Façade

Architectural Panels
by American Architectural Millwork

INSTALLATION
INSTRUCTIONS

03/2017-V2

Contents

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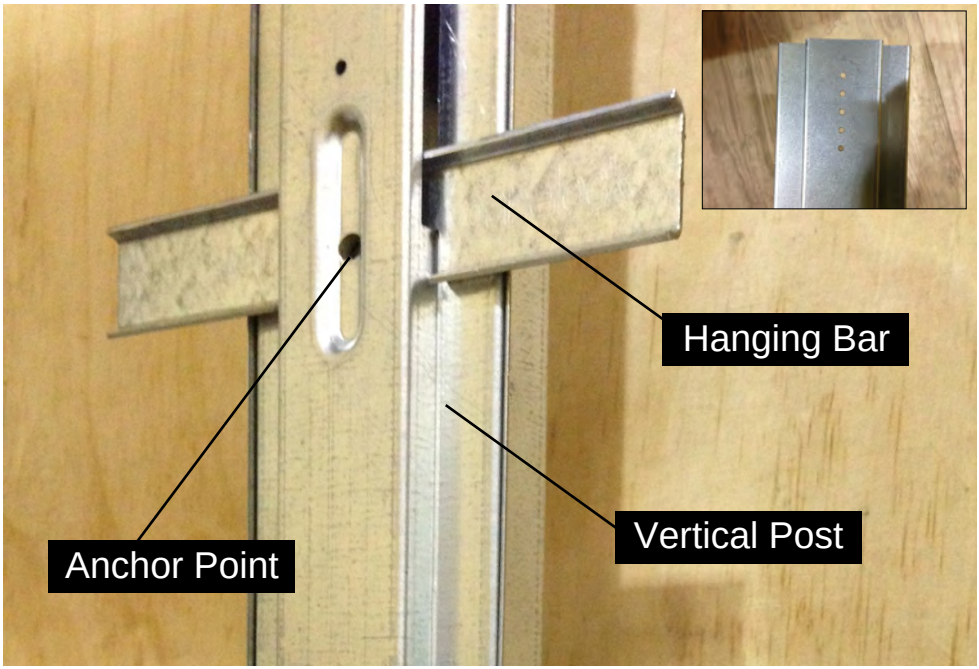
1 Hardware

Vertical Post

1

The Vertical Post is pre-machined with Anchor Points at 150mm centers to receive wall fasteners and Hanging Bars. (The type of wall fastener used will vary based on the surface to which the frame is being installed.) Wall fasteners should be fixed at every other anchoring point. The hanging bars are simply slid into the pre-machined slots in the Vertical Post.



The Vertical Posts are cut on site. If a site condition requires the post to be cut down in length ALWAYS cut from the bottom.

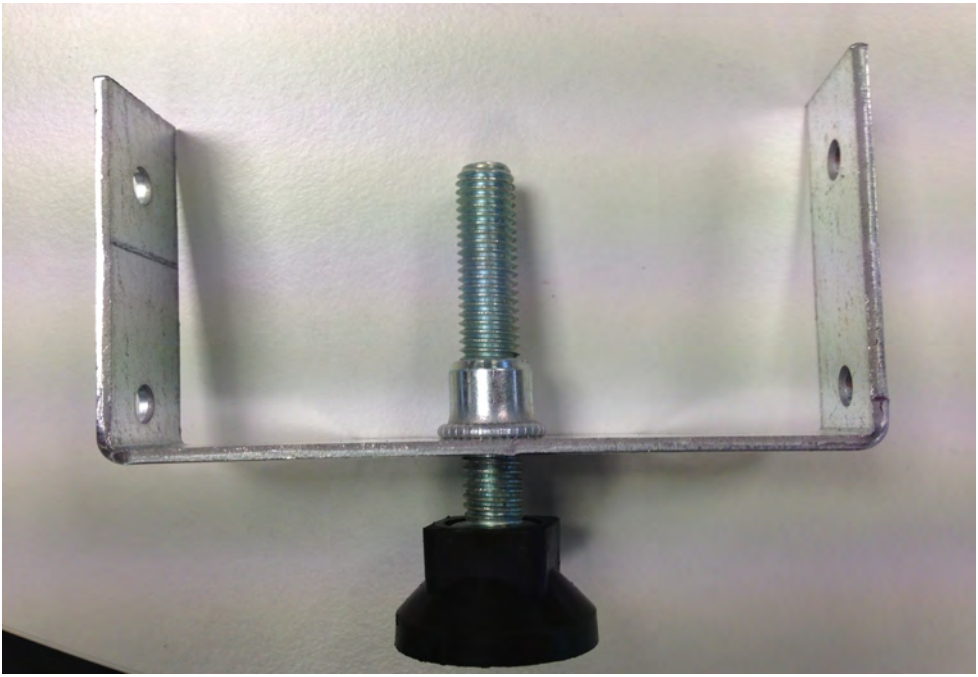
For heights longer than 10', attach Vertical Posts together using the Vertical Post Extender Sleeve.

