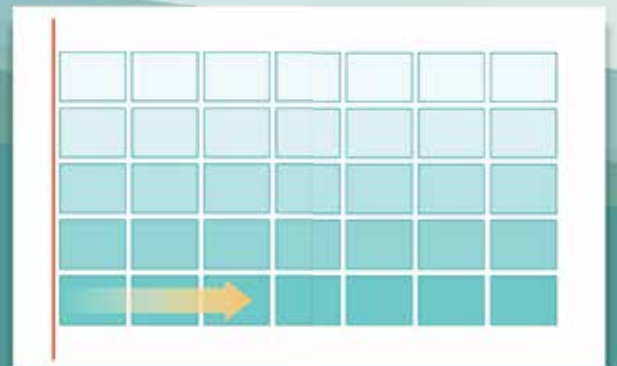


 DRAPER®

# FOUNDATION®

Installation Manual



**SAMSUNG** IER & IFR  
SERIES

FORM: FDN\_SAMSUNG\_Inst21-R

**LEFT to RIGHT**

## Important Safety Information



**WARNING**

Improper installation and use of Foundation for LED Panels can result in serious injury or death. Primarily, injuries can occur when the Foundation for LED Panels falls due to imprecise installation, mishandling of the Foundation for LED Panels during installation or installation on an insufficient wall or ceiling structure. Please use extreme care.

1. Please read the following installation guidelines thoroughly and follow them carefully. Failure to do so may cause product to fall or otherwise fail, and could result in serious injury.
2. Installation and use of any video wall display should be conducted with approved clearances for operating and servicing the display along with adequate ventilation for cooling. Consult your display manufacturer for operation, ventilation, and servicing conditions and requirements. Draper does not make recommendations related to proper operation of any display nor will Draper accept liability for a display which fails due to improper installation, use, or ventilation.
3. Installation and calibration of the Foundation for LED Panels should only be performed by an authorized, qualified, and experienced professional. In particular, electrical work and wiring [indicated in diagram by dashed lines] must be completed only by a qualified professional electrician who has read this manual completely and is familiar with the construction and operation of this equipment and the hazards involved.
4. Turn off power and any nearby equipment or cables carrying electricity before connecting switches, wires, controls, or electrical components.
5. Do not affix the unit to wall or ceilings that have inadequate strength to permanently hold the unit during use. It is the owner's and installer's responsibility to confirm the wall to which the unit attaches is sufficient to permanently hold the weight and stress loads of the unit at all times. Draper, Inc., is not responsible for improper installation, application, testing or workmanship related to the product at place of installation.
6. It is the installer's responsibility to make sure appropriate fasteners are used for mounting.
7. All brackets and other hardware must be installed level. Foundation for LED Panels must be level and square.
8. Never leave the area while operating the Foundation for LED Panels during installation, maintenance, or normal operation, unless it is secure and safe.
9. Before testing or operation, carefully inspect the entire area and areas underneath to be sure no persons or objects are in the area.
10. During testing or operation, carefully watch the surrounding area for any potential safety concerns including nearby persons or objects.
11. After installation, the entire system should be carefully tested to ensure safe and normal operation. Extreme care should be taken during testing to remain clear of moving parts to avoid possible injury.
12. Operation of Foundation for LED Panels should be performed only by authorized and qualified personnel, who have been trained in the safe and effective operation of the Foundation for LED Panels & understand its safety features.
13. The safety features of the Foundation for LED Panels should never be disabled, bypassed or overridden. The system should not be operated until all safety features are properly and completely installed, calibrated and tested.
14. Foundation for LED Panels may need to comply with local, state or district rules and regulations, in particular when installed in schools. All applicable rules and regulations should be reviewed before installation and use.
15. Failure to precisely follow installation guidelines invalidates all warranties.
16. Custom products/installations may not be reflected in this manual. Call Draper, Inc., if you have questions about the installation of custom products or any questions about your installation.

## Before Beginning Installation

1. Look for any job site conditions that could interfere with installation or operation of the system.
2. Read carefully and be sure to understand all installation instructions and all related operations manuals. These instructions are intended to as a guide for the installer and owner. They should be followed closely and combined with the expertise of experienced qualified installers. Draper, Inc., is not responsible for improper installation, application, testing or workmanship related to the product at place of installation. Please retain all instructions for future use.
3. Open cartons lengthwise.
4. Locate and lay out all pieces.
5. Inspect all boxes to make sure you have received the proper Foundation for LED Panels and parts.

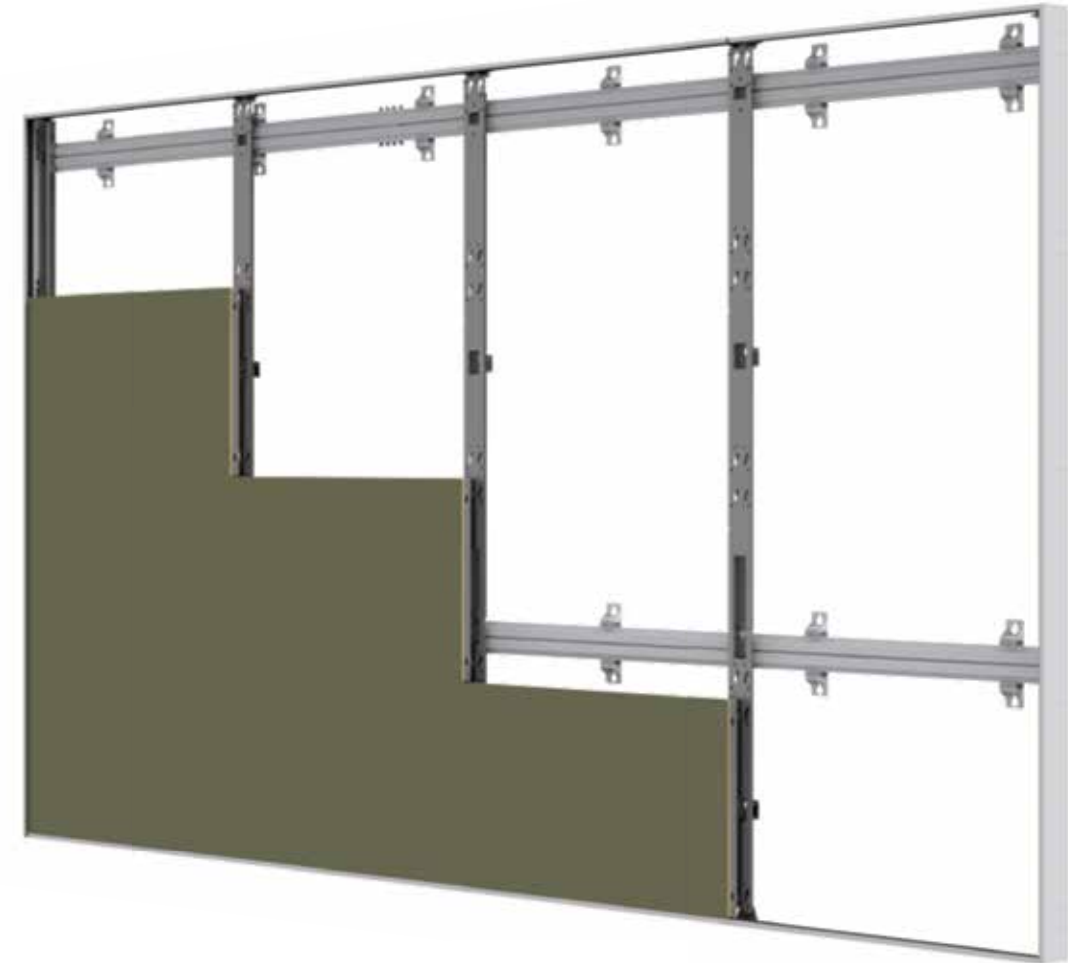
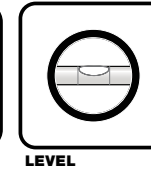
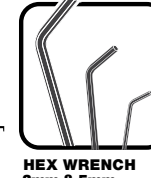
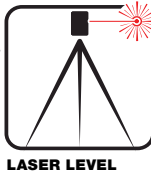


**CAUTION**

Read and understand all warnings (Page 2) before beginning installation.

## Section 1 - Personnel and Tools Required

### PERSONNEL REQUIRED

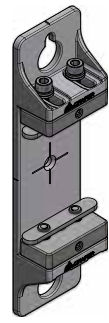


## Contents

Section 1 - Personnel and Tools Required.....	2	Section 12 - Attaching Trim Brackets .....	24
Section 2.1 - Components - Foundation Frame .....	4	Section 12.1 - Installing Center Top Trim Brackets.....	24
Section 2.2 - Components - Foundation Trim.....	6	Section 12.3 - Installing Center Bottom Trim Brackets.....	24
Section 3 - Determining Mounting Location .....	8	Section 12.4 - Installing Outer Bottom Trim Brackets.....	25
Section 3.1 - Marking Horizontal Mounting Locations.....	8	Section 12.2 - Installing Outer Top Trim Brackets .....	25
Section 3.2 - Marking Vertical Mounting locations .....	10	Section 13 - Attaching LED Cabinets.....	26
Section 3.3 - Attaching Mounting Hardware (by Others) to Wall .....	11	Section 13.1 - Attaching Spring-Loaded Fasteners .....	26
Section 4 - Assembling Horizontal Rails.....	12	Section 13.2 - Attaching LED Panels .....	26
Section 5 - Hanging Horizontal Rails.....	13	Section 14 - Attaching Foam Tape to Completed LED Array.....	28
Section 6 - Adjusting and Aligning Horizontal Rails .....	14	Section 15 - Attaching Trim to Trim Brackets.....	30
Section 7 - Securing Inner Wall Brackets .....	15	Section 15.3 - Installing Bottom Trim.....	30
Section 8 - Attaching Wall Adjuster Brackets to Vertical Rails.....	15	Section 15.1 - Installing Center Top Trim .....	30
Section 9 - Inserting Front Rail Connector and Vertical Rail Fasteners.....	16	Section 15.2 - Installing Center Top Trim.....	31
Section 10 - Attaching Vertical Rails.....	18	Section 15.4 - Installing Side Trim .....	31
Section 11 - Adjusting Verticals.....	20		
Section 11.1 - Y - Axis Adjustment.....	20		
Section 11.2 - X - Axis Adjustment (Squaring Verticals with Alignment Tool).....	21		
Section 11.3 - Z - Axis Adjustment .....	22		

If you have any difficulties installing or servicing your Foundation for LED Panels, call your dealer or Draper, Inc.

Section 2.1 - Components - Foundation Frame



**WALL MOUNTING BRACKETS**

**HORIZONTAL RAILS**

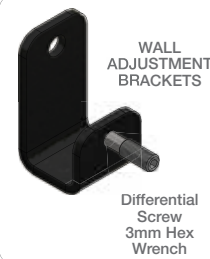


**VERTICAL RAILS**

VERTICAL RAIL LEFT SIDE    VERTICAL RAIL CENTER    VERTICAL RAIL RIGHT SIDE



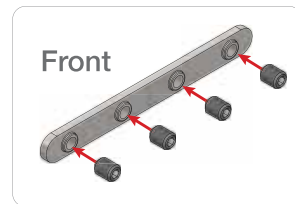
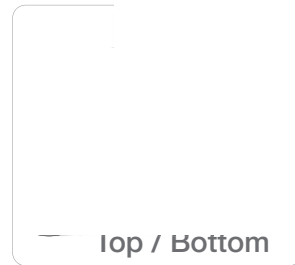
**VERTICAL RAIL FASTENERS**



**LED MOUNTING & ALIGNMENT**



**HORIZONTAL RAIL COI**



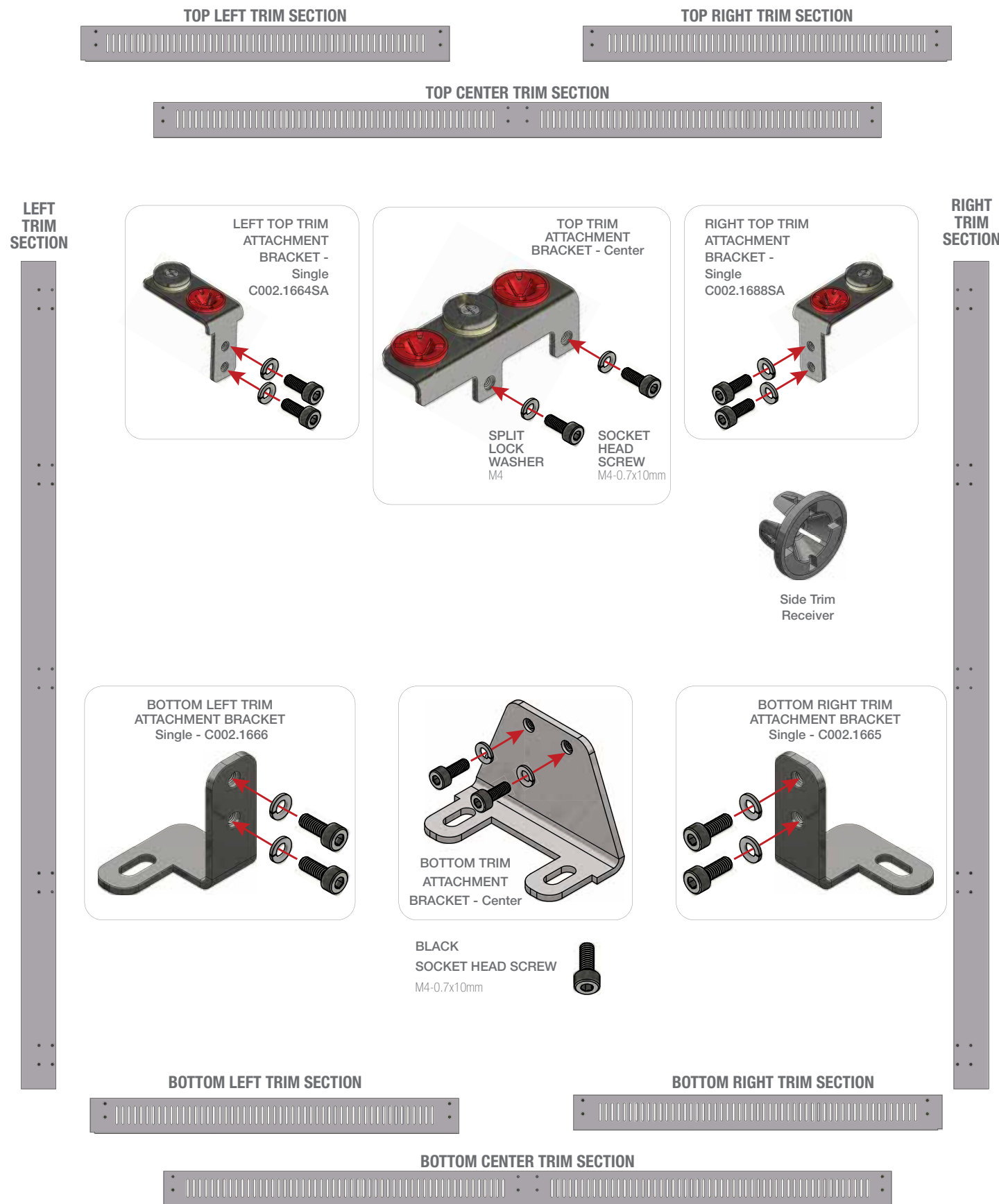
**Component**

**Part #**

**Array Size 4x4**

<b>LED Panels: SAMSUNG IER &amp; IFR</b>	By Others	16
<b>WALL MOUNTING BRACKETS</b>	C002.1603	14
<b>WALL ADJUSTERS</b>		
Wall Adjuster Bracket	C002.1604.02SA	10
Differential Socket Screw: M6 - 1x32.6mm	C020.725	10
<b>HORIZONTAL RAILS</b>		
90" (2286mm) Horizontal Rail	C285.062.001	2
Horizontal Rail Section (length varies)	C285.062 Length	2 60 3/8" (1534mm)
<b>HORIZONTAL RAIL CONNECTOR - Top/Bottom</b>		
Horizontal Rail Connector Bar	C162.032	4
Washer: .255"ID X .562"OD X .06"	C013.012	16
Split Lock Washer: .25" ID X .365"OD X .063"	C013.028	16
Screw: M6 - 1x10mm	C020.729	16
<b>HORIZONTAL RAIL CONNECTOR - Front</b>		
Horizontal Rail Connector Bar	C162.032	2
Set Screw: M6 - 1x8mm	C020.728	8
<b>VERTICAL RAIL FASTENERS</b>		
Slide-In Nut: M6	C018.165	10
Flanged Socket Head Screw: M6 - 1x9mm	C020.735	10
<b>LED ALIGNMENT &amp; ATTACHMENT TOOLS</b>		
LED Plum Alignment Pin	C032.126	6
LED Alignment Tool	C202.044	2
<b>VERTICAL RAILS</b>		
Vertical Support Lower Center	C056.102SA	3
Vertical Support Lower End Left	C056.108SA	1
Vertical Support Lower End Right	C056.114SA	1

