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**Notice:** The application and detail drawings in this manual are strictly for illustration purposes and may not be applicable to all building designs or product installations. Projects should conform to local building codes. The manufacturing plant is not responsible for the performance of the material if it is not installed correctly.

Information contained in this booklet was in effect at the time of publication and is subject to change without notice.

# IMPORTANT INFORMATION

This manual contains suggestions and guidelines on how to erect your building. The drawings in this guide are for illustration purposes only and may not apply to all building designs or product applications. The installation details shown are proven methods of construction, but are not intended to cover all instances, building requirements, designs, or codes. It is the responsibility of the designer/installer to ensure that the details meet particular building requirements. The details may require changes or revisions due to

each project's conditions. It is the buyer's responsibility to verify all applicable code requirements, check all measurements, and determine suitability of product for the job. Failure to comply with stated recommendations relieves the manufacturer of responsibility for any damage or deterioration of the product incurred and voids any applicable warranty. The manufacturing plant reserves the right to modify, without notice, information in this guide.

## SAFETY

Each job site presents different hazards; therefore it is the responsibility of the buyer/installer to determine the safest way to erect your building based on the recommended instructions contained in this guide. Provide crew members working on the project with required safety railing, netting or safety lines. If you must walk on a metal roof, take great care.

Metal panels can become slippery, so always wear shoes with nonslip soles. Avoid working on metal roofs during wet conditions when the panels can become extremely slippery. If you must walk on the roof, always walk on the purlins, never between. OSHA safety regulations should be complied with at all times.

### CAUTION

Always wear heavy gloves when working with steel panels to avoid cuts from sharp edges. When power cutting or drilling steel panels, always wear safety glasses to prevent eye injury from flying metal fragments.

# CARE AND HANDLING

### STAGE

Galvalume® steel sheets have a good service life when exposed to normal weather conditions however, to protect the appearance of panels and trims from damage, there are a few simple precautions that can be taken. The steel sheets are subject to stain when water sits upon, or becomes trapped between the sheets. If the Galvalume® sheets are to be stored for any period of time, they should be stored only in a dry place, preferably under a roof. Stand panels on end and fan them out at the bottom to provide air circulation and moisture run off. If space does not allow this, the panels should be separated, blocked off of the floor at least 12 inches to allow air flow, and stored at an incline to encourage drainage. The panels should then be covered, yet still have good air flow through the sheets to prevent condensation. Do not use a plastic cover, as this may cause the panels to sweat or condensation to occur.

### CUTTING

A portable field shear is the ideal method for cutting panels. Nibblers or a power shear may also be used. Although we do not recommend it, if you decide to cut with a saw, it is very important that the panels be turned upside down during cutting so that hot shavings do not come in contact with the painted surface. Make sure all adjacent panels are covered so that shavings are not imbedded in these panels. If metal shavings become imbedded in the paint surface, they will quickly rust. To avoid this, panels should be thoroughly wiped of all filings on both sides of the panel. Failure to comply with the recommended cutting procedures releases the manufacturer of any responsibility.

### STORAGE

Failure to follow these steps may result in wet storage stains and premature rusting. The manufacturer's warranty will be void at this time, and the manufacturer will not be responsible.

### HANDLING

When unloading panels, extreme caution must be employed. Care needs to be used when unloading panels with a forklift. Panel edges and underside paint may become damaged if the forklift driver does not use caution. Once at the job site, care must be taken in order to protect the painted surface. When unbundling the panels, never drag them across the surface of one another. This may cause scratches across the underneath panels. It is recommended that the panels be "rolled" off the top of the bundle to prevent scratching. Never lift panels by the ends, instead lift the panels longitudinally and carry vertically.

Panel edges are very sharp, therefore, safety equipment should be worn by all workers handling the material.

### DRILLING

Panels should not be drilled while stacked. This will cause shavings that will become imbedded in the paint surface.

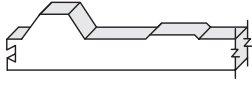
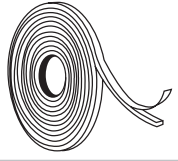


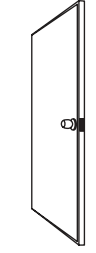
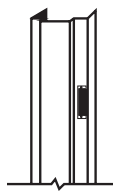
### INSTALLING WALL PANELS

Panels and trim are subject to staining and premature rusting in conditions where moisture accumulates causing the exposed panel edge to stand in water. This may happen at the wainscot, head trim, or rat guard due to improper installation. Contractors should leave 1/8" space between wainscot trim and upper wall panel to prevent rusting and discoloration.

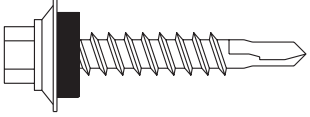
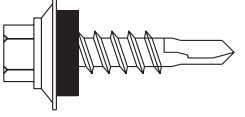
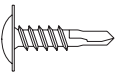
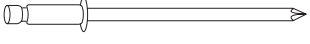
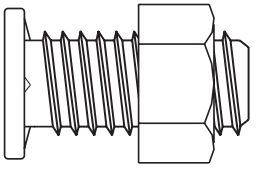
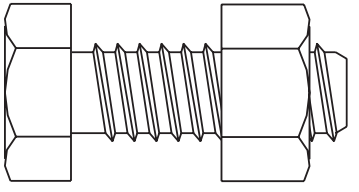
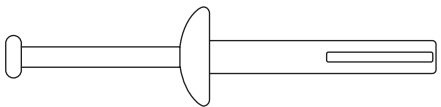
Shavings created by saw cutting or drilling may cause the panel to rust and will void warranties in affected areas.



# PARTS LIST ACCESSORIES

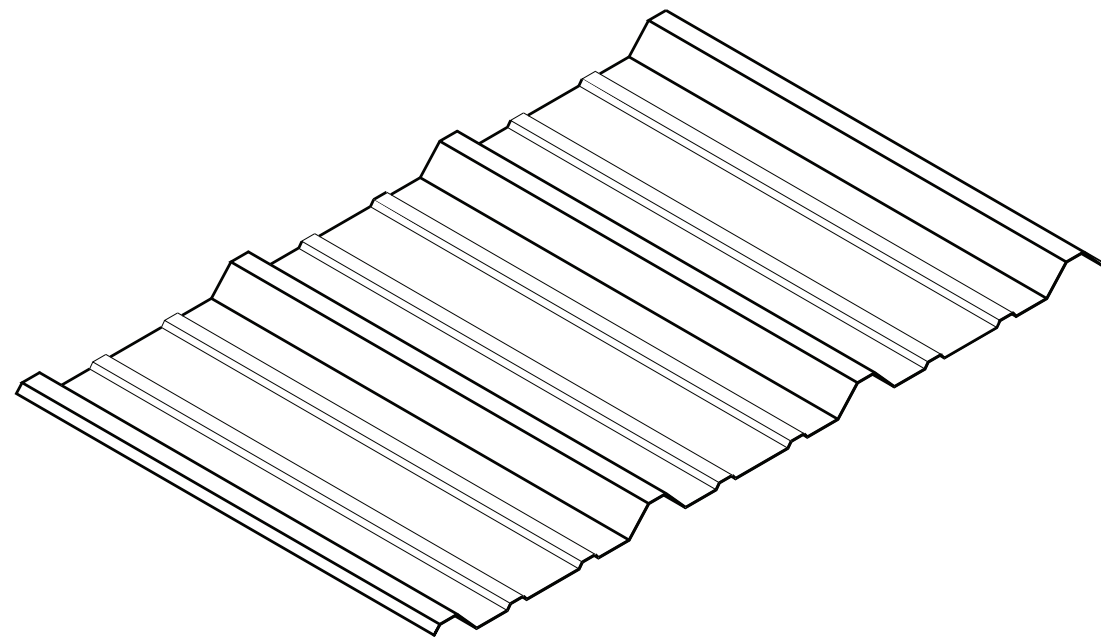
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	NOTE
<b>ACC50</b>	CLINRGLUE	Inside Closure	36	
				
<b>ACC51</b>	BTL	Butyl Tape	17	
				
<b>ACC52</b>	MRSCLEAR	Clear Sealant Tube	2	
				
<b>ACC53</b>	GRAYFLEX115	Expandable Foam Roll	7	
				
<b>DOOR47</b>	3070DOOR	Commercial Walk Door	1	Steel door leaf only
				
<b>DOOR48</b>	8X3070JAMB	Jamb kit for walk door	1	Include jambs, header, threshold, door lever with key lock, hinges, and weather strip kit. Frames are non-reusable. Swing out only.
				

# PARTS LIST FASTENERS

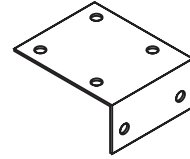
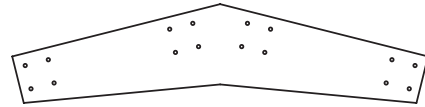
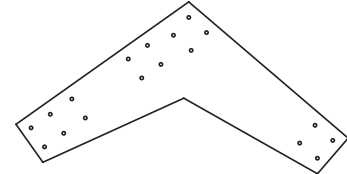
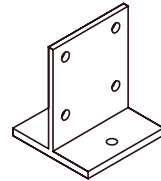
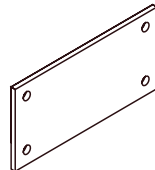
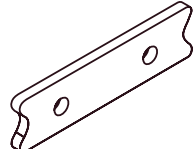
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	NOTE
<b>FAST3</b>	114MM	Metal Screws in Roof color	1,000	
<b>FAST12</b>	114MM	Metal Screws in Wall color	1,250	
				
<b>FAST4</b>	78LAP	Lap Screws in Roof color	500	May have additional bags of 78LAP in multiple trim colors.
<b>FAST13</b>	78LAP	Lap Screws in Wall color	500	
<b>FAST23</b>	78LAP	Lap Screws in Trim color	250	
				
<b>FAST 24</b>	8x12LATH	#8 x 0.5" Screw, No Washer	500	
				
<b>FAST20</b>	POP	Pop Rivets	100	
				
<b>FAST46</b>	114FINNECK	.5" x 1.25" Fin Neck Bolt with Nuts	25	
				
<b>FAST54</b>	112A325	.5" x 1.5" A325 Bolt with Nuts, Box of 50	700	
				
<b>FAST55</b>	11FASTENER	.25" x 1.25" Nail Drive Masonry Anchor	200	
				

# PARTS LIST PANELS

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
<b>PANEL1</b>	HRL	Roof Panels	36	15' 1.5"
<b>PANEL37</b>	HRL	Wall Panels	5	15' 8.5"
<b>PANEL24</b>	HRL	Wall Panels	4	14' 2.5"
<b>PANEL26</b>	HRL	Wall Panels	4	13' 5.5"
<b>PANEL28</b>	HRL	Wall Panels	4	12' 8.5"
<b>PANEL7</b>	HRL	Wall Panels	36	11' 11.5"
<b>PANEL29</b>	HRL	Wall Panels	4	14' 11.5"

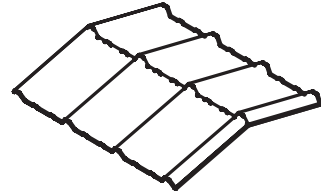


# PARTS LIST PLATES

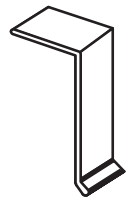
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
<b>PLATE35</b>	GIRTCLIP	Girtclip	68	
				
<b>PLATE41</b>	RFPEAK	Rigid Frame Peak Plate	3	
				
<b>PLATE42</b>	RFHAUNCH	Rigid Frame Haunch Plate	6	
				
<b>PLATE43</b>	RFBASE	Rigid Frame Base Plate	6	
				
<b>PLATE44</b>	EWPEAK	Peak plate for endwall Frame	2	
				
<b>PLATE45</b>	RFSPACER	Spacer Plate	30	
				

# PARTS LIST TRIM

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
<b>TRIM2</b>	FRC36	Ridgecap Panels for Roof	18	3'



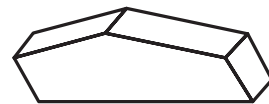
<b>TRIM14</b>	LEA	Eavetrim	8	14' 2"
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<b>TRIM16</b>	RG	Ratguard Trim	6	14' 2"
<b>TRIM30</b>	RG	Ratguard Trim	5	16' 2"



<b>TRIM18</b>	REND	Rake Trim End Cap	4	
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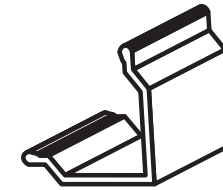


<b>TRIM19</b>	PBOXFGRAPHIC	Peak Box Trim	2	
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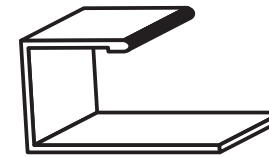


# PARTS LIST TRIM

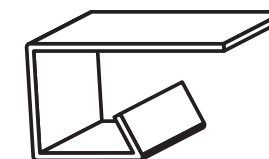
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
<b>TRIM31</b>	OU	Outside Corner Trim	4	12' 2"



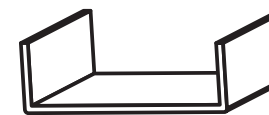
<b>TRIM22</b>	HE	Head Trim	1	10' 3"
<b>TRIM26</b>	HE	Head Trim	1	3' 6"



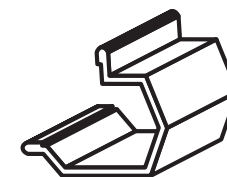
<b>TRIM23</b>	JA	Jamb Trim	2	10' 2"
<b>TRIM27</b>	JA	Jamb Trim	2	7' 2"



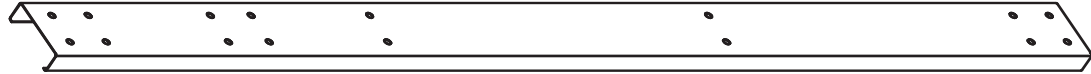
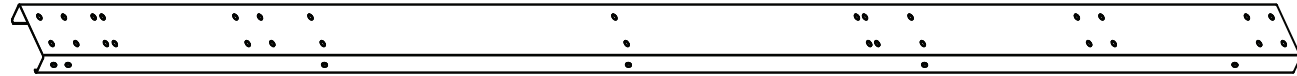
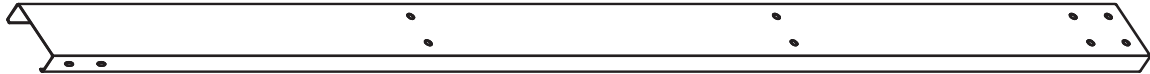
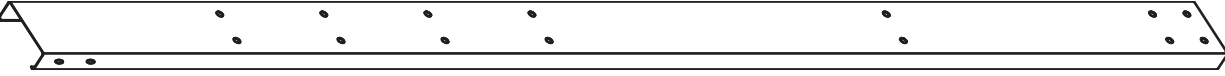


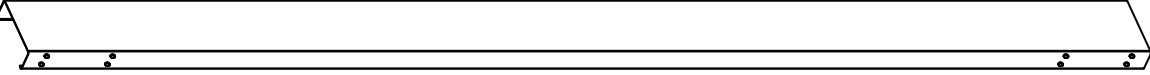
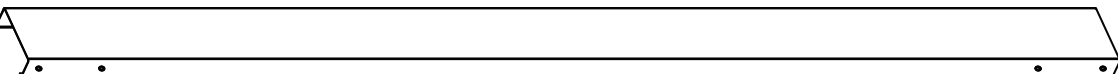
<b>TRIM24</b>	JH	Jamb Header Trim	3	10' 2"
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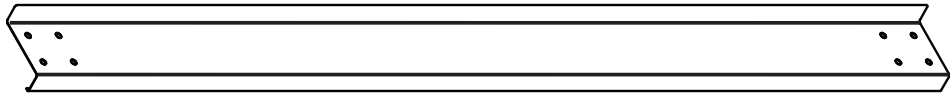
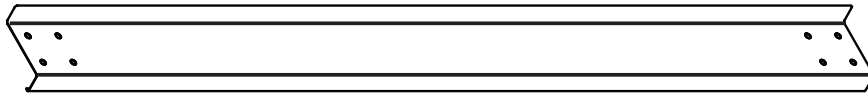
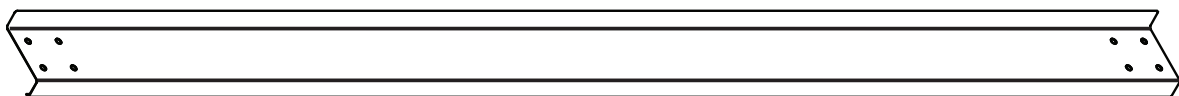

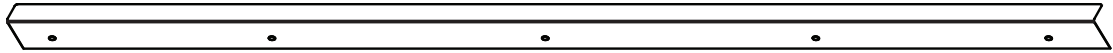
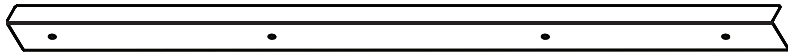

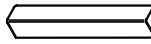

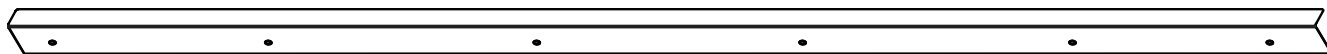
<b>TRIM28</b>	RA	Rake Trim	4	18' 2"
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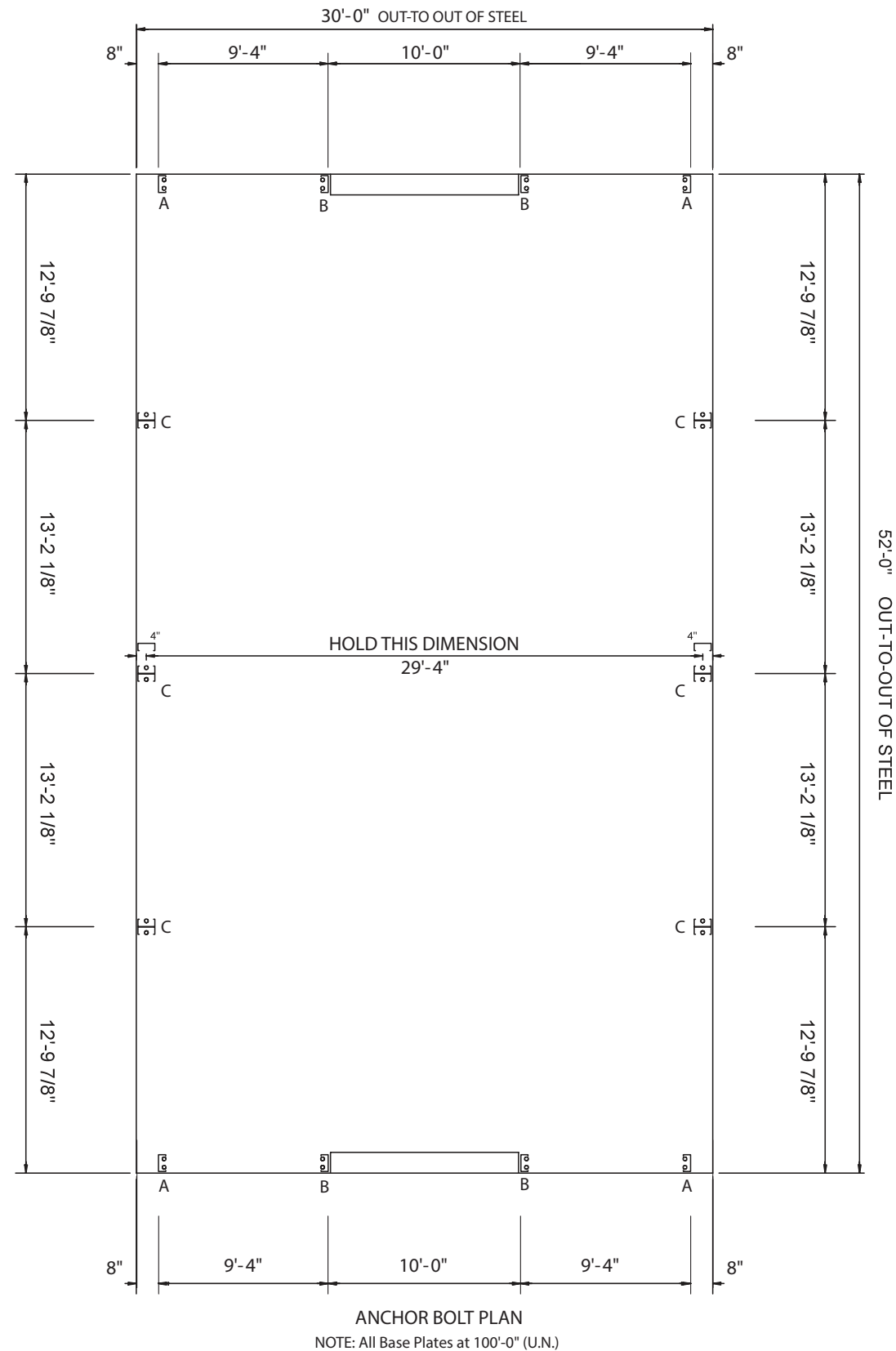


# PARTS LIST PURLINS

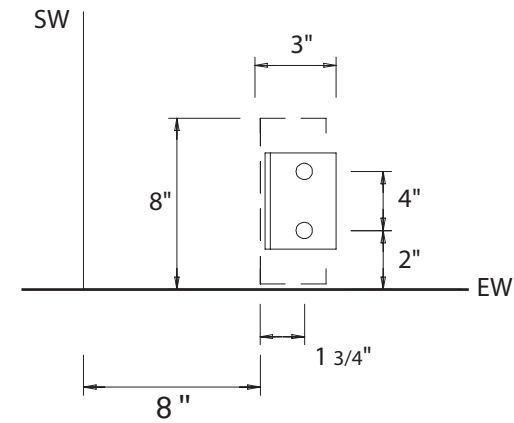
ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
<b>PURLIN57</b>	C83512R	RF1-1 (SIDE COLUMN)	12	10' 6.8125"
				
<b>PURLIN14</b>	C82514R C83512R (145mph Wind Option)	RF1-2,ER-1&2(RAFTER)	16	15' 3"
				
<b>PURLIN61</b>	C83516R C83514R (145mph Wind Option)	EC-1 (END COLUMN)	4	11' 5.6875"
				
<b>PURLIN62</b>	C83516R	EC-2 (END COLUMN)	4	13' 10.75"
				
<b>PURLIN19</b>	Z82516R	P-2 (PURLIN)	16	15 5.625"
				
<b>PURLIN21</b>	Z82516R	P-1, P-2 (PURLIN)	16	13' 11.375"
				
<b>PURLIN12</b>	E84316LR	E-2 (EAVE STRUT)	4	13' 1.625"
				
<b>PURLIN13</b>	E84316LR	E-1,E-3 (EAVE STRUT)	4	12' 9.375"
				

# PARTS LIST PURLINS

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
<b>PURLIN23</b>	Z82516R	G-1 (END GIRT)	8	8' 7.5"
				
<b>PURLIN32</b>	Z82516R	G-2 (END GIRT)	2	9' 11.5"
				
<b>PURLIN22</b>	Z82516R	G-3 (SIDE GIRT)	16	12' 5.125"
				
<b>PURLIN34</b>	C82516R	DH-1 (END HEADER)	1	9' 11.5"
				
<b>PURLIN6</b>	B4216R	L4X2 (SIDE BASE)	8	12' 5.125"
				
<b>PURLIN9</b>	B4216R	L4X2 (END BASE)	4	8' 7.4375"
				
<b>PURLIN37</b>	B4216R	L4X2 (END BASE)	2	9' 11.5"
				
<b>PURLIN39</b>	B4216R	Base Angle Purlin	4	0' 7"
Note: Pieces may be perforated and should be field separated.				
				
<b>PURLIN60</b>	B4216R	Extra Angle	4	11' 11.5"
				
<b>PURLIN4</b>	B4216R	L4X2 (RAKE ANGLE)	4	15' 3"
				

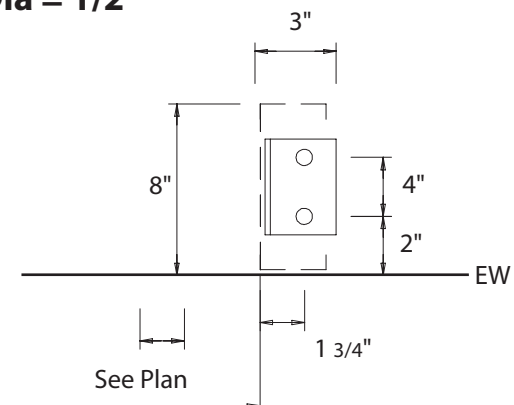


**Dia = 1/2"**



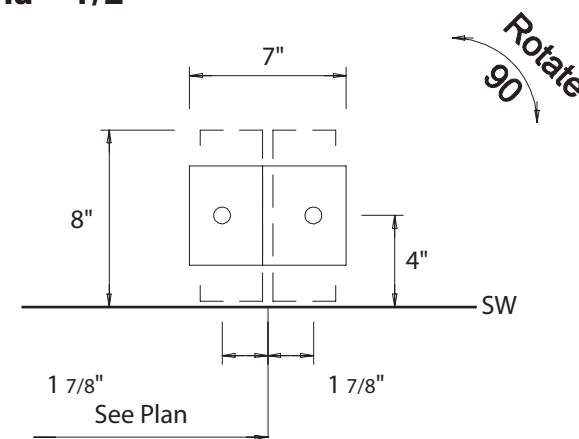
**Detail A**

**Dia = 1/2"**

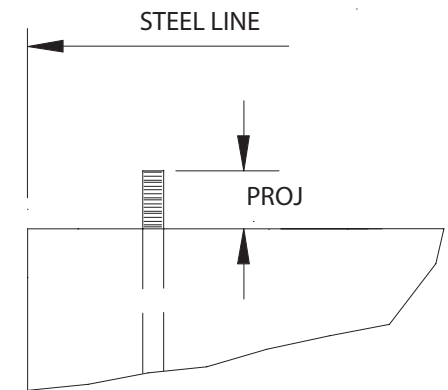


**Detail B**

**Dia = 1/2"**



**Detail C**



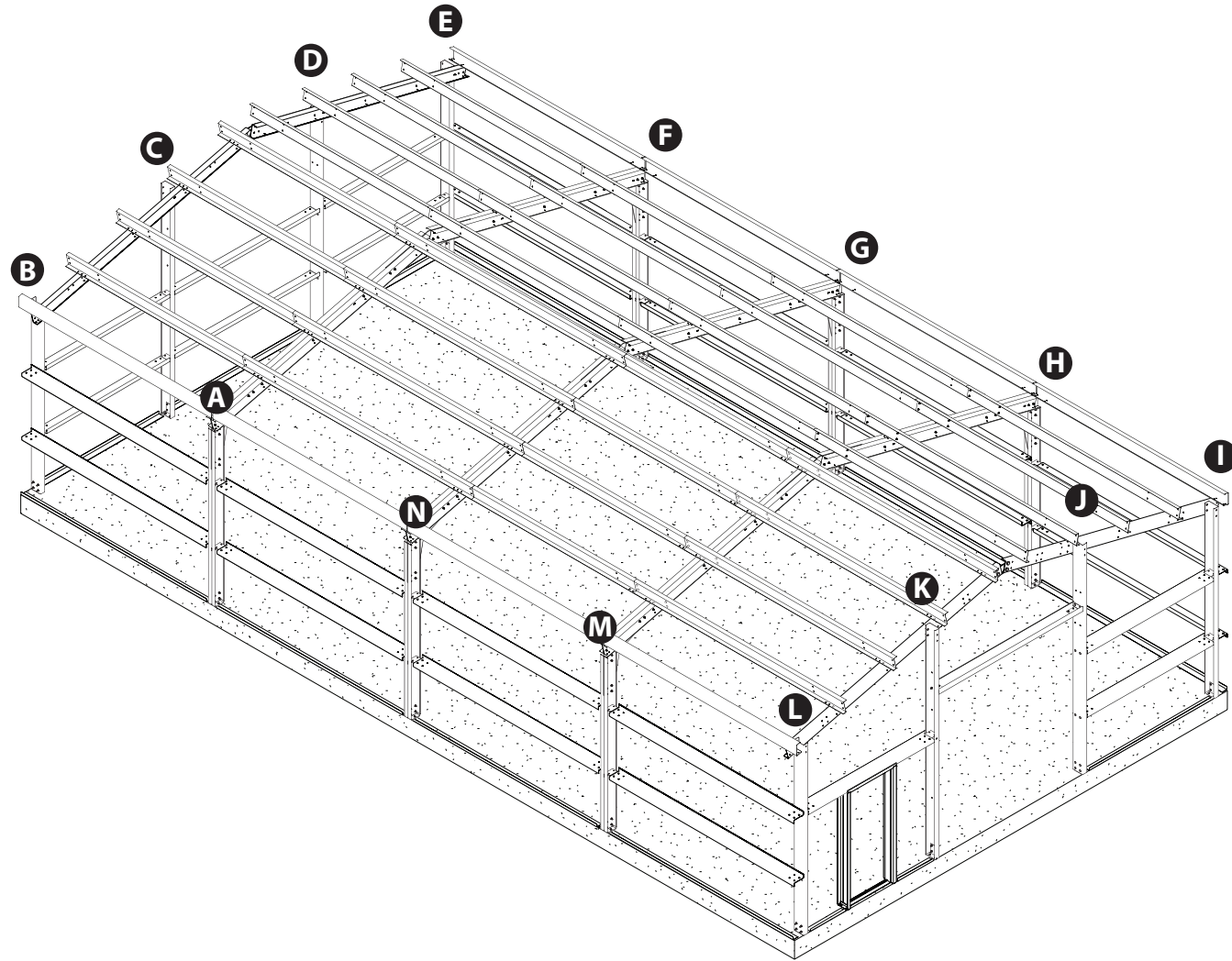
**ANCHOR BOLT PROJECTION**

1. The metal building manufacturer is responsible for the design of the anchor bolt diameter only to permit the transfer of forces between the base plate and the anchor bolt in shear, bearing and tension, but is not responsible for the anchor bolt embedment for transfer of forces to the foundation. The metal building manufacturer does not design and is not responsible for the design, material and construction of the foundation embedments. The end use customer should assure himself that adequate provisions are made in the foundation design for loads imposed by column reactions of the building, other imposed loads, and bearing capacity of the soil and other conditions of the building site. It is recommended that the anchorage and foundation of the professional engineer experienced in the design of such structures, (section a3 mbma 2006 metal building systems manual).
2. Bottom of all base plate are at the same elevation. (Unless noted)



# PROJECT OVERVIEW

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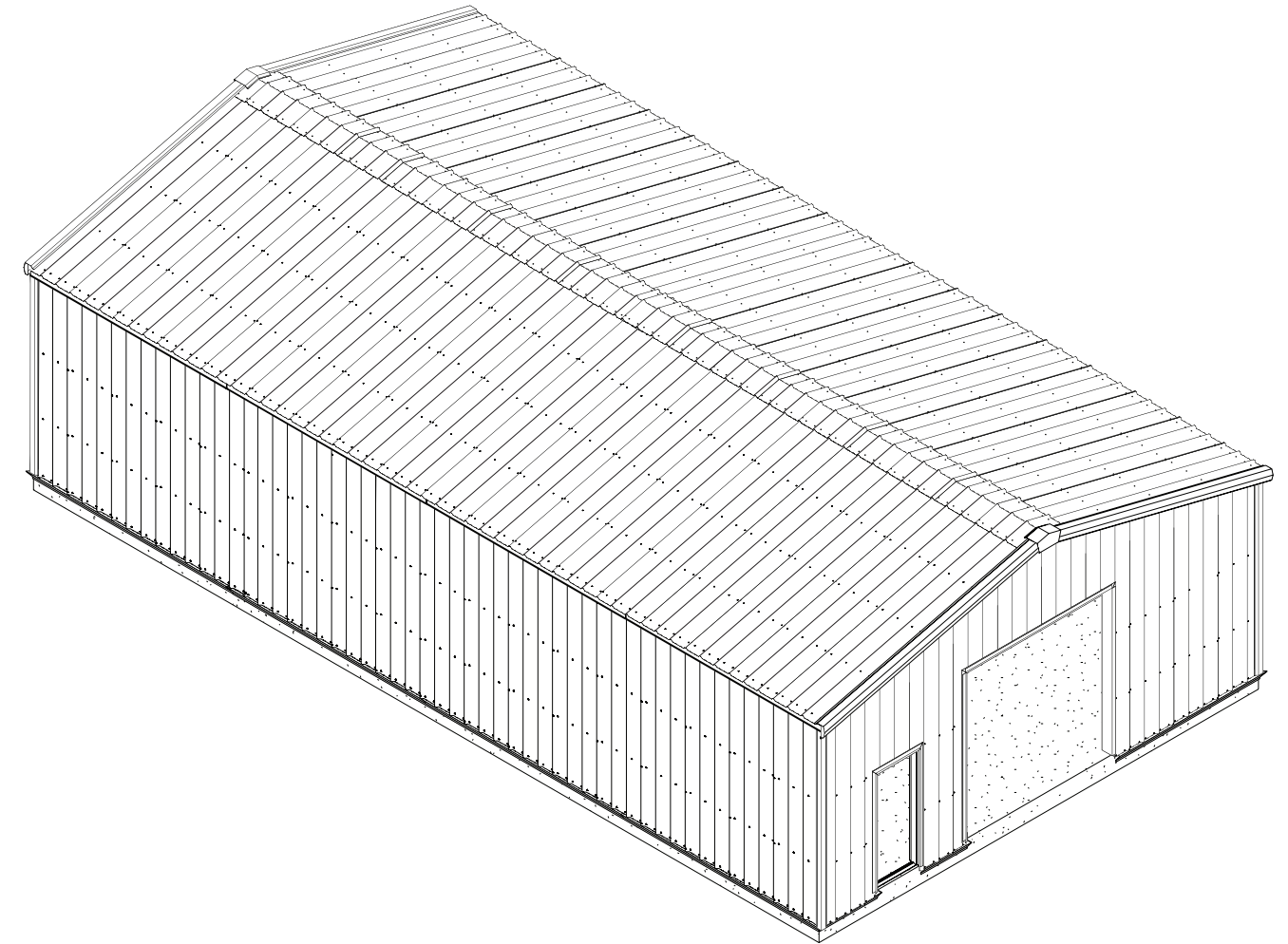


## Completed Structure

The above drawing shows the completed frame structure and columns labeled. The columns will be called out periodically throughout the instructions.

