

## CEILING SYSTEMS

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# WOODWORKS™ ACCESS™ Hook-on Wood System - Installation Instructions (Non-Seismic and Seismic)

## 1 GENERAL

### 1.1 Product Description

WoodWorks Access Hook-on Panel system is a downward accessible, wood ceiling available in a range of sizes. It is designed to install on an Armstrong Hook-on Aluminum Seismic H Bar (BP6158) suspension system. All full panels can be removed and re-installed from below to gain access to the plenum. Two opposite sides support the installed panels. Aluminum hooks (BP6115), field screwed to the wood panel, engage on the Aluminum Seismic H Bar suspension element. Both hook ends are the same; insert the hook of one edge onto the Aluminum Seismic H Bar as far as possible. Raise the opposite end up and slide the panel back to engage the hook, the first hook will now engage onto the Aluminum Seismic H Bar securing the panel in place.

### Gaskets

A foam "Gasket" is required between all WoodWorks Access Hook-on panels. The gasket (standard width 6mm - 1/4") allows panels to be installed and removed easily and creates a uniform reveal joint. Gasket location will be indicated on the shop drawings. Field applied gasket should be installed a minimum of 1/8" above the panel face (See Drawing 3).

### Perforations

Panels may be perforated or non-perforated.

### Surface Finish

WoodWorks panels are composite panels with specified veneer options that are factory finished, have excellent durability and are cleanable. Due to the inherent properties of wood and the changing numbers of sheets cut from any given log, variation in color and grain will appear from one sheet to another. This is a natural occurrence. Natural maturing and mellowing of the color may occur with age and is consistent with the appearance of natural wood.

### 1.2 Storage and Handling

The ceiling panels shall be stored in a dry interior location and shall remain in cartons prior to installation to avoid damage. The cartons shall be stored in a flat, horizontal position.

The protectors between panels should not be removed until installation. Proper care should be taken when handling panels to avoid damage and soiling. Do not store in unconditioned spaces with humidity greater than 70% or lower than 20% RH and temperature lower than 50°F or greater than 86°F. Panels must not be exposed to extreme temperatures, for example, close to a heating source or near a window in direct sunlight.

### 1.3 Site Conditions

WoodWorks ceiling panels should be permitted to reach room temperature and have stabilized moisture content for minimum of 24 hours before installation. (Remove all plastic wrap to allow panels to climatize). They should not, however, be installed in spaces where the temperature and humidity conditions vary greatly from the temperature and humidity conditions that will be normal in the occupied space.

### 1.4 HVAC Design & Operation

Proper design for both supply air and return air, maintenance of the HVAC filters and building interior space is essential to minimize soiling. Before starting the HVAC system, make sure air supply is properly filtered and the building is free of construction dust.

### 1.5 Temperature & Humidity During Installation

WoodWorks ceiling panels are interior finish products that are designed for installation to be carried out in temperature conditions between 50°F (10°C) and 86°F (30°C), in spaces where the building is enclosed and HVAC systems are functioning and will be in continuous operation. Relative humidity shall not fall below 20% or exceed 70%. Additionally, the fluctuation in relative humidity shall not vary more than 30% over the life of the ceiling panels. There shall be proper ventilation of the plenum in high moisture areas. All plastering, concrete, terrazzo, or any other wet work shall be completely dry. All window and doors shall be in place. The heating, ventilation and air-conditioning system should be installed and operable where necessary to maintain proper temperature before, during and after installation of the WoodWorks panels.

## 1.6 Plenum

Since panels are installed from below, WoodWorks Access Hook-on panels require minimal clearance above the suspension system. **NOTE:** light fixtures and air handling systems require more space and will usually determine the minimum plenum height for the installation.

## 1.7 Ceiling Panel Layout.

Refer to the shop drawing for suspension system assembly, panel orientation and layout.

## 2 SUSPENSION SYSTEM

### 2.1 General

The suspension system shall be Armstrong “U” profile (BPM300.100) and Aluminum Seismic H Bar (BP6158) suspension elements. The suspension system shall be properly installed and leveled using not less than 12-gauge galvanized steel wire. Suspension system installation shall conform to ASTM C-636.

### 2.2 Suspension Grid – U-profile

WoodWorks Access Hook-on panels may be installed in a variety of modules. The U profiles shall be spaced 48” O.C. with a maximum distance of 18” to a perimeter wall or outside edge of a floating module. The top of the U-profile is 3-3/4” above the finished ceiling height. The U Profiles must be leveled to within 1/4” in 10’.

(See Drawing 1)

### 2.3 Suspension Grid – Aluminum Seismic H Bar

The Aluminum Seismic H Bar grid element is non-directional. The Aluminum Seismic H Bars shall intersect the U profile at 90 ° at every module. Refer to the shop drawing for module spacing and center distance. The Aluminum Seismic H Bar requires two H-bar hangers (BPM300.107) to secure it to the U-profile. **NOTE – the M6 x 16mm bolt supplied with the H-bar connector must be removed (requires a 8mm wrench) and discarded. It must be replaced with a M6 x 12mm bolt (requires a 10mm wrench). This step is necessary to provide clearance for the installation and removal for the panel hook.** Position H-bar hangers facing the same direction on the U-profile where the Aluminum Seismic H Bar is to be installed. Use the Plug-in clip (BPM300.120) to secure the H-bar hanger to the U-profile at the desire module. Slide the top straight leg of the Aluminum Seismic H Bar into the hanger slot and tighten the bolt to 15 in/lbs torque. Install a second H-bar hanger on the U-profile at the opposite edge and secure it to the Aluminum Seismic H Bar. Use the Aluminum Seismic H Bar splice (BPM311.017) to connect adjoining sections of Aluminum Seismic H Bar.

(See Drawing 2)

Test fit a panel to confirm Aluminum Seismic H Bar spacing and alignment. Repeat this process until all Aluminum Seismic H Bar hangers are secured in place.

### 2.4 Suspension Grid Alignment

It's recommended the U-profiles and Aluminum Seismic H Bars be fastened to two adjacent walls using the wall anchor (BPM300.140). Wall anchors are slotted to allow alignment of the grid system for proper squareness. The Aluminum Seismic H Bars must be square to the U profile within 1/16” in 2’. Drop heights from U profile to Aluminum Seismic H Bar shall be accurate plus or minus 1/16”.

(See Drawing 2)

### 2.4.1 FLOATING Suspension Grid Alignment

The use of rigid bracing to structure is recommended for floating WoodWorks Access Hook-on suspension systems. This will stabilize the system to keep it square, maintain proper panel alignment and ease panel installation and removal.

