A Year in Review...

Modeling Mosquito Beach // Rethinking the Revolving Fund // Surveying the Field
In This Issue

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Wragg Mall // Photo by Rachel Wilson
Dear Friends of the program,

Greetings from a warm and muggy June morning in Charleston. To say that my first year as program director has been “eventful” might be the understatement of my life. Indeed, after a relatively boring summer and fall semester (with the exception of a small hurricane), we saw the joyous birth of two babies – Amalia and Gaurav’s daughter Veda Michelle Samant and Amanda and Grant’s son Holden Patrick Tucker. Then, just as we were settling into the spring semester, COVID-19 struck, forcing us to flee the Cigar Factory and finish the semester online. As I write this, like much of the country, we in Charleston are reckoning with the historical consequences of racial inequality and searching for ways to leverage our discipline and privilege to promote social and economic justice (more about this below).

Throughout this white-knuckle-ride of a year, I was impressed and inspired by the work of our students and faculty. While working in our amazing IDC project house at 70 Tradd St., I saw our first-year students progress from measured-drawing “noobs” to highly proficient AutoCAD draftspersons. I also witnessed their trials and tribulations as they worked through the gauntlet of first-year courses in preservation history and theory, American architectural history, historic property research methods, landscape preservation, preservation studio, and conservation science. I also had the pleasure of advising our second-year students through their thesis projects, which they all admirably tackled along with courses on building technology and pathology, preservation law and economics, and electives. As the following pages show, all of this coursework was wrapped-around hands-on, real-world projects. The experiential focus of our curriculum is a central pillar of our program’s identity, and the results of these projects demonstrate the effectiveness of this teaching strategy.

Before closing, I want to say that we in the program are listening to the call for social change that has been at the center of recent protests in Charleston and elsewhere. It is a call that we will answer in a number of ways following the directives of the Clemson School of Architecture and the College of Charleston. First, we will identify and implement ways to better incorporate social and economic justice into our curriculum and lecture series. Second, we will commit to emphasizing diversity when recruiting students and faculty. Third, our program already has a strong history of community-based preservation projects, but we will work harder to listen to our community partners when collaborating, so that we can better design our projects around the concerns and outcomes that they prioritize.

We hope you enjoy the following essays, each of which is authored by our students. A special thanks to Elliott Simon and Rachel Wilson for doing a great job editing. Please follow our work on facebook (https://www.facebook.com/CharlestonMSHP/) and Instagram @mshp_grad_program.

Regards,
Dr. Jon Marcoux
On The Road.

The Lowcountry and Beyond

1 // Student Bernie O’Brien birdwatching before class at Mosquito Beach. February 2020. Photo by Sarah Clifton

2 // Second-year BTaP class with professor Amalia Leifeste at Nucor Steel in Berkeley County, Fall 2019.

3 // First-Year students surveying Chapel Street Fountain Park, February 2020. Photo by MSHP

4 // First-Year students visiting Colonial Dorchester, September 2019. Photo by Laurel Bartlett
First-year students inside the Memorial Hall tower at Enston Homes, October 2019. Photo by MSHP.

Students with Carter Hudgins at the Vernacular Architecture Forum last May in Philadelphia, PA.

The Gothic Room at Marble House in Newport, RI, October, 2019. Photo by Elliott Simon.
Brick Baptist Church
St. Helena, Beaufort, SC

Spring 2020 by John Bennett

In the spring semester, the second-year class wrote a Historic Structure Report (HSR) on the Brick Baptist Church on St. Helena Island, outside Beaufort, SC. The HSR denotes the beginning portion of an ongoing effort by the National Park Service to document the church, its landscape, and the Historical Park in its entirety. The church is a part of the Reconstruction Era National Historical Park, formed in 2007. Brick Baptist Church was built in 1855 by the enslaved population, primarily funded by William Fripp. The church was abandoned by the white inhabitants of St. Helena Island, who fled in November of 1861 as the Federal Army seized control of the port. The church became the expanded home of the Penn School in 1862. Founded by Laura Towne and Ellen Murray, Penn School was one of the first schools to educate freed slaves. The church has been in continuous use, even after the school moved across the street to a new building.