# PROJECT OVERVIEW

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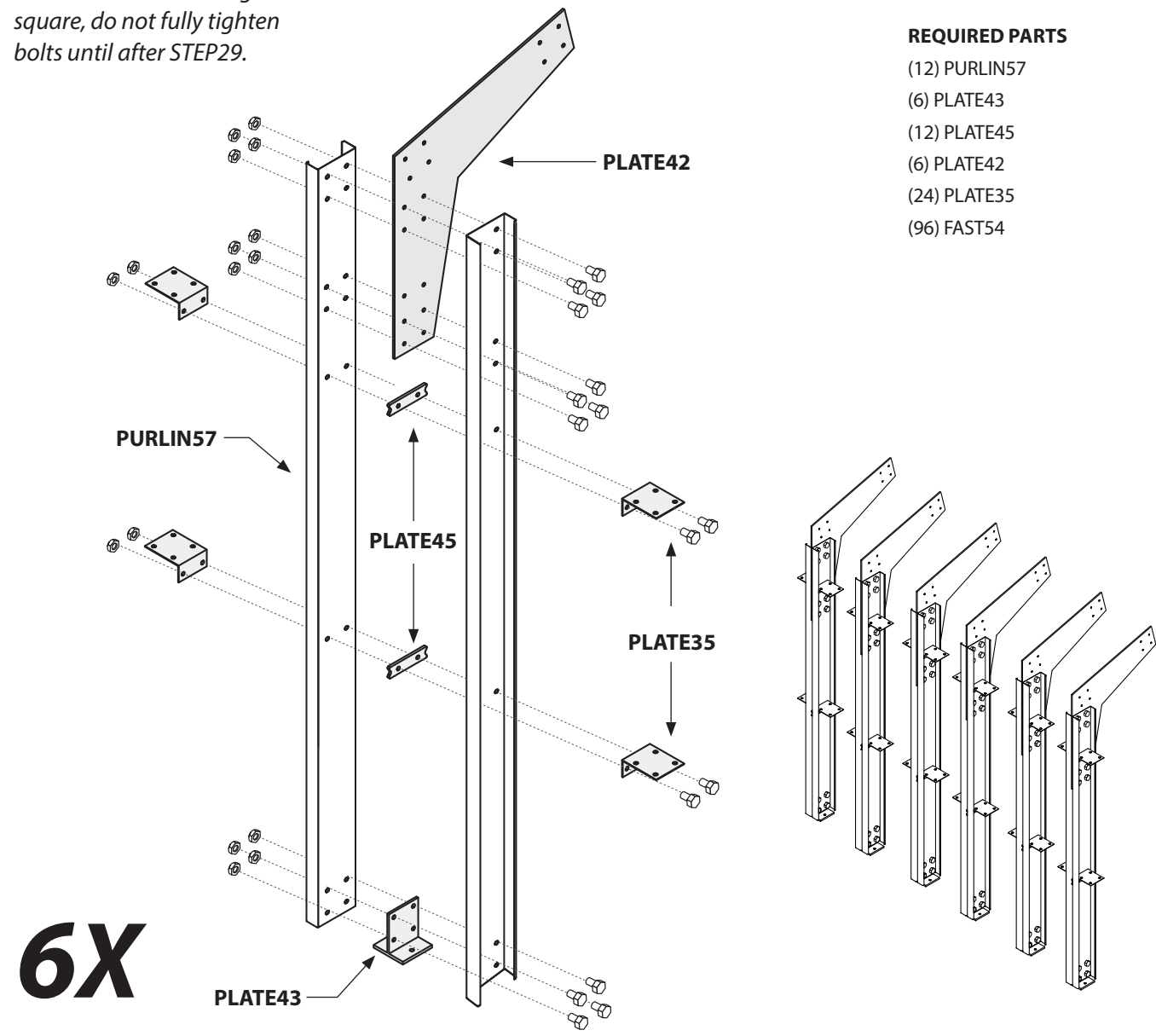


## Completed Structure

The following instructions are to assemble the 30x52x12 building as shown above. There will be optional variations to the buildings layout called out on certain pages. Follow those instructions as they pertain to your needs.

# STEP 1

Note: To ensure building is square, do not fully tighten bolts until after STEP29.



**6X**

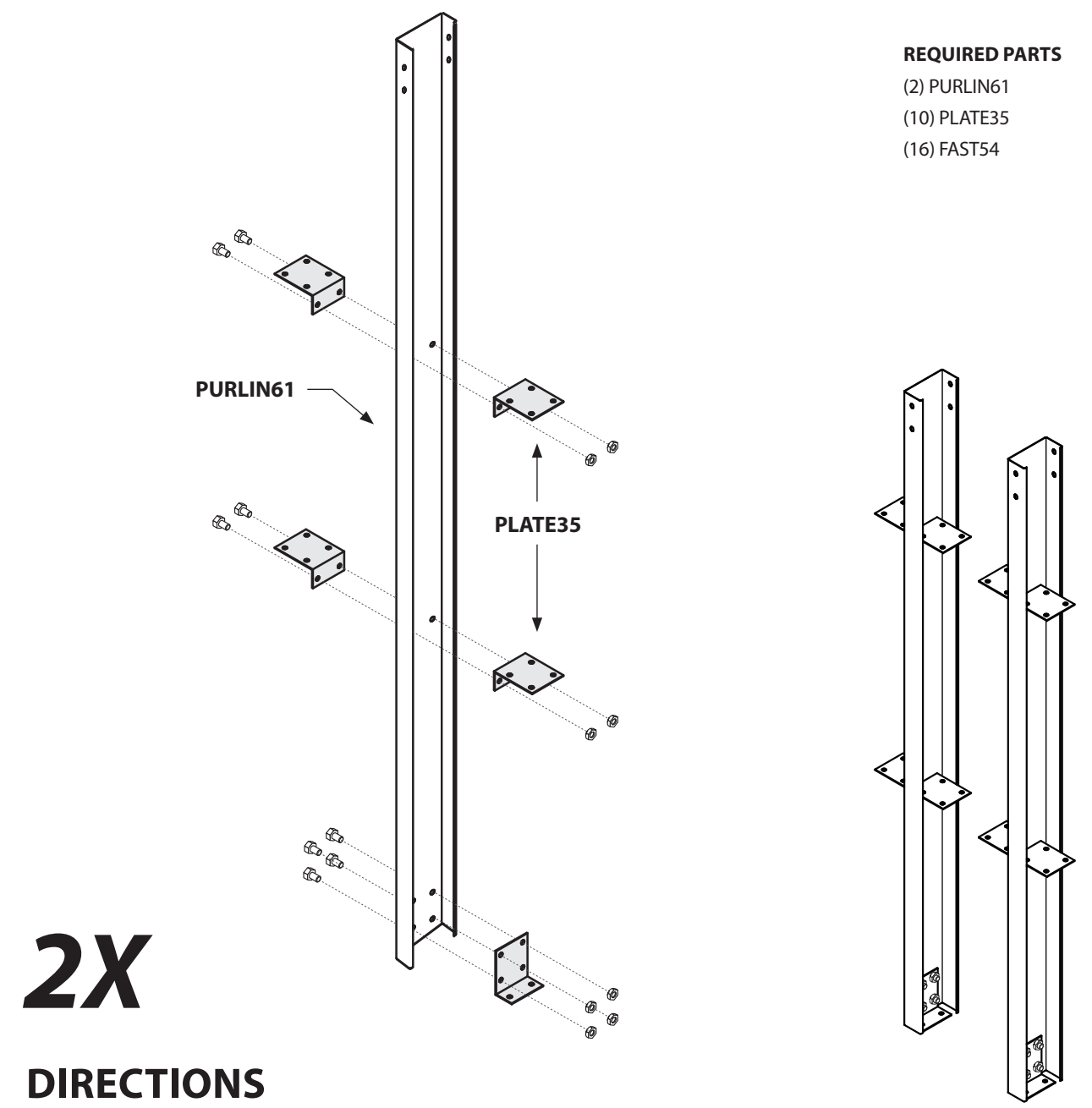
## DIRECTIONS

### Assemble Columns A ,F, G, H, M and N

Note: Place level on all girt clips throughout installation to ensure level girts.

1. Layout (2) PURLIN57 sidewall columns A.
2. Attach (1) PLATE43 plate using FAST54.
3. Attach (2) PLATE35 at 3'6" from bottom with PLATE45 between columns as shown using FAST54.
4. Attach (1) PLATE42 plate with (2) PLATE35 at 7'4" from bottom using FAST54.
5. Repeat these steps for the other Columns.
- 6 Set assembled columns aside for later use.

# STEP 2



**2X**

## DIRECTIONS

### Assemble Columns B and E

1. Layout (1) PURLIN61 corner column for column B.
2. Attach (1) PLATE35 at bottom using FAST54.
3. Attach (2) PLATE35 at 3'6" using FAST54.
4. Attach (2) PLATE35 at 7'4" using FAST54.
5. Repeat these steps for column E.
6. Set assembled columns aside for later use.

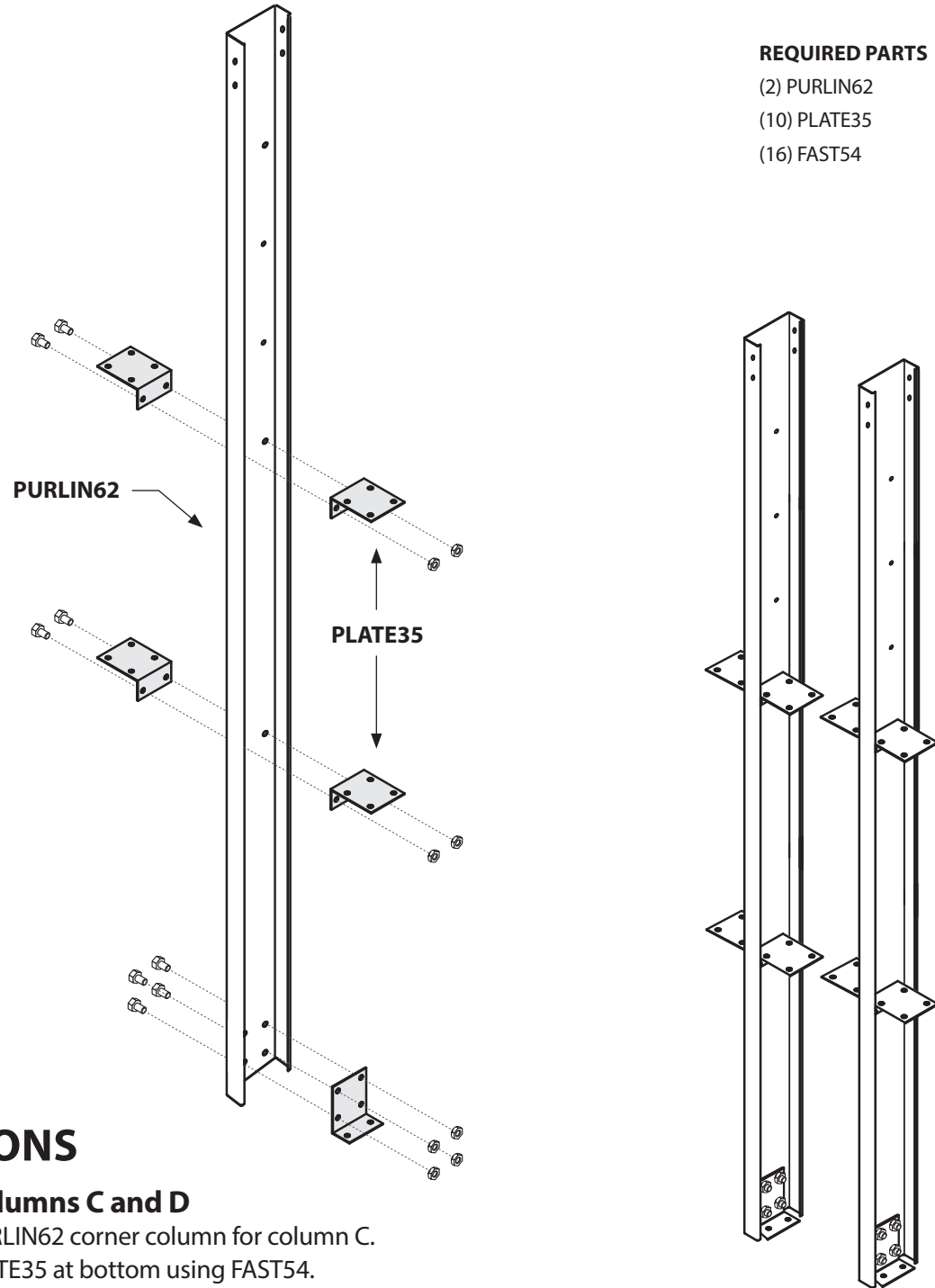
# STEP 3

If you are adding a framed opening to the endwall.  
Refer to page 69 for assembly instructions.

# STEP 4

### REQUIRED PARTS

- (2) PURLIN62
- (10) PLATE35
- (16) FAST54

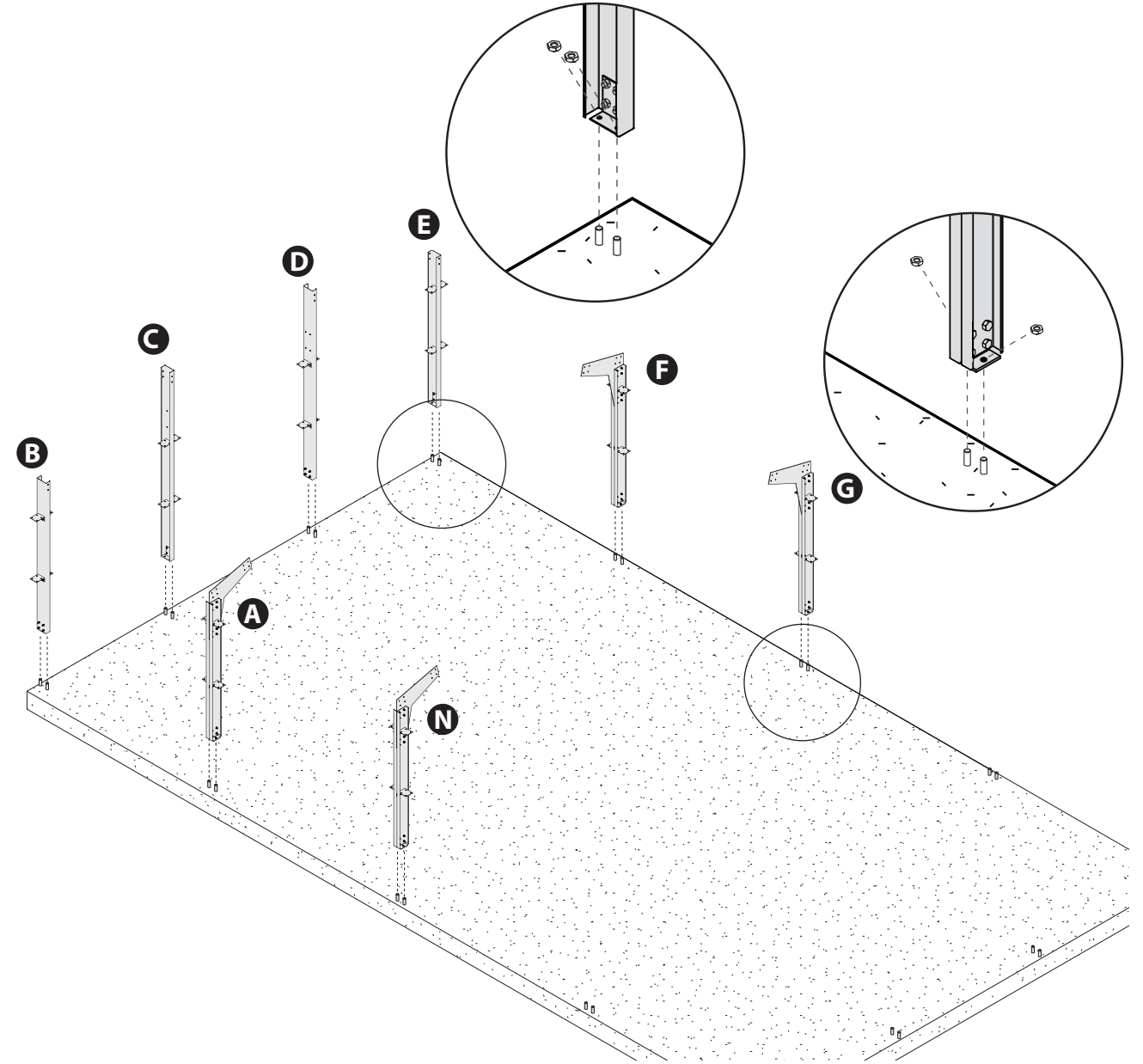


**2X**

## DIRECTIONS

### Assemble Columns C and D

1. Layout (1) PURLIN62 corner column for column C.
2. Attach (1) PLATE35 at bottom using FAST54.
3. Attach (2) PLATE35 at 3'6" from bottom using FAST54.
4. Attach (2) PLATE35 at 7'4" from bottom using FAST54.
5. Repeat these steps for column D.

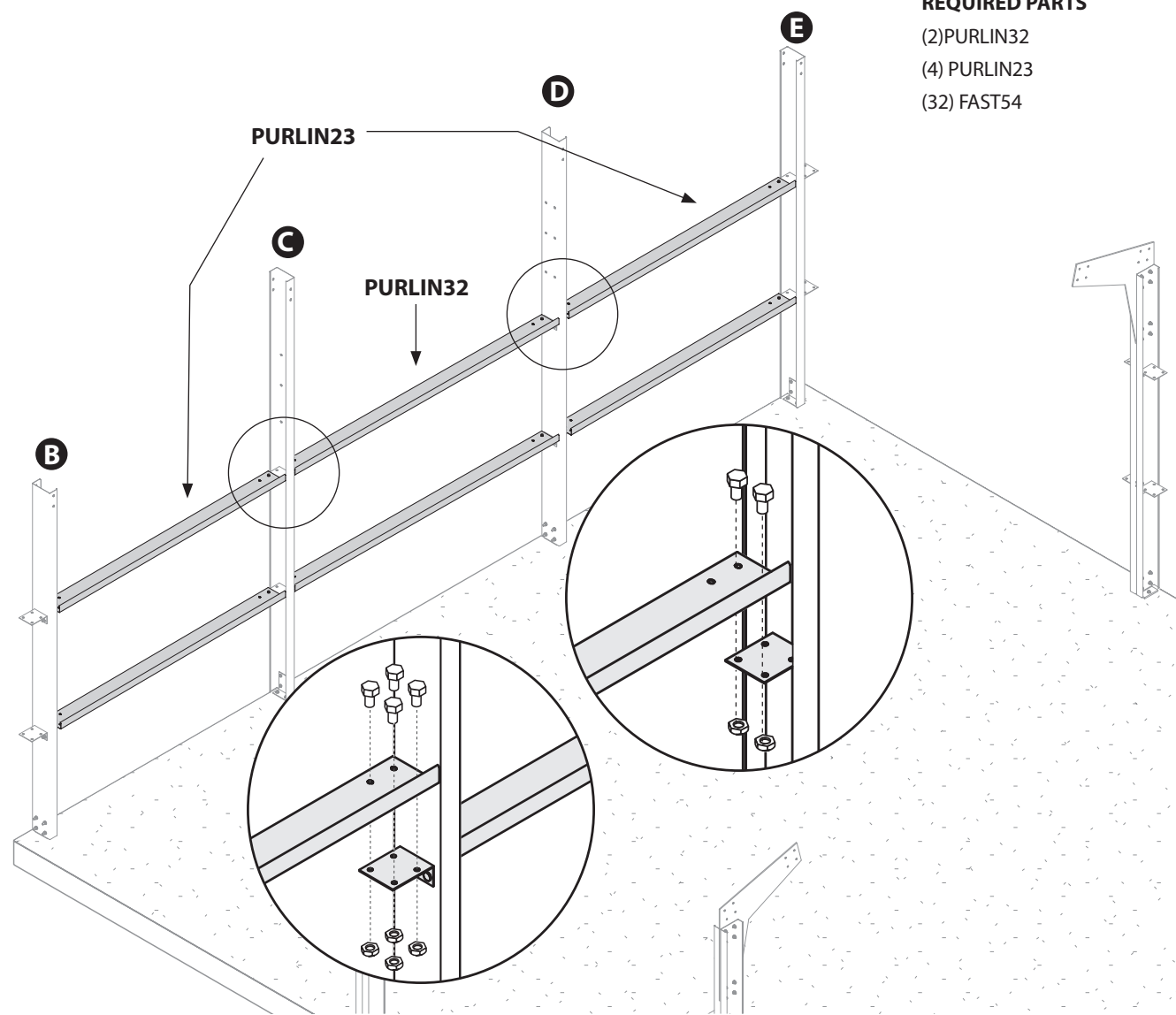


## DIRECTIONS

### Stand and Anchor Columns A, B, C, D, E, F, G, and N

*Note: Anchor bolts and nuts are not included in building package. Anchor bolts are placed by your foundation specialist when laying foundation and corresponding nuts will be provided by your foundation specialist.*

# STEP 5



### REQUIRED PARTS

- (2) PURLIN32
- (4) PURLIN23
- (32) FAST54

## DIRECTIONS

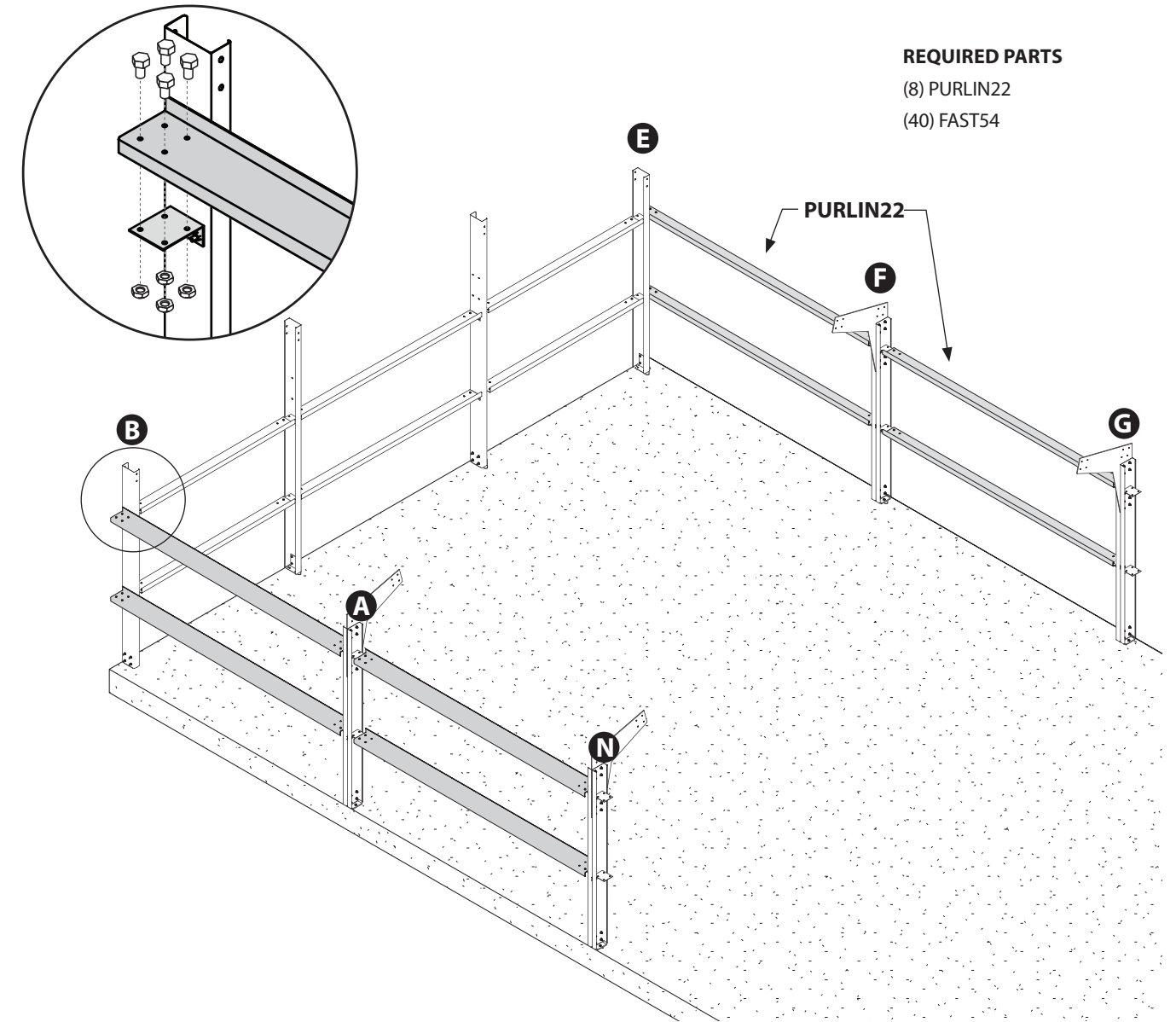
### Attaching Zee Girts

*Note: Do not overtighten bolts on wall girts until columns are vertically level. Then tighten bolts.*

*This applies throughout installation.*

1. Attach PURLIN23 between columns B & C and D & E as shown.
2. Attach PURLIN32 between columns C & D as shown.

# STEP 6



### REQUIRED PARTS

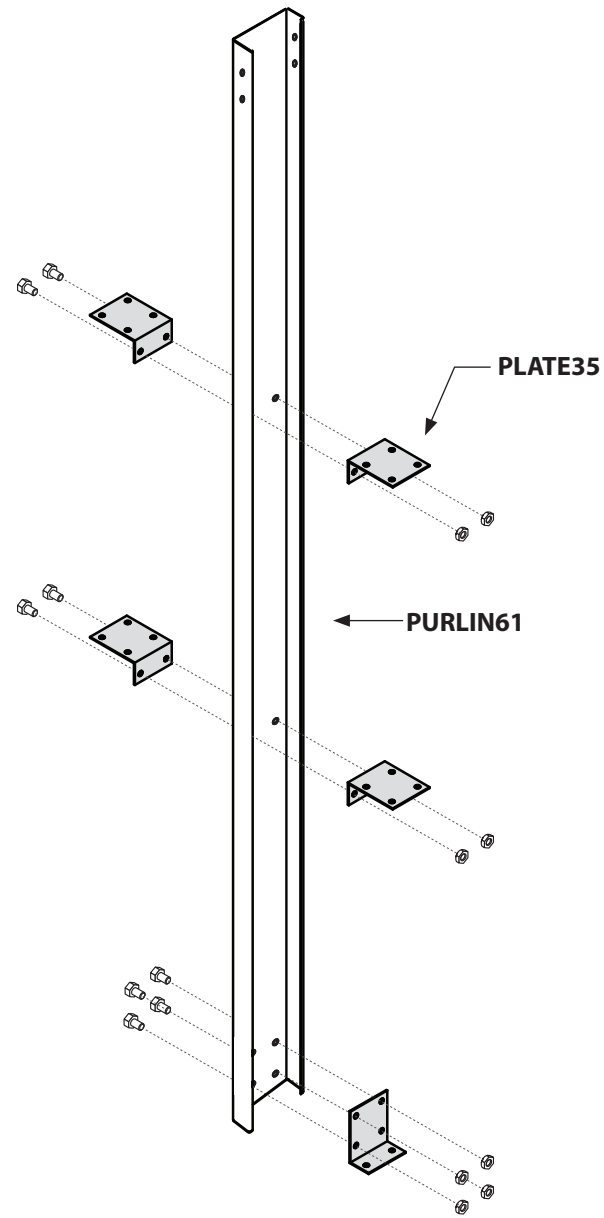
- (8) PURLIN22
- (40) FAST54

## DIRECTIONS

### Attaching Zee Girts

Attach PURLIN22 between columns B & A, A & N, E & F, and F & G using FAST54 as shown.

# STEP 7



### REQUIRED PARTS

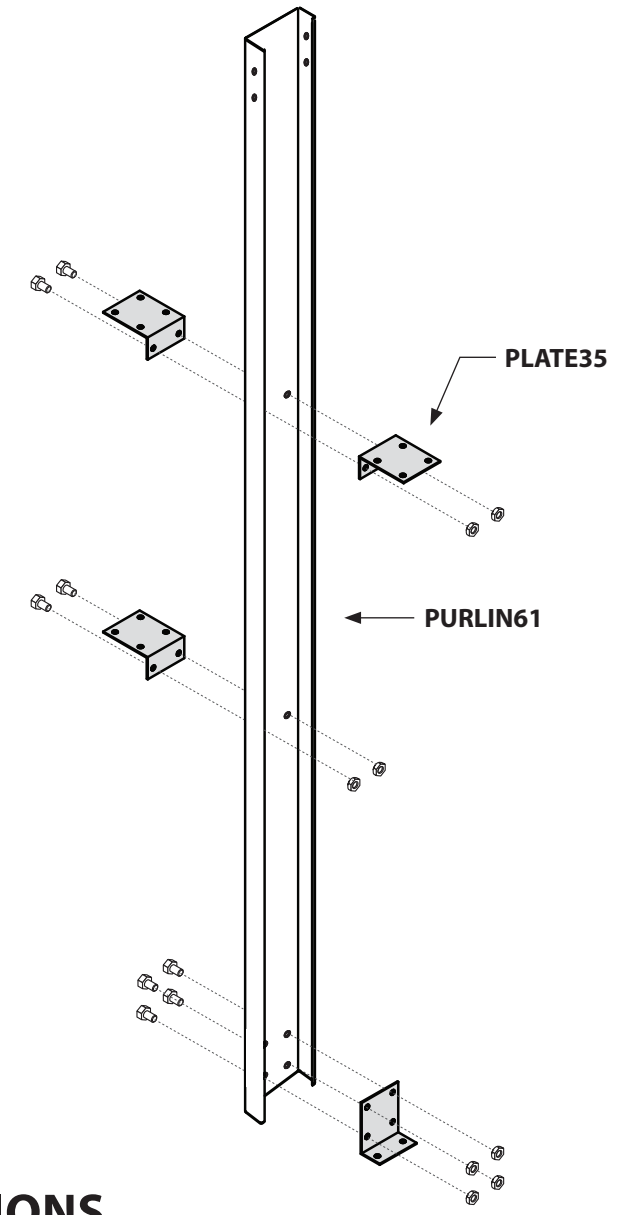
- (1) PURLIN61
- (5) PLATE35
- (8) FAST54

## DIRECTIONS

### Assemble Column I

1. Layout (1) PURLIN61 column for column I.
2. Attach (1) PLATE35 at bottom using FAST54.
3. Attach (2) PLATE35 at 3'6" from bottom using FAST54.
4. Attach (2) PLATE35 at 7'4" from bottom using FAST54.
5. Set assembled column aside for later use.

