

# EVOLUTION<sup>™</sup>

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STEEL DECK FRAMING

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## INTRODUCTION

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### READ INSTRUCTIONS COMPLETELY BEFORE STARTING INSTALLATION

#### General Guidelines

It is the responsibility of the installer to meet all code and safety requirements, and to obtain all required building permits. The framing installer should determine and implement appropriate installation techniques for each installation situation. Fortress Building Products nor its distributors shall **NOT** be held liable for improper or unsafe installations.

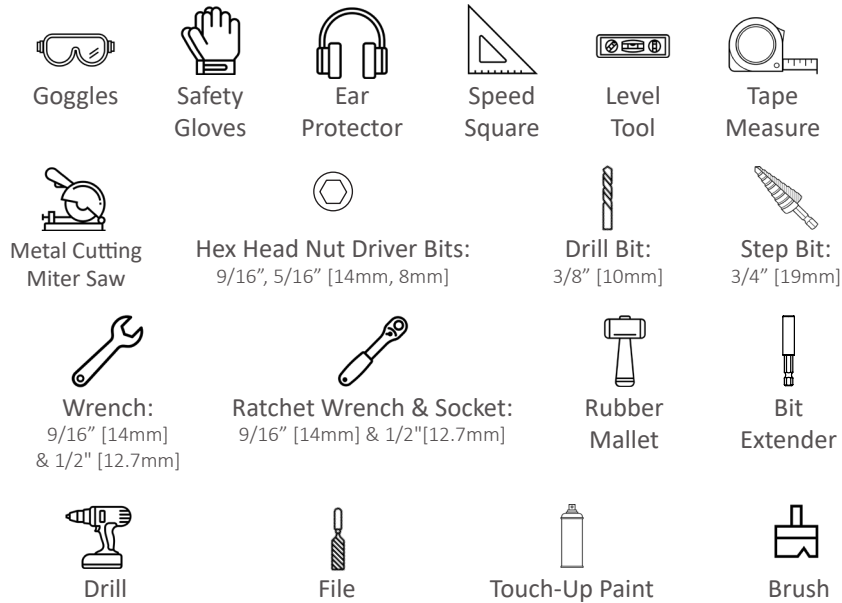
Personal Protection Equipment (PPE) must be worn anytime you're using power tools and working with Evolution framing. Eye protection, hearing protection, closed-toe shoes, gloves, long sleeves, and pants must be worn to keep yourself safe.

As the steel framing parts are cut, all metal shavings and/or chips must be removed from inside the Evolution Framing parts. At the end of a work period, all steel shavings and/or chips must be cleaned off the jobsite. Not doing so could result in the staining of surrounding surfaces.

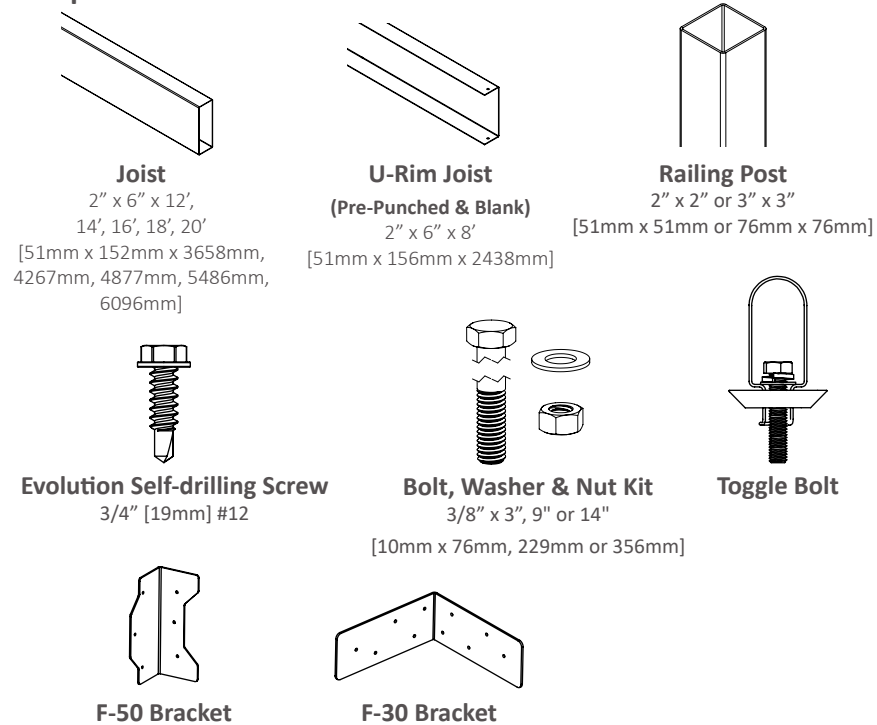
As the steel framing parts are cut, **DO NOT** allow metal shavings and/or chips to get dropped or blown into a pool, hot tub, or any other body of water. Staining could occur if this were to happen.

