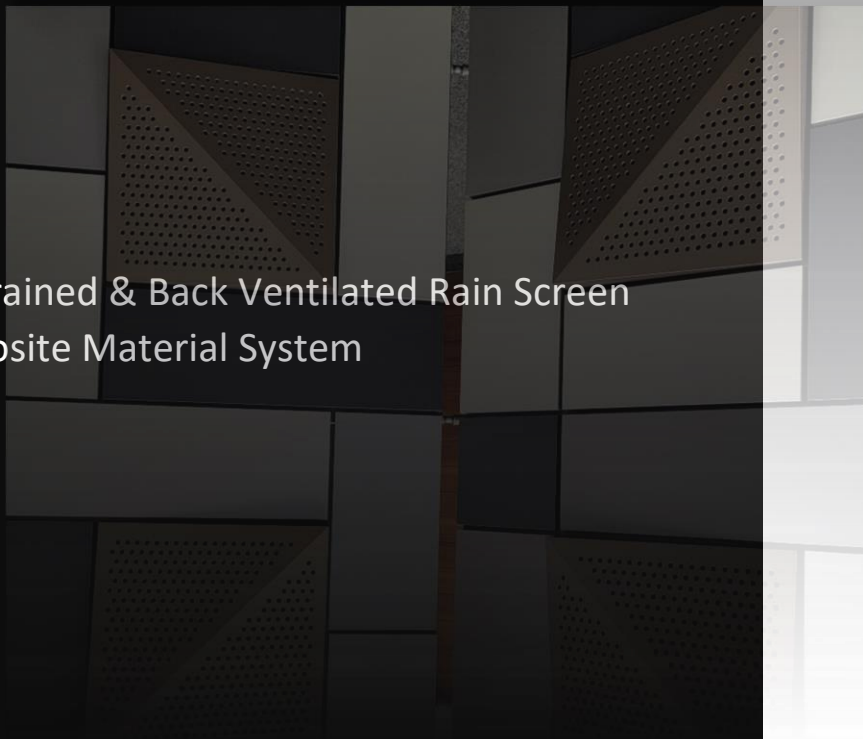




INSTALLATION MANUAL

Metalite® 8000 Drained & Back Ventilated Rain Screen
Aluminum Composite Material System





Metalite® 8000

Installation Manual

Why Build with Metalite® Prefabricated Panels?

Speed up construction or restoration. Simplify installation. Extend the construction season. A structure built with Metalite®8000 prefabricated panels means more for everyone, more satisfied contractors, more comfortable occupants or tenants, and more efficient structures and cost-effective operation for owners.



Faster Construction Time

In-plant fabrication can reduce production time, and speed up field application of exterior cladding systems, to reduce construction schedules.



Stronger and More Resilient

Our systems are designed for maximum durability, many with service lives far surpassing that of competing systems.



Cost-Effective for the Long-Term

A broad range of products can fit most project budgets — but our energy-efficiency and maintenance solutions can also help you ensure cost-effective ownership and operation for the long term.



One Point of Contact

Our products and systems are backed by industry leading warranties — all from a single point of contact. We can also help with everything from asset management to diagnostics to installer training.



Avoid Labor Shortage Problems

Prefabricated Metalite®8000 panels can help address ongoing shortages in the skilled labor force while simultaneously maximizing quality



Quality Assurance, Unsurpassed

Certified quality assurance and traceability program ensure you are getting what you are paying for.



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Installation Procedure

Pre-fabrication Requirements:

- Metalite®8000 shop drawings approved and stamped for Construction.
- All adjacent materials are set, anchored, and cleaned (if applicable).
- Substrate materials are plumb, square and in the proper plane.
- All field dimensions submitted by the customer are in the correct format.
- All fabrication tickets have been reviewed and approved by the customer.

Pre-installation:

- Confirm that any damage or deviation to substrate materials, air barrier or other adjacent materials have been remediated.
- The air barrier is undamaged, and all components are compatible.
 - Report any deviations.
- Order the correct fasteners (by delegated design).
- Confirm field inventory:
 - Starter extrusions
 - Sub-framing
 - MCM panels
 - Joint spline(usually the same color as the main MCM unless requested otherwise)
 - Flashings, if necessary
 - Fasteners

Installation:

- Mark the control lines on the substrate (water proofing) for field measurements purpose.
- The installer should review and confirm all control lines left by the layout crew.
- Install (pre-drill) Z-girts per structural delegated design or shop drawings. Fastener type, placement and spacings are also per structural calculations or shop drawings. Z-girts shall be snug to the air barrier, level, and in the specified gauges. Dimensions and spacings shall be in accordance with the approved shop drawings and any structural review.

Note:

Never shim between the substrate and the Z-girt. Any shimming should be done between the Z-girt and the metal panel itself.

