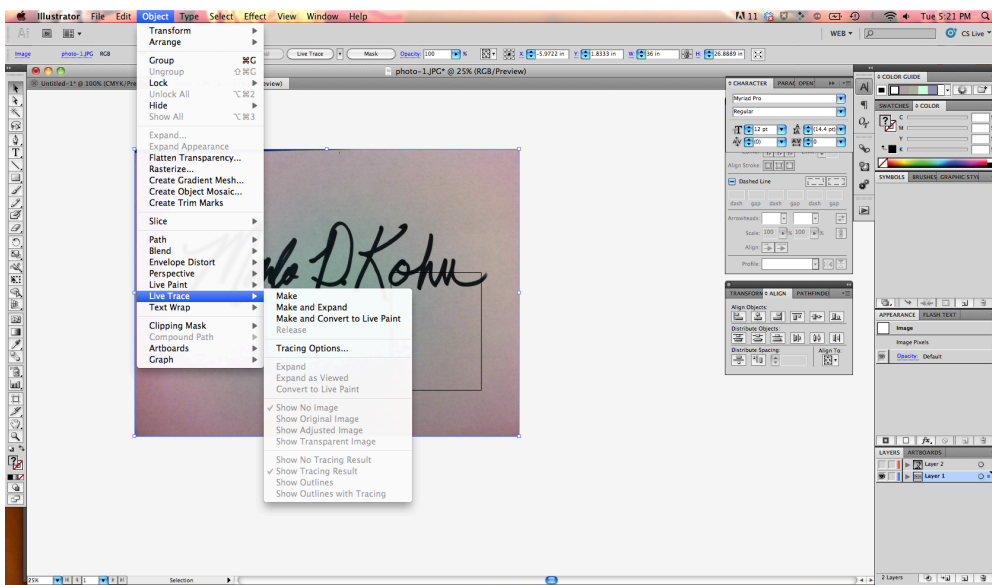
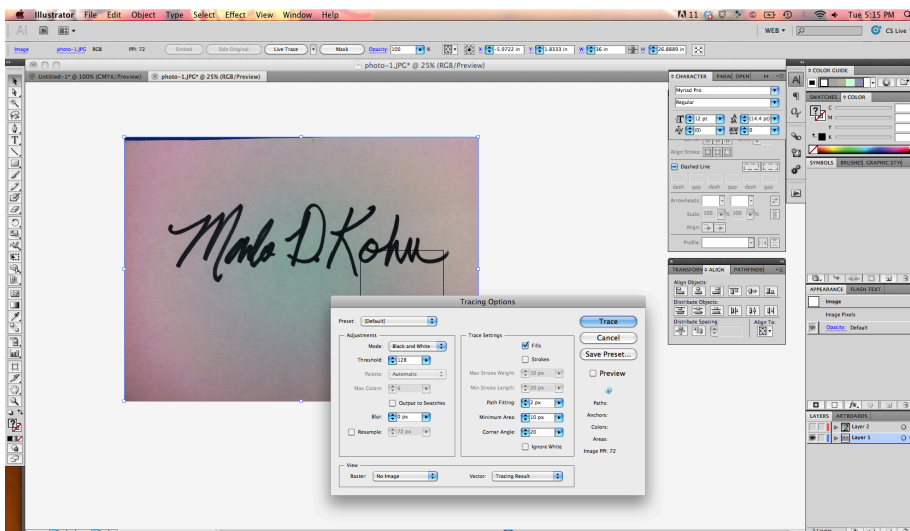


Goal: Want to take an image (photograph or drawn by hand) and convert it to vectors in order to vinyl cut it or laser cut/engrave.

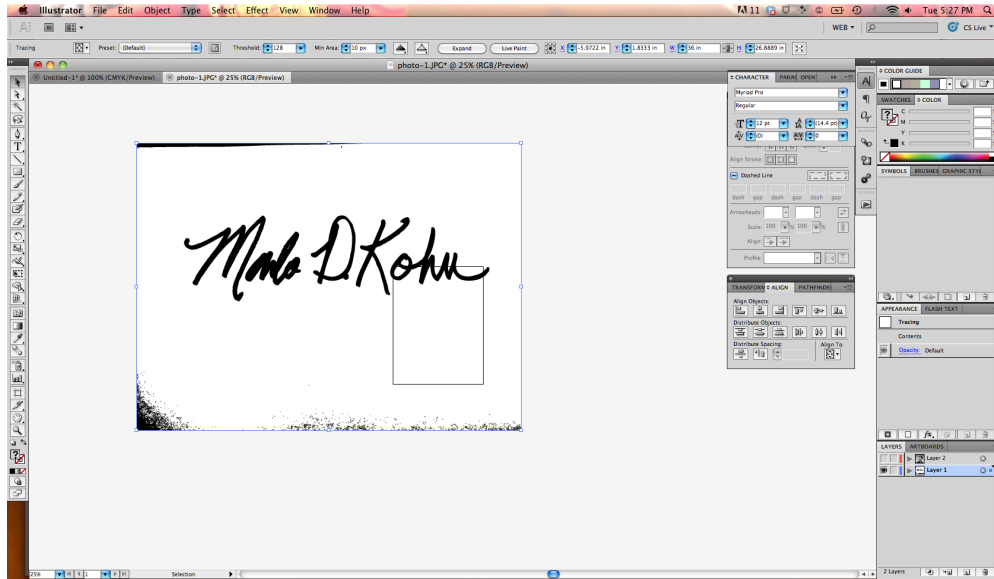
1. Find or create an image of your starting file. This may mean that hand drawn images will need to be photographed or scanned.
2. Open the image in Illustrator. First the image will be simplified and converted to black and white without shading, and then that simplified image will be traced to create vectors.
3. Click on the image using the Selection Tool (black arrow, shortcut "v"). A highlight outline will appear around the image.
4. Select Object → Live Trace → Tracing Options... for the most flexibility with manipulating the image. You can also select Make and Convert to Live Paint at this point if no fine tuning is necessary.



