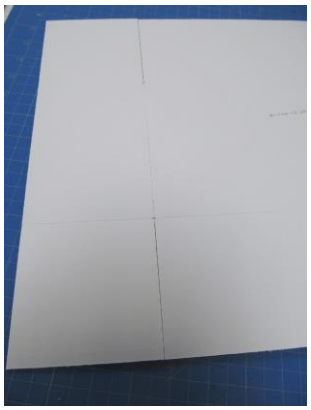
DENVER MUSEUM OF NATURE&SCIENCE

Department of Anthropology
Regular Box Re-Housing Instructions

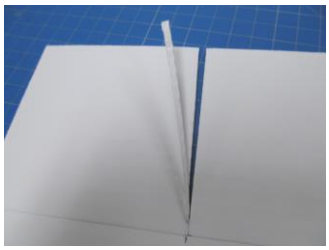
Making the Cuts

- Cut the rigid blue board (the board that is blue on one side and white on the other) to the correct dimensions as listed on the 'Dims Cut Sheet' dimensions.
- Once the board is cut, the 'H Dim (height)' needs to be marked in pencil twice off each edge of the white side of the box. These marks will be used to score the box so that the sides can be folded easily.
- Once the 'H Dim (height)' marks are made, take a straight edge and score the box on the marks with the blunt side of a bone tool.
- With the longest edge of the board lying perpendicular in front of you, cut through the short line of the edge score to create the corner flap. Do this to all four corners (**1**).

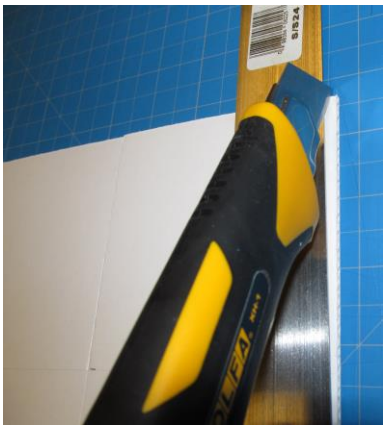
1



2



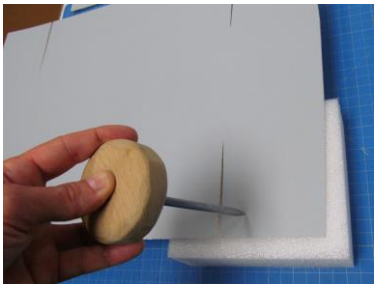
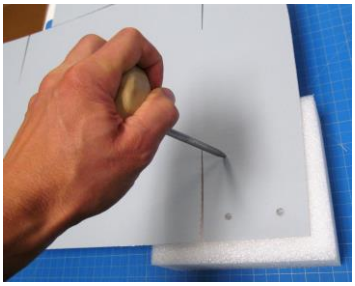
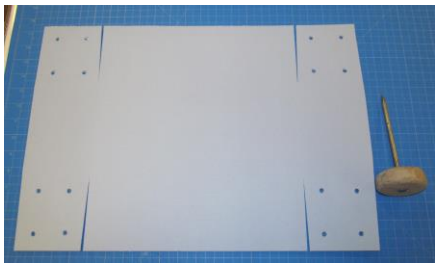
3



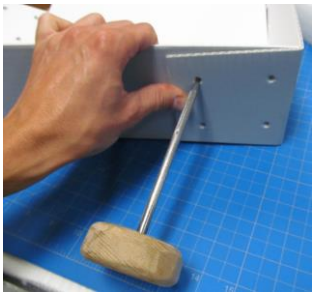
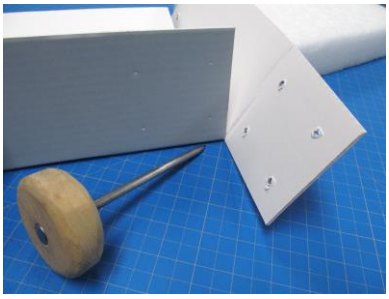
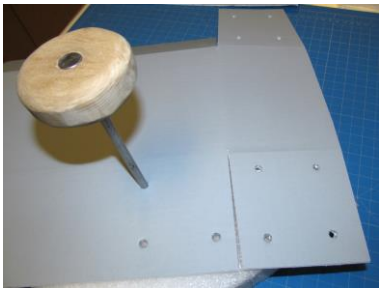
  - The longest edge is placed in front of you in order to avoid the corner flaps overlapping. Sometimes this is unavoidable and you may have to cut the flap down due to the small size of the box.
- Cut a small sliver off of the inside and outside of the flap (**2 & 3**). This should be only .25 inches at the widest end. This will keep the box from dragging on the flap when pulled and pushed in the cabinet. It will also create a refined look to the box.

