

CRM

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Research To Planning To Operations: Grant-Kohrs Ranch NHS John Albright

In an article aptly titled "How Much is a Piece of the True Cross Worth?" Brooke Hindle of the Smithsonian Institution tells us that "three dimensional survivals provide a means of direct contact with the past." He continues: "the desk at which Thomas Jefferson wrote the Declaration of Independence, Eli Whitney's cotton gin, and Charles Lindbergh's Spirit of St. Louis—each connects us with the reality of the historical abstractions we have learned." Historic objects and historic sites serve as vehicles to convey the abstractions of history to the public. Whatever other valid reasons there may be for historic preservation—aesthetics, environmental diversity, economic benefits, the many pleasures of seeing and touching historic fabric from the past—for historians, the purpose of historic sites is to serve as a physical contact giving substance to the abstract idea we call history.

So with this in mind and the Grant-Kohrs Ranch research and planning experience as a guide, the relationship between historical research needs and managerial needs in the Service can be examined. Research and management combine to bring historic sites that sense of reality Hindle observes. Grant-Kohrs Ranch, with the research and planning directions developed there, serves as an example.

The first question to be asked is: "Does the Grant-Kohrs Ranch research and planning history represent the standard National Park Service approach to historic sites?" The answer is "yes." The sequence of research to planning to development

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Right to Survive: Restoration of the Elizabeth Stanton Home

Michael West
Karlota M. Koester

The Elizabeth Cady Stanton House, one of several buildings which comprise the Women's Rights National Historical Park in Seneca Falls, New York, has undergone extensive work to restore it to its circa 1846-1862 appearance. Elizabeth Cady Stanton was a convener of the first women's rights convention and a principal figure for over 50 years in the struggle for women's equal rights. The endurance of her home in a national historical park stands as quiet testimony to her work.

The Stanton House was assessed at \$1,500 in 1860, then sold for slightly more than that amount to John Edwards when Cady Stanton left Seneca Falls in 1862. Thereafter, the property underwent several major changes. In the 1860s, the north wing was removed. Then, the roof of the

south wing was raised in 1903, and the front porch and back kitchen wing replaced at the same time. Donated by the Elizabeth Cady Stanton Foundation, the structure became the property of the National Park Service in 1982, the same year that Women's Rights NHP opened to the public.

To carry out the mandate, "to preserve and interpret for the education, inspiration, and benefit of present and future generations the nationally significant historical and cultural sites and structures associated with the struggle for equal rights for women," preservation specialist John Darcy and architectural conservator Barbara Pearson from Boston's North Atlantic Historic Preservation Center visited Seneca Falls the same year the park

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Elizabeth Cady Stanton home under construction work.

represents a model National Park Service approach. There is also a second question—the key question—“Does the Grant-Kohrs Ranch experience illustrate the relationship between research historians and federal managers?” It does not take too much analysis to answer “yes” to that question also.

Congress established Grant-Kohrs Ranch National Historic Site on August 25, 1972 “to provide an understanding of the frontier cattle era of the Nation’s history, to preserve the Grant-Kohrs Ranch, and to interpret the nationally significant values thereof for the benefit and understanding of future generations.” According to the legislation, preservation of the park rests with the superintendent and staff. Physical protection, visitor safety, maintenance, and the day-to-day operation of the site: these are the manager’s responsibilities. The legislative requirement that the Park Service “provide an understanding of the frontier cattle industry and to interpret the nationally significant values thereof,” is in the historian’s province.

Official interest began in the mid-1960s when the possibility of acquiring the ranch headquarters at the north edge of Deer Lodge, Montana took shape. A 1968 evaluation by historian Merrill Mattes described the site, noting that cattle ranching history had been overlooked in National Park Service managed areas. Then, in 1971, Service historian Ed Bearss prepared a report entitled “Resource Description and Evaluation,” which presented a brief narrative history. By 1972, the ranch had been authorized and, in 1973, purchased from the National Park Foundation.

In early 1976, a superintendent and staff reported to Deer Lodge to augment the caretaker’s efforts, and research began. Early the next year the general and structural history had been completed, and the architectural research neared completion.

During that research period, both the historian and historical architect spent a great deal of time at the park, using initial research findings to help the park and regional office staff identify the numerous structures, evaluate their importance, and determine which ones needed immediate attention. In addition, the research phase included the micro-filming of

site records and the Conrad Kohrs papers held by the last owner of the ranch. It was necessary to negotiate filming the papers, finding a professional archivist to organize them, and locating funds to do the job.

Once the historical research was complete, a rudimentary visitor facility had been established, a few temporary exhibits set up, and the historical data placed in the hands of park staff who used it to prepare their message to visitors.

The General Management Plan was prepared next. Published in February of 1980, it listed among the management objectives the following: “to base all management decisions on adequate historical data and research.” Guidance on management of buildings, grounds, and sites was included, the general direction of interpretation outlined, and research requirements listed. In short, the General Management Plan reflected historical values, and focused on preserving the historic scene. By that time, the park functioned smoothly, and the plan was good enough to ensure that the park operated well.

Indeed, the research and planning process revealed that Park Service historians serve in many roles: researcher, archivist, and librarian; management consultant (advising the manager of what to protect, preserve, maintain, or develop immediately, and what action to hold back on); and support historian for the interpreter. Research historians gather data and assemble it into narrative form. They also identify the primary themes and the data supporting those themes, so that the interpreters on the park staff can use the data and pass it on to the visiting public. Finally, the historian sometimes functions as research program chairman. No responsible Service historian completes a study without identifying additional research needed to support the mission of the park. This may involve a listing of required studies in priority order and detailed scopes of research for each, or it may be only a list of unanswered questions. In this role, as in the management consultant’s role, the historian’s relationship with the park usually outlasts the life of the particular research project.

So in meeting the needs of the manager, the historian serves in various capacities. But the manager’s needs

also merit some scrutiny. (It can even be argued that the manager’s needs, as they relate to the research historian, are not the manager’s needs at all, but the needs of the resource.) The manager must ensure the best operation, service facilities, protection for historic structures, and interpretation of the site to the public as possible. It follows that the researcher’s duty in regard to the manager is developing the historical data into a narrative which defines historical themes, identifying the physical resources to be protected, evaluating them, and doing so in a package that the typically non-historian manager and interpreter can readily use.

The Grant-Kohrs Ranch research and planning process illustrates this. The 1968 and 1971 studies, described earlier, focused on the physical aspect of the site. The 1968 study described the site and pointed out that cattle ranching was overlooked in National Park Service managed areas. The 1971 study contained a brief history of the Kohrs cattle enterprise and an initial identification of ranch structures. These early studies helped to gain National Park Service and congressional support for adding the ranch to the system. Broad in scope, they met management’s need to know enough about the site and its significance in order to make a decision.

By the time the more intensive research had been completed, management had been handed a great many more needs—interpretive needs—developed through research. The managers had been shown that the preservation of the park’s story should include such topics as old versus new ranching techniques, the differences between northern plains cattle raising and the better known story of raising cattle in Texas, Conrad Kohr’s continuing efforts aimed at local and statewide community building, his concepts of marketing cattle, use of railroads, and selective breeding to improve the quality of the cattle. All these topics were developed by historical research, and once developed, became management requirements. Management had to ensure that the interpretive program reflected the themes historical research had developed. Importantly, management had not defined needs the historian had to address; the historian had developed management needs instead.



Grant-Kohrs Ranch National Historic Site.

In identifying the meaning of the site, historians may come closest to failing to meet management requirements to operate the historical park to their fullest potential. As we have seen, National Park Service historians conduct research to identify the significance of properties in an historical park, define the historical story the site represents, even determine management needs. Yet the historian who assembles and analyzes the data usually leaves a project when the research is done, and the interpreters then take the historical information and package it for public consumption.

This problem is certainly not unique to the National Park Service, but endemic to any organization managing historic properties with a limited research staff. The manager of a large historic site argued that the historian should remain with the staff even after the research had been completed:

When the buildings are ready, maybe even landscaped, the work is far from done. There is a large, largely unrecognized, and continuing need for the same people who built the place to stay on to help interpret it to the public.

