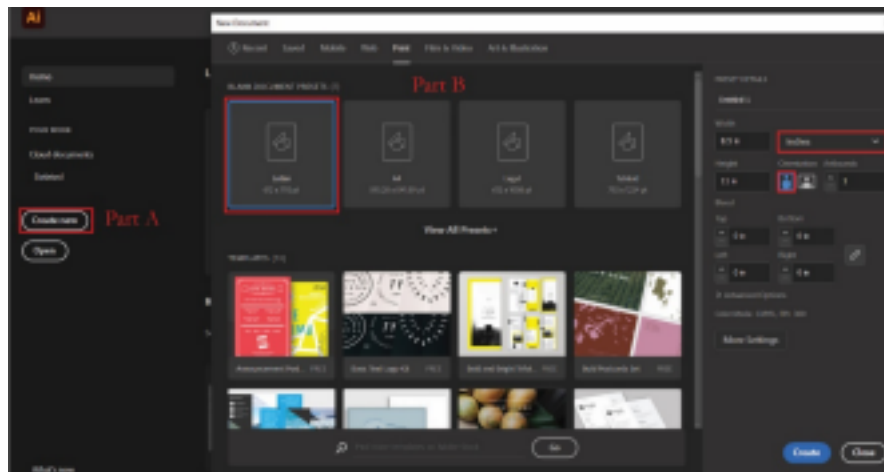


1. Getting Set Up

- Open Illustrator and **click on “Create New”**.
- Set the orientation to Portrait, units to inches, and paper size to Letter. **Then click “Create”**.



2. “View” Menu

There are a number of options in the “View” menu that you should become familiar with, you will use them a lot. The following is a quick breakdown of commonly used menu options. **Turn these options on.**

Smart Guides:

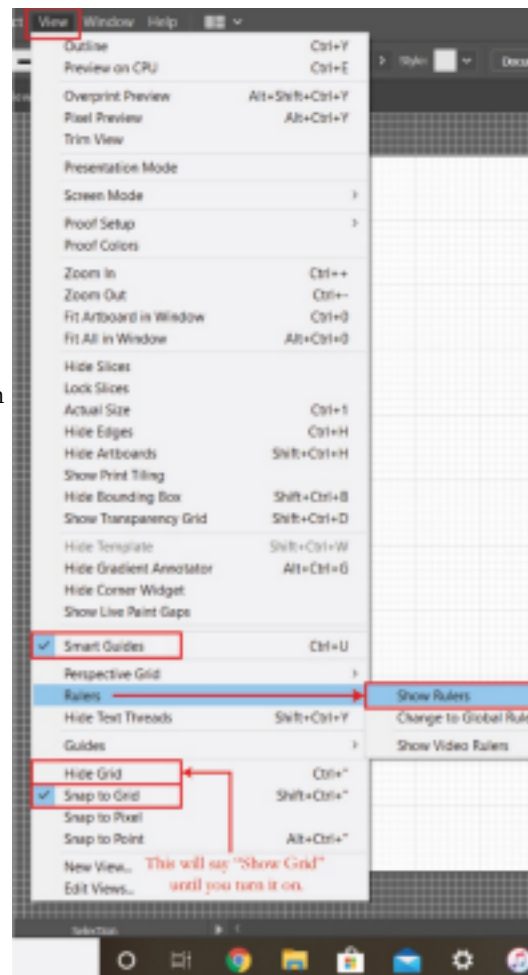
Smart guides is useful to keep on because it automatically gives you the option to line up elements of your map so that they look clean. Some examples would be to center text, align map elements so they have common spacing etc. (there are tons of uses).

Ruler:

The ruler is something you should always have on. When turned on, it puts a ruler along the top and side of your page. This is useful for everything and is a good way to check the size and units of your document before you start.

Show Grid:

Grid is, well a grid that can be turned on and off and is not a part of your map document. This is a great way to get even spacing and when paired with the ruler is an easy way to get even spacing for example in your margins. (we’ll use this in the next step).



When you set the doc to “inches” the grid cells will be 1/8th inch each. 8 cells = 1 inch, 2 cells = 1/4 inch, and so on.

