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VOLUME 11

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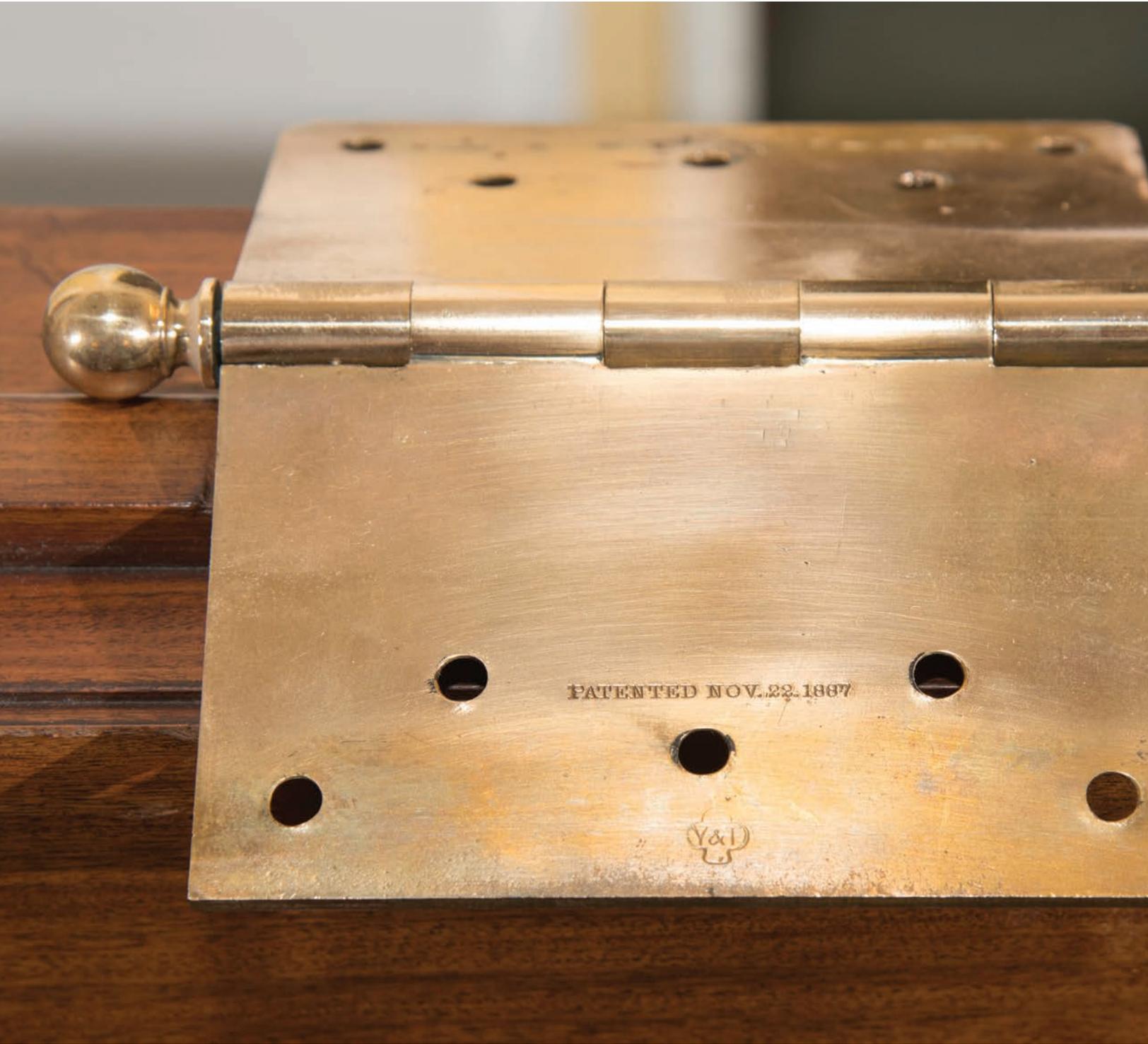
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PROJECT UPDATE

FIRE EGRESS LIBRARY OF CONGRESS

WRITTEN BY ERIN NELSON
PHOTOGRAPHY BY JAMES ROSENTHAL

We all recently watched in horrified silence as the famed Notre Dame cathedral fire sent dark gray smoke billowing into an otherwise beautiful Paris day. I couldn't help but think of our own famous buildings and their significance to our country. That's the reason many Architect of the Capitol (AOC) employees show up to work every day — to maintain, preserve, clean, polish and restore these historic treasures. Those key roles are often visible to the public, but the AOC also employs experts dedicated to improving fire protection throughout the Capitol campus, ensuring these buildings continue standing for generations to come.