A nice idea, but also a highly impractical one. Historians generally will not pick up and move from park to park as Clio's itinerants responding to the dictates of each research project. Nevertheless, we need to retain the connection between the historian and the park staff using the material the historian has developed. At the present that connection is tenuous at best. Historians, who years before had completed research at a park, may drop by while on vacation and talk things over with the park staff. But this is an informal and chancy kind of relationship based on happenstance. Both the historian and park deserve better than that.

Times change, and attitudes change. New historical materials appear in archival collections and libraries. Managers require the advice of the historian as new demands are placed on the care and interpretation of historical parks. Each aspect of on-going park operations demand that the historian return and reevaluate the data from time to time in order to meet changing management needs—the greatest of which may well turn out to be the evolving values of park visitors. The meaning of these cul-

tural remains and what they reflect on American history is, after all, the ultimate purpose of preserving artifacts of the past. It surely follows then, that the historian who did the original research should revise it as occasion demands and review the data in light of current historical thought.

If historians can share the task of helping the visitor understand the continuity between past and present existing in our historic parks, then they will have conveyed an important piece of American history to the public. And that, as any history teacher will confirm, can be quite an accomplishment. ©

The author is a historian with the Denver Service Center. His article was adapted from a paper presented at the Western History Conference in St. Paul, Minnesota, October 10-13, 1984. A fully documented copy is available from the author upon request.



Steve Spaulding positions new cornice.

opened. They researched the history of the building in order to discover and recapture its appearance during the Stanton occupancy. The Stanton family had made numerous alterations during their 16 years in the home. A woodhouse and new kitchen were built. Doors or windows were also cut, since Cady firmly believed in the importance of fresh air to the health of the individual.

Unfortunately, few written records of these modifications remain available; therefore, researchers had to rely on the ability of the house to tell its own story. When it was stripped of later modern building materials, several facts emerged. Originally, the building had been covered by clapboards. It had featured a porch also much different from the modern addition. The oldest known photograph of the house proved that the south wing roof covered only one-and-a-half stories in the 19th century, not the two stories which existed in 1982. Lowering the roof to its historic level involved using a jack system. The wood shingle siding was stripped away, the 1903 kitchen wings and porch removed, and several layers of asphalt roofing shingles taken off. The careful removal of interior

Museums Study Their Future

Debra Berke

How are museums catching up with new technological developments? Will the increasing median age of our population affect museum visitation? These and other trends facing museums had not received serious analytical assessment until leaders at the American Association of Museums realized the need in 1982. Thereafter, museum directors, trustees, foundations, and business leaders were asked to join a commission of twenty five members to accomplish this task. They gathered information through open forums, colloquia, written and oral comments, and the monitoring of 65 randomly selected museums.

The data was analyzed and summarized in a recently issued report entitled "Museums for a New Century"

(American Association of Museums, 1984, 143 pp.). Two priorities were established: (1) improving collection organization and care, and (2) expanding the educational function of museums. The report describes creative museum programs like the interactive science exhibits at the Exploratorium in San Francisco. It lists 16 long-term recommendations and suggests ideas for accomplishing them. Also included are inspiring comments about museums. One such comment was made by Illinois Representative Sidney R. Yates.

"Last summer I visited the Grand Teton National Park with my grandchildren, who are nine and six. They had grown up frequenting the Field Museum and the Adler Planetarium in Chicago. I looked on in wonder as they identified various plants and animals, and at night, under the starry sky, I listened with
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modern additions also became increasingly intricate. Successive tenants had made drastic changes to the house, which was occupied almost to the time the Park Service acquired it. The modern heating unit and the 1903 knob-and-tube electric system represented several of the items removed when a more practical and less antiquated system was installed.

After removing the post-1862 building fabric, the restoration team analyzed the remaining historic fabric in order to identify less obvious renovations to the house. Studies determined what paint, plaster, and wallpaper in the house authentically related to the Stanton period. Up to 15 layers of wallpaper were removed and studied. Additional changes involved removing the 1903 cornice work, the additional wall studs that raised the south wing, certain partitions, and the 1903 staircase and chimney additions. The restoration team also covered the second floor opening left after the removal of the staircase.

Since the foundation of the house required strengthening, each cornerpost went in new. Through "Beta-work," rotted and weakened joints received strengthening by the application of epoxy, forming single solid joints. Beams, sills, and girts were also strengthened. Modern materials and techniques brought an end to a persistent water problem which had

threatened the second floor for some time. Reproduced materials replaced materials removed from the house after 1862. Specially milled wood was used for the shingles, sills, clapboards, and cornices. After the detachment of the modern porch, a new porch was designed to reproduce the original, based on the circa 1890 photograph. Safety equipment was added to protect the building from fire and damage for many generations.

The restoration of the Stanton house continues under the supervision of Preservation Center carpenter Steve Spaulding. The main stairway has been reproduced to fit its 1848 appearance. Finishing work has included hanging reproduced wallpaper, graining some of the woodwork, and laying the floorcloth. Research is planned to determine if a home on an adjoining lot is the missing north wing of the Stanton house. The extant portion of the Stanton house will be completely restored and dedicated in early June, 1985.

The challenge of restoring this house is a tribute to the importance of Elizabeth Cady Stanton and her life-time fight for women's rights. ©

Michael West is a Park Technician at Womens' Rights. He wrote and researched the preceding material for a slide program at the park. Karlota Koester, Assistant Editor for the CRM BULLETIN, compiled the material from his program into an article.

Recording In The National Parks

Since 1933, the Historic American Buildings Survey (HABS) has preserved a visual and written record of America's most treasured architectural heritage. Through measured drawings, photographic documentation, and written historical and architectural data, the HABS recording teams have chronicled landmark structures across the United States. Their work has assured the preservation of buildings slated for destruction—preservation not in bricks and mortar but in the graphic representation and associated research assembled by the teams. Indeed, approximately 1/3 of the structures recorded by HABS since the 1930s now exist only at the Library of Congress, as part of the HABS collection. Yet without these aids to our architectural memory, a variety of significant old structures would have passed unnoticed from the national scene.

Now HABS has turned a portion of its energies to recording nationally significant structures and the architectural resources within the national parks... and the results have been important ones. The Park System protects a variety of cultural resources, the maintenance of which often involves complex procedures. Yet not every structural ailment can be examined at once. Generally, parks plan both an annual and cyclic maintenance program, as well as a schedule for more technically exacting projects which require special funding. As an aid to such planning, HABS donates copies of all drawings and field notes made of a particular resource to the originating park and region. Since these drawings detail the architectural features of a structure as that structure existed on a specific day at the specific time it was drawn, they serve as a handy reference tool for parks engaged in preservation activities.

Cracks in historic fabric, signs of new plaster or crumbling brickwork, additions or deletions—these are readily visible. Indeed, the type and location of structural problems can appear more clearly in a drawing than a photograph, due to the emphasis measured drawings can place on one feature above another. Missing balustrades or broken paneling also can be detected instantly because



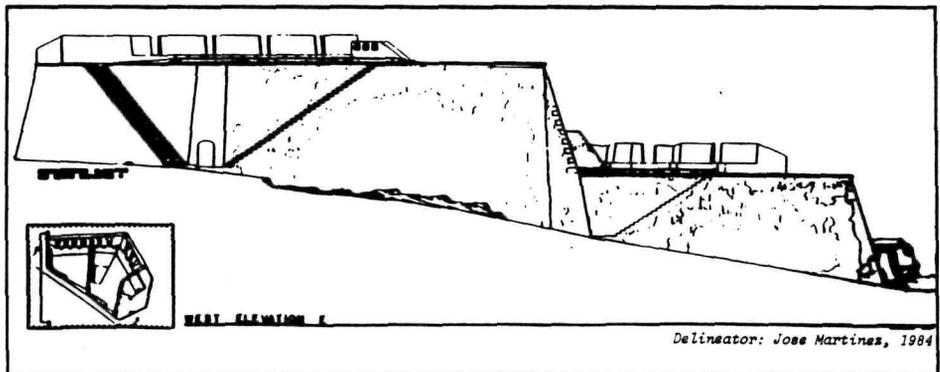
Work in progress at San Juan National Historic Site.

the space they normally occupy is obviously empty.

