
3.8 Barge

One Barge needs to be built. Tools & Equipment (for 1x Barge)

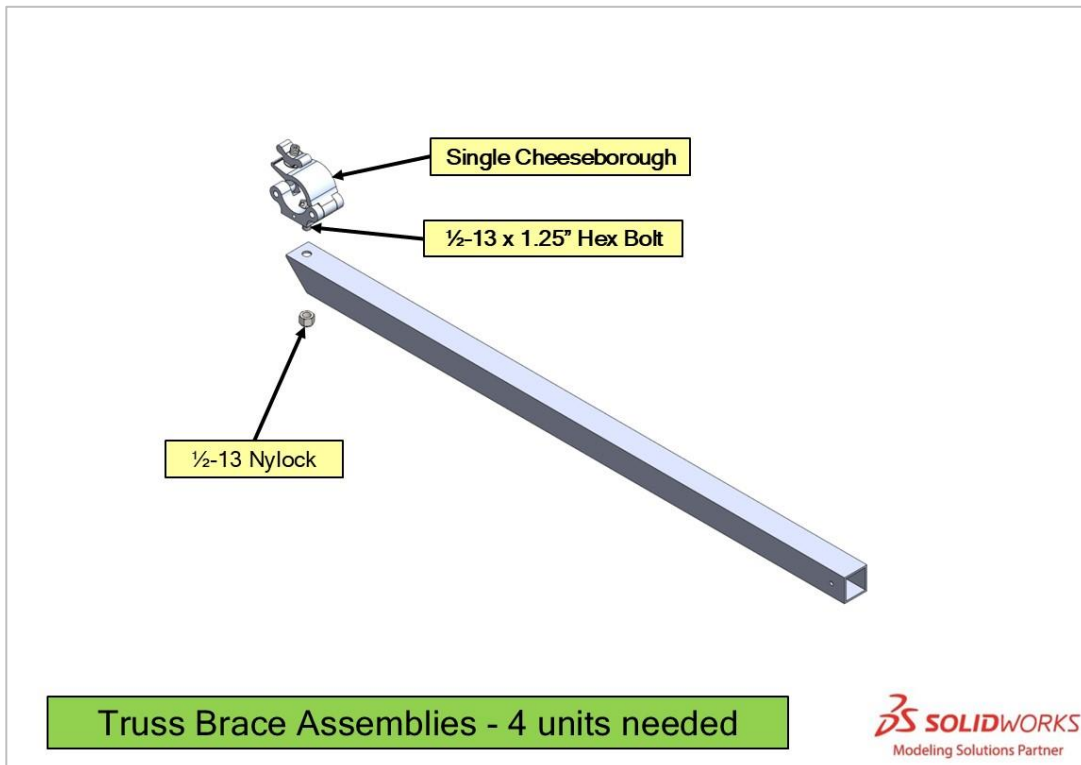
- 7/16" wrenches/sockets
- 3/4" wrenches /sockets
- 15/16" wrenches/sockets
- 50 lb. cable ties, white
- 50 lb. cable ties, black (ONLY USE ON REEFSCAPE LOGO PLASTIC)
- 120 lb. cable ties
- 6x 1/2-13 eye nuts
- 6x 1/2-13 shoulder eye bolts
- 8x 1/4-20 x 1" hex head bolts
- 10x 1/2-13 x 1.25" hex bolts
- 10x 1/2-13" nylock nuts
- 12x 1/2" flat washers
- Tackle box of truss hardware
- 24x 1/4" x 2-5/16" pins

3.8.4 Assembly

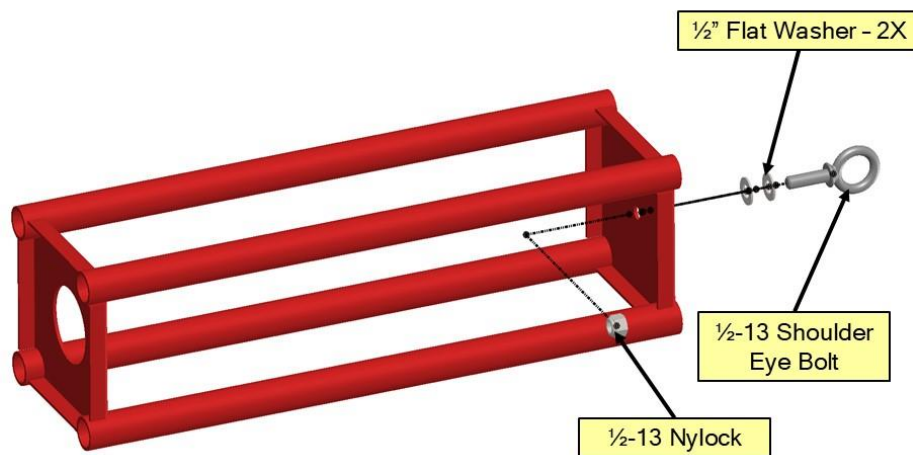
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2.



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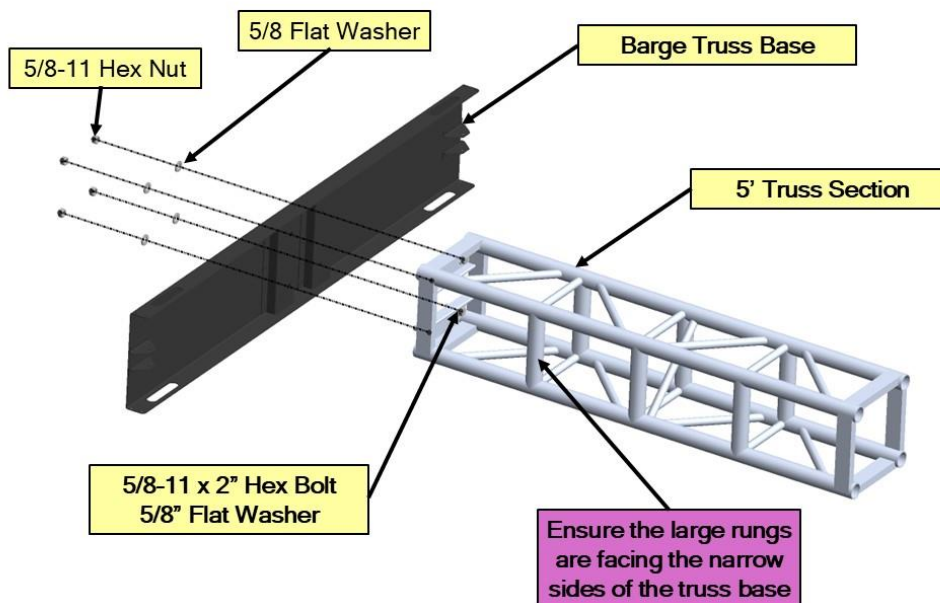


Attach shoulder eye bolts to the cages using hardware shown. Tighten so that the cages do not spin freely, but can still rotate by hand with some difficulty.

