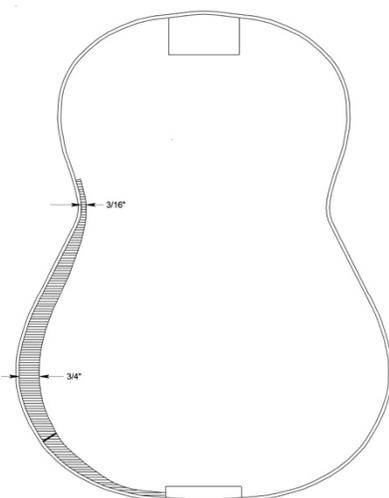


The Bevel Part 1. Preparation and Re-Profiling the Sides:

I think the bevel is one of the most important developments ever made for the acoustic guitar. It was originally designed by Grit Laskin, and over the years, some advancements have been made. I'll be showing a version of the bevel that was designed by Kevin Ryan. I want to thank both Grit and Kevin for discussing their bevels in detail with me, and giving me permission to describe this important feature here. Several methods of making a Kevin Ryan-style bevel have been documented. I think one of the best is described by Kent Everett in his DVD "The Traditional Arm Bevel by Kent Everett". My method is very similar to Kent's, but differs in some ways.

The bevel makes resting your arm on the edge of the guitar much more comfortable and at the same time, its clean lines look really good. However, the bevel cannot be added as an afterthought. As you will see, it must be planned very early in the building process of the guitar, and it becomes an integral part of the instrument. The guitar I'll be using for this discussion of the bevel is the same one used in the last chapter (a dome top classical with a 15" top radius). In fact, we'll start off right where we left off—We've put two laminations on the sides, making the sides much stiffer, and also much thicker. We have also sanded the top with a 15' radius sanding dish, profiling the sides to a 15' radius.

Drawing 1



In Drawing 1, we see the sides of the guitar, including the headblock and endblock, along with a basswood piece of wood, called the bevel backing (crosshatched). It is actually made of two pieces of basswood, to keep the glued edge mostly side grain and not endgrain. This is the wood that the entire bevel is built on.

Photo 1



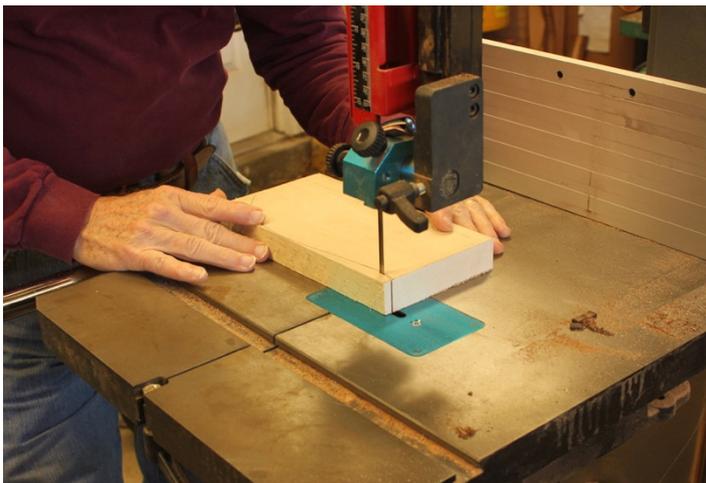
In Photo 1, I am holding a small board of basswood up against the top (bass side) of the sides. I will trace the curvature of the sides onto the basswood. The grain direction is mostly parallel to the side of the guitar.

Photo 2

In Photo 2, you can see the tracing of the guitar edge. Next I'll cut close to the edge on the bandsaw.



Photo 3



In Photo 3, I'm cutting the edge that will fit against the side. I'll try to cut very close to the line, but leave the line.

Photo 4

As you can see in Photo 4, I'm using the belt sander to smooth the edge. This must fit almost perfectly against the side.



Photo 5



In Photo 5, I'm checking the fit of the block. After going back and forth a few times to the belt sander, it's fitting very well, so it's time to cut the other side of the block..

Photo 6

Here, in photo 6, I've drawn the shape of the other side of the block. At its narrowest, it's about the same width as the kerfed linings. At its widest, it's about $\frac{3}{4}$ in. The widest part of the bevel will be $\frac{1}{2}$ in. in our case, so this will leave a $\frac{1}{4}$ " ledge for the top to sit on.