The report follows the National Park Service HSR structure, and it serves as the launching point for a comprehensive HSR that is a guiding document for interpretation, documentation, and building maintenance. The project involved a significant research component into the history of the church, the Penn Center, and the island. The church building was documented by hand measurements and laser scans to capture the geometry and architecture accurately. The surrounding topography is included in the documentation to provide some broader understanding of the changing site conditions, where storm-water runoff has threatened the foundations of the church. The report concludes with recommended treatment plans and maintenance schedules. It was evident that the continued use of the building for 165 years has been the most significant contributing factor in its successful preservation.

Students use technology to map out massive Revolutionary War structure under Marion Square
The Investigation, Documentation, and Conservation (IDC) course, provides first-year students with an understanding of basic preservation skills. This year’s students used the Judge Robert Pringle House, located at 70 Tradd Street, in Charleston, as the focus of their study. Students began the course with learning documentation skills, where several rooms of the Pringle house were documented through measured drawings. These drawings were then brought back to the Clemson Design Center, Charleston (CDC.C), and drawn in AutoCAD. Photographs and architectural descriptions supplemented this documentation.

Next, students conducted investigatory work into the construction and evolution of the Pringle House. This began with deed research, and recording the chain of title of the house, as well as finding any historic documentation of the property such as records held at Charleston County, Board of Architectural Review (BAR), and family records. This gave a better understanding of the ownership, use, and evolution of the property since its construction in the late eighteenth century. Further investigatory work was done through a condition assessment. In this process, each student chose a building system, such as the doors, windows, floors, walls, ceilings, roof, security systems, and fire suppression systems, and recorded the current state on a scale of poor, fair or good. The condition of each system was documented through photographs, meant to supplement written descriptions.

The final stage of the IDC course involved building conservation. Conservation was mainly practiced through paint analysis, where samples were collected from various rooms and surfaces throughout the Pringle House. These samples were then brought back to the CDC.C Conservation Lab and microscopically examined. In several instances students found evidence of historic finishes including faux marbling and wood graining. These results were logged and kept on file for future conservation of the historic house.

The IDC course was completed after all of the findings were presented to members of the Clemson University and Charleston community and compiled into a final report. These reports were given to the conservators, professors, and owners of the Judge Robert Pringle House so that they may be used as a tool for future preservation efforts.
During winter break a collaborative team of three second-year students (Tanesha High, Elliott Simon, and Rachel Wilson) and two first-year students (Ben Thomas and Jenny Brant) were tasked with completing measured drawings and photographic record of the historic U.S. Vegetable Breeding Laboratory located in Charleston County, South Carolina. The documentation of the c. 1936 laboratory complex was a part of a larger mitigation report that was conducted by MSHP alumna Brittany Lavelle Tulla (’12).

The agricultural research center was constructed as a result of the Bankhead-Jones Act of 1935 implemented by the USDA as a way to solve the malnutrition issues common in the US and to lessen the financial impacts on farmers caused by the Great Depression. The lab constructed off Highway 17 in West Ashley was the first of nine labs built through this act to conduct research on agricultural issues in the greater Charleston area.
Documentation efforts were focused on two structures within the complex. The first is the two and a half story Colonial Revival style main laboratory built mostly from concrete slabs and completed in 1936. For this structure, exterior drawings included a plan, exterior elevations, sections, and detailed drawings of unique features like the front door which shows evidence of modifications.

The second structure documented was the “head house” and its connected greenhouses. The headhouse is located directly behind the main laboratory. The headhouse is a collection of three timber-framed structures with brick veneer connected by a main hall. The headhouse was constructed in two phases, in 1939 and in the 1950s. Extending from the back of these buildings were three greenhouses. A plan along with exterior elevations were created for this collection of buildings. Extensive photographic documentation was also done for both the main lab and the head house.

