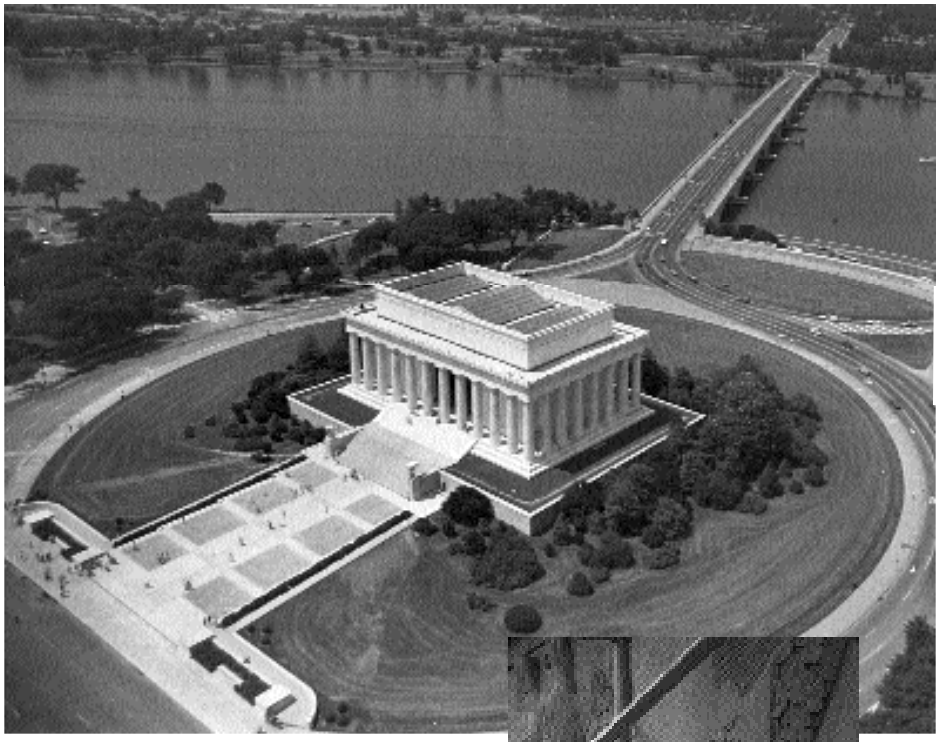
Cataloging Archival Materials

The Lincoln and Jefferson Memorials

J. Steven Moore

Washington is a city of monuments. From one end of the federal district to another, it is possible to see represented the entire epic of American history from Christopher Columbus to the Vietnam War. The styles of the monuments are as varied as the subjects they depict with many hearkening to classical antiquity for their inspiration, while others are more modern in design.

Two of the city's more important monuments that fall into the first category evoke images of ancient Greece and Rome more than most. They are the Lincoln and Jefferson memorials. Occupying two of the most prominent locations in the city's grand plan, they stir images of democracy and freedom comparable in degree to such hallowed landmarks as the Capitol dome or the Statue of Liberty and succeed to that extent precisely as their planners envisioned.



Aerial view of the Lincoln Memorial. Photo by Bill Clark, NPS, 1980.

The architects who designed the Lincoln and Jefferson memorials, Henry Bacon and John Russell Pope, respectively, had in mind two of the ancient world's most significant architectural treasures when they conceived their plans. Bacon's Lincoln Memorial was modeled after the Parthenon (432 B.C.) in Athens, Greece, considered by architectural historians as the crowning achievement in the Golden Age of Greece. Pope's Jefferson Memorial borrowed from the Pantheon (128 A.D.) in Rome. The design bears further significance, because Jefferson himself admired the Pantheon and used the dome form in his own home, Monticello, and in the Rotunda at the University of Virginia in Charlottesville. Unfortunately, like these treasures of the ancient world, the Lincoln and Jefferson memorials are not immune to deterioration. Unlike their cultural antecedents, however, they did not require two millennia, wars, and the uncontrolled effects of air pollution of this century to show the impact of age.

