Making a Stone Bridge From Wood

by Tony Segro

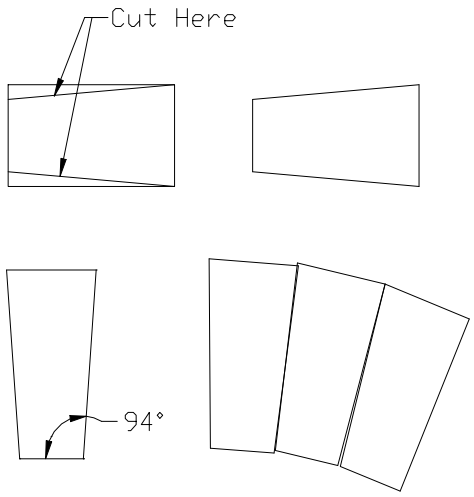
I needed to build a bridge to span the creek on the Columbia Historic Preservation Society's HO scale model railroad layout. The bridge will carry the track for the power plant. I decided to make it a stone bridge as a contrast to the nearby plate girder bridge that carries both the east and westbound mainlines across the creek. However, instead of carving plaster to form the stones, I decided to carve the stones from balsa wood 5/32" square strips.

Tools & Materials Required

Double Edged Razor Blade
4 Wood Strips (0.156 x 0.156) Length=2ft.
Elmers White Glue
Raw Umber Acrylic Paint (any mfg)
Poly S Pacemaker Gray Paint
Antique White Acrylic Paint (any mfg)
"The Chopper" by NorthWest Short Line

Construction

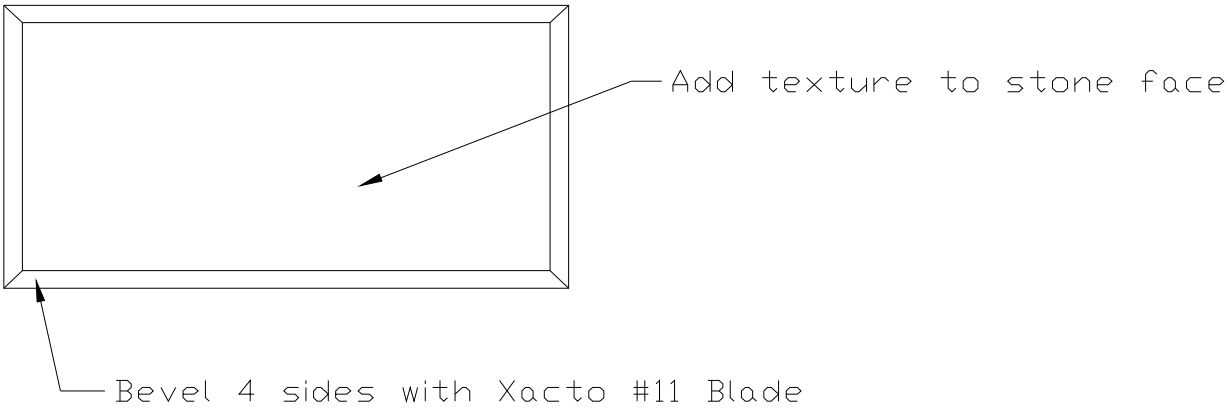
First, I needed to layout a drawing using AutoCAD 2000 in order to fit the bridge to the area on the layout that it would occupy. With AutoCAD, I could also determine the size of the 3 arches and the size of the "stones". The drawing was then taped to a piece of balsa wood. Using the Northwest ShortLine Chopper, I set the measurement for approx. 1.5 scale ft. (3/16") and cut several stones. I had to angle the stones forming the rim of the arches. This is shown in the illustartion below. I did this by trimming the wood stone on a slight angle. When placed together, these stones form the rim of the arches.



I glued these stones around the arch openings. I then glued the other stones in rows around the arches. There were some areas left open, but this only added to the realism of the bridge. Prehaps stones chipped away in different places. This step is shown in Fig.1.

Fig.1

I also added texture to the wood stones by slightly beveling the 4 edges of the stones. The illustration below shows this. To accomplish this, I used an Xacto #11 blade for the beveling (slight angling of the edges).
I then took the end of the round Xacto blade holder and pressed it into the stone face. This will leave a depressed mark which will represent texture on the face of the stone. I overlapped plenty of these depressions to texture the entire stone face.



To paint the bridge, I began with Raw Umber acrylic paint. Any brand will work for this. I made sure the paint entered the cracks and crevices between the stones. It took the paint a few minutes to dry. I then drybrushed the bridge with a Neutral Gray acryllic paint to draw out the texture on the stone faces.

"**Drybrushing**" is done by dipping the brush in the paint, then wiping the brush dry with a cloth. There will be
a hint of the paint left on the brush. The brush is then pulled in one direction over the object. Figure 2 below
illustrates the painted bridge. I then removed the wood sheet under the arches (marked "XX" in Fig.2) using my Xacto knife with #11 blade.

Fig.2

To add the bridge to the layout was then completed. I used some old cardboard toilet paper rolls for the underbody of the bridge on the layout. I used hot melt glue to attach the bridge to the wood subroadbed on the layout.