

IMPORTANT: READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION

General

The following guidelines provide basic assembly and installation instructions for ECV-645-MD extruded aluminum stationary blade louvers installing via the "anchorless" method. The ECV-645-MD is designed to withstand the severe weather effects typically associated with hurricanes and is certified by Miami-Dade County for resistance to impacts, cyclic fatigue and static pressures up to 150 psf.

1. For additional details, refer to product NOA submittal drawings posted at www.alllite.com as well as any job-specific submittal drawings when provided.
2. Carefully lift louver sections by their frames using multiple lifting points if necessary to avoid distortion, racking or damage. **Do not apply excessive force to a single point and NEVER LIFT UNITS BY LOUVER BLADES.** Take necessary precautions to prevent marring the louver finish.
3. Caulk and anchors to the building condition are by others. Per the Florida Building Code, proper isolation (also by others) is required between aluminum louver components and steel building conditions in order to prevent corrosion.

Preparation

Louvers and Hardware:

1. Locate all crates, boxes, cartons, etc.
2. Remove louvers from packaging, inspect for damage, confirm quantities and sizes with packing list and organize parts in order of installation. To verify installation hardware quantities, refer to Table 1. Installation hardware will typically be shipped in a separate box.
3. Notify your All-Lite representative immediately of any shortages or shipping damage.

Openings:


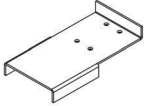






1. Inspect openings for damage, repair as needed and remove any obstructions or debris.
2. Prior to installation, verify that openings are square and plumb and that the louvers will fit properly.

Single Section Louver Installation

1. First, locate the Hat Channel Clips (A-3) and attach to the top and bottom of each louver section using #12 Hex-Head Screws (F-6). Refer to Figure 1 for details and required locations.
2. Next, attach the Mounting Clips (A-4) to the Hat Channel Clips using #12 Flat-Head screws (F-11) as illustrated in Figure 2. When installed, each pair of Mounting Clips should sit side-by-side.
3. If the louver includes the fully sleeved option, attach the Sleeve Side Plates to the sides of the louver section using #12 Hex-Head Screws (F-6) running through the existing clearance holes in the pre-welded sleeve attachment angle into the back of the louver frame. Refer to Figure 5 and 6. The ends of the attachment angle should be roughly flush with the top and bottom of the louver frame. If no sleeve is required, omit steps 3-4 and proceed to step 5.

Table 1: Standard Installation Hardware,

"Anchorless Method"

Part	Description		Quantity Required	
			Louver Sections < 26" wide	Louver Sections ≥ 26" wide
A-3	Hat Channel Clip		Four (4) per section	Eight (8) per section
A-4	Formed Mounting Clip, Flanged		Four (4) per section	Eight (8) per section
A-5	2" x 2" x 1/4" x 12" - Long Retaining Angle		Two (2) per section	Four (4) per section
F-2	1/4" I.D. x 5/8" O.D. Flat Washer		Twenty-four (24) per section	Forty-eight (48) per section
F-4	1/4-20 UNC Hex Nut		Twelve (12) per section	Twenty-four (24) per section
F-5	1/4-20 UNC x 1" Hex Bolt		Twelve (12) per section	Twenty-four (24) per section
F-6	#12-14 x 3/4" Hex-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section*	Thirty-two (32) per section*
F-11	#12-14 x 3/4" Flat-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section

* Note: Additional #12 Hex-Head Screws will be shipped for louvers with an optional sleeve.

4. Working from the rear (interior) side of the louver, slide the Sleeve Top and Bottom Plates into place. The Top and Bottom Plates should fit inside the formed flanges at the ends of the Side Plates, and will rest just outside the Mounting Clips. Refer to Figure 5. If no sleeve is required, omit steps 3-4 and proceed directly to step 5.
5. Lift the louver section up and place it into the opening as shown in Figure 3.
6. As necessary, shim around the perimeter to level the louver and to maintain an approximate 1/4" clearance between the louver frame and the edges of the opening (shims by others.)

Single Section Louver Installation (cont.)

7. With the louver section sitting level inside the wall opening, place the Retaining Angles (A-5) in the positions shown in Figure 3. The Retaining Angles should be tight against the rear surface of the wall (the wall will be "sandwiched" between the Mounting Clip flanges in front and the Retaining Angles behind.)
8. For each Mounting Clip, drill 9/32" clearance holes for 1/4" hardware through both the clip and the adjacent Retaining Angles (as well as the sleeve, if present). These holes should be located no closer than 3/8" to the rear edge of either the Mounting Clip or the Retaining Angle. Side-to-side spacing is not critical but should be approximately even.
9. Use 1/4" Hex Bolts (F-5), 1/4" Hex Nuts (F-4) and Flat Washers (F-2) to bolt the Mounting Clips and the Retaining Angles together, using the clearance holes drilled in step 8 above.
10. Finally, install backer rod and caulk around the entire perimeter of the louver, as required.

Multiple Section Louver Installation

1. Install Hat Channel Clips and Mounting Clips on all sections following steps 1-2 for single-section louvers.
2. If a sleeve is required, attach a Sleeve-Side Plate only to the left-hand side of the left-most section in the opening (as viewed from the exterior), following step 3 for single-section louvers. Also, attach a Sleeve Side Plate only to the right-hand side of the right-most section (mirroring the left section). If no sleeve is needed, omit this step and proceed directly to the next task below.
3. Lift the section up and place it into the opening. For a sleeve, insert Sleeve Top and Bottom Plates between the Mounting Clips and the opening as shown in Figure 6; otherwise, refer to Figure 3. Shim as required to level the section and to maintain an approximate 1/4" clearance between the louver frame and the edges of the opening (shims are by others).
4. Attach Retaining Angles to the left section as described in steps 7-9 for single-section louvers.
5. As shown in Figure 6, press the I-mullion seam cover onto the right-hand jamb of the left section (again as viewed from the exterior). The I-mullion may require tapping with a rubber mallet to properly seat into place.
6. Using the procedure described above, install the next section to the right leaving approximately 1/4" between sections. If a sleeve is required, place Sleeve Top and Bottom Plates between the Mounting Clips and the opening before installing the Retaining Angles.
7. Moving sequentially from left to right, follow the same method to install any remaining I-mullions and louver sections.
8. Finish by installing backer rods and caulk around the entire perimeter of the opening, as required. If the louver includes a sleeve, be sure to caulk any seams between sleeve plates.