In addition to their maintenance uses, HABS drawings have proven beneficial to the leasing program. Because park units find it difficult to lease properties without knowing the extent of their maintenance needs and without being able to pass on this information to a potential lessee, the measured drawings quickly summarize the condition and square footage of the property, associated buildings,

existing floor plans, will be used to solicit leasing proposals.

A final structure at Hot Springs, one scheduled for demolition, was also recorded this summer. The Arkansas Historic Preservation Program contributed funds which permitted documentation of the privately owned Pythian Bathhouse, a black bathing facility. Without such cooperation between state and federal government, records of this in-



West elevation of San Juan National Historic Site. HABS work was accomplished through generous support from US/ICOMOS and the American Institute of Architects Foundation.

and the relationship of one site to another. Hot Springs National Park protects certain properties targeted by the leasing program. Eight bathing facilities along "Bathhouse Row" received documentation, thanks to the interest of the Regional Office, the park, and the Arkansas Historic Preservation Program. These measured drawings, along with photographs of

interesting and significant structure would have been lost.

Perhaps one of the most innovative aspects of HABS activity appears in their fundraising capabilities. Co-sponsors have come forward frequently to aid the parks with hard-to-fund projects. The reliability of the HABS name as well as their professional

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association with various preservation-related organizations have made possible this approach. State historic preservation offices, historical societies, AIA chapters, and universities in close proximity to a HABS recording project receive advance notification of the activity. Sometimes, these institutions have a mutual interest in either the property HABS intends to document or an auxiliary property which would add to the material associated with the original recording project.

As at Hot Springs, cooperation between state and federal agencies at Lyndon B. Johnson National Historical Park permitted the completion of work otherwise out of reach of either organization acting alone. The Southwest Region and the Texas Historical Commission cosponsored the LBJ recording project. This enabled the High Post Office, site of the swearing in of the only Postmaster General outside of Washington, to be recorded with joint funds. The Junction School was also recorded as part of this project, as well as all the extant structures at the ranch. The University of Texas at Austin provided such amenities as drafting tables, and the Denver Service Center (DSC) funded students to complete additional work, such as sketch plans to be used by the DSC.

The James A. Garfield National Historic Site provided another example of creative funding. Not yet a Park Service property, it resides under the guardianship of the Western Reserve Historical Society. Through their cooperation—and indeed with their generous donation of office space—HABS completed measured drawings for Lawnfield (the Garfield house), the campaign office, and the carriage barn and gasholder. Using existing drawings of the house produced by the Denver Service Center and supplementing these with exterior elevations, sections and architectural details, the teams produced drawings which will provide the NPS with significant information on the Garfield site prior to its admission to the Park System. In this way, plans can be advanced and initial efforts begun on the mandatory Historic Structures Report, following which, evaluations of adaptive reuse proposals can be made. Knowing the needs of the property in advance will

The Jaite Mill Company Town: Adaptive Restoration as Park Headquarters

Edward H. Adelman, AIA

Over the past three years, Cuyahoga Valley National Recreation Area has been in the process of adapting the former company town of the Jaite paper mill into its headquarters. This action was taken to provide a consolidated headquarters facility while at the same time preserving and using a significant cluster of historic structures.

Background

In 1905, Charles Jaite constructed and began operating a paper mill on the banks of the Cuyahoga River. This mill, once considered one of the most substantial manufacturing buildings in the county, had a daily capacity of eight tons of manufactured paper. Initially, the Jaite Company made its own pulp for rags and wood. Their paper was made into flour and cement bags and sold directly to the manufacturers of these products. In 1928, Jaite successfully manufactured the first multi-wall cement bag, which later came into general use. When the mill closed in 1984, it was producing paper for use in corrugated mediums from recycled boxes.

At one time, this large, active mill employed over 200 people, most of whom lived in nearby communities. In 1907, the Jaite Company constructed five duplex houses for some of the workers. These were followed, in 1919, by the construction of four single-family bungalows, a carriage house, and a privy. In 1924, a company store was built to serve the mill workers and to provide dormitory space for additional employees, who slept in shifts. In the 1950s and '60s, the mill and company town changed ownership several times. Finally, in the early 1960s, the mill owners sold both. From that time until 1980, when it was acquired by the National Park Service, it was operated by a third party as rental housing.

The Jaite buildings are historically significant because they represent a largely intact company town, others of which were common in the area in the late nineteenth and early twentieth century. The company town represents a symbol of the corporate paternalism typical of the era, and fits well with the valley's interpretive themes of settlement, industry, his-

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also enable thorough recommendations to be proposed for stabilization and restoration work.

San Antonio Missions National Historical Park offers a unique example of measured drawings and associated documentation as historical reference material. In the 1930's, recording teams documented the existing condition of the Missions. This packet included good photo documentation as well as 16-inch scale drawings, along with floor plans. Over the past two summers, with a third summer of major activity approaching, HABS has reexamined the four missions, again aided by outside funding.

Rather than redraw the earlier work, an addendum now illustrates changes over the past 50 years. By comparing the drawing sets, the park can easily tell the original mission walls from those restored. Major re-pointing becomes visible also, as does the 1930s reconstructed concrete dome (the original dome collapsed in the 1800s), graphically represented with the appropriate line use to

visually distinguish concrete from other materials.

All in all, HABS drawings serve as a stable foundation on which to rely for precise technical information concerning what is known about a property. They serve as maintenance and planning tools, and may also assist efforts such as the leasing program. On several occasions, such sound documentation has dramatically benefited the Park Service. After teams completed work at Springwood, the Theodore Roosevelt estate, fire damaged the structure. Copies of the HABS drawings served as a foundation for the restoration. This and similar benefits have increased requests for HABS documentation in the parks. Last summer, eight projects were successfully completed. During the summer of 1985, HABS anticipates eleven such projects. HABS measured drawings serve as insurance protection as well as an accurate representation of the time, for the architectural and historically significant thumbprints of our culture. ©

Case Study: How a Committee can Serve as a Resource Management Tool

Michael E. Whatley

At first glance, resource management would not appear to benefit from committee guidance any more than any other subject. When looked at more carefully, however, the very nature and complexity of resource management suggests that committee guidance probably is a good method for dealing with this deverse topic.

Resource management is not a single subject that can be easily overseen by one individual or even one discipline. For example, in any given area is resource management natural or cultural? In most areas, it is a mixture of both, often 50/50. Furthermore, just who are the National Park Service's resource managers? Are they biologists, law enforcement rangers, maintenance workers or park superintendents? In reality they are all of the above and more.

While park superintendents must approve all resource management activities, and while some parks have resource management specialists, the resource management process is actually carried out by a variety of individuals who represent a number of different disciplines. This variety can be very beneficial when drawn upon to create a balanced and effective resource management committee.

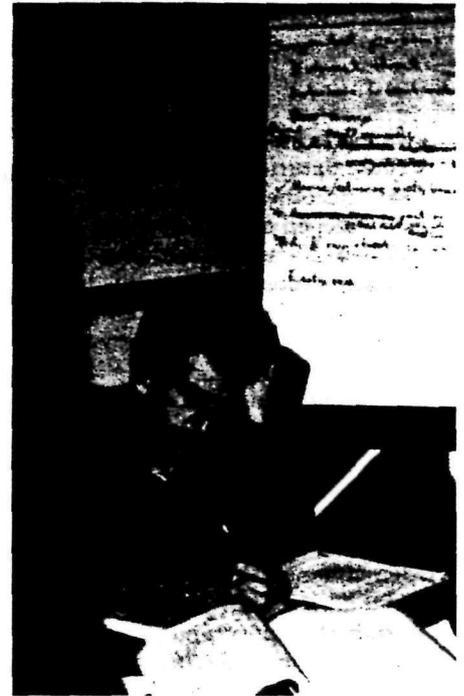
Less than five years ago, a resource management committee was set up at Cape Cod National Seashore to review internal park projects and operations. The committee's initial duty was to check for environmental compliance needs. Over the years, however, the role of the committee has broadened and now includes an almost equal mix of monitoring cultural as well as natural matters. Likewise, the committee has taken on a wider scope of duties, such as reviewing or making suggestions for changes in the park's Resource Management Plan, as well as drafting interim resource preservation guidelines to be used until formal ones can be developed for specific resource problems.