Fortress Building Products **DOES NOT** cover all possible installation scenarios within these instructions. In some cases, it may be necessary for you to consult a professional engineer, building code official, or local dealer. In addition, it may become necessary to use brackets other than Fortress' when more complex installations take place.

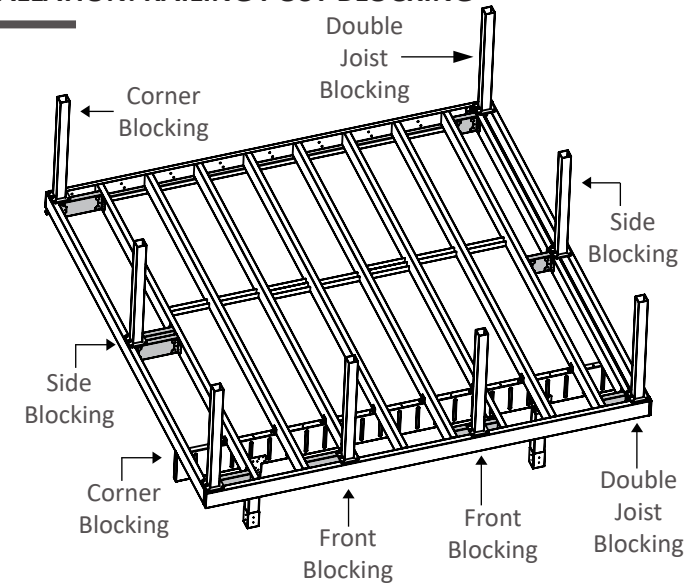
## Required Tools



## Components

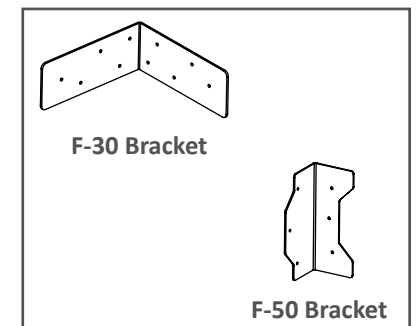
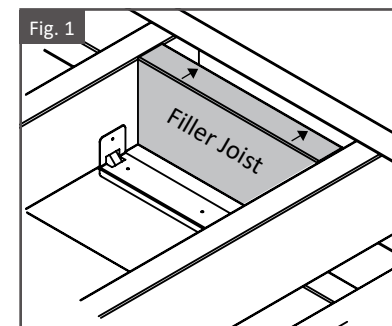


