National Park Service
U.S. Department of the Interior

National Center for Preservation Technology and Training

National Center for Preservation Technology and Training 2019 Annual Report

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National Center for Preservation Technology and Training
Natchitoches, Louisiana

National Park Service
U.S. Department of the Interior

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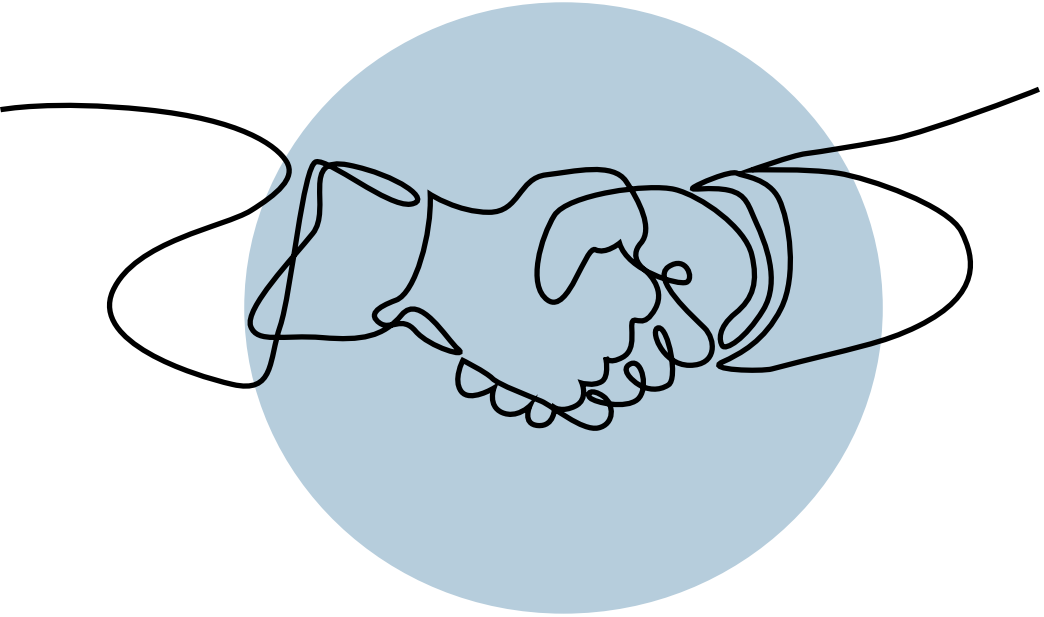
Cover Photo - Jason Church documents the conditions of a tenant cabin on Magnolia Plantation using a three-dimensional laser scanning camera.

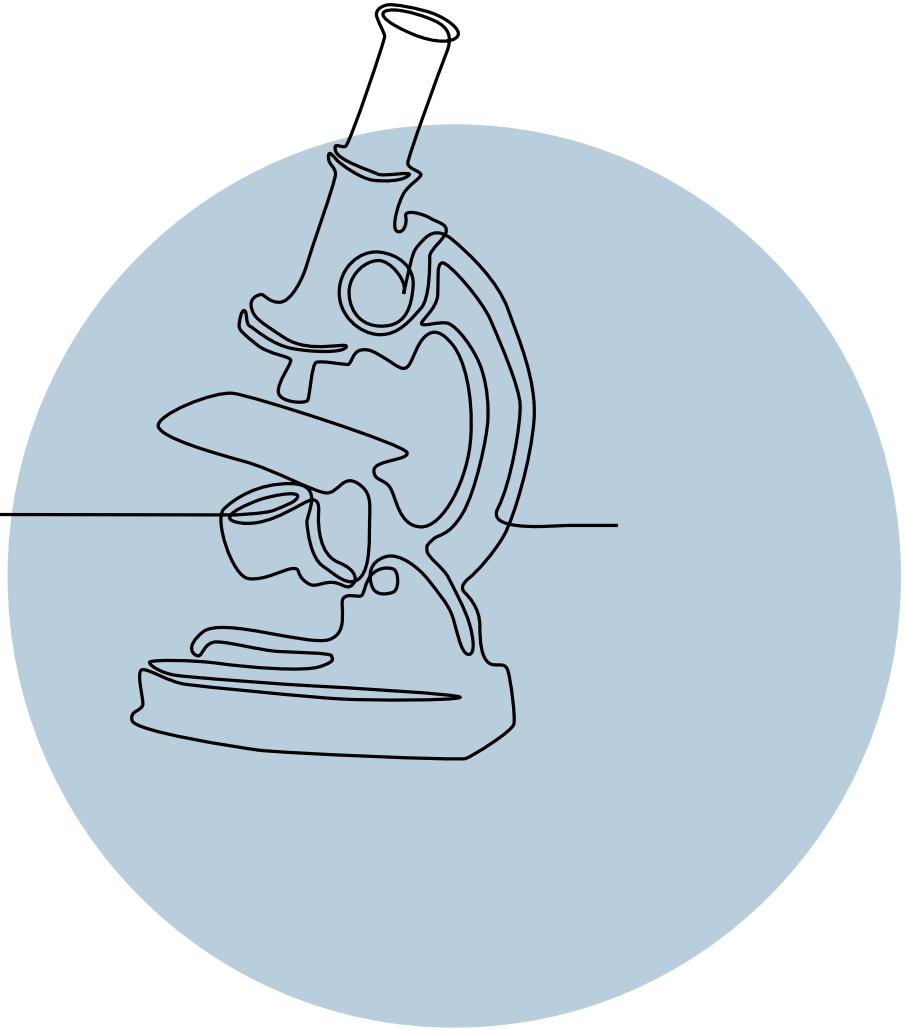


National Center for Preservation Technology and Training (NCPTT) continues its efforts to be a world-class preservation technology center. In 2019, NCPTT is facing new challenges and new beginnings. Threats to cultural resources are on the rise from wildfires to land subsidence. This year, NCPTT initiates new projects to address these threats. A new study investigates the effects of fire suppressants on cultural materials and ways to limit damage. Another study looks at alternatives to glyphosate-based herbicides. Additionally, the Center continues the Mississippi River Delta Archeological Mitigation (MRDAM) project to understand and slow the loss of archeological resources.

NCPTT depends on partners to help with our mission. Our newest international partner is the Federation Francaise du Batiment (FFB), and its related organization, Cluster Patrimony Batiment 4.0 in Troyes. This partnership shares research, training, and skills development worldwide. The Center continues its association with the US branch of the International Council on Monuments and Sites (US/ICOMOS) by hosting international students and emerging professionals for internships at our facilities. Also, NCPTT teamed up with the Advisory Council on Historic Preservation, National Park Service, and the National Trust for Historic Preservation's HOPE Crew and hosted architecture students from Tuskegee University.

NCPTT launches its new technical services program in 2019. This initiative puts technical analyses and preservation consultation within easy reach of national parks and other agencies. Catherine Cooper heads up the suite of services.
In the report that follows, I share NCPTT's latest projects, workshops, partnerships, and grants. I hope you enjoy learning more about us.

Kirk A. Cordell
Executive Director



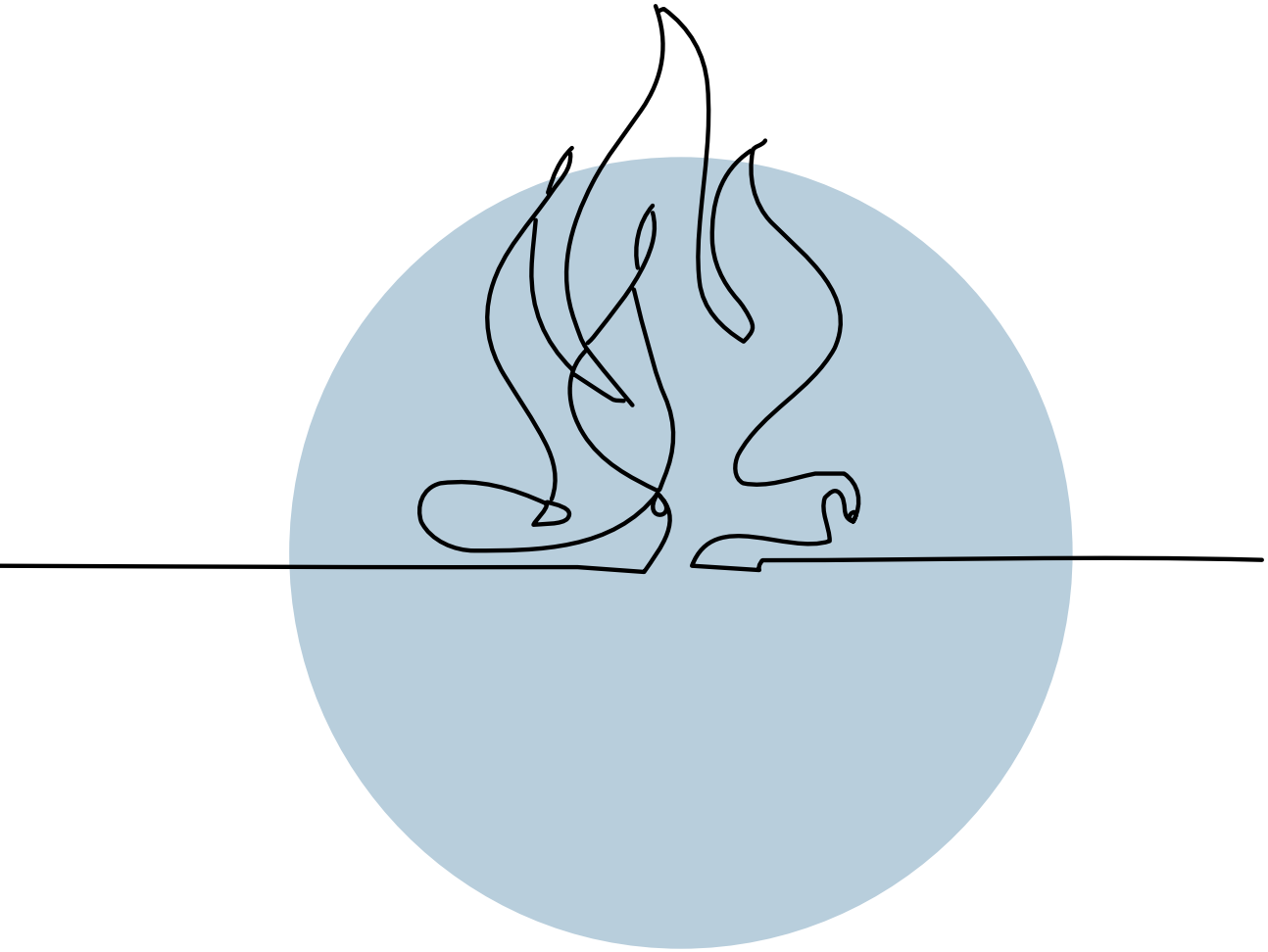
Mission

NCPTT helps preservationists find better tools, better materials, and better approaches to conserving historic buildings and landscapes, archeological sites, and museum collections. It conducts research and testing in its laboratories, provides cutting edge training around the United States, and supports research and training projects at universities and nonprofits. NCPTT pushes the envelope of current preservation practice by exploring advances in science and technology in other fields and applying them to issues in cultural resource management.
The Center's work is multidisciplinary and includes efforts in archeology, architecture, collections management, engineering, historic landscapes, and materials conservation. NCPTT tackles its mission through three primary mechanisms -- projects, partnerships, and grants.

Catherine Cooper, Research Scientist, studies archeological objects using a portable X-ray fluorescence analyzer.

Projects

NCPTT welcomes researchers and research fellows from around the world to do research within its laboratories. The Center partners with leading scientists, architects, archeologists, historians and others to conduct research through internal and external projects, cooperative agreements, and memoranda of understanding. Projects may be funded with NCPTT's base budget, or funding may be found in other areas within government or the private sector. For example, our current research on removing crude oil from historic structures is funded by the U.S. Department of the Interior Inland Oil Spill Preparedness Project (IOSPP). The following projects are examples of our work in 2019.

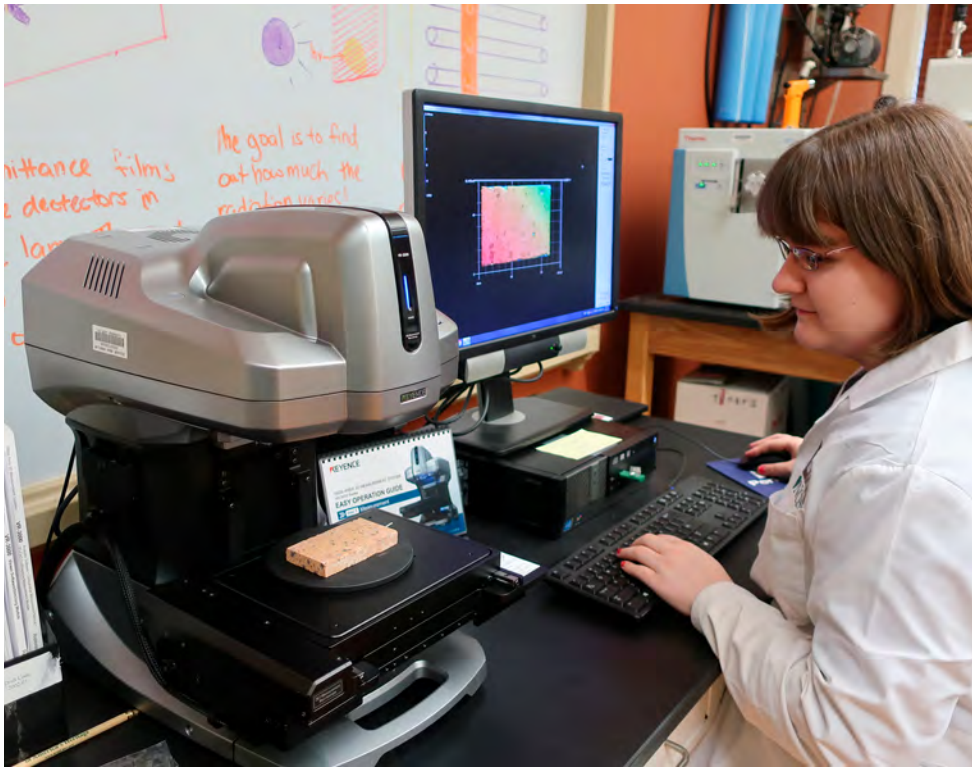


The red staining on these Civilian Conservation Corps era buildings is a result of exposure to fire suppressants.
PHOTO BY MESA VERDE NATIONAL PARK.

New Initiatives

Effects of fire suppressants on cultural resources

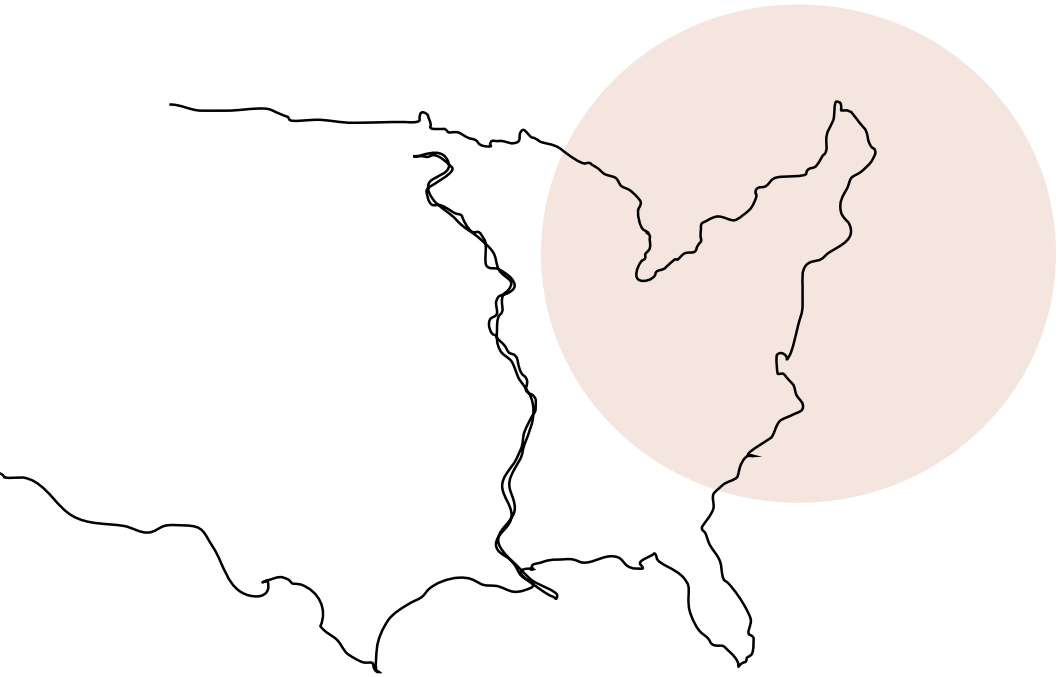
NCPTT is studying the effects of fire suppressants on cultural resources and identifying methods to remove fire suppressants from these historic materials. According to the National Interagency Fire Center, more than 75 million acres of land were affected by wildland fires from 2007 to 2017, including public lands. A new generation of chemical fire retardants and suppressants have come into use over the course of the last decade. Given current climatic trends and predictions of continuing climatic instability, it is safe to predict an increase in wildfire activity across the American West that will increase the need for chemicals to suppress these wildfires. This study will provide sound science-based information to help speed recovery efforts to structures and sites after a wildfire.



Abigail Poe, Research Associate, studies the surface of brick samples before testing the effects of herbicides on historic masonry.
PHOTO JASON CHURCH

Alternative herbicides for use around cultural resources

Does the use of herbicides around buildings damage masonry and other traditional materials? Previous work by NCPTT shows that there is a good likelihood that popular products such as Round-up® and Garlon® used to kill weeds can damage stone and brick. Now NCPTT is testing alternative weed control methods and products to determine their effects on building materials. Herbicides are widely used, both locally and internationally, around all types of cultural heritage. They have become an integral part of vegetation management in the conservation of heritage. Recently, health issues have been raised with the use of glyphosate, the main chemical component of Roundup. This project will help preservationists choose the right weed control method for use around cultural resources.



Current Research

Mississippi River Delta Archeological Mitigation

NCPTT is a member of a newly formed archeological consortium to document sites and properties that are rapidly disappearing due to loss of coastal wetlands, sinking land, rising sea-levels, storm surges, and manmade alterations to land and waterways. The Mississippi River Delta and north-central coast of the Gulf of Mexico contains thousands of archeological sites, cultural landscapes, and traditional cultural properties. The Mississippi River Delta Archeological Mitigation (MRDAM) project is using information generated on archeological sites and historic properties to determine the best ways to mitigate loss of these special places.

A partnership, the MRDAM Consortium, supports this project. The Consortium is consulting with Native American tribes and communities to help preserve these sites. The Consortium currently includes researchers at the following universities and agencies:

- National Center for Preservation Technology and Training, National Park Service
- University of Louisiana at Lafayette, Louisiana Public Archaeology Lab
- Tulane University, Department of Anthropology
- Louisiana State University, Department of Geography and Anthropology
- Louisiana Office of Cultural Development, Division of Archaeology
- Northwestern State University of Louisiana, Creole Heritage Center

Redfish Slough prehistoric archeological site, La Fouche Parish, Louisiana.
AERIAL IMAGE COURTESY OF DR. KORY KONSOER, LSU, GEOMORPHOLOGIST

Elizabeth Salmon, Research Associate, prepares oiled brick samples for artificial weathering
PHOTO BY MARISSA BARTZ, NCPTT

Cleaning methods to remove crude oil from cultural heritage

NCPTT enters its second year of research into cleaners (surface washing agents) to remove crude oil from traditional building materials. As considerable amounts of crude oil circulate North America by truck, rail, and pipeline, spills are inevitable. Such incidents lead to indiscriminate contamination of surrounding environments, including cultural and historical sites. The results of NCPTT's research to date point to a two-part cleaning method. The bulk of the oil is first removed, then a poultice is applied to help remove staining. Accell® Clean Surface Washing Agent, AQUACLEAN®, and Nokomis 5-W® are some of the products applied as poultices that performed well. A third phase will start in Fiscal Year 2020.

"The work of the NCPTT on surface washing agents provides valuable insight into oil spill remediation from a previously unexplored perspective. Typical applications of surface washing agents treat oiled shoreline substrates, but the restoration of cultural artifacts must address a different set of objectives. This can significantly affect the choice of product to provide the appropriate characteristics for the application. Having this information available to inform the selection of suitable treatment products is critical to optimizing the outcome of restoration efforts to preserve fouled cultural and historic artifacts."

BEN FIELDHOUSE

Completed Research

Archeological Management Model

NCPTT and the University of Illinois completed the second phase of developing an Archeological Predictive Management Model for Death Valley National Park. Predictive modeling tries to predict the location of archaeological sites or materials in a region. The model uses a Geographical Information System (GIS) and many layers of data to determine the location of likely sites of past human dwelling places.

The model is an important tool to better understand the archeological record over time and allows cultural resource managers to be better stewards of the sites. The proceedings of the Tenth Death Valley Conference on History and Prehistory include the results of the modeling efforts, which indicate that cultural resources are more likely to be located along the valley floor.

Marrissa Bartz, Research Associate, drills samples for testing salt content within the test walls.
PHOTO BY CATHERINE COOPER, NCPTT

Comparative study on the efficacy of anti-efflorescence coatings for salt mitigation

Since 2018, NCPTT researchers have studied commercially available anti-efflorescence coatings to see if they minimize salt movement. Both flooding and driving rain have the potential to impact how salts move in historic masonry structures and result in wall deterioration. Changing environmental conditions influence the deterioration rates on masonry. The NCPTT study included Efflock® Topical Treatment, Cathedral Stone Guardian® Water Repellent, Dry-Treat Meta Crème®, Aqua Mix Eff Ex®,and Ghostshield® Siloxa-tek 8505. Research has been completed and the results are forthcoming.

Partnerships and Outreach

International Partnership with Federation Francaise du Batiment

NCPTT's Andrew Ferrell met with members of the Federation Francaise du Batiment (FFB) to sign an Agreement of Collaboration between the two organizations and to participate in a FFB workshop on uses of lime in building restoration. NCPTT and the FFB's Cluster Patrimony Batiment 4.0 in Troyes will jointly conduct research, exchange preservation experts and scientists for studies, develop training events, and share results. The first research project for the newly formed partnership is a study on insulation retrofits on historic half-timbered structures. Gregory Lefebvre, an international exchange student from the École Polytechnique Féminine Graduate School of Engineering, arrived in July 2019 and began designing the study. He is comparing three insulation types in model structures and measuring air quality, as well as moisture and heat transfer. This is the pilot phase of a three-phase study which will include laboratory testing, field testing, and modeling of results. The research will support recommendations to the public for insulation choices for their homes.

Gregory Lefebvre, Student FFB-CPB 4.0 Intern, adds brick masonry to the framed model houses in the laboratory.
PHOTO BY CATHERINE COOPER, NCPTT.

Vincent Mathieu, Federation Francaise du Batiment (FFB), Andrew Ferrell (NCPTT), Frederic Letoffe (FFB), and Jonathan Budzin, Cluster Patrimony Batiment 4.0, (FFB-CPB 4.0) met in Paris to sign a letter of intent to collaborate.

PHOTO BY CHLOE THIEBAUT, FFB-CPB 4.0

"Working with NCPTT's team is an immense pleasure. They possess a high level of technical expertise, and a true dedication to the preservation of built heritage. We continue to work closely and successfully to develop a network of worldwide experts in the field of heritage preservation!"

JONATHAN BUDZIN
DIRECTEUR EXÉCUTIF, CLUSTER PATRIMOINE BÂTI 4.0

Sukrit Sen (Far Left) interviews Natchitoches Mayor Lee Posey (Right) and Natchitoches City Chief of Staff Ed Lee (Center) for his project.
PHOTO BY INA STHAPIT, NCPTT

Sukrit Sen and Ina Sthapit prepare the 3D laser scanner for documentation of the tenant cabin.
PHOTO BY JASON CHURCH, NCPTT

US/ICOMOS and NCPTT host interns from India and Nepal

NCPTT sponsored two interns through the US branch of the International Council on Monuments and Sites (US/ICOMOS). Sukrit Sen and Ina Sthapit documented tenant farming houses in the Cane River Region using 3D laser scanning techniques. Few tenant cabins are left in the plantations around Natchitoches, Louisiana. At one time, hundreds of similar structures housed the agricultural workforce of the region. Now this vernacular building type has all but disappeared from the landscape. The project not only documents these buildings but raises awareness of their significant cultural history. Additionally, the interns created oral histories regarding cultural traditions and music of the region.

"Having worked in the U.S. with NCPTT, I was exposed to a very different ecosystem in the field of heritage conservation. It has helped me immensely to understand western approaches towards the same and how with a balanced use of technology, many hurdles in the field could be surpassed more easily."

SUKRIT SEN
ARCHITECT AND STUDENT AT AHMEDABAD UNIVERSITY, INDIA

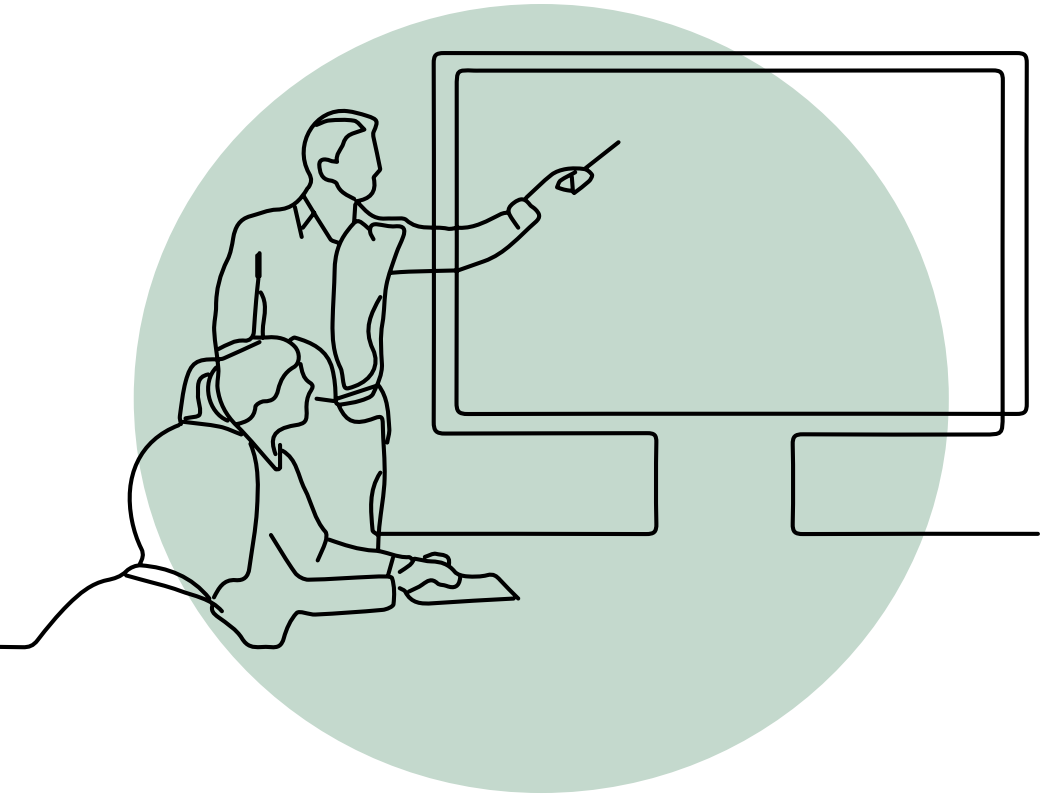
Tuskegee students at Melrose Plantation during their site visit to NCPTT.
PHOTO BY TAD BRITT, NCPTT

Tuskegee University Visits NCPTT

NCPTT served as the first stop in the 2019 Touching History: Preservation in Practice program for Tuskegee University's architecture program. The Touching History Project, developed by the Advisory Council on Historic Preservation, National Park Service, and the National Trust for Historic Preservation's HOPE Crew, introduced historic preservation to architecture students. Participants in the program learned about caring for historic materials, including removing graffiti and cleaning grave markers.

"During the program I got to travel across the United States to learn, network, and do great work. On our first stop to Natchitoches, Louisiana, we spent time at the National Center for Preservation Technology and Training (NCPTT) learning how to care for different building materials. It was very interesting to me, because I never gave much thought to how to remove vandalism and dirt from stone."

KAYLA HEARD
TUSKEGEE UNIVERSITY
ROBERT R. TAYLOR SCHOOL OF ARCHITECTURE



Training

Technical training is an integral part of moving preservation forward in the twenty-first century. NCPTT complements its research efforts by training preservation professionals and the general public in a wide variety of techniques. From courses in the latest microscopy techniques to workshops on much-needed traditional skills, NCPTT offers something for everyone. The following events are examples of NCPTT's training efforts.

Wood Identification Workshop for Professionals

NCPTT and the American Institute for Conservation hosted a wood identification workshop for preservation and conservation professionals on January 29- 31, 2019, at the New Orleans Jazz Museum. First steps in preservation work require identifying materials from which an object is made. Wood behaves differently depending on the species of wood, the grain of the wood and the speed at which it grew. Participants learned skills to identify any unknown wood sample. Participants received hands-on exercises in sampling, sample preparation, and macroscopical and microscopical techniques. Also, each participant received a set of reference samples.

"HOPE" comes to Stones River National Cemetery

NCPTT and the National Trust for Historic Preservation's HOPE Program partnered to bring more than 150 volunteers from states as far away as New York, Louisiana, and Michigan to Stones River National Cemetery and Battlefield in Murfeesboro, Tennessee, on October 20, 2018. Cemeteries are ubiquitous and need regular care and maintenance. Despite best efforts, there is often not enough time and manpower to care for every grave marker in a cemetery. During this four-hour event, volunteers hand scrubbed 5,000 veterans' grave markers with soft bristle brushes and D/2 Biological Solution. This volunteer community effort was a windfall for the National Park Service.

Volunteers from around the country and of all ages came out to honor the veterans buried at Stones River.
PHOTO BY JASON CHURCH, NCPTT

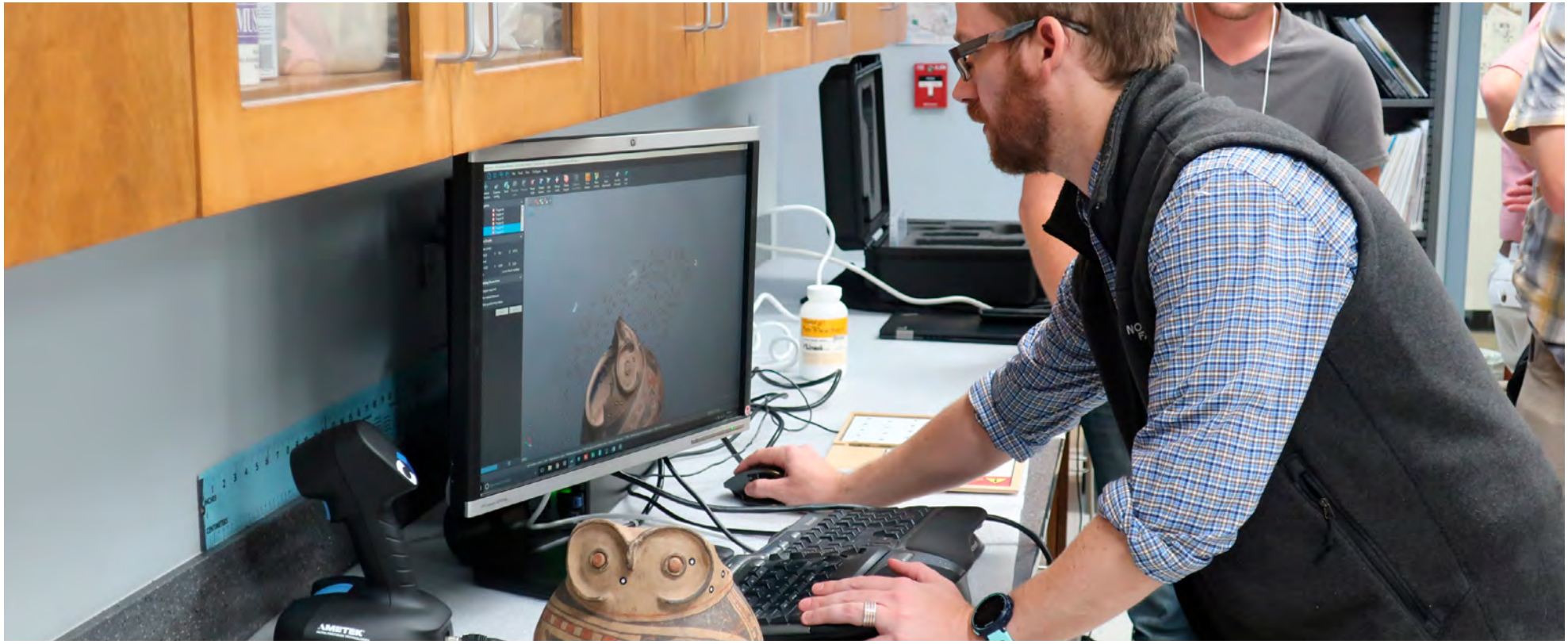
Participants in the Wood ID Workshop pair up to use the microscopes to examine wood thin sections that they created.
PHOTO BY JASON CHURCH, NCPTT

Archeology of Firearms Workshop

March 11-13, 2019, Springfield, Massachusetts.

NCPTT, the Springfield Armory National Historic Site, and the Friends of NCPTT sponsored the Archeology of Firearms workshop, which taught methods to identify firearms, firearm parts, and ammunition components found at archeological sites. Firearms and their components were essential tools on the American landscape since the 1500s, ubiquitous and critical to a successful livelihood throughout history. Participants developed skills identifying and classifying gun parts and ephemera found in the archeological record.

Flintlock Rifle, detail of hammer and lock.
PHOTO COURTESY OF SPRINGFIELD NATIONAL ARMORY, NPS



Dr Robert Z. Selden reviewing a 3D scan of an artifact
PHOTO BY TAD BRITT, NCPTT

Advanced 3D Imaging and Morphometrics for Archeologists

October 15-18, 2018, Tucson, Arizona.

NCPTT featured the use of 3D imaging as a way to study surfaces of archeological objects in a workshop held in Tucson, Arizona. Participants learned the methods and theory of 3D scanning and produced images of a variety of objects. 3D imaging is an important tool for non-destructive analysis and allows the artifact to be curated but accessible virtually by researchers and other interested groups from any web- based computer. The use of these 3D tools offers greater accuracy and precision when looking at tool marks and surface conditions.

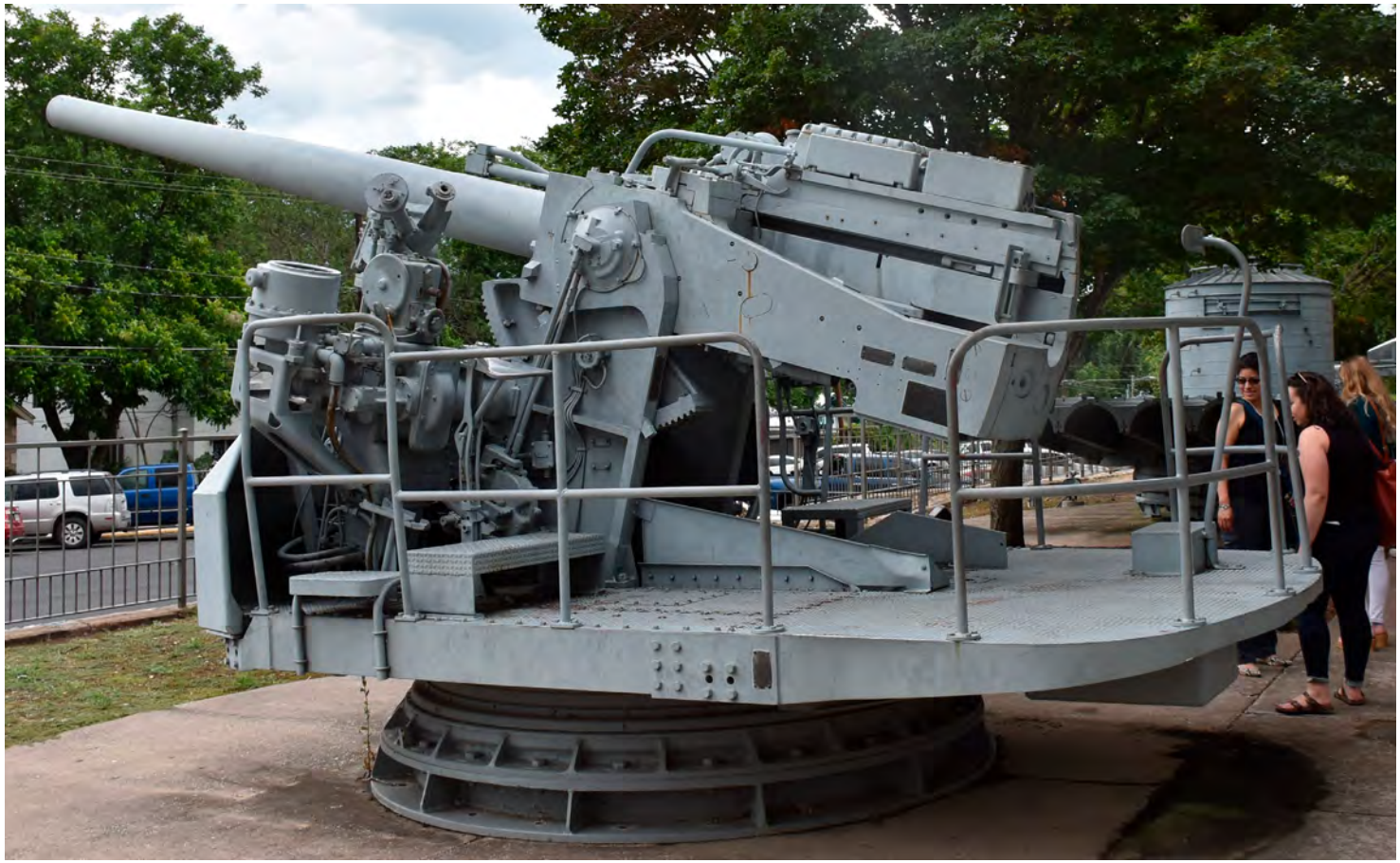
Symposia

NCPTT addressed cutting edge preservation issues which other preservationists sometimes neglect. In 2019, NCPTT brought together experts and enthusiasts from around the country to address aging military heritage. The National Center held the symposium, Preserving U.S. Military Heritage: WWII to the Cold War, in Fredericksburg, Texas, June 4-6, 2019.

The three-day symposium discussed state-of-the-science efforts to preserve sites, features, objects, letters, photographs, machines, shipwrecks, uniforms, and tools that represent military heritage. The event featured 27 papers, 11 posters, and two tours. More than 100 participants enjoyed talks including Richard Hulver and Blair Atcheson's presentation USS Indianapolis Discovered! Now What? – Analysis of a Wrecksite; Janet Folkert's presentation Preserving Public Memory: Caring for Mementos Left at the Vietnam Veterans Memorial; and Stephanie Nutt and Adam Smith's presentation Rehabilitating the WWII Black Officers' Club, Fort Leonard Wood, among others.

The third day of the symposium featured a site visit to the National Museum of the Pacific War with tours. Participants discussed unique preservation issues within the collections. The museum occupies a six-acre campus and includes the Admiral Nimitz and George H.W. Bush Galleries, the Nimitz Education and Research Center, the Pacific Combat Zone, a Memorial Courtyard, the Plaza of Presidents the Japanese Garden of Peace.

Participants in the field session at the National Museum of the Pacific War studied a Japanese mini-submarine from exterior and through-windows cut into the interior.
PHOTO BY CATHERINE COOPER, NCPTT



Participants in the Field Session at the National Museum of the Pacific War get close to macro-artifacts mounted outside of the museum.
PHOTO BY CATHERINE COOPER, NCPTT

"My participation with the NCPTT symposium here at the National Museum of the Pacific War provided me with a perfect opportunity to learn from respected experts who work at a variety of federal, state and local institutions. This symposium made me aware of unique approaches to preserving twentieth century military history and provided invaluable opportunities to interact with a number of people who are as passionate about their work as I am. It was a very satisfying experience and I would do it all over again if given the chance."

RORIE CARTIER
MUSEUM DIRECTOR, NATIONAL MUSEUM OF THE PACIFIC WAR

Publications and Media

"Proceedings of the Are We There Yet? Preservation of Roadside Architecture and Attractions"

The Friends of NCPTT and the National Center published the proceedings of the Are We There Yet? Preservation of Roadside Architecture and Attractions Symposium. The papers presented address complex issues associated with preserving these unique features constructed during the 1920s-1970s along American roads. The symposium delved into a broad range of conservation topics, from preserving early concrete gas stations and wigwam hotels to restoring roadside giants, Sinclair dinosaurs, and a terrazzo state map from the New York State Fair of 1964.

"When the Rust Settles, Convert It" graphic story

The third graphic story from NCPTT looks at rust and the use of rust converters to stabilize iron and steel artifacts. This graphic story uses the real-world example of the USS Texas as its artistic backdrop. Rust converters are important for conservation because they offer a better way to preserve the original iron-based historic material by chemically converting the iron oxide into a more stable compound. This process is less invasive than sand blasting and grinding the original surface down to remove the oxide.

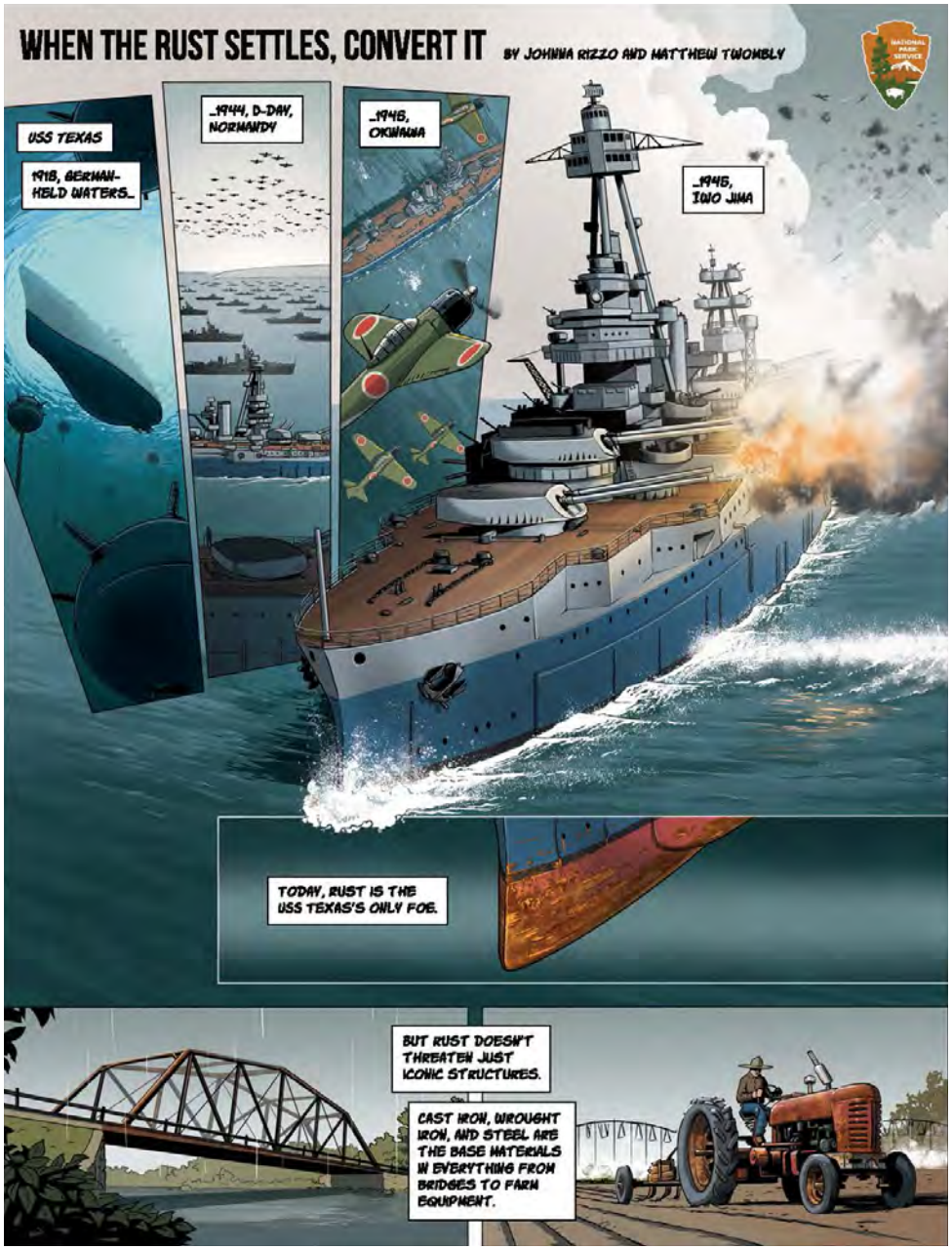
Are We There Yet?

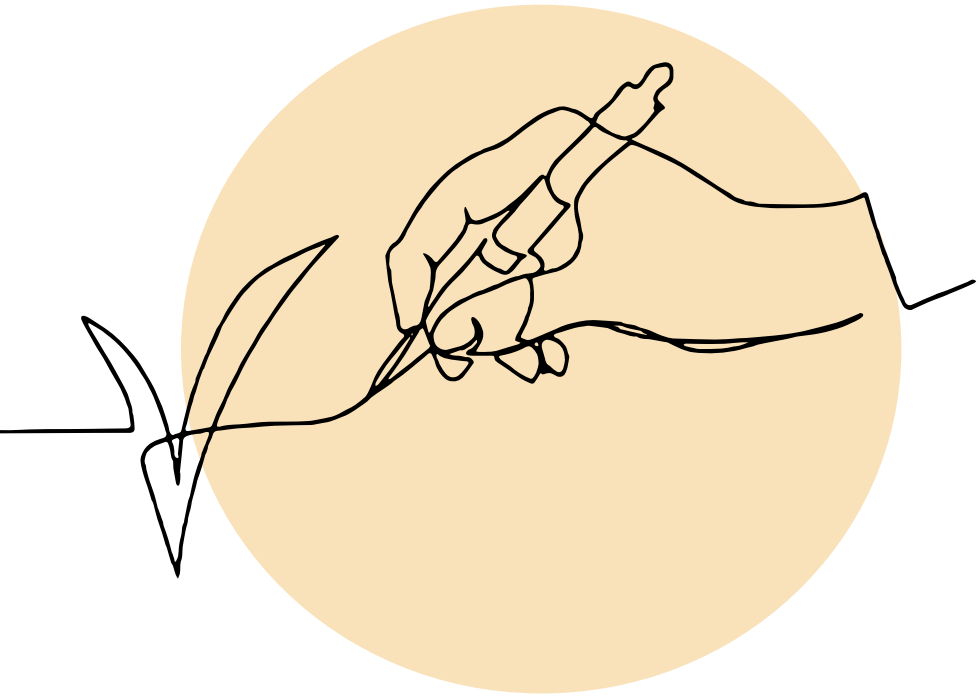
Preservation of Roadside Architecture and Attractions

Tulsa, Oklahoma, April 10-12, 2018

FRIENDS of NCPTT

NCPTT

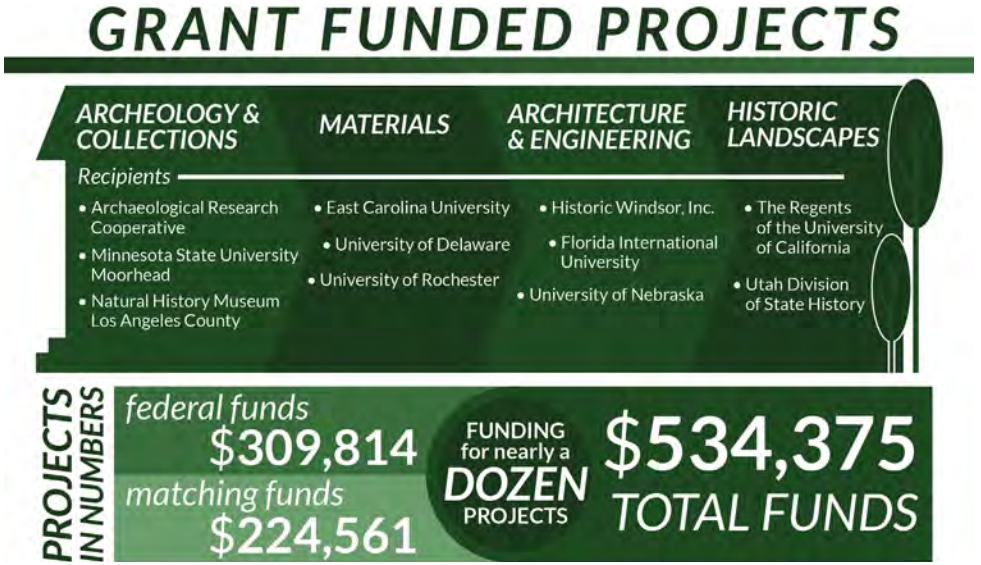




Grants

When the Center was established, founders expected NCPTT to create synergy with researchers nationally and internationally in order to address complex preservation issues through technology. One way to spur on advances was to create a grants program.

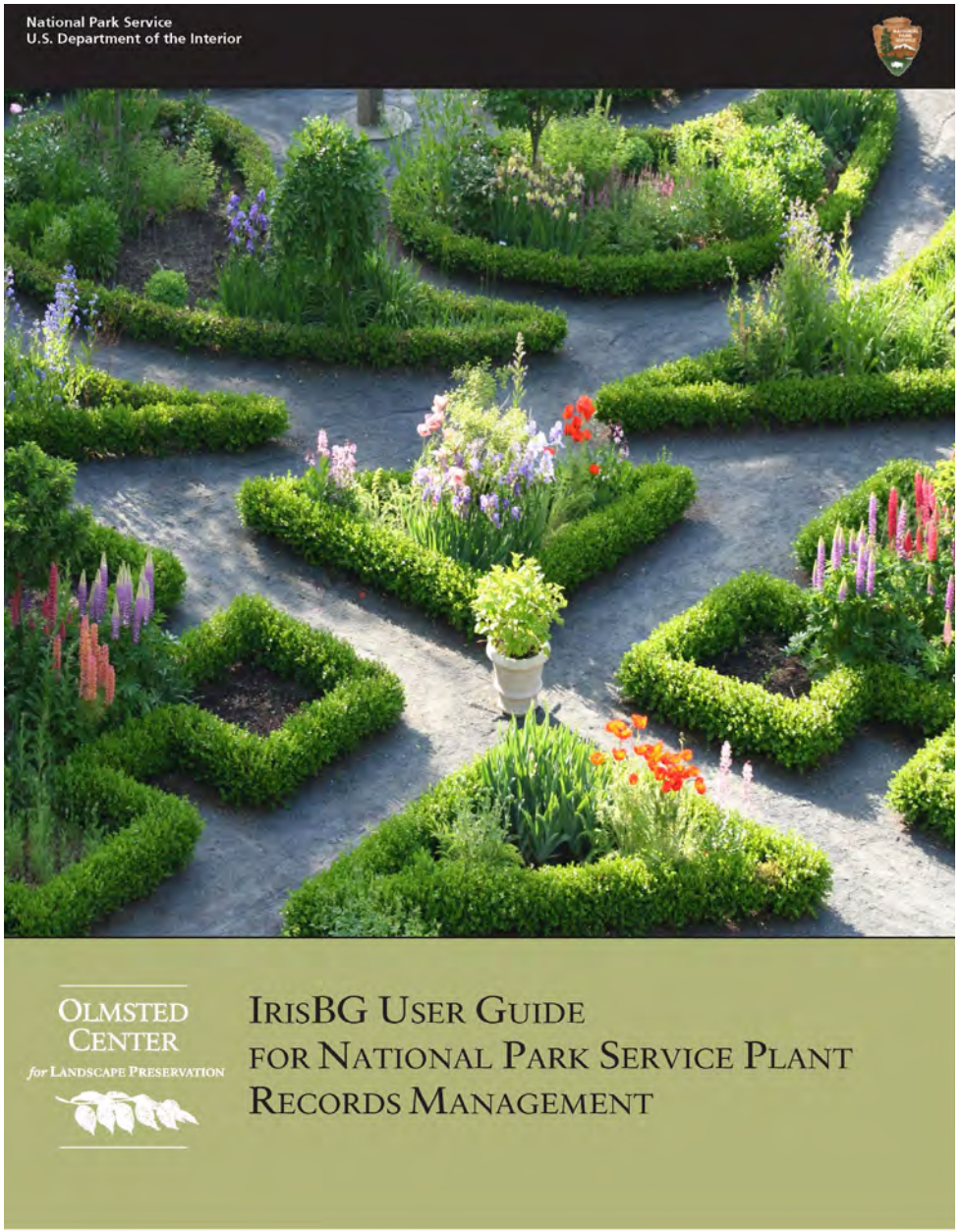
NCPTT awards grants annually for research and training activities. NCPTT awarded eleven FY 2019 Preservation Technology and Training grants totaling $309,814. The grants will generate information, products, and services that support preservation and stewardship of the nation's cultural and historical heritage. The scientific community and researchers external to NPS will gain new knowledge provided through scientific research generated by these grants. The complete list of 2019 grants can be found in Appendix C.



Reports and Projects

Olmsted Center for Landscape Preservation: Modernizing Plant Records Management

With funds from NCPTT, the NPS Olmsted Center for Landscape Preservation compared digital databases for creating and using digital plant records. The result was an IrisBG User Guide for National Park Service Plant Records Management, which is relevant to botanical gardens and arboreta around the world. Plants are a cornerstone of our national landscapes. Not only do plants provide living, tangible links to the past, they also possess great ecological and scientific value. Access to plant records, and documenting the history, condition, and care of wild and cultivated plants, is essential to understanding these resources.



Georgia O'Keeffe. Cedar Tree with Lavender Hills, 1937. Oil on canvas, 30 x 19 ½ in. Georgia O'Keeffe Museum

Dioptra Digital Photograph of painting location, 2018

Georgia O'Keeffe Museum: Georgia O'Keeffe Museum Viewshed Project

The Georgia O'Keeffe Museum is developing a database connecting O'Keeffe's paintings to the iconic locations they portrayed and to the specific viewsheds that the paintings encompass with support from NCPTT. Georgia O'Keeffe's artistic representations of diverse New Mexican landscapes evoke a strong sense of place, identity, and character, deeply felt by locals and visitors alike. The interactive mapping tools can be found at:
https://web.tplgis.org/gokmuseum/

Colorado Mesa University: Historic Rifling Data Characteristics: Using Forensic Techniques to Further Archeological Inquiry into Firearms

Battlefield archeological studies can lead to a much better understanding of the conflicts that took place throughout history. Most archeologists and curators can only identify a bullet or cartridge case to caliber. Using funding from a Preservation Technology and Training Grant, Colorado State University developed forensic casting and digital imaging technologies that resulted in a database of rifling characteristics for 788 firearms. The database can be used to identify some common pre-1900 rifled firearm ammunition components to type, model, or gunmaker.

Dr Doug Scott with assistant taking an epoxy impression of the rifle barrel
PHOTO COURTESY OF DR. DOUG SCOTT

Special Initiatives

NEW! Technical Services for parks and partners

NCPTT formalized its Technical Services program in 2019. The program is designed to make the resources and expertise at NCPTT available to help the National Park Service and other agencies working to protect cultural heritage. NCPTT does this by offering technical analytical and consultation services, including site visits and assessments, chemical analyses of samples, and training events. The first official project was a consultation at Fort Pickens, Gulf Islands National Seashore. Preservation professionals assessed the Mine Storeroom at Fort Pickens and took mortar samples for analysis to advise on the best approach to conserving the building.

Catherine Cooper, Research Scientist, taking a mortar sample for analysis from the Mine Storeroom at Fort Pickens, Gulf Islands National Seashore.
PHOTO BY JASON CHURCH, NCPTT

Researchers at the U.S. Army Corp of Engineers Construction Engineering Research Laboratory in Champaign, Illinois, remove wall assembly from flood immersion simulation tank.
PHOTO BY NCPTT

Disaster Response

NPS Technical Preservation Services partnered with NCPTT and the U.S. Army Corp of Engineers to assess the durability of traditional assemblies typically found in historic buildings within flood-prone areas in order to compare performance with new materials marketed as flood-damage resistant.

The project evaluates and grades traditional building materials with prolonged exposure to flood water. Using an engineering-based approach, the project develops guidance to expedite post-disaster recovery.

The team exposed twelve wall assemblies and four floorings to simulated flood immersion according to the ASTM E3075 standard. Walls were constructed using a range of materials and techniques representing different construction periods. Brick walls included traditional and early 20th-century construction, which was finished with gypsum, wallboard, limewash, and wainscot. Wood frame walls included assemblies with or without sheathing, with aluminum siding, stucco, wainscot, clapboard and wire lath. Flooring materials -- heart pine, cypress, ceramic tiles and oak with sheathing -- were used for testing. Measurements of drying time and microbial activity were determined on each assembly after 72-80 hours of immersion in sewage and mold surrogate. The study concluded with categorizing the materials into five types based on their resilience to flooding.

Historic Cemetery Preservation

NCPTT developed methods to remove iron stains from marble veterans' markers for the National Cemetery Administration. The resulting method had to both do no harm to the historic marker and be applicable in the field to large areas of a cemetery. NCPTT Staff conducted testing and field work that resulted in a solution for Beaufort National Cemetery.

A National Cemetery Adminstration (NCA) employee rinses the chelating agent from an iron-stained marble grave marker in Beaufort National Cemetery.
PHOTO BY JASON CHURCH, NCPTT

INTRODUCTION TO CONSERVING MODERN ARCHITECTURE

May 28-30, 2019
Los Angeles, California

Increasingly, design professionals and preservationists are tasked with preserving, repairing, and assessing the historic significance of modern buildings. However, the conservation of modern architecture is a fairly recent area of practice that is unfamiliar to many practitioners. To address these needs, NCPTT and the Getty Conservation Institute held a second offering of the three-day Introduction to Conserving Modern Architecture course in 2019. Professionals from around the world came to the Getty Center to learn about conservation principles and methodology applied to modern structures. The course included lectures and labs to teach attendees the necessary skills to evaluate modern buildings and identify their common deterioration problems. Participants had the opportunity to tour the Eames House and learn about the design and implementation of a conservation management plan.

Catherine Copper, Research Scientist, demonstrates analysis of modern finishes at the Introduction to Conserving Modern Architecture course.
PHOTO BY GCI

Preservation Trades Workshop, 2019

April 26-27, 2019
Natchitoches, Louisiana

The Preservation Trades Network (PTN) collaborated with the NCPTT to hold a Preservation Trades Workshop in Natchitoches, Louisiana. The event brought demonstrators from across the region to learn traditional trades. NCPTT offered a mortar workshop at American Cemetery on April 25th as part of the event. The workshop taught participants the importance of selecting the correct mortar mix to match the age of their masonry.

PTN has an important mission to promote and educate the general public as well as preservation professionals about traditional building trades.

Mortar workshop participants repoint a brick box tomb using mortar mixed from lime putty.
PHOTO BY JASON CHURCH, NCPTT

Research Associates and Interns

Ariel Bailey,
Information Technology
Ariel assists in uploading information to the content management system for NCPTT's website. She is working towards a bachelors degree at the Louisiana Scholars College with an emphasis on Fine Arts.

Marissa Bartz,
Materials Conservation
Marissa is studying the efficacy of anti-efflorescence coatings for historic masonry structures. Bartz has a background in chemical microscopy and a master's degree in art history from Syracuse University.

Sierra Glenn,
Historic Landscapes
Sierra is making NCPTT's symposia materials and grant products available online and assisting with other program tasks. She is an undergraduate at Northwestern State University of Louisiana majoring in biology.

Vrinda Jariwala,
Materials Conservation
Vrinda is completing phase three of the study of surface washing agents for cleaning oil-soiled historic structures. She is an architect with a masters degree in architecture (architectural conservation) from School of Planning and Architecture, New Delhi. Most recently she completed an Advanced Professional Diploma in Technical Building Conservation at Engine Shed, Historic Environment Scotland with Forth Valley College, Stirling.

Isabella Jones,
Materials Conservation
Isabella is designing print materials and creating short videos about NCPTT's research capabilities. She is a senior fine and graphic arts and biology major with concentrations in graphic design and natural science at Northwestern State University of Louisiana.

Gregory Lefebvre,
Materials Conservation
Gregory is comparing the effectiveness of three different insulation products for retrofitting historic half timber homes. Gregory is in his fourth year of studies at the École Polytechnique Féminine (EPF) Graduate School of Engineering, Troyes, France.

Santana Mount,
Archeology and Collections
Santana is a senior at Northwestern State of Louisiana, studying anthropology with an emphasis in museum curation. She is an intern and is working on a nationwide database of contact information regarding archeologists, State Historic Preservation Officers, and Tribal Historic Preservations Officers.

Abigail Poe,
Historic Landscapes and Materials Conservation
Abigail is evaluating better, safer chemical products to remove and control weeds around historic buildings. She is earning a Bachelor of Science in biology
at Northwestern State University in
Louisiana.

Elizabeth Salmon,
Materials Conservation
Elizabeth is examining the efficacy of surface washing agents to remove two types of crude oil from architectural media. The ultimate goal of this research is to glean information about how best to respond to an inland oil spill at a cultural heritage site while limiting physical and chemical damage to its historic materials. Elizabeth is an alumna of Vassar College, where she studied anthropology.

Sukrit Sen,
US/ICOMOS Intern, Architecture
and Engineering
Sukrit Sen is documenting the disappearing slave cabins in the historic districts along the Cane River in Natchitoches, Louisiana. Also, he is interviewing several stakeholders associated with these cabins to develop an oral history regarding the life and times of tenant farmers. He is currently pursuing his master's degree in heritage management from Ahmedabad University, India.

Sheena Simmons,
Architecture and Engineering
Sheena is developing a framework for conducting assessments of cultural landscapes using free and publicly accessible tools: Google Earth Pro, historical imagery, and a fillable PDF survey form. Simmons is a recent graduate of the University of Florida's Master's of Forest Resources and Conservation program.

Ina Sthapit,
US/ICOMOS Intern, Architecture
and Engineering
Ina is currently using laser scanning to document the cabins of tenant farmers at the Oakland Plantation along the Cane River, and several other houses in Natchitoches Parish. She is pursuing a master's degree in historic preservation at the University of Florida.

David Watt,
Archaeology and Collections
David is a research associate who is developing a GIS database and risk assessment for at-risk cultural resources in coastal Louisiana. This research is being conducted for the Mississippi River Delta Archaeological Mitigation program (MRDAM) which is evaluating coastal archeological resources impacts from sea-level rise and subsidence.
He is currently a Ph.D. student at Tulane University.

STAFF

Kirk Cordell, Executive Director

Andrew Ferrell, Deputy Director

Kevin Ammons, Administrative Officer

Seth Butler, Executive Assistant

Tad Britt, Chief, Archeology and Collections

Jason Church, Materials Conservator

Sean Clifford, Web and Mobile Development Specialist

Catherine Cooper, Research Scientist

Lance Ellis, Information Technology Administrator

Sarah Jackson, Architectural Conservator

Deborah Dietrich-Smith, Chief,

Historic Landscapes

Mary Striegel, Chief, Materials Conservation

PTT Board

The PTT Board is comprised of 13 members and advises the Center on a wide variety of topics. They recommend questions for NCPTT to address through training or convening of experts.and identify unmet needs within their particular areas of expertise. The board members stay on top of emerging trends in historic preservation and serve as beacons to guide the Center's work. Four seats are currently vacant.

Norman R. Weiss, Chair, Professor, Graduate School of Architecture, Preservation and Planning, Columbia University

Horace H. Foxall, Jr., Program Manager U.S. Army Corps of Engineers

James W. Garrison, State Historic Preservation Officer, Arizona

Lucy Lawliss, Landscape Architect, National Park Service

Fred Limp, Ph.D., Center for Advanced Spatial Technologies, University of Arkansas

Nancy N. Odegaard, Ph.D, Arizona State Museum, University of Arizona

Robert G.H. Pahl, AIA, NCARB, President, Pahl Architecture/Planners

Jack H. Pyburn, FAIA, Principal, Historic Preservation Studio Lord Aeck Sargent, Inc.

Jonathan C. Spodek, AIA, Associate Professor, Department of Architecture, Ball State University

Ekaterini Vlahos, Director, Center for Preservation Research, University of Colorado, Denver

APPENDIX A: TRAINING

- Advanced 3D Imaging and Morphometrics for Archeologists, October 15-18, 2018, Tucson, AZ: NCPTT partnered with the Arizona State Museum to hold the four-day workshop.
- HOPE comes to Stones River National Cemetery, October 20, 2018, Murfreesboro, TN: NCPTT and the National Trust for Historic Preservation's HOPE Program joined to lead hundreds of volunteers clean over 5,000 veteran grave markers at the Stones River National Cemetery and Battlefield.
- Cemetery Preservation Workshop, October 23-24, 2018, Frederick, MD: NCPTT instructed at the two-day workshop held prior to the International Preservations Trades annual workshop at the Mount Olivet Cemetery.
- Put the Lead In: Casting Replacement Ornamental Fence Elements, October 26, 2018, Frederick, MD: NCPTT taught the half-day class as part of the International Preservations Trades annual workshop.
- Intermediate Cemetery Preservation Workshop, November 1-2, 2018, Mooresville, NC: NCPTT instructed the two-day workshop at the Willow Valley Cemetery.
- Maintaining Historic Wood Windows, November 3-4, 2018, Natchez, MS: NCPTT partnered with the Mississippi Department of Archives and History to hold the two-day workshop at Historic Jefferson College.
- Advanced Ground-Penetrating Radar, November 5-8, 2018, Marksville, LA: NCPTT held the three-day workshop at the Marksville State Historic Site.
- Wood Identification Workshop for Professionals, January 29- 31, 2019, New Orleans, LA: NCPTT partnered with FAIC to hold the three-day workshop at the New Orleans Jazz Museum.
- Archeology of Firearms, March 11-13, 2019, Springfield, MA: NCPTT partnered with the Springfield Armory National Historic Site to hold the three-day workshop at the armory.
- Historic Masonry Workshop, April 24-25, 2019, Natchitoches, LA: NCPTT held the two-day workshop prior to the Preservation Trades Network's annual workshop.
- Preservation Trades Workshop, April 26-27, 2019, Natchitoches, LA: NCPTT hosted the annual Preservation Trades Network workshop.
- NAGPRA for Archeologists, May 6-9, 2019, Durant, OK: NCPTT, partnered with the Choctaw Nation of Oklahoma and the National NAGPRA Program to hold the four-day course.
- Technology Showcase at AIC Annual Meeting, May 14, 2019, Uncasville, CT: NCPTT organized the showcase focused on emerging technologies useful to conservators.
- Archeological Prospection in the 21st Century, Fort Casimir Site, May 20-May 24, 2019, New Castle, DE: NCPTT partnered with the NPS Midwest Archeological Office, Delaware State Parks, and the New Castle Historical Society to hold the five-day workshop at Fort Casimir site.
- Introduction to Conserving Modern Architecture Course, May 28-30, 2019, Los Angeles, CA: NCPTT and the Getty Conservation Institute partnered to hold the three-day workshop at the Getty Museum.
- Cemetery Conservation Workshop, June 14-15, 2019, Bardstown, KY: NCPTT taught in a two-day event to educate participants on cemetery sustainability and restoration.
- Cemetery Conservation 101, June 26, 2019, Boiling Springs, NC: NCPTT instructed at the three-day workshop held at the Association for Gravestone Studies Annual Conference.
- Cemetery Conservation Workshop, June 29, 2019, Shelby, NC: NCPTT instructed at the one-day workshop held at the Association for Gravestone Studies Annual Conference.
- 3D Photogrammetry Workshop, August 19-23, 2019, Moose, WY: NCPTT partnered with TN Photogrammetry, NPS Western Center for Historic Preservation, and the Bureau of Land Management to hold the five-day workshop.
- Introduction to Cemetery Preservation Workshop, August 26, 2019, Salt Lake City, UT: NCPTT partnered with the State of Utah to teach the one-day workshop at the Salt Lake City Cemetery.
- Cemetery Preservation Workshop, August 27-28, 2019, Park City, UT: NCPTT partnered with the State of Utah to teach the one-day workshop at the Glenwood Cemetery.
- Cemetery Conservation Workshop, September 13-14, 2019, Bloomington, IN: NCPTT partnered with the University of Indiana and the Monroe County History Center to hold the two-day workshop.

APPENDIX B: MEDIA

SYMPOSIA VIDEOS

Are We There Yet? Preservation of Roadside Architecture and Attractions. NCPTT partnered with the Friends of NCPTT, the City of Tulsa, the NPS Route 66 Corridor Preservation Program, and the Tulsa Foundation for Architecture to hold a three-day symposium in Tulsa, Oklahoma on the preservation of roadside architecture and attractions.

The following video presentations are closed-captioned and available on the NCPTT website.

- A Tale of Two Survivors: The Gettysburg and Atlanta Cycloramas, Suzanne Wray, Historian, New York
- After the Fair: Preserving the Texaco Road Map Pavement at the New York State Pavilion, Frank Matero, University of Pennsylvania.
- A Sign of the Times: Delaware's Historical Markers as Roadside Attractions and Artifacts, Kevin Barni, University of Delaware.
- Color Palettes to the Rescue: Saving Buildings from Demolition, Tania Alam, Jablonski Building Conservation.
- Sixty-six Phillips 66 Stations: From Walking Dead to American Restoration, Mike Kertok, Kertok Architect.
- Celebrating the Roadside Architecture of Route 66: A Marketing Perspective, Amy Webb and Grant Stevens, National Trust for Historic Preservation.
- Tourism and T Rex Tracks, Jennifer Carpenter, Texas Parks and Wildlife Department.
- Getting the Word Out: Interpretation of Route 66 in Oklahoma, Scott Sundermeyer, Oklahoma Department of Transportation and Chad Moffett, Mead & Hunt.
- Roads, Model T's, Tourists, and Tea Rooms, Cynthia Brandimarte, Texas State Parks and Wildlife
- Concrete Jungle: Conserving Canada's Menagerie of Concrete Sculptures, Kelly Caldwell, CSI Conservation Solutions.
- Grassroots Efforts: Neon Sign Restoration Along Route 66, Jim Thole, Route 66 Association, Neon Heritage Preservation Committee.
- Ed Galloway's Totem Pole Park, Erin Turner, Artist, New York.
- Route 66: Preserving the Roadside Experience, Kaisa Barthuli, National Park Service, Route 66 Corridor Preservation Program.
- Signs of Oklahoma, Lynn Rostochil, Okie Mod Squad.
- Photography as Preservation, Rhys Martin, Photographer, Tulsa, Oklahoma
- Symposium Interview with Amy Webb, National Trust for Historic Preservation.
- Symposium Interview with Frank Matero, University of Pennsylvania.
- Symposium Interview with Joel Baker, American Giants.
- Symposium Interview with Grant Stevens, National Trust for Preservation.
- Symposium Interview with Dylan Thuras, Atlas Obscura.

National Park Service
U.S. Department of the Interior

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