KB RACKING®
Simple solutions you can count on.

AEROGRID® EAST WEST

INSTALLATION MANUAL

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VERSION 5 – JAN 2026

Table of Contents

Introduction & Safety

INTRODUCTION & OVERVIEW

This installation manual provides a detailed guide on how to install the AeroGrid racking system. It will cover each step of the assembly process with guidance on how to prevent damage to equipment and tips on efficient assembly. Read all the instructions carefully prior to installation.

Precautionary measures must be taken to ensure a safe working environment. Prior to beginning installation, it is important to identify potential hazards and implement a safety plan to ensure safe work practices during installation. Should you have any questions, please contact your KB Racking Project Manager.

LIABILITY/DISCLAIMER

The installer of each project is responsible for the safe and proper installation of each system. They are required to supervise all safety programs and precautions for each project site, as well as provide all necessary protection to ensure a safe working environment.

KB Racking does not perform any portion of its mounting system installation and therefore does not have any duty or responsibility for the safe and proper installation.

REFERENCE DOCUMENTS

The images and diagrams in this manual are for reference only. The steps in this installation manual are to be followed for all projects in conjunction with project specific documents and dimensions provided by KB Racking. Ensure you have the following documents prior to beginning the installation: Spacing Diagram, Layout Diagram, Ballast Diagram, and Rail Table.

STORAGE CONSIDERATIONS

KB Racking recommends installing racking components shortly after delivery to the project site. If components are not installed immediately, they should be stored in a well ventilated and dry location. Failure to do so may cause the moisture to form stains and/or surface rust which may decrease the coating service life and overall component performance. KB Racking is not liable for claims related to improper storage and such claims are not covered by the product warranty.

RECEIVING PRODUCT

KB Racking components may have shifted during shipping. Take extra care when moving and unpacking components. Upon receiving parts, ensure the correct type and quantities of parts have been delivered by unboxing all components and checking for any damages. If you have received damaged or missing components, document with photos and immediately notify your KB Racking Project Manager.

KB RACKING IS NOT RESPONSIBLE FOR ANY DAMAGES INCURRED ONCE THE SHIPMENT HAS BEEN SIGNED FOR AND RECEIVED.

PERSONAL & SITE SAFETY

A structural analysis of the roof should be conducted prior to installing to determine the load capacity. Always observe all governing codes and ordinances. Only qualified professionals should install solar modules, DC cabling, and any anti-lightning safety devices. Some safety considerations include:

PPE – While installing the PV system, proper safety equipment should be worn. Wear safety gloves when handling parts. Newly fabricated parts may have sharp edges.

Fall Prevention – If roof/building has a fall distance of 10ft (3m) or greater, appropriate safety measures must be taken (i.e., harnesses) for installation of modules closer than 6.5ft (2m) to roof edges or skylights. KB Racking Inc. requires all arrays to be no closer than 3ft (0.9m), unless otherwise stated, from a building's roof edge to validate wind load calculations and ensure the system is safely ballasted.

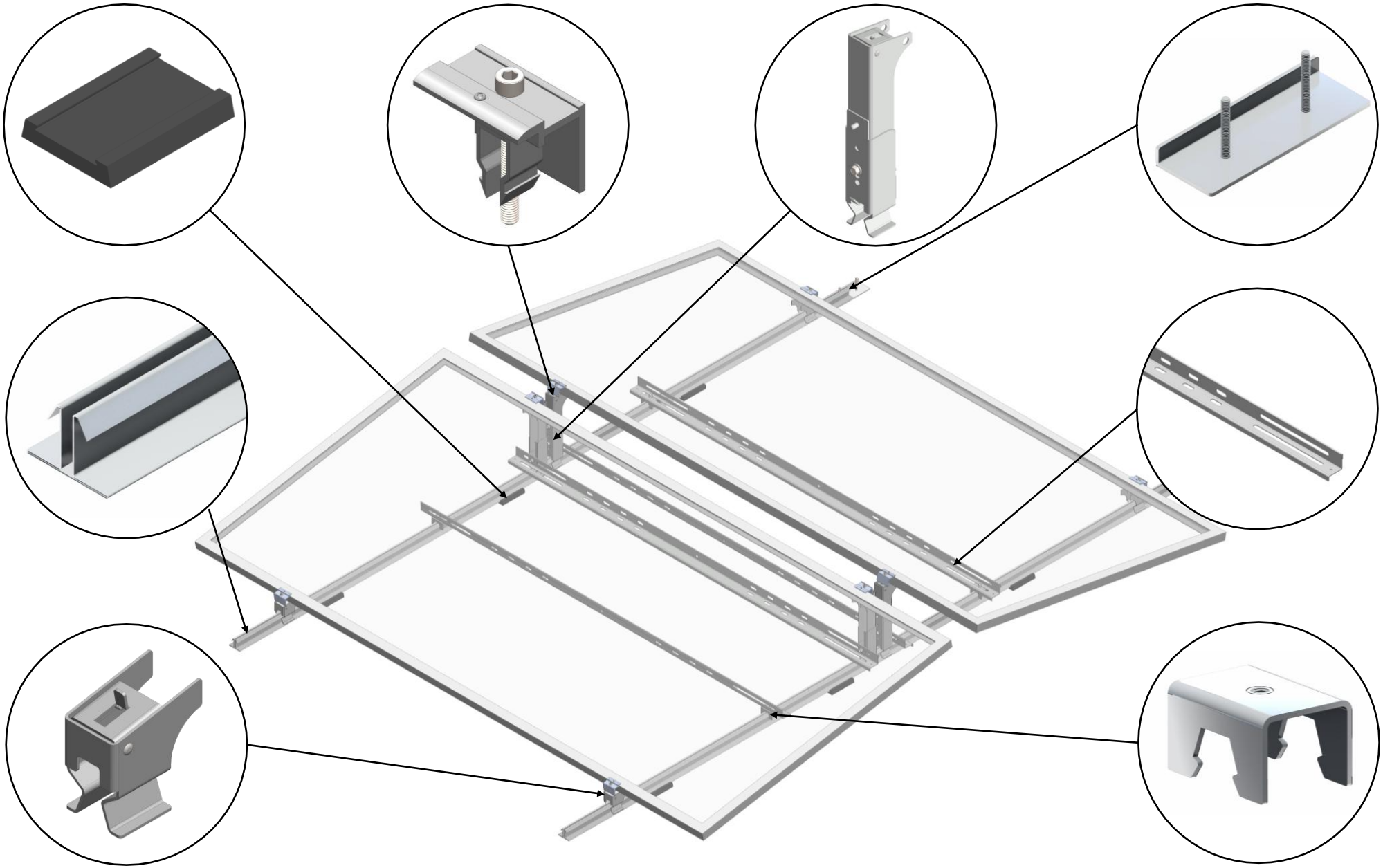
Roof Debris – Inspect the roof for damages prior to installation and record any existing damage with a camera. Clean the roof surface and remove all dirt and debris.

Roof Flooding – Ensure proper drainage on the roof. Water accumulations may lower the load reserve of the rooftop and decrease lifespan. Additionally, constant submersion of PV supports in water may damage parts. Consult with a KB Racking Project Manager if this is the case.

UL 2703 MODULE COMPATABILITY

AeroGrid may be used to ground and/or mount a PV module complying with UL 1703 or UL 61730 only when the specific module has been evaluated for grounding and/or mounting in compliance with the included instructions. Refer to the 'Master Module List' document for modules that have been approved for use.

System Overview

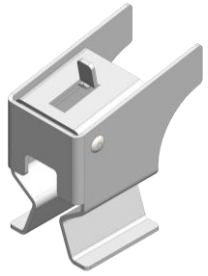


System Components & Hardware

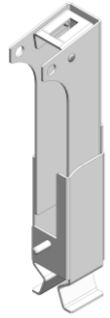
COMPONENTS NOT TO SCALE

Rail
G00-GS-01-XX

Splice
G00-GS-02



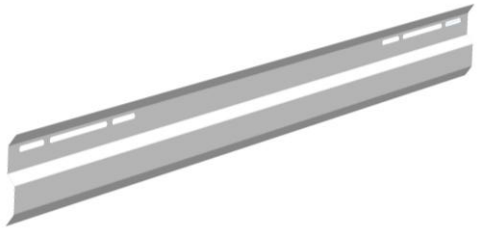
Bottom Support
GXXTD-GS-03



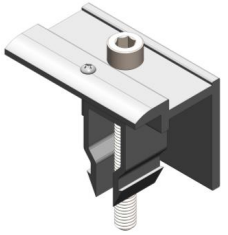
Top Support
GXXTD-GS-04

Accessory Bracket
G00-GS-05

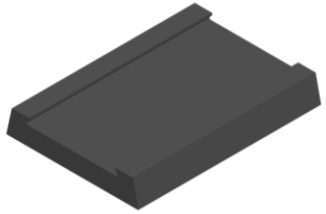
Ballast Tray
G00-GS-06



Windshield
GXX-GS-07-XX
(Only Required for Peak Edge Rows – Refer to Page 22)



KB Konnect End Clamp
KB00-AL-01-XX



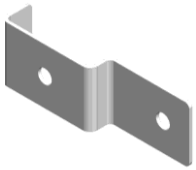
Rubber Mat
G00-RBR-01

1/4”-20 x 5/8” Hex Bolt
9111-1420-580-SS0

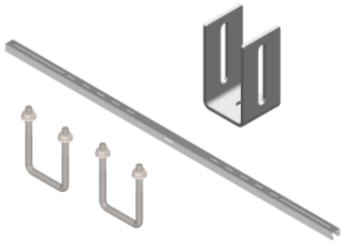
1/4”-20 Hex Nut
9211-1420-SS0

System Accessories

COMPONENTS NOT TO SCALE
HARDWARE NOT LISTED

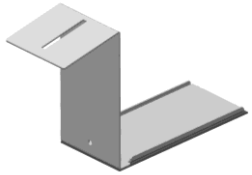


MLPE Bracket Kit
G00-GS-043



Anchor Kit
G00-GS-101
G00-GS-102

Spacing Jig Kit
G00-GS-091
G00-GS-092
G00-GS-093



HUS Support Kit
GXX-AL-01

Ballast Stones
Not Provided
Refer to Page 19

Grounding Lug
Not Provided
Refer to Page 24

Installation Tools

- 7/16” Hex Socket
- 3/8” Hex Socket
- 5mm Allen Bit
- Ratchet
- Torque Wrench
- Measuring Tape
- Safety Gloves
- Safety Glasses
- Chalk Reel
- Power Drill – **NOTE: DO NOT USE IMPACT DRIVER**
- Spacer Sticks *(Pre-Cut Wooden Spacers)*
- 1/2” Hex Socket *(Only required for Anchor Attachments)*
- 9/16” Hex Socket *(Only required for Anchor Attachments)*

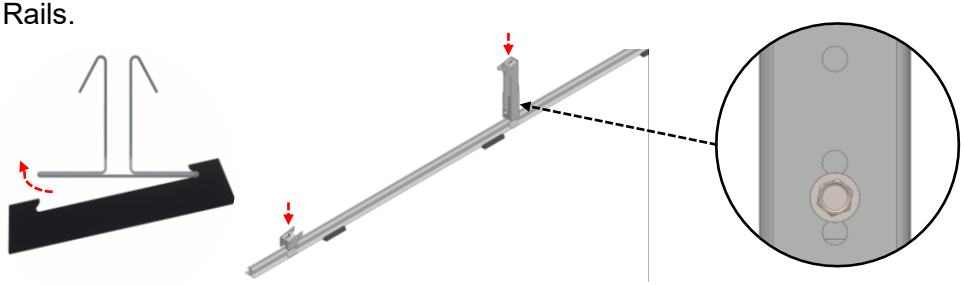
Torque Specifications

Component Connection	Torque [In-lb]	Torque [N-m]
All System Connections	75	8.5
Anchor Connections	Refer to Page 27	Refer to Page 27

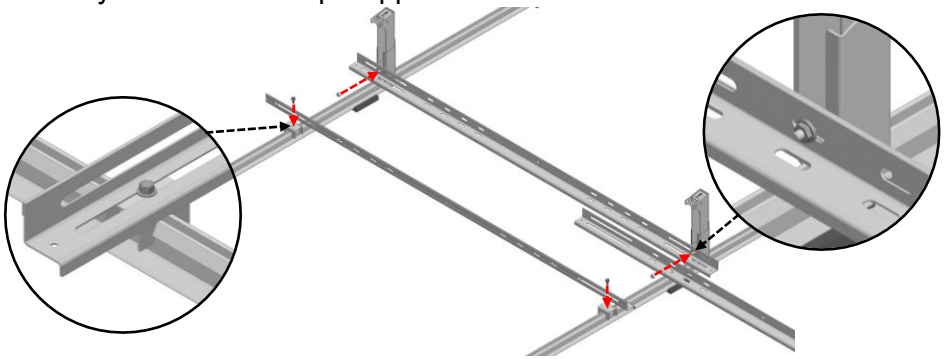
QuickStart Installation Guide

TORQUE ALL CONNECTIONS TO 75 IN-LB

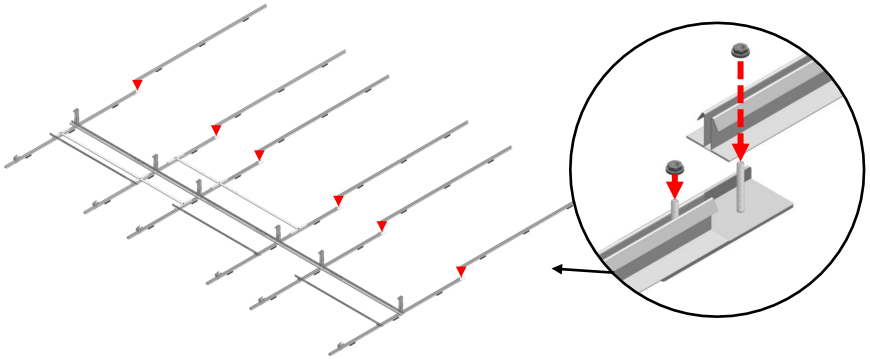
1. Place Rails on roof with assembled Rubber Mats. Verify Top Support is set to the correct hole height. Click-in Bottom and Top Supports on Rails.



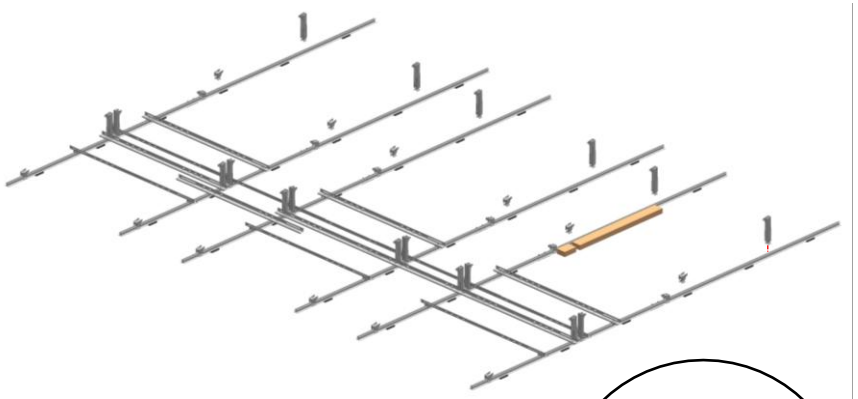
2. Click-in Accessory Brackets on Rails and fasten Ballast Trays to Accessory Bracket and Top Support Studs.



