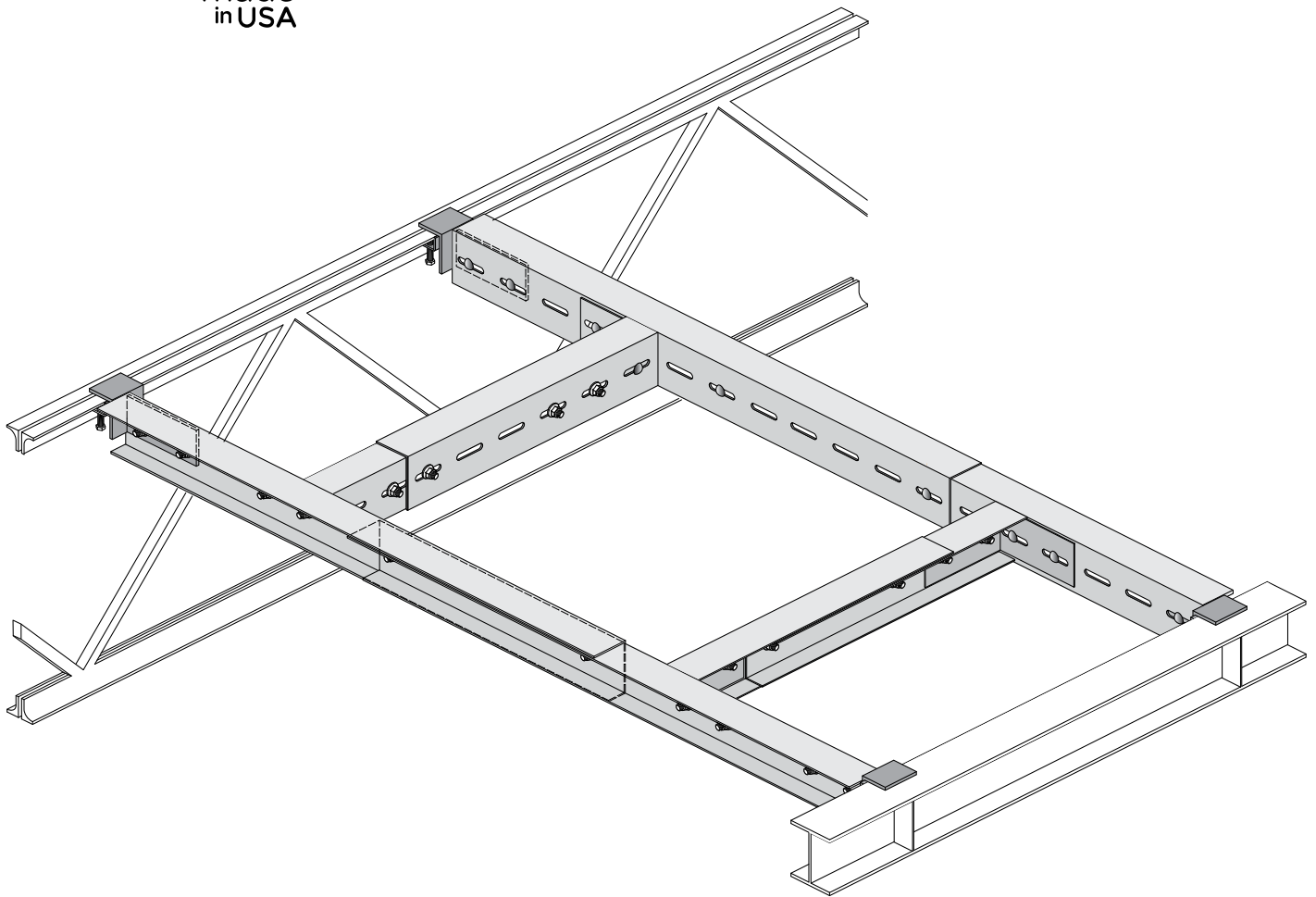


QUICKFRAMES™

The Leader in Engineered Structural Support Systems

Installation Guide v1.0



Important Safety Guidelines



- **Read and comply with all of the instructions and safety precautions in this manual and on all product labels. Failure to follow the safety precautions could result in serious injury or death.**
- **Do not build frames on the ground! Build them into the structure!**
- **Always use both rails (inside and outside) when installing rails. Do not separate rails.**
- **It is recommended that the assembly be performed by two people.**
- **Wear gloves during assembly to avoid injury.**
- **Save these instructions for future reference.**

NOTICE

Building Roof Structure

Building roof structure framing capacity (existing or new) should be checked by a registered structural engineer to ensure the proposed load on the frame does not over-stress any roof supporting members and/or building components. Refer to QuickFrames current frame capacity chart at www.quickframes.com for allowable QuickFrames loads.

QuickFrames USA LLC. accepts no liability for damage to property or person caused by faulty installation or failure to obtain structural engineering approval by a licensed, registered structural engineer. Site specific engineering is available through QuickFrames USA LLC.

Turn-of-Nut Pretensioning Method

After all the Quickframes components have been installed, all hanger tap bolts and serrated flange nuts need to be pretensioned using the Turn-of-Nut method. Turn-of-Nut pretensioning is performed by rotating the hanger tap bolts and serrated flange nuts a specific turn after the hanger tap bolts and serrated flange nuts have been snug tightened.

What Does Snug Tightened Mean?

Snug tighten is defined as the effort applied to bring the bolted joint into *firm contact*.

To ensure that the Turn-of-Nut method is done correctly, follow the steps below.

For Hanger Tap Bolts:

1. Snug tighten the hanger tap bolts.
2. Place a mark on the bolt threads. Next place a corresponding mark on the hanger face.
3. Rotate the hanger tap bolts 1/4 turn.

For Serrated Flange Nuts:

1. Snug tighten all serrated flange nuts.
2. Mark the end of the carriage bolt. Next place a corresponding mark on the serrated nut.
3. Rotate the serrated flange nuts 1/3 turn.

