

# **EMPIRE STATE BUILDING**

## **1. Location**

This building sits in the United States, NY, New York City, Manhattan, Midtown District. It stands at 350 5th Avenue, between 33rd and 34th streets.

## **2. History**

The first preparatory work began on January 22, 1930, but the proper construction, which employed over 3,400 workers, began on March 17, 1930. The plot on which the Empire State Building is constructed belonged to the New York Astor family. The construction started after the fire of their hotel Waldorf-Astoria, which was an icon of a kind.

Every week, workers with European roots and Indians have built about 4.5 floors. Although it once happened that they managed to build 14 levels in 10 days. During the process of constructing such a massive building, it is remarkable that only five workers died. Compared with modern construction, during the building of one of the stadiums in Qatar three workers died at the construction site on one week.

Through a detailed schedule, which was adhered to very closely, it was possible to complete the construction of the building in 58 weeks, the building itself in just over a year. The Empire State Building was finished on April 11, 1931. It was officially opened on May 1 by the then US President Herbert Hoover, who pressed the light button of the building.

For a record time (41 years), this building was impossible to catch, as it was the tallest building in the world. It was also the tallest man-made structure for 23 years. Initially, the mast at the top of the building was to be used for mooring airships but the strong wind blowing at such a high altitude made it impossible to implement this idea. In 1950, the old mast was replaced with a new, higher one with radio and TV sets. In 2001, the Empire State Building briefly became the tallest in the United States again due to the destruction of the twin WTC towers by the terrorists on September 11. Now, Empire State Building is the third tallest skyscraper in New York, the fifth in the USA, and the 25th in the world.

## **3. Architects and style**

The architectural firm that undertook the design of such a monumental building was Shreve, Lamb, and Harmon, founded in 1929 by Richmond Harold Shreve, William Lamb, and Arthur Loomis Harmon. Empire State Building is designed in the art deco style. The American Society of Civil Engineers named the building to be one of the seven wonders of the modern world.

## **4. Technical data of the facility and materials used for its construction**

The total height of the building is 443.2 m (381 m structural height, 62.2 m antenna height). It has 102 floors, and its total usable area is 257,211 m<sup>2</sup>. The entire building weighs around 360,000 tons. It has 73 elevators, but we can also climb to the top after 1,860 steps. 60 thousand tons of steel, 5663 m<sup>3</sup> of limestone and granite, 740 tons of aluminum and stainless steel for external walls, 10 million bricks, and 5600 m<sup>3</sup> of stones for floors, walls, and basements were used for the construction. Electrical installation cables have a total length of approximately 692 km. There is 112 km of water pipes, 80 km of central heating pipes, and 6,500 windows, over 3 million light bulbs, 5,600 km of telephone cables, 7,450 tons of air-conditioning devices.

## **5. Lighting of the building**

Regularly, it is related to the prevailing season, but there are also exceptions most often due to some important events and holidays. For example, after the destruction of the WTC towers, the building was illuminated for several months with red, white, and blue light. In June 2002, on the 50th anniversary of the rule of Elizabeth II, the building turned purple and gold, which are the colors of the Windsor, but in 2004 the building fell into total darkness for 15 minutes after the death of American actress Fay Wray.

## **6. Interesting facts about Empire State Building**

One of the most popular outdoor observation decks in the world is located on the 86th floor of the building. It gives a complete panorama, and it has been visited by over 110 million people. The total annual average visits to the building are 3.6 million people.

Empire State Building or Empty State Building? The building has been called the Empty State Building from its opening until the 1940's due to a large amount of unused office space caused by the lack of tenants.

The name Empire State comes from naming the same New York state. Most of the buildings exceed the planned budget, but this seventh wonder of the modern world not only was built in such a short time, but it consumed only half of the preconcerted amount. It was estimated that it would cost \$ 50 million, but it turned out to be only \$ 24.7 million.

Probably many people, when they were to say which of the largest building in the USA the plane hit, would be told that the northern tower of the WTC. However, this is the wrong answer. Fifty-six years before the attack, on July 25, 1945, the bomber plane did not notice the building through a thick fog and hit it at the height of 78 and 79 floors. Fourteen people were killed then, and sixty-four were injured. The repair of the building amounted to a million dollars.

The Empire State Building can be found in many games and movies such as King Kong, Independence Day, or Empire of Andy Warhol.

## **7. Model data**

The total height of the model is 39 cm. The height of the mast is 5.7 cm, and the structural height is 33.3 cm. At its widest point, it is 13.6 cm. The material used to create the model are polystyrene, a plastic mast, and a skylight.

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