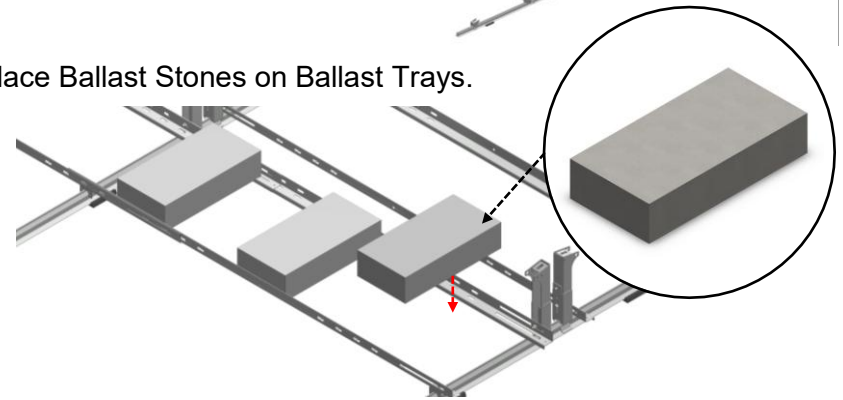
3. Repeat steps 1-2 to complete first row along the East edge of the array. Fasten Rails together with Splice.



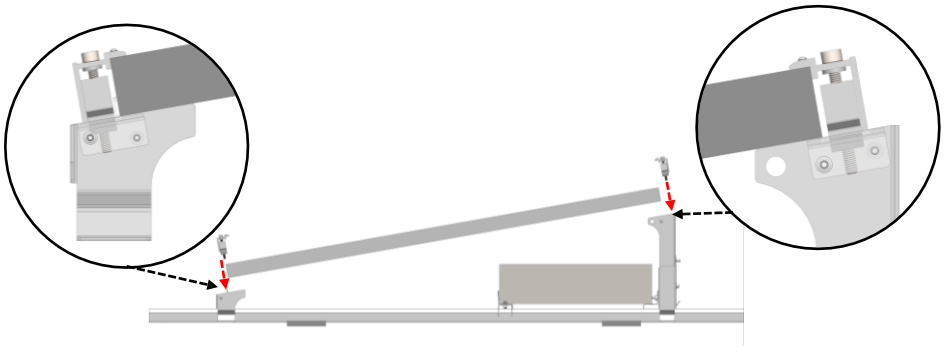
4. Repeat steps 1-2 to build remaining array rows using Spacer Sticks.



5. Place Ballast Stones on Ballast Trays.



6. Place PV Modules on Supports. Click-in KB Konnect End Clamps through Bottom and Top Support slots and fasten to PV Module.



How To Use Your Spacing Diagram

Spacing Diagrams are specific to each installation. Three pages are included that indicate the following:

1. Assembly Spacing Diagram

Shows the required spacing dimensions to assemble system and the correct Top Support Hole placement.

TIP: Create Spacer Sticks for dimensions **A** and **B** *(see page 9 for details).*

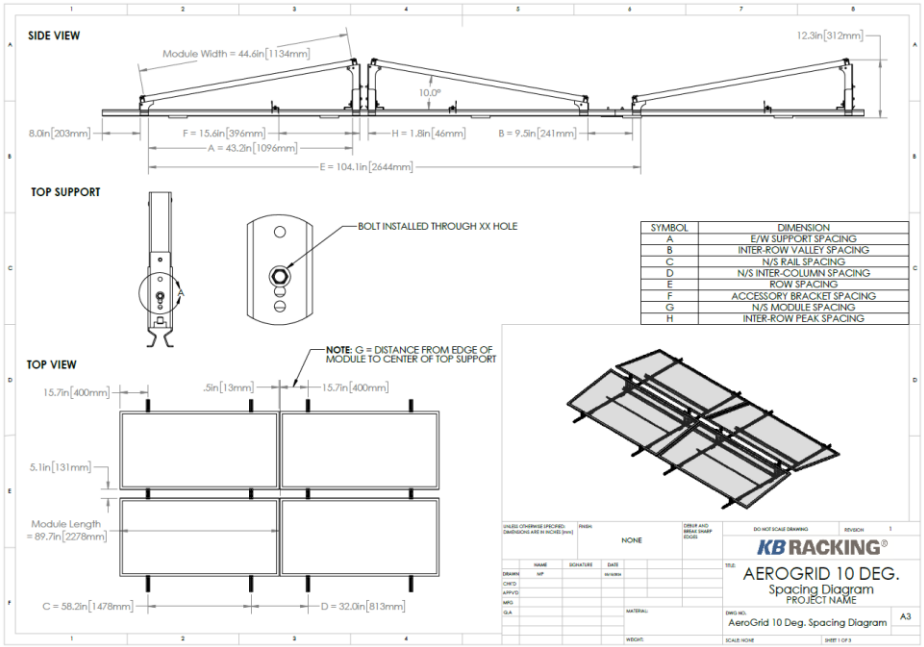
2. Ballast Tray Assembly Diagram

References the Ballast Tray slot to symmetrically assemble the inter-column Ballast Tray *(see page 16 for details).*

3. Spacing Jig Set-up Diagram

References the Spacing Jig assembly dimensions required for installing dimensions **C** and **D** *(see page 9 for details).*

SPACING DIAGRAM EXAMPLE:



How To Use Your Rail Table

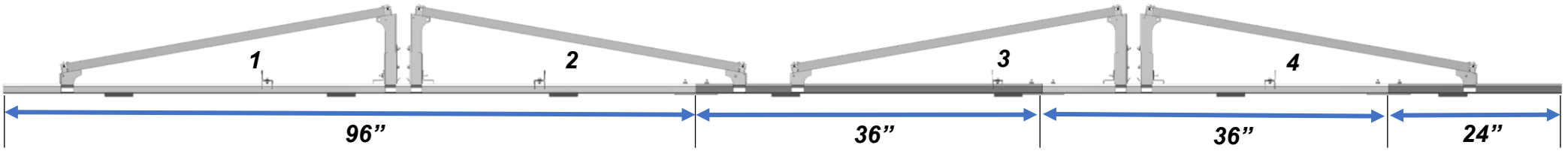
AeroGrid consists of 3 Rail lengths including **96”, 36”, and 24”.** Combinations of these Rail lengths are used within an array assembly. Refer to your *Rail Table* to determine Rail quantities used within each array.

NOTE: Modules on a Rail column references the number of Module rows within a given array and the associated quantities of Rail combinations used. Rail assemblies begin along the East row with 96” Rails.

RAIL TABLE EXAMPLE:

Modules on Rail	# of Rail Pieces required		
	96”	36”	24”
4	1	2	1

Rail tables are specific to each installation. Above, where 4 modules are on a Rail, install one 96” Rail, two 36” Rails and one 24” Rail as seen in the illustration below.

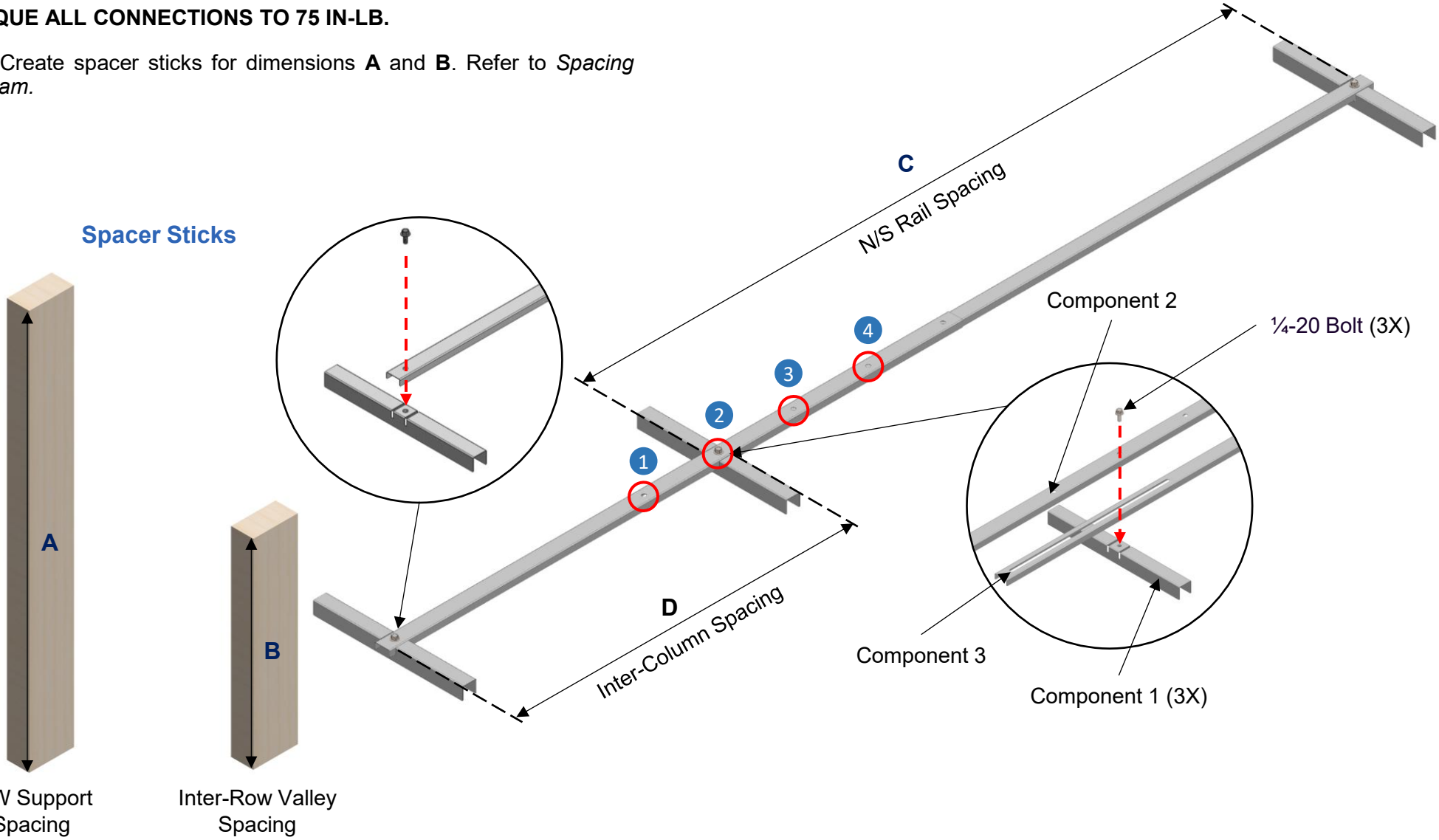


Spacing Jig & Spacer Stick Construction

1. Assemble the Spacer Stick and adjust to **C** and **D** dimensions. Verify Component 2 is installed through the hole specified in the *Spacing Diagram (1, 2, 3 or 4).*

TORQUE ALL CONNECTIONS TO 75 IN-LB.

TIP: Create spacer sticks for dimensions **A** and **B**. Refer to *Spacing Diagram.*



Rubber Mat Installation

Rubber Mats are used as a protective layer between the Rail and roof surface to avoid any sharp edges from penetrating the roof.

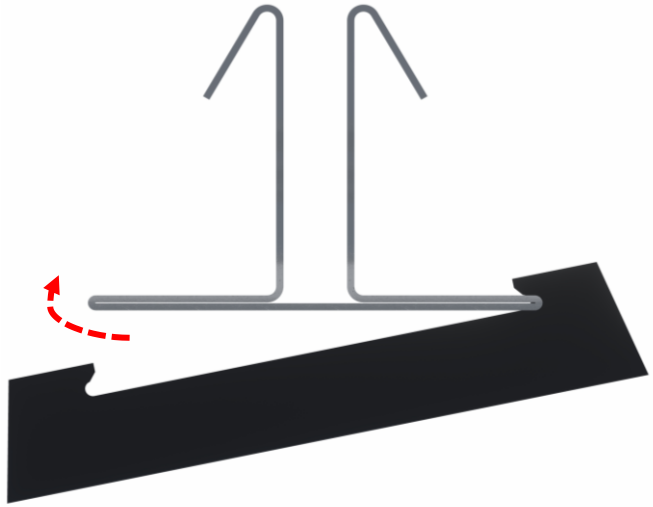
1. Press-Fit Mat lips around the Rail until a snap fit is achieved on the Rail. Refer to the *Mat Table* to determine quantities per Rail.

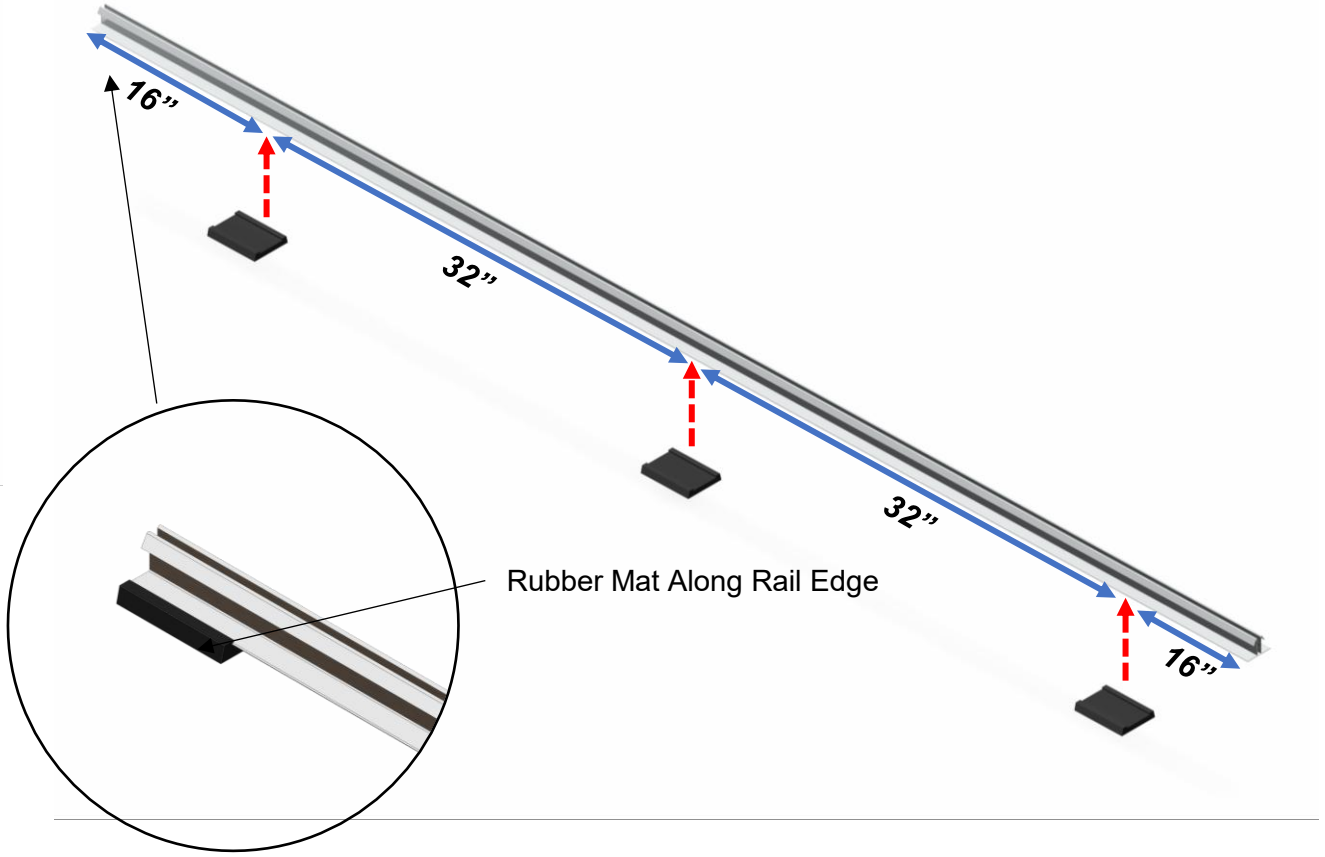
NOTE: Space the Rubber Mats equidistant with a max of 32” apart.