Installing the Rivets

- Each flap will need four rivets (**10**). If the flap is small, it will only need two rivets. Use the awl to make four holes equidistant to one another (**4, 5 & 6**).

4  **5**  **6** 

- Once the holes are made in the flaps, fold the flap so that it rests securely on the perpendicular side of the box. Use the awl to create a small pilot hole through the flap and onto the perpendicular side (**7 & 8**).

7  **8**  **9** 

- Lay the flaps/box flat and using the pilot holes, punch holes through the pilot holes of the perpendicular side of the box (**9**).
- Fold the flaps over so that they rest over the holes of the perpendicular sides.

10  **11**  **12** 

- Install the hollow nut through the outside of the box and then install a threaded screw through the inside of the box. Finger twist slightly until they tighten (**11 & 12**).
- Take the box to the hammering jig and use a hammer to lightly tap the rivets together.

Making the Pallet

Most of the boxes will need a pallet. This is simply a piece of blue board that the Ethafoam and the object will be secured to in order to limit the handling of the artifact during research. The pallet also helps to hold all of the foam components together. Some objects may need two or three pieces of board for the pallet which will be determined by the weight of the object. Most objects will just need a single board for the pallet.

- Measure the inside of the box. The sides that have the rivets will need to be accounted for. Measure rivet to rivet and subtract .125 inches from the total. This should allow enough clearance for the pallet to be removed from the box. Measure the non-riveted side to get a close fit.

14

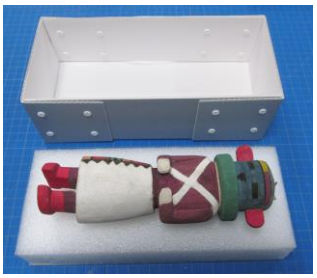
- Cut a piece of blue board to the inside dimensions of the box (**14**).
- Test the pallet by dropping and lifting it from the box, it should lift out and fall into place easily without catching on the rivets.

Cutting the Ethafoam

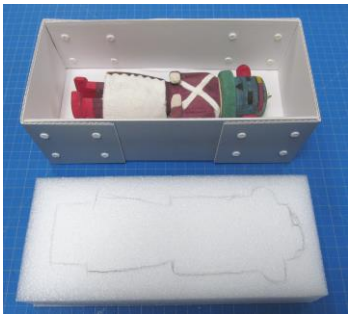
- Place the pallet on top of the piece of Ethafoam and cut to size (**15**). Be sure to keep the blade as vertical as possible to avoid cutting the foam at an angle.

15

16



17

18  **19**  **20** 

- Place the object on top of the Ethafoam and carefully trace around it with a pencil (**16 & 17**).
- Cut through the Ethafoam following the trace line using a vertical sawing motion making sure to make contact with the table top with each down stroke. Then hold the foam vertically and plunge the blade into the previous made cut line. Carefully drag the blade to cut the remaining line. (**18, 19 & 20**).
- Place the object in the cavity to make sure it fits.
- Cut a .75 inch thickness out of the negative shape and refit into the foam cavity.
- Place the object in the foam cutout and determine if any additional foam needs to be cut to support the object.

Installing the Tyvek

Tyvek must be used as a barrier between the object and the Ethafoam. Tyvek has a slick side and a textured side. Always use the slick side against the object.

- Cut a .5 inch deep line around the object cavity in the Ethafoam (**21**). The line needs to be approximately .25 to .375 inches from the cavity. The edge of the Tyvek will be stuffed into this channel.

21 

- Cut a piece of Tyvek that is approximately 2-3 inches longer than the overall dimension of the Ethafoam mount (**22**).


22

- Use the blunt end of the bone tool to stuff the Tyvek into the deeper channels of the object cavity. Then stuff a small amount into the outer channel (**23 & 24**). Cut the excess material with scissors leaving a .25 inch edge of material above the outer channel (**25**).