Although the post looks as though it can be used either way up, it can not. The top of the Vertical Post is machined with holes in the face (see inset image).

Vertical Post - Floor Mount

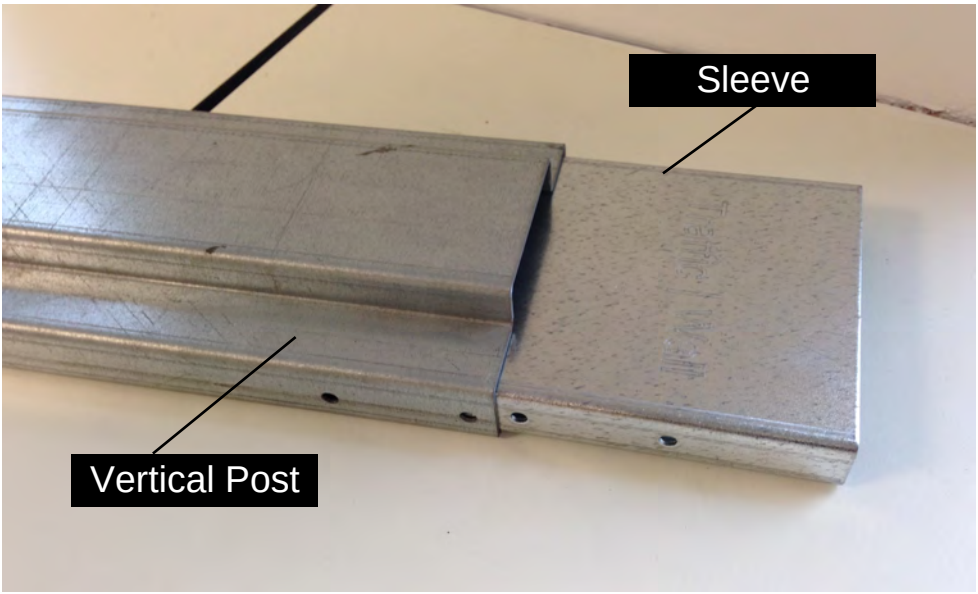
1

The Vertical Post Floor Mount can be attached to the bottom ends of a Vertical Post to adjust down to fit on the floor.
This is recommended when installing particularly heavy panels or when it is preferable to transfer some of the load from the wall to the floor.



Vertical Post - Extender Sleeve 1

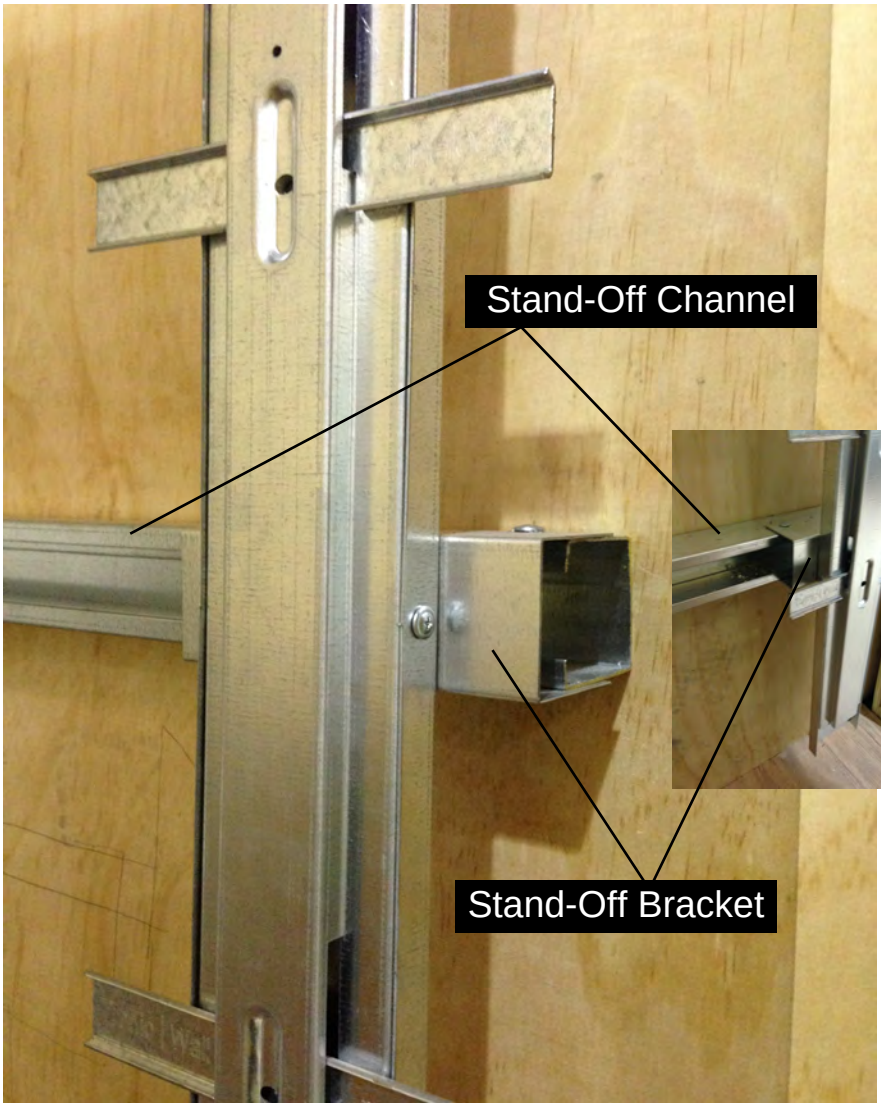
The Vertical Post Extender Sleeve can be inserted into the top and bottom ends of a Vertical Post to extend the height beyond the standard length of the Vertical Post.



