

# Assembly Instructions for Hi-Hog's 5-Row Bleachers on skid frame and/or 5-Row Bleachers with Stairs on skid frame



No Stairs



Left Hand Stair



Right Hand Stair

## Questions, problems, missing parts?

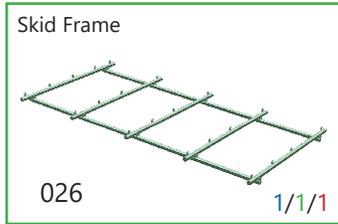
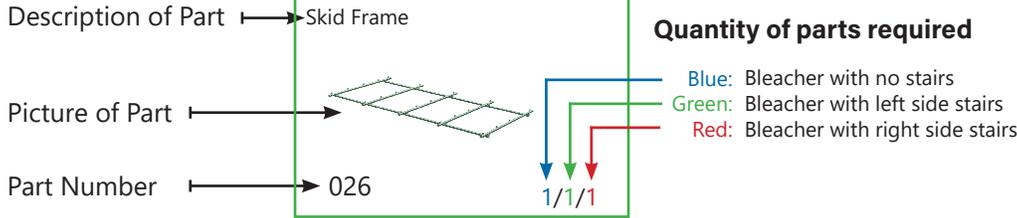
Before returning call customer service  
8:00 am - 4:00 pm, MST, Monday - Friday

1-800-661-7002

We appreciate the trust and confidence you have placed in Hi-Hog Farm & Ranch Equipment Ltd. We strive to continually provide quality products designed for durability and performance. To assist us in please let us know how we can improve these instructions. *Last Edited October 2023*

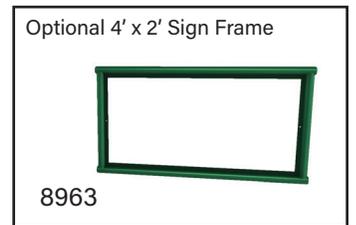
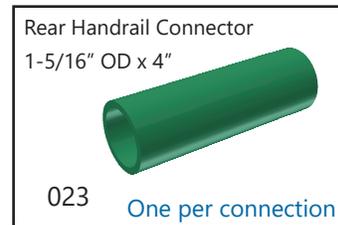
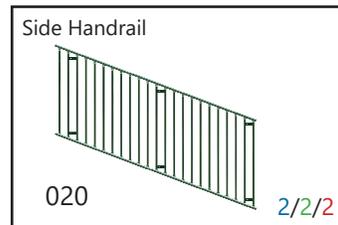
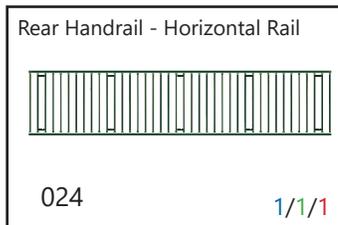
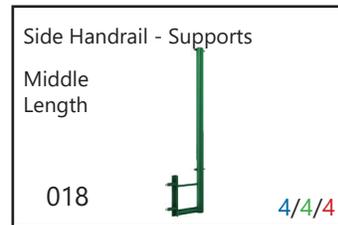
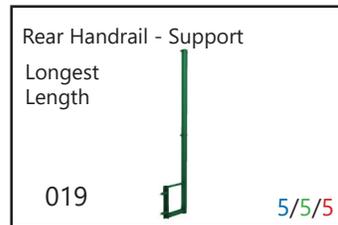
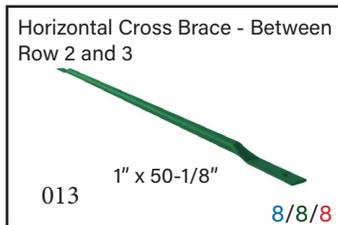
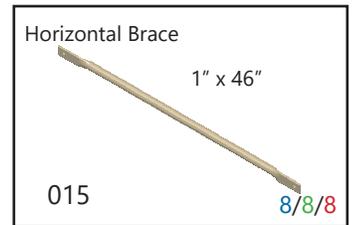
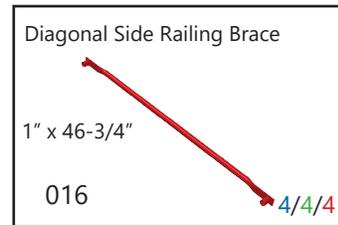
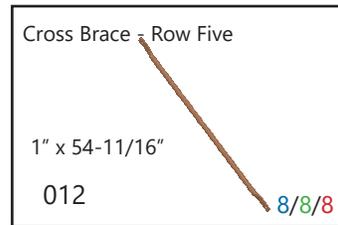
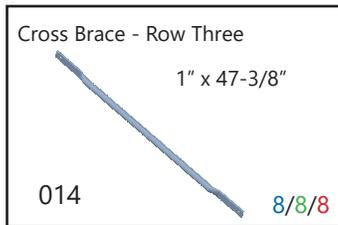
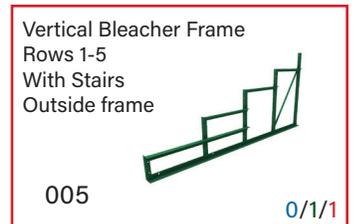
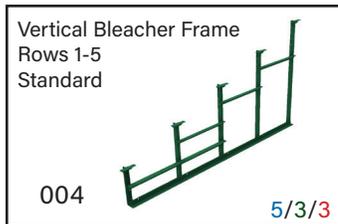
# Parts

Note: Actual part quantities required will vary with the style of bleachers you have purchased as well as the combinations of bleachers that you have selected. Quantities of parts for one standard 16', 5-Row Bleacher on Skids, with two side rails and one back rail, are shown in blue.



Note: Quantities will reduce if your railing requirements change. For example, if you join two sets of bleachers you will reduce the total number of side rails required.

Note: unless the bleachers are installed and anchored against a wall (with no gap larger than 4") then you are required to include the railings to meet code.



# Bleacher Frame Fasteners

5/16" x 4" HHCS Plated



22/22/22

3/8" x 4" HHCS Plated



22/22/22

3/8" x 3-1/2" HHCS Plated



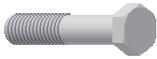
4/4/4

3/8" x 2-1/2" HHCS Plated



12/12/12

3/8" x 2" HHCS Plated



8/8/8

3/8" x 1-1/2" HHCS Plated



24/24/24

3/8" x 1-1/4" HHCS Plated



25/25/25

7/16" x 1-1/2" HHCS Plated



20/20/20

3/8" NC Nylon Locknuts



89/89/89

5/16" NC Nylon Locknuts



22/22/22

1/4" x 1" Hexhead Self Tapping Screw



6/6/6

7/16" NC Nylon Locknuts



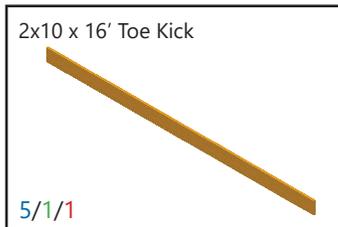
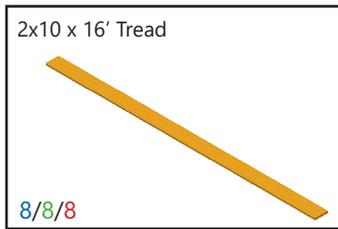
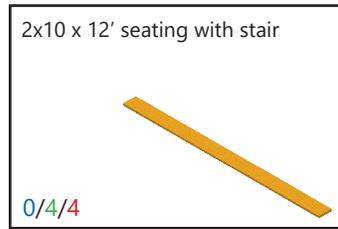
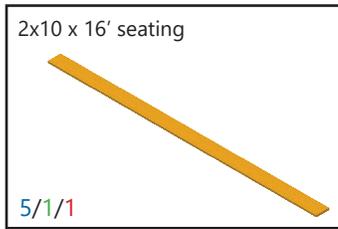
20/20/20

**Suggested Tools: cordless drill, socket set, wrenches, screw driver and drill bits**

# Bleacher Wood Seating and Fasteners

Note: The following wood seating package is recommended to complete the bleacher installation. These items are not included in the bleacher package. Please see the Installation of wood section (page 16), to see the location and spacing of lumber.

## Bleacher with No Stairs, Left Hand Stairs or Right Hand Stairs

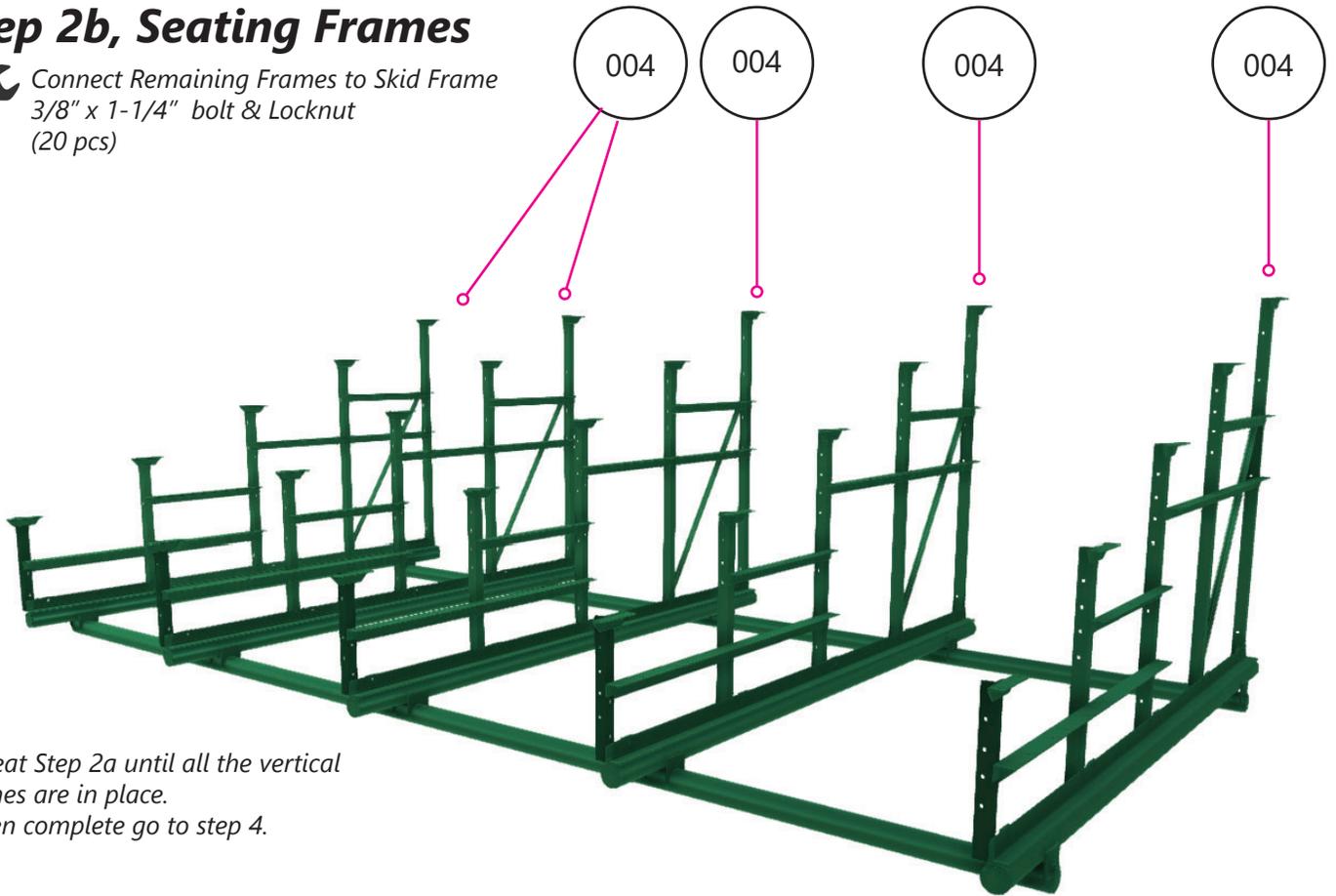




## Step 2b, Seating Frames



Connect Remaining Frames to Skid Frame  
3/8" x 1-1/4" bolt & Locknut  
(20 pcs)

