

THE STORAGE OF ARCHITECTURAL DRAWINGS – AN ALTERNATIVE HONEYCOMB FOR ROLLED PROJECTS

Summary: The AE Bye Landscape Architecture Drawings in The Eberly Family Special Collections of the Penn State University Libraries were in desperate need of rehousing. Since AE Bye is a noted landscape architect, researchers from around the world travel to work with this collection. There are more than 1,400 projects that range from a single-sheet drawing to many hundreds of sheets of various sizes and qualities of paper. The drawings were stored as they had been received and it was very difficult to locate an individual project without having to move many others. <https://www.libraries.psu.edu/psul/digital/aebye.html>



Original storage for a portion of the AE Bye Drawing Collection

*Open your eyes to Nature, See what is There
Use it to Create Poetry in the Landscape*
... A.E. Bye

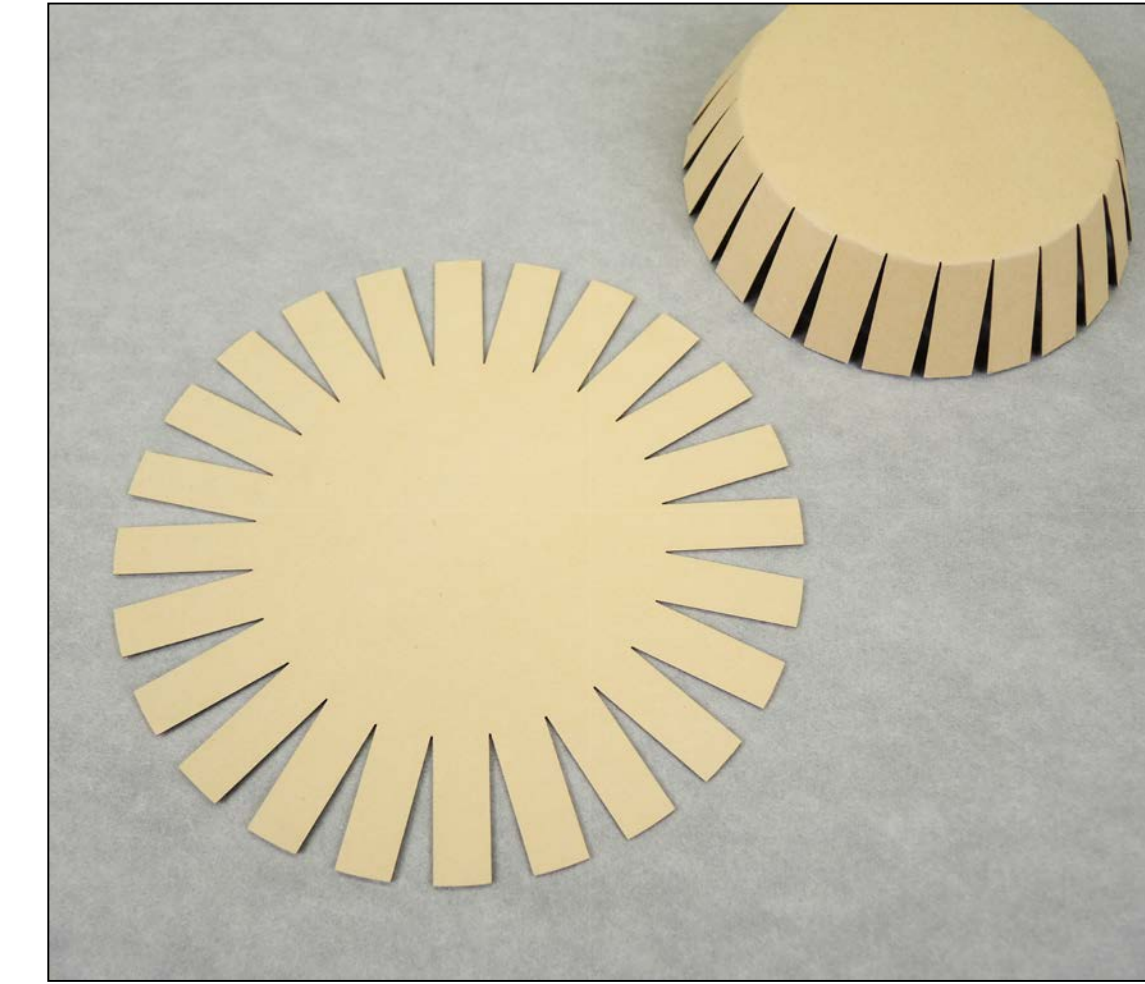
Background: Arthur Edwin Bye, Jr. received a bachelor's degree in Landscape Architecture from Penn State University in 1942. One of his earliest projects was to design a woodland landscape for Frank Lloyd Wright's Reisley house.

