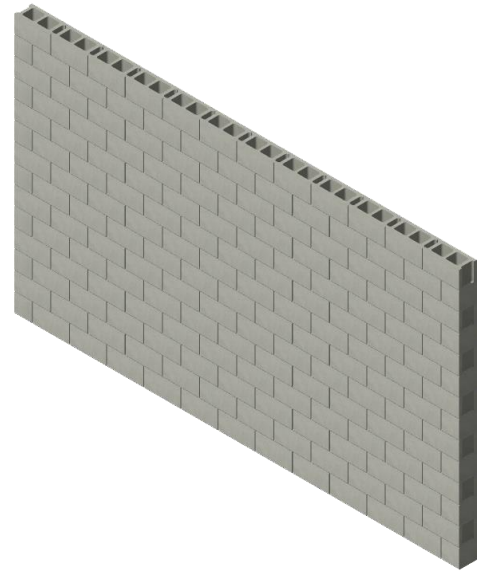# ProGUARD®*DP* Installation

Step 1: Inspect Concrete Wall Substrate

The substrate can be comprised of poured-in place concrete or concrete block. Ensure these walls are plumb prior to installation. Ensure these substrates are free of dust and debris. Deflection criteria for substrate should be L/600 (L/720 preferred).

Step 2: Base Wall Flashing

Install 16-gauge steel flashing/panel support (ideally prefinished or with a G-90 coating) at the base of all walls, above wall openings, and at deflection joints in the concrete wall assembly. Attach the steel flashing at 16" O.C. back to the solid substrate behind, using the same screws used to attach the ProGUARD®*DP* insulated concrete panels (shorter versions of the same screws). The steel flashing should extend 6" up the wall and the horizontal leg should project a minimum of ½" beyond the face of the ProGUARD®*DP* insulated concrete panel face (i.e. horizontal leg is based on the thickness of the ProGUARD®*DP* insulated concrete panels plus ½"). If the panels are resting on the foundation ledge or 16-gauge steel flashing/panel support is used then this would be a ProGUARD®*DP* "**supported panel application**" (i.e. base of ProGUARD®*DP* insulated concrete panels are supported on foundation ledge or footing or 16-gauge steel flashing/panel support).

16-gauge steel flashing/panel support does not have to be utilized. If not used then this would be a ProGUARD®*DP* "**unsupported panel application**". In this case, more screws with a tighter screw spacing may be required to fasten the ProGUARD®*DP* insulated concrete panels to the substrate. The engineer of record should provide this information by referring to NTA Report TRI9030116-28.

Step 3: Install Air & Water Barrier

Apply two coats of Laticrete Air and Water Barrier (Vapor Barrier Material) over the entire surface of the substrate. Follow manufacturer's instructions for proper application.

Alternatively apply two coats ProGUARD®*DP* Water Armor Air and Water Barrier (Air Barrier Material) over the entire surface of the substrate. Follow manufacturer's instructions for proper application.

Install 1/8" thick hard plastic shims at the base of the wall on top of the 16-gauge flashing or flashing over the foundation ledge to support the bottom of the panels and create a small gap for moisture to escape the assembly from the drainage planes. Tack the shims in place with a dab of waterproofing.
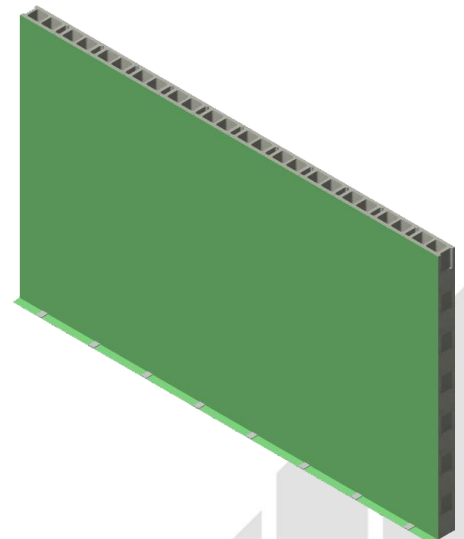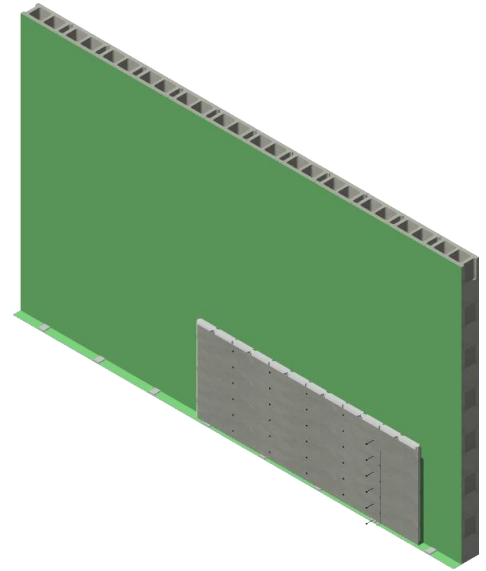
Step 4: Install First ProGUARD®*DP* Insulated Concrete Panel

