



Preservation Architect

The Newsletter of The Historic Resources Committee | December 15, 2003



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Upcoming Conferences and Events

Cultural Landscapes and Historic Preservation

The Fourth National Forum on Historic Preservation

Goucher College, Baltimore, Md.

March 18-20, 2004

The Fourth National Forum on Historic Preservation Practice will focus on the challenges faced in documenting, assessing, and protecting America's changing cultural landscapes.

Restoration & Renovation, Boston, April 21-24, 2004

"Preserving the Metropolis: Legacies of the Twentieth Century"

The Restoration & Renovation Exhibition and Conference is the most comprehensive learning and networking event for professionals who are passionate about historic restoration and renovation, traditional architecture, construction, and planning. More than 6,000 restoration and renovation professionals and enthusiasts attend each year to network among peers, take part in world-class educational seminars, and meet face-to-face with exhibitors who offer specialty, hard-to-find products and services, many of which you've never seen before.

Mark your calendars for this exciting event. For complete details, visit the show Web site at www.restorationandrenovation.com; call Restore Media, LLC, at 800-982-6247 or 978-664-8066; fax them at 978-664-5822; or e-mail info@restoremedia.com.

HRC Events at the 2004 AIA National Convention and Design Exposition

McCormick Place, Chicago

June 10-12, 2004

Join us for four HRC-sponsored events at the 2004 AIA National Convention.

AIA Historic Resources Committee Preservation Education Symposium

AIA National Headquarters, Washington, D.C.

November 18-19, 2004

This conference will address current issues in architecture and preservation education. Topics will include the integration of existing buildings and preservation practices into architecture education to serve the needs of future generations of practitioners. Conference sessions will highlight best practices among degree programs focused on the education of historic preservation architects.

This conference is part of an AIA HRC Preservation Education Initiative in collaboration with the National Architectural Accrediting Board (NAAB), the Association of Collegiate Schools of Architecture (ACSA), the National Council of Architectural Registration Boards (NCARB), and the National Council for Preservation Education (NCPE).

For more information, stay tuned to the HRC Web site or e-mail hrc@aia.org.

In the News

HABS 70th Anniversary Symposium

HRC and the National Park Service hosted the HABS 70th Anniversary Symposium November 14-16, 2003, at AIA National Headquarters.

The History of HABS

In 2003, the Historic American Buildings Survey (HABS) celebrated its 70th anniversary. To commemorate this event, the AIA Historic Resources Committee and the National Park Service hosted a conference November 14-16 that delved into HABS's history and the role played by large format photography and measured drawings.

HABS Large Format Photography

Our buildings are built with demolition in mind, so for any kind of continuity we need documentation. Photography is critical in documentation, said Jack Boucher, HABS supervisor of architectural photographic documentation, during the HABS 70th Anniversary Symposium sponsored by the American Institute of Architects and the National Park Service.

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The 'Shadow Box' in the Digital Age

Carol M. Highsmith

Change has swept in digital imaging, but by no means has it swept away the depth, versatility, and archival importance of film. Any photographer who does not keep up with our changing world will be left to admire his art while he wonders where the clients went.

Promise to Probabilities: Use of the Three-Dimensional Laser Scanner at Texas Tech University as a Documentation Tool at the Statue of Liberty, and Diverse Historic Sites

Elizabeth I. Loudon

Texas Tech University has opened a new realm of research possibilities with the acquisition of the Cyrax 3D laser scanner. Digital procedures allow documentation of monumental objects without the use of scaffolding, and with a safe and accurate process, yet issues such as file size, output methods, and rendering techniques are still under development.

Integrating GIS and GPS Technologies into Cultural Resource Survey and Documentation

Deidre McCarthy

(This article originally appeared in Vernacular Architecture Newsletter, Fall 2003)

Throughout the field of historic preservation, accurate locational data remains a critical element in our understanding of cultural landscapes, building traditions, settlement patterns, and past lifeways. Using geographic clues about environmental and human influences on cultural resources can significantly aide in cultural resource management, conservation, and physical preservation of sites.

Managing a HABS Team

John P. White, AIA

Based on over 30 years of experience in historic preservation and 25 years as a HABS project supervisor, John White examined today's procedures for managing a HABS team. While management methods have evolved since he first led a HABS team in 1974, the project supervisor continues to serve as a manager, teacher, advisor, and mediator in the successful completion of a HABS project.

Teaching HABS in a University Setting

David G. Woodcock, FAIA

David Woodcock examined the purpose and products of over 25 years of instruction in a professional program in architecture. Beginning with a personal reflection, he shows that documentation plays a critical role in the education of the architect.

National Park Service, American Institute of Architects, and Library of Congress Re-Sign 1933 Tripartite Agreement

The National Park Service (NPS), the AIA, and the Library of Congress recently re-signed the HABS Tripartite Agreement. First signed in 1933, the agreement created the Historic American Building Survey (HABS) to document America's historic structures and to create work for architects, draftsmen, and photographers left jobless by the Great Depression.

Preservation Knowledge and Networks

HRC Liaison Reports Keep Preservation Architects in Touch with Allies

Jack Pyburn, AIA

Moderator, 2003 Liaison Reports

> [Read Current Reports](#)

The AIA-Historic Resources Committee (AIA-HRC) recognizes the importance of collaboration with and mutual support between its allied preservation organizations and disciplines in achieving national preservation goals. Every year the AIA-HRC solicits a written report from national allied preservation organizations and asks a select group of the organizations to present their reports in person at an annual AIA-HRC meeting. In 2003, the liaison reports were presented at the 70th Anniversary Celebration of the Historic American Building Survey, held at AIA Headquarters on November 14. For the first time, and as a result of recently expanded AIA Web site capabilities, the written liaison reports are available online.

Each 2003 liaison report presents basic information about the organization reporting, identifies the focus of the past and coming years' activities for the organization, identifies the pressing preservation issues facing the organization, and discusses new opportunities in preservation from the organization's vantage point. Finally, each organization identifies how the AIA can support their activities and mission.

Reading the reports is an efficient way to gain an understanding of the current state of preservation and the current issues, activities, and goals for each of the reporting allied organizations.

HRC Member and Component News

The Historic Resources Committee of AIA Cleveland

AIA Cleveland's Historic Resources Committee (HRC) has been one of the chapter's most active bodies since its founding in the late 1950s. Established at a time when the preservation movement was in its infancy, the committee has long championed the role historic buildings play in contributing to the quality of life in Northeast Ohio.

HRC National Subcommittee Updates

HRC National now has official subcommittees to manage some of the group's most critical issues. We hope you'll want to get involved!

Let us hear from you!

Forward your news by e-mail to hrc@aia.org.

Preservation Resources

From Preservation Online: The magazine of the National Trust for Historic Preservation

<http://www.nationaltrust.org/magazine/story/index.htm>

Common Ground: Preserving Our Nation's Heritage

<http://commonground.cr.nps.gov>

Heritage News, published by the National Park Service for the Heritage Community

<http://heritagenews.cr.nps.gov/index/Index.cfm>

CRM: The Journal of Heritage Stewardship

<http://crmjournal.cr.nps.gov>



TRADITIONAL BUILDING

EXHIBITION AND CONFERENCE



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In Case You Missed The...

Traditional Building Exhibition and Conference

Chicago 2010

At the Historic Navy Pier

WRAP UP

Sixty education sessions including seminars, workshops, craftsmanship demonstrations and architectural tours plus the popular Traditional Building Design Challenge drew 2,500 from around the world to the annual Traditional Building Exhibition and Conference in Chicago, Oct. 20-23, 2010.