Before our department became involved in the re-housing of this collection, PVC drain pipe and acidic mailing tubes were being considered. Obviously, neither material was acceptable for preservation, but a budget had already been established. As we looked at how similar collections had been housed, the Syracuse University Library design stood out (see *Book & Paper Group Annual 22* (2003), page 131. Unfortunately, the projected cost for materials to duplicate such a design would amount to well over \$75,000, which exceeded the budget. For preservation, we had to find a suitable alternative.

Initially, we considered thin aluminum tubes, similar to those used as vent pipes. Another material was corrugated plastic, or Coroplast, but it was too difficult to form as a small box. Coming full-circle, we started to experiment with simple, acid-free corrugated sheets. Fortunately, the standard sheets are 48" x 96", so we could obtain four pieces from a sheet. One important detail is that we would be using the material against the grain for a stiffer format. At the same time, we borrowed from architecture's building structure concept where individual boxes would be assembled as a larger unit, thus one box would help strengthen and support adjacent boxes.



Early considerations for storage included the 6" acid-free tube; a custom-made aluminum tube, and a box fabricated from Coroplast. In this photo the Coroplast is supporting 36 lbs. of weight.



To identify each project, a label was made from 20 pt. acid-free folder stock that was laser-cut using equipment in the Architecture Department.



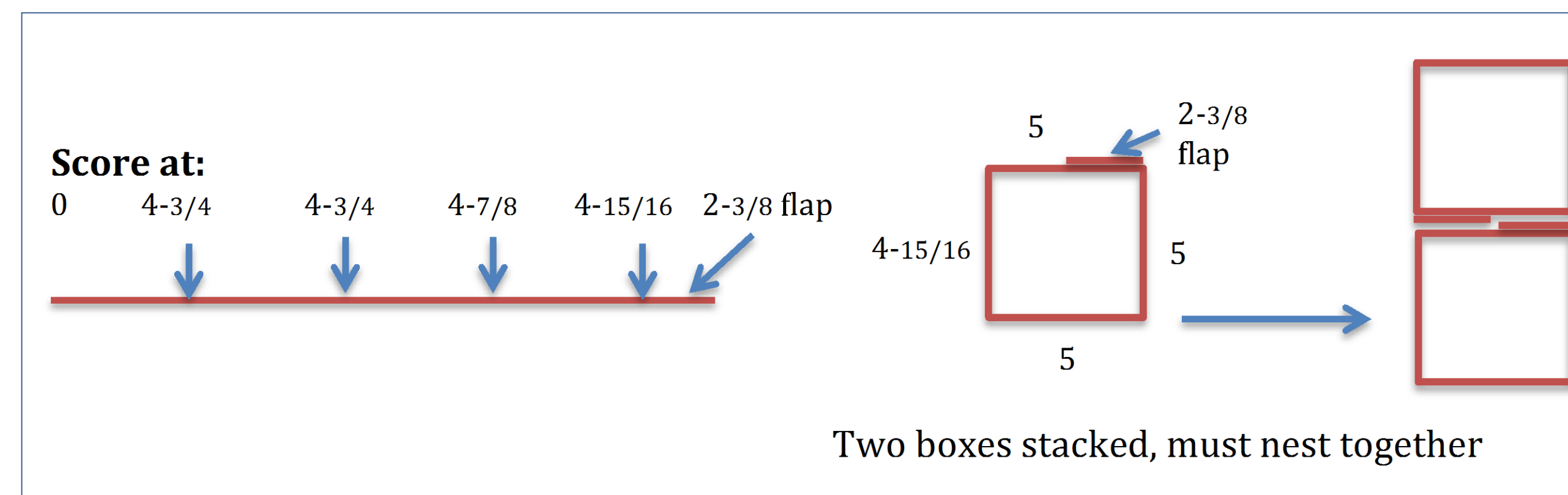
This funnel-shaped device and the plunger were 3-D printed using Library facilities. The device is used to insert the label into the tube.



One of 125 -- 48" deep honeycomb units with 46" long, acid-free tubes wrapped in soft-Tyvek.



The laser-cut labels were inserted into the far end of the tube using the device above. Each label is held in place with a small amount of PVA.



4-foot x 8-foot sheets of acid-free, B-flute corrugated board were cut by the supplier to 21-3/4" wide. The flutes are running this short dimension, thus against the grain. These sheets were then precisely scored as indicated to provide a finished 5" square box as shown.



