

## PRE-FAB/OFFSITE

### Supplemental Guide for AWP Installation

This document is intended to supplement the main Nichiha Architectural Wall Panel (AWP) installation guides, which can be found on our website, along with all other technical documents such as technical bulletins, architectural details, instructional videos, and code compliance reports and approvals: [nichiha.com/resource-center](https://nichiha.com/resource-center).

Install products in accordance with the latest installation guidelines and all applicable building codes and other laws, rules, regulations, and ordinances. Review all installation instructions, [Intertek CCRR-0299](#), and other applicable product documents before installation. This document's effective date is January 2024.

#### TECHNICAL DESIGN REVIEWS

Please consult with Nichiha's Technical Department directly before installation of AWP on offsite or panelized exterior walls. In order to maintain the Product Warranty, a full technical review is required.

#### WALL ASSEMBLY OPTIONS & REQUIREMENTS

The wall assembly requirements to enable AWP installations on pre-fab construction are essentially the same as presented in the horizontal and vertical AWP installation guides. Framed exterior wall partitions will need 16" o.c. minimum 18 gauge steel or 2x wood studs. Exterior continuous insulation may require furring or a nail-base insulated sheathing option. Please refer to the appropriate document(s) and review *Framing & Sheathing Requirements* and *Continuous Insulation*. Wall assemblies are a key focus during the Technical Design Review.

#### BEST PRACTICES & DESIGN

The Ultimate Clip system is required with Pre-Fab/Offsite installation.

The AWP 3030 horizontal application is best suited for pre-fab/offsite. All vertical joints and edges are aligned and stabilized by flanged sealant backers, H-Mold, or J-Mold trim on both sides, protecting against lateral movement. AWP 1818 can also follow the AWP 3030 application method with removal of the vertical shiplapped edges (17-7/8"). Coat the cut edges with color-matching exterior acrylic latex paint.

*Whenever AWP 1818 vertical shiplap joints are utilized, the Joint Tab Attachments included with Ultimate Clips are **required**.* Refer to the AWP 1818 specific installation steps in the *Horizontal AWP Install Guide*. The Joint Tabs are also utilized in a customized manner for the Partial Onsite method for stacked layouts of 1818 panels presented in this supplemental document.

**PANELIZED EXTERIOR WALLS** - AWP are normally installed on vertical walls (i.e. erected structures). Particularly with horizontally-oriented AWP, gravity assists the installer to seat the panels on the Starter Track and Ultimate Clips. So whenever possible, it is recommended that offsite installation on pre-fab panelized walls be done with the walls set vertically. Horizontal (tabletop) installation can be done but extra care must be taken to properly seat/fit the panels tightly at their shiplap joints. Utilize wood blocks and rubber mallets, tapping panels on their edges, to persuade them into place.

#### TRANSPORTATION & MOVEMENT

Crane lifting, loading, and setting, with balanced top-side load point connections, of modular or panelized prefab units is recommended over other methods such as forklifts.

Any straps or bungee cords utilized during unit transportation can vibrate or flutter. Therefore, particularly at any buckles or ratchets, it is recommended that foam insulation board be used to protect the installed AWP against impact damage.

**Nichiha is not responsible for transportation, movement, or installation-related product or finish damage. AWP are a finished product and must be protected accordingly.**

## COMPLETE OFFSITE PRE-INSTALLATION - HORIZONTAL AWP

The Complete Offsite approach allows for full pre-installation of Nichiha AWP in a factory setting. The AWP on each module or wall panel are detailed to make them independent of AWP on other pre-fab units. This is accomplished with specialized vertical and horizontal unit joints. Otherwise, standard installation practices are followed. Note: this approach does not allow for repair/proper jointing of the WRB between unit joints.

### Vertical Unit Joints

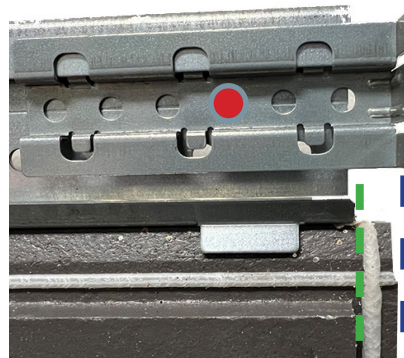
*See Detail A.* Along the vertical (perimeter) edges of the pre-fab unit, install J-Mold trim. Position the trim 3/16" in from the vertical edges of each unit. This will create a 3/8" sealant joint when the units are set at the final jobsite. The J-Molds will prevent the AWP from shifting laterally during transport.

