

Design Project 4

This project covers the following design concepts:

- DRAWING TOOLS
- SNAP TO GRID
- SETTING CONSTRAINTS
- CUT PATH TOOL
- CENTERLINE TEXT
- COPY & PASTE
- FLIP & ROTATE
- CREATING A CLOSED REGION
- MANAGING DATA
- STAYING UNDER ROLLERS
- UPLOADING TO MEMORY CARD



INSTRUCTIONS:

➤ STARTING THE SOFTWARE

Open the CarveWright Designer Software

The Welcome screen appears with project options.



Select “New Project”

Set your board piece dimensions.

Length: 12”

Width: 5.5”

Thickness: .75”

Click ok

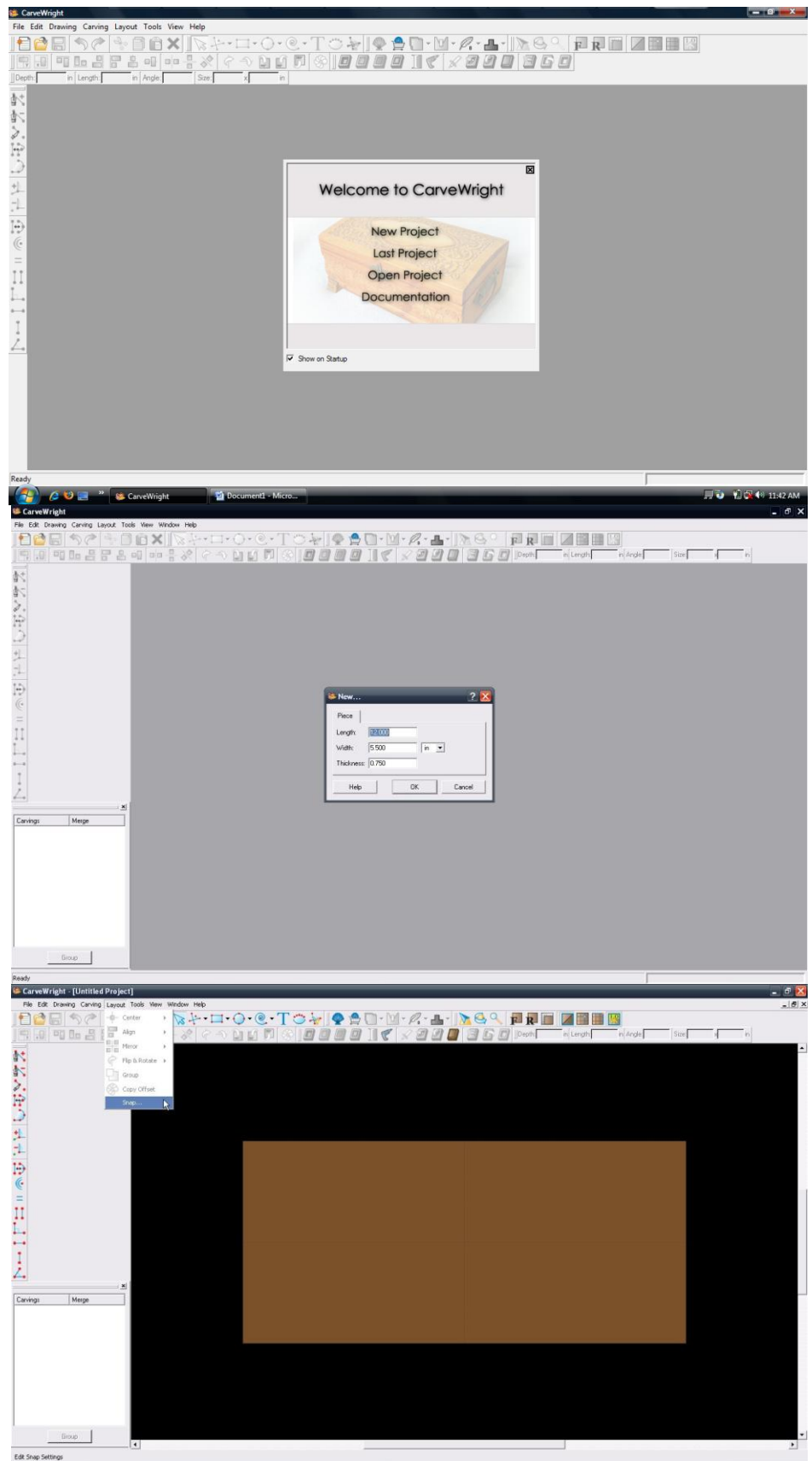
➤ BOARD SETTINGS



Use “Toggle Texture” to remove wood grain for better viewing.