Committee membership is represented by each park field division (eg. Protection, Maintenance, Interpreta-

tion, etc.). But in addition, the committee also includes as members most of the park's specialists, notably the Chief of Environmental Planning, the park biologist, historian, and natural resource management specialist. In addition, monthly meetings are open to participation by others such as district rangers, division chiefs, or the park curator.

Two other factors have also had a great deal to do with the success of this committee. The foremost is the indirect involvement of the park superintendent. The superintendent reviews the minutes of each meeting. At this time, the superintendent either approves or suggests alterations to the proposed resource management activities. Once he signs them, the committee minutes in essence become an action plan. This then calls for follow-up activity (eg. re-route a trail, eliminate non-compatible activities affecting a cultural resource etc.). The second factor that makes this work is accountability. In order to insure that the necessary actions are taken, the committee chairman assigns an individual with the task of monitoring follow-up. Often the individual is either a committee member or a division chief. Since the committee minutes have the equivalent power of a work order due to the superintendent's approval, the follow-up activities generally come off without a hitch.

Committee reviews include a variety of cultural and natural resource problems. One problem centered around multiple uses of the grounds adjacent to a park historic structure listed on the National Register. Careful review by the committee and input from all parties resulted in the development of a plan for a better program of area use. This occurred in part because a committee member reviews the legal requirements for the building and grounds, verifying that the present alternative uses were not actually in keeping with preserving requirements for the resource. An interim plan was developed as well as the policy statement of just which uses were compatible. Another problem centered around the migration of alewives, a type of herring which spawns in fresh water but returns to salt water. The committee reviewed an artificial channel between two ponds that was silting in. It had been determined previously that the sluiceway should be maintained, and the committee took on the task of determining alternative



Resource management committee chairman.

ways of accomplishing this with the least environmental impact.

The resource management committee at Cape Cod investigates resource problems as requested by the park superintendent, division chiefs, and committee members as well as other individuals. Without the committee, many resource management problems would have to be solved in a much more arbitrary manner. For example, the committee eliminates a deadlock that may result between division chiefs and district supervisors over how a specific resource should be managed. In situations of this sort, it may well be that the decision on how to manage the resource is based not on resource preservation needs but rather on other factors. The committee assures that the resource gets a fair assessment of its actual preservation needs through an objective and balanced review. Likewise, the resource management committee serves as a useful tool to the park superintendent. The superintendent utilizes the committee to review problems and look at them from a variety of angles, or even to present alternative solutions for consideration. In all of these ways, the resource management committee at Cape Cod National Seashore has proven to be a useful, effective tool, enhancing the management of all the park's resources. ©

The author is Supervisory Park Ranger at Cape Cod National Seashore.

Museums Study The Future

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awe as they pointed out Jupiter, Venus, Saturn, Andromeda, the Big Bear and other constellations. And as I watched them, I thought how wonderful was this wedding of Chicago's museums and this beautiful national park in fulfilling our needs for learning and enjoyment."

The Commission specifically asked for National Park Service ideas on its museum programs and on the general issues facing museums today. To obtain park input, the Associate Director, Cultural Resources requested written comments from park staff and regional curators. This project gave park staff the opportunity to reflect on park museums, and as a result they offered enthusiastic and thought provoking ideas. All park comments and a summary report prepared by the Curatorial Services Branch, Preservation Assistance Division, WASO, were submitted in August 1983 to the Commission.

The role of park museums, according to many respondents, is to orient and introduce the visitor to the park, and to preserve the material evidence of the nation's natural and cultural resources. A number of the respondents listed specific museum needs, some of which include: adequate funding, increased accountability, additional and more professionally trained museum staff, better object preservation, increased scholarly research on collections, more recognition of National Park Service museums, improved quality of exhibits, and acquisition of objects that are germane to park collections.

The park respondents also noted a number of features about park museums which make them different from other museums. First, park museum collections are focused on a specific site or geographic area. An example of one such collection is Yosemite with its rich concentration of materials documenting the park's natural and cultural history. Second, most park museum collections remain on or near the site or origin. Third, park museums are part of a large network that encompasses the entire nation and a great variety of disciplines. This allows for centralized functions like conservation, exhibit preparation, research, and policy development.

One park respondent cleverly described the network:

"The National Parks museum is that great entity unifying park museums and guiding and coordinating their existence. The head and much of the heart of this curious creature are to be found in the Office of the Chief Curator in Washington, at the Harpers Ferry Center, the Denver Service Center, and at various gangalia elsewhere. The body of the beast spans a continent. Its parts are the individual park museums. No other museum network is so varied and far-flung, yet so administratively bound to pursue unity."

Copies of the National Park Service summary report of park comments can be obtained from the Curatorial Services Branch, Preservation Assistance Division. The Commission report entitled "Museums for a New Century" is available from the American Association of Museums, P.O. Box 33399, Washington, D.C., 20033. It costs \$13.95 for members, \$17.95 for non-members.

The Commission's report can give parks a sense of the general trends in the museum community. Parks can analyze their own efforts at planning and developing museum programs in light of the recommendations, goals, and suggestions identified by the Commission. Unfortunately, the usefulness of the report relative to Park Service museums is diminished because it does not include any specific examples submitted by parks.

"Museums for a New Century" challenges all museums to take an active role in the future. It marks the beginning of an effort by the museum community to assess its potential in society and to insure a productive role in the future. Park museums must be involved in this effort. ©

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Using Computers?

We are planning an article in an upcoming issue of the CRM BULLETIN on the use of computers in the cultural resource programs. We are particularly interested in examples that show parks, regional offices, and field centers using microcomputers. If you use or know of such a computer application, please call John Peterson in the Information and Data Systems Division, WASO, on FTS 343-4415.

PRESERVATION TECH NOTES

Charles Fisher

Beginning with this issue, Preservation Tech Notes will appear regularly as inserts in the CRM BULLETIN. The Tech Note series deals with practical, innovative techniques and practices for preserving our Nation's cultural resources. The series provides a unique opportunity to exchange information among preservation and conservation practitioners in the National Park Service and the private sector.

CRM BULLETIN readers may elect to separate and organize the Tech Notes inserts in a looseleaf notebook for future reference. The one appearing in this issue is part of the special series on windows prepared for inclusion in a publication entitled "The Window Handbook: Successful Strategies for Rehabilitating Windows in Historic Buildings" (available later this year). Future insert topics will range from a temporary protective system for staircases to the conservation and protection of cultural artifacts. Individuals interested in contributing to the series should write to Charles Fisher, Preservation Assistance Division-424, National Park Service, Department of Interior, P.O. Box 37127, Washington, D.C. 20013-7127.

Hugh C. Miller

Using Lacquers On Bronze Statues Not A Good Idea.

Often through a desire to decrease regular maintenance requirements, "protective" coatings are used. On non-ferrous metals this usually includes the use of lacquer or other similar clear coatings. Whether on small objects (i.e. candlesticks, silverware) or large outdoor bronze sculptures, these coatings often cause more work and potential for damage than they save. The reason for this lies in their application and in characteristics inherent to the coatings themselves. Any coating must be applied to a scrupulously clean surface, and it is extremely difficult, if not impossible, to remove all traces of cleaning materials or polish. Lacquer or a similar coating often becomes brittle as well, and, due to a lack of primer, can be scratched with relative ease (it will also craze and flake off with time). Any defect or failure of the coating allows localized corrosion or tarnish. Such corrosion is usually very obvious due to the contrast between itself and the surrounding intact coating. To "restore" this localized area without stripping the entire object and "repolishing" or retreating the entire object becomes almost impossible.