Begun in 1914, the Lincoln Memorial was formally dedicated in 1922 with President Harding presiding and Lincoln's own son, Robert Todd Lincoln, in attendance. But even before this had occurred, the approaches and terrace wall surrounding the memorial required additional shoring. The original foundation for these two structures consisted of a slab foundation which was separate from the rest of the building. It proved wholly inadequate to support the weight and began settling almost immediately. It became necessary to build concrete piers down to bedrock, the same method as had been used for the subfoundation of the memorial. Between 1921 and 1922, 104 concrete piers were added to support the terrace wall and 72 for the approaches.

View of the attic ornamentation at the Lincoln Memorial showing deterioration.

Less dramatic in terms of its obvious impact, but no less significant was the long-term deterioration of two paintings flanking the north and south walls of the chamber above the inscriptions of the Gettysburg Address and Second Inaugural Address. Entitled "Emancipation" and "Reunion," the murals depict allegorical figures showing an Angel of Truth freeing a slave in the first picture and the reunion of the North and South in the second. Each stands 12' high and 60' long.

Painted by Jules Guerin, the murals originally displayed vivid colors of blue, red, and yellow, but the intervening 70 years have all but dulled their appearance to the point of oblivion. It is still possible to discern the images, but the effect is like viewing a sunset while wearing a pair of tinted glasses. Although under cover and pro-

A maintenance worker repairs a stylobate joint at the Jefferson Memorial. Photo by the author.

tected from direct sunlight and rain, the murals are still exposed to the yearly extremes of temperature and humidity that have been the scourge of Washington since its founders first considered it as a site for the national capital. Guerin was not ignorant of these conditions, but planned to offset them by mixing the 300 pounds of paint required with white wax and kerosene. Similar to the wax used by the ancient Egyptians, it was designed to harden and prevent the paint from cracking. As time has shown it was not a full-proof solution. It might have worked well in the hot, dry climate of Egypt, but ran afoul of Washington's weather rather more quickly. It is, of course, true that short of placing a material in an inert environment where it is not effected by the vagaries of the planet Earth, any substance will eventually show the effects of age. In 1940, just over two decades after the murals had first been placed in the memorial, $28,000 was requested in a Department of the Interior appropriations bill for a heating system to protect the paintings from condensation caused by cold weather, but this money was later eliminated from the final version of the bill.

While Congress debated the merits of preserving one memorial, a second one of equal proportions and significance was rising a short distance away. The groundbreaking for the Jefferson Memorial occurred in 1939. It was finished in the summer of 1942 and dedicated by President Franklin D. Roosevelt the following year.

View of a broken volute on an interior column at the Jefferson Memorial, c. 1962.

Settlement of peripheral approaches became a problem here just as it had at the Lincoln Memorial. *The Evening Star* reported in September 1946, that the roadway and walks at the northeast corner of the grounds had sunk about 18". Settlement of the walks continued and in 1949 the National Park Service pumped mud underneath the sidewalks to raise them to their proper level. The park superintendent emphasized that the memorial itself was structurally sound.

A more serious problem appeared in 1961 when a volute comprising the capital on one of the columns

A worker removes a broken volute from a column capital at the Jefferson Memorial.

broke and crashed to the chamber floor. Causes for such stone failure vary, but include a natural, existing weakness in the formation of the marble, vibration, and water penetration. The same situation repeated itself in 1990 when another volute failed. Additionally, a second was accidentally knocked loose during a scaffolding inspection. The inspection revealed cracks in six more volutes which were removed at this time as a safety precaution. Algae in the cracks indicated water penetration had occurred.

Both the Jefferson and the Lincoln memorials are subject to a variety of almost constant wear and abuse that damages the structures. This includes air pollution, bird droppings, insects, rain, and such innocuous things as visitors who inadvertently spill a soda drink or spit out their chewing gum on the floor. With two million visitors a year, most of whom are not guilty of these transgressions, it adds up, nevertheless.