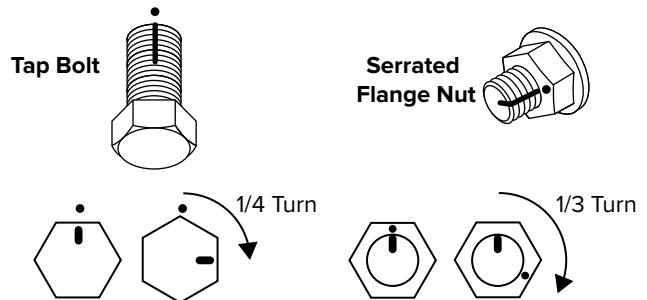


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What to do When You Receive Your QuickFrame Shipment



Receive Your Order

Your order will arrive on a pallet. You will need a forklift to unload the pallet from the freight carrier. Liftgate service is available for an additional charge.

Locate the plans before removing the pallet wrap and banding. The plans may be inside a shipping envelope attached to the pallet wrap or rolled

up loosely inside one of the stacks of rails on the pallet.

Take some time to familiarize yourself with the plans and the components. Refer to page-4 to learn how to read the QuickFrames plans.

Inspect and Sort the Components

Inspect and Sort

Remove the plastic wrap and metal banding. The main rails and cross rails will be separated and clearly marked. The angle brackets and hardware will be packed in a carton.

Important Note:

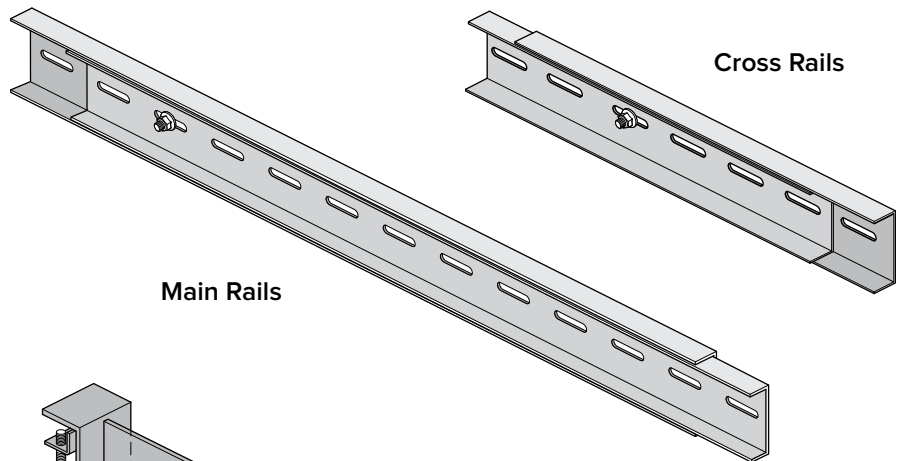
Main rails and cross rails may have 2" or 4" top flanges depending on the application.

Rails

10GA, 12GA, or 16 GA 50KSI, G-90 galvanized steel, cold-formed in a channel configuration.

Note:

Main rails have the gauge of the rail printed on each main rail to help when sorting the order.



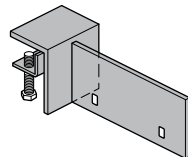
Main Rails

Cross Rails

Hangers

Cold-formed 3/16" (black) HR steel plate. Hangers are usually pre-mounted to the ends of the main rails at the factory.

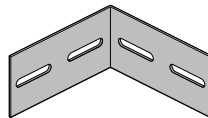
(See page-5 for hanger mounting instructions.)



Hanger Assembly
01-133-U

Angle Brackets

10GA, 50KSI, G-90 galvanized steel, cold-formed.



Hardware

1' x 1/2" SAE Grade-5 zinc short-shouldered carriage bolt

1/2" SAE Grade-5 zinc serrated flange nut



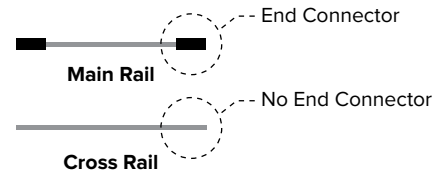
Tools Required

Impact driver with 3/4" socket.

Reading QuickFrames Drawings / Framing Plans

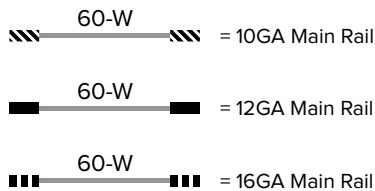
QuickFrames are comprised of two types of rails: main rails and cross rails. Main rails span from building framing member to building framing member (e.g. joist to joist). Cross rails span between the main rails. Both types of rails are comprised of two rail segments which provide QuickFrames unique adjustability.

On QuickFrames drawings, main rails can be identified by the black end connector found at the end of each rail. Cross rails do not have end connector symbols.



Identifying Main and Cross Rails

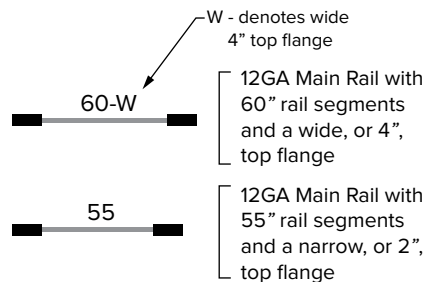
The type of black end connector signifies the gauge of QuickFrames main rail to be installed in a particular location. There are three gauges of main rails.



Cross rails span between main rails and do not have end connector symbols, as shown below.



On QuickFrames drawings, each type of rail is shown with a length indicator as well as a top chord width indicator. Each rail length is shown in a unique color to aid in distinguishing one rail from another. For example:

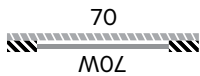


An easy way to determine the size of any QuickFrames rail is to count the number of slots per rail and multiply by 5. In the example below, the rail segment shown has 6 slots. Therefore it is part of a 30" rail set.

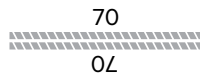


Special Cases

A 70" 10GA main rail and a 70" 10GA cross rail bolted back-to-back to create an I-beam main rail. Refer to page 10 for I-beam main rail details.



