



Preservation and Conservation (PAC) Programme Frequently Asked Questions

Oversized materials

Prepared by PAC North America

Q: Why are oversized materials more vulnerable to damage?

A: Large format objects such as maps, posters and broadsides are difficult to handle and store. From the time they were first created these objects were often folded, rolled, or hung to save space. These folds are often weak to the point of breaking particularly if the object has been handled repeatedly. Sometimes objects are rolled too tightly which places stress on the paper and leads to breakage or damage to media. Hanging subjects the object to threats such as light and dust.

The edges of the materials also may suffer from edge tears if the object was stored in a smaller folder or on a shelf where the edges extended unprotected. This type of damage is more likely to be seen on papers that have deteriorated and become brittle over time.



Oversized materials are vulnerable to damage when improper rolling causes creases. Unprotected rolls are vulnerable to edge damage. Oversized materials that have been folded to fit within a portfolio or folder may be damaged

Q: How to assess oversized objects or collections

A: It can be overwhelming to assess the condition and needs of oversized materials. You can start by asking basic questions to identify risks and prioritize storage and handling improvements

- Are oversized object(s) protected from exposure to threats such as light, dust, and water leaks?
- Are there shelves, flat files or cabinet that can accommodate the size of the objects?
- Can the object(s) be safely handled and consulted
 - Are there tables or counters large enough to accommodate the size of the object(s)
 - Does the object(s) need to be unfolded or unrolled? If so can this be done safely without causing further damage?
 - Are there enough people available to assist with handling oversized object(s)?
 - Have staff had training in how to handle oversized materials?

Q: What are suggested storage strategies for housing oversized objects?

A: Flat Storage

- Flat storage in flat files or in boxes on large shelves is ideal if space and furnishings exist
- Flat storage minimizes handling of brittle material
- Objects can be placed in individual paper or polyester folders
- A rigid board can be placed below large and fragile objects to avoid slumping and stress

Precautions when using flat storage

- Oversized objects should be protected on shelves and in flat file drawers. Objects that are not protected in folders or encapsulations can shift against one another in the

drawers leading to media abrasion and damage to fragile paper. Multiple objects may be able to be stored within a single folder depending upon the thickness of the object, the condition of the support and the stability of its media.

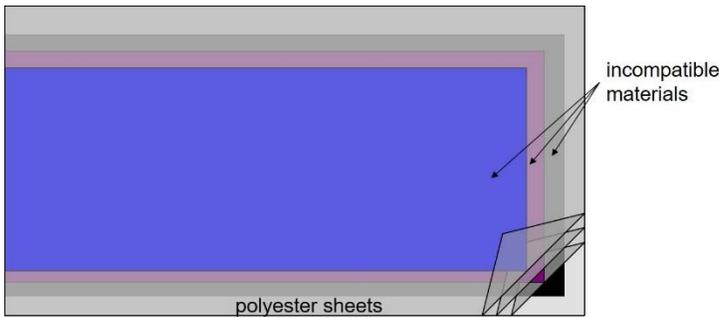
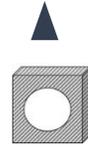
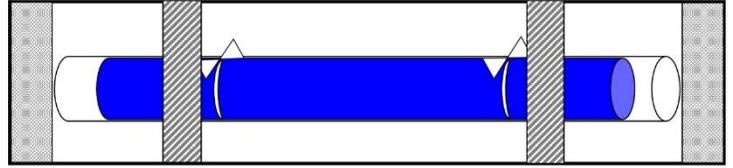
- Folders and boxes should be slightly larger than the objects within to avoid edge damage. Folders containing the oversized items should be cut to the size of the box or drawer in which it is stored.
- Oversized objects can be placed in flat storage boxes. Do not overfill the boxes as heavy boxes are vulnerable to damage at the corners. Heavy boxes can pose a significant ergonomic challenge for staff.



Oversized objects protected in polyester folders. The reading room table at right is large enough to support the object.

Rolled Storage

- If space is limited this is an efficient storage option for oversized materials in good condition that are flexible enough to be rolled, especially if they will not be used frequently.
- Rolled objects can be stored in boxes, tubes or at minimum wrapped in polyester sheeting.
- Objects should be rolled around a core that is large enough in diameter to not place stress on the support or media. The core should extend beyond the length of the documents to protect the edges and allow room for handling.
- The core of the housing can be created of acid free cardboard tubing, heavy acid free paper rolled into a tube or rolled polyester. Propping the tube up on each end will alleviate stress on the objects protecting them from further damage.
- Cotton twill tape can be used to secure rolled objects. Labels can be attached to this tape.
- Some materials, particularly some architectural reproduction types should be separated from adjacent objects. Polyester sheeting can be used to segregate objects within a single box.



Polyester sheeting can be rolled around the object to provide protection or used to segregate incompatible materials. Rolled objects can be placed in boxes with cushions to protect the ends of the roll. The rolls can be lifted using foam blocks cut into u-shapes or with circular cut outs to minimize sagging and reduce pressure on the object

Q: What is the suggested way for handling oversized objects?

A:

- When moving large paper items, use a rigid, flat support that is larger than the object. Always hold mats and folders flat.
- Flip a large object safely, by placing it between two boards (or in a folder) so that the item is fully supported on both sides while turning.
- Use two people for moving or turning very large objects. Use a cart if moving the object more than a few steps. Very large, flexible items can be transported on a cart with a u-shaped insert that supports the object in a gentle curve; stiff items can be moved on an A-frame cart if they are fully supported and restrained while tilted to avoid slumping.
- Move one object or folder at a time, using two hands.