Section 2.2 - Components - Foundation Trim



**Trim Component**

**Part #**

**Array Size  
4X4**

Trim Component	Part #	Array Size 4X4
<b>TOP TRIM BRACKETS</b>		
Trim Attachment Bracket - Single - Top Right	C002.1688SA	1
Trim Attachment Bracket - Single - Top Left	C002.1664SA	1
Trim Attachment Bracket - Double - Top Center	C002.1655SA	3
Screw: M4 - 0.7x10mm	C020.621	20
Split Lock Washer: M4	C013.196	20
<b>SIDE TRIM ATTACHMENT</b>		
Side Trim Receiver	C036.013	16
<b>BOTTOM TRIM BRACKETS</b>		
Trim Attachment Bracket - Single - Bottom Right	C002.1665	1
Trim Attachment Bracket - Single - Bottom Left	C002.1666	1
Trim Attachment Bracket - Double - Bottom Center	C002.1654.02SA	3
Screw: M4 - 0.7x8mm Black Oxide	C020.739	6
<b>TRIM SECTIONS</b>		
BOTTOM CENTER TRIM - SAMSUNG IER & IFR	C287.170SA	1
BOTTOM LEFT TRIM - SAMSUNG IER & IFR	C287.171SA	1
BOTTOM RIGHT TRIM - SAMSUNG IER & IFR	C287.172SA	1
RIGHT SIDE TRIM - SAMSUNG IER & IFR	C287.188SA	1
LEFT SIDE TRIM - SAMSUNG IER & IFR	C287.175SA	1
TOP LEFT TRIM - SAMSUNG IER & IFR	C287.192SA	1
TOP CENTER TRIM - SAMSUNG IER & IFR	C287.190SA	1
TOP RIGHT TRIM - SAMSUNG IER & IFR	C287.191SA	1
<b>MISC</b>		
TAPE 1/2" X 1/2" BLACK PVC FOAM PVC 1 SIDE ACRYLIC ADHESIVE	C118.116	41 5/8' (12.7M)

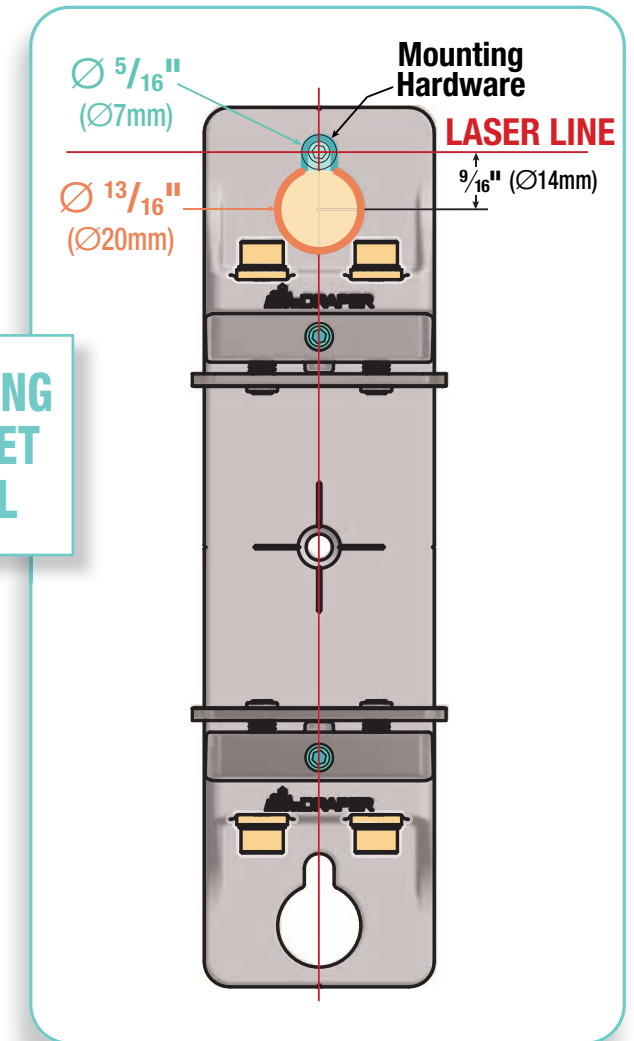
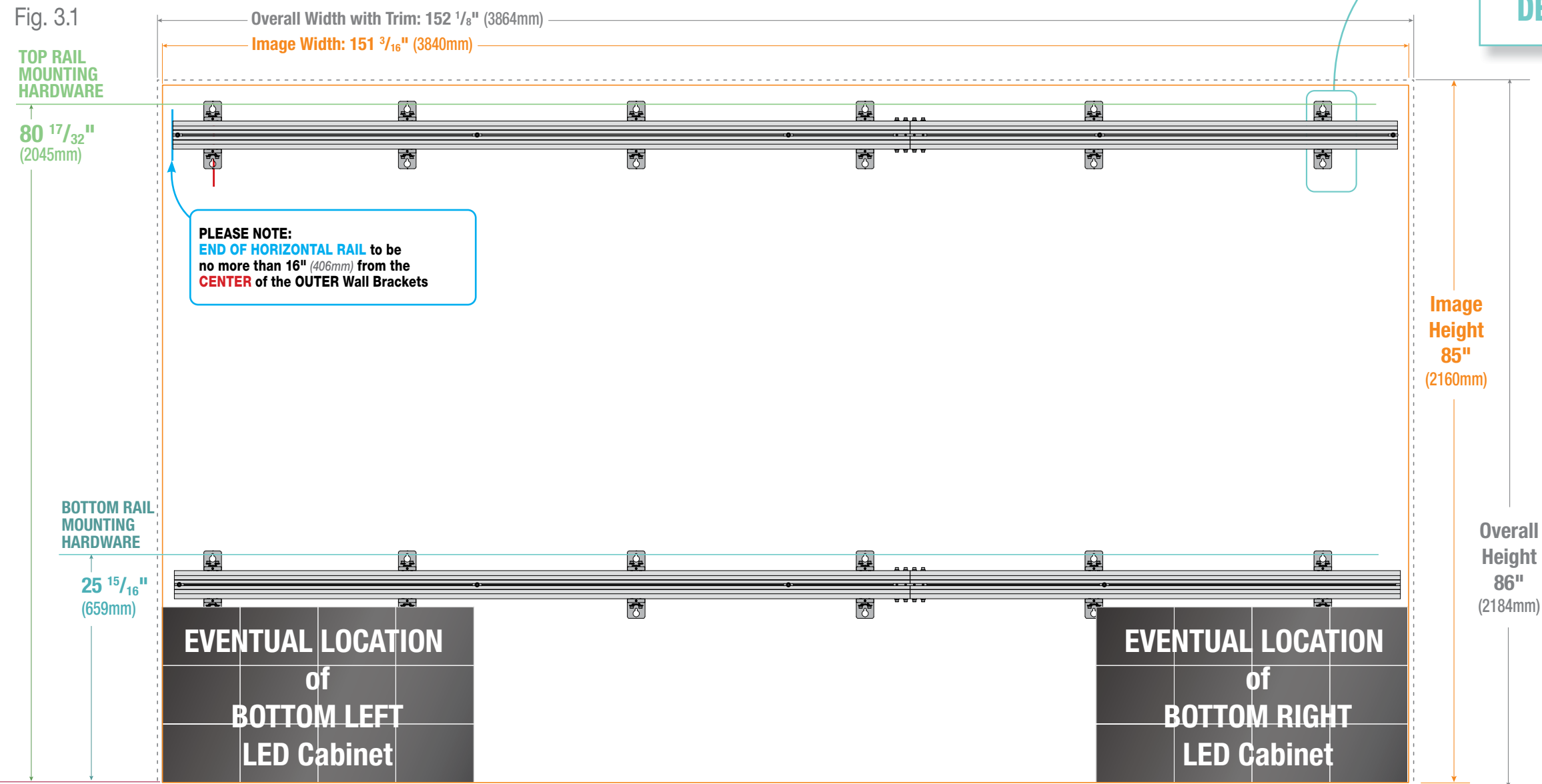
Section 3 - **Determining Mounting Location**

**Section 3.1 - Marking Horizontal Mounting Locations**

The Foundation Wall Brackets must be securely anchored to the wall. If mounting to drywall/gypsum board wall, all mounting hardware (by others) must be anchored to a vertical stud. If mounting to a brick or block wall, the brackets must be evenly spaced no more than 32" (813mm) apart. In the drawings showing in this manual, the bracket spacing is 24" unless specified otherwise.

1. Mark the location of the **Bottom Left Corner** of the **viewing area**.
2. From the mark made in step 1, measure up **25 15/16" (659mm)** and draw a level horizontal line the width of the LED display.  
This is the top mounting hole location of the **WALL MOUNTING BRACKET FOR THE UPPER HORIZONTAL RAIL** (see *Mounting Bracket Detail at right*).
3. From the mark made in step 1, measure up **80 17/32" (2045mm)** and draw a level horizontal line the width of the LED display.  
This is the top mounting hole location of the **WALL MOUNTING BRACKET FOR THE BOTTOM HORIZONTAL RAIL** (see *Mounting Bracket Detail at right*).

The fully assembled Horizontal Rails (see section 4) will be hung from them in Section 5.



**START HERE**

- LOCATE BOTTOM LEFT of **Image Area** ———  
or  
LOCATE BOTTOM LEFT of **Trim** - - - - -

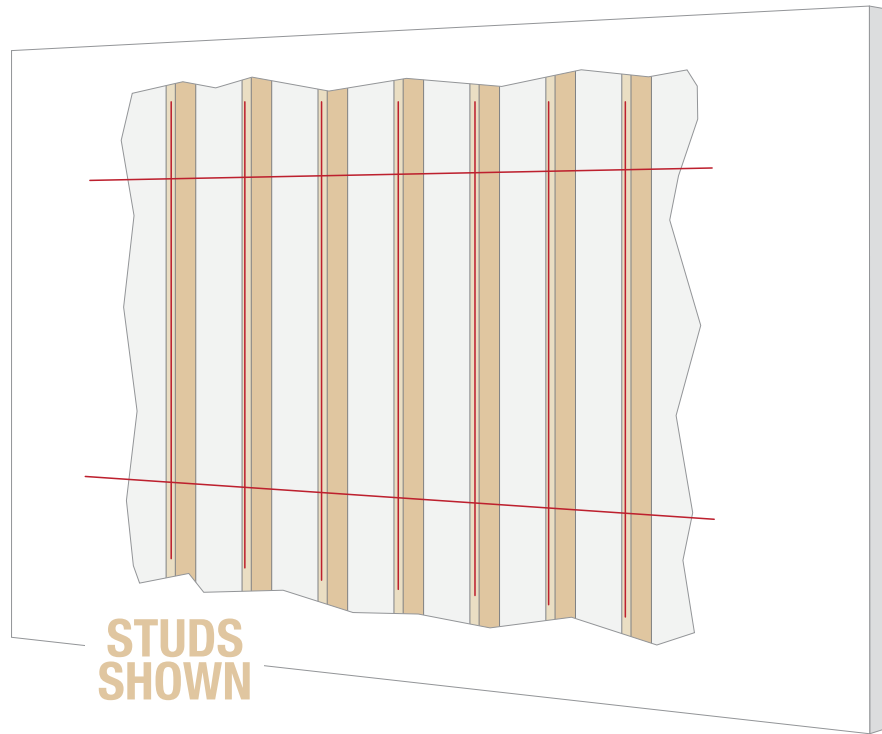
NOTE: If installing trim, you must allow 1 5/16" (33mm) of clearance around the outside of the image area.

**Section 3.2 - Marking Vertical Mounting Locations**

**Section 3.2.1 - WOOD/METAL STUD INSTALLATION**

1. Locate the wall studs and mark their location at the intersection of the lines drawn in Section 3.1.

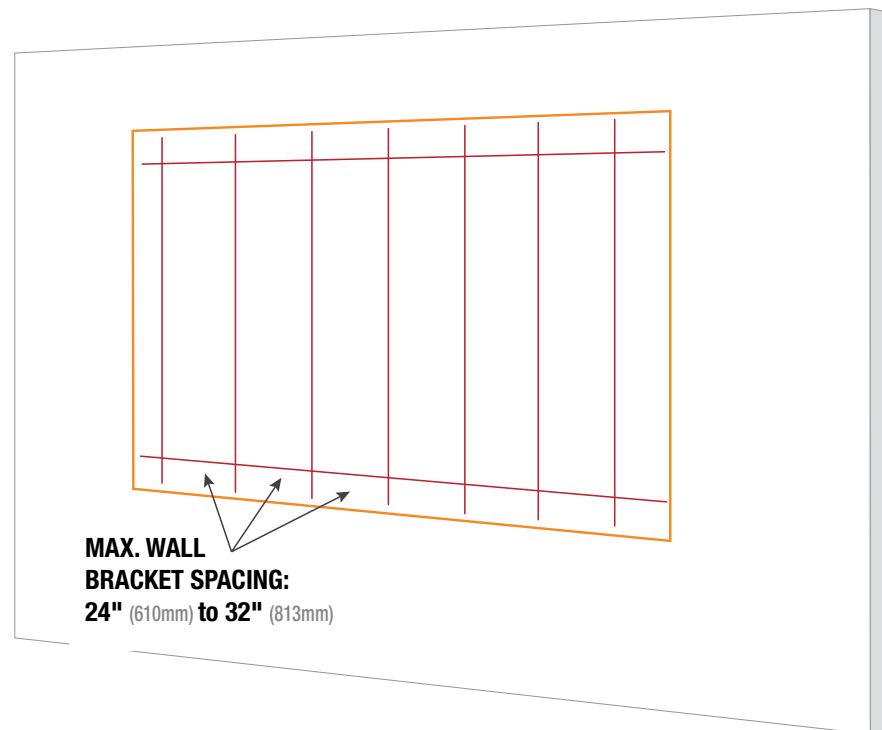
Fig. 3.2-1



**Section 3.2.2 - CONCRETE, BLOCK OR BRICK INSTALLATION**

1. Draw vertical lines spaced 24" (609mm) to 32" (813mm) apart.

Fig. 3.2-2



**Section 3.3 - Attaching Mounting Hardware (by Others) to Wall**

1. Loosely attach the wall mounting hardware (provided by others) to the wall at the outer four corners of the grid created in Sections 3.1 & Section 3.2.  
Ensure the head of the hardware is at least 1/2" (12mm) off the surface of the wall.

The assembled Horizontal Rails will be hung from these in SECTION 5 - Hanging Horizontal Rails.