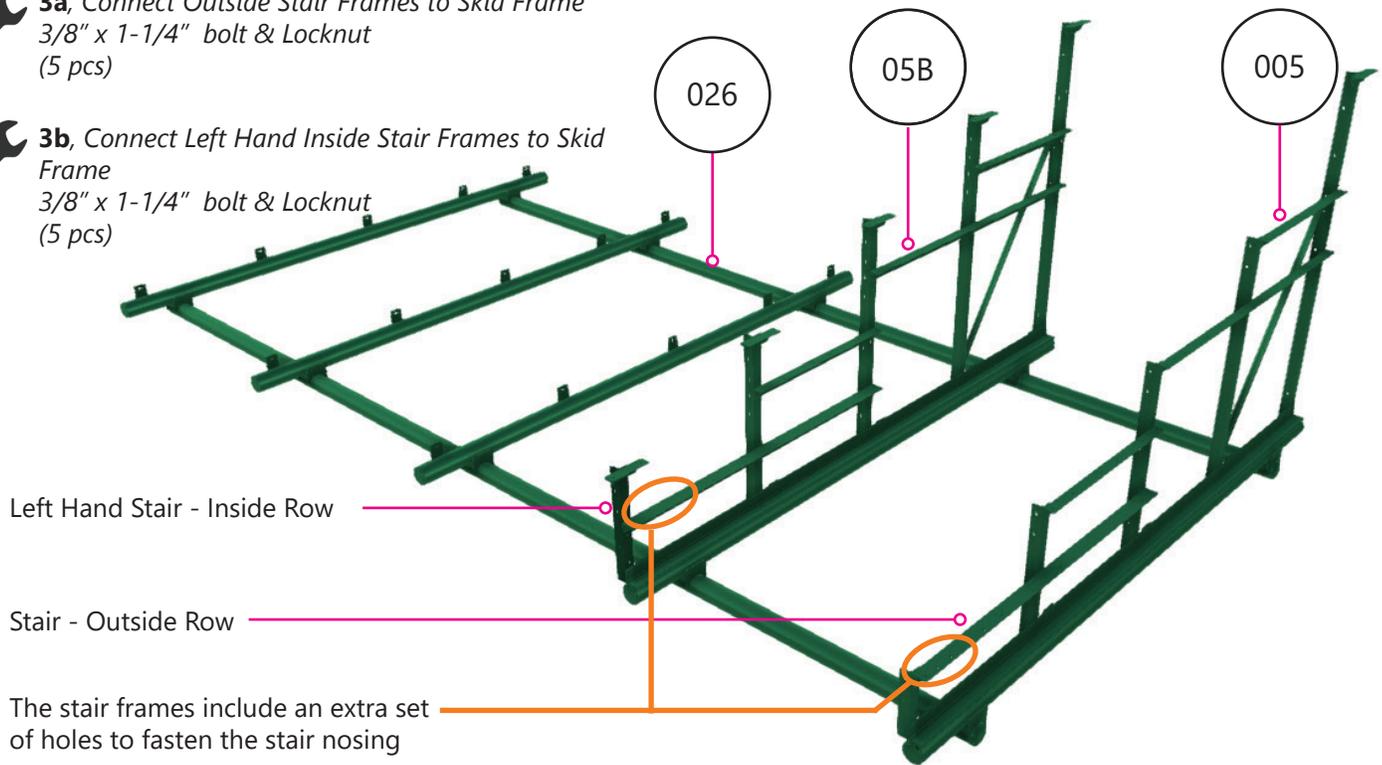


Repeat Step 2a until all the vertical frames are in place.  
When complete go to step 4.

## Step 3a and 3b, Frames for **Left Hand Stair Assemblies**

 **3a, Connect Outside Stair Frames to Skid Frame**  
3/8" x 1-1/4" bolt & Locknut  
(5 pcs)

 **3b, Connect Left Hand Inside Stair Frames to Skid Frame**  
Frame  
3/8" x 1-1/4" bolt & Locknut  
(5 pcs)



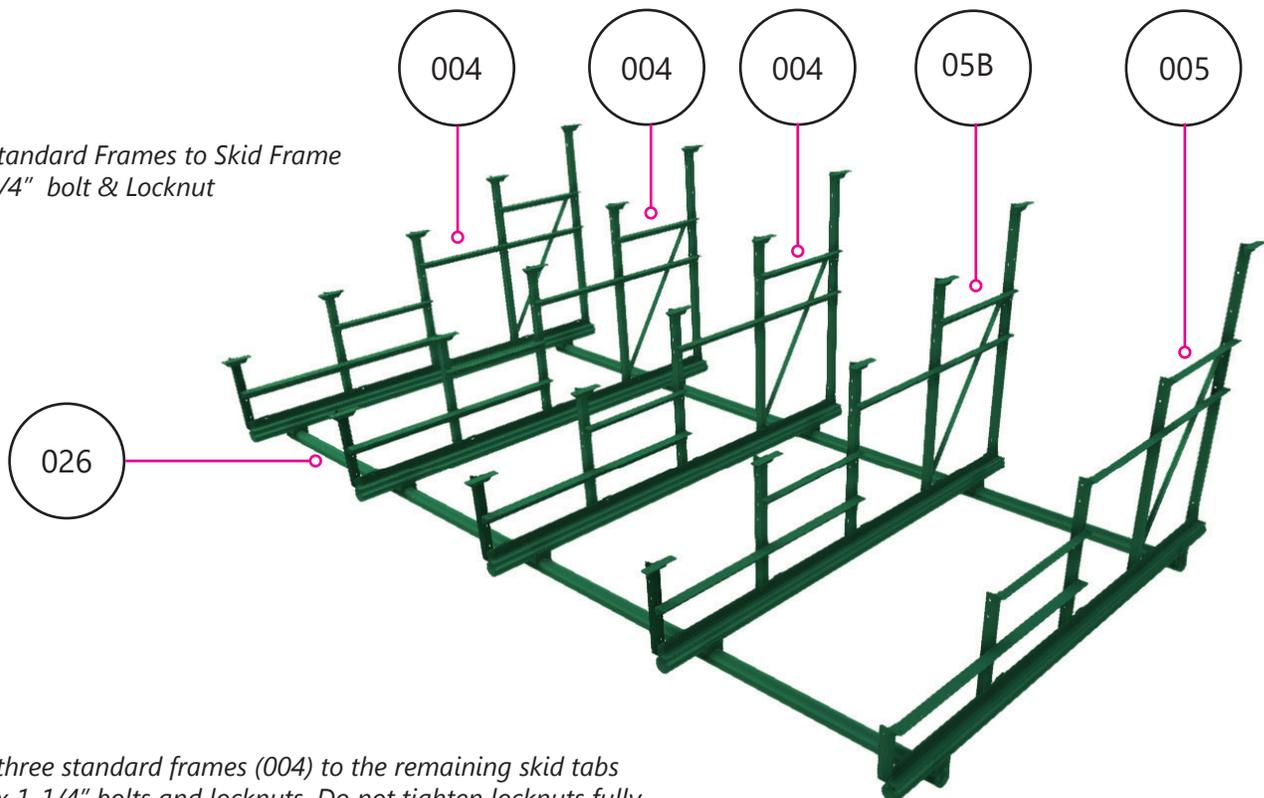
3a. Attach the Outside Stair frame (005) to the tabs on the outside row of the skid frame using 3/8" x 1-1/4" bolts and locknuts. Do not tighten locknuts fully.

3b. Attach the front Inside Stair frame (05B) to the tabs on the inside row of the skid frame using 3/8" x 1-1/4" bolts and locknuts. Do not tighten locknuts fully.

(For right hand stair assemblies go to step 3d).

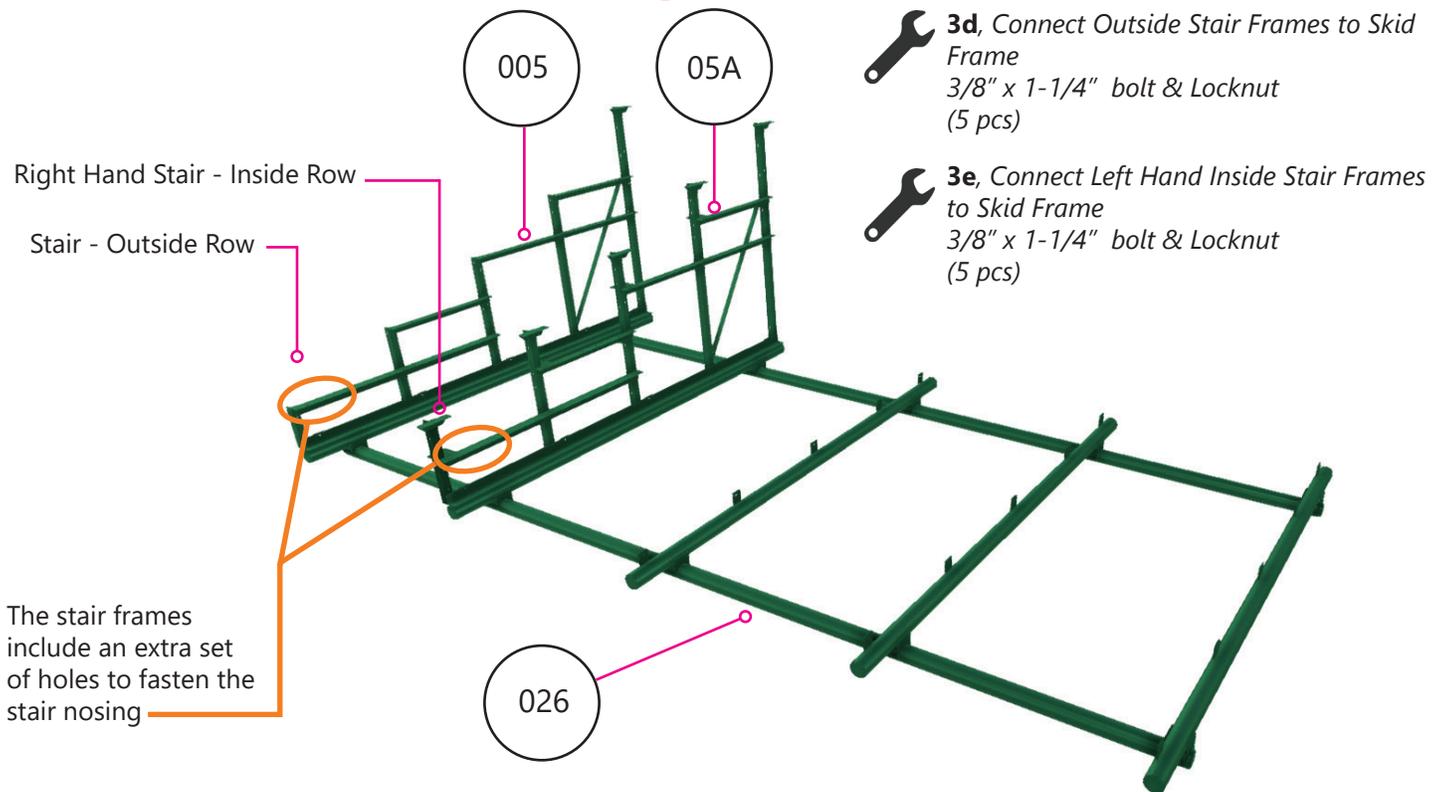
## Step 3c, Vertical Frames for Left Hand Stair Assemblies *continued*

 **Connect Standard Frames to Skid Frame**  
3/8" x 1-1/4" bolt & Locknut  
(15 pcs)



Attach the three standard frames (004) to the remaining skid tabs using 3/8" x 1-1/4" bolts and locknuts. Do not tighten locknuts fully.