Units Needed: 3 Red, 3 Blue

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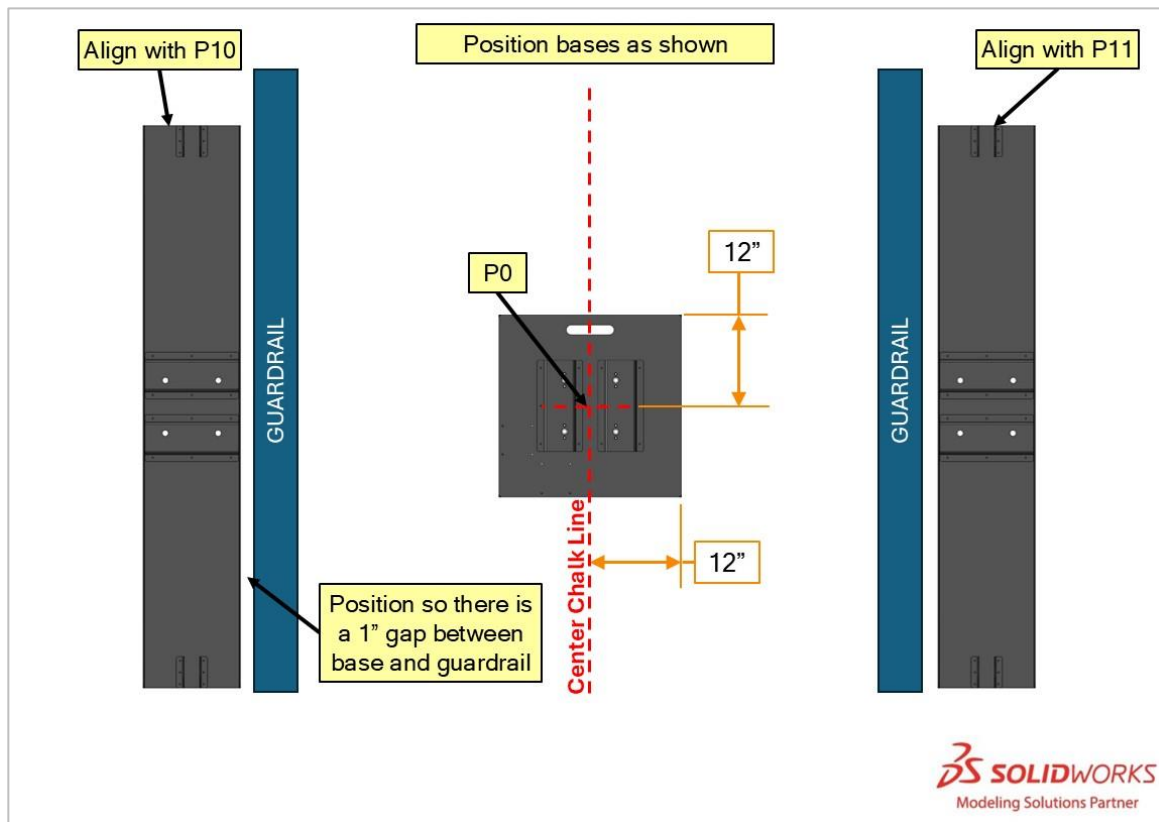
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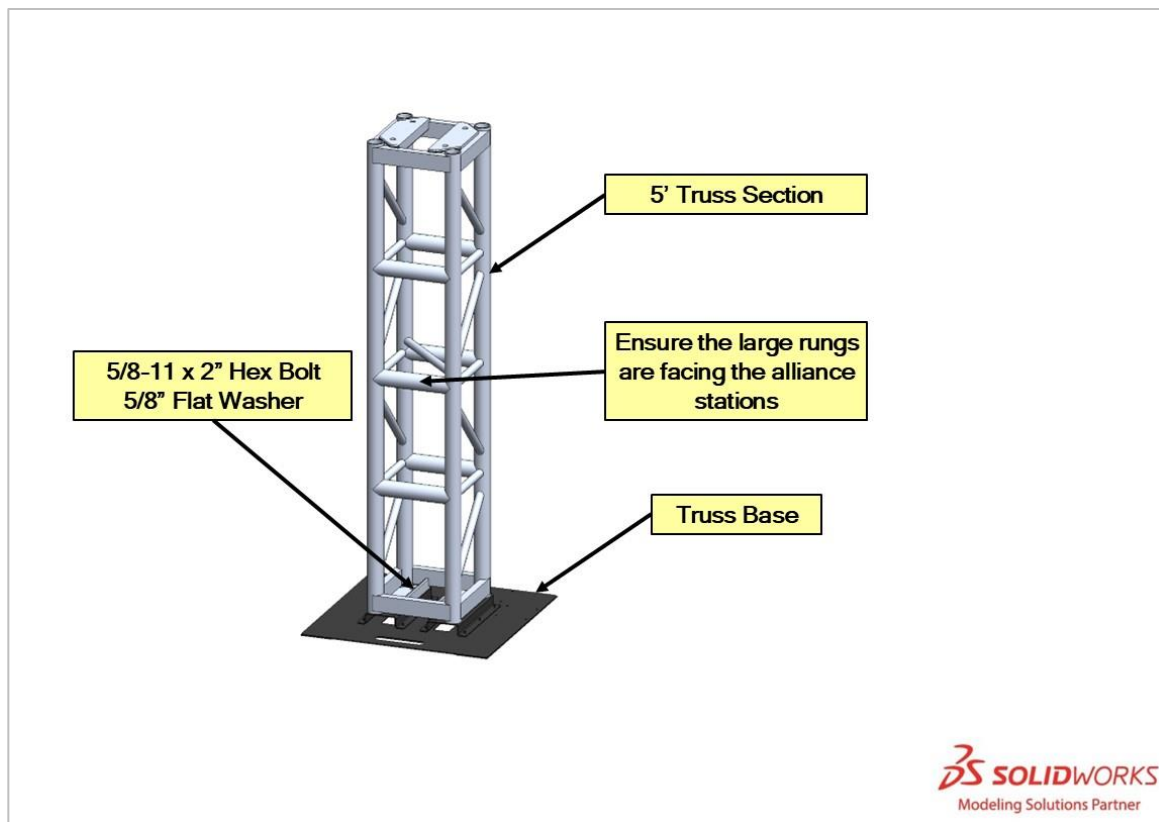
Units Needed: 2