Snap to Grid:

This option gives you the ability to snap lines, boxes, images, and anything else to the grid. This option, when you also have “ruler” and grid” on, makes it easy to create perfect margins, because you just snap the image and make sure you have 2 boxes on each side (for a 1/4 inch margin on a standard letter size doc).

Hint, turn on snap to grid before you resize in the next step.

3. Importing Your Data

a. Copy the Exercise 3 folder to your dedicated class folder.

b. **Drag and drop “Morrill.tif” onto the drawing** and **position/resize the photo** at the bottom of the page with about 1/4 inch of white space on the right, left, and bottom of the page. Don’t worry about the top, we will use that space for a title.

i. Remember to **hold down the Shift key when resizing** so that you don't change the aspect ratio of the drawing. If you mess this up, you can always “ctrl + Z” to undo.

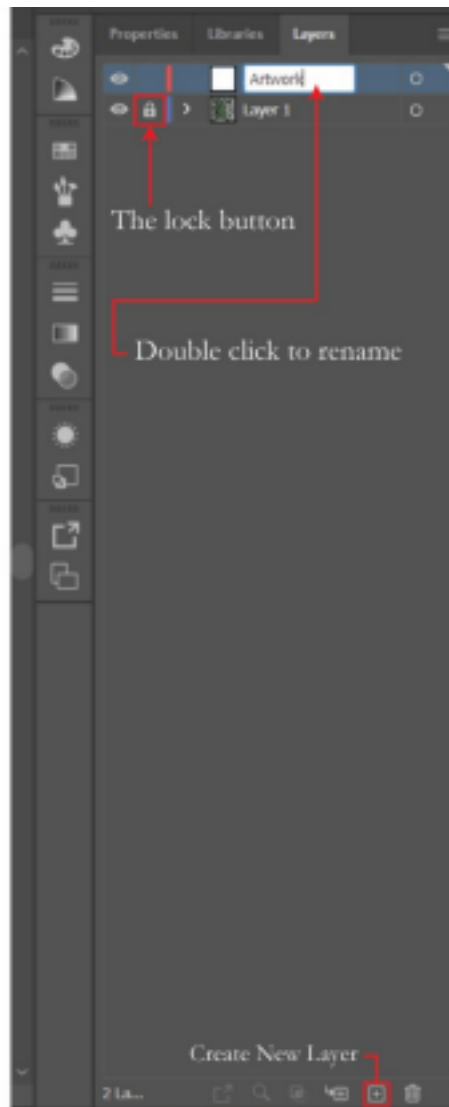
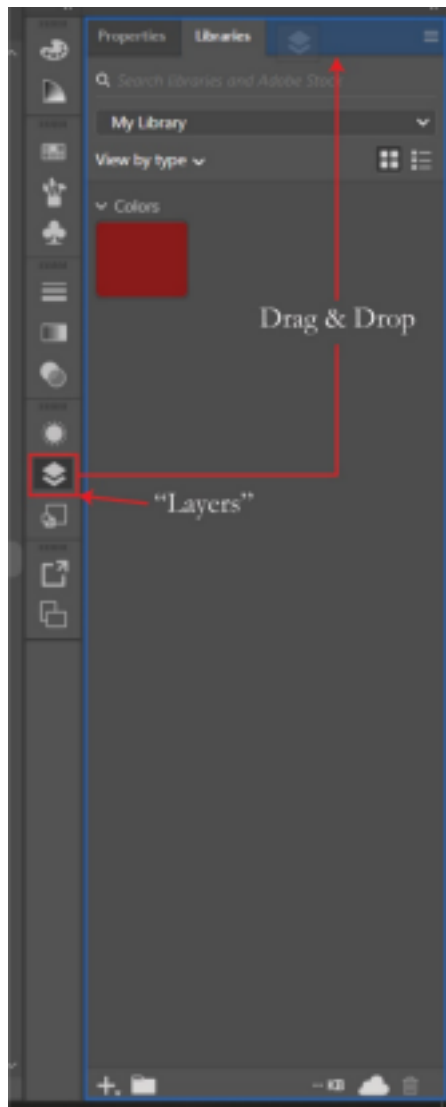
4. Essentials Classic/Creating New Layers