So what can be done to preserve these national treasures for future generations? In 1990, the National Park Service undertook an architectural survey to ascertain the memorials' condition and determine a course of action for their upkeep. The main scope of this project involved photogrammetry, whereby each stone—numbering almost 8,000 in the Lincoln Memorial and approximately 6,000 in the Jefferson Memorial—was photographed and the pictures used to make scale drawings. This will provide a record from which final decisions may be made concerning what to do about such things as cracked volutes.

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As an adjunct to this, research has been done on primary design and construction documents on the memorials. The research entails cataloging each separate archival item whether it be a letter, photograph, architectural drawing, or report using the Pro-Cite database (see sidebar, page 19). Pro-Cite provides work forms for a variety of different documents or sources in addition to those previously listed—everything from artwork to videos. Work forms allow the researcher to store information about documents in the database. Although there is some variation from one to the next, each includes space for such information as the author, date, storage location (i.e., the National Archives or Library of Congress), an abstract, and the ICAP codes used to identify a document with a specific architectural feature of the memorials.

ICAP refers to Inventory Condition Assessment Program.[1] Each ICAP code is a four-digit number and provides the key for unlocking Pro-Cite. For instance, in a four-page letter written September 25, 1913, to the Lincoln Memorial Commission, the congressionally-mandated agency charged with selecting a site and design for the memorial, Henry Bacon analyzed the construction bids, recommended his choice for contractors for the foundations and superstructure, and stated his preference for Colorado Yule marble. The ICAP code numbers in this entry are for buildings, exterior envelope, exterior wall covering/surface, exterior wall structure, interior, interior wall covering/surface, interior wall structure, foundation, pier, pile, functional design, and site design. Another entry concerns four similar black and white photographic prints of the illuminated statue of Jefferson from February 1956. Numerical codes for this entry are for buildings, building utility systems, electrical, lighting fixture, and sculpture.

