



## Appendix E – Overhang Installation

Last updated 4/19/2023

### Overhang Framing Installation

#### 1. Install columns, rafters, and outriggers using a typical haunch bracket

This step follows the same steps to the instructions found in Appendix B/Haunch Bracket Installation with additional steps to create an Overhang.

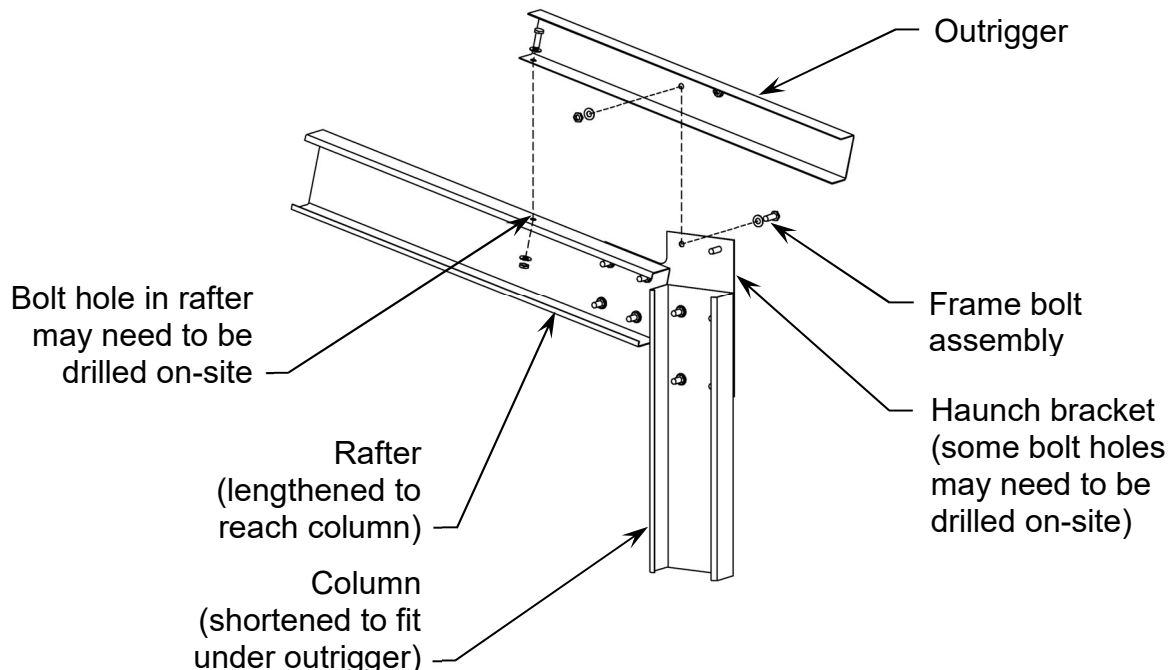
The main differences are:

- the installation of the outrigger.
- the column will be shorter and sit lower on the haunch bracket.

When installed the haunch bracket will stand above the column. The column-to-haunch bracket connection requires four bolts as illustrated below. The column will always be supplied with 4 holes however in some building configurations the bracket may not come with the required number of bolt holes. If this is the case, attach the haunch bracket to the column using bolts through the 2 holes that already align. Then drill the other two holes through the haunch bracket using the existing spare holes in the column.

Once the column and rafter are installed, the outrigger can be installed to the rafter and haunch bracket. On the bottom end, it will need to attach to the haunch bracket with frame bolts. On the top end, it will attach to the top of the rafter. Note that the hole in the rafter (shown below) may need to be drilled on-site. Please see the engineering plans for exact attachment requirements.

The illustration below shows the outrigger installation for a single rafter. On a double-rafter, two outriggers will be installed, one on each rafter.



