# Floor Plan Knowledge Base

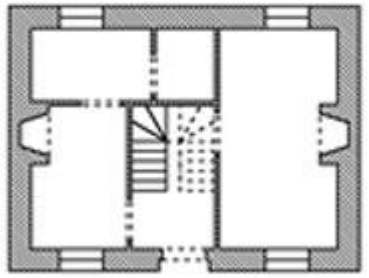
A floor plan is a 2d drawing to scale of the inside of a building. It is a horizontal cut of the building at a height of 1 meter from the floor.

The elements that can be shown in a floor plan are:

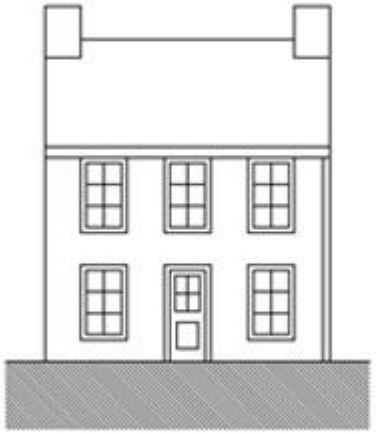
- The Walls,
- The Partitions,
- The Doors,
- The Windows,
- The Stairs,
- The Furniture, And More

# Different views in architecture

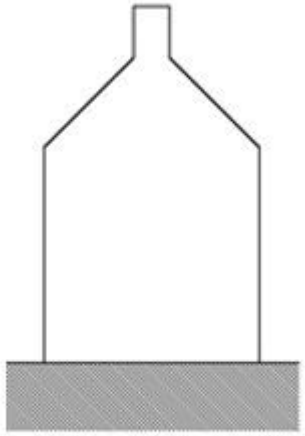
A plan view is only one of the different views of a building we see in architecture. There are also elevation views, section views, and 3D views. These are some example of different view we can have:



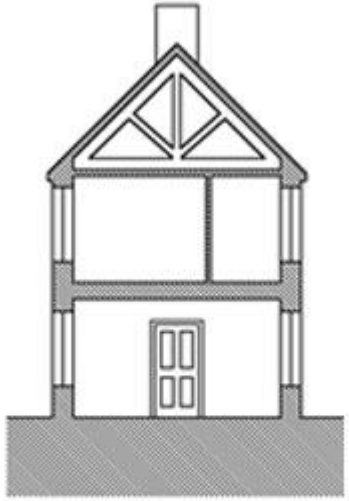
**Floor Plan**



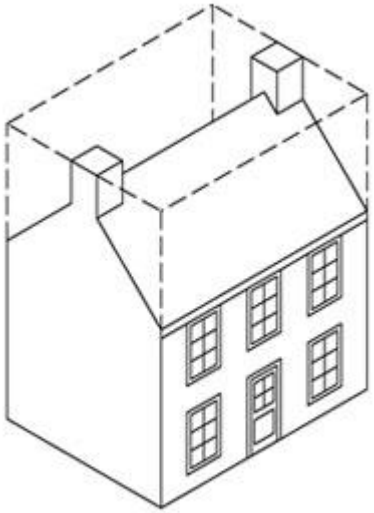
**Front Elevation**



**Side Elevation**



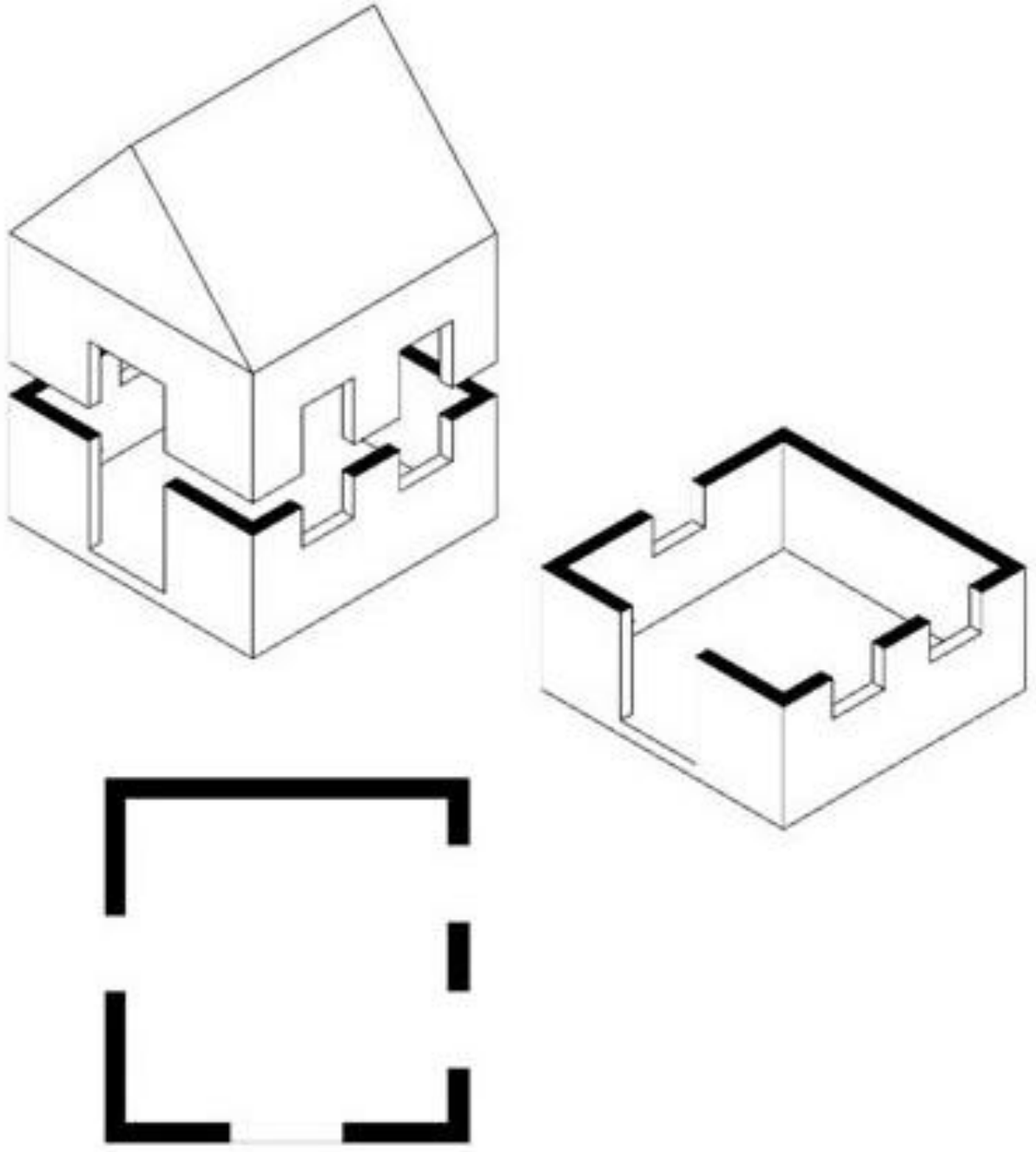
**Section AA**



**Isometric**

## Plan view

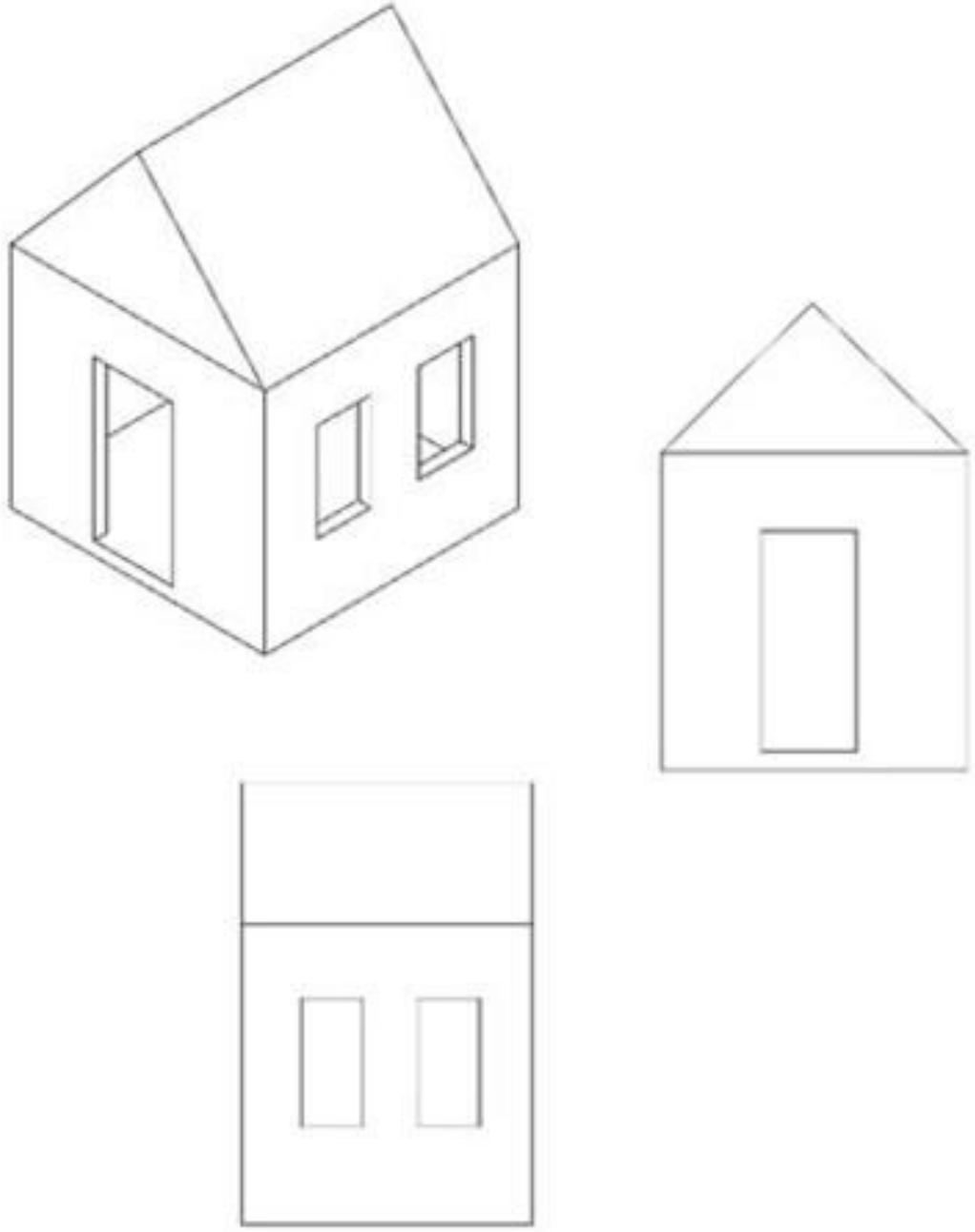
A plan view is a horizontal 2D view of a building. The most common plan view drawing is a floor plan, but there are also reflected ceiling plans, details plan view, etc.



## Elevation view

An elevation view is a 2D view

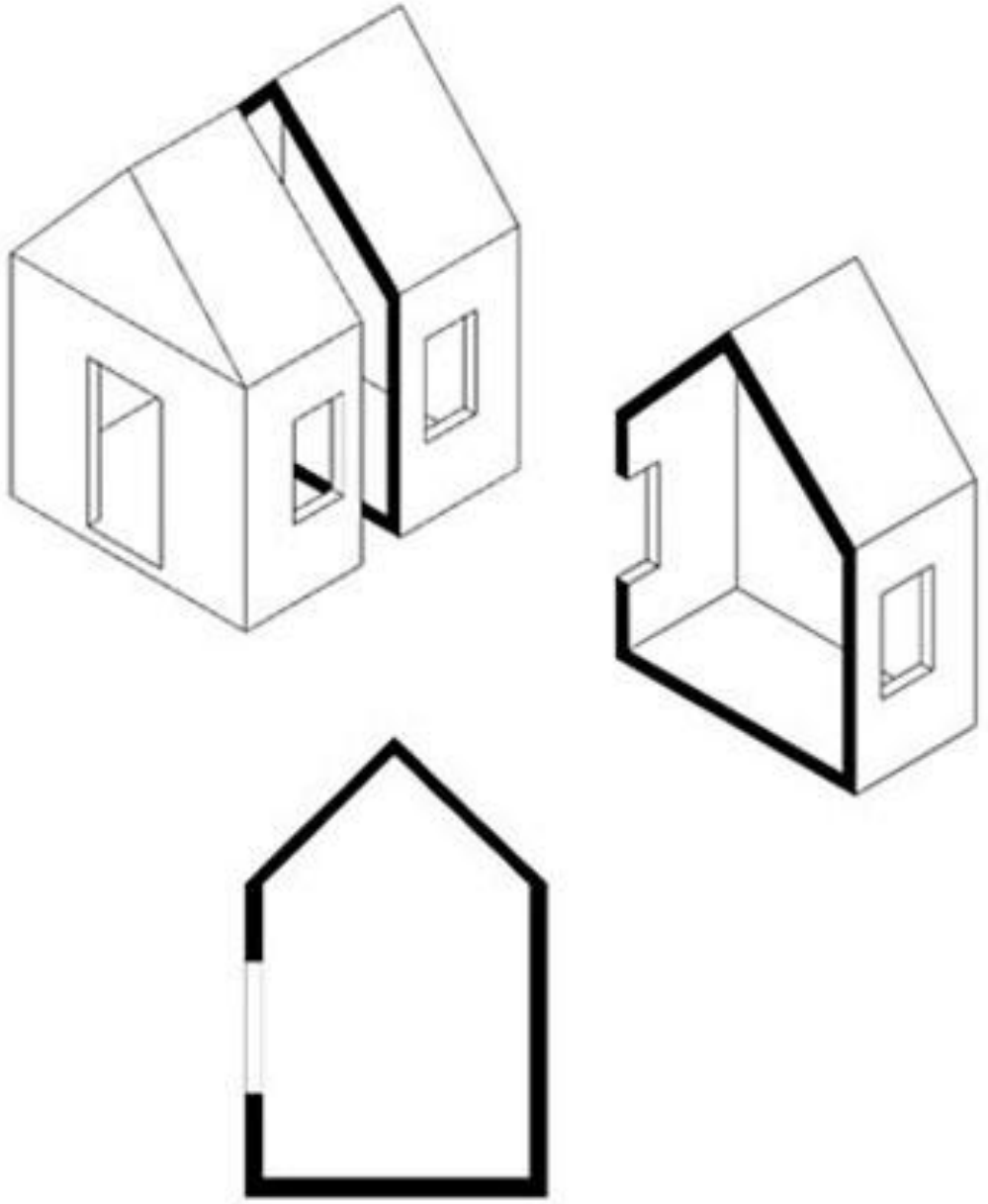
of one of the sides of a building.



## Section view

A section view is 'cutting' in the building (vertically) and looking at the inside.

Even for a floor plan, it is useful to think about the section view and the elevation view. Some elements are cut through, like in section, and some elements are seen in 2D from an outside point of view, like in elevations.