➤ SNAP TO GRID

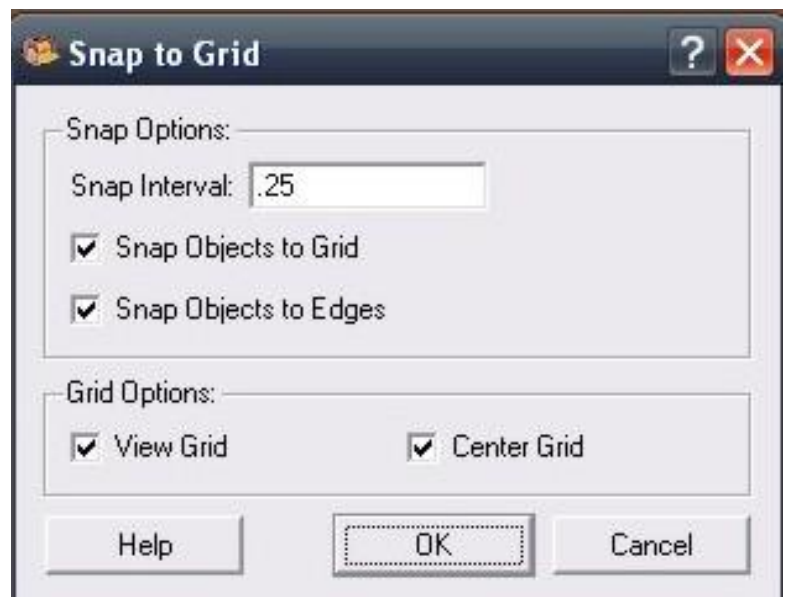
Go to the menu bar and click “Layout” then select “Snap...”



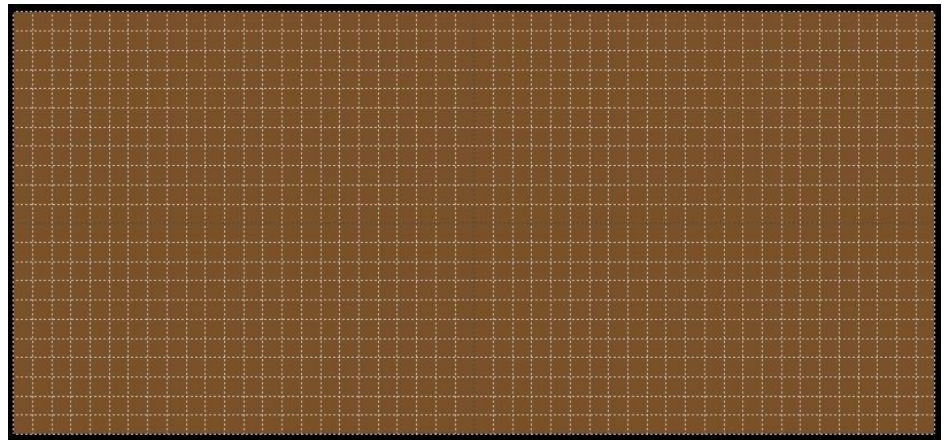
From the “Snap to Grid” dialog box change the “Snap Interval” to “.025”.

Check Snap Objects to Grid;
Snap Objects to Edges;
View Grid & Center Grid

Click “OK”



On your work piece you should now see a set of grid lines.

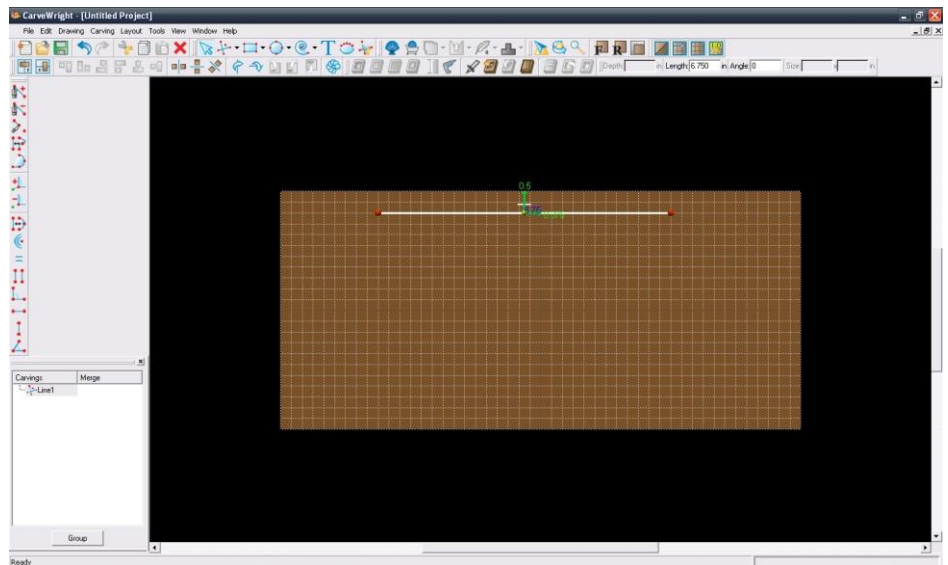


➤ DRAWING TOOLS



Select the “Line Segment Tool”.

Draw a horizontal line on the board on the second gridline from the top. The vertical green arrow shows the distance from the element to the top (or edge) of the board. Move the element or change the number to “.05”.



➤ CONSTRAINTS

In the “Length” box or with the Blue Number type “8.0” and press Enter.