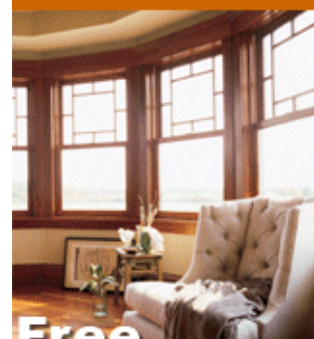
Attendees were architects, contractors, interior designers, building owners and facilities managers who restore and renovate historic buildings and build new ones in both residential and non-residential traditional styles.

"Our attendees are looking for solutions and networking for new business," said Education Director Judy Hayward. Attendance for education sessions was up slightly over last year's conference in Baltimore while exhibit hall traffic was slightly down. "Continuing Education Credits continue to be an important motivation for attendees and architects could earn 24 Learning Units," according to Hayward. [Over 100 exhibitors of](#)

[period authentic products](#) dazzled attendees.

Four Fine Webinars

A Mini Symposium on Traditional Building and Design



Free
on-demand events

Hot Stuff: Energy Performance in Historic Buildings

On-demand version available

1.5 HSW/SD

Click here to register online.

Produced by Clem Labine's Traditional Building, Clem Labine's Period Homes, and the Traditional Building Exhibition and Conference.

Underwritten by Marvin Windows and Doors.

Take all four; earn 6.0 HSW/SD.

NEWS

President Obama on Historic Preservation: [President Obama spoke with residents of Fairfax, Virginia, about the economy and jobs, and historic preservation.](#)

Traditional Building by the Bay: [TBEC Takes Baltimore](#)

New Book Announcement: [Traditional American Rooms](#) is a guided tour through the magnificent period rooms of the Winterthur Museum and Country Estate.

Conference Brochure
[Click here to receive a full conference brochure.](#)

Why This Recession Is a Good Thing: [A Letter From Restore Media's President](#)

Historic Neighborhoods, Traditional Buildings and Today's Economy: [Industry Seer Donovan Rypkema Delivers a Sharp-Edged Assessment at the Traditional Building Exhibition and Conference](#)

The Stimulus Plan: [The recently passed stimulus plan](#) offers a vast array of opportunities for preservation and construction projects, but finding specific information is a challenge. [Traditional Building](#) decided to take a closer look at the bill, all 407 pages of it, and extract relevant information.

[GSA Announces Buildings Slated to Receive Stimulus Funds \(PDF\)](#)

Popular sessions included the "Cast Iron Workshop", presented by the Great Lakes Chapter of the Association of Preservation Technology International; the "Palladio Awards"; "Masonry and Moisture Problems and Solutions;" and the keynote address: "Greener at the Grassroots." This year's winner of the Clem Labine Prize, Steven Semes delivered an important lecture called "The Future of the Past: a Conservation Ethic for Architecture, Urbanism and Historic Preservation," which discussed sympathetic additions to historic buildings. Semes has written a book with the same name.

Seminars which discussed the intersection of historic preservation and sustainable development were also popular. Traditional building professionals continue to collect data on the inherent energy efficiency of historic buildings. Recycling these buildings should be a universally accepted "green building practice." Seminars on the adaptive reuse of historic and existing buildings were very well attended.

"We were gratified by the positive response we got for this year's focus on Green Preservation and Development. We appreciate the effort and professional delivery by the 100 speakers whose presentations are so appropriate for traditional building practitioners," said Hayward.

The Exhibition Hall presented over 100 beautiful, sustainable, durable, custom made, period authentic building product types including antique wood flooring; decorative hardware; kitchen cabinets; roofing; siding; windows; doors; cast iron; cast stone; ceramic tile and fine paint. "Attendance was steady, not overwhelming, but we got some very high quality sales leads," said one happy exhibitor who summed it up for most.

The annual [AIBD Traditional Building Design Challenge](#) created exciting buzz on the exhibit floor as five design teams toiled for two days hand drawing a building design for an infill project in the Jefferson Park neighborhood of south Chicago. The Design Challenge winner was Hibler Group/Andrews University.

Design Award winners for the annual [Palladio Design Awards](#) Program were recognized at a dinner Thursday evening at the historic Cliff Dwellers Club. Residential and non residential projects were singled out in eight different categories for traditional design excellence.

For speaker proposals and conference inquiries,
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The History of HABS

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"The Historic American Building Survey (HABS) was the beginning of an unparalleled undertaking," said Catherine Lavoie, a historian with HABS, "because it was a national study of historic structures."

Launched in 1933, HABS was a make-work program for unemployed architects, photographers, and historians that used three components: measured drawings, large format photos, and written history.

It rallied regional preservation efforts that continued to operate on a regional basis as grass roots programs that lay in the hands of the district managers. This emphasis in turn led to an array of regionally and ethnically defined structures.

"The U.S. preservation movement really began in places like Mt. Vernon and Monticello," said Orlando Ridout V, chief of research, survey, and registration with the Maryland Historical Trust.

Colonial revival was hot stuff in the late 19th century and early 20th century, said HABS historian Lisa Davidson. It was very patriotic, and the use of it at the 1876 Centennial and the 1893 World's Expo encouraged a broader revival.

Early American architecture was also a source for new design, she said, and it provided models for HABS methodology. Publications and surveys on colonial architecture influenced HABS and established the need for a more permanent, widespread effort.

Williamsburg was renovated in the 1920s, Annapolis in the 1920s and 1930s, followed by Jamestown, Yorktown, Charleston, and the movements to preserve, study, and document them.

Ridout focused on the preservation efforts in Annapolis. When the state capitol, where George Washington had resigned his commission from the Continental Army, was renovated the citizens were outraged by the change. They insisted that it be returned to its appearance during Washington's era.

This effort set a significant precedent in the town. When a fire gutted McDowell Hall at St. John's College, built in 1741, the building was restored instead of being torn down.

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Of course, not all buildings can be saved. HABS provides what is sometimes called preservation through documentation, because it documents buildings that would otherwise be lost, observed Davidson.

"Where history is silent, you can glean much from photos and drawing, even if it includes no information on why a building was chosen, its significance, and an architectural analysis," Lavoie said.

There needs to be a balance between the documentation of the existing fabric and the interpretation of the building, Ridout noted. HABS's method is to focus on certain elements considered key to the regional style.

HABS is a diversified resource that is a treasure trove for architects, preservationists, and historians, Lavoie said. The measured drawings overshadow other aspects sometimes, but historical research is a critical part of the context. Index cards were created for every building that might be measured by HABS. First buildings were identified, then recorded and measured. There are even references to published materials on index cards. Sometimes these cards led to eliminating the building from future measuring.

"World War II did away with the program and the people, but following the war there was a slow revival," said James Jacobs, a historian with HABS. In 1946 there was talk of the surveys resuming, and in 1951 architectural historians, architects, the AIA, and the Library of Congress sought to reestablish HABS. However, it wasn't until 1957 that it was reactivated.

In the meantime, he noted, things changed significantly. When HABS began, history was a base component of the survey and of architectural education. By the time HABS revived, this Beaux Arts tradition had been supplanted by the Bauhaus ideals, which saw no usefulness in history and favored the machine aesthetic.

"There was a gulf between trained architects and trained historians after World War II," Jacobs said. The documentation needs were filled with a greater variety of disciplines, including American studies, history, architecture, architectural history, and preservation.

The bulk of the work was taken on by student summer teams, resulting in a simplification of drawings compared to the work of the 1930s. As Ridout noted, elevations and plans are important, but there is also a need for architectural details, like ornamental cornice work and carving. These are things that can be captured with photos. Other elements that need to be captured are service spaces, interior fabric, and a full range of building types and records of types of living done in the spaces.