Figure 1: Attaching Hat Channel Clips

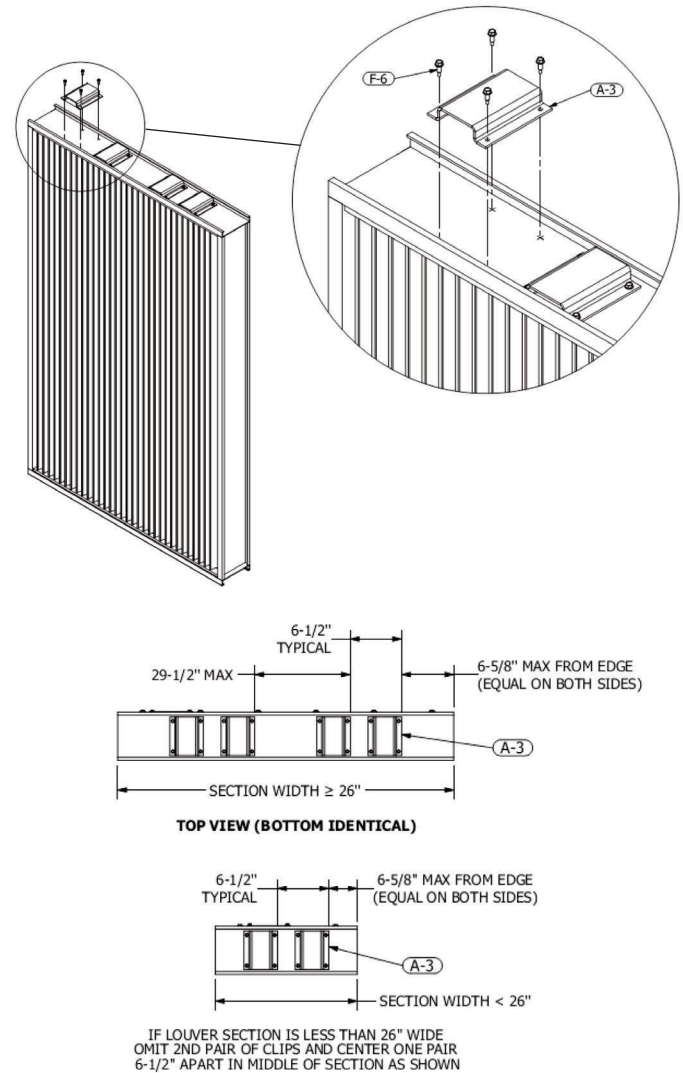


Figure 2: Installing Mounting Clips

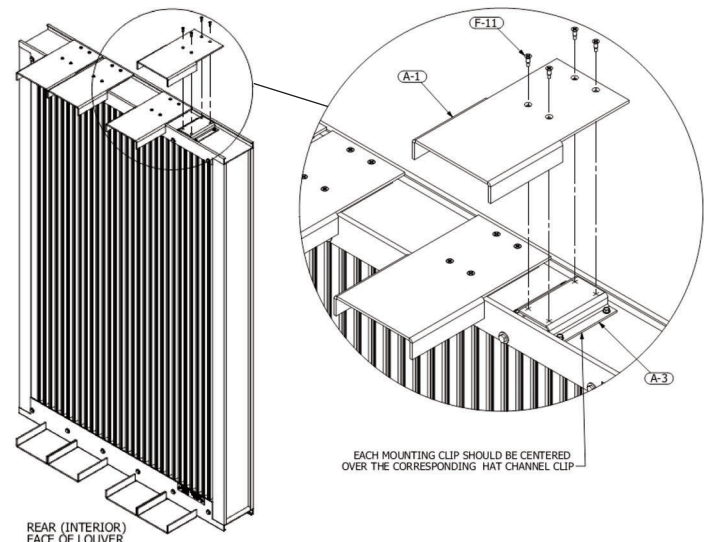


Figure 3: Securing Louver Sections to Opening

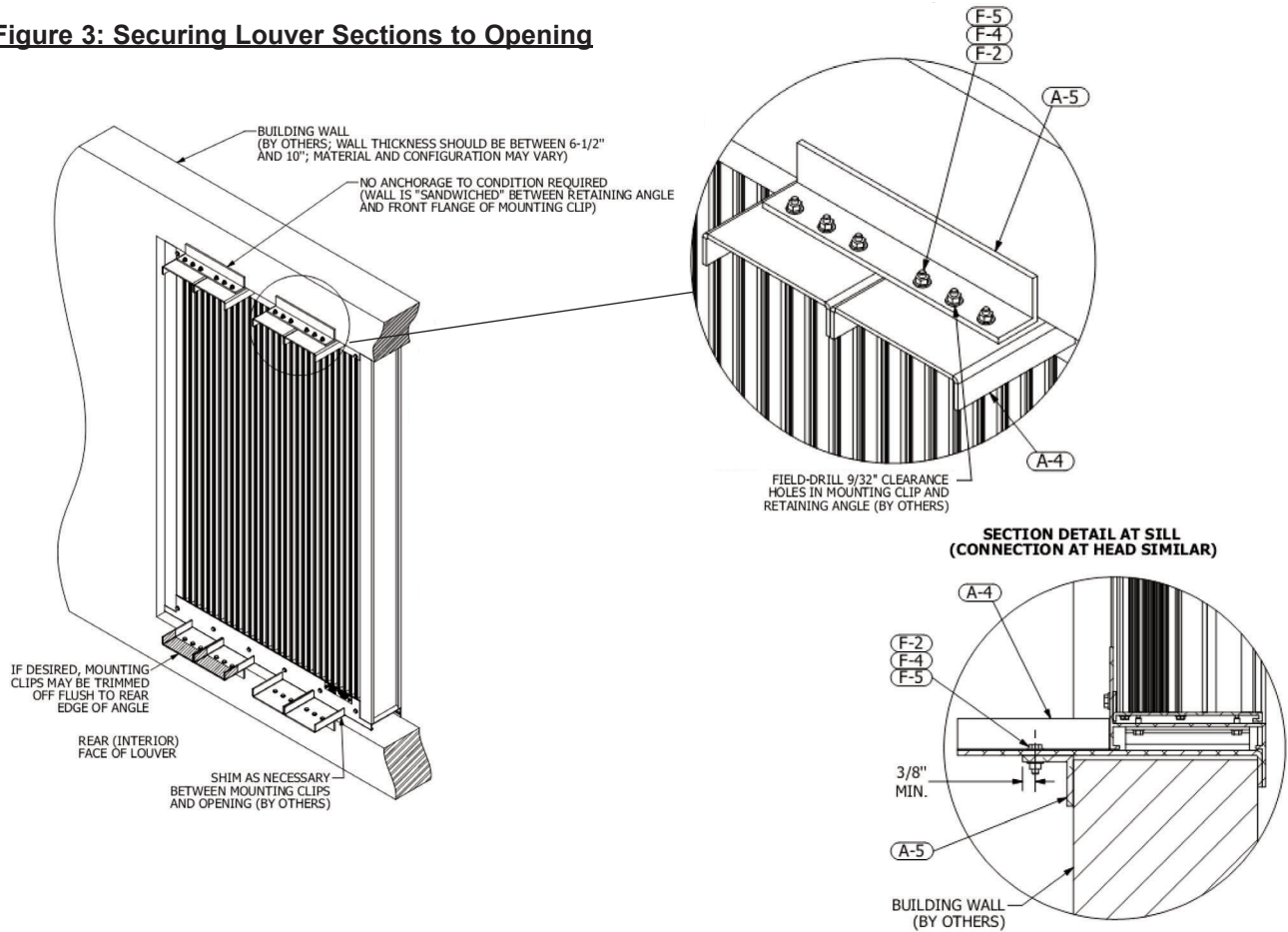


Figure 4: Sleeve Components (if required)

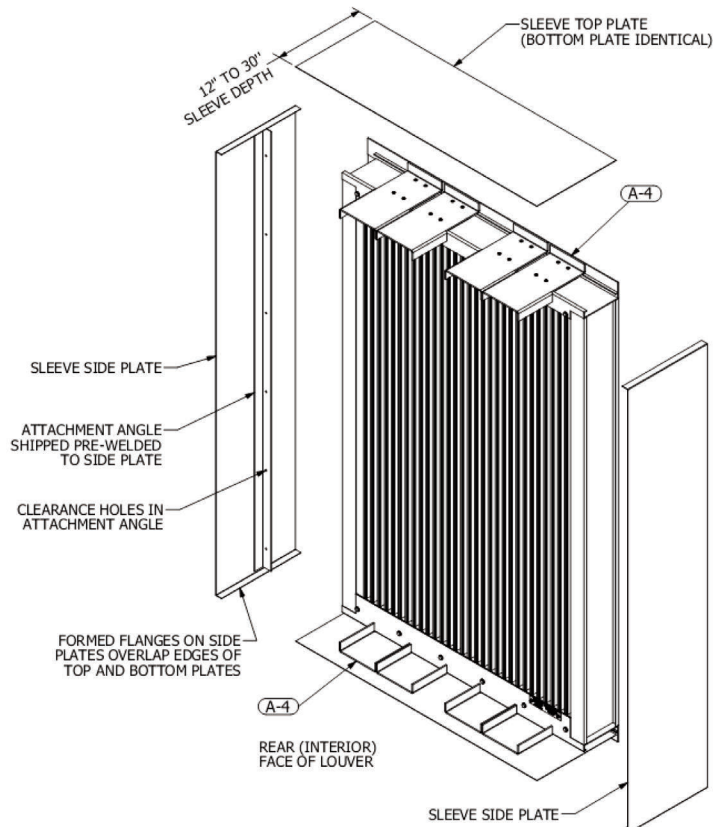


Figure 5: Installing Louver Sleeve (if required)

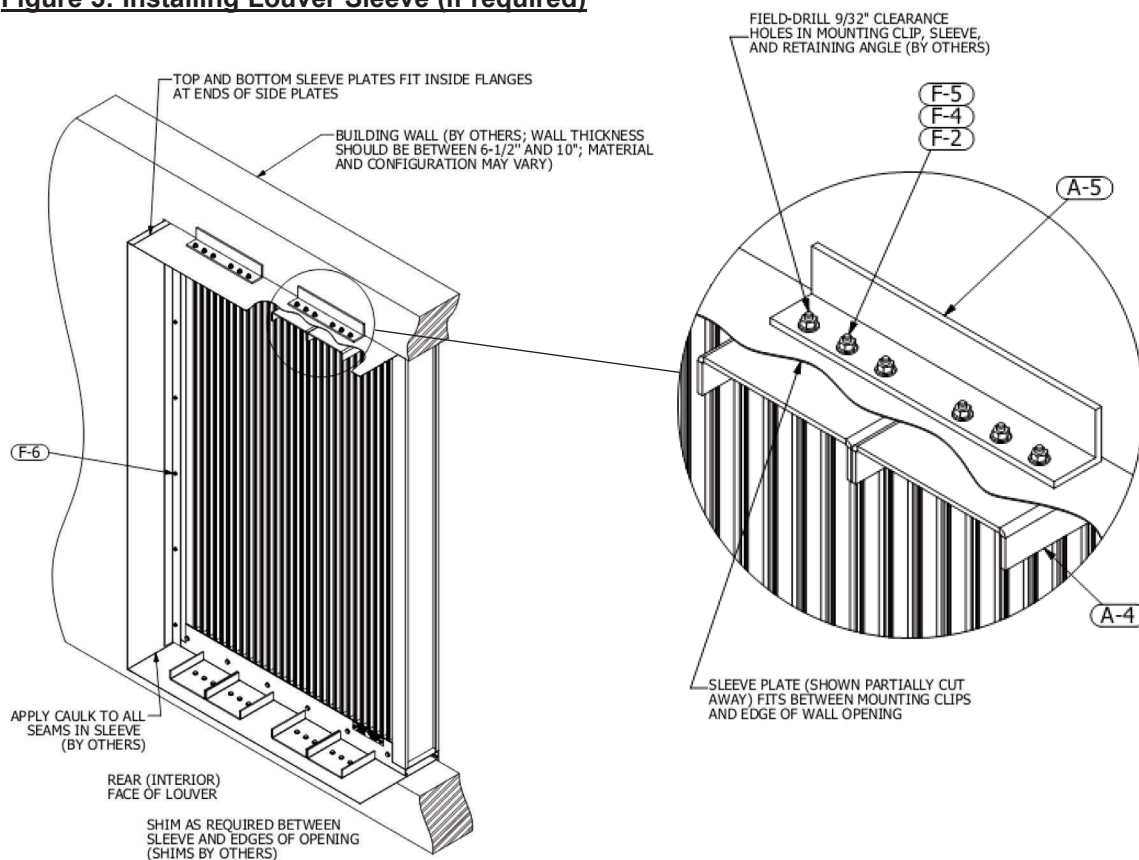
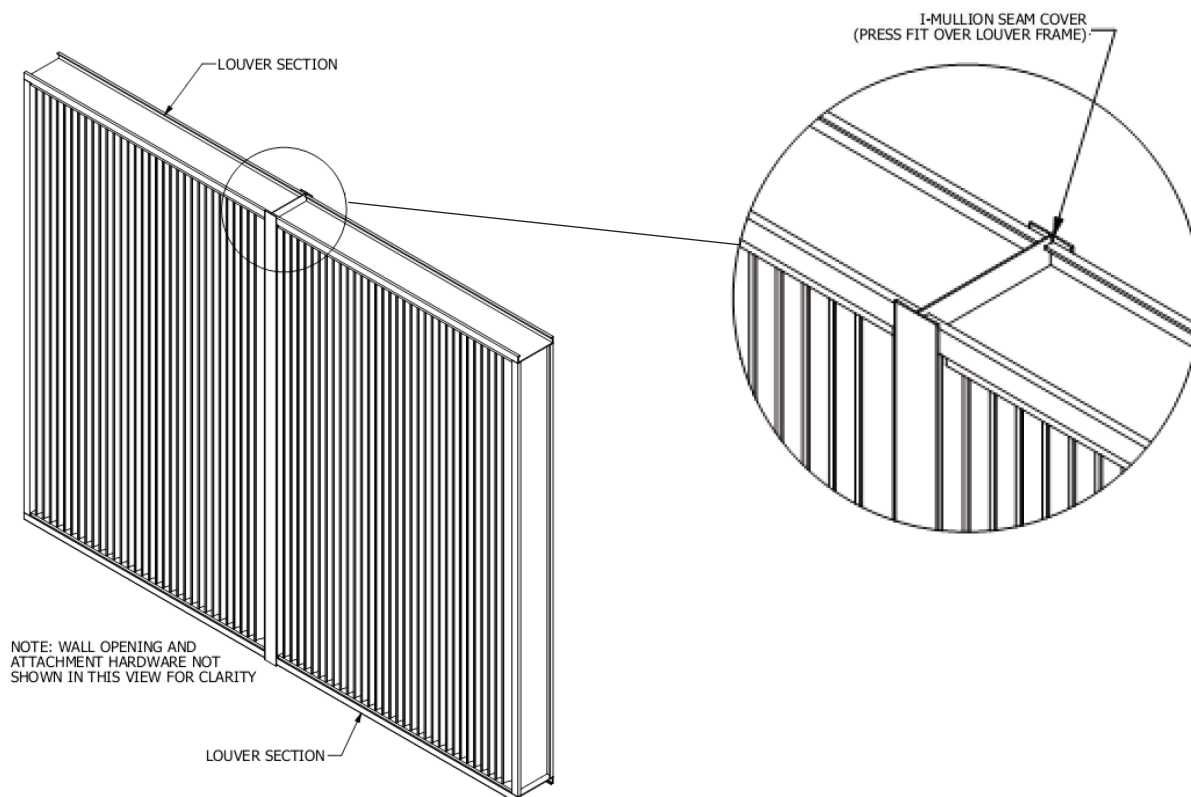


Figure 6: Installing I-Mullion (multiple section installations only)



IMPORTANT: READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION

General

The following guidelines provide basic assembly and installation instructions for ECV-645-MD extruded aluminum stationary blade louvers mounting to concrete masonry unit (CMU) building conditions. The ECV-645-MD is designed to withstand the severe weather effects typically associated with hurricanes and is certified by Miami-Dade County for resistance to impacts, cyclic fatigue and static pressures up to 150 psf.