Working on this collaborative project allowed students to earn income doing preservation work over their academic break, and enabled Clemson to leverage its students to create parts of the mitigation report. Sitting in on meetings involving many stakeholders and having conversations with clients provided insights and experiences that cannot be recreated in the classroom. Also, being a part of the fieldwork team further developed teamwork and documentation skills and also resulted in work being published in a formal document.
First-year students began their spring Preservation Studio by documenting the Pine Tree Hotel in Mosquito Beach under the guidance of Warren Lasch Conservation Center’s Justin Shwebler and Nick DeLong. During the mid-20th century, Mosquito Beach was an entertainment destination for black citizens from the Sol Legare and greater James Island community. Members of the community built pavilions along the marsh and restaurants and clubs along the road. Built in 1964 by Andrew “Apple” Wilder, the Pine Tree Hotel offered accommodations for black patrons during a time when accommodations for black patrons were scarce. As one of five black beaches in the Charleston area, Mosquito Beach saw many visitors every weekend.

After Hurricane Hugo hit the coast in 1989, some buildings like the Pine Tree Hotel were damaged and some structures like the pavilion were destroyed. In the years since Hugo, the Mosquito Beach community has worked to rebuild. In 2019, Mosquito Beach was added to the National Register for Historic Places and received a National Park Service Civil Rights Grant to rehabilitate the Pine Tree Hotel. The photogrammetry project of the Pinetree Motel was part of the ongoing work that Historic Charleston Foundation is doing with the community of Mosquito Beach.
In order to learn a new documentation technology, students documented the hotel using photogrammetry. Photogrammetry is the process of taking photos of an object or structure from numerous angles and creating a 3D model. Students began the project by photographing the structure’s exterior from all angles, making sure there was at least a 40% overlap between each image. Students took care to maintain the same distance from the building and height from the ground in order to maintain perspective and reduce any potential distortion in the model. The students also photographed one of the former bedrooms on the second floor.

Back in the studio, the students used Agisoft Software to combine the photos and build the model. The process involved aligning the photos, creating a dense point cloud, adding mesh and texture to the model, and fine-tuning the appearance to create the final 3D model of the Pine Tree Hotel.

Photogrammetry requires minimal time at a site but still provides a detailed and interactive visual documentation of a structure. The fieldwork allowed the students to learn about the significant Mosquito Beach site, acquire a new documentation skill, and evaluate how innovative documentation methods can support traditional methods.

Learn more at historicmosquitobeach.com created in part by Historic Charleston Foundation
The Historic Interior class used the inventory of John Rattray, an owner and resident of the Lining House between 1757 and 1761, as a starting point to begin interpreting the dining room. The inventory was used in conjunction with archival research, scholarly secondary sources, paintings of the period, and other comparable inventories to create a historically appropriate interpretation of the Lining House dining room.

On March 5, 1757, the property at 106 Broad Street was sold to 41-year-old John Rattray, Esq. and his wife, Helen. Rattray was a prominent Charleston lawyer and used the house at 106 Broad Street as his law office and in-town residence until his death in 1761. He was active in many government, civic and social organizations and was on the furnishing committee for the new statehouse. Other committee members included Lt. Gov. William Bull Jr., William Wragg, Henry Middleton, Thomas Middleton, Peter Manigault, and Charles Pinckney. From this list of committee members, it is clear that Rattray was living in a world where his peers were prominent politicians, artisans, planters, and merchants whose careers, success, and spheres of influence spanned across the colonies.

Exterior of the John Lining House, looking North. Photo by Kayleigh Defenbaugh

A selected drop leaf, mahogany table, with a manufacture date of 1760, has Chippendale style cabriole legs and sculpturally carved ball and claw feet. The selected Queen Anne style tilt-top tea table, dated to 1760, would have been a natural choice for Rattray as its collapsible and lightweight character would have been easy to move between the dining room and the best bedroom, which was directly attached to the dining room.

North Elevation Rendering by Rachel Wilson
A Charleston-made, Queen Anne card table, circa 1745-1755, and a Charleston-made marble slab table, circa 1740-1750 were selected with earlier dates to reflect lower appraisal values. The 24 mahogany chairs were likely placed around the extended square tables and around the perimeter of the room. The 12 chairs with worked bottoms (needlepoint seats) were appraised at 120 pounds, whereas the 12 chairs with leather bottoms were appraised at 36 pounds. The price difference likely accounts for both the valuable needlepoint work and a difference of age and style with the worked bottom chairs being of a more recent, higher style and the leather-seated chairs being of an older, less intricate style. For the needlepoint seat chairs, a Charleston-made chair circa 1740-1755 includes cabriole legs, “claw and ball feet,” “interlaced and scrolled back straps creating [a] pierced splat” and carved elements. For the leather bottom chairs, a 1730-1750 chair in the Queen Anne style includes many elaborate details.

Rattray’s art pieces reflect both his Scottish roots and interest in politics. Art in the dining room included William Hogarth’s Marriage A-la-Mode, etchings of “Duchess of Hamilton & Countess of Coventry,” and “A Representation of the March of the Guards towards Scotland in the Year 1745.” Rattray likely used his dining room for meetings with many of his professional, legal, and political contacts. Rattray’s 1761 inventory was appraised at a high value, about 7,206 pounds, with a library accounting for much of this (1,200 pounds).

The dining room contained a great deal of furniture, including five tables (two large square mahogany tables, a card table, a marble slab table, and a tea table) and 24 chairs (12 mahogany chairs with worked bottoms and 12 mahogany chairs with leather bottoms). A chimney glass, likely placed over the mantel, and a pair of sconces and glasses, likely on either side of the mirror, added a decorative flourish and helped to illuminate the room. The square mahogany tables were likely drop leaf tables placed side by side in the center of the room allowing for a gathering of likely 10 or more people.

The adjacent north elevation rendering was created using Auto CAD and Photoshop. The furniture was chosen then drawn in CAD and appropriate colors were chosen for the walls and the soft furnishings. Colors were decided upon by consulting period paintings and physical evidence from houses in a close date range, like the John Hewlett House, c. 1740-60, on Long Island, NY.
During the Fall 2019 semester, the second-year students in the Special Topics: Revolving Fund Class conducted a financial and feasibility assessment of Historic Charleston Foundation’s Revolving Fund. The report was made possible through a 1772 Foundation grant that was shared through Roger Williams University in Rhode Island.

The students met with guest speakers, William Cogswell, Richard Sidebottom, Jeffery Roberts, and Robert Benedict to discuss feasibility and financing of real estate projects. They visited revolving fund-administering organizations in Newport and Providence, Rhode Island; Richmond, Virginia; and Raleigh, North Carolina to assess how they function. Additionally, the students conducted historic research of Historic Charleston Foundation’s Revolving Fund and compared that information to real estate market trends during successful years, and analyzed current real estate market trends in Charleston.

Throughout the first part of the semester, guest speakers from different areas of real estate and development came and spoke with the class about their work and how it pertains to revolving funds. The first two speakers were William Cogswell and Richard Sidebottom. William Cogswell is a Charleston real-estate developer. He contracts Richard Sidebottom from MacRostie Historic Advisors to help with Federal and State Tax Credits programs. The next guest speaker to visit was Robert Benedict. He is a real estate and development professor at Clemson University. The third guest was Eric Busch, a financial consultant for development companies. The final speakers were Jeffery Roberts and Pat-

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Students visited Historic Richmond and Preservation Virginia to learn about their revolving fund. Photo by Amalia Leifeste

Class meeting with Richard Sidebottom of Macrostie Historic Advisors and William Cogswell of WECCO Development. Photo by Amanda Tucker

Rethinking the

by Monica Hendricks

A Special Thank You to the Many Guest Speakers and Hosts Who Shared Their Time and Knowledge with the Class Throughout the Semester

Charleston, SC
-WECCO Development
-Macrostie Historic Advisors
-Clemson University’s Real Estate Development Program
-JJR Development
-Historic Charleston Foundation
rick Head of JJR Development LLC. Each of the guest lecturers focused on different aspects of real estate development and how historic preservation affects development projects.

In the second part of the semester, the class traveled to Rhode Island, Virginia, and North Carolina to meet with Providence Revolving Fund, Newport Restoration Foundation, Historic Richmond, Preservation Virginia, Preservation North Carolina, and Mary Ruffin, a preservation consultant. From meeting with each of these organizations, the class learned a range of approaches to revolving funds. The class was able to synthesize all of the information from the guest speakers and meetings with preservation organizations to make recommendations to HCF about a few directions that are plausible for the next incarnation of their revolving fund.

The final project was an assessment of Historic Charleston Foundation's revolving fund from 1958 to today and offered different approaches to operating the revolving fund. There were five recommendations offered by the class: geographic expansion, hibernation, targeting demolition by neglect buildings, partnering with developers, and offering a loan system for flood based interventions. The class presented their findings at HCF and submitted a report for reference.

Revolving Fund

Bristol/Newport/Providence, RI
-Roger Williams University
-1772 Foundation
-Peregrine Group Real Estate Advisory
-Providence Revolving Fund
-Newport Restoration Foundation

Richmond, VA
-Historic Richmond
-Preservation Virginia

Raleigh, NC
-Preservation North Carolina
-Hanbury Preservation Consulting

Students visited Historic Richmond and Preservation Virginia to learn about their revolving fund. Photo by Amalia Leifeste
Second-year students in the Advanced Conservation Lab spent time at Old St. Andrew's Parish Church, working in the oldest section of the graveyard. The earliest grave dates to 1718, and is still an active graveyard to this day.

Each student undertook an individual gravemarker to conserve beginning with a proposal submitted to Mr. Larry Coomer, the graveyard administrator. Each marker was cleaned using a sensitive detergent and a soft-bristled brush. Previous repair materials were removed, and the ground around the gravemarkers was probed for any missing pieces. Using a two-part stone epoxy, the pieces of each stone were set, then, a conservation stone filler material that is similar in properties to the actual stone was used to fill in any small areas of loss and sculpted to match any profiles or text that may have been affected by the previous breaks.

Ground Penetrating Radar (GPR) was completed under the guidance of Dr. Jon Marcoux to record two survey areas; one the west side of the church was investigated to look for evidence of the original vestry and the other was located on the east side of the church in the oldest area of the graveyard. No definitive architectural features were discovered, however a pit of burned clay was uncovered. A historic photograph supplied by Larry Coomer shows the fence-line of the Mathews family plot, a feature that is no longer seen. Several features were discovered approximately six feet deep, resembling the graves within the plot. The fence however was not discovered.

Gravemarker locations, family plot curbing, pathways, and vegetation were all documented using a Total Station. General recommendations were made for the ongoing conservation and care of the graveyard. These, along with the other findings and completed work were presented to members of the graveyard committee and interested members of the congregation to help guide further conservation efforts.

Students returned to Old St. Andrew’s to present their work a second time, intended for the full congregation. Photo by Frances Ford.
Today Marion Square is home to numerous monuments and acts as a gathering and event space for both residents and visitors. Marion Square is located roughly at the center of Charleston, bounded by King Street to the west, Calhoun Street to the south, Meeting Street to the east, and Tobacco Street to the north. Many people, however, do not know what significant structure lies beneath the Square. During the Colonial Period, a large tabby fortification known as the horn work was built here. Tabby is a Colonial-age building material. It is a matrix of oyster shells bound together by lime. It was used like modern cement, poured in layers called “lifts” to construct structures.

During the Revolutionary War, soldiers used the horn work to defend Charleston from invading British forces. After the Colonies became independent from Britain the defensive structure was dismantled in 1784. Only a small portion of the tabby structure is on display today and is tucked away in the northwest corner of the square.

In February Dr. Jon Marcoux and first-year students conducted ground-penetrating radar (GPR) at Marion Square. The purpose was to identify the location and form of the horn work still underneath Marion Square. The entire northwestern and half of the southwestern quadrants of the Square were gridded off using cloth measuring tapes and stakes. The GPR device was rolled across the ground at two-foot-wide intervals in the hopes of catching anomalies in the ground. The GPR device sends out radar waves that bounce off objects at different wavelengths. The resulting pictures the waves form can reveal what is under the ground. A total station was used to document where the stakes were placed so that, upon returning to continue the GPR, the stakes can be placed in the same location without any guesswork. Revealing the location and form of the horn work underneath Marion Square adds another layer of historical context to Charleston. Knowing the location and the form of the structure will allow the City of Charleston to accurately interpret the site and inform the public about one of Charleston's hidden treasures.
**MSHP Class of 2020 Thesis Topics**

**John Bennett:** Existing Building Codes and Historic Masonry Towers

**Kayleigh Defenbaugh:** Living and Working on the Peninsula: A Study of Spatial Home and Work Location Relationships As Related to Occupations and Charleston’s Historic Landscape at the Turn of the Twentieth Century

**Monica Hendricks:** Tax and Infrastructure: Testing the Correlation Between Assessed Property Tax Value and Infrastructural Advancements in Charleston, South Carolina 1880-1940

**Tanesha High:** The Bricks of St. Michael’s Church ad Pompeion Hill Chapel: A Historic and Scientific Study

**Elliott Simon:** The Building Stones of Charleston: Sandstone and Limestone, Pre-1800

**Rachel Wilson:** This is Not a Drill: A Survey of Natural Disaster Preparedness in House Museums and Historic Sites

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**Alumni**

Kayleigh Defenbaugh (2020) is working for Macrostie Historic Advisors in Houston.

Monica Hendricks (2020) created her company Beyond the Gravestone for cemetery conservation in Charleston.

Kim Hlavin (2019) is the Board of Architectural Review-Small Administrator for the city of Charleston.

Kate Howard and Kendra Waters (2019) were selected as Advocacy Scholars by the Preservation Action Foundation for 2020.

Kerri Ross (2019) is working for the Tennessee SHPO as the GIS Survey Coordinator and the Certified Local Government Coordinator.

Elliott Simon (2020) is working for Richard Marks Restorations in Charleston.

Sada Stewart (2019) was named the new director of the Historic Salisbury Foundation.

Kyunhea Kwon West (2019) is working as the Operations Manager at Scott Henson Architect in New York City, and presented at the Southeast Chapter of the Society of Architectural Historians conference.

Ashley Wilson, FAIA (former faculty) has recently been recognized as a fellow of the American Institute of Architects.

**News**

**Congratulations to all the new parents!**

Kim Hlavin and Sean Carson welcomed Eva Adelaide Carson

Amalia Leifeste and Gaurav Samant welcomed Veda Michelle Samant

Katie and Christopher Martin welcomed (Left to Right in photo): Rowan, Greer, Guy

Amanda and Grant Tucker welcomed Holden Patrick Tucker

Kyunhea and Mike West welcomed Jia James West
Changing of the Guard

Leah Applewhite, Charleston Museum
Jenny Brant, Drayton Hall and NCPTT
Sarah Clifton, Circular Congregation Church
Gabriel Cristofari, Historic Charleston Foundation
Lisa Gardiner, Peachtree Plantation
Darcy Neufeld, Historic Charleston Foundation
Bernie O’Brien, Preservation Maryland
Vito Scocozzo, Dr. Carter Hudgins with Texas A&M
Ben Thomas, Historic Charleston Foundation

MSHP Class of 2021 Internships

Creativity in the Time of Corona(virus)

Faced with the challenges of the pandemic, creative solutions were devised, including several firsts, from remote thesis defense to drive through graduation. Thank you to everyone for helping us persevere.

A screenshot from second-year Historic Structures Report class meeting via online conference call.

The six-foot long “diploma and social distance measurer” awarded to graduates.

With adjacent: MSHP Faculty and staff gathered in a caravan to hold graduation while staying socially distanced. Photos by Tanesha High.
http://www.clemson.edu/caah/historic-preservation/
Keep up with us throughout the year by following us on Facebook and Instagram!