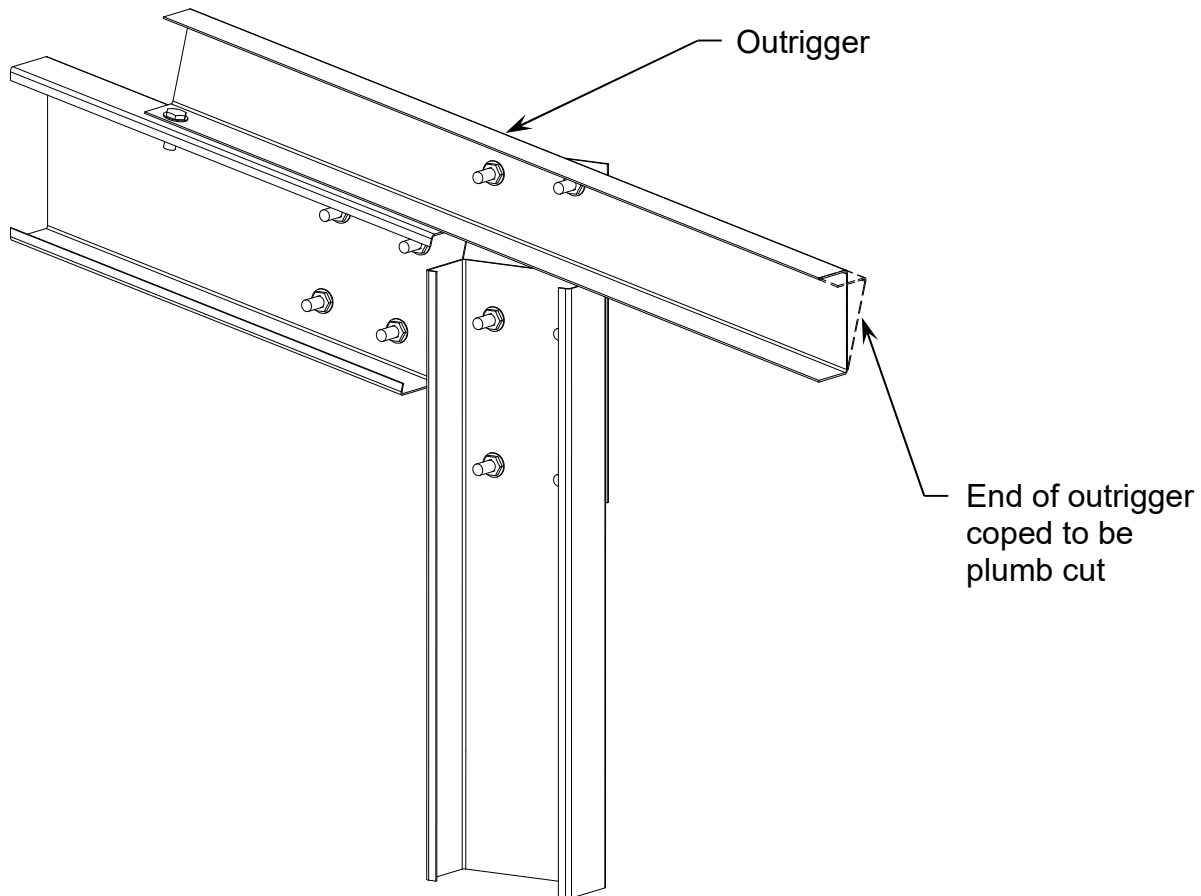


## 2. Plumb cut ends of outriggers, if necessary

In some cases, outriggers will be sent out longer than the nominal overhang length. This is to ensure that connection between outrigger and overhang eave purlin meets all engineering requirements. This situation will most often occur on 4:12 or steeper roof pitches where a vertical face is required on the overhang.

In these cases, the end of the outrigger will need to be coped on the end so that the end is plumb cut. The length of the outrigger should come be ordered to a length where you will simply need to cut straight up from the bottom corner of the overhang.

Please check your building order to see if your outriggers will need to be coped. This will be noted in the Usage column of your order, with the text “End to be plumb cut”, and the piece mark on the outrigger will be marked with a “\_PC” at the end of the mark.



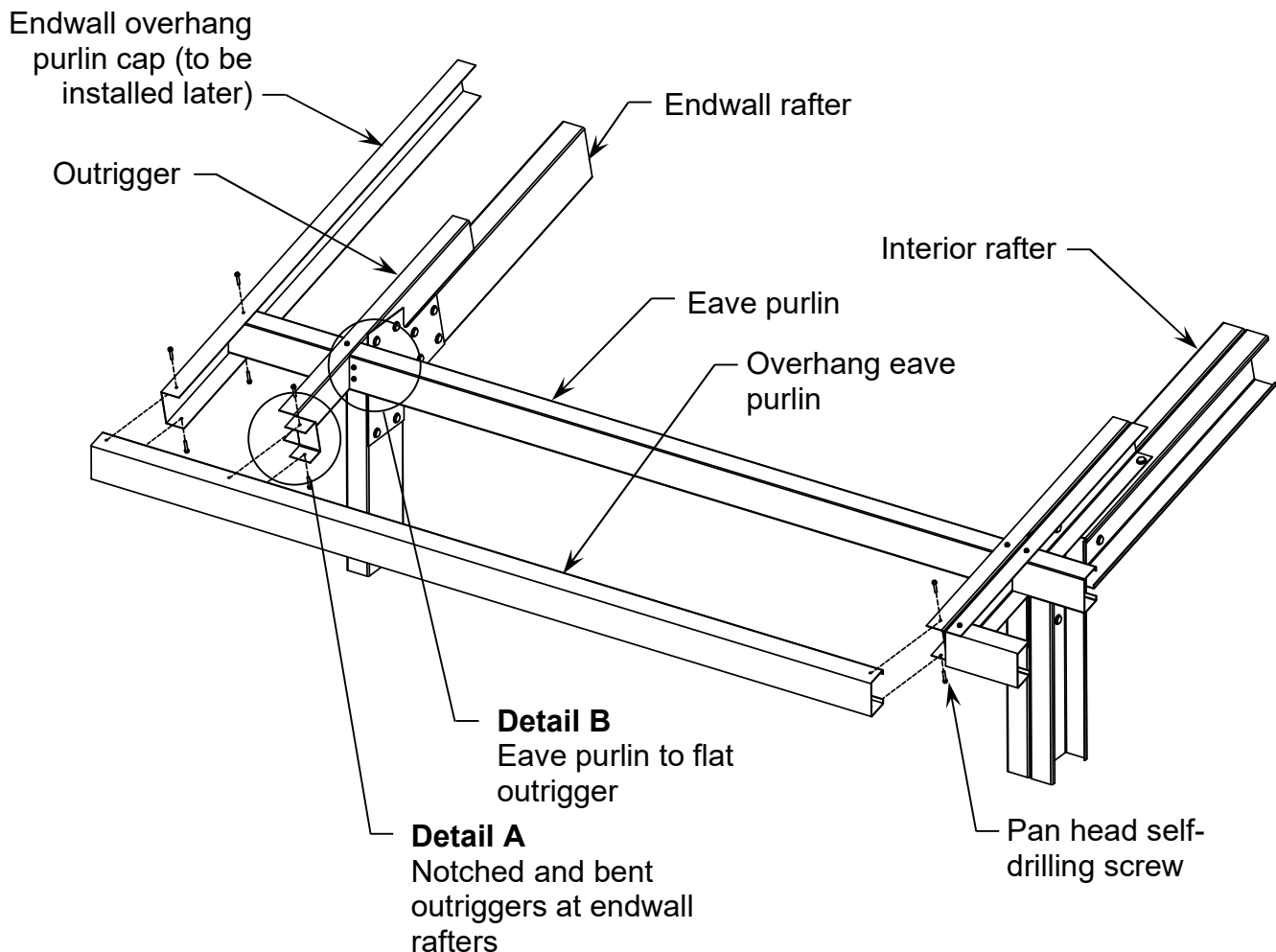


### 3. Install eave purlins between outriggers

After installing all the outriggers you can install the eave purlins between the outriggers. Each sidewall with an overhang will have two eave purlins per bay, an eave purlin that is installed at the top of the wall sheeting, and an overhang eave purlin, that is installed at the end of the outrigger, which is shown in the illustration below.