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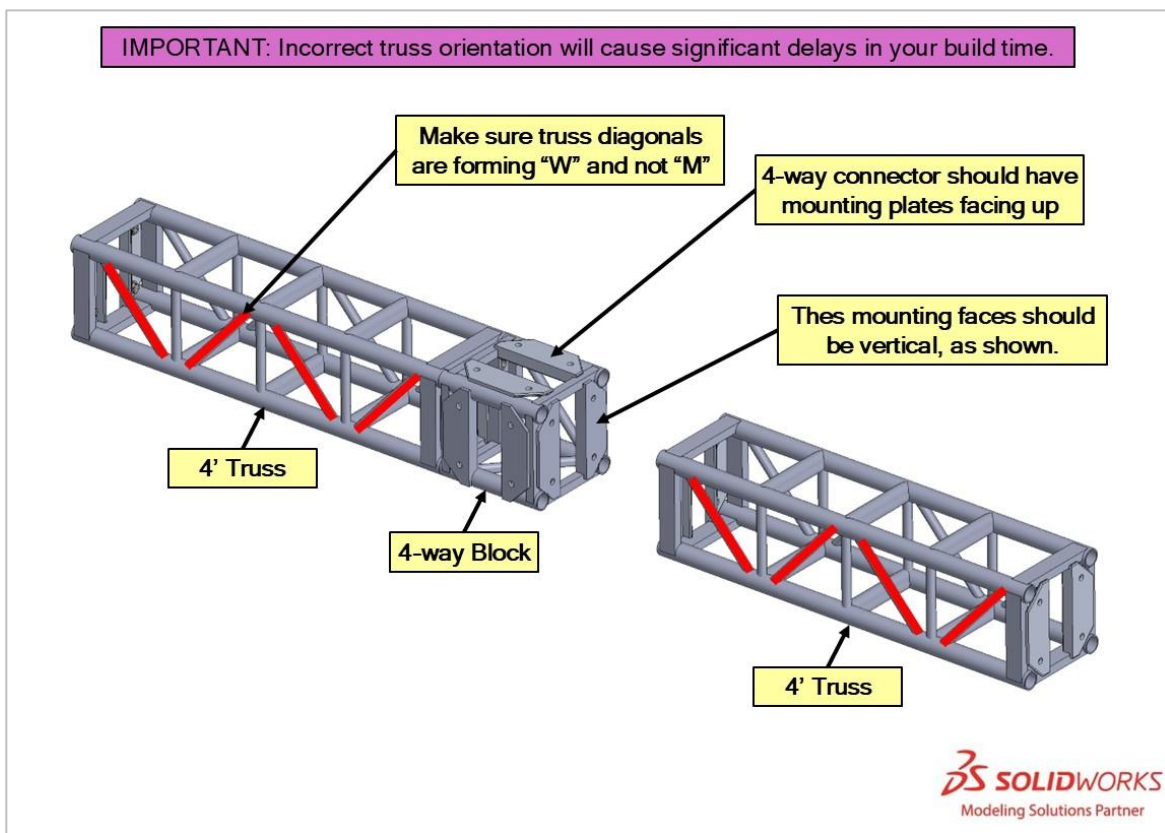
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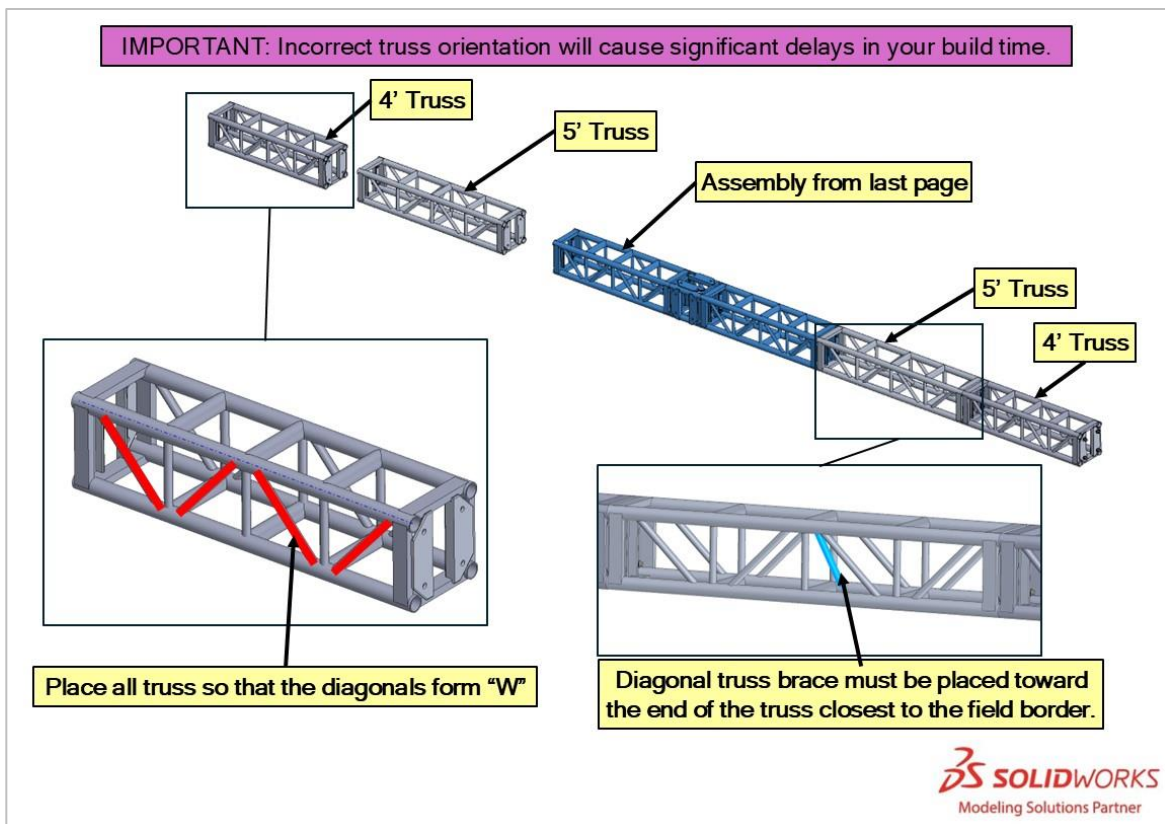
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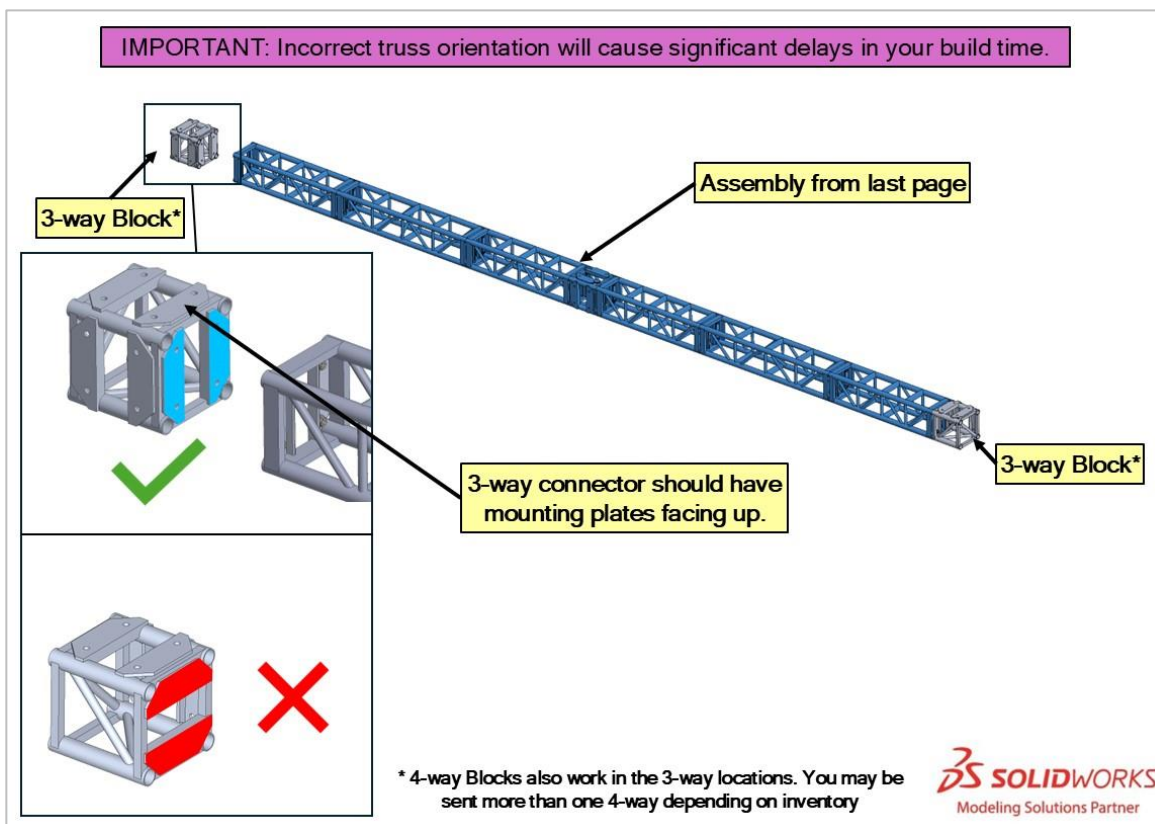
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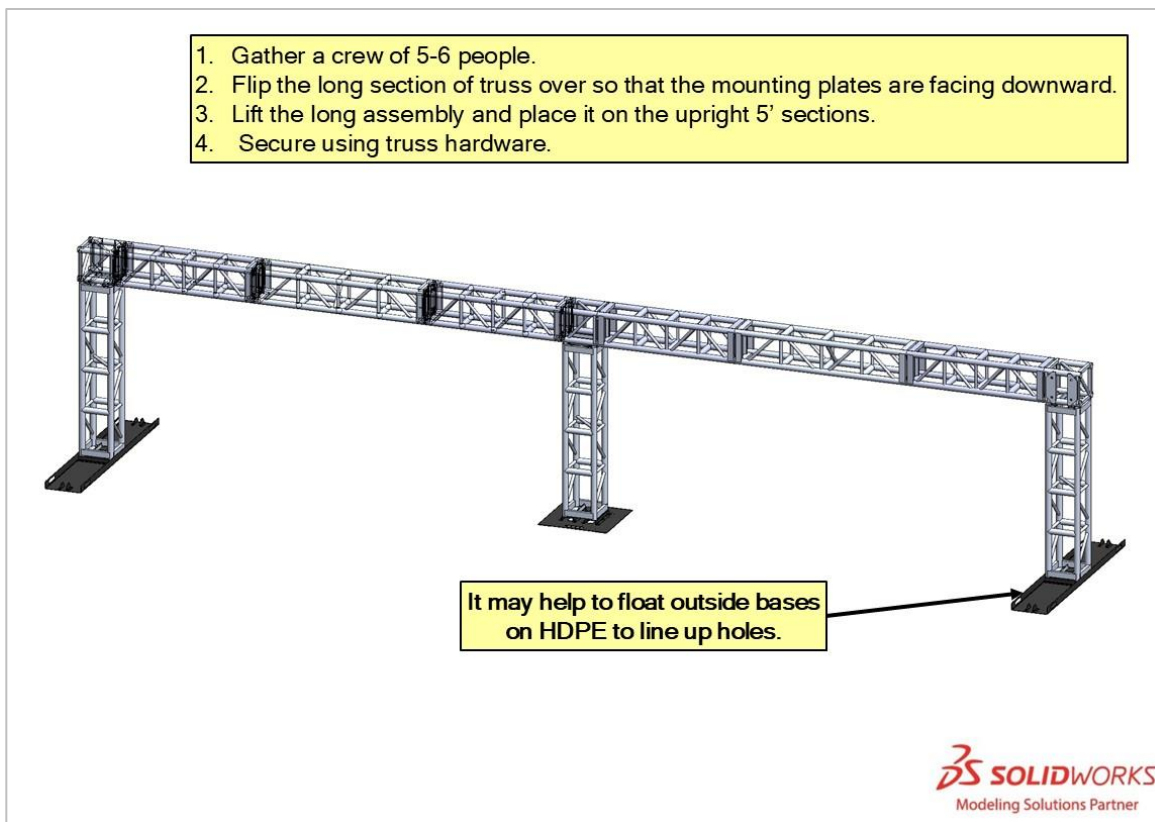