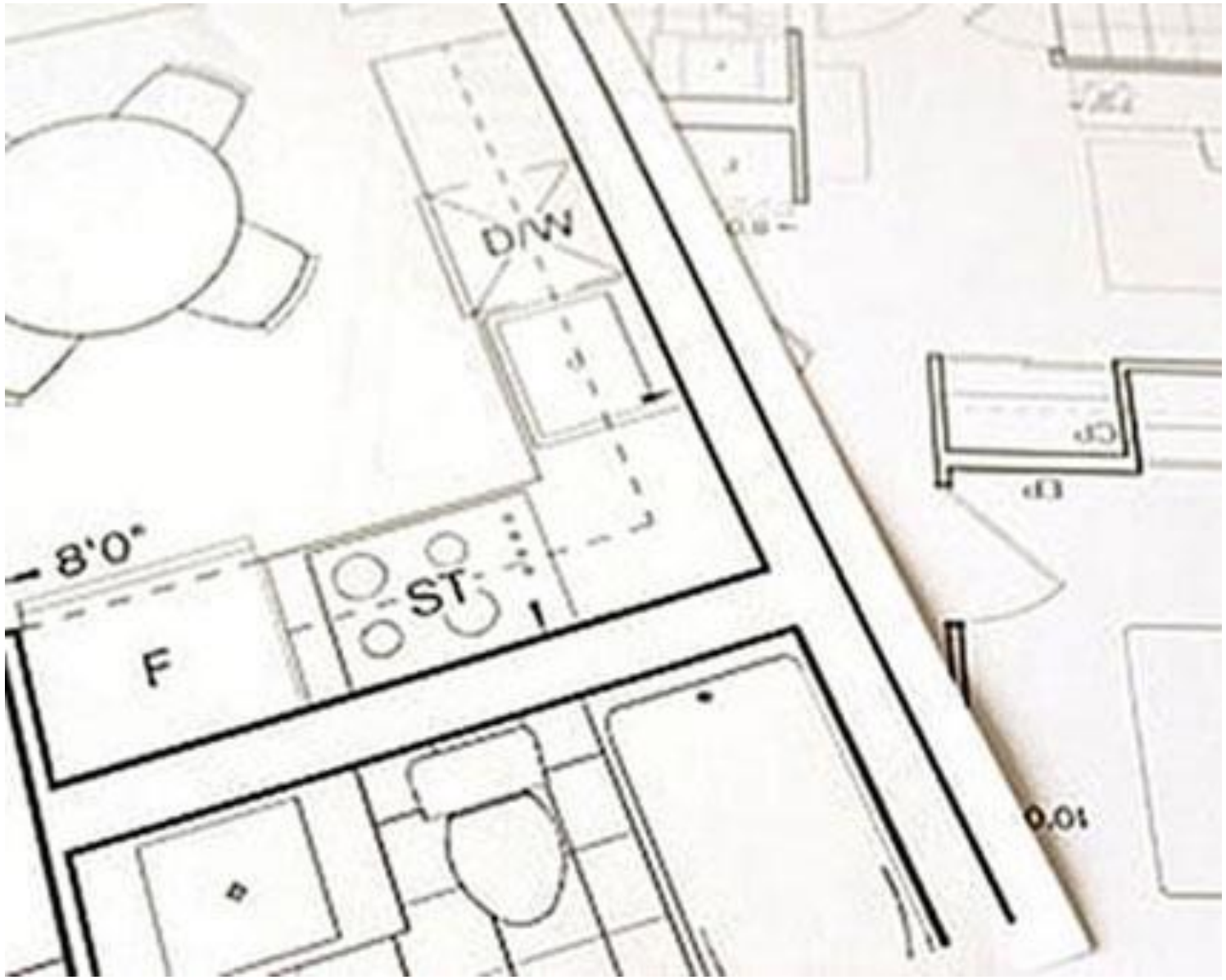
## Line Weight

In architecture floor plans, there are different line thicknesses used for different elements. This is called line weights.

This is to make the plan easier to understand and help them make the link between the 2D and the 3D.

Every object drawn in a floor plan can be separated into 3 categories:

- The objects below 4 feet
- The objects 'cut' at 4 feet
- The objects above 4 feet




Depending on the category to which the objects belong, it will not be represented with the same line weight.

## The objects below 4 feet

The objects below 4 feet often include the floor itself, front porches, decks, balconies, banisters, walls not reaching the ceiling, stairs going down, the lower steps of stairs going up, countertops, and other furniture.

These objects are seen from above, so their representation is only the way they look on the top. We usually use continuous fine or medium lines to represent them.

Sometimes, the closer the objects are to 4 feet, the heavier the lines can be.

## The objects 'cut' at 4 feet

The objects 'cut' at 4 feet will always be represented with heavier lines. They often include exterior walls, interior walls, the glazing and frame of windows, columns, etc.

To indicate that they are cut trough, a lot of these objects will be poached (shaded in black). This includes the main elements of floorplans, like the exterior walls, the partitions, and structural elements. Doors and windows will not be poached.

**The objects above 4 feet**



The object above 4 feet often includes the higher steps of stairs going up, ceiling features (Ex: opening in the floor above or cathedral ceilings), or upper cabinets.

Those objects are considered "hidden" in the floor plan because you would not see them if you look down at 4 feet. So, to draw them, we use fine dashed lines.

**Other uses of line weights**

Also, different line weights can be used for graphic reasons. An object that as a lot of details in a small amount of space will have thinner lines to make it easier to understand. It can also be used to hierarchize the elements. For example, less important ones, like **floor finishes**, will be in thinner lines to draw attention to the main elements.

The dashed line is also used to represent any hidden object even if it is not above 4 feet. For example, in **stairs**, the riser will be in dashed lines, because they are hidden by the tread and the nosing. Also, the part of the dishwasher that is under the countertop will be in dashed lines.

# Recap

Large: cut through architectural elements, such as interior and exterior walls

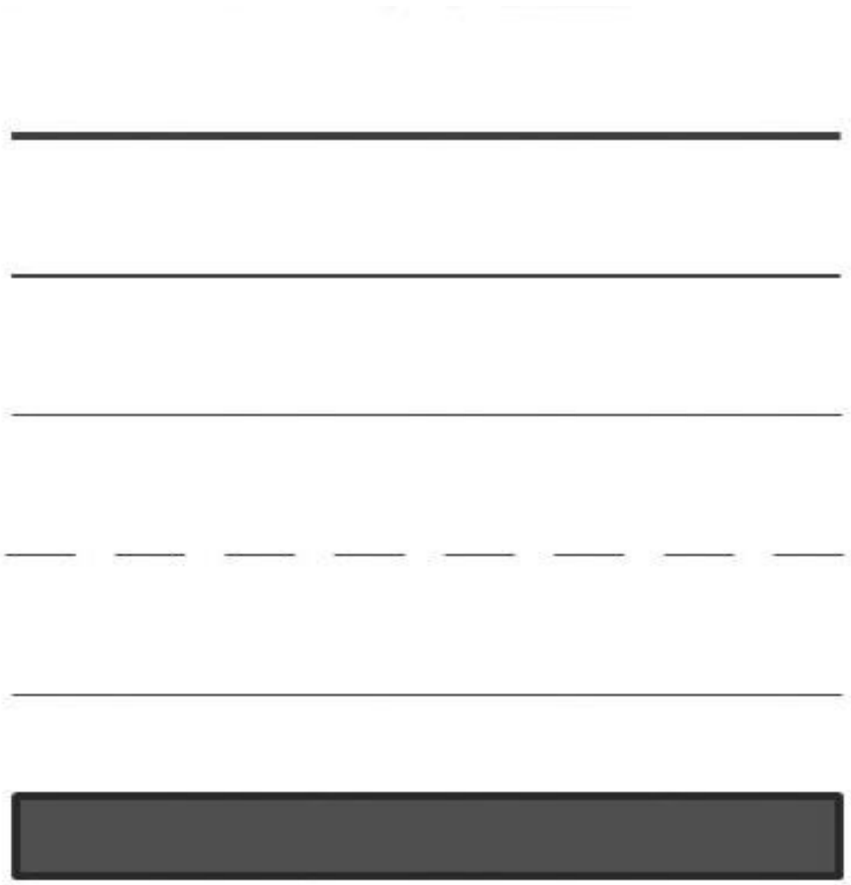
Medium: doors, windows, stairs, floor limits, countertop and other architectural elements seen from above