Eave purlins are installed between the outriggers, from the web of one outrigger to the other. Channel material is used as the outrigger, so the eave purlins should fit into the channel, and then be attached using pan head screws.

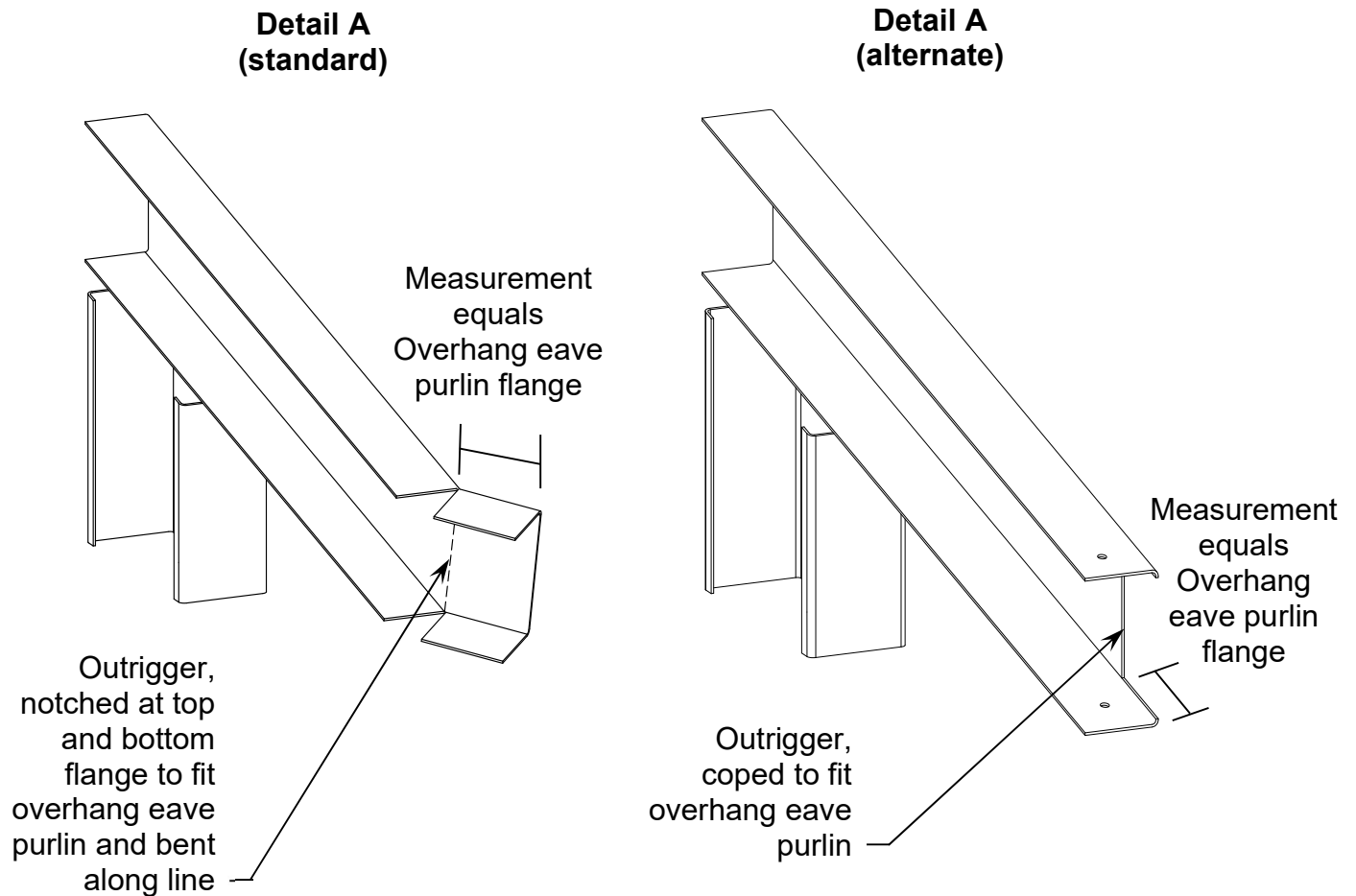
On some buildings with large sidewall overhangs, a roof purlin may fall in the outrigger area. This is not shown in the illustration below. If this is required on your building, it will be indicated on your order, in the Usage column with the note “Purlin in Outrigger.” Those purlins will need to be installed to the outrigger in the same manner as the eave purlins.





The illustration on the previous page displays not only the typical eave purlin installation, but the installation of an eave purlin when an endwall overhang is also present. Notice how the typical eave purlin is cut at the outrigger at the endwall rafter, but the overhang eave purlin runs all the way to the endwall overhang purlin cap. When an endwall overhang is present, the last outrigger must be notched and bent into position (as shown in Detail A) before installation of the eave purlin.