Another interesting facet of HABS and the New Deal programs is how the work of different groups could fit together to form a more cohesive image of the architecture and the people using it.

John Michael Vlach, professor of American civilization and anthropology at George Washington University, combined the work done by the Federal Writers' Project with the information collected by HABS to create a more cohesive look at slavery and plantation architecture.

The Federal Writers' Project wanted to tell the story from the slave's

perspective, Vlach said. One of its projects was a historical narrative of slavery that they compiled through interviews with over 4,000 slaves and their descendents.

Sometimes there were photos, and those can be combined with the HABS photos and documentation to create a more complete picture.

There are also drawings of the big house or plantation house surrounded by outbuildings, and those sometimes included slave quarters. The movement among the buildings showed a landscape of control, an insistent geometry. It was clear that the vision of control was supposed to influence behavior.





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HABS Large Format Photography

"Our buildings are built with demolition in mind, so for any kind of continuity we need documentation. Photography is critical in documentation," said Jack Boucher, HABS supervisor of architectural photographic documentation, during the HABS 70 th Anniversary Symposium sponsored by the American Institute of Architects and the National Park Service.

Over the decades large format cameras have recorded buildings more quickly than the measured drawings. Dimensions can be easily determined, the photos can be enlarged to study details, and everything in them is accurate.

Large format cameras work the best for this kind of documentation because they can correct for perspective distortions. However, they also require many different kinds of equipment and weigh up to 900 pounds.

Not to mention you have to use a tripod, you use sheets of film, and have to have a dark cloth, said Steve Simmons, publisher and editor of View Camera magazine.

"You can't use it to take hundreds of photos, but they're images that have many uses," Boucher observed. You usually get 15-20 images, half exteriors and half interiors. It can take hours to do an interior shot.

One reason people continue to use the large format cameras is tradition, said Simmons. More importantly, though, you get the correct perspective using the large format camera. "You could fix the building in Photoshop, eventually," he noted, "but it would take hours of work, and you can end up messing up other things in the image."

The smallest size camera that works for this kind of documentation is the 4x5, said Carol Highsmith, of Carol Highsmith Photography Inc., although many of the HABS photographers use the 5x7.

There are other issues challenging large format photography besides the cumbersome equipment. One is color vs. black and white. Another is digital vs. film.

Boucher typically uses black and white film because it's more stable and will last 400 to 500 years. Highsmith, on the other hand, shoots in black and white but also feels our buildings should be documented in color.

"It's time for HABS to add color to their work," she said.

Douglas Nishimura, senior research scientist at the Rochester Institute of Technology's Image Permanence Institute (www.rit.edu/ipi), noted that

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color stability is generally thought to be poor, but it doesn't have to be with the proper storage. The level of light, the temperature, and the humidity all affect film. Light reactions add energy and cause colors to fade. All the details are in the dyes, so when they fade they can't be recaptured.

"Cold storage is one option to improve color stability," he said. "At about 35 degrees, and 20-30 percent humidity, color film will last about 900 years. If you can't store your pictures in such an environment, stick with black and white." He also pointed out that silver will tarnish and destabilize images; photographic silver tarnishes particularly quickly because the pieces are very small and therefore present more surface area.

Poor processing is thought to be the big problem, but it's really not, Nishimura observed. Good processing is relatively easy to achieve. The real cause of degradation, he said, is environmental pollution. This includes indoor air quality, outdoor air pollution, high temperatures, and humidity. Oil based paints and ozone machines are big culprits because they release oxides.

Nishimura presented some lessons learned:

- Nothing lasts forever
- Nothing lasts long unless it is properly cared for
- Image density and portability has replaced stability--we have added motion, sound, color, and depth to our CDs and DVDs, but they are less stable

The world of digital also raises a host of questions about image longevity. "In 15 years, will we still be able to read CDs?" asked Simmons. Digital technology remains unproven and it is changing rapidly.

And, as Simmons pointed out, digital cameras are smaller, but there's no wide angle lens, and the light striking the chip must hit at a specific angle. The large format camera can use oblique angles of light.

However, the digital age has changed the way business is conducted, as Highsmith noted. "Computers today have everything to do with photography, and architects have the same issue. You have to be a geek to keep up with all the new technologies."

She in particular likes to know the latest so she can compete in our fast-paced world. But, she doesn't use these technologies for anything but communication. For example, she has a cell phone camera to e-mail her clients images to make sure she knows what they want before she shoots with her large format camera.

Right now she shoots her images in 4x5 format and then scans them very large. This gives her the permanence of film and the flexibility of digital, and she is able to color correct them.

Technology also lets her run her business by herself, with an assistant, whereas she used to have five photographers on staff. Her PDA gives her access to all her images, books, and whatever other information she wants or needs when she's away from the office.

Despite her fascination with technology, Highsmith still shoots film. Why?

She listed a number of reasons: Because she's giving all her film to the Library of Congress; because digital technology will change; and because images are still the measure of her work and digital is not the same quality as film.

Boucher listed four elements necessary for successful large format photography:

1. Knowledge of photography and architecture
2. Top quality equipment
3. Photo lab for processing film and making prints
4. Love and enthusiasm and dedication to recording buildings for posterity

"Large format photography is more science than art," Boucher said. "There are two types of people who photograph buildings: photographers of architecture, who manipulate pictures for art, and architectural photographers who take it as it is and as it was intended by the architect."



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Use of the Three-Dimensional Laser Scanner at Texas Tech University as a Documentation Tool at the Statue of Liberty, and Diverse Historic Sites

Presentation to HABS 70th Anniversary Symposium: Technology and Architectural Documentation on November 15, 2003

Elizabeth I. Loudon, Associate Professor

Abstract:

Texas Tech University has opened a new realm of research possibilities with the acquisition of the Cyrax 3D laser scanner. Digital procedures allow documentation of monumental objects without the use of scaffolding, and with a safe and accurate process, yet issues such as file size, output methods, and rendering techniques are still under development. The Statue of Liberty project catapulted project participants into the national and international limelight, while also expanding their knowledge and capabilities to record difficult sites.

Introduction

The laser scanner technology promises to quickly and accurately capture measurements that may be used create documentation drawings. It appears to be the ideal time and effort saving solution to recording historic buildings. However, as someone quipped, it is a little "like flying to the moon. A little math, a little rocket fuel and there you are."¹ Of course, getting to the moon was much more difficult than it appeared to be when on a hot summer day 34 years ago when some of us heard astronaut Neil Armstrong say "One small step for a man, one giant leap for mankind." On that July 20, 1969 day, I venture to say that none of us thought that we would be using advanced laser technology to record historic buildings. And although still fraught with difficulty and even disaster, flying to the moon has become almost commonplace and in a similar way, the day of digital documentation as a common occurrence is defining the state-of-the-art in preservation.

But, with the laser scanner as with most things that initially may be thought to be a panacea, the rigors of creating documentation drawings, even with the 'magic' of lasers is still not the complete answer nor is the usage of laser measurement tools appropriate in all situations. To match the quality of hand measurement and drawing translation, it takes a great deal of time, understanding and proper technique to yield good results. From the last dozen or so projects, we have begun to understand what the appropriate situations are to use the scanner and when we must use the tried and true Historic American Building Survey, Historic American Engineering and Historic American Landscape Survey (HABS/HAER/HALS) techniques that have evolved over the past 70 years. Not only are we struggling to define our procedures in terms of the most effective and efficient use of this electronic measuring tool, but also we are seeking how and when to incorporate AutoCad or hand - rendering techniques to supplement the drawings. These decisions early in the project mean the difference in months or even years for project completion.