- To fasten a panel where there is no framing (between two Z-girts) you will need to add a support perpendicular to the two existing Z-girts forming a bridge.
- If the weather barrier experiences any damage, use compatible materials for repairing the affected area.
- Make sure all the installed Z-girt are plum, leveled, and all fasteners are snug and tight against Z-girts to achieve a compression seal against the weather barrier.
- Never shim past stated tolerances (1/4" in 20ft, non-cumulative, on level, plumb, location lines without notifying the project manager. Use of solid shims and/or metal framing is preferred.
- Place the flashings at the top of the Z-girt in accordance with the specifications outlined in the shop drawings.
- Install W termination flashings to the Z-girt at all inside corners as well as Z flashing at all fascia, soffit locations and L flashings at jambs.

MCM Installation

Once the flashing install is complete, it is time to install the MCM components.

- Measure all walls and cut the starter extrusion to appropriate size. Attach the starter extrusion to the Z-girt using fasteners (by delegated design) and correct length so that you do not penetrate the water proofing and make sure to attach one fastener to every Z-girt. Ensure the extrusion is aligned and is square at the building corners.
- Vertical starter extrusions are installed in a similar manner at all required conditions. Make sure to review shop drawings to confirm what termination requires starter extrusion. Shim where required to ensure the extrusion is plumb.
- Let us not forget the starter extrusions at the window head. Attach to Zees using the same criteria as before and making sure you use the screw guide in the extrusion for fastener location.
- Locate the MCM spline for the starter extrusion. These are the splines that have a scored line on the backside. Cut down the splines to fit the length of the extrusion and then proceed to snap these into the starter extrusion. Please note that the horizontal pieces run long, and the vertical pieces should run short at the intersections. Also, at the building corner the spline should be a routed piece to fold and turn at the corner.
 - For termination panels that have the 2-piece extrusion (FL8 Mod + CL8) you can add a fastener on the back side to keep the extrusion locked in place during installation. This is not a requirement but will help keep the CL8 extrusion from sliding out during hoisting and installation.
- Confirm MCM installation direction. Standard is left to right, bottom to top.
- Per the approved shop drawings and installation sequence, locate the first bottom row panel and use standard 8" glass suction cups on the film side to help with carrying the panels. The Metalite® 8000 certification label, panel mark numbers and grain direction are all clearly noted on the backside of each panel.

- Grab the first bottom row panels using the proper lifting technique and walk it over to the wall to begin panel install. Please make sure the panel orientation and grain direction are correct. Lift the panel up over the starter extrusion and then slowly lower it into place to ensure the bottom FL8 extrusion interlocks with the starter at the base. Once panels are interlocked, adjust the panel up and down and left to right using plastic shims to accommodate the standard 1/2" reveals.
- Prior to attaching panels to the sub framing, confirm that panels are level and plumb using a speed square and level. The bottom row panel is the most critical to ensuring a quality installation, so please confirm that the top of the panel is following the benchmark on the wall left behind by the layout team. Now you can attach the panel extrusions to the Z-girts using fasteners (by delegated design), again making sure that these fasteners only penetrate through the Z-girts and not the waterproofing. Once the panel is installed, make sure you install the horizontal MCM spline in the MR8 extrusion before installing the next panel.
- Repeat the same steps for the next row of panels until you reach your top panel. After that stack of panels is complete you will need to install the 1/2" wide MCM spline at the required terminations only. These 1/2" wide splines can be snapped into place using a rubber mallet and plastic shims.
- Continue the installation of the Metalite® 8000 panels making sure to follow the installation sequence and repeating the steps and techniques described previously. Prior to moving on to the next panel it is important to make sure your panel joints are consistent, and all panels are level and plumb. It is always a good idea to double check that your panels are following the control lines marked on the wall as well as following the grain direction. Please note that the grain direction of the panel is noted on the protection film with arrows for easy visual inspections.
- Note that the MCM spline for the starter extrusion is identified by the scoring on the backside of the spline. Also, please note that the splines for corner fold conditions are fabricated and shipped with the v-route on the backside for folding. These are snapped into the starter extrusion prior to the installation of the panel.
- Now that the installation of the wall panels is complete, we are ready to start with the soffit and fascia panels. There is no difference to installing a soffit panel. Note that depending on the specific project condition, the installation sequence may vary (from building out or from outside in).
- The fascia panels are installed next in a similar fashion. It is important to note that any shimming required to plumb the panels needs to be done between the panel and the Z-girts. The folded corner panels are shipped flat and need to be folded in the field. This panel installation will require a person on either side of the corner. A pry bar may be used to adjust the panel, just make sure that very slight pressure is used to avoid damaging or scratching the panels. Prior to fastening the panel in place check the panel for plumbness and squareness.
- Snap in MCM spline into MR8 extrusion on right side to continue left to right install. Use a rubber mallet to help slide the spline into place and secure it into extrusion.