MAT TABLE:

Rail Length [in]	Number of Mats
96	3
48	2
24	1

NOTE: Install Rubber Mats along the North and South array Rail edges. Ensure all edges of the Rail are protected from the Rubber Mat.





How to Begin Assembly, Installing First Row of Rails

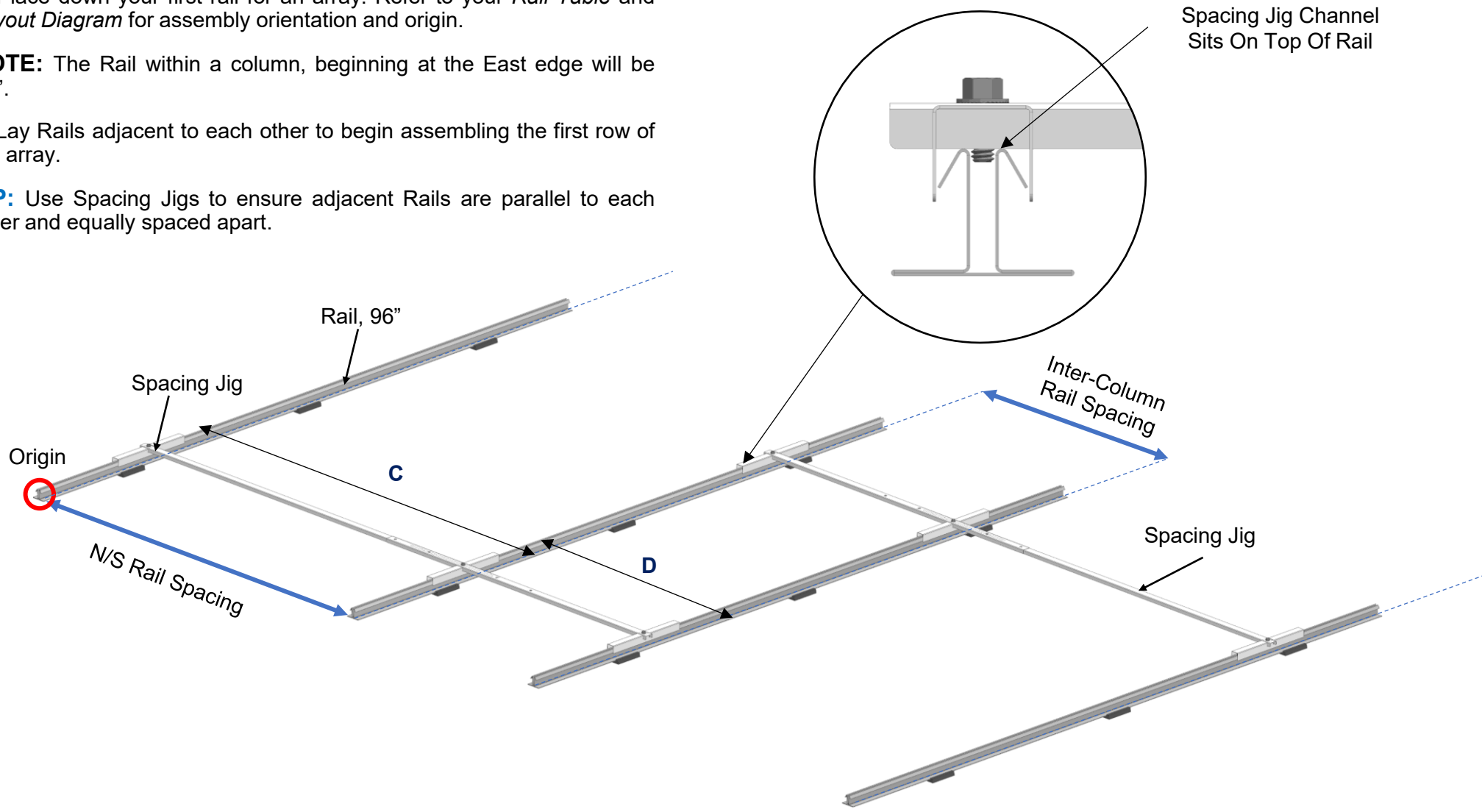
1. From the layout, use the N/S and E/W dimensions of your roof as the ORIGIN (i.e., the beginning) of your installation. The corner of the Rail will be the origin point for assembling the module array.

2. Place down your first rail for an array. Refer to your *Rail Table* and *Layout Diagram* for assembly orientation and origin.

NOTE: The Rail within a column, beginning at the East edge will be 96".

3. Lay Rails adjacent to each other to begin assembling the first row of the array.

TIP: Use Spacing Jigs to ensure adjacent Rails are parallel to each other and equally spaced apart.

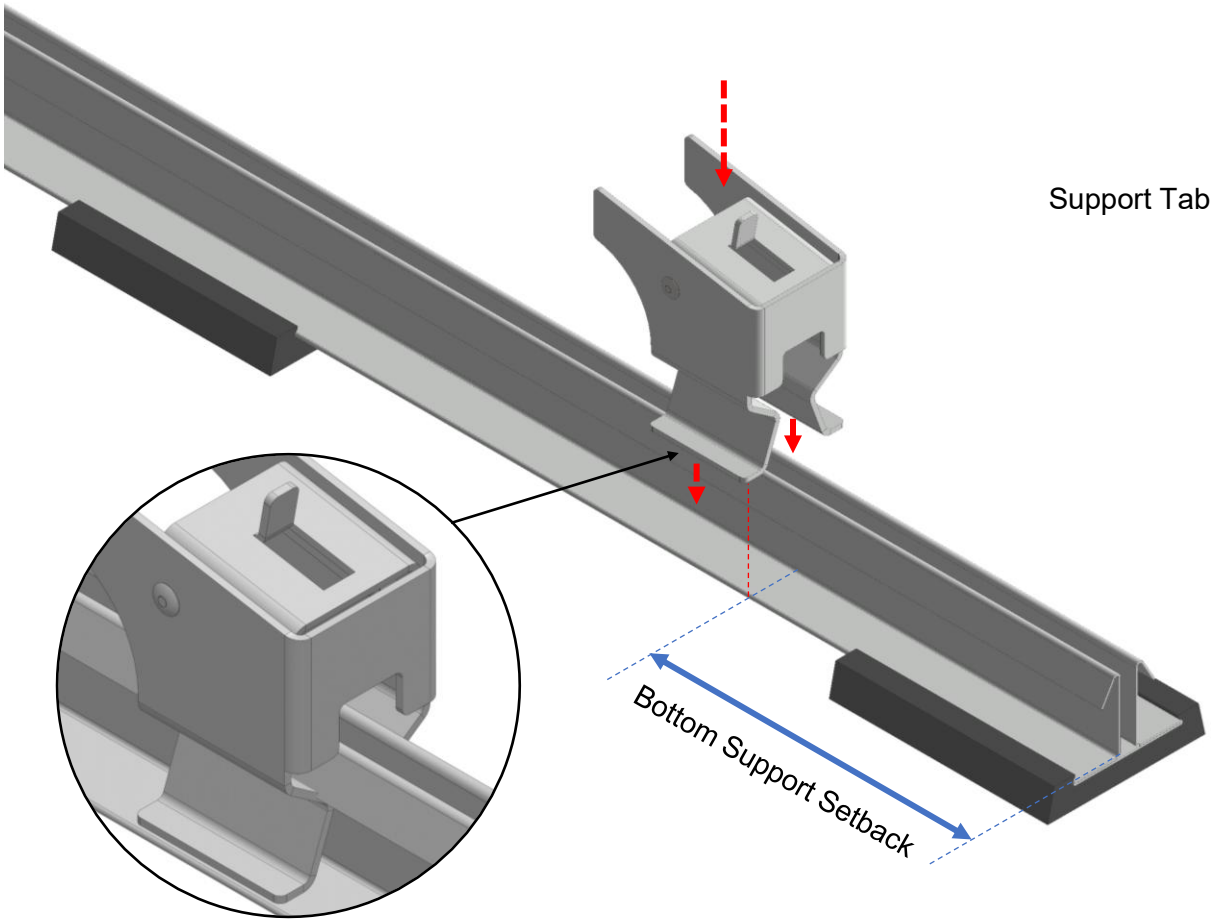


Bottom Support Installation

1. Mark the Bottom Support setback distance indicated on the *Spacing Diagram* from the South edge of the Rail.

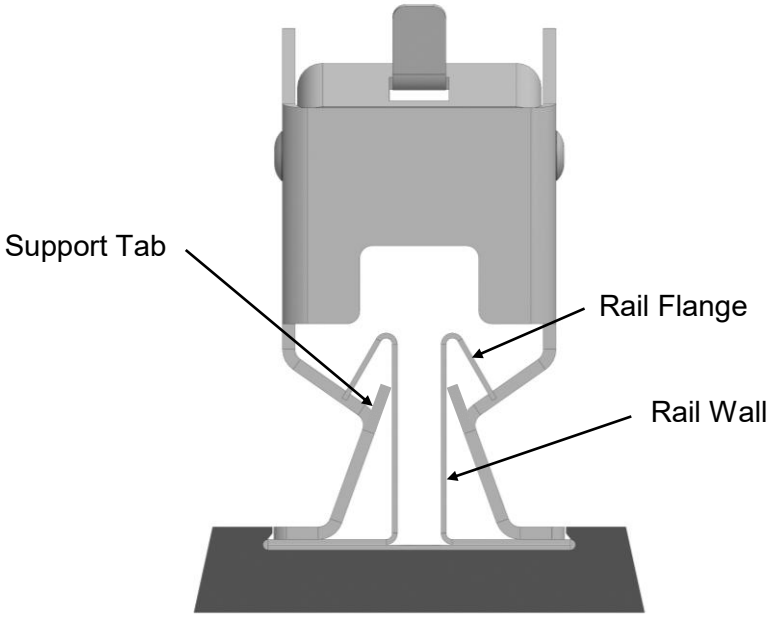
2. Seat Bottom Support on Rail. Apply downward pressure on the Support with your hands until the click-in feature has engaged with the Rail. Support Feet will rest flush along the Rail.

NOTE: Refer to page 18 for placement of Bottom Supports along remaining rows.



TIP: The Support will create a click-in sound once the Support Tabs are engaged underneath the Rail. The Rail walls will compress inward until the Support is flush with the Rail.

NOTE: Support Tabs must be engaged underneath the Rail Flange.



Top Support Assembly and Installation

1. Refer to your *Spacing Diagram* to verify the ¼-20 Bolt is hand threaded through the correct hole number. Fasten to Support Sleeve.

NOTE: Hole number sequence begins at the bottom hole and increases with each additional hole. 10-Degree Supports have four holes and 5-Degree Supports have three holes.

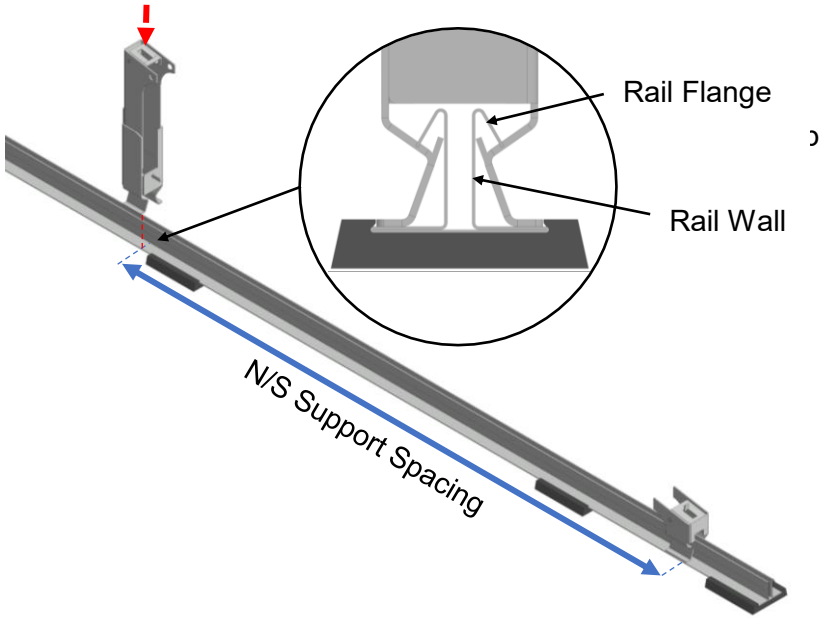
TORQUE ALL CONNECTIONS TO 75 IN-LB.

2. Refer to your *Spacing Diagram* for the N/S Support spacing length and mark setback along Rail.

TIP: Use spacer sticks to reduce installation time and ensure Supports are equally spaced along Rail.