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Laser scanning yields an incredible amount of data, however, it can also be too much information to effectively and efficiently handle. This paper will discuss the fundamentals of laser scanning and compare the procedures used on several different kinds of projects. Laser scanning has been used in the industrial engineering field for over ten years, but it is just now coming into wider use particularly in the architectural and preservation fields. We are at the point of early adoption on the use of 3D laser scanning for historic preservation with still a great deal to learn. By understanding the background and basic operation of laser scanner, we are better able to make the most effective choice of whether to scan or to use manual methods to record the project.

Principles of 3D LIDAR Laser Scanning

Laser Basics

The short definitions of 3D laser scanning / digitizing is "a technology that captures the digital shape of physical objects."² The high-energy photon beam is pulsed out of the scanner head at a rate of up to 800 separate beams per second. When the beam hits any solid surface, it bounces back, dispersing in many directions. Some of that returning light is captured by the mirrors inside the scanner head and sent to the laptop computer via a cross-talk cable. The timing devices within the scanner head records coordinate locations that lie on the surface of the object. The user sets the point spacing and scene distance within the operating software. The terms accuracy and resolution need clarification here. Accuracy relates directly to the scanned object's optical qualities or reflectivity. High gloss surfaces excessively disperse the beam creating 'noise' in the scan or in cases such as the gilded torch on the Statue of Liberty, no information at all can be collected. Resolution, on the other hand, is the smallest increment of distance that the timing devices are capable of detecting. The scan density and the area to be scanned are also predetermined through the scanner control software. "These XYZ coordinate locations are stored in a file that can be converted to IGES or ASCII formats for input into nearly any CAD/CAM system or specialized point-cloud processing software on the market today."³ The end result typically is a grid of measurement points limited by the size and power of the laser beam and the distance to the object.

The scanner used by Texas Tech University College of Architecture is a Cyrax 2500 manufactured by the Cyra Corporation, now a subsidiary of Leica. Purchased by the University in 2001, the equipment is managed and stored by the College of Architecture with the charge by the University President to engage in joint research projects or at the very least, to be available for technical advising to other departments on campus. The software used to operate the scanner is called Cyclone. Various other software programs are used to combine the different scans into one three-dimensional 'point cloud.' The collection of data points is referred to as a point cloud. The points are immediately visible on the laptop screen as they are captured and are interactive, that is, the data can be rotated and viewed from various angles. A good way to comprehend the coordinate representation on the computer screen is to imagine Christmas lights strung on a house in a tight grid pattern and spaced an inch apart. The lights would show not only every edge, but also every detail of the surface including the soffits, chimneys, roof tile, brick and stone as well as the doorknobs and hinges.

The scanner pulses out the beam in a vertical column toward objects in the

scene. After each column, the mirrors in the scanner head redirect the beam, moving over the column of light pulses in the predetermined spacing. Up to a million points can be collected in one file or scanworld.

The most difficult part about the fieldwork scanning is to establish an overlapping arrangement of "scanworlds." The laser fires the beams in a 40° cone of vision. To provide adequate information to assemble the separate files into one large file, each subsequent scene must overlap adjacent scenes by at least 20%. Planning the locations around the object(s) to be scanned is the most critical phase for later success with the ² three-dimensional point cloud. It is also important not to 'over - scan' a scene. A scan that is too dense reduces the likelihood of a successful later 'registration' or combination of files.

There are two typical ways of combining files. One uses reflective targets just as surveyors use. Although the Cyra scanner does not need reflective targets to measure a distance, these are used because they are easily identifiable within the millions of data points. In the other method of registration, software incorporating various powerful data matching algorithms uses the coordinate system to match the x, y, z position of points in space.⁴ Two files are brought together based on a precise matching of multiple sets of these coordinates. After a series of steps that takes the three-dimensional point cloud into the formation of polygonal models and solid - surfacing, further renderings can be produced depending on the outcome and deliverables that are desired. AutoCad documentation drawings can be either extracted from the completed point cloud dataset or the point cloud itself can be transformed to serve as the precision tracing base for accurately recorded dimensions and details of the structure. Please see the footnote for more information on Lasers.⁵

Scanning at the Statue

Professors Willard B. Robinson and John P. White established the courses and traditions of teaching HABS/HAER documentation techniques at Texas Tech University (TTU) College of Architecture (COA) during the 1970s. His work through 27 consecutive summers firmly placed TTU as a recognized center for teaching conservation theory and HABS documentation techniques. Because of his work and the subsequent contributions to the documentation traditions by this author, the COA was poised for greater accomplishments. In the late 1990s, a need to explore new direction by streamlining the fieldwork procedures and the incorporation of digital technology became apparent to me. My first foray into this idea used software called FotoG. This software used digital camera images and a system of overlapping images to 'digitize' the elevations of a building for later tracing in AutoCad or other CAD programs. This product provided very limited success. Later, Associate Professor Glenn Hill uncovered literature that leads to the Cyra Corporation who was at that time just bringing the Cyrax 2500 into production after its testing phases. The Cyrax, although initially conceived as a tool for industrial piping additions and plant renovations, was clearly a strong potential answer to shortening the documentation fieldwork issue. Following a series of demonstrations and meetings, the University was convinced of the potential research applications and agreed to purchase the equipment.

Historic American Building Survey Chief, Paul Dolinsky heard about TTU's purchase of the laser scanner and called Professor White with a proposal. .to test the laser scanner on the Statue of Liberty. From January to March 2001, the team of co-principles planned the scan. A pilot study was

conducted in March convincing the project planners of the feasibility to accurately record a monumental nonlinear (curvilinear) structure to meet the accuracy requirements of the Secretary of the Interiors Standards for Recording Historic Buildings.

The actual data gathering was planned for August 2001 allowing two students, Jared Wright and Jon Gamel, the opportunity to participate without disrupting their fall class schedule. Scanning at the Statue was planned for five days. The scanning was completed in four days with two teams, one working the seven a.m. to two p.m. shift and the other team continuing until the last National Park Service ferry leaving Liberty Island at 10 p.m. Ultimately 94 million data points from 13 scan locations around the base of the statue formed the nucleus of the raw data.

Conversion of the point cloud began immediately upon the team's return to the TTU campus. Jared Wright tackled the task and kept a journal record of his registration attempts. By November 2001, the first full point cloud registration had been achieved.

Since that time, a series of students and the faculty co-principles have worked with the point cloud trying to find the appropriate file size, procedures and software that would yield the deliverables agreed upon in the initial scope of work. Those deliverables included a series of horizontal section cuts at one-foot increments yielding in the neighborhood of 110 line drawings. The first ever scaled drawings of the exterior would also be created in the form of elevation drawings. But other obstacles stood in the path to the creation of the archival representations. Although the precision of $\frac{1}{4}$ " accuracy was achievable from the data collected, there were large gaps in the information where the scanner could not 'see' the surface. Primarily these areas were on the top of Lady Liberty's head, the top of her chest and the base of the figure, specifically the feet and the bottom of her tunic. These areas were blocked from view by either the view angle from the scanner and by the pedestal itself. A second trip with a system to elevate the scanner will be needed to acquire the missing data. There may yet be other software or procedures uncovered that will allow the missing data to be merged with the original dataset.