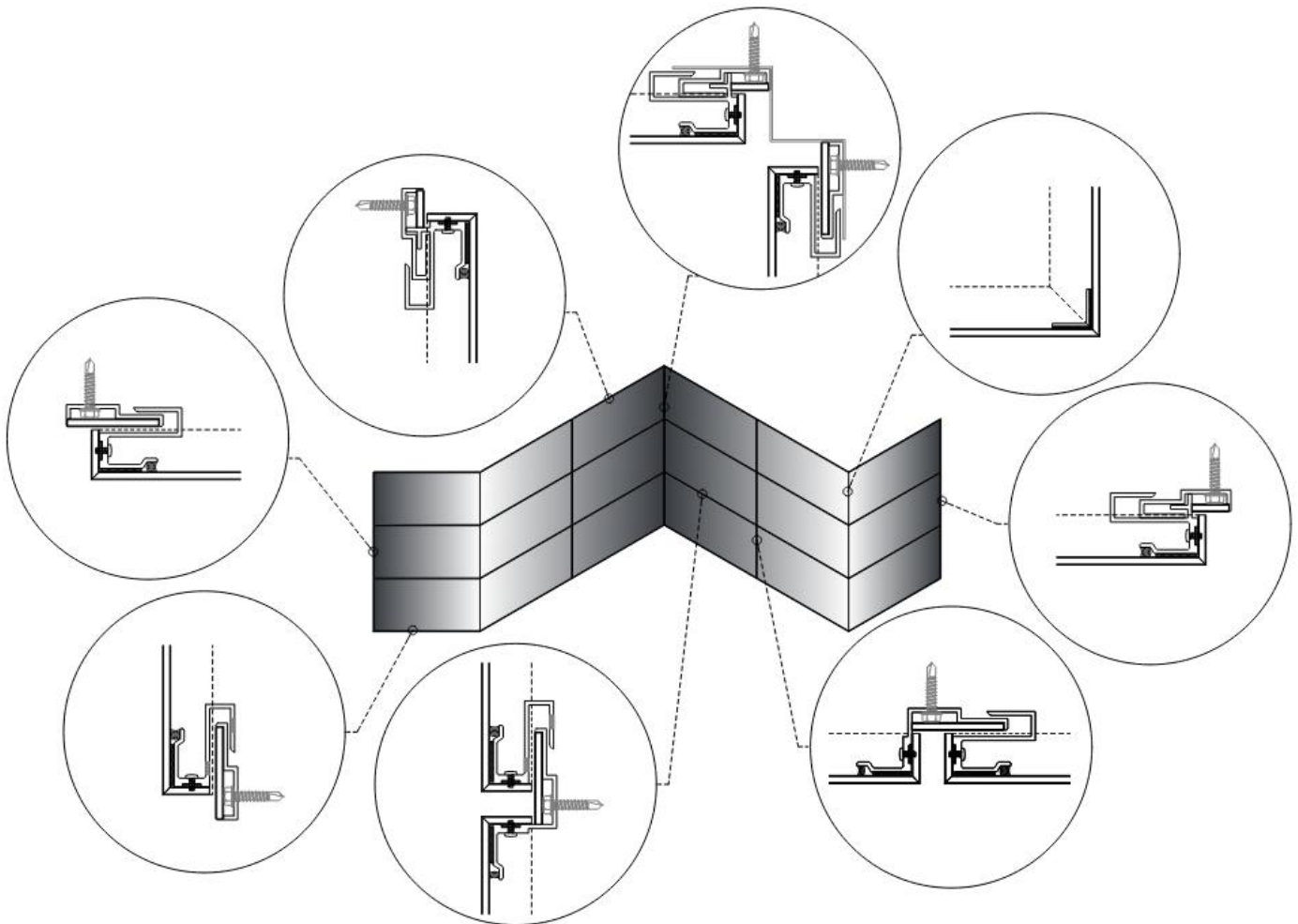


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- Install the remaining fascia and soffit panels using the same installation technique until the project is complete.
- After all panels are installed, you need to make sure your work area is clean and do a visual inspection of the entire wall to ensure all panels are attached properly, all panel joints are consistent, all reveals have MCM splines installed and that all finished panels are free of any damages or scratches.
 - **Remove protective film per the manufacturer's recommendation.**
- Upon project completion, submit all pertinent warranties and a certificate of completion to the general contractor.

System Components



Note: Flashing, fasteners, and Z-girts are not components of the Metalite®8000 system and should be provided by the installer.

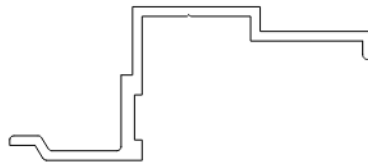
Aluminum Extrusion (mill finished)