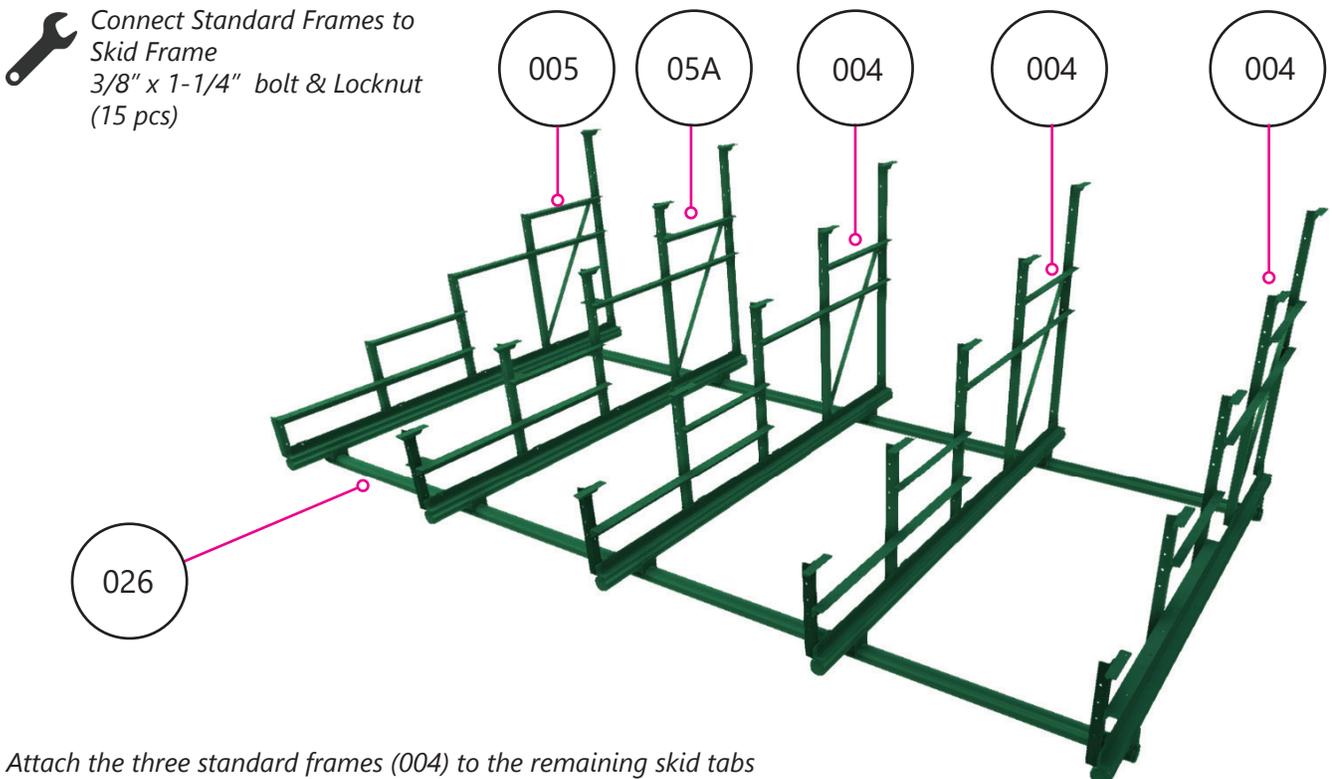
## Step 3d and 3e, Frames for **Right Hand Stair Assemblies**



*3d. Attach the Outside Stair frame (005) to the tabs on the outside row of the skid frame using 3/8" x 1-1/4" bolts and locknuts. Do not tighten locknuts fully.*

*3e. Attach the front Inside Stair frame (05A) to the tabs on the inside row of the skid frame using 3/8" x 1-1/4" bolts and locknuts. Do not tighten locknuts fully.*

## Step 3f, Vertical Frames for Right Hand Stair Assemblies



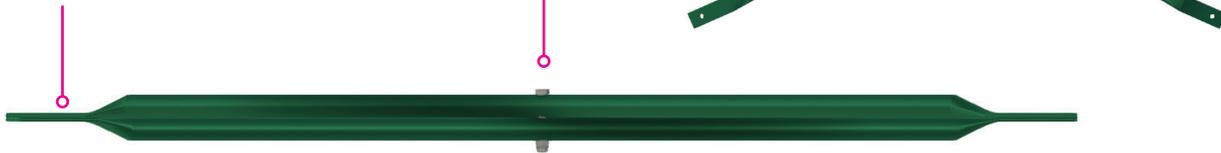
*Attach the three standard frames (004) to the remaining skid tabs using 3/8" x 1-1/4" bolts and locknuts. Do not tighten locknuts fully.*

## Step 4a, Cross Braces



Connect Cross Braces for seating row three.  
 3/8" x 2-1/2" bolt & Locknut  
 (5 pcs)

Note: If you swing the two cross braces in line with each other the flattened ends should be touching each other as shown here.



Assemble cross braces for Row 3 of the bleachers. Take two cross braces (014) and bolt them together as shown above with a 3/8" x 2.5" Bolt and a 3/8" locknut. Make sure the braces are positioned so that the flattened ends rest against one another.

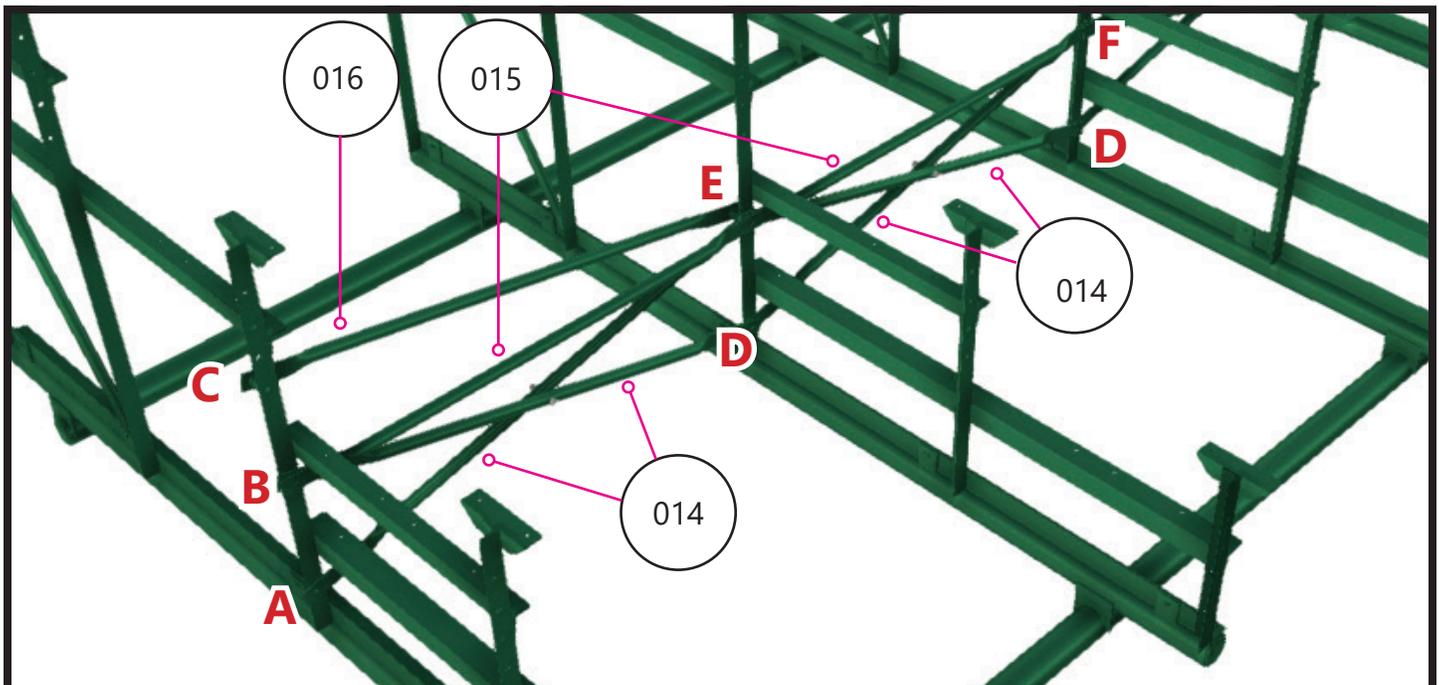
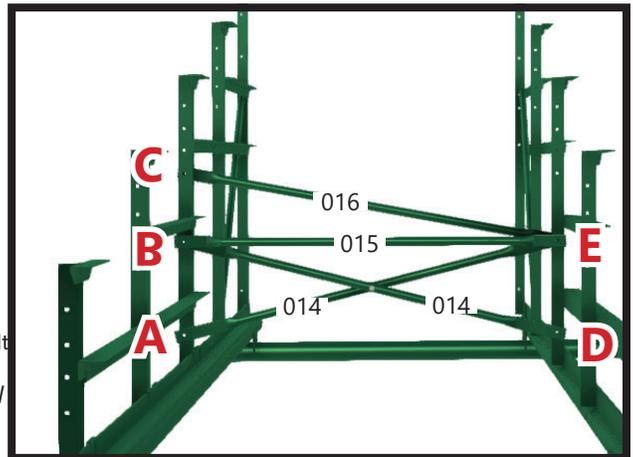
## Step 4b, Cross Braces - Fasteners

Start installing the cross braces at either the left or right end. The recommended order for installation is shown below. Note: several braces are often attached with a single fastener.

- A) fasten one cross brace (014) with a 3/8" x 1.5" bolt and locknut
- B) fasten one cross brace (014) and one horizontal brace (015) with a 3/8" x 1.5" bolt and locknut
- C) fasten one diagonal brace (016) with a 3/8" x 4" bolt and locknut. Note: the diagonal brace includes a 1" OD extension piece at each end. Diagonal Brace mounts on back side of frame.
- D) fasten two cross braces (014), and two horizontal braces (015) with a 3/8" x 2" bolt and locknut
- E) fasten two cross braces (014), two horizontal braces (015) and one diagonal brace (016) with a 3/8" x 3.5" bolt and locknut.
- F) fasten two diagonal braces (014) and two horizontal braces (015) with a 3/8" x 2" bolt and locknut.

