

Various Scaled Model Railroad Comparisons Using Structures

Introduction:

Some model railroad structures and accessories tend to “look right”, while others don’t.

Some of the larger model railroad scales allow for quite realistic scaled model structures and accessories to be created, while some of the smaller scales don’t.

Don’t confuse scale, which is a ratio of a real world item to its modeled size, with track gauge, which is the width between the rails that model locomotives and rolling stock use.

To learn more about gauge, visit the Website “VISUAL GUIDE TO RAILWAY GAUGES”.
<https://wearerrailfans.com/c/article/visual-guide-gauges>

The following information is about **SCALE, NOT TRACK GAUGE!**

Trying to visualize extremely small widths, or thicknesses, is very difficult. Trying to create them, or represent them, in a scaled model is even more difficult!

A typical 12” ruler, in the US, notes the main unit in inches with each inch divided fractionally into 16 equal parts. Each one of those smaller units is noted as one-sixteenth (1/16) of an inch. In the US, double prime marks are used to denote a value in inches. This is a double prime mark ”. A single prime mark, ', is used to denote feet.

Standard gauge, distance between the rails, in the US, and many other countries, is 4' 8-1/2” or 4' 8.5”.

The other measuring side of the ruler notes the main unit as centimeters (cm) with each centimeter divided equally into ten units known as millimeters (mm).

Visually, **it is possible** to discern where 1/32” of an inch might be on a 12” rule, as it is halfway between two adjoining 1/16” marks. Similarly, a half millimeter can be discerned between two adjoining millimeter marks.

Parts smaller than those are almost impossible to imagine or visualize, yet they exist all around us.

Six scale sizes are represented in the following illustrations; 1:48, 1:64, 1:76, 1:87, 1:148 and 1:160.

1:76 scale was used for OO scale, a popular scale in the UK, in the following illustrations instead of the correct 1:76.2, which would have resulted in an in perceptively smaller structure.

All of the scaling was completed using the scaled proportions for the following noted full-size values of the illustrated items. Inkscape, an open source vector drawing program, was used to create the scaled illustrations.

The Full-Size Values for the Drawn Items:

The Walls: The two wall panels are 12' (144”) long by 8' (96”) high; ~3.7m wide by ~2.4m high.

The **white band, between the wall panels**, represents the face side of a 1 x 6 piece of lumber, which is actually 5-1/2” wide; ~14cm wide.

The **far left window** represents a type commonly found in a brick style building. The window size is 24" wide by 36" high; ~61cm wide by ~91.4cm. The window casing is 2" wide; 50.8mm. The window muntin width is 3/8"; ~9.5mm. The sill is 30" wide by 4" high; 76.2cm wide by ~10cm high. The Lintel is 28" wide by 5" high; ~71.1cm wide by 1.3cm high.

The Doors:

The metal commercial type door, on the left panel, represents a nominal 36" x 84" door; ~91.4cm wide by ~213.3cm high. Since 36" x 84" is a nominal value, only the 2.25" frame width is exactly scaled to 2.25"; ~57mm.

The **door, on the right panel**, is a nominally 32" wide by 80" high exterior type; ~81.3cm wide by 203.2cm high. The trim, around the door, represents a 1 x 3, which actually measures closer to 2.5" wide; 63.5mm. The window in the door is a 20" wide by 32.5" high; 50.8cm wide by 82.6cm high. It's casing is 1" (25.4mm) wide and the muntins are 5/8" (~15.9m) wide.

The **window, in the right panel**, is a 26" wide x 36" high window; ~66cm wide by ~91.4cm high. It has a 2" (~51mm) casing width and 1" (25.4mm) window muntins. The window frame represents 1 x 4 lumber which is actually 3.5"; ~89cm.

The **Office sign**, over the door, has 4" (~10.2cm) high lettering. The **lettering on the wall**, that notes the scale, is 12" (~30.5cm) high.

The human figure is 6' (~183cm) tall.

To verify that the various scales have printed correctly on your printer using 8.5" x 11" plain letter paper, the height of the 1:48 scale wall should be 2". 2" is just a bit shy of 51mm.

If A4 paper is used, a method to print the PDF so that the 1:48 scale wall height measures 2" is required.

The Scaled Illustrations