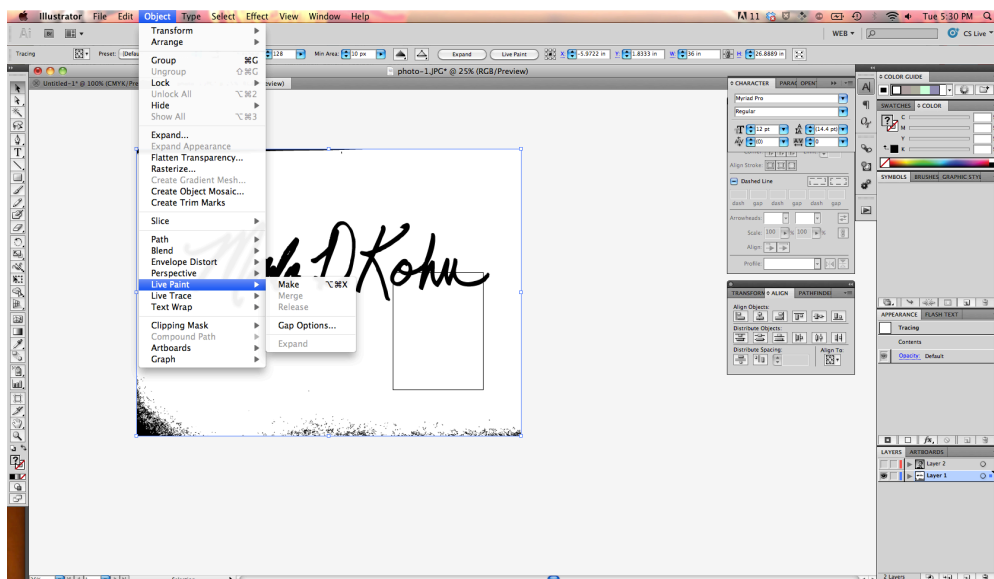
5. Move the Tracing Options window so that you can see the image you are working on.



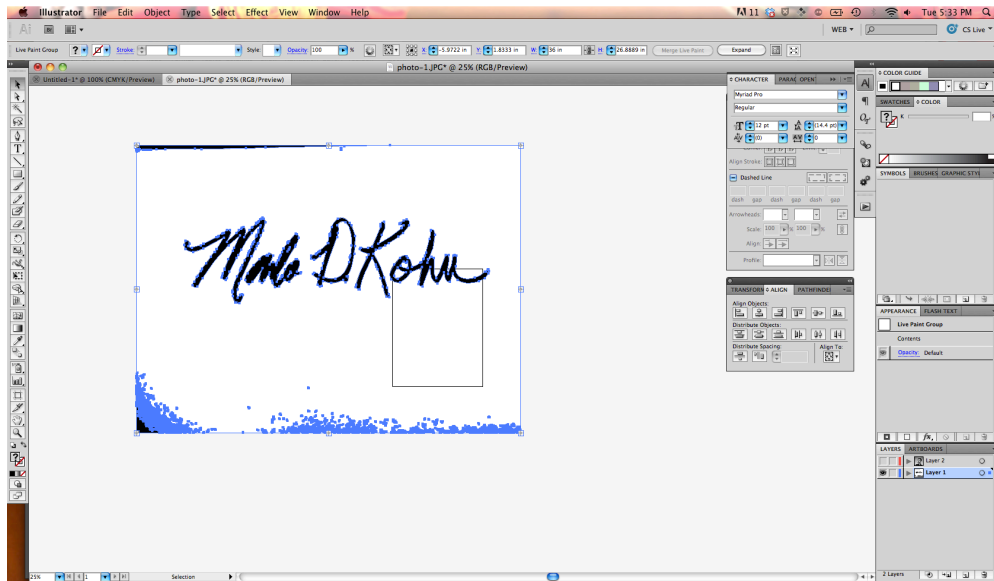
6. You can check the Preview box to see how the default settings will affect your image. Otherwise, explore the adjustments available. For example, the Threshold adjustment allows for the variation of the amount of black or white in the image.
7. When satisfied with the Previewed image, click Trace. This will show the resulting simplified black and white image.