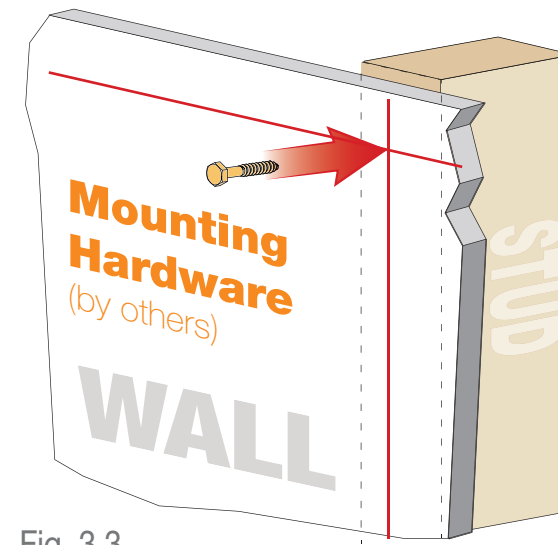
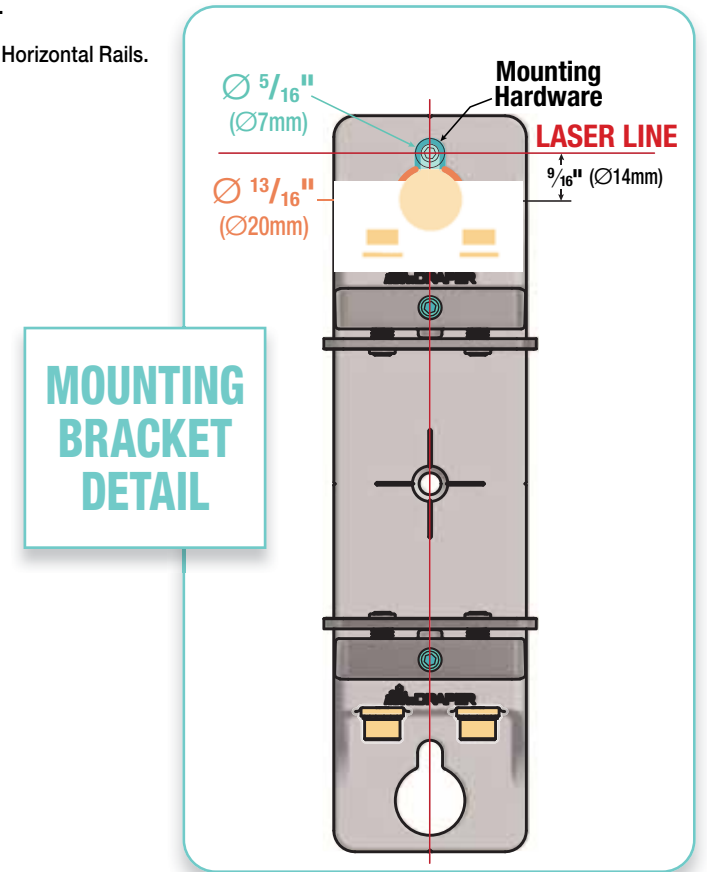


Fig. 3.3

**Please Note:** It is the responsibility of the installer to select mounting hardware appropriate for the mounting surface

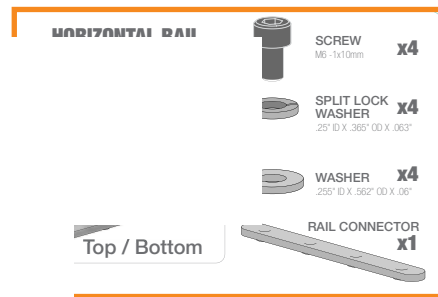
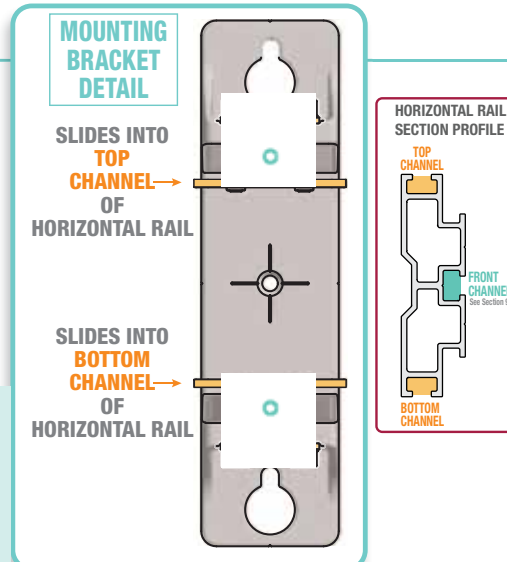


Section 4 - **Assembling Horizontal Rails**

The horizontal rails must be assembled prior to being secured to the wall.

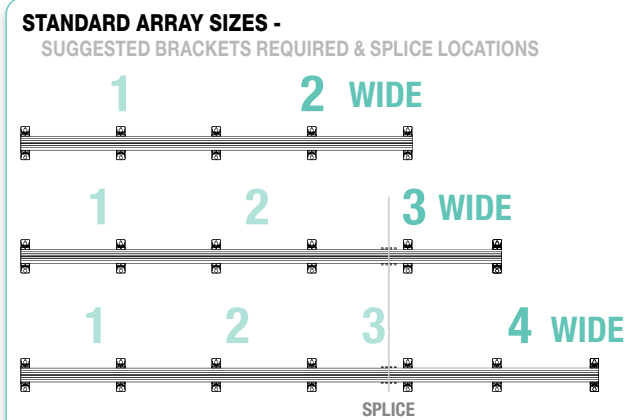
A complete Horizontal Rail consists of Wall Mounting Brackets engaged in both **TOP and BOTTOM Channels** of extruded rail sections (see **MOUNTING BRACKET DETAIL** at right).

Horizontal rail sections are extended in length using 3 Horizontal Rail Connectors per splice.



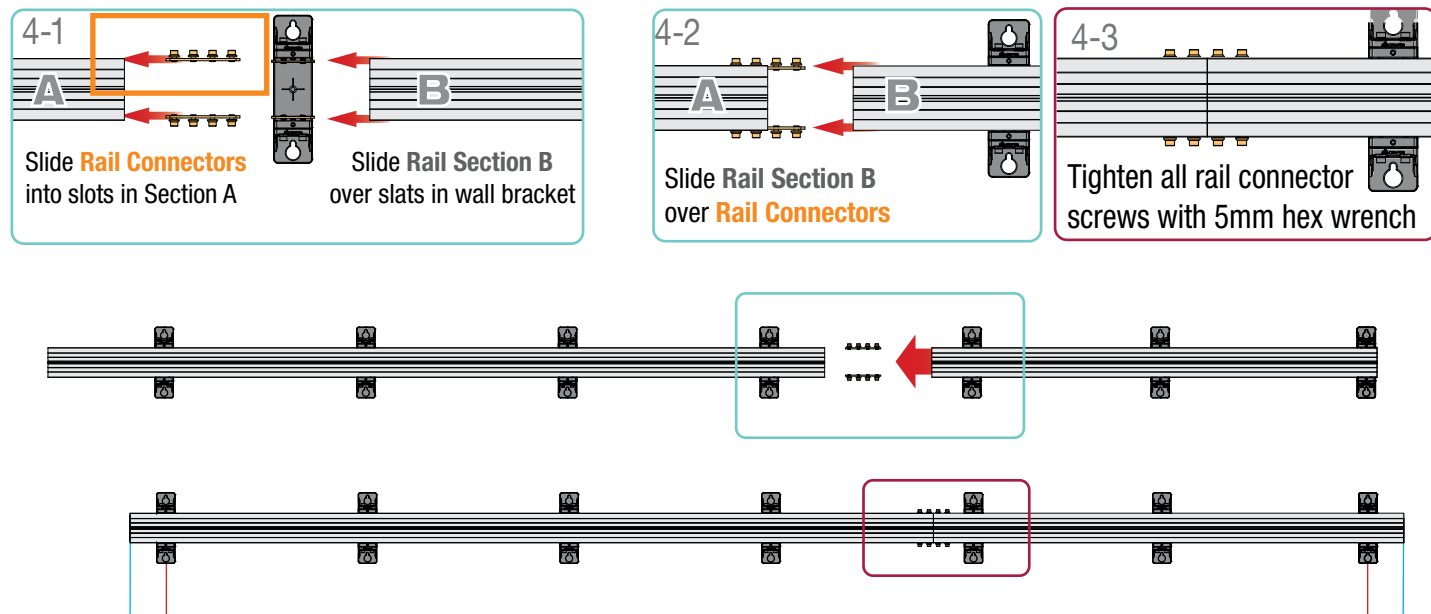
**Please Note:**  
Only the TOP and BOTTOM rail connectors will be used to assemble the rails.  
Front Rail Connector will be installed later in Section 9.

See chart above for the suggested number of wall brackets required per rail and splice locations.



**Note:** For Array sizes that require more than one Rail Splice, you MUST locate the wall mounting brackets on the center rail section prior to securing splices.

**To assemble the Horizontal rails:**



Section 5 - **Hanging Horizontal Rails**

- Using the top keyhole slots of the two outer wall mounting brackets, hang the bottom horizontal rail on the pre-installed mounting hardware (see Section 3, Step 5).

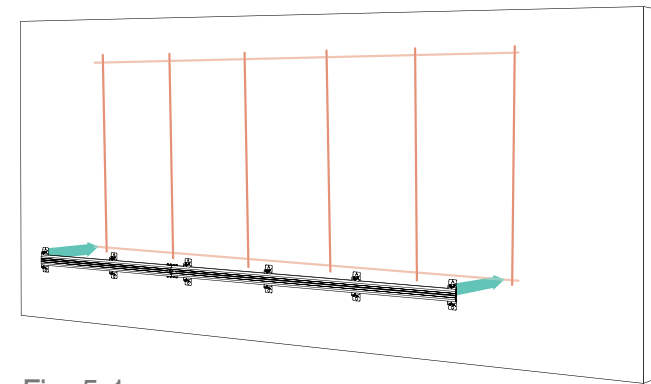


Fig. 5-1

- Using the top keyhole slots of the outer wall mounting brackets, hang the top horizontal rails on the pre-installed mounting hardware.

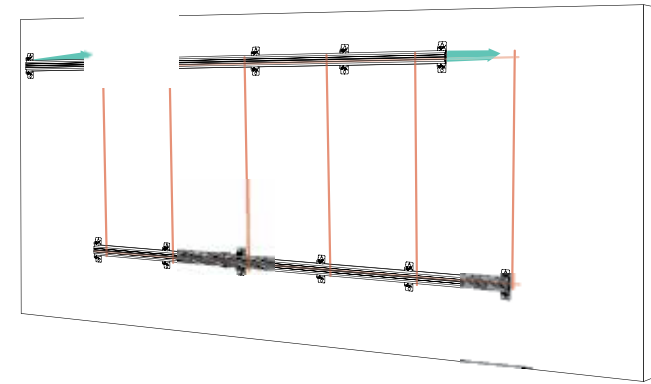


Fig. 5-2

- Secure the outer wall mounting brackets on each end of the horizontal rails onto the wall. Leave the inner brackets loose for now.

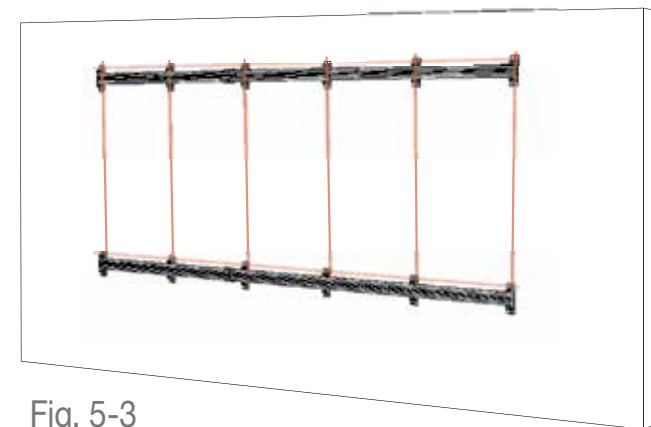
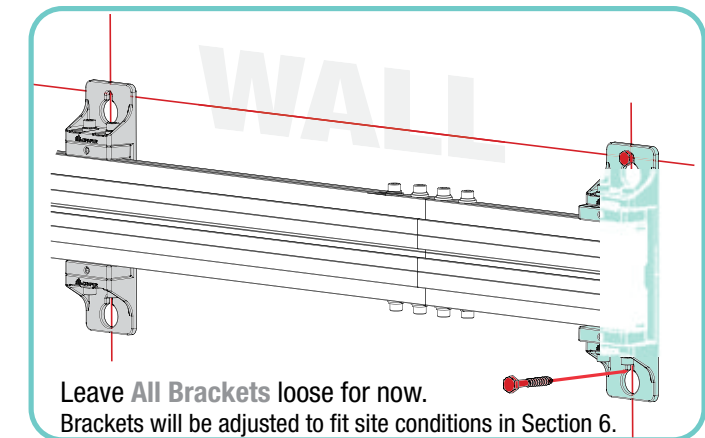
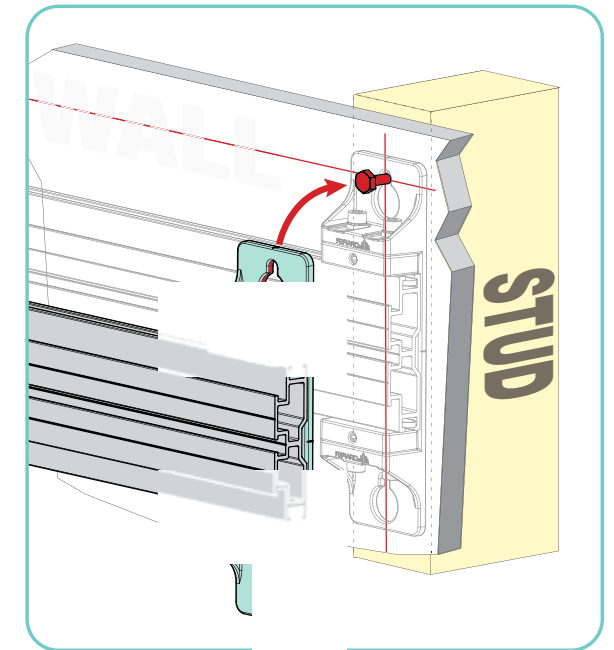


Fig. 5-3



Section 6 - **Adjusting and Aligning Horizontal Rails**

1. Push the wall brackets against the wall where they will be mounted. Depending on the flatness of the wall some brackets may not touch the wall (see Fig. 6-1).

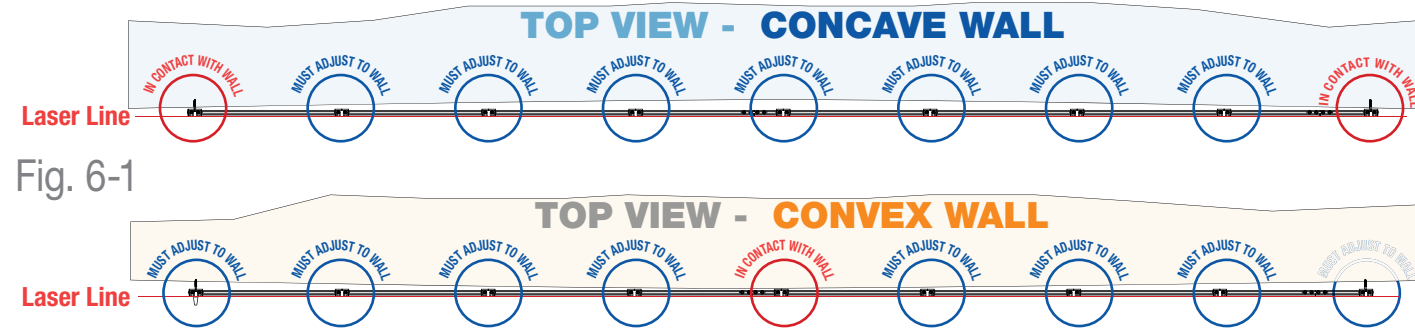
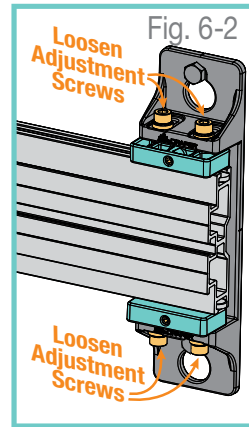


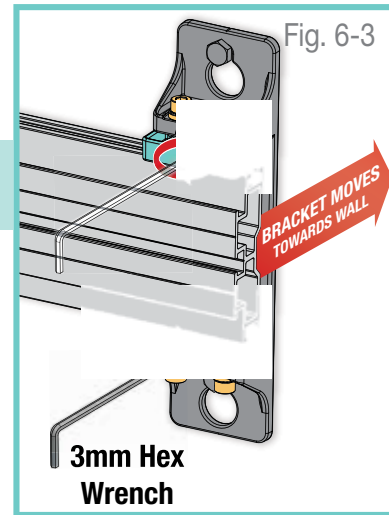
Fig. 6-1

2. For any wall brackets not touching the wall (see BLUE CIRCLES ABOVE) use a 5mm Hex Wrench to loosen the four (4) locking screws on the top and bottom of each bracket (See Fig. 6-2).



3. Using a 3mm Hex Wrench, turn the two (2) adjustment set screws on each wall mounting bracket. Adjust the wall bracket back until it touches the wall (see Fig. 6-3).

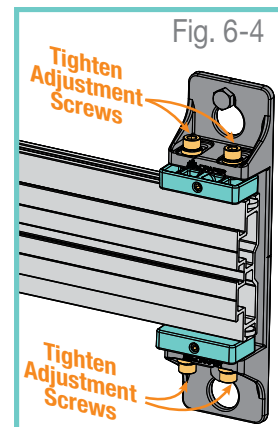
**PLEASE NOTE:** Take care not to adjust too far and force any wall brackets off the wall that were touching it. A level or straight edge can also be laid across the front face of the horizontal rail between 3 or more wall brackets to ensure the rail is straight.