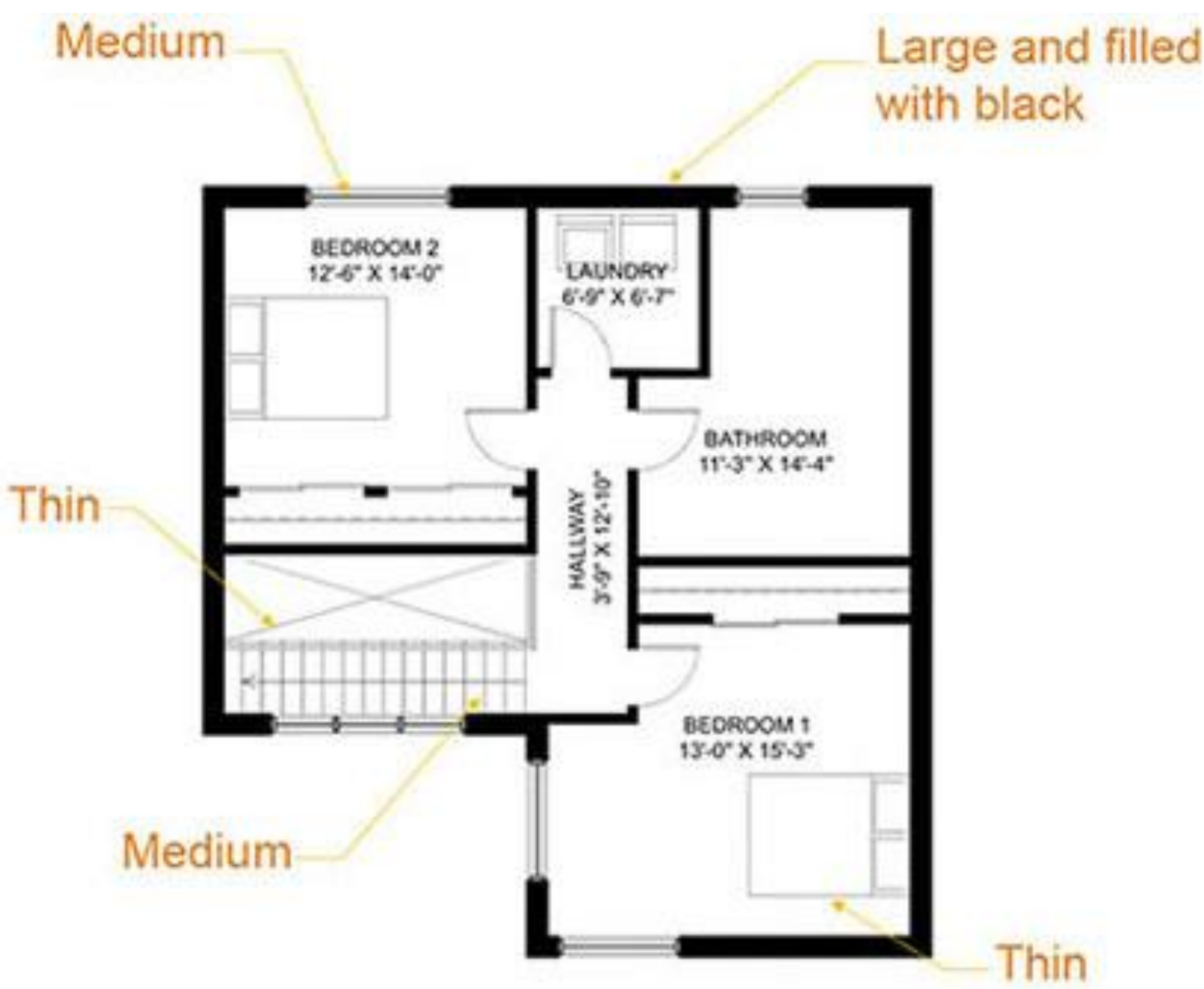
Thin: furniture, appliances, and symbols

Thin (dashed): hidden objects, ceiling features, risers (stairs), and more.

Extra thin: materials (floors) and other surface features

Elements are filled with black when they are cut through. In a floorplan, it is mostly walls or columns.




Medium
Large and filled with black
BEDROOM 2
12'-6" X 14'-0"
LAUNDRY
6'-9" X 6'-7"
BATHROOM
11'-3" X 14'-4"
HALLWAY
3'-9" X 12'-10"
Thin
BEDROOM 1
13'-0" X 15'-3"
Medium
Thin

**Overall view**

This is an overall view of the use of weight line.

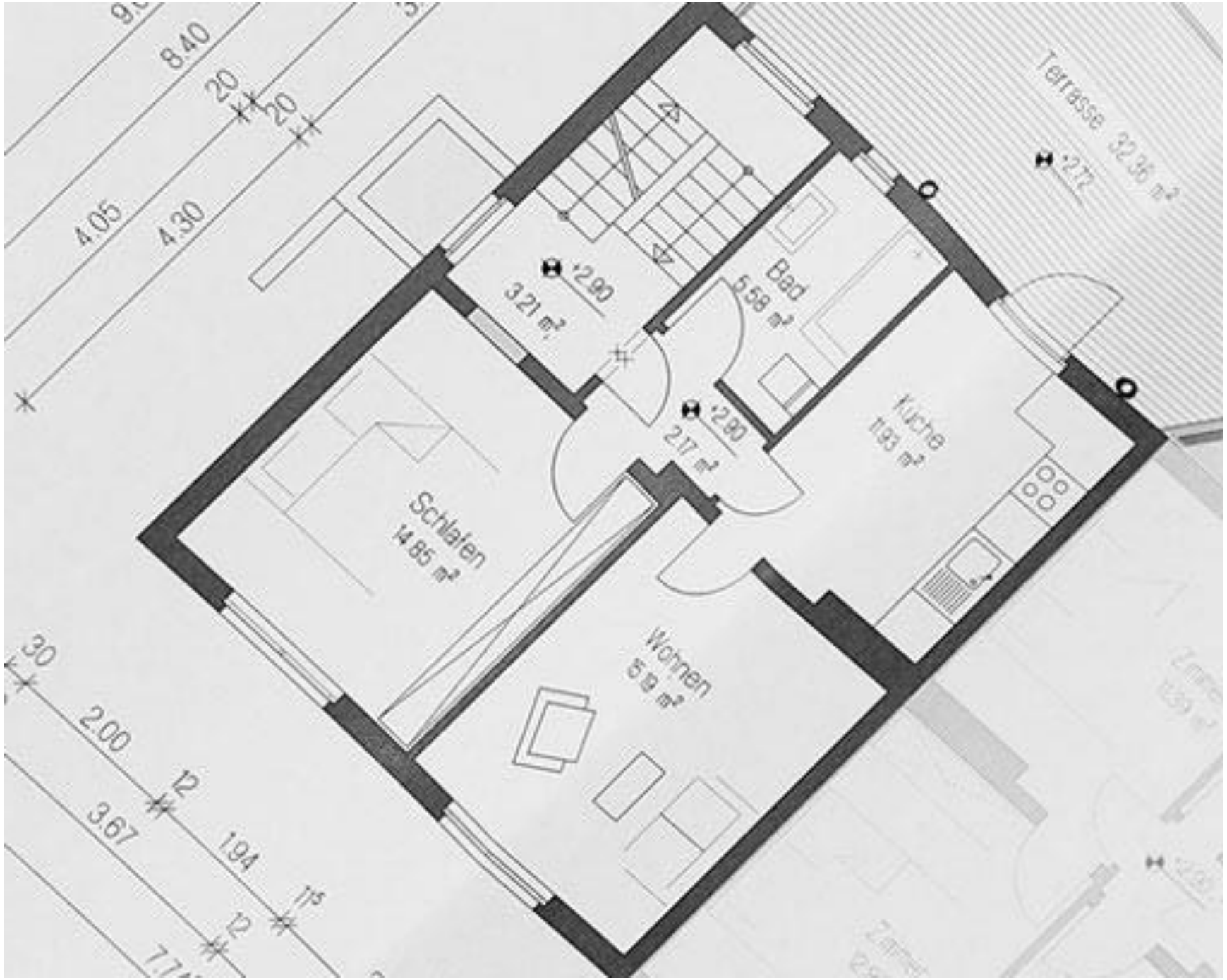
**Exceptions**

The 4 feet rule is almost always followed but does not apply all the time. For example:

In a basement, we often see windows that are only on the upper part of the wall. However, if we follow the 4 feet rule, those windows will not appear in any floor plan. Because they are a very important element of the building, we can make the decision to still show them as if they were regular windows.