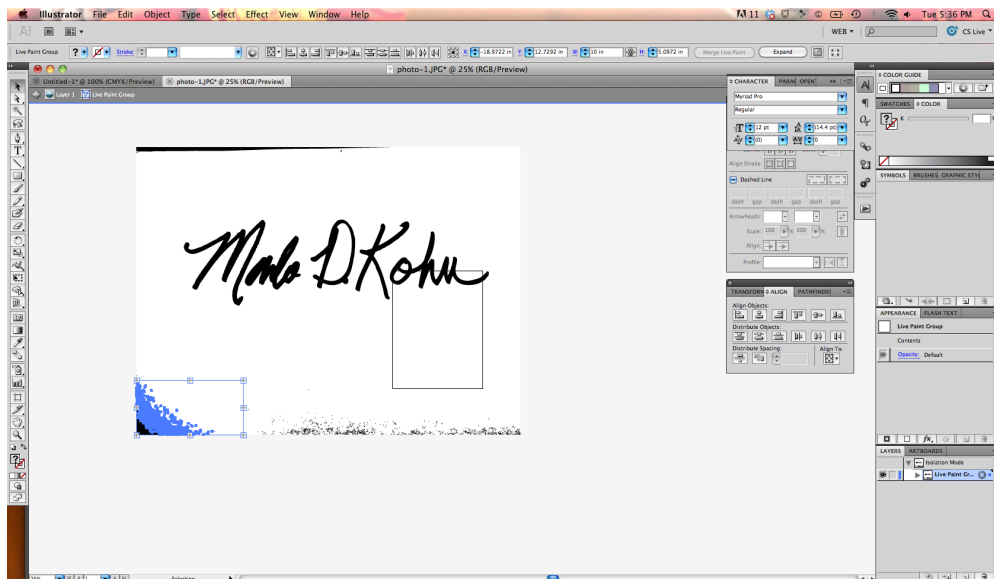
8. To create vector outlines of this image, Select Object → Live Paint → Make (unless you already converted to Live Paint when you Live Traced)



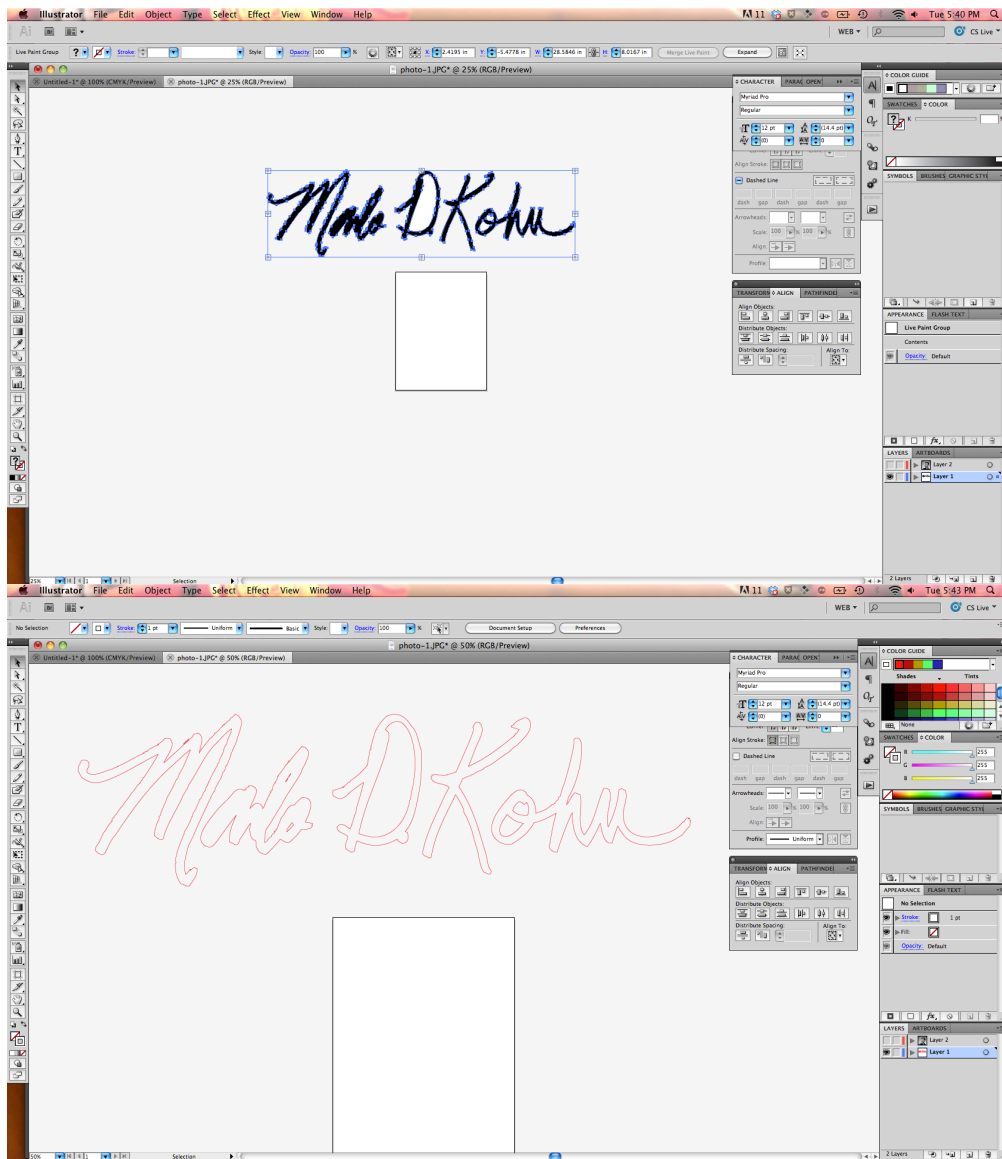
9. Now when you click on the image, all of the black bodies will be outlined.