1. For additional details, refer to product NOA submittal drawings posted at www.alllite.com as well as any job-specific submittal drawings when provided.
2. Carefully lift louver sections by their frames using multiple lifting points if necessary to avoid distortion, racking or damage. **Do not apply excessive force to a single point and NEVER LIFT UNITS BY LOUVER BLADES.** Take necessary precautions to prevent marring the louver finish.
3. CMU masonry around the wall openings must be either solid or fully grouted, with a compressive strength of at least 1500 psi for both grout and masonry. Installation to hollow CMU blocks is not permitted.
4. Caulk and anchors to the building condition are by others.

Preparation

Louvers and Hardware:

1. Locate all crates, boxes, cartons, etc.
2. Remove louvers from packaging, inspect for damage, confirm quantities and sizes with packing list and organize parts in order of installation. To verify installation hardware quantities, refer to Table 1. Installation hardware will typically be shipped in a separate box.
3. Notify your All-Lite representative immediately of any shortages or shipping damage.

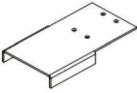

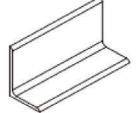




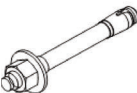

Openings:

1. Inspect openings for damage, repair as needed and remove any obstructions or debris.
2. Prior to installation, verify that openings are square and plumb and that the louvers will fit properly.

Single Section Louver Installation

1. First, locate the Hat Channel Clips (A-3) and attach to the top and bottom of each louver section using #12 Hex-Head Screws (F-6). Refer to Figure 1 for details and required locations.
2. Next, attach the Mounting Clips (A-1) to the Hat Channel Clips using #12 Flat-Head screws (F-11) as illustrated in Figure 2. When installed, each pair of Mounting Clips should sit side-by-side.
3. Lift the louver section up and place it into the opening as shown in Figure 3.
4. As necessary, shim around the perimeter to level the louver and to maintain an approximate 1/4" clearance between the louver frame and the edges of the opening (shims are by others).

**Table 1: Standard Installation Hardware,
CMU Building Condition**

Part	Description		Quantity Required	
			Louver Sections < 26" wide	Louver Sections ≥ 26" wide
A-1	Formed Mounting Clip, Non-Flanged		Four (4) per section	Eight (8) per section
A-3	Hat Channel Clip		Four (4) per section	Eight (8) per section
A-6	Mounting Angle (6" x 4" x 3/8" x 12"-Long)		Two (2) per section	Four (4) per section
F-2	1/4" I.D. x 5/8" O.D. Flat Washer		Twenty-four (24) per section	Forty-eight (48) per section
F-4	1/4-20 UNC Hex Nut		Twelve (12) per section	Twenty-four (24) per section
F-5	1/4-20 UNC x 1" Hex Bolt		Twelve (12) per section	Twenty-four (24) per section
F-6	#12-14 x 3/4" Hex-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section
F-8	5/8" x 6" Hilti Kwik Bolt TZ Expansion Anchor*		Four (4) per section	Eight (8) per section
F-11	#12-14 x 3/4" Flat-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section

* Not supplied by All-Lite.

5. With the louver section sitting level inside the wall opening, determine the position of Mounting Angles (A-6) and wall anchors, using Figure 3 as a guide. The 4" angle leg will be placed flat against the edge of the corresponding Mounting Clip, while the 6" leg should sit against the rear surface of the wall. Each angle will be secured to the wall by two anchors, which must be located according to the following requirements:

Single Section Louver Installation (cont.)

- Anchors must be spaced at least 9-1/2" apart.
- Anchors must be at least 4" away from the edge of the wall opening.
- No anchor may be closer than 1-3/8" to a vertical joint between masonry blocks.

Each Mounting Angle should be approximately centered against the corresponding pair of Mounting Clips, but some adjustment side-to-side may be necessary in order to fulfill guidelines for anchor location.

- On each Mounting Angle, mark locations for anchors and drill 11/16" clearance holes. Hole centers must be located at least 15/16" from the edges of the angle.
- Next, using Mounting Angles as templates, drill 5/8"-diameter holes in the wall to a minimum depth of 4-3/4", but no deeper than 5-1/2".
- After cleaning any dust or loose material from the holes, use a hammer to drive a 5/8" x 6" Hilti Kwik-Bolt III Expansion Anchor (F-8, by others) into each anchor hole. From 1-3/8" to 2-3/8" of the anchor's length should remain projecting out of the hole.
- With the Mounting Angles in position, tighten the nuts on the anchors to the correct installation torque specified by Hilti.
- For each Mounting Clip, drill 9/32" clearance holes for 1/4" hardware through both the clip and the adjacent Mounting Angle. These holes should be located 3-3/8" behind the rear face of the louver. Side-to-side spacing is not critical but should be approximately even.
- Use 1/4" Hex Bolts (F-5), Hex Nuts (F-4) and Flat Washers (F-2) to bolt the remaining Mounting Clips and the Mounting Angles together, using the clearance holes drilled in step 10.
- Finally, install backer rod and caulk around the entire perimeter of the louver, as required.

Multiple Section Louver Installation

- Install Hat Channel Clips and Mounting Clips on all sections following steps 1-2 for single-section louvers.
- Install the left-most section (as viewed from the exterior) inside the wall opening following steps 3-11 for single section louvers.
- As shown in Figure 4, press the I-mullion seam cover onto right-hand jamb (as viewed from the exterior). The I-mullion may require tapping with a rubber mallet to properly seat into place.
- Install the next section to the right following steps 3-11 for single-section louvers, leaving an approximate 1/4" gap between sections.
- Install any remaining I-mullions and louver sections using the procedure described above. Finish by installing backer rod and caulk around the entire perimeter of the opening, as required.