SR8



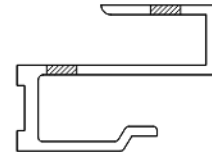
@ Base

MR8



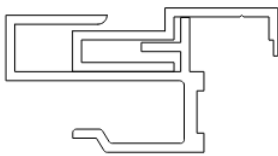
@ Top + Right

FL8



@ Bottom + Left

FL8 Mod + CL8



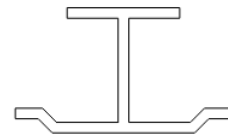
@ End

ZC8



@ Alternate Termination

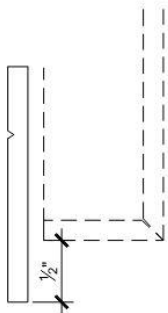
ST8



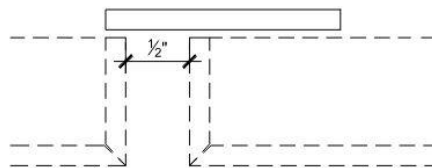
Stiffeners

Spline

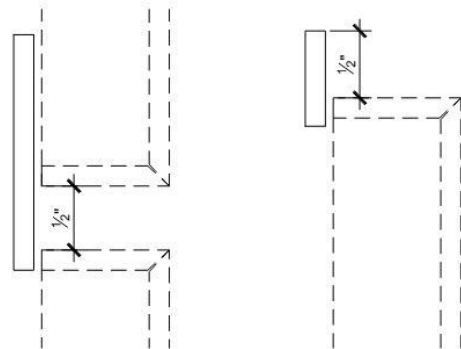
Base spline



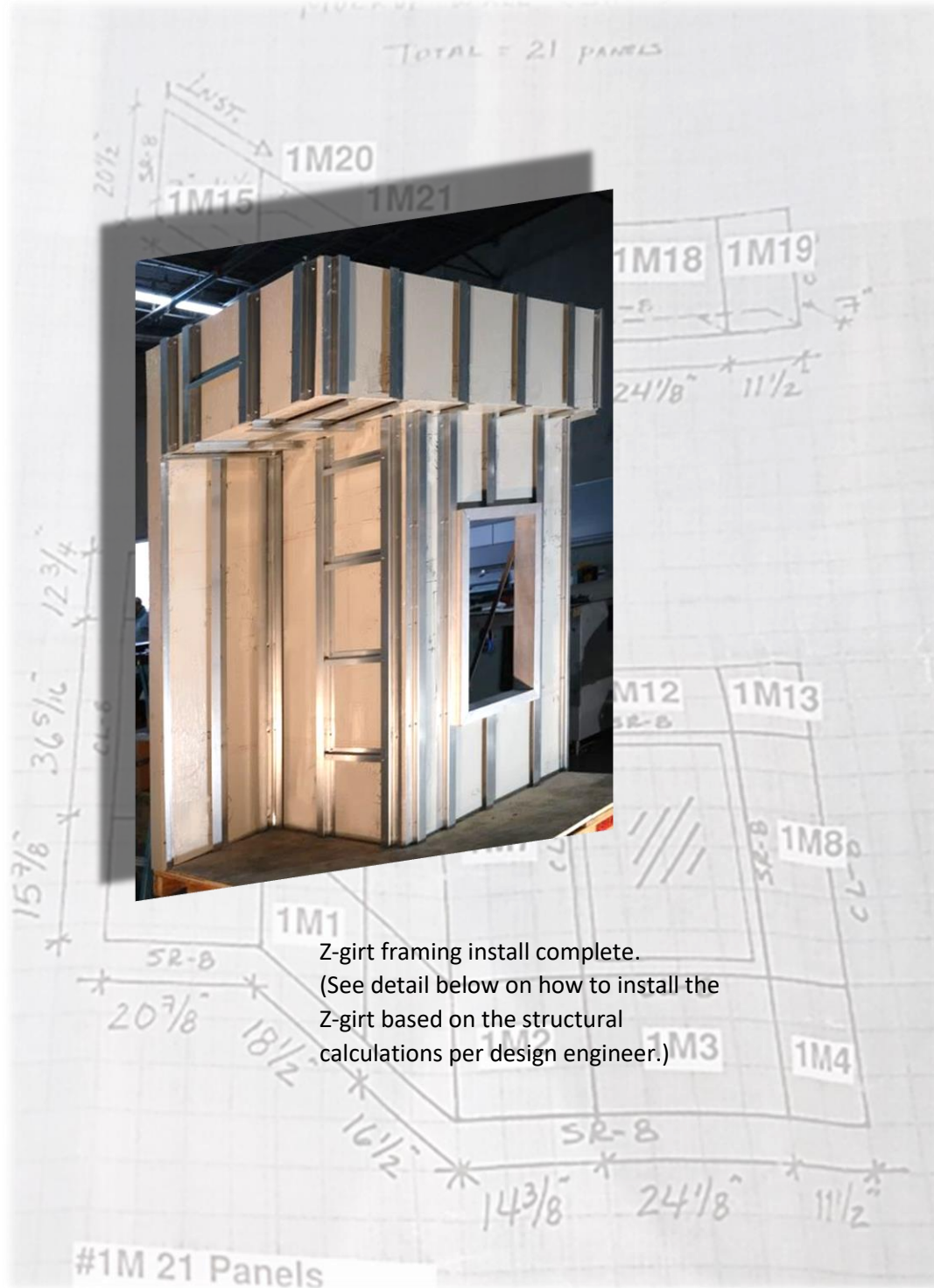
Vertical & Horizontal spline



Top / End



Assembly Illustration



Z-girt Installation

Note: Z-girts are installed in the field and not components of the panel system.



Measure Z-girt and cut to required size for install.

Pre-drill Z-girts holes at fastener spacing per approved engineered shop drawings.