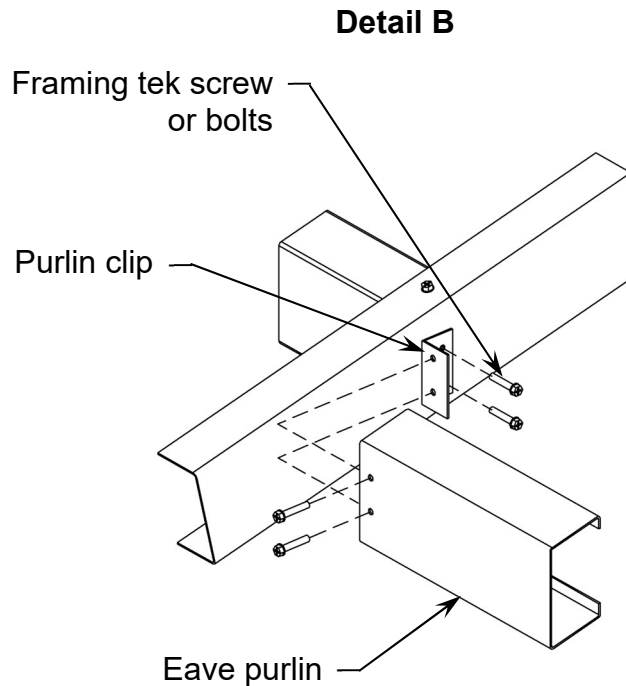
Note that in some cases an alternate installation must be used. If you were required to plumb cut your purlins in step 2, you will need to use the alternate detail A. In the alternate installation, the outrigger will be ordered longer than normal and will then need to be coped on site as shown in the illustration below.





When installing the overhang eave purlin, the flanges of the outrigger and the flange of the eave purlin must adequately overlap. Please refer to the engineering plans for required overlap, and follow any extra steps required.

In some cases the eave purlins will fit to the flat side of the outrigger. In these cases, purlin clips and framing tek screws will need to be used, as shown in Detail B. For exact details on installation requirements, please refer to your engineering plans.



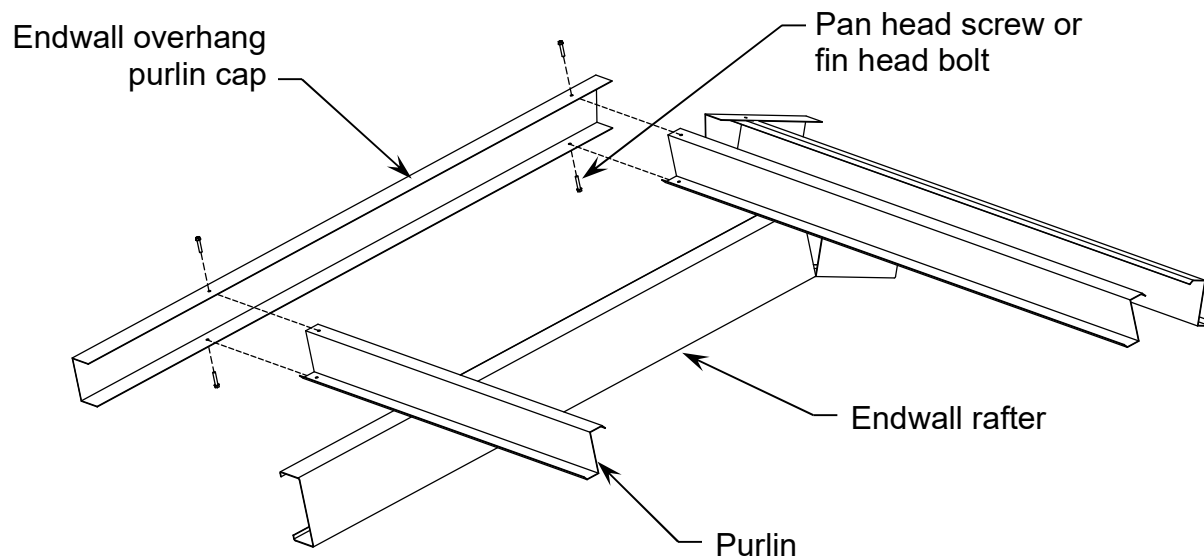


#### 4. Install Endwall Overhang Purlin Cap

At this point, you should have your eave purlins and typical purlins installed. If installing an endwall overhang, the purlins will extend past the edge of the building by the size of the overhang.

After the purlins are installed, the endwall overhang eave purlin cap (which is also shown above) will need to be installed. Simply slide the cap over the ends of the purlins, and secure with one pan head screw into the top and bottom flanges.

Please see the illustration below for an example of the purlins extending past the edge of the endwall, and the cap installed over the ends of the purlins.