Split levels. They are represented on the floor plan of the closest level. There is no distinction between the way split levels and the rest of the level are drawn. The 4 feet rule is ignored because the representation of the split level would be too hard to understand.

Some furnitures are drawn as if they were seen from above even if they are cut through, like the fridge, because representing the inside of a fridge would add not any helpful detail. However, we tend to show the inside of custom or integrated furniture, like pantries.


Terrasse 32.36 m²
2.72
2.90
3.21 m²
Bad
5.58 m²
2.90
2.17 m²
Kuche
11.93 m²
Schlafen
14.85 m²
Wohnen
8.9 m²
8.40
4.05
4.30
2.00
3.67
1.94

## Exterior spaces

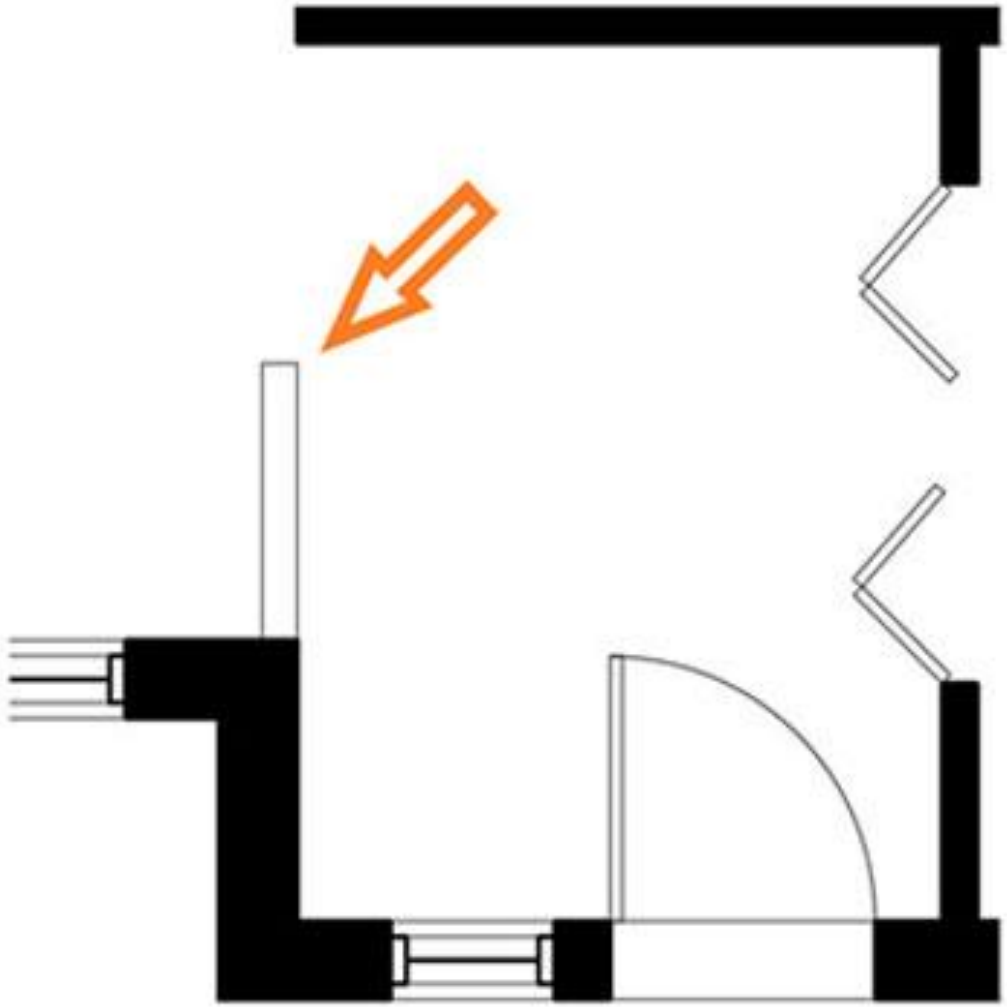
- The exterior elements will only be drawn in the level they are in.
- For example, on the ground floor, the deck and the front porch are drawn, as well as the exterior stairs and the banisters. However, we do not see the pavement on the ground because it is not considered to be at the same level.
- For the second floor, we will not see the deck or the front porch because they are a level below. However, if the second floor has a balcony, we will see it.
- In the basement, nothing from the exterior is usually shown because it is only soil all around the foundation walls.


ENTRY
PORCH
DOWN TO BASEMENT PLAYROOM
ENCLOSED PORCH
LIVING ROOM
HALL
DINING ROOM
DOWN
KITCHEN
LIBRARY
NORTH
0 1 2 4 8 16 FEET
0 1 2 4 8 METERS

# Walls not reaching the ceiling

Some partitions inside the house can be at half their height.

They are represented with the same thickness as walls, but they aren't filled with black because they are not cut through.



**Structural elements**

A few structural elements can be seen in the floor plan, such as bearing walls, columns, and beams.

They should be aligned with one another because the structural elements of a building are positioned following the horizontal and vertical axis.

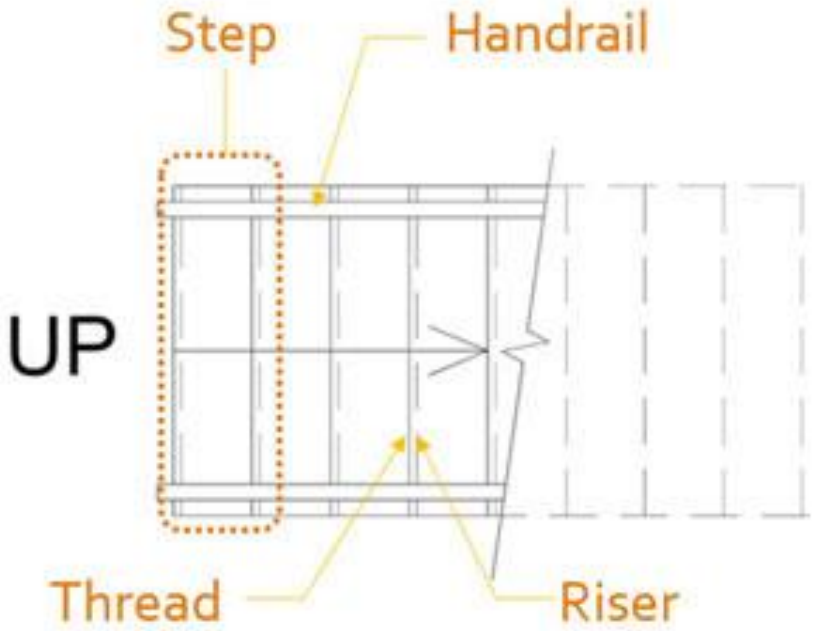
The columns are represented the same way as walls (poached in black), and the beams like archways if they are visible. (columns and beams together create archways).