# STEP 8



### REQUIRED PARTS

- (1) PURLIN61
- (4) PLATE35
- (8) FAST54

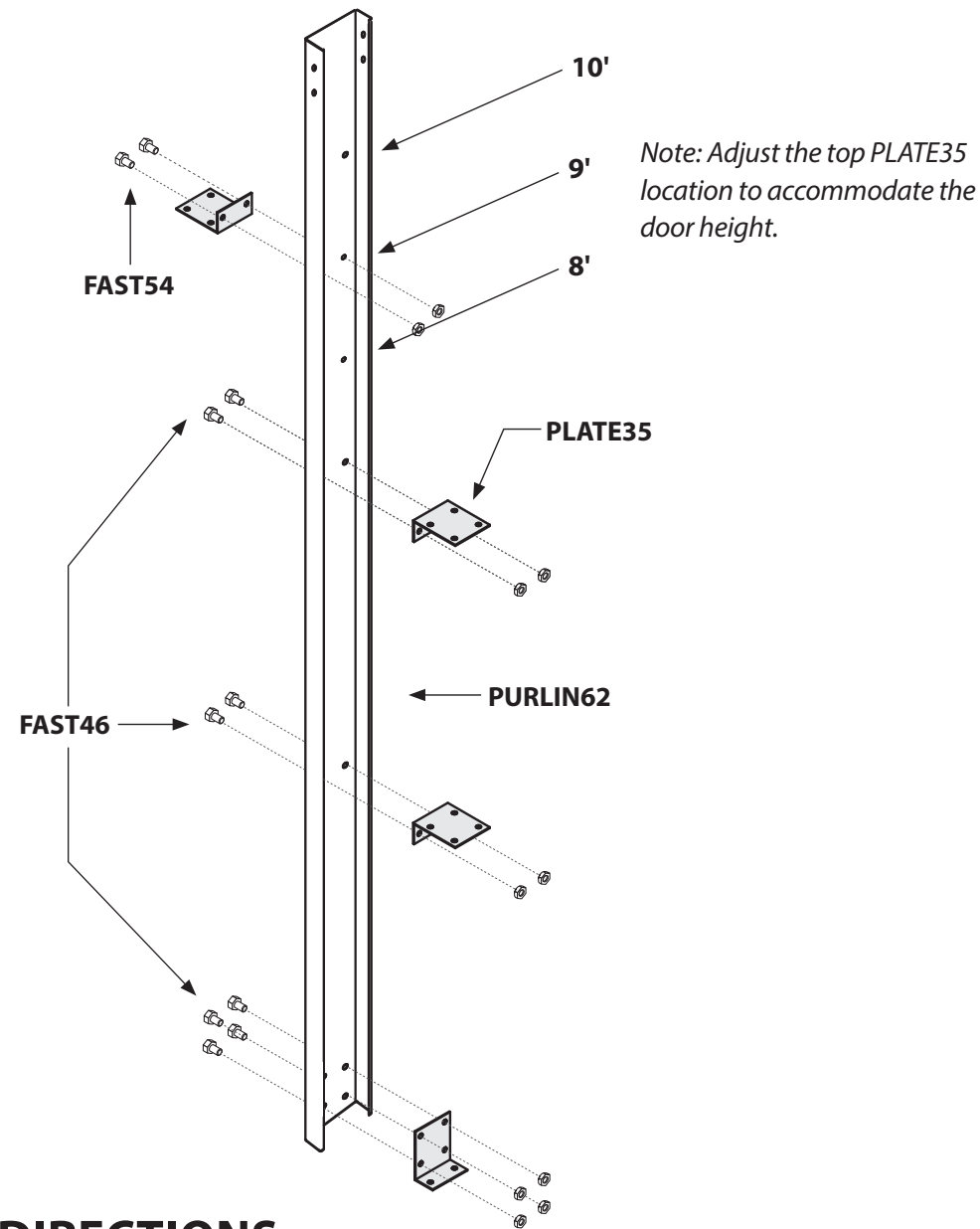
## DIRECTIONS

### Assemble Column L

1. Layout (1) PURLIN61 column for column L.
2. Attach (1) PLATE35 at bottom using FAST54.
3. Attach (1) PLATE35 at 3'6" from bottom using FAST54.
4. Attach (2) PLATE35 at 7'4" from bottom using FAST54.
5. Set assembled column aside for later use.

# STEP 9

If you are not adding a garage door opening.  
Refer to page 68 for assembly instructions.



## REQUIRED PARTS

- (1) PURLIN62
- (4) PLATE35
- FAST54
- FAST46

Note: Adjust the top PLATE35 location to accommodate the door height.

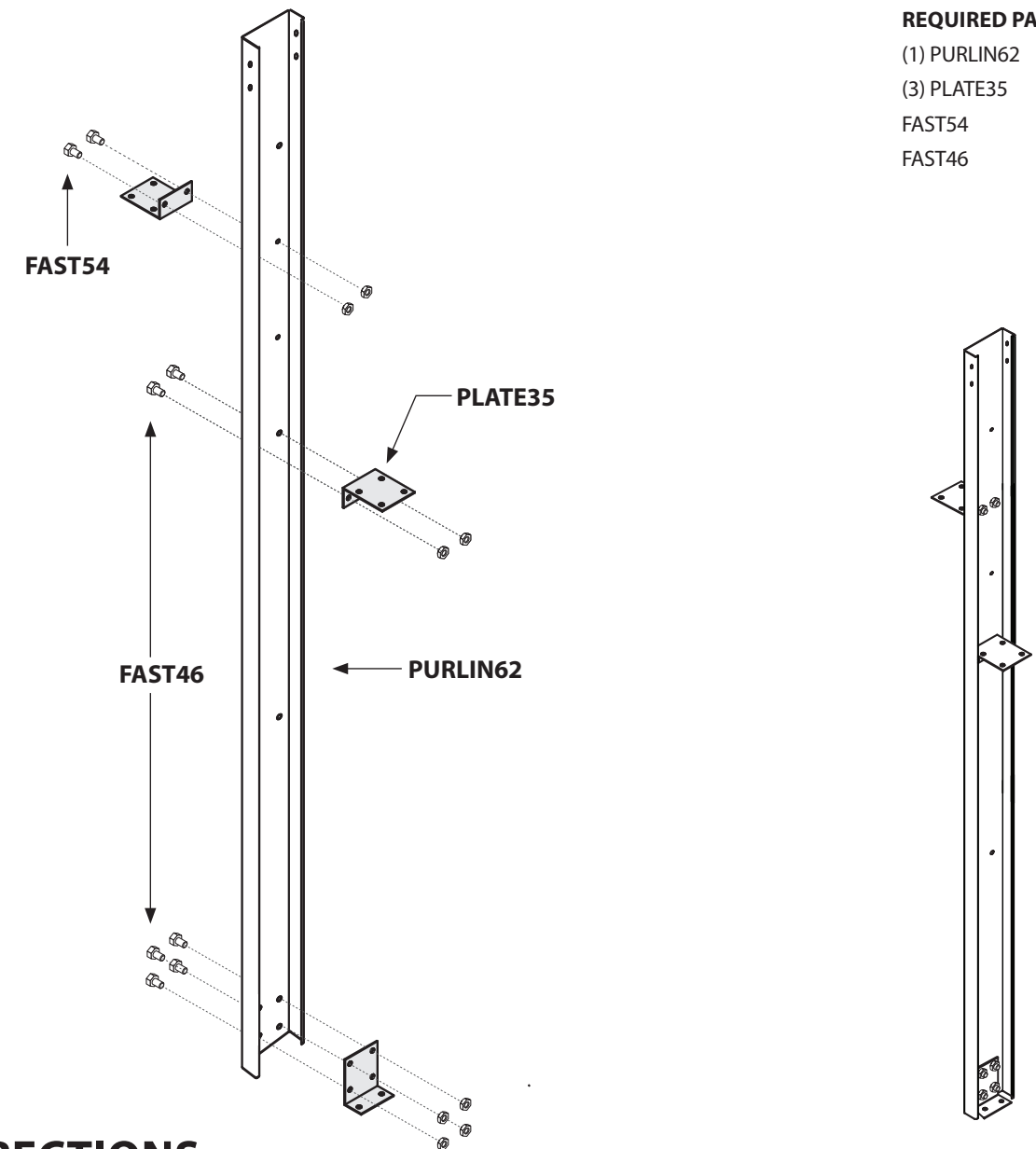
## DIRECTIONS

### Assemble Columns J

Note: Adjust the top PLATE35 location to accommodate the door height.

1. Layout (1) PURLIN62 column for column J.
2. Attach (1) PLATE35 at bottom using FAST46.
3. Attach (1) PLATE35 at 3'6" from bottom using FAST46.
4. Attach (1) PLATE35 at 7'4" from bottom using FAST46.
5. Attach (1) PLATE35 at desired door height using FAST54. (9' is shown above)
6. Set assembled column aside for later use.

# STEP 10



## REQUIRED PARTS

- (1) PURLIN62
- (3) PLATE35
- FAST54
- FAST46

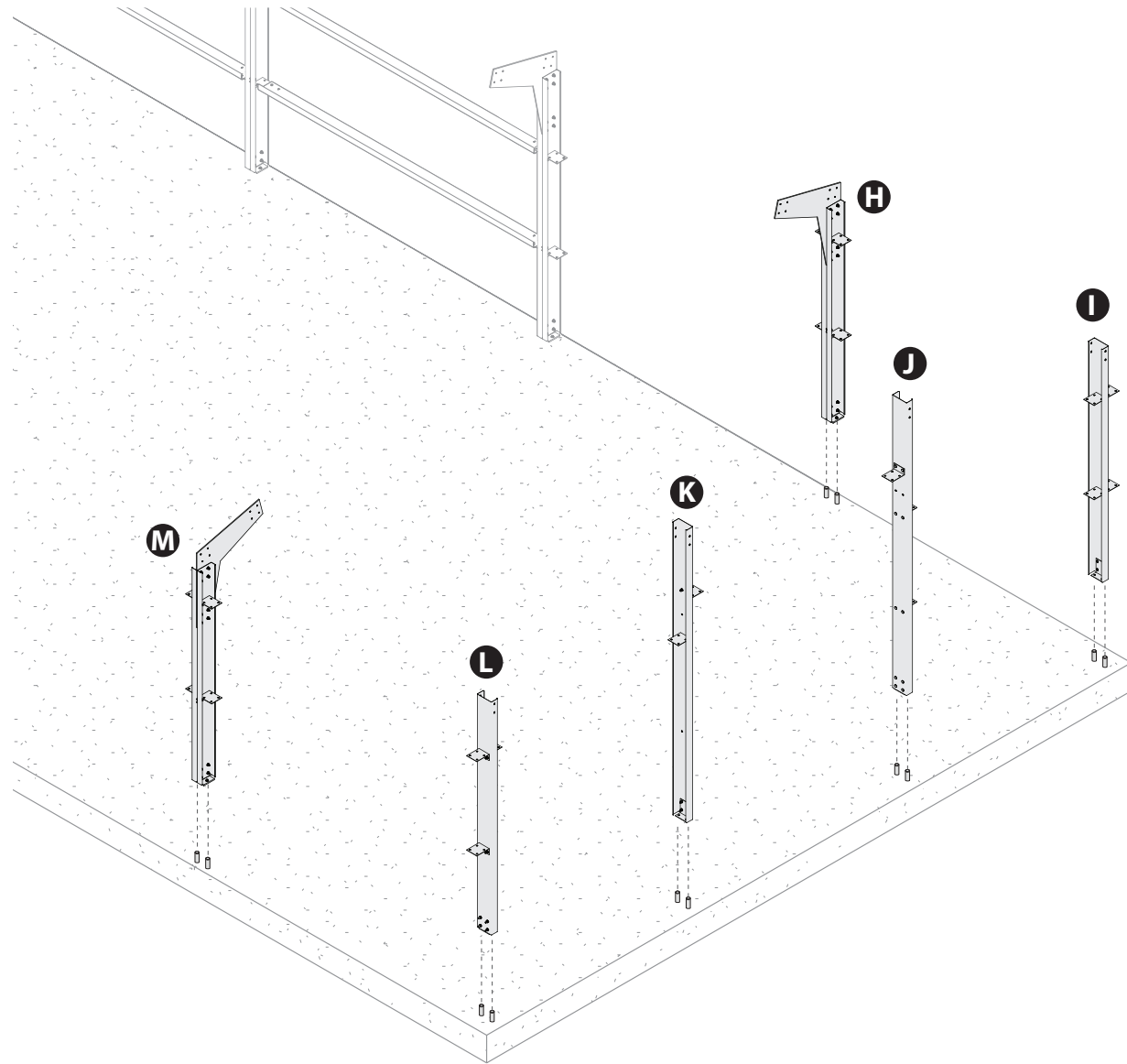
## DIRECTIONS

### Assemble Columns K

Note: Adjust the top GIRTCLIP location to accommodate the door height.

1. Layout (1) PURLIN62 column for column K.
2. Attach (1) PLATE35 at bottom using FAST46.
3. Attach (1) PLATE35 at 7'4" from bottom using FAST46.
4. Attach (1) PLATE35 at matching height as Previous Step using FAST54.

# STEP 11

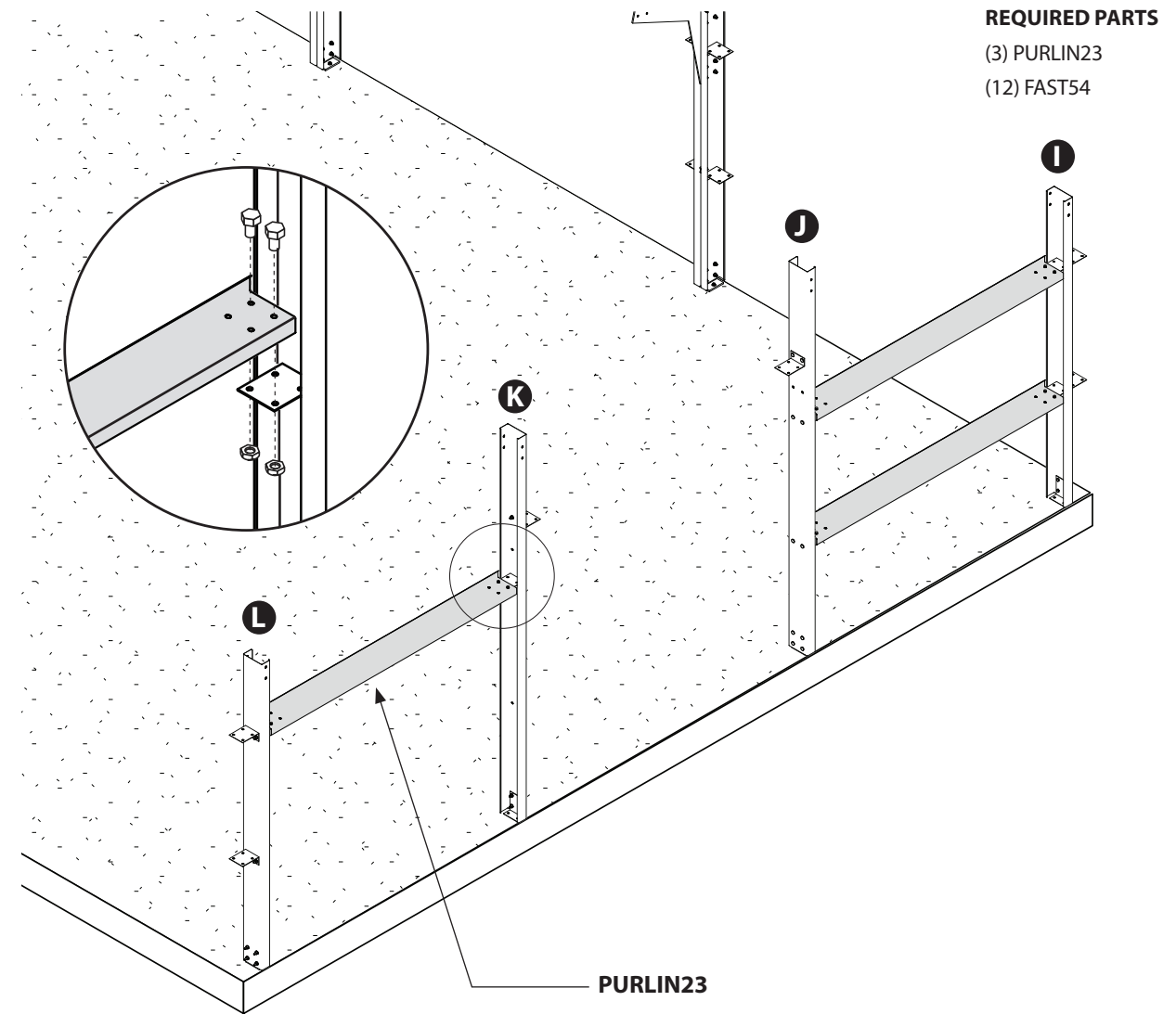


## DIRECTIONS

### Stand and Anchor Columns H, I, J, K, L and M

*Note: Anchor bolts and nuts are not included in building package. Anchor bolts are placed by your foundation specialist when laying foundation and corresponding nuts will be provided by foundation specialist.*

# STEP 12



## REQUIRED PARTS

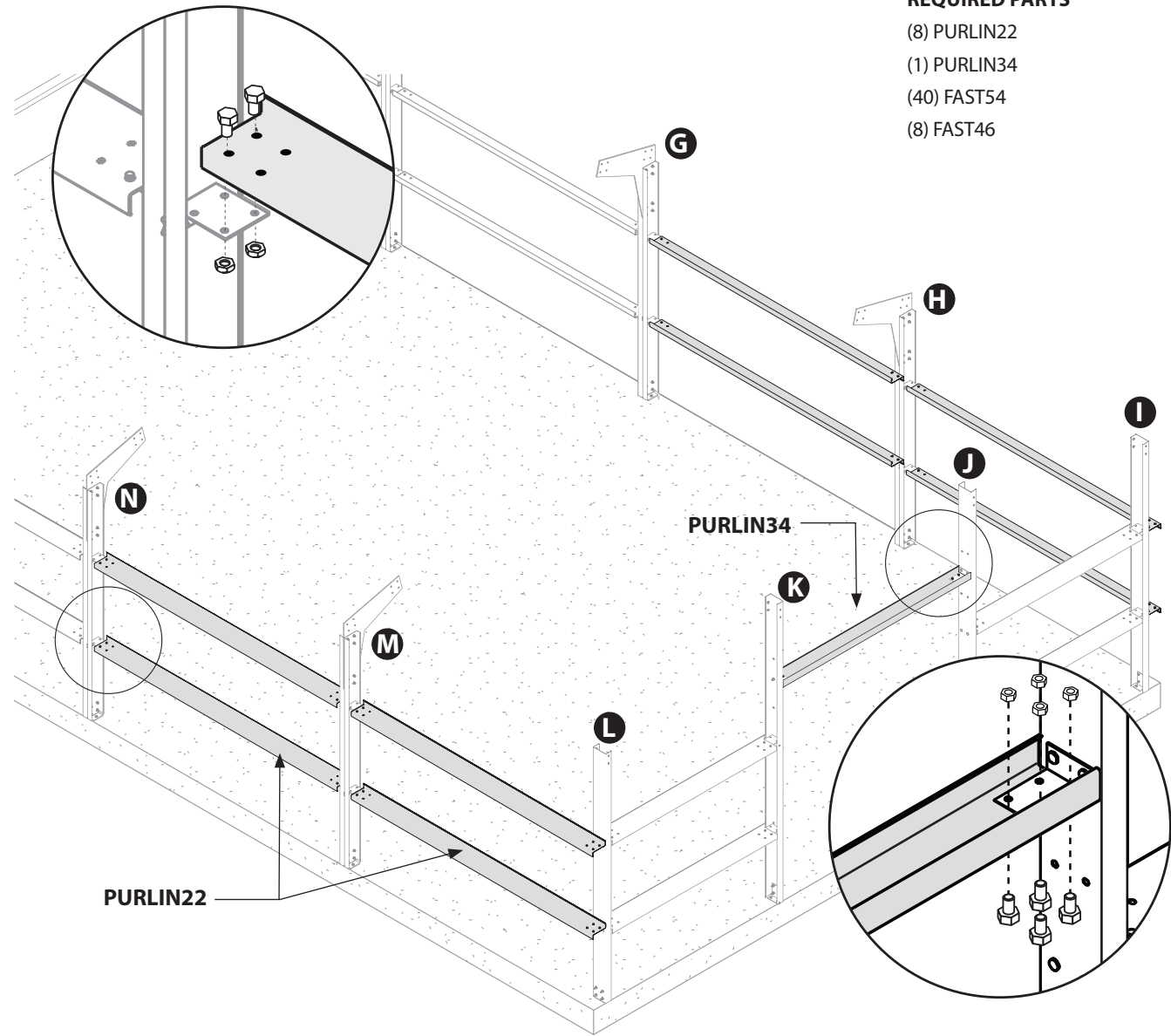
(3) PURLIN23  
(12) FAST54

## DIRECTIONS

### Attaching Zee Girts

1. At 3'6" and 7'4" from bottom of column, attach PURLIN23 between columns H and I using FAST54 as shown.
2. At 7'4" from bottom of column. Attach PURLIN23 between columns J and K using FAST54 as shown.

# STEP 13



### REQUIRED PARTS

- (8) PURLIN22
- (1) PURLIN34
- (40) FAST54
- (8) FAST46

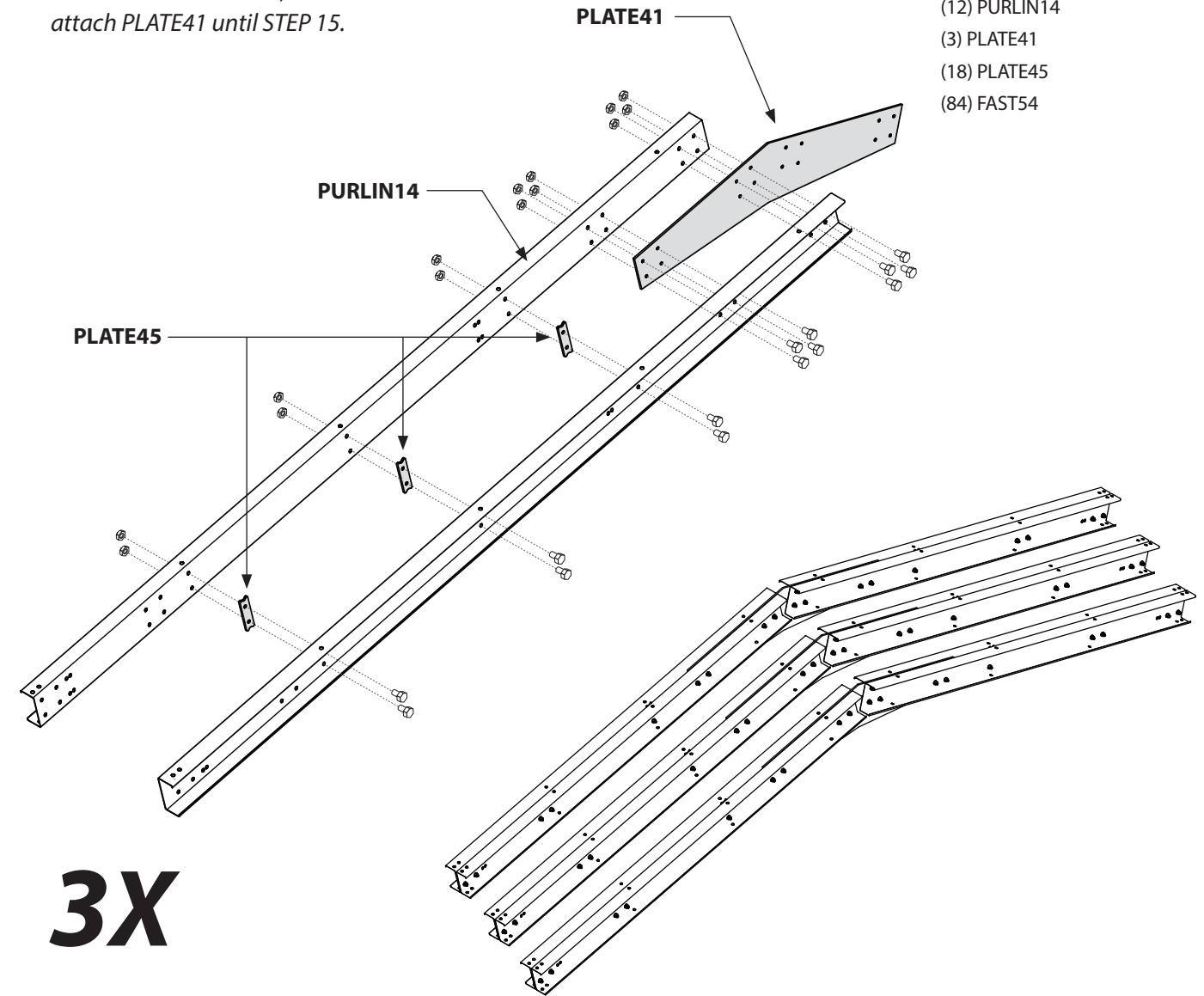
## DIRECTIONS

### Attaching Zee Girts

1. Attach PURLIN22 at 3'6" and 7'4" from the between columns G & H, H & I, L & M and M & N as shown. Use FAST54 to fasten to girtclips.
2. Attach PURLIN34 between columns J and K. PURLIN34 can be placed at 7', 8', 9' or 10' depending on the height on the door. Adjust the top GIRTCLIP location on column J & K to accommodate the door. Example shown above is at 9'. This height was set in Previous Step. Use FAST46 to fasten to girtclips.

# STEP 14

*DIY Alternate Method:  
If lifting machinery is not being used,  
assemble center rafters, but do not  
attach PLATE41 until STEP 15.*



### REQUIRED PARTS

- (12) PURLIN14
- (3) PLATE41
- (18) PLATE45
- (84) FAST54

# 3X

## DIRECTIONS

### Assemble Center Rafters

1. Layout (2) PURLIN14 rafters.
2. Attach (1) PLATE41 peak plate using FAST54.
3. Attach (3) PLATE45 between rafters using FAST54.
4. Repeat steps 2 and 3 to opposite side of PLATE41 to complete center rafter assembly.
6. Repeat these steps again for the other rafter assembly.

Note: Each rafter assembly weighs approximately 275-300lbs.

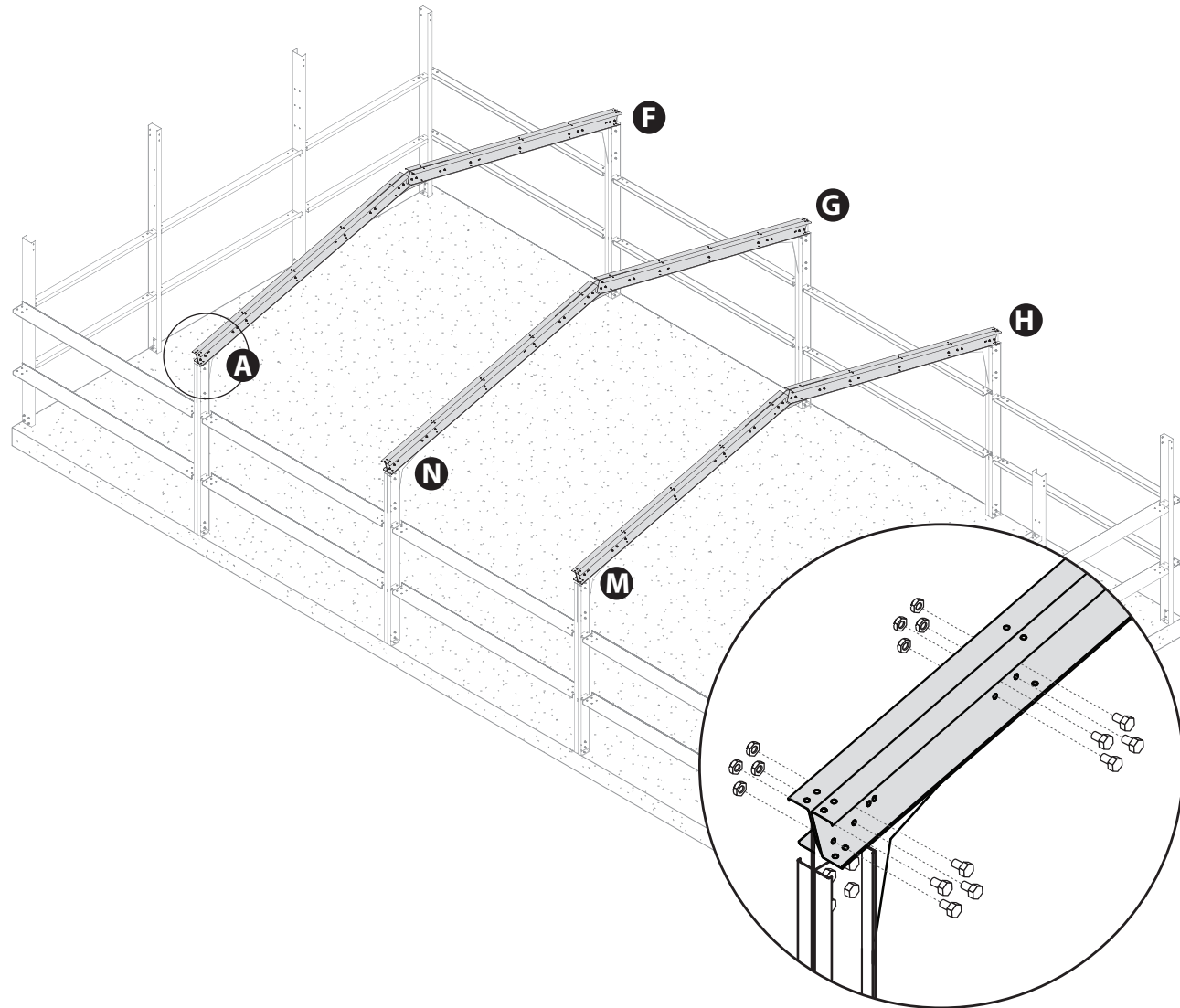


# STEP 15

*DIY Alternate Method:*

*If lifting machinery is not being used, stand center rafters and hold in place with 2x4 bracing. Then lift and install PLATE41. See instructional video for visualization.*

**REQUIRED PARTS**  
(48) FAST54



## DIRECTIONS

### Stand and Install Center Rafters

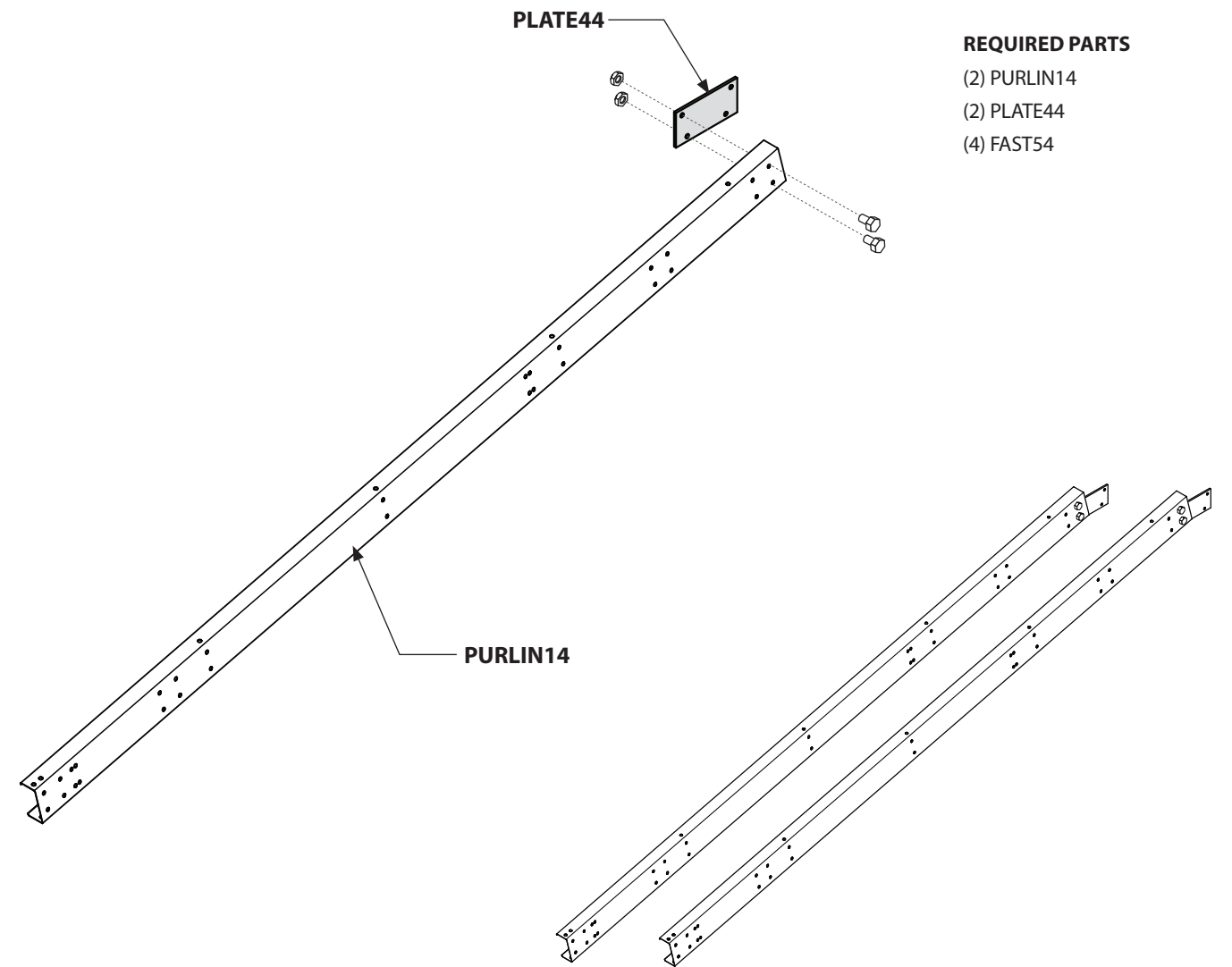
*Note: This step will require lifting machinery due to height and weight of components.*

*Follow OSHA safety requirements for your area.*

1. Lift full rafter assembly from previous step over columns A & F, N & G, and M & H.
2. Bolt center rafter to top of columns A and F using Fast 54.