## INSTALLATION: RAILING POST BLOCKING

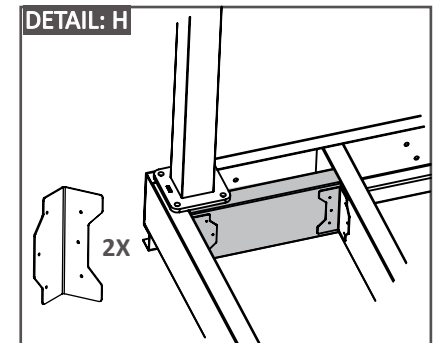
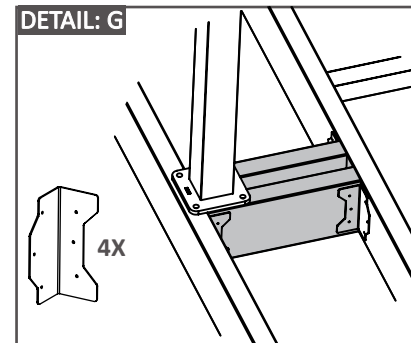
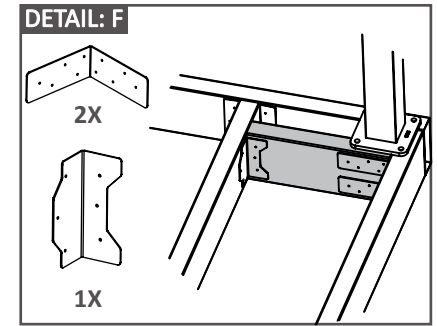
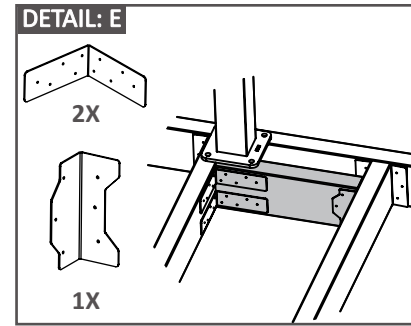
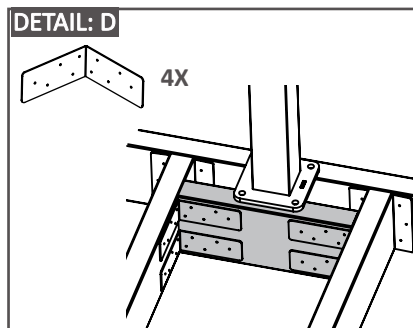
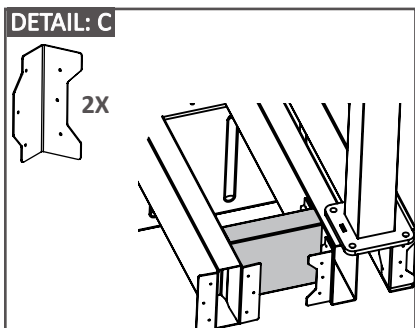
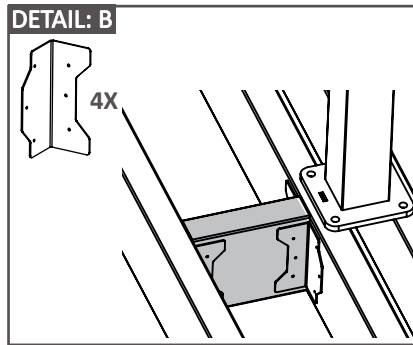
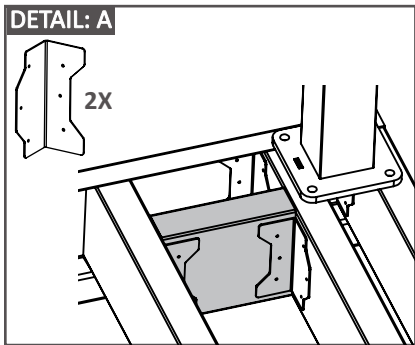
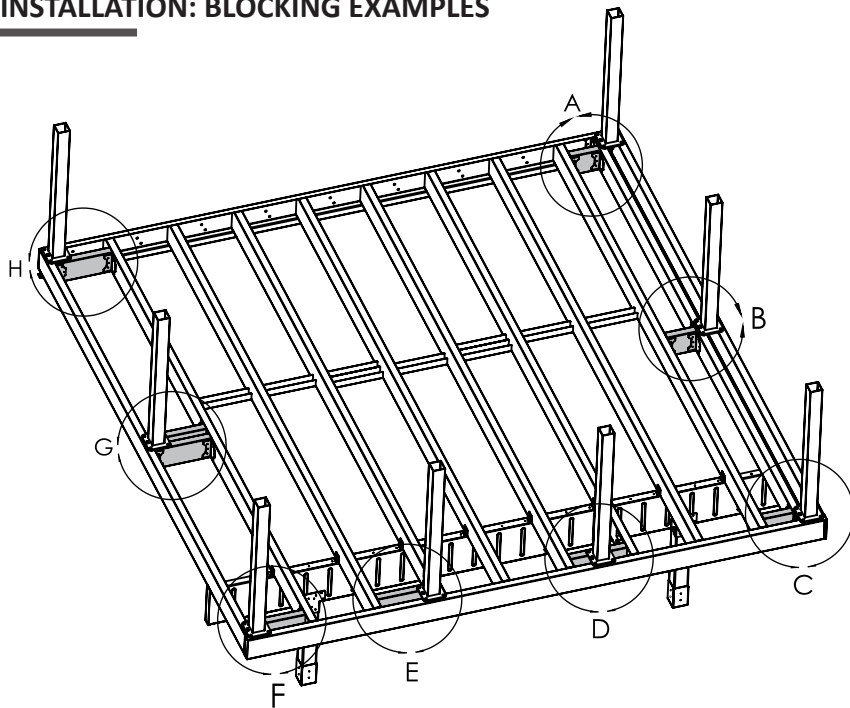