➤ DRAWING TOOLS



Click on the “Circle Drawing Tool” drop down menu and select the “Arc Tool”.

With your mouse pointer place your cursor over the left red node on your horizontal line.

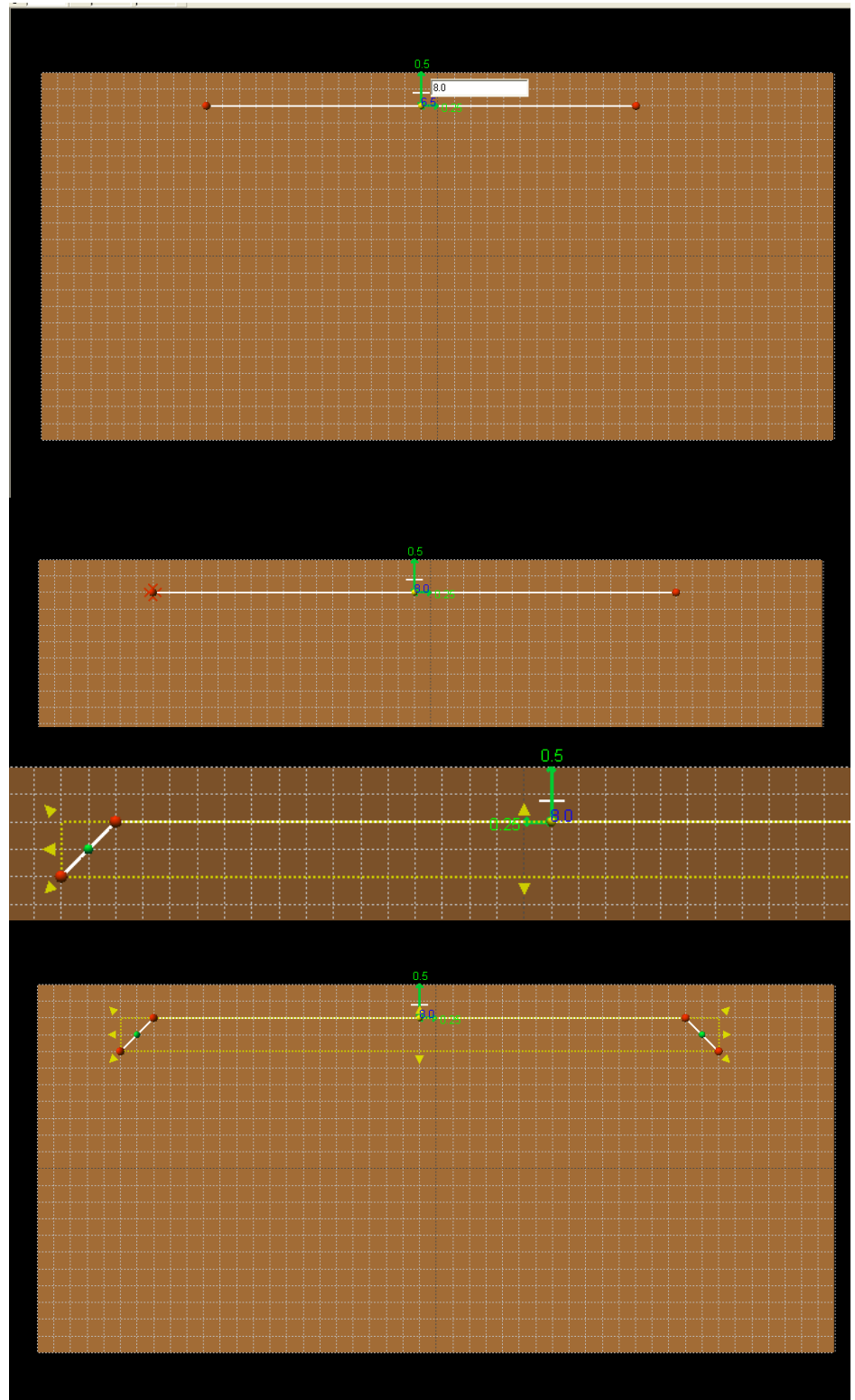
When done correctly it should give you a visual notification that you are connecting the two drawing methods.

When you see the connected notification, left click once. Now count two grid lines to the left and two grid lines down and left click once.