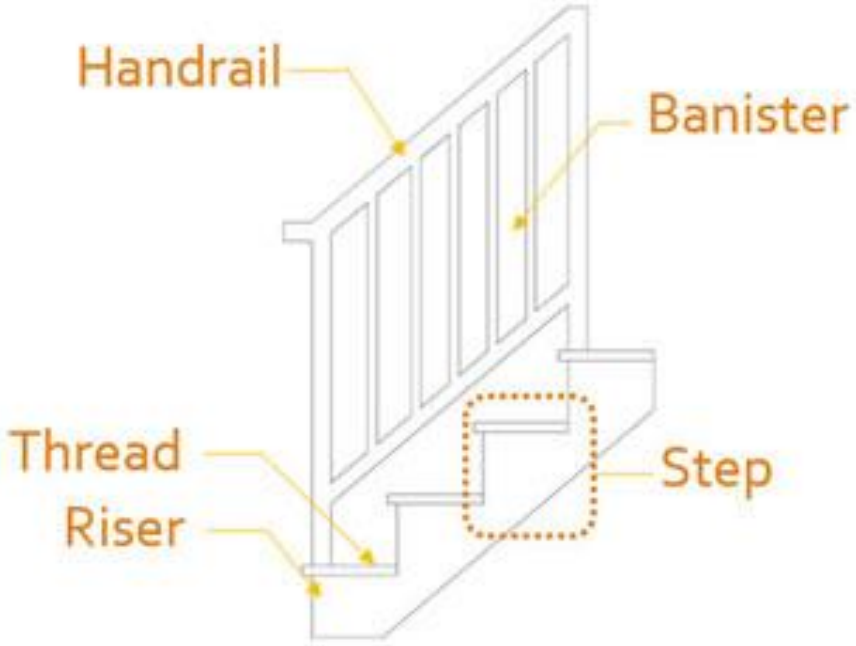
## Stairs

Stairs are one of the most difficult elements to represent because it can easily get confusing for the people looking at the floorplan to understand their direction.

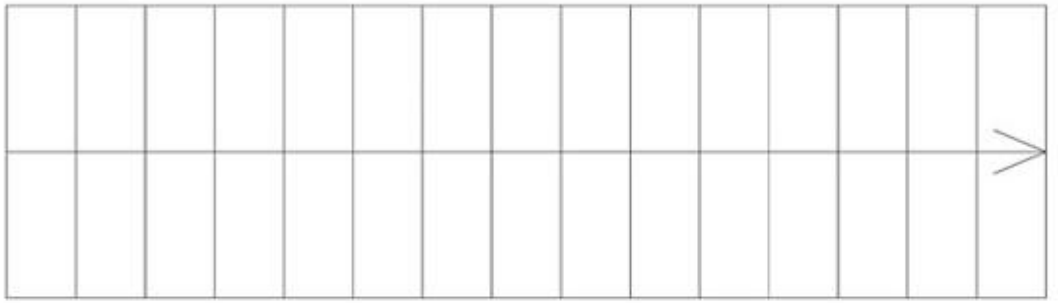
In a floor plan, the parts of the stairs and the dimensions we are able to see are the width of the stairway, the landing, and the thread.

The risers are shown in dashed lines, whereas the threads are in ordinary lines. The handrail is also often shown with two lines.