The removal of lacquer or other coating usually subjects the object to potential damage. This can be particularly true if the coating has been exposed to ultraviolet light (e.g. sunlight). In 1982 we found that the In-cralac (an acrylic lacquer containing a corrosion inhibitor) applied to the four gold horses near the Lincoln Memorial in 1972 was insoluble in almost all readily available solvents. We finally had to use a "marine" paint stripper (for epoxies) and then "blast" softened lacquer off with about 900 psi water pressure (far in excess of desirable pressure). Because of this we decided to use wax containing Benzotriazole (a corrosion inhibitor) as a protective coating instead of reapplying lacquer. The wax seems to be doing an acceptable job of protecting the surface of these statues. Very easy to remove, it has also been used on other statues for several years, with success.

Nicholas F. Veloz
George Washington Parkway

Lead Flashing

Recently Philadelphia lost a preservation battle over the McCrea Houses, twin row houses built in 1798. Accessioning parts of the structures into the Independence NHP Architectural Study Collection, along with the production of 11 sheets of HABS drawings plus photographs have been the only compensations for this loss.

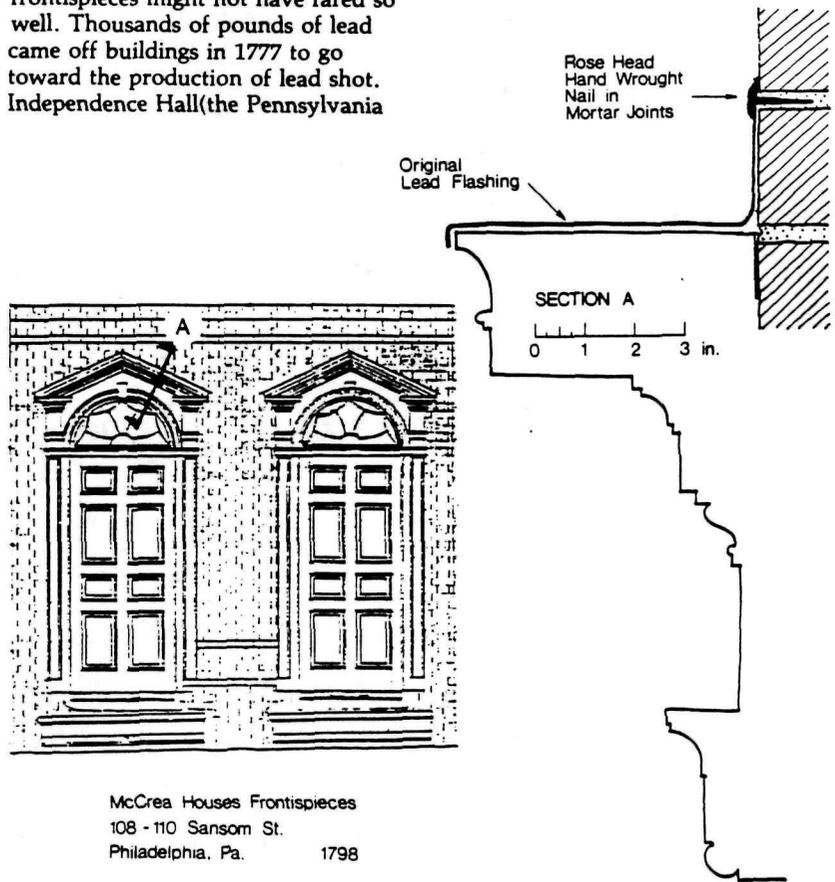
The pair of wood frontispieces, Independence National Historical Park (INHP) accessions 3493-1 and 2, rare and delicately detailed, only survived on the exterior face of the structures as they had continuously been flashed. Upon close inspection during the rescue mission we found very heavy lead flashing, 1/16-1/8 thick, covering the "gable roofs" of each frontispiece. The lead sheets curved down over the top fillet of the crown molding, and bent up some three inches back against the brick wall, one sheet for each slope overlapping at the gable peak. The lead was fastened tight to the brickwork with 3/4" diameter, rose head, 1 1/4" inch long wrought nails driven into the mortar joints.

Had the McCrea Houses been built before the American Revolution their frontispieces might not have fared so well. Thousands of pounds of lead came off buildings in 1777 to go toward the production of lead shot. Independence Hall (the Pennsylvania

State House then) lost its original lead rainwater conductor heads. Fortunately someone controlled the confiscation to relatively non-essential use of lead at the State House. Original lead sheets still protect the exterior wood trim of the 1755 tower, still fastened with hand wrought nails.

Prompted by this historic use, our INHP Maintenance carpenters have been using lead to cover all exterior woodwork where rainwater could possibly collect. Two vital features of the Park will probably have their life extended this way: the 1795-97 carved mahogany eagle tympanum of the First Bank of the United States, and the 1828 leaf work surrounding William Strickland's tower clocks at Independence Hall. In both these cases, the lead flashing was cut to fit the carving with the back edge turned up against the back wall. Using 1/2-3/4 inch mason's cold chisels, in one operation the lead was cut off and forced into reglets formed in the wood back walls. ☉

Penelope Hartshorne Batcheler
Historical Architect
Independence National Historical Park



McCrea Houses Frontispieces
108 - 110 Sansom St.
Philadelphia, Pa. 1798

Jaite Mill . . .

continued from page 6

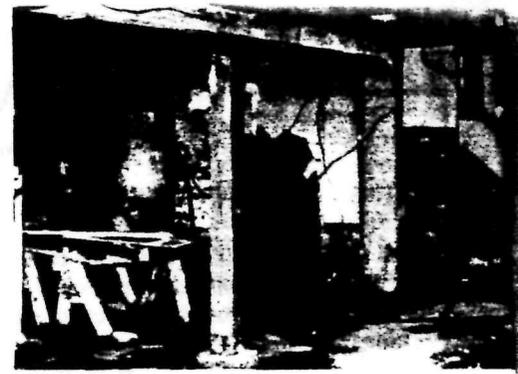
toric architecture, and changing lifestyles.

Unfortunately, when acquired by the government, the buildings were deteriorated and largely vacant. Three of the duplexes were gone. At the same time, the developing staff of the recreation area found themselves scattered in offices located across wide distances in many nonhistoric buildings, some of which were intrusions in the otherwise pastoral scene of the Cuyahoga Valley. Therefore, in the spring of 1982, a brief study was undertaken to determine the most feasible site for a consolidated headquarters facility. The historical significance, central location, and suitability of the existing space for the proposed use distinguished Jaite as the preferred location for this purpose.

Research and Planning

After the site feasibility study was completed and approved, historical

research and architectural investigation began. This formed the basis of the Historic Structure Report (HSR), which included detailed construction drawings to adapt the existing spaces for the proposed office use. Such planning ensured that the significant features of the structures were preserved during the rehabilitation which followed. It also helped to identify locations of missing historic fabric and existing nonhistoric material. The completed HSR and architectural drawings (prepared by staff of the recreation area) were reviewed and approved by the Midwest Regional Office and the Ohio State Historic Preservation Office prior to the start of work. The Jaite area was also studied from an archeological point of view to identify subsurface cultural material potentially affected by ground disturbing activities, such as the installation of underground utility lines, the layout of walks and drives, and the construction of a new sewage treatment system. Since the area was substantially disturbed during the construction and maintenance of the original buildings, little cultural material was expected or encountered. The leach



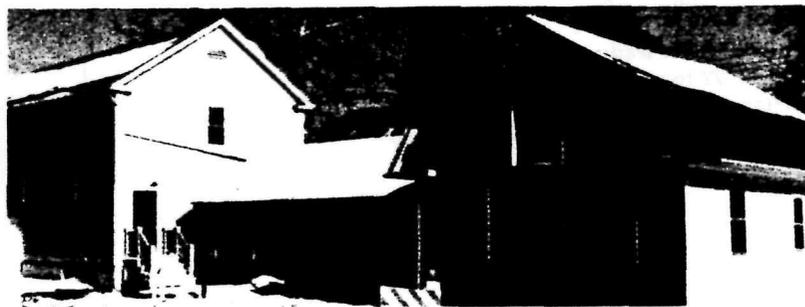
View of store basement, which is now a training room.

field, however, was redesigned when an important prehistoric remain was encountered in a pre-construction archeological survey.