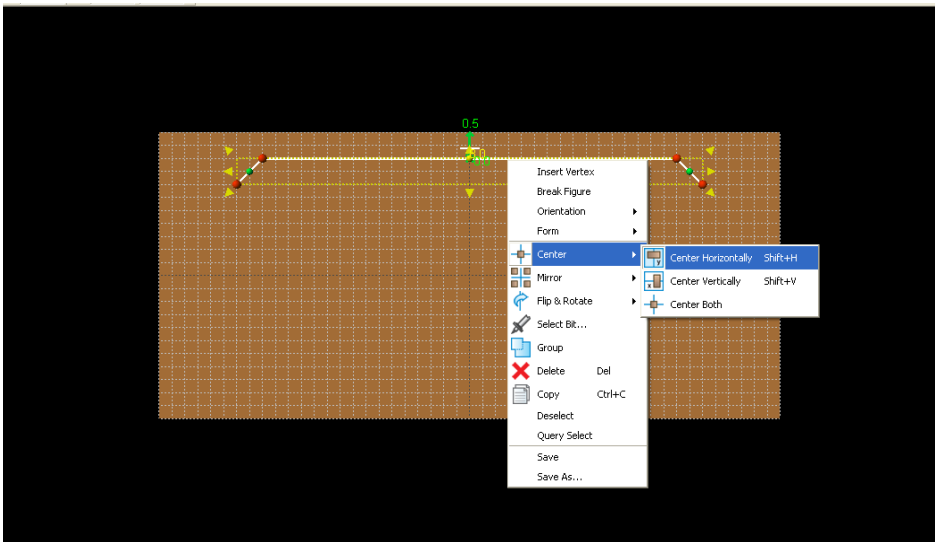
At this point, we will not set the arc radius.



Select the “Arc Tool” again. Do the same to the right side of the line segment. Your shape should look like the top part of a trapezoid.

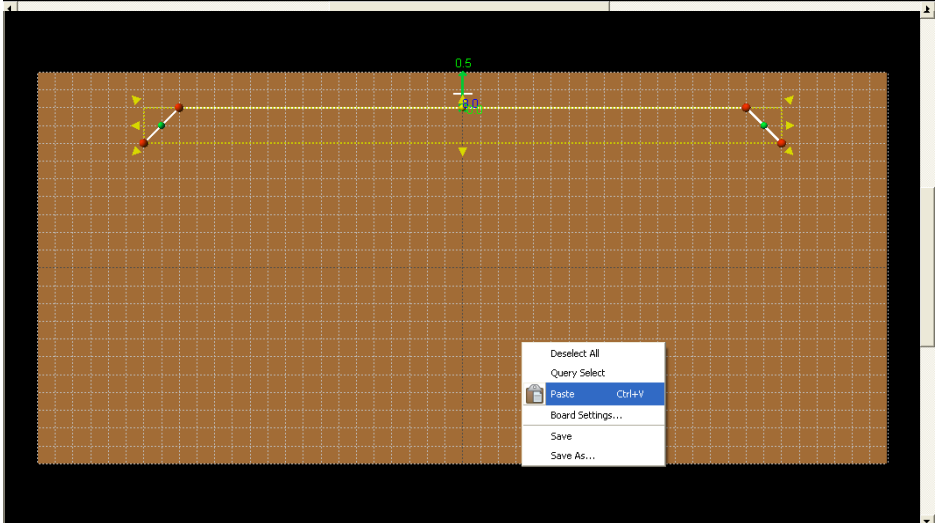


Right click on the line and select “Center”, “Center Horizontally”



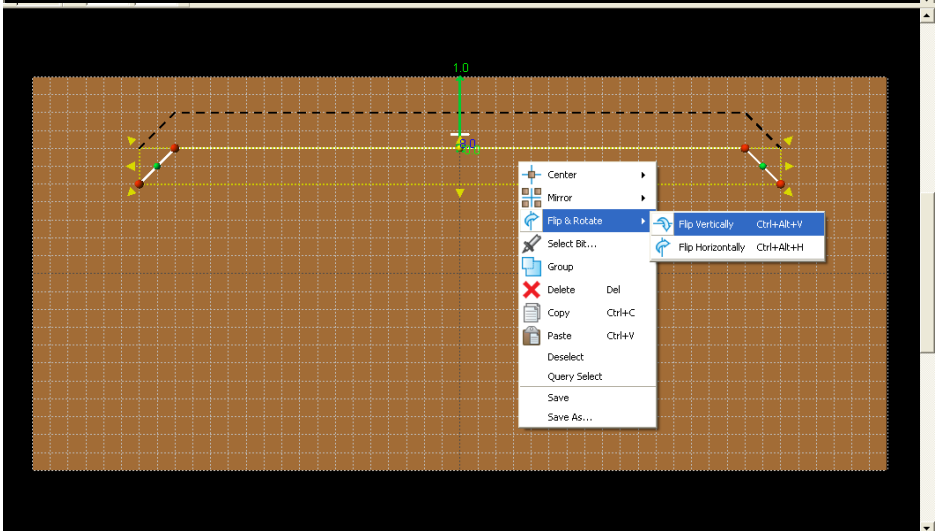
➤ COPY & PASTE

Select the line segment that was just created. Copy it and then paste.



➤ FLIP & ROTATE

With only the pasted line segment selected, Right click and select “Flip & Rotate”, “Flip Vertically”.



Now move the copied line to the second grid line from the bottom.

There should be two line segments in the Carving Tree.

➤ CONSTRAINTS

Constraints are given to guarantee a uniform project layout.

On both line segments, set the Constraints for Center of the Board and Edge of the Board to “0.0”.

NOTE: Changing the number applies a “Constraint” and the number indicates this by turning yellow.