# STEP 16

**REQUIRED PARTS**  
(2) PURLIN14  
(2) PLATE44  
(4) FAST54



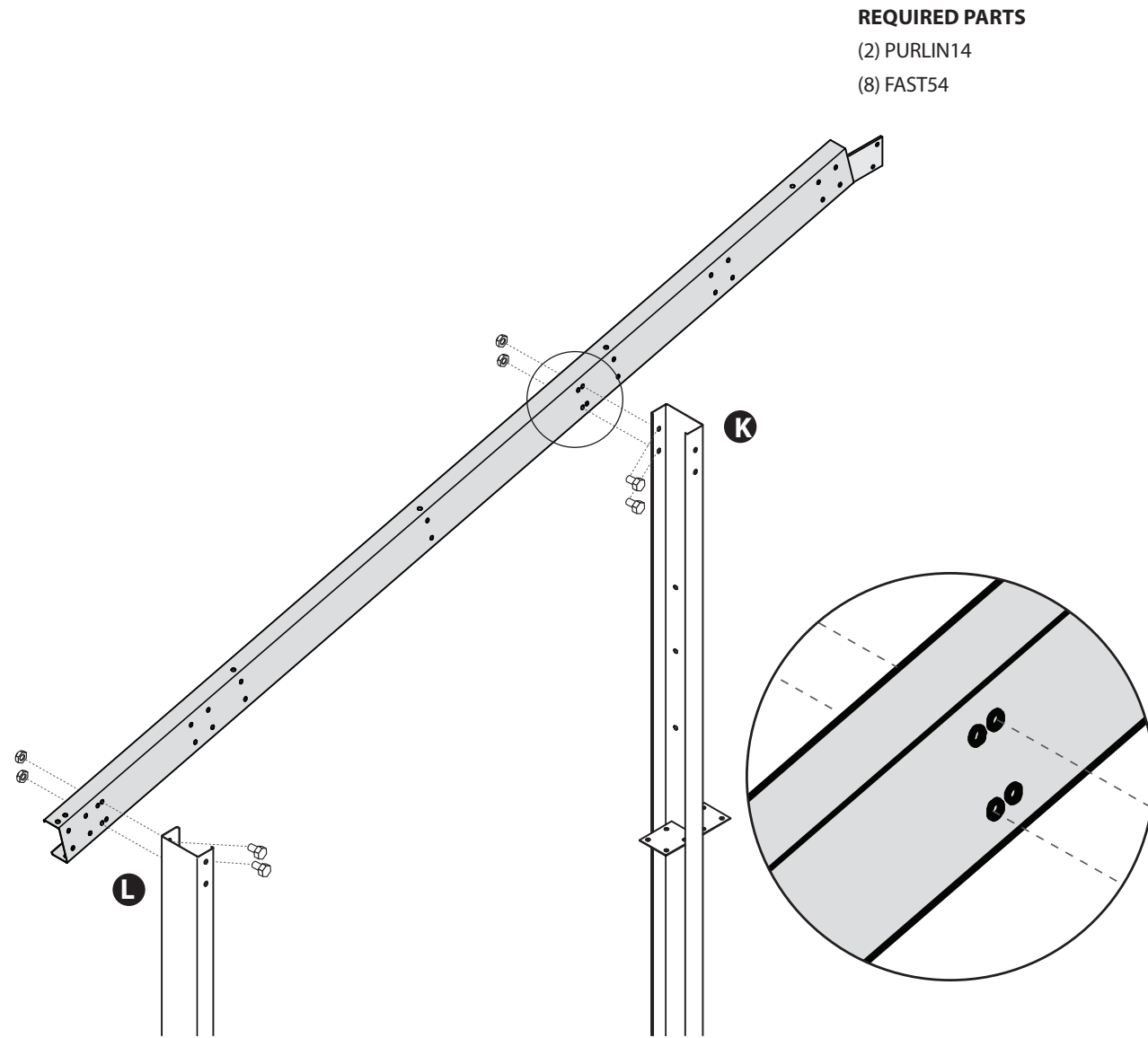
# 2X

## DIRECTIONS

### Assemble Endwall Rafters

1. Attach (1) PLATE44 to (1) PURLIN14 using FAST54.
2. Repeat for the 2nd endwall rafter.

# STEP 17



**REQUIRED PARTS**  
(2) PURLIN14  
(8) FAST54

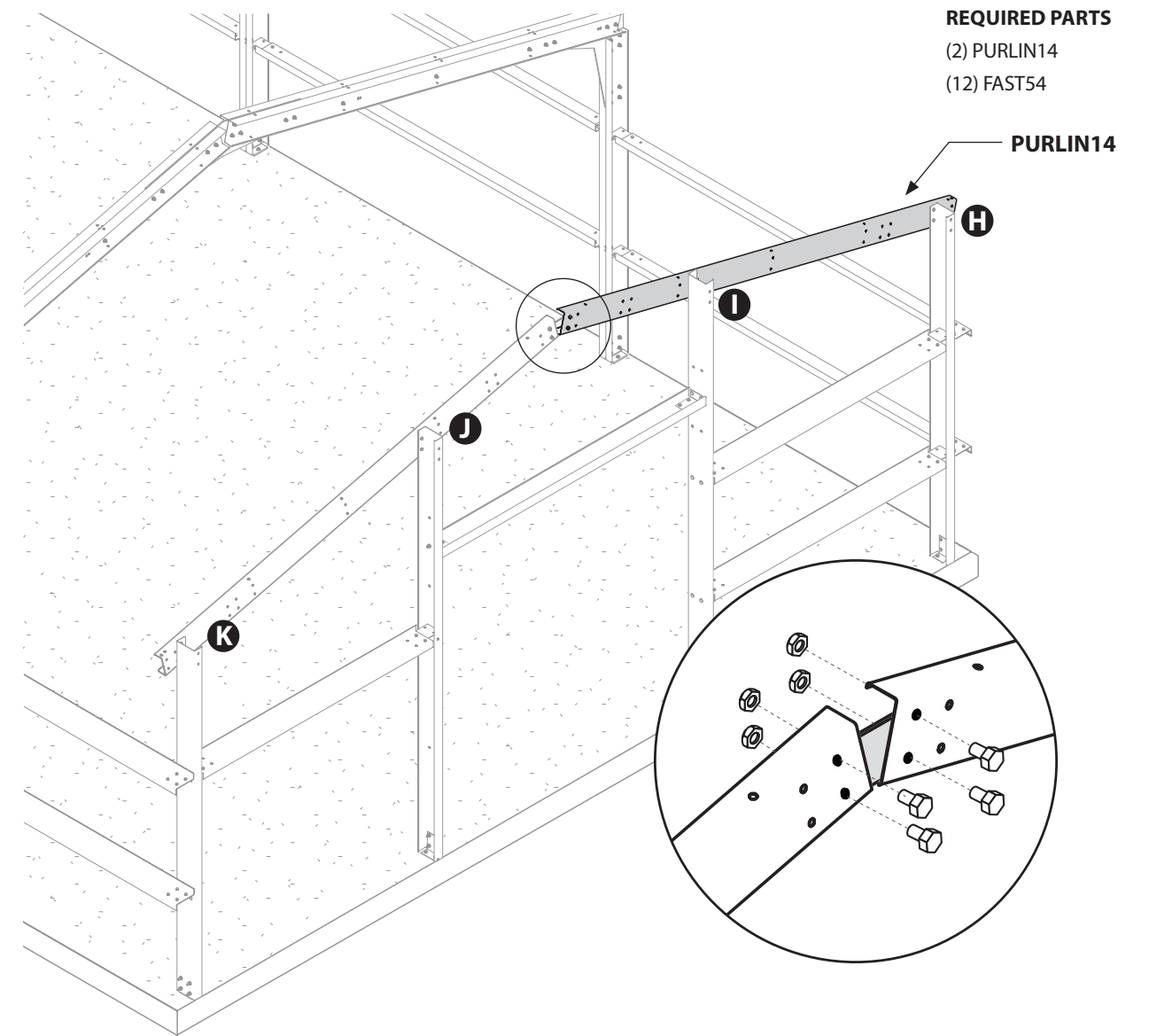
## DIRECTIONS

### Assemble and Install Endwall Rafters

*Note: Keep PLATE44 facing interior of building.*

1. Attach assembly from previous step to the top of columns K and L using FAST54.
2. Repeat this installation over columns D and E.

# STEP 18



**REQUIRED PARTS**  
(2) PURLIN14  
(12) FAST54

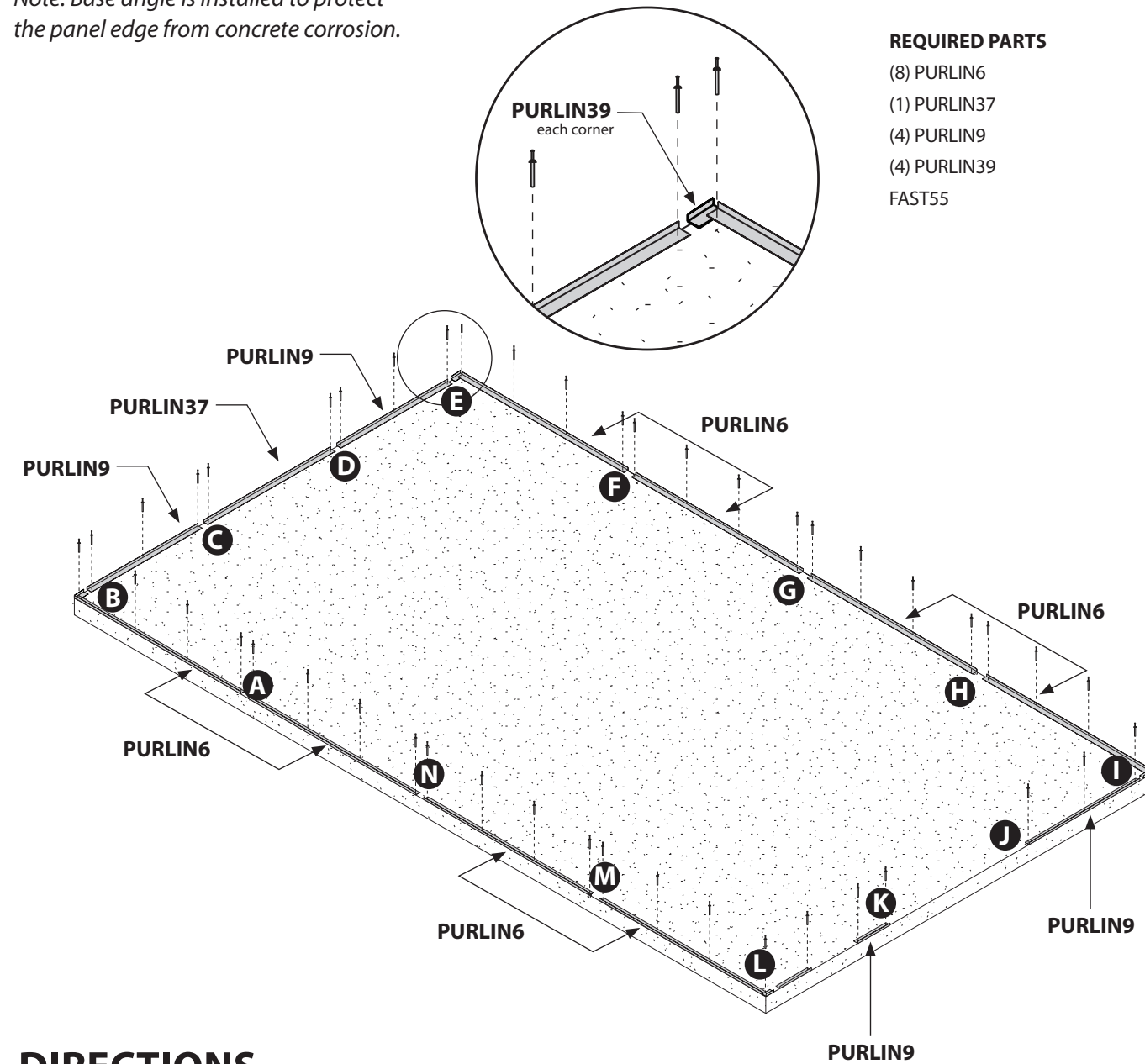
## DIRECTIONS

### Assemble and Install Endwall Rafters

1. Attach (1) PURLIN14 to the top of columns H and I and attach to installed PLATE44 using FAST54.
2. Repeat this installation over columns D and E.

# STEP 19

Note: Base angle is installed to protect the panel edge from concrete corrosion.



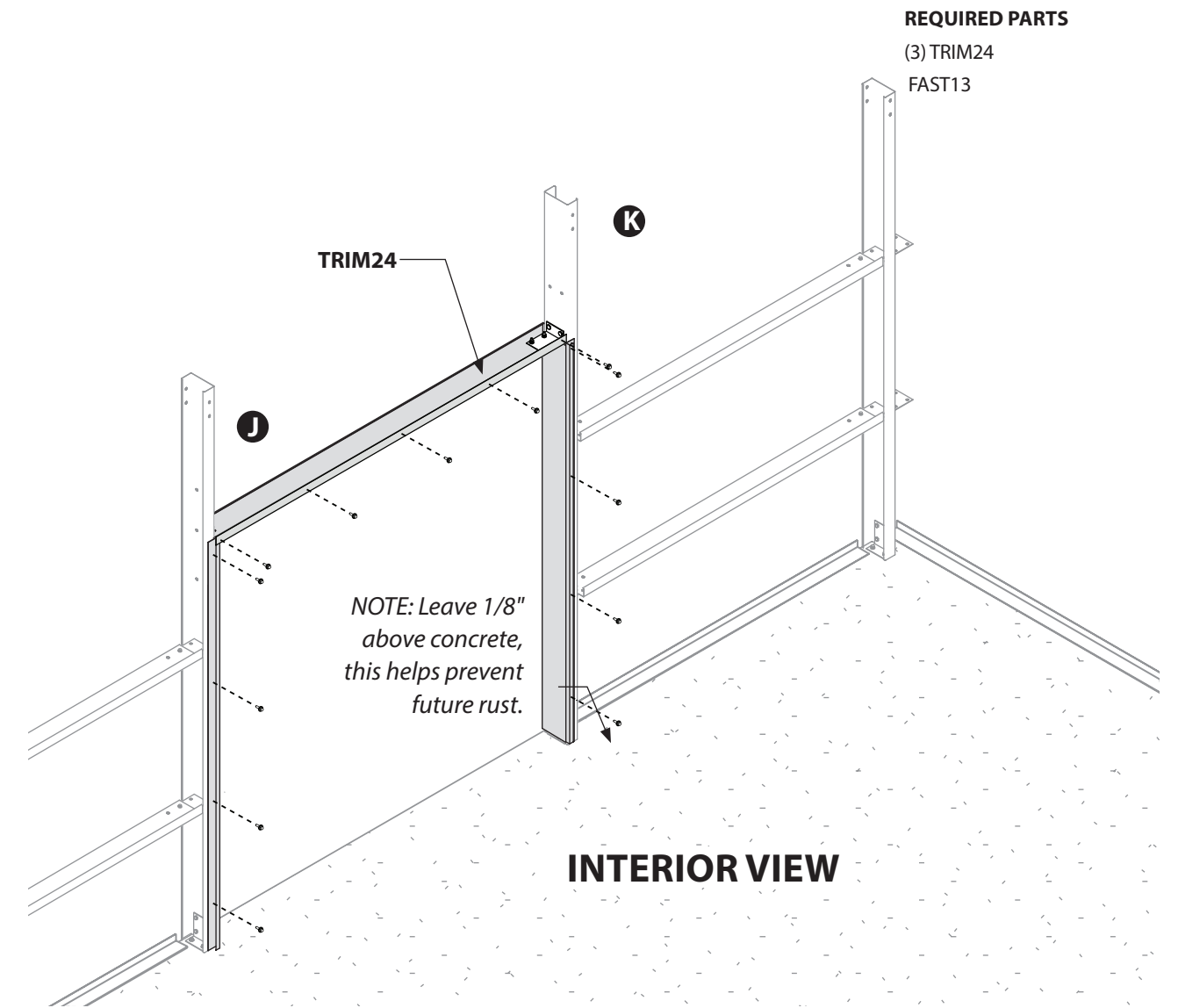
## DIRECTIONS

### Install Base Angle

Note: When using the FAST55, you will need to predrill 1.25" holes in concrete, and then tap in the FAST55 to secure the base angle. When tapping in the FAST55, do not hit the pin at the top until the fastener is all the way in the hole. The pin expands the fastener to hold it in place, so this needs to be hit when the fastener is completely in the hole.

1. Install PURLIN6 between columns E & I and B & L using FAST55.
2. Install PURLIN37 between columns C & D using FAST55.
3. Install PURLIN9 between columns B & C, D & E, H & I, and K & L. Cut K & L to make room for the door.
4. Install PURLIN39 to the outside columns B, E, I, and L. This will give support when fastening trim.

# STEP 20

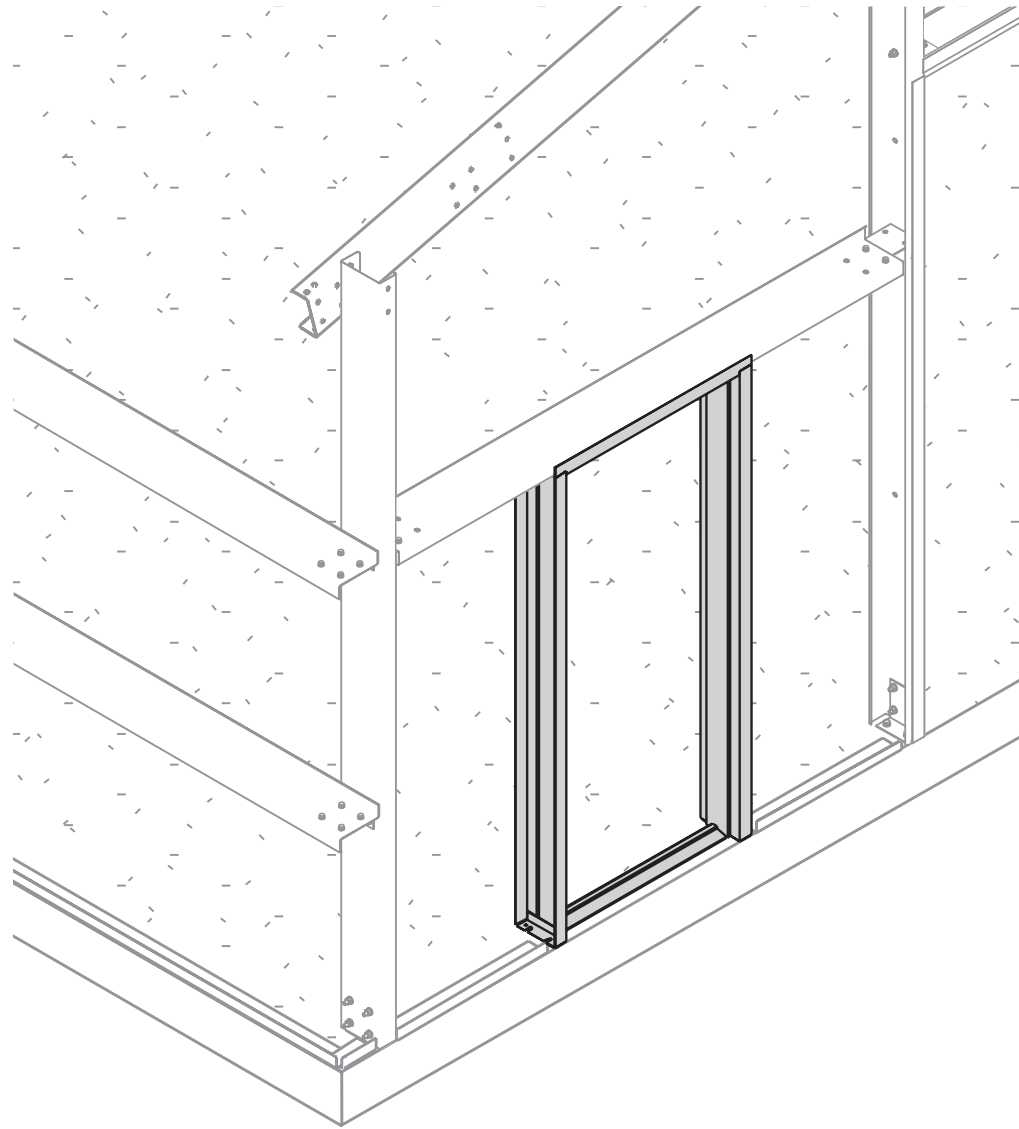


## DIRECTIONS

### Trim Framed Opening

1. Install TRIM24 along columns K and J. Cut length to fit between floor and wall girt at top of framed opening. Fasten to column with FAST13 every 24". Fasten along inside edge facing the interior of building. The other edge will be fastened in later steps.
2. Install TRIM24 along the wall girt between Columns J and I. This is the top of your framed opening. Fasten to header with FAST13 every 24". Fasten along inside edge facing the interior of building. The other edge will be fastened in later steps.
3. If necessary, miter the corners of the trim to create a finished look where pieces meet in the corner.

# STEP 21



## REQUIRED PARTS

- (1) DOOR47
- (1) DOOR48
- FAST12
- FAST55

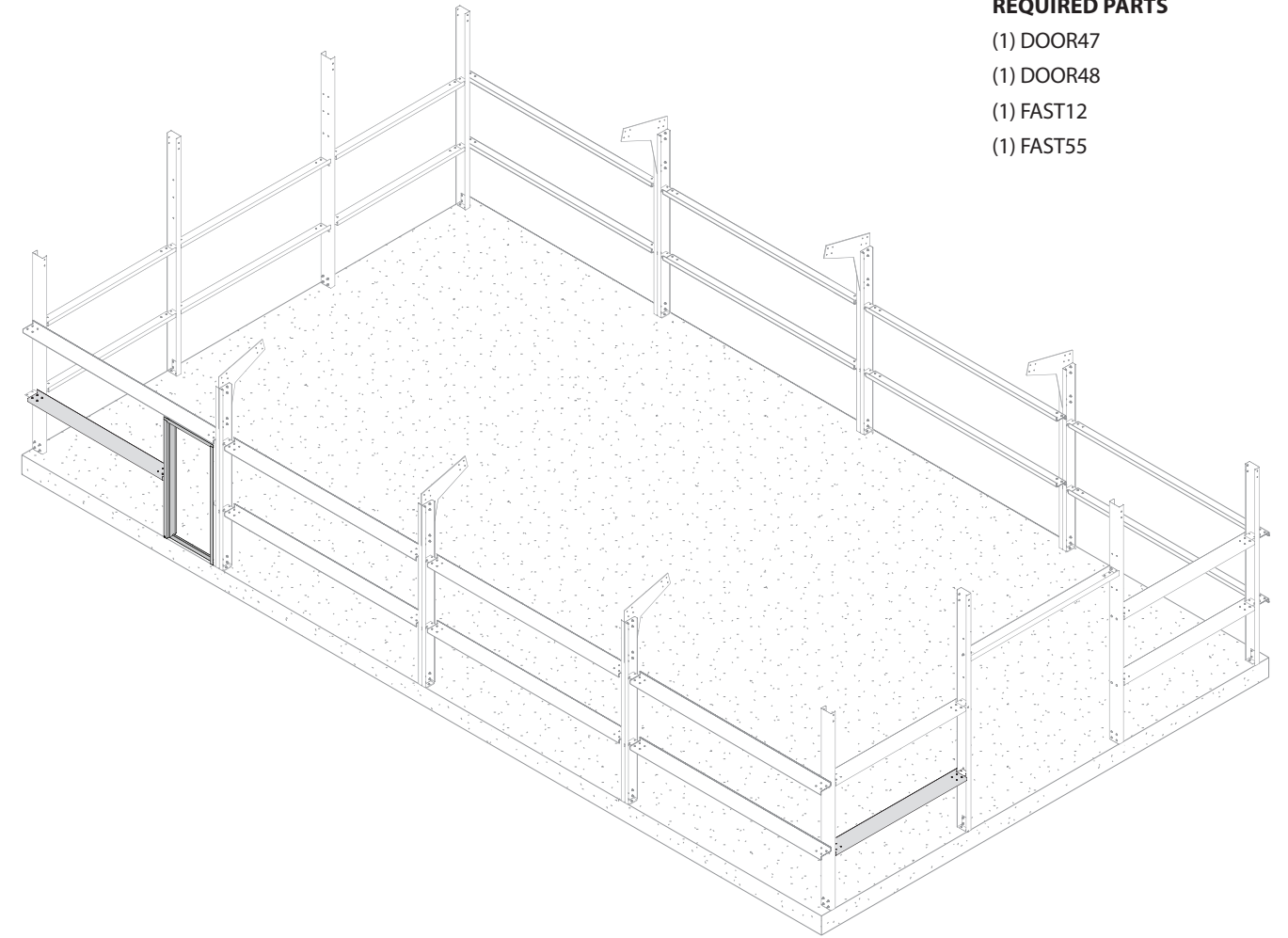
## DIRECTIONS

### Option 1: Installing walk door in location shown above

*Note: Determine where you would like to install your walk door. Illustration above shows walk door between columns J and K, but door can be located in any location.*

1. Assemble DOOR47 and DOOR 48 as describes in manufacturer's instructions included with product.
2. Stand DOOR48 into position and secure using FAST12 to zee girt at 7'4" height. Install between columns K & L.
3. Use FAST55 to fasten bottom of DOOR48 to concrete.
4. Install DOOR47 into DOOR48 using manufacturer's instructions included with product.

# STEP 21 CONT.



## REQUIRED PARTS

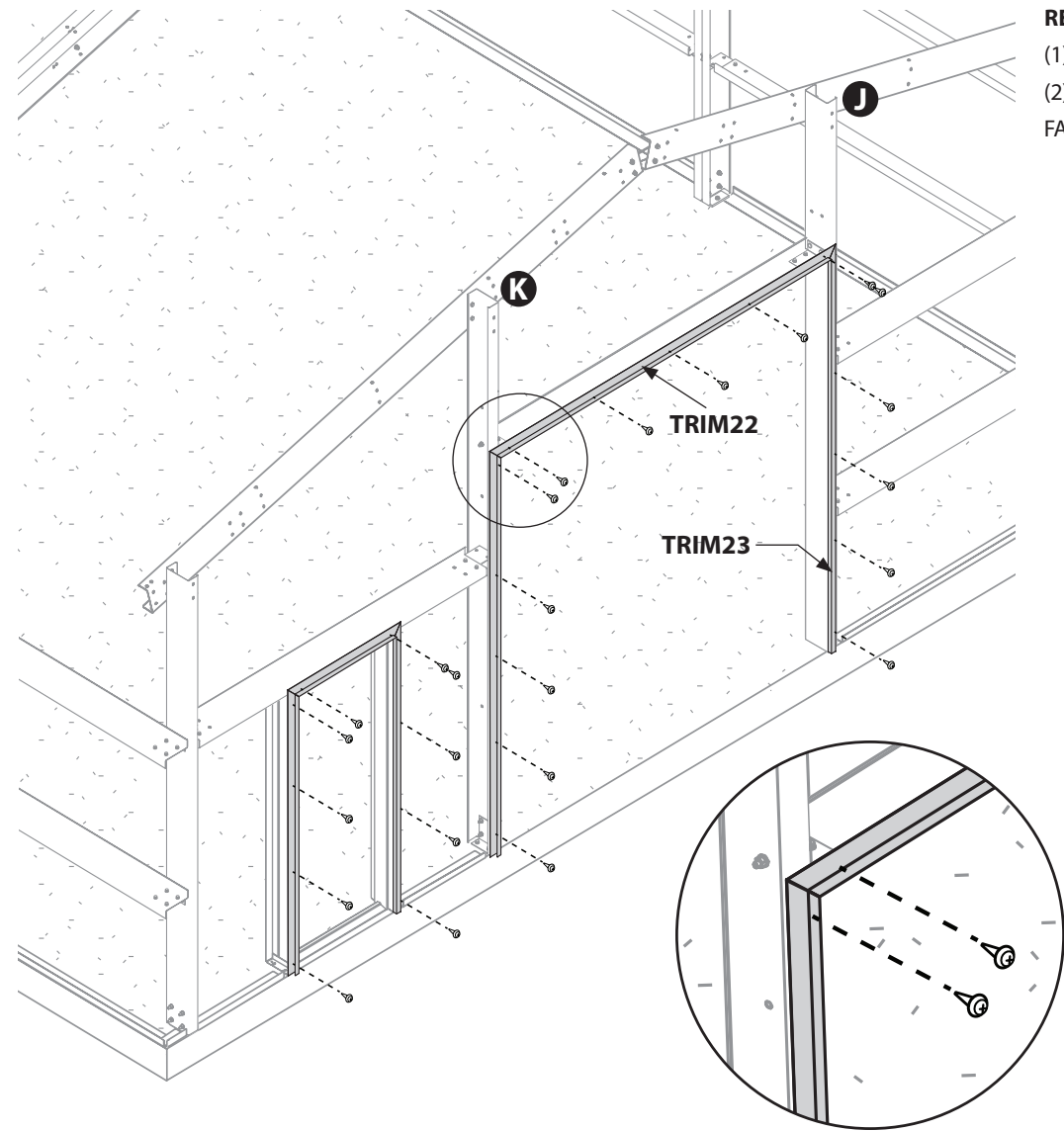
- (1) DOOR47
- (1) DOOR48
- (1) FAST12
- (1) FAST55

## DIRECTIONS

### Option 2: Installing door into an alternate location

1. Remove the zee at 3'6" height previously installed in the bay you wish to install your walk door.
2. Install a PURLIN31 between columns J & I.
3. Follow STEPS 1-4 listed in Option 1.
4. Measure the distance from between the DOOR48 and column. Cut the removed zee girt from step 1 in Option 2 to fit between the column and DOOR48.  
(You are basically cutting a gap into the wall girt to allow for the walk door.)
5. Install the newly-cut zee girt between the column and DOOR48 using FAST12.  
Do this on both sides of DOOR48 if necessary.

# STEP 22



## REQUIRED PARTS

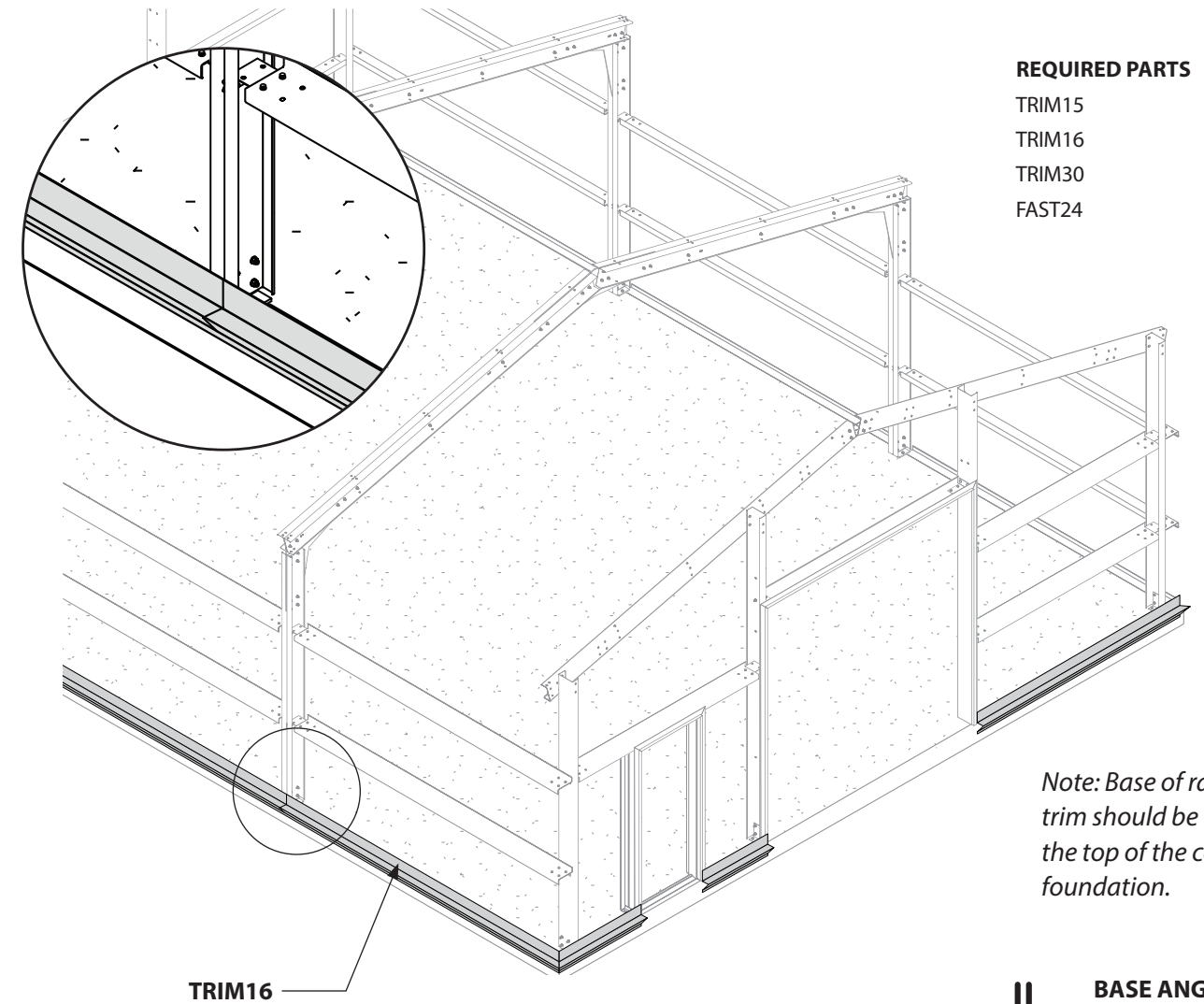
- (1) TRIM26
- (2) TRIM27
- FAST24

## DIRECTIONS

### Trim Framed Opening

1. Install TRIM23 along columns I and J, with the mouth of trim facing outward as shown. Fasten to exterior side of the building with FAST24 every 24". FAST24 will go through TRIM23 and TRIM24 to fasten both to purlin.
2. Install TRIM22 along wall girt between column J & K, with the mouth of trim facing upward as shown. Fasten to exterior side of building with FAST24 every 24". FAST24 will go through TRIM22 and TRIM24 to fasten both.
3. Repeat previous steps for the walk door with TRIM26 and TRIM27.