There are several illustrator formats you can choose from which determine the placement of functions. a. For the purposes of this course, **choose “Essentials Classic”**. The default is “Essentials” and won’t show you all the tools and menu options. You can easily switch between these settings in the top right corner of the window next to the light bulb button.

b. Next **find the “Layers” tool**, located in the vertical menu bar on the right side of your screen. **Drag and drop it onto the menu window to the right**. You will now be able to easily see and access your layers all the time.

c. In the Layers window, you will notice that illustrator has created a layer for you when you dropped the photo of Morrill on to the canvas. We want to lock this layer for now so it cannot be edited. To do this, **click on the blank box to the right of the Eyeball icon**.

d. Next, **click on the Create New Layer icon** at the bottom of the box, this creates a layer called “Layer 2”. Let’s **rename this layer and call it “Artwork”**. Do this by double clicking on “Layer 2” and change the name.



5. The Pen Tool



a. We will be using the Pen tool quite a bit to draw straight lines so let's try it out. Off to the side of your document, click once on the point where you want to start the line, move the cursor to the point where you want the line to end and click again. Instant fun.

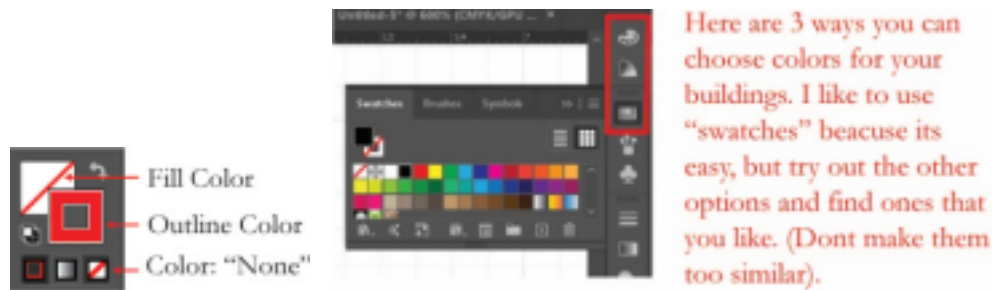
- i. Make sure you **do not click and drag**, that is used to make curved lines.
- ii. Remember that all the tool icons will identify themselves if you hover the mouse over the icon for a second or two.

6. Digitize Morrill (Why, you ask? because it's the coolest building on campus, duhh)

a. Using the Pen tool, **trace the outlines of the 5 Morrill buildings** (1,2,3,4S, 4N) and make each one a different color.

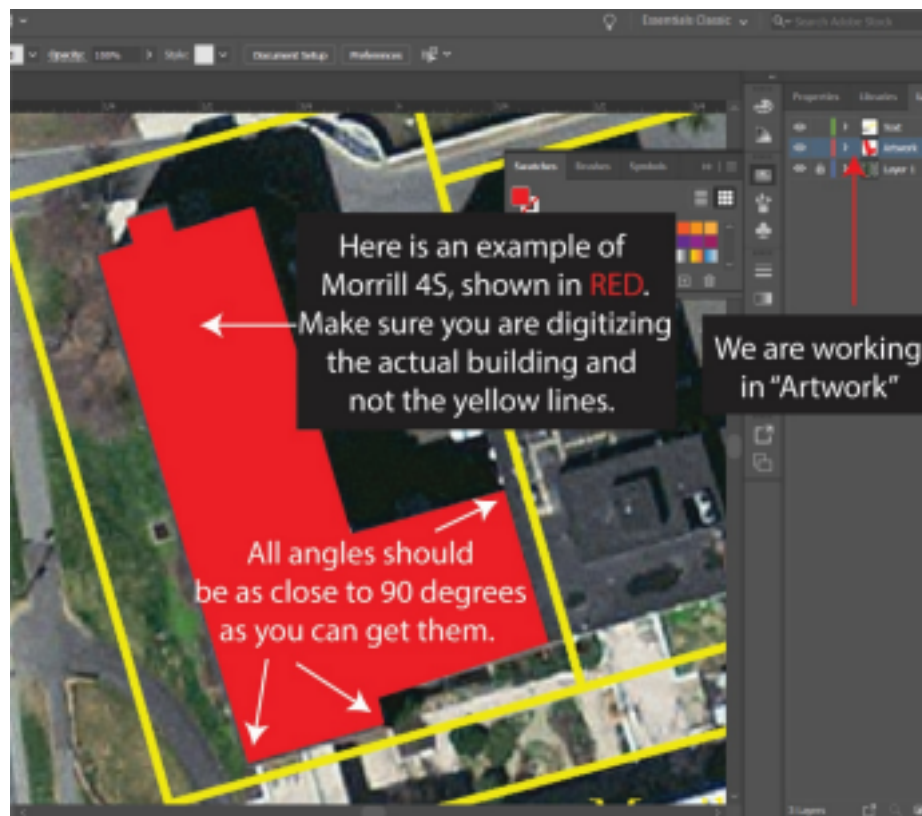
i. **Turn off "Snap to Grid" for this.**