### Notes:

- The spacing between cut Joists will vary in size. To achieve the desired blocking for plated posts, the post base plate and the location will need to be taken into consideration.
- The user will use a combination of the F50 bracket and F30 brackets to make the blocking connections.
- Ensure all joists' top faces are flush when fastening the top to ensure the deck surface is level upon completion.
- If you are installing a post on top of the rim joist a piece of 2x6 joist needs to be added to the inside of the rim joist. This is called a "Filler Joist" as shown in Fig. 1.
- Double joist blocking shown in the image above (right-hand side of deck) is preferred when creating a picture frame deck.



## INSTALLATION: BLOCKING EXAMPLES



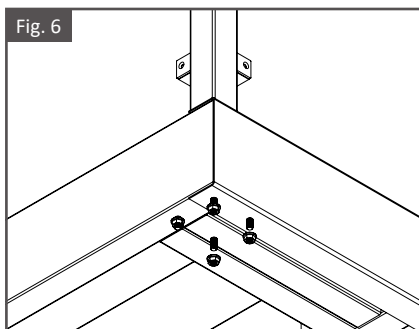
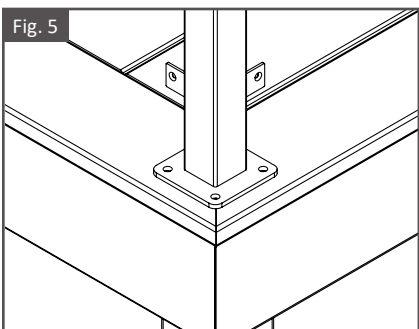
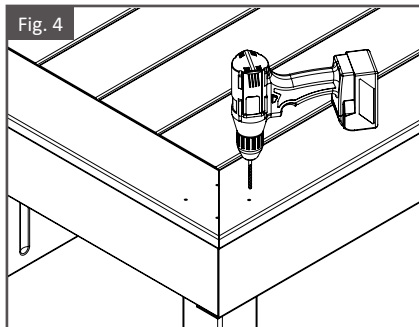
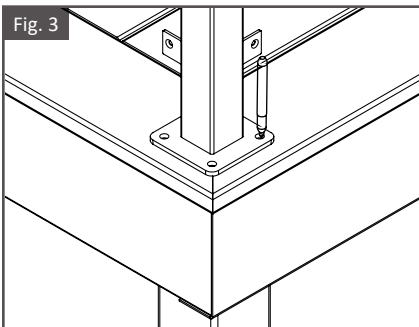
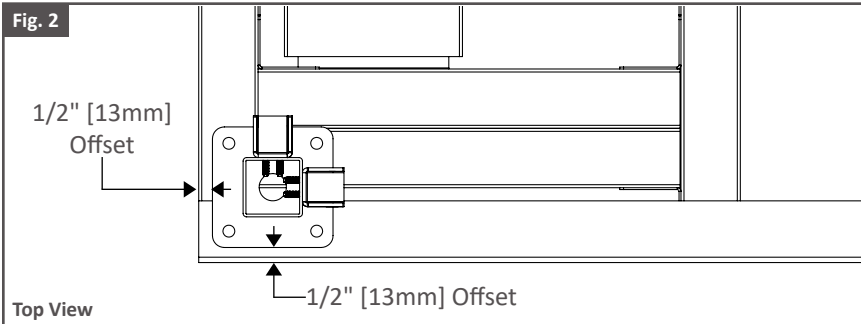
## INSTALLATION: RAILING POST WITH THROUGH BOLT KIT