4. Leaving the wall brackets free floating, shine a laser line parallel to the desired viewing surface of the LED wall and close to the horizontal rails.

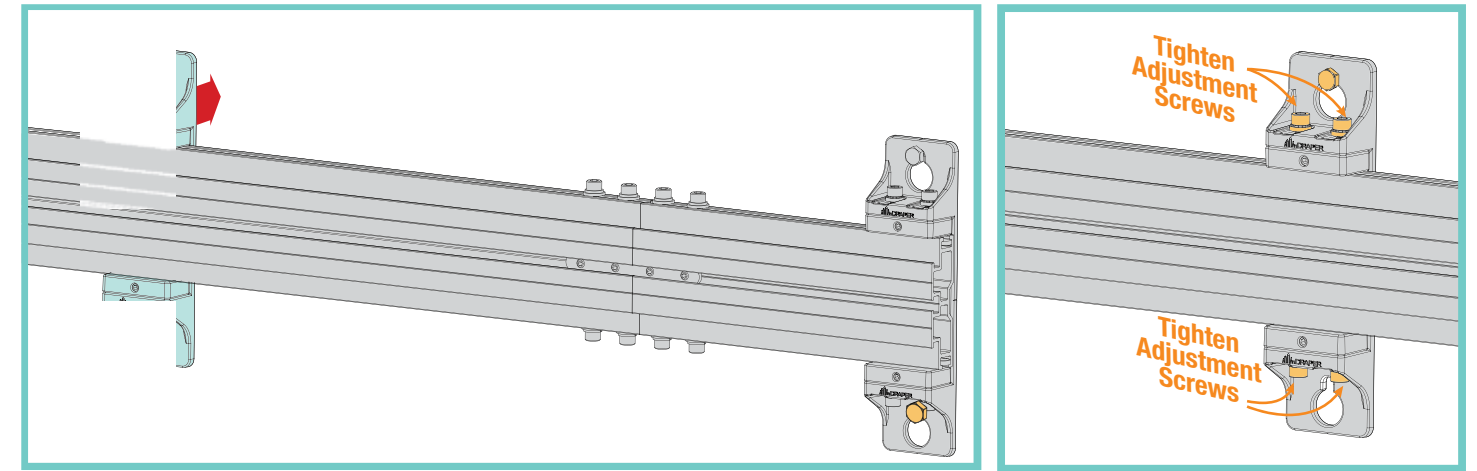
5. Using a tape measure check the distance from the laser line to the horizontal rail at each wall bracket, and adjust any wall brackets until all measurements match.

6. Once all brackets are in contact with the wall, and the horizontal rails are perfectly straight, tighten all adjustment screws.



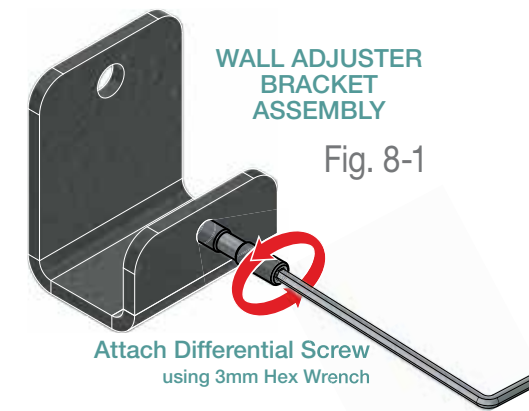
Section 7 - **Securing Inner Wall Brackets**

1. Using a 3mm Hex Wrench adjust all remaining wall mounting brackets. Ensure that each bracket is flush to the wall and secure to the wall with the appropriate mounting hardware.
2. Carefully tighten all four (4) locking screws on the top and bottom of each wall mounting bracket.
3. Repeat steps 1 and 2 until all brackets are plum and secured in place.

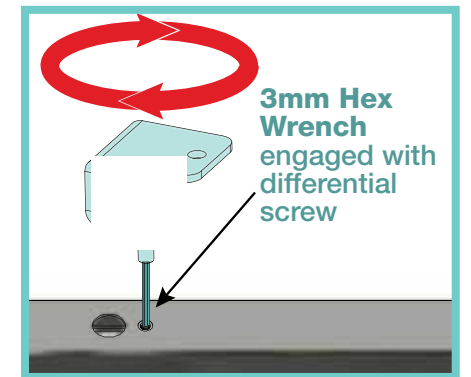


Section 8 - **Attaching Wall Adjuster Brackets to Vertical Rails**

1. Attach the Differential Screw to the Wall Adjustment Bracket



2. Attach two (2) Wall Adjuster Brackets to the back side using a 3mm hex wrench.

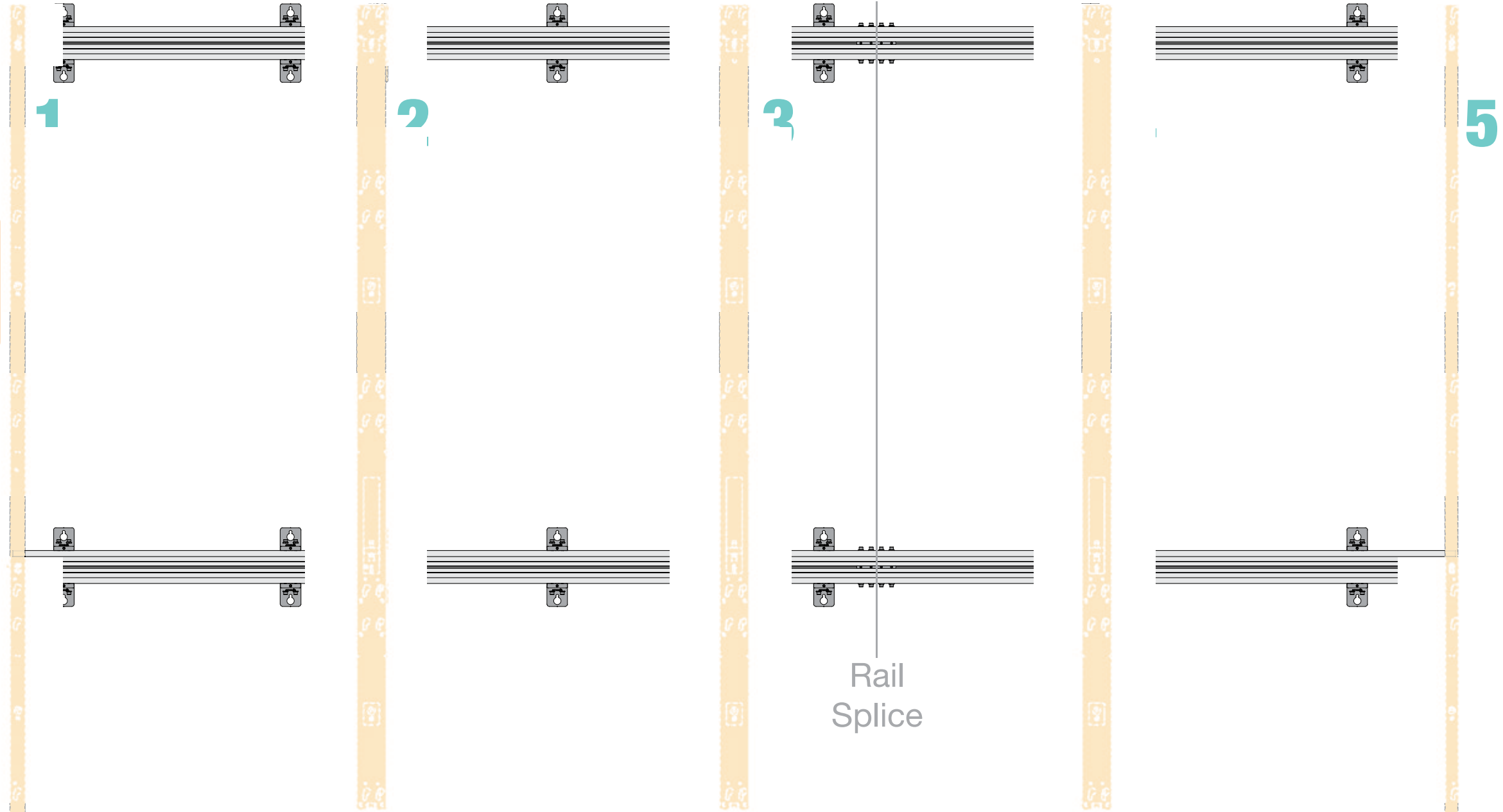
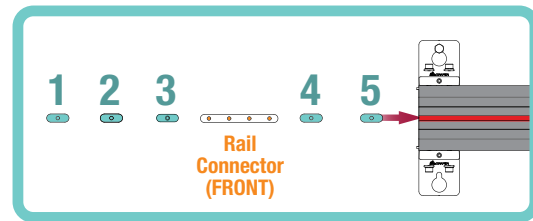
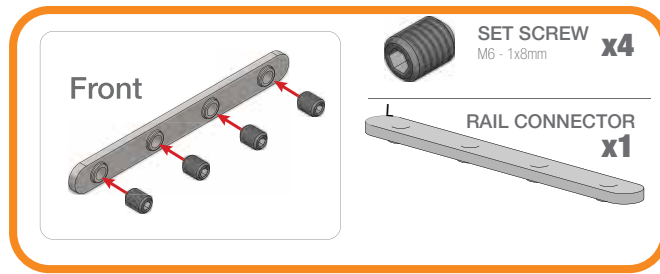
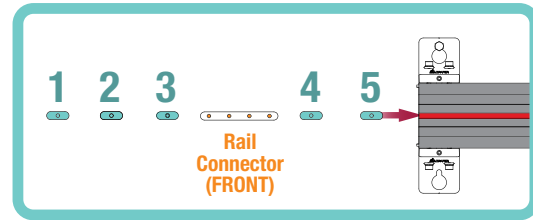




Section 9 - Inserting Front Rail Connector and Vertical Rail Fasteners

1. Insert horizontal rail connector and vertical rail fasteners into the top and bottom horizontal rails.  
Fig. 9-1

# 4x4 5 Vertical Rails



Eventual location of Vertic

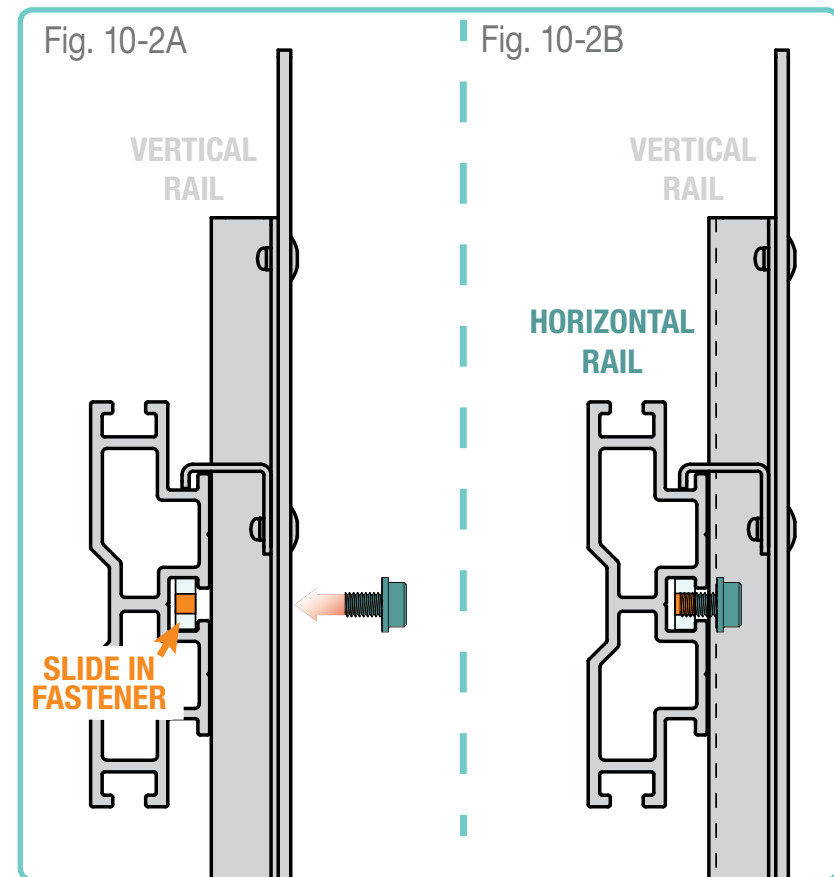
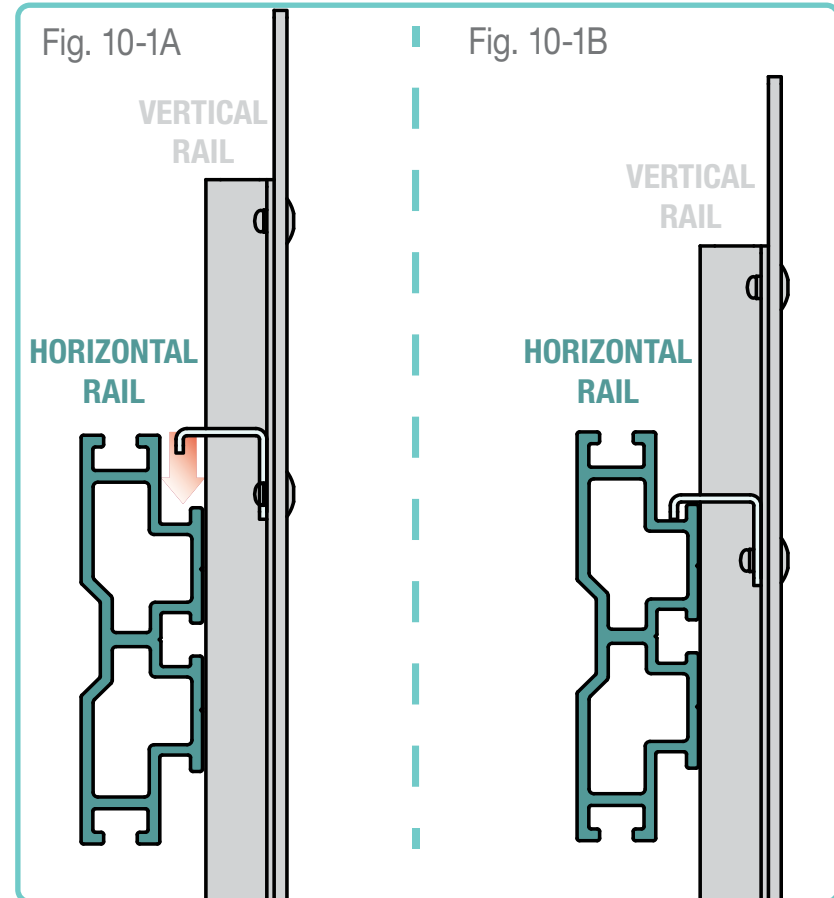
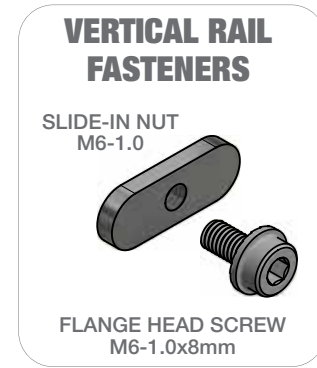
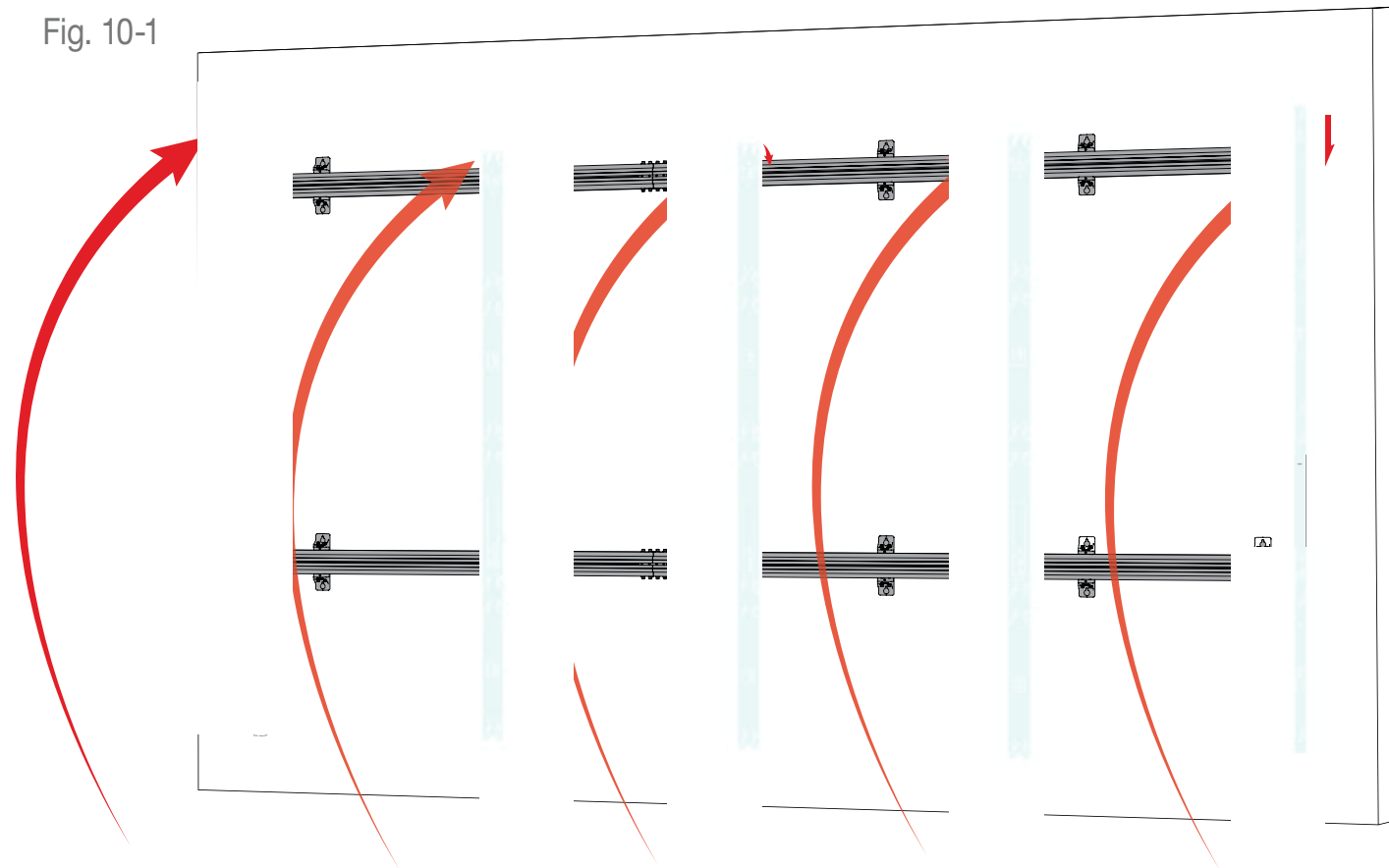
/n