## 3 PANEL INSTALLATION & REMOVAL

### 3.1 General

WoodWorks Access Hook-on ceiling panels are easily installed and removed from below the suspension system allowing easy downward access to the plenum.

### Panel Orientation

Before beginning panel installation refer to the shop drawing for correct panel size and orientation.

### 3.2 Panel Hook

WoodWorks Access Hook-on ceiling panel hooks will require field attachment at the job site.

#### 3.2.1 Panel Hook Inspection

Inspect the Hook to make sure there are no signs of damage.

#### 3.2.2 Field Attached Panel Hook

The aluminum panel hook may require field cutting to length. Position the hook on the back of the WoodWorks panel so the bottom rail fits tight against the end edge. Secure with #10 x 5/8 screws every 6” along the length of the hook. This must be done on both ends of the panel.

(See Drawing 3)

### 3.3 Back Bracing

WoodWorks panels may require back bracing depending on the panel size and length. The recommended solution to back brace is using a section of Armstrong 1-1/2” wide drywall grid secured every 6” with screws along the length of the panel. See shop drawing for specific back bracing detail.

(See Drawing 3)

### 3.4 Safety Cable

Armstrong recommends using two safety slack cables on all panels exceeding 20 pounds. Attach the cable to structure or rigid support, allow enough length for connection to the panel below the suspension system. Cable can be attached to the WoodWorks panel with a snap connection to the back brace.

(See Drawing 3)

### 3.5 Installing Panels

Note the panel end hooks are the same detail. Either end can be installed or removed first. Install panel as shown on the shop drawings. Foam gasket must be applied before panel installation.

**Step 1:** Connect safety cables to WoodWorks panel.

**Step 2:** Insert the panel hook of one end onto the Aluminum H Bar as far as possible.

**Step 3:** Raise the opposite end of the panel up until it touches the bottom of the next Aluminum H Bar.

**Step 4:** Gently slide the panel back until the panel hook is over top of the Aluminum H Bar.

**Step 5:** Lower the Woodworks panel evenly until the panel hooks engage onto the H-profile. Check panel(s) for proper fit and alignment

(See Drawing 5)

Repeat process until first row of panels is in place. Install the remaining panels using this same process.

It is not necessary to use any specific sequence, as all panels are fully accessible with or without the other panels installed.

### 3.6 Panel Alignment

The use of a laser or string line is recommended to establish straight panel alignment. Panels may be slid along the Aluminum Seismic H Bar to adjust alignment as necessary. Mechanically secure a row of panels to the Aluminum Seismic H Bar to maintain correct alignment and to prevent subsequent misalignment during routine access and replacement. The universal wall anchor can be field bent to make this attachment.

(See Drawing 7)

### 3.7 Panel Penetrations

Holes cut for sprinkler heads, light fixtures, speakers and other services that penetrate the ceiling panel may be field or factory cut. Use standard wood working tools to field cut WoodWorks panels.

### 3.8 Panel Removal

Removal is the reverse of installation.

**Step 1:** Carefully lift the WoodWorks panel to disengage the panel hooks.

**Step 2:** Gently slide the panel in either direction towards an Aluminum H Bar.

**Step 3:** Lower the opposite end until it clears the Aluminum H Bar

**Step 4:** Gently slide the panel towards the lowered end until the opposite hook clears the Aluminum H Bar and carefully lower the panel.

**Step 5:** Disconnect the panel safety cables

(See Drawing 5)

## 4 PERIMETER DETAILS

WoodWorks Access Hook-on panels are designed to minimize field cutting perimeter panels. Floating installations will have the suspension system recessed along the perimeter. Wall to wall installations can be full size or field cut to fit the suspension system and concealed by some form of wall trim.

### 4.1 Floating Perimeter Installations

The Aluminum Seismic H Bar and panel hook is installed several inches in from the perimeter panel end. Factory supplied perimeter panels will have a hook location kerf in the back of the panel. This kerf will have to be made on field cut perimeter panels. Refer to shop drawings for perimeter details.

(See Drawing 4)

## 4.2 Cutting WoodWorks Panels

Use standard woodworking tools to cut Woodworks panels. Clean sharp saw blades designed for wood laminates produce the best cut and visual. Follow manufactures recommendations for safety.

### 4.3 Cutting Perimeter Panels

Perimeter panels will have to be cut and fit as needed. Carefully measure the perimeter opening and transfer this dimension to the panel. All WoodWorks Access Hook-on panels must be supported by the suspension system. Wall trim is considered a cosmetic closure and provides no structural support.

#### 4.3.1 Field cutting the hook edge

Field cut panel to the required length. Refer to the shop drawing for kerf detail and location. Field cut the kerf to locate the panel hook to fit the perimeter Aluminum Seismic H Bar. Fit the panel hook bottom rail into the kerf and attach with screws as required.

(See Drawing 4)

#### 4.3.2 Field cutting the non-hook edge

Field cut the panel to the required width. Field cut the panel hook to the panel width or slightly smaller to fit the Aluminum Seismic H Bar. Screw attach as required.

## 4.4 Treating exposed edges

Cut panel edges that are exposed to view will have to be treated to look like factory edges. Pre-finished peel and stick edge banding is recommended for this purpose. Cut edge must be clean and smooth before applying edge banding. Peel off the release paper and apply the edge banding using finger pressure or a small trim roller. Trim excess material with a sharp knife blade or a chisel.

### 4.4.1 Ordering Edge banding Material

Pre-finished pressure sensitive adhesive banding is available 15/16" wide and in 50' lengths. Standard colors are Cherry, Maple and Anigre (Steamed Beech). Other veneer choices are available for custom products. Several vendors can provide pre-finished banding. The brand of banding used is of no consequence as long as the finish is an acceptable match to the face veneer. One such vendor is:

Fastcap  
3725 Irongate Road, Suite 105  
Bellingham, WA 98226  
Customer service Phone: (888) 443-3748

## 4.5 WoodWorks Access Hook-on Perimeter Trim Options

Refer to shop drawings for perimeter trim details.

### 4.5.2 Aluminum Bulkhead Trim Option

An aluminum bulkhead perimeter trim system can be secured to the suspension system. The bottom flange of the bulkhead trim will conceal factory or field cut panel edges.

(See Drawing 4)

# Seismic Installations

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## 1 SEISMIC DESIGN CATEGORY

The following recommendations are solutions to meet additional installation requirements in areas of seismic activity (IBC - D, E and F). The local authority having jurisdiction must approve all seismic installation details before installation begins.