ii. Also, when you're making polygons (as we are now) make sure the "Fill" is set to none and the outline is set to the color you've chosen.



b. Once you have clicked on the last corner, just click the starting node to complete the polygon. If your buildings are not as square as you like, you can use the White Pointer Tool to move the nodes to a different location.

i. For some reason, Illustrator sometimes crashes at inopportune times, so remember to save your work early and often – especially if you have just spent ten minutes doing some painstaking tracing!!



7. Adding “Text” Layer

- Add a new layer** by clicking on the add layer icon (reference step 4 part D if you forgot)
- Rename “Layer 3” to “Text”.**

8. The Text Tool



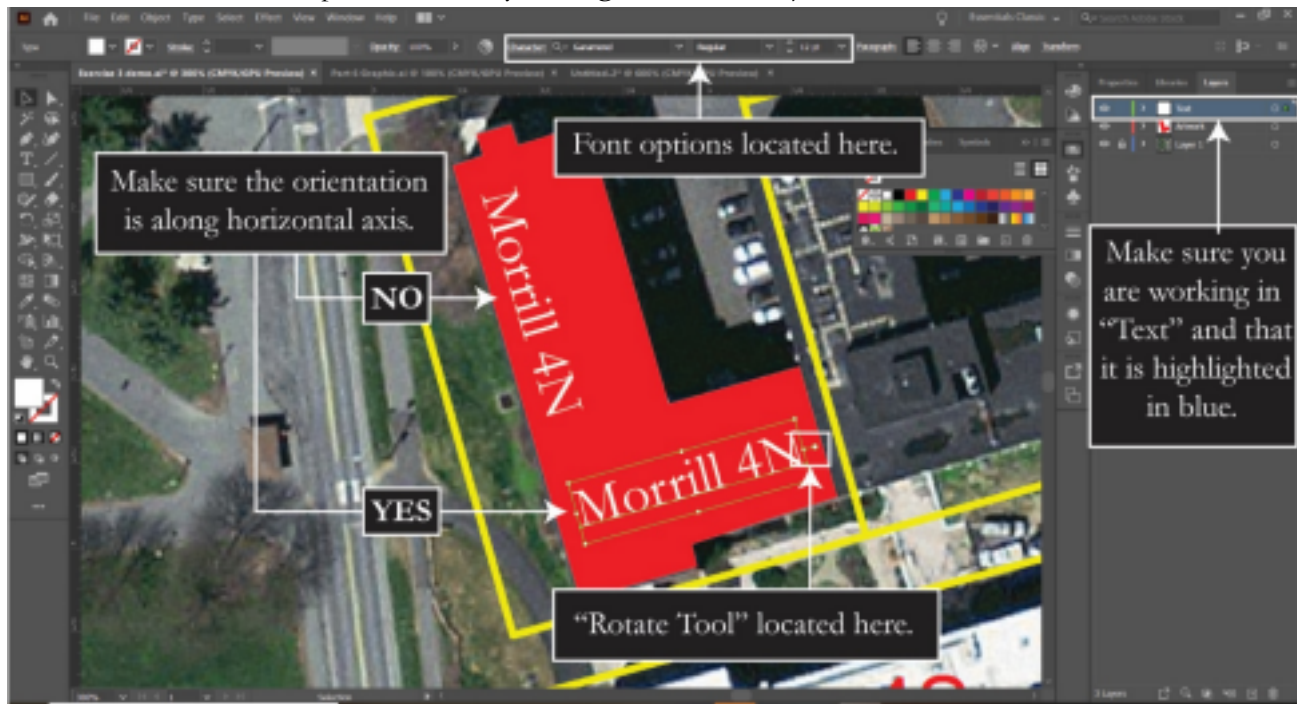
Here we are going to add text labels to our newly digitized buildings.