### Horizontal Unit Joints

*See Detail B.* After the top-most panel is secured, cap the unit with a coping-like flashing. At the base of the second story unit and thereafter up to the parapet wall, utilize a simple angle flashing positioned just above the base of the unit. This shape and positioning should reduce risk for damage of the flashing during unit transportation and placement.

positioned to align with the edge of the face of the panel. The shiplap (to be covered by the last panel) will protrude to the right. It is 3/8" wide and features the sealant gasket. After positioning and fastening the clip to the framing or furring, next add a Joint Tab Attachment to extend to the right with the forward facing flanges aligning with the edge of the shiplap. This will serve as a lateral movement stop for the second course of panels. **Fasten the Joint Tab Attachment to the Ultimate Clip with the provided fastener.** *See Image One.* Repeat this step as the stack of AWP builds upward. The left side of the next unit will utilize a continuous Sealant Backer joint at the starting point just to the right of the unit joint.

Image One



## PARTIAL ONSITE COMPLETION - HORIZONTAL AWP

The Partial Onsite approach allows for majority installation in an offsite factory setting, leaving off AWP adjacent to unit joints so that limited installation is required at the jobsite. Note: this approach allows for repair/proper jointing of the WRB between unit joints.

### AWP 1818 - STACKED

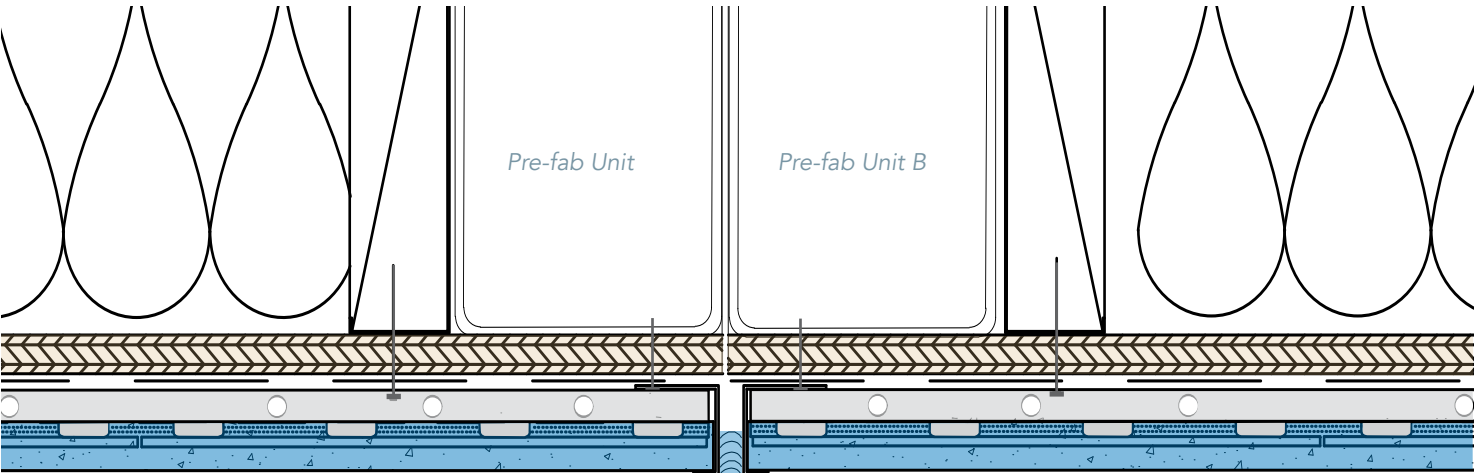
#### Vertical Unit Joints

*See Details C and E.* Working from left to right, install the AWP normally until reaching the next to last panel, leaving off the last panel that will span the vertical unit joint at the jobsite. Secure the next to last panel with an Ultimate Clip

#### Horizontal Unit Joints

*See Detail G.* When work reaches the next to last course at the top of the unit, secure the next-to-last panels normally with Ultimate Clips, leaving the clips exposed below the horizontal unit joint. At the bottom of the unit to be stacked above, add z-flashing, such as Nichiha's Compression Joint Flashing, positioned above the base of the unit. This will help prevent damage to the flashing during the transportation and placement process. Install Starter Track and AWP normally above, but including the special step with Joint Tabs for the last right side panels adjacent to the unit vertical joint. At the jobsite, measure and cut the fill-in panels to span across the horizontal unit joint once the WRB has been repaired/jointed. Face fasten the top of the panel through 10mm Spacer.