## 2 WOODWORKS ACCESS HOOK-ON SUSPENSION SYSTEM

### 2.1 Wall to Wall Installations

The U-profiles and Aluminum Seismic H Bars are the suspension system for WoodWorks Access Hook-on panels. This system must be attached to the perimeter walls on two adjacent sides. The opposite walls must have 3/4" clearance.

(See Drawing 6)

#### 2.1.1 U-Profile

Use the universal wall anchor to positively anchor one end of the U-profile. The opposite end requires 3/4" clearance from the wall and a hanger attachment within 8" of the wall. The first and last U-profiles must be within 12" of the perimeter wall.

(See Drawing 6)

#### 2.1.2 Aluminum Seismic H Bar

Use the universal wall anchor to positively anchor one end of the Aluminum Seismic H Bar. The opposite end requires 3/4" clearance from the wall. Ends of the Aluminum Seismic H Bar will be supported within 12" of the perimeter wall where they intersect the U-profile.

(See Drawing 6)

#### 2.1.3 Aluminum Seismic H Bar Splice

Use splice (BPM311.017) to connect adjoining sections of Aluminum Seismic H Bar. The splice must be secured using two #6x7/16" self drill sheet metal screws or equivalent to each end of the H Bar.

(See Drawing 6)

### 2.2 System Restraints

#### 2.2.1 Lateral Force Bracing

Typical system restraints are the 4-wire cluster splay bracing and compression post. This must be made at an intersection of U-profile and Seismic Aluminum.

#### 2.2.2 Rigid Bracing

Installations not anchored to the perimeter walls or floating clouds require rigid bracing to structure strong enough to resist lateral forces imposed upon it without damaging the system or allowing panels to fall from the ceiling.

## 3 WOODWORKS ACCESS HOOK-ON PANEL INSTALLATION

### 3.1 RH215 Seismic Spring

Seismic installation of WoodWorks Access Hook-on panels require the use of BP6157 RH-215 Seismic Spring to maintain positive engagement of the panel hook to the H Bar.

### 3.2 RH215 Seismic Spring Installation

Insert the flared ends of the RH215 Seismic spring into the channel along the top edge of the H Bar. The bottom loop will be lower than the H Bar but gently lifts up as the WoodWorks Access Hook-on panel is installed. RH215 Seismic springs are required every 16" along the panel hooks.

(See Drawing 7)

### 3.3 Perimeter Panels

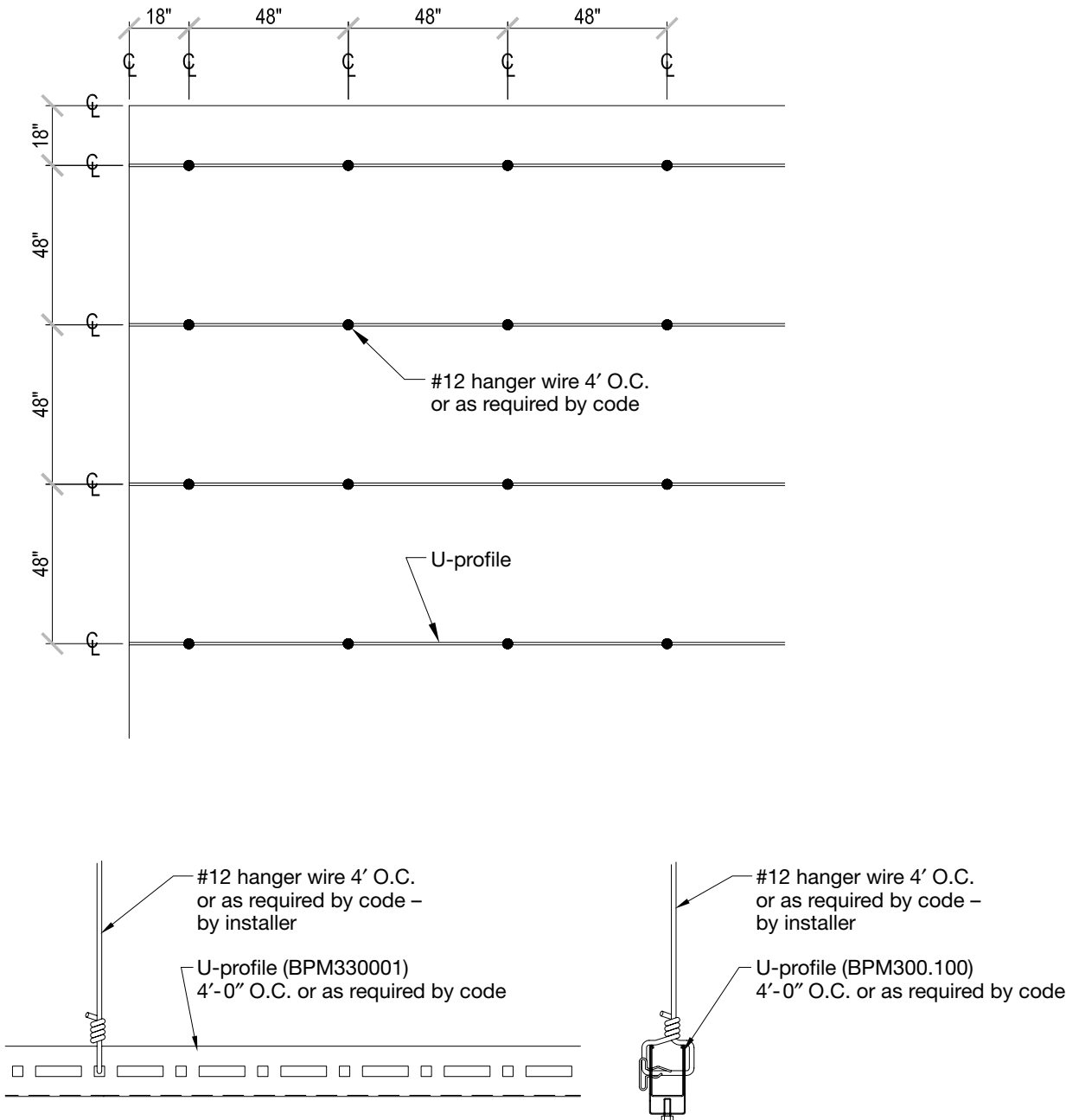
Perimeter panels in a floating installation must be positively fastened to the Seismic Aluminum H Bar to prevent them for sliding along the H Bar. This will maintain panel alignment and system integrity.