The AOC Construction Division with the support of the AOC Library Buildings and Grounds jurisdiction worked together to complete the Fire Door Improvements project in the Thomas Jefferson Building, improving fire safety within this historic building.

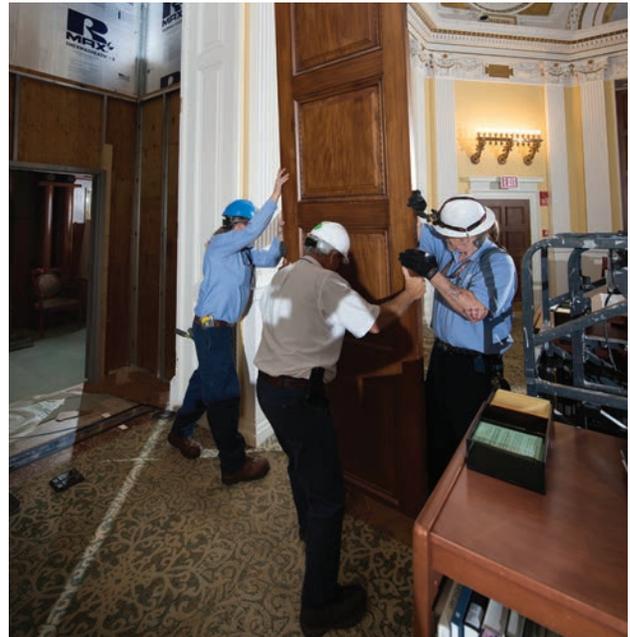
The project required heavy coordination between day shift employees with Library Buildings and Grounds and the Construction Division teams completing the work at night. Teams worked behind the scenes to ensure the least amount of impact to Library of Congress (LOC) operations. Woodcrafters, machinists, painters, refinishers and insulators began their work at 9 p.m. long after visitors and staff had left for the day and diligently worked through the night until 5:30 a.m.

The project included replacing 77 ornate, historically significant stair doors with fire-rated replicas. Additionally, the project improved egress from rooms with high-occupant loads by re-swinging 20 historic doors to open in the direction of egress travel. Many of the re-swung historic doors were 14 feet tall, weighing 275 pounds, and at least 120 years old.

While the stair doors could be replaced with fire-rated replicas, the same could not be said for the original historic frames. A solution to keep the existing frames was finalized during design; it called for filling the voids behind the frames with grout. Upon further investigation, it was determined that the grout would damage the surrounding decorative wall finishes. Construction Division and Library Buildings and Grounds employees worked together to identify an alternative material approved by the fire marshal and LOC collection preservation staff. A substantial cost savings was realized because the alternative approach was easier to install. The project was recently completed on time and under budget — a major accomplishment when working within historic structures.

AOC employees often have two things in common — an appreciation for the historic items they care for and a desire to preserve them for future generations. AOC Fire Protection Engineer Matt Harrison is no different.

PHASE 1 | REMOVING



(left to right) Woodcrafters Bob Sheya, Nelson Samuels and Martin Jones carefully remove one of the 120-year-old historic doors, weighing upwards of 275 pounds.

PHASE 2 | RETRO FITTING



(left to right) Woodcrafters Bob Sheya and Jose Martinez were tasked with refitting new door hinge locations on existing door frames. The hinge locations on the doors were altered, and the existing locations were filled with wood shims.

Harrison managed the project for the Library Buildings and Grounds and echoes that sentiment, “It’s a privilege to work in these historic buildings. There are unique challenges when integrating security, life safety and historic preservation requirements into historic buildings, but I find the work is much more rewarding than identifying common solutions to conventional office buildings.”

His fellow Project Manager Bob Bunce from the Construction Division considers himself just as privileged, “This is an amazing place to work. It’s easy to lose sight of that when you focus on the day-to-day tasks, but while working on this project, I would leave the Library in the early morning and would look up at the sunrise and see the Capitol, Supreme Court and Library of Congress buildings. It gave me goosebumps to know I’m part of something much larger than myself.”

PHASE 3 | STAINING



Painter/Re-finisher Darnell Johnson is shown prepping the door surface for stain after the old hinge locations were filled and sanded.

PHASE 4 | RE-INSTALLING



(left to right) Martin Jones and Nelson Samuels maneuver a door through occupied space on its way to being reinstalled. The pathways to and from the door locations had to be carefully planned to allow for the doors to be moved without damaging them or other items along the route.



