02-02-Exercise (LATROBE DRAWING WITH DRAWN ONE FOOT SCALE ON IT)

Get drawing to scale and other operations

OPEN FILE
> Open file
> Check image size (usually we are concerned with overall pixel dimensions)
> Check mode (should be RGB) Often when you get drawings from internet it might be PNG
> Copy All (Command-A) and jump this to a new layer (Command-J)
> Alternate method: drag layer to duplicate icon at bottom of Layers Palette
> Activate Background layer and delete to white background color (Command-Delete)

TRANSFORM BY ROTATE
> This **transform** (Command-T) is to get the scale bar be vertical
> Check **preferences** units/rulers and see that you are working in inches
> Bring up **rulers** (Command-R)
> Drag out the cyan-colored guides, both vertical and horizontal
> Recalibrate the origin by dragging origin to the intersection of two of your guidelines
> (Command-T) **transform** when you hover above corners you'll see a rotate icon
> Check to see the point of rotation (you could drag it to the origin at this stage)
> Activate 2nd layer and manually rotate so Latrobe's scale bar becomes vertically aligned w guide

CHANGE SCALE USING TRANSFORM
> Toggle-down on the **eyedropper tool** until a sub-menu is revealed and pick **ruler tool**
> Drag out guides to isolate the one-foot dimension both vert and horiz
> Using **ruler tool** snap to intersections of guides and read dimension above
> Should be inches. Check ruler scale on side of work space window.
> Dimension should read .692″
> .692″ is not usable by an architect. We need another standard like 3/4″ = 1′-0″ (.750″)
> To get from .692″ to .75″ we need to multiply by 110.78%
> Get **transform** up. Lock H and W by clicking chainlink. Type 110.78% in small window above
> Recheck the one foot dimension (you may bring out new guides for this) Should read .750″

CHANGE SCALE BY CHANGING PIXEL DIMENSIONS
> Make another copy of the original by Cmd-A Cmd-J or by dragging to copy icon
> Label it so you can recall what you're doing. Double click and retype.
> Check existing dimension. Should be .692″
> To get to a standard scale we need we multiply by 110.78% to get to .750″ (3/4″ = 1′-0″)
> Open **Image Size**. Make sure proportions constrained. Multiply either pixel dim by 110.78%
> Horizontal pixel dim goes from 2658 to 2946. Round up to nearest even number.
> The other method made the layer larger. This one makes whole file larger.
> Check that it measures .750″

CHANGE CANVAS SIZE
> When we made file size bigger our image went out of the frame. We need to increase **canvas**.
> Recalibrate origin to the upper left corner and check your overall dimensions
> Open the **Canvas Size**. Either use upper menu or use (Command-Option-C)
> Canvas will expand relative to where you tell it to. Let's stick w center.
> A convenient size that's larger than our current **Canvas Size** will be 11″ x 14″. Type this in.
> You should now have your image on a canvas that's slightly larger and BG layer is white.
> **SAVE** (SAVE often - Command-S)

BRING IN ANOTHER FILE OF SAME SCALE INTO YOUR FILE
> Open the file indicated as 200 ppi. This image is the same image at exact same scale
> Place them side-by-side. Now *drag the background layer* of the new file into your file space
> With left hand, hold down **Shift Key** and the new layer you're dragging in will snap to center
> It was the same scale but came in at exactly 2/3 of the size… why?

> Your origin file was 300 ppi resolution. The new layer dragged in was 200 ppi.
> Therefore, the 2nd one was 2/3 the 1st - or conversely, the 1st was was 3/2 the size of the 2nd
> You must always be aware of your pixel dims and resolutions especially if you're combining files
> **SAVE** - Command-S

USE HIGH PASS TO MAKE SHARPER IMAGE
> Turn off your 200 ppi layer. It probably came in at the top of the stack.
> Take your latest and greatest transformed layer that's the correct scale.
> Duplicate it using either method (Command-A Command-J) or (Drag to duplicate icon)
> Activate the one that's higher in the stack.
> Change name to **high pass** which is the name of a **filter**
> Go to **filter** > **other** > **high pass**
> Scrub the **pixel tolerance** up and down to see what it does.
> Pixel tolerance forces pixels of diff. values side-by-side to have more contrast between them
> We only want to sharpen the line weight so scrub this until you see dark lines appear (about 2 or 3)
> Now go to **Layers Palette** top and set the overlay toggle to **hard light**
> Zoom into the drawing and now toggle the high pass layer off and on and see what it does
> **SAVE** and CLOSE