Command Sheet, Week 4

Insert a Plan Image into Rhino

1. Start the **PictureFrame** command
2. Choose the image you want
3. To make sure the image comes in straight, turn on **Ortho** snap, assuming if it isn't on already. To turn it on, click "ortho" in the toolbar on the bottom of the screen.
4. Click to place the first corner of the image; click to place the second. The image should be in your file now.
5. To make the image transparent, press F3 to bring up the **Properties** dialog. Make sure you have the image selected. Where it says **Object** under Properties, click the dropdown and choose **Material**. In the panel, go down to **Transparency** and change the number to 80 (or whatever you like).

From here, it's best to add the image to its own layer

6. Go back up to Properties. Change the dropdown from Material to Object. Chnage the Layer dropdown to a different layer.

Scale the image

1. On your plan, locate either a scale or something with a known dimension such as a doorway (3’)
2. Draw a line over this object, matching the length as best you can
3. Select your image
4. Start the **Scale** command
5. With **End** Osnaps turned on, pick the left side of the line you drew for #2
6. Now pick the right side of the line from #2
7. Last, type in the true dimension for the line from #2, using relative coordinates (i.e. "r3',0 for a 3 foot line)
8. Your image should be scaled. You may wish to verify by making a quick measurement with the **Linear Dimension** tool
Photoshop procedure for rotating images

1. Open your image in Photoshop.
2. Go to the toolbar. Click and hold on the Eyedropper tool, select the Measure Tool (ruler). Alternately, you can toggle through the tools by typing 'I' until you get to the ruler.
3. Using the ruler tool, trace a line across an existing one on your plan. Aim for one that is long, but manageable enough that you can trace it accurately.
4. Go to Image > Image Rotation > Arbitrary; Click OK.
5. Save your corrected plan.

To rotate an image in Rhino (to straighten out your plan lines prior to tracing)

1. In Rhino, draw a straight Line starting from the left end of one of your crooked plan lines. Pick a longish-one. The longer the line, the better you can judge the rotational distortion. Stop the line as close as you can to the end of this crooked line (eyeball it). Your straight Rhino line shouldn't meet the crooked plan line. This is the difference between crooked and straight in your drawing.

   Tip: To get a perfectly straight line in Rhino, Turn on Ortho snap at the bottom first (click Ortho, so it is bolded); This restricts your rotation to 90 degree increments.

2. Select the plan; Do NOT select the line from #1 (Ctrl-click to deselect a line)
3. Start the rotate command (type: “rotate”)
4. Click on the left end point of the line you drew for #1 (turn on End Osnaps)
5. Turn OFF Ortho snap at the bottom
6. Click the right point of your CROOKED LINE in the plan
7. Now click and snap to the end of your straight line from #1
8. Voila! Your plan should be straight. If you are careful with how you judge the point in #6, it should be close to perfect.
   (You can delete the line from #1 now)