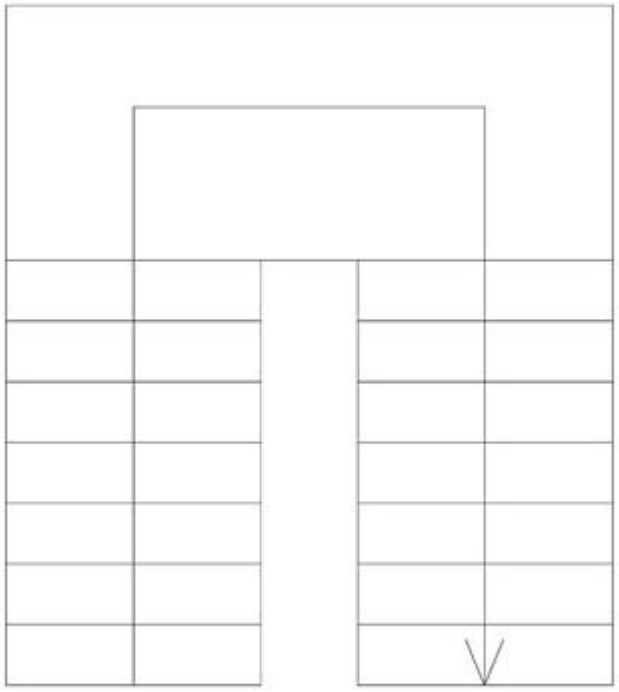


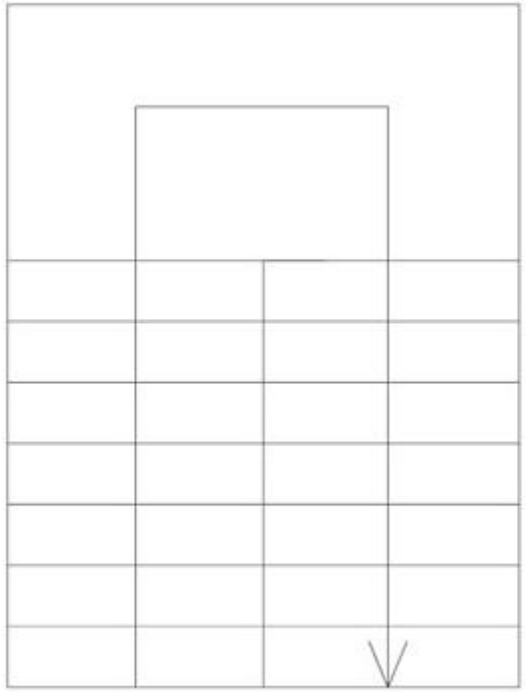
# Types of stairways



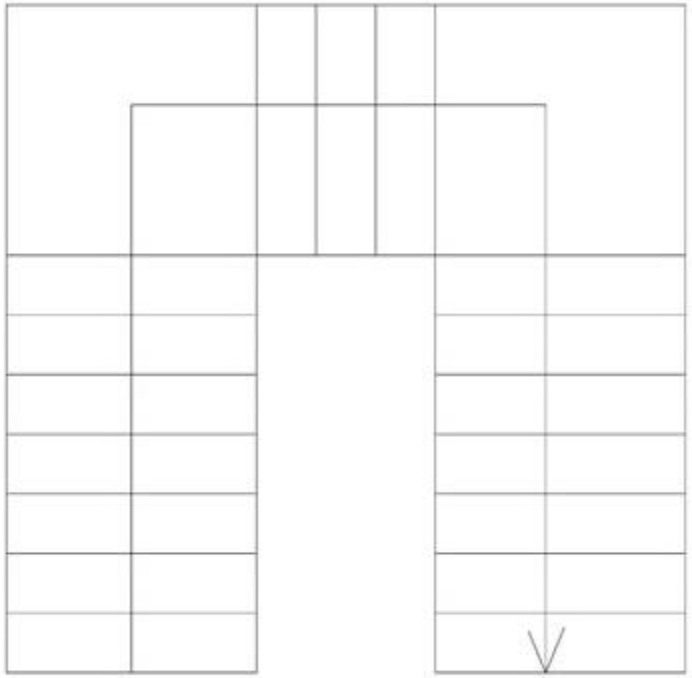
Straight stair



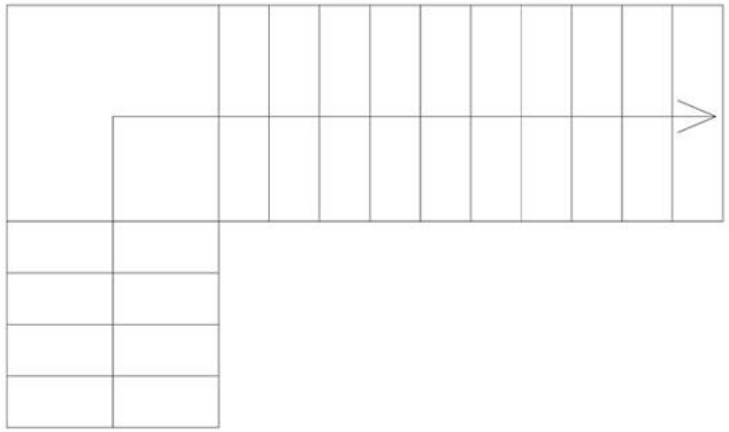
U-Shaped stair



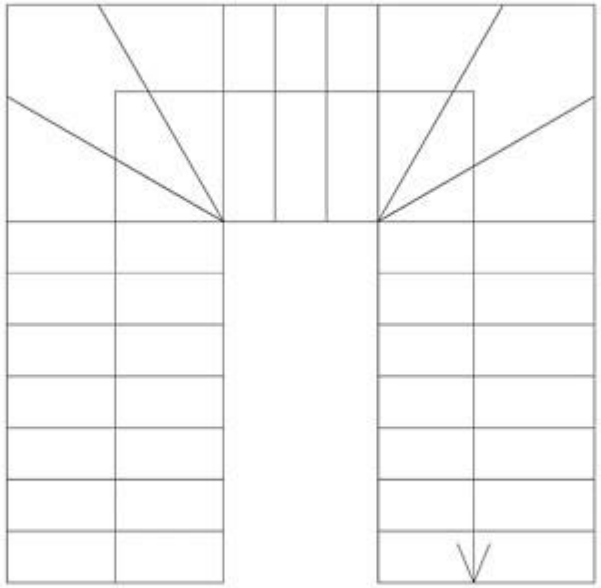
U-Shaped stair



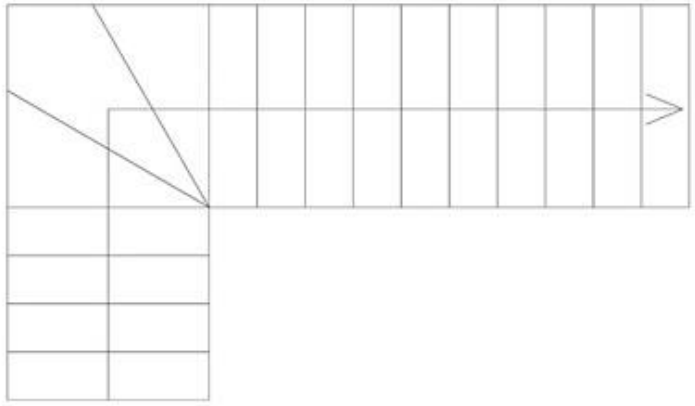
U-Shaped stair



## L-Shaped stair

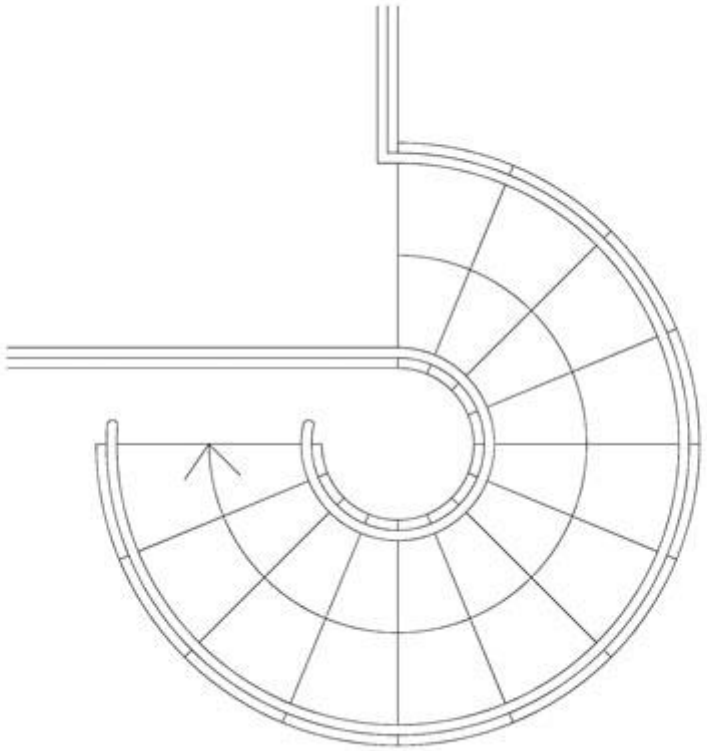


**U-Shaped and Winder stair**

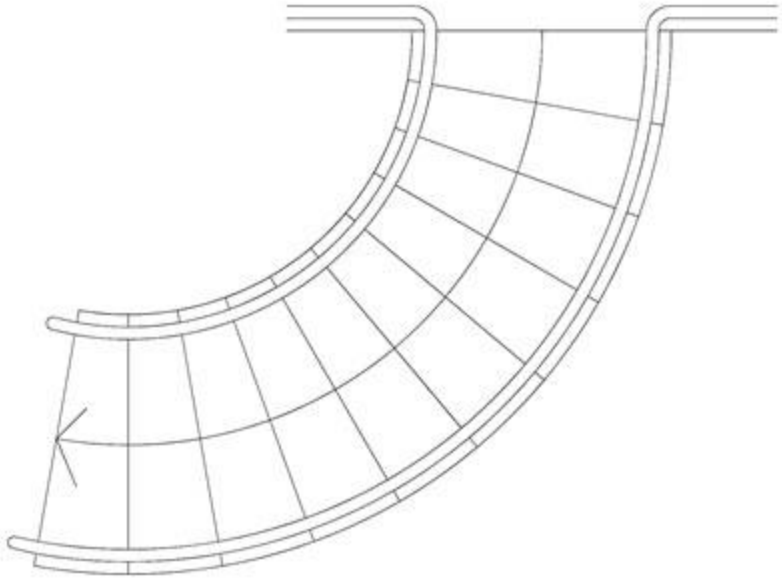


## Winder stair

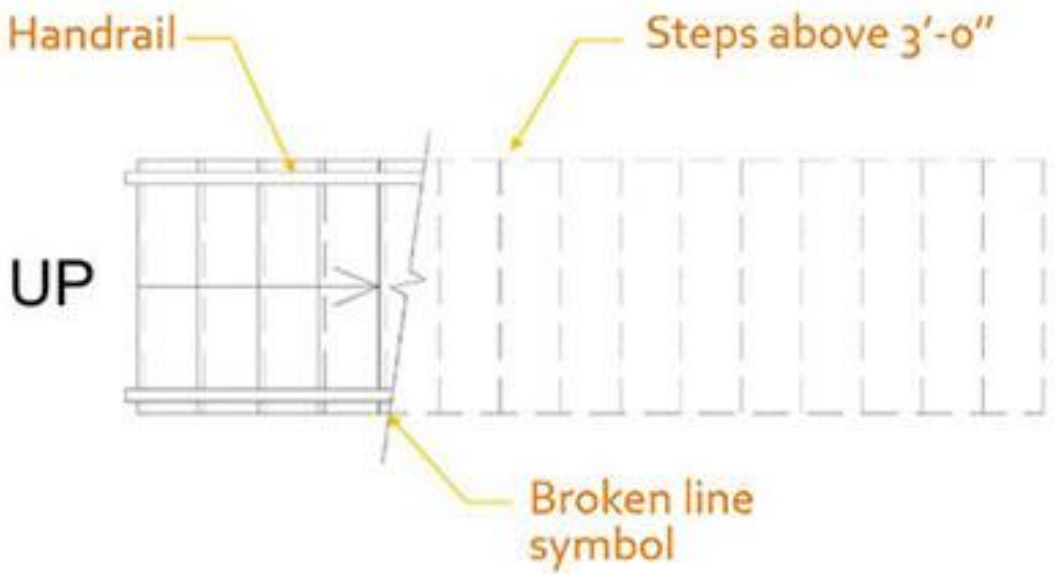
Angular steps can either be at 30 or 45 degrees