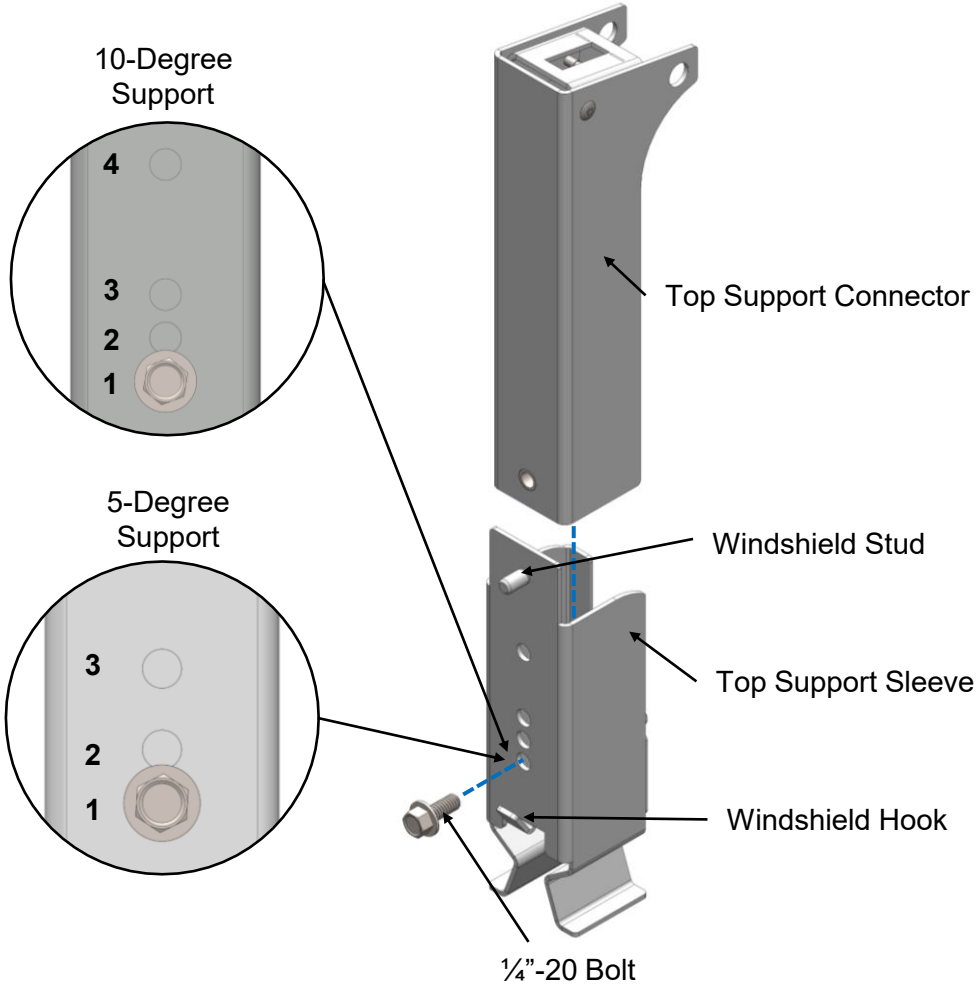
3. Seat Top Support on the Rail. Apply downward pressure on the Support with your hands until the click-in feature has engaged with the Rail. Support Feet will rest flush along the Rail.

NOTE: Refer to page 18 for placement of Top Supports along remaining rows.



TIP: The Support will create a click-in sound once the Support Tabs are engaged underneath the Rail. The Rail walls will compress inward until the Support is flush with the Rail.

NOTE: Support Tabs must be engaged underneath the Rail Flange.



Ballast Tray Assembly Overview

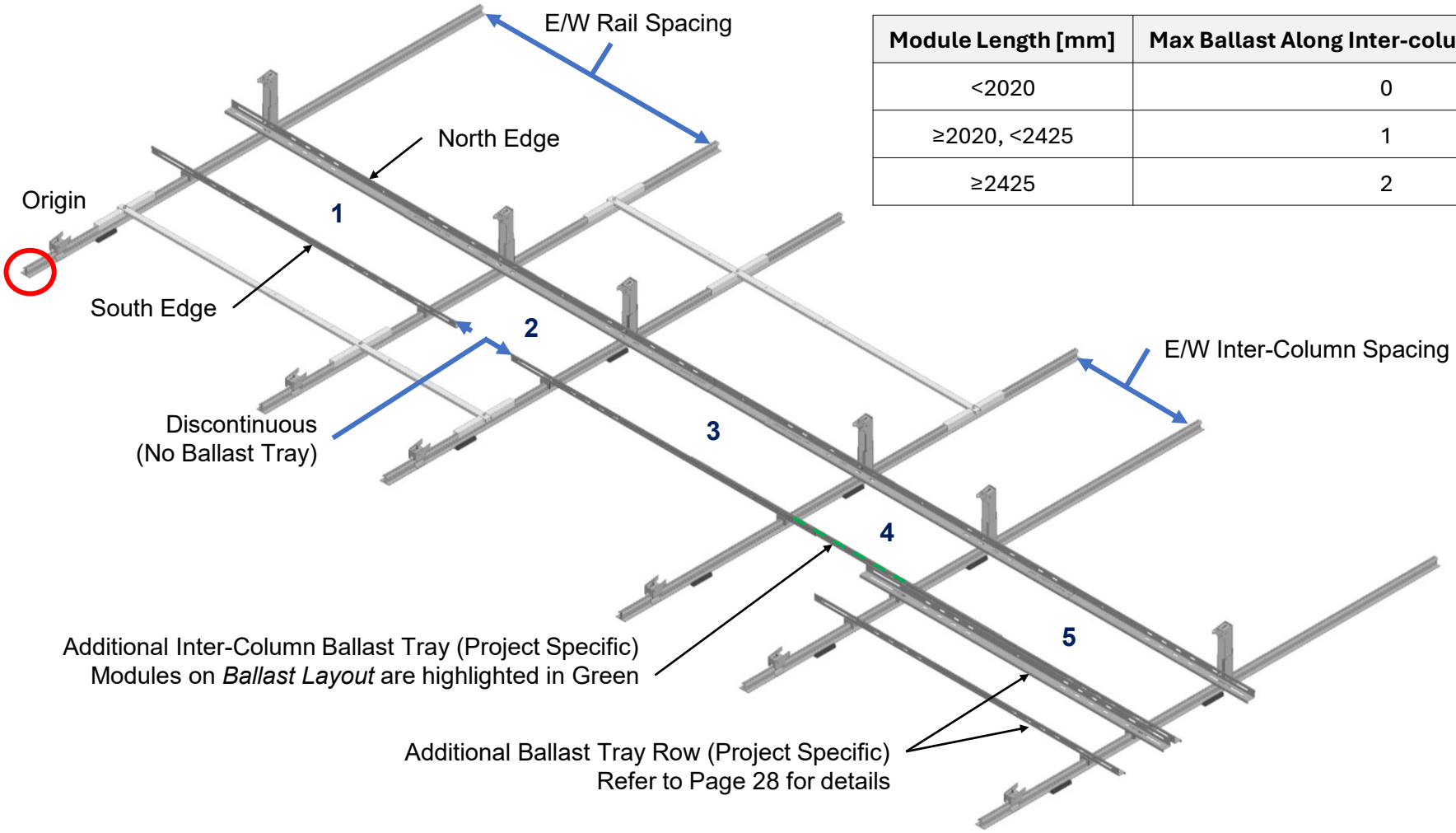
Ballast Trays are installed in the N/S directions to form a grid and allow for Ballast Stones to be placed over top.

Ballast Trays along the West edge are continuous and overlap each other (1-5). Ballast Trays along the south edge are discontinuous and are place every other Rail column (1, 3, 5).

NOTE: In certain layouts, additional Ballast Trays may be required along the south edge to allow for additional ballasting room in areas that exceed **8 Large Stones** (Additional Ballast Tray 4). Refer to the table below.

PV modules requiring Ballast Stones that exceed the table below may require an additional Ballast Tray row. Refer to Page 28 for details.

Module Length [mm]	Max Ballast Along Inter-column Per Module
<2020	0
≥2020, <2425	1
≥2425	2



Accessory Bracket & Ballast Tray Installation

NOTE: Ballast Trays & Accessory Brackets along the East edge are not typically required in anchor locations**.** Ballast Trays are still required along the West edge. Refer to page 27 for anchor installation.

1. Refer to your *Spacing Diagram* to determine Accessory Bracket spacing from the Top Support. Mark distance on Rail as required.

2. Seat Accessory Bracket on the Rail. Apply downward pressure on the Accessory Bracket with your foot until the click-in feature has engaged with the Rail. Place the second Accessory Bracket on the adjacent Rail.

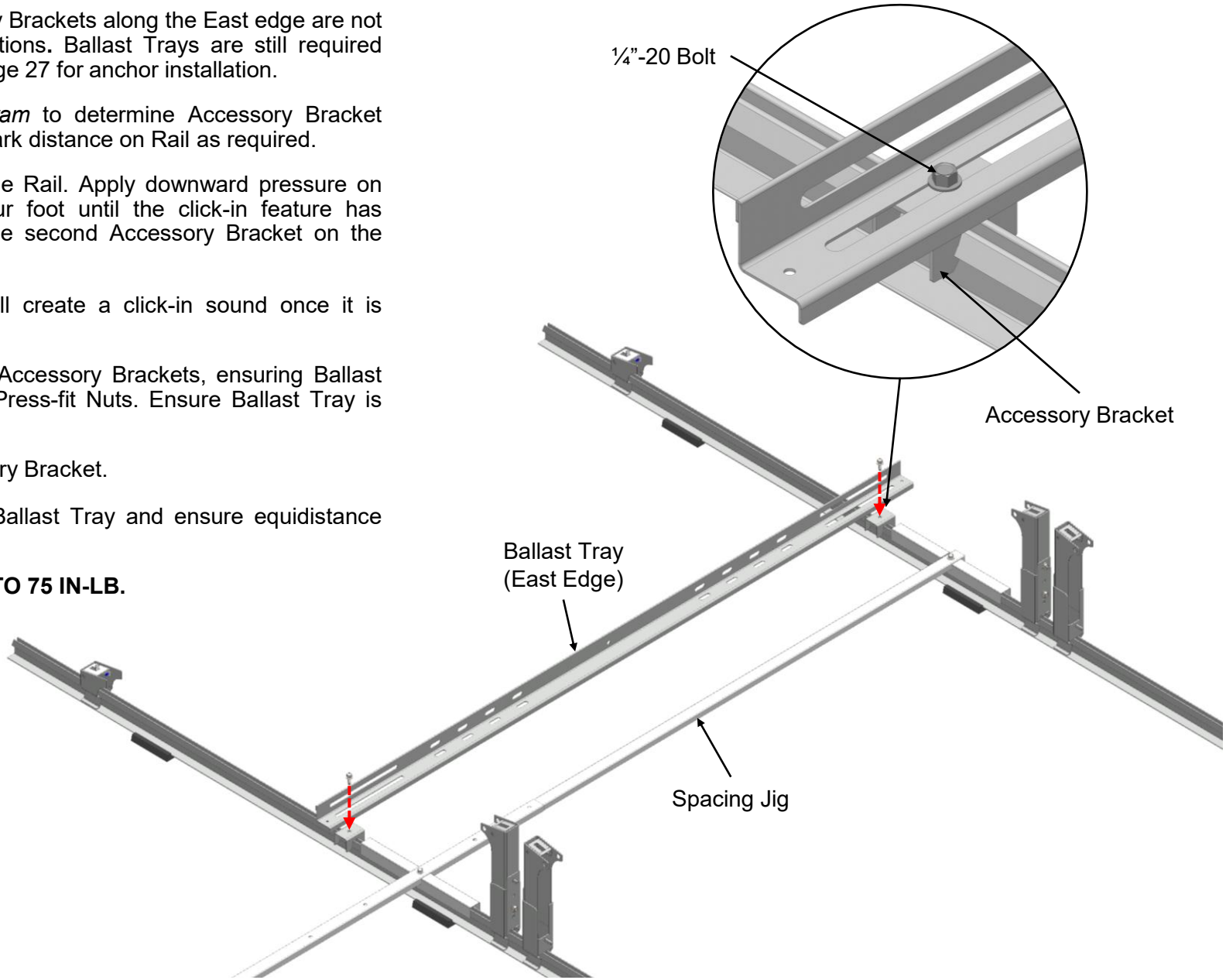
TIP: The Accessory Bracket will create a click-in sound once it is engaged with the Rail.

3. Place Ballast Tray on top of Accessory Brackets, ensuring Ballast Tray slots are aligned with the Press-fit Nuts. Ensure Ballast Tray is spaced equally between Rails.

5. Fasten Ballast Tray to Accessory Bracket.

TIP: Use Spacing Jig to align Ballast Tray and ensure equidistance from Supports.

TORQUE ALL CONNECTIONS TO 75 IN-LB.



Installing Ballast Trays on Supports

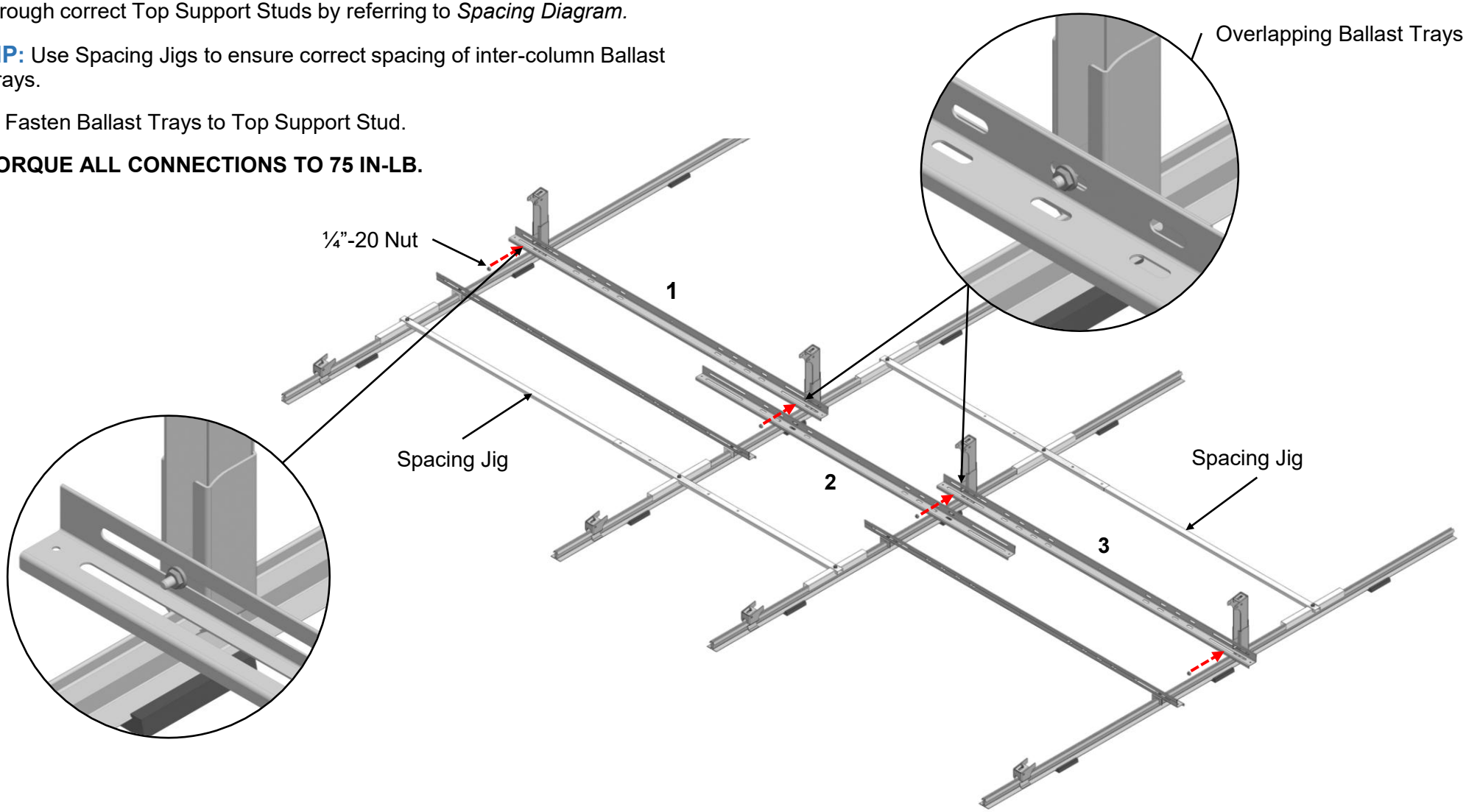
1. Place Ballast Tray (1) and (3) on Top Support Press-fit Studs. Ensure Ballast Tray is spaced equally between Rails.