Stand-Off

1

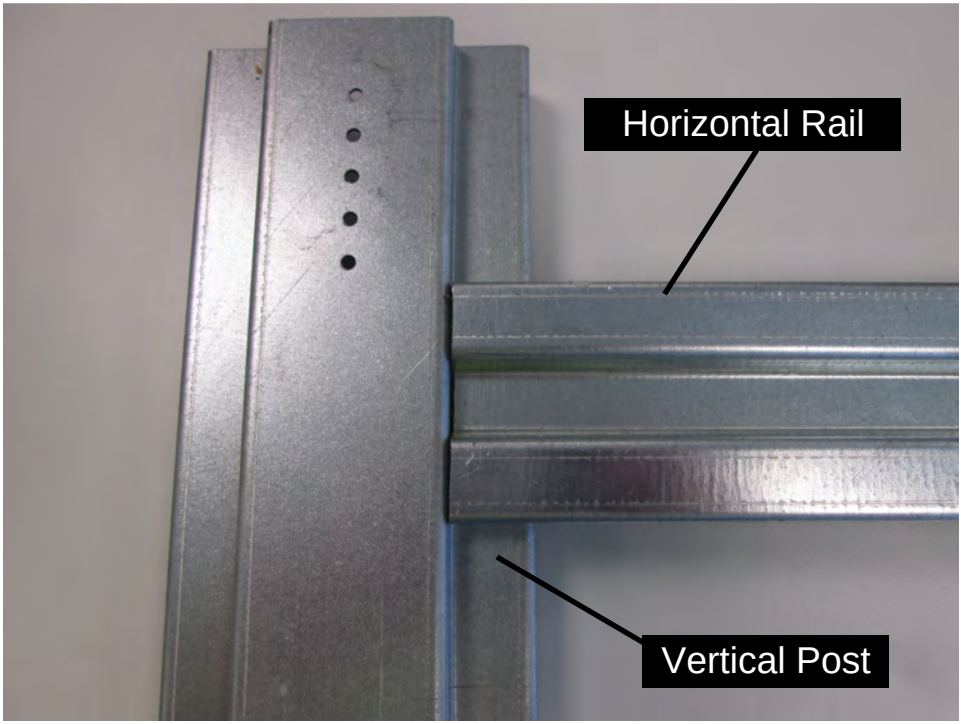
The Stand-Off section is used to push the support frame away from the wall to allow Services, Back-lighting or Insulation to run behind the installed panels. In two sections, the Stand-Off Wall Channel is fixed to the wall. The Stand-Off Bracket slides over the Wall Channel to create the depth required.



Horizontal Rail

1

The Horizontal Rail is installed between Vertical Posts and fixed in place by screwing through the recess in the Horizontal Rail and through the reveal in the Vertical Post.



Corner / End Cap

1

The Corner Cap is fixed over the Vertical Post and used to maintain reveals between panels at external corners. It is also used to form a stop-end when an elevation of panels stops short of the end of a wall elevation.

Frame Hardware

Hanging Bar

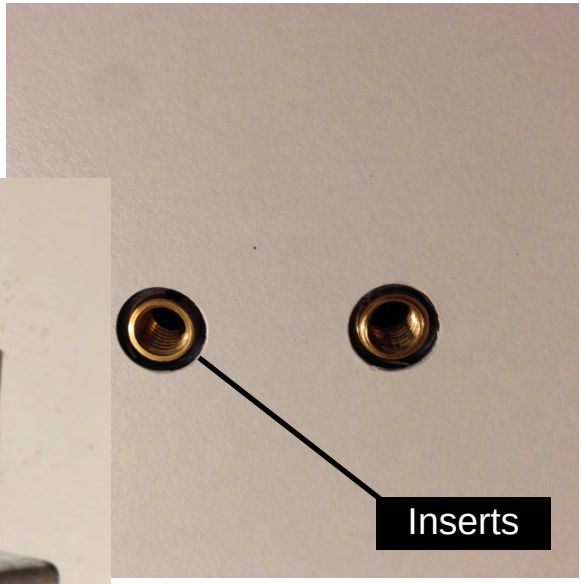
1

The Hanging Bar is the component onto which the panel clip will sit. It is slid into the pre-machined slots of the Vertical Posts at the appropritae points.