Figure 1: Attaching Hat Channel Clips

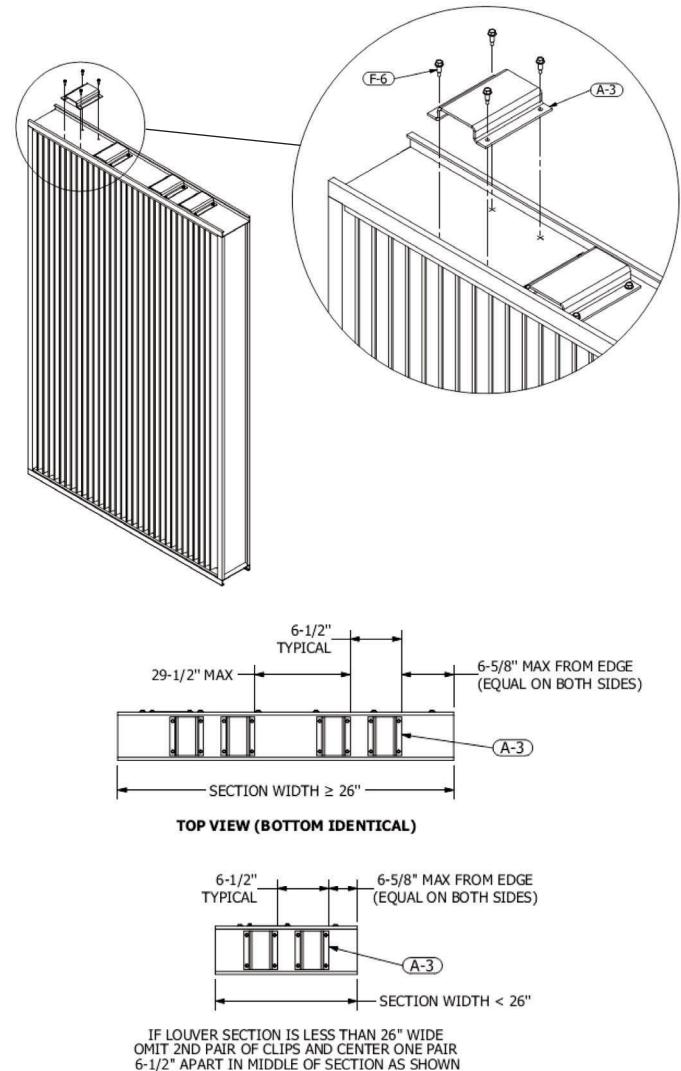


Figure 2: Installing Mounting Clips

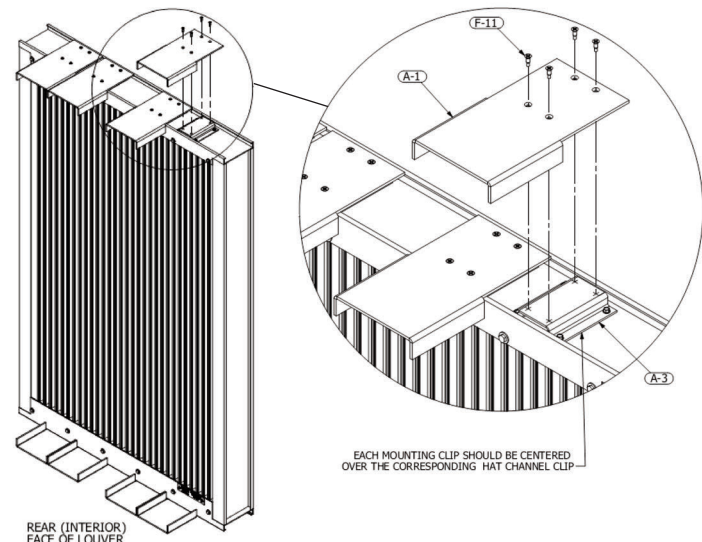


Figure 3: Securing Louver Sections to Opening

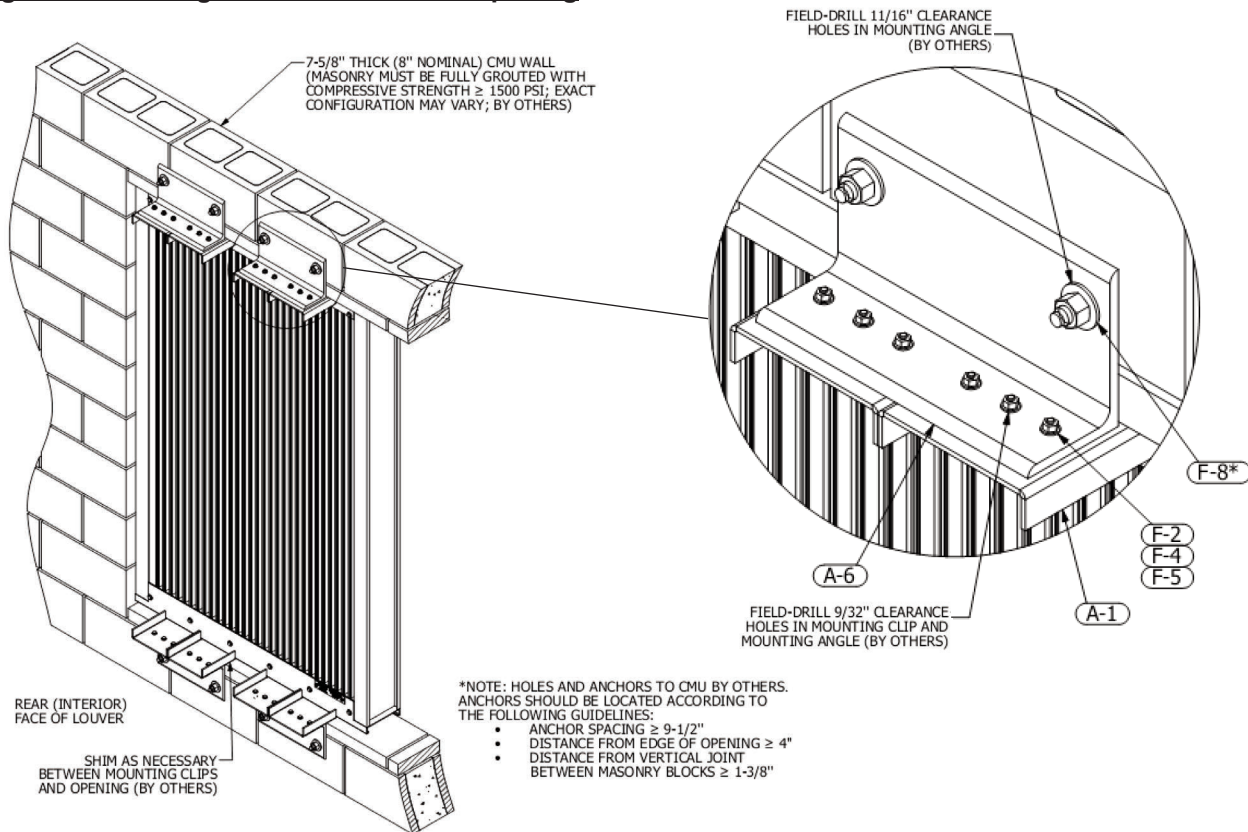
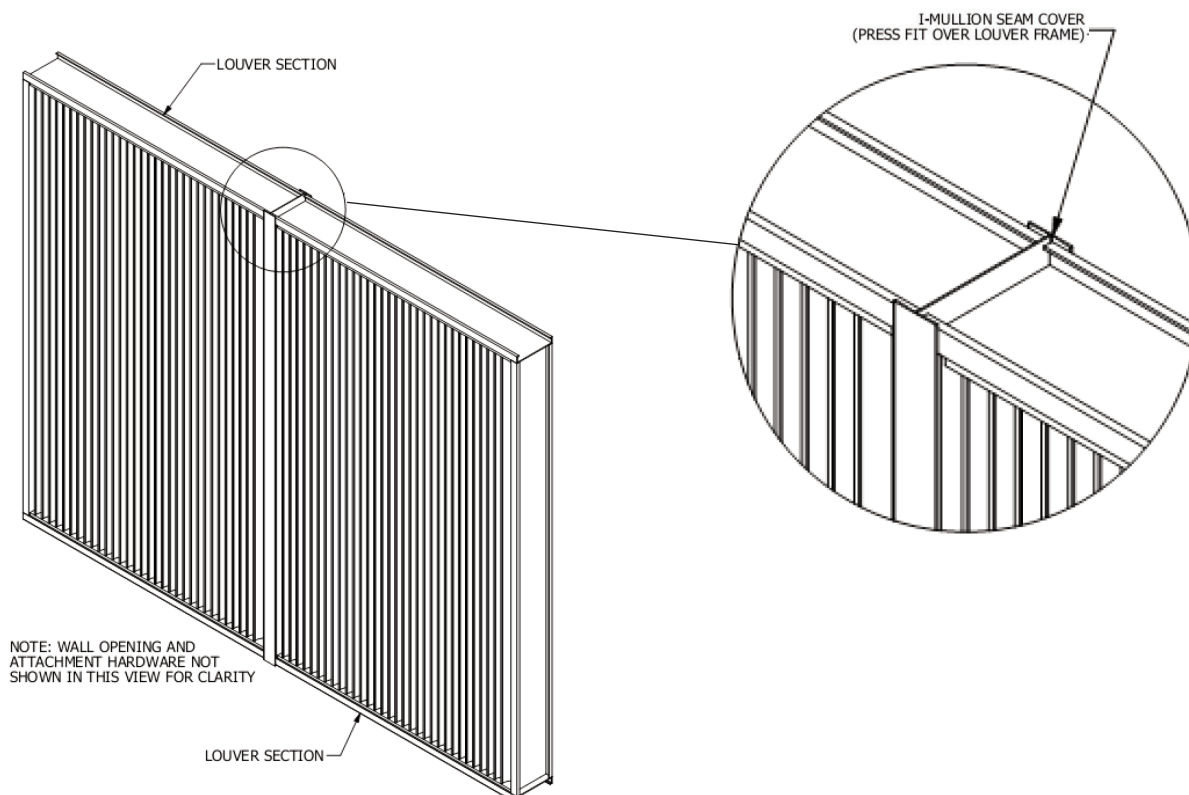


Figure 4: Installing I-Mullion (multiple section installations only)



IMPORTANT: READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION

General

The following guidelines provide basic assembly and installation instructions for ECV-645-MD extruded aluminum stationary blade louvers mounting to concrete building conditions. The ECV-645-MD is designed to withstand the severe weather effects typically associated with hurricanes and is certified by Miami-Dade County for resistance to impacts, cyclic fatigue and static pressures up to 150 psf.

1. For additional details, refer to product NOA submittal drawings posted at www.alllite.com as well as any job-specific submittal drawings when provided.
2. Carefully lift louver sections by their frames using multiple lifting points if necessary to avoid distortion, racking or damage. **Do not apply excessive force to a single point and NEVER LIFT UNITS BY LOUVER BLADES.** Take necessary precautions to prevent marring the louver finish.
3. Caulk and anchors to the building condition are supplied by others.

Preparation

Louvers and Hardware:

1. Locate all crates, boxes, cartons, etc.
2. Remove louvers from packaging, inspect for damage, confirm quantities and sizes with packing list and organize parts in order of installation. To verify installation hardware quantities, refer to Table 1. Installation hardware will typically be shipped in a separate box.
3. Notify your All-Lite representative immediately of any shortages or shipping damage.

Openings:

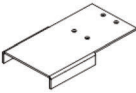
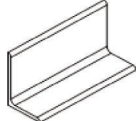





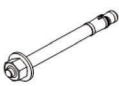

1. Inspect openings for damage, repair as needed and remove any obstructions or debris.
2. Prior to installation, verify that openings are square and plumb and that the louvers will fit properly.

Single Section Louver Installation

1. First, locate the Hat Channel Clips (A-3) and attach to the top and bottom of each louver section using #12 Hex-Head Screws (F-6). Refer to Figure 1 for details and required locations.
2. Next, attach the Mounting Clips (A-1) to the Hat Channel Clips using #12 Flat-Head screws (F-11) as illustrated in Figure 2. When installed, each pair of Mounting Clips should sit side-by-side.
3. Based on concrete thickness, determine whether the installation should use a shear connection or a tension connection. If the wall is at least 10" thick, refer to Figure 3 for a shear connection and install per steps 6-11. If the wall is less than 10" thick, use a tension connection as shown in Figure 4 and install per steps 12-19.
4. Lift the louver section up and place it into the opening as shown in Figure 3 or 4, as appropriate.

Table 1: Standard Installation Hardware,

Concrete Building Condition

Part	Description		Quantity Required	
			Louver Sections < 26" wide	Louver Sections ≥ 26" wide
A-1	Formed Mounting Clip, Non-Flanged		Four (4) per section	Eight (8) per section
A-2	Mounting Angle (5" x 3" x 3/8" x 12"-Long)		Two (2) per section	Four (4) per section
A-3	Hat Channel Clip		Four (4) per section	Eight (8) per section
F-2	1/4" I.D. x 5/8" O.D. Flat Washer		Twenty-four (24) per section	Forty-eight (48) per section
F-4	1/4-20 UNC Hex Nut		Twelve (12) per section	Twenty-four (24) per section
F-5	1/4-20 UNC x 1" Hex Bolt		Twelve (12) per section	Twenty-four (24) per section
F-6	#12-14 x 3/4" Hex-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section
F-10	1/2" x 5-1/2" Hilti Kwik Bolt TZ Expansion Anchor*		Four (4) per section	Eight (8) per section
F-11	#12-14 x 3/4" Flat-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section

* Not supplied by All-Lite.

5. As necessary, shim around the perimeter to level the louver and to maintain an approximate 1/4" clearance between the louver frame and the edges of the opening (shims are by others).

Single Section Louver Installation (cont.)

Shear Connection

6. With the louver section sitting level inside the wall opening, determine the locations for concrete anchors. Each Mounting Clip will have one anchor located roughly on the centerline of the part and no closer than 2-7/8" to the edge of the wall. Refer to Figure 3 as a guide.
7. At the appropriate locations, drill 9/16" clearance holes through the Mounting Clips.
8. Using the Mounting Clips as templates, drill 1/2"-diameter holes in the wall to a minimum depth of 4", but no deeper than 4-3/4".
9. After cleaning any dust or loose material from the holes, use a hammer to drive a 1/2" x 5-1/2" Hilti Kwik-Bolt TZ Expansion Anchor (F-10, by others) into each anchor hole. From 1-1/8" to 1-7/8" of the anchor's length should remain projecting out of the hole.
10. Tighten the nuts on the anchors to the correct installation torque specified by Hilti.
11. Finish by installing backer rod and caulk around the entire perimeter of the louver, as required.