2. Place inter-column Ballast Tray (2) overtop of Ballast Trays (1) and (3). Ensure inter-column Ballast Tray (2) slots are symmetrically placed through correct Top Support Studs by referring to *Spacing Diagram.*

TIP: Use Spacing Jigs to ensure correct spacing of inter-column Ballast Trays.

3. Fasten Ballast Trays to Top Support Stud.

TORQUE ALL CONNECTIONS TO 75 IN-LB.



Installing Splices & Remaining Rails

1. Place Splice Studs through Rail holes. Splice Stud will be situated between Rail walls as seen in the diagram below.

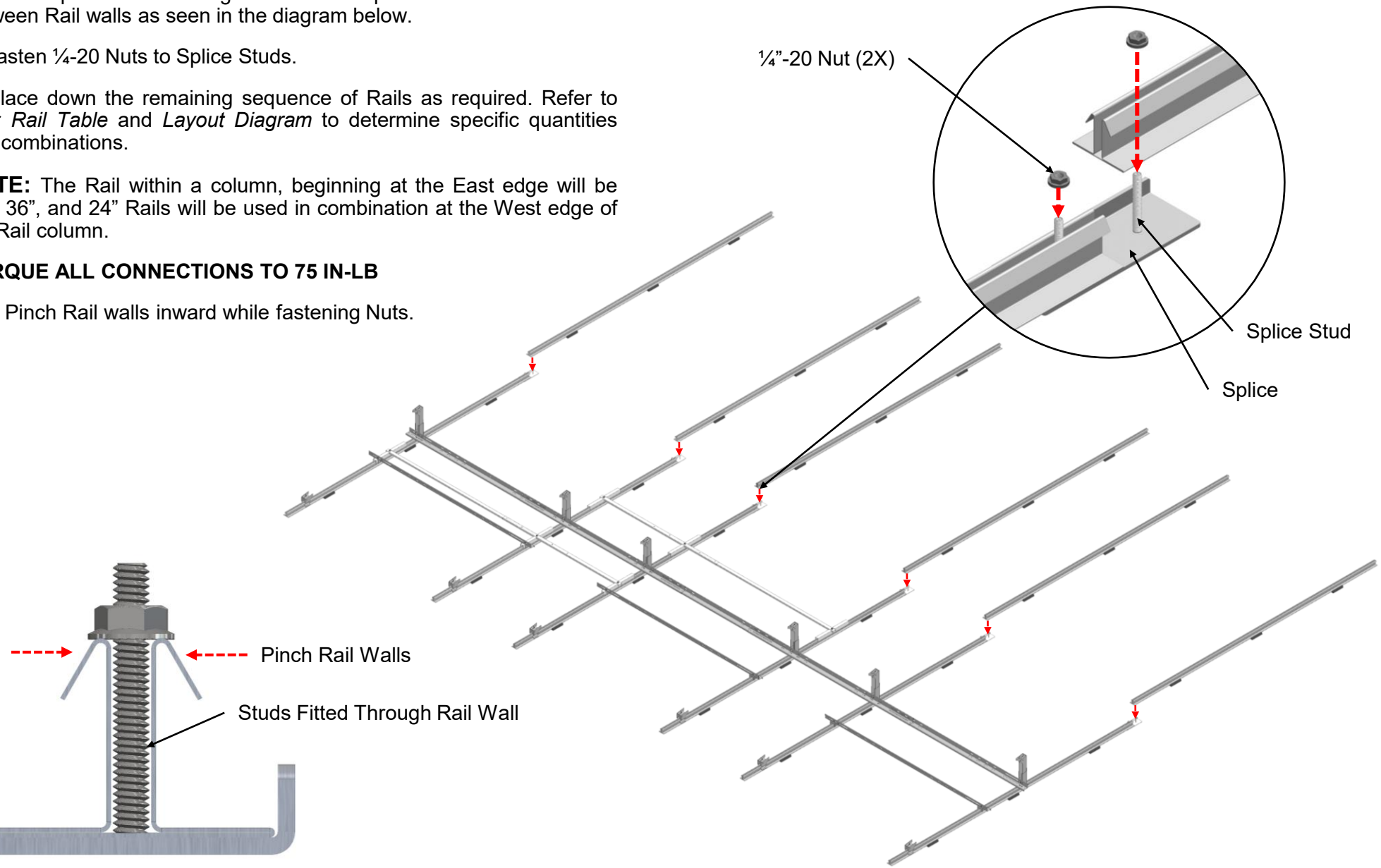
2. Fasten ¼-20 Nuts to Splice Studs.

3. Place down the remaining sequence of Rails as required. Refer to your *Rail Table* and *Layout Diagram* to determine specific quantities and combinations.

NOTE: The Rail within a column, beginning at the East edge will be 96''. 36", and 24" Rails will be used in combination at the West edge of the Rail column.

TORQUE ALL CONNECTIONS TO 75 IN-LB

TIP: Pinch Rail walls inward while fastening Nuts.



Installing Remaining Rows

1. Refer to your *Spacing Diagram* for the E/W Support, Inter-Row Peak, and Inter-Row Valley Spacing. Mark distances along Rail.

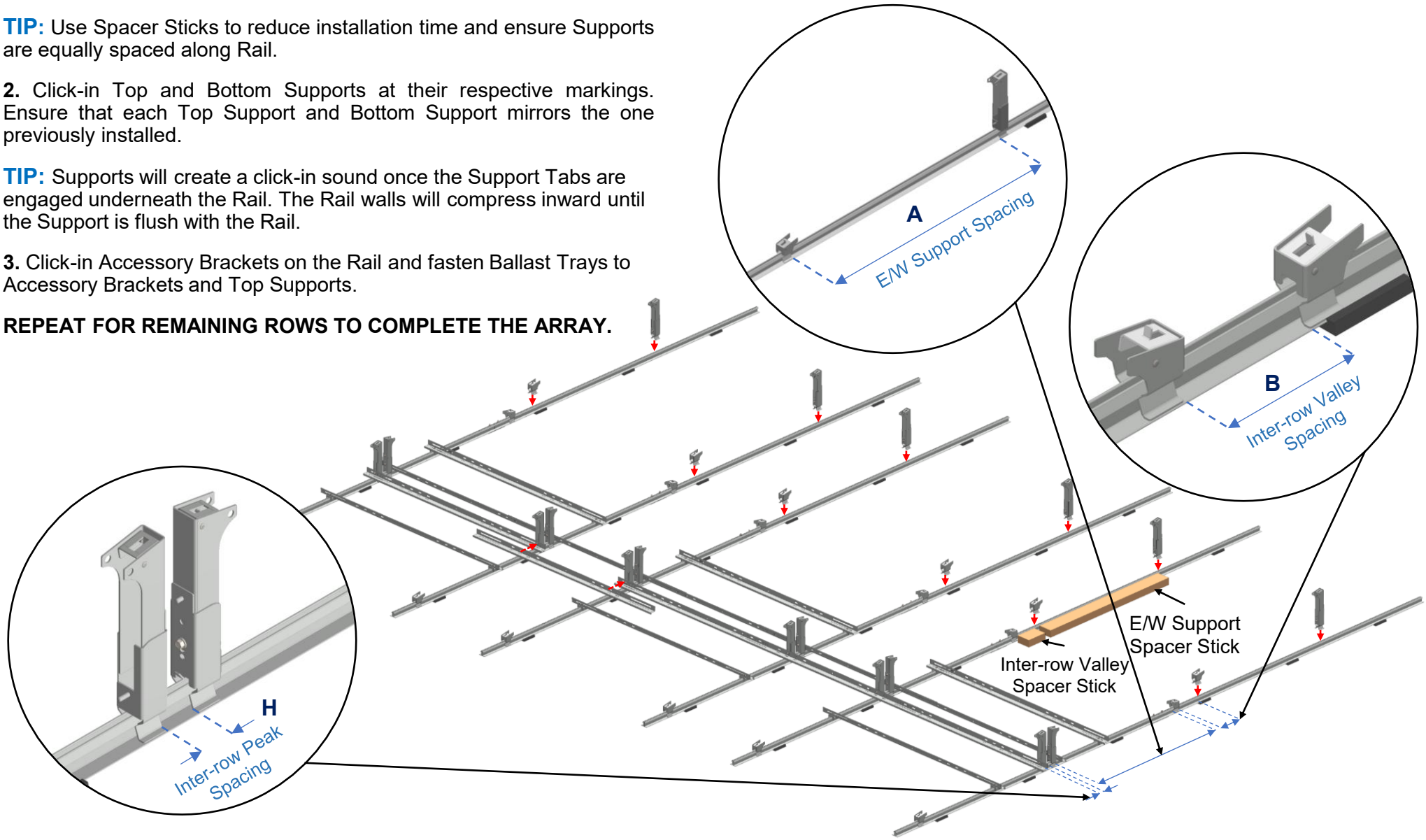
TIP: Use Spacer Sticks to reduce installation time and ensure Supports are equally spaced along Rail.

2. Click-in Top and Bottom Supports at their respective markings. Ensure that each Top Support and Bottom Support mirrors the one previously installed.

TIP: Supports will create a click-in sound once the Support Tabs are engaged underneath the Rail. The Rail walls will compress inward until the Support is flush with the Rail.

3. Click-in Accessory Brackets on the Rail and fasten Ballast Trays to Accessory Brackets and Top Supports.

REPEAT FOR REMAINING ROWS TO COMPLETE THE ARRAY.



Installing Ballast Stones

Ballast Stones are used to hold down the racking on top of the roof. Ballasting requirements are unique to each project and are dependent on multiple variables.

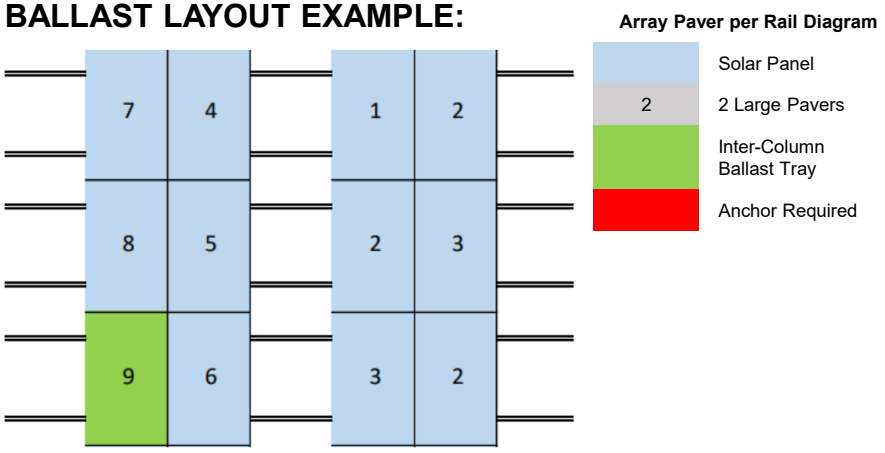
1. Place Ballast Stones top-down. The *Ballast Layout* will specify the quantity of Stones to be placed underneath each module. Ensure Ballasts are evenly distributed on both Ballast Trays.

NOTE: Nominal **4" x 8" x 16" (32 lbs)** Ballast Stones are best suited for AeroGrid. Alternative Ballast Stone sizes may be used upon request.

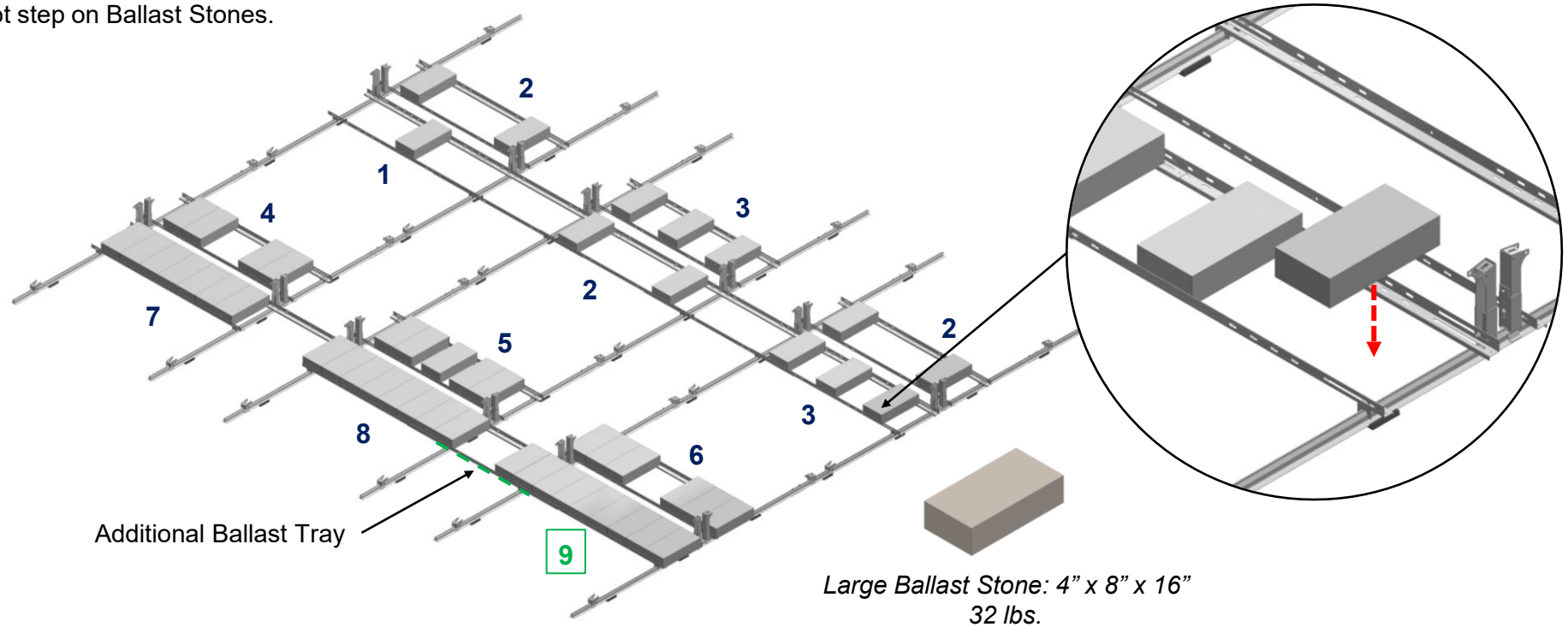
NOTE: Ballast Stones must conform to ASTM C1884 where the Ballast Stones have been manufactured and tested for freeze-thaw durability. Project locations with freezing cycles less than 25 may use ballast blocks conforming to ASTM C90.