10. Extraneous black components can be cleaned up by selecting them and deleting. Double click on some of the extra bits to enter Isolation Mode and highlight and delete only what you don't want. To exit Isolation Mode, press ESC on the keyboard.

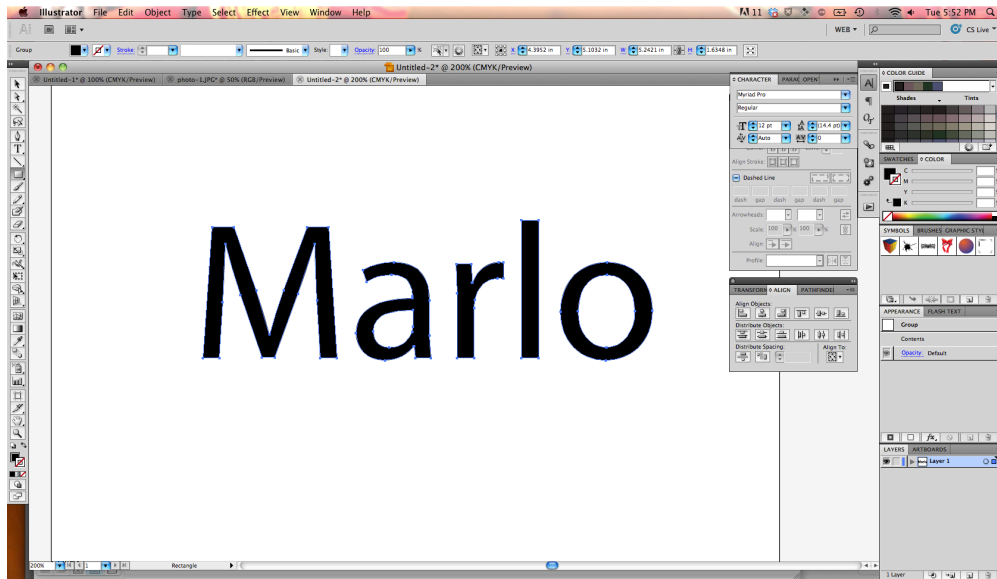


11. Now you have just your artwork outlined in vectors. At this point, the file could be cut on the vinyl cutter. If you want to laser cut or engrave the image, you will need to change the color of the stroke and fill per the laser cutter requirements.