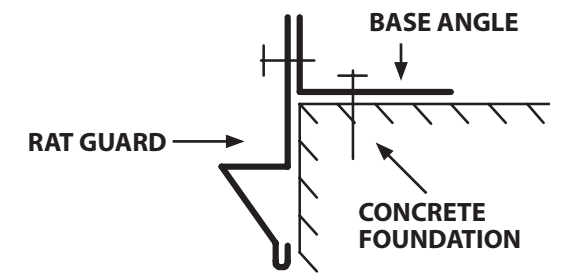
# STEP 23



## REQUIRED PARTS

- TRIM15
- TRIM16
- TRIM30
- FAST24

*Note: Base of rat guard trim should be below the top of the concrete foundation.*



## DIRECTIONS

### Install Ratguard Trim

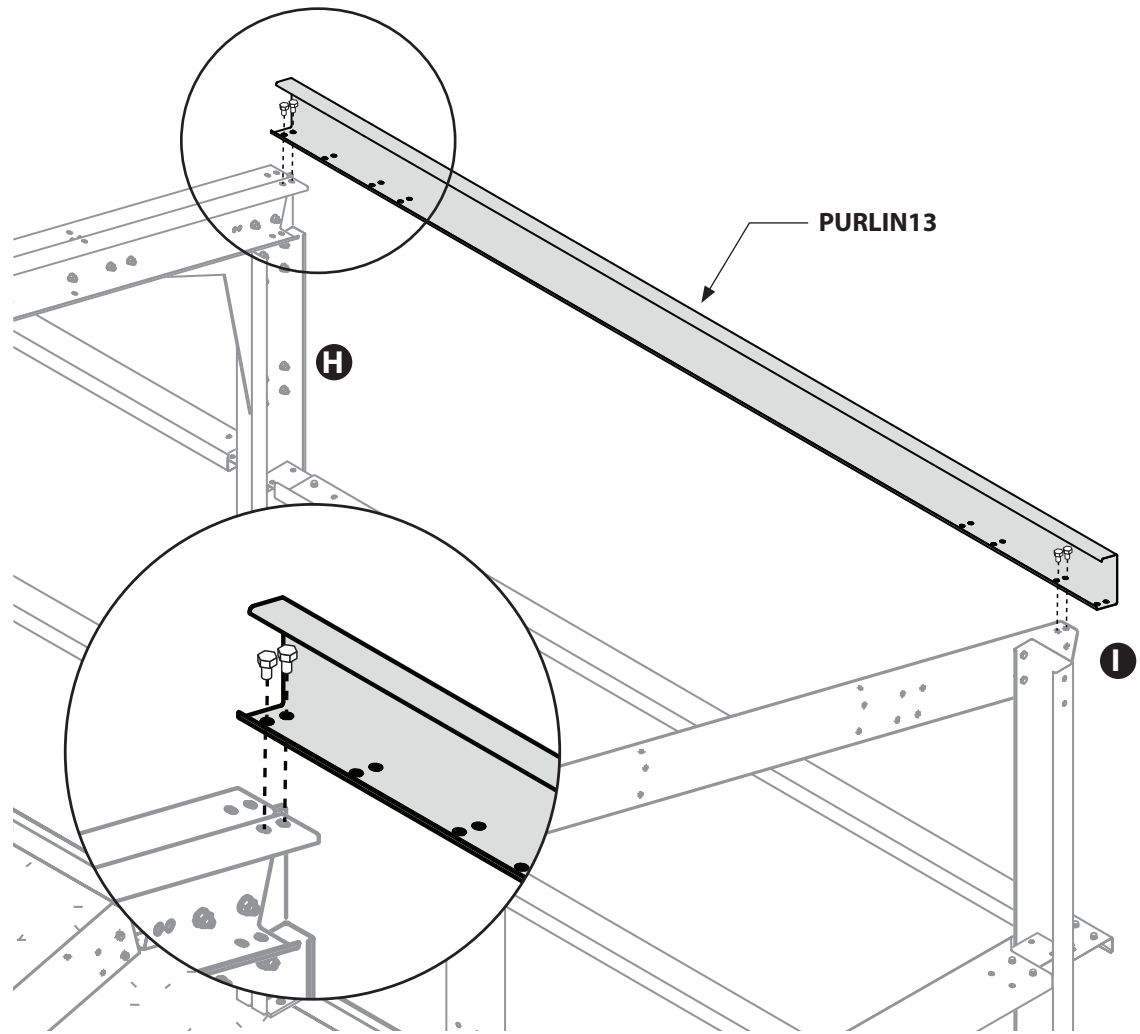
*Note: In this step, you will be installing the trim along the bottom of the building. This trim is available in lengths of 14'2" (TRIM16) and 16'2" (TRIM30) and will be cut as needed to fit around the building. They will not be installed where any opening or doors are located. (overlap as necessary)*

1. Cut TRIM16 and install as shown, fastening to base angle (PURLIN36-40) with FAST24 as needed.
2. Repeat this step around the base of the building, except in spaces for framed openings and walk doors.

# STEP 24

## REQUIRED PARTS

- (1) PURLIN13
- (4) FAST54



## DIRECTIONS

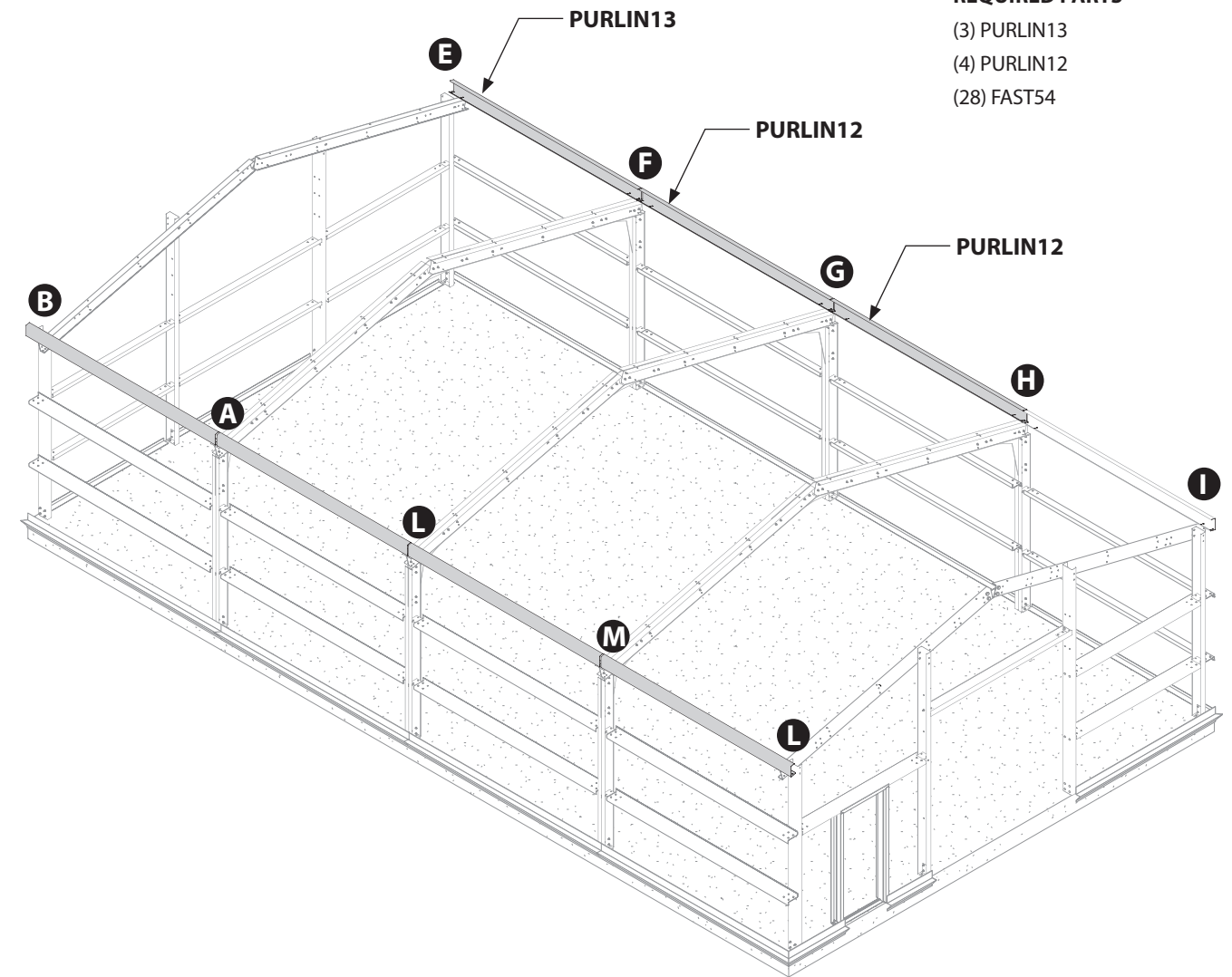
### Install Eavestruts

Bolt PURLIN13 on top of column H and I using FAST54 as shown above.

# STEP 25

## REQUIRED PARTS

- (3) PURLIN13
- (4) PURLIN12
- (28) FAST54



## DIRECTIONS

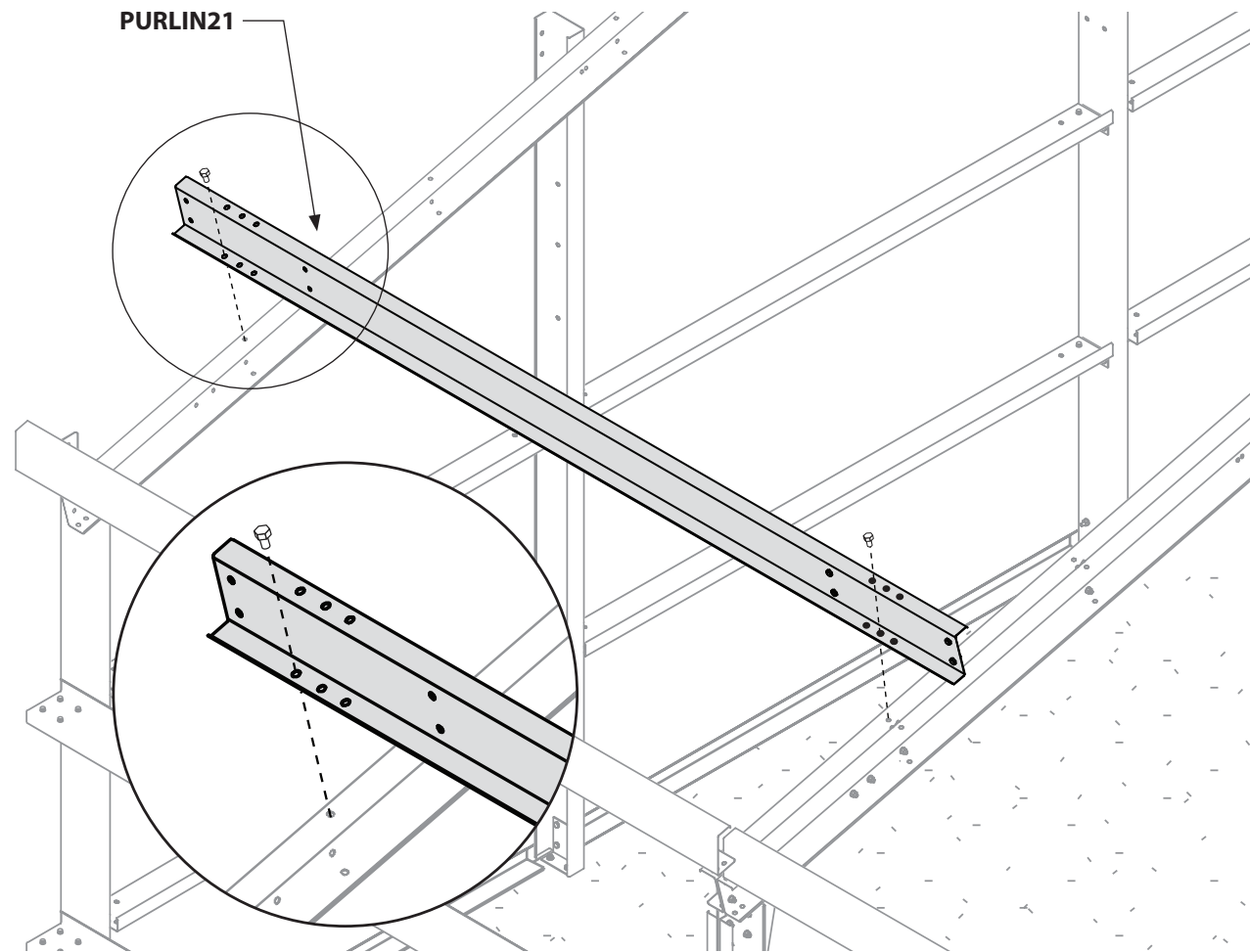
### Install Eavestruts

Repeat previous step between Columns B & L, and Columns E & H. The middle bays will use PURLIN12. The outside bays will use PURLIN13.

# STEP 26

## REQUIRED PARTS

- (1) PURLIN21
- (2) FAST54



## DIRECTIONS

### Install Roof Purlins

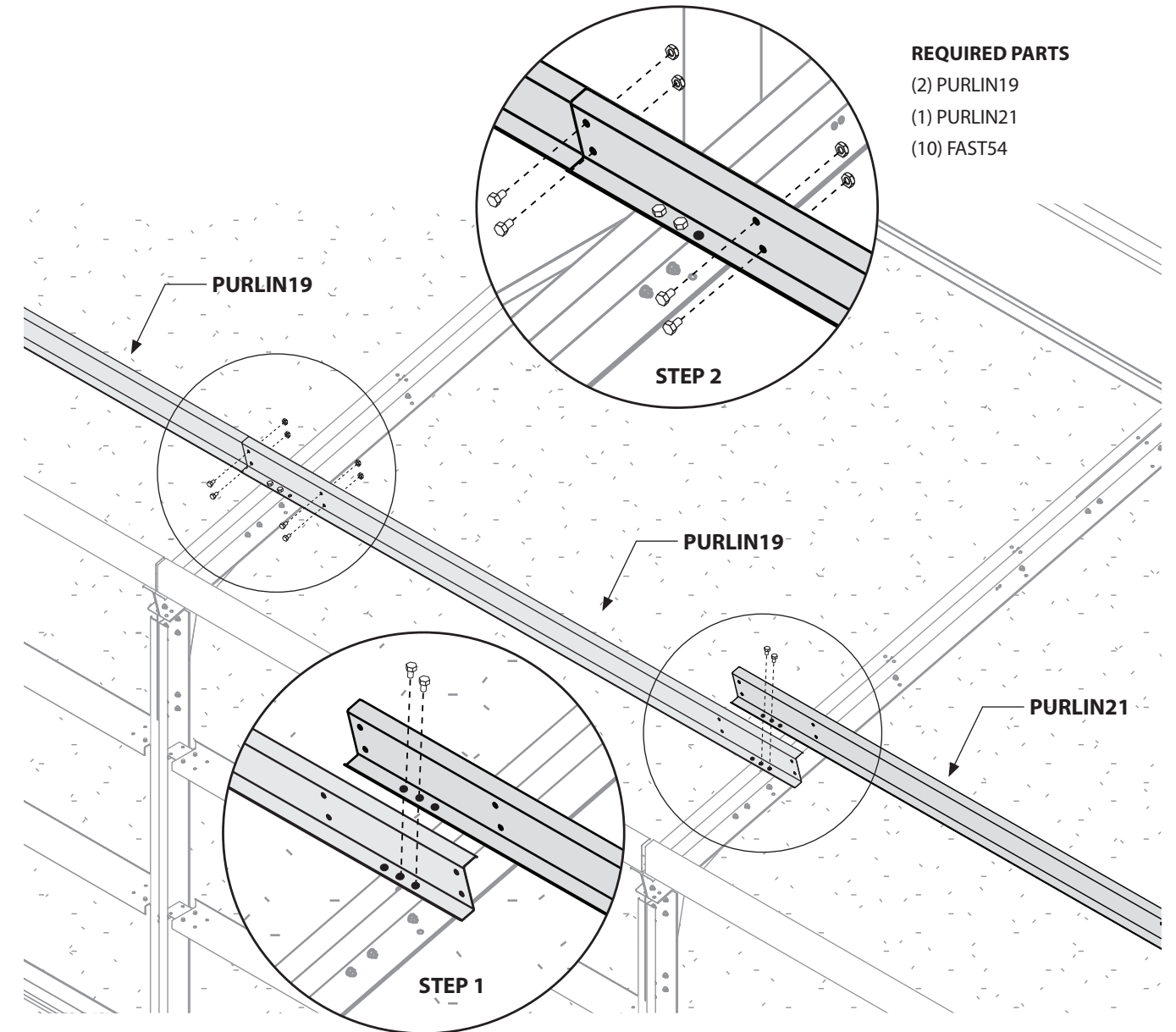
*Note: The bolt along the center rafter is temporary.(Do not over tighten)*

Install PURLIN21 between endwall rafter and center using FAST54 as shown above.

# STEP 27

## REQUIRED PARTS

- (2) PURLIN19
- (1) PURLIN21
- (10) FAST54



## DIRECTIONS

### Install Roof Purlins

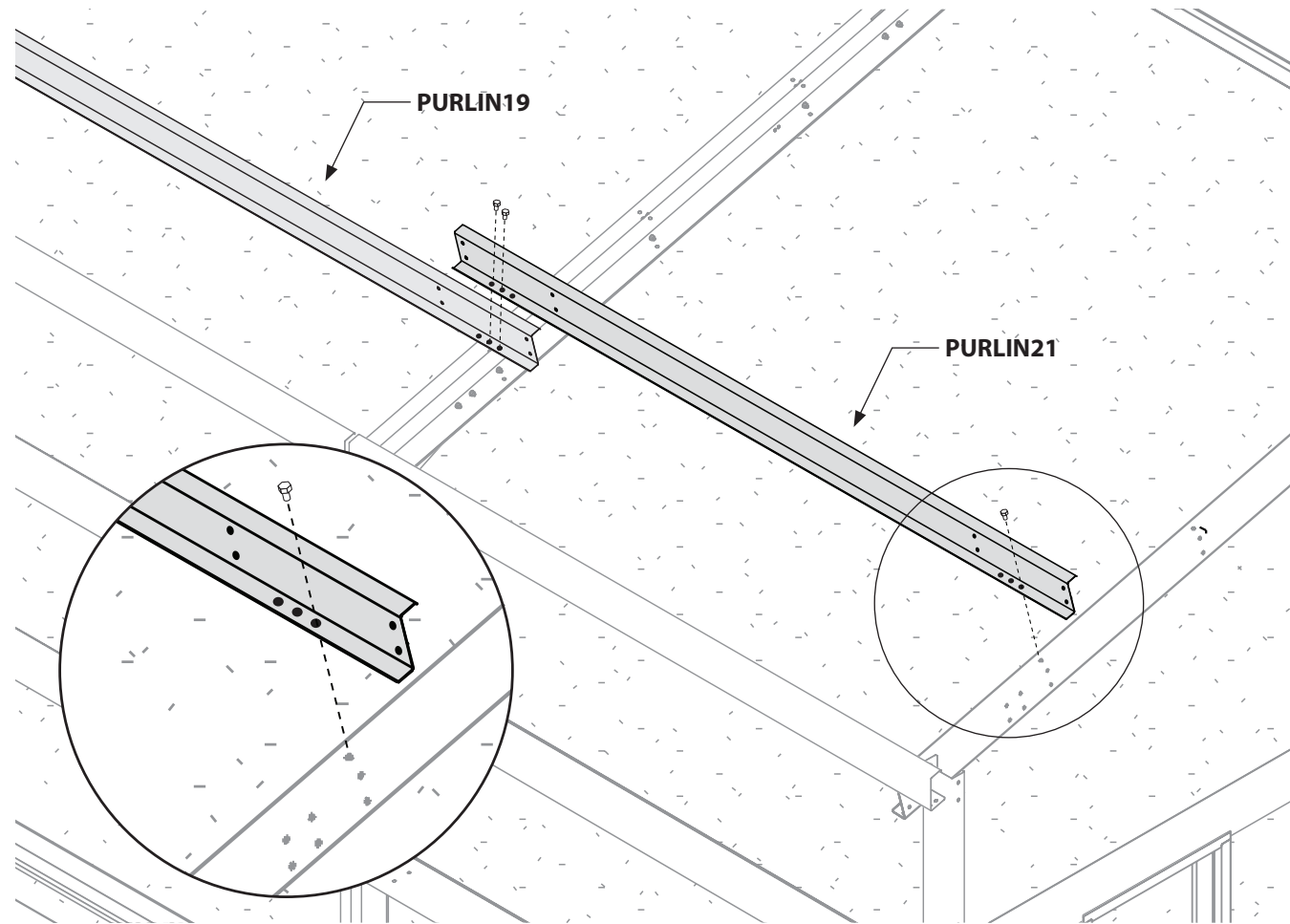
*Note: Remove the bolt from the center rafter before installing PURLIN19.*

1. Overlap two PURLIN19 and fasten to center rafters as shown in STEP 1.
2. Secure PURLIN19 through web with four FAST54 as shown in STEP 2.
3. Follow same steps to secure PURLIN 19 to PURLIN21.

# STEP 28

## REQUIRED PARTS

- (1) PURLIN21
- (7) FAST54



## DIRECTIONS

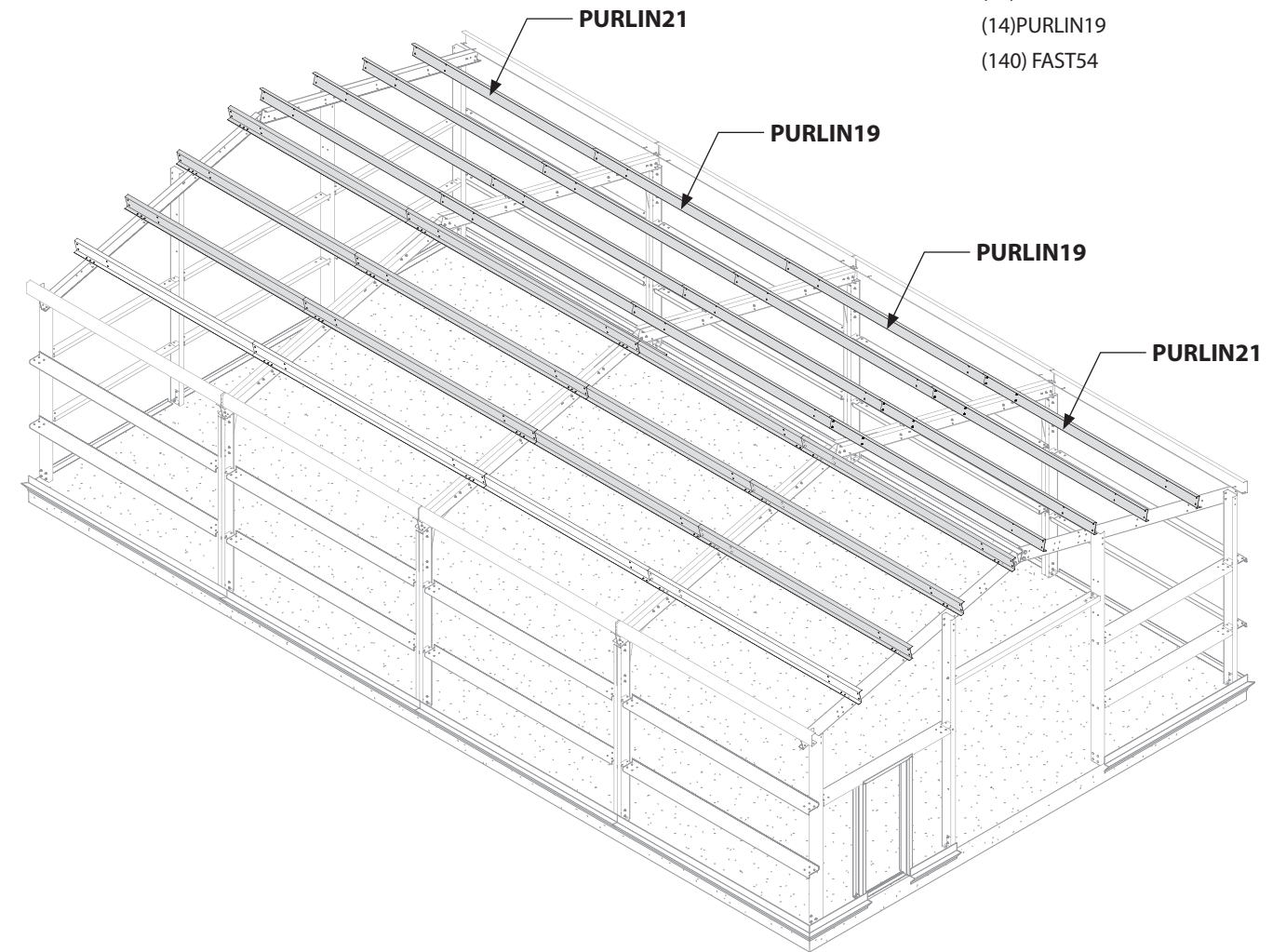
### Install Roof Purlins

Install PURLIN21 over end rafter as shown

# STEP 29

## REQUIRED PARTS

- (14) PURLIN21
- (14) PURLIN19
- (140) FAST54



## DIRECTIONS

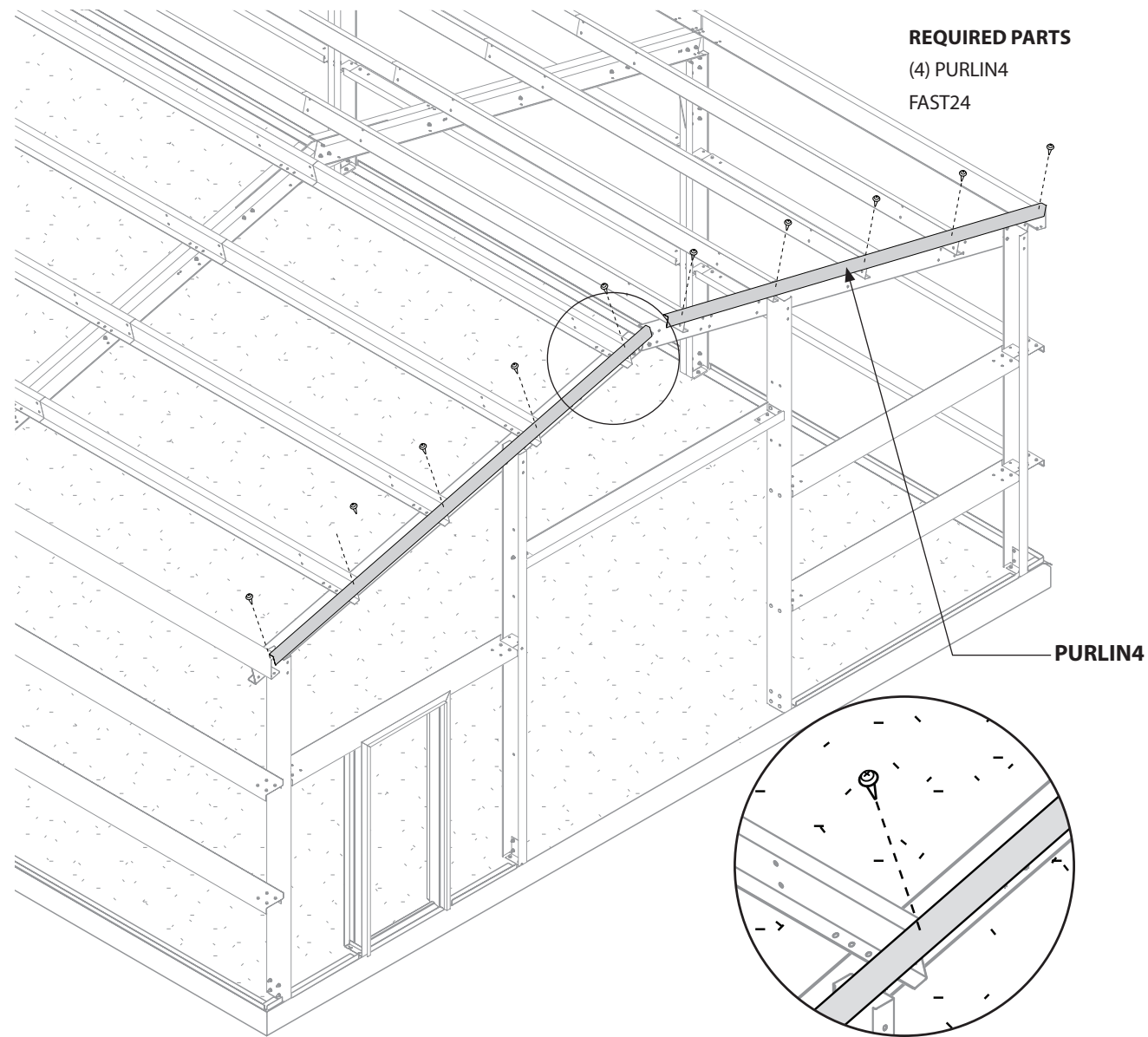
### Install Roof PURLINS

Repeat steps 26-28 to install the remaining roof PURLINS.

NOTE: After completing STEP29, ensure that building is square by placing a strap on each corner and ratcheting corner columns until they are level. Then tighten all bolts on building while strapping is still in place. Remove strapping after bolts are properly tightened.



# STEP 30



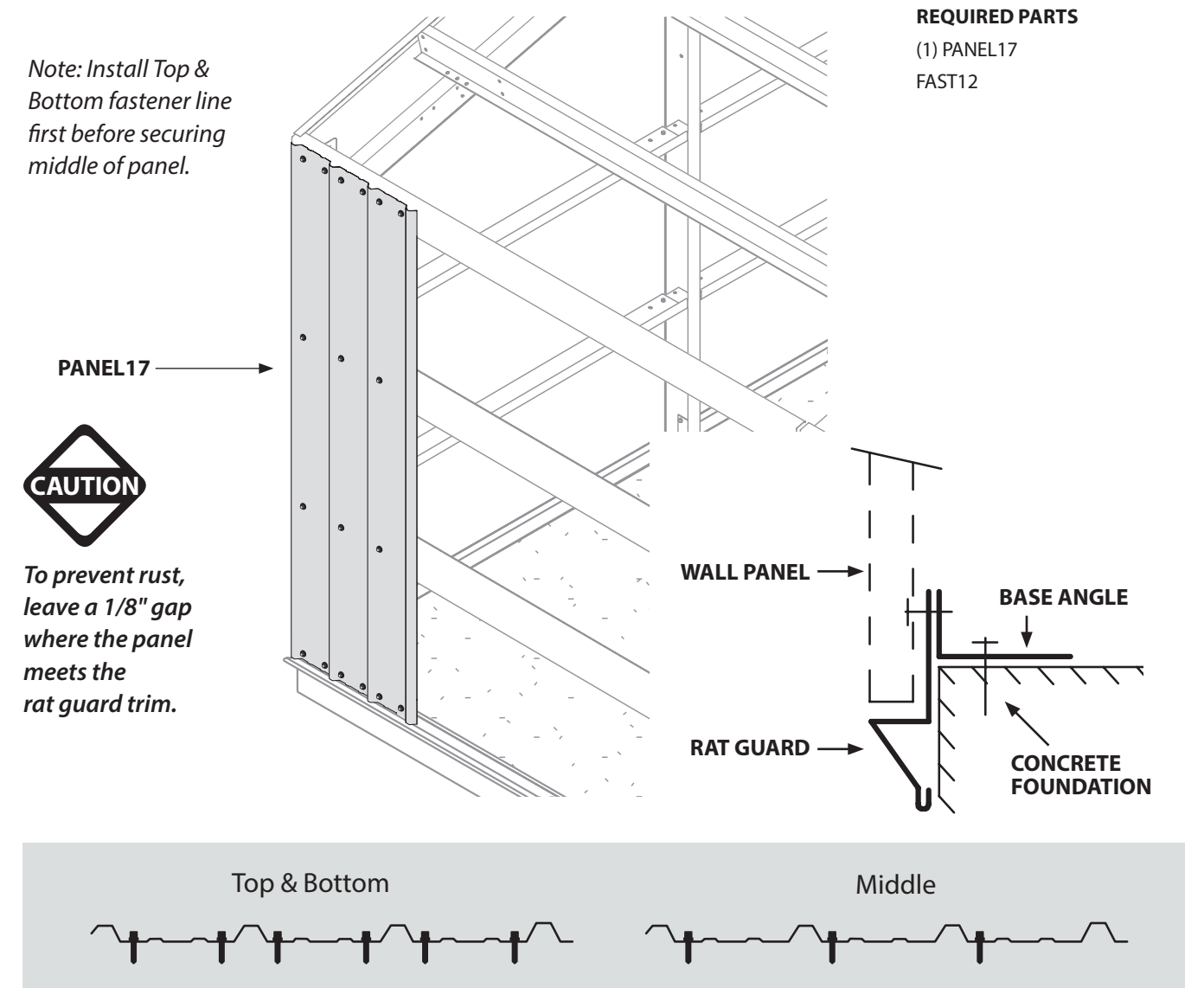
## DIRECTIONS

### Install Rake Angle

Install PURLIN4 above endwall rafter using FAST24 as shown above.