(See Drawing 7)

# Access Hook-on Wood Suspension Installation

DRAWING 1

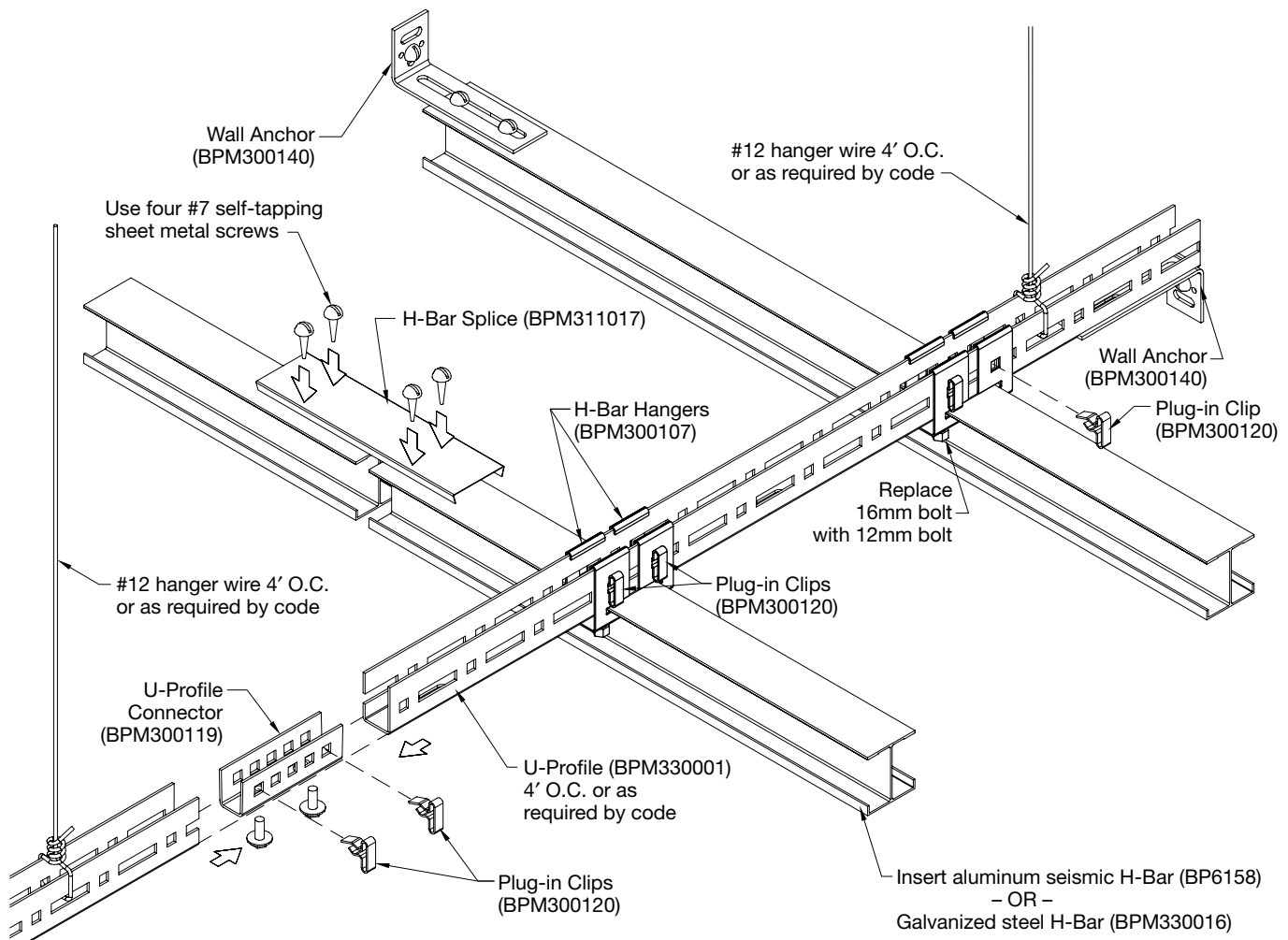
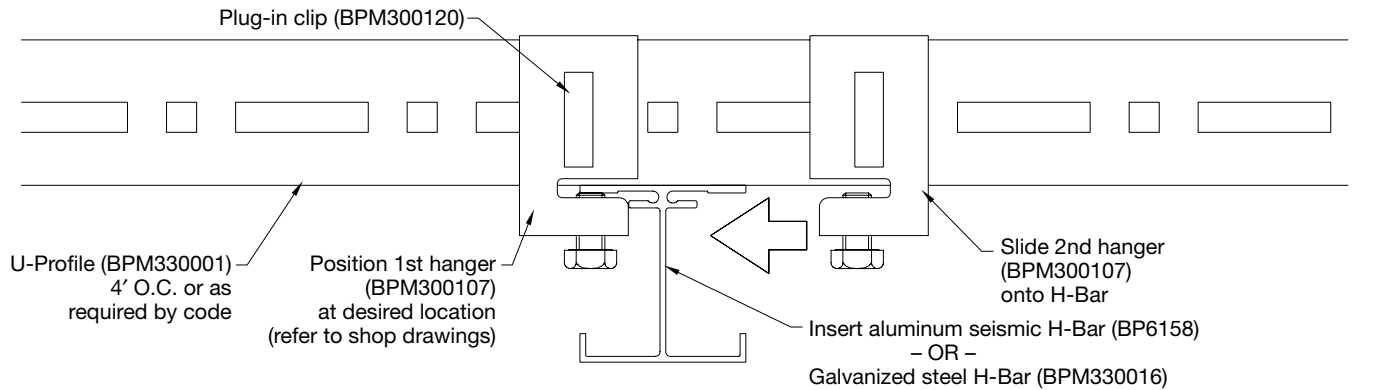
U-profiles are installed 48" on center with a maximum distance of 18" to the perimeter walls. U-profiles are suspended with 12 GA Galvanized wire, wires must be within 18" of the perimeter wall, then 48" on center. Hanger wire must be wrapped tightly with 3 full wraps within 3" of the U-profile. Level U-profile to within 1/4" in 10 feet (ASTM C-636). The top of U-profile will be 3-3/4" above the finished ceiling height.