> *On the great axis, planned over a century ago, we have at one end the Capitol, which is the monument of Government, and to the west, over a mile distant from the Capitol is the monument to Washington, one of the founders of government. The Lincoln Memorial, built on this same axis still farther to the west,… is the monument of the man who saved the Government, thus completing an unparalleled impact to each of its monuments a value in addition to that which each standing alone would possess.*
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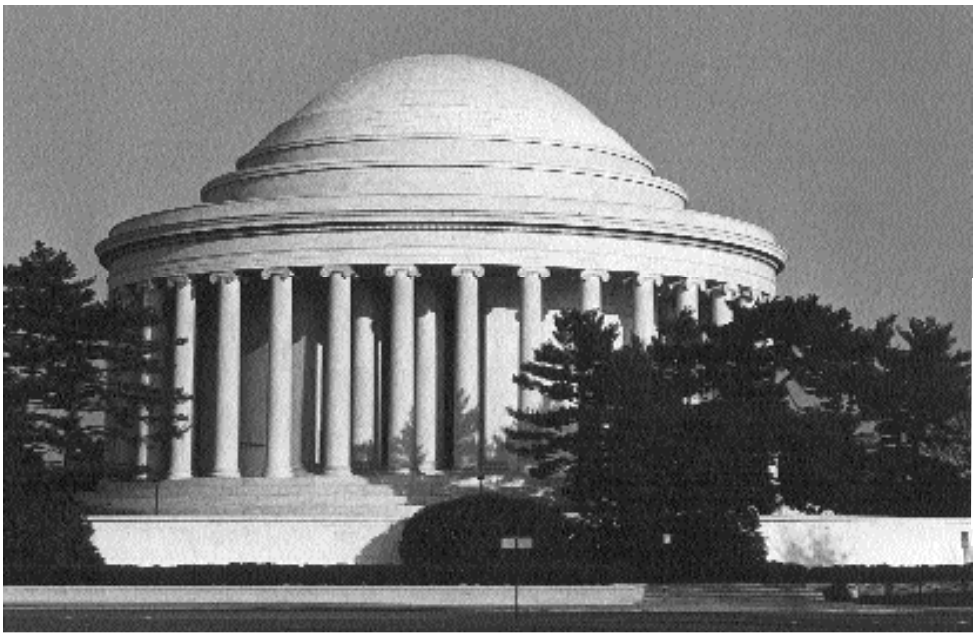
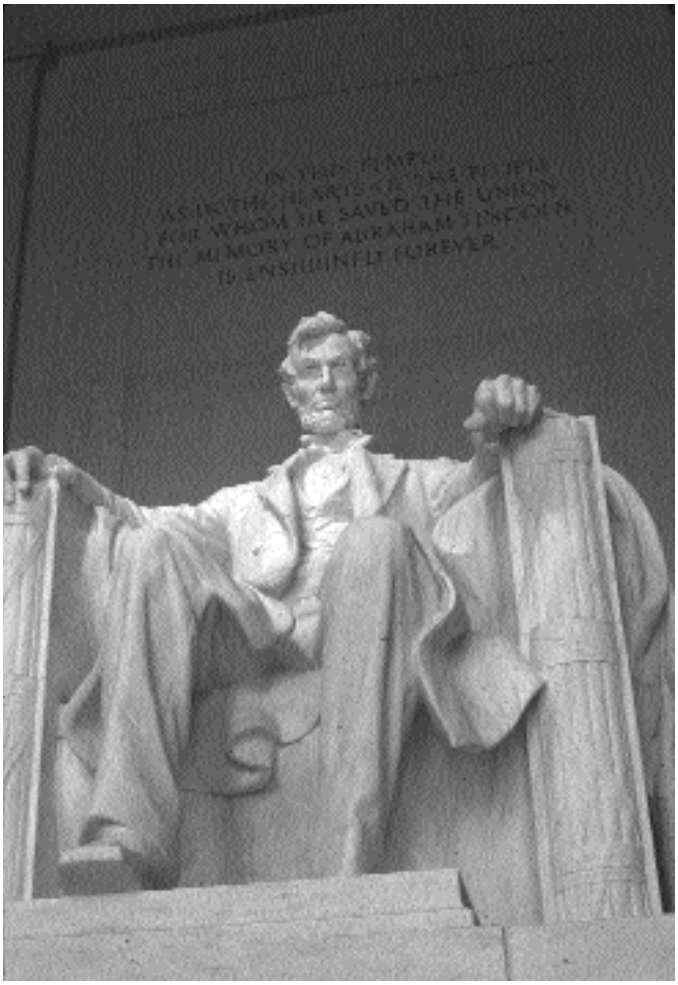
> *The accepted design of the memorial itself, as prepared by the office of John Russell Pope on a scheme which received his approval, is in the classic style which Jefferson introduced and advocated for the building of the Capitol. It is of the general type of the Roman Pantheon, which he admired—a circular building with a low dome, its curved outline contrasting with the rectangular mass of the Lincoln Memorial. A surrounding circular colonnade distinguishes the monument from others of the type and enriches its effect from the Potomac.*
>
> *—Henry Bacon*
> *on the Jefferson Memorial's symbolic significance*
> *to the city's other major memorials*

Pro-Cite is flexible. It would not be necessary to input all the ICAP code numbers to view this entry in the database. If a researcher had a record of the document for which he was searching and wanted to learn where the original was stored, he could perform a search using select terms such as the date or author's names. What the ICAP codes do is allow a researcher who wants as much information as possible about, say, the exterior columns to input the appropriate code numbers and receive a complete list of all the documents concerning that particular feature. Selecting from a list of more than 400 codes, ICAP may be used to access information on everything from roadways to the heating and air conditioning ventilation system. Some of the less obvious categories in ICAP that do not directly relate to the memorials or their immediate surroundings include boat docks, public utilities, and campgrounds.



The Jefferson Memorial. Photo courtesy National Park Service.