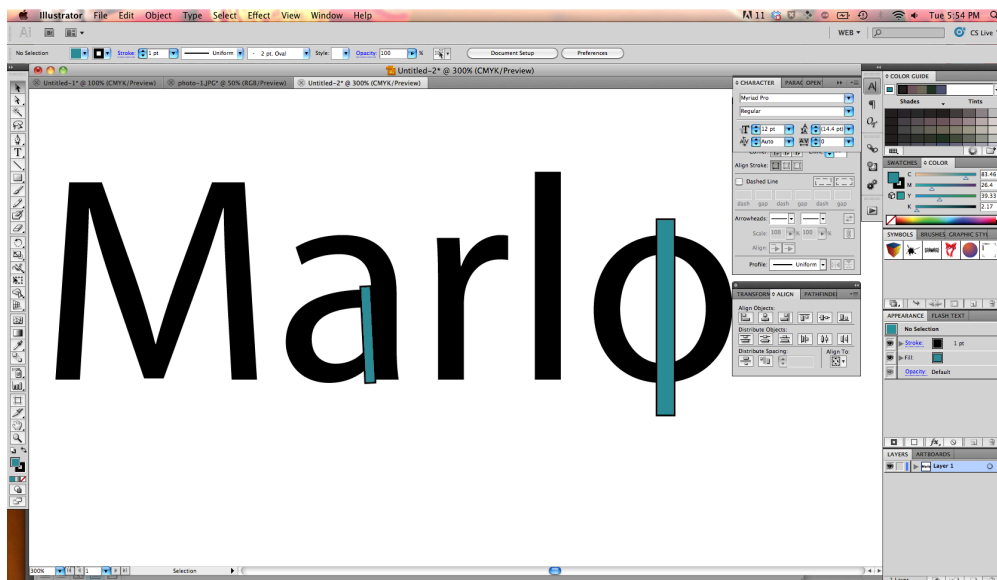


Goal: Combine or simplify vector paths into a single outline for vinyl cutting or laser cutting.

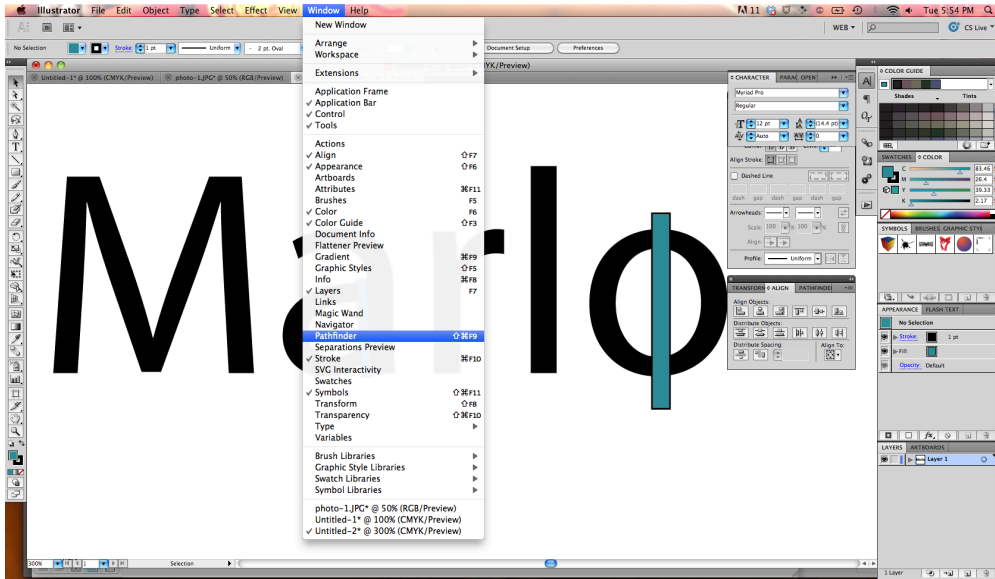
1. This is often used when stencil-izing text or graphics, or two combine overlapping paths into one simplified outline (to vinyl cut or laser cut, generally).
2. Type the text (or create the graphics) that you want to stencil-ize. Right click on the text to Create Outlines.



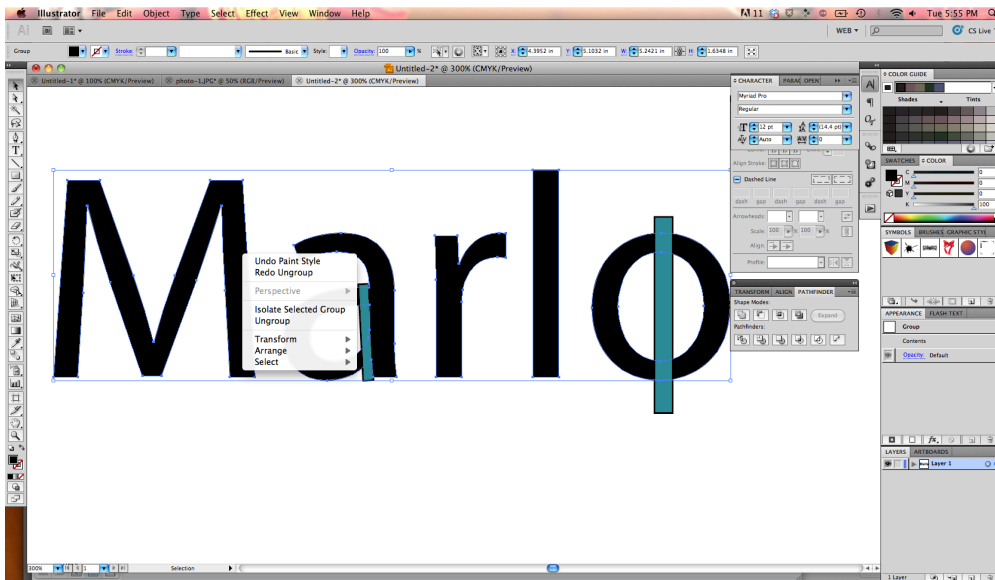
3. Draw rectangles or other stencil strips across the letters or graphics that require stencil-izing.