Panel Clip

1

The Panel Clip is fixed into the pre-machined and pre-fitted inserts in the rear of the panel using the machine screws provided.



Reveal Finish

1

Reveal Finish is a decor strip that is applied to the Vertical Post, Horizontal Rail or End Cap after installation and prior to hanging panels. It covers the fasteners and forms the back face of the reveal. Depending on the reveal type, this is either supplied in strips or on a roll, and either way, can be cut to length. Affix using double sided tape (not supplied)

2 Preparation

Preparation

Installer note: If wood panels are being used on this project please review the Wood Panel Acclimatization Instructions. Failure to properly acclimate the panels to the environment renders the warranty null and void.

1. Verify that **ALL** parts match the Bill of Materials noted on the Shop Drawings.

2. Insure that the proper quantities of each component are present.

3. Lay out the parts of each elevation on the floor to familiarize yourself with to components.

4. Verify that the walls to receive AAM Facade are plumb and square.

   A. Vertical Alignment of Wall (plumbness) must be within 1/8” in 120”.
   B. Horizontal Alignment (levelness) must be within 1/8” in 120” of thier respective heights.
   C. Squareness of wall shall not be more than 1/8” out of square along the entire elevation.

5. Insure that all surfaces to receive AAM parts are free from debris so as to provide a flat and even surface on which to fix components.

   Prior to installation ensure that there is no damage to any panels or shortage of any panels or hardware. DO NOT commence installation if any damage or shortage is noted. If you commence installation, any damage or shortage will be at the installers expense and neither AAM or it's distributors will be liable for replacement.

   Advise AAM within 24 hours of delivery of any shortage. Note any damage on the delivery paperwork.

3 Installation

Marking The Walls

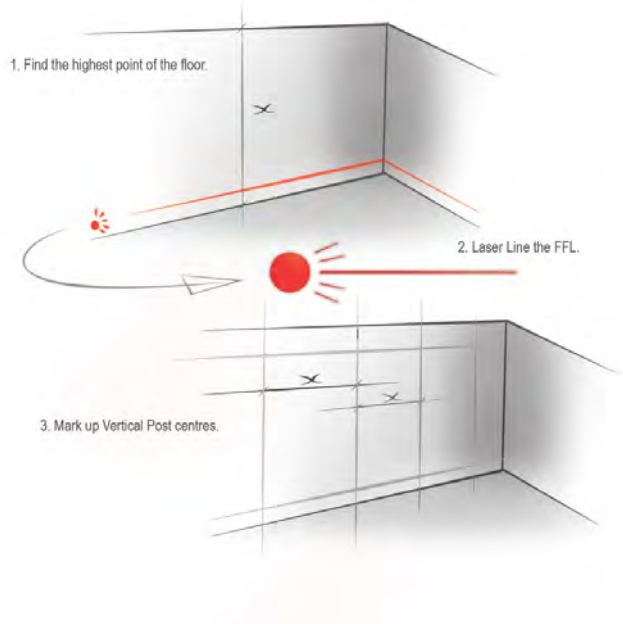
1

Begin by finding the highest point of the floor in the room, and mark a horizontal laser line along the the elevations to receive AAM Wall Panels. This line represent the Finish Floor Level (FFL).

Measure up from the FFL 600mm plus the height of the base board and mark a horizintal laser line around the elevations that will receive AAM Wall Panels. This line is the Datum Line.

Each of the Vertical Posts are precision machined with Anchor Points at 150mm centers. Therefore, each Vertical Post must be attached to the wall with the fourth Anchor Point up from the bottom of the Vertical Post fixed at the height of the Datum Line.

Snap a vertical plumb line at the centers of the Vertical Posts as indicated on the Shop Drawings.