TIP: Do not step on Ballast Stones.

BALLAST LAYOUT EXAMPLE:



Ballast Layouts are specific to each installation. Green module locations require an additional Ballast Tray along the inter-column.



Large Ballast Stone: 4" x 8" x 16"
32 lbs.

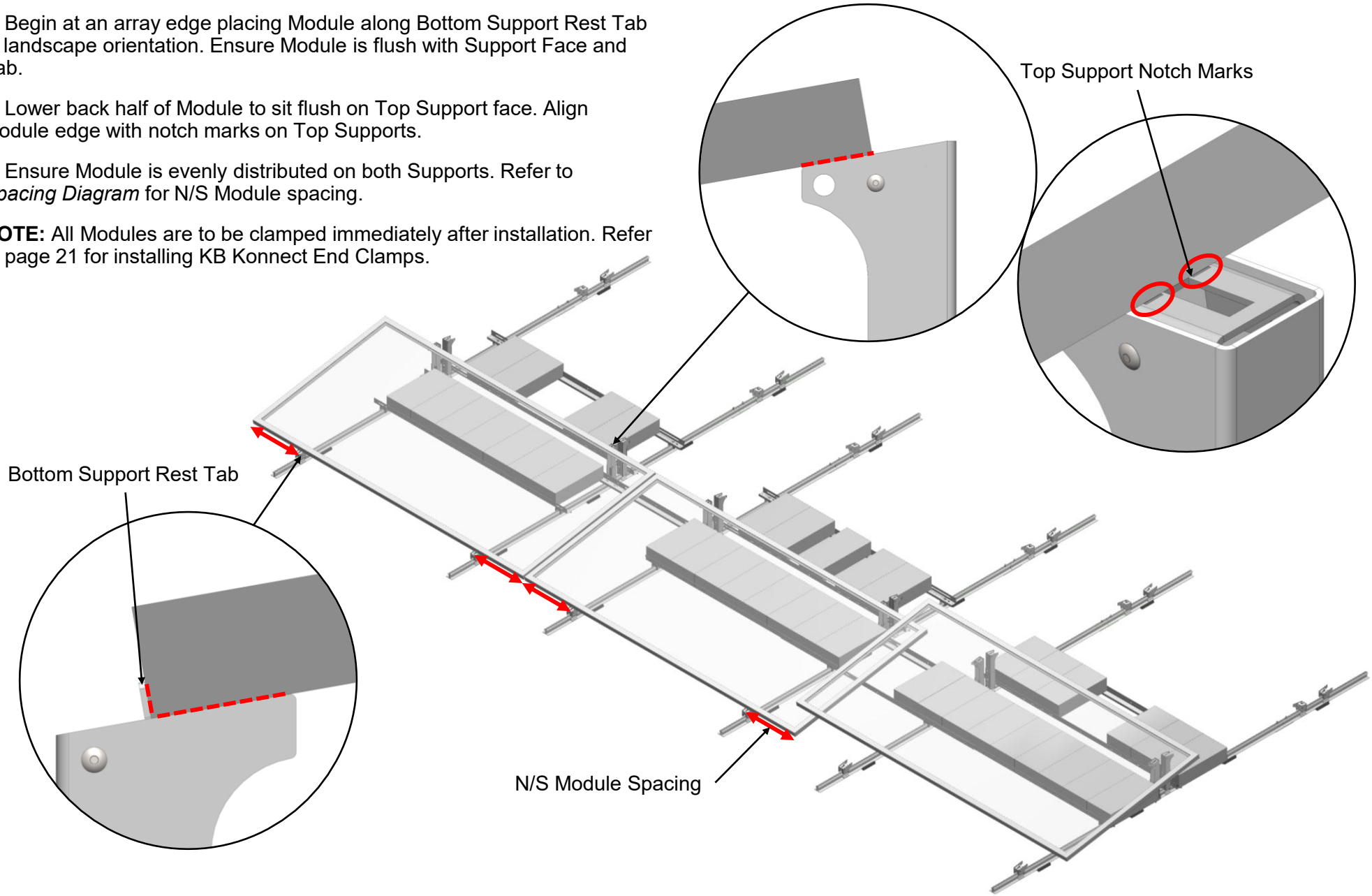
Installing PV Modules

1. Begin at an array edge placing Module along Bottom Support Rest Tab in landscape orientation. Ensure Module is flush with Support Face and Tab.

2. Lower back half of Module to sit flush on Top Support face. Align Module edge with notch marks on Top Supports.

3. Ensure Module is evenly distributed on both Supports. Refer to *Spacing Diagram* for N/S Module spacing.

NOTE: All Modules are to be clamped immediately after installation. Refer to page 21 for installing KB Konnect End Clamps.



Installing KB Konnect End Clamps

1. Click-in KB Konnect Clamp to Top and Bottom Support Slots.

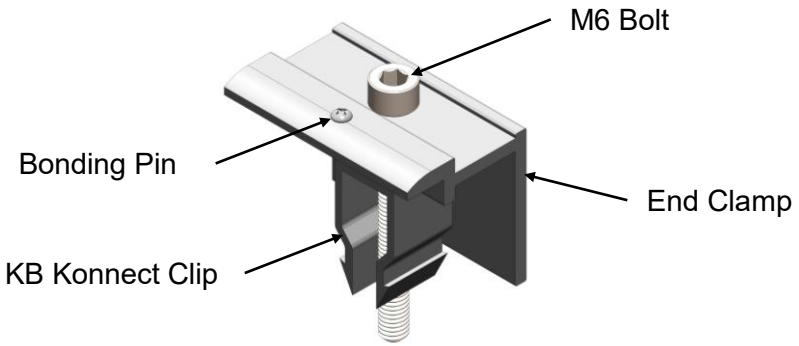
TIP: Pinch KB Konnect Clip to click-in easily.

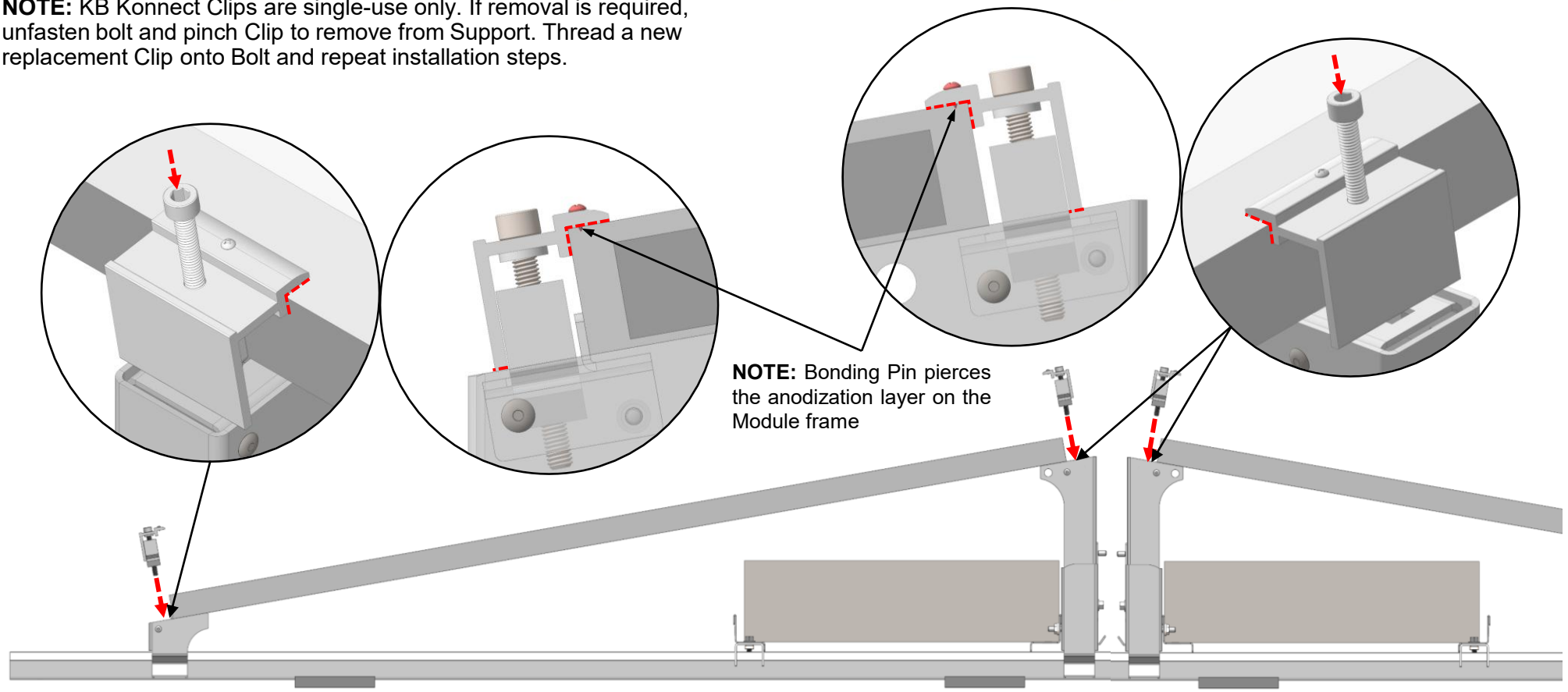
2. Place KB Konnect End Clamp flush against Module and Support.

3. While holding Clamp flush, fasten M6 Bolt. Ensure Bonding Pin pierces the anodization layer on the Module frame. Repeat for remaining Supports.

TORQUE ALL CONNECTION TO 75 IN-LB.

NOTE: KB Konnect Clips are single-use only. If removal is required, unfasten bolt and pinch Clip to remove from Support. Thread a new replacement Clip onto Bolt and repeat installation steps.





NOTE: Bonding Pin pierces the anodization layer on the Module frame

Installing Windshields (Peak Edge Rows Only)

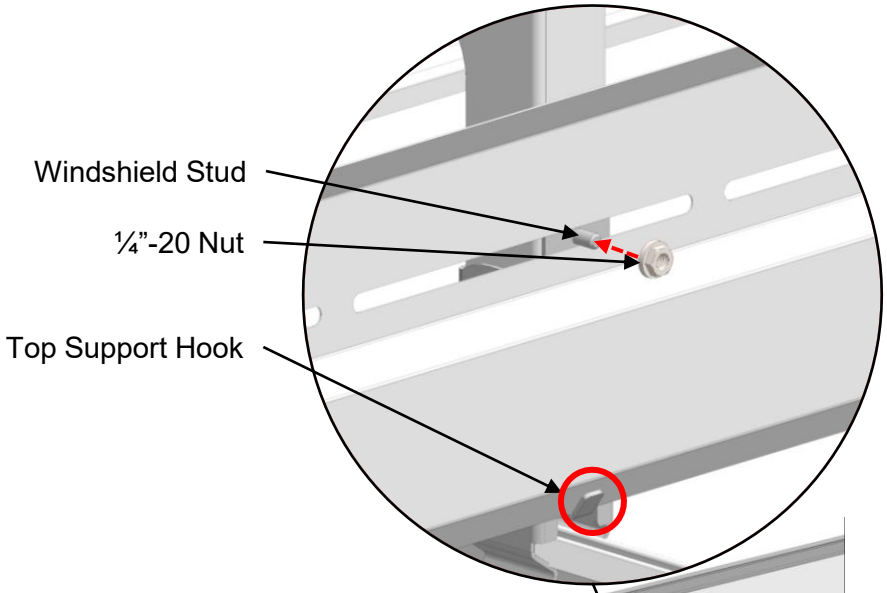
NOTE: Wind deflectors are only required along "Peak Edge Rows" that contain a Top Support at the West edge of the array. Never leave a Peak Edge Row under ballasted without Windshields during assembly once PV Modules are installed.

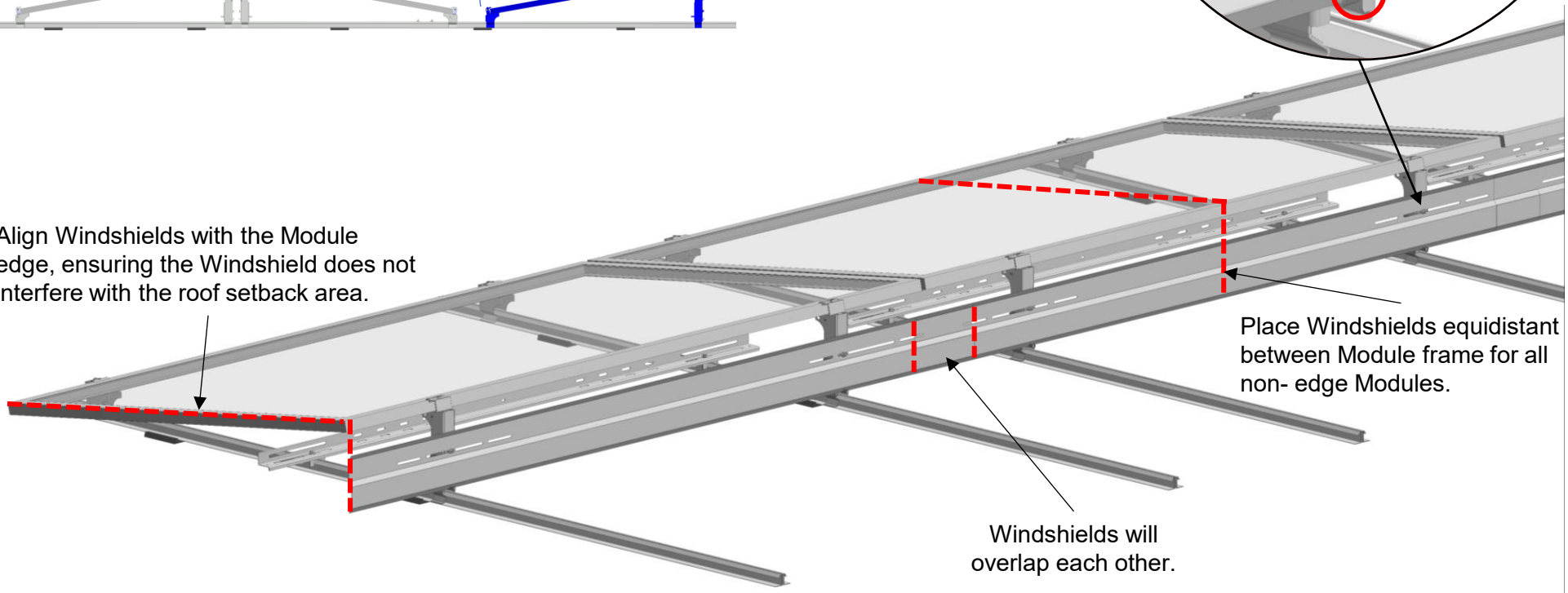
TIP: If installing MLPE's and/or Anchors, install prior to Windshields. Refer to page 26 and 27.