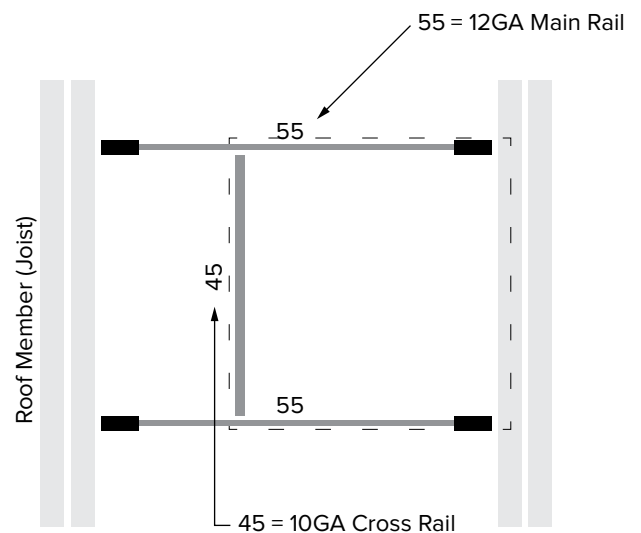
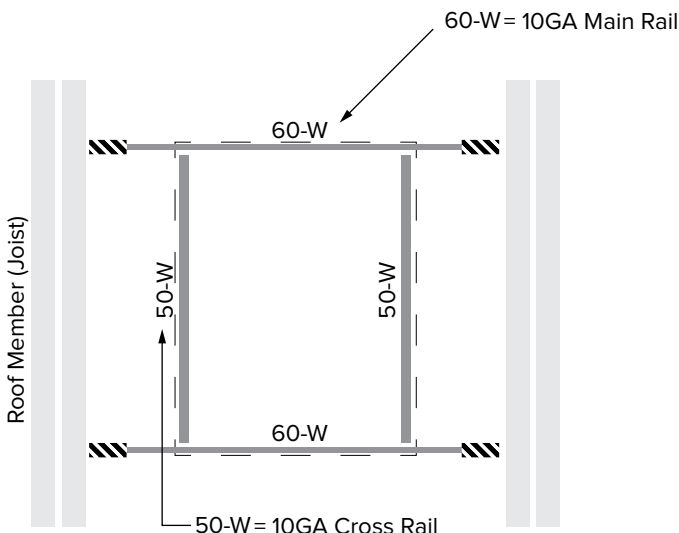
Two (2) 70" 10GA cross rails bolted back-to-back to create an I-beam cross rail. Refer to page 10 for I-beam cross rail details.



A 45" 12GA hybrid rail with an end connector on one side that attaches to a roof framing member, while the other side attaches to a QuickFrames main rail.



Reading the QuickFrames Drawing



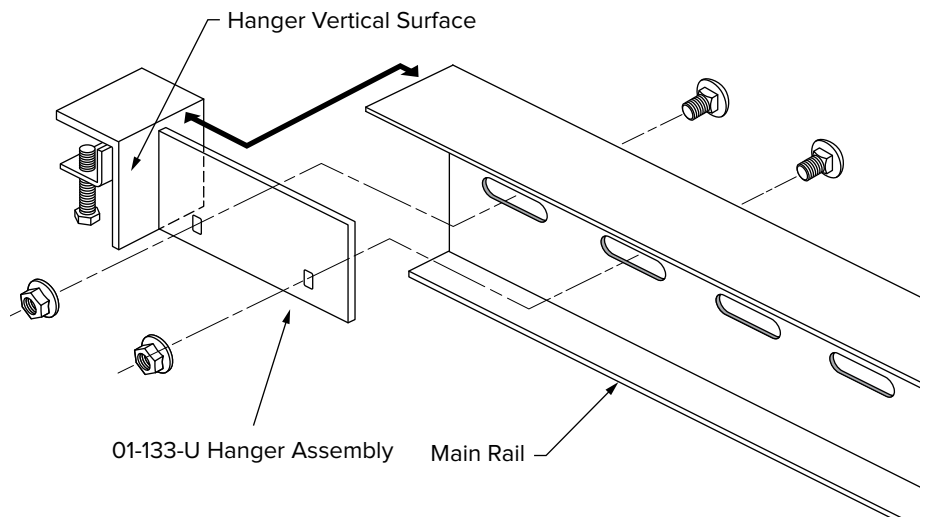
Attaching Hangers to the Main Rails

Note: For some orders, the hangers may be shipped separately.

Hangers are securely attached to the ends of the main rails using the included carriage bolts and serrated nuts.

The end of the main rail must be touching the vertical surface of the hanger. See figure at right.

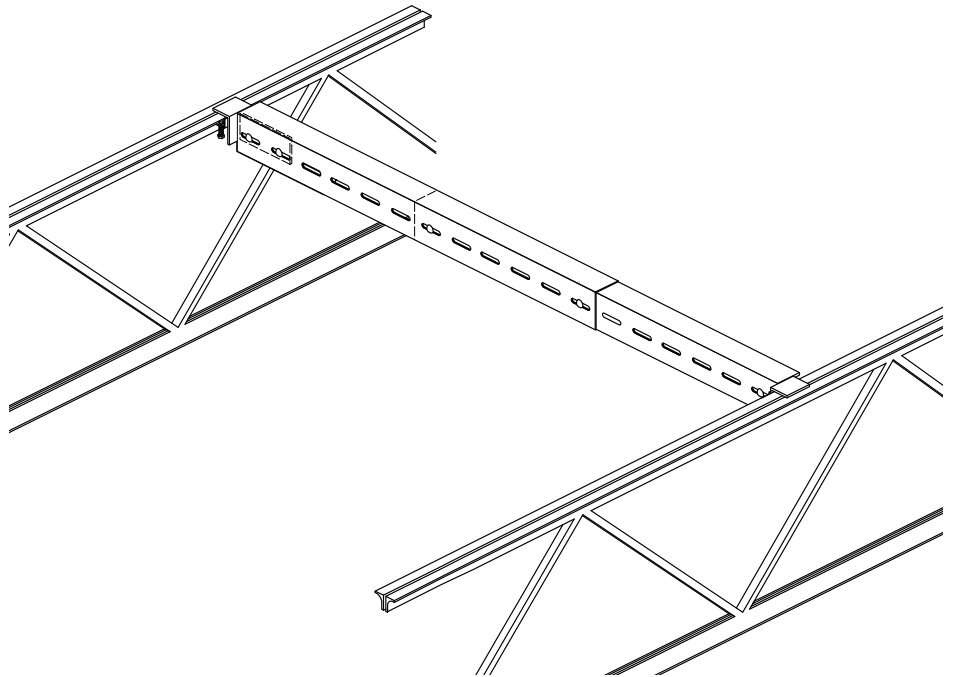
Note: The actual hanger used may vary depending on the building structure. Specific instructions will be provided for each hanger type.