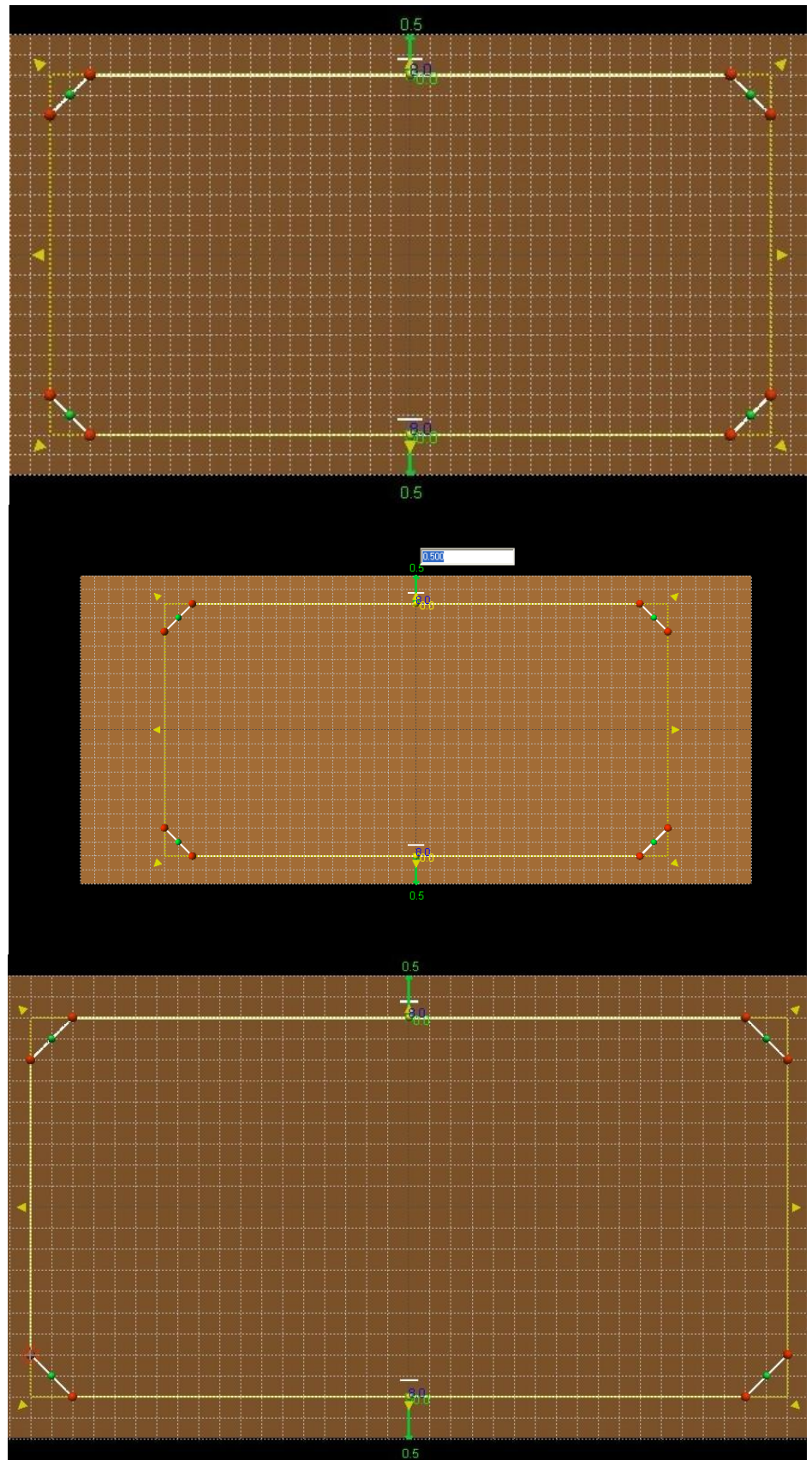
Note: To remove or edit a constraint, right click on the number and select remove.



Select the Arc Tool and connect to each red node on the left side of the work piece.

Note: If connection is successful, the Carving Tree will show only one Line Segment.

Repeat prior action with the right side of the design project.



➤ CREATING A CLOSED REGION

The shape should now be completely connected (“closed region”).

➤ CUT PATH TOOL



Note: Region is not fully connected, if “Cut Path” option is not available when the element is selected.

Check each red node to make sure they are fully connected.