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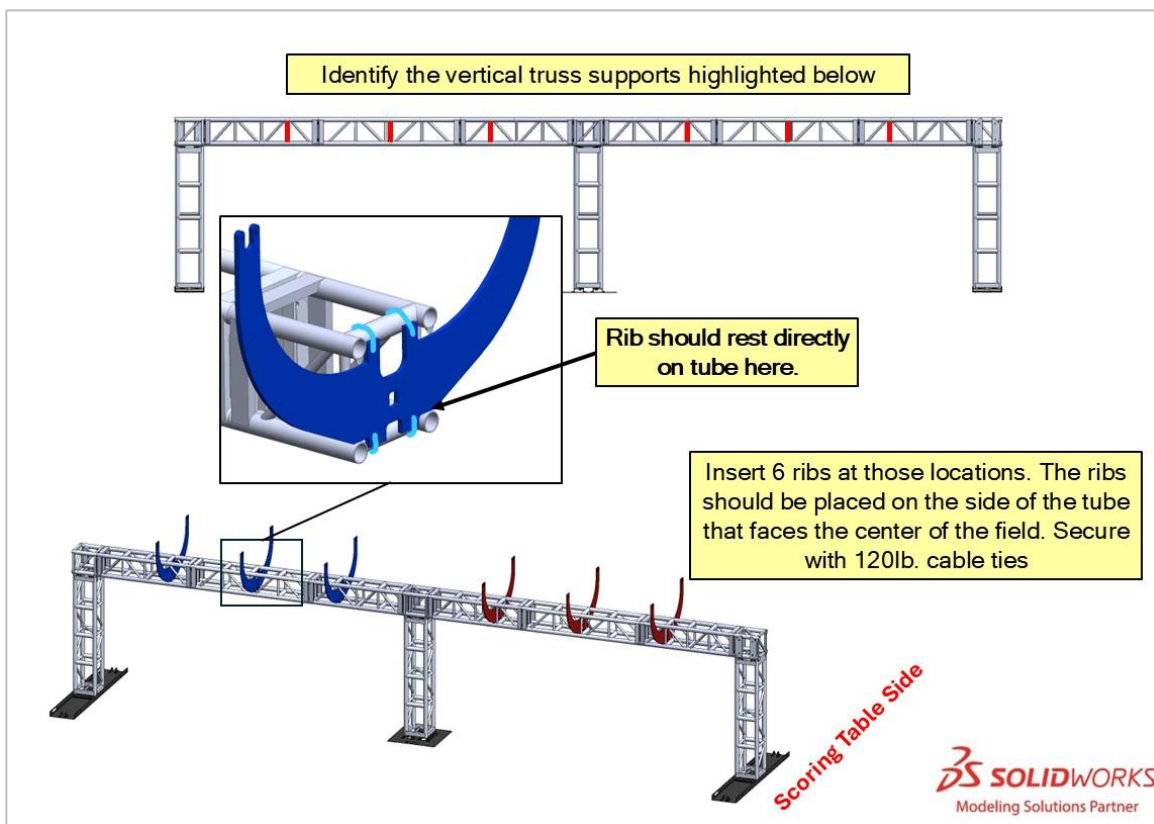
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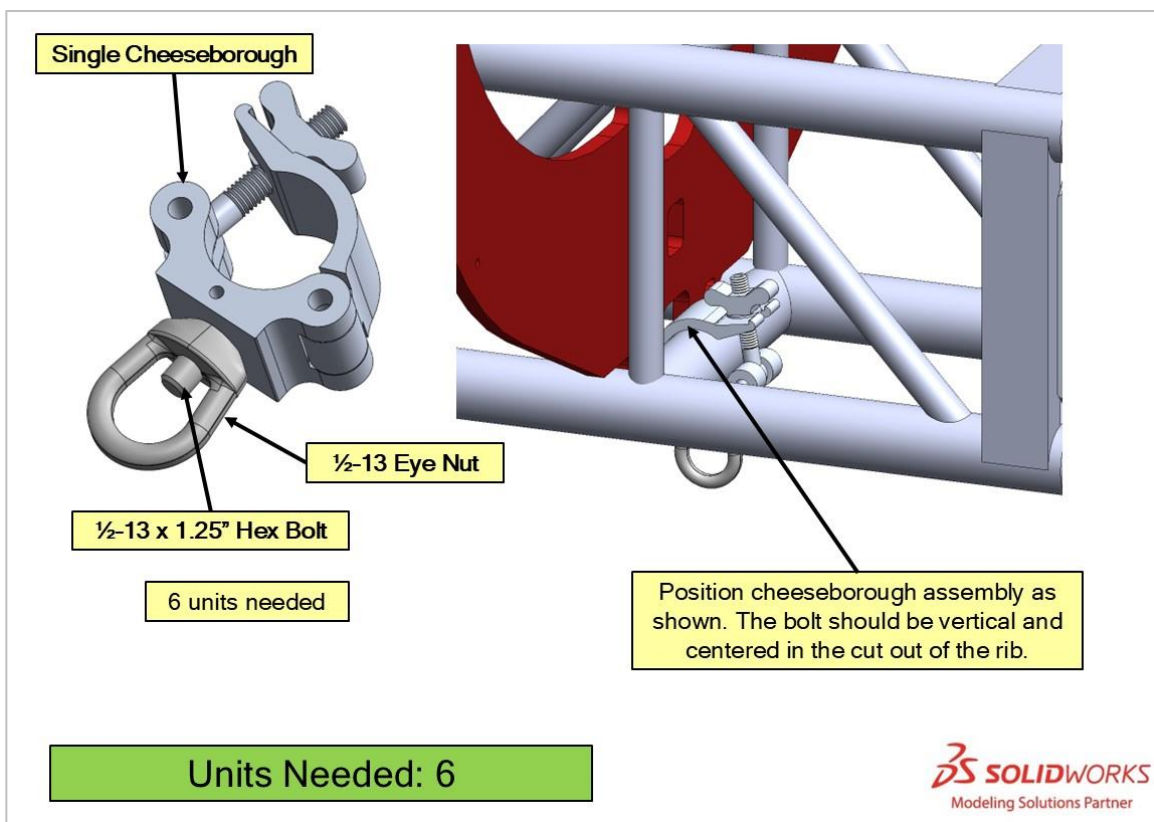
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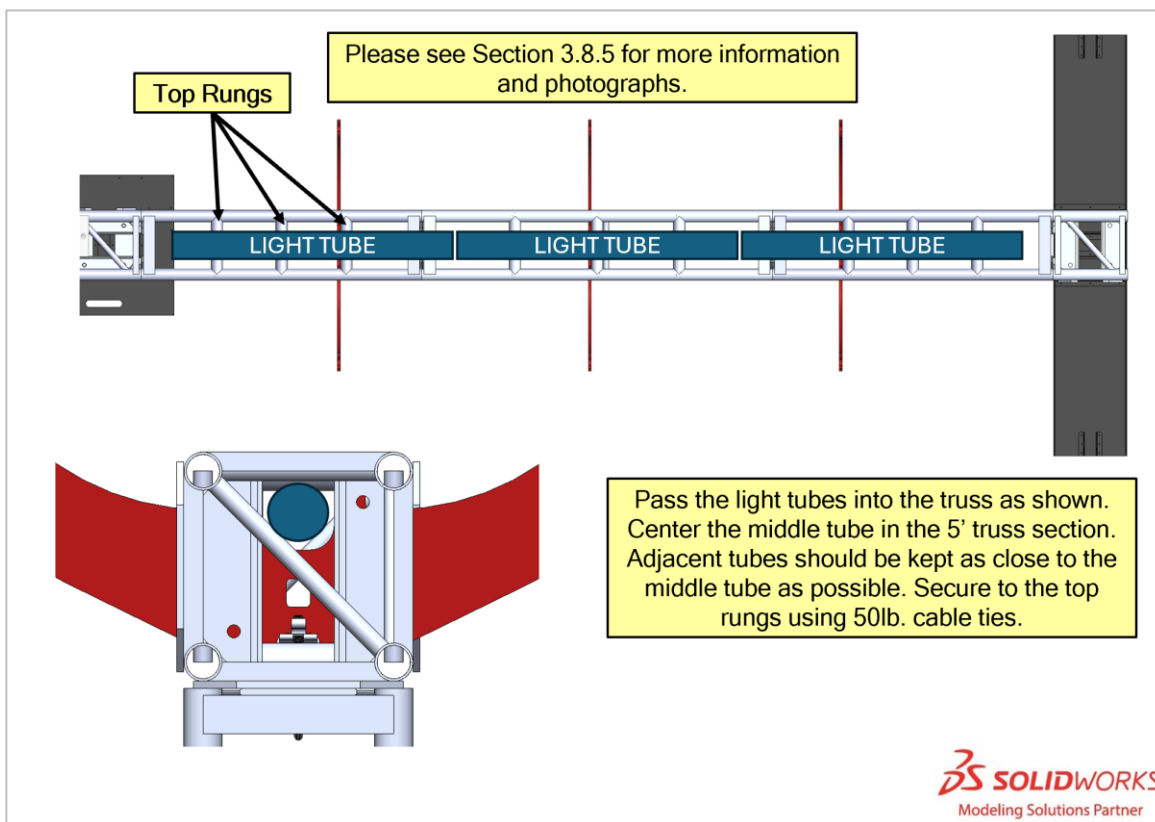
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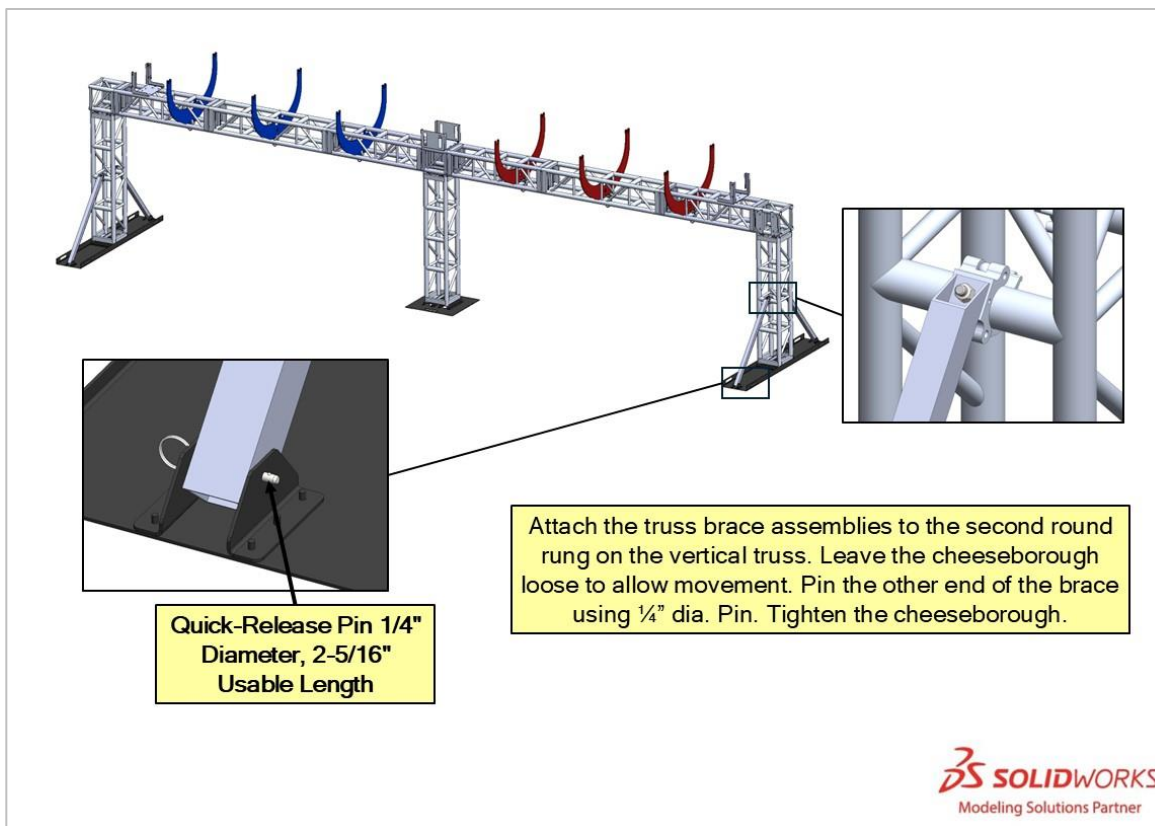