Section 10 - **Attaching Vertical Rails**

1. Hang the Vertical Rails on the top horizontal rail and space evenly (See fig. 10-1).  
The Left edge of Left Outer Vertical Rail (A) will align with the Left edge of both Horizontal rails.
2. Using a 5mm hex wrench, slide the fastener nuts (from Section 9) into position and attach using the supplied M6x9 hardware.

Fig. 10-1





Section 11 - **Adjusting Verticals**

**Section 11.1 - Y - Axis Adjustment**

1. Set the height of the Left Side Outer Vertical Rail. The Left edge of Left Outer Vertical Rail will align with the Left edge of both Horizontal rails.
2. Shine a laser level line across utilizing the laser level notch and set the Right Side Outer Vertical Rail.
3. Use a 5mm hex wrench to raise each Inner Vertical Rail until all are level.

**Please note:** All Vertical Rails must be aligned and level with each other.

Fig. 11-1

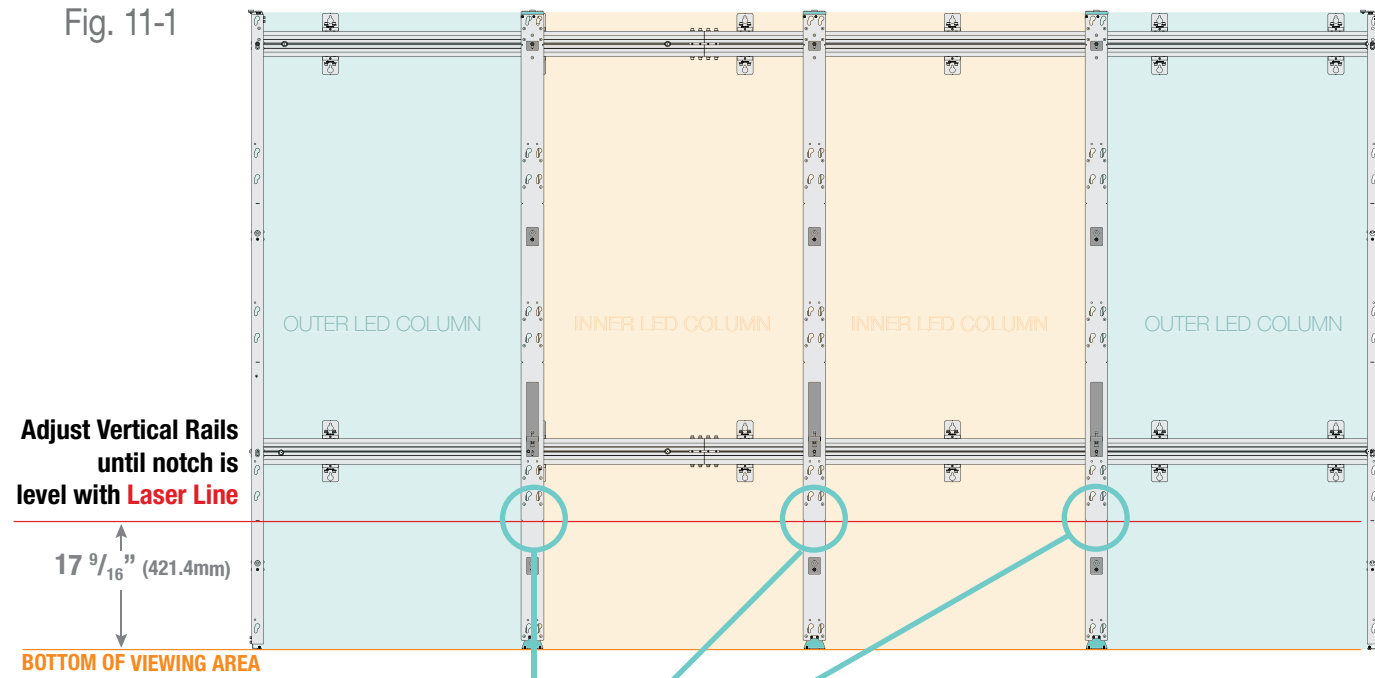
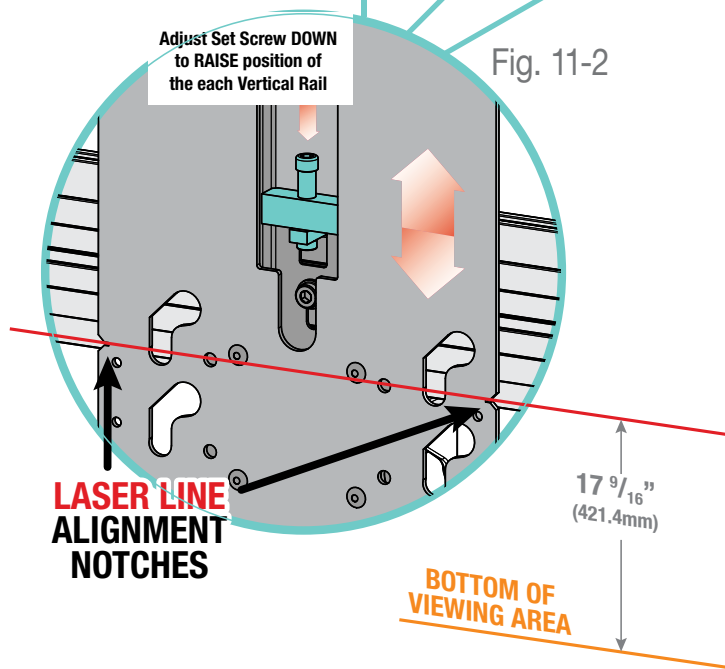


Fig. 11-2

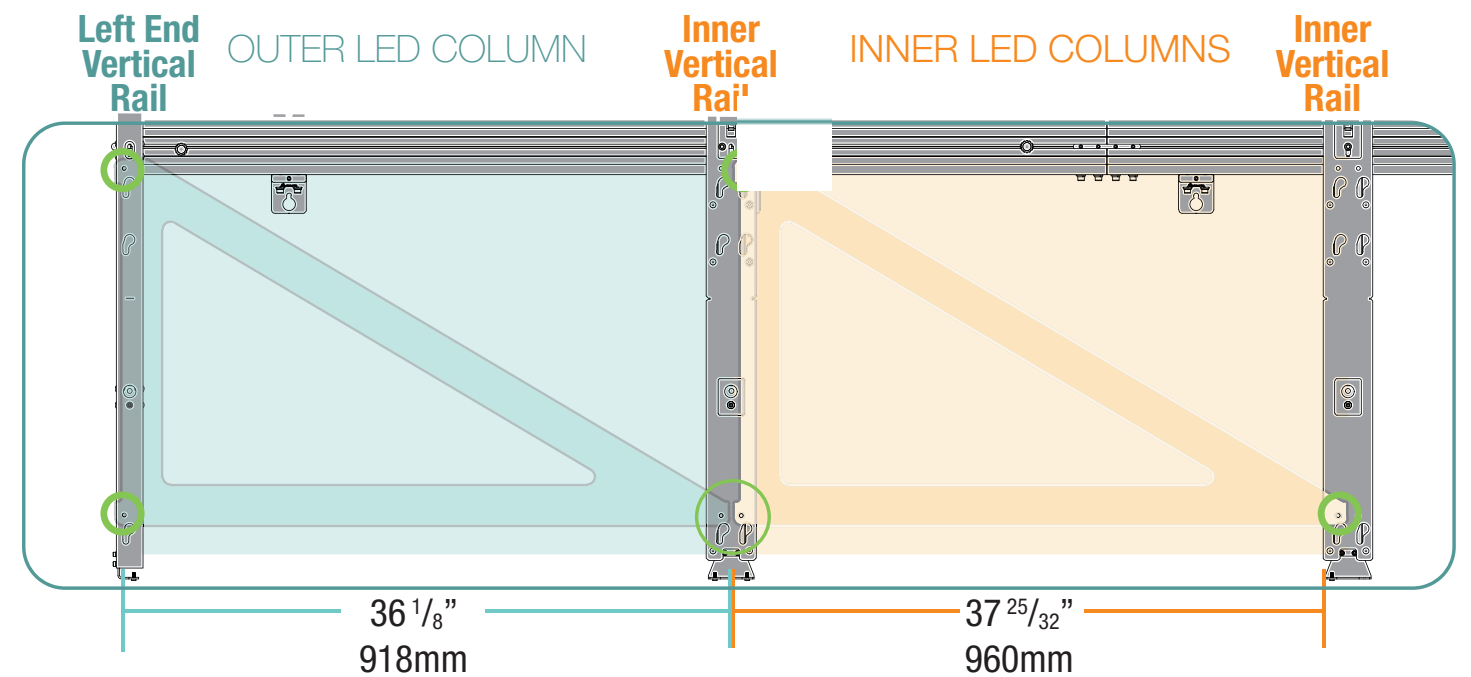
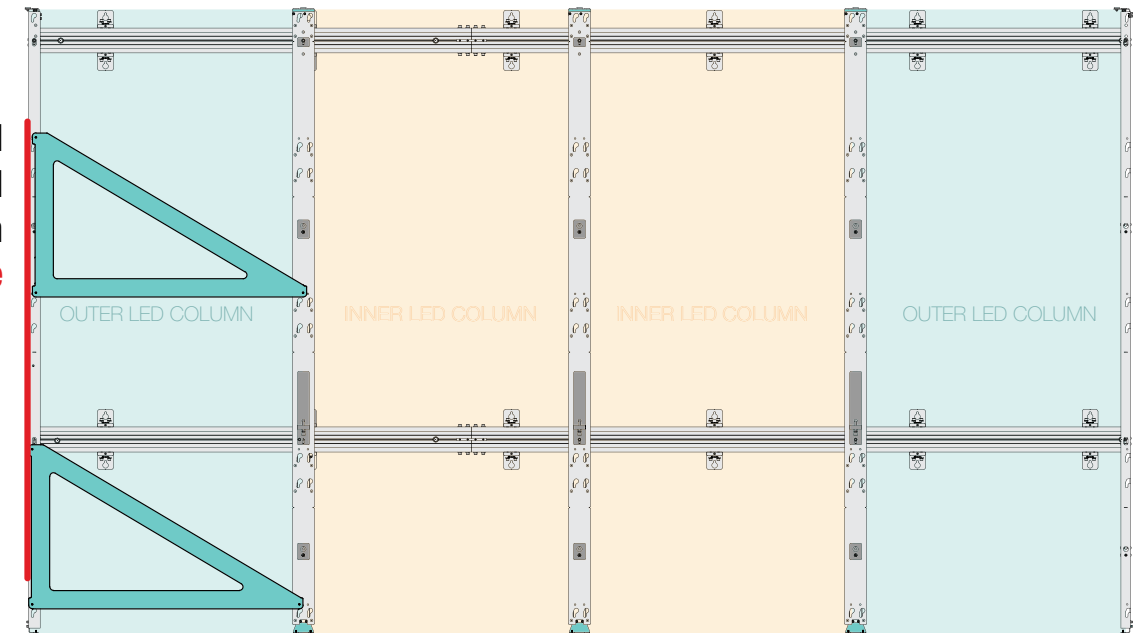


**Section 11.2 - X - Axis Adjustment (Squaring Verticals with Alignment Tool)**

1. Shine a laser line at the left edge of the structure and check that the first Vertical Rail is square with the floor. To adjust, loosen the fasteners installed in Section 10, Step 3 and slide the Vertical Rail along the Horizontal Rail until square. Tighten fasteners when the first left vertical is aligned with the left edge of both horizontals.
2. Attach the two (2) alignment tools to the vertical rail positioned in step 1. Insert the pins into the corresponding alignment holes on the first vertical rail at the top and bottom locations.
3. Adjust the position of the next vertical rail in order for the alignment pin on each tool to align with the corresponding alignment hole in the vertical rail.
4. Tighten the second vertical rail mounting screws.



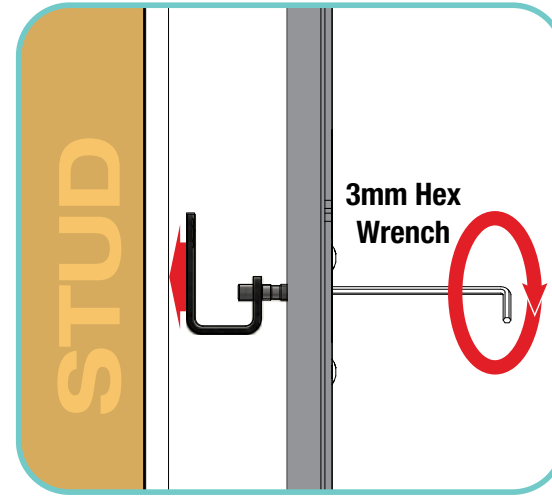
**Adjust Vertical Rails Until Plum with Laser Line**



**Section 11.3 - Z - Axis Adjustment**

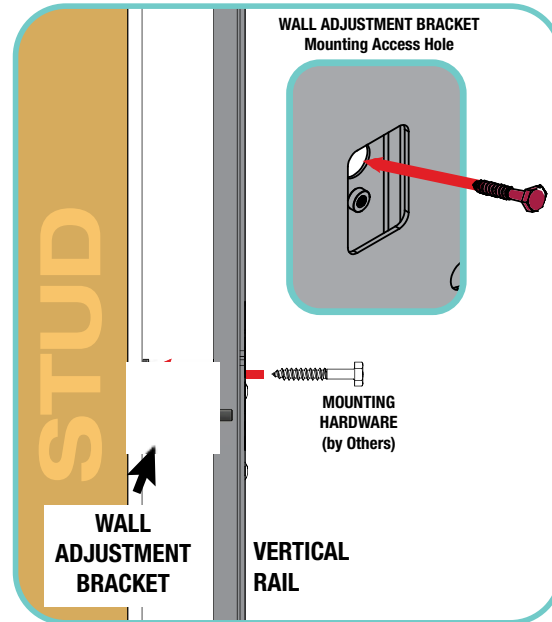
1. Using a 3mm hex wrench, adjust each Wall Adjuster Bracket until it contacts the wall.