Photo 7



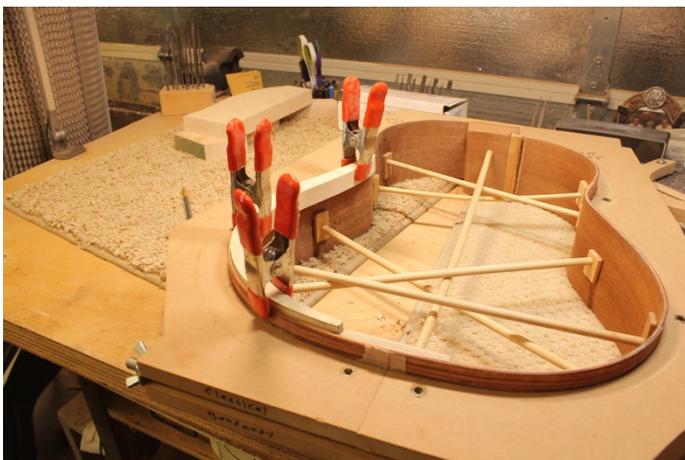
As you can see in photo 7, I've cut the other edge of the piece, I've sanded it down, and now, I'm reducing the overall height of the piece. The original basswood block was 1" thick, and I'm cutting about 1/4" off. The final block height of 3/4" will be just about right.

Photo 8

The first bevel piece we made will make up about 3/4 of the total piece we need, so now, we'll make up the remaining piece. We'll do it in exactly the same way as before. In photo 8, a new small piece of scrap basswood will do just fine for the piece. Note the grain orientation is such that it will be mostly parallel to the side.



Photo 9



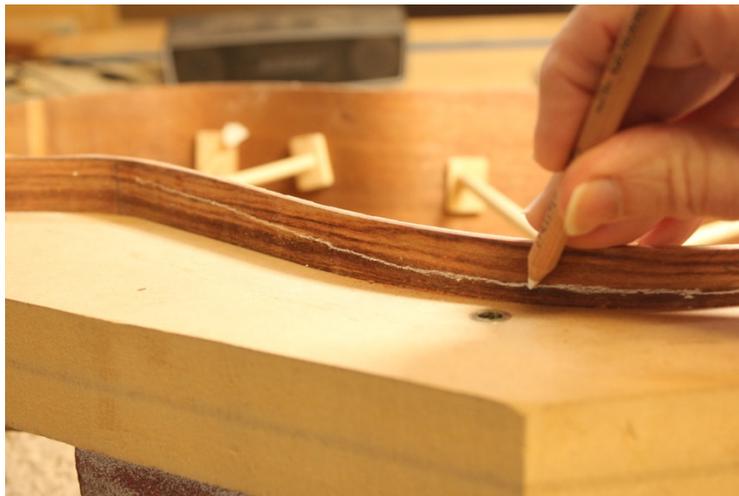
In this photo, both pieces of the bevel have been completed and have been clamped in place. The both fit a bit high, because they must be sanded down and profiled precisely with the 15' radius of the top.

Photo 10

In Photo 10, I am marking the bottom edge of the basswood material on the side, so I can get it in the exactly right position when it is glued in. DO NOT GLUE THE BASSWOOD IN YET.



Photo 11



In Photo 11, I have removed the basswood material, and am marking the side, showing exactly the shape of the bevel I want to make. It should have a nice gentle curve to its shape. I am making this bevel to have a maximum of $\frac{1}{2}$ " down from the top. When we mark the top, it will also have a maximum of $\frac{1}{2}$ " in from the outside edge.

These are my dimensions—you can make your dimensions to be either smaller or larger.

Photo 12

Once you're happy with the drawn shape, use a curved sole plane as shown in Photo 12. This will enable you to get that nice curved line you need. When done with the plane, use a curved sanding block to get any waves or bumps out of the edge.



Photo 13



It's now time to glue on the kerfed linings and the basswood. Once all the linings and the basswood have been glued on, it's time to re-profile the top using a 15' radius sanding dish. When any one section (like the basswood section is a little too high, it's best to chalk the whole surface, and use a plane to take down the highest spots, using the sanding dish to get the final sanding done. Everything must be leveled with the sanding dish.

Photo 14

In Photo 14, I am using the 15' radius sanding dish to re-profile the top of the sides.



Photo 15



Once the top surface has been leveled, the basswood should be trimmed. It must be left square to clamp in for gluing, but now, some of the material should be trimmed away. In Photo 14, I am using a Dremel with a sanding bit to take off unnecessary material.

Photo 16

Here is the basswood material,
trimmed and ready to go. Next step,
fitting the top.