Tension Connection:

12. With the louver section sitting level inside the wall opening, determine the position of Mounting Angles (A-2) and concrete anchors, using Figure 4 as a guide. The 3" angle leg will be placed flat against the edge of the corresponding Mounting Clip, while the 5" leg should sit against the rear surface of the wall. Each angle will be secured to the wall by two anchors which must be located according to the following requirements.
 - a. Anchors must be spaced at least 9-1/2" apart.
 - b. Anchors must be 2-1/8" away from the edge of the wall opening.
13. On each Mounting Angle, mark locations for anchors and drill 9/16" clearance holes.
14. Next, using Mounting Angles as templates, drill 1/2"-diameter holes in the wall to a minimum depth of 4", but no deeper than 4-3/4".
15. After cleaning any dust or loose material from the holes, use a hammer to drive a 1/2" x 5-1/2" Hilti Kwik-Bolt TZ Expansion Anchor (F-10, by others) into each anchor hole. From 1-1/8" to 1-7/8" of the anchor's length should remain projecting out of the hole.
16. With the Mounting Angles in position, tighten the nuts on the anchors to the correct installation torque specified by Hilti.
17. For each Mounting Clip, drill 9/32" clearance holes for 1/4" hardware through both the clip and the adjacent Mounting Angle. These holes should be located 3-3/8" behind the rear face of the louver. Side-to-side spacing is not critical but should be approximately even.
18. Use 1/4" Hex Bolts (F-5), 1/4" Hex Nuts (F-4) and Flat Washers (F-2) to bolt the Mounting Clips and the Mounting Angles together, using the clearance holes drilled in step 10 above.
19. Finally, install backer rod and caulk around the entire perimeter of the louver, as required.

Multiple Section Louver Installation

1. Install Hat Channel Clips and Mounting Clips on all sections following steps 1-2 for single-section louvers. Determine the type of connection to use (shear or tension) as detailed in step 3 in single-section louver installation.
2. Install the left-most section (as viewed from the exterior) inside the wall opening following steps 6-10 or 12-18, as appropriate, for single section louvers.
3. As shown in Figure 5, press the I-mullion seam cover onto the right-hand jamb (as viewed from the exterior). The I-mullion may require tapping with a rubber mallet to properly seat into place.
4. Install the next section to the right following steps 6-10 or 12-18, as appropriate, leaving an approximate 1/4" gap between sections.
5. Install any remaining I-mullions and louver sections using the procedure described above. Finish by installing backer rod and caulk around the entire perimeter of the opening, as required.