Install first ProGUARD®*DP* insulated concrete panels. The bottom ship-lapped edge of panel should be cut so that the concrete board and insulation are flush at the base of the wall. Set the bottom of the panel down on the steel flashing support and shims. Ensure that the vertical panel joints fall on a stud. Panels may have to be cut to length to accomplish this. Always set the 8'-0" dimension in the horizontal dimension on the wall (3'-0" is always the vertical dimension).

Engineer of record should select ProGUARD®*DP* screws and screw spacing using NTA Report TRI9030116-28 and will be dependent on supported or unsupported panel applications, weight of the thin adhered masonry veneer or stucco application, insulation thickness, wall height, wind pressure, and wind speed. When fastening the ProGUARD®*DP* panels, the screw heads should not break the outside skin of the concrete board.

Please call Arriscraft Technical Services if there are any questions about the screws or screw spacing. Only use approved ProGUARD®*DP* screws and do not substitute with any other screw.

Step 5: Install Remaining Panels

Install second ProGUARD®*DP* insulated concrete panel adjacent to the first panel (following similar procedures to the first). Slip the foam insulation edge of the second panel behind the ship-lapped edge of the concrete board of the first panel. Screw the ship-lapped edge of the first panel back to the substrate. Continue in the same fashion along the base of the wall until all panels are installed.

Install the next row of ProGUARD®*DP* panels above offsetting the vertical panel joints in increments of 16" O.C. (i.e. 16", 32", 48" etc…). ProGUARD®*DP* insulated concrete panels cannot be oriented vertically (i.e. the 8'-0" length of the panel must always be in the horizontal direction for the drainage grooves to align). **To promote drainage of the assembly, the panels must be installed with the insulation grooves aligned.** Offsetting the vertical panel joints in increments of 16" O.C. (i.e. 16", 32", 48" etc.) will help to align the drainage grooves, however using a 3/8" diameter wood dowel slid into the drainage grooves to align the joints may be required. Remove the wood dowel once the next panel has been tacked into place and repeat as required

Screw penetrates min. 1"

Plan view of ProGUARD®*DP*
Vertical Joint
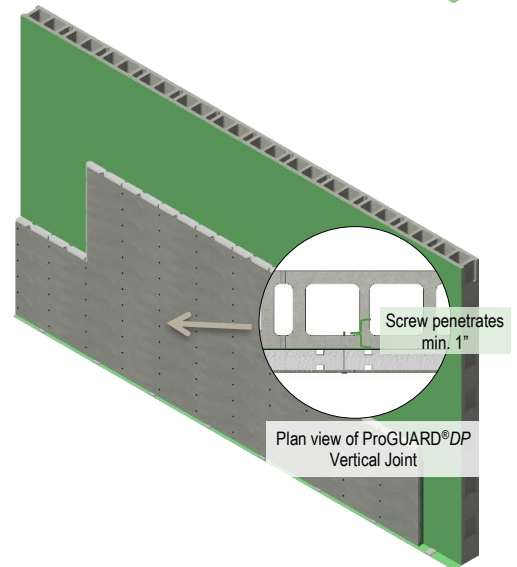
Step 6: ProGUARD®*DP* Insulated Concrete Panel Joint Treatment