Locating the 1st Main Rail

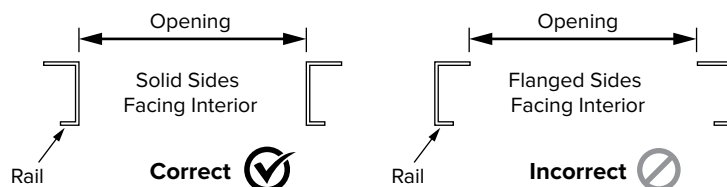
Mark the location of the first main rail by measuring from a building column, I-Beam, or exterior wall over to the location of the first main rail.

Refer to the "Erecting Drawings" provided to you by the engineer of record or architect.



Proper Orientation of Main Rails

The solid side of the main rails must face towards the interior of the frame opening. The diagram at right shows correct orientation of the main rails.

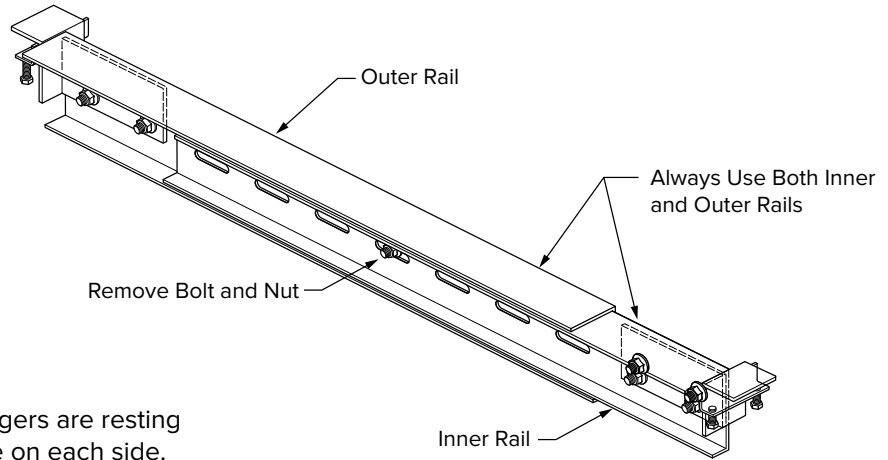


Installing the Main Rails

Safety First! It is recommended that two persons perform the installation of the QuickFrame components.

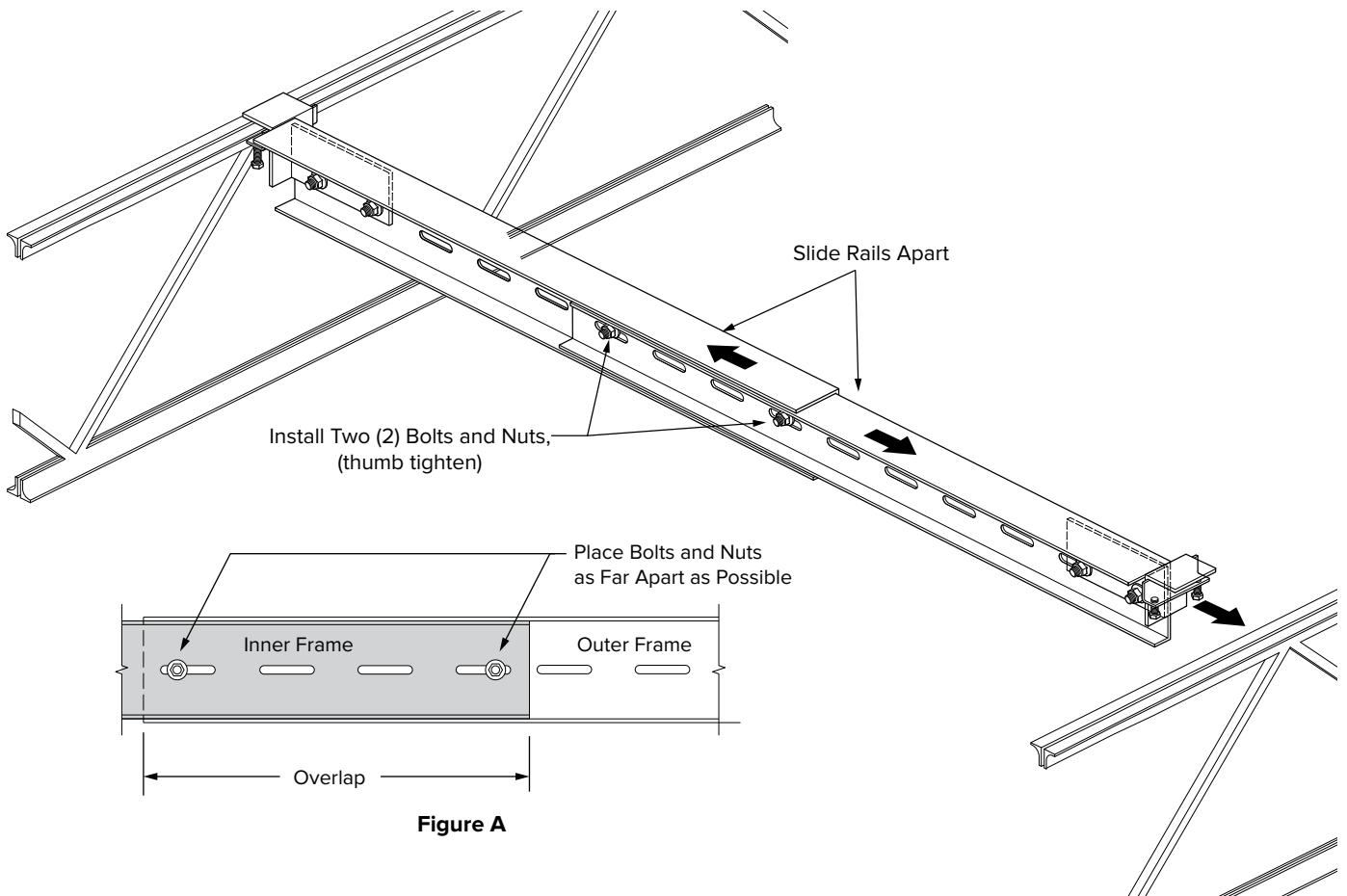
- 1**
STEP Remove the bolt and nut that was used to hold the rails together for shipping.