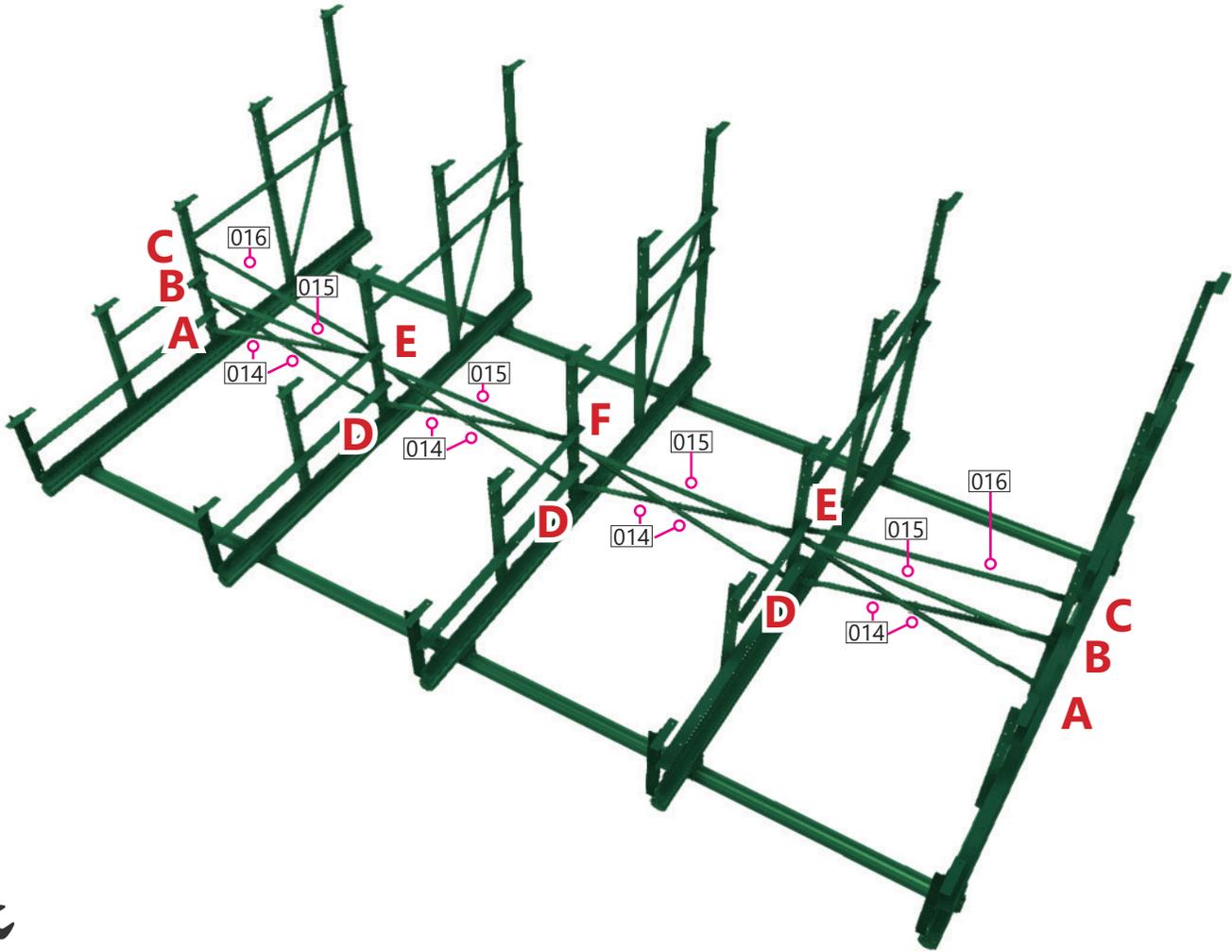
Do not tighten fasteners fully at this time as you may need to make some small adjustments to align the frame.

Note: the fastener at Location C will need to be removed and re-installed after the wood toe kick has been installed.



*Note: the diagonal brace (016) is only required to support the end frame that will include a side handrail. If you are joining two or more bleacher sets together you only require the diagonal bracing at the end of each set to support the outside frame with a handrail.*

### **Step 4c, Cross Braces - Row 3**



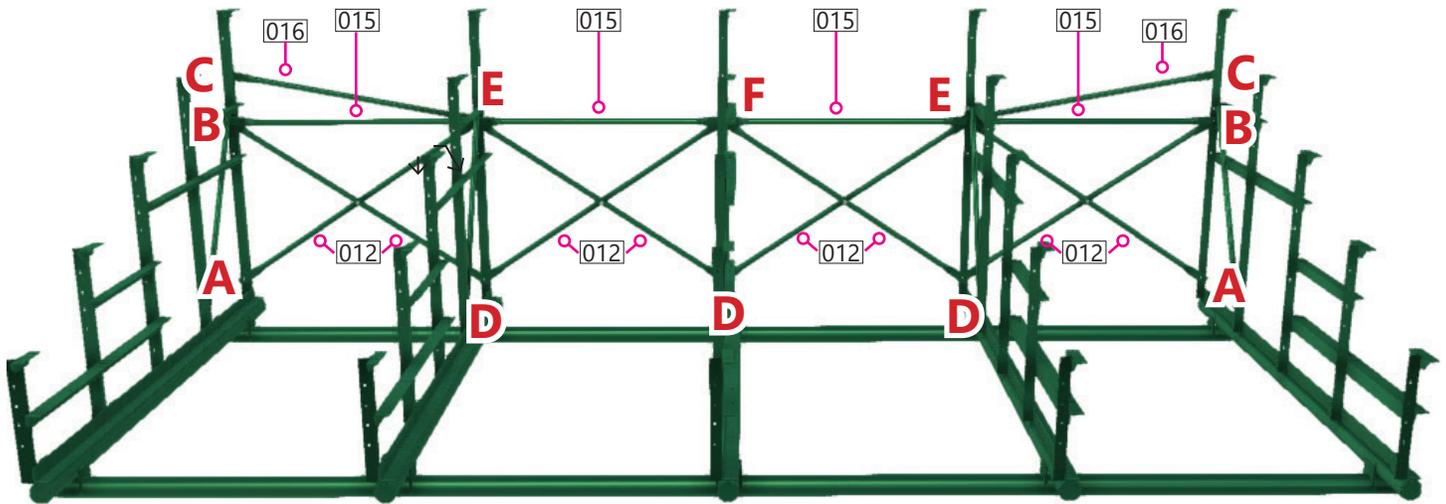
*Start installing the cross braces at either the left or right end. The recommended order for installation is shown below. Note: several braces are often attached with a single fastener.*

- A) fasten one cross brace (014) with a 3/8" x 1.5" bolt and locknut
- B) fasten one cross brace (014) and one horizontal brace (14) with a 3/8" x 1.5" bolt and locknut
- C) fasten one diagonal brace (016) with a 3/8" x 4" bolt and locknut. Note: the diagonal brace includes a 1" OD extension piece at each end. Diagonal Brace mounts on back side of frame.
- D) fasten two cross braces (014), and two horizontal braces (015) with a 3/8" x 2" bolt and locknut
- E) fasten two cross braces (014), two horizontal braces (015) and one diagonal brace (016) with a 3/8" x 3.5" bolt and locknut.
- F) fasten two diagonal braces (014) and two horizontal braces (015) with a 3/8" x 2" bolt and locknut.

*Do not tighten fasteners fully at this time as you may need to make some small adjustments to align the frame. Note: the fastener at Location C will need to be removed and re-installed after the wood toe kick has been installed.*

*Note: the diagonal brace (016) is only required to support the end frame that will include a side handrail. If you are joining two or more bleacher sets together you only require the diagonal bracing at the end of each set to support the outside frame with a handrail.*

## **Step 4d, Cross Braces - Row 5**



*Start installing the cross braces at either the left or right end. The recommended order for installation is shown below. Note: several braces are often attached with a single fastener.*

- A) fasten one cross brace (012) with a 3/8" x 1.5" bolt and locknut
- B) fasten one cross brace (012) and one horizontal brace (015) with a 3/8" x 1.5" bolt and locknut
- C) fasten one diagonal brace (016) with a 3/8" x 4" bolt and locknut. Note: the diagonal brace includes a 1" OD extension piece at each end. Diagonal Brace mounts on back side of frame.
- D) fasten two cross braces (012), and two horizontal braces (015) with a 3/8" x 2" bolt and locknut
- E) fasten two cross braces (012), two horizontal braces (015) and one diagonal brace (016) with a 3/8" x 3.5" bolt and locknut.
- F) fasten two diagonal braces (012) and two horizontal braces (015) with a 3/8" x 2" bolt and locknut.

*Do not tighten fasteners fully at this time as you may need to make some small adjustments to align the frame. Note: the fastener at Location C will need to be removed and re-installed after the wood toe kick has been installed.*

## Step 4e, Horizontal Cross Braces - Between Row 2 and 3

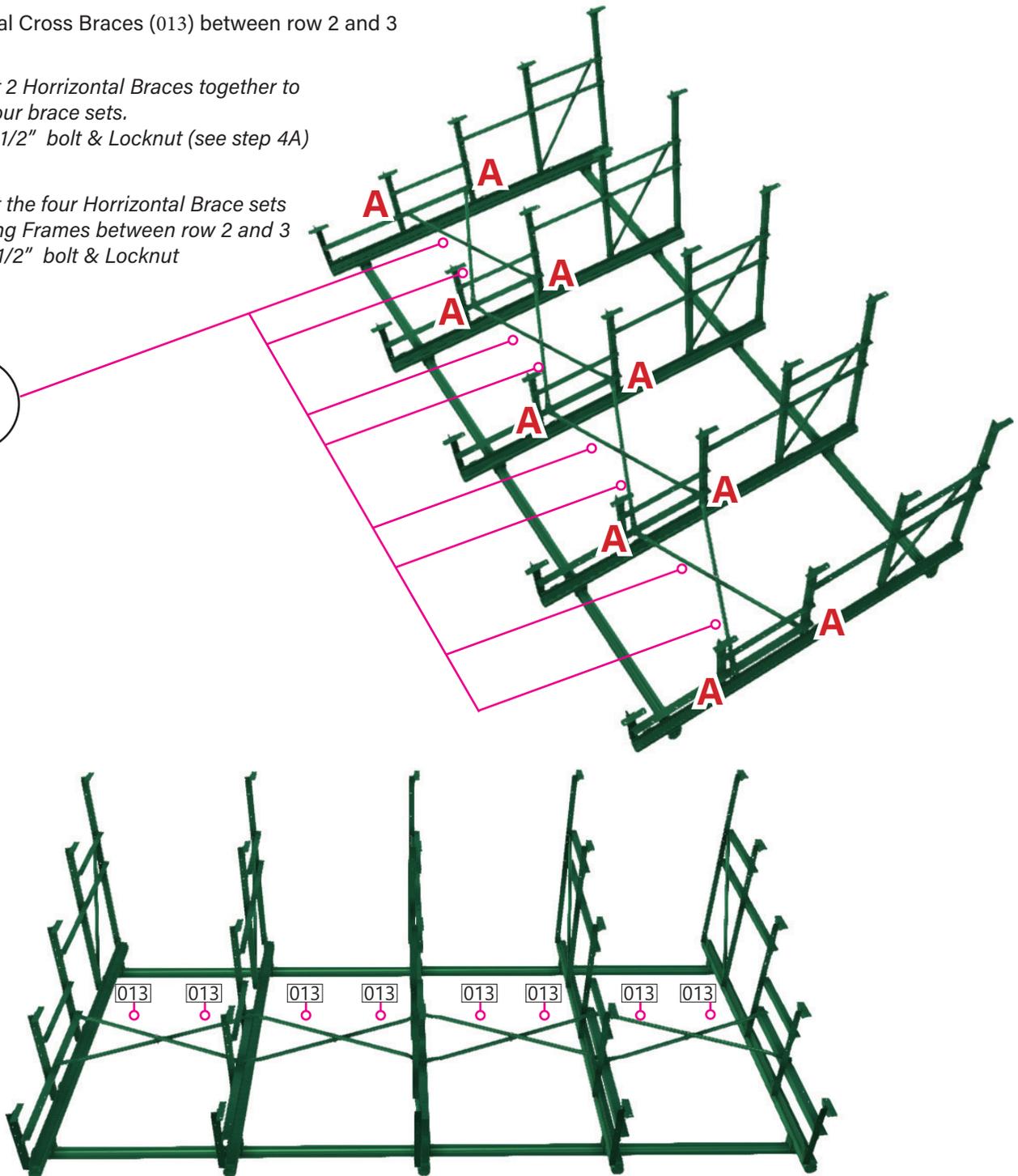
Install Horizontal Cross Braces (013) between row 2 and 3