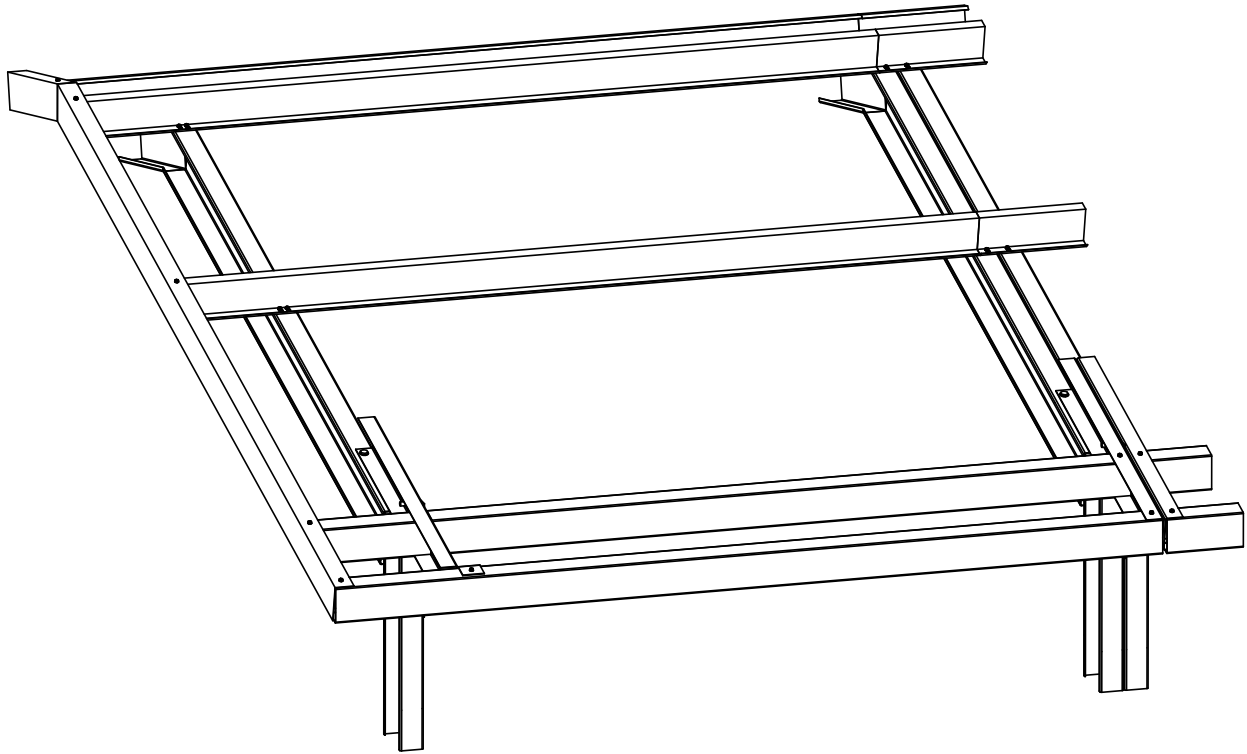




## 5. Completion of overhang framing

Once the eave purlins, purlins, and endwall overhang purlin cap are installed, the framing portion of overhang will be complete.

Below is an illustration of the completed overhang framing when both a sidewall and endwall overhang exist on the building.



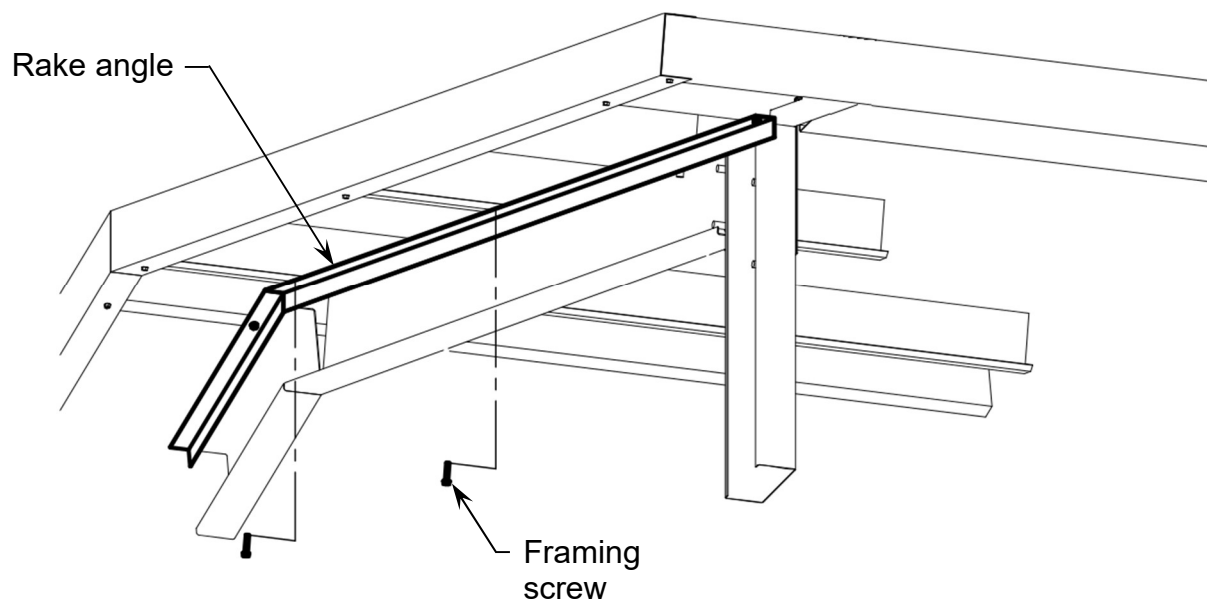


## Overhang Trim Installation

### 1. Install rake angle

On the underside of the purlins, install the rake angle. The vertical leg of the rake angle should align with the outside edge of the endwall girts (not shown in the illustration below), so that the wall sheet can later attach to that leg.

The short leg of the angle will attach to the underside of the purlins. At each location where the angle crosses the purlin, connect with a standard framing screw.

