

# MetalWorks™ SecureLock™ Plus

## Assembly and Installation Instructions



### 1. GENERAL

#### 1.1 Product Description

12-, 14-, and 16-gauge galvanized steel planks available in 12", 18", and 24" widths and up to 12' lengths.

#### 1.2 Surface Finish

MetalWorks™ SecureLock™ Plus planks are surface-finished with a factory-applied powder-coat after forming (post-coat).

#### 1.3 Site Conditions

Panels may be perforated or unperforated. Optional field installed acoustical infill pads are available for increased sound absorption.

#### 1.4 Storage and Handling

The ceiling panels should be stored in a dry interior location and should remain in crates prior to installation to avoid damage. The crates should be stored in accordance with the instructions on the crate. Proper care should be taken when handling to avoid damage or soiling.

#### 1.5 Site Conditions

Review project scope and schedule with the General Contractor and all subs who must work above areas to be treated with security ceilings. Review work that must be completed prior to installation of the ceiling and also after ceiling installation. All above ceiling work for Plumbing, Sprinklers, HVAC, and Signaling must be completed before ceilings are installed.

Store all materials on site in unopened packaging away from contact with water and debris.

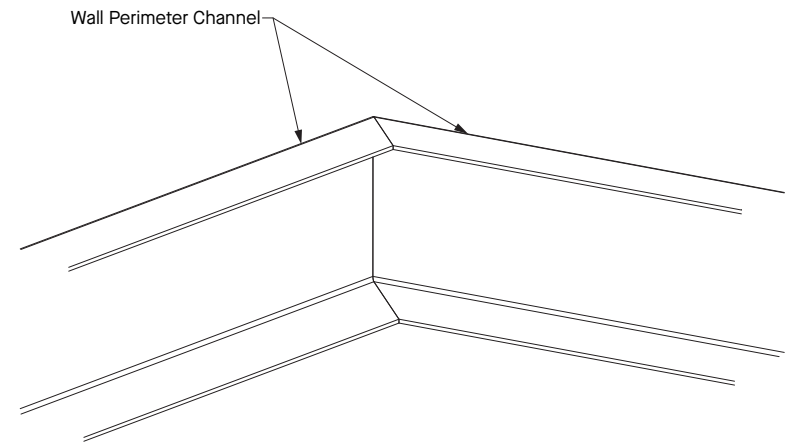
**CAUTION:** SECURITY CEILING MATERIALS ARE HEAVY. USE APPROPRIATE EQUIPMENT AND MANPOWER TO AVOID INJURY.

### 2. INSTALLATION

#### 2.1 Perimeter Channel

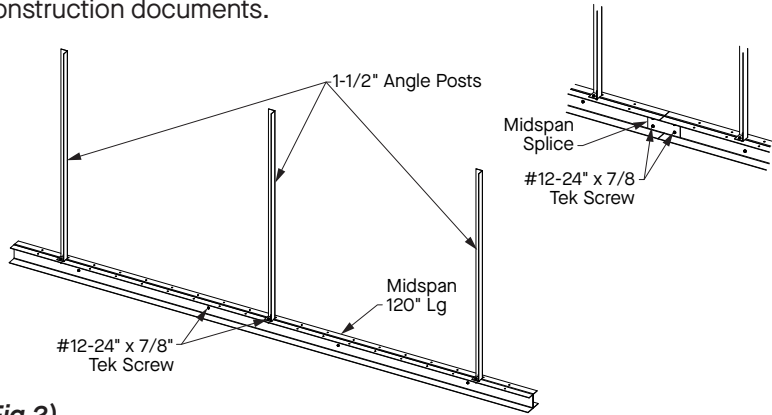
Install Perimeter Channel at the elevation defined in the construction documents. Use fasteners specified in the construction documents. Where no such specification is provided, use fasteners appropriate for the construction. Fastener spacing should be not more than 12" O.C.