Detail A - Vertical Unit Joint - Complete Offsite Pre-Installation



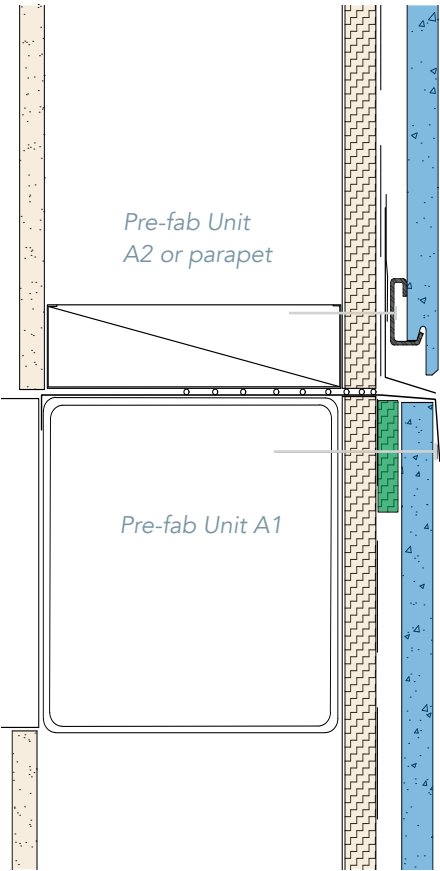
Horizontal AWP with Ultimate Clips - fastened at framing (or furring)

Vertical Unit Joint with AWP capped by J-Mold trim with a 10mm gap filled with sealant between pre-fab units.



Vertical Unit Joint at jobsite prior to the addition of sealant.

Detail B - Horizontal Unit Joint - Complete Offsite Pre-Installation



Horizontal AWP on Starter Track (FA700)

Horizontal Unit Joint with AWP lower unit panels capped by flashing. A simple angle flashing is installed at the base of the upper unit.



## AWP 3030 - STACKED

### Vertical Unit Joints

See *Detail F*. With 3030mm panels, all vertical joints are aligned/stacked. Use a Single or Double Flange Sealant Backer or H-Mold trim as the stopping point, leaving a gap where the vertical unit joint will be at the jobsite. To complete the installation in the field, install AWP 3030 normally to cover the unit vertical joint.

### Horizontal Unit Joints

See *Detail G* and follow the same steps as with AWP 1818 - Stacked.

## AWP 1818 - STAGGERED

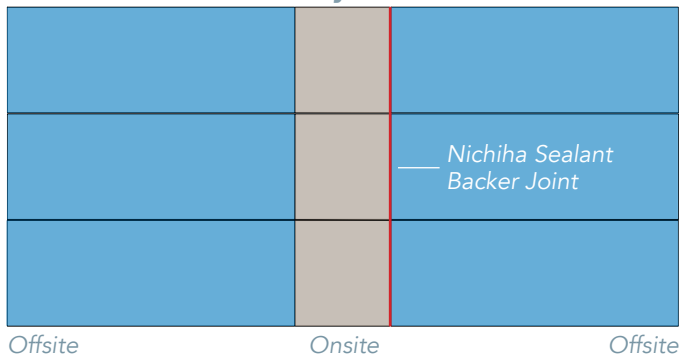
### Vertical Unit Joints

See *Details D and F*. Working from left to right, install the AWP normally until reaching the next to last panel, leaving off the last panel that will span the vertical unit joint at the jobsite. Remove the right-side (with sealant gasket) vertical shiplap edge and then secure the next to last panel with an Ultimate Clip positioned to align with the edge of the face of the panel. Add a Single or Double Flange Sealant Backer. The panels will all terminate at the same continuous line and the Sealant Backer will aid in preventing lateral shifting of AWP during the movement processes. The starting point for panels on the adjacent unit will also be a Nichiha Sealant Backer. The unit-joint-spanning panel will have this sealant joint on both vertical edges.

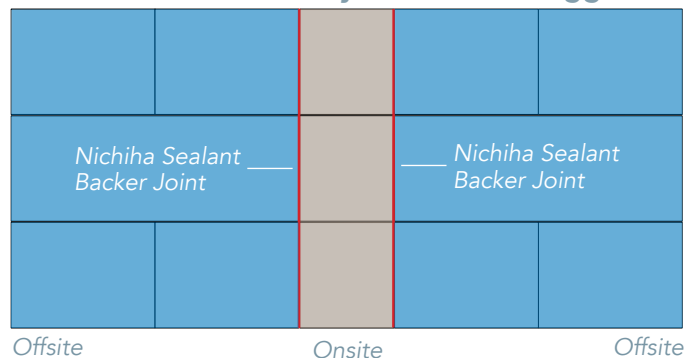
### Horizontal Unit Joints

See *Detail G* and follow the same steps as with AWP 1818 - Stacked.

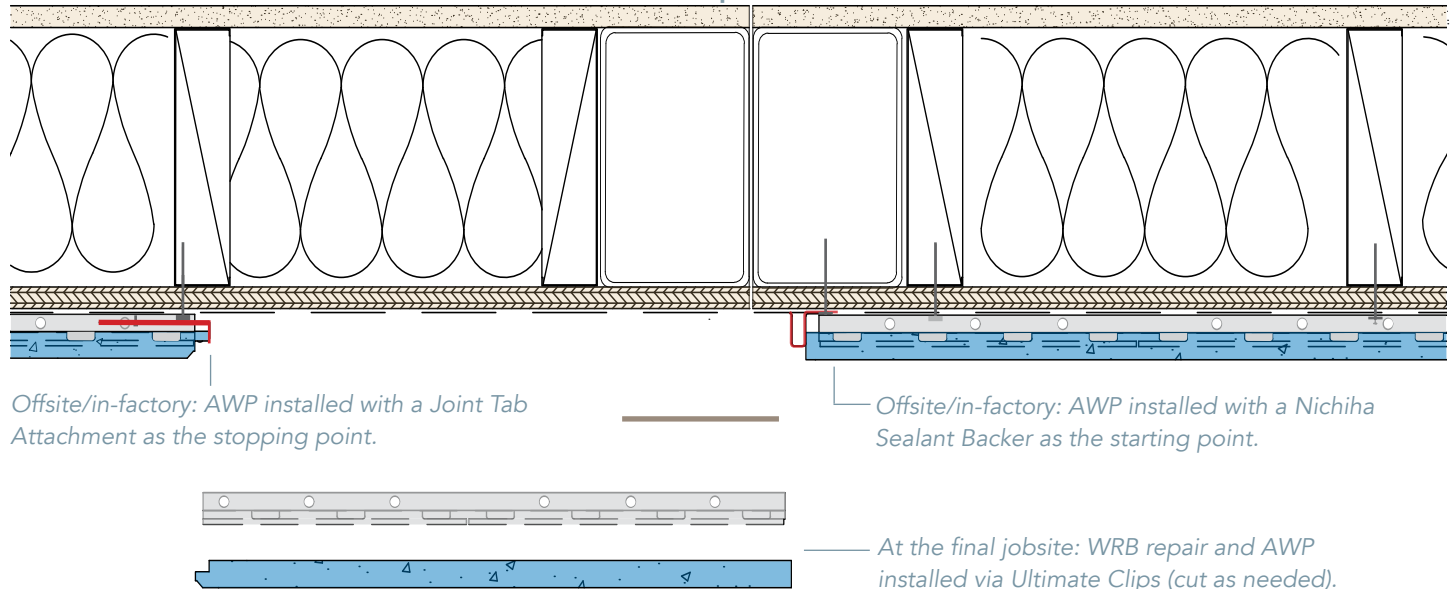
Detail C - Elevation/Layout - 1818 Stacked



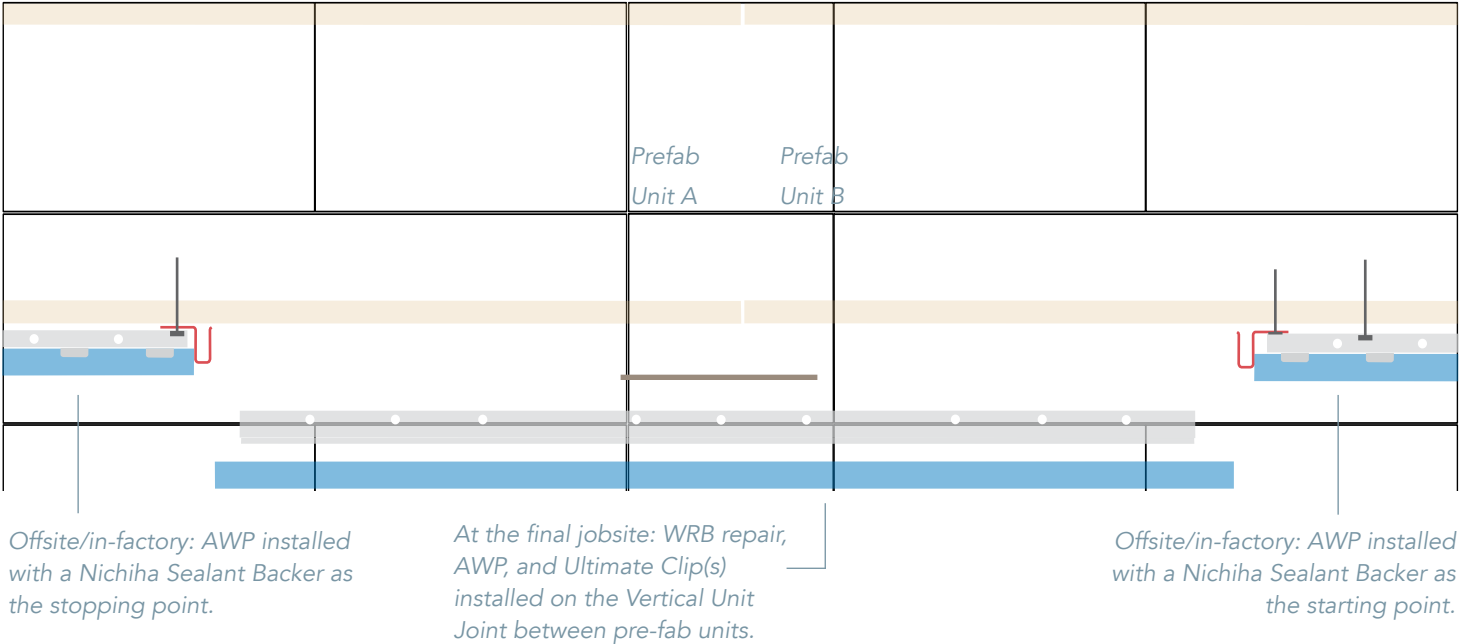
Detail D - Elevation/Layout - 1818 Staggered



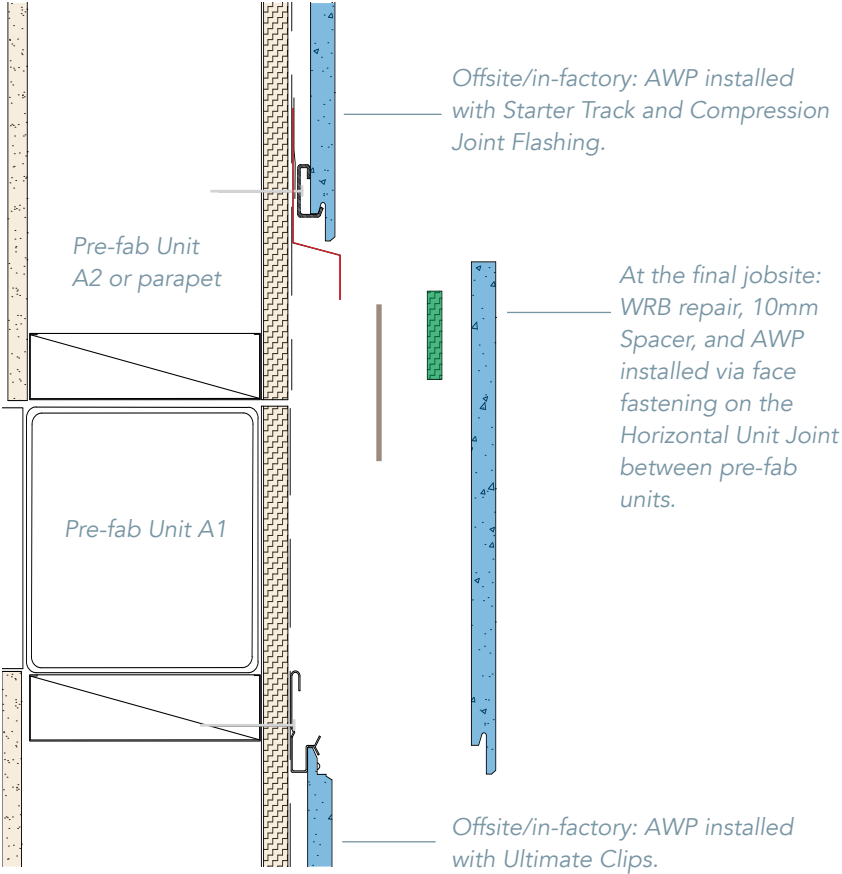
Detail E - Vertical Unit Joint - Partial Onsite Completion - AWP 1818 Stacked



### Detail F - Vertical Unit Joint - Partial Onsite Completion - AWP 1818 Staggered and AWP 3030 Stacked



### Detail G - Horizontal Unit Joint - Partial Onsite Completion





## COMPLETE OFFSITE PRE-INSTALLATION - VERTICAL AWP 3030

The Complete Offsite approach allows for full pre-installation of Nichiha AWP in a factory setting. The AWP on each module or wall panel are detailed to make them independent of AWP on other pre-fab units. This is accomplished with specialized vertical and horizontal unit joints. Otherwise, standard installation practices are followed. Notes: this approach does not allow for repair/proper jointing of the WRB between unit joints. The vertical AWP details here depict continuous insulation and furring and the *horizontal hat channel furring* approach. The Structural Sheathing Method may also be followed. Refer to pages 5-7 of the *Vertical AWP Install Guide* for wall assembly options and requirements.

### Vertical Unit Joints

**See Detail H.** Along the vertical (perimeter) edges of the pre-fab unit, install J-Mold trim. Position the trim 3/16" in from the vertical edges of each unit. This will create a 3/8" sealant joint when the units are set at the final jobsite. Cut the last vertical panel to the necessary width and secure the cut edge normally with face fasteners through 10mm Spacer into the framing or furring. Always keep face fasteners 1" away from cut edges.

### Horizontal Unit Joints

**See Detail I.** Cap the vertical AWP at the top of the unit with a parapet-cap-like flashing. At the base of the second story unit and thereafter up to the parapet wall, utilize a simple angle flashing positioned just above the base of the unit. This shape and positioning should allow the flashing to be undamaged during unit transportation and placement.

## PARTIAL ONSITE COMPLETION - VERTICAL AWP 3030

The Partial Onsite approach allows for majority installation in an offsite factory setting, leaving off AWP adjacent to unit joints so that limited installation is required at the jobsite. Note: this approach allows for repair/proper jointing of the WRB between unit joints.

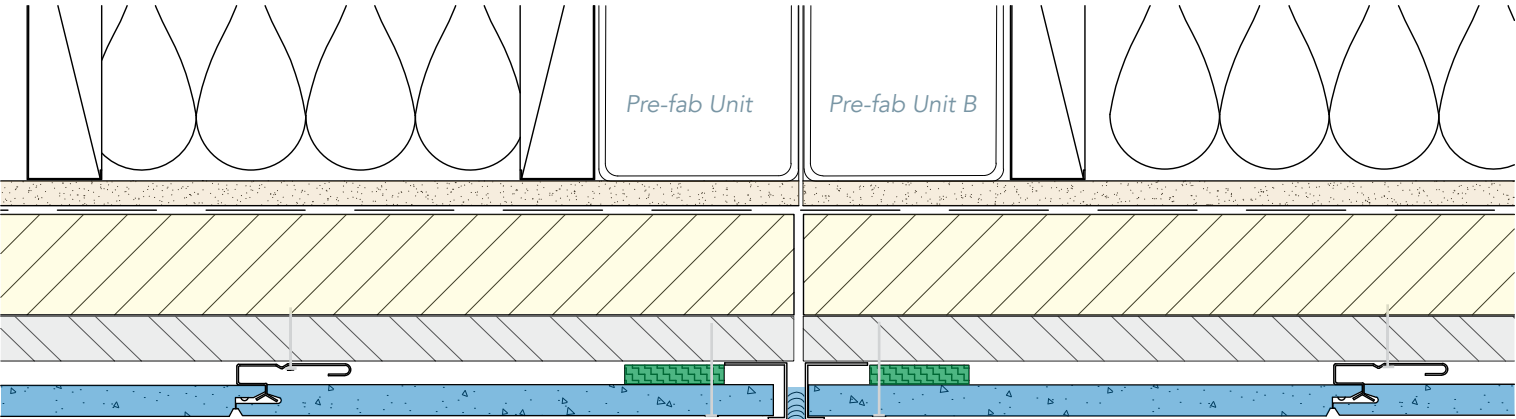
### Vertical Unit Joints

**See Detail J.** Working from left to right, install the AWP normally until reaching the next to last panel, leaving off the last panel that will span the vertical unit joint at the jobsite. Secure the next-to-last panel with Ultimate Clips, leaving those on the right side exposed. This will serve as a lateral movement stop. The left side of the next unit will utilize a continuous Nichiha Sealant Backer joint at the starting point just to the right of the unit joint.

### Horizontal Unit Joints

**See Detail K.** Install vertical AWP normally and cap the course with Compression Joint Flashing (below the unit joint - floor or roofline). At the jobsite, repair/joint the WRB between units per manufacturer best practices. Measure and cut the fill-in AWP to span across the floor framing and unit joint. Install normally with Vertical (Panel) Starter Track (FA710T) for vertical AWP (or FA700 Horizontal (Panel) Starter Track for horizontal AWP) and Ultimate Clips. Review page 30 of the *Vertical AWP Install Guide* for horizontal transition joints between vertical and horizontal AWP.

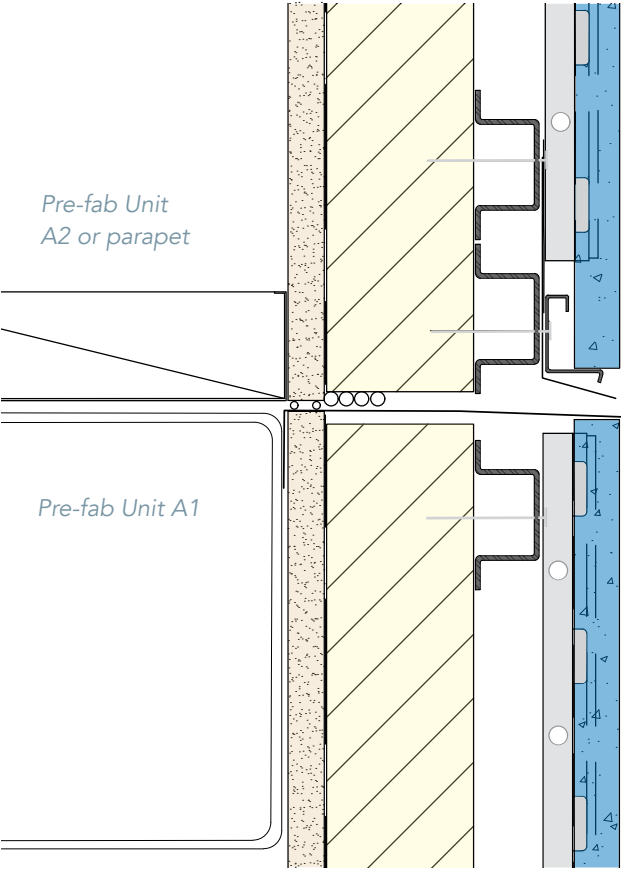
Detail H - (Vertical AWP) Vertical Unit Joint - Complete Offsite Pre-Installation



Vertical AWP with Ultimate Clips - fastened at furring. Refer to pages 6-7 of the Vertical AWP Install Guide.

Vertical Unit Joint with AWP capped by J-Mold trim with a 10mm gap filled with sealant between pre-fab units. Cut vertical edges are face fastened with buglehead screws penetrating through the panel and 10mm Spacer to framing or furring.

Detail I - (Vertical AWP) Horizontal Unit Joint - Complete Offsite Pre-Installation

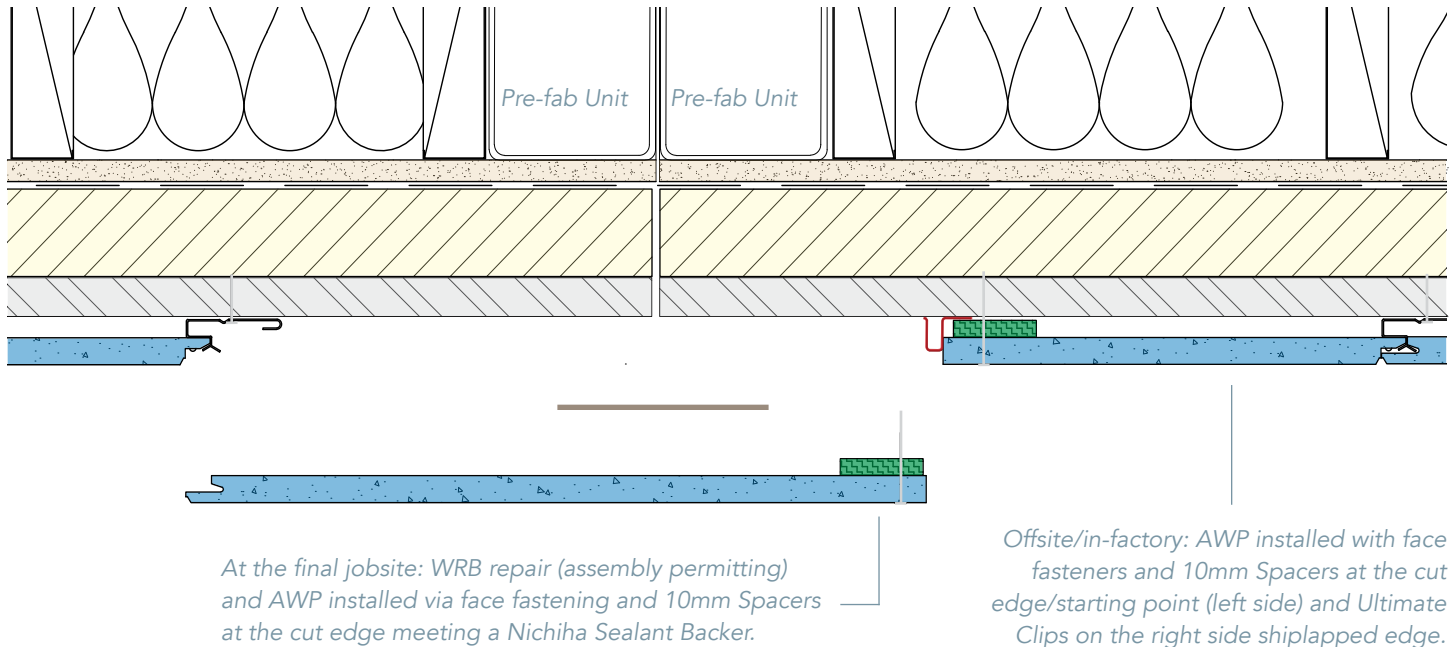


Vertical AWP on Vertical (Panel) Starter Track (FA710T)

Horizontal Unit Joint with AWP lower unit panels capped by parapet-coping-like flashing. A simple angle flashing is installed at the base of the upper unit.

Vertical AWP with Ultimate Clips - fastened at furring. Refer to pages 6-7 of the Vertical AWP Install Guide.

## Detail J - (Vertical AWP) Vertical Unit Joint - Partial Onsite Completion



## Detail K - (Vertical AWP) Horizontal Unit Joint- Partial Onsite Completion