- First, lets **make sure that you are working in the layer “Text”**. You will know which layer your working in under the layers tab, active layers will be highlighted. (if you lock a layer, you must unlock it before you can start).
- Use the Text Tool located in the right toolbar to label each of the Morrill buildings.** i. Once the text tool is selected, make sure to only click once where you want your first label otherwise, you’ll end up with a bunch of text boxes. (you can always “ctrl/z” to undo).
- Highlight or select the text** for your first label and let’s change the font type to “Garamond”. The options to do this are in the top menu bar when you have your text selected.
 - Once we set the font type for our first layer, Illustrator will remember this and will automatically

use “Garamond” for your next label (within the same session). For this reason, it will save you time if you set the font early on.

- d. Next **choose an appropriate font size**. Remember that this class incorporates using your artistic eye to produce esthetically pleasing projects. It is a good idea to keep your font/ font size/ font color consistent, so make sure to choose a font size that will fit your labels even on a smaller building. (You can always go back and shrink everything later) Consistency is key.
- e. Next, play with the font color. Changing a font color can be useful for instance, click on a new color to change the text color if necessary (for instance, if the black text does not show up on a dark blue polygon, try making it white).
 - i. Again, it will look better if your text color is consistent on all of your buildings. If black text isn’t showing up too well on your blue building but works well on your other buildings, consider changing the blue building to a lighter color. With text, having a high contrast to the background will make it easier to read. (also, will look better)

f. Now we are going to **rotate the text to make it parallel to the building orientation**. We want our text to be aligned to the side of each building that is the most horizontal. To rotate text or any other object, move the “Black Pointer” near the corner of the text until a pair of small curved arrows appear, and then rotate to the position you want. You may have to zoom in to click on this option more easily. **OR right click the object and then click transform then Rotate.**



9. Digitize the Campus Pond

Now it’s time to use your new digitizing skills without me holding your hand.

- a. Use the Pen Tool to **outline the Campus Pond, give it an appropriate color, and a label**.
 - i. Make sure that the artwork is in Artwork layer and the text is in the Text layer. It is a good idea to lock the layer you are not working in.
 - ii. The points we add to our pond polygon are called vertices. The more vertices you add, the more realistic and less blocky the pond will look.
 - iii. In some areas its confusing as to where exactly the shoreline is. Just do your best and don’t worry if its not perfect. Play around, try Ctr+Z and see how it works while using the Pen Tool.
 - iv. Also when you’re done, try using the White Pointer Tool to move vertices around. This is confusing at first because sometimes Illustrator won’t let you move the point you clicked on. Weird I know but try clicking on the point next to it. Now the point you want to move will change to white, and you should be able to move it around. (You won’t always need to do this).
10. Digitize 6 Sidewalks/ Stroke Tool

- a. Use Pen to **trace the centerline of at least 6 sections of sidewalk** around the pond. Using the Stroke

Tool on the right tool bar, **change the line width from 1 to an appropriate width (3 or 4)**. b. Next **change to a gray color that matches the sidewalk** you are tracing. Make sure that you are changing the outline color, not the fill color (which should be set to “none”)

- i. Remember that you can also use the small Fill and Outline Color window near the bottom of the left toolbar to get to the color tool, then choose shade of gray that you want to use. These options are also in the Swatches tool, third from the top in the right toolbar.
- ii. Also remember that we are going to be removing the picture of campus at the end, so try turning off “Layer 1” to see how your final production will look. Hint, connect the sidewalks. It will look silly to have a few floating around going nowhere.