Fig. 11.3-1



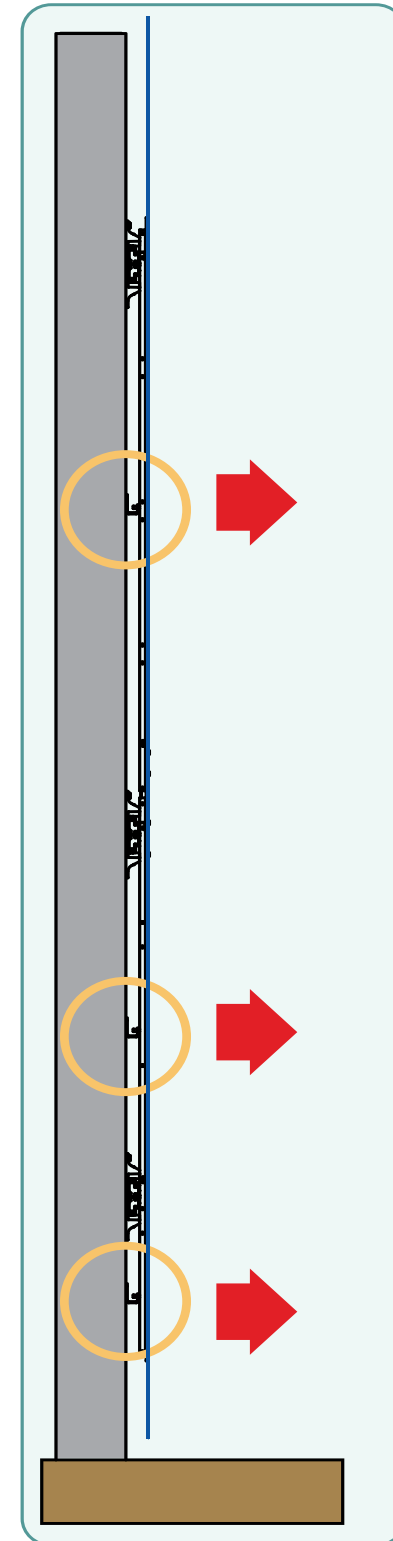
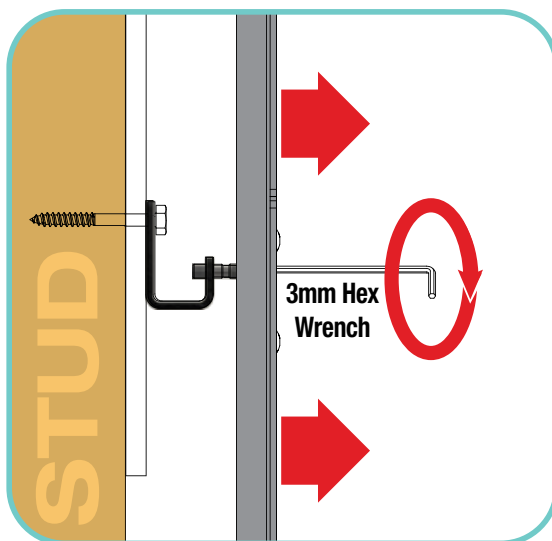
2. Use the clearance hole in the vertical rail to allow for a socket to drive a lag screw (by others) into the wall.

Fig. 11.3-2

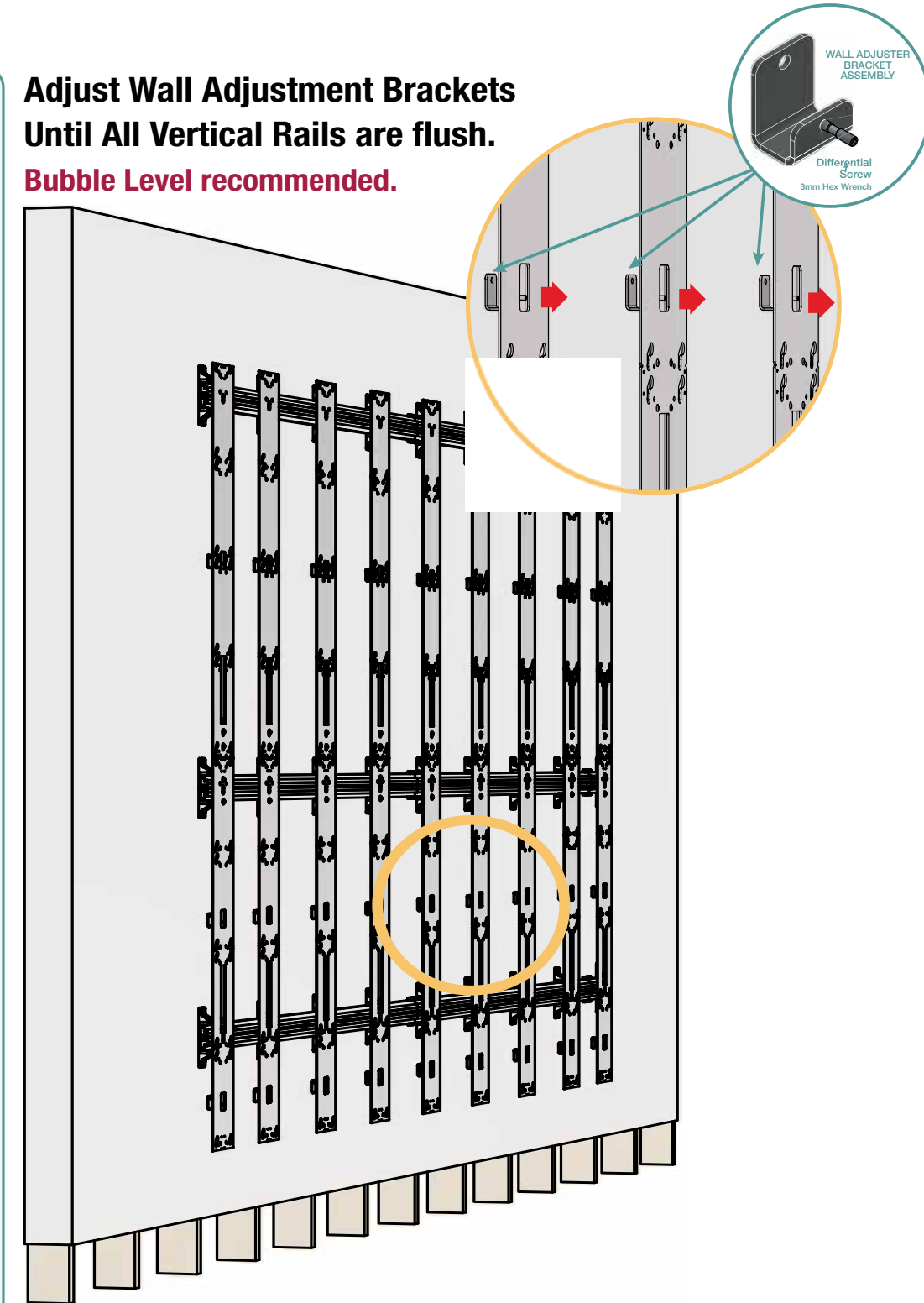


3. Rotate the differential screw to push or pull the vertical rail to be straighter if required.

Fig. 11.3-3

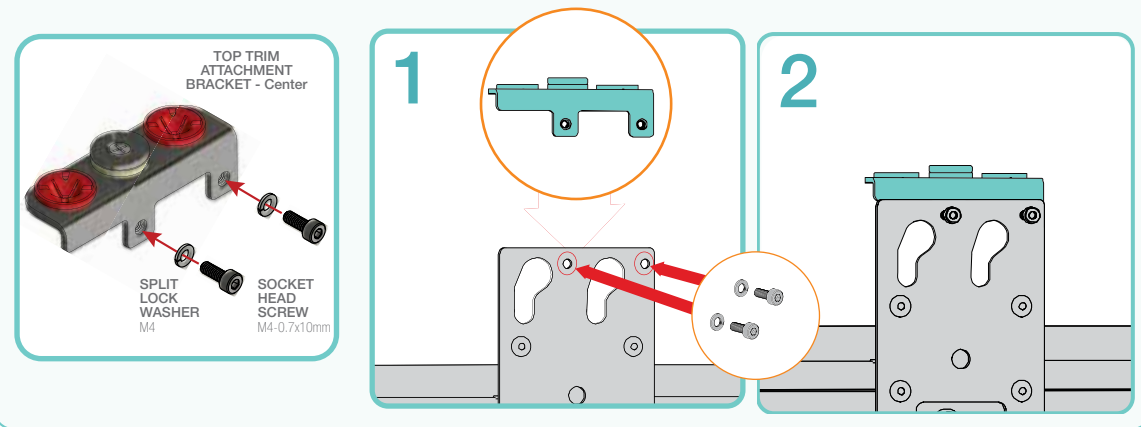


**Adjust Wall Adjustment Brackets Until All Vertical Rails are flush.**  
**Bubble Level recommended.**

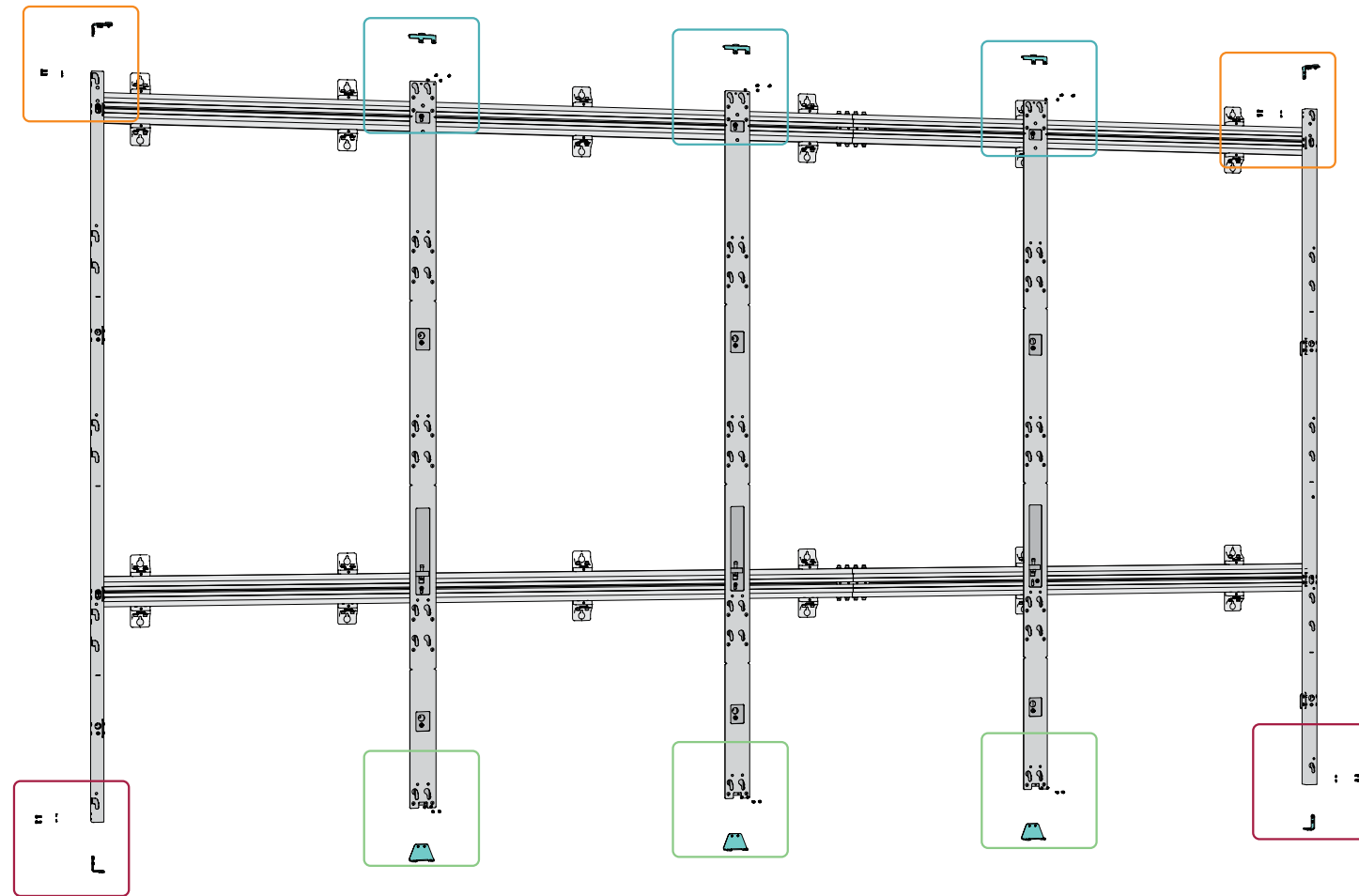
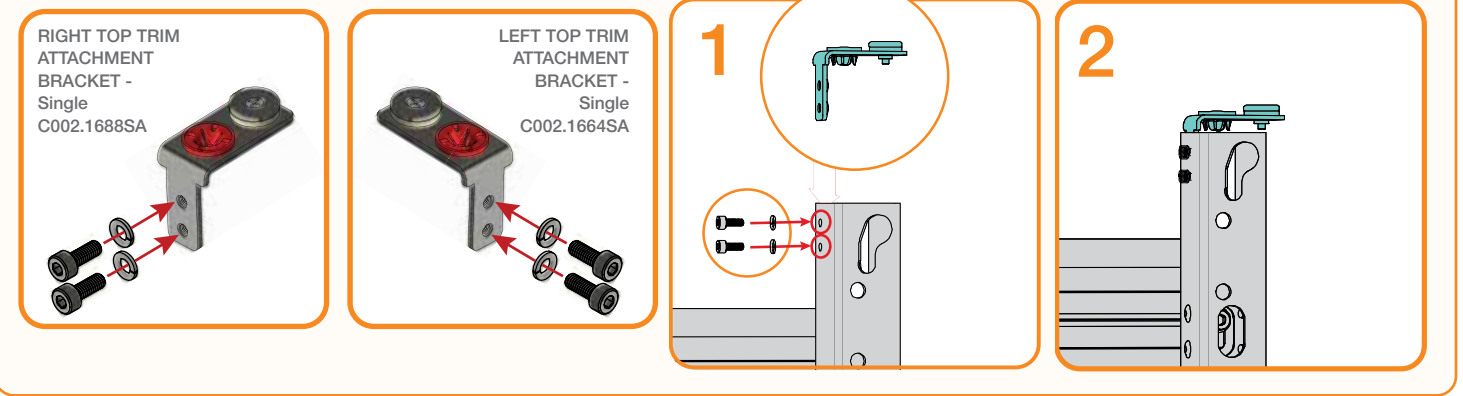


Section 12 - Attaching Trim Brackets

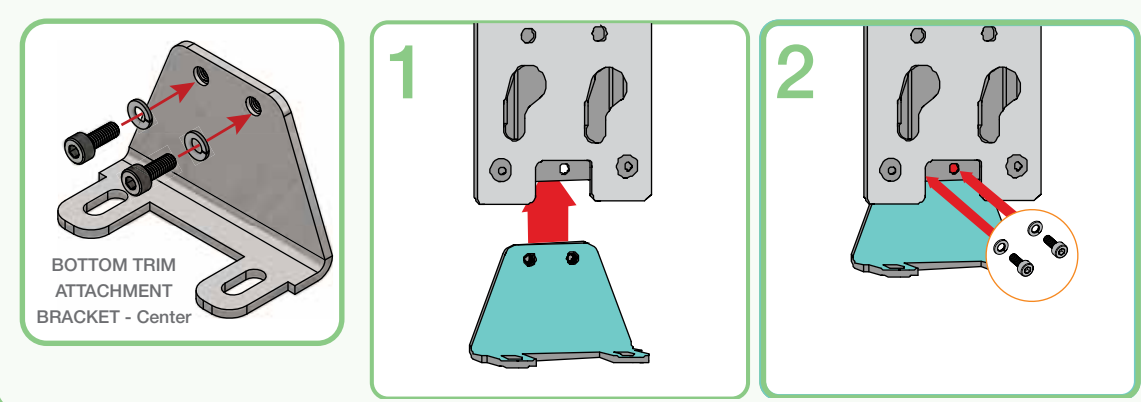
Section 12.1 - Installing Center Top Trim Brackets