- Do not pull an object or folder out of the middle of a stack or lift several large folders at once.
- Handle folded paper objects carefully; the folds may be weak and handling may result in damage.
- Keep rolled objects horizontal; do not place them on end for storage, transport or access.
- Label containers well to encourage proper use of items, for example: fragile, keep flat, this side up, heavy – use two people, etc. Photographic labels can minimize the need for unrolling and handling objects, and can also be used to point out delicate areas.



Above: two people place oversized print on a rigid support board when removing from map case drawer.

Above right: large oversized item protected by rigid board on A-frame.

Right: Large floppy items can be damaged if not properly supported

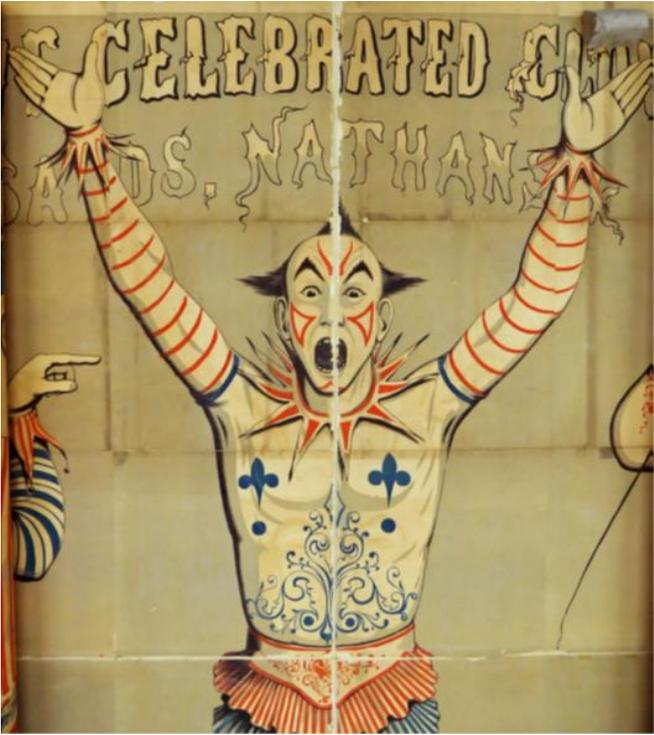
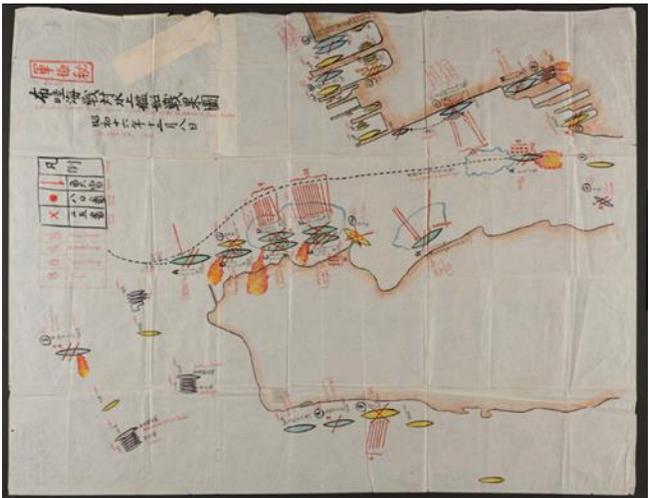


Q: Previous treatment approaches that may impact the condition of oversized materials

A: In the past, backings or linings of heavy paper or cloth have been applied with a variety of adhesives to large paper objects such as maps and oversized posters printed in separate sheets. In more recent times conservators have used thinner tissue linings adhered with starch paste. Trained conservation staff should assess the condition of lined objects, or decide whether to remove or apply linings as every treatment step requires expert consideration based on the condition of the object's paper support and media.

In many instances tears have been joined using western paper, Asian tissue, fabric strips or pressure sensitive tape. Assessment of these mends should be undertaken by trained conservation staff. Removing old mends can result in substantial damage to an object and therefore should only be performed by trained conservation staff.

New mends should only be applied after careful assessment of the object and applied by trained staff. Mending can cause significant long term damage if incorrectly applied.



Oversized maps and posters may have been taped or lined to join pieces or segments. Only trained conservators should assess condition, develop strategies and execute interventive treatment procedures.

Additional Resources

<https://www.nedcc.org/free-resources/preservation-leaflets/4.-storage-and-handling/4.9-storage-solutions-for-oversized-paper-artifacts>

Some of the following solutions were developed for rolled textile storage but could be adapted for rolled paper objects.

<http://stashc.com/the-publication/containers-2/boxes/creating-a-custom-enclosure-for-oversized-rolled-graphic-recordings/>

<http://stashc.com/the-publication/storage-furniture/racking-systems/adaptive-re-use-of-wood-material-for-hanging-long-and-thin-objects-on-less-utilized-spaces/>

<http://stashc.com/the-publication/supports/tubes/hanging-rolled-textiles-on-underutilized-spaces/>

<http://stashc.com/the-publication/storage-furniture/racking-systems/a-textile-hanging-system-composed-of-readily-available-hardware-materials/>