If you have the wainscot option, please refer to page 64 for assembly instructions.

# STEP 31



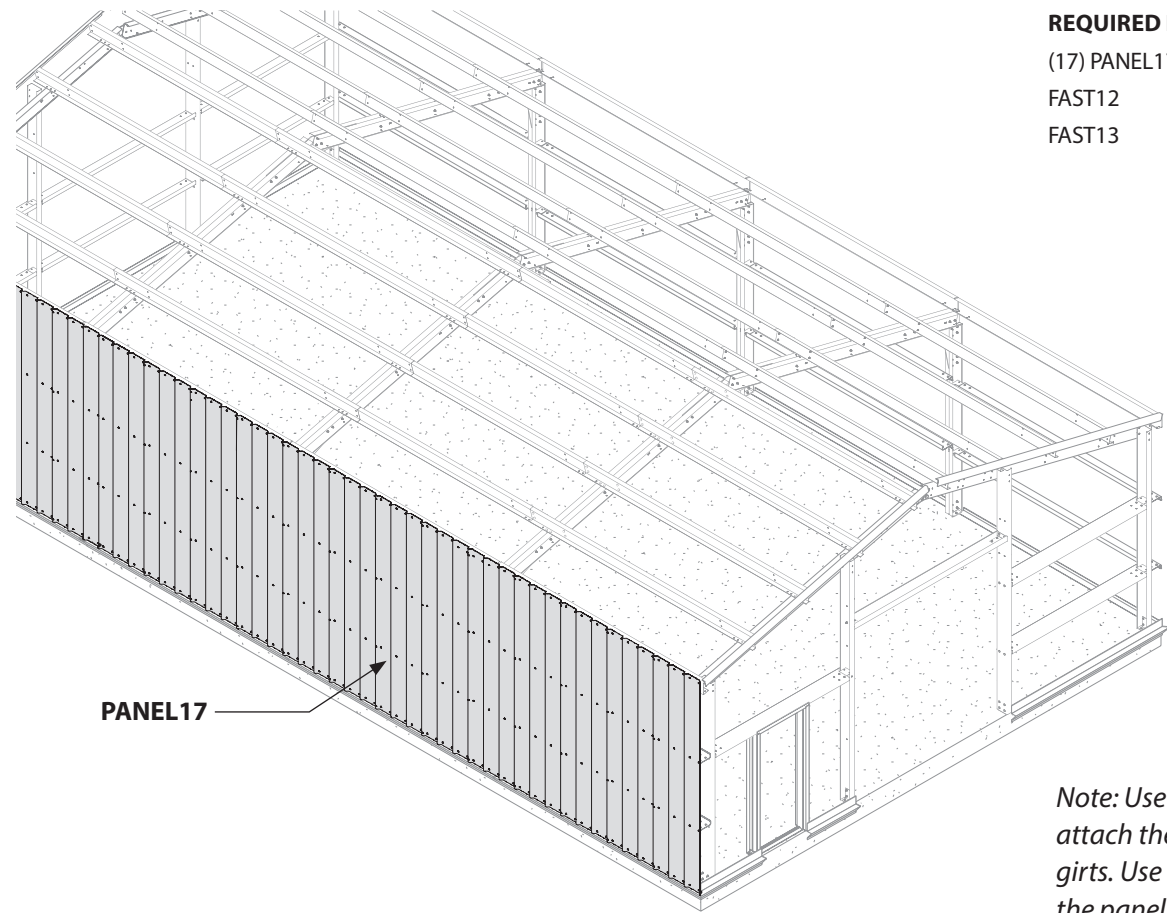
## DIRECTIONS

### Install Wall Sheeting

Note: Before installing, take note to which direction the prevailing winds come from at your location. You will want to begin installing panels on the end that is farthest away from the prevailing wind direction. This will allow the panel overlaps to not be exposed to the highest wind. (For example, if the strongest wind typically comes from the West, begin installing panels on the East end of your wall. Begin on the sidewall with the least amount of framed openings.)

1. Install one sheet of PANEL17 at the edge of your sidewall. Fasten PANEL17 to the wall girts using FAST12. Be careful to note the underlap and the overlap side of the panel.
2. Follow the diagram for fastener pattern at bottom and top of panel.
3. Follow the diagram for fastener pattern at 3'6" and 7'4" wall girt.

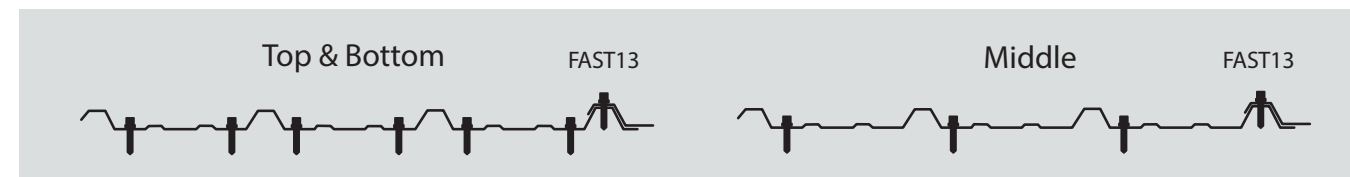
# STEP 32



### REQUIRED PARTS

- (17) PANEL17
- FAST12
- FAST13

*Note: Use FAST12 to attach the panels to the girts. Use FAST13 when the panels overlap.*



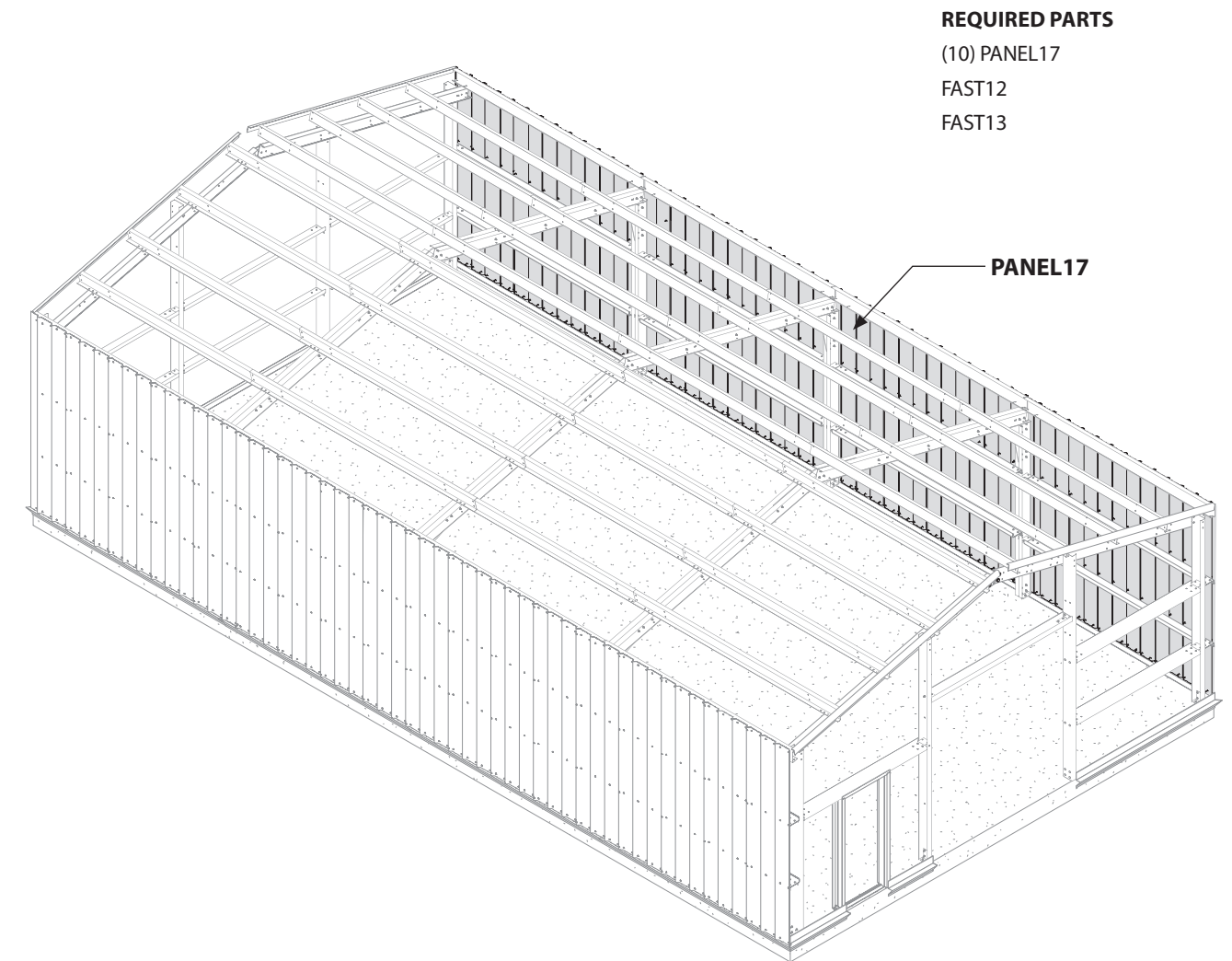
## DIRECTIONS

### Install Wall Sheeting

*Also, some panels may be overlapped more than 1 rib to avoid cutting. If necessary, panel may be cut long ways at ending edge of sidewall.*

1. Repeat STEP 31 for the 17 remaining panels of the sidewall, overlapping panels as shown in the diagram.
2. Use FAST12 to secure panels to the purlins. Use FAST13 when securing the panels together.
3. If necessary, measure and cut panels to allow for framed openings and walkdoors.

# STEP 33



### REQUIRED PARTS

- (10) PANEL17
- FAST12
- FAST13

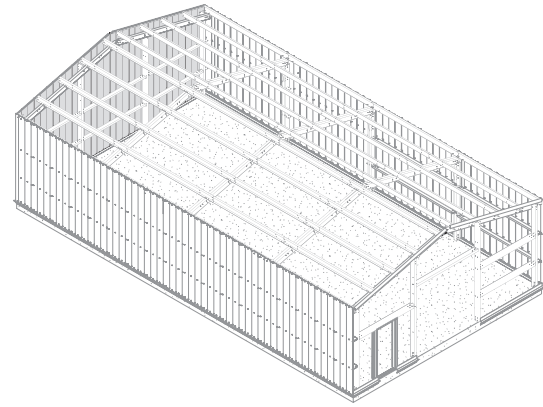
## DIRECTIONS

### Install Wall Sheeting

*Also, some panels may be overlapped more than 1 rib to avoid cutting. If necessary, panel may be cut long ways at ending edge of sidewall.*

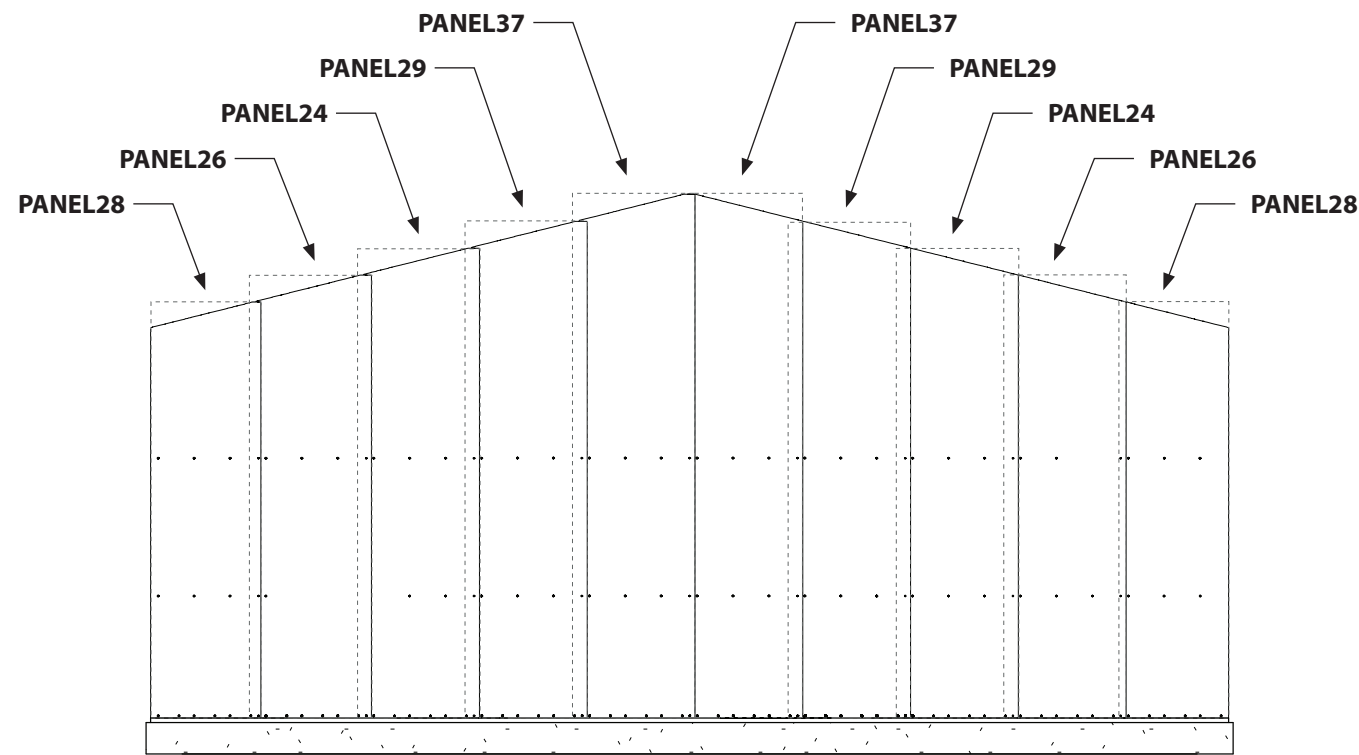
1. Repeat STEP 31 and 32 for the other sidewall.
2. If necessary, measure and cut panels to allow for framed openings and walkdoors.

# STEP 34



## REQUIRED PARTS

- (2) PANEL37
- (2) PANEL24
- (2) PANEL26
- (2) PANEL28
- (2) PANEL29
- FAST12
- FAST13



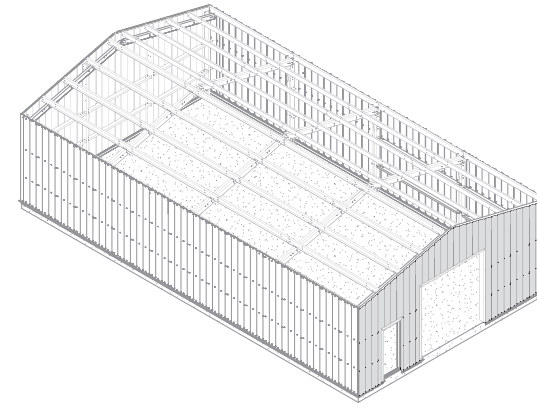
## DIRECTIONS

### Install Wall Sheeting

Also, some panels may be overlapped more than 1 rib to avoid cutting. If necessary, panel may be cut long ways at ending edge of sidewall.

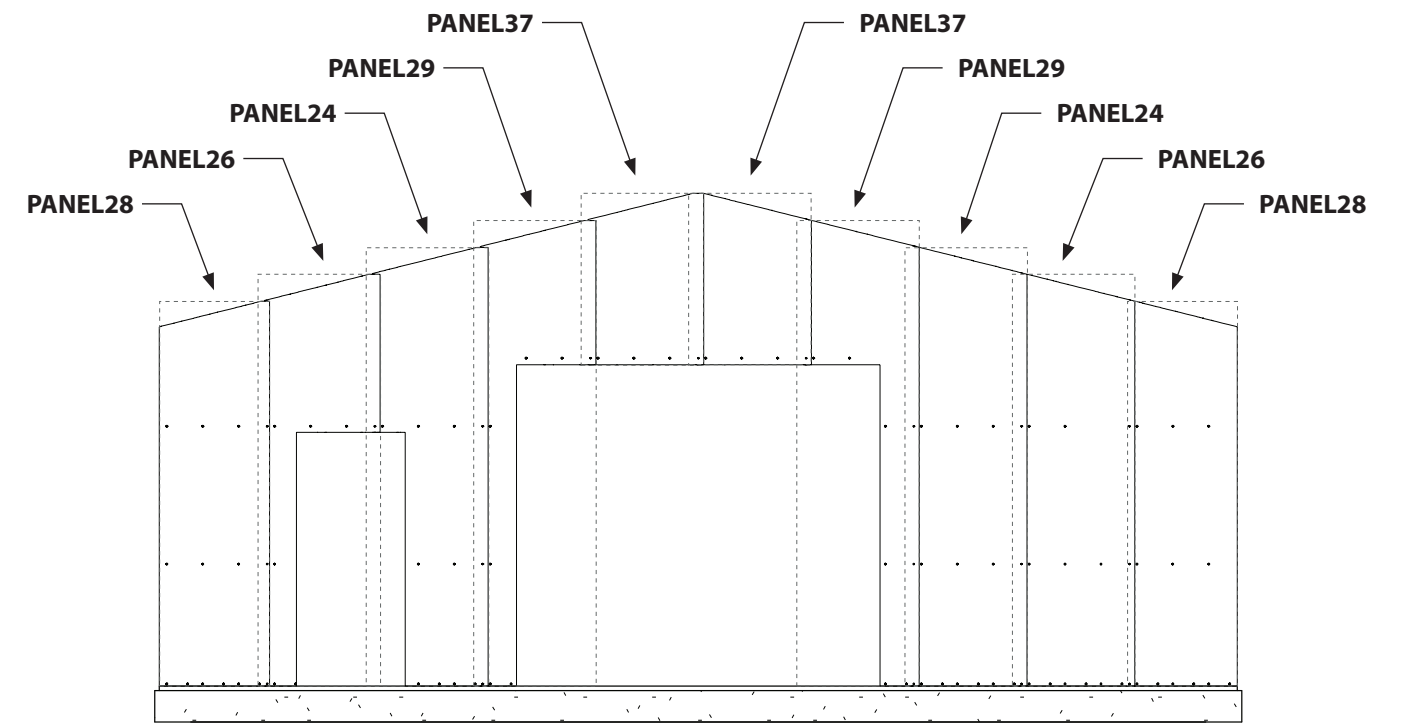
1. Assemble the panels shown above for the end wall. Cut Panel tops to follow roof line.
2. Use the diagram on page 51 for the screw placement. Follow diagram A for fastener pattern at bottom and top of panel. Follow diagram B for fastener pattern at 3'6" and 7'4" wall girt.
3. If necessary, measure and cut panels to allow for framed openings and walkdoors.

# STEP 35



## REQUIRED PARTS

- (2) PANEL37
- (2) PANEL24
- (2) PANEL26
- (2) PANEL28
- (2) PANEL29
- FAST12
- FAST13



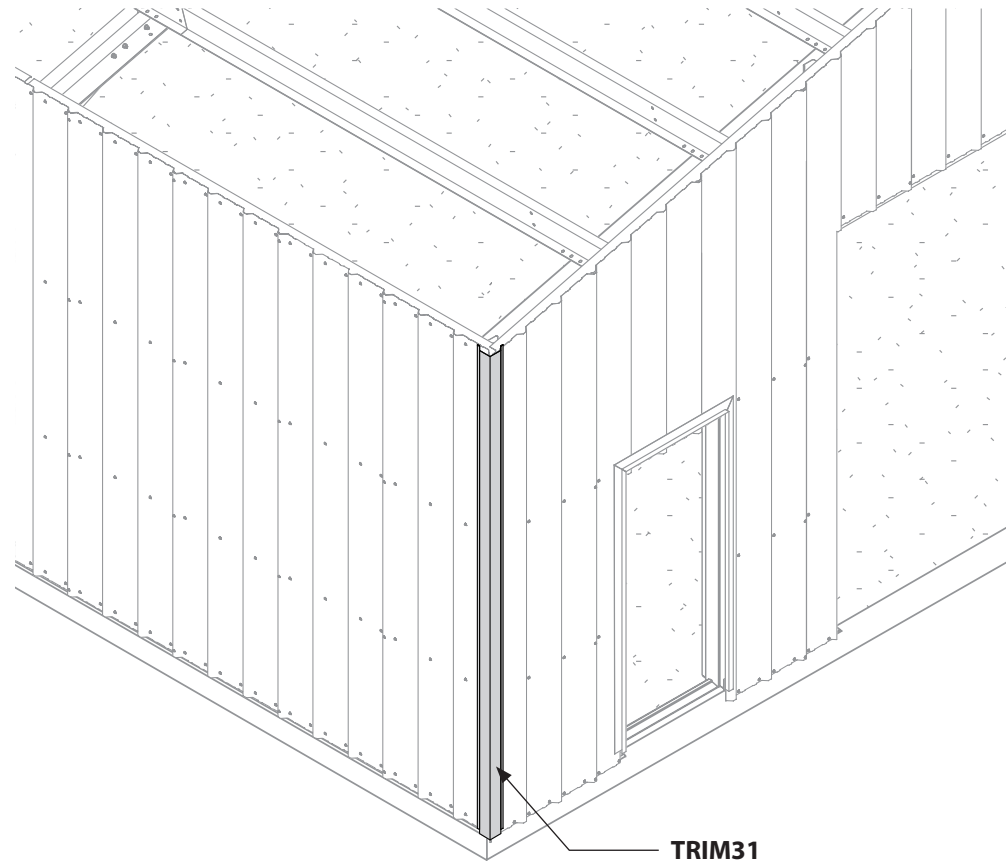
## DIRECTIONS

### Install Remaining Wall Panels

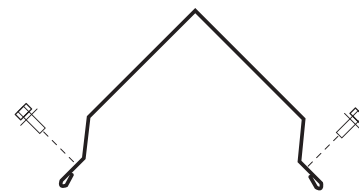
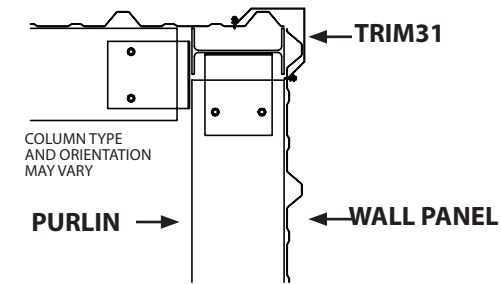
Also, some panels may be overlapped more than 1 rib to avoid cutting. If necessary, panel may be cut long ways at ending edge of sidewall.

1. Assemble the panels shown above for the front wall. Cut panel tops to follow roof line.
2. Use the diagram on page 53 for the screw placement. Follow diagram A for fastener pattern at bottom and top of panel. Follow diagram B for fastener pattern at 3'6" and 7'4" wall girt.
2. If necessary, measure and cut panels to allow for framed openings and walkdoors.

# STEP 36



**REQUIRED PARTS**  
 (4) TRIM31  
 FAST23

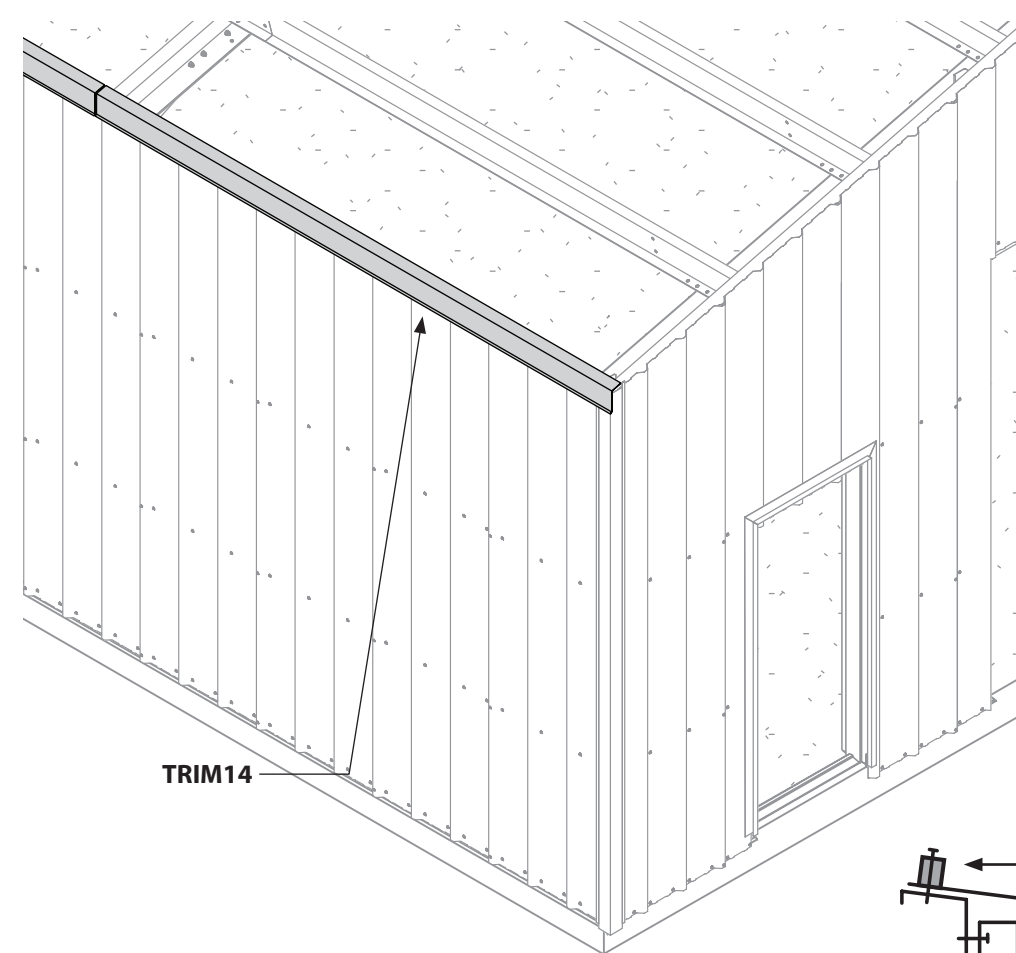


## DIRECTIONS

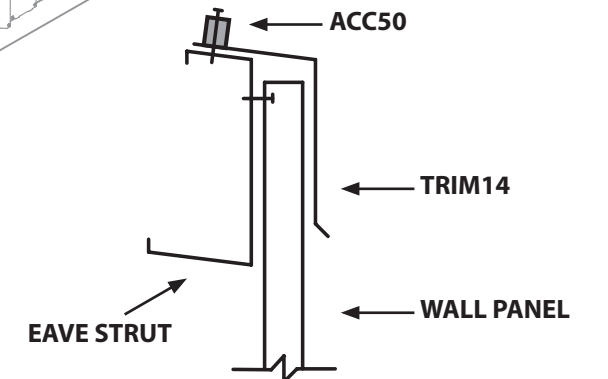
### Install TRIM21

Install all 4 TRIM31 with FAST23 along the corners of the wall panels. Place fasteners to match fastener line on wall panels (do not overtighten). The above diagram shows the fastener placement location.

# STEP 37



**REQUIRED PARTS**  
 (4) TRIM14  
 FAST12  
 ACC50



## DIRECTIONS

### Install TRIM14

1. Place ACC50 on top of TRIM14 by installing. Line up rib profile of closure with wall panel rib profile. Place on edge of top leg of trim.
2. Install TRIM14 above the eavestrut (PURLIN30) as shown above using FAST12.
3. Repeat on both sidewalls.

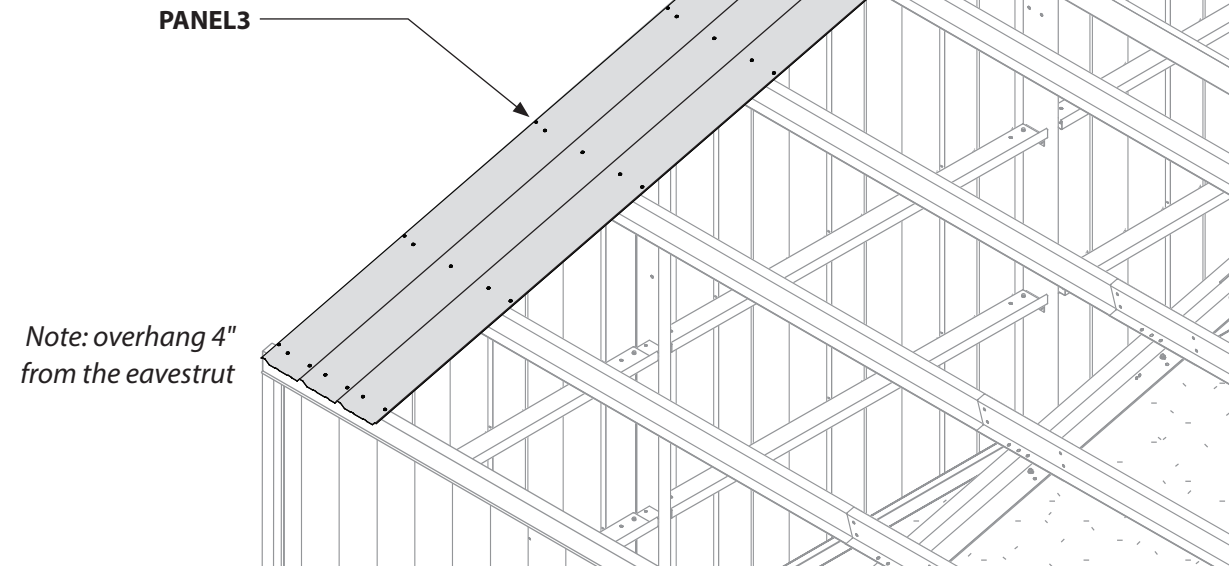
# STEP 38

If you are installing gutters, please go to page 70 before proceeding.

*Tip: Squareness is key on this first panel. Start by aligning the panel along the rake angle. Then measure that each side is hanging over the eave trim by 3". Continue this down the roof line.*

*Note: Do not fasten top row. Will be fastened in Step 40.*

**REQUIRED PARTS**  
(1) PANEL3  
FAST3



*Note: overhang 4" from the eave strut*



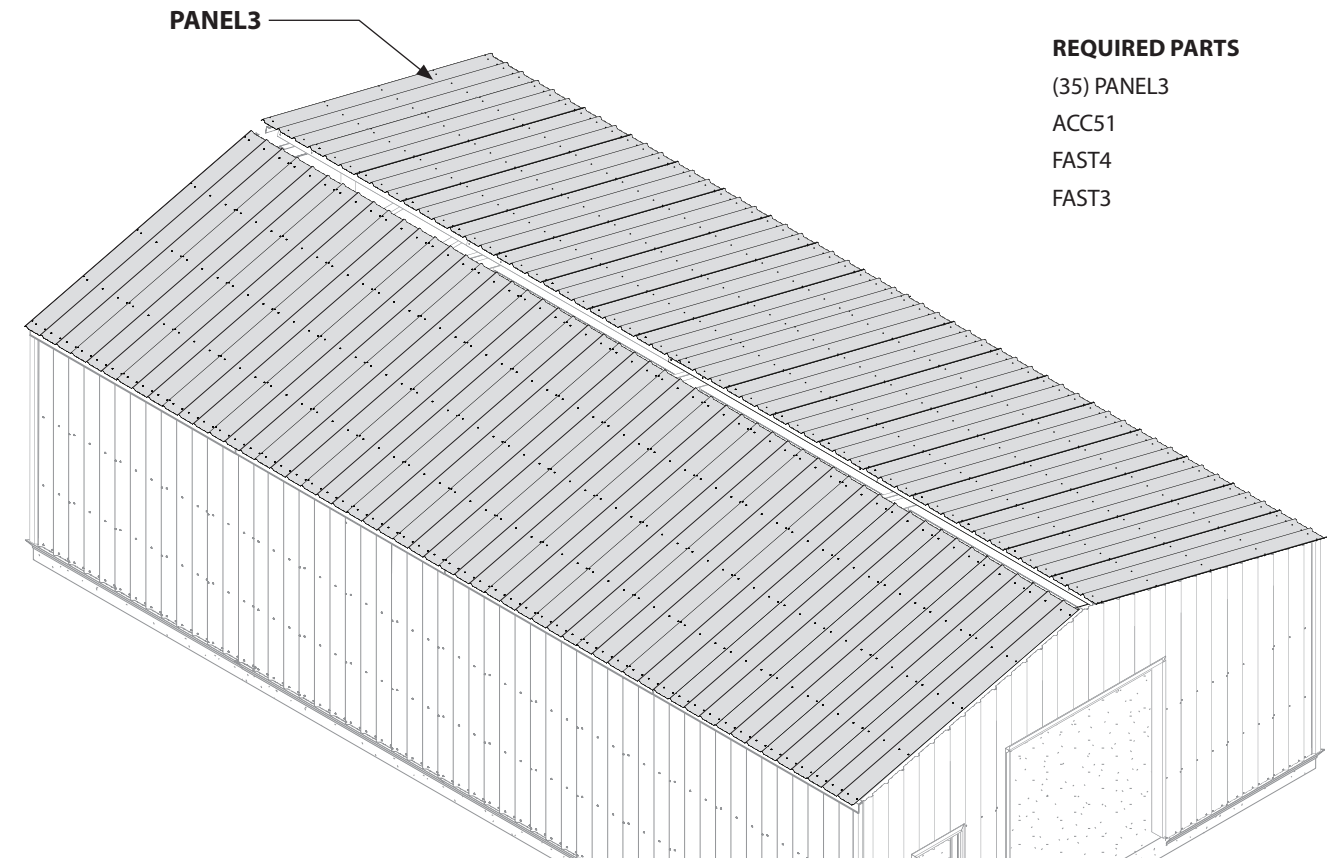
## DIRECTIONS

### Begin Sheeting the Roof

Note: Before sheeting the roof take note of the direction the prevailing winds come from. Start with the end that is opposite from your prevailing wind direction.