Figure 1: Attaching Hat Channel Clips

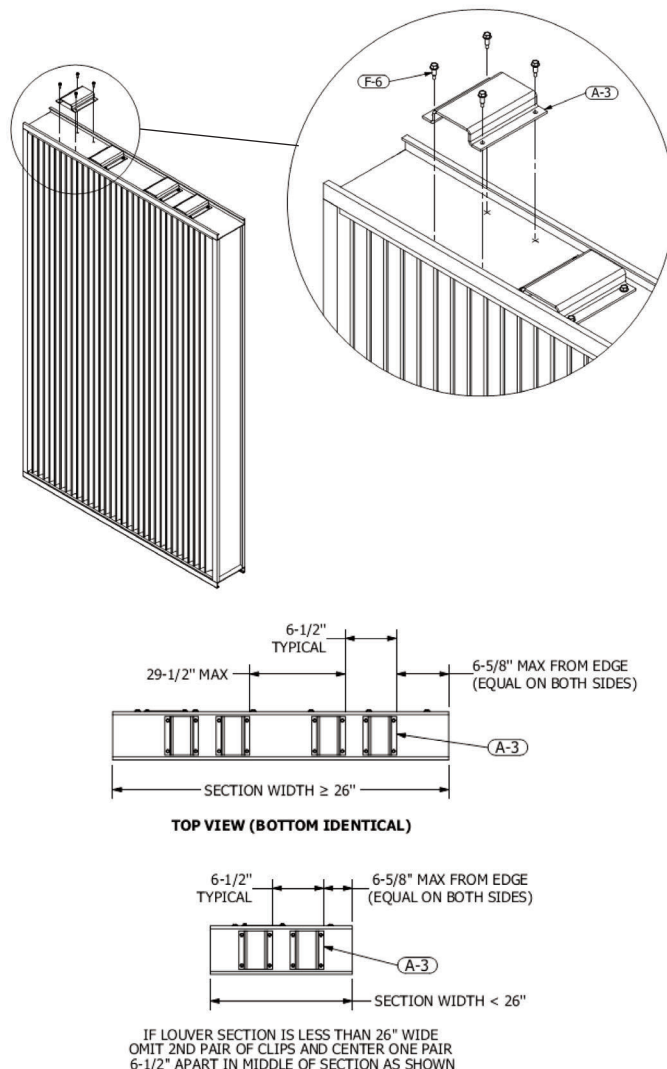


Figure 2: Installing Mounting Clips

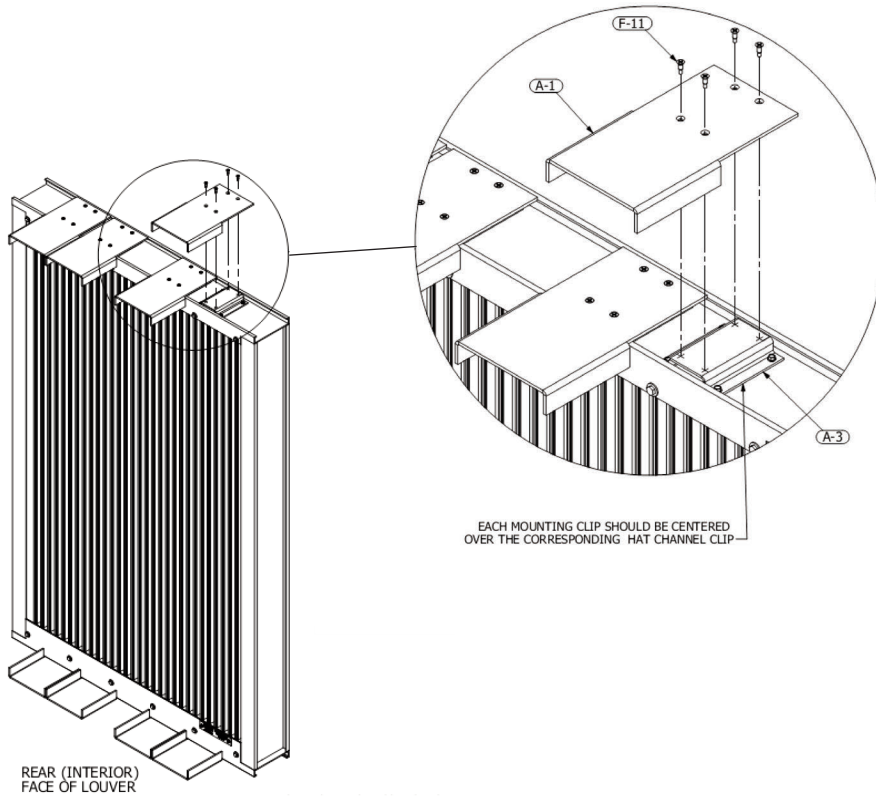


Figure 3: Securing Louver Sections to Opening - Shear Connection

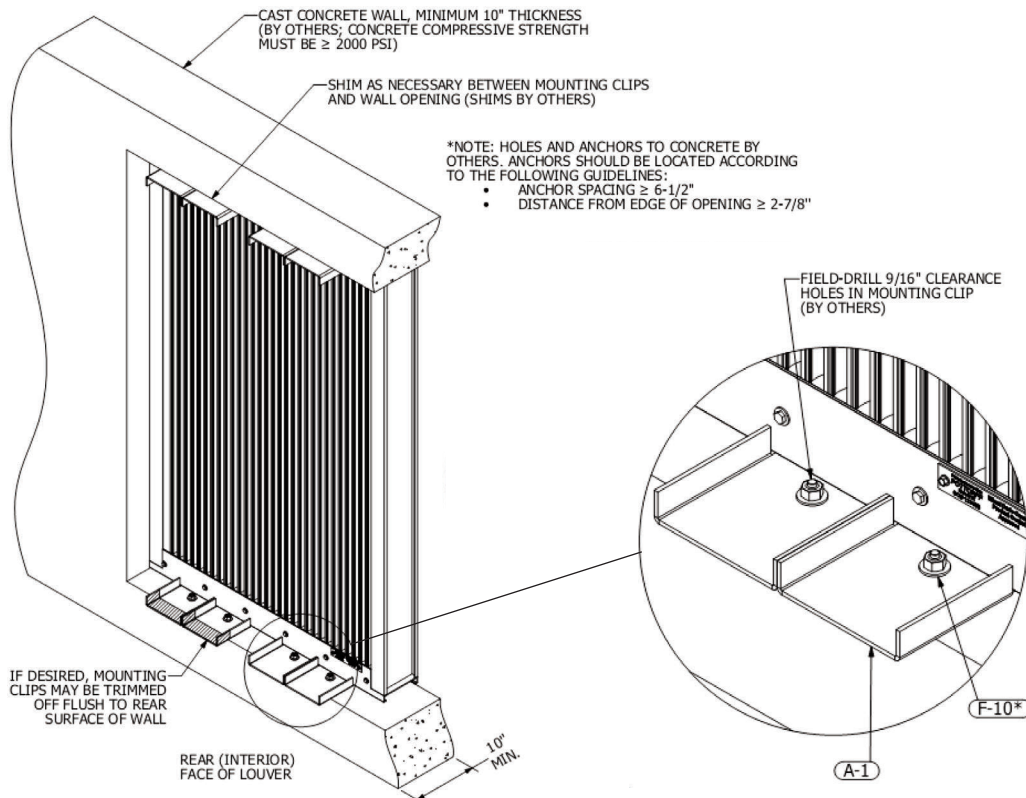


Figure 4: Securing Louver Sections to Opening - Tension Connection

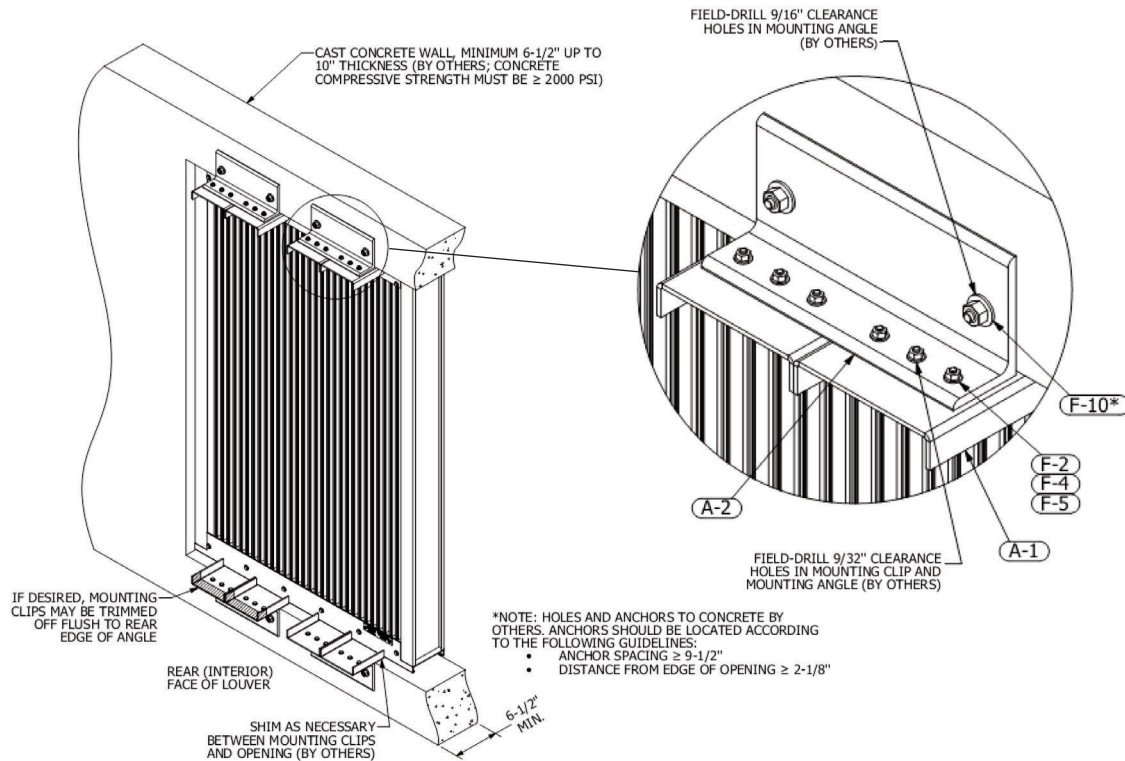
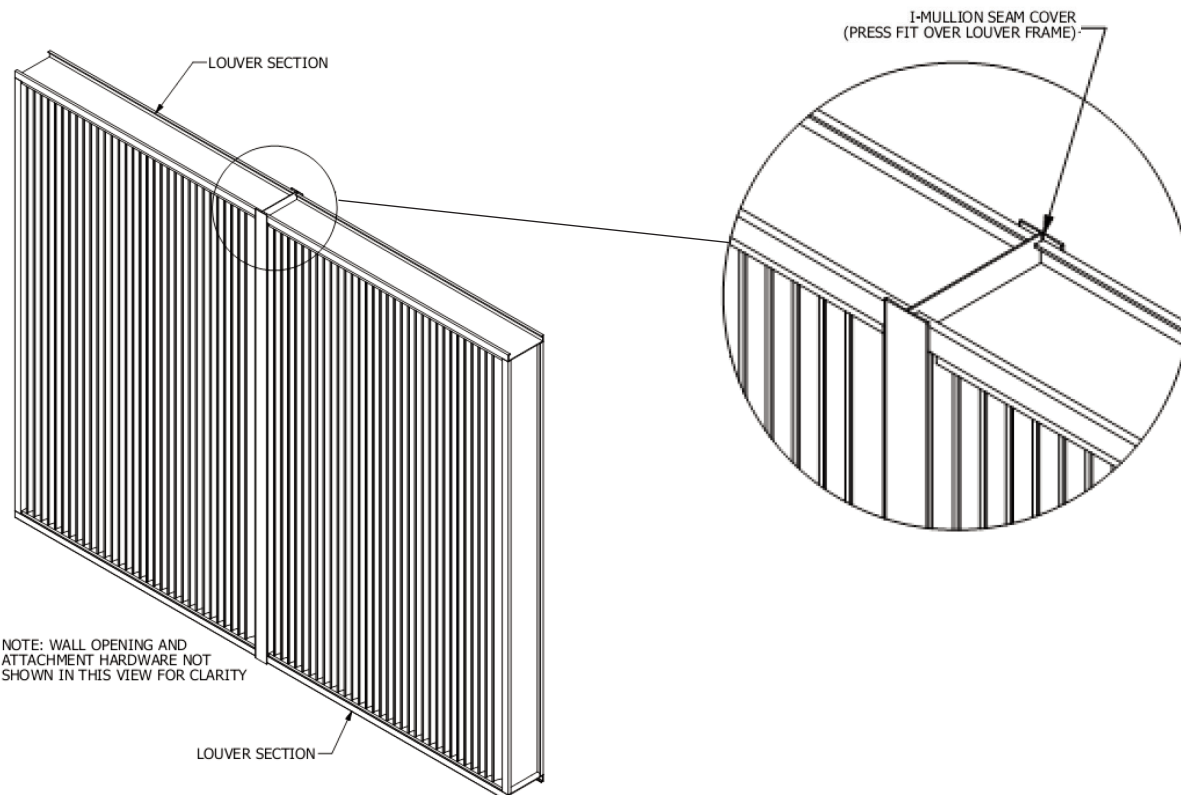


Figure 5: Installing I-Mullion (multiple section installations only)



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3. Caulk and anchors to the building condition are supplied by others. Per the Florida Building Code, proper isolation (also by others) is required between aluminum louver components and steel building conditions in order to prevent corrosion.

Preparation

Louvers and Hardware:

1. Locate all crates, boxes, cartons, etc.
2. Remove louvers from packaging, inspect for damage, confirm quantities and sizes with packing list and organize parts in order of installation. To verify installation hardware quantities, refer to Table 1. Installation hardware will typically be shipped in a separate box.
3. Notify your All-Lite representative immediately of any shortages or shipping damage.

Openings:

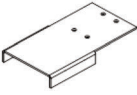




1. Inspect openings for damage, repair as needed and remove any obstructions or debris.
2. Prior to installation, verify that openings are square and plumb and that the louvers will fit properly.

Single Section Louver Installation

1. First, locate the Hat Channel Clips (A-3) and attach to the top and bottom of each louver section using #12 Hex-Head Screws (F-6). Refer to Figure 1 for details and required locations.
2. Next, attach the Mounting Clips (A-1) to the Hat Channel Clips using #12 Flat-Head Screws (F-11) as illustrated in Figure 2. When installed, each pair of Mounting Clips should sit side-by-side.
3. Lift the louver section up and place it into the opening as shown in Figure 3.
4. As necessary, shim around the perimeter to level the louver and to maintain an approximate 1/4" clearance between the louver frame and the edges of the opening (shims are by others).

Table 1: Standard Installation Hardware,

Steel Building Condition

Part	Description		Quantity Required	
			Louver Sections < 26" wide	Louver Sections ≥ 26" wide
A-1	Formed Mounting Clip, Non-Flanged		Four (4) per section	Eight (8) per section
A-3	Hat Channel Clip		Four (4) per section	Eight (8) per section
F-6	#12-14 x 3/4" Hex-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section
F-7	#12-14 x 1" Hex-Head Tek Self-Drilling Machine Screw*		Eight (8) per section	Sixteen (16) per section
F-11	#12-14 x 3/4" Flat-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section

* Not supplied by All-Lite. Installation fasteners must be of corrosion-resistant steel (stainless, hot-dip galvanized or zinc-plated at a minimum)

5. When the louver is level and in the proper position, use #12-14 x 1" Self-Drilling screws (F-7 by others) to fasten the Mounting Clips to steel members along the top and bottom of the opening. Refer to Figure 3 for details and fastener locations.
6. Finally, install backer rod and caulk around the entire perimeter of the louver, as required.

Multiple Section Louver Installation

1. Install Hat Channel Clips and Mounting Clips on all sections following steps 1-2 for single section louvers.
2. Install the left-most section (as viewed from the exterior) inside the wall opening following steps 3-5 above for single-section louvers.
3. As shown in Figure 4, press the I-mullion seam cover onto the right-hand jamb (as viewed from the exterior). The I-mullion may require tapping with a rubber mallet to properly seat into place.
4. Install the next section to the right following steps 3-5 for single section louvers, leaving an approximate 1/4" gap between sections.
5. Install any remaining I-mullions and louver sections using the procedure described above. Finish by installing backer rod and caulk around the entire perimeter of the opening, as required.