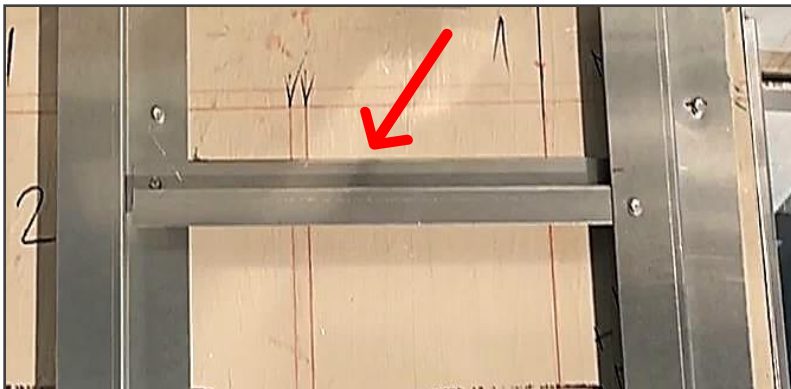


Attach Z-girt to building structure using the fasteners and spacing per delegated design.

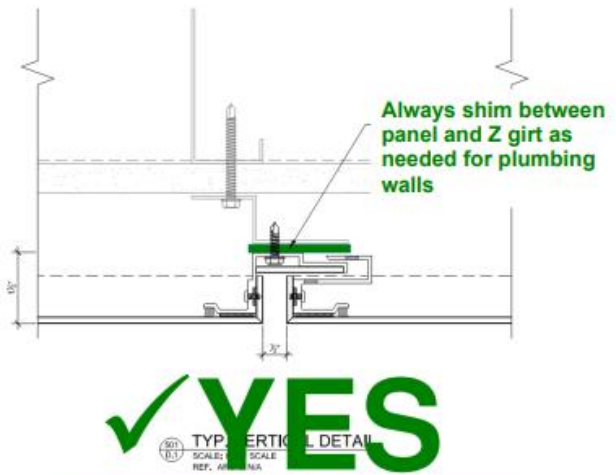
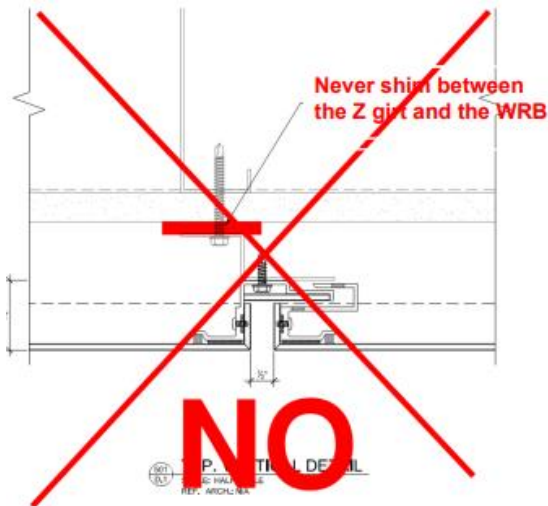


Additional Z-girts must be added for vertical panel joints that do not align with the spacing of the sub-framing.

Field measure between Z-girts and cut framing down to infill as required. Please note that the added infill framing should match the same spacing required for panel attachment.



Final Z-girts Installation.



Note:

Never shim the Z-girts against the substrate. Any Shimming should be placed between the Z-girt and the metal panel itself. Shimming against the substrate will negatively impact the performance of WRB.

Flashing Installation

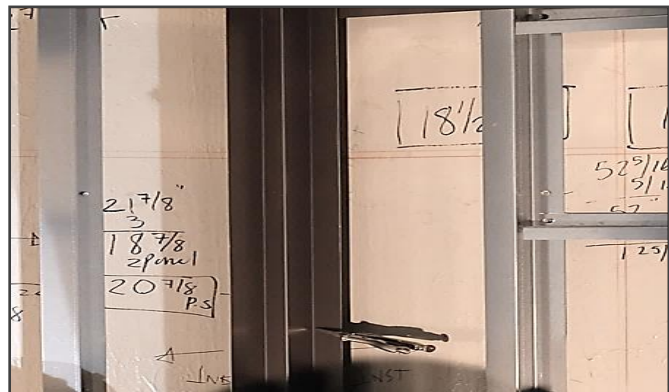
Note: Inside corner in wall and soffit (Flashing as required by others).

Flashings are installed in the field and not components of the panel system.

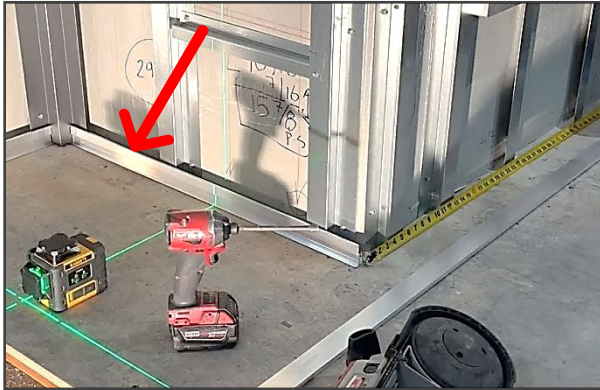


Attach W termination flashing to the Z-girt at all inside corner conditions using $\frac{3}{4}$ " pan head self-drilling screws as well as Z flashing at fascia / soffit conditions.