1. Use the above diagram for the fastener patterns when installing panels using FAST3.
2. Let the panel hang 3" over TRIM14.
3. Do not fasten at the ridge. This will be fastened when installing the ridgecap.

# STEP 39



**REQUIRED PARTS**  
(35) PANEL3  
ACC51  
FAST4  
FAST3

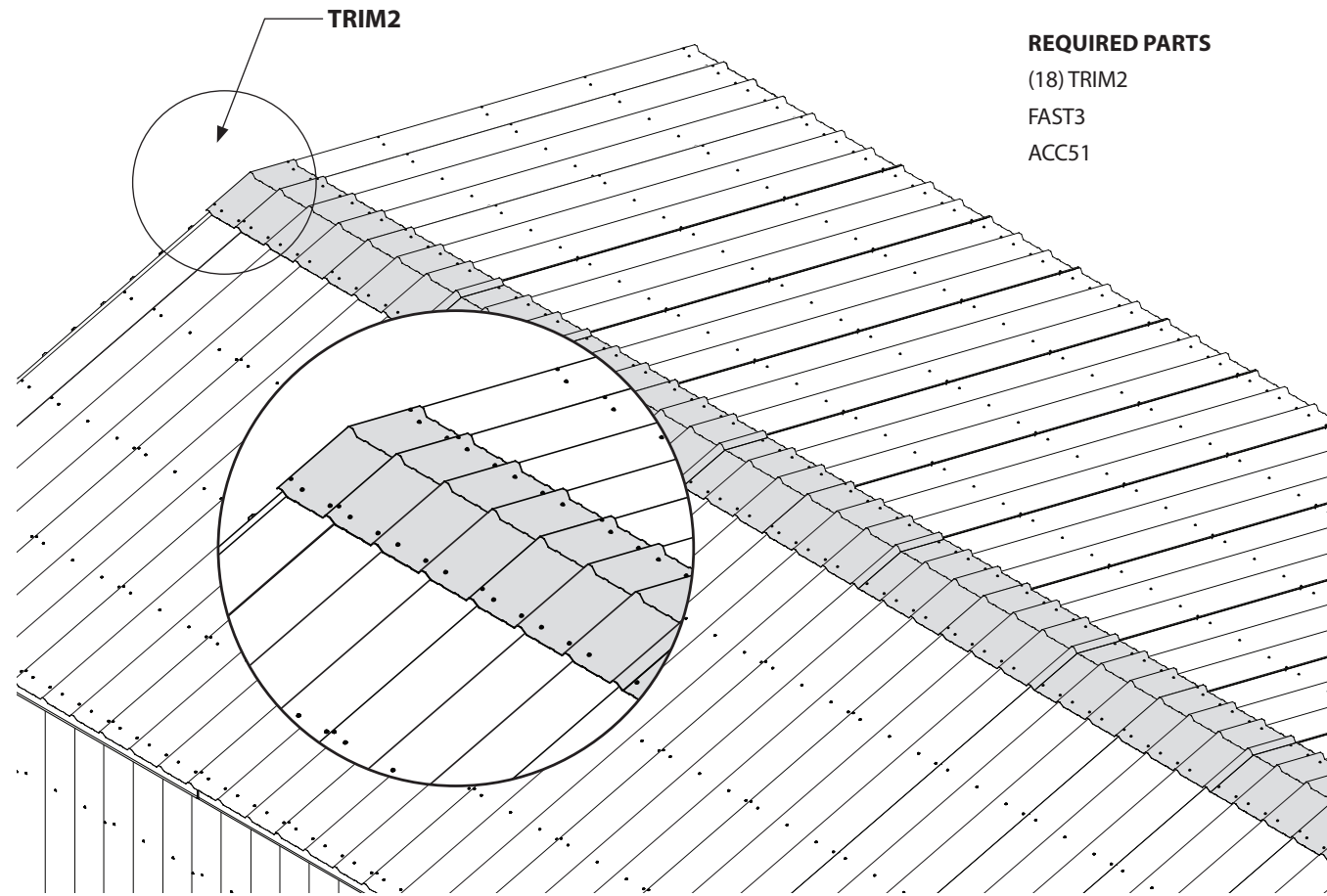


## DIRECTIONS

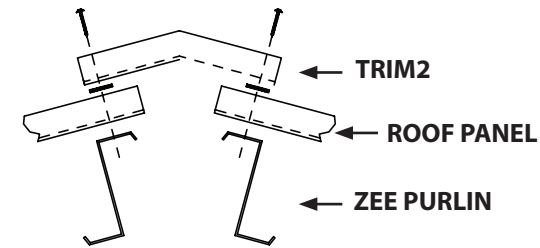
### Finish Sheeting the Roof

1. Use FAST3 to secure panels to the purlins. Use FAST4 when securing the panels together.
2. Do not overlap roof panel more than one rib, if the length of your building is not divisible by 3 then your last panel will need the excess cut off.
3. Install all of one side then in the same direction, install the opposite side. Ensure every panel installed on the opposite side is directly across from an equal rib. This will allow the formed ridge cap to be easily installed.
4. Prior to taking the panel to the roof, install a single run of ACC57 to the underside of the what will become the overlap rib; leaving one side of the wax paper installed that will be removed once the panel is placed into position on the roof. (Removing wax paper before in position or not applying before taking the panel to the roof may be more difficult, as the butyl tape will adhere to any metal it comes in contact with)
5. Place a 3' foam inside closure 6" from the bottom edge of the panel.  
Allowing the closure to rest on top of the eave trim approximately 2" from the edge once installed on the roof.

# STEP 40



**REQUIRED PARTS**  
 (18) TRIM2  
 FAST3  
 ACC51



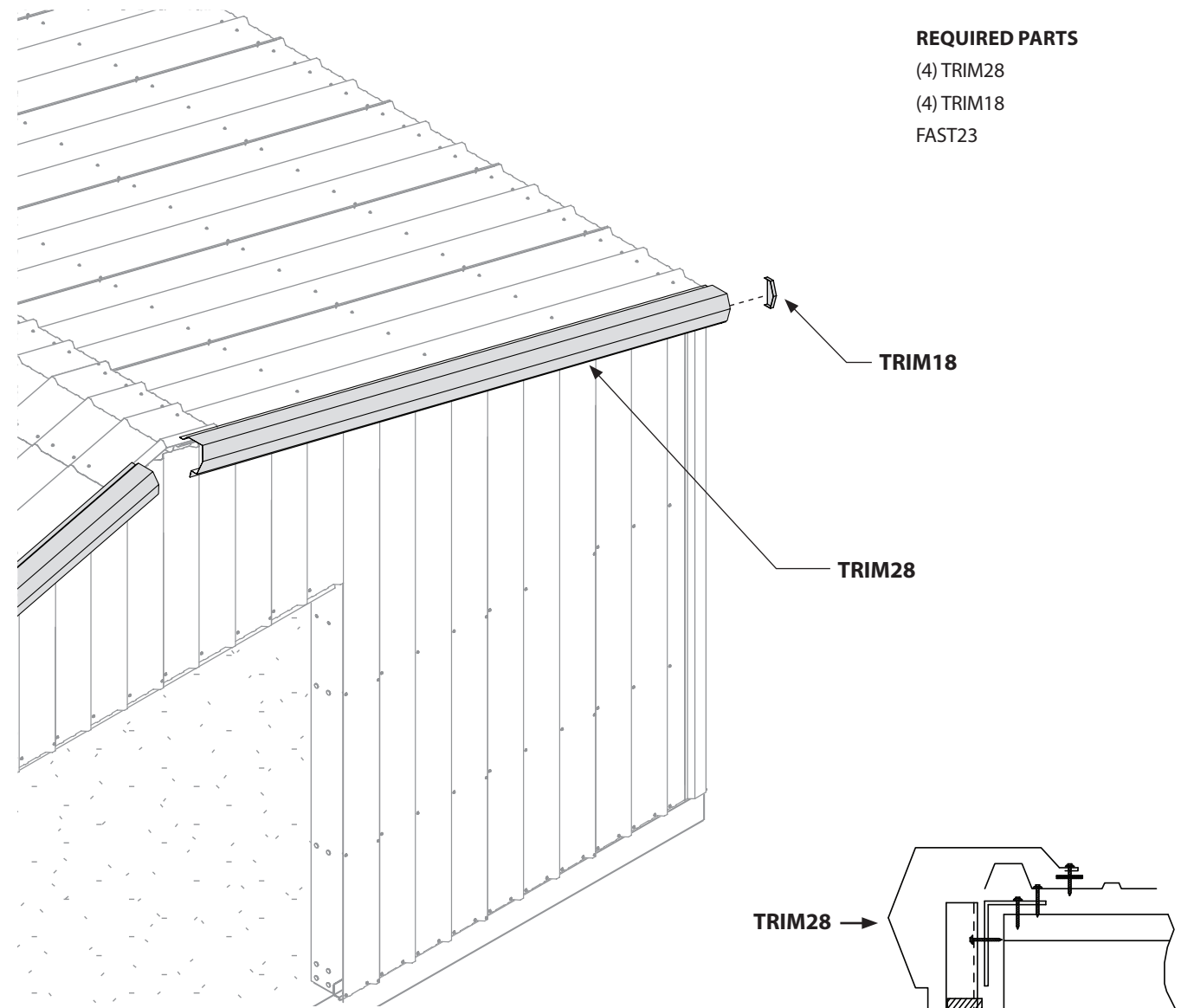
*Tip: To locate the center of ridge on building, use two levels to meet in the middle to determine apex.*

## DIRECTIONS

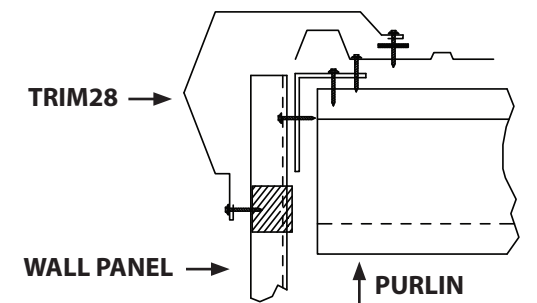
### Install the Ridge Cap

- Once all of the roof panels are installed with an inside closure above the eave trim at the low eave, and butyl tape at every lap then you may begin installing your roof formed ridge caps.
- While on the ground, run ACC51 around three sides of your ridge cap.
  - The bottom of your overlap rib.
  - The full 3' length on the bottom of both sides, 2" from the edge.
  - Leave wax paper installed until the ridge cap is in position then pull the paper off and secure ridge cap to roof panels and into the roof ZEE purlin. (DO NOT OVERLAP MORE THAN 1 RIB)
- Fasten TRIM2 to roof panels & purlins using FAST3. Be sure your fasteners are to the interior of ACC57 so the ACC57 prevents water going thru Fastener holes.

# STEP 41



**REQUIRED PARTS**  
 (4) TRIM28  
 (4) TRIM18  
 FAST23

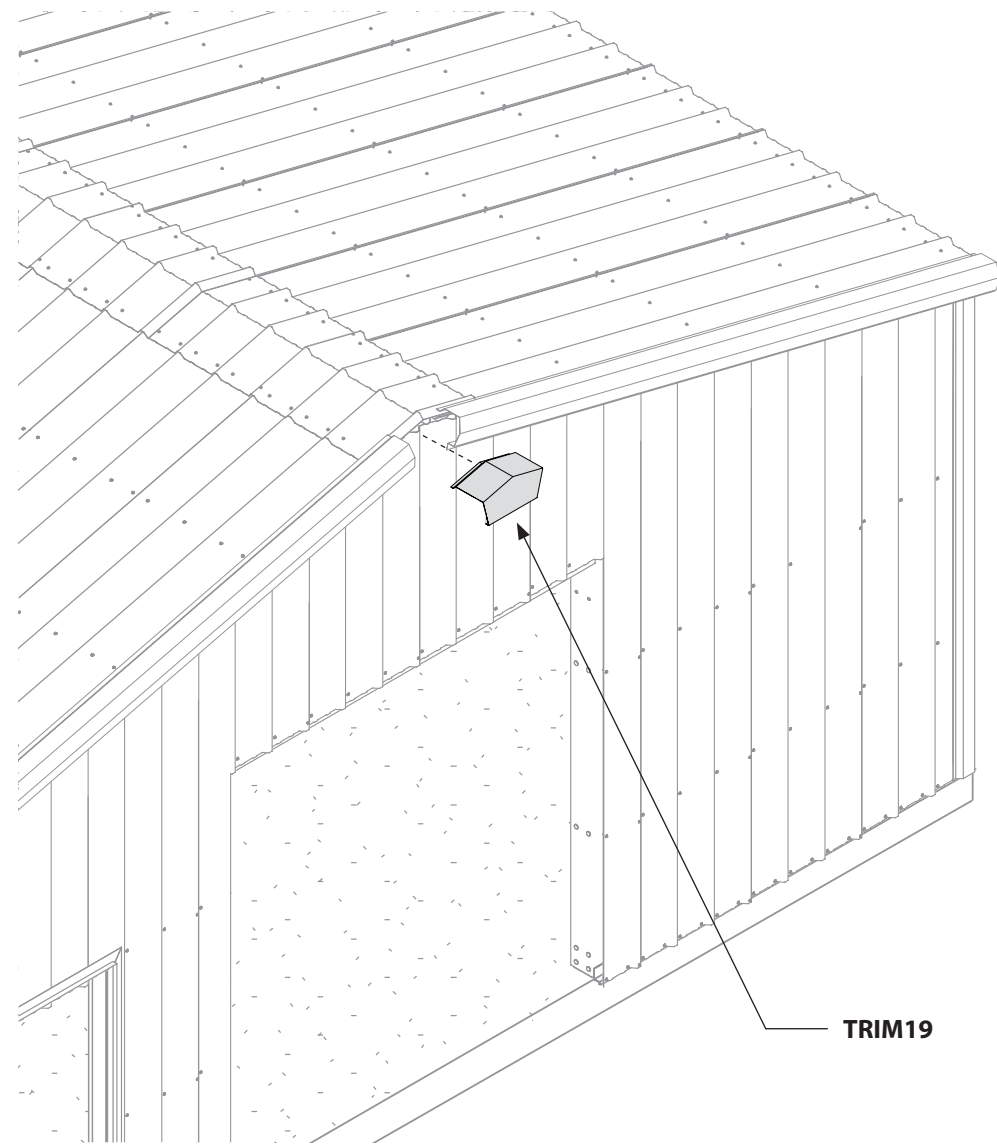


## DIRECTIONS

### Install Corner and Rake Trims

- Install the TRIM28 with TRIM18. TRIM28 may need to be cut to match panel length. Hide cut edge at top of ridge.
  - Begin by applying ACC51 to the bottom of the rake trim's hemmed edge that will rest on the roof panels; leaving the wax paper on until the trim is in place.
  - Apply the ACC53 closures to the rake trim's hemmed edge that will be fastened to the endwall panels.
  - Attach rake then remove any excess paper; giving you a mastic connection to the roof panels and expandable closures at the wall panels. Use FAST23 to fasten through trim and ACC51 & ACC53.
- Attach TRIM18 to end of rake (TRIM28) using FAST20.
- Repeat for the other endwall.

# STEP 42



## REQUIRED PARTS

(2) TRIM19

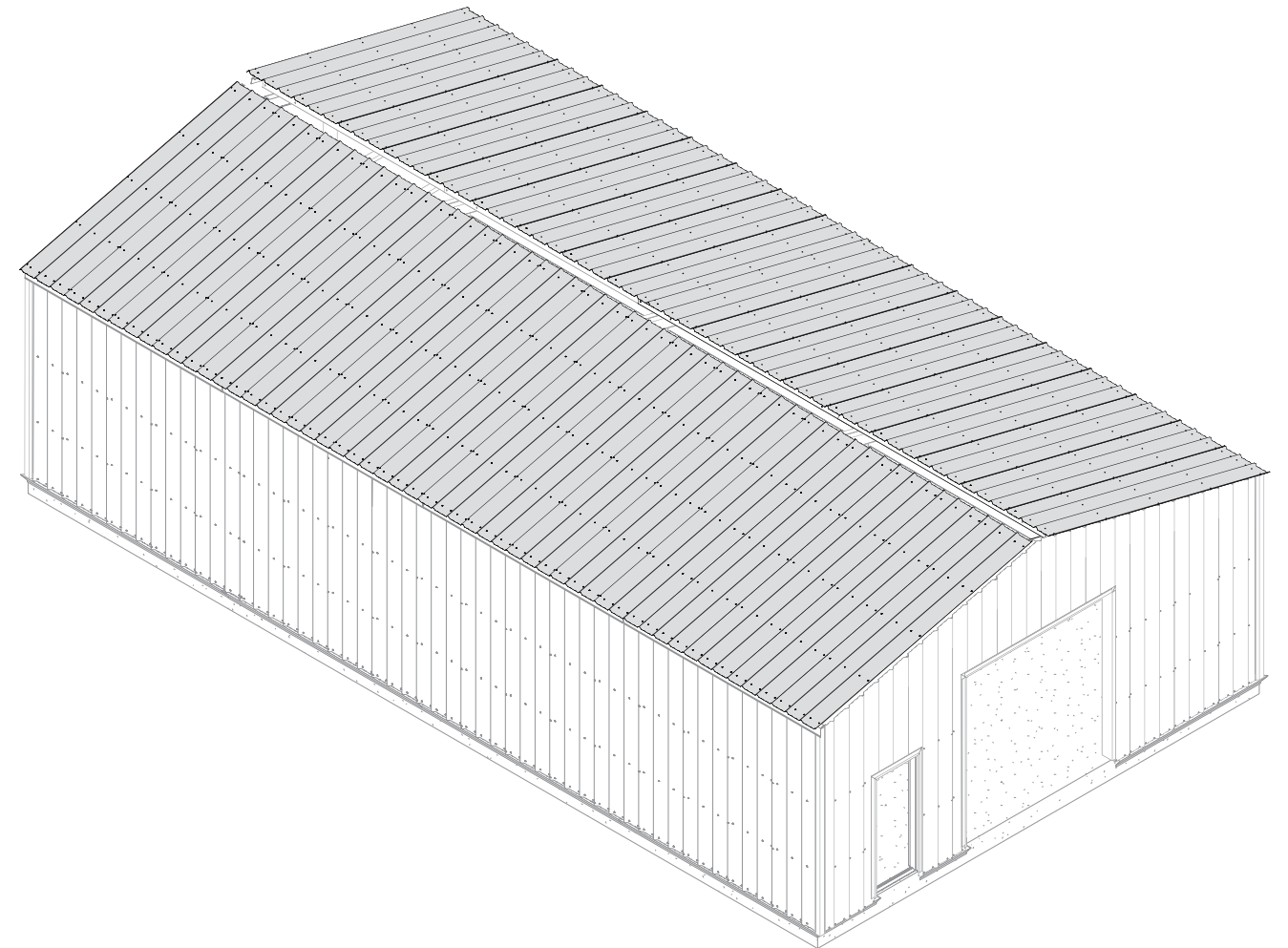
FAST20

## DIRECTIONS

### Installing the Peak Box

1. Install each TRIM19 with pop rivets or lap fasteners into the rake trim. (do not overtighten)
2. Remove any excess shaving from the roof panels to ensure shavings are not left behind that might create rust.

# STEP 43



## ENJOY YOUR COMPLETED BUILDING

Your building is finished. Take a break, relax, and find a way to payback the friends who helped.

# OPTIONAL PARTS

Most options both remove and add parts. The following tables list the parts adjustments that are made with each option. Please refer to images at front of assembly instructions if necessary.

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
<b>Wainscot Option</b>				
<i>The following items are removed</i>				
PANEL37	HRL	Wall Panels	-5	15' 8.5"
PANEL24	HRL	Wall Panels	-4	14' 2.5"
PANEL29	HRL	Wall Panels	-4	14' 11.5"
PANEL26	HRL	Wall Panels	-4	13' 5.5"
PANEL28	HRL	Wall Panels	-4	12' 8.5"
PANEL7	HRL	Wall Panels	-36	11' 11.5"
FAST13	78LAP	Lap Screws for Wall	-500	
FAST12	114MM	Metal to Metal Screws for Walls	-1,000	
<i>The following items are added</i>				
PANEL17	HRL	Upper Wall Panels	36	8' 5"
PANEL29	HRL	Upper Wall Panels	4	9' 2"
PANEL31	HRL	Upper Wall Panels	4	9' 11"
PANEL32	HRL	Upper Wall Panels	4	11' 5"
PANEL33	HRL	Upper Wall Panels	4	10' 8"
PANEL37	HRL	Upper Wall Panels	5	12' 2"
PANEL20	HRL	Lower Wall Panels	56	3' 6"
FAST13	78LAP	Lap Screws for Upper Walls	500	
FAST13	78LAP	Lap Screws for Lower Walls	500	
FAST12	114MM	Metal to Metal Screws for Upper Walls	750	
FAST12	114MM	Metal to Metal Screws for Lower Walls	500	
PURLIN48	B4216	Base Angle Purlin for Wainscot	8	12' 5.125"
PURLIN37	B4216	Base Angle Purlin for Wainscot	2	9' 11.5"
PURLIN49	B4216	Base Angle Purlin for Wainscot	4	8' 7.5"
TRIM39	WA122	Wainscot Trim	5	16' 2"
TRIM32	WA142	Wainscot Trim	6	14' 2"

# OPTIONAL PARTS

ASSEMBLY PART #	MANUFACTURER PART #	DESCRIPTION	QUANTITY	LENGTH
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## Gutter Option

*The following items are added*

TRIM33	GU142	Gutters	8	14' 2"
TRIM34	DK102	Downspouts	6	10' 2"
TRIM35	GS9	Gutter Straps	54	-
TRIM36	DSS2	Downspout Strap	12	-
TRIM37	GEN	Gutter End Cap	4	-
TRIM38	OCB	Outside Corner Box	4	-

## Remove Endwall Framed Opening Option

*The following items are removed*

TRIM22	HE	Head Trim	-1	10' 3"
TRIM24	JH	Jamb Header Trim	-3	10' 2"
TRIM23	JA	Jamb Trim	-2	10' 2"
PLATE35	GIRTCLIP	Girtclip	-2	

*The following items are added*

PURLIN32	Z82516R	Zee Purlin	4	9' 11.5"
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*The following items are removed*

## Add Sidewall Framed Opening

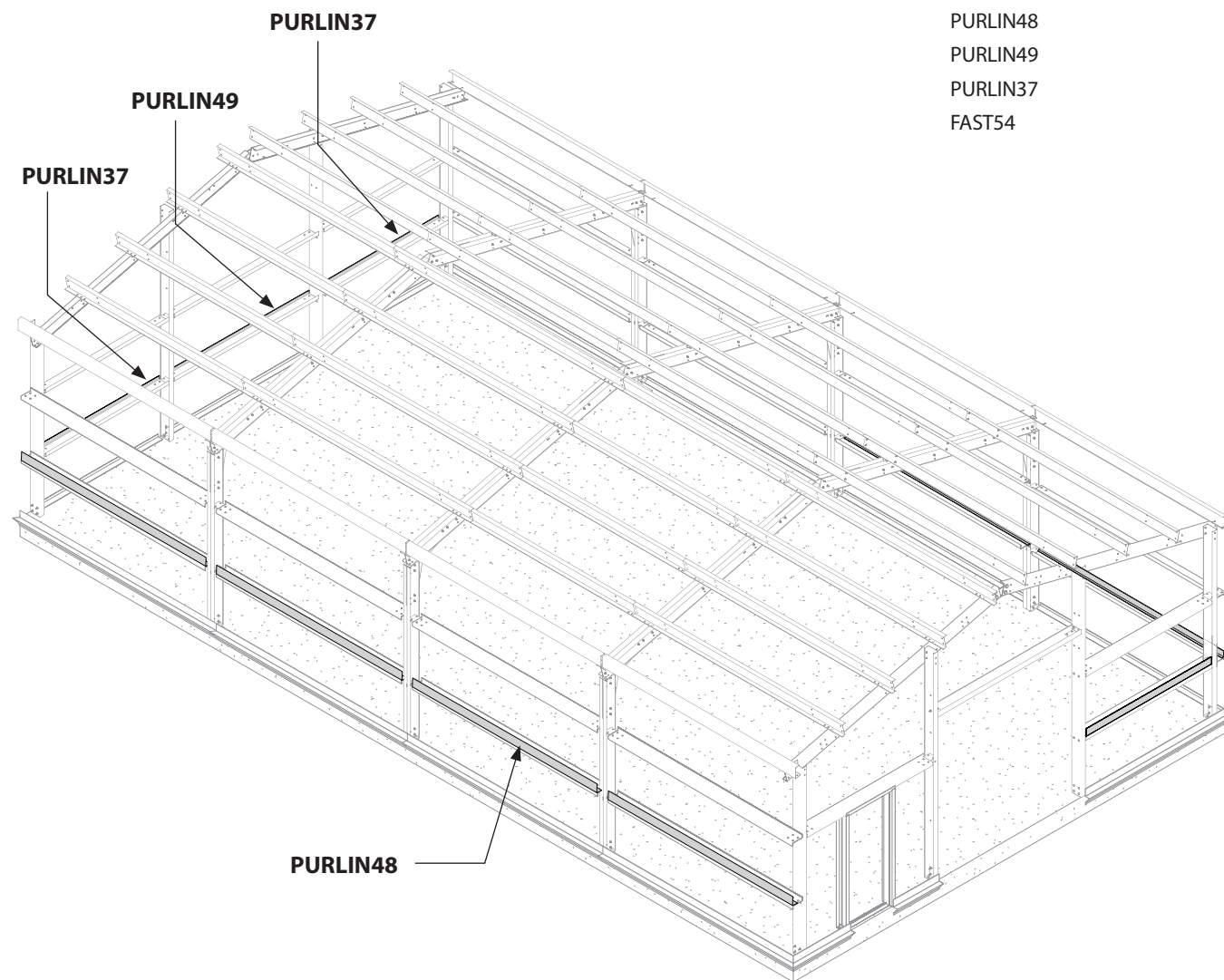
PURLIN22	Z82516R	Zee Purlin	-2	12' 5.125"
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*The following items are added*

TRIM22	HE	Head Trim	1	10' 3"
TRIM24	JH	Jamb Header Trim	3	10' 2"
TRIM23	JA	Jamb Trim	2	10' 2"
PURLIN50	Z82516R	Zee Purlin	4	0' 10.25"
PURLIN56	C83516R	Cee Purlin	2	11' 3"
PURLIN43	C82516R	Cee Purlin	1	9' 11.5"
PLATE35	GIRTCLIP	Girtclip	8	
PLATE46	DJCOLD30	Eave Strut Plate	2	
FAST46	114FINNECK	Finn Neck Bolt	25	



# WAINSCOT OPTION



## REQUIRED PARTS

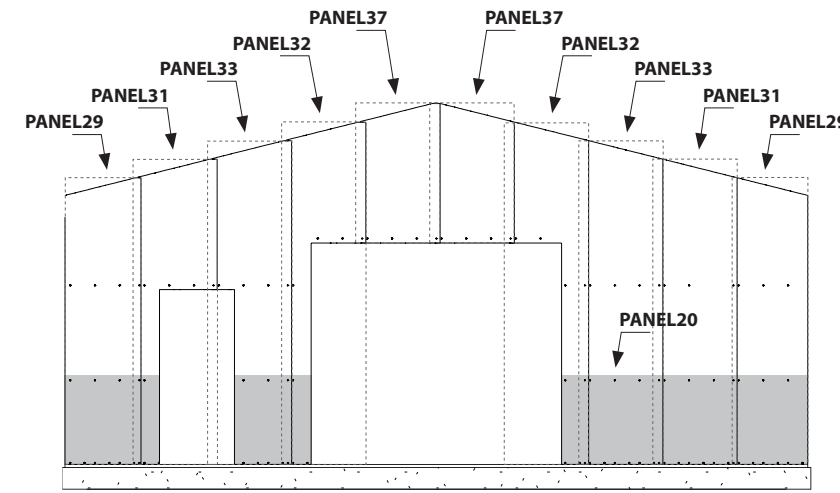
PURLIN48  
PURLIN49  
PURLIN37  
FAST54

## DIRECTIONS

### Install the PURLINS

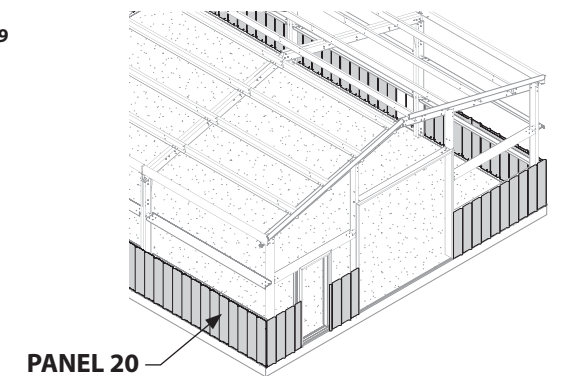
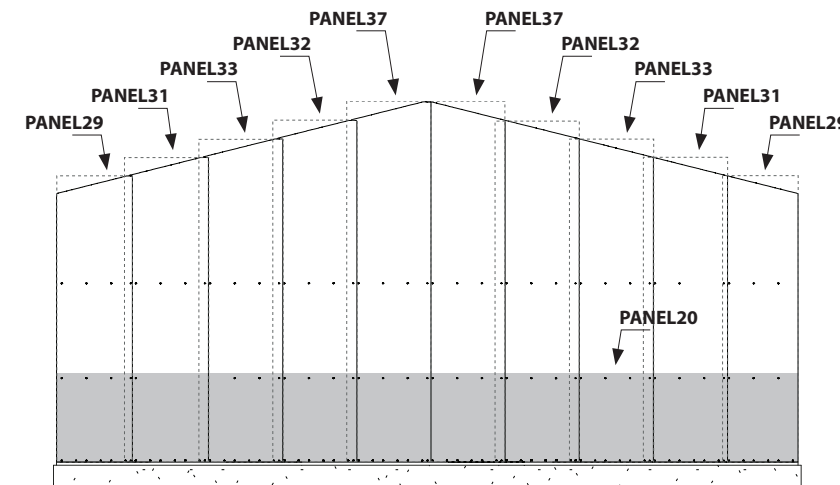
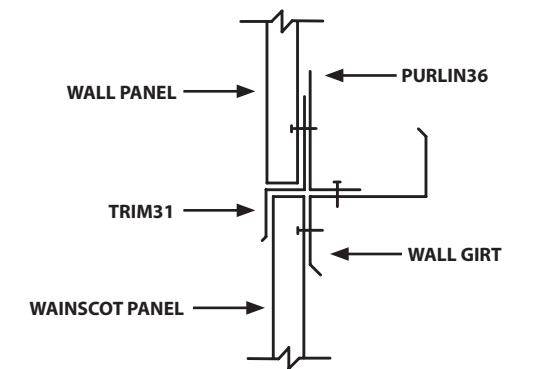
1. Install PURLIN48 on the sidewalls.
2. Install PURLIN37 and PURLIN38 on the endwall.
3. Use FAST12 through the 2" side of the angle and aligning the 4" side (pointed up) with the outside steel line of the wall ZEE girt. This will extend the ZEE girts existing 2.5" downward leg by adding 4" upward; allowing for a 6.5" surface area to attach wainscot trim. Lower wall sheets and upper wall sheets.