Connect 2 Horizontal Braces together to create four brace sets.  
3/8" x 2-1/2" bolt & Locknut (see step 4A)  
(4 pcs)

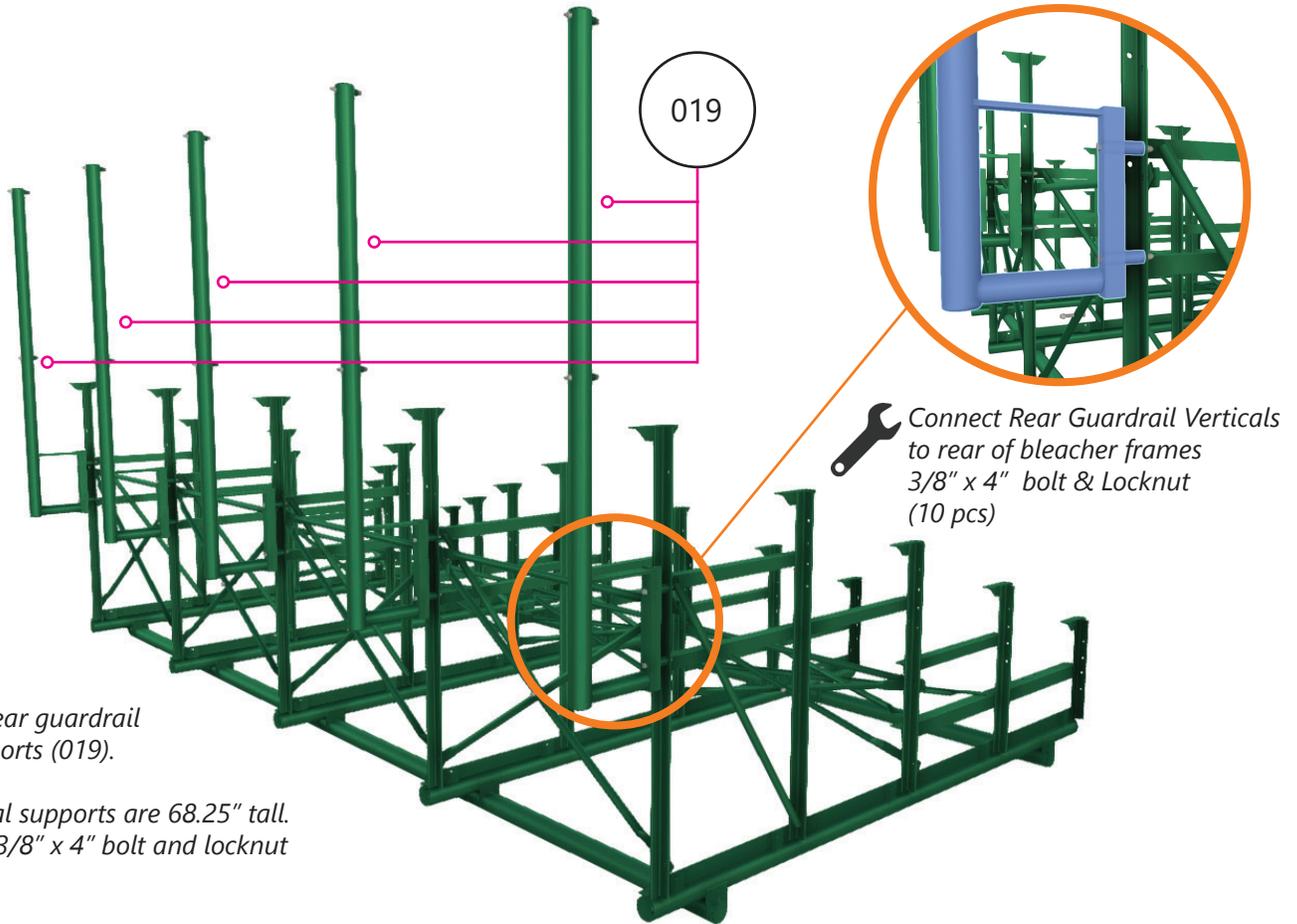


Connect the four Horizontal Brace sets to Seating Frames between row 2 and 3  
3/8" x 1-1/2" bolt & Locknut  
(10 pcs)



**When all the braces have been attached you can tighten the locknuts. Leave the locknuts at 'C' hand tight until after you have secured the wood toe-kick (step 8).**

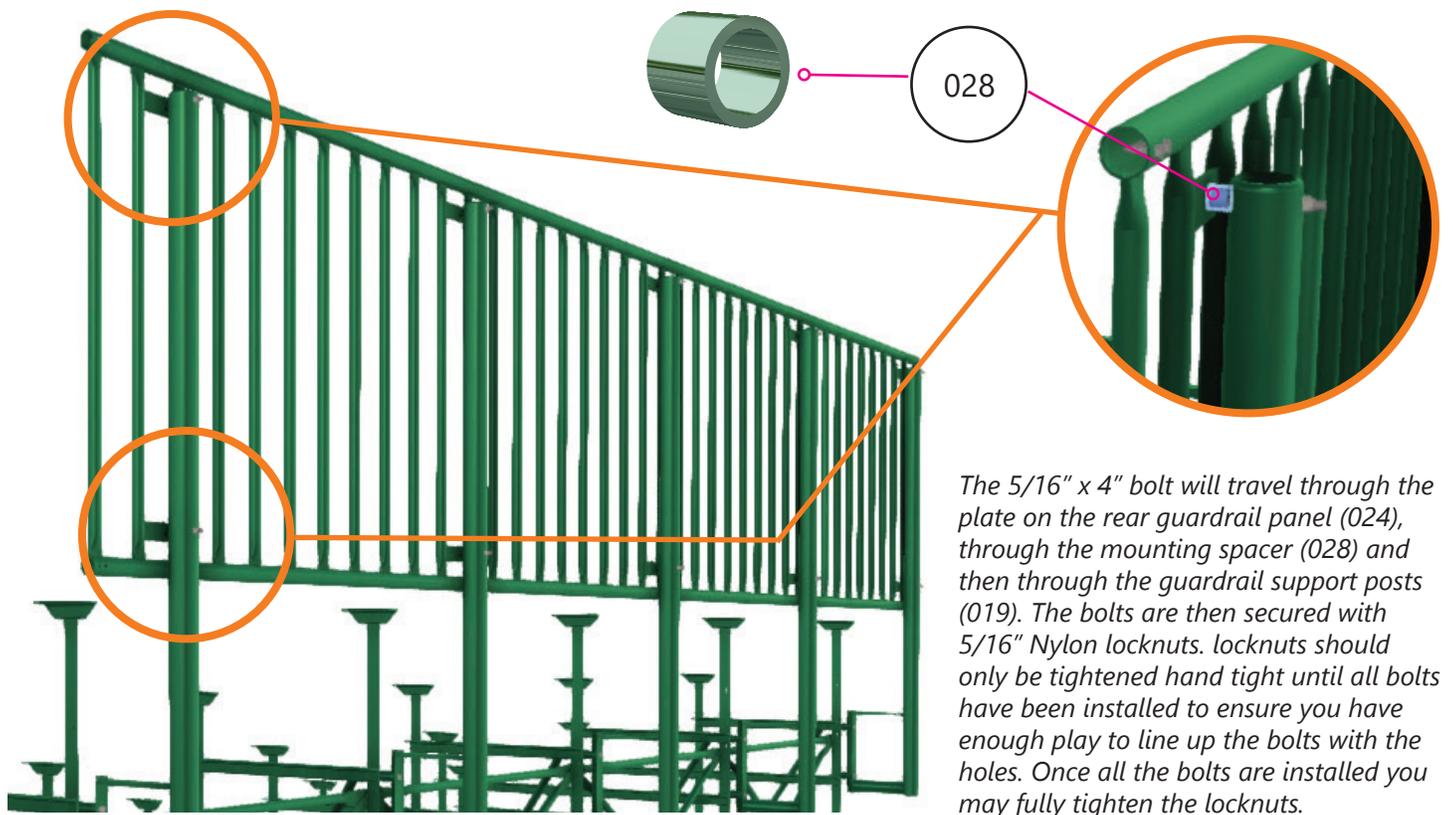
## Step 5a, Install Rear Guardrail Verticals



Attach the rear guardrail vertical supports (019).

These vertical supports are 68.25" tall. Fasten with 3/8" x 4" bolt and locknut (hand tight).

## Step 5b, Install Mounting Spacer



## Step 5c, Install Rear Guardrail Panel

Connect Rear Guardrail Panel (024) to rear guardrail vertical supports (019) with 5/16" x 4" bolt & Locknut (10 pcs)

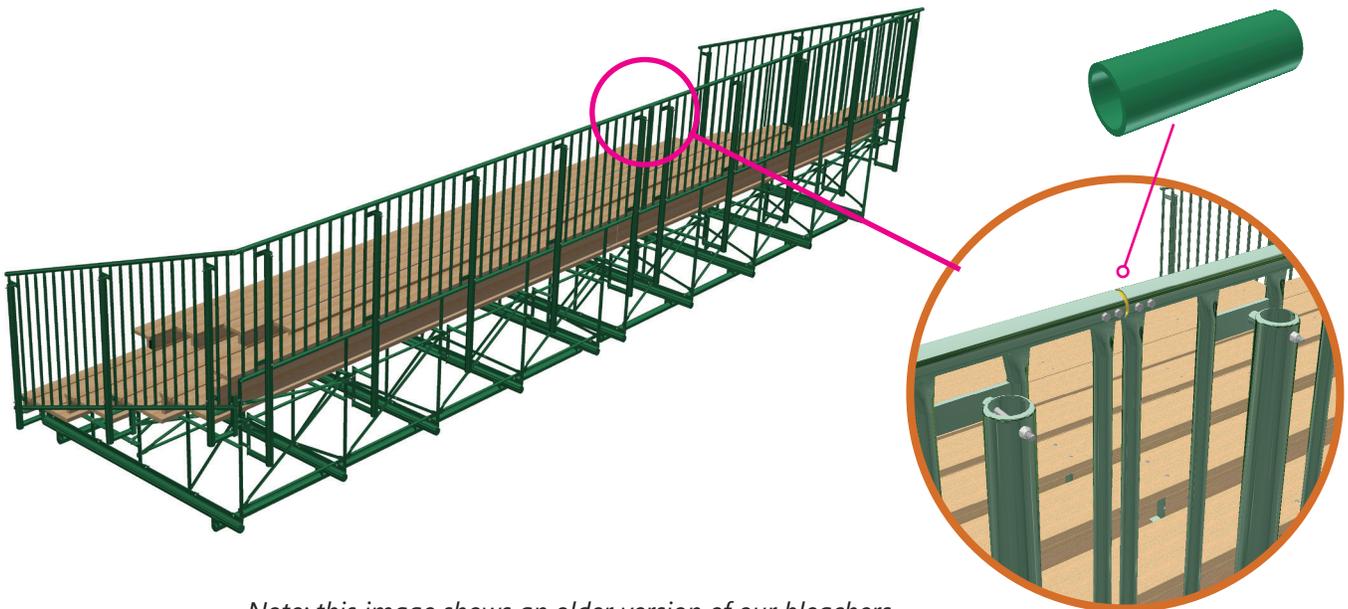


Attach the rear guardrail Panel (024). Fasten with 5/16" x 4" bolt and locknut (hand tight). When all bolts on panel have been installed you can tighten the locknuts on both the handrail verticals and panels.