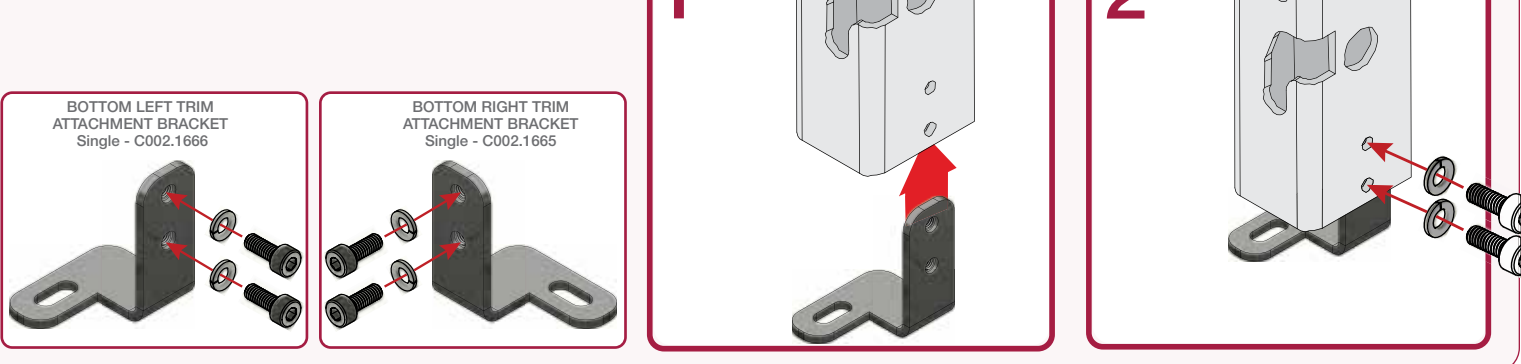
Section 12.2 - Installing Outer Top Trim Brackets



Section 12.3 - Installing Center Bottom Trim Brackets



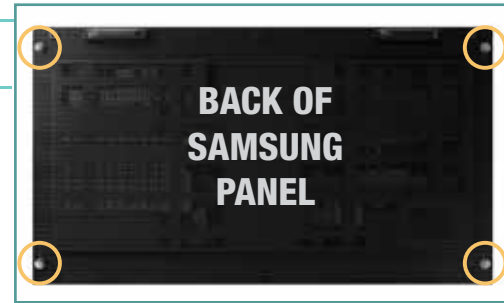
Section 12.4 - Installing Outer Bottom Trim Brackets



Section 13 - **Attaching LED Cabinets**

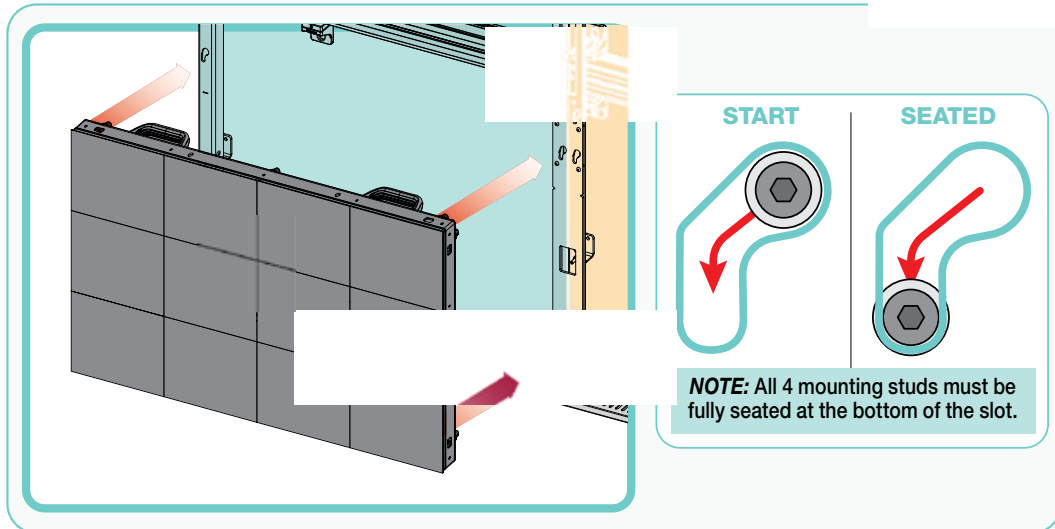
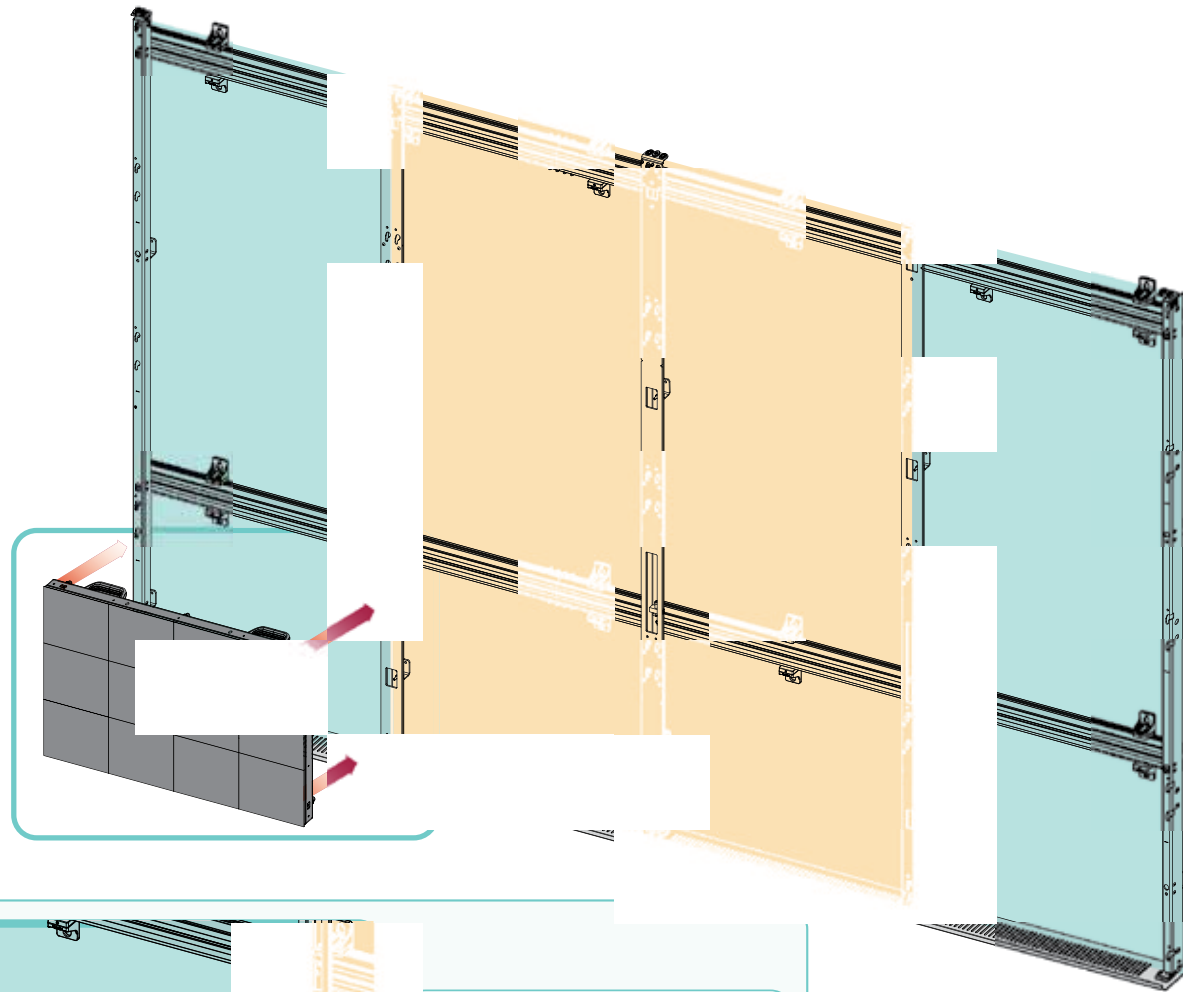
**Section 13.1 - Attaching Spring-Loaded Fasteners**

1. Replace the mounting bolts (pre-installed by LED manufacturer) in the LED cabinet with the provided Spring Loaded mounting studs.

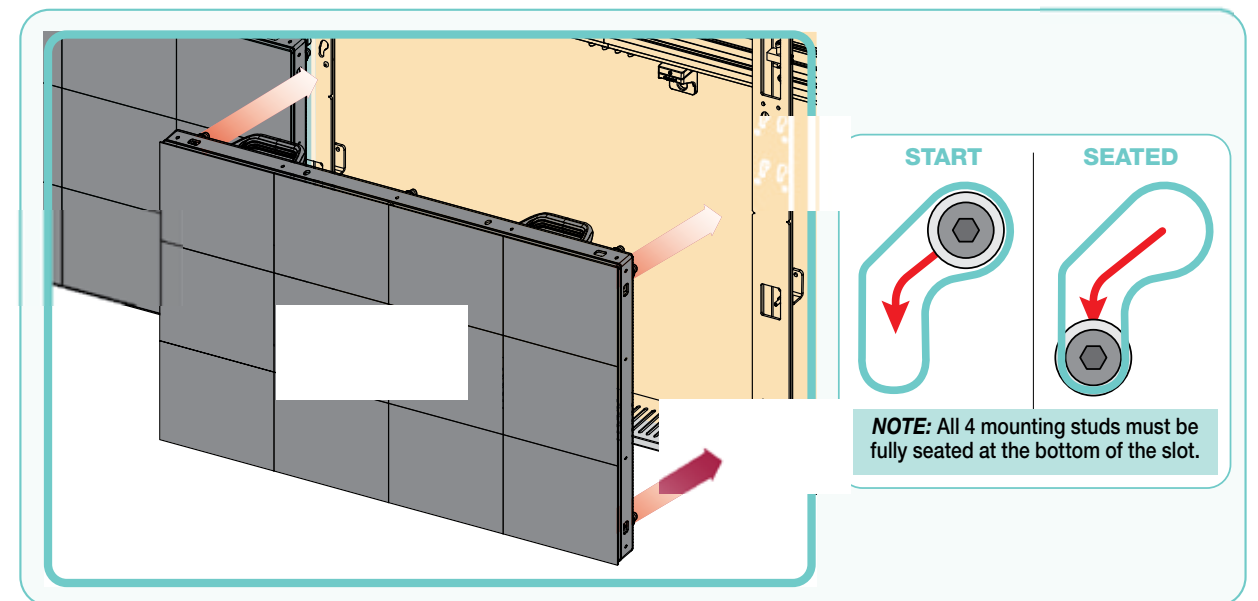
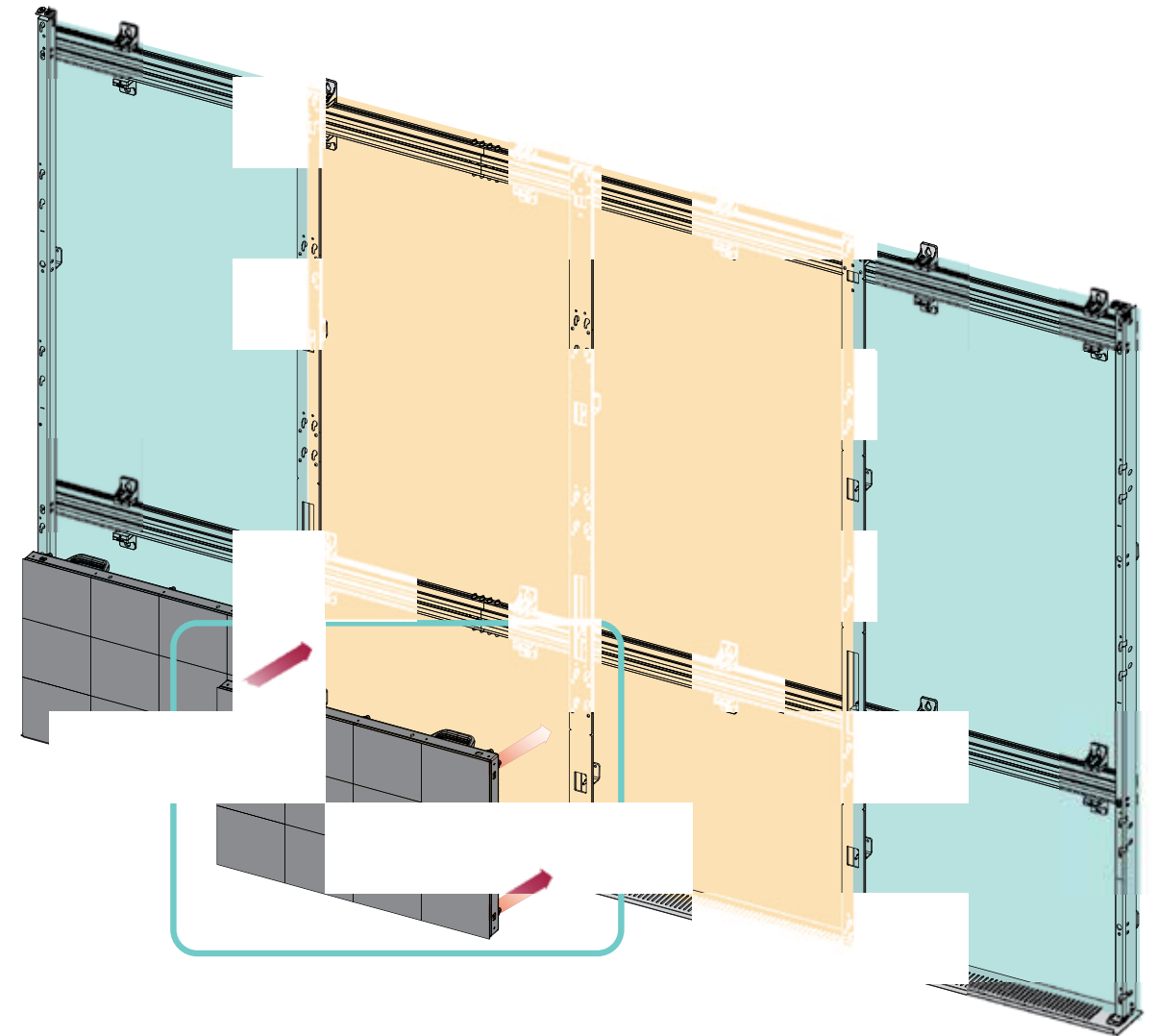


**Section 13.2 - Attaching LED Panels**

1. Starting in the bottom left corner, insert the four (4) Spring-Loaded Mounting studs into the angled slots on the vertical rail as shown. The head of the studs will engage with the back side of the vertical rail and the spring washer will remain on the front face (does not fit through the slot). Once the head of all 4 studs are fully inserted, lower the panel into the final location.

