Creating Oversized Backing Boards

By Hugh Phibbs

Art work which is to be kept in a frame for an extended period must be given steady physical support. The window and back mat will provide this support if the art is overmatted, since the window mat will be in contact with the glazing and can draw support from its planer rigidity. Many contemporary works, however, are float mounted or may have a combination of window mat and spacer; in either case, the backing board is the sole source of stability for the package.

This can be especially problematic with larger objects, since the material comprising the backing board may not be available in large enough sheets to be used without splicing. A successful backing board must be as warp resistant as possible and it must not constrain the back mat from reacting to changes in relative humidity which may affect both it and the art which it supports.

Backing boards may be made of paper, plastic, combinations of plastics, or a combination of paper and plastic. Each material will have a particular response to changes in relative humidity which must be accounted for in the design of the frame. One temptation which should be avoided is joining pieces of backing board by gluing them to the crosspieces of the strainer. If a paper based board is joined in this manner, the portions of the board inbetween the members of the strainer will expand as the humidity rises and will warp in toward the glazing, since it will be least constrained on that side. This warpage can push the art up against the glazing and can render the spacer useless.

Combination paper and plastic boards will encounter the same problem, since the counter tension of their facing papers gives them their rigidity. Boards which are made entirely of plastic can still be hygroscopic and may be given to similar warpage. Only if the boards are placed on either side of the strainer, and a filling core used to adhere them to each other between the members of the strainer, can a stable combination of strainer and backing board be accomplished. Since this last method is too time and material intensive to be a part of the practice of most shops, it can be generally said that the strainer is not a useful device for use in splicing backing boards.

Another possibility which is fraught with problems is the use of the back mat as a splicing device. If the backing board is partially attached to the back mat, the mat may warp over time, and if the two are attached over all, the ability of the back mat to respond to changes in relative humidity will be compromised. Since four-ply board is already less responsive than the paper on which most art is created, this constraint of the back mat can lead to cockling of the art between the hinges as the relative humidity rises.

The safest design allows the back mat, backing board, and strainer to operate independently of one another. This requires strong and inert means to create the splices needed to create a large enough backing board.

Tapes are an obvious candidate for use in making such splices. Pressure-sensitive tapes will not hold over time, since their adhesives will age and loose their grip. They can also cause problems if their adhesive oozes or off gasses and affects the back mat. Water-activated tapes may work better, but their use can involve some expense. One and one half inch wide linen tape can make good splices if it is placed on either side of the joint in a paper faced board, but its expense will discourage this approach. Commercial paper tapes which are reinforce with fibers can be found in wide sizes and can be useful, but they are made of groundwood which contains lignin and cannot be considered archival.

Long scraps of two ply conservation quality board can be adhered to either side of the joint with an archival quality polyvinyl acetate, and will give a good bond for paper boards or plastic boards which are faced with paper. This sort of two-ply board is not found in most shops, and while conservation quality four-ply board may be used, it may thicken the backing board in the area

of the splice more than is desirable. Another material which can be used for splicing is polyester sheet, the same material which is often used to make encapsulations.

Polyester sheet can be found in four or five mil thicknesses in rolls and can be cut into long strips which are not costly. If these strips are sanded, they can be glued with polyvinyl acetate glue to both sides of the joint for use with paper or paper-faced plastic boards. The polyester will slow the drying of the glue and may require longer setting times than are convenient. Perhaps the most versatile method involves the use of hot-melt glue and polyester strips.

The glue must be hot enough to bond with the polyester, and this requires the use of industrial-type glue which comes in three eights inch wide sticks as opposed to the one quarter inch wide hobby-type glue. The glue must be applied in a manner which allows it to give maximal heat to the polyester if a strong bond is to be established.

The two pieces of board should first be placed side-to-side and a bead of glue should be run into the gap for a distance of a few inches. The polyester should be pressed into the glue while it is quite hot, using a bone folder to squeeze the glue out away from the joint. This procedure should be repeated down the length of the joint until a smooth, flat bridge is established.

As soon as the material is cool, the board can be turned and the same sort of splice applied to the other side of the joint. If the job is successfully done, the glue should fill the gap and should cover at least half of the rest of the polyester strip. More strength can be added if the polyester strip is sanded to enhance the glue's grip on it. This kind of bond can be used with all types of board and can create a joint which is stronger than the surrounding material.

The interaction of the components of the frame is a complicated subject which is not completely understood. As we observe how large contemporary frames behave over time, it is apparent that the back mat, the backing board, and the strainer should support each other without constraint. If there is a need to ensure that the backing board does not flex forward toward the glazing, it can be lashed to the crosspieces of the strainer with strips of linen tape to polyester sheet in such a manner that the board is prevented from moving forward but not laterally.

The well designed backing board will give a steady, puncture-resistant, support to the back mat without constraining the mat's response to changes in relative humidity, and will provide a stable platform for supporting the art as it is eased out of the frame during unframing. The role which the backing board plays in sequestering the art from pollution and changes in climate is an area where our understanding is evolving, and where we may expect preservation to be enhanced by new materials or better use of those currently available. ■