

Assignment #1: Perspective Drawing (Part A)

Assigned: August 30, 2012

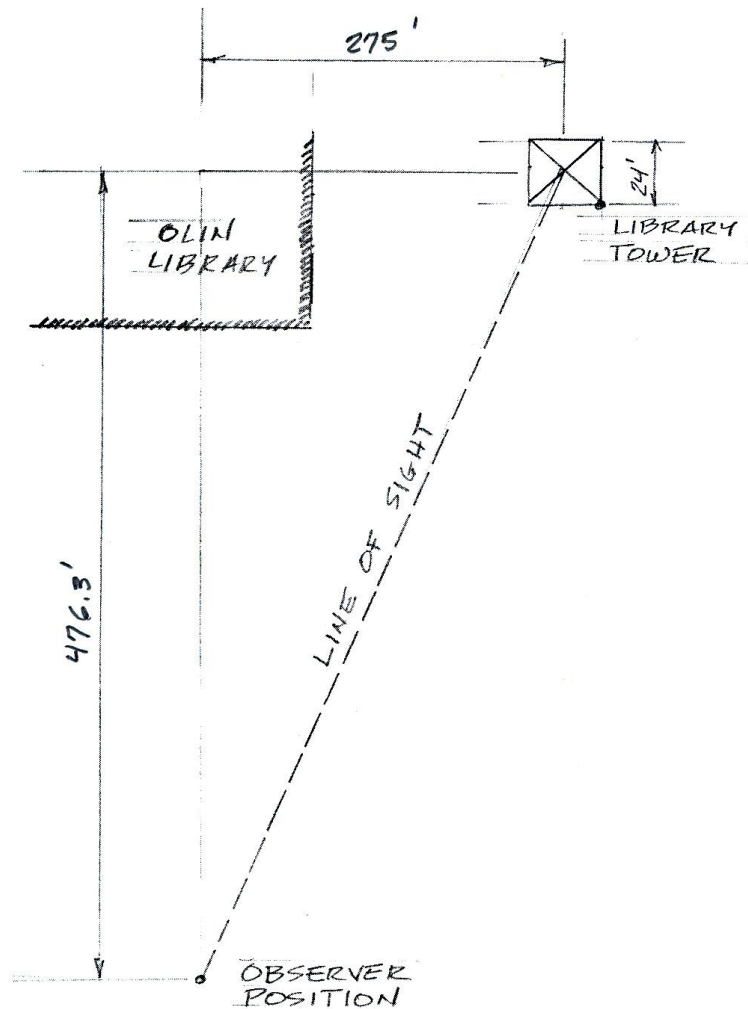
Due: September 11, 2012

The first assignment is to recreate Brunelleschi's perspective demonstration of the Florentine Baptistry using our own local historical landmark, Cornell's Uris Library with its signature clock tower. By standing near the center of the Arts and Science College quadrangle [see map] one has a view in which the tower and the surrounding buildings are in view.

From this location, draw a perspective image of Uris Library. Your line of sight (view direction) should be contained within a vertical plane defined by your view position and the tip of the bell tower, and form an angle of 15 degrees with the horizontal ground plane.

You are to construct a "panel" with dimensions 20" x 20" and utilize a mirror (to be provided) with the same aspect ratio but half the size in each direction. The "peep hole" must be cut so that the viewer sees not only the reflected image, but the surrounding buildings. (Morrill Hall and Olin Library). The trees do not have to be part of the drawing.

We will use Brunelleschi's experimental methods to verify the accuracy of your perspective drawing. Your panel will be placed on the tripod and rail as shown in class. Successful completion of the project will require a careful analysis of the original 15th century demonstration.



Assignment #1: Perspective Drawing (Part B)

Assigned: August 30, 2012

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The observer is standing on the Arts quadrangle as shown. The view direction lies in a vertical plane defined by the observer position and the tip of the bell tower and makes an angle of 15 degrees with the horizontal ground plane. The base of the library tower is 30' x 30' and truncates to a square 24' x 24'. The top of the Library Tower is 173' high, and the cornice is 140' high.

1. Find the (x_e, y_e, z_e) coordinates of the right upper corner of the tower cornice (as shown in the picture) in the eye coordinate system.
2. Find the (x_s, y_s) coordinates of this same corner of the tower cornice in the screen space coordinate system. Please show all work.

Assume a 60° frustum of vision and screen dimensions of 20" x 20" ($S=10''$).

You may work in groups of up to three students for this portion of the assignment. (Part B)
Please show all work and identify your collaborators.

Note that everyone is to submit their own perspective drawing. (Part A).