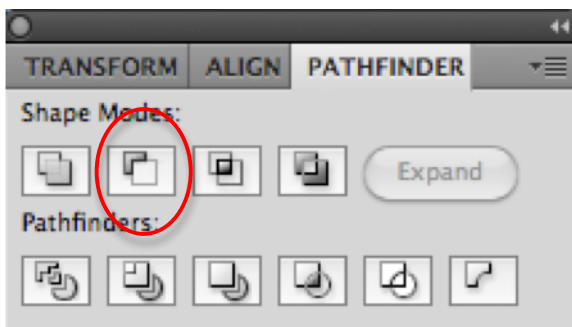
4. Select Window → Pathfinder to open the Pathfinder toolbar.



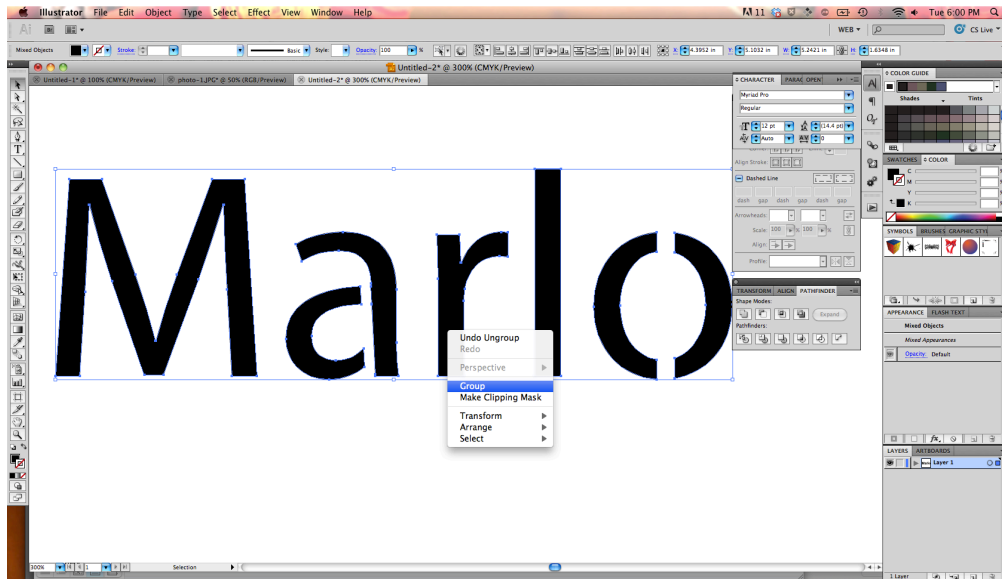
5. You may need to ungroup the letters or graphic elements.



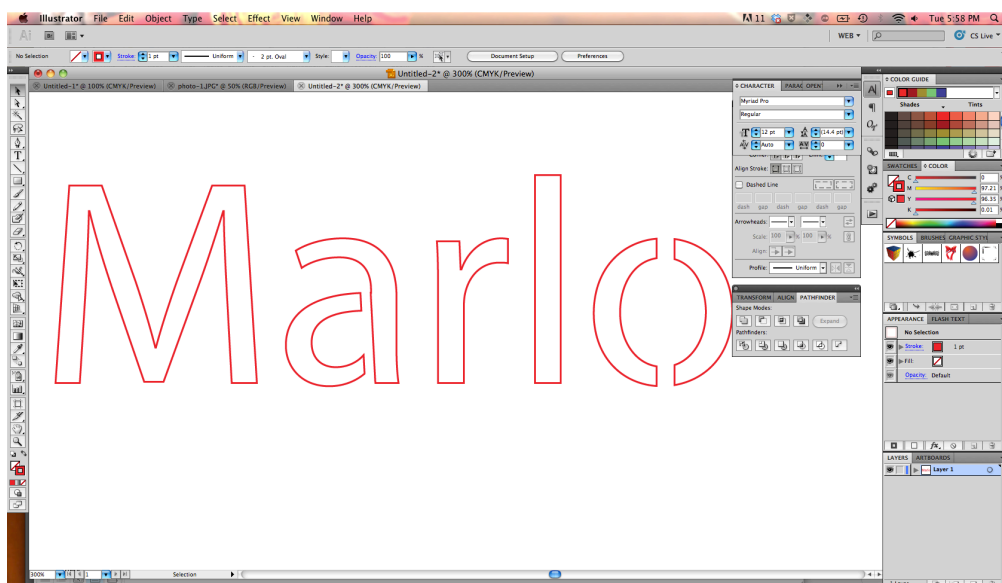
6. Highlight the object(s) of the stencil-izing (ie, the letters) and the corresponding stencil-izing strips. Under Shape Modes, select Minus Front from the Pathfinder toolbar.