#### 2.2 Miter cut and butt all perimeter trim Sections at corners. Do not overlap bottom flanges (*Fig 1*).

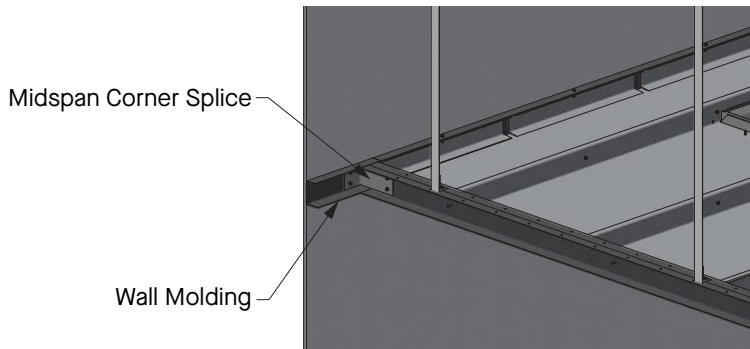


(Fig 1)

**2.3** Installations greater than one panel long require the use of a Midspan (Fig 2). Use Midspan Corner Splice to attach the Midspan to the Perimeter Channel on both ends with Tek Screws (Item 5598) (Fig 3). Suspend the Midspan struts to the ceiling structure as specified in the construction documents.



(Fig 2)



(Fig 3)

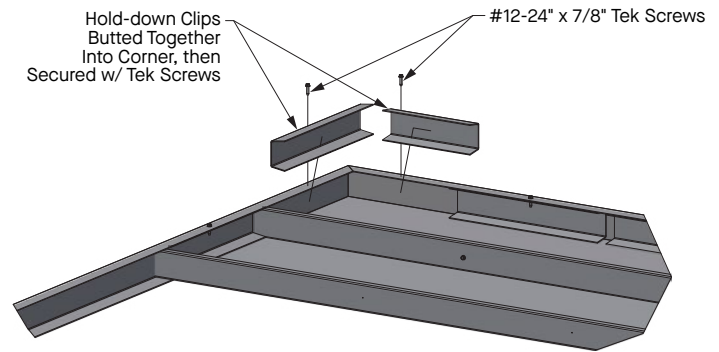
**2.4 Hold-down Clips**

Begin the installation of the planks away from the exit door (See explanation for Exit Plank in Section 2.8). Install Hold-down Clips into planks adjacent to the perimeter channel as work progresses. Insert the Hold-down Clip with the closed side facing towards the wall. Hold-down Clips are available in 3 different lengths based on the width of the plank (12", 18" or 24" plank) being installed. When installing Hold-down Clips only allow 1" to 2" spacing between the clips. Install Hold-down Clips in a row on the long side of the planks, per clip size and spacing noted in the chart below. If a full length Hold-down Clip is too long for remaining last space, cut Hold-down to length required to maintain 1" to 2" spacing.

Hold-down Clips Spacing			
Plank Size	Hold-down Clip Size	Clip On Center Spacing	Max Spacing Between Clips
12" Plank	11"	12"	1"
18" Plank	17"	18"	1"
24" Plank	22"	24"	2"

Use one clip on each short side of the plank. Secure the Hold-down Clips to the Perimeter Channel by inserting one self-drilling Tek Screw (5598) down through the top flange of the perimeter trim into each clip.

At the corners, use two Hold-down Clips butting up to each other, insert them into the channel, and secure with Tek Screw (5598) (Fig 4).

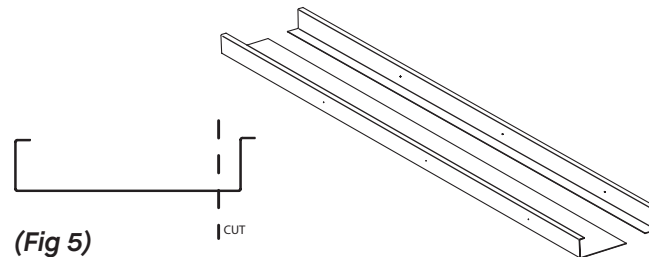


(Fig 4)

**2.5 Install Planks**

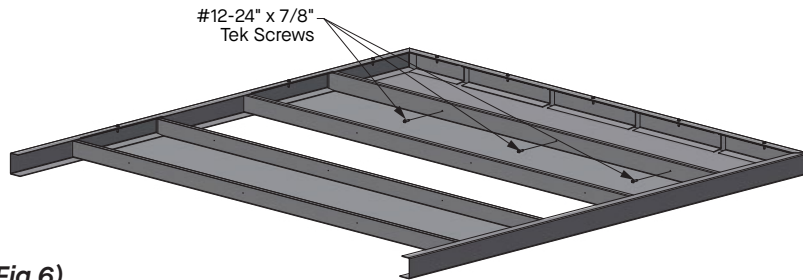
Rip cut the first plank to required width, removing the outward turned edge (Fig 5). Cut plank length to fit. The plank should overlap half way over the bottom flange of the Perimeter Channel on each side.