# WAINSCOT OPTION



## REQUIRED PARTS

FAST54



## DIRECTIONS

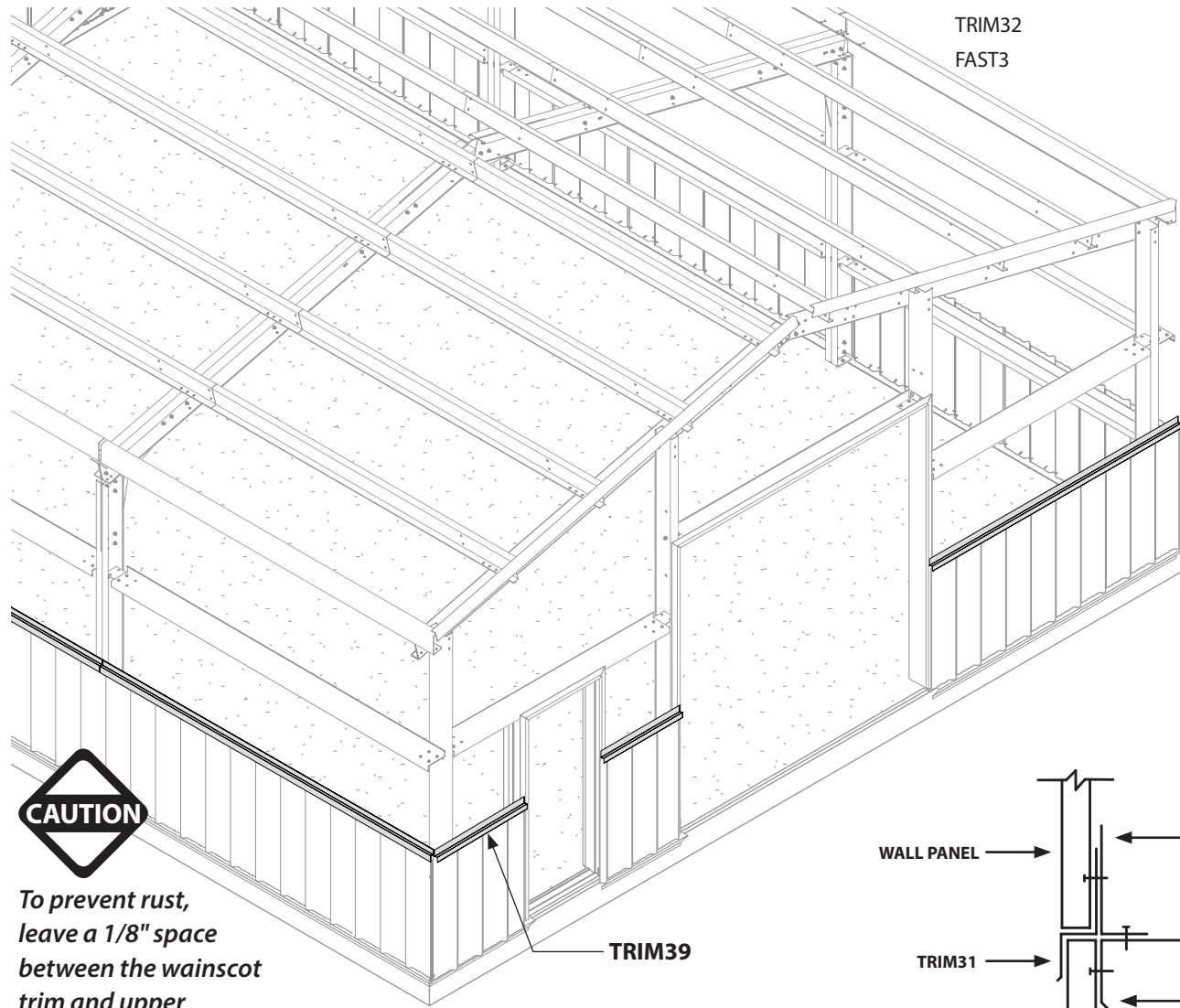
### Install PANEL20

Follow the diagram Step 32 through step 35 to install PANEL20 onto the lower section of wall panels. Fasten top of into PURLIN36/37/38.

# WAINSCOT OPTION

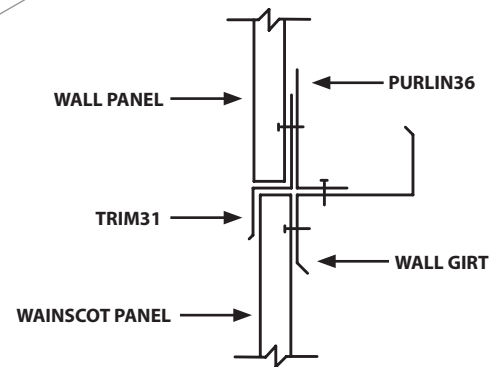
## REQUIRED PARTS

TRIM39  
TRIM32  
FAST3



To prevent rust, leave a 1/8" space between the wainscot trim and upper wall panels.

TRIM39



## DIRECTIONS

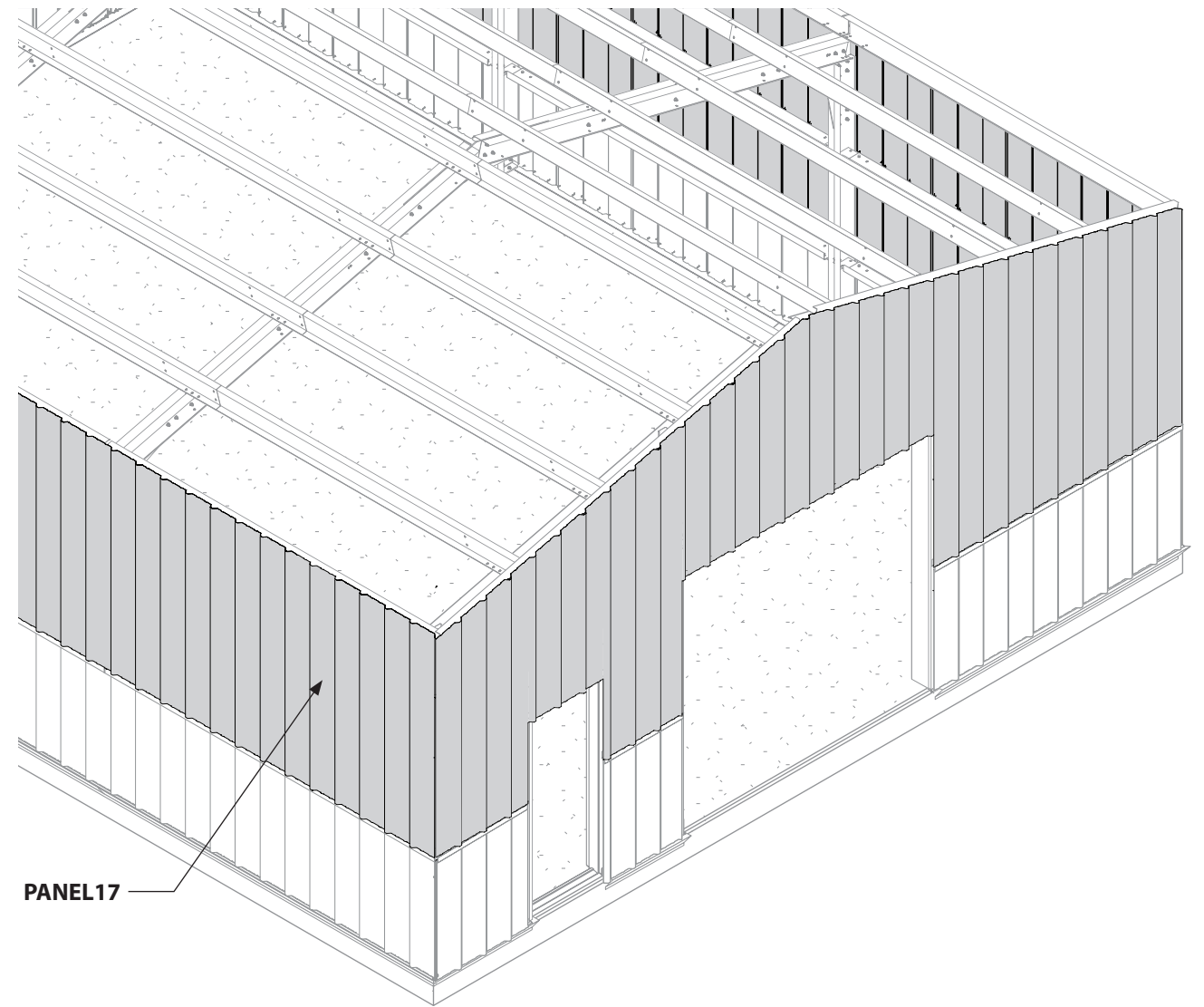
### Install the Wainscot Trim

Install the TRIM39 and TRIM32 wainscot trim on to the 3'6" girt, allowing the trim horizontal flat surface to rest on top of the lower panels installed. This horizontal line should be level at 3'6". TRIM39 and TRIM32 are interchangeable. Cut, overlap, and install as needed around building.

# WAINSCOT OPTION

## REQUIRED PARTS

PANEL17  
FAST54



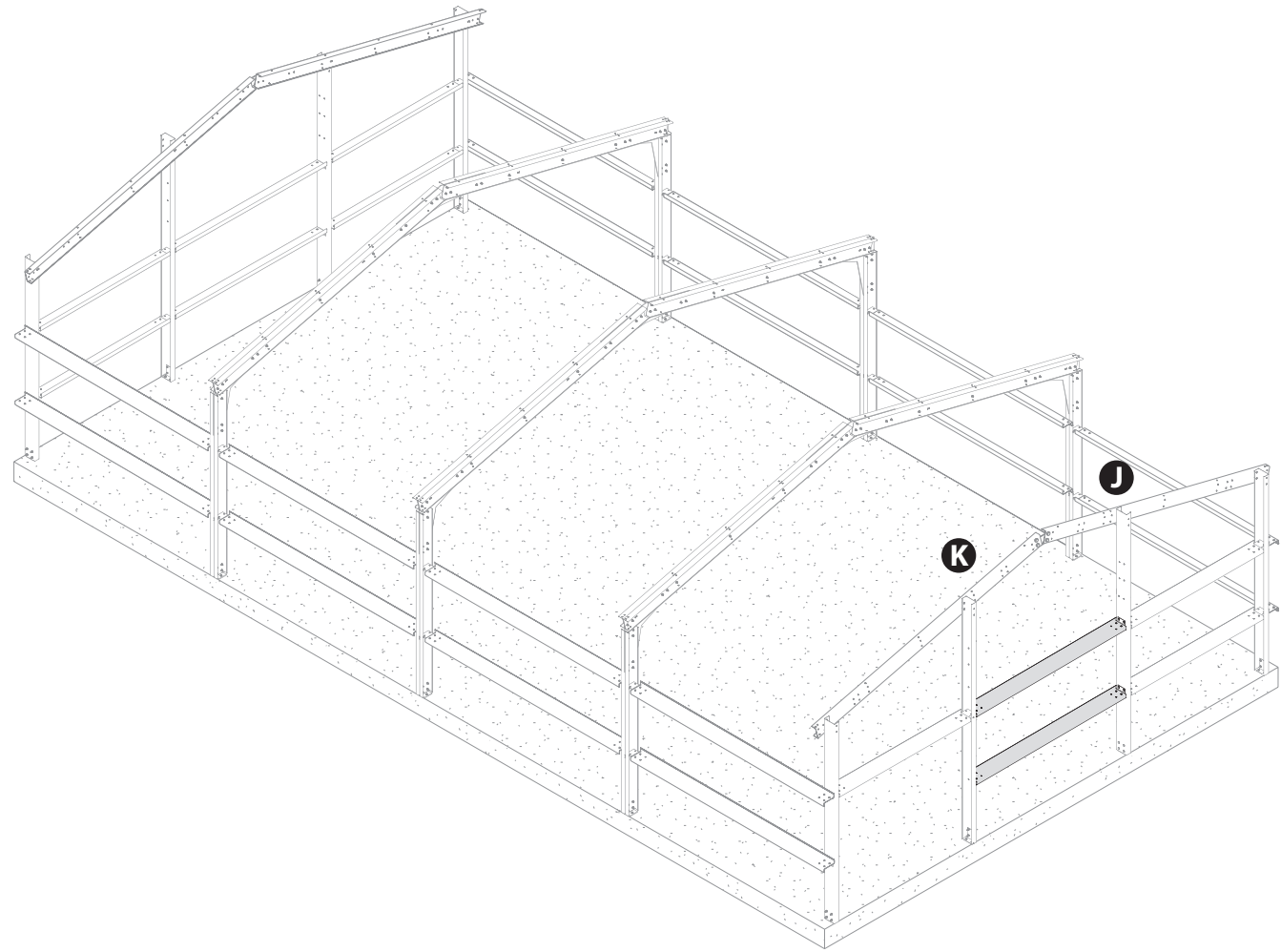
PANEL17

## DIRECTIONS

### Install Upper Wall Panels

1. Follow Step 32 through step 35 to install wall panels on to the upper section of wall panels. Fasten bottom of panel to PURLIN36/37/38. Follow diagram below. Be sure to leave 1/8" space between wainscot trim and upper wall panels to prevent rusting & discoloration.
2. Once the wainscot is complete go to step 38 to continue assembly.

# REMOVE ENDWALL OPENING OPTION

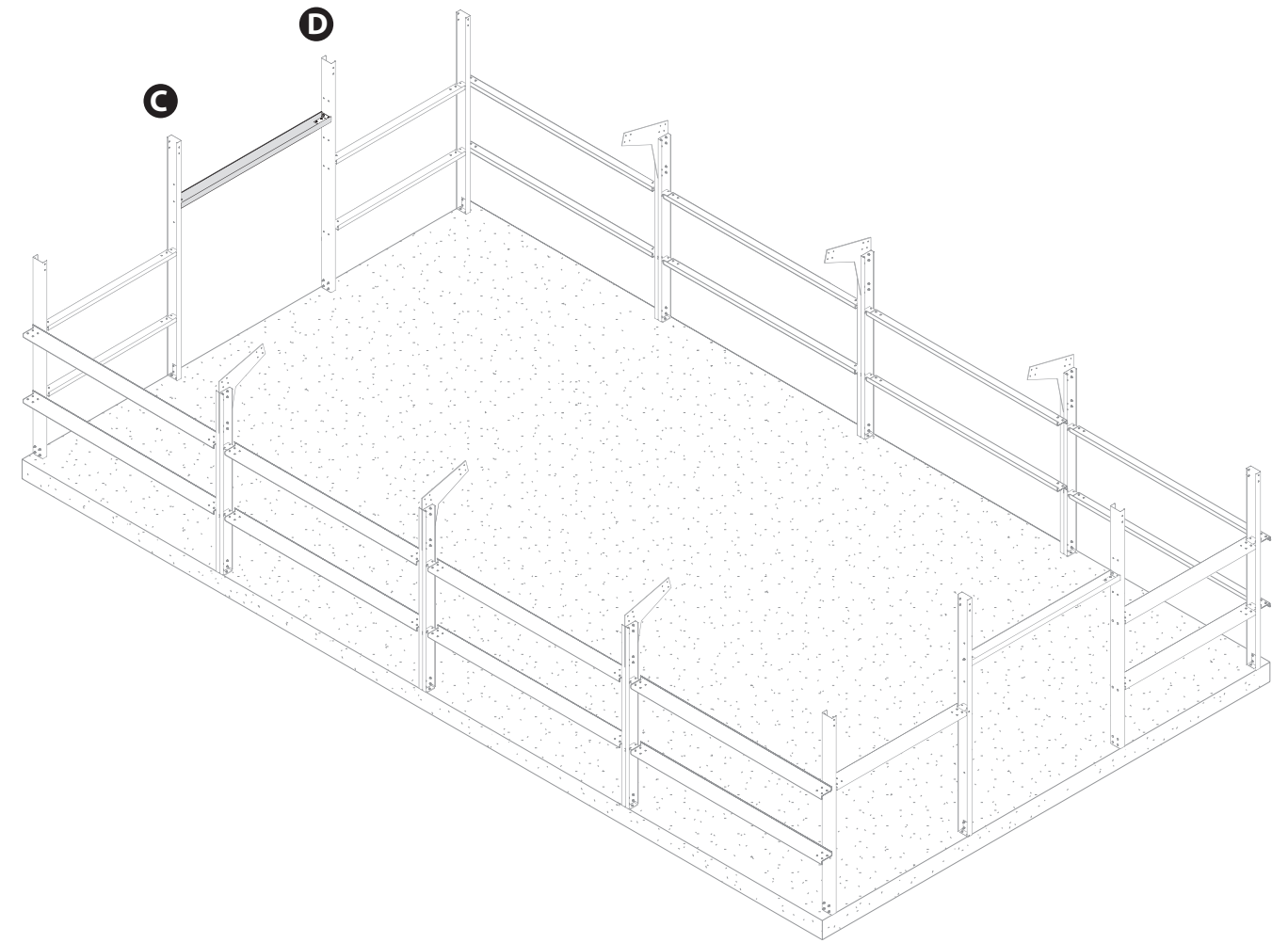


## DIRECTIONS

### Remove Framed Opening in Endwall Option

1. When assembling columns J and K in step 11 and 12, use all FAST54, rather than a mixture of FAST54 and FAST46.
2. Repeat steps 6-8 to install wall girts similar to other endwall erected in steps 6-8.

# ADD ENDWALL OPENING OPTION

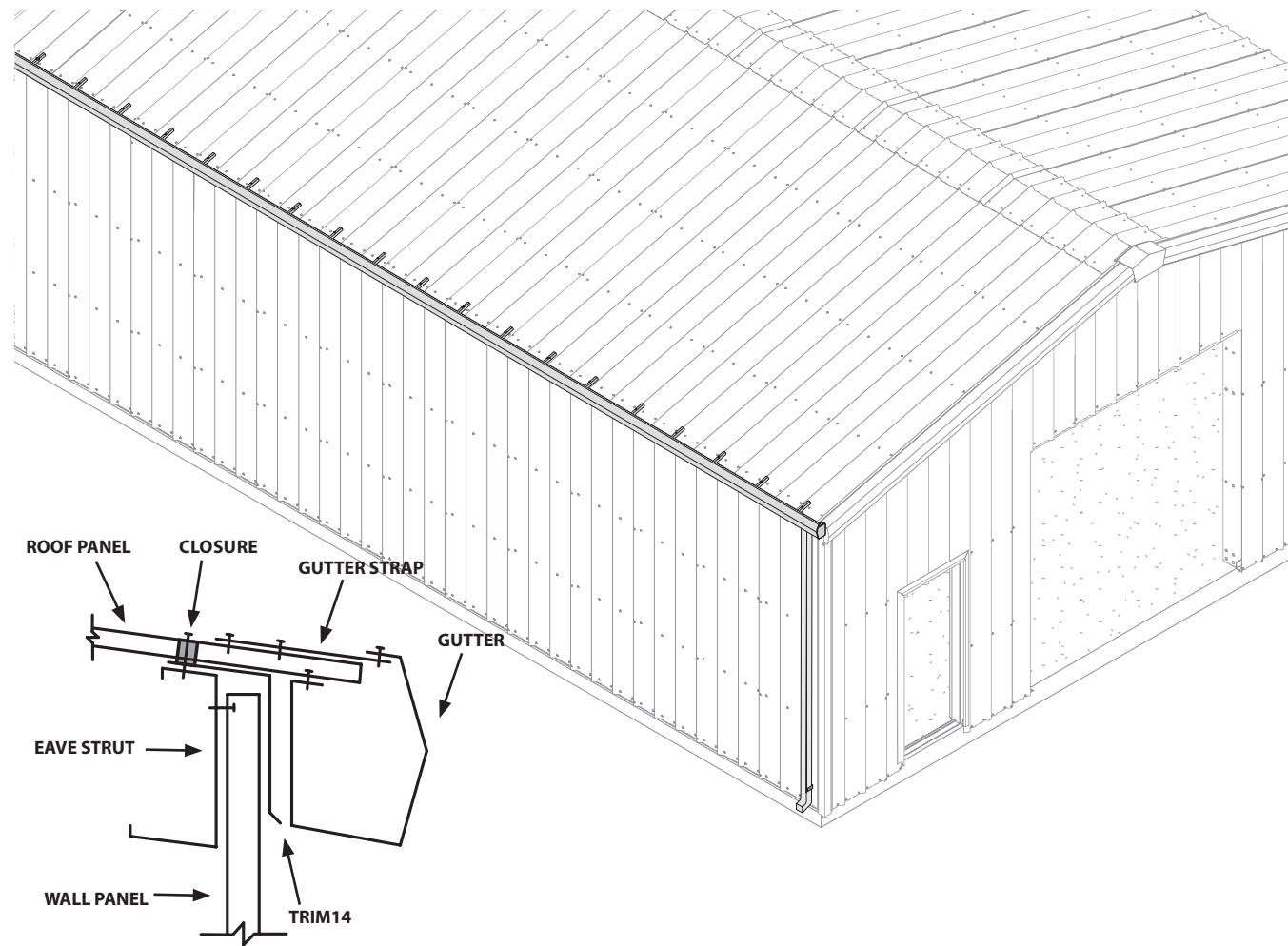


## DIRECTIONS

### Endwall Framed Opening Add Option

1. Assemble columns C and D using steps 11 and 12. do not follow Step 3.
2. Install opening header between columns C & D using step 14.

# GUTTERS OPTION



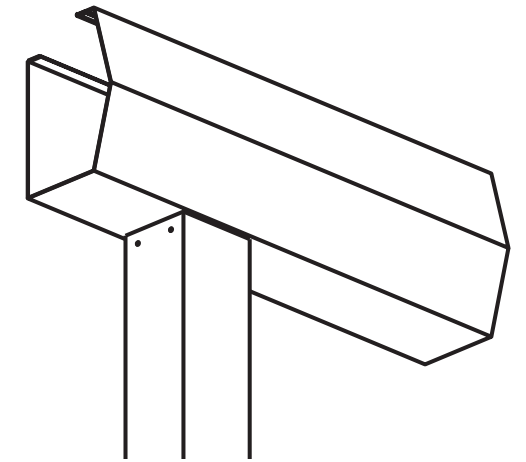
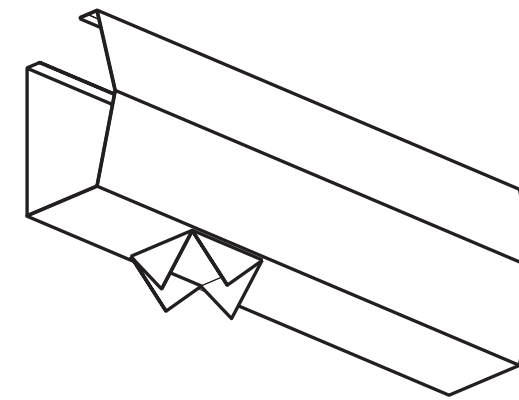
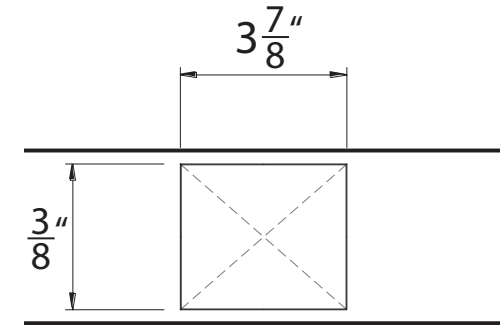
*Tip: If multiple gutter sections are required to meet the building's length, then sequential gutter(s) will nest inside of the previous gutter's end approximately 4" with a small bead of sealant (ACC52). Fasten the sequential gutter to the previous gutter using POP or 78LAP fasteners then continue until you have fully covered the length of your building, trimming any excess gutter to allow the final gutter end to align with the endwall steel line.*

## DIRECTIONS

### Installing gutters

1. Starting on either end, attach the gutters to the bottom of the roof panel. Allow the gutter to hang in front of the eave trim and fasten with FAST18, beginning at the endwall steel line. Fasten every 1'.
2. Reinforce the gutter with TRIM35. Fasten TRIM35 to the top of every other rib (2') in roof panel and fasten to lip of gutter using FAST23.
3. Using POP or 78LAP fasteners, attach each TRIM37 by nesting the endcap into the gutter's end approximately 2" with a small bead of clear caulking supplied.
4. Repeat this on the opposite sidewall.

# GUTTERS OPTION



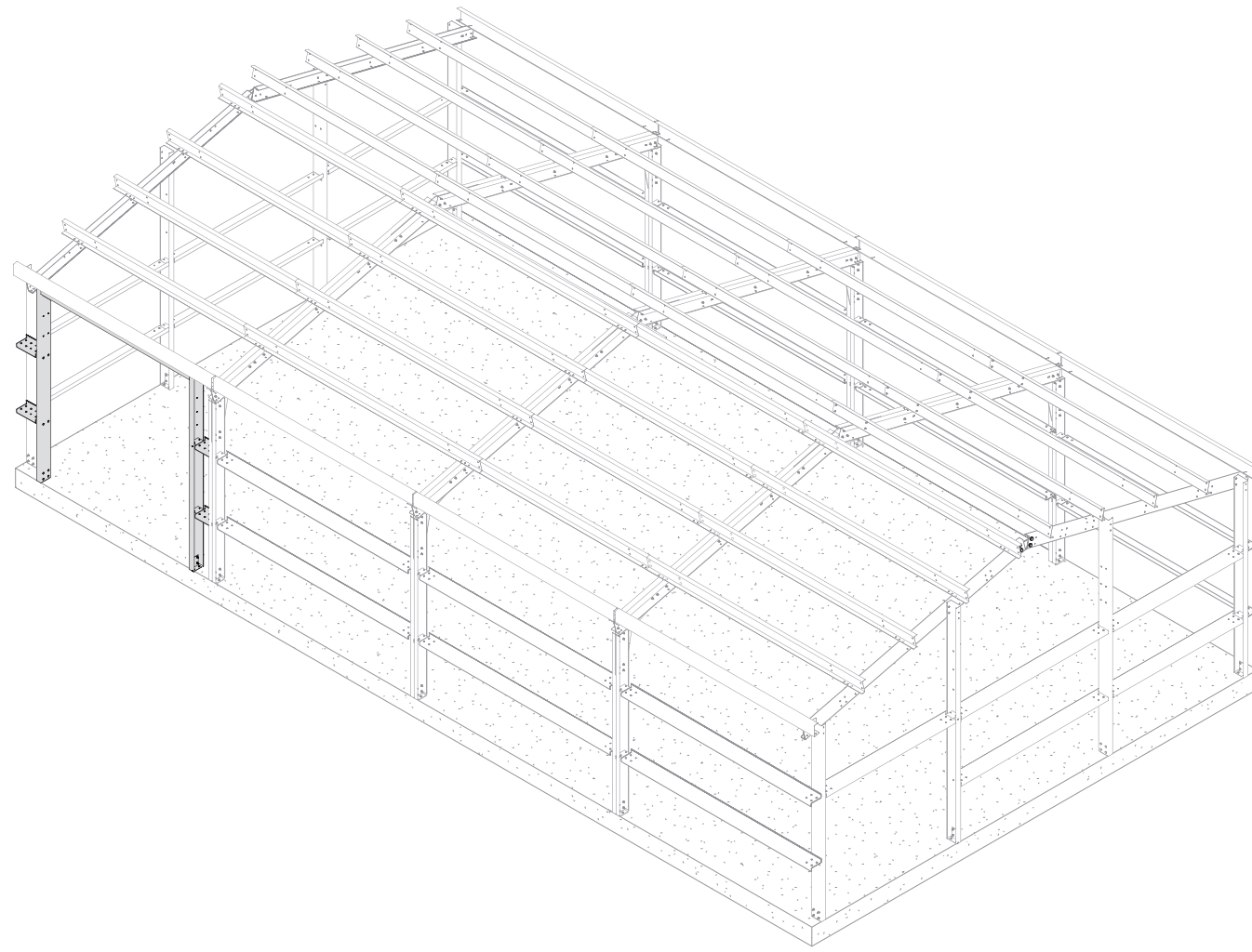
## DIRECTIONS

### Installing gutters

*Note: TRIM38 will be needed to be installed after Rake trim (TRIM28) is installed in future steps.*

5. With gutters now hung, identify the location of downspouts. Downspouts will typically be placed on each end of the building's gutter. The exact location can vary (6"-14"), but is recommended to position the downspout directly centered over a wall rib, which will allow for a vertical and level downspout once installed.
6. Once you have identified your downspout location, mark an "X" at bottom of the gutter to the center of where your downspout will be placed. Each leg of the "X" should extend 2" from center of "X". Using a drill bit to create a hole, and metal snips, cut along the "X". Fold the flaps of the "X" down. This is where you will attach your downspout.
7. Attach TRIM36 approximately 4' from the concrete. Attach to the wall rib directly below the "X" created in step above. Additional TRIM36 are provided if desired.
8. Attach TRIM34 over the "X" flaps and fasten with FAST23. Place downspout in TRIM36. Check that downspout is level and fasten to TRIM36 using FAST23.
9. Apply a bead of ACC52 to the "X" opening in gutter to seal.
10. Repeat step 4-9 for the other downspouts.
11. Cover transition from rake to gutter with TRIM28. Pop rivet TRIM28 in place.

# ADD SIDEWALL OPENING OPTION

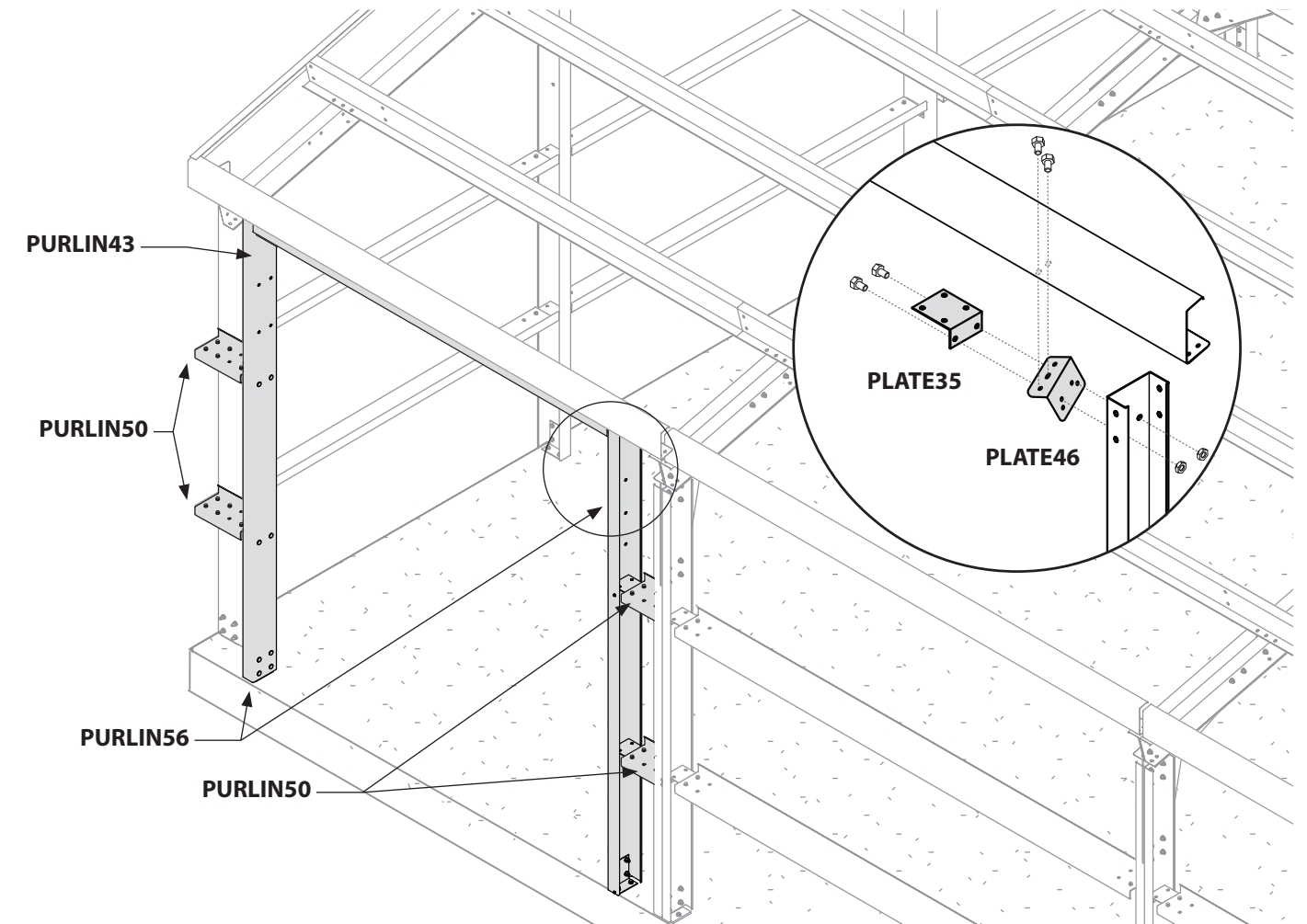


## DIRECTIONS

### Sidewall Framed Opening add Option

**Before Starting:** You will have flexibility to install this opening in any sidewall bay that suits your needs for every sidewall framed opening section. Once you have determined which bay to place your framed opening in, you will notice that this bay's 2 girts will be replaced with 4 shorter girts and include 2 jambs, 1 header, 2 DJCOLD30 clips, and your framed opening trims and fasteners. One bay must remain sheeted for diaphragm and panel shear bracing of your building, any sidewall bay can contain a framed opening (walk doors are except) but one bay must always remain sheeted for engineering requirements.

# ADD SIDEWALL OPENING OPTION



## DIRECTIONS

*Note: At this point the bases of your jambs are not attached to the concrete. This is fine, as the next step will ensure every connection has been done correctly for your framed opening.*

1. Attach GIRTCLIPS to PURLIN56 as shown. Use FAST46. Attach GIRTCLIP for the 7', 8', 9' or 10' location, depending on the desired height of your framed opening.
2. Attach the PLATE46 clips to each top side of your jambs using FAST54.
3. Stand each jamb up one at a time and attach top PLATE46 clip to the bottom aligning holes of the Eavestrut (PURLIN30) using FAST54.
4. Attach PURLIN50 to assembled jamb (PURLIN42) as shown.
5. Install PURLIN43 at your installed girt clip location for your framed opening header.  
*Note: At this point, you should have the sidewall framed opening completely installed with the exception of the base connection to the concrete of the two jambs.*
6. Using a level, level each jamb and drill through the concrete where the GIRTCLIP at bottom jamb will be attached. Use 1/2" wedge anchors or similar concrete fastener to connect to concrete (not included).
7. Repeat steps above for every sidewall framed opening selected.
8. Use steps 21 and 23 to trim this framed opening.





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