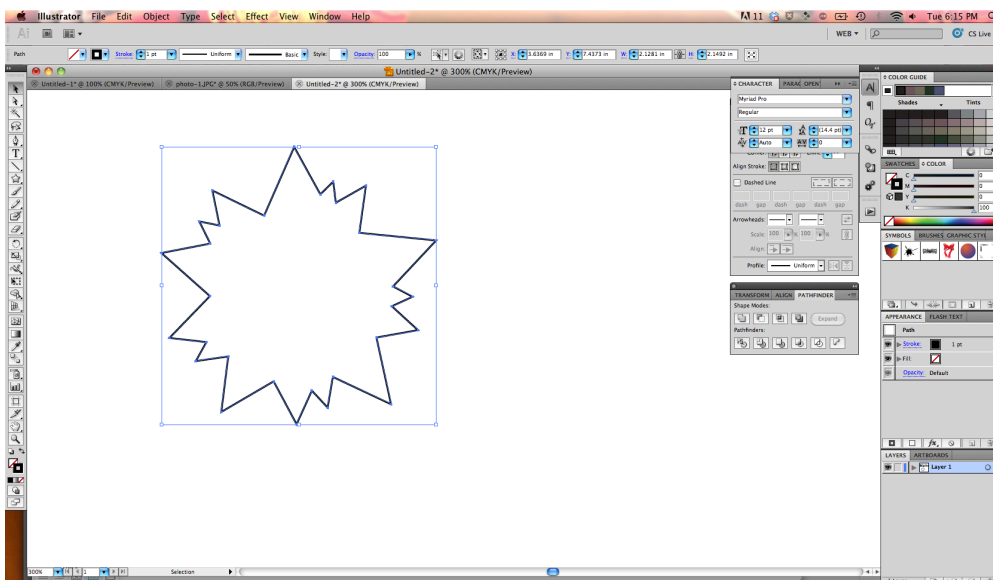
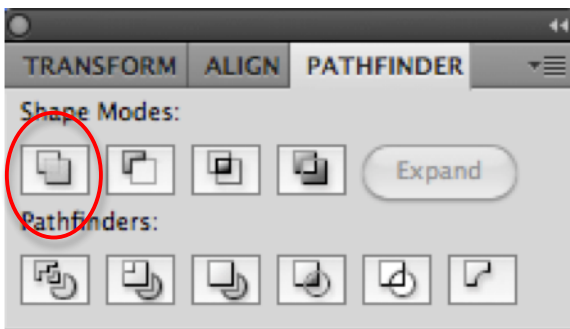
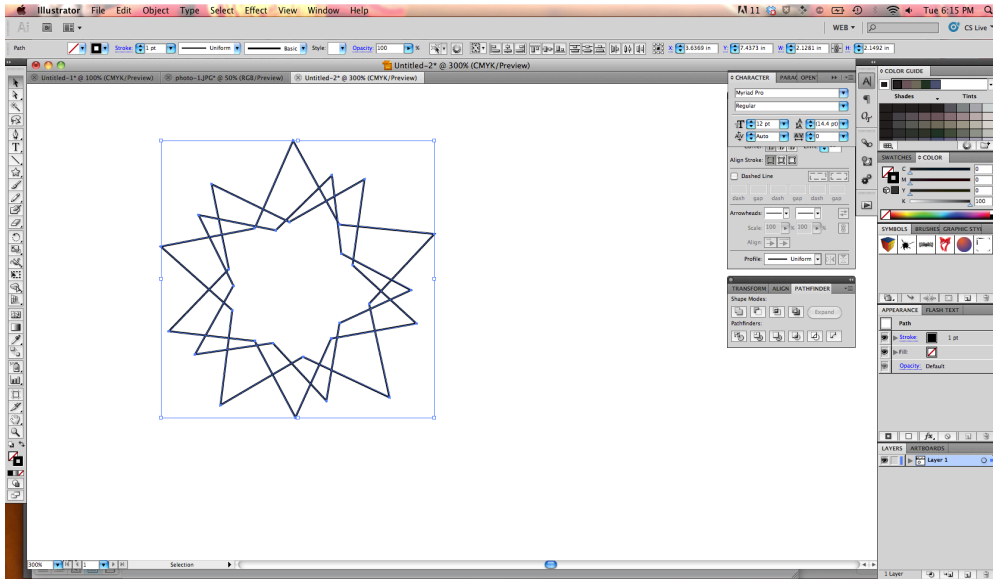
7. Select all of the letters, right click, and Group if desired.



8. Convert Fill to white or null, and Stroke to RGB Red (255, 0, 0) with a weight of 0.001" if laser cutting is the desired outcome of your stenciled font.