# Access Hook-on Wood H-Profile Installation

## DRAWING 2

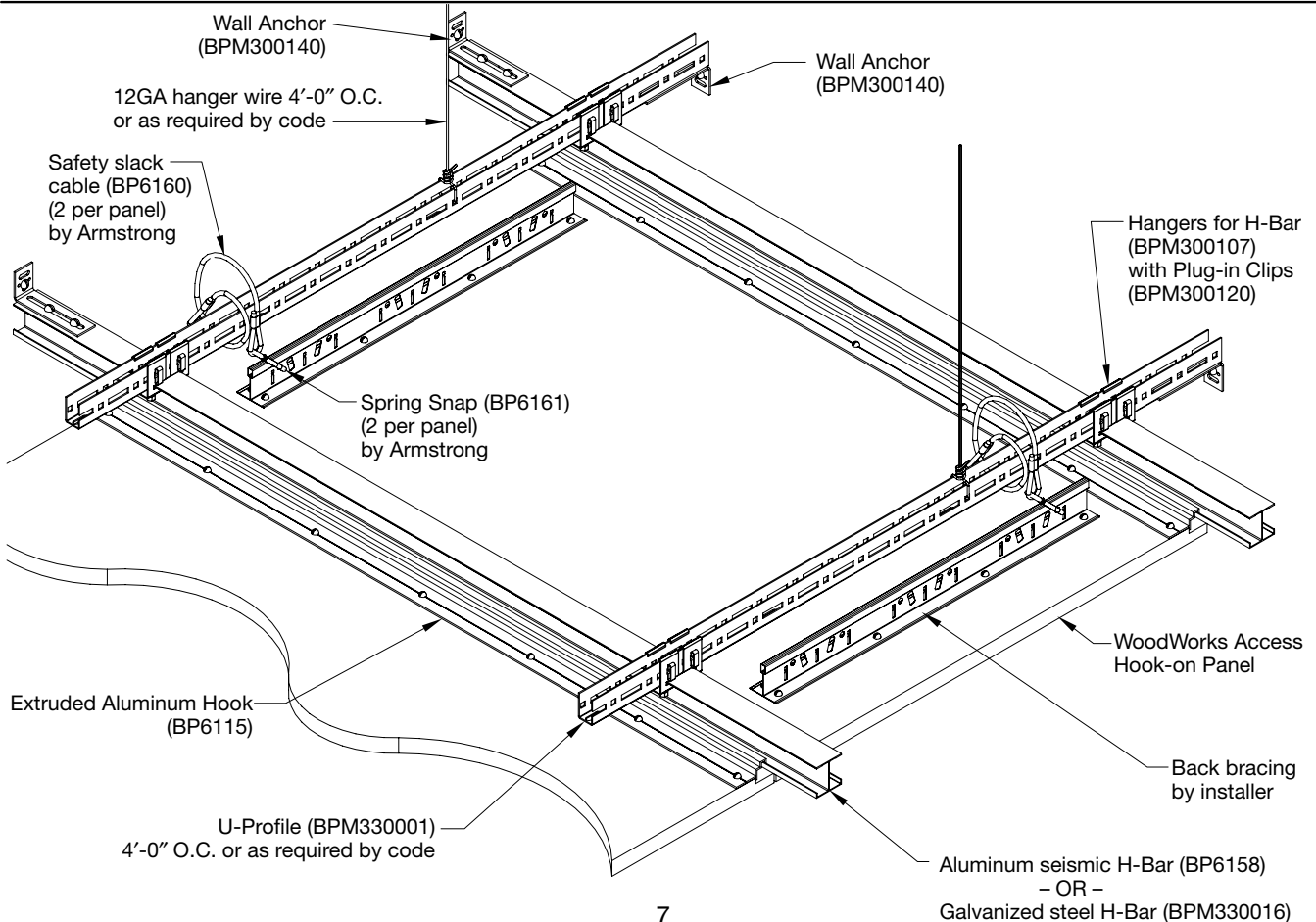
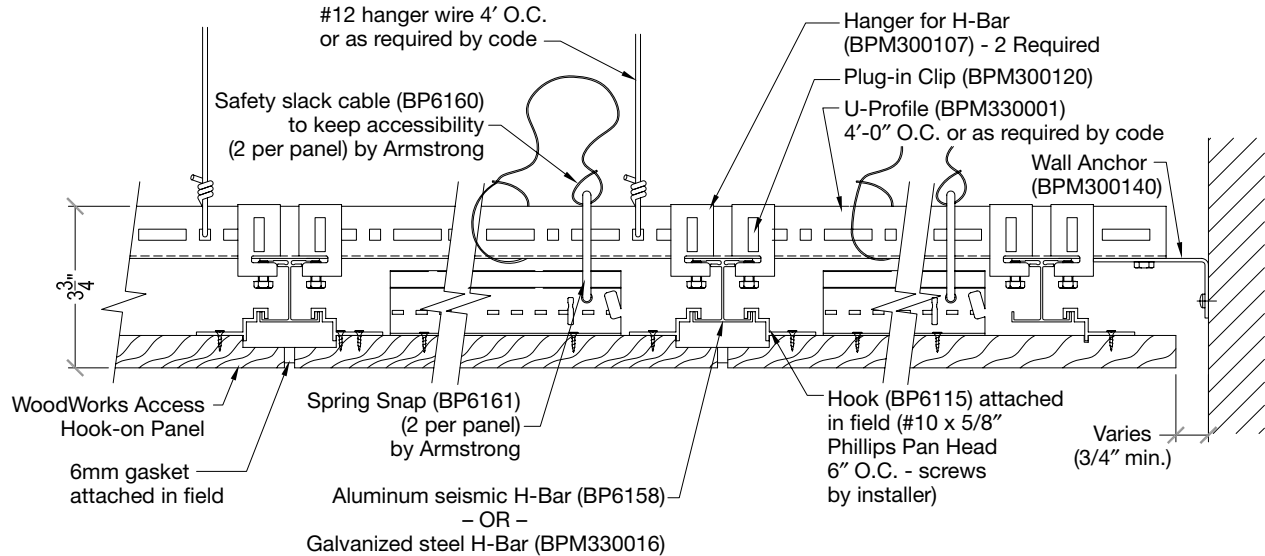
The H-bar is non-directional. Refer to the shop drawing for module spacing and center distance. The H-bar requires two (2) H-bar hangers (BPM300.107) to secure it to the U-profile. **NOTE – 16mm long bolt supplied with the H-bar connector must be removed and discarded. It must be replaced with a 12mm long bolt, this step is necessary to provide clearance for the installation and removal for the panel hook.** Position the first H-bar hangers facing the same direction on the U-profile where the H-bar is to be installed. Use the plug-in clip (BPM300.120) to secure the H-bar hanger to the U-profile at the desired module. Slide the top straight leg of the H-bar into the hanger slot and tighten the bolt to 15in/lbs torque. Install a second H-bar hanger on the U-profile at the opposite edge and secure it to the aluminum seismic H-bar. Use the H-bar splice (BPM311.017) to connect adjoining sections of H-bar. Use wall anchors to secure U-profiles and H-bars to the perimeter walls.