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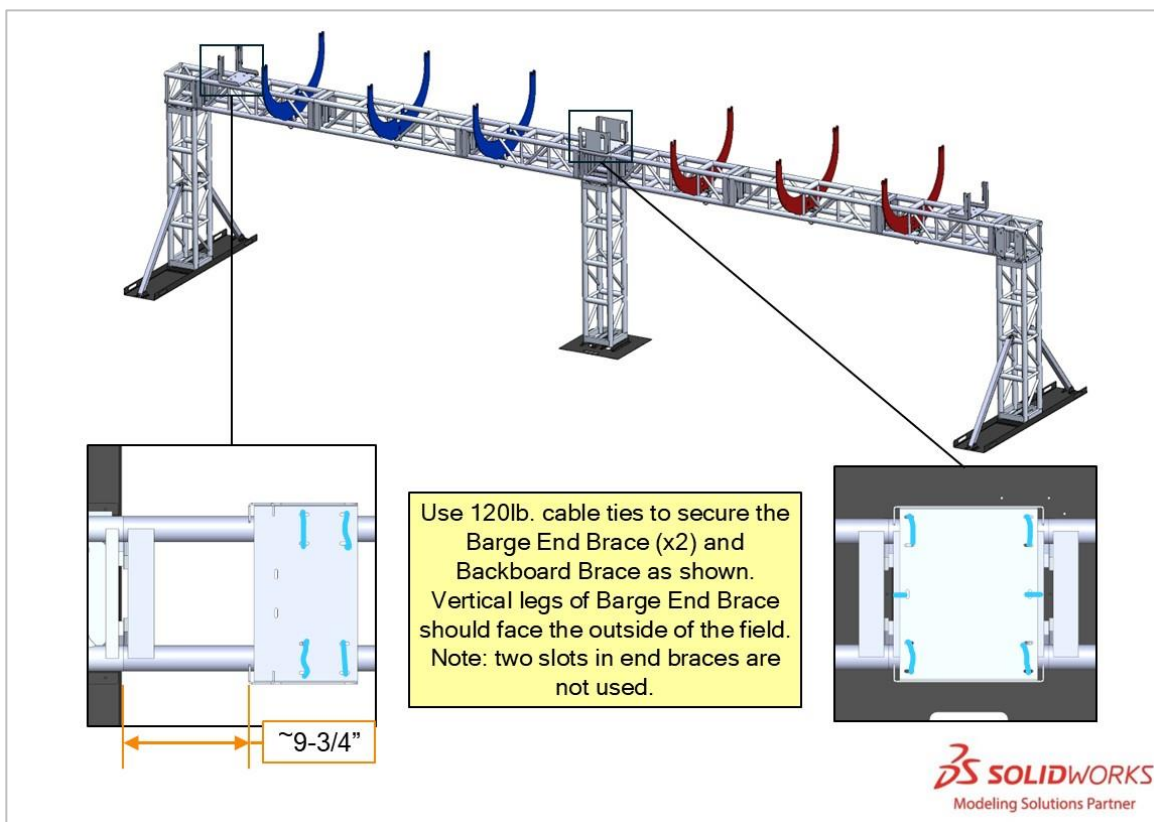
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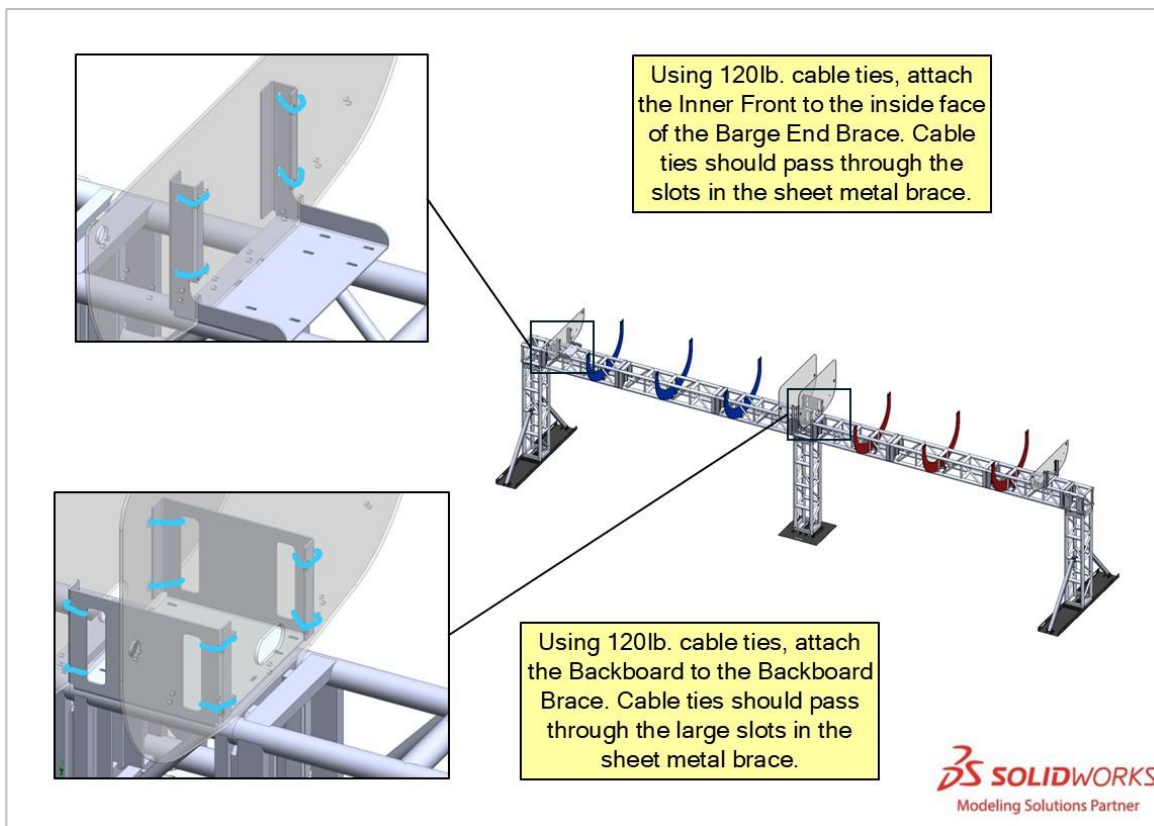
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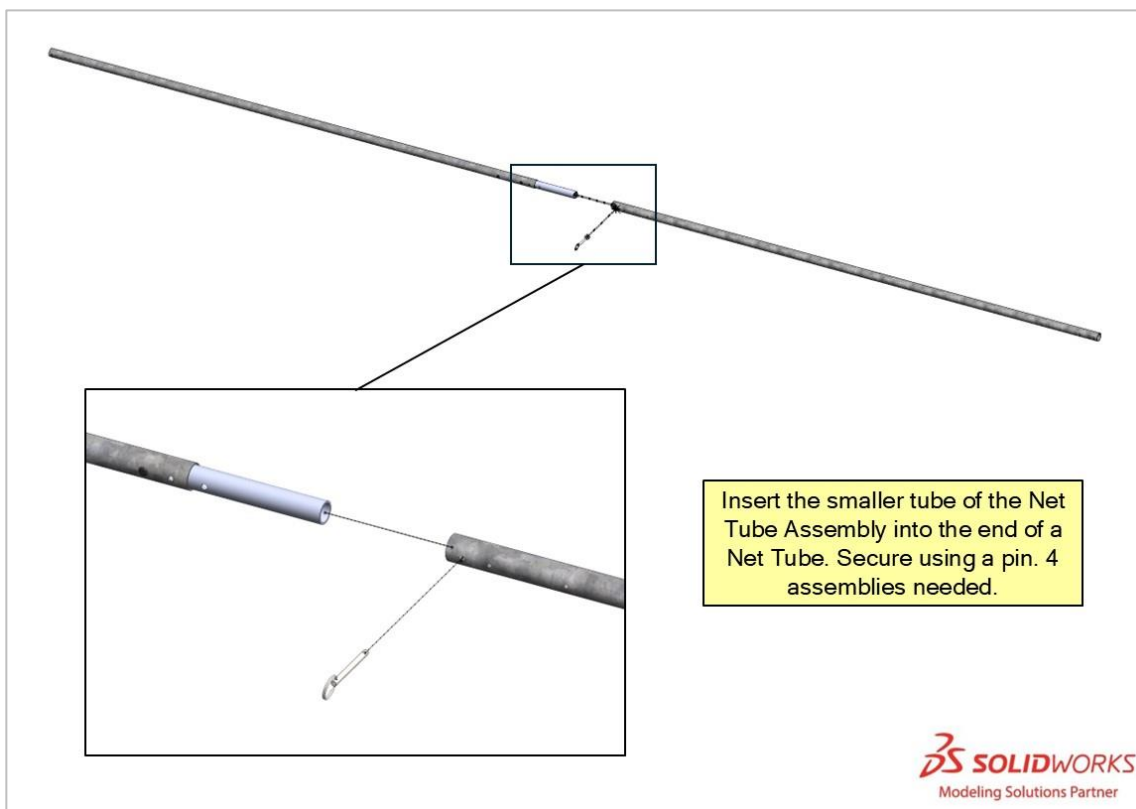