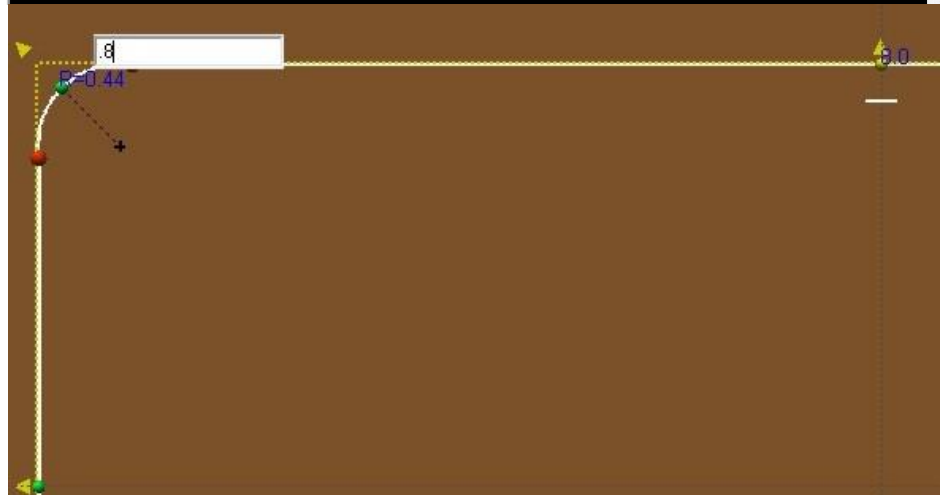
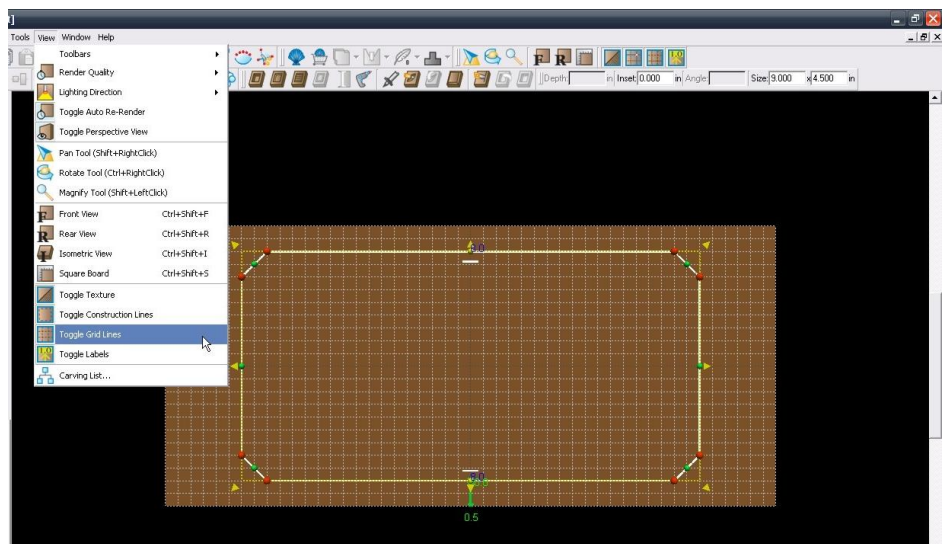
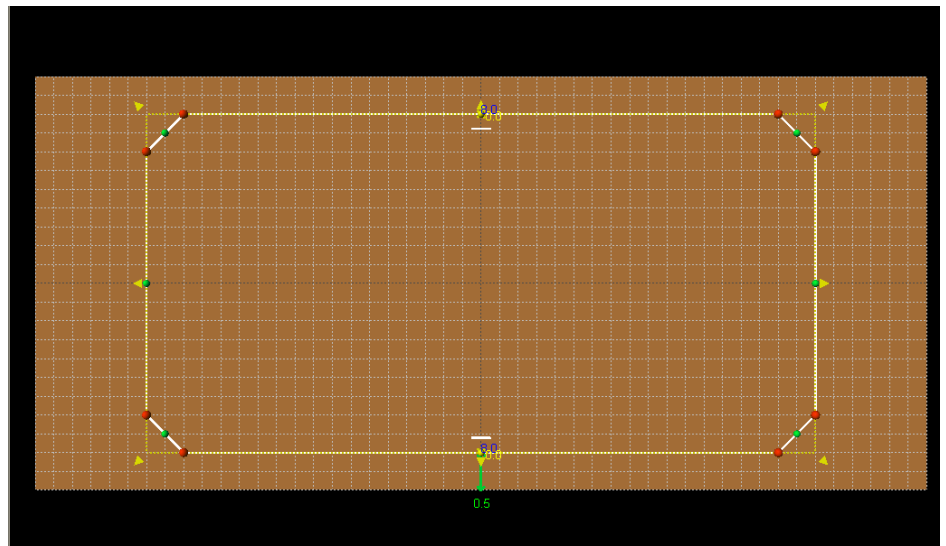


Go to View and select “Toggle Grid Lines”

➤ SETTING CONSTRAINTS

Start with the upper left arc. Left click the green node and drag it toward the upper left of the board. Depending on how far you dragged your arc, your radius ($R=$) will vary.