# Access Hook-on Wood Panel Installation

## DRAWING 3

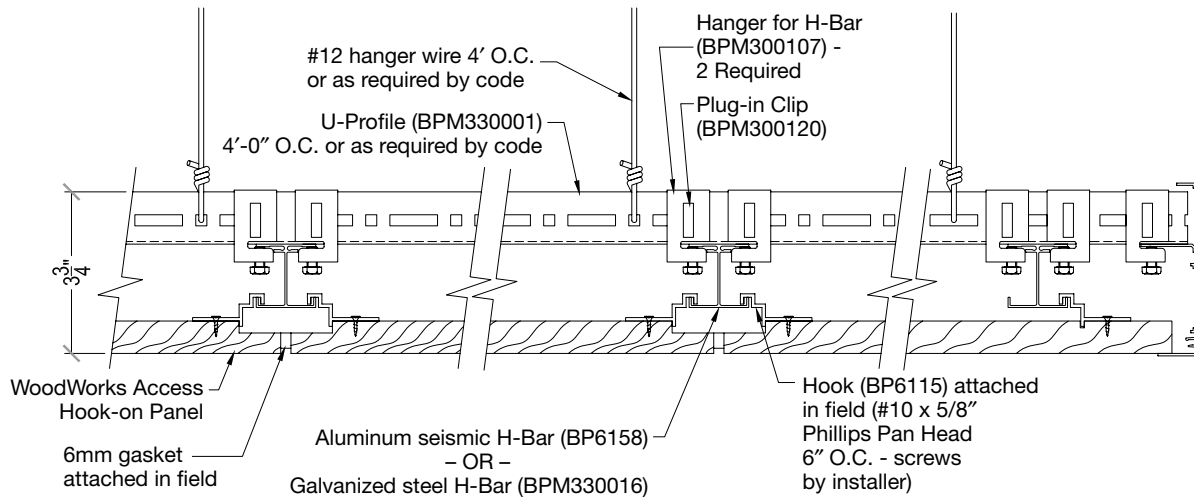
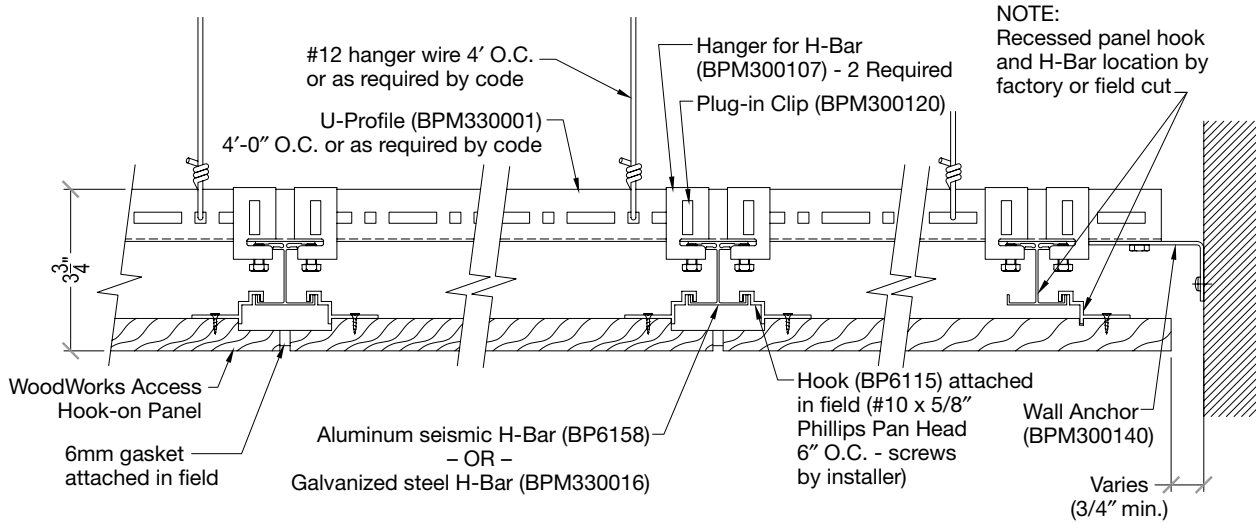
- Position the hook on the back of the WoodWorks panel so the bottom rail fits tight against the end edge. Secure with #10 x 5/8" screws every 6" along the length of the hook.
- When required, back brace the panel using a section of Armstrong 1-1/2" wide drywall grid secured every 6" with screws along the length of the panel. See shop drawing for specific back bracing detail.
- Use two (2) safety slack cables on all panels exceeding 20 pounds, approximately 7-1/2 sq.ft. Attach the cable to structure or rigid support then, connect the cable snap to the WoodWorks panel back brace.
- Both ends are the same so either end can be installed or removed first. See section 3.5 or drawing 5 for panel installation process. Refer to the shop drawing for the correct panel size and orientation. Use a laser or string line to align panels.



# Access Hook-on Wood Perimeter Wall Trim Options

## DRAWING 4

WoodWorks Access Hook-on panels are designed to minimize field cutting perimeter panels. Floating installations will have the suspension system recessed along the perimeter. Perimeter hook location can be provided from the factory or field cut. When required – use standard woodworking tools to cut WoodWorks panels. Cut panel edges **that are exposed to view** will have to be treated to look like factory edges. See installation instruction, Section 4, for complete details.

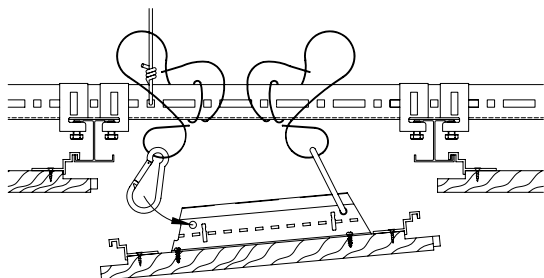




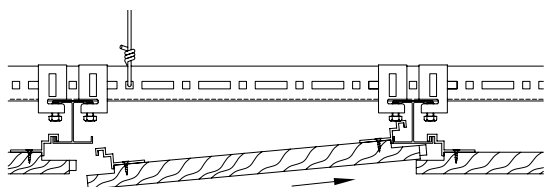
# Installation and Removal of WoodWorks Access Hook-on Panels

## DRAWING 5

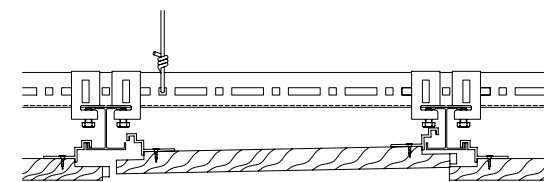
### INSTALLATION OF WOODWORKS ACCESS HOOK-ON PANELS



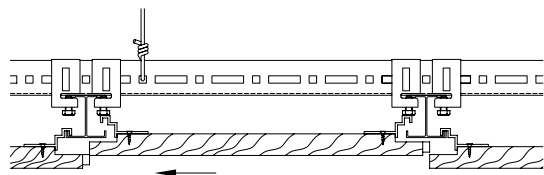
**Step 1:** Connect safety cables to WoodWorks panel.