Important:
QuickFrames are engineered to use both the outer and inner rails at all times. Never use only one rail.



- 2**
STEP Slide the rails apart until the hangers are resting on the roof joist or I-beam flange on each side. Install two (2) serrated flange nuts and carriage bolts. Only thumb tighten now. See Figure A.

Do not fully tighten hanger tap bolts or serrated flange nuts yet. All bolts and nuts need to be pretensioned as a final step as detailed in Step 8 on page-9. Also refer to page-2 for explanation of the Turn-of-Nut pretensioning method.



Installing the Main Rails

3
STEP

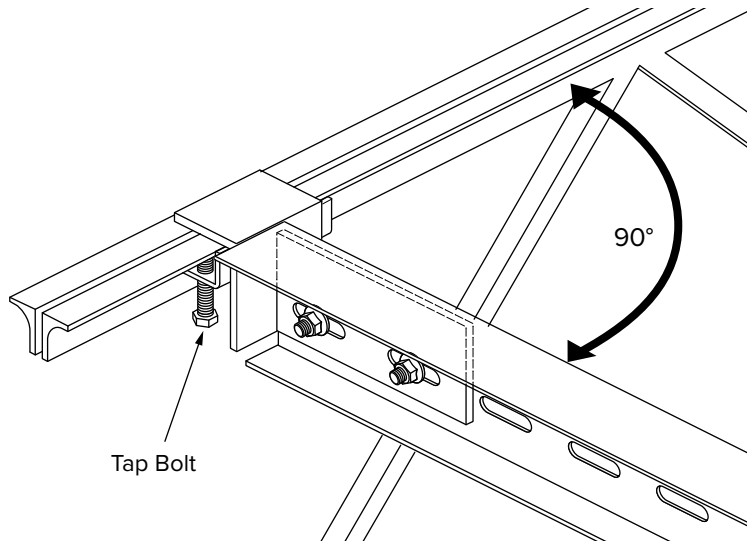
Make sure that the main rail assembly is square to the roof joist or I-beam.

Hand tighten (light snug) the tap bolts at this time.

Do not fully tighten the tap bolts yet. All tap bolts will need to be pretensioned as detailed in Step 8 on page-9.

WARNING! Over tightening of the tap bolts can result in damage to the hanger.

Note: Refer to page-2 for explanation of the Turn-of-Nut pretensioning method.

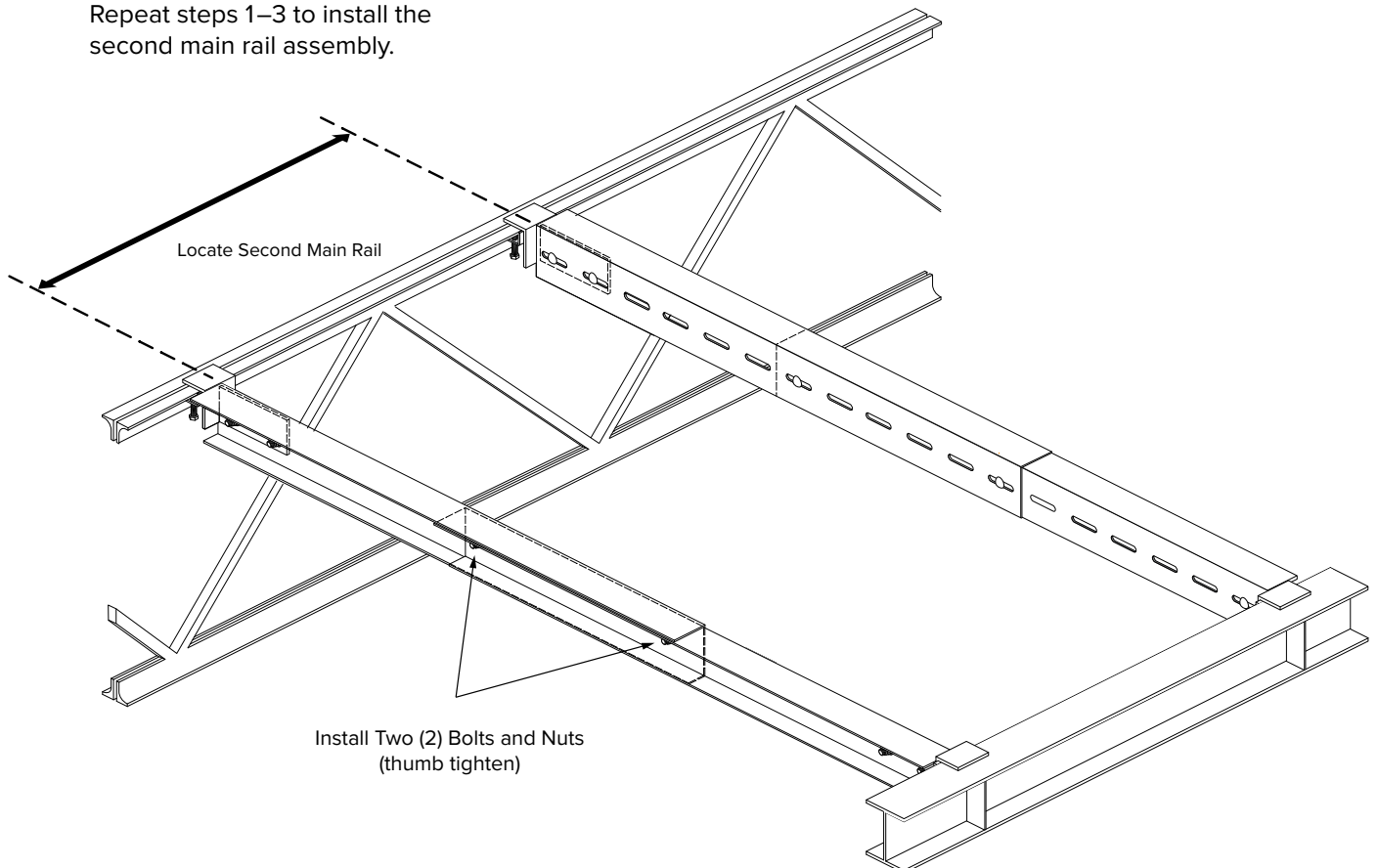


4
STEP

Mark the location of the second main rail by measuring from the first main rail.