**CAUTION:** CUT EDGES OF METAL PANELS CAN BE EXTREMELY SHARP! HANDLE METAL CAREFULLY TO AVOID INJURY. ALWAYS WEAR SAFETY GLASSES AND GLOVES WHEN WORKING WITH METAL.



(Fig 5)

**2.6** Secure the first plank by inserting Hold-down Clips as described in Section 2.4. Continue installing planks, securing each plank flange to the previous plank with Tek Screws (Item 5598) at the pre-punched hole locations (**Fig 6**). Add Hold-down Clips at each end of planks.

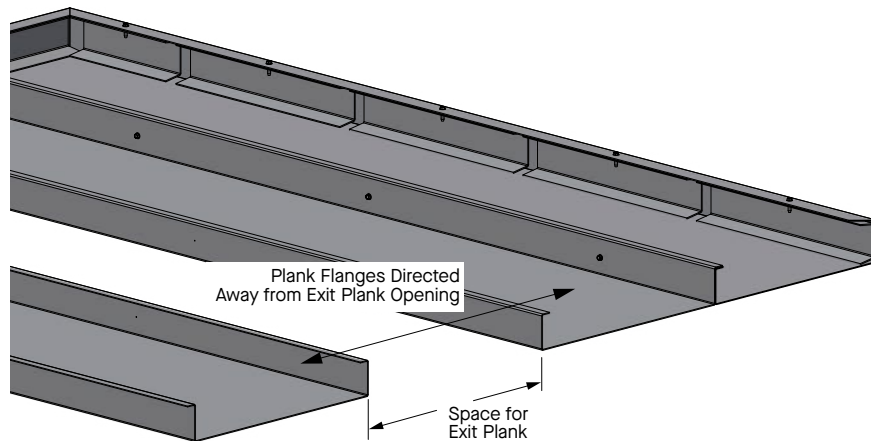


(Fig 6)

**2.7** Where specified, install acoustical infill panels on the back side of the planks as the work proceeds.

As planks are installed, be sure to orient planks so inward facing flanges point away from the Exit Plank location on both sides. This means the planks on one side of the Exit Plank location will be oriented 180 degrees from the planks on the other side of the Exit Plank (**See Fig 7**).

Rip cut to width and install the last perimeter plank before installing the Exit Plank. Discard the outward facing of the cut panel, same as first. First cut plank described in Section 2.5.



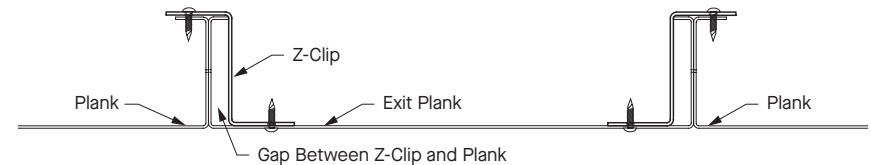
(Fig 7)

**2.8 Install Exit Plank**

Install the Exit Plank last. Screw Z-Clips (Item 5599) to the top of the upturns on the planks adjacent to the exit plank location. Be sure to leave a gap between the Z-Clips and the adjacent planks wide enough to allow the Exit Plank's inward flanges to slide up between them when inserting the Exit Plank. Centering the Z-Clip screw holes on the adjacent plank flange will ensure a properly sized gap between the plank and Z-Clip.

Space the Z-Clips as shown in submittal drawings or use chart below as a guide, and attach with Tek Screw.

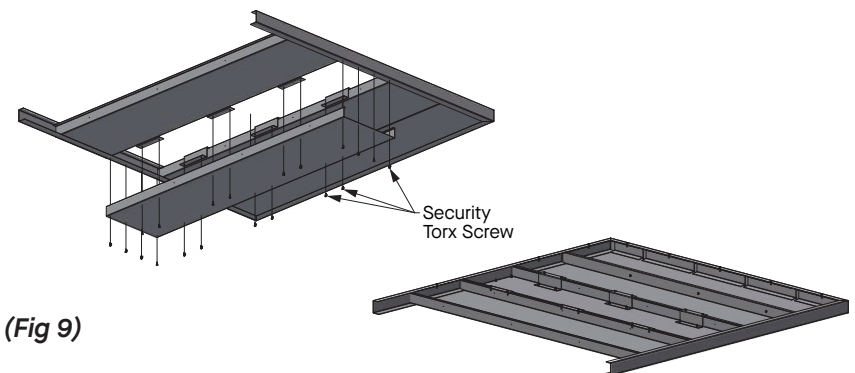
Plank Width (inches)	24"	36"	48"	60"	72"	84"	96"	108"	120"	132"	144"
Z-Clips/Plank (total)	4	4	4	4	4	6	6	8	8	10	10