## Step 5d, Optional, Continuous Bleacher Seating

 When installing 5 Row bleachers side by side insert the Rear Guardrail Connector into the top horizontals on the two abutting Rear Guardrails. Secure the Connector with four Hexhead Self Tapping 1/4" x 1" Screws.

Rear Guardrail Connector (023)

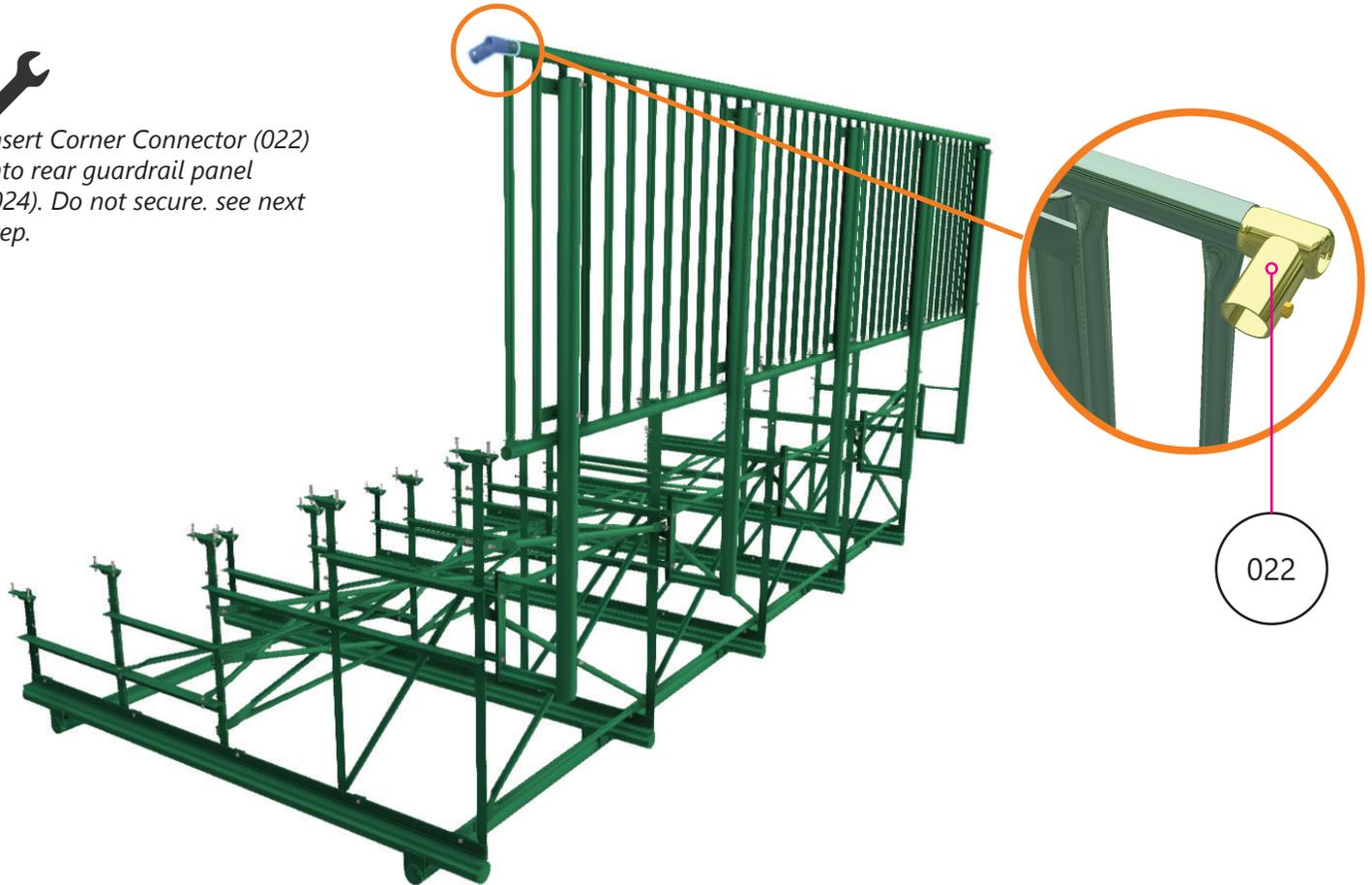


Note: this image shows an older version of our bleachers

## Step 6a, Side Railings - Insert corner connector into rear guardrail.

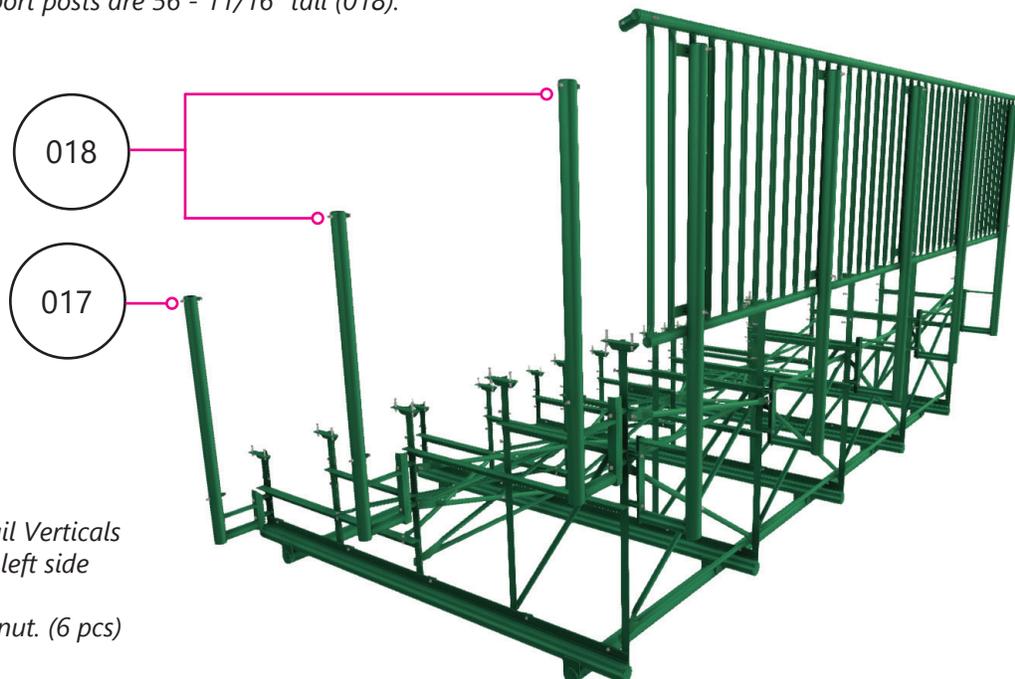


Insert Corner Connector (022) into rear guardrail panel (024). Do not secure. see next step.



## Step 6b, Side Railings - Install Vertical Supports

Connect Left Side Rail support posts to end frame. Note that the support post at Row One is 51 - 15/16" tall (017). The remaining side support posts are 56 - 11/16" tall (018).



Connect Side Handrail Verticals (018 and 017) to the left side bleacher frames  
3/8" x 4" bolt & Locknut. (6 pcs)

Attach the side handrail verticals (017 and 018) to the left side bleacher frames. Fasten with 3/8" x 4" bolt and locknut (hand tight). Please note that vertical (017) attaches to the first row of the bleacher frame.

## Step 6c, Side Railings - Install Left Side Railings

**Note:** Ensure Mounting Spacers [028] are positioned between the Side Railings and the Support Verticals at all 6 bolt locations.



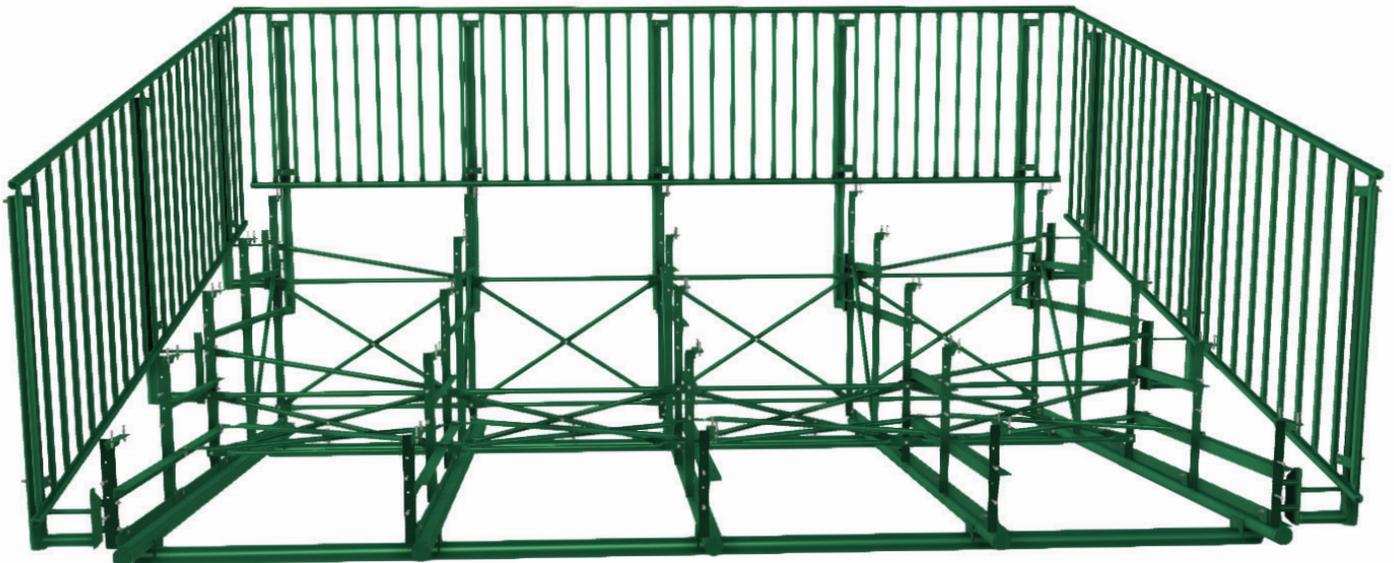
Slide the top horizontal of the side handrail into the corner connector. When Side handrail is fully mounted secure corner connector with self tapping screws.