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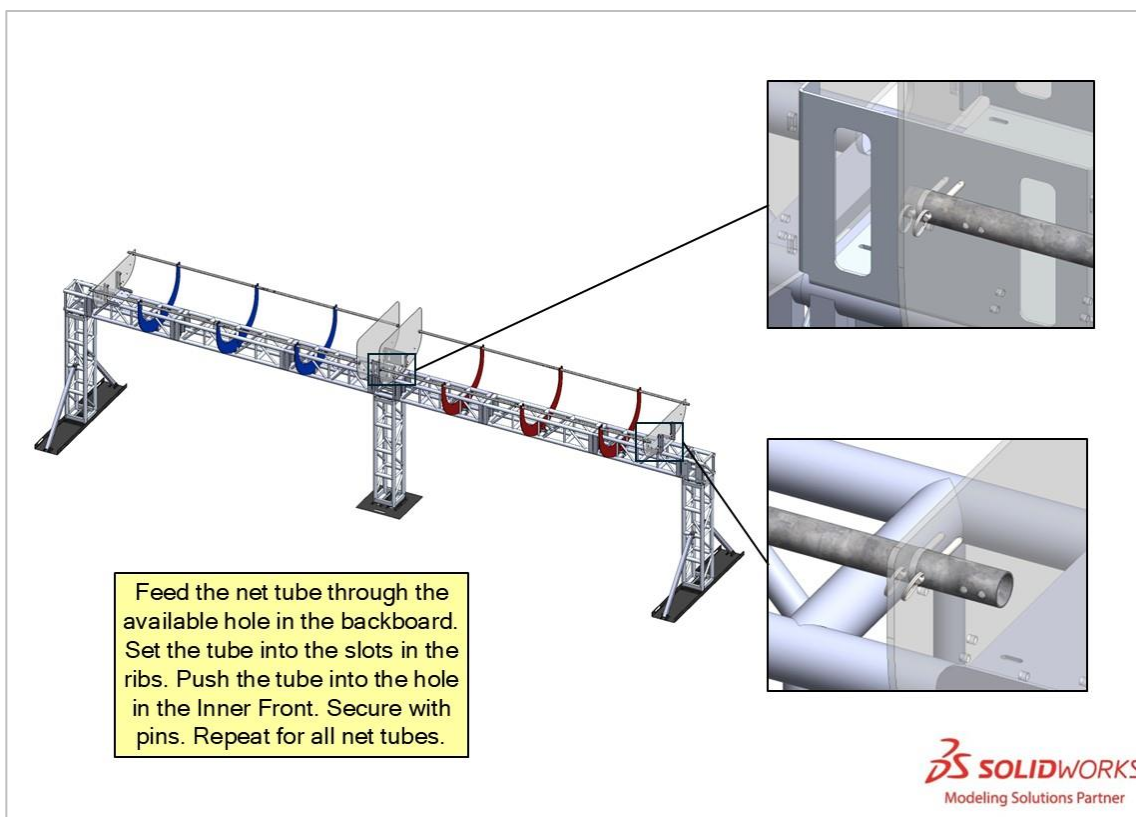
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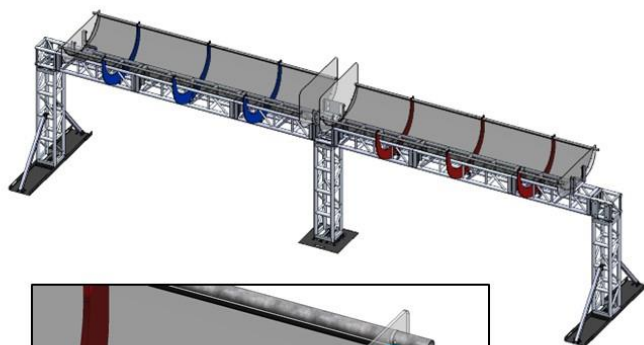
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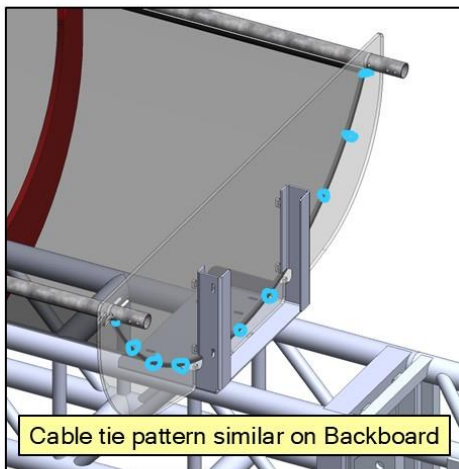
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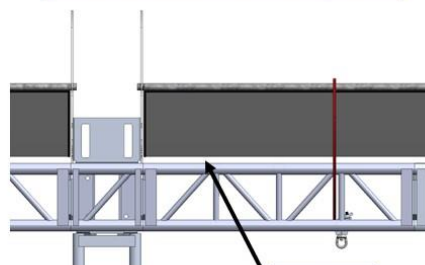
19.