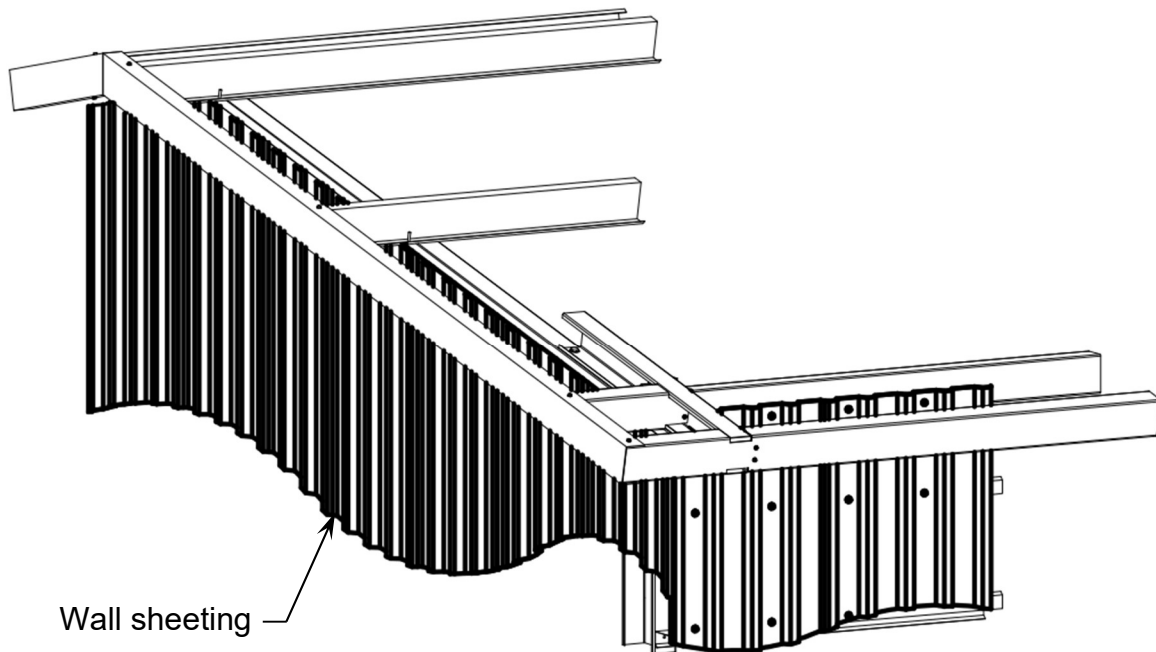




## 2. Install wall sheathing and insulation

Install all wall sheathing and installation per standard installation instructions, found in Appendix C. As with a standard installation, when installing sheathing under an overhang, sidewall sheathing will install at the top to the eave purlin. The endwall sheathing will attach to the rake angle.

Note that sidewall sheathing will need to be trimmed around the outriggers to install correctly.





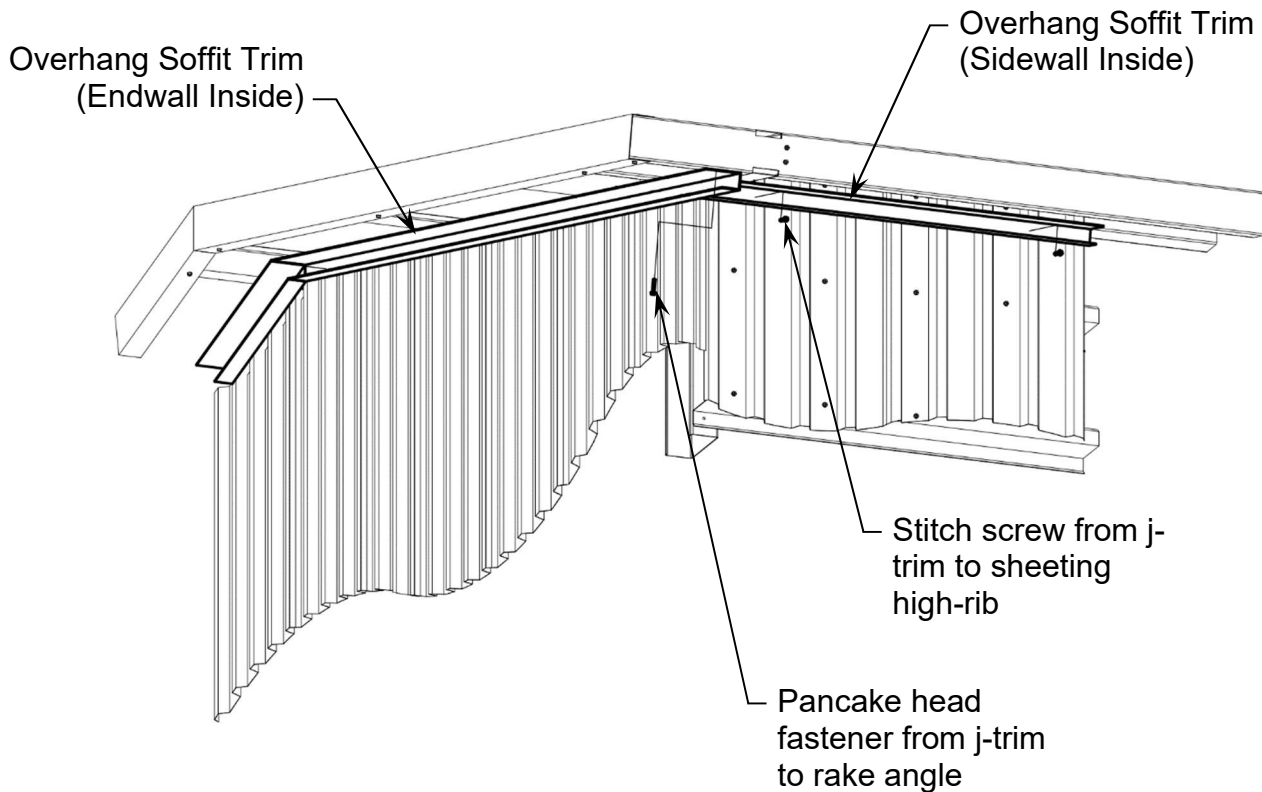
### 3. Install j-trim at underside of purlins

J-trim will then be installed at the top of the wall sheeting, and will eventually accept the overhang soffit material. This material will be listed on your order with the usage “Overhang Soffit Trim (Sidewall Inside)” and “Overhang Soffit Trim (Endwall Inside)”.

On the sidewall, j-trim will be installed to the high-rib with a stitch screw every 24". A pancake head screw can also be installed from the j-trim leg every time that it crosses the bottom of the outrigger.

On the endwall, a pancake head screw will be installed from the j-trim into the rake angle at every location where a purlin exists.

Note that is you are installing wall closure strips, they will be installed between the j-trim and the wall sheeting.