Bob Sheya installs new hardware as the finishing touch on a finished door. The entire process for one door from removing to re-installing and applying hardware was about two weeks.

BY THE NUMBERS

SEVEN THINGS YOU MAY NOT KNOW ABOUT CAPITOL GROUNDS AND ARBORETUM

WRITTEN BY ERIN COURTNEY

The Capitol Grounds and Arboretum jurisdiction is responsible for the day-to-day maintenance of the U.S. Capitol Grounds, long-term planning and management of an accredited arboretum, and preservation of a culturally significant historic landscape originally designed by famed landscape architect Frederick Law Olmsted.

This team is one of our most diverse, busiest and most visible on the campus. The Capitol Grounds and Arboretum team includes a landscape architect, horticulturalists, gardeners, arborists, mechanics, pipefitters, stonemasons and heavy equipment operators.

Warmer temperatures have returned to Washington, D.C., making this the perfect time to get outside and admire the work of this dedicated and talented team.

2

Smaller water features on the Capitol campus are cleaned twice a week in the spring, summer and fall to remove particulate matter, maintain water flows and clean stains.



6

The six-acre Capitol Reflecting Pool undergoes major maintenance in the fall. Members of the Capitol Grounds and Arboretum team use heavy equipment to drain and clean the pool. In addition, campus-wide irrigation systems are flushed and winterized, and storm drain catch basins are repeatedly cleaned to ensure proper drainage.



Photography by Luke Walter

286

The U.S. Capitol Grounds are comprised of approximately 286 acres, including the U.S. Capitol, Senate and House office buildings, the Capitol Power Plant and Union Square. This area includes lawns, parks, trees, horticultural display beds and decorative elements such as statuary and water features.



Photo by Thomas Hatzenbuhler



Photo by Chuck Badal



Photo by Thomas Hatzenbuhler

4,500

Trees are heavily used to both frame the U.S. Capitol Building and to provide shade for visitors. The Capitol Grounds and Arboretum team continues to use Frederick Law Olmsted's original design in making landscaping decisions today, including the placement and selection of trees. There are about 4,500 trees throughout the 286 acres managed by Capitol Grounds and Arboretum.

500



Photo by Thomas Hatzenbuhler

The team purchases 500 tons of rock salt for road surfaces and 20 tons of deicer for sidewalks and steps in preparation for the winter. The Capitol Grounds and Arboretum team clears snow and ice from more than 14 miles of sidewalks, seven miles of streets and drives, and 20 acres of parking lots and plazas.

110,000

Each year, gardeners with Capitol Grounds and Arboretum carefully select 110,000 flower bulbs to provide a vibrant backdrop for the nation's capital. The color palettes in the flower beds are no accident. The team carefully selects bulbs based on a theme or anticipated event. For example, patriotic colors of reds, blues and accents of white are usually selected in an inauguration year. Tulips, hyacinths, crocuses and daffodils fill 160 flower beds during the spring.



Photo by Thomas Hatzenbuhler

250,000

Using formulas derived from the U.S. Forest Service's i-Tree Streets model, the trees cared for by Capitol Grounds and Arboretum are estimated to create economic benefits totaling over \$250,000 per year. The benefits include greenhouse gas and energy savings from the cooling effects of trees, as well as air quality and property value benefits, and the benefits of intercepting over 8 million gallons of stormwater that would have otherwise been processed in water treatment plants.



Photo by Chuck Badal

FEATURE

U.S. BOTANIC GARDEN ORCHIDS GAIN 600 NEW SIBLINGS

WRITTEN BY DEVIN DOTSON
PHOTOGRAPHY BY THOMAS HATZENBUHLER

What would you do if a friend said they wanted to give you an orchid? What if they wanted to give you a coveted collection of 600 orchids that had grown over half a century? If you're the U.S. Botanic Garden (USBG), you ask for the documentation, collection inventory and once it looks like a good fit you start making space! The USBG's collection of orchids was already nationally noted, with more than 3,000 specimens. They range from temperate to tropical varieties, hail from here in North America to around the world in Asia and Africa, and include some that grow in bogs and others that grow high in the treetops without roots in soil. This donated collection — the second largest single donation in USBG history — adds to the rich heritage and importance of the USBG's orchid collection.

The donation came from orchid grower Joe Francis, who lives in northern Virginia. USBG volunteer Mike Bechtold helps tend the orchid collection there. He also knew that Joe might be interested in donating his large collection to an institution that could care for it and share it with the public.