The current Pro-Cite database covered by ICAP has more than 8,000 entries, roughly divided between the Jefferson and Lincoln memorials. The database has been in the making for more than two years and catalogs documents from several repositories, including the National Archives, the Library of Congress, the Museum Archeological Regional Storage (MARS), the Harpers Ferry Center's Office of Library, Archives, and Graphics Research, the headquar-



Lincoln Memorial. Photo by Bill Clark, NPS.

ters for National Capital Parks-Central, the Office of Land Use Coordination of the National Capital Region, the Fine Arts Commission, and Wesleyan University in Middletown, CT, where some of Henry Bacon's papers and renderings are stored. Rules for examining documents vary from one repository to another, so anyone interested in doing research should contact each facility directly.

Pro-Cite has been used by architects and engineers to access information for reports documenting the problems at the memorials. By providing a record of what has gone before, Pro-Cite allows the user to ascertain as nearly as possible the builder's original intent. Although no decision has been made concerning the preservation of the memorials' marble surface, other projects are currently underway. One involves repairing the terrace at the Lincoln Memorial and the stylobate mall at the Jefferson Memorial. At the Lincoln, all the dirt on the terrace deck—some two to three feet—has been removed and the concrete slab waterproofed and repaired. Likewise at the Jefferson, repairs have been made to the stylobate mall, involving the installation of new sheet piling, the placement of a storm drain line, and the removal of sick trees and shrubs or those not corresponding to the original landscaping plan. In this latter case, landscape architects using original documentation from the 1940s concluded that the plantings were intended to complement vistas of the memorial, not obscure it as later occurred when additional landscaping was done.

As the work proceeds in other areas, Pro-Cite will provide a link with the past, permitting preservationists to gain access to a wealth of information quickly and easily. In so doing, it will be as close as one is likely to come to re-entering the minds of Henry Bacon and John Russell Pope to understand what they hoped to express in their work honoring two of this country's greatest leaders.

While the casual observer would probably not notice the cracks in individual stones or spalls in the steps of the memorials, such little problems can become big problems if allowed to go unaddressed. The volutes are a case in point. To ensure this does not happen and that the memorials remain the dramatic symbols of the nation's birth and unity they were intended to be, preservation and maintenance policies will be established that by drawing upon the past will ensure their continued presence along the banks of the Potomac River until far in the future.

Note

1 The Inventory and Condition Assessment Program (ICAP) is a computerized methodology for inventorying, assessing condition, identifying maintenance and major deficiencies, providing corrective work procedures, and developing estimated costs for correction of the identified feature deficiencies of all types of historic, prehistoric, and non-historic assets. The program's methodology and computer program have been designed to support the national park system's Maintenance Management program as well as other programs.

J. Steven Moore is a park ranger with National Capital Parks-Central in Washington, DC. He recently completed a detail assignment with the NPS Denver Service Center-Eastern Team in Falls Church, VA. The Denver Service Center is coordinating the restoration work on the Lincoln and Jefferson memorials, and Mr. Moore gathered the data for the Pro-Cite database described in this article.

Pro-Cite is a commercially available bibliographic software package. The National Park Service has joined the growing ranks of other federal agencies that use Pro-Cite, including the Library of Congress, the Smithsonian Institution, the National Institute of Standards and Technology, and the National Archives and Records Administration, to mention a few. Within the NPS, Pro-Cite has been adopted as its recommended standard of the NPS Library Program and is or will be the software base for several other NPS programs dealing with bibliographic material. An advantage of Pro-Cite, as Mr. Moore points out, is that it is custom tailored for a wide range of bibliographic material and journalistic styles. Users only need to select the Pro-Cite standard formats and/or styles that are useful to them. What makes Pro-Cite particularly interesting is that it combines powerful searching capabilities with a variable length database management system. The application described in this article illustrates the considerable flexibility of Pro-Cite in handling seemingly disparate information for useful purposes.

—Randall J. Biallas