Treatment

The basic treatment of the Jaite buildings was one of rehabilitation. The exteriors were restored to their historic appearance while the interiors were adapted for the new use. Given the high level of integrity of the historic fabric and the suitability of the existing spaces for the proposed uses, only minor modifications were made to both the interior and exterior of the company town buildings.

The greatest interior change was made on the first floor of the com-





View of connector under way; note roof framing of existing Shower Building and new connector.

pany store, where the original open space was divided into a conference room and a series of spaces for support services. Even so, the new walls were designed to be compatible with, yet discernible from, the original material. Another important interior modification was the construction of a staircase to provide a second means of egress from the basement and second floor levels of the building. This staircase greatly improved the circulation pattern within this building and allowed the establishment of a small training room in what was previously an unusable basement.

In the other areas of the store and throughout the other buildings, the existing arrangement of spaces served the headquarters' functional requirements remarkably well. Only minor modifications of a few non-loadbearing walls were necessary. For the most part, the interior spaces were cleaned, patched, and painted. The original plaster walls and ceilings along with wooden doors, windows, and floors were retained. Missing or damaged elements were replaced with new material to match the adjacent historic fabric.

With the exception of a shower building constructed in the 1950s and small bathroom additions to the bungalows in the 1960s, the company buildings remained primarily unaltered through the years. The maintenance of their exteriors, however, had been deferred, and what work had been performed was often done poorly. The roofs of the buildings had four or more layers of asphalt shingles; the gutters and downspouts were ineffective; many window sashes were missing; and the wooden clapboarding exhibited every type of paint failure imaginable.

To remove the excessive weight and to prevent further deterioration from leaks, the first order of business was to reroof the buildings. Since few extant historic photographs of the town existed, a determination of the appropriate replacement roofing material was made by physical examination. The roof of one of the duplexes still contained the original roof sheathing and sawn shingles. This roof had been covered with plywood and with asphalt shingles. The roof sheathing of the store and bungalows, however, revealed that the original

roofing material was individual, cut asphalt shingles. Modern, tab-type asphalt shingles similar in appearance were installed on the roofs of the bungalows and the store, and fire-retardant sawn cedar shingles were contracted for installation on the duplexes.

Paint samples were taken from all painted exterior surfaces to identify the original color scheme. This analysis revealed two complementary shades of light yellow for the clapboarding and trim with a deep bottle green for the window sash and doors. Prior to repainting the building with these colors, the exterior wood surfaces were thoroughly prepared. The sash, trim, and clapboarding were scraped to sound material, sanded, and primed before being painted with two coats of the researched paint scheme.

The bathroom additions were retained, not so much for their contribution to the history of the evolution of the structures, but because, reasonably well built, they provided essential services. The shower building, constructed in the 1950s, was converted into office space. Its roof, however, was raised to enclose a new corridor which now connects the shower building and the carriage house to the store.

The other major exterior work was the replacement of the original two-story front porch on the store building. From physical evidence and oral history, it was known that this porch was removed in the late 1940s. Old tax records showed the plan of the porch; scars on the clapboarding showed its height; but no photographs or drawings could be found to reveal its detailing. As the rehabilitation work progressed, many local residents became interested in the project. One in particular, a long-time manager of the mill, took a special interest. While passing by one day, he produced an old photograph of a child in the yard of a neighboring property. In the background, was the corner of the Jaite store, including its porch. Under close examination, the configuration of the posts, handrails, and balustrades could be easily determined. The design of the replacement porch, which was based on the previously known overall size and height of the original, was completed, thanks to the detail contained in this photograph.

continued on page 12

Jaite Mill . . .

continued from page 11

Accessibility for the Physically Disabled

To the extent possible, the new headquarters facility was designed to be accessible to the physically disabled. The siting of the buildings, with their first floor levels approximately three feet above grade, made this goal somewhat difficult to achieve. Furthermore, the rather small size of the upper floors of the Jaite buildings—the bungalows in particular—made it difficult to install elevators without an unacceptable loss of historic fabric with only marginal gains in accessibility. Therefore, the first floor levels of the store and of the duplexes were made completely accessible to the disabled. A ramp was incorporated into the design of the new porch and the bathrooms were designed accordingly. In this way, almost half of the building space and all of the services offered by the headquarters are accessible.

Utilities

The utility systems of the Jaite buildings required virtually total

replacement. Although these systems had been upgraded over time, the water supply, waste treatment, electrical wiring, and telephone service were inadequate to meet the needs of the headquarters facility or the requirements of the health and safety codes.

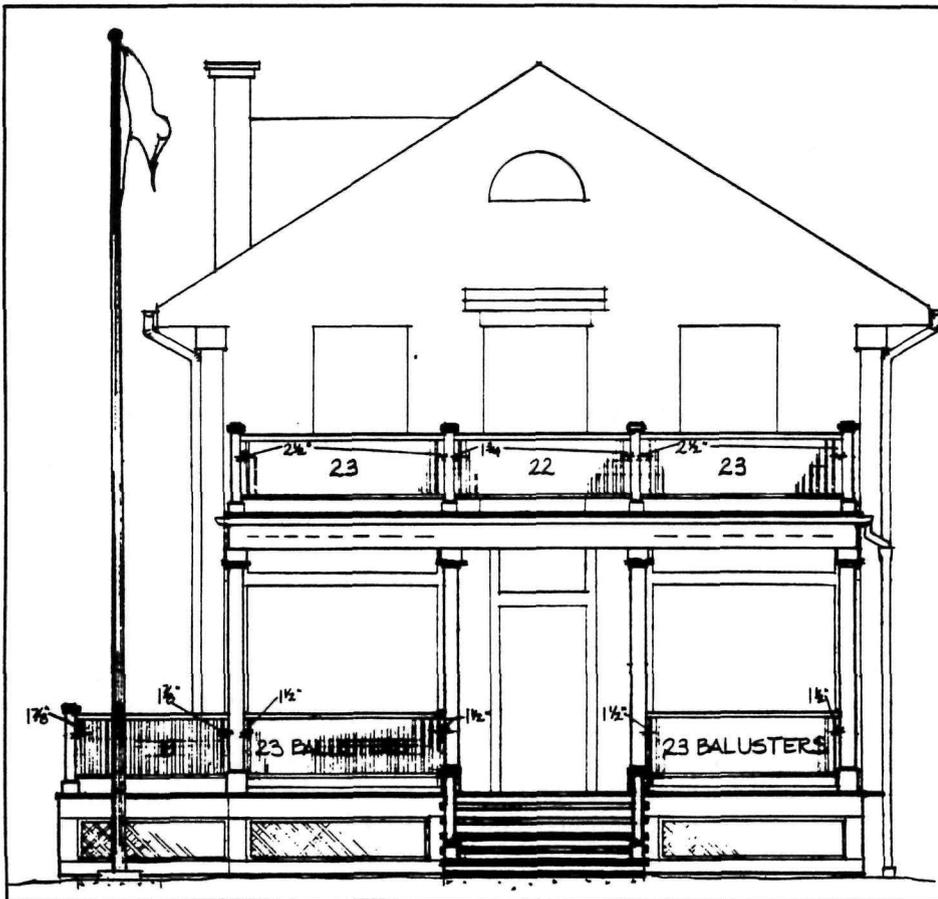
Cuyahoga Valley is not served by municipal water supply or waste treatment systems. The existing well has sufficient capacity to serve the plumbing requirements of the Jaite buildings, but the water contains natural gas. Therefore, a holding/venting tank was installed in this water supply system so that the water could be filtered, softened, and chemically treated. The existing plumbing fixtures, piping, and bathroom finish materials were replaced with new material. The existing septic tanks, even though designed and used for the much greater flow rates of the original residential use, were completely antiquated. A new central, sewer system—including piping, pump station, and leach field—was designed and installed in accordance with Ohio EPA and U.S. Public Health Service standards. With the cooperation of the local fire

marshall, a large underground water reservoir and suction hydrant were planned and installed to provide fire fighting water.