“Joe has a stellar reputation for growing plants in a manner that is free of viruses,” said Bill McLaughlin, USBG curator of plants. “This was an important component in our consideration of this donation, as viruses are one of the biggest problems with growing orchids in cultivation. Joe was an early adopter of orchid virus testing. As soon as test kits were made available for the two major viruses, he tested his collections on a large scale.”

An initial visit to Joe’s greenhouses in June 2017 confirmed the quality and virus-free status of the potential orchid donation. The USBG is

MANY OF THE DONATED ORCHIDS RECEIVED AWARDS FROM THE AMERICAN ORCHID SOCIETY, WHICH DENOTES THEIR FLORAL QUALITY.

completing a multiple-year process of testing and cleaning up its own orchid collection, so bringing in a new, virus-free collection was a perfect match.

“I chose to offer my collection to the U.S. Botanic Garden because they were serious about developing a clean collection,” said Joe Francis. “I knew that this would give them a leg up in peopling their nascent collection, and as a real bonus these

will remain at hand for many future generations of our citizens to learn from and to enjoy.”

The orchids in this donation are mostly hybrids developed in the 1950s up through the 1980s, the majority of which are large *Cattleya* orchids.

“There is an educational aspect to this group of hybrids,” McLaughlin said. “They represent important



Rhyncolaeliocattleya Tampico (inset) stands proud among the many donated “corsage type” *Cattleyas* blooming at the Botanic Garden in the spring of 2019.



USBG gardener Paula Waltz hauls a cartload of orchids into the Production Facility, each individually wrapped to prevent possible disease transmission.

***Brassocattleya Binosa*, bred in 1950, has become a very important parent to many later hybrids.**

American breeding lines during a burgeoning demand for orchids in the corsage industry. Corsages originally started with species orchids, but the industry began to demand year-round production, larger orchids and a greater color range. Hybridizers went to work, and the results were more vigorous plants, with larger and more spectacular blooms."

Many of the donated orchids received awards from the American Orchid Society, which denotes their floral quality. Many modern *Cattleyas* are compact and don't need to have their flowers staked. The orchids from the Joe Francis collection were developed to produce cut flowers.



“You need to stake up the flowers because they are huge — 7 to 8 inches across,” said McLaughlin. “They are really over-the-top horticultural plants, beautiful and unique. While today’s orchid hybrids are bred for small hobby greenhouses or windowsills, these older lines were aimed at floral production in expansive commercial greenhouses. We can give them the expert care and extra space they need and share them with the public.”

After the orchids were transported to the USBG’s Production Facility in southwest Washington, D.C., they were quarantined for three months. Space in greenhouses away from the USBG’s orchid collection was created for keeping them separated during this process. Additional benches were erected to keep them off the ground and prevent water splash up, which

could spread disease. USBG Plant Health Care Specialist Jim Willmott monitored the orchids, checking them throughout this period for pests and diseases.

They’ve been kept together as a group as the USBG plant records team researches each plant, updates names, hand enters each plant into a plant database, and creates a display label. It’s a multimonth process that the Garden has just wrapped up.

Orchid nomenclature has been in flux due to continuing emergence of new phylogenetic information (evolutionary histories reconstructed using DNA sequence data, not just structural information). This sort of review and naming update is something a botanic garden has to do on an ongoing basis. The names of 50 percent or more of the donated orchids have been updated.

Some of the new orchids have already gone up to the USBG Conservatory’s Orchids house for display there, while others have been displayed in the recent “Orchids: Amazing Adaptations” joint exhibit with Smithsonian Gardens.

Going forward, the team is photographing each plant as it comes into bloom to add to the database as well as to verify that each plant is indeed properly labeled. The Garden’s plant records team is currently hand-inventorying the entire orchid collection with the goal of getting the collection nationally certified.

Make sure to stop by the Orchids house over the coming months as these new orchids join the Garden’s display. With their large and colorful blooms, they are sure to be a treat to see.

ORCHID NOMENCLATURE HAS BEEN IN FLUX DUE TO CONTINUING EMERGENCE OF NEW PHYLOGENETIC INFORMATION



Joe Francis (seated) with USBG employees and helpers on moving day.



Kevin Baker, USBG summer intern, hand carries a bulb crate of orchids to a waiting truck.



The butter yellow flowers of *Rhyncattleanthe* Abbeville 'Golden Promise' represent the more modern breeding among the Francis collection.

HIDDEN HISTORY

BRUMIDI ARTIFACTS

WRITTEN BY ARCHITECT OF THE CAPITOL CURATOR S OFFICE
PHOTOGRAPHY BY JAMES ROSENTHAL

Constantino Brumidi, born in Rome in 1805, was fully trained in classical and Renaissance painting techniques, including true fresco. He painted murals for popes and princes and was considered one of the city's best artists. In 1852 he emigrated to the United States.