 Cover 5/16" x 4" bolts with mounting spacer (028)(6pcs)

 Connect Side Handrail (019) to Side rail vertical supports 5/16" x 4" bolt & Locknut, (6pcs)

Slide the top Side Handrail horizontal into the handrail Corner Connector (022) on the Back Handrail. Secure the Side Handrail (020) to the side handrail vertical supports (017, 018). Ensure a Mounting Spacer (028) is positioned between the Side Railings and the support verticals at all six locations with a 5/16" x 4" bolt. Hand tighten locknuts. When side handrail is secured you may secure the corner connector with self tapping screws and fully tighten all the locknuts on the side rail verticals

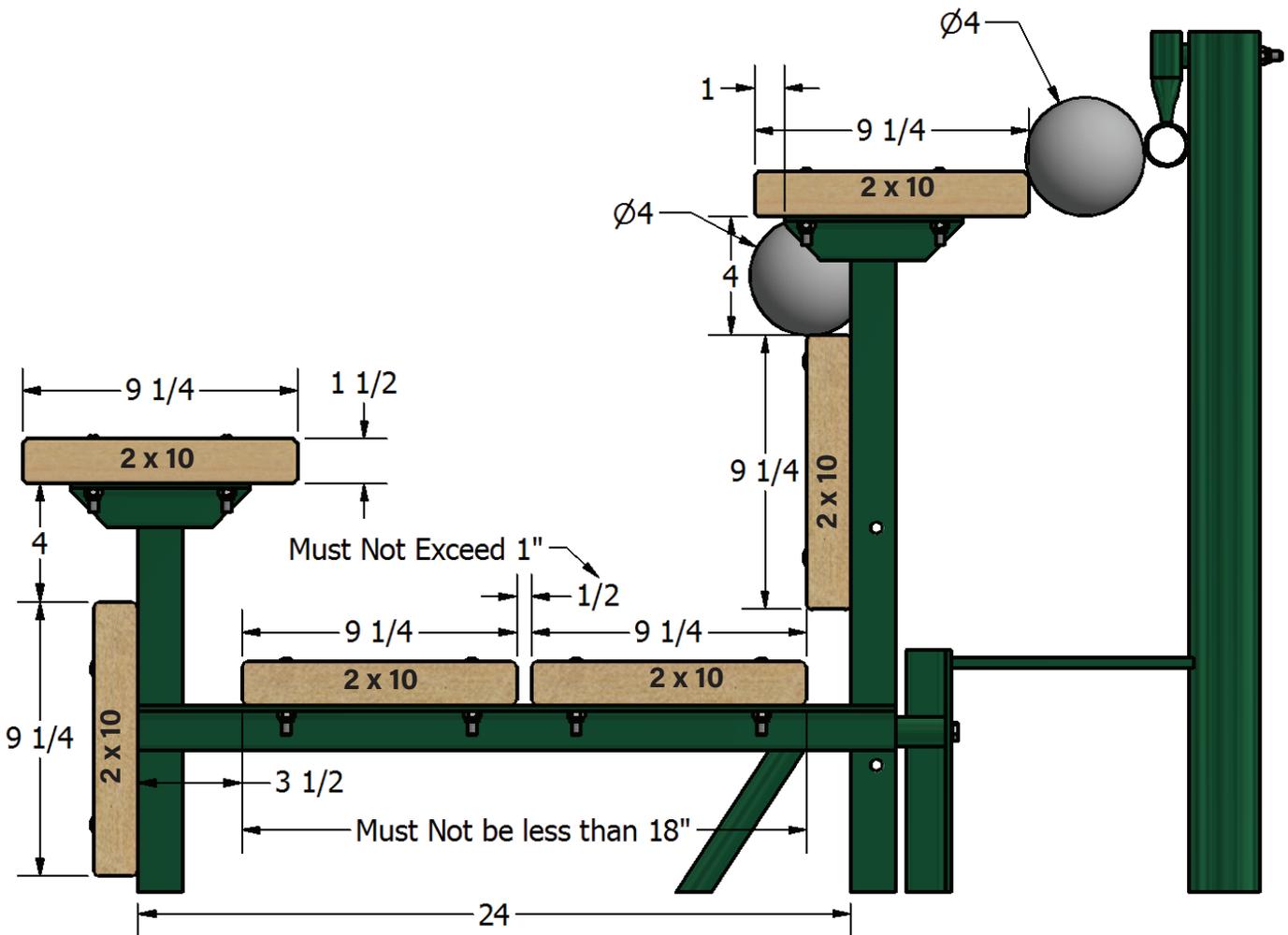
## Step 7a, Side Railings - Right Side



Repeat Steps 6a, 6b and 6c to complete the right hand side rail.

**Before installing seating check that all locknuts are tight (accept for those that will be removed to install the toe kicks)**

**The following pages describe the installation of wood for treads, kick boards, and seating. The materials required for this portion of the installation are not included.**



### Important Note:

Use this drawing as a guide for installing the lumber on your bleachers. Note, for bleachers with stairs you will need to adjust some of your lumber sizes (see page 18)

When you have installed your lumber there should not be any openings larger than 4" in diameter (that is to say a 4" ball could not be put through the gap). This spacing meets most building codes. You are responsible for checking the codes in your area.

## Step 8a, Standard Bleacher - Wood Installation - Treads

**For bleachers sets with stairs proceed to step 8d**

Tread 2x10 x 16' , 2 pieces



Starting at the bottom row, drill a pilot hole up through the holes provided in the angle iron supports and through the 2x10 x 16' lumber. Secure the treads with round headed bolts and locknuts. If your installation requires stairs go to step 8d. Note: A 4" sphere should not pass through any gap between the treads, toe kick and Side Guard.

## Step 8b, Standard Bleacher - Wood Installation - Toe kick

Toe Kick 2x10 x 16'



The 2x10 x 16' toe kicks mount to the vertical face of the seat support frames. Fasten the toe kicks using the same method used in 8a. After toe kicks have been installed tighten the locknuts. Note: the fastener at Location C will need to be removed and re-installed after the wood toe kick has been installed. See pages 9-11  
**The top of the toe kick must be no more than 4" below the seat.**

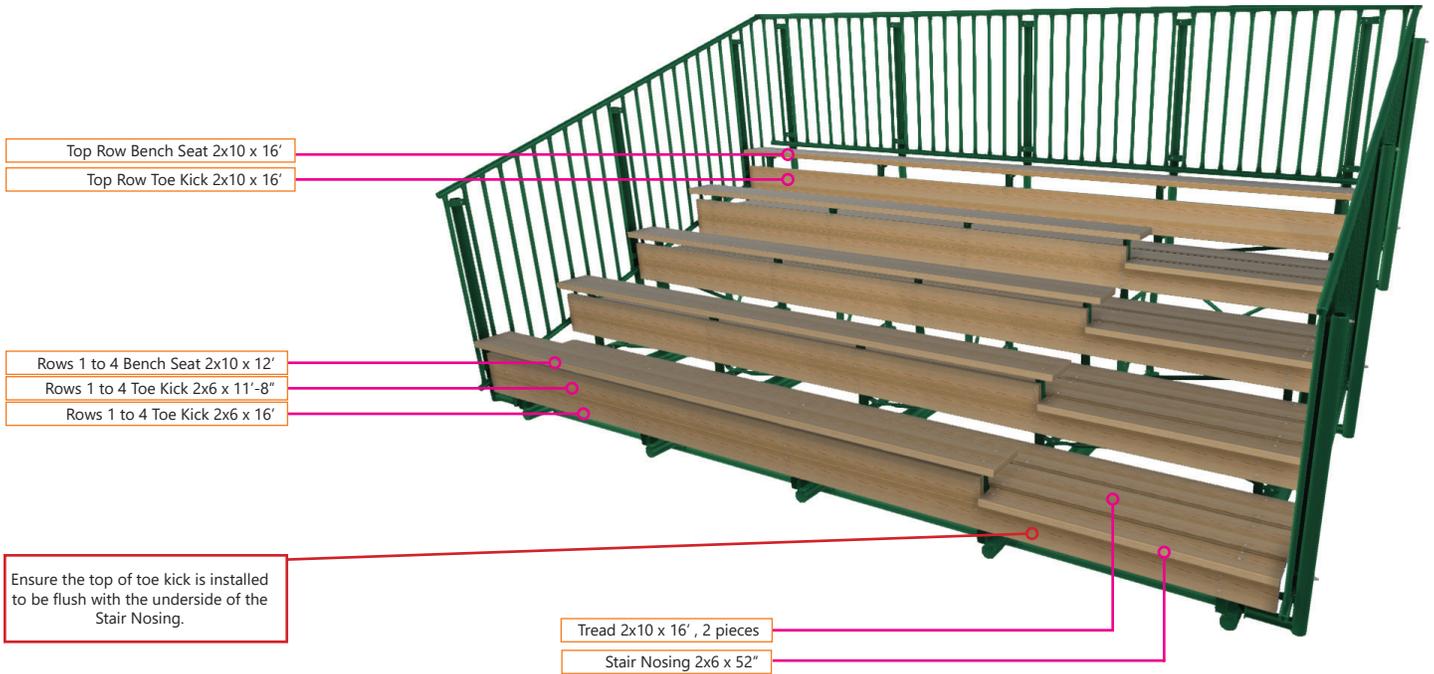
## Step 8c, Standard Bleacher - Wood Installation - Seats

Bench Seat 2x10 x 16'



Install the 2x10 x 16' bench seating starting at the top row. Note the seat for the back row should be no further from the back handrail than 4".