### Step 1: Mount Posts

1. Position the edge of each post base plate  $1/2"$  [13mm] from the Joist or beam edges. As shown in Fig. 2.
2. Mark bolt hole locations and drill a  $7/16"$  [11mm] hole. As shown in Fig. 3 and Fig. 4.
3. Insert hex head bolts through the base plate and pre-drilled holes. As shown in Fig. 5
4. Fasten nuts and washers onto bolts on bottom of framing. As shown in Fig. 6

### Note:

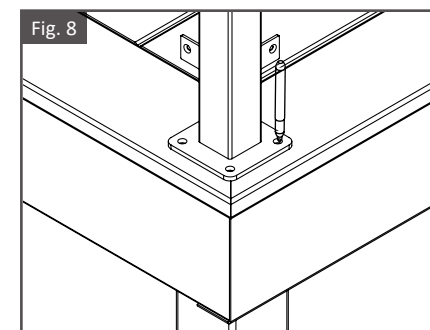
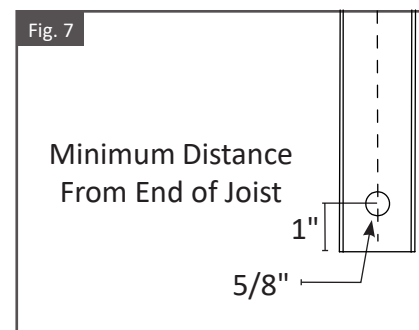
- Fortress offers two different through bolt lengths. 9" hex bolts for 6" joists and 14" hex bolts for 11" beams.
- For a successful installation, through bolts must penetrate (Post blocking, U-Rim, Joist).
- Be sure drill is plumb when drilling.