1. Place Windshield over Top Support Hook.

2. Fasten Windshield to Top Support Studs.

TORQUE ALL CONNECTIONS TO 75 IN-LB.





Electrical Grounding

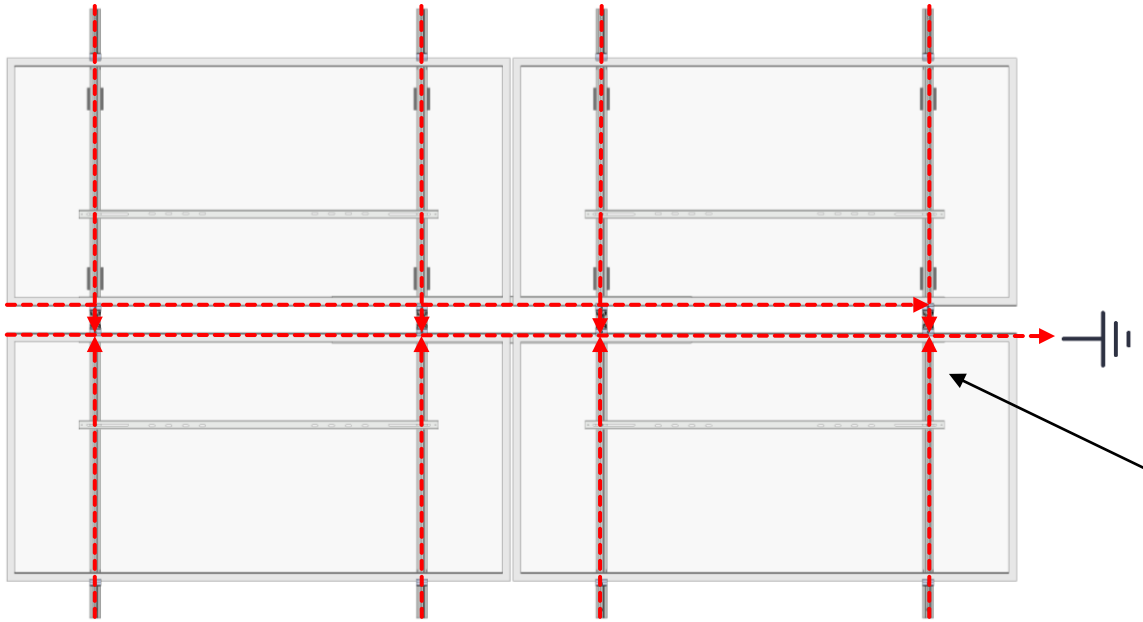
The Bottom and Top Supports contain protruding teeth that pierce the module frame to provide an electrical bonding connection between the Module and racking. The grounding continues through the racking to the base Rail where the system is connected to a grounding wire through grounding lugs.

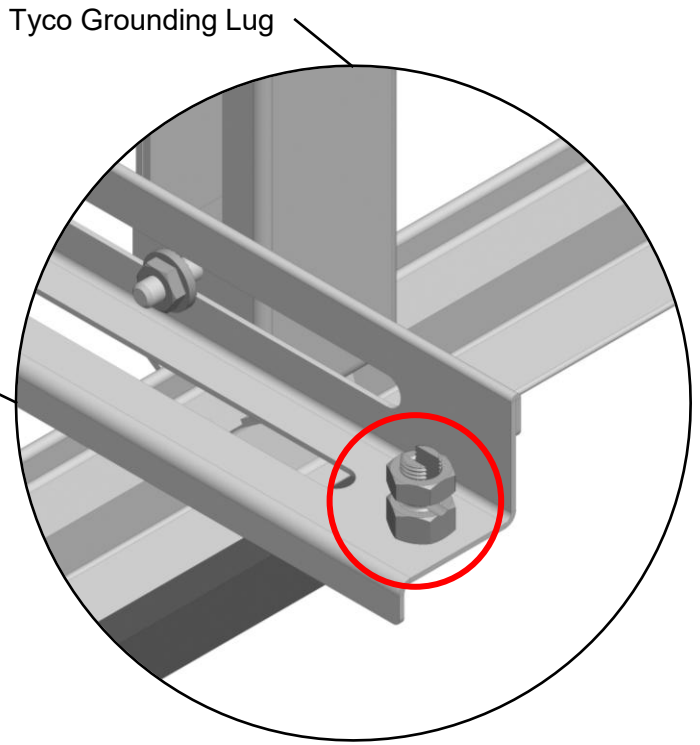
Grounding is transferred through ballast trays for E/W and Rails in the N/S directions.

IMPORTANT

For electrical bonding, only one grounding lug is required per array per 20x25 modules in the N/S x E/W directions, respectively. If the array area exceeds 20x25 modules, then additional grounding lugs are required, per each additional area.

Maximum Series Fuse Rating: 30 Amps





Installing ETL Certified Grounding Lugs

COMPATIBLE GROUNDING LUGS

AeroGrid is compatible with any ETL listed grounding lug including the specified TE Connectivity or Ilsco grounding lugs.

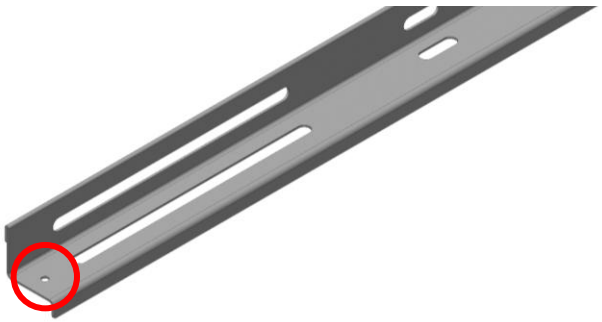
Installer is responsible for and shall provide an appropriate method of direct-to-earth grounding in accordance with the latest edition of the Canadian Electrical Code Part 1, CSA 22.1 Safety Standard for Electrical Installations or the National Building Code, including NEC 250: Grounding and Bonding, and NEC 690: Solar Photovoltaic Systems. Please refer to your local Building and Electrical Codes.

Keep Copper away from Aluminum components in a fashion that maintains a minimum of ¼" separation.

The bonding path for grounding is a result of the interconnection of all components in the array;

During scheduled maintenance, the removal of Modules, Rails, Ballast Trays, Splices, Supports or other components must be carefully and methodically considered. By removing a column of Modules and Ballast Trays, you may be disrupting the bonding path in the East-West direction.

At all times, the array must be interconnected to the grounding lug (as well as during maintenance).



TE CONNECTIVTY GROUNDING CLIP INSTALLATION

1. Place the grounding clip onto the Ballast Tray, making sure that the Screw straddles the grounding lug hole on the Ballast Tray. Thread the Hex Nut onto the Screw.

TORQUE TO 15 IN-LB.

2. Insert the wire into the wire slot. Press down on both ends of the wire (the wire slot will cause the wire to form a slight curve).

3. Manually, or using channel lock pliers, push the slider over the base until it covers the base. This will terminate the wire.

ILSCO GROUNDING LUG INSTALLATION

1. Install so that connector body is pushed firmly up against Ballast Tray edge. Tighten Screw.

TORQUE TO 75 IN-LB.

2. Install ground conductor and tighten Screw.

TORQUE TO 35 IN-LB.

Ilsco Grounding Lug
Part Number:
SGB-4

TE Connectivity Grounding Clip
Part Numbers:
1954381-2
1954381-3

Product Maintenance

OVERVIEW

Regular inspections and maintenance play a crucial role in guaranteeing the security and longevity of your AeroGrid racking system. The following guidelines are suggested to identify and address issues proactively to prevent performance degradation and/or safety concerns.

SYSTEM MAINTENANCE

1. General Inspection

- Verify that intended connections are secure with Clamps and hardware. Any loose components or fasteners shall be re-tightened in accordance with these instructions.
- Check for any signs of shifted components, cracked Ballast Stones, or Ballast Stones touching roof.
- Inspect for signs of stress or damage (warping, bent, etc.) to the racking components. Any components showing signs of damage that compromise safety shall be replaced immediately.

2. Steel Inspection

- Examine steel components for any indication of excessive rust, such as flaking or discoloration.
- Thoroughly examine regions where galvanized coating might by damaged or scratched as these areas are more susceptible to corrosion.

3. Torque Inspection

- Use a torque wrench to verify that all fasteners are tightened to manufacturer specifications.

4. Electrical Inspection

- Inspect electrical components (junction box, wiring, connectors, etc.) and connections for signs of wear, corrosion, or loose wires.
- Monitor performance of inverters and other electrical equipment per manufacturer’s instructions.

5. Module Maintenance

- Clean solar modules and remove bird waste.
- Remove debris from roof which may damage module or stop solar absorption.

RUST TREATMENT

It is normal for rust to form along cut edges of steel components. For additional protection, or installers wishing to apply additional treatment to rust, the installer can choose to follow KB Racking's suggested actions below:

- Remove loose rust and corrosion using a wire brush or sandpaper.
- Apply a suitable rust primer or inhibitor to reduce the rate of oxidation and prevent further corrosion.
- Apply a topcoat of cold galvanized spray to provide a protective layer and clean finish.

ROUTINE MAINTENANCE

Inspections are to be conducted every six months to maintain the reliability of your AeroGrid racking system. It is also important to consider environmental conditions that may require additional inspections when necessary. It is highly recommended that projects are inspected after any severe weather event.

APPENDIX A | MLPE Installation

MLPE MOUNTING OPTION 1 (MLPE BRACKET)

1. Fasten MLPE to Bracket and place on Top Support Windshield Stud.
NOTE: Install MLPE and bracket prior to Windshield installation.

MLPE MOUNTING OPTION 2 (ACCESSORY BRACKET)

1. Click in additional Accessory Bracket in front of Ballast Tray and fasten MLPE.

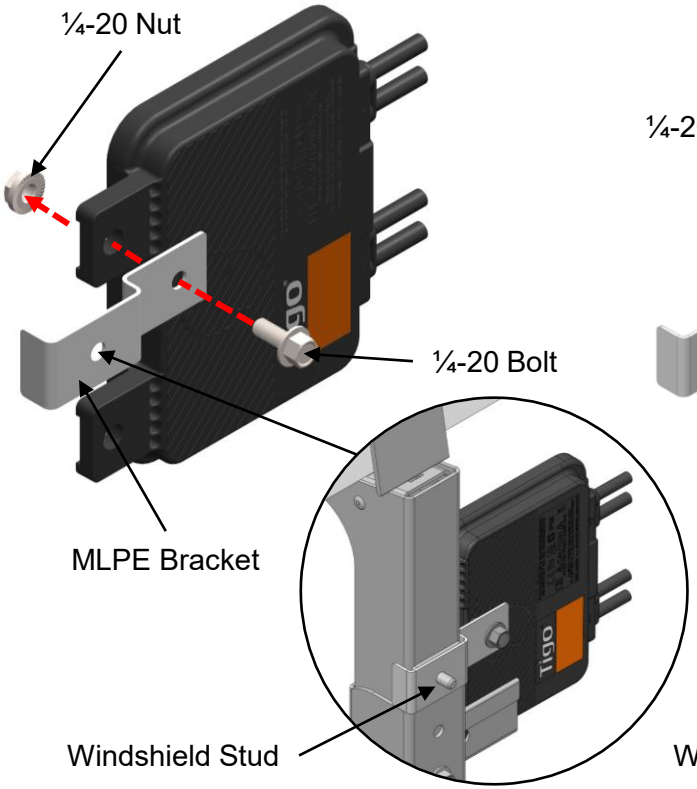
TORQUE ALL CONNECTIONS TO 75 IN-LB.

LIST OF APPLICABLE MLPEs

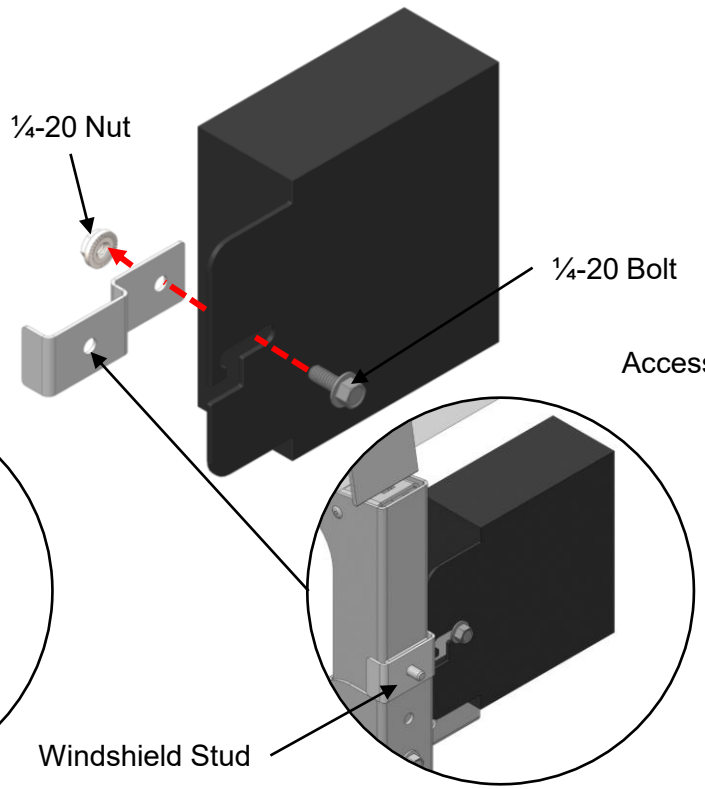
MLPE Manufacturer	MLPE Model
SolarEdge	P100, P1101, S1200, S1201
Tigo Energy	TS4-A

NOTE: MLPE Brackets & Accessory Brackets used for MLPE mounting are add-on components and do not come standard. *Please contact KB Racking to determine applicability if using alternant MLPE's.*

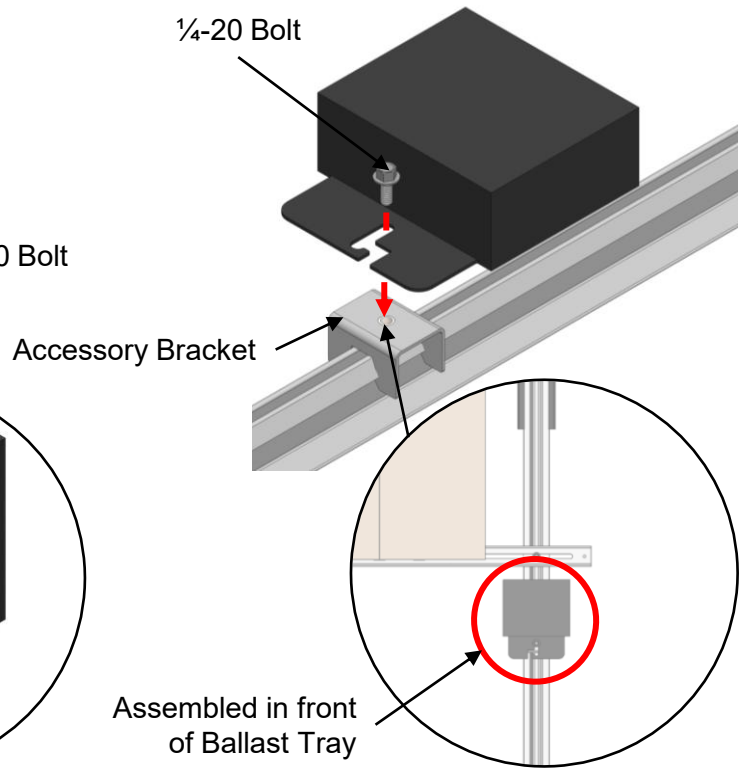
Mounting Option 1 - Tigo
*Applicable for 5 & 10 Deg Systems



Mounting Option 1 – SolarEdge
*Applicable only for 10 Deg Systems



Mounting Option 2 – SolarEdge & Tigo
*Applicable for 5 & 10 Deg Systems



APPENDIX B | Anchor Installation

LIST OF APPLICABLE ANCHORS

Anchor Manufacturer	Anchor Model
OMG Roofing	PowerGrip Plus
	PowerGrip Universal 7
U-Anchor	U-Anchor 2000 Series

NOTE: Anchors are to be installed after Ballast Trays are installed.