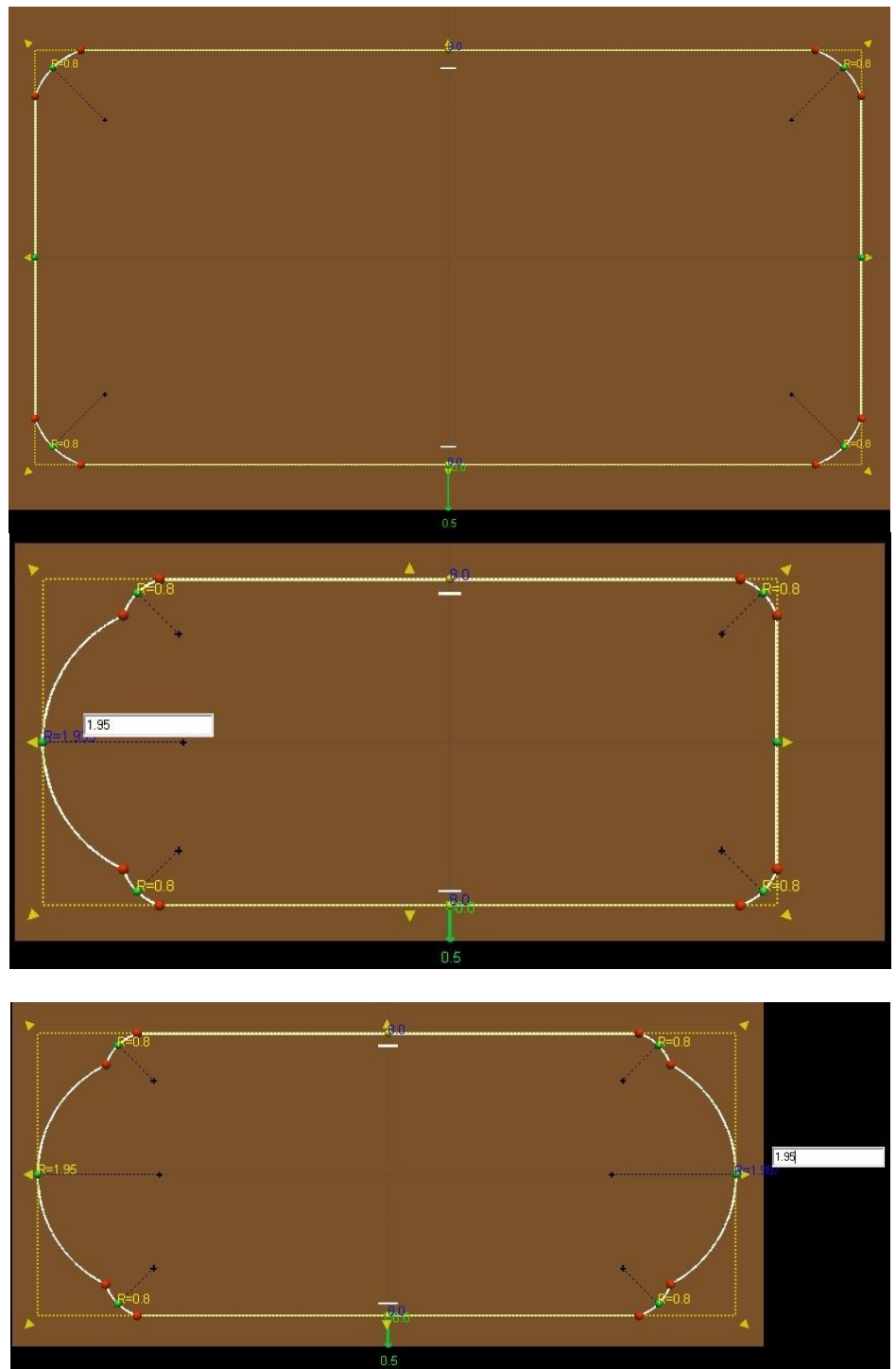
Left click on your radius ($R=$) and a box will open where you can constrain your radius. Type “.8” in the box and press Enter.



Repeat this step to constrain the three remaining corners to “.8”.

To change the radius on the vertical arcs, Left click and drag the left green node to the edge of the board. Once you have an arc left click on the radius (R=#) and change it to “1.95”.

Repeat this step to constrain the other vertical arc to “1.95”.



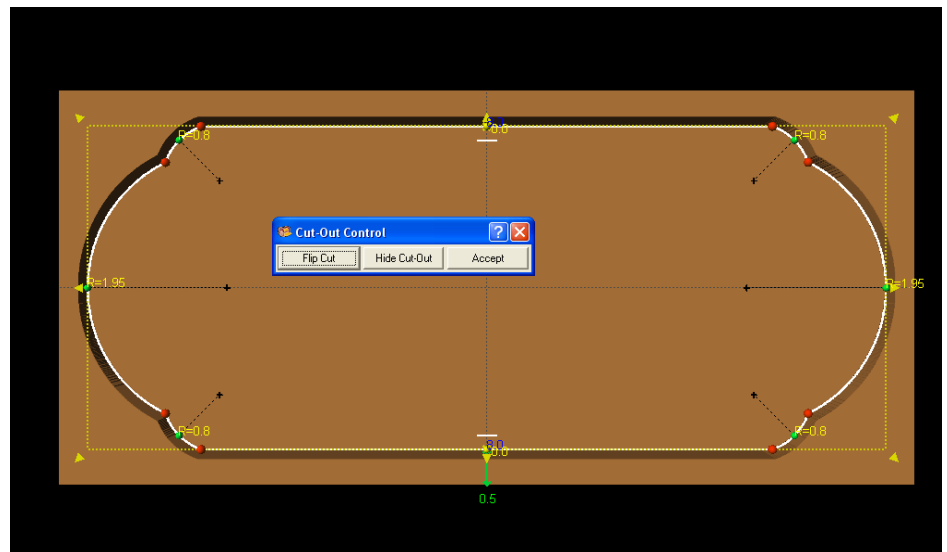
➤ CUT PATH TOOL



Select the “Cut Path Tool”.