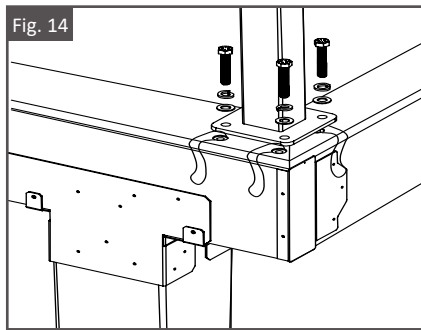
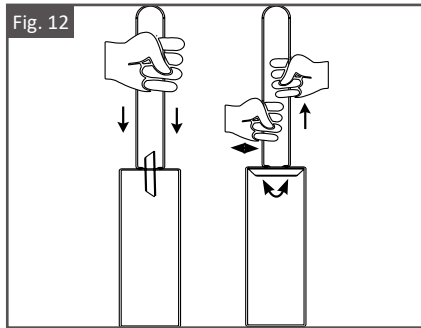
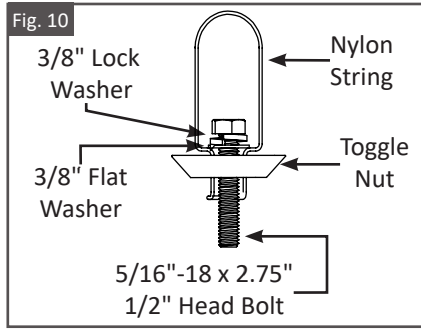
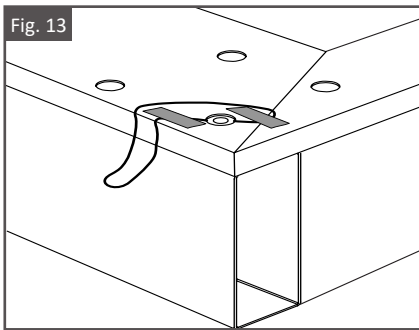
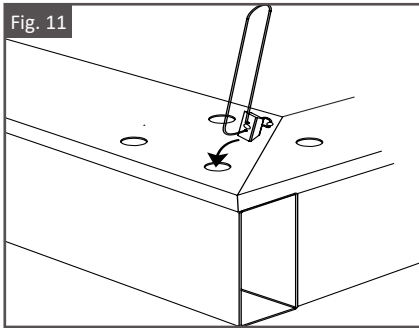
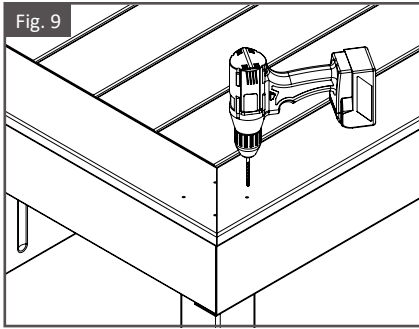


## INSTALLATION: RAILING POST WITH TOGGLE BOLT

### Step 1: Mount Posts

1. Position the post over the joist to have the mounting holes on the base plate be a minimum of 1" from the edge of the joist. As shown in Fig. 7.
2. Use the post base plate as a template and mark the 4 bolt locations. As shown in Fig. 8.
3. Use a 5/8" drill bit to drill the 4 mounting holes. Only drilling through the top of the joist or beam. As shown in Fig. 9.
4. To install the toggle nut in 5/8" hole, disassemble it from the bolt, flat washer and lock washer. Set bolt, lock washer, and flat washer aside for later. As shown in Fig. 10.
5. While holding onto the nylon string, insert the toggle nut into the 5/8" hole. As shown in Fig. 11
6. Once the toggle nut is inside the joist, use the strings to rotate the nut so that it is flat on the top of the joist. As shown in Fig. 12.
7. To keep the toggle nut from falling down into the joist use a piece of masking tape to hold strings in place. As shown in Fig. 13
8. Install the bolt, flat washer and locker washer, and secure it with a ratchet & socket or wrench. As shown in Fig. 14.





## CARE & MAINTENANCE

### Care And Maintenance Of Fortress Building Products Powder-Coated Products And Surfaces:

- Immediately after installation of your Fortress Building Products, clean powder-coated products and surfaces with a solution of warm water and non-abrasive, pH neutral detergent solution. Surfaces should be thoroughly rinsed after cleaning to remove all residues. All surfaces should be cleaned using a soft cloth or sponge.
- Ensure construction materials such as concrete, plaster, and paint splashes are removed immediately before they have a chance to dry. Failure to remove these materials may cause damage to the powder-coated surfaces.
- **DO NOT** allow metal shavings and/or chips to get dropped or blown into a pool, hot tub, or any other body of water. Staining could occur if this were to happen.
- The frequency of cleaning depends in part on the standard of appearance and also the requirements to remove deposits that may cause damage to the powder coating after prolonged exposure. Fortress recommends cleaning all powder-coated products and surfaces in three to four monthly intervals.
- **WARNING: Do not use strong solvents such as thinners, or solutions containing chlorinated hydrocarbons, esters, or ketones. Abrasive cleaners or cutting compounds should not be used.**

## WARRANTY

To obtain and review a copy of the warranty, please go to: <https://Fortressbp.com/warranties>. You can also contact: (844) 909-1999 or write to: Fortress Building Products Warranty, 1720 N 1st St, Garland, TX 75040 to obtain a copy of the warranty.



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