(Fig 8)

Exit Plank

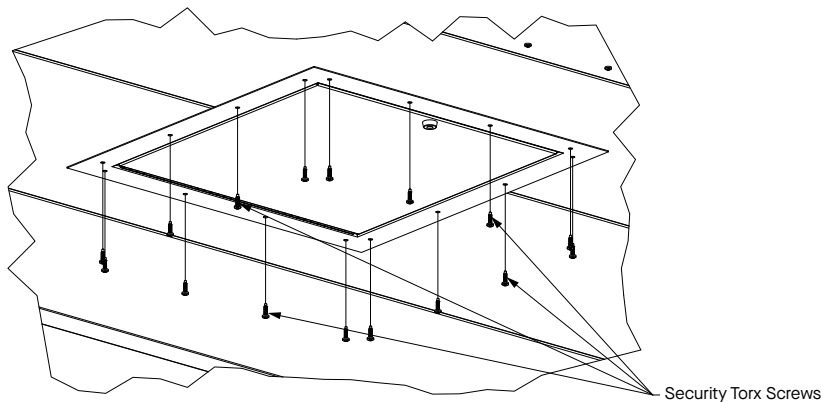
Raise the Exit Plank(s) into position and attach the plank to all Z-Clips, 2 screws per Z-Clip. For anti-ligature installations, the Exit Plank must additionally be attached with security screws to the lower flange of the perimeter channel along the short end width of the plank, spaced no more than 1" from the long sides of plank and no more than 6" O.C. across width (**Fig 9**).



(Fig 9)

## 2.9 Install Access Door

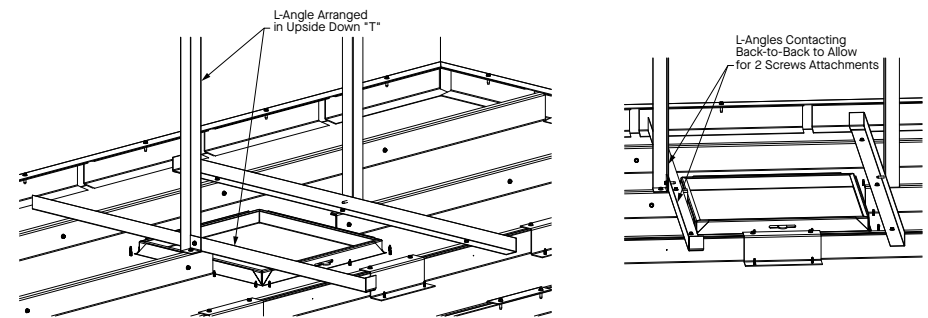
Cut planks for the Access Door prior to installation into the ceiling. Secure with Security Screws (Item 5596) no more than 6" O.C. and within 1" maximum from the corners on each corner side of the door frame. A 24" wide panel requires 5 screws per side, an 18" wide panel requires 4 screws per side, and a 12" wide panel requires 3 screws per side. Security screws will install through the Access Door frame flange into the face of the panel (**Fig 10**).



(Fig 10)

For installations where the Access Door location spans across two planks (for example an 18" door on 12" planks), additional reinforcement is required. Use two 1-1/2" L-Angle posts (also used in the Midspan Assembly) screwed together in an upside down "T" arrangement with the back surfaces of the L-Angles in contact using Tek Screws.

Attach the upside down "T" across the plank widths at the edge of Door Frame cutout, with the "T" being centered above the plank flanges that were cut out. Having the upright L-Angle off to the side (or back-to-back) of the horizontal L-Angle of the "T" provides two places for a screw attachment to the cut off flanges. Screw attach the upside down "T" to the 3 flanges; with the cut flange having 2 Tek screws, and the two adjacent flanges having 1 Tek screw each. Two upside down "T"s are required, one for each side of the Door Frame cutout (**Fig 11**).