23


24


25

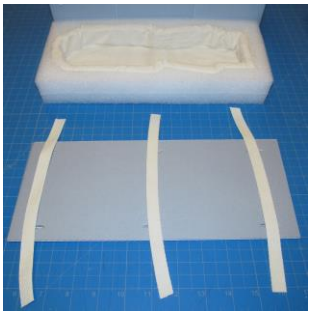
- Use the bone tool to stuff the remaining material into the external channel.

<u>Attaching the Pallet to the Ethafoam Mount</u>

The pallet will be attached to the Ethafoam mount using twill tape. Some pallets will only be secured by two pieces of twill tape and some could need as many as five. This will be determined by the length of the pallet. The instructions below are for a three piece twill tape pallet.

- On the longest side of the pallet, make a .75 inch mark on the pallet .375 inches from the corner edges of the pallet. Locate the center of the edges of the pallet and make a .75 inch mark .375 inches away running parallel from the longest edge of the pallet (**26**).


26


27


28

29  **30** 

- Cut through the pallet on the lines (**26**).
- Use the sharp end of the bone tool to push through the cut to create a gap in the pallet for the twill tape to fit within (**26**).
- Cut the twill tape 4 inches longer than the total width of the pallet (**27**).
- Feed the twill tape through the top of the pallet so that a 2 inch tail sticks out on either side of the pallet (**28**).
- Place the Ethafoam mount on the pallet.
- Cut a line in the Ethafoam .5 inches above the twill tape (**29**).
- Use the sharp end of the bone tool to stuff the twill tape into the Ethafoam (**30**).
- Repeat for the other side.
- Once the pallet is secure, place the pallet in the box and test for ease in getting the pallet in and out of the box. Make proper adjustments if the pallet is snagging on the box.

Cutting Lift Points

The pallet will need lift points that are located strategically around the object. The pallet will need to easily lift and be placed inside the box for research purposes. The object should not need to be touched during this procedure.

There are a few different styles of lift points that can be cut into the Ethafoam. Corner lifts and side lifts are the most common.

- Corner Lifts: If there is enough space at the corners of the Ethafoam and the object can be safely lifted from these points then this is a good location for lift points.

31  **32** 

- Angle cut into the top corner of the Ethafoam with a knife, cut the angle towards the object cavity (please remove object during this procedure to prevent possible damage). From the side of the corner cut straight into the cut angle and remove the Ethafoam. It is ideal to create at least a .375 inch vertical gap. The void should allow for at least three fingers to fit in the corner [with small objects, a single finger width will suffice] (**31**).

- Repeat these cuts in the opposite corner of the Ethafoam mount (**32**).

- Place the mount into the box and test to see if the mount is easy to remove and replace. Make any adjustments that are necessary (**33**).

33 

Labels

The accession number will need to be printed and affixed to all four sides of the box.

Labels are to be printed out using the same font throughout for consistency and legibility. **Arial 30 point bold** will be used for the boxes. A smaller Arial font size (20 point) can be used for small boxes. Labels will need to be placed in the upper right corner of the boxes when possible. The label needs to be mounted level with the top of the box rather than with the flaps as this will make the label crooked. If the label will not fit due to the rivets, then mounting the label centered in the middle of the box will suffice. Labels will be affixed using Lascaux and a brush. Brush Lascaux onto the back of the label and affix to the box. Be sure to apply Lascaux to the top of the label in order to seal it in and prevent pealing.

****Please cut the labels as straight as possible, a poorly cut label will make the entire box look bad.**

****Please mount the labels parallel to the top and side of the box, a poorly mounted label will make the entire box look bad.**

The internal support will be fabricated following guidelines described by Bender, B., A. Harrison, and D. Senge. 2011. *Conserve O Gram* 5/3. National Park Service. 1-4.

Recess storage cavitites are patterned after Campbell, M. W.1992. Recessed Support for Fragile Specimens. In *Storage of Natural History Collections: Ideas and Practical Solutions,* eds. C.L. Rose and A.R.de Torres. York, PA: Society for the Preservation of Natural History Collections. 31-32.

Internal support for heavy clothing will be fabricated following guidelines described by Bender, B., A. Harrison, and D. Senge. 2011. *Conserve O Gram* 5/3. National Park Service. 1-4.

Re-housing system compiled and designed by Melissa Bechhoefer, Jeff Phegley, Jude Southward, Bethany Williams, and DMNS Volunteers. 2018. Denver Museum of Nature and Science.