Refer to the “Erecting Drawings” provided to you by the engineer of record or architect.

Repeat steps 1–3 to install the second main rail assembly.

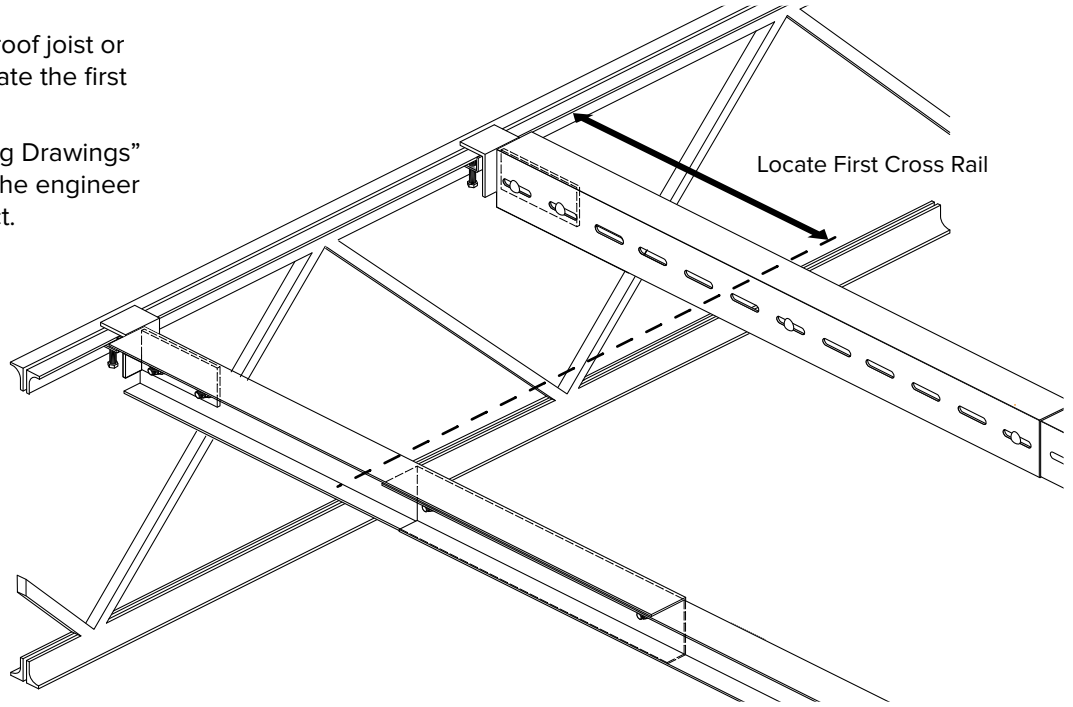


Installing Cross Rails

5
STEP

Measure over from roof joist or I-beam flange to locate the first cross rail.

Refer to the "Erecting Drawings" provided to you by the engineer of record or architect.



6
STEP

Install the angle brackets next. Note that the angle brackets can be installed in several configurations. See Figure B below.

Only hand tighten the angle bracket bolts/nuts at this time.

Do not fully tighten nuts yet. All nuts will need to be pretensioned as a final step. Also refer to page-2 for explanation of the Turn-of-Nut pretensioning method.

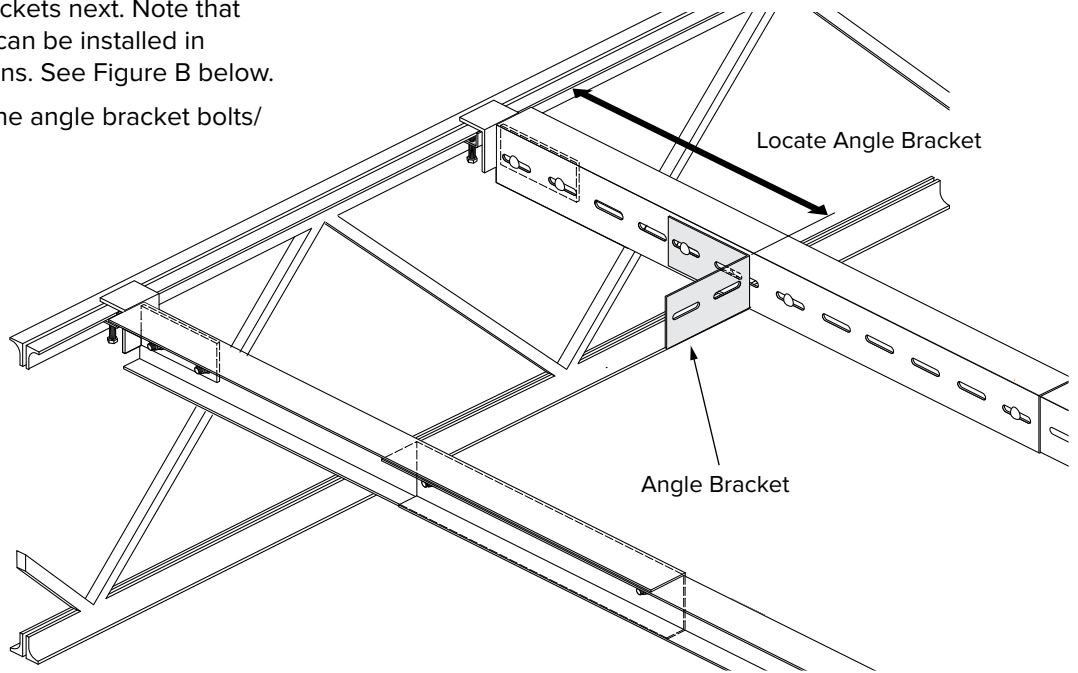
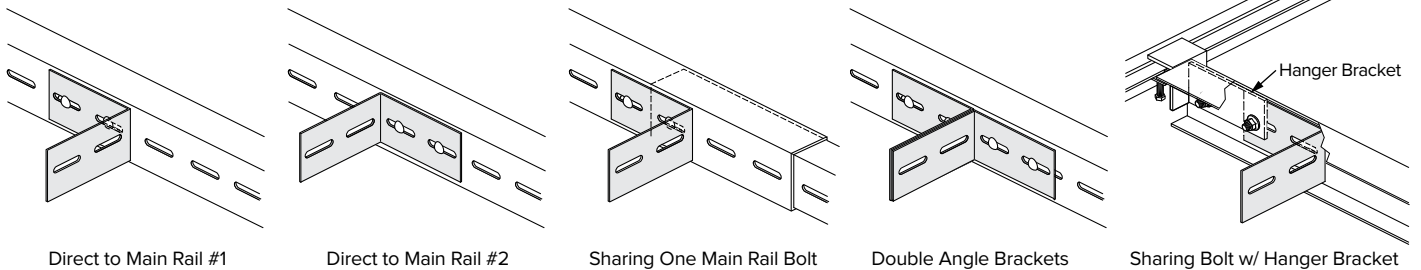