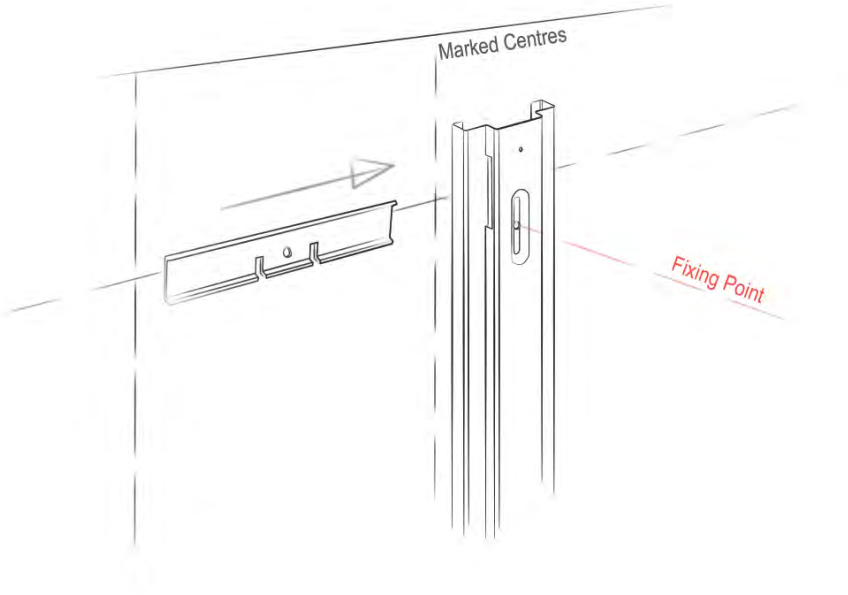
Fix The Vertical Post

2

Hand fit the Hanging Bars into the premachined slots on the Vertical Post at the points indicated on the shop drawings.Fix the vertical members to the wall on the centers of the Vertical Plumb lines. Insure that the Vertical Posts are each fixed with the same Anchor Point of each post located on the Datum Line.

Insure that the fastener selected is appropriate for the wall type to which you are fixing.

Shim as necessary to insure plumb and square.

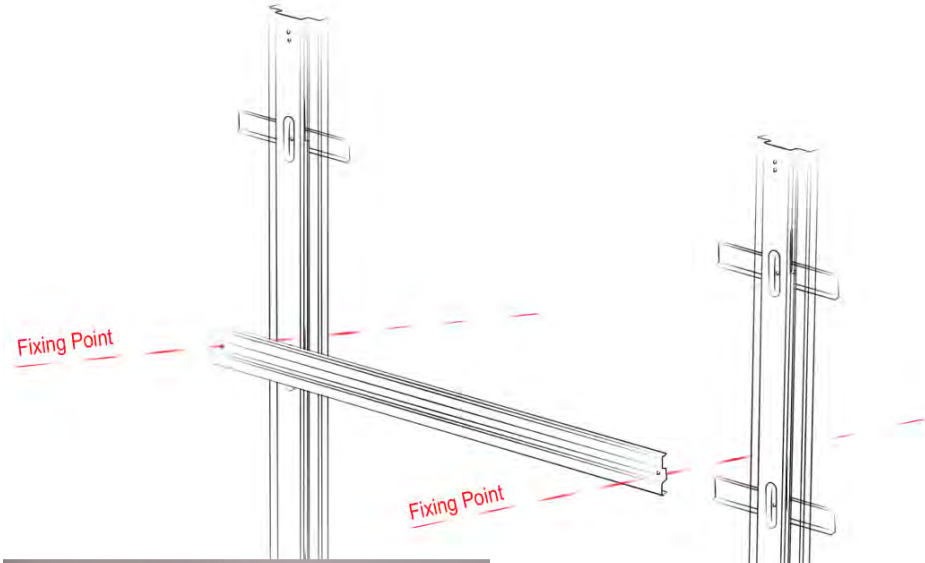


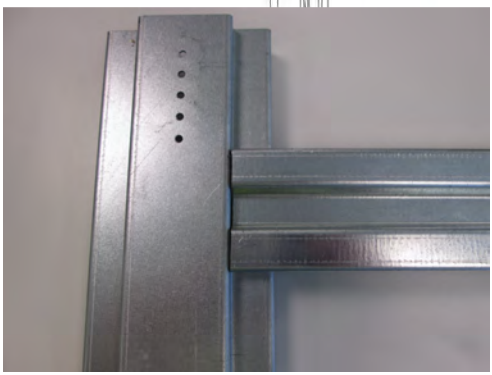
Installing The Frame

Fix The Horizontal Rail

3

Fix the Horizontal Bar between Vertical Posts at the heights indicated on the Shop Drawings using 1” self tapping pan head metal screws.