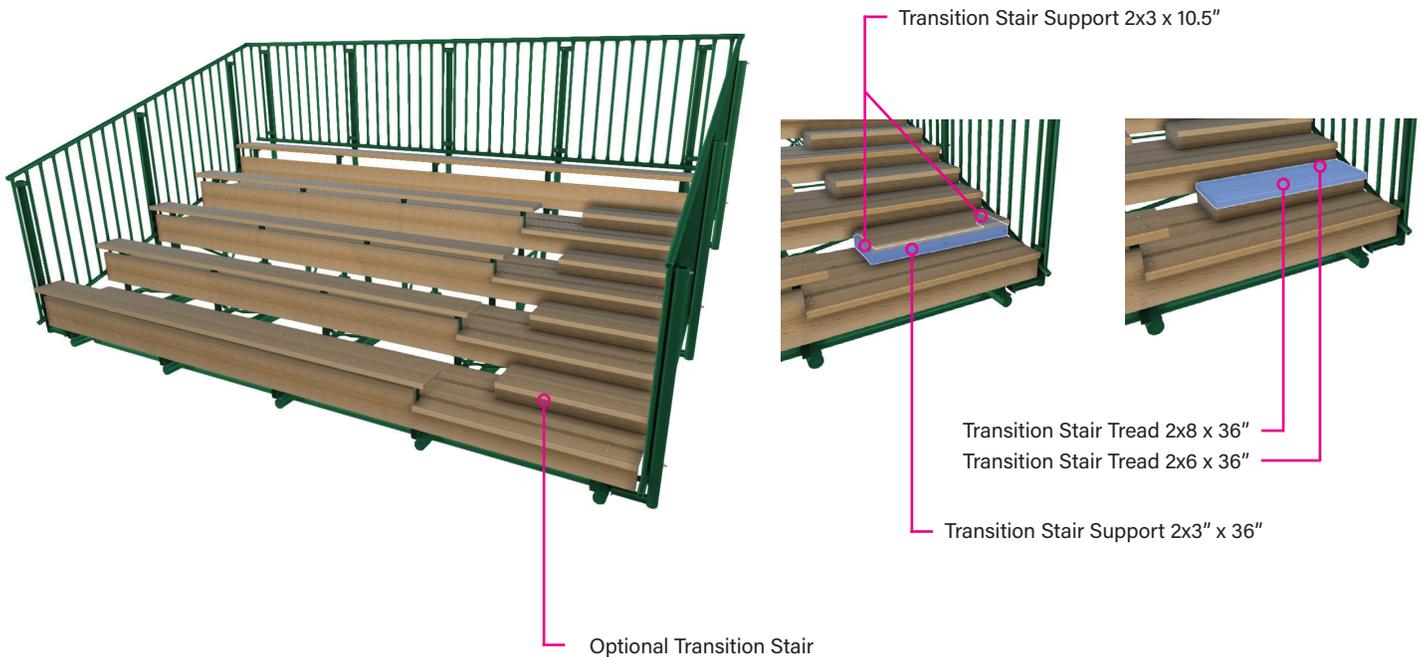
## Step 8d, Bleacher with stairs - **Left Side Stairs - Treads**



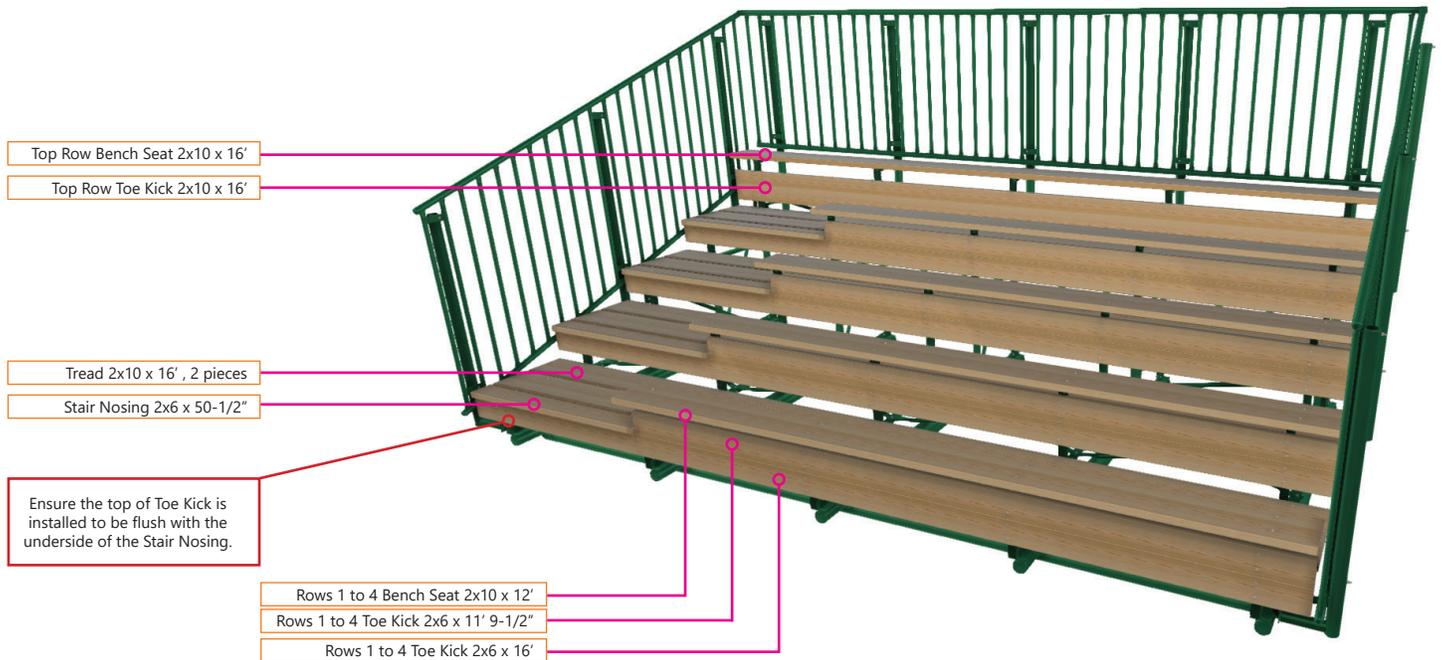
Repeat Steps 8a, 8b and 8c except use the modified lumber sizes and add a nosing piece to the stair section.

Starting at the bottom row, drill a pilot hole up through the holes provided in the angle iron supports and through the lumber. Secure the treads with round headed bolts and locknuts. The frames for the stairs (005, 05B, 05A) include extra holes for fastening the nosing tread. The seats for the first 4 rows will only be 12' in length while the top bench seat will remain the full 16' length.

## Optional transition step - Left



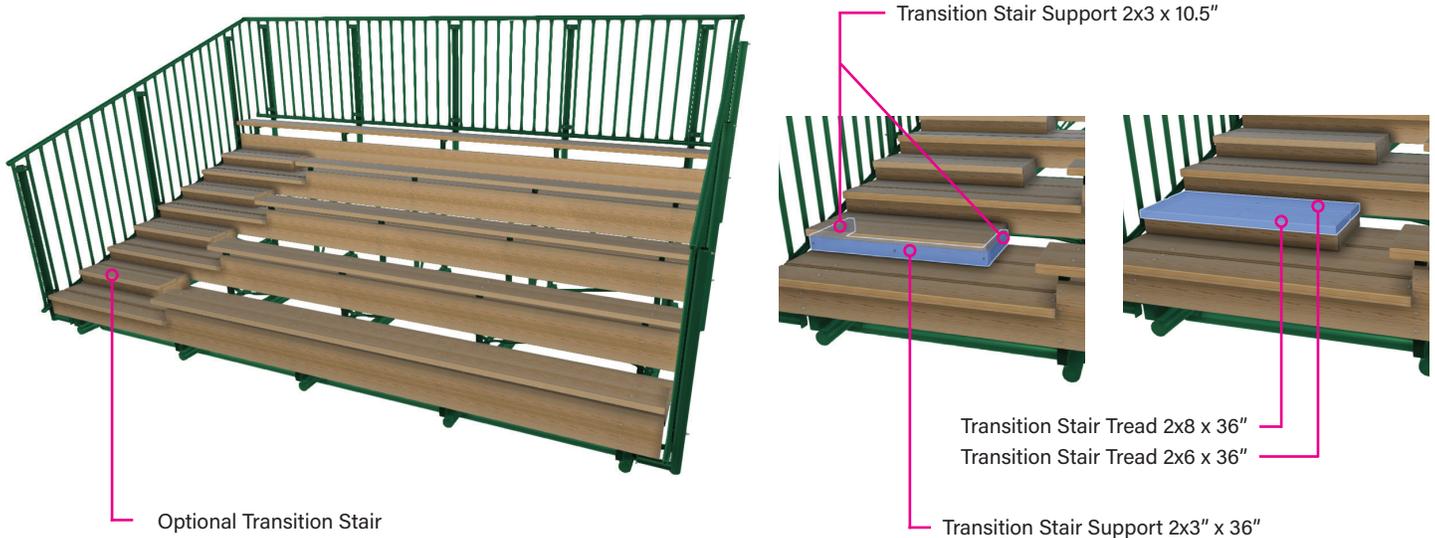
## Step 8e, Bleacher with stairs - **Right Side Stairs** - Treads



Repeat Steps 8a, 8b and 8c except use the modified lumber sizes and add a nosing piece to the stair section.

Starting at the bottom row, drill a pilot hole up through the holes provided in the angle iron supports and through the lumber. Secure the treads with round headed bolts and locknuts. The frames for the stairs (005, 05B, 05A) include extra holes for fastening the nosing tread. The seats for the first 4 rows will only be 12' in length while the top bench seat will remain the full 16' length.

## Optional transition step - Right



## Step 9, Adding the optional sign frame

The optional sign frames (8963) can be added to the rear guardrail of the bleachers. The mounting brackets are located so you can use the upper existing bolts used to tie the rear guardrail to the guardrail support posts.

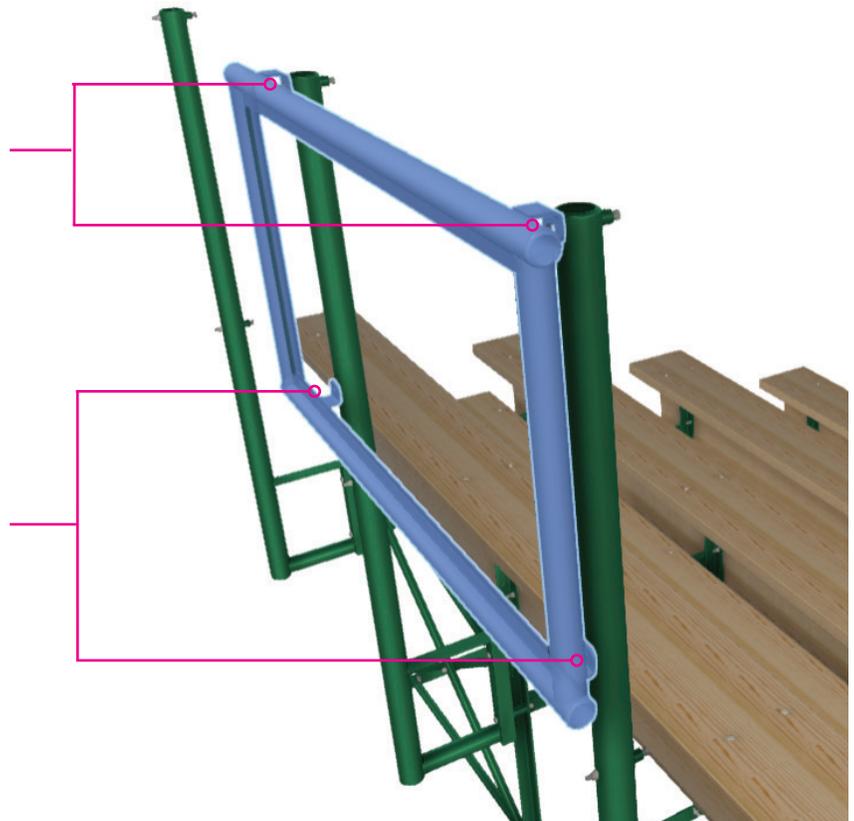
Sign frames can be added to the rear guardrail to promote businesses who support your facilities, or to generate additional advertising revenues. Each bleacher set can support two sign frames. The sign frames are designed to hold a 2' x 4' sign. Pre-drilled holes in the sign frame make it easy to securely bolt your sign in place



Note: This image shows the sign frame mounted on a 5-row bleacher with no skids, but the method is the same for mounting on a 5-row bleacher with skids.

For clarity the rear guardrail panel is not shown in the image below

Use existing fasteners to secure the top of the sign frame to the top of the rear guardrail support post.



The guardrail support posts do not come with pre-drilled holes for securing the lower portion of the sign frame. These holes must be drilled on site and the sign can then be secured with two 5/16" x 3.25" bolts