

CHAPTER 18- PERSPECTIVE

Mechanical Drafting

Dossin

Perspective



Perspective



Perspective



Perspective Drawing

- After reviewing this material, students will know how to do the following:

- Identify a drawing created using perspective projection.
- List the differences between perspective projection and axonometric projection
- Create a drawing using multiview perspective.
- Describe 3 types of perspective.
- Measure distances in perspective projection.



An example of a Perspective Drawing

Perspective Drawing

- **Perspectives** excel over all other types of projection in the pictorial representation of object because **it more closely approximates the view produced by the human eye.**
- **Geometrically**, the typical photograph is a perspective.
- Unlike, axonometric projection, which the observer is at an infinite distance from the object, **perspective projection defines the observer at a specific distance.**

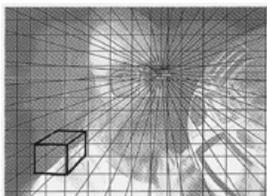


An example of a Perspective Drawing

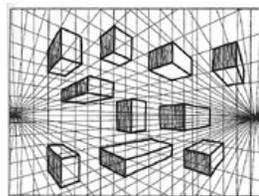
Perspective Drawing

- There are 3 Types of Perspective Drawings

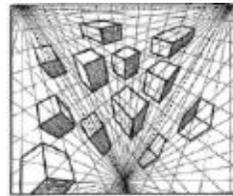
1. One-Point
2. Two-Point
3. Three-Point



One-Point



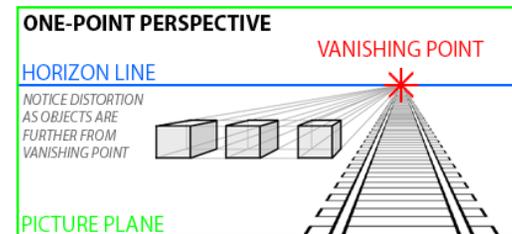
Two-Point



Three-Point

One-Point Perspective

- **One-Point Perspective**
 1. One-Point perspective is the simplest of the perspective methods. One-point is typically used when drawing city streets, landscapes, or other views that to come together at one central point.



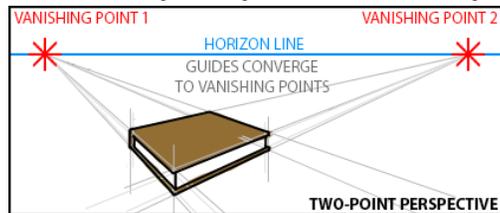
An example of a One-Point Perspective Drawing



Two-Point Perspective

Two-Point Perspective

- Typically in life we do not view objects directly at the front or sides and view most objects at an angle. **Two-point perspective** drawings represent views more realistically by positing two faces of the object at an angle to your view or aka the *picture plane*.
- Two-point perspective is often used to represent buildings or large structure in engineering such as dams or bridges.



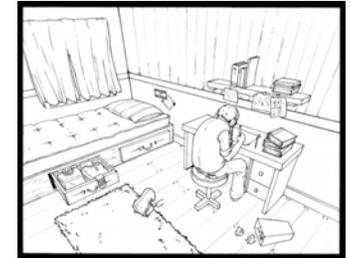
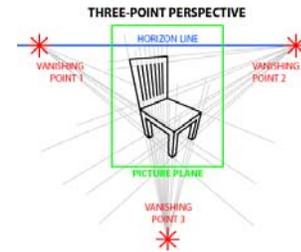
An example of a Two-Point Perspective Drawing



Three-Point Perspective

Three-Point Perspective

- Three point perspective is when the third vanishing point is not on the horizon plane. The third vanishing point is placed either above or below the horizon lines, indicating if the viewer is looking up at the object or looking down on the object.
- Three-point perspective can be used when the *corner* of an object is closest to the picture plane.

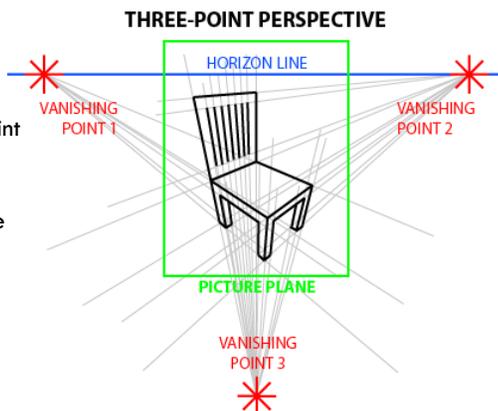


An example of a Three-Point Perspective Drawing

Three-Point Perspective

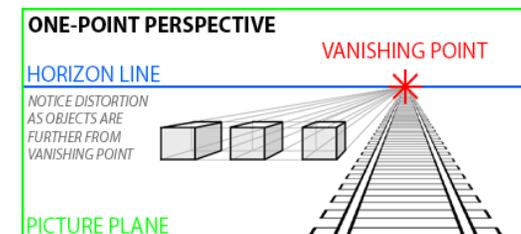
- When doing perspective work it is not required for the vanishing points to be located within the picture plane. Notice in the chair illustration the picture plane does not contain the vanishing points.

- Often, when drawing smaller images, using two or three point perspective, the drawing will look more real if only one vanishing point is in the picture plane.



Line Weights in Perspectives

- Line Weights (*a.k.a. line thickness*) help to suggest depth in a drawing.
- For example look at the lines of the train tracks as they get further away from the viewer- they get thinner – which helps them “fade into the distance.”
- Thick, dark lines can be used to make objects look more “close up” and demand attention.



Perspective Drawing

□ Perspective Drawing involves 4 main elements:

- 1. The Observer's eye
- 2. The Object being viewed.
- 3. The plane of projection.
- 4. The projectors from the Observer's eye to all points on the object.



An example of a Perspective Drawing

Line Weights in Perspectives



Note the varying line weights used in this comic book Perspective Drawing

Credits

Information and pictures were taken from the following sources:

http://www.archives.gov/on.ca/english/exhibits/architecture/big/11_957_ryrie.htm

www.flickr.com

<http://drawsketch.about.com/library/weekly/aa021603c.htm>

<http://www.atpm.com/9.09/design.shtml>

<http://www.termespheres.com/perspective.html>

<http://www.andrewdiec.com/perspective.html>

Technical Drawing by Giesecke, Mitchell, Spencer, Hill, Dygdon, and Novak