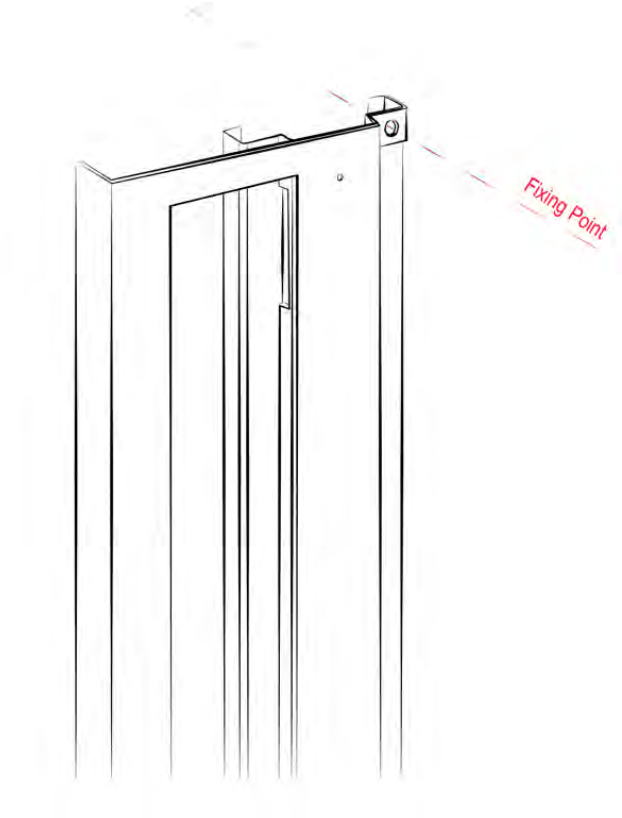
Fix the Corner End Cap

4

Fix the Corner / End Cap in place over the Vertical Post at the external corners or stop ends as indicated on the shop drawings.

Where the End Cap forms an external corner, the End Cap will protrude from the face of the return elevation so that the End Cap return face will be in line with the Vertical Post face on the return elevation.

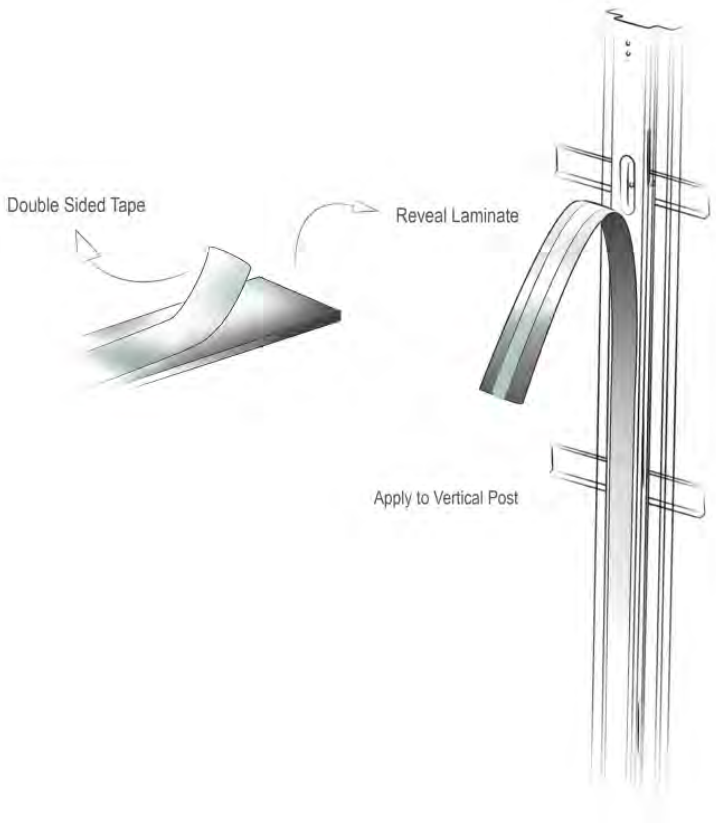
Where the End Cap forms a stop end, the End Cap return face will terminate back to the wall forming a reveal between the back face of the panel and the wall.



Apply the Reveal Laminate

5

Now that the frame is installed, apply the Reveal Finish to the Vertical Posts and Horizontal Rails using the clear double sided adhesion tape (not provided.)
Be certain to cut the meeting ends of Reveal Finishes square so as to provide flush and seamless abutments between strips. Depending on the Reveal Material Type, you may be able to overlap the Reveal Finish.



Installing The Frame

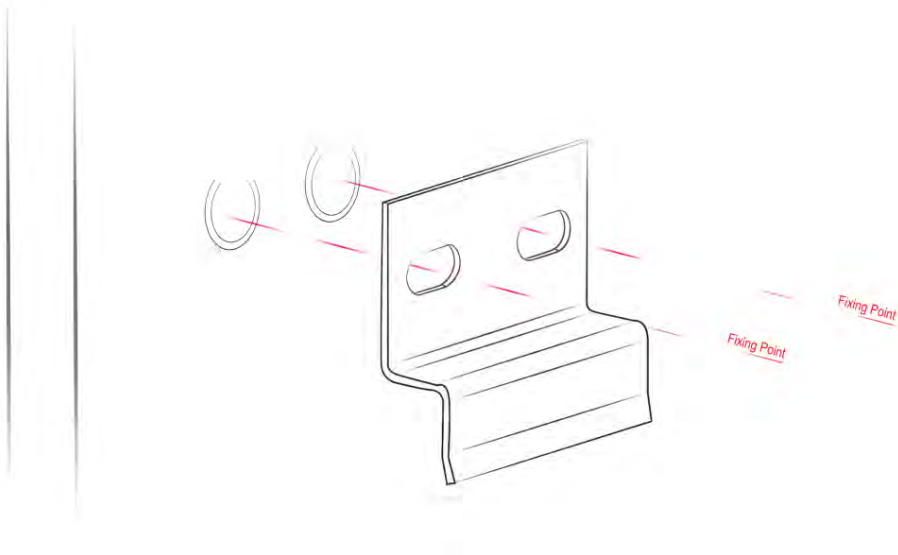
Attach Panel Clips

6

Each panel is precision machined in the factory, and the rear face has inserts machined and fitted at the exact locations necessary to hang the panels correctly.