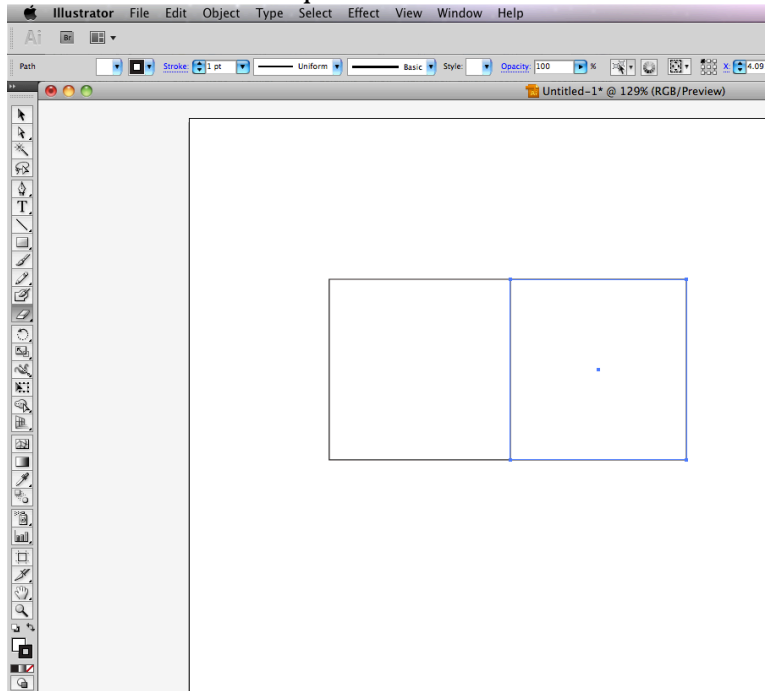


- To combine overlapping paths into a simplified outline, select all of the paths, and on the Pathfinder Toolbar, select Unite under Shape Modes.



Goal: Trim extra lines (either overlapping duplicate lines or

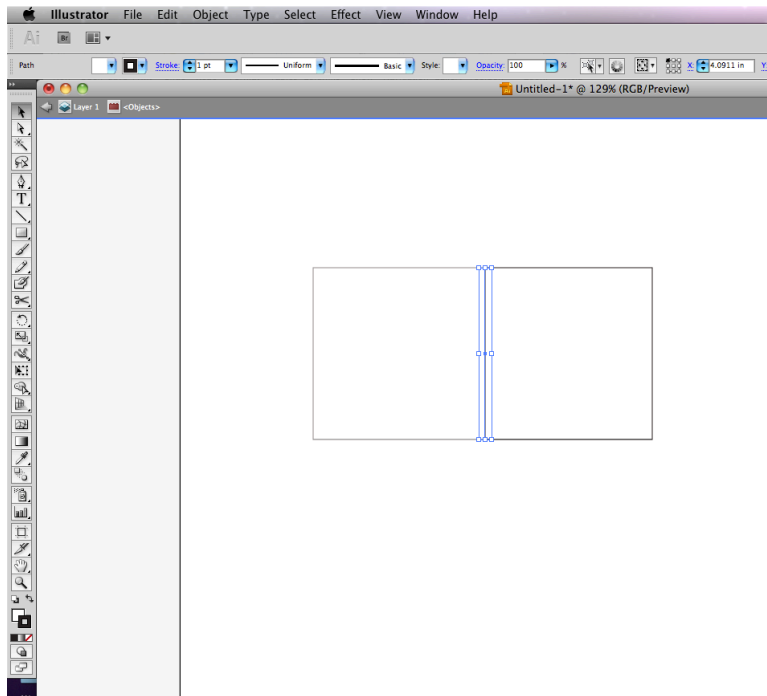
1. Illustrator is a vector-based program, so you can't use an eraser tool in the same way you might in Photoshop.
2. You can use the Scissors tool to trim any lines that are overlapping, or are
3. Begin by using the black arrow (Selection Tool, keyboard shortcut "V"). Click on the entity that you want to trim. In the example below, we are trimming one vertical line off of one of the squares so that it wouldn't double-cut on the laser cutter.



4. Find the Scissors Tool (keyboard shortcut "C"). It may be hiding under the Eraser. If so, click and hold on the Eraser, drag to the right to get the drop-down menu of other tools. Select the Scissors.



5. Click on the line where you want to trim it. The tool will snap to intersection points. When you have clicked at least twice (to form the endpoints of the trimmed line), go back to your Selector Tool black arrow (press “v” on the keyboard).
6. Now you can click on the trimmed line section and delete it.



MISC NOTES:

- Stanford Logos (don't hack them and use Live Trace on jpegs!)
 - identity.stanford.edu → Downloads → enter SUID and password → Download the appropriate EPS file and manipulate in Illustrator.
- Color Mode – Document Color Mode and Color window
 - To laser cut, your DOCUMENT COLOR MODE must be set to RGB. If you are using the Color window to adjust your colors, you can also set this to RGB mode by clicking on the horizontal lines symbol in the upper right corner:

