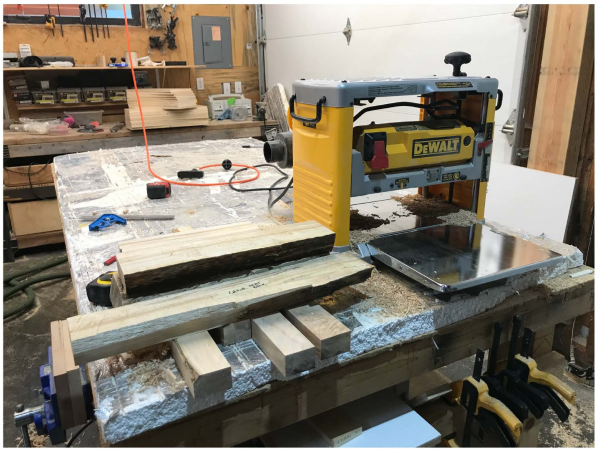
Process Work

office chair, desk, bedside tables set

This line of pieces was created out of reclaimed maple and madrona wood. Boards were milled, dried, and then flattened before being made into the final products. With the maple, the disparity of how long the logs had been sitting since falling resulted in range of wood, from highly figured / spalted wood to clear and pristine. I took advantage of the spalted wood for the pieces that were less structural, leaving the clear sections for supports that were weight bearing.

The Wood

The maple and madrona trees that I used for this project came down between 2015 - 2019 during windstorms. One of the maples sat out in the elements for a few years before being milled which resulted in the spalting. Even though the wood was fairly dry, it took a lot of work to get each board flat using a small table-top planar.



Tabletop planar with structural pieces

Desk Chair

The beginnings of this project started with the Katakana chair designed by Sean Dare. With this as my inspiration I went back to redesign the structural support along with the angle of the seat and back to try to achieve a maximum comfort. I elected to use the clearest maple from the fallen section to ensure that it would be strong enough, I also beefed up the thickness of the legs and supports to best match the aesthetics I would follow in the accompanying desk. After figuring out construction technique I started to prototype where the back support would be placed, along with the angle, depth, and width of the seat (see next page). Using two pieces of old plywood as the sides with a 2 x 6 as the back support and 2 x 4s as the support for the base I was able to subtly adjust each variable until I achieved a comfortable chair. I prototyped the chair to match a desk at 30”.

Chipboard templates for side pieces

Prototype of chair ergonomics with mock-up desk

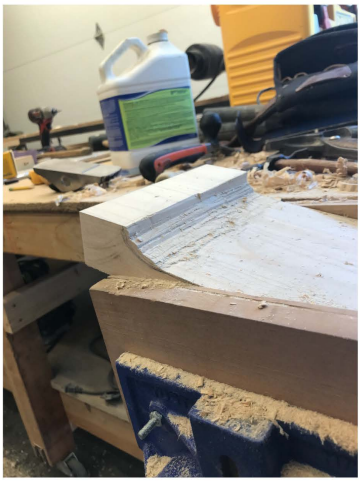
Desk Chair (cont.)

Mortise and Tennon joints

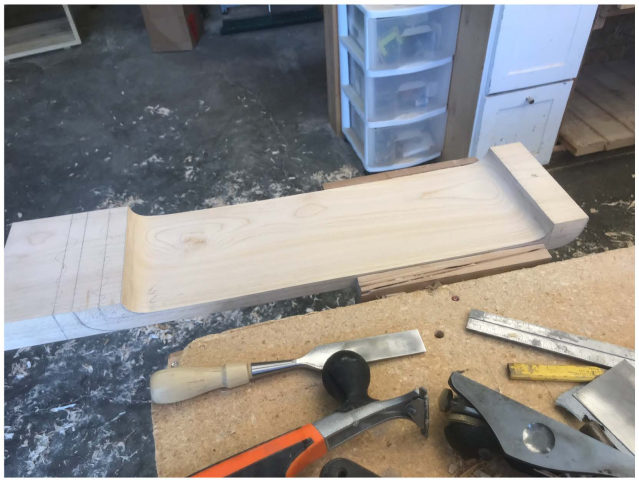
The biggest takeaway from the prototype was width, the initial design I created had a 16” seat width, this ended up excessively tight thus it was increased to 18”. With the general design set and the wood ready, I made chipboard templates which were then used to roughly cut each peice. Mortise and tenon joints were used for all connection points (see image to the right). In order to achieve consistent radii on all corners I used a 3/4” router bit to plunge cut before gluing the pieces together. A jig was used to fit (see top image on the next page) and then clamp the precut pieces to ensure the sides would match up once connected. After the glue-up, each side section was hand-planed and sanded flush to make all the joints as smooth and continous as possible. The botoms of the legs were trimmed such that the sides sat on a flat floor identically.

With the two side pieces glued-up and finished I was able to measure up for the back piece. Starting with a thicker piece of maple I removed half of the depth so the seat would have smooth corners leading into the backrest instead of a 90 joint (see process below). When this was roughed out, the back was trimmed to match the side piece that led into it, then mortises were cut to maximize the strength of the joint.