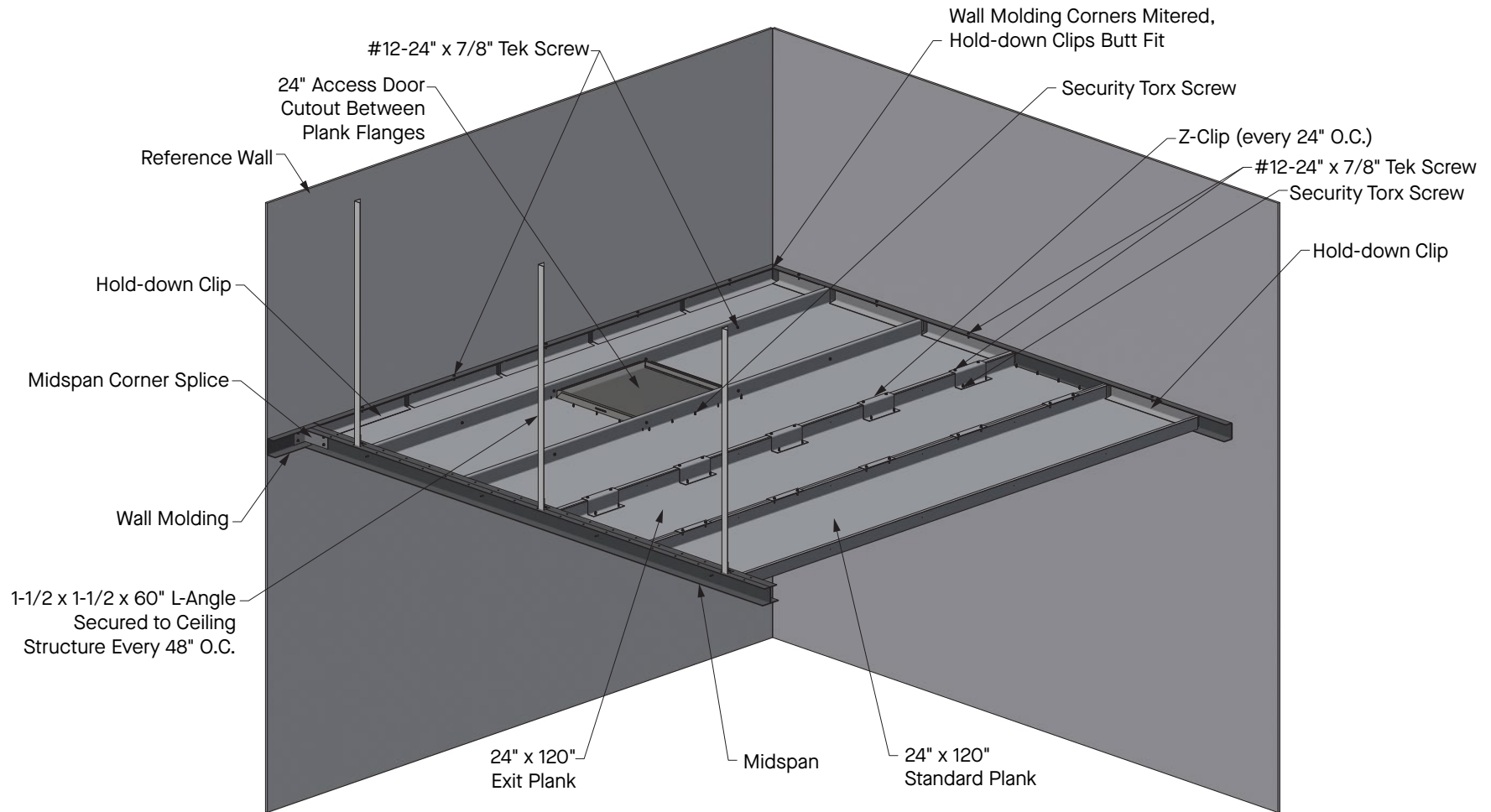
(Fig 11)

## 3. TOUCH UP AND CLEANING

Touch up scraps and dings with matching paint. Do not spray paint directly onto a plank. Dispense the paint into a cup and use a brush to apply it to the surface. Clean smudges and fingerprints with warm soapy water and a soft cloth.