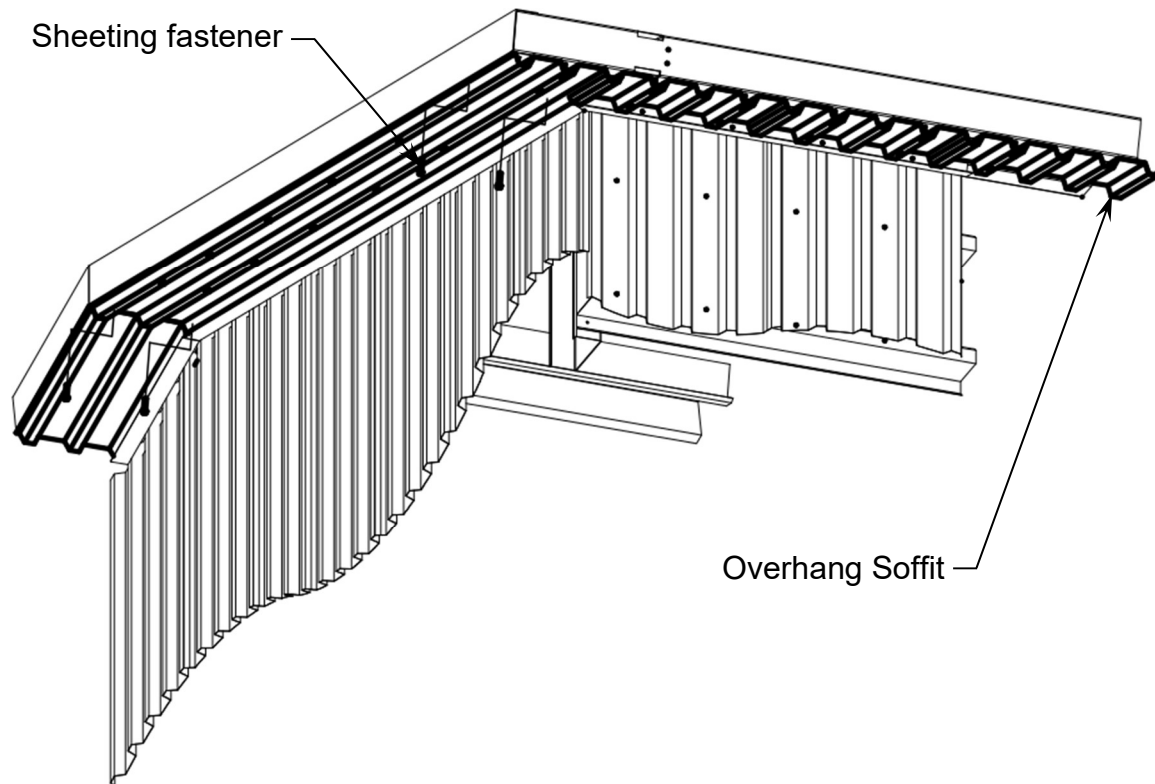




#### 4. Install soffit material

For sidewall soffit, insert the top end of the soffit into the existing j-trim and secure the bottom side of the soffit using sheeting screws at the underside of the overhang eave purlin.

For endwall soffit, secure the soffit to the underside of the purlins. Screws will be installed near high ribs at the same frequency as for wall sheeting.