Figure 1: Attaching Hat Channel Clips

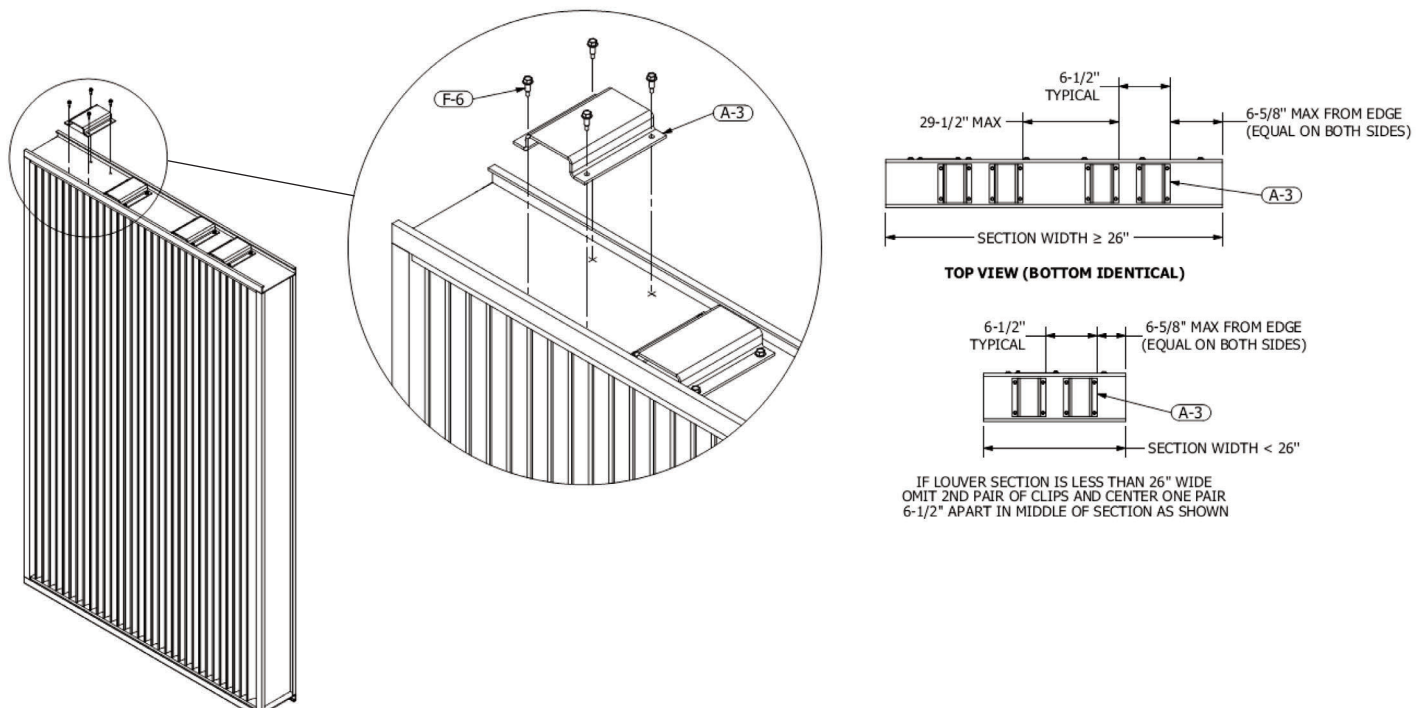


Figure 2: Installing Mounting Clips

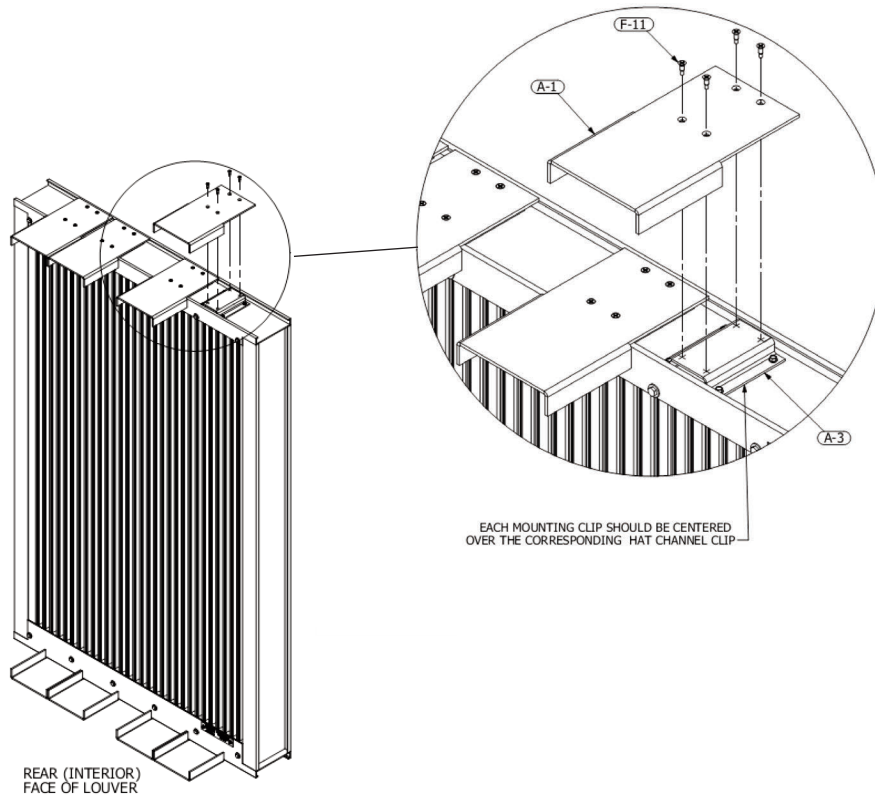


Figure 3: Securing Louver Sections to Opening

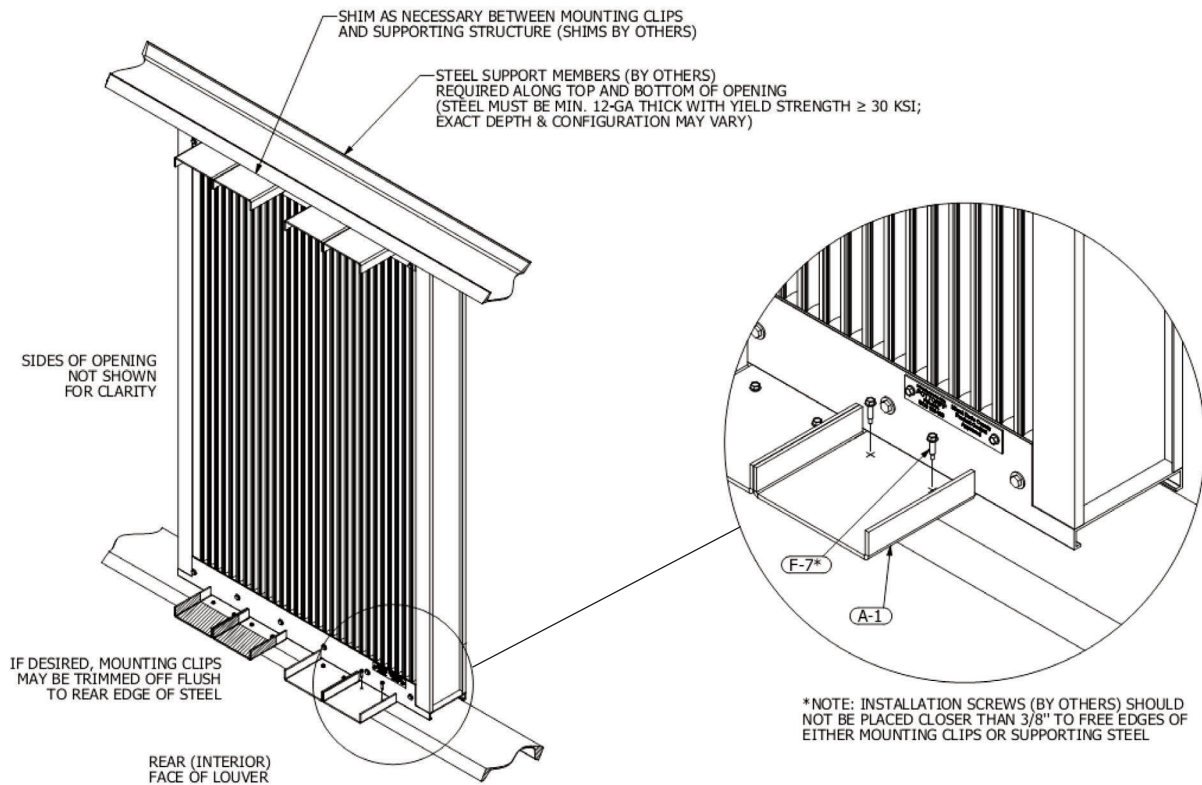
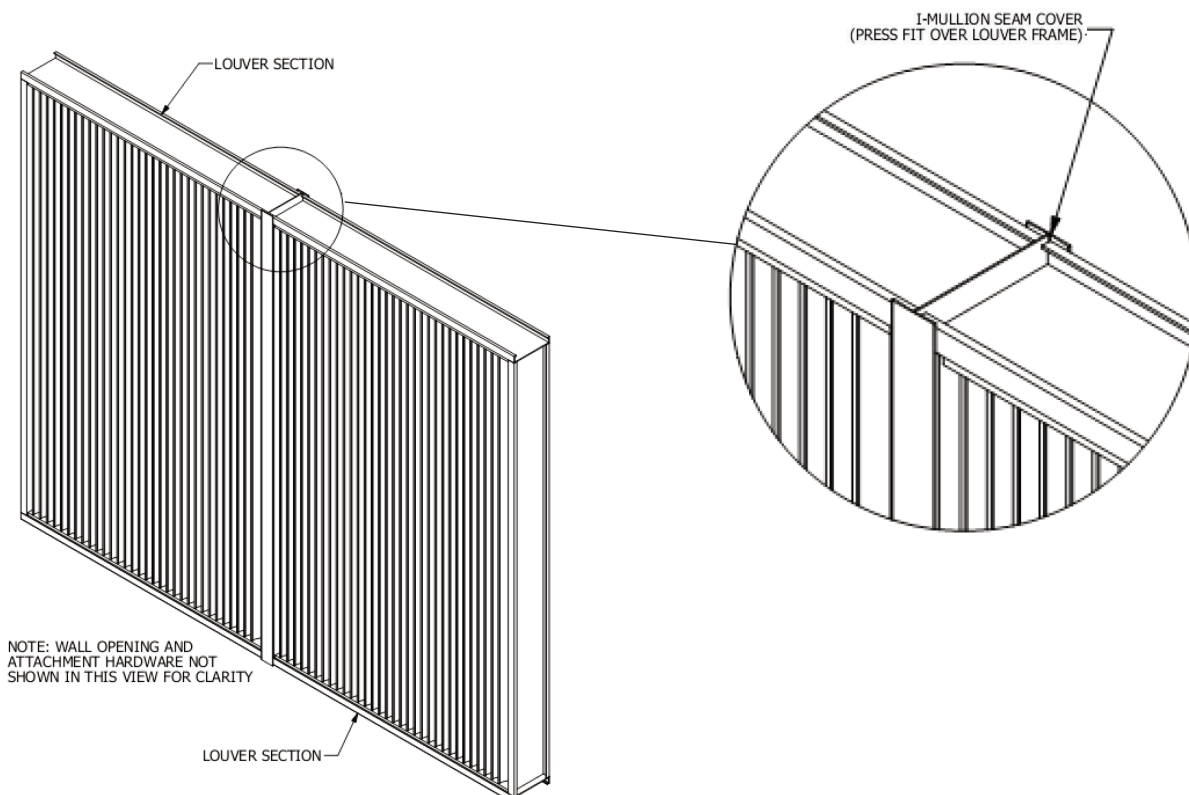


Figure 4: Installing I-Mullion (multiple section installations only)



IMPORTANT: READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION

General

The following guidelines provide basic assembly and installation instructions for ECV-645-MD extruded aluminum stationary blade louvers mounting to wood building conditions. The ECV-645-MD is designed to withstand the severe weather effects typically associated with hurricanes and is certified by Miami-Dade County for resistance to impacts, cyclic fatigue and static pressures up to 150 psf.

1. For additional details, refer to product NOA submittal drawings posted at www.alllite.com as well as any job-specific submittal drawings when provided.
2. Carefully lift louver sections by their frames using multiple lifting points if necessary to avoid distortion, racking or damage. **Do not apply excessive force to a single point and NEVER LIFT UNITS BY LOUVER BLADES.** Take necessary precautions to prevent marring the louver finish.
3. Caulk and anchors to the building condition are supplied by others.

Preparation

Louvers and Hardware:

1. Locate all crates, boxes, cartons, etc.
2. Remove louvers from packaging, inspect for damage, confirm quantities and sizes with packing list and organize parts in order of installation. To verify installation hardware quantities, refer to Table 1. Installation hardware will typically be shipped in a separate box.
3. Notify your All-Lite representative immediately of any shortages or shipping damage.

Openings:

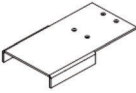




1. Inspect openings for damage, repair as needed and remove any obstructions or debris.
2. Prior to installation, verify that openings are square and plumb and that the louvers will fit properly.

Single Section Louver Installation

1. First, locate the Hat Channel Clips (A-3) and attach to the top and bottom of each louver section using #12 Hex-Head Screws (F-6). Refer to Figure 1 for details and required locations.
2. Next, attach the Mounting Clips (A-1) to the Hat Channel Clips using #12 Flat-Head screws (F-11) as illustrated in Figure 2. When installed, each pair of Mounting Clips should sit side-by-side.
3. Lift the louver section up and place it into the opening as shown in Figure 3.
4. As necessary, shim around the perimeter to level the louver and to maintain an approximate 1/4" clearance between the louver frame and the edges of the opening (shims are by others).

Table 1: Standard Installation Hardware.