Each panel is marked on the reverse face indicating the Top Edge of the panel and it's location on the frame and corresponds to the shop drawing. Be certain to hang the panel correct way up.

Attach the Panel Clips to the panels using the machine screws provided. Be sure not to over-tighten the fastners.

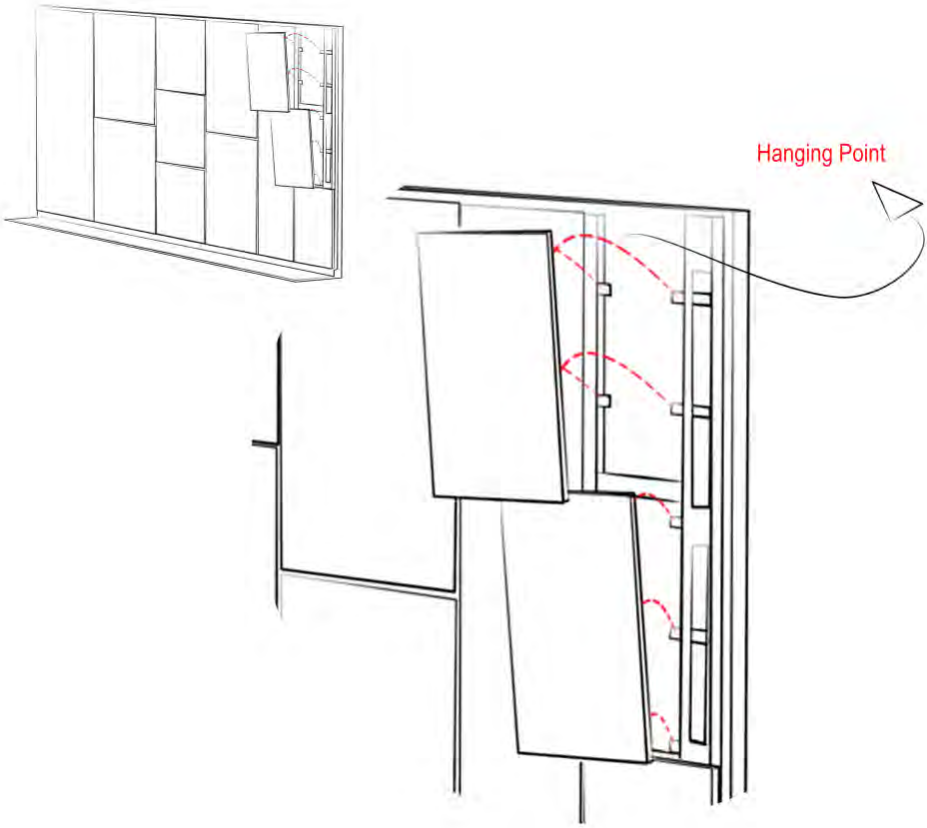


Install Panels

7

Installer Note: Wood panels must be stored, installed and maintained only in a secured ambient environment (Humidity min. 25% - max 55%, temperature not to exceed 80). Refer to AAM Wood Panel Acclimatization Instructions at the end of this document.

Hang the panels in place in the same sequence as the Shop Drawings. There is lateral adjustment in the Hanging Bar / Panel Clip assembly, so you can nudge the panels into vertical alignment.



4 Acclimatizing
Wood Panels

Importance of Acclimatization

All wood products are hygroscopic and therefore absorb and give off moisture constantly. The rate depends entirely on the environmental conditions. Wood products expand as they absorb moisture and contract as they give off moisture. This expansion and contraction, if left uncontrolled, can cause wood panels to move forcing the panels to bow and warp within the AAM frame and affectimg the uniformity of the reveals.

Acceptable building climate conditions

The Architectural Woodworking Institute (AWI) defines a controlled environment suitable for the acclimatization and installation of wood panels as having a Relative Humidity of 25-55%, and a Temperature Range of 55-85 degrees Fahrenheit. Environmental conditions outside of these limits are unacceptable and will void the warranty of AAM wood panels.

Responsibility for Acclimatization falls in part, on each of us; AAM, the Installer, the General Contractor, the Architect and the Building Owner.

AAM provides wood panels within acceptable tolerances for moisture content, with the specified wood substrate, specified veneer and specified finish quality.

The **Installer** receives, stores and installs the panels in a controlled building environment. He is responsible for insuring the panels are acclimatized to the building environment prior to installation. Environmental conditions that do not conform to AWI specification mustbe corrected prior to installation of the wood panels.