If shimming is required, use solid plastic shim and place between back of flashing and outer legs of Z-girts.



Starter Piece Installation



Once the flashings are complete it is time to install the starter extrusion, measure all walls.

Cut the starter extrusion **SR8** to the appropriate length. Please note that these extrusion will be provide in 16' stock lengths.



Attach the base starter extrusion **SR8** to the Z-girts. Please make sure you attach per the spacing called out for in the engineering calculations.

At all flashing locations the **SR8** starter should attach through the flashing and into the Z-girt.



Attach one fastener at every Z-girt or as required by the approved shop drawings or engineering calculations.

Ensure that the **SR8** starter extrusions align and are square building corners.





Vertical starter extrusions are also installed in a similar manner at all required conditions.

Starter extrusions at the window head are attached to Z-girts using the same criteria as before.



Starter extrusions at the soffit are attached to the Z-girts using the same criteria as before.

MCM Spline

Starter MCM base splines are indicated with a scored line on the backside.



Locate the MCM spline for the starter extrusion, cut down the spline to fit the length of extrusion and then proceed to snap these into the starter extrusion.

At the building corner, the MCM spline should be a routed piece to fold and turn the corner.





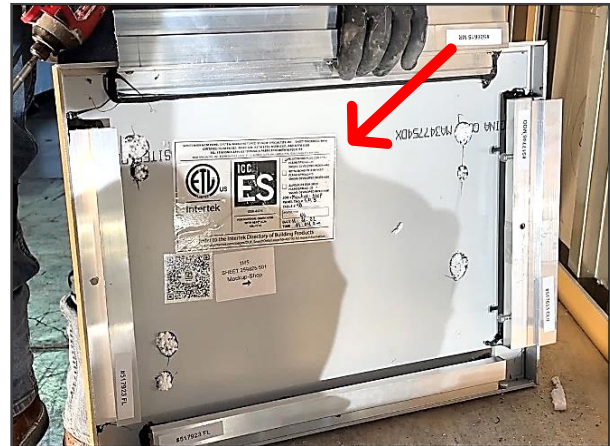
Install MCM splines on all starter piece, note that the horizontal pieces run long, and the vertical piece should run short at the intersections.

The horizontal splines running long and the verticals stopping short.



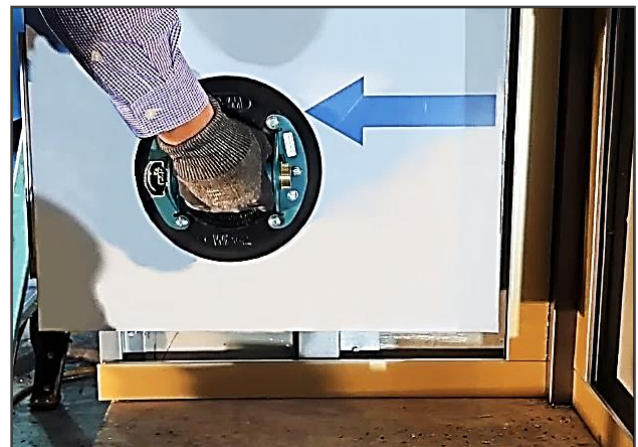
Panel Installation

The Metalite®8000 certification label, panel mark numbers and grain direction are all clearly noted on the backside of each panel.



Locate the first bottom row panel and use standard 8" glass suction cups on the film side to help with carrying the panels.

Lift the panel up over the starter extrusion and then slowly lower it into place to ensure the bottom **FL8** extrusion interlocks with starter piece at the base.





Adjust the panel up and down and left to right using plastic shims to accommodate the standard ½" reveals.

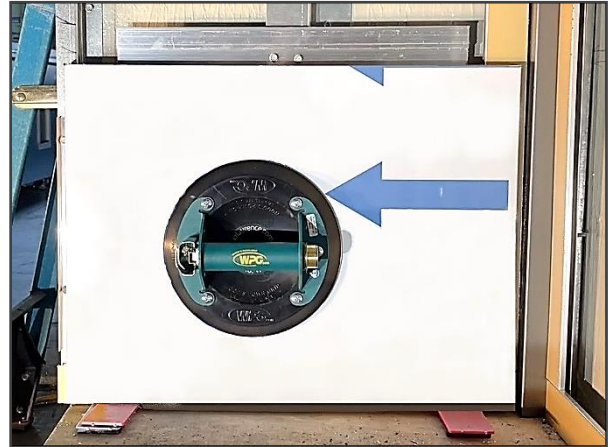
Confirm that panels are level and plumb using a speed square and level.



The bottom row panel is the most critical to ensuring a quality installation.

Note: Attach all panel extrusions to the building structure per delegated design and use fasteners per approved engineer shop drawings.

Horizontal Attachment at every vertical Z-girt using the correct type and length of fastener.



Once panel is installed make sure you install the horizontal MCM spline in the **MR8** extrusion before installing the next panel.

FL8 Mod + CL8 extrusion at the top termination.