Wood Building Condition

Part	Description		Quantity Required	
			Louver Sections < 26" wide	Louver Sections ≥ 26" wide
A-1	Formed Mounting Clip, Non-Flanged		Four (4) per section	Eight (8) per section
A-3	Hat Channel Clip		Four (4) per section	Eight (8) per section
F-6	#12-14 x 3/4" Hex-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section
F-9	1/2" x 3-1/2" Lag Bolt with Flat Washer*		Eight (8) per section	Sixteen (16) per section
F-11	#12-14 x 3/4" Flat-Head Tek Self-Drilling Machine Screw		Sixteen (16) per section	Thirty-two (32) per section

* Not supplied by All-Lite. Installation fasteners must be of corrosion-resistant steel (stainless, hot-dip galvanized or zinc-plated at a minimum)

5. With the louver section sitting level inside the wall opening, determine the locations of the 1/2" x 3-1/2" Lag Bolts (F-9, by others). Each Mounting Clip will have two anchoring bolts and the bolts must be spaced at least 3" apart and no closer than 2-1/2" to the edge of the blocking. At the appropriate locations, drill 9/16" clearance holes through the Mounting Clips.
6. Using the Mounting Clips as templates, drill pilot holes into the wood blocking. Pilot holes should be deep enough to allow the Lag Bolts to be inserted to their full length. Follow the bolt manufacturer's guidelines for hole diameter.
7. Insert the Lag Bolts into the pilot holes and tighten to the torque recommended by the bolt manufacturer.
8. Finally, install backer rod and caulk around the entire perimeter of the louver, as required.

Multiple Section Louver Installation

1. Install Hat Channel Clips and Mounting Clips on all sections following steps 1-2 in the single section louver installation section.
2. Install the left-most section (as viewed from the exterior) inside the wall opening following steps 3-7 for single-section louvers.

Multiple Section Louver Installation (Cont)

3. As shown in Figure 4, press the I-mullion seam cover onto the right-hand jamb (as viewed from the exterior). The I-mullion may require tapping with a rubber mallet to properly seat into place.
4. Install the next section to the right following steps 3-7 for single-section louvers, leaving an approximate 1/4" gap between sections.
5. Install any remaining I-mullions and louver sections using the procedure described above. Finish by installing backer rod and caulk around the entire perimeter of the opening, as required.

Figure 1: Attaching Hat Channel Clips

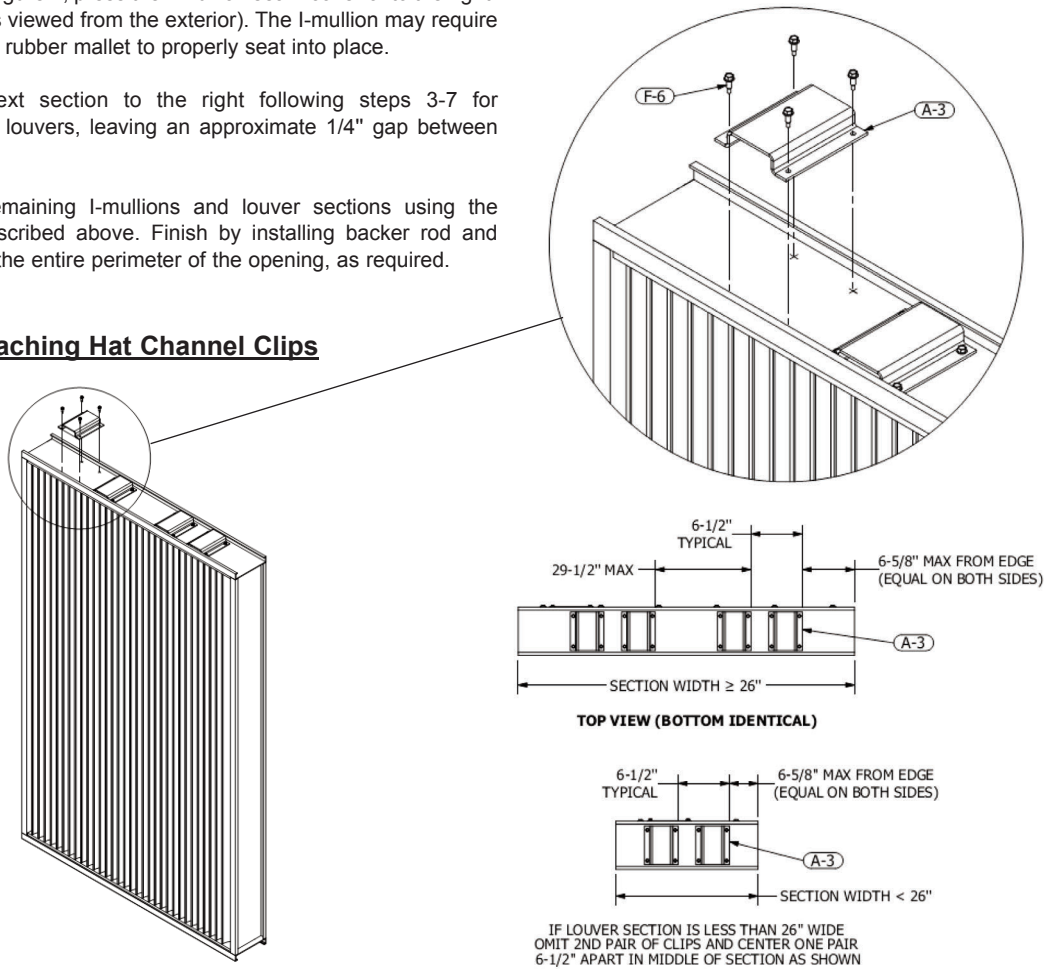


Figure 2: Installing Mounting Clips

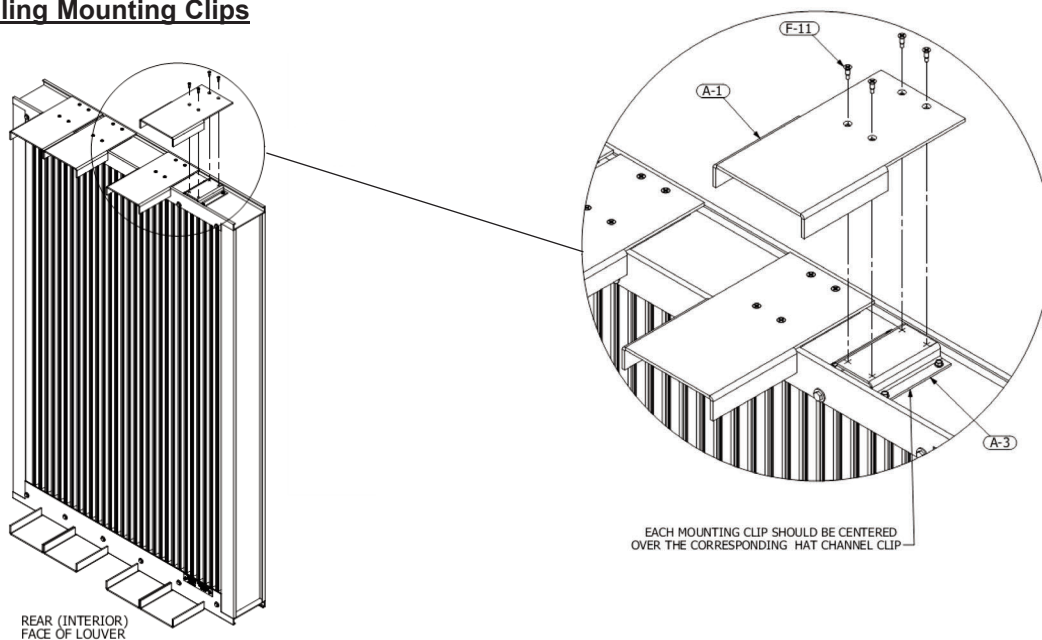


Figure 3: Securing Louver Sections to Opening

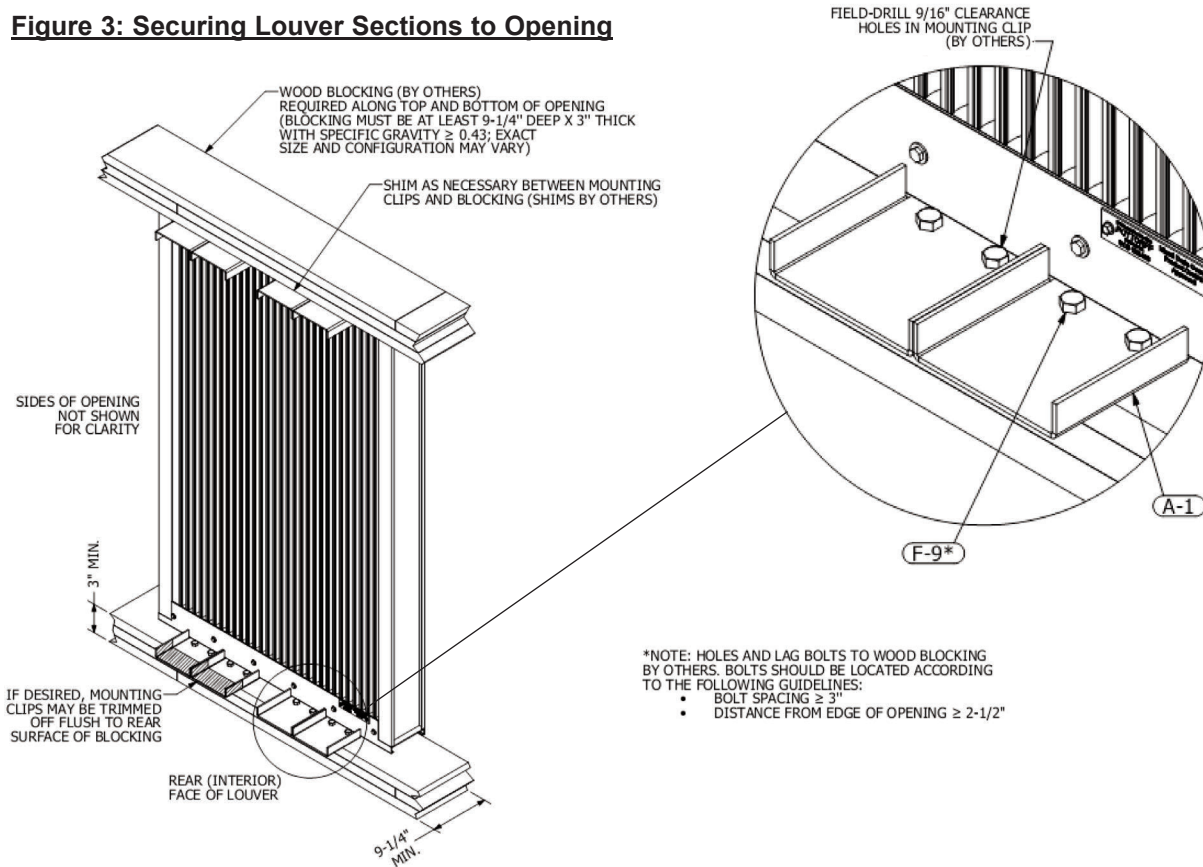


Figure 4: Installing I-Mullion (multiple section installations only)