Using 50lb cable ties, attach the long side of the nets to the net tubes. Make sure the ties are loose enough to slide on the tube. Attach the net to the backboard, these cable ties can be tight. Attach the net to the Inner End. Do not over tighten.



Cable tie pattern similar on Backboard

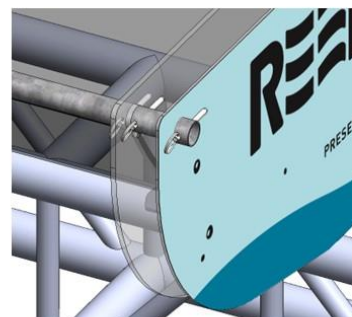
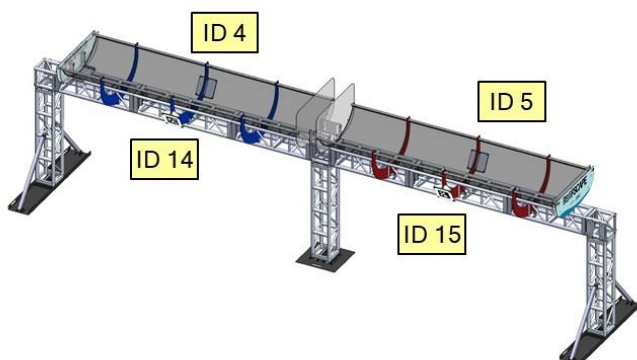


2" gap

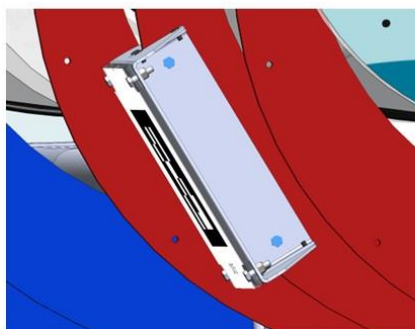
Using 50lb. cable ties, cinch the net up until there is an approximately 2" gap between the net and truss.

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20.