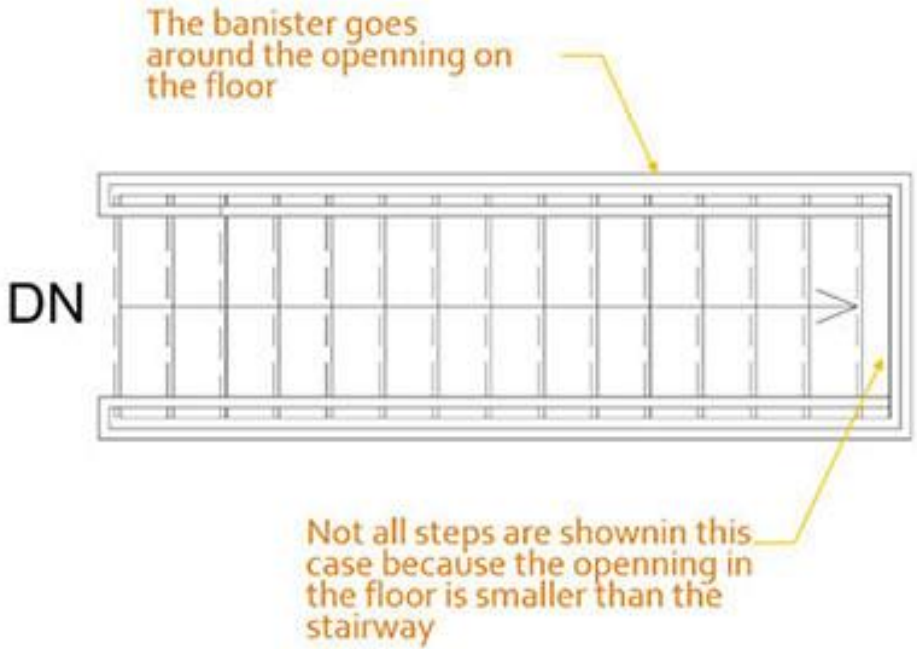


**Spiral stair**



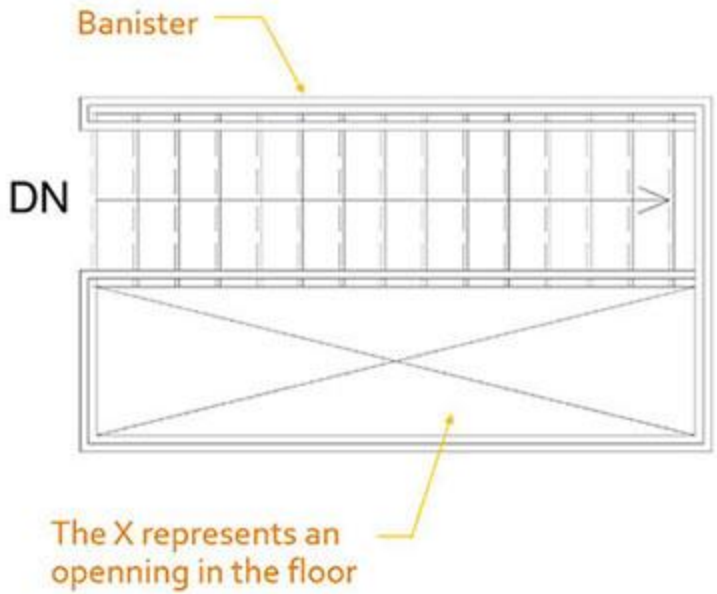
**Helical stair**



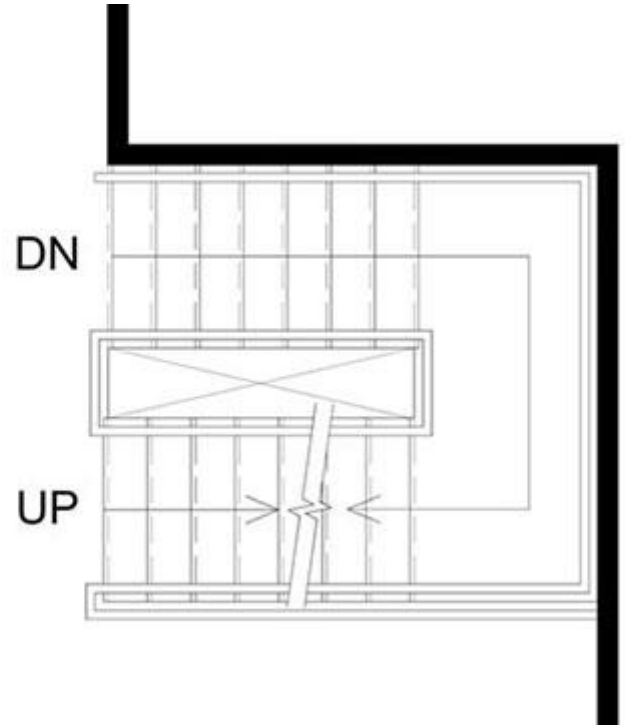




**Stairs Up**

**Stairs Down**




**Opening in the floor**

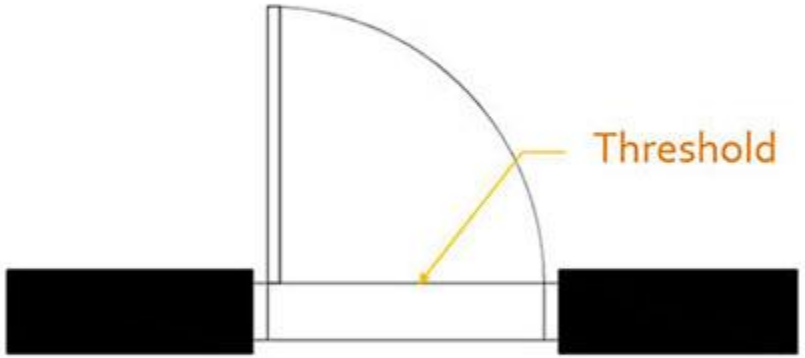



**Stairs Up and Down Combined**

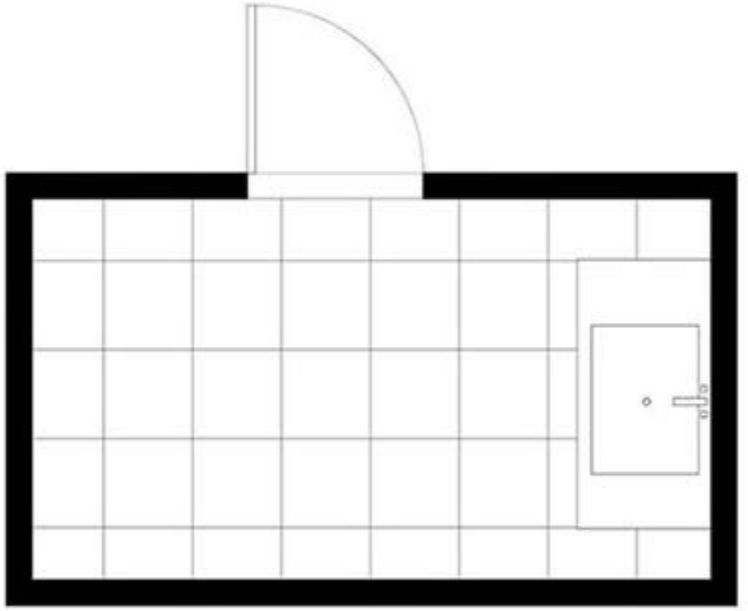
# Standard Sizes

## Doors

- **Standard Sizes - Interior Doors**
- **Standard Sizes - Exterior Doors**




**Exterior Door Threshold**



**Interior Door Threshold**

**Archway**

# Room Identification and Dimensions

## 1. Identification

All the rooms are usually identified with their dimensions, except closets and small storage spaces. Hallway and other circulating areas are also identified. Sometimes, it can be purposeful to identify the deck or the porch if there is a lot of exterior living space.

If there is not enough space to write the complete name of the room, we can use abbreviations. For example, WASHROOM often becomes WC or BATHROOM only BATH. Just make sure to write it the same way in all the plans of the same house so it is easily understandable.

There isn’t a conventional way to name the rooms, as long as it is logical and easily understandable.

- **Common Room Names Examples**

- **ENTRY**
- **BATHROOM**
- **WASHROOM (WC)**
- **KITCHEN**
- **DINING ROOM**
- **HALLWAY**
- **MASTER BEDROOM**
- **GUEST BEDROOM**
- **BEDROOM 1,2...**
- **OFFICE**
- **LAUNDRY ROOM**
- **FAMILY ROOM**
- **EXERCISE ROOM**
- **GARAGE**
- **SOLARIUM**
- **WALK-IN CLOSET**

# 2. Dimensions