1. Refer to your *Layout Diagram* for Anchor locations and Anchor Schematic for dimensions.

TIP: Hand tighten all connections points prior to Torquing.

2. Fasten U-Bracket to Anchor Strut with 5/16”-18 Bolt and Nut. Evenly space Anchor Strut between Rails and place U-Bracket over Anchor Stud.

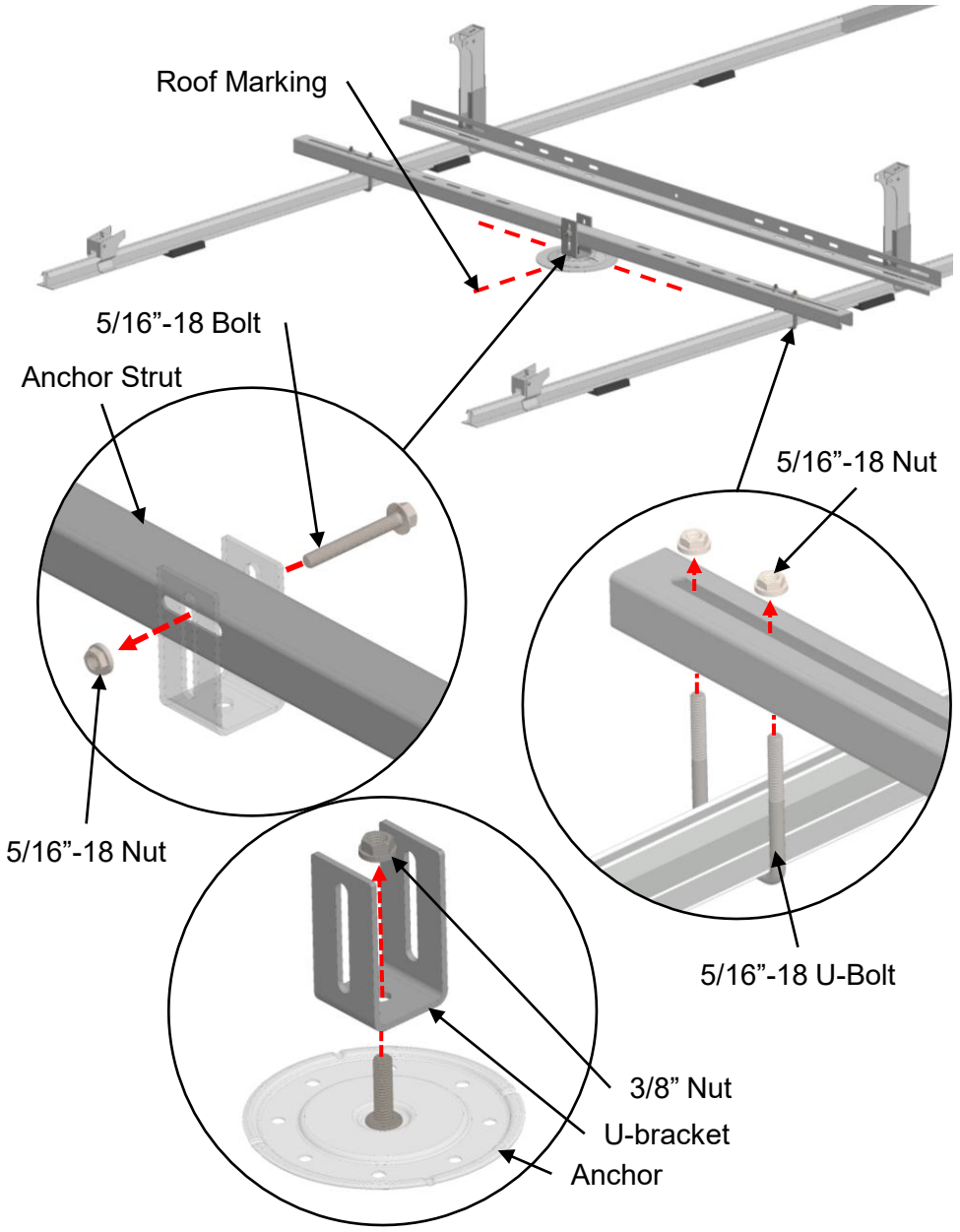
3. Mark location of Anchor on roof and fasten Anchor into roof per manufacturer instructions.

4. Assemble U-Bolt underneath Rail through Anchor Strut. Fasten U-Bolt with 5/16”-18 Nut. Fasten 3/8”-16 Nut to Anchor Stud.

5. Tighten all connections to specified torque setting.

TORQUE SPECIFICATIONS

Component Connection	Torque [In-lb]	Torque [N-m]
U-Bolt (5/16”-18 Nut)	30	14.91
Anchor Stud (3/8-16” Nut)	150	16.95
Anchor Strut (5/16-18 Nut)	132	3.39



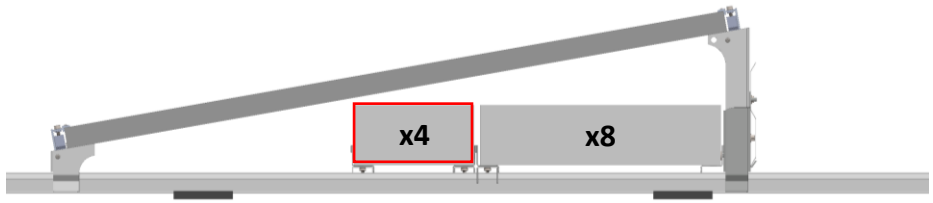
APPENDIX C | Additional Ballast Row Installation

AeroGrid can accommodate additional Ballast Tray rows that can increase the total ballasting weight underneath the PV module. Refer to the figures below for the additional ballasting orientations and maximum weight per panel constrained by the ***module width.***

10 DEG. SYSTEM

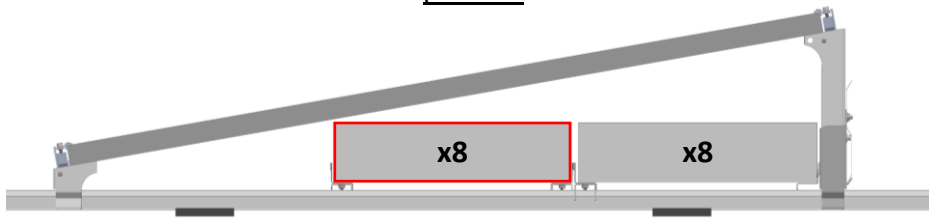
PV Module width: 1049-1278mm

- 4 additional Ballast Stones installed in landscape.



PV Module Width: 1279+mm

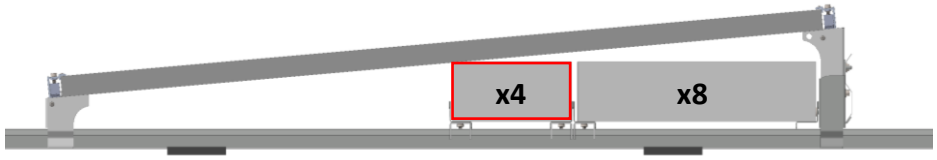
- 8 additional Ballast Stones in portrait.



5 DEG. SYSTEM

Module width: 1250mm+

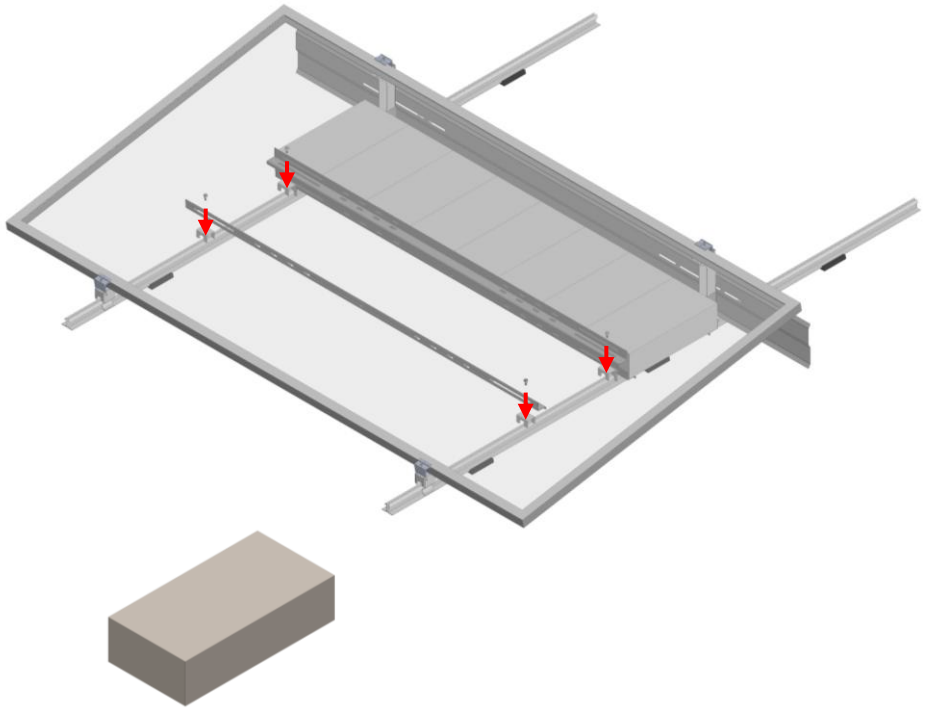
- 4 additional Ballast Stones in landscape.



ADDITIONAL BALLAST ROW COMPONENTS

Part Name	Part No.	QTY / Location
Ballast Tray	G00-GS-06	2
Accessory Bracket	G00-GS-05	4
1/4”-20 x 5/8” Hex Bolt	9111-1420-580-SS0	4

NOTE: Refer to pages 14-16 for assembly of Accessory Brackets and Ballast Trays.



Large Ballast Stone: 4” x 8” x 16”
32 lbs.

APPENDIX D | Wire Management Recommendations

WIRE WAYS

Utilize wire ways to protect wires in exposed areas such as inner row space and pathways.

- Ensure that PV wire is not exposed to sharp edges when entering or exiting wireways

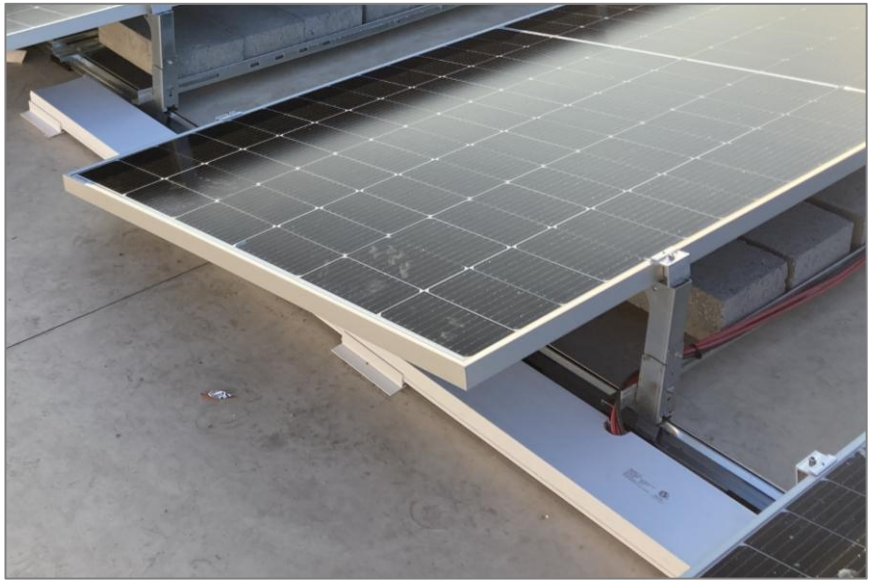
KB Racking recommends the following wire way options listed below:

Wireway Type	Routing Direction(s)	Mounting Method(s)
RayTray Solar Wire Management System	N/S	• N/A (Freestanding along array edge)
Electrical Metallic Tubing (EMT)	N/S, E/W	• Rooftop Support Blocks
Rigid Metal Conduit (RMC)		
Intermediate Metal Conduit (IMC)		
PVC Tubing	N/S, EW	• Rooftop Support Blocks • Secure to Rails with Zip Ties
Flexible Nonmetallic Conduit	N/S, EW	• Rooftop Support Blocks • Secure to Ballast Tray and Rails with Zip Ties

NOTE: All electrical installation and procedures should be conducted by a licensed and bonded electrician or solar contractor. Ensure electrical installation complies with all applicable local or national building and fire codes, including any that may supersede this manual.

Example of Flexible Non-Metallic Conduit with Wire Clips

Example of Metal Conduit and Rooftop Support Block Along Array Edge



Example of RayTray Along Array Edge

APPENDIX D | Wire Management Recommendations (cont.)

WIRE CLIPS / ZIP TIES

Utilize wire clips and zip ties to route wires underneath the module:

- Wire clips attach to the module frame flange for cable securement.
- Zip ties secure cables to the AeroGrid Ballast Trays and Rails.

NOTE: Do not allow wires to sag between clips. Do not overtighten or pinch wires

KB Racking recommends the following wire clip options listed below:

- Hellermann Tyton Edge Clip and Cable Tie (MFG PN: 111-01561, 111-01564, 156-02224 & 156-02226)
- Module Flange Clip

NOTE: All electrical installation and procedures should be conducted by a licensed and bonded electrician or solar contractor. Ensure electrical installation complies with all applicable local or national building and fire codes, including any that may supersede this manual.

Example off Wire Clips Attached to Module Frame Flange

Example of Wire Management Along Ballast Trays with Wire Clips