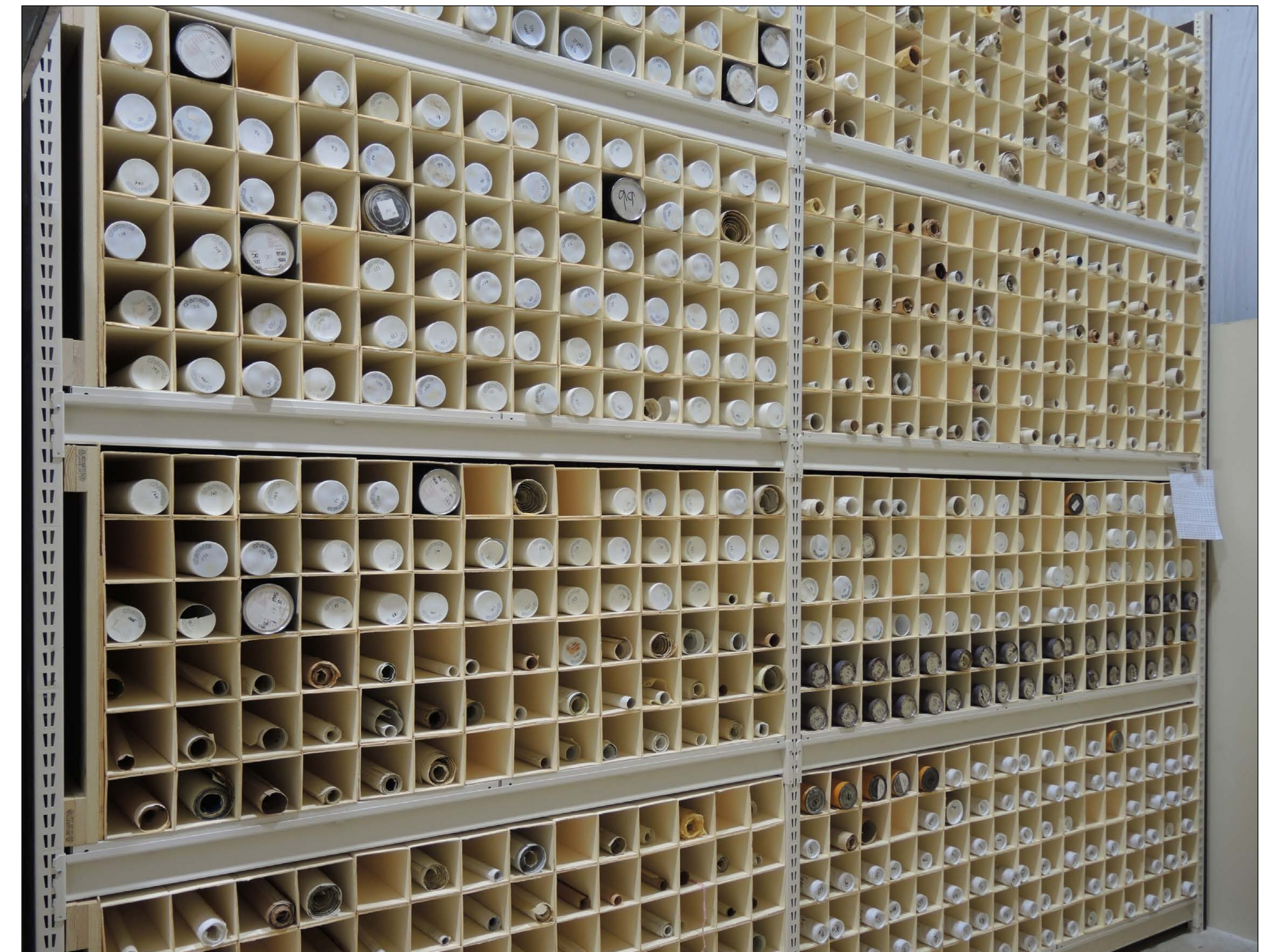
After folding, the small flap is hot-glued. We found that a slow-set glue, rated at 45-seconds, was needed.



This was a "team effort" with everyone from our Preservation Department helping with the assembly, including folding and hot-gluing the boxes.



Individual boxes were then assembled into twelve-box units using PVA. They were then placed in these wooden frames for 20-minutes while the PVA set.



Two shelving units: 12-feet high x 13-feet wide x 4-feet deep were used. Shown here is Phase-2 of the current project: About 1,500 projects have been placed in the honeycomb boxes. Phase-3 will be to re-roll the drawings around the outside of a 3" diameter x 46" long, acid-free tube. The tubes will be labeled, covered with soft-Tyvek and secured with Velcro.

CONCLUSION: Our Preservation Department staff assembled 1500 boxes into the final units. The project is not yet fully complete, but everyone is quite pleased with the results. All of the drawings have been moved to their new location and await Phase-3 of the project where the drawings will be rolled around the acid-free tubes and then wrapped in soft-Tyvek. While we did go over budget, the final cost was about a third of the alternative. At the same time, we met our criteria of using acid-free materials. The drawings are now housed in an efficient manner and readily accessible while being protected from dust and dirt.