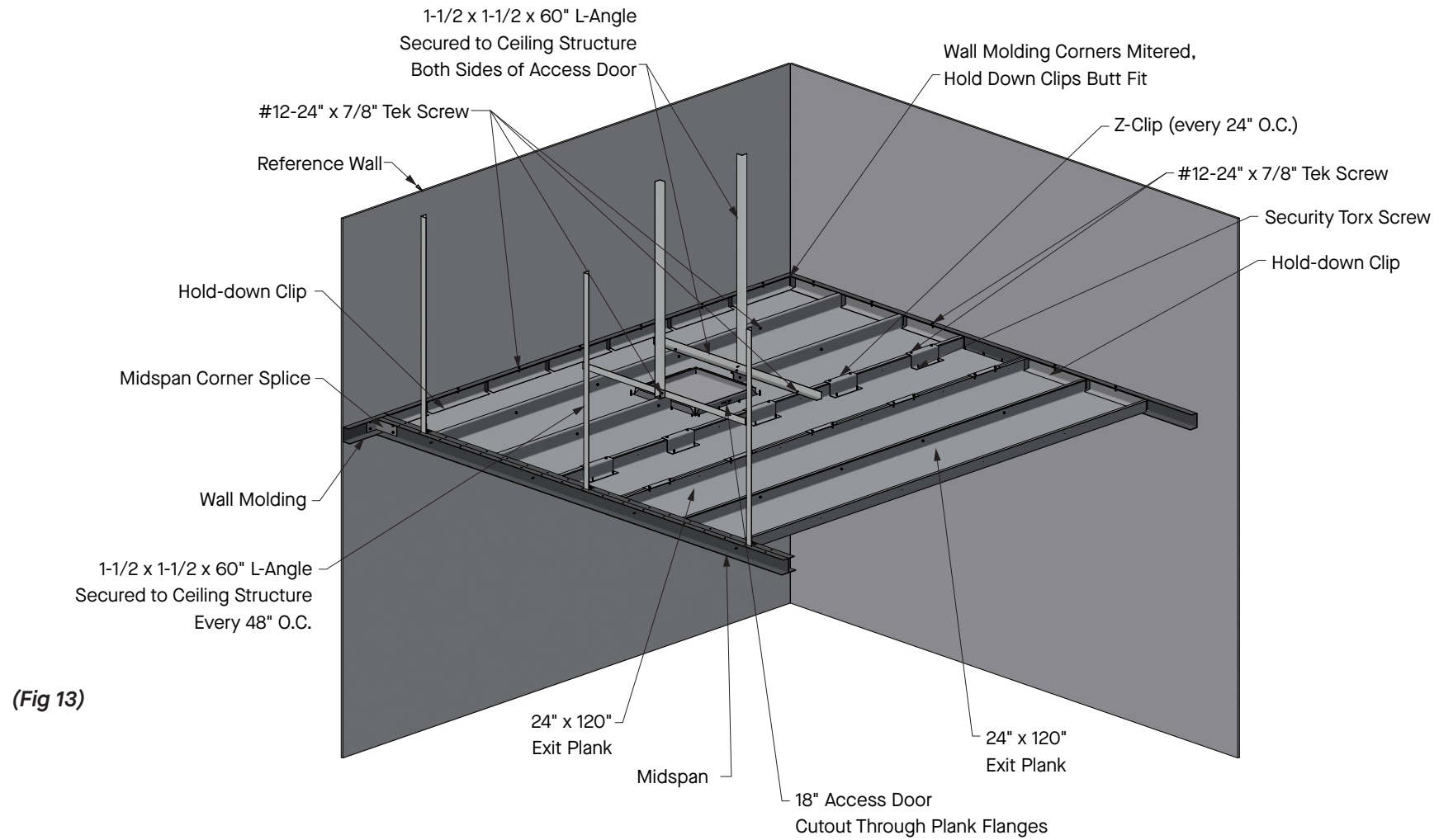
## 4. INSTALLED SYSTEMS

### 4.1 Installation w/Access Door Within a Single Plank (Fig 12)



(Fig 12)

## 4.2 Installation w/Access Door Spanning Across Two Planks (Fig 13)



(Fig 13)

### MORE INFORMATION

For more information, or for an Armstrong Ceilings representative, call 1 877 276-7876.  
 For complete technical information, detail drawings, CAD design assistance, installation information, and many other technical services, call TechLine customer support at 1 877 276-7876 or FAX 1 800 572-TECH.  
 For the latest product selection and specification data, visit [armstrongceilings.com/metalworks](http://armstrongceilings.com/metalworks)

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