11. Curved Line Tool


- a. **Use Curvature Tool to draw a curved line** from the center of the road in front of Morrill 4N to the south end of parking lot 62.
 - i. Use the method we used in the demo, and using the white pointer, move the “handles” that are on the ends of the curve to match the line to the center of the street. Click on one of the end nodes to display the handles.
 - ii. You will likely mess this up on your first try. No worries just delete it and try again.
 - iii. Hint, clicking a bunch of times won’t really help you (you’ll end up with a squiggly road). Less is more in this case (maybe 3 or 4 points will work well).

12. Make the Road

We are going to change the width and color of the line to make it look like a road and label it as “North Pleasant Street” with curved text.

- a. To do this, **click on the road line**, Ctrl/c to copy it, Ctrl/Shift/v to paste it in place and then move it a little to the right of the existing line and change the line width to 1.
- b. **Switch to the Text Tool**, move the cursor near the new line as we did in Exercise 1 and type in your label “North Pleasant Street”. Position and color the text as necessary remembering that where you click on the line with the Text Tool will determine the start of your label.
 - i. Remember that if you delete or move something you didn’t want to; Ctrl/Z undoes your last move.

13. Make it Look Like a Road

Now we’re going to create a yellow dashed line in the center of the road, so it looks more realistic. a. **Copy and paste the road line in place** (ctrl/Shift/v) once more and **use the stroke and color tools to make the wide gray line into yellow dashes**. With the line selected (with the black pointer) go into Stroke tool  and click on the Dashed Line box. If there are no options here, we want to click on the Stroke menu button located in the top right corner of Stroke, then click “show options”.

- b. Set the dash and dot settings. **Type in 6 in the dash box, and then 5 in the gap box**, then go to the color pallet and **make the fill (solid box) no color, and click on the outline (open box) and choose a yellow**.
 - i. You should now have a grey road, labeled in curved text as “North Pleasant Street”, and yellow dashed line in the center.

14. Turn Off “Layer 1”

- a. Finally, **turn off “Layer 1”** and look at how your illustrations look without the background. b. Now is a good time to fix anything you may have overlooked while the image was still there. Use the White Pointer Tool to edit any of your lines or vertices.
 - i. Hint, don’t play with your road too much. If you mess it up, it will be a pain in the butt to have to re-do.

15. Add a Title and Sign Your Work

We always want our productions to have a few key elements. A title, neat line, legend, scale bar, and your name at the bottom are all we’re going to ask of you for this exercise but in the coming weeks you will learn how to create

other map elements such as a north arrow, and scale bar.

- a. First **add a title to your map**, call it “Morrill Complex”. **Make sure that the font size is appropriate** given the space you have at the top of your map. (Also make sure you’re **still using Garamond**... Don really likes Garamond, I think they’re in love).
- b. Now create a neat line. Do this by first **making sure that “show grid” and “Snap to Grid” are turned on**. Then by **using the rectangle tool, click, drag, and release to create a box that has 2 grid spaces on the outside on each side**. This gives us a nice 1/4 inch margin. Don’t worry if your map seems to disappear, it is simply behind the big (probably white) box that we just created. **Change the fill color of this box to “none” and the outline color to black. Our line thickness should be 1.**
 - i. A neat line is essentially a border around your map which frames it, so it looks nice.
- c. Next, **place your name at the bottom right corner of the map** inside of the neat line, **in size 8 font**. It should say “Cartography by: YourNameHere”
 - i. Make sure that the last letter of your name lines up nicely with the bottom right corner of your map.
- d. Finally, **add a legend (we understand everything has a label). Using lab 3, copy the scale bar from that lab.** (You can paste your pdf of completed lab 3 and remake a scale bar)

16. Save and Finish

- a. **Save the Illustrator document** as “Exercise 3” in your Exercise 3 folder (which should be in your dedicated class folder)
- b. Lastly, we want to **export the Illustrator file as a PDF**. We do this by going to “File/Print” and save the document in your exercise 3 folder as a PDF. **Make sure that you submit your lab as a PDF and that it is named “YourLastName Exercise 3”.**
 - i. FYI you can also export your map as a JPEG or anything else by going to “File/Export->Export as...”

Great job! You are now ready to turn in Exercise 3.