The **General Contractor** is responsible to provide an environment that meets the AWI standards for relative humidity and temperature.

The **Architect** is responsible for the overall project design and specification of appropriate HVAC equipment to maintain the environmental conditions required for the stabilization of wood products.

The **Building Owner** bears the responsibility for maintaining the correct environmental conditions for the stabilization of wood products.

Wood Acclimatization

The moisture content of wood is directly related to the humidity and temperature of the surrounding air. The equilibrium moisture content (EMC) occurs when the wood has reached an equilibrium with its environment and is no longer gaining or losing moisture.

Table 1 provides EMC values for a fairly representative range of atmospheric conditions that wood is likely to be exposed to. Values in this table are applicable to wood of any species for most practical purposes.

The EMC table is a guide for determining whether or not the conditions of the construction area are suitable for receiving and installing AAM wood panels. The moisture content of AAM wood panels when they are shipped is 8-13% at 70 degrees F.

A moisture meter is used to determine the moisture content of AAM wood panels. A minimum of 12 measurements should be taken from randomly selected panels.

NOTE: The pins on the meter will produce small holes in the panel. Measurements should only be taken on the unseen edges of the panels so as not to mar the exposed surface.

Measurements of the moisture content should be recorded, and an average Moisture Content percentage established. For your convenience a humidity and temperature reporting form is included at the end of this document.

The following chart is used to estimate the equilibrium moisture content of the AAM panels based on the temperature and relative humidity of the area where the AAM Facade system is to be installed: with an ambient air temperature of 70 degrees F, and with a relative humidity 50%, the AAM wood panels must reach a stabilized moisture content of 9.2% prior to installation.

Table 1

Relative Humidity %	Ambient Air Temperature - degrees Celsius and Fahrenheit (Celsius rounded to nearest degree)										
C:	-1	4	10	16	21	27	32	38	43	49	54
F:	30	40	50	60	70	80	90	100	110	120	130
5	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0
10	2.6	2.6	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.1	2.0
15	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.3	3.2	3.0	2.9
20	4.6	4.6	4.6	4.6	4.5	4.4	4.3	4.2	3.0	3.9	3.7
25	5.5	5.5	5.5	5.4	5.4	5.3	5.1	5.0	4.9	4.7	4.5
30	6.3	6.3	6.3	6.2	6.2	6.1	5.9	5.8	5.6	5.4	5.2
35	7.1	7.1	7.1	7.0	6.9	6.8	6.7	6.5	6.3	6.1	5.9
40	7.9	7.9	7.9	7.8	7.7	7.6	7.4	7.2	7.0	6.8	6.6
45	8.7	8.7	8.7	8.6	8.5	8.3	8.1	7.9	7.7	7.5	7.2
50	9.5	9.5	9.5	9.4	9.2	9.1	8.9	8.7	8.4	8.2	7.9
55	10.4	10.4	10.3	10.2	10.1	9.9	9.7	9.5	9.2	8.9	8.7
60	11.3	11.3	11.2	11.1	11.0	10.8	10.5	10.3	10.0	9.7	9.4
65	12.4	12.3	12.3	12.1	12.0	11.7	11.5	11.2	11.0	10.6	10.3
70	13.5	13.5	13.4	13.3	13.1	12.9	12.6	12.3	12.0	11.7	11.3
75	14.9	14.9	14.8	14.6	14.4	14.2	13.9	13.6	13.2	12.9	12.5
80	16.5	16.5	16.4	16.2	16.0	15.7	15.4	15.1	14.7	14.4	14.0
85	18.5	18.5	18.4	18.2	17.9	17.7	17.3	17.0	16.6	16.2	15.8
90	21.0	21.0	20.9	20.7	20.5	20.2	19.8	19.5	19.1	18.6	18.2
95	24.3	24.3	24.3	24.1	23.9	23.6	23.3	22.9	22.4	22.0	21.5
98	26.9	26.9	26.9	26.8	26.6	26.3	26.0	25.6	25.2	24.7	24.2

Wood Acclimatization

Acclimatization Record

CONTRACTOR:
PRODUCT NAME:
PRODUCT ADDRESS:

1. See Table 1 on previous page. Determine the target values of the interior environment and note below.

Target Values		
Temperature (f):	Relative Humidity (%):	Mositure Content:

2. During acclimatization period, record temperature (f) and relative humidity % readings from digital hygrometer. (Data will establish the acceptance moisture content range for the installation.)
3. Three to five panels should be randomly selected and monitored during acclimatization period.
4. Using a moisture meter, take three moisture content readings along the edge of each panel and record the average of the three values.
5. As the AAM wood panels reach equilibrium, the moisture content readings will stabilize at the proper temperature and relative humidity values.
6. DO NOT begin installation of panels until they have reached equilibrium moisture content in the target range.

Date	Time	Temp	RH(%)	Moisture Content (Average of 3 readings)				
				Panel 1	Panel 2	Panel 3	Panel 4	Panel 5

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