Subsequent Scanner Projects

The original test case for the purchase of the scanner was the JA Ranch House. The Cyra Corporation agreed to scan the exterior of the historic ranch to demonstrate the potential for measured drawing construction. About that time, the Statue of Liberty project also came up as a potential project. Since that time, numerous other documentation opportunities have arisen testing both procedures and team stamina. These projects include the Exell Helium Plant, near Amarillo, Texas; the 6666 Ranch at Guthrie, Texas, the Sabine Pass Lighthouse, in Cameron County, Louisiana, the Daniel's Ranch in Big Bend National Park, Texas, as well as the opportunity to scan two Chaco Canyon Outlier Sites in northwest New Mexico.⁶ During the past summer, there were three documentation projects conducted at TTU all relying almost exclusively on scanner data with supplemental hand measurements. Under the primary direction of Associate Professor Gary W. Smith, the Chaco Canyon project is in the final drawing phase. The Bureau of Land Management and the Denver Service Center of the National Park System funded this project. Two other projects were commissioned by the Texas Department of Transportation (TxDoT) through a heritage management firm in Austin, Texas. One project, a HAER documentation of the Continental Grain Elevator in Brownwood, Texas was recorded as the

prototypical terminal concrete elevator for the region. The goal of the project was to create documentation drawings and illustrate the process of grain storage. This project held a similar task as the Statue of Liberty, to record a monumental structure without the use of scaffolding. In just three days, the sixteen - cylinder grain elevator, warehouse and offices were scanned. The team of students and I, along with a project supervisor Karen Hughes, from HHM, Inc, the heritage management firm, completed the scanning, photography and field notations. In four months, eleven sheets of detailed process drawings, flow charts and building documentation were completed and successfully submitted to the funding agency. A second project funded by TxDoT and channeled through HHM, Inc. involved scanning the historic Bluff Dale Bridge in Bluff Dale, Texas; the oldest known cable-stayed bridge in Texas and perhaps the United States. I directed the team as we scanned the bridge, internationally known for its unique cable structure, over a three - day period and during a central Texas record heat wave. Scanning work is not always glamorous, but the fieldwork has been successfully registered into a three-dimensional point cloud. Structural details were also scanned, but the results from use by the Cyrax 2500 demonstrated that while adequate, the level of detail was less than desired. Another type of scanner, such as the Minolta laser scanner for close detail work, would be a better choice for that work.

Two other historic ranch documentation projects, the Mallet Ranch and the Harold Dow Bugbee Ranch offer an interesting comparison. Both ranches are rather modest structure, the Mallet headquarters building constructed in the 1890s and Bugbee house was constructed in 1907. The Mallet ranch and ancillary buildings are generally arranged around a large open area, somewhat like a plaza while the Bugbee house stands alone with only two nearby sheds. An older house stands a short distance away but has no real relational organization to the 1907 house. Both building sites were slated for scanning, primarily to avoid any dangerous climbing and measuring. But ultimately, the two-story Bugbee house was completely hand-measured by Professor White and a team of four students. After the fieldwork was begun, Professor White determined that the roof details were safely accessible and it would be more efficient to use hand ? measuring as a basis for drawing translation. Those drawings were nearing final completion in October 2003. The Mallet ranch, on the other hand, was begun in the summer of 2002. It was planned that the buildings would be scanned on the outside and hand measured on the interior. For one reason or another, the scanning project remains unfinished although several trips have been made to capture the data and the interior of the main house has been hand measured. Certainly the Mallet Ranch has more buildings, but the primary reason for the delay is that we have not yet captured an entire dataset of the building complex. The scanner was placed in the center of the plaza area and scans taken in 360° were captured and registered together into the three-dimensional point cloud. It remains for us to return and scan from an external perimeter looking back in towards the plaza area. About three days and several hundred person/hours have already been logged on the documentation; however, the drawings are as yet hardly begun.

Perhaps because the buildings are only 45 minutes from the College it is easier to postpone yet another Mallet Ranch trip to complete the scanning. However, the most significant factors in efficiently completing projects remains the changing personnel in terms of the student workforce, steep learning curves coupled with faculty teaching duties and student coursework demands. The Continental Grain Elevator project was completed in four months because the students were hired only if they were not taking

summer classes and were available to work 40 hours a week.

Other projects

During the late part of last summer, another interesting possibility presented itself. About to undergo extensive restoration, the Nueces County Courthouse in Corpus Christi, Texas, needed the surface mapped for replacement of the architectural terra cotta. The opportunity to incorporate a Graphic Information System (GIS) as a vertical mapping system to a building elevation was an intriguing possibility. Although recommended by the Texas Historical Commission as a potential surface mapping resource, eventually the contractor bid plus the development costs became a prohibitive factor for the project.

Meanwhile, another opportunity presented itself during the summer, 2003. Colleagues at the Washington HABS office called to discuss the documentation needs for George Washington's 1776 Valley Forge Sleeping Marquee. The fieldwork would have to be completed by the end of September. The short turn-around time was a result of plans to take down the tent for major conservation work. The dilemma was to record the tent without touching it that made traditional documentation methods next to impossible. The 3D laser scanner was an option, but there were serious questions relative to the curatorial issues of ultra-violet and heat exposure from the laser beam itself. Although the laser uses a Class 2 green laser chip and no heat can be felt as it passes over the skin, a reasonable concern for eliminating any potential damage was prudent. This author decided to arrange a simulation test at the TTU Museum with a museum specialist, Nicki Ladkin. Ms. Ladkin organized a testing area with canvas draped simulating the tent. One aspect of the testing rested on the question of heat build-up from a tight scanning where the beam would travel over small areas in a tight grid pattern. The second question centered on measuring the amount of Ultra-violet exposure. Using a light meter, numerous conditions were simulated including with fluorescent lighting and in darkness. Relatively little meter readings were registered and it was determined that the laser scanner would not contribute significantly to damage of the 224 year old fabric. In late September 2003, the research team, including John White, Karen Hughes and myself, spent four days at Valley Forge National Historical Park. This was the first project that we had conducted entirely inside a building. Curators had erected the marquee inside a climate-controlled space that was surrounded on three sides by glass. The "guy" ropes pulled the fabric taut and were pegged at the base of the enclosure leaving little maneuvering room for the scanner. At the end of the scanning, we had collected 85 separate files with scan data spaced from .1 to .2 inches apart. All of the file data amounted to 1.4 megabytes of information. Currently, the files are being organized by a research assistant in preparation to piece the puzzle together. The tent will remain out of public view until the new Valley Forge Visitor Center opens and the tent is re-presented to the public on President Washington's 2006 birthday.

Another potential project is to scan a historic train trestle at the Golden Spike National Historic Site. Recommended by associate at Big Bend National Park where Loudon has conducted numerous documentation projects, the trestle would offer another unique site for scanning. The conditions that would warrant the scanner use would be the dangerous nature of the structure and the very limited access leaving hand-measuring a questionable choice for obtaining the measurements. This project is still pending.

What's next

New opportunities come almost every day, however, some are inappropriate since they do not add to either our knowledge or skill base, or they are a purely contract venture. We are very interested in both developing the architectural applications and developing other collaborations at TTU. Several departments have used the scanner in their own research work with the assistance of architecture research assistants and faculty. These have involved Geo-Sciences, Museum Science, Archaeology and Biology. Through these collaborations, the scanner has been used to record the interior of Carlsbad Caverns and the underside of a canyon wall; dinosaur bones and river habitats. The capability to calculate mass volume and erosion loss is an area in which we are looking forward to develop our skill and knowledge.

Conclusion: When to use the scanner

Clearly the most beneficial use of the scanner is the capability to record measurements at a distance and with a high degree of precision. Monumental projects such as the Statue of Liberty or the Grain Elevators are prime candidates for its usage. With a 2mm to 6mm accuracy level at 100 meters without reflective targets such as would be necessary with surveying instruments, the Light Distance and Ranging (LIDAR) laser technology offers excellent results. AutoCad replication of machine manufactured building components, more prevalent in modern structures, could also use the scanner data in a fast and efficient manner where highly detailed projects with repetitive elements offers the ability for documentation using precise location and drawing placement capabilities. The laser scanner data also lends itself to HAER projects with the 3D capabilities. The Continental Grain elevator project was entirely modeled in AutoCad using the point cloud data as a basis for drawing construction supplemented with hand measurements. In the warehouse building, we were able to scan the interior and easily fit the outside to the inside creating a truly 3D model. All of the truss work on the interior was modeled providing amazing photo-realistic interior perspective views.

We definitely have been able to meet one of our initial goals, that of shortening field time, but the issue of electronic archiving the data is still under debate. At the present time we are saving the raw data in the native .imp format as well as .ascii, .dwg, .dxf, .dgn, .wrl and .xyz file formats. Another service option will be providing point cloud data for processing by other agencies and institutions. We hope to eventually assist other efforts to document structures by offering the equipment and our expertise to acquire the raw data that will be processed by someone else. In this way, more buildings and structures can be efficiently and precisely recorded before they are destroyed or otherwise lost.

One of our primary drawbacks is the very time consuming conversion to 2D drawings, which come primarily from tracing the point cloud while working with student teams. Although there doesn't really seem to be any shortcuts to creating documentation drawings, the opportunity to capture information on the exact location and the shape of every rock, for example in the case of the Chaco Canyon projects and the 6666 Ranch documentation, has lead us to appreciate this level of precision, but at the same time, assess the relative importance of capturing that level of detail.

An ICOMOS exchange student on a Harper's Ferry National Park summer HABS team once questioned me about the need for spending so much time and effort to record every detail on a building. Apparently student

documentation teams in Greece would be able to record an entire village in a day. The purpose was to preserve a record of the existence of the village while knowing that the drawings would never be used to precisely replicate the village were it to be destroyed. My answer to "how much is enough and when is it too much detail for document drawings?" is always that we are recording facts and as such, they must be as accurate and detailed as humanly possible. With the scanner, a nonhuman, at the pixel level of detail is possible so it seems that we have swung entirely in the other direction. I often say, there is a fine line between meticulous and ridiculous; the pun is very much intended.

¹ <http://www.kreysler.com/faq/faq.htm>. Accessed 10/18/03

² Ibid.

³ <http://www.laserdesign.com/specs/documents/faq.pdf>. Pg 1. accessed 10-18-03. Pg. 2 IGES stands for 'Initial Graphic Exchange Specifications.' 'ASCII stands for American Standard Code for Information Interchange.' According to the <http://www.hyperdictionary.com/dictionary/ASCII>, accessed 11/05/03, ASCII is "a code for information exchange between computers made by different companies; a string of 7 binary digits represents each character; used in most microcomputers"

⁴ Ibid. pg3.

⁵ <http://www.dewtronics.com/tutorials/lasers/leot/>, Accessed 10/18/03. Information on LASER operation.

⁶ Associate Professor Gary W. Smith, Professor John P. White and myself are the co-principle investigators on the Chaco Canyon Outlier documentation projects. Professor Smith and Loudon are co ? P.Is. on the Sabine Pass Lighthouse while White, Smith and Loudon all have portions of research on the Harold Dow Bugbee Ranch and the Mallet Ranch. Professors White and Loudon are co-principle investigators on the George Washing Valley Forge Sleeping Marquee documentation. Professors Hill and Loudon headed the Exell Helium plant documentation. Professor Loudon is the sole PI on the 6666 Ranch, the Continental Grain Elevator and the Bluff Dale Bridge documentation projects.



Preservation Architect

The Newsletter of The Historic Resources Committee | December 15, 2003



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HRC National Subcommittee Updates

HRC National now has official subcommittees to manage some of the group's most critical issues.

Liaison Organizations Subcommittee

The AIA Historic Resources Committee recognizes the importance of collaboration with, and mutual support between, allied preservation organizations and disciplines to achieve national preservation goals. Annually, the AIA/HRC solicits a report from national allied preservation organizations in writing and asks a select group of the organizations to present their reports in person at an annual AIA/HRC meeting. Each report presents basic information about the liaison organization reporting, identifies the focus of the past and coming years' activities for the organization, identifies the pressing preservation issues facing the organization, and discusses new opportunities in preservation from the organization's vantage point. Finally, the organizations identify how the AIA can support their activities and missions. If you are interested in getting involved in this subcommittee, please contact Jack Pyburn, AIA, at jpyburn@ojparchitect.com.

Communications and Publications Subcommittee

HRC's Communications and Publications Subcommittee develops policies and procedures to support programs that will improve the effectiveness and quality of communication and the exchange of knowledge among HRC members. The subcommittee produces the Preservation Architect e-newsletter, the Historic Resources Committee Web page, transcripts of HRC conference proceedings, and other communications tools. The committee is also responsible for developing and maintaining HRC publications such as "The Historic Resources Committee Guide to Historic Preservation." If you are interested in getting involved in this subcommittee, please contact Frank Sturgeon, AIA, at norazeaia@aol.com.

Sponsorship Subcommittee

The Sponsorship Subcommittee develops policies and procedures to support the annual HRC sponsorship program, which secures outside funding for HRC conferences and programs. Sponsorship of HRC programs make them more accessible to HRC members and the public. If you are interested in getting involved in this subcommittee, please contact Jamie Malanaphy, AIA, at james_malanaphy@dnr.state.ak.us.

Speakers Subcommittee

The Speakers Subcommittee coordinates the efforts of HRC members who

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wish to present papers and continuing education sessions at the annual conventions and conferences of the American Institute of Architects, the National Trust for Historic Preservation, and other HRC liaison organizations. The subcommittee also coordinates and assists HRC members in preparing successful proposals for education sessions and workshops at the annual Restoration and Renovation Exhibition and Conference. If you are interested in getting involved in this subcommittee, please contact Joe Opperman, AIA, at joskopp@mindspring.com.

Awards Subcommittee

The Awards Subcommittee develops policies and procedures to support programs that acknowledge membership participation on the HRC and promote the recognition of historic preservation architects and historic preservation in the AIA's various award programs, including the Honor Awards, the Kemper Award, the Thomas Jefferson Award, the Firm Award, the 25 Year Award and others. If you are interested in getting involved in this subcommittee, please contact Jim McDonald, AIA, at jmcdonald@aearchitects.com.



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National Register Celebrates 2011 African American History Month

The National Register of Historic Places is commemorating this year's African American History Month with an online feature about Berkley Square in Las Vegas, Nevada's first subdivision built by and for African Americans. Located in the city's historic Westside, the neighborhood consists of 148 Contemporary Ranch-style homes designed by internationally celebrated architect Paul Revere Williams, the AIA's first African American member, and the creator of several famous Hollywood homes. Built between 1954 and 1955, Berkley Square also has the distinction of being the first minority built subdivision in the state. In past years, the National Register of Historic Places has promoted and continues to promote awareness of the many historical [accomplishments by African Americans](#) through the showcasing of historic properties listed in the National Register, National Register publications, and National Park units that honor and illustrate their contributions to American history. The web feature also includes links to other National Park and Federal Government sources, including the Library of Congress, that examine different aspects of African American history.

NPS Highlights of the 111th Congress

With the adjournment of the 111th Congress in December, the National Park Service Office of Legislative and Congressional Affairs has released a report detailing the significant legislation affecting the National Park Service, that it enacted. [The American Recovery and Reinvestment Act](#), passed in February 2009, provided \$900 million for hundreds of much needed park maintenance and road upgrades. Another powerful bill, the Omnibus Public Land Management Act, passed in March 2009, resulted in the designation of over two million acres of wilderness, the establishment of three park units, and the creation of nine new national heritage areas. In addition, thousands of miles of scenic and historic trails were created and almost 20 Congressional studies were authorized. For more information and to view the full list of enacted relevant laws, check out the report.

NPS Web Exhibit Showcases Historic Maryland Estate

One of America's most well preserved estates is the star of a new virtual web exhibit, produced by the National Park Service Museum Management Program. The latest in a series designed to make NPS museum collections more accessible, the [Hampton National Historic Site](#) exhibit features dozens of object photographs, a mansion and grounds tour, and a wealth of information about the 63-acre estate. Located just north of Baltimore, the c. 1790 Georgian mansion was

Calendar of Events

February 2011

[Click for More Events](#)

Heritage In the News

[Tell-tale Disappointment: Mysterious Visitor to Poe's Grave is a No-show for 2nd Straight Year](#)

Baltimore Sun in January 19

Telltale hearts beat with anticipation during a rainy, midnight dreary and beyond, hoping the mysterious visitor to Edgar Allan Poe's grave would return after a one-year absence.

[Italian Researcher: Symbols Found in 'Mona Lisa'](#)

Washington Post in January 12

Forget her smile. An Italian researcher says the key to solving the enigmas of "Mona Lisa" lies in her eyes.

[The Largest Slave Revolt in U.S. History is Commemorated](#)

The Times-Picayune in January 3

More than a century before the first modern-day civil rights march, there was Charles Deslondes and his make-do army of more than 200 enslaved men battling with hoes, axes and cane knives for that most basic human right: freedom.

[A Triage to Save the Ruins of Babylon](#)

New York Times in January 2

The damage done to the ruins of ancient Babylon is visible from a small hilltop near the Tower of Babel, whose biblical importance is hard to envision from what is left of it today.

[History Online](#)

More than 1,000 books, studies, and reports are available online courtesy of the [Park History Program](#). Highlights of the latest additions include:

NPS Centennial Essay Series, published by the [George Wright Society](#)

History of [Commercial Fishing in Glacier Bay](#) (2010)

The [Farm Buildings at Sagamore Hill](#) National Historic Site (2010)

Managing the [National Park Service in the Information Age](#) (2010)

Conflicting Goals for a National Park: [The Historic Arsenal at Springfield](#), 1968-2008 (2010)

home to the prominent Ridgely family for over 200 years and today represents over three centuries worth of American social, cultural, and economic changes.



Warehouse Sheds Old Life for New Use

A slice of Milwaukee's industrial past has been rehabilitated with the help from the National Park Service Federal Historic Preservation Tax Incentives program. The [Monarch Manufacturing Building](#) once housed a plant for producing sheepskin, leather, duck clothing, and mackinaws. Today it is a mixed-use property in the city's vibrant Historic Third Ward. Built in 1917 by local architectural firm Martin Tullgren & Sons, the concrete and brick warehouse's interior rehabilitation included installing modern light fixtures and new spiral ductwork, as well as making several small openings in the floors to both let light flow to the lower floors and create a more cohesive office design. Outside, its severely deteriorated steel windows were replaced with compatible aluminum replicas and a modest accessibility ramp was installed to allow access to the building. Much of the rehabilitation involved preserving the industrial features such as the concrete structural columns and large saw-tooth skylights that were already there, since the building had seen few changes over the last nine decades. Although the rehabilitation allowed some modifications to the building, the completed project retained the structure's historic character while allowing for today's modern use. Currently the building is home to both a contemporary furniture store and an advertising firm " and with its large multi-paned windows and open floor plan, it was already well suited for just such a purpose.



National Register Announces 2011 County Challenge

Who Am I? [Reflections on the Meaning Of Parks](#) on the Occasion of The Nation's Bicentennial (1975)

Yosemite [nature notes](#) (1922)

Grants

Increasing African American Diversity in Archives: The HistoryMakers Fellowship

Made possible by a grant from the [Institute of Museum and Library Services](#), the purpose of this yearlong fellowship program is to provide training for African American archivists and other archivists interested in working with African American archival collections. The year (June 6, 2011-June 1, 2012) will include an immersion training program at The HistoryMakers Chicago location and an on-site residency. Application Deadline: February 15.

Leon Levy Visiting Fellowship

This scholarship program, presented by [New York University's Institute of Fine Arts](#) graduate training program in conservation, offers a unique opportunity for an individual specializing in the conservation of archeological materials of the ancient world to study at NYU, with its renowned faculty and unparalleled resources, for the 2011-2012 academic year. Application Deadline: March 1.

2011 Tribal Project Grants

[The National Historic Preservation Act](#) authorizes grants to Indian tribes for cultural and historic preservation projects. Now in its 21st year, this grant program assists American Indians and Alaska Natives in protecting and promoting their unique cultural traditions. Historic Preservation Funds are granted to Indian Tribes, Alaskan Natives, and Native Hawaiian Organizations. Application Deadline: March 4.

Jane C. Waldbaum Archaeological Field School Scholarship

Created in honor of former [Archaeological Institute of America president Jane Waldbaum](#), this scholarship is intended to help students who are planning to participate in archeological fieldwork for the first time. Students majoring in archeology or related disciplines are especially encouraged to apply. Application Deadline: March 6.

MotorCities National Heritage Area Community Grant Program

The [MotorCities National Heritage Area Community Grant Program](#) is designed to encourage, support, and grow community-based automotive heritage and labor based initiatives within the National Heritage Area. A traditional 50 percent match program. It is geared toward applicants who have the match at the time of application. Projects should be able to be completed within 12 months and cannot exceed a total budget of \$10,000. Application Deadline: April 1.

Silos & Smokestacks National Heritage Area General Grant Program

Eligible grant projects must be located in one of the [37 counties within the Heritage Area](#) and provide a 50 percent match to the grant request. There is \$50,000 available for projects including exhibit development, educational programs, interpretive signage, marketing, and event programming. Awards may range from \$1,000 to \$10,000.

The National Register of Historic Places is issuing a challenge to preservationists nationwide: take a photo of a historic property in your county and post it to Flickr. The goal? To create a snapshot of America's historic places, with every county in all 50 states being represented. And, as the National Register notes, "not all Register listings have decided to attach a plaque to their buildings" you may be surprised at the number of listings around you! For more information about the challenge and to view already posted photos, visit the [National Register's Flickr page](#).

Tulsa's Oil Heritage Exhibited in New National Register Listing

For Tulsa, Oklahoma, there is probably no event more important in its history than the 1901 discovery of oil. The town had only about 1,390 residents at the turn of the century, but the first oil wells ignited Tulsa's wealth and the population exploded as newcomers wishing to partake of the riches flooded into the city. And when the oil companies prospered, the city did as well. A more vibrant, mixed-use downtown emerged following the oil boom, and although Tulsa is no longer the "Oil Capital of the World" the industry eventually relocated to Texas the demand it created for all types of new buildings is still strongly evident in the Oil Capital Historic District. Newly added to the [National Register of Historic Places](#), the 15-block area contains numerous examples of architecture from several different eras, including late-19th and early-20th Century revival Styles, such as Classical revival, Greek revival, and Gothic revival, and textbook examples of Art Deco and Beaux Arts design. Several structures represent the simple lines of the Modern Movement. Three buildings are identified as Commercial Style and one unique edifice; the McFarlin Building is an excellent example of the Italianate Style. The district was listed on December 13, 2010.

Eligible applicants are nonprofit organizations, local or regional governments, and federally- recognized Indian tribes located within the Heritage Area. Application Deadline: April 27.

On the Hill

New Public Laws

December 22 " President Obama signed into law the following bills of interest to the National Park Service:

H.R. 3082, Continuing Appropriations and Surface Transportation Extensions Act, 2011. Title I of the legislation provides continued funding for all government operations through March 4, 2011. It is Public Law 111-322.

H.R. 1061, Hoh Indian Tribe Safe Homelands Act. The act transfers 37 acres from Olympic National Park to the tribe to improve access to their lands on higher ground and to allow their homes to be moved from the tsunami zone. It is Public Law 111-323.

H.R. 6278, Kingman and Heritage Islands Act of 2010. The act amends the National Children's Island Act of 1995 to expand allowable uses for Kingman and Heritage Islands by the District of Columbia, and for other purposes. It provides for the islands to revert to the National Park Service if they are not used for specified purposes. It is Public Law 111-328.

S. 1405, Longfellow House-Washington's Headquarters National Historic Site Designation Act. The act redesignates the Longfellow National Historic Site in Massachusetts as the Longfellow House - Washington's Headquarters National Historic Site. It is Public Law 111-333.

Floor Action

New Bills of Interest

H.R. 320 " to designate a Distinguished Flying Cross National Memorial at the March Field Air Museum in Riverside, California, introduced by Ken Calvert (R-CA) on January 19.

H.R. 302 " to provide for State approval of national monuments, and for other purposes, introduced by Virginia Foxx (R-NC) on January 18.

H.R. 306 " to direct the Secretary of the Interior to enter into an agreement to provide for management of the free-roaming wild horses in and around the Currituck National Wildlife Refuge, introduced by Jones (R-NC) on January 18.

H.R. 274 " to rename the Homestead National Monument of America near Beatrice, Nebraska, as the Homestead National Historical Park, introduced by Jeff Fortenberry (R-NE) on January 12.

H.R. 275 " to authorize the Secretary of the Interior to expand the boundary of the Homestead National Monument of America, in the State of Nebraska, and for other purposes, introduced by Jeff Fortenberry (R-NE) on January 12.



2010 National Register Statistics

The National Register listed [1215 nominations](#) in Fiscal Year 2010 (October 1-September 30.) This included 42,673 contributing buildings, 882 contributing sites, 1,171 contributing structures, and 295 contributing objects. In Calendar Year 2010 (January 1-December 31) the National Register listed 1090 nominations. This included 36,275 contributing buildings, 849 contributing sites, 1,372 contributing structures, and 90,356 contributing objects.

December National Register Statistics

[125 nominations](#) were listed in the National Register of Historic Places in the month of December 2010. This included 4,673 contributing buildings, 127 contributing sites, 199 contributing structures and 90,125 contributing objects. December 2010 is the latest month for which complete statistics are available.

December Historic Rehabilitation Tax Credit Statistics

The National Park Service's [Historic Preservation Certification](#) review of applications for the Federal Historic Preservation Tax Incentives Program has three parts: Part 1 determines the eligibility of a property for the tax incentives program; Part 2 determines whether a proposed project meets the Secretary of the Interior's Standards for Rehabilitation; Part 3 determines whether the completed project conforms with the Secretary's Standards. In December, National Park Service staff reviewed 92 Part 1 applications, 81 Part 2 applications representing nearly \$464 million

H.R. 251 "to authorize the Secretary of the Interior to study the suitability and feasibility of designating Oak Point and North Brother Island in the Bronx in the State of New York as a unit of the National Park System, introduced by Jose E. Serrano (D-NY) on January 7.

S. 4049 "to sustain the economic development and recreational use of National Forest System land and other public land in the State of Montana, to add certain land to the National Wilderness Preservation System, to release certain wilderness study areas, to designate new areas for recreation, and for other purposes, introduced by Jon Tester (D-MT) on December 18.

H.R. 6546 "to amend titles 23 and 49, United States Code, to improve the effectiveness of transportation programs on Federal lands and to provide funding for park roads and parkways and the Paul S. Sarbanes Transit in Parks Program, and for other purposes, introduced by Mazie Hirono (D-HI) on December 17.

Milestones

Todd Brindle has been named superintendent of [Glen Canyon National Recreation Area](#).

Jane Lyder, Deputy Assistant Secretary for Fish and Wildlife and Parks, has been announced acting superintendent of [Grand Canyon National Park](#).

Laura Miller has been named superintendent of [President William Jefferson Clinton Birthplace Home National Historic Site](#).

Keith Newlin has been selected superintendent of the [National Parks of Western Pennsylvania](#).

Nancy Skinner has been announced superintendent of [Fossil Butte National Monument](#).

in estimated preservation investment, and 74 Part 3 applications that resulted in \$450 million in preservation investment using the federal tax credit. The National Park Service administers this program in cooperation with State Historic Preservation Officers and the Internal Revenue Service.

Pete Swisher has been named superintendent of [Herbert Hoover National Historic Site](#).

Charles Tracy has been selected as trail administrator of the [New England National Scenic Trail](#).

Coming Up

Contests

["Take Your Family to the National Parks" Essay Contest](#)

Presented by the National Parks Traveler website, this contest is offering students in age groups 8-11, 12-15, and 16-18, the chance to win a three-night national park vacation for the entire family based on their submissions to the selected parks-related essay question for their age group. NPS Director Jon Jarvis will select the three winning entries, and the lucky chosen contestants will be announced during National Parks Week in mid-April. Several runner-ups will also receive prizes including a DVD of Ken Burns epic documentary *The National Parks: America's Best Idea*, and an autographed copy of photographer Ian Shive's *The National Parks: Our American Landscape*. For the specific essay question per age group and complete contest details, visit the Traveler website. Submission Deadline: March 1.

Conferences

Mid-Atlantic [2011 Regional Conference](#); March 3-5; in Mumford, New York; presented by the Association for Living History, Farm, and Agricultural Museums.

Society for American Archaeology [76th Annual Meeting](#); March 30-April 3; in Sacramento, California.

Texas Historical Commission: [2011 Annual Historic Preservation Conference](#); March 31-April 2; in Austin, Texas. Registration Deadline: March 15.

National Council on Public History [2011 Annual Meeting](#): Crossing Borders/Building Communities "Real and Imagined"; April 6-9; in Pensacola, Florida.

New Mexico [Heritage Preservation Alliance Conference](#): Championing Sustainability; April 6-9; in Las Vegas, New Mexico.

[Building Museums 2011](#); April 10-12; in San Francisco, California; presented by the Mid-Atlantic Association of Museums.

Training

[Preservation Planning for Campuses, Complexes, and Installations](#):

March 9-10; in Phoenix, Arizona; presented by the National Preservation Institute, Arizona State University, and the Arizona State Historic Preservation Program.

[Care and Handling of Photographs](#); March 15; live online webinar; presented by the Northeast Document Conservation Center. Registration Deadline: March 14.

[NEPA Compliances and Cultural Resources](#); March 15-16; in

Honolulu, Hawaii; presented by the National Preservation Institute,
Hawaii State Historic Preservation Division, and the University of
Hawaii Historic Preservation Program.

Checkout the [online events calendar](#).

Heritage News is a monthly e-newsletter published by the National Park Service to deliver timely information on topics including grant opportunities, new laws or policies, events, and activities of interest to the national heritage community.

Suggestions of news or calendar items may be sent to NPS_HeritageNews@nps.gov. Please include contact information, including websites. News items should be no longer than 100-200 words.

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