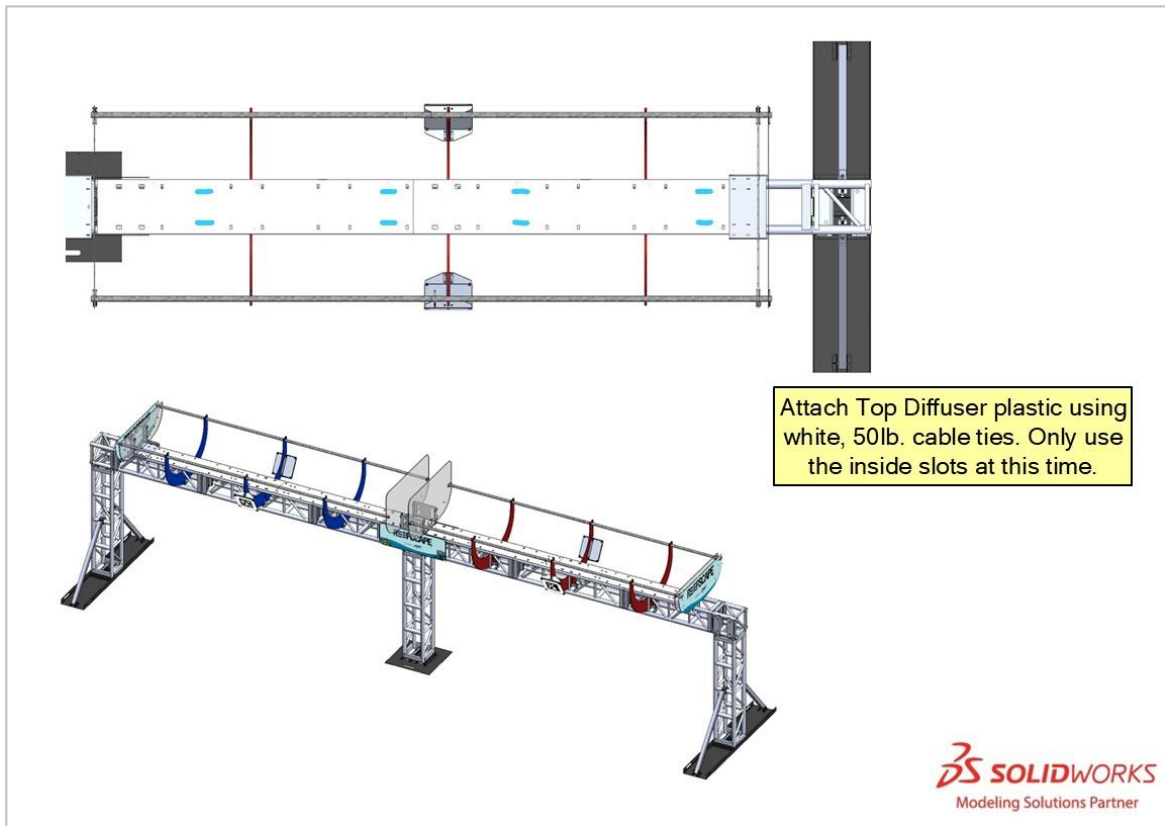
Insert the two net tubes into the Outer End (vinyl). Secure with pins.



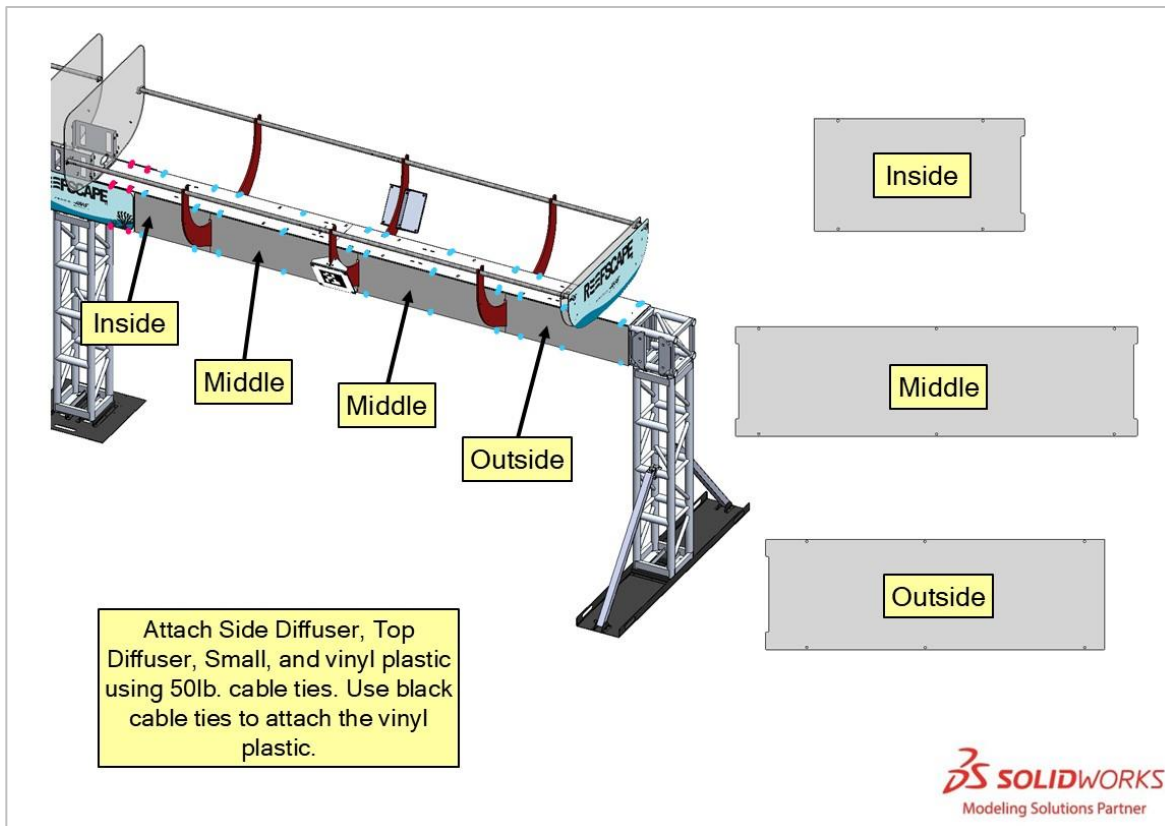
Attach April Tags to the middle ribs on both sides. Secure with 1" Hex Bolts

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21.

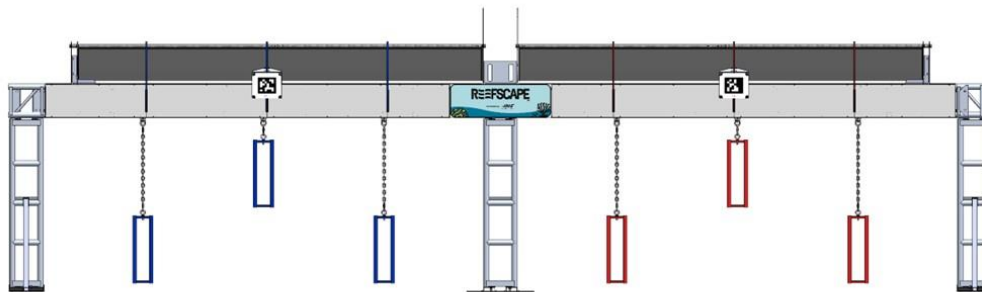


22.



23.

Hang the cages using two carabiners and chain.
Please note, cages should be in the low position
to start each day.



3.8.5 Electronics

3.8.5.1 Equipment

- 6 5' extensions
- 6 Alliance Colored Lights wrapped around an acrylic tube. (3 Red and 3 Blue)

3.8.5.2 Barge Wiring

- The Alliance colored lighting is installed in the Barge during the construction phase (Step 13). If the extension cords were not installed with the lights, it should be done now. An example of cable tying the lights in is shown below.



- All cords should be cable tied to ensure they do not hang below the truss and no robot gets snagged on one. Example shown below.



- Run the cables down the inside of truss leg to the base. See Section 3.7.3 for more details about how this lighting cables connect to their associated relay box.

