

# Research paper on the washington monument

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## **Introduction**

The Washington Monument was constructed to honor the memory of the first president of the United States of America - George Washington. The process of construction itself was long and took place from 1848 to 1884, depending on multiple factors including disagreements on the monument's look, construction difficulties, financial crisis, and finally, the Civil War.

## **Project history**

A decision to honor the first president of the US by erecting a monument in his name can be traced back to August 1783, when Congress unanimously agreed on building of an equestrian statue of George Washington. The exact construction site was not chosen until a French-born American architect and city planner - Pierre Charles L'Enfant, was given a task to draw a plan for the US capital city: Federal City (Washington D. C.). Then the architect proposed on placing the equestrian statue of the President between the Capitol and the President's mansion, but with death of George Washington in 1799, the House of Representatives made a decision to build a more appropriate

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memorial to honor Washington, and appointed a joint committee to choose one. The committee suggested creating a marble monument in the Capitol Building in the capital city, with George Washington's body buried underneath it.

The next three decades were spent in various disagreements and discussions on the location and look of the monument. People of the Federal City founded the Washington National Monument Society in the early 1830s, as a private establishment, the main aim of which was to provide fundraising and watch the erection of the monument to be done from the funds provided by the general public. In August of 1836, American artists and architects were offered a chance to suggest their designs for the monument, and after examining multiple options American society decided to select a design of one Robert Mills, who had already had previous experience of designing a monument for Washington in Baltimore; his design featuring a 500-foot tall obelisk surrounded by a circular colonnaded pantheon with an estimated cost of \$200,000 immediately won him a competition among other artists. Over the next 12 years the society was fundraising money, constantly debating on the plans of the proposed monument, and finally made a decision to construct the obelisk only due to limited funding. Congress authorized the construction on public grounds and work on the monument's foundation started in the spring of 1848. The initial construction site location was based on the proposed recommendations of L'Enfant's first design, but swampy and completely unstable soil conditions made their corrections to a new location being about 370-feet east of the White House and 124-feet south of the Capitol.

## **Construction history**

Symbolically, the cornerstone for the obelisk was laid on July 4. Construction started in the spring of 1848 with an excavation the depth of 7.6 feet to the foundation level, under the supervision of the main project's architect Robert Mills, and overseen by William Dougherty for the public.

The foundation was built as a stair stepped pyramid structure out of blocks of blue gneiss, brought from the Potomac Valley, while as the shaft was made of marble blocks from Baltimore, which undertook the intense testing to ensure that the stone was strong enough to sustain the compressive weight of the structure. When the shaft height had reached the point of 150 feet by the end of 1858, the work on the monument stopped because the project had run out of money and the means to invest more; the nation was in the middle of an economic crisis and the society itself was struggling to stay afloat.

During the next three years, only 4 feet were added to the shaft height actually using blocks of stone rejected earlier, which were still on the construction site. Unable to raise more funding necessary for this project and with a party in chaos, the Know Nothing Party halted the construction of the monument until control of the society was restored. From this moment the monument stood unfinished for the coming two decades for various reasons, including the Civil War. By the 1870s, the monument was still far from completed, with the society still not processing enough funds to finish it. Thus, on August 2, 1876, the US President, Ulysses S. Grant approved the act, which stated the transfer of the not completed monument to the federal government and appointed the Joint Commission to take over the process of

erecting the Washington National Monument, with the society still being able to continue providing assistance in construction, advising and raising means for the project. An overall inspection of the monument's foundation was carried out in order to determine whether it is able to withstand the monument's loading capacity.

With all of the changes implicated the construction was resumed only after an appointment of a board of engineers by the US Army Corps of Engineers in 1878 under the supervision of Lieutenant Colonel Thomas Lincoln Casey as to analyze the status of the Monument. The board determined that the monument's present weak clay and sand layer under the foundation pose a capacity failure threat to the whole project. Being in charge of the project, Lieutenant Colonel Casey decided to start with foundation enlargement and strengthening in order to make more fitting to sustain the weight of the obelisk. Underpinning was to start with digging 4-foot wide trenches underneath the foundation to a depth of no more than 12-feet (the level of the existing groundwater table). The earth removed during the excavation was replaced with cement concrete from Portland. As a result the cement concrete foundation in shape of a square ring was formed underneath the existing gneiss foundation. In 1880, work on the obelisk itself was continued, with a structural design of the shaft changed and the proportions of the pyramidion reconsidered, with the grand colonnade of Mills never to be built. In 1880-1881, the earth around the foundation was moved, thus forming a terrace for the monument. The final construction of the shaft was finished to a height of 555-feet above the top of the pyramidal foundation, with a capstone set in place on December 6, 1884, thus completing the whole

monument, and being dedicated on February 21, 1885. It was opened to the public in April of 1886, and was officially declared open on October 9, 1888. After the opening of the monument to the public, it was immediately placed under the jurisdiction of the Office of Public Buildings and Grounds. Later this office became known as the Office of Public Buildings and Public Parks of the National Capital. Finally, in 1933, responsibility for the monument was put in hands of the National Park Service.

## **Conclusion**

The Washington Monument is an astonishing engineering marvel of the times past, which took a great amount of time, effort, and money to be built. With all of the obstacles surpassed and having the height of 555-feet it is now towering over the great city of Washington, bearing the name of the great President of a young state.

## **References**

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