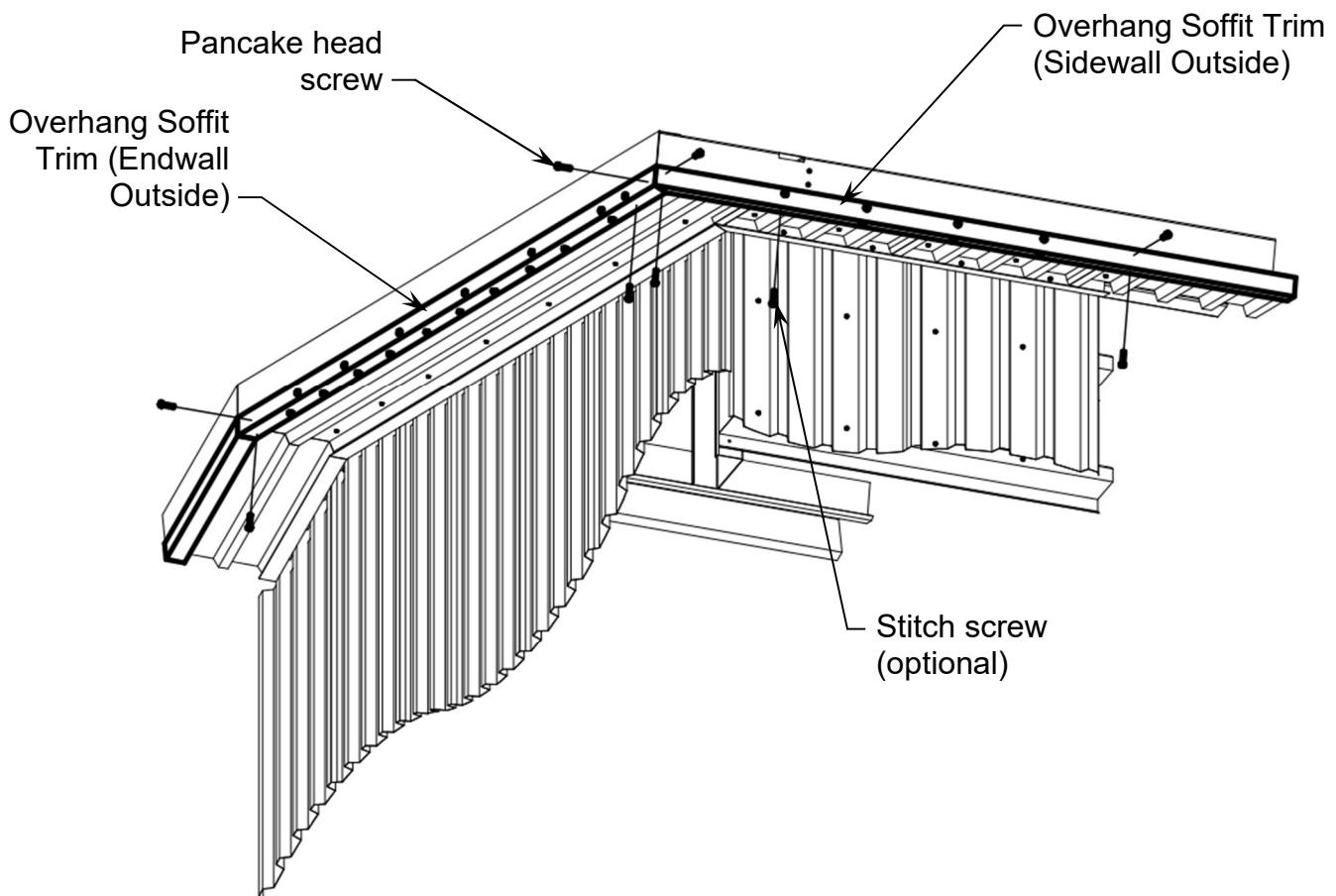


## 5. Install outside bottom soffit trim

On the bottom outside edge of the overhang, trim will need to be installed. This trim will be noted with the usage “Overhang Soffit Trim (Sidewall Outside)” and “Overhang Soffit Trim (Endwall Outside)” on your order. If the sidewall overhang has a vertical face, the bend angles for these trims will be different.

Trim will be secured to the front of the overhang eave purlin or the face of the endwall overhang cap using pancake head screws installed every 48”.

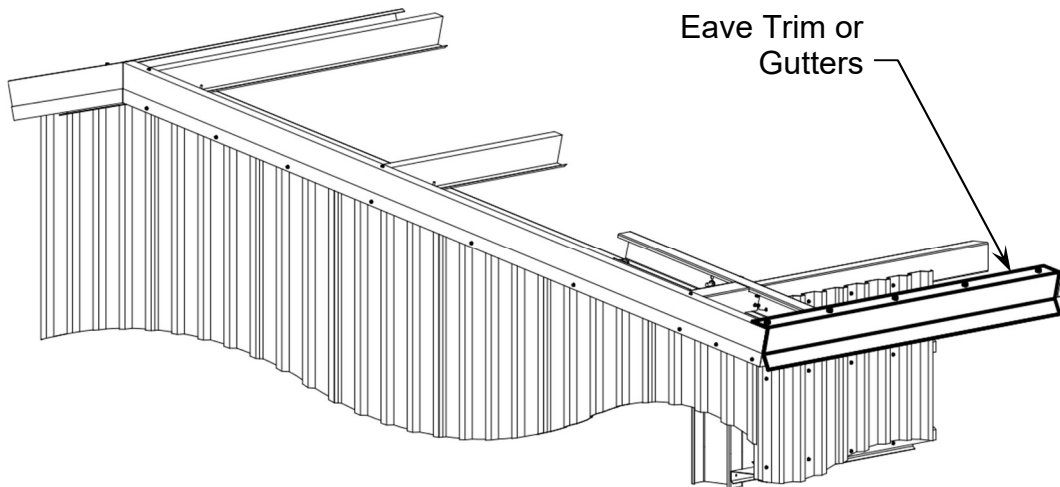
Optional stitch screws can be used to secure the bottom leg of the trim to the soffit material.





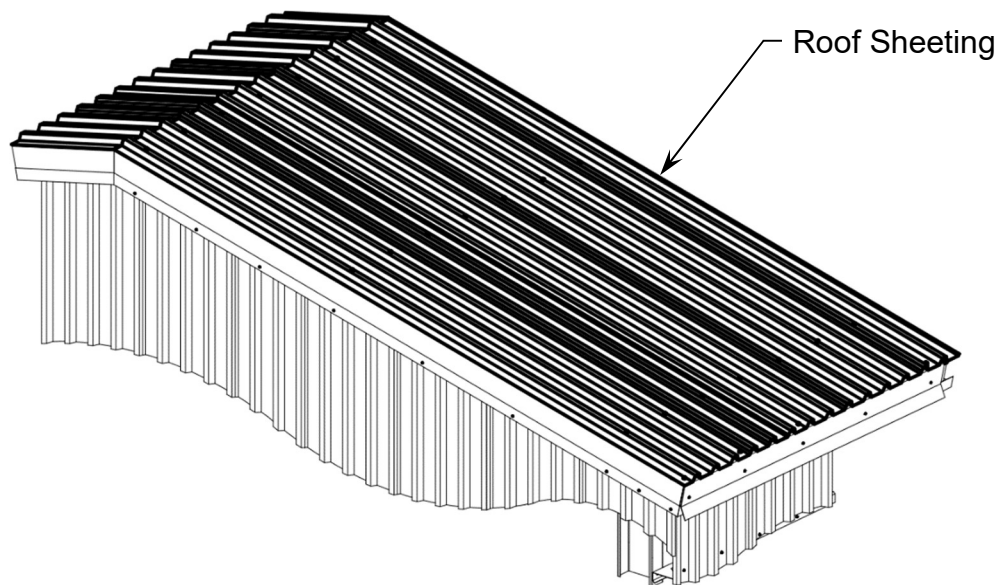
## 6. Install eave trim or box-style gutters

Install eave trim per standard instructions, found in Appendix C. If a gutter is in use, check how it is installed. Gutters that attach to the eave purlin will need to be installed at this point, while gutters that attach to the roof or wall sheathing will be installed after all other sheathing and trim.



## 7. Install roof sheathing and insulation

Install roof sheathing per standard instructions, found in Appendix C.





## 8. Install rake trim

Install rake trim per standard instructions, found in Appendix C.

