

INTRO TO ARCHITECTURAL DRAFTING FOR BEGINNING INTERIOR DESIGNERS

Architectural drafting is a technical skill. It requires formal training and many hours of practice to learn to do it correctly. It is imperative that the draftsman draw the floor plan accurately so the structure can be built correctly.

For our Interior Design purposes, we will learn basic drafting skills that will be used to visually communicate our design ideas with our clients. We will not create working drawings that are meant to be used for building a structure. We will use our drawings to communicate structural design changes, space planning, color and pattern choices of flooring, furniture and fabrics.

We will learn to draw floor plans to $\frac{1}{4}$ " scale, use correct architectural symbols, space plan furniture and render (color) materials for flooring, furniture and fabrics.

TOOLS:

Architectural drafting requires a lot of expensive technical tools. It would be wonderful to have professional tools but to begin we can get by with just a few simple things.

- Mechanical pencil
- Ruler
- Graph Paper
- Tracing Paper
- Eraser
- Masking tape
- Black ink pen
- Colored pencils

IMPORTANT BASIC FACTS:

The typical floor plan is drawn in a flat, 2-dimensional view called the "**plan view**" or "**bird's eye**" view. That means that we are looking down directly from above. We can see the length and width of an object but we cannot see how tall it is. An **elevation** view looks straight on at the object. An elevation gives a flat, two-dimensional view. Elevations show the height of object, and either it's width or length, depending on the view, but not both. A plan view and an elevation view need to be used together to get a full view of the floor plan. Elevations are "to scale" and are measurable.

Residential floor plans are drawn in $\frac{1}{4}$ " scale. That means that **$\frac{1}{4}$ of an inch = 1 foot**. The notation is $\frac{1}{4}" = 1'-0"$. Kitchens and baths are drawn in $\frac{1}{2}"$ scale because the spaces are smaller and more accurate detail is needed.

A **rough drawing** means that the drawing is a sketch and is not "drawn to scale". It is not measurable and is not in the correct proportion. A **scale drawing** refers to a drawing that is

drawn using a scale measurement, example, $\frac{1}{4}'' = 1' - 0''$ or $\frac{1}{2}'' = 1' - 0''$. Scale drawings are measurable and are in correct proportion.

The **inch and feet notations** are critical to understand. The double quote mark ("), means inches. The single apostrophe mark (') means feet or foot. Easy way to remember, the word "inches" has two syllables. Its notation, (") has two marks. The word, feet/foot has one syllable ('), its notation has one mark.

The notation 3'-3" reads three feet and three inches.

10'- 6" reads _____

6" reads _____

9' reads _____

Walls have various thicknesses depending on their location in the space. In technical drafting, the walls would be drawn to their exact specifications. For our graphic communication purposes, **all walls with be drawn 6" or $\frac{1}{2}$ squares thick**. We will be using $\frac{1}{4}''$ graph paper (four squares on $\frac{1}{4}''$ graph paper = one inch on a ruler), that translates to a wall thickness of $\frac{1}{2}$ of a square. (*It's a common mistake to make wall thickness a whole square, thick.*)

1 square = 1 foot

1 square = 12 inches (same as 1 foot)

$\frac{1}{2}$ square = 6 inches (wall thickness for all our drawings)

When drawing floor plans, follow these steps:

Step 1: draw the inside lines first

Step 2: add wall thickness (6") to **the outside** of the inside line

Step 3: add doors and windows

Using the $\frac{1}{4}''$ graph paper provided a ruler, and a dark colored pencil, follow the directions to draw a $\frac{1}{4}'' = 1' - 0''$ floor plan of a simple room.

Step 1: Draw the inside wall of 15' x 20' space. (15 squares across, 20 squares down) Start somewhere in the upper left corner of the graph paper. *Leave room for the wall thickness.*

Step 2: Add wall thickness (6" or $\frac{1}{2}$ square) to **the outside** of the line you just drew.

Step 3: add one, 36" wide door and at least one window, any size, on each wall.

FYI: Doors come in various widths. Bathroom doors are usually 2'-3", interior doors are usually 2'-6", exterior doors are usually 3'. For consistency, we'll make all our doors, **36" or 3 squares**. *If you know the actual size of the door you're drawing, it's OK to draw to its true size.*

FYI: Windows come in increments of 3".

Example: 3", 6", 9", 12", 15, 18" 21", 24", 27, 30, 33, 36, etc.

Larger glass sizes are expensive and difficult to work with.

Multiple, smaller windows can be joined together for the same effect as one large piece of glass. *You may make your windows any size you wish. It may be easier to stay with whole foot measurements.*

HOMEWORK ABOUT YOUR HOME

- Make a rough sketch drawing of your bedroom.
- Freehand the floor plan layout.
- Measure or estimate each wall.
- Include measurements for windows, doors and closets.
- Write the measurements on the plan.
- It's not suppose to be perfect, messy is normal.
- If you don't have a tape measure, estimate.
- (Helpful tip) take a ribbon/rope/string and measure off the kitchen counter depth. Kitchen countertops are typically 24" deep. Use the 24" length as a measurement tool to estimate the size of the room.
- Optional/take pictures with your phone to help remember details.

Bring the rough sketch back to class tomorrow so you can convert it to a scale drawing.

REVIEW

Important terms to know:

¼" scale: one quarter of an inch on a ruler equals one foot when drawing floor plans or building models.

Plan view or **bird's eye view:** the view looking down directly from above. Shows the length and width but not the height of an object.

Elevation view: looking straight on at the object. An elevation gives a flat, two-dimensional view. Elevations show the height of object, and either it's width or length, depending on the view, but not both. A plan view and an elevation view need to be used together to get a full view of the floor plan. Elevations are "to scale" and are measurable.

Rough drawing: a hand drawn, rough sketch of a floor plan. It is not "to scale" and is not in correct proportion. It is not measurable.

Scale drawing: a plan that is created using an architectural scale measurement. Usually ¼" = 1' for residential floor plans. Scale drawings are measurable.

6" reads: 6 inches

6' reads: 6 feet

Wall thickness measurement = 6" or ½ of a square

When drawing floor plans, follow these steps:

Step 1: draw the inside lines first

Step 2: add wall thickness (6") to **the outside** of the inside line

Step 3: add doors and windows

Bathroom doors are usually 2'-3"

Interior doors are usually 2'-6"

Exterior doors are usually 3'.

How wide will we make our doors? 36" or 3 squares

Windows come in increments of: 3".