

**Statement of the Honorable Stephen T. Ayers, FAIA, LEED AP
Architect of the Capitol**



Architect of the Capitol Fiscal Year 2015 Appropriations

**Statement before the Subcommittee on the Legislative Branch,
Committee on Appropriations, United States Senate**

Tuesday, April 8, 2014

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Madam Chairwoman, Senator Hoeven and members of the subcommittee, thank you for the opportunity to testify today regarding the Architect of the Capitol's (AOC) Fiscal Year 2015 budget request.

We appreciate the support and trust the Congress has placed in us to address critical construction and preservation projects across the Capitol campus, especially the ongoing U.S. Capitol Dome Restoration project. The investments you have made in the AOC have created a healthier, safer and more vibrant workplace for employees. Visitors to the Capitol campus have experienced awe-inspiring facilities in a safe and secure environment. Funding has also enabled us to preserve our history and ensure the Congress can accomplish its daily functions.

It is our mission to ensure that the buildings and facilities of the Capitol campus effectively serve members of Congress and their staff for generations to come. Everyday we focus our efforts on using sustainable practices to improve the future by the actions we take today.

Sustainable practices are transforming our work in large and small ways by allowing us to reduce energy consumption and conserve natural resources, while at the same time preserving the historic fabric of our nation's most iconic buildings.

Specifically, we have found great success in meeting our energy goals by **measuring** our energy consumption, **comparing** building performance to long-term performance goals and **improving** our energy savings by identifying operational changes and opportunities.

Maintaining and improving the integrity of a building's exterior contributes to the overall building's performance, including energy efficiency. Cracks and gaps in the exterior stone allow heat, cold and water to infiltrate the building, raising overall energy consumption. In this vein, stone preservation continues to emerge as one of our biggest priorities. Time and weather have not been kind to the historic buildings entrusted to our care. For the long-term preservation and safety of our buildings, we must take measures to stop water infiltration and do what we can to abate the deterioration of historic stone.



A piece of cracked stone from the Russell Senate Office Building.

The conditions of the exterior stone on most, if not all, of the buildings on Capitol Hill are rapidly deteriorating. To prevent further deterioration, significant near-term investment is necessary.

The first phases of the Capitol Building and Russell Senate Office Building exterior stonework were funded by the Congress in Fiscal Year 2014. Coordination is underway to survey and plan for the erection of scaffolding around portions of these buildings. You will see the next phases of these projects in our Fiscal Year 2015 request. This investment will pay long-term dividends, as we make critical improvements that both address the growing needs across the Capitol campus and preserve these historic buildings for decades to come.

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We have developed our Fiscal Year 2015 budget request through a deliberative planning process using the best planning and predictive tools available. The recommendations we bring to you today are the result of this rigorous decision making, which balances our mandate to be both fiscally prudent and trusted stewards of the national treasures you place in our care.

In Fiscal Year 2015, we are requesting \$676.6 million – a 0.7 percent decrease from our Fiscal Year 2014 request.

To address capital projects categorized as urgent or immediate, we are requesting \$156.5 million. This is a \$1.8 million or 1.2 percent increase from our Fiscal Year 2014 request, leaving \$259.9 million in deferred maintenance work – work that still must be accomplished in a future request. While deferring maintenance increases costs and the risk of facility failures, we recognize that current fiscal realities won't allow for every project to be funded.

Aging Infrastructure Requires Critical Prioritization

We specialize in repairing and restoring the historic buildings that provide both an effective workplace for the Congress and a destination that millions of Americans visit and enjoy all year long. Our workforce has unique and specialized skills honed for our historic buildings. In many instances, the craftsmanship of our employees has successfully disguised the serious conditions or fragile states that facilities are in or has temporarily stemmed any further deterioration.

The key to successfully identifying these needs and the appropriate time to make these key investments is to prioritize projects to ensure resources go toward the most important work. Our Project Prioritization Process has never been more important than it is today. With vital work to be done and not enough resources to do it, the most urgent projects must rise to the top.

We employ our Project Prioritization Process to rank every necessary project using two primary drivers: the conditions of the facilities and the urgency in which the deficiencies need to be addressed. Our process also takes into account the need to protect key infrastructure, mission-critical work, sustainability, preservation of heritage assets and our commitment to the efficient use of public funds. This has effectively allowed the AOC to identify and recommend to the Congress the levels of investment and maintenance required to ensure that all the facilities on the Capitol campus remain safe, functional and protected.

As with all deferred maintenance, the longer necessary repairs and maintenance are postponed, the greater the risk of problems becoming worse over time and the repairs becoming more costly. The AOC continues to carefully monitor and maintain the facilities and systems to minimize the risk of catastrophic failure. However, delaying work on critical infrastructure and preventive maintenance puts even greater pressure on future fiscal years and on our employees to keep deteriorating systems running for much longer than best practices dictate.

Due to the constraints of available resources, we have found that in certain cases it is necessary to phase major projects to better manage the time and resources needed to complete them. The

ongoing Dome Restoration project is a first-rate example of this practice's success. The first phase, the Dome Skirt, was completed on time and below budget, and provided the project team with valuable lessons learned for the future phases of the Dome Restoration project.

In addition to maintenance and construction work necessary to preserve our infrastructure, we are also tasked with accommodating new mission requirements. Therefore, we are requesting funds for the leasing of space on four commercial antenna towers within the metropolitan area to support the U.S. Capitol Police Radio System, which is vital to the health and safety of all who work in and visit Capitol Hill.