Stoves provided the original source of heat for the duplexes and store; the bungalows had central coal-fired furnaces. At the time of Federal acquisition, all buildings were heated by oil-fired, forced hot air furnaces. In the basement of the store alone, there were seven 250-gallon fuel oil storage tanks. To improve the efficiency and to reduce the maintenance of these heating systems, new natural gas furnaces were installed. The decision to convert to natural gas as a fuel source was based upon the high cost, annual maintenance requirements, and administrative burden of oil heat, compared to the availability of natural gas, its greater efficiency and cleanliness, and the need to replace the existing furnaces, regardless of the fuel source. Central air conditioning was also added. Although new return ducts were required to update the original gravity systems, the existing supply ducts and registers were reused, wherever possible, for both heating and cooling. Fortunately, the original chimneys were lined and could be used to vent the new mechanical equipment.

To conserve as much energy as practical, the attics and foundations of the Jaite buildings were insulated. In addition, former chimney thimbles

Photograph which provided missing information on porch detailing.

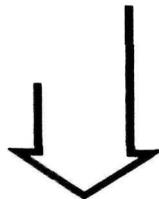


North Elevation of Company Store, showing replacement porch and ramp for the physically disabled.



were sealed, the exterior doors weatherstripped, and storm windows installed. The exterior walls, however, were not insulated. These are constructed of clapboarding on 1-inch thick tongue-and-groove sheathing. The interior finish, 1-inch thick plaster on wood lath, was in such a good state of preservation that the loss of historic fabric could not be justified by the relatively small projected reduction in heat loss. Blown-in insulation was considered but rejected because the absence of a vapor barrier would cause condensation within the walls, the resulting loss of insulative value, and, ultimately, deterioration of the structural envelope. The several small panes of glass which comprised the storefront were replaced with double pane glass of the same size and number. This provided an energy-efficient glazing system which did not mar the appearance of the storefront as did the storm windows which the double pane glass replaced. The new heating and cooling systems are equipped with setback thermostats. A single central heating and cooling system was also considered for the entire Jaite Company Town, but rejected due to the projected loss of efficiency over the relatively large transmission distances between structures and the greater flexibility and reliability of separate systems.

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New on the Market

New York City's Gracie Mansion: A History of the Mayor's House, Mary Black. Published by the J. M. Kaplan Fund and distributed by the Publishing Center, 625 Broadway, New York, New York 10012. Priced at \$10.95 (paperbound) and \$17.95 (hardbound).

The book presents the historical record of the mayor's house and its surroundings before Fiorello H. LaGuardia reluctantly took residence there in the early 1940's. The story begins in 1646 with a land grant to a Dutch carpenter, discusses the house's misfortunes during the War of 1812, and the circumstances when the city took it over in 1896, as well as the efforts of Robert Moses who claimed the near-derelict house for the official mayor's residence, remodeled it, and encouraged Fiorello LaGuardia to move there in 1942.

Built in the U.S.A.: American Buildings from Airports to Zoos. Preservation Shops, National Trust for Historic Preservation, 1600 H Street, N.W., Washington, D.C. 20006. Priced at \$8.95 (less 10% discount for Trust members) plus \$3.00 for postage and handling.

The book provides a unique overview of American architecture. Guidebook-sized, it presents lively illustrated essays by noted authorities on 42 building types, revealing why they look the way they do. The book is highly readable and designed to appeal to general readers as well as confirmed building lovers. More than 250 illustrations are used (black and white photographs and drawings).

The Wages of History: The AASLH Employment Trends and Salary Survey, Charles Phillips and Patricia Hogan. Order Department, AASLH, P.O. Box 40983, Nashville, TN 37204. Priced at \$10.00.

A statistical study of history professionals, their salaries, ages, sex, education, and professional experience and responsibilities as collected from a survey of 1,000 historical organizations and 1,000 individuals working in the history field.

Essays from the Lowell Conference of Industrial History, 1982 and 1983, Edited by Robert Weible. Museum of American Textile History, 800 Massachusetts Avenue,

North Andover, MA 01845. Priced at \$15.00 plus \$2.00 postage and handling.

The Lowell Conference on Industrial History is a yearly program which examines different aspects of American and international industrial history. Conference papers have been combined for the years 1982 and 1983. The 1982 meeting addressed arts and industrialism and examined the ways in which the growth of an industrial society has shaped the aesthetic of the modern world, and how the arts have, in turn, shaped our understanding of industrial society. The 1983 conference focused on a wide range of topics associated with the industrial city: teaching urban history in the classroom and in the cities themselves, preserving the city, technology's impact on urban industrial growth, and the people of the urban industrial community.

The Scope of Historical Archaeology—Essays in Honor of John L. Cotter, Edited by David G. Orr and Daniel G. Crozier. Priced at \$15.00, with all proceeds donated to the Society for Historical Archaeology. Write David G. Orr, Archeologist, Mid-Atlantic Region, 143 South Third Street, Philadelphia, PA 19106.

The archeological career of John L. Cotter has spanned almost five decades. From Paleo-Indian sites to "Above Ground Archaeology," Professor Cotter has made his mark on the study of American institutions and culture. Some of the essays in this new collection describe early excavations as well as their originating logic and philosophy. Others discuss National Park Service archeological and historical concerns, using Valley Forge as a focus. Above all, the authors and editors alike intend the volume as a tribute to John Cotter and his impact on their lives.

Where the Potomac Begins, Gilbert Gude. Seven Locks Press, 7425 MacArthur Boulevard, P.O. Box 37, Cabin John, MD 20818. Priced at \$18.95 (include \$1.75 for postage and handling).

Written by a former Maryland Congressman, the book presents a history of the North Branch Valley. Gude begins by describing the land as it must have been during the coal-forming era 20 million years ago, and closes with an analysis of the legacy of environmental problems from 40 years of mining. He traces the history of Kempton, Maryland, and Elk Garden, West Virginia—towns which flourished during the early part of this century but barely survive now that the coal has run out. Former West Virginia Senator Jennings Randolph writes in his Foreward, "From the creation of coal deposits in prehistoric centuries to the current threat of acid rain, (Gude) has traced the geology, the history, and the commerce of the Upper Potomac region, always relating them to the people who live there." ☉

The electrical and telephone systems were completely replaced. A new, underground electric line was installed to the former privy, which now functions as an electrical distribution and metering station. From the privy, separate underground electrical feeds are provided to each structure. Prior to completing the site work, underground conduits were placed between the bungalows and the store, providing a location for telephone, alarm, computer, and other present and future low voltage wiring needs. All of the buildings are equipped with fire and intrusion detection systems, which transmit their signals and status via radio to the park communications center, which is staffed 24 hours a day.

Landscaping

One of the most difficult and most often overlooked aspects of a rehabilitation project of this type is the landscaping. It was critical to develop a landscaping plan which united as one facility six houses and a store which originally functioned independently of each other. It was also important to develop a parking area large enough and conveniently located (particularly for the physically disabled) to serve the headquarters facility without changing the character of the historic district.

These goals were accomplished by developing four separate small parking lots which provide enough spaces in the right places without becoming too obtrusive. One small lot, with spaces for the disabled and Government vehicles (seven spaces total), is located directly adjacent to the store and bungalows. Across the street, outside of the historic district, is a general parking area for employees and visitors. It is well-screened by a thick vegetative buffer. Adjacent to the duplexes is another lot for employees, visitors, and the disabled. One additional parking area, located approximately 200 feet from the bungalows at a previously disturbed site, is an overflow lot, provided particularly for users of the training room. A separate system of pedestrian walks links these parking areas with the individual company town buildings so that they all function together as one facility, minimizing conflicts between pedestrians and vehicles.

Conclusion

The rehabilitation of the Jaite Company Town came at a particularly timely point in the development of Cuyahoga Valley National Recreation Area. The need for a consolidated headquarters facility was acute and the historic buildings were deteriorating rapidly. Of fundamental importance to the project, the park had the funds and personnel to do most of the work in-house. The feasibility study, historical research, architectural investigation, design, drafting, procurement, construction, and supervision were all performed by the park staff. Later, however, as fewer park employees became available for this project, more work elements were contracted out. This required much greater advance time for project planning, contract document preparation, construction specifications, and bidding. As the cost for certain work elements increased and as fewer funds became available for the project, the completion time was extended dramatically.