In the “Cut-Out Control” select “Flip Cut”, “Hide Cut-Out” and “Accept”.

“Flip Cut” changes the cut path from the inside of the vector line to the outside of the line. When cutting out carved patterns, the outside is preferred for better results.



➤ TEXT TOOL



Select the “Text Tool”.

Click anywhere on the board.

Select the following options:

Font = “Century”

Justification = “Center”

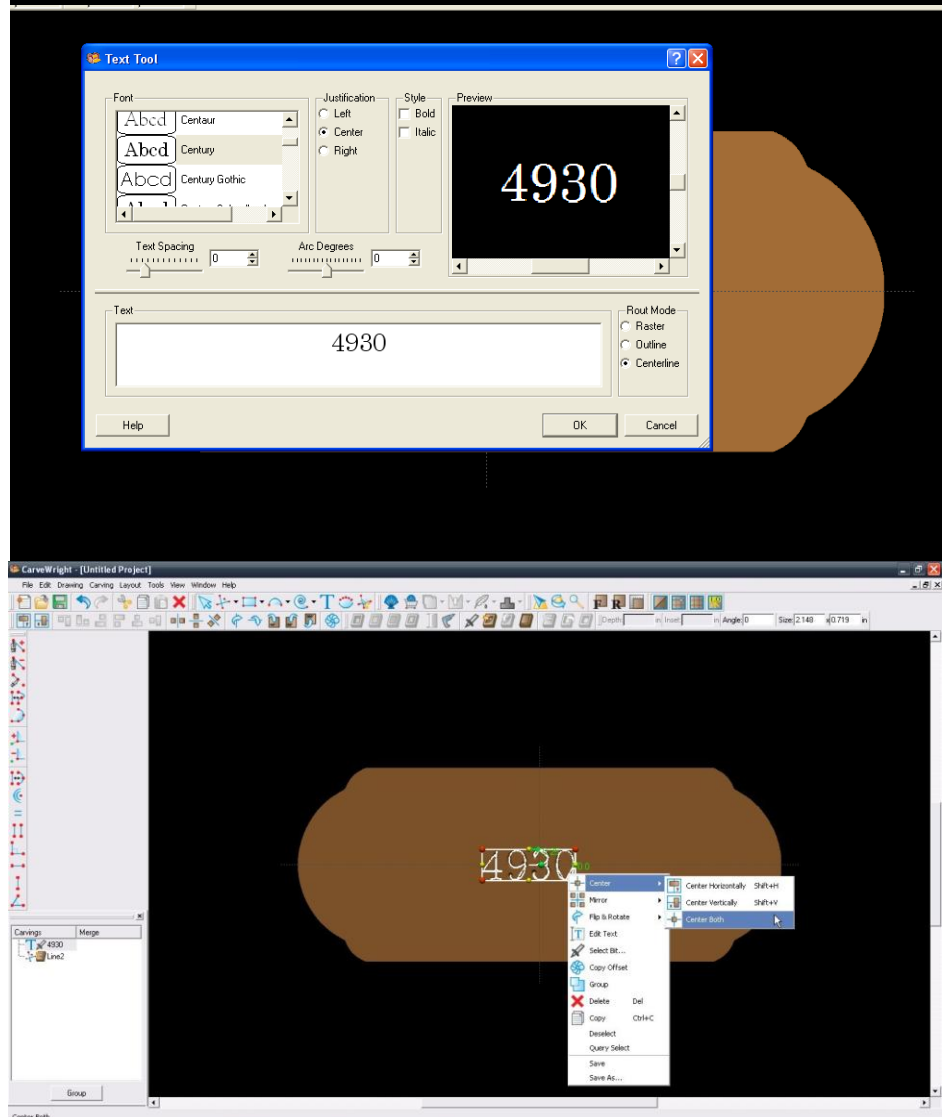
Text = (Your house number)

Rout Mode = “Centerline”

Select “OK”

Right click on the newly added text and select “Center”, “Center Both”.

To resize the address simply click and drag any of the red nodes.



Once the address is the size you like, save the project.



Select “File”, “Save”

*****IMPORTANT*****

Name file and click “Save” to hard drive.

- UPLOADING TO MEMORY CARD



Select “File”, “Upload”
Save to memory card.

- STAYING UNDER ROLLERS

Note: The Auto-Jig option may appear when uploading to the memory card. Auto-Jig scales a project according to a predetermined set of dimensions to avoid possible errors. In this case the board we setup in the software is 12”. The actual piece that should be inserted into the machine needs to be at least 19” to stay under the rollers. Therefore, select “Ignore”.

Example:

streetnumbersign_N_13

(recognizable name_quality
setting_estimated time to
carve)