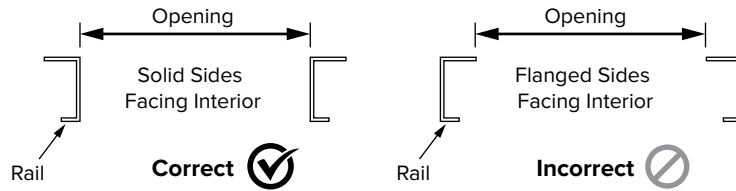
Figure B



Installing Cross Rails

Proper Orientation of Cross Rails

The solid side of each cross rail must face towards the interior of the frame opening. The diagram at right shows correct orientation of the cross rails.



7 STEP

Single Cross Rail Application

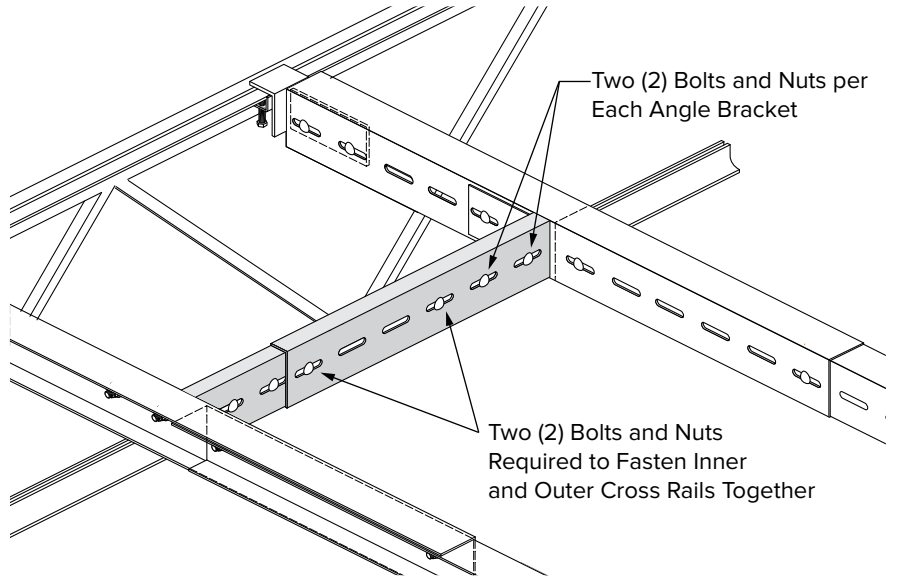
Note: Cross rail top flange may be 2" or 4" depending on each application.

Expand the cross rails until they are flush with the main rails on each side.

Fasten the cross rails to the angle brackets on the main rails.

Next, fasten the inner and outer cross rails together using two (2) bolts and nuts. (See Figure A on page-6.)

Snug tighten serrated nuts and proceed to Step 8.

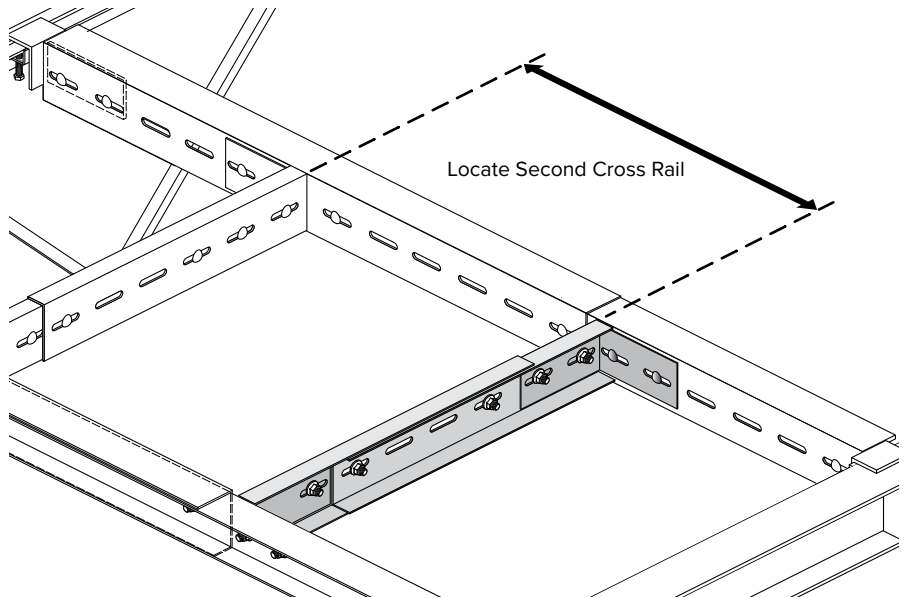


Adding a Second Cross Rail

Measure over from the first cross rail and mark the location of the second cross rail.

Repeat Steps 6 and 7.

Proceed to Step 8.



8 FINAL STEP

Turn-of-Nut Pretensioning

The final step is to pretension all hanger tap bolts and serrated flange nuts as explained on page-2.

Pretensioning Tap Bolts

To avoid rolling the frame, light snug both tap bolts to the beam/joist first. Next, alternately tighten both bolts until snug tightened. Finally, rotate each tap bolt an additional 1/4 turn.


Pretensioning Serrated Flange Nuts

Snug tighten all serrated flange nuts. Finally, rotate each serrated flange nut an additional 1/3 turn.