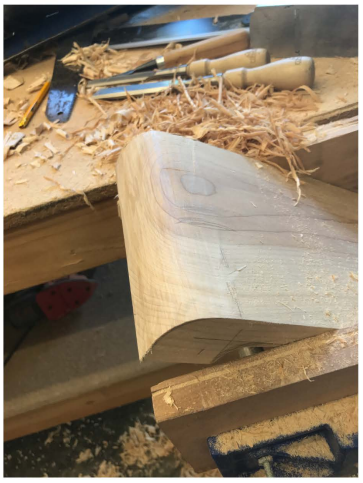
Clamping / Layout jig for sides



Rough-out of back support



Continued roughing out



Back curve

Along with the back support, the chair has two cross braces (that the seat sits on) which help define the width. These supports were designed to be somewhat hidden below the seat platform that sat on top. Similar to the other joints in the chair, the cross-pieces were mortised and tenoned into the two sides. Before everything was assembled all edges were chamfered. This helped to soften the edges and also created a new faccet that the light could catch and accentuate the form. At this point the structure of the chair could be assembled, glued-up, and clamped (see first picture on next page).

Desk Chair (cont.)

The next feature that had to be made was the seat platform. I ended up using 1/2” ply as a base material that the seat was built around. This provided the structure to support someone’s full weight but was easy to conceal inside the maple edges that surrounded it. All corners were rounded to match the radii present on the side pieces. With the frame set, I had to make the seat cushion that would fit inside. This was simply done with 1 1/2” foam wrapped in faux leather. The initial idea was to staple the back but the bottom was too thin so I ended up gluing.

Final Clamp-Up for back and sides

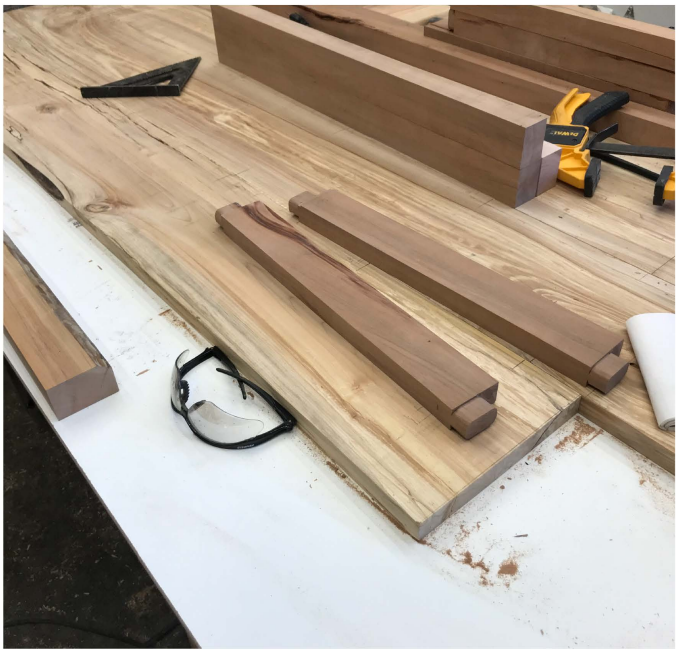
Cushion Upholstery set-up

With everything assembled all that was left was sanding down to 220 grit, then rubbing down with a natural oil sanding between each layer to get a smooth, satin finish.

(see full furniture page for images of the final product!)

Desk

The desk was made to pair with the chair. The desk frame was made from madrona to maximize the strength and help meet the aesthetic without worrying about too many supports. Each piece of madrona was chamfered then mortised and tenoned (see image below) as tightly as possible. For the final glue-up a spacer piece was needed along the front to keep the frame all square.



Tennons for desk structure

Full Clamp-up of legs

The desktop was made from semi spalted maple strips that were jointed then tenoned together, matching the two bedside tables. The top piece ended up being around 30” deep by 84” long. Threaded inserts and bolts were used to attatch the table top to the desk’s structure.

(see full furniture page for images of the final product!)

Final Look of Desk

Bedside Tables

The bedside tables match the desktop in wood-type, construction, and thickness. I laid out the boards to identify the pieces I wanted to highlight. With these longer boards I wanted to make sure that I could get the features to continue over the joint (see bottom right image). Each glued-up board was cut at 45 degrees then glued together to form a box with a shelf tenoned in the middle. In order to strengthen the 90 degree corners I cut channels then glued in cherry splines (see top image).

Gluing in cherry splines

Wood figure wrapping around corner

Cherry bowtie to stop wood from continuing to split

Additionally I made a very small foot / pedestal that lifted the bedside table off the floor, giving it a somewhat levitating look. This was made from four maple strips with lap joints at each corner (see full post for detail images) then glued to the base. The final piece was sanded and oil finished until smooth.

Thank you for reading & making it this far!!