## Scaled Drawings

Erika Mendez

#### **Definition: Scaled Drawing**

A drawing that shows a real object with **accurate sizes reduced or enlarged** by a certain amount (called the scale).

In <u>architecture</u> and <u>building engineering</u>, a **floor plan** is a drawing to <u>scale</u>, showing a view from above, of the relationships between rooms, spaces and other physical features at one level of a structure.

In its most basic understanding, floor plans (scaled drawings) are a set of instructions used to build the space (object).

# Architectural Scales & Engineering Scales

The scale is shown as the length in the drawing, then a colon (":"), then the matching length on the real thing.

DRAWING SCALE	DRAWING SCALE
1/16" = 1'-0"	1" = 10'-0"
3/32" = 1'-0"	1" = 20'-0"
1/8" = 1'-0"	1" = 30'-0"
3/16" = 1'-0"	1" = 40'-0"
1/4" = 1'-0"	1" = 50'-0"
3/8" = 1'-0"	1"= 60'-0"
1/2" = 1'-0"	1" = 70'-0"
3/4" = 1'-0"	1" = 80'-0"
1" = 1'-0"	1" = 90'-0"
1 1/2" = 1'-0"	1" = 100'-0"
3" = 1'-0"	

#### Step 1: Sketch and Measure

Sketch your design and measure the length of the longest dimension.

- Roughly sketch your design
- Use it to record your measurements.





### Step 2: Determine Scale

Scale this measurement down so that it will fit onto your sheet.

Be careful not to choose a tiny scale. You want it large enough so others can easily read your instructions.

Possible Scales: 1" = 1" $\frac{1}{2}" = 1"$ 

3" = 1"



#### Step 3: Set up your Views

Which views should one choose for a multiview drawing? **The views that reveal every detail about the object.** Three views are not always necessary; we need only as many views as are required to describe the object fully.





#### Step 3: Continued



#### Step 4: Draw Using Your Tools

Using your preferred method, begin to draw your design.

- **By Hand:** Using graph paper, pencil, and scale/ruler
- Computer Software: BIM (Building Information Modeling), Revit, AutoCAD, Sketchup, Rhino, etc.



## Architectural Examples

Floor Plans





### SketchUp

#### What is SketchUp?

**Sketchup**, is a 3D modeling computer program for a wide range of drawing applications such as architectural, interior design, landscape architecture, civil and mechanical engineering, film and video game design.







#### **SketchUP Model**

#### **Rendered Model**

#### Thank You

Erika Mendez emendez13@msn.com