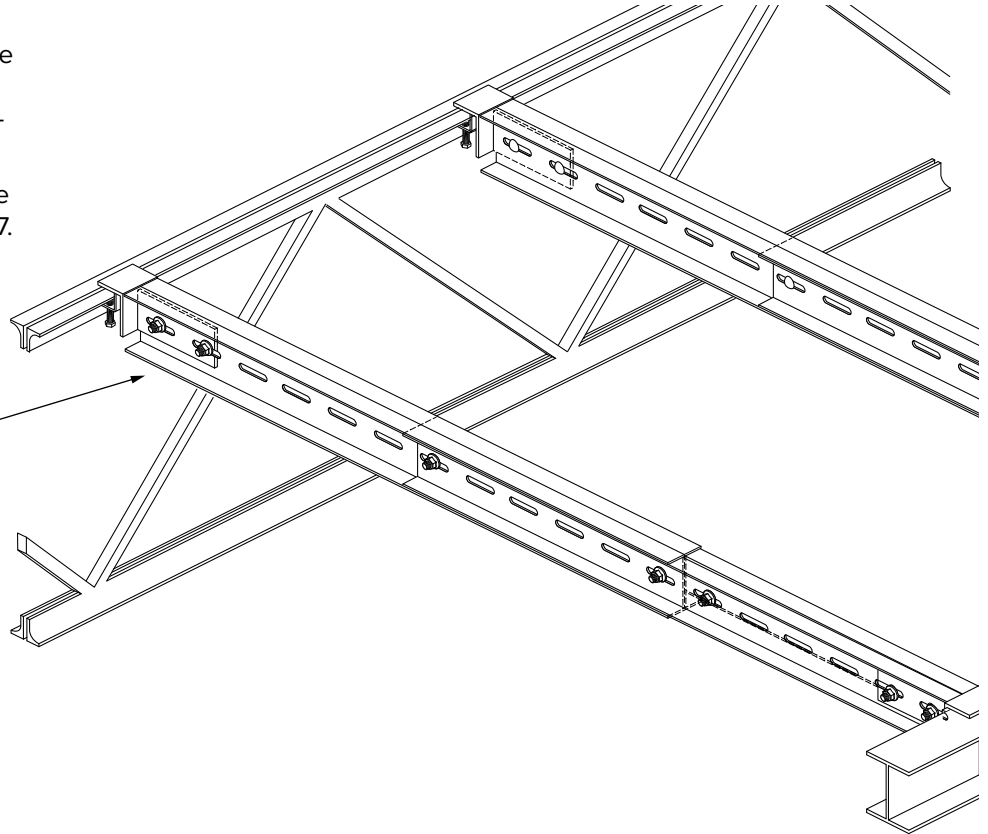
Optional I-Beam Main Rails

Optional I-beam style main rails can be specified. The I-beam consists of two cross channels that are bolted together in the field.

The installation steps are similar to the steps already described on pages 5–7.

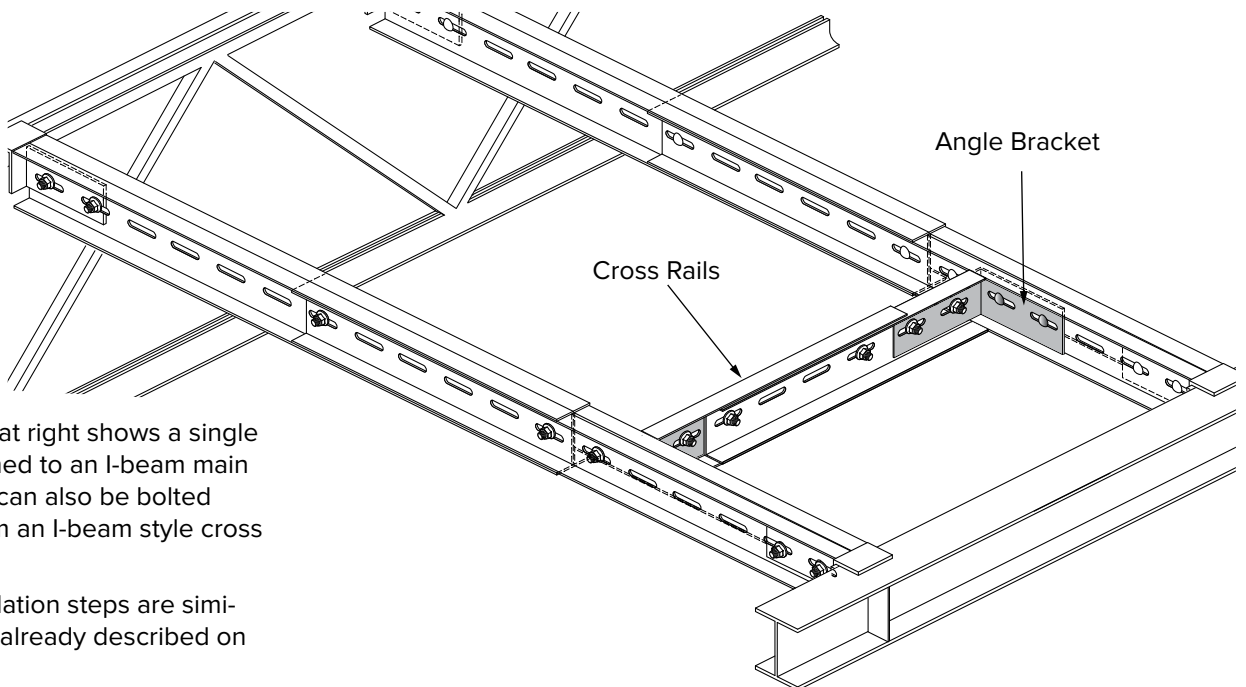


I-Beam Main Rail



All bolts and nuts are final tightened using the Pretensioning Method as fully described on page 2.

Adding Cross Rails In An I-Beam Installation



The illustration at right shows a single cross rail attached to an I-beam main rail. Cross rails can also be bolted together to form an I-beam style cross rail.

Cross rail installation steps are similar to the steps already described on pages 8 and 9.

All bolts and nuts are final tightened using the Pretensioning Method as fully described on page 2.

Warranty / Returns

Warranties, Limitation of Liability and Indemnification. All materials manufactured by QuickFrames are warranted for a period of 1 year following the date of delivery to be free from defects in workmanship and material. During such period QuickFrames will, without cost to Buyer, at QuickFrames option, either repair such defective materials, furnish replacement materials or grant credit to Buyers account in the amount of Buyer's net purchase price of such defective materials. Defective conditions in the materials caused by third parties, acts of God, defective installation, other trades, abnormal use or stress or other matters unrelated to the QuickFrames activities are specifically excluded from the coverage of this warranty.

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