The above conditions required careful planning and a logical phasing of the work. Fortunately, the nature of the company town allowed a highly flexible project schedule. Initially, exterior stabilization and restoration were undertaken. At the same time, the interior of the store was completed. This allowed use of the store while the interiors of the bungalows were readied. Then, after the bungalows were occupied, site work continued while the duplexes were prepared. Even though this phased construction process created some inconvenience to the employees and visitors (especially before the walks and drives were paved), it was the only way that a project of this magnitude could be undertaken with the available funds and personnel.

The rehabilitation of the Jaite Company Town as park headquarters simultaneously solved the issues of providing adequate office space and of preserving a significant collection of historic structures. A notable spin-off benefit was the removal of four surplus structures, further reducing maintenance requirements and increasing the use of historic structures at Cuyahoga Valley National Recreation Area. ©

The author is a Historical Architect,
Cuyahoga Valley National Recreation Area.

Announcements

Training on Federal Archeological Responsibilities Available

The Archeological Assistance Division, National Park Service, plans a course entitled "Archaeology for Federal Managers" in Washington, D.C. the week of June 24, 1985. Open to all Federal managers with responsibility for archeological resources, the three and a half day course introduces participants to the purposes and methods of modern archeology. Major Federal legislation will be covered in detail, as will requirements present in implementing regulations and related documents. Problems of current interest, such as curation of recovered archeological materials and the disposition of archeological human remains, will also be discussed. For further information, write to Ms. Nina Backus, Archeological Assistance Division, National Park Service, Department of the Interior, Washington, D.C. 20013, or call Dr. Annetta Cheek at 202/343-4101.

Update: National Archeological Database

For the last two years, Congress had made the development of a Nationwide Computerized Archeological Database an Archeological Assistance Division priority. The purposes of the database are to improve Federal agency project planning, to avoid duplication of archeological efforts, and to improve NPS ability to oversee and coordinate the Federal archeological program and report to the Congress on its scope and effectiveness, as required under the Archeological and Historic Preservation Act of 1974.

The last year was spent designing and developing the database with nationwide implementation projected for early summer. In the meantime, a pilot project is being conducted in the Southeast Region. Since much of the database information already resides in the State offices, it is hoped that working with the states will insure uniformity of data elements as well as a degree of nationwide standardization. Georgia and Arkansas are already participating in the pilot project.

The database will include information on archeological reports, on Federal archeological projects and on other existing databases where people can go to get more detailed information. Information on location, type of archeological study, acreage, and time periods will be included. There is enough flexibility built in so that States and agencies can add variables and tables specifically tailored to their individual information needs.

The demonstration database is set up on an IBM-XT and uses the ORACLE relational database management system. This is a fully relational DBMS which will run on micros, minis, and mainframes. The system has been mounted on a portable computer (Compaq plus). The database package has been installed in SERO, WRO, and MARO.

Training Certificates

A training course in preservation philosophy and techniques needed to preserve our cultural resources has resulted in the issuing of certificates to 26 National Park Service employees, many of whom are maintenance personnel. The course undertook to teach the art of Historic Preservation Maintenance through hands-on restoration of a park operations building at the Grand Canyon. The training effort was initiated by Jim Askins of the Williamsport Training Center. Close to 1,000 hours were expended by those working on the project.

Call for Papers

The National Park Service and Vincennes University announce the third annual George Rogers Clark Trans-Appalachian Frontier History Conference on October 5, 1985 at Vincennes University. Papers may be delivered on any aspect of frontier history from the Appalachians to the Mississippi. Proposals must be received by June 5. If interested, submit a 300 word summary of your subject, together with a short resume to: Conference Committee, George Rogers Clark, NHP, 401 S. Second Street, Vincennes, IN 47591.



Ladder going up arm which leads to torch inside the Statue of Liberty.

Edison NHS

A year-long conservation project was recently completed for the Edison National Historic Site at Glenmont House in West Orange, New Jersey. It included a detailed physical survey of the textiles in the 25-room house as well as a conservation plan. Implementation of actual conservation procedures completed the project.

Presidential Awards for Design Excellence

The first Presidential Awards for Design Excellence were presented to representatives of the National Park Service during a recent ceremony held at the White House. Winners included the Historic Preservation Tax Incentives Program, the Linn Cove Viaduct at the Blue Ridge Parkway (North Carolina), Franklin Court (Philadelphia), and the Unigrid Design Program, cited for the uniformity and quality they bring to the communications of the Service. The Presidential Design Awards were established by President Reagan to "publicly recognize successful achievements in Federal design and inspire standards of excellence throughout the Federal government."

Upholding the Torch: Statue of Liberty Restoration

Designed by Auguste Bartholdi, the statue was more than a work of art; it was a challenge to the engineering skills available over 100 years ago. Bartholdi enlisted the help of the eminent French engineer Gustave Eiffel to design a load-carrying frame for the copper skin.

The 151 foot tall statue has a framework of puddled iron. Her central support system is a pylon with four legs linked by cross bracing. Connected to the pylon is a secondary framework consisting of iron angles and flat iron bars. This framework provides support for the armature, a network of 1,350 puddled iron bars (2 by 5/8 in.) that conform to the outer shape of the statue. The copper skin is attached to the armature with 1,500 U-shaped copper saddles. The saddles fit around the armature on three sides and are flush riveted, with copper, to the copper skin. The 80-ton copper envelope (3/32 in. thick copper) consists of 300 hammered sheets rivetted together with 300,000 copper rivets. The design of the skin armature attachment using saddles was ingenious, as it allows the skin to move freely with changes in temperature and other weather conditions.

Yet even though Bartholdi, Eiffel, and their colleagues anticipated the effects of the weather, the severity of the marine environment, water seepage, and acid rain have taken their toll. Over a dozen problem areas that need attention have been uncovered, the most important due to corrosion. These included:

1. The condition of the exterior copper skin,
2. Paint peeling on the interior,
3. Deterioration of the torch,
4. Weakening of the torch arm's iron support structure and,
5. Corrosion of the iron armature, especially in the area of the copper saddles where it is attached to the skin.

Work to correct these problems is currently underway at a cost of \$400,000,000. It is scheduled for completion in time for the 100th birthday of the statue on July 4, 1986.

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Announcements

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Ready Reference

The reference guide to helpful professional organizations included in the February, 1985 CRM BULLETIN overlooked several useful ones.

For Historic Architecture:

Society of Architectural Historians
1700 Walnut Street
Philadelphia, PA 19103

For History:

American Historical Association
400 A Street, S.E.
Washington, DC 20003

Organization of American Historians
112 N. Bryan Street
Bloomington, IN 47401

Western History Association
Department of History
University of Nevada at Reno
Reno, NV 89557-0037

Southern Historical Association
Department of History
Athens, GA 30602

American Association for State
and Local History
708 Berry Road
Nashville, TN 37204

Society for History in the
Federal Government
Box 14139
Benjamin Franklin Station
Washington, DC 20044

National Council on Public History
Department of History
West Virginia University
Morgantown, WV 26506

National Coordination Committee
for the Promotion of History
400 A Street, S.E.
Washington, DC 20003

American Studies Association
307 College Hall
University of Pennsylvania
Philadelphia, PA 19104

Surfboat Completed

The first oar-powered Beebe-McClellan surfboat to be built in the U.S. in over sixty years was launched in Camden, Maine on November 16, 1984. The launching culminated a two-year project by the Historic Furnishings Division at Harpers Ferry Center to recreate an exact, working replica of the surfboat for the refurbishing of the United States Life Saving Service Station at Sleeping Bear Dunes National Lakeshore. The boat

holds a crew of eight and can be rowed or sailed. In rough seas and surf, the Beebe-McClellan is **virtually unsinkable**. Air tanks in the side of the boat and handles on the bottom make it easy to right after a capsizing. Special baffles in the deck of the boat make it self-draining. ©



Beebe-McClellan at construction site.

CRM BULLETIN

April 1985

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Cultural Resources,
Washington, D.C.

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