

THE ST. MARK WINDOW, HOW IT WAS MADE

This window began with a "to-scale" little color design, a color rendering of how the finished window was to look.

My second step was to copy the sketch into a full size drawing, called a cartoon. The word "cartoon" means black and white drawing. A second full scale drawing was made and it is called "cutline". This drawing was a map for cutting the glass whereas the cartoon was my guide for painting on the glass.

The paints that are used on glass that is to be stained are actually ground glass, lead, and frits. It comes in a powder form and can be mixed with water, turpentine, oils, or whatever liquid medium an artist wishes to work with. Our supplier is in N.Y. and the glass itself that we used in the St. Mark window is mouth-blown hand-made German glass, excepting for the perimeter red border glass and the head and hands of Mark.

Mark Haeger cut all the glass to the cutline and then I cleaned the pieces and placed them on the cartoon which was placed on my light-table. I placed powder enamel on a glass palette, added a binder and mixed it all with water, then prepared to trace the cartoon design onto the glass. My hand rests on a stilt so that I can have full movement for applying the paint and so that my hand will not drag on the wet surface. The stilt allows me to also work without getting the glass surface dirty--the enamel will not adhere to an oily surface when the enamel is of a water base. I then fired the glass in a kiln to 1240°.

It takes about 1½ hours to fire the glass, 45 minutes to anneal, and overnight to cool down the kiln to room temperature.

Now that the glass pieces had received their first enamel coat and it was fired permanently to the glass, I no longer needed the cartoon. Since our windows are "one-of-a-kind", the cartoon was put in storage for studio records.

The next step for St. Mark was to "mat" him. First I taped the cutline to the back of the easel. That was my map for locating the glass pieces. An easel for stained glass is quite different than an artist's painting easel. It is a large sheet of plate glass framed which pivots on a stand and the stand has wheels. The framed plate can rest horizontally or pivot to an upright. In order for me to see a window, check out its coloring, and mat it, I needed to attach the many glass pieces to this plate glass and

this is done by first arranging the glass pieces on the easel while it is horizontal. Beewax is heated to just before it "smokes"--it must not boil. The hot wax is carried to the easel then one drop of wax is set at each glass piece corner to stick the glass pieces to the plate glass. When waxing-up, it is very important that no wax is dropped on any glass piece surface as the mat will not take to a waxy surface.

Now that the glass was "waxed-up", I pivoted the easel upright and began the matting process. Mat is the same material that was used for tracing to the cartoon. It is applied to the entire surface of the glass with a brush and evened out with a wide badger brush while wet. When the mat was dry, I began to work on removing the mat with brushes and needles. This process is exactly the opposite of charcoal drawing. Instead of putting on more medium, one removes the medium and as one does this, light comes through the glass and depths begin to emerge. The drapery of Mark's garments began to look like folds, the face began to show a nose coming forward, etc. The first fired lines from the cartoon tracing were my guide. My imagination and skills as an artist were my pleasure.

When I had completed this process, I rolled the easel out from the studio window and again pivoted the easel to its horizontal position. Then with great care so as not to disturb the mat, one-by-one I removed the glass pieces from the plate glass surface. The pieces were placed in the kiln and fired to 1240° and the following day I repeated the whole process, matting on the easel and firing the glass. The background glass of blue received only one firing, the tracery received two firings, and Mark's clothing and the lion received four firings. Mark's head and hands received many firings--one to lightly trace, three for shading, one for hair, skin, and a translucent back film, and one for lips and eye color, and a separate firing, the final firing, for the gold of his halo. Different enamels require different temperatures. Mark's head began as ordinary clear window glass.

When I had completed the staining/enameling process, the window was then leaded and soldered by Marc. He also scrubbed the weathering compound into the lead channels, picked and cleaned the window, let it rest for a week then recleaned, polished, and soldered the copper straps to the lead so that the window could be supported by bars. Our final step was to install the window into its permanent home, the Chapel of St. Mark's Episcopal Church.

Marc and I hope that you will enjoy your new St. Mark leaded glass window; we enjoyed making it. Not all types of leaded glass windows require so much attention by artist/craftspersons and it is always our pleasure to create a true stained glass window.