Horizontal joint attachment, showing that all shimming should occur between the panel and the face of the Z-girt.

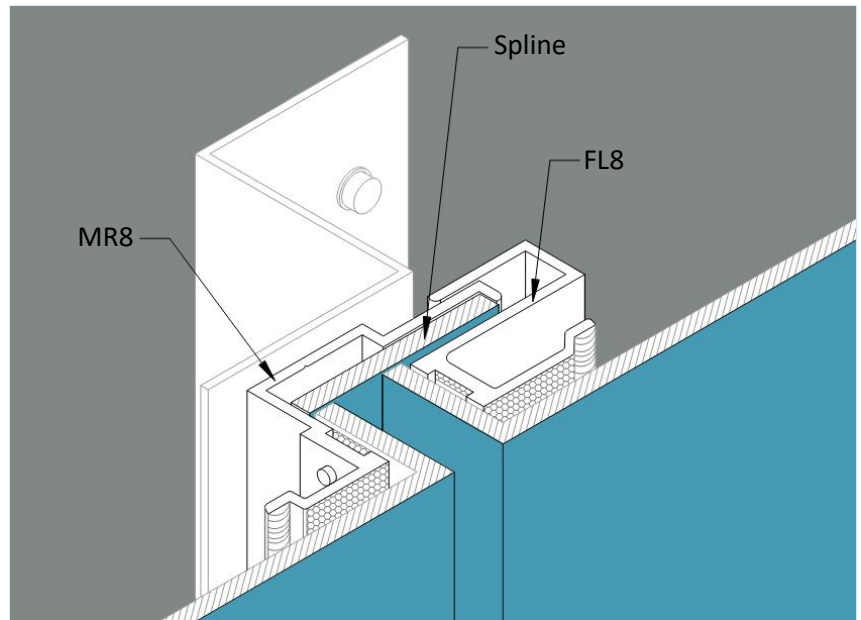
FL8 Mod + CL8 extrusion at the end termination.



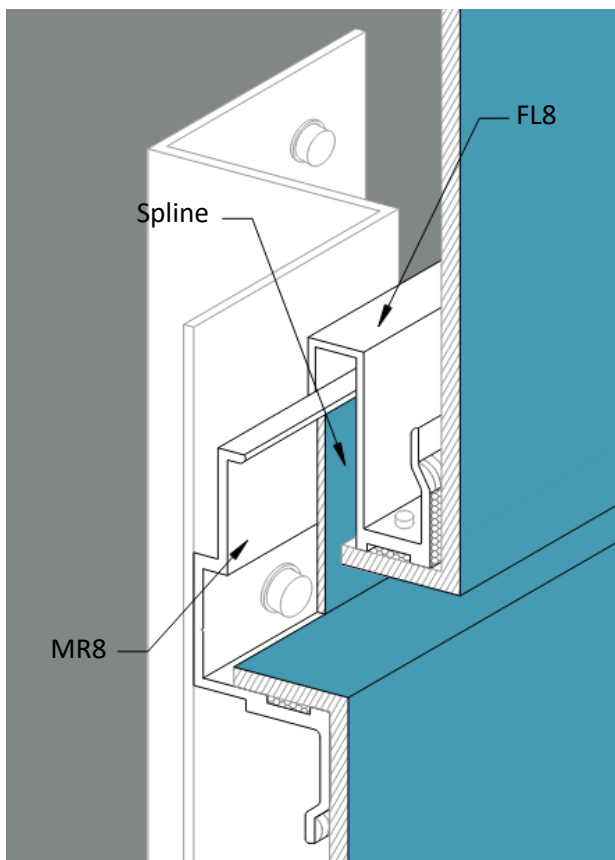


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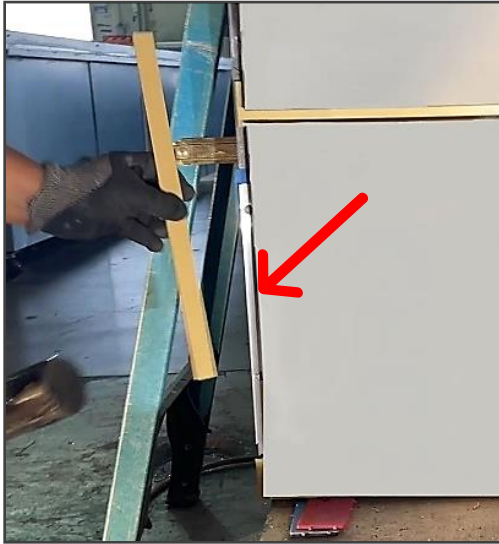


Vertical Joint Panel



Horizontal joint Panel

Note: Use a rubber mallet to help slide the spline into place and snap into extrusions.



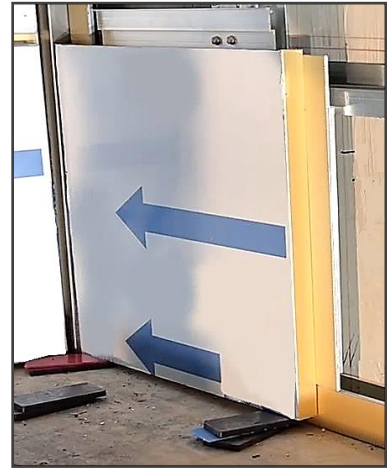
Snap in MCM spline into **FL8 Mod + CL8** termination extrusion.