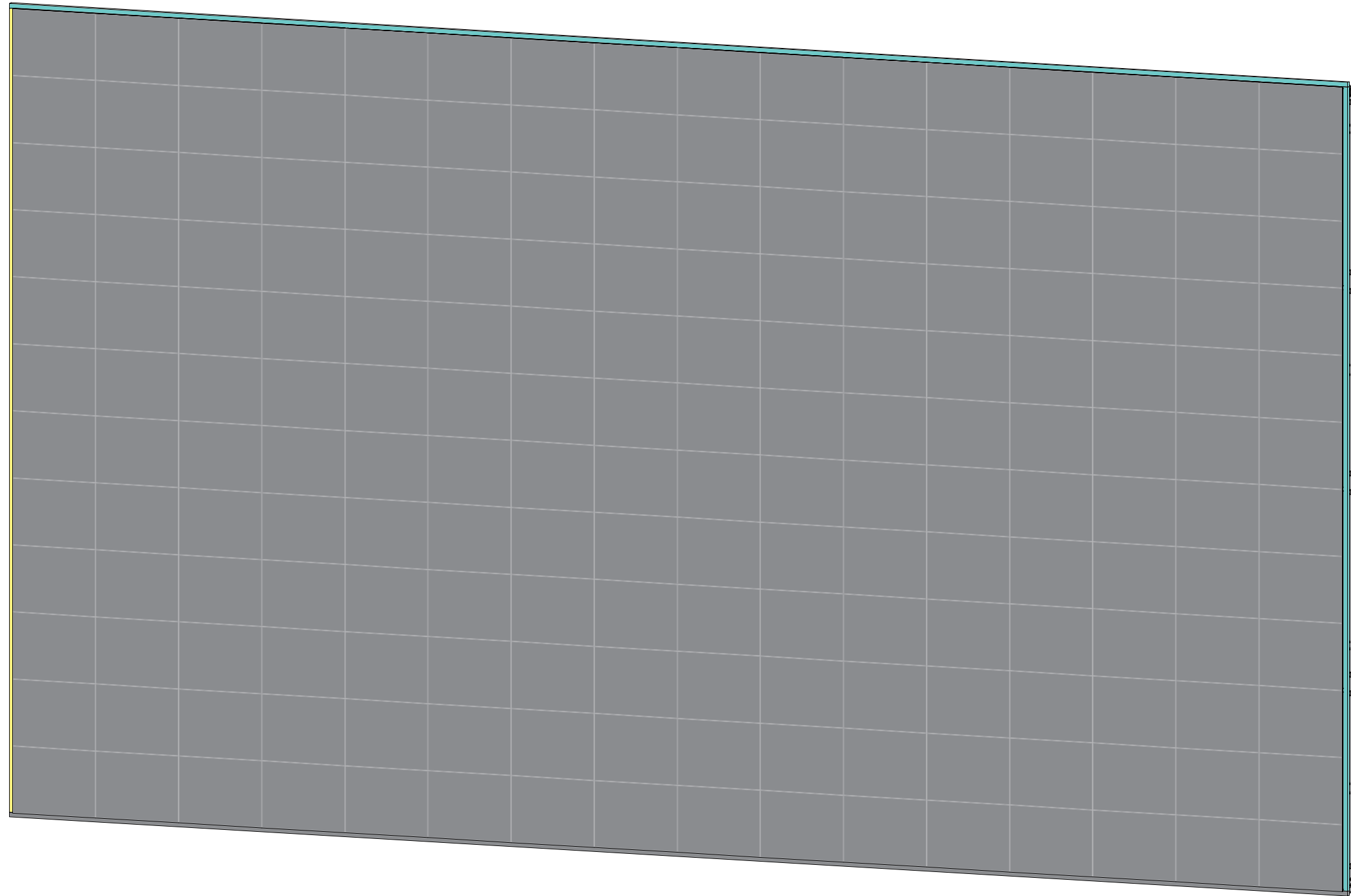
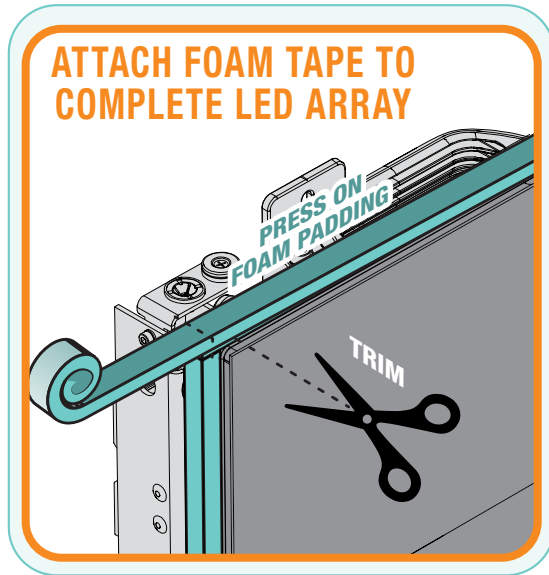


2. Attach the next LED cabinet direct to the right of the first. Continue until the first row is complete.
3. Working from left to right, attach the row of LED cabinets.
4. Continue until all LED cabinets are installed.



Section 14 - **Attaching Foam Tape to Completed LED Array**

1. After the LED panels are installed, attach the Samsung perimeter mounting clips as directed by Samsung.
2. Apply foam tape around the outer edges of the display before installing the trim. Foam tape will cover the previously installed Samsung clips.



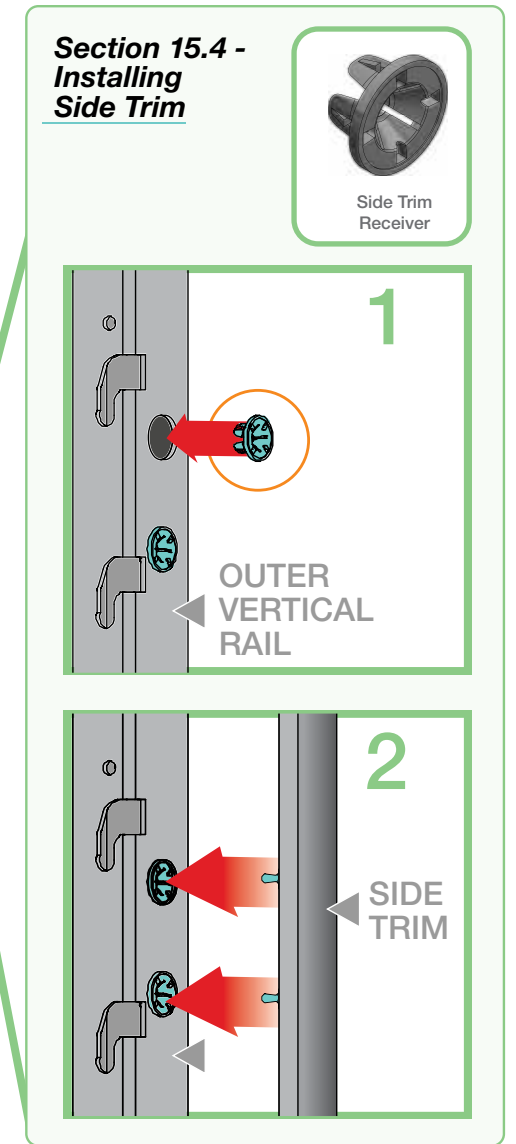
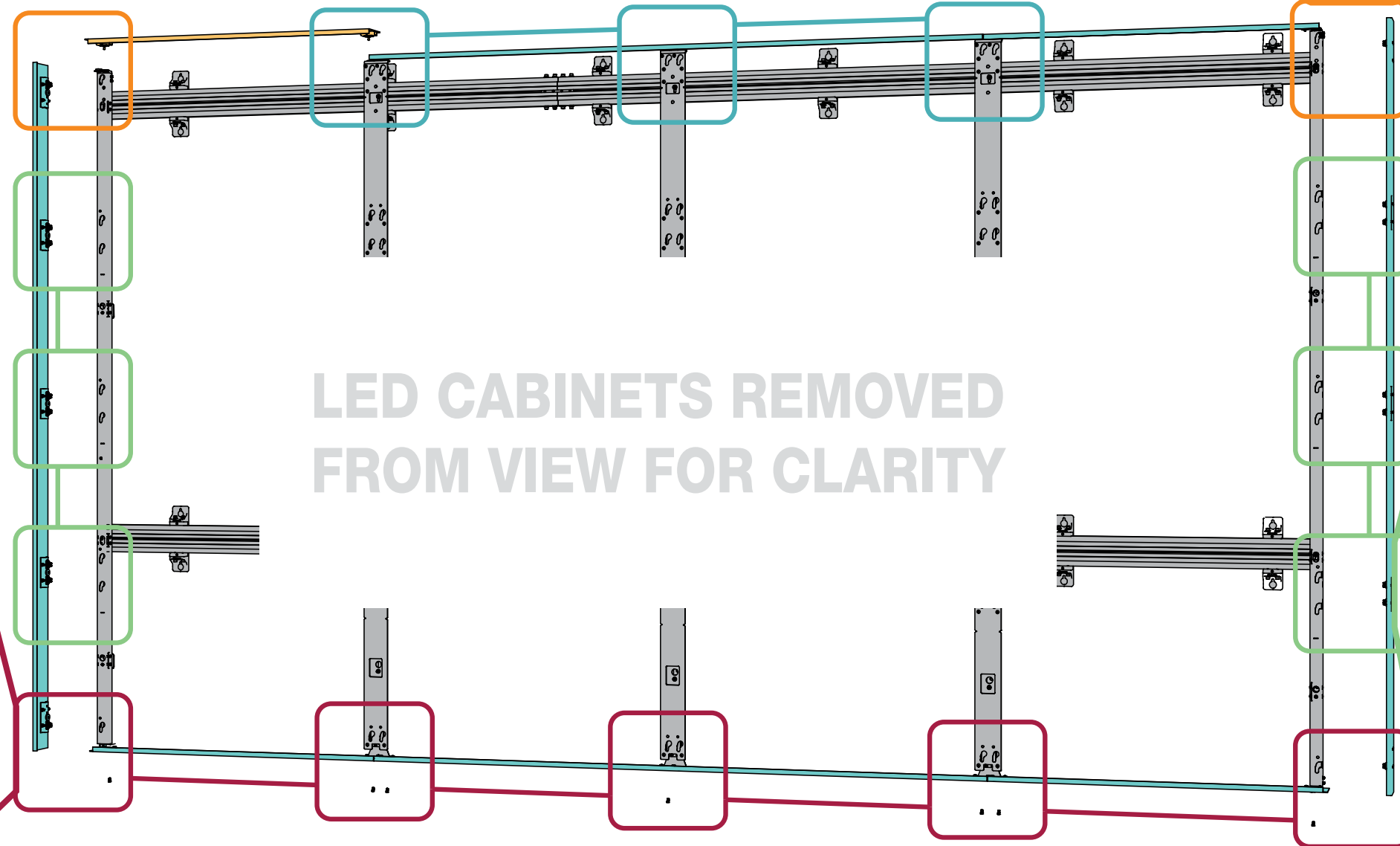
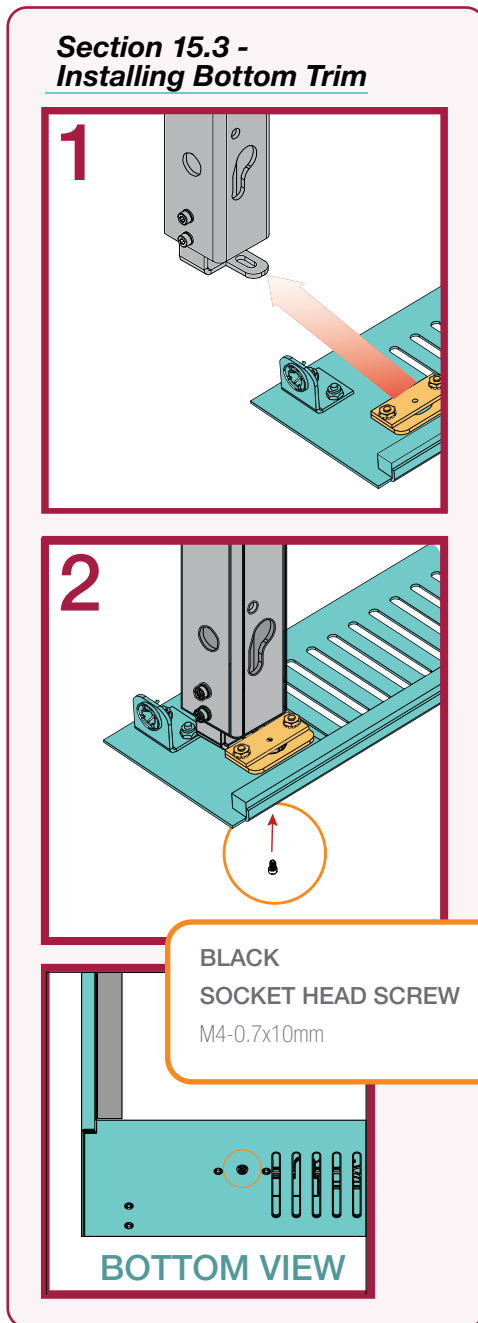
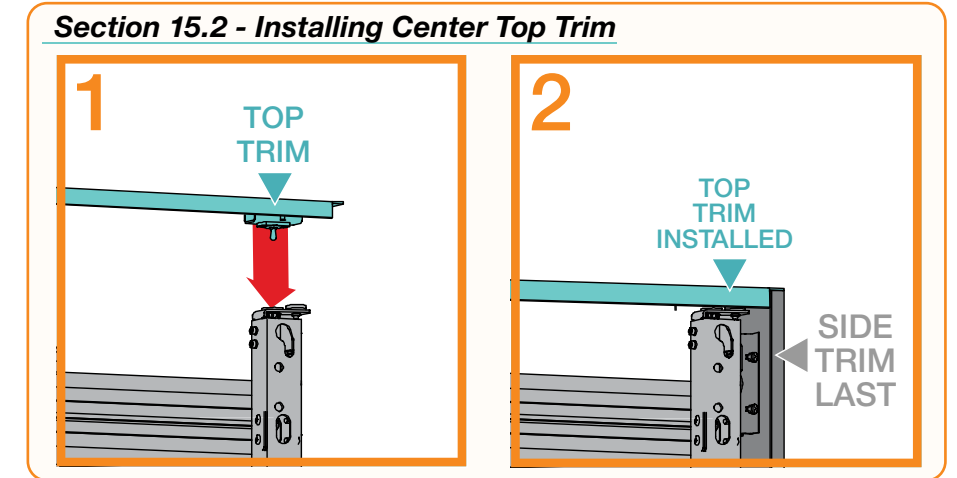
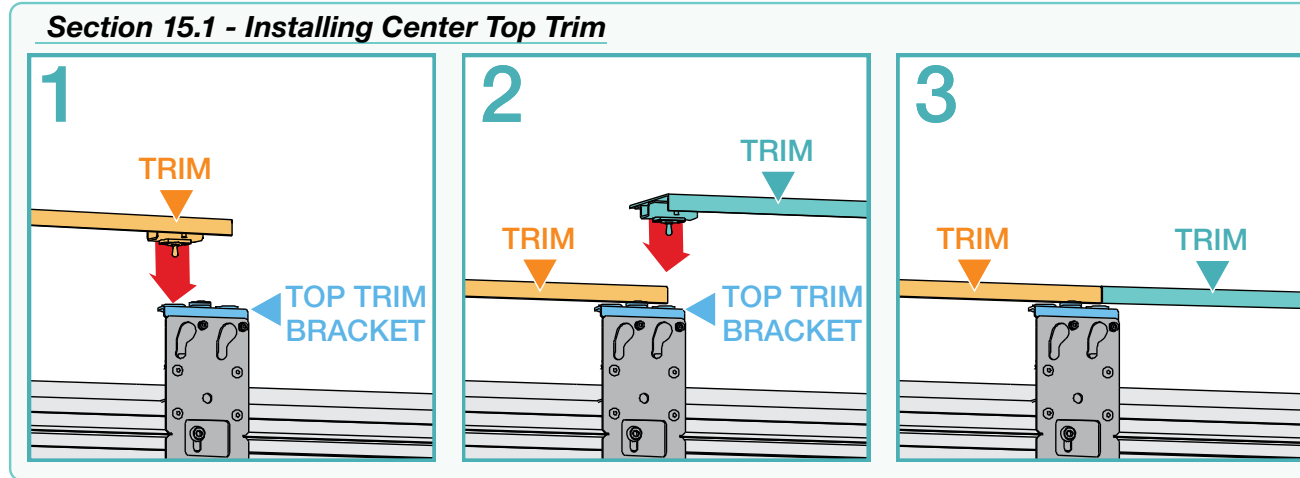
Section 15 - Attaching Trim to Trim Brackets

**TRIM INSTALLATION ORDER**

TOP TRIM

BOTTOM TRIM

then SIDE TRIM last.

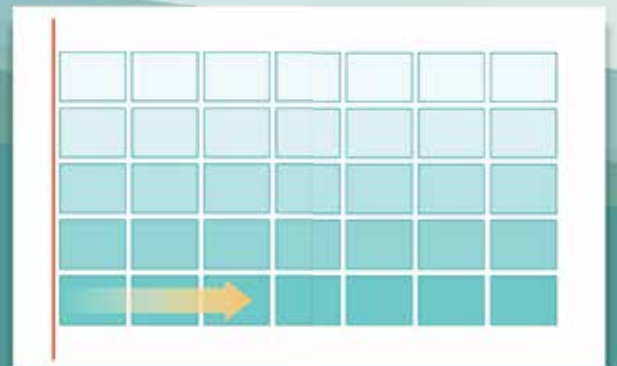


**NOTE:** You must allow  $1 \frac{5}{16}$ " (33mm) of clearance around the outside of the image area to install trim.



# FOUNDATION®

Installation Manual



**SAMSUNG** IER & IFR  
SERIES

FORM: FDN\_SAMSUNG\_Inst21-R

**LEFT to RIGHT**