Critical Projects

The buildings of the Capitol campus are well cared for by the dedicated men and women of the AOC who use their incredible talents and skills to maintain the buildings and grounds. However, upon closer examination, it is evident that wear and tear, weather, and environmental factors have taken their toll on the buildings. Water in particular is very destructive to stone structures. The sandstone and marble façades of our historic buildings are cracking, spalling and, most seriously, stone is actually breaking away and falling from many buildings.



Cracked and spalling stone on the Capitol Building.

To address stone failures across the Capitol campus, the AOC has been conducting a series of exterior stone surveys. The results of these evaluations continue to confirm our deepest concerns – the conditions of the exterior stone on most, if not all, of the buildings on Capitol Hill are rapidly deteriorating. The precarious threat of falling stone is significant. Additionally, the temporary fixes that the AOC is undertaking to prevent catastrophic failures are not enough to prevent conditions from worsening. To fully address these issues, significant investments will need to be made.

In our Fiscal Year 2015 budget request, we have highlighted several exterior stone projects for which we are requesting funding to repair. The **U.S. Capitol South Extension Exterior Stone and Metal Preservation** request is the second of four planned phases and involves the stabilizing, cleaning, repairing and preserving of the exterior stone on the Capitol Building's north façade of the south extension and its connection to the main west façade. This work will help to stem the water infiltration and protect members of Congress, staff and the public from the risk of falling stone.

The second phase of the five-phase **Russell Senate Office Building Exterior Envelope Repair and Restoration** project will address the east façade of the 105-year-old office building. The work will repair the façade, windows and doors; repoint the masonry; restore and refinish the exterior metals and make structural repairs to the balustrades.

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At the U.S. Botanic Garden (USBG) Conservatory, conditions at the exterior envelope continue to deteriorate with widespread cracking and spalling stone, and cornice and roof flashing failures. The **USBG Conservatory Exterior Stone Repair and Roof Replacement** project request will repair hundreds of cracks and spalls across the Conservatory's façade; repoint and reseal masonry joints and remove the existing roofing systems and replace them with a new vegetative roofing system. Instead of replacing the roof in kind, a new vegetative roofing system will have a longer lifespan and will reduce water runoff.

These exterior stonework examples clearly show that the longer deferred maintenance projects are delayed, the more the conditions of these facilities will deteriorate. Instances of cracking and spalling stone will grow more serious, and ultimately, more costly to repair. Additional consequences from not addressing looming deferred maintenance projects are the continued crumbling of infrastructure; a loss of historic artwork and architectural features; continued system and building failures; and security threats.

Damage to our crucial building infrastructure is especially concerning, such as the deterioration of several garages. We are requesting appropriations for the first of four phases to address the necessary **Rayburn House Office Building Garage Rehabilitation** repairs, which will focus on the severe concrete delamination and improving the structural stability of the garage. Engineering studies have identified severe corrosion of the reinforcing steel as well as spalling and delaminating concrete in the ceiling and support columns.



Damaged stone on the Senate Underground Garage plaza.

In the Senate Underground Garage, major deficiencies have been identified in the upper plaza and fountain, including structural cracks and spalling concrete. The first of three phases of the **Senate Underground Garage Renovation and Landscape Restoration** project will address garage waterproofing and spalling concrete repairs to the ceiling. In addition, the upper plaza fountain will be restored along with the upper and middle plaza stairs, retaining walls and planters will be restored, pedestrian walkway will be waterproofed, existing light poles will be refurbished and the storm water management system will be upgraded. This would be the first major renovation effort since the 1950s.

At the Capitol Power Plant (CPP), the West Refrigeration Plant is more than 30 years old and has long-standing structural and waterproofing issues, which have led to failures in spandrel beams and falling concrete. The **CPP West Refrigeration Plant Chiller System Replacement** project request would finish funding the third phase of the project, which includes repairs to the precast concrete connections, walls, columns and decks; applying water repellent coatings to the concrete roof deck and exposed surfaces and repairing flashing at column transitions.

Safety is a top priority for the AOC and a number of safety-related projects are included in the Fiscal Year 2015 budget request, including the second phase of the project to replace the exhaust system serving the main kitchen areas of the Dirksen Senate Office Building. The work will renovate the kitchen exhaust systems to comply with the current fire safety code. In addition, the request also includes the funding needed to enclose the West Grand Stair in the Capitol Building to prevent smoke migration in the event of a fire. The work will address an Office of Compliance citation and will prevent the risk of smoke, heat and flames from spreading. Several projects in the Library of Congress buildings are needed to address life-safety issues as well. The construction of new exit stairs in the Thomas Jefferson Building will allow for the direct discharge of building occupants to the exterior of the building, as required by current code. In the James Madison Memorial Building, the number of elevator breakdowns has increased, requiring a growing amount of maintenance. The modernization of several elevators will significantly decrease wait times, reduce power consumption and decrease the need for maintenance.

Our Fiscal Year 2015 budget request also includes funding for the final phase of the **Dome Restoration** project, specifically to repair the interior of the Rotunda. The work will restore the interior walls, painted columns and pilasters, and the coffered ceiling that have sustained water damage and paint delamination. Over time, the infiltration of humidity and moisture in the Rotunda has deteriorated the condition of the metal, allowing daylight to be visible through parts of the coffered ceiling. The work will also include upgrading the Rotunda's mechanical and electrical systems to current codes, and installation of new fire alarm and communications systems.

Funding our recommended projects in Fiscal Year 2015 ensures that necessary investments are made in our historic infrastructure, and increases the safety and security of those who work in or visit the facilities on Capitol Hill. In future budget requests, we will continue to include multi-phased projects to restore and repair the damage to the exterior stone to ensure that we preserve the unique and historic masonry features of the buildings that serve the Congress and the American people.



Water infiltration into the Rotunda has caused damage to cast iron columns and threatens historic artwork.