End panel MCM spline.



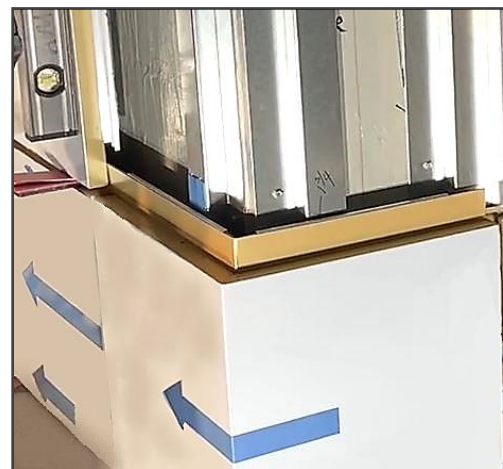
Top MCM spline into **MR8** extrusion.

Vertical joint MCM spline, note that horizontal splines run long, and vertical splines stop short at intersections.



This corner panel install will require a person on either side of the corner.

Also, at the building corner the spline should be a routed piece to fold and turn the corner.



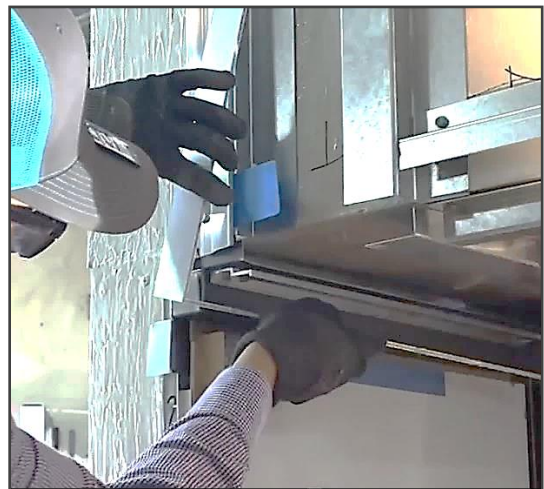
Fascia and Soffit

Now that the installation of the wall panels is complete, we are ready to start with the soffit and fascia panels.



The folded corner panels and splines are shipped flat and need to be folded in the field.

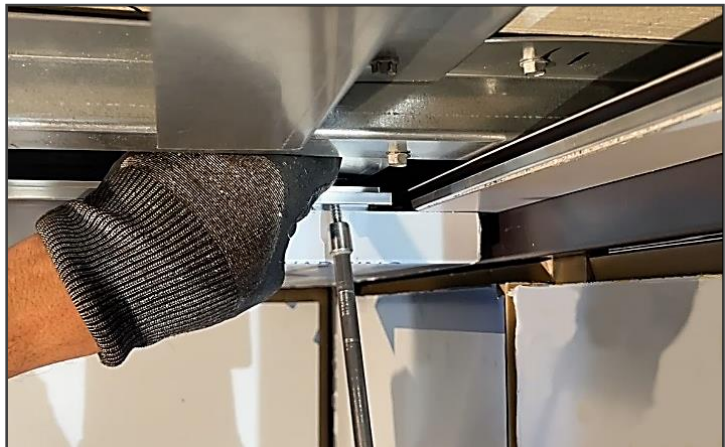
Locate the MCM spline for the starter extrusion, cut down the spline to fit the length of extrusion and the proceed to snap these into the starter extrusion.





Lift the panel up over the starter extrusion and then slowly slide it into place to ensure the bottom **FL8** extrusion interlocks with the starter at the end.

Now you can attach the panel extrusions to the Zees using fasteners per delegated design, again making sure that these fasteners only penetrate through the Zee and not the waterproofing.



Once panel is installed make sure you install the horizontal MCM spline in the **MR8** extrusion before installing the next panel. Repeat the same steps for the next row of panels until you reach your end panel.

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Prior to fastening the panel in place check the panel for plumbness and squareness.



It is important to note that any shimming required to plumb the panels needs to be done between the panel and the Zees.

This corner panel install will require a person on either side of the corner.





Attach the top extrusion **FL8 Mod + CL8** to the Z-girt.

Snap in MCM spline into **MR8** extrusion on right side to continue left to right install. Use a rubber mallet to help slide the spline into place and secure into extrusion.



Prior to moving on to the next panel it is important to make sure your panel joints are consistent, and all panels are level and plumb.

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Once panels are interlocked, adjust the panel up and down and left to right using plastic shims to accommodate the standard 1/2" reveals.

Grain Direction

Note: MCM Panel finishes in mica, metallic or anodized are batch sensitive and have a grain direction.



After all panels are installed, you need to make sure your work area is clean and do a visual inspection of the entire wall to ensure all panels are attached properly, all panel joints are consistent, all reveals have MCM splines installed and that all finished panels are free of any damages or scratches.

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