Once all ProGUARD®*DP* insulated concrete panels are installed, treat all joints between panels with a 4" wide alkali-resistant mesh tape. Apply tape across all joints (2" on either side of joint), pressing firmly to ensure adhesion to substrate. Spread a thin coat of Laticrete Hi-Bond Masonry Veneer Mortar over the alkali-resistant mesh tape. Allow Laticrete Hi-Bond Masonry Veneer Mortar to fully cure.
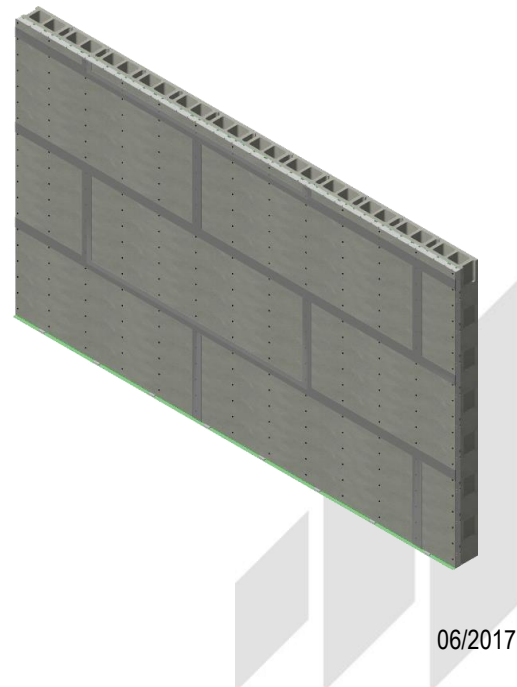
### Step 7: Adhered Veneer Substrate Preparation

Ensure installed ProGUARD®*DP* insulated concrete panels are free of dust and debris. Using a notched trowel, spread Laticrete Hi-Bond Masonry Veneer Mortar across ProGUARD®*DP* insulated concrete panels and ensuring to burn the mortar into the concrete board surface. Pull notched side of the trowel across mortar to create a grooved surface and to gauge the mortar thickness. Notched trowel selection is dependent on the material being installed and the tolerances on the substrate. Apply only a workable area of mortar that will allow stone to be properly set before surface drying occurs. This area will vary depending on site environmental conditions.

NOTE: Do not substitute Laticrete Hi-Bond Masonry Veneer Mortar with any other product or material unless Arriscraft Technical Services has been consulted.
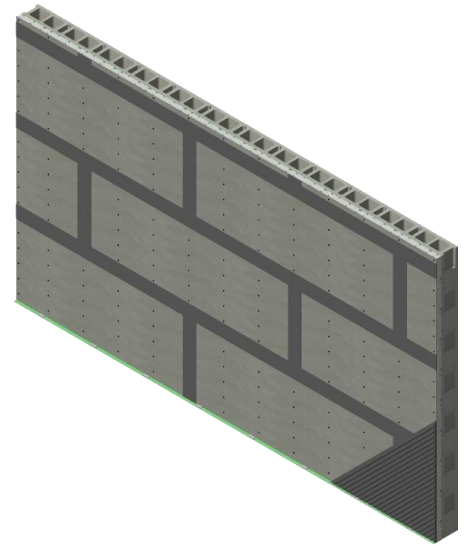
Step 8: Prepare Thin Adhered Masonry Veneer

Clean unit backs of any dust, laitance, loose material and any excess film that could impede bond. With the point trowel "back-butter" the stone units, ensuring to burn the mortar into the back of the units and filling any surface irregularities and ensuring 100% coverage.
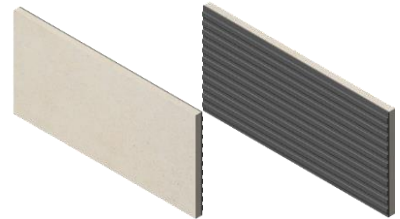
Step 9: Install Thin Adhered Masonry Veneer

Begin with the corner pieces. Press the corner piece onto the wall, rotating back and forth slightly. This process should force some of the mortar to "squeeze out" and work out any air gaps in the mortar. Remove any excess mortar with a square flat trowel and use the excess on the next piece of stone.

After the corner pieces are installed, apply flat stretcher pieces starting at an outside corner unit and working your way in. Set the stretcher unit. Once set on the wall push the unit up and at an angle and then return it back to desired position. This process should force some of the mortar to "squeeze out" and work out any air gaps in the mortar. Remove any excess mortar with a square flat trowel and use the excess on the next piece of stone. Remove excess mortar droppings from the stone face with a clean wet sponge and a stiff fibre brush. Check for 100% mortar coverage by removing two stone units from the wall per bag of mortar used.

ARRIS-stack, Coastal and Midtown shipped materials include a percentage of shorter random length/fragmented units. These can be used by the installer around openings such as windows and doors to create the random ashlar bond pattern, or in internal corners where two walls meet. Some units may need to be field trimmed or guillotine split to ensure units fit snugly together.