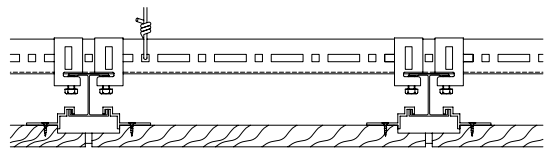
**Step 2:** Insert the panel hook of one end onto the Aluminum H-Bar as far as possible.



**Step 3:** Raise the opposite end of the panel up until it touches the bottom of the next Aluminum H-Bar.

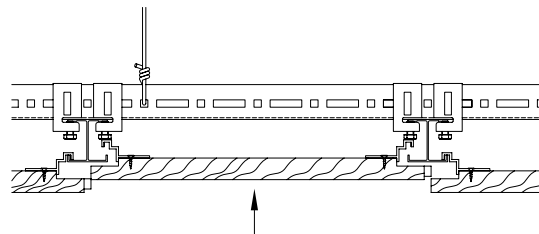


**Step 4:** Gently slide the panel back until the panel hook is over top of the Aluminum H-Bar.

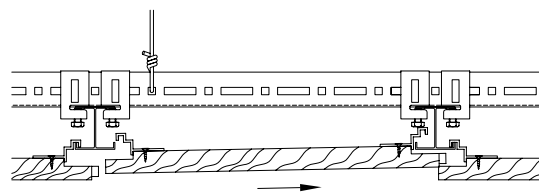


**Step 5:** Lower the Woodworks panel evenly until the panel hooks engage onto the H-Bar. Check panel(s) for proper fit and alignment.

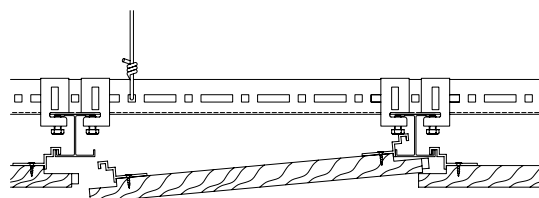
### REMOVAL OF WOODWORKS ACCESS HOOK-ON PANELS



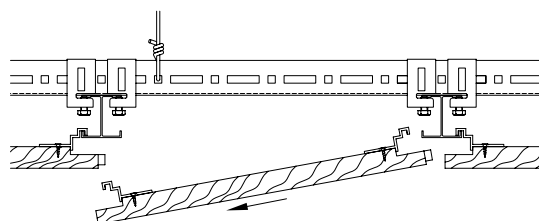
**Step 1:** Carefully lift the WoodWorks panel to disengage the panel hooks.



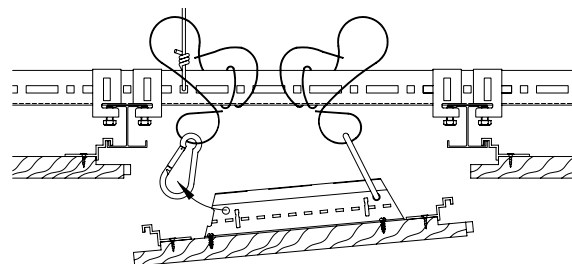
**Step 2:** Gently slide the panel in either direction towards an Aluminum H-Bar.



**Step 3:** Lower the opposite end until it clears the Aluminum H-Bar.



**Step 4:** Gently slide the panel towards the lowered end until the opposite hook clears the Aluminum H-Bar and carefully lower the panel.

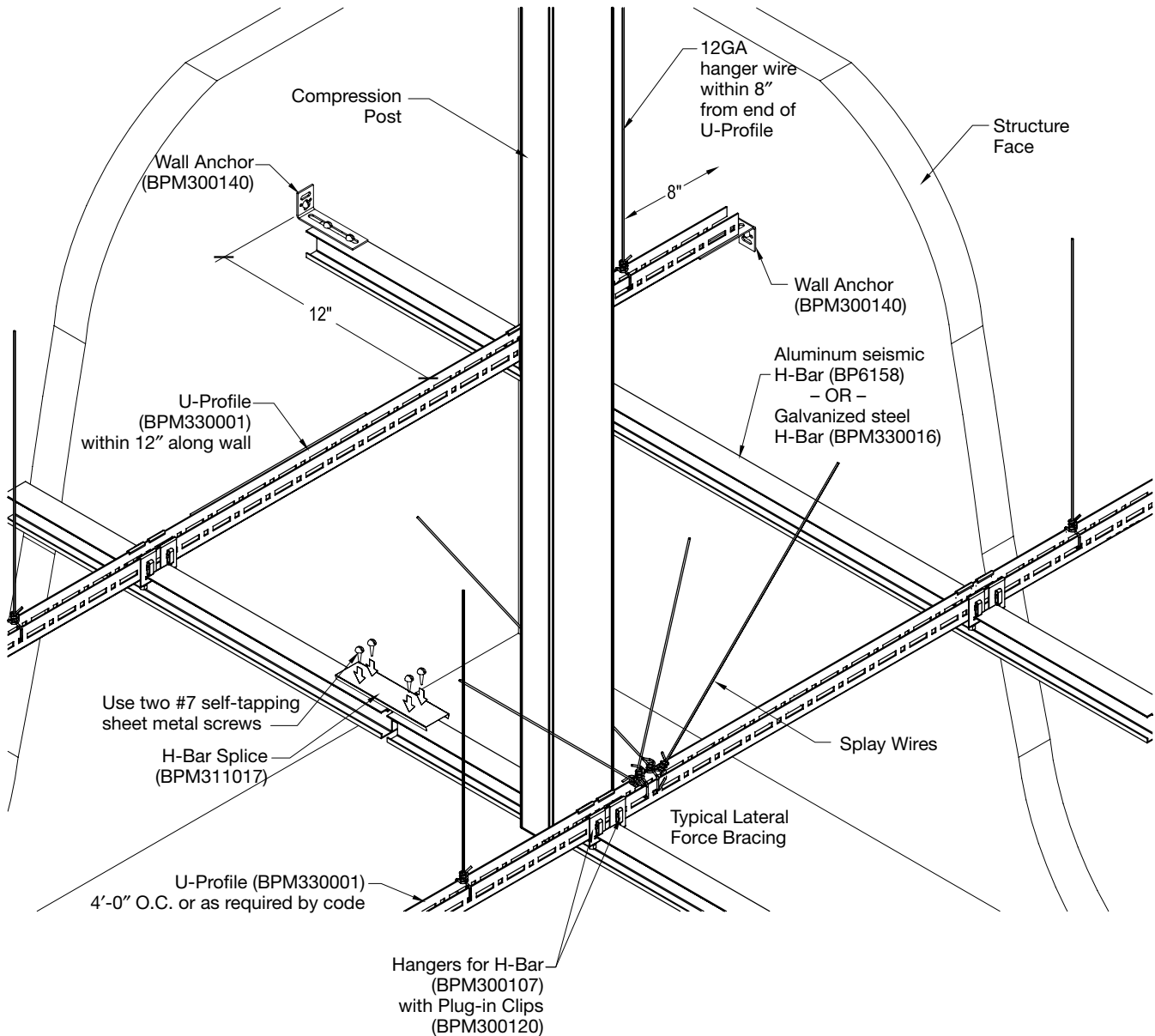


**Step 5:** Disconnect the panel safety cables.

# Access Hook-on Wood (Seismic) Suspension System Installation

## DRAWING 6

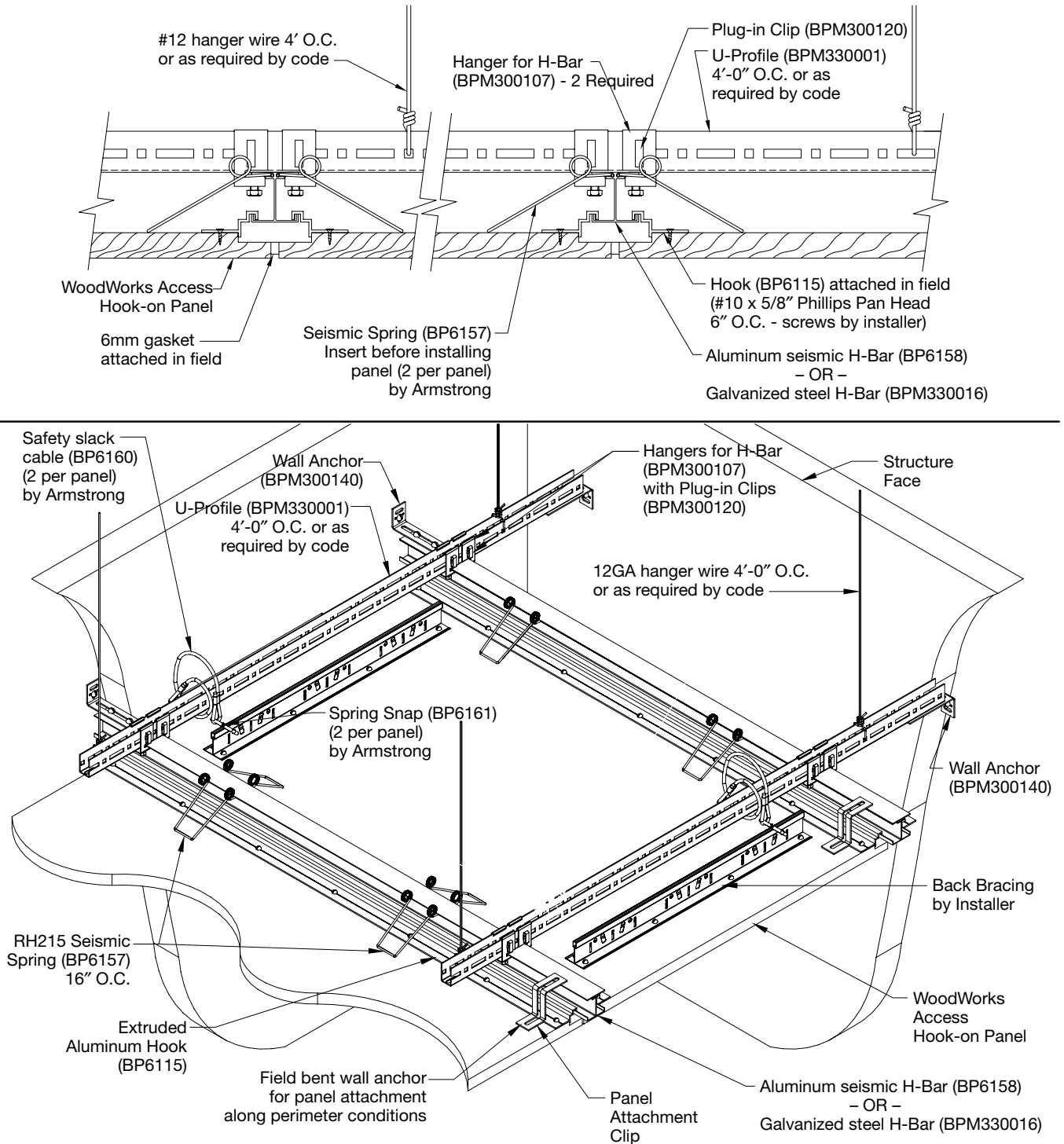
These installation requirements are in addition to the standard installation. Wall to wall installations require that U-profile and H-bar must be attached to two (2) adjacent perimeter walls with 3/4" clearance at the opposite walls. U-profiles must be within 12" along perimeter walls. Hanger wires are required within 8" of each end of the U-profile. Floating installations require rigid bracing to resist lateral force loads as required by local code authorities. H-bar splice must be secured to the H-bar with four (4) screws. Lateral force bracing must be attached at the U-profile and H-bar intersection.



# Access Hook-on Wood (Seismic) Panel Installation

## DRAWING 7

These seismic installation requirements are in addition to the standard installation. RH-215 seismic springs easily insert into the H-bar channel before installing the panel. RH-215 seismic springs are required every 16" along the panel hook to maintain positive engagement. WoodWorks Access Hook-on panels install and remove as normal. End panels must be prevented from sliding by securing them to the H-bar. Attachment – field bend a wall anchor for panel attachment along the perimeter. Secure with screws to the H-bar and panel.



## MORE INFORMATION

For more information, or for an Armstrong representative, call 1 877 ARMSTRONG.

For complete technical information, detail drawings, CAD design assistance, installation information and many other technical services, call TechLine™ services at 1 877 ARMSTRONG or FAX 1-800-572-TECH.

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