In 1855, after painting a trial fresco in the U.S. Capitol's new House wing, he was put on the payroll. Brumidi worked intensively at the U.S. Capitol through the early 1860s, designing, painting and supervising murals in rooms and corridors of the new Senate wing. He continued to add frescoes in the 1870s. His major contributions are the monumental canopy

and the frieze of the new Capitol Dome. In the canopy over the Rotunda he painted "The Apotheosis of Washington" in 1865. He began painting the frieze depicting major events in American history in 1878 but died in 1880 before completing it.

The artifacts in these photographs were passed down through the family of Brumidi's third wife, Lola Germon, and given to the Architect of the Capitol by Mildred Thompson, Lola's great grandniece, over a span of years beginning around 1961, when she donated the Brumidi family Bible.



NICKEL PLATED OVAL BOX

This container could be used to hold snuff, tobacco or small objects. The scene on the lid depicts a military officer grieving for those slain in battle. A patent date of 1860 stamped on the side indicates that Brumidi obtained the box in the United States. The patent is for the "dimples" that secure the closure of the lid.



NAPKIN RINGS

These two napkin rings, although not a set, would have complemented each other in the Brumidi household. The simple, concave cylindrical ring is engraved with the initials "CB" in script; the flattened ring decorated with the head of a helmeted female figure is engraved "Lola."



PRIZE MEDAL, “PREMIO ALLO STUDIO” / “REGIO ISTITUTO DI BELLE ARTI IN ROMA”

Brumidi’s son Laurence studied art in Rome for five years around 1880; this is believed to be the prize medal awarded to him by the Royal Institute of Fine Arts. The front and back of the medal are stamped with the Italian words for “First Prize in Studies” and the name of the institute, respectively.



STERLING SILVER FRUIT KNIFE

This knife’s folding tools include a cutting blade and a seed picker. The handle is decorated with rosettes and scrolling leaves, and Brumidi’s surname is engraved on one of the side panels. Hallmarks stamped into the blade indicate that the knife was made by the Gorham Manufacturing Company circa 1863 1890.



BRUMIDI'S BIBLE AND A SMALL FRAMED PHOTOGRAPH OF BRUMIDI

Brumidi was given this Bible September 18, 1852, the day he arrived in New York from Rome; he wrote his name inside the front cover. On the family history page he recorded his parentage and birth information and later added his own children.

The small metal frame with designs of beads and rope molding and a fleur de lis crest holds a photograph of Brumidi in middle age.



SEASON HIGHLIGHTS

OUT AND ABOUT ON WALKABOUTS

WRITTEN BY FRANKLIN BRADLEY

Acting Architect of the Capitol Christine Merdon has been talking face-to-face with employees in shops and other work locations around the agency in informal gatherings referred to as Walkabouts. Employees can ask her questions and have taken pride in showing off their recent work to Ms. Merdon.

She explained why Walkabouts are a top priority for her. "The AOC has some of the most talented and widely admired employees in the world. It is important to me that we foster an atmosphere of accessibility, safety and transparency to retain and attract talented employees who are engaged and passionate about their work."

Ms. Merdon said that hearing from employees is not only important, it's also time she looks forward to. "All the work we undertake is in service to the American people as the stewards of the Capitol campus. It's always the best part of my day to spend time with employees who are providing that service."

**“EVERY POST IS HONORABLE IN WHICH
A MAN CAN SERVE HIS COUNTRY.”
—GEORGE WASHINGTON**



Left: In her first Walkabout, Merdon visited the Library Buildings and Grounds HVAC shop. The employees were proud to show off how they are improving efficiency with new direct digital control systems.

Below left: In the Senate woodworking shop, Merdon saw that the employees maintain their tools and workspaces with as much care as they take in their craft.

Below right: The night shift House elevator shop employees, who work not only behind the scenes, but also after hours, were glad to spend time with Merdon and show her their current work.

Photo by Dewitt Roseborough



Photo by Thomas Hatzenbuhler



Photo by Luke Walter



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U.S. Capitol, Room SB-16
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Tholos Summer 2019

The Architect of the Capitol strives to meet its mission 24 hours a day, 365 days a year to **serve** Congress and the Supreme Court, **preserve** America's Capitol, and **inspire** memorable experiences for all who visit the buildings and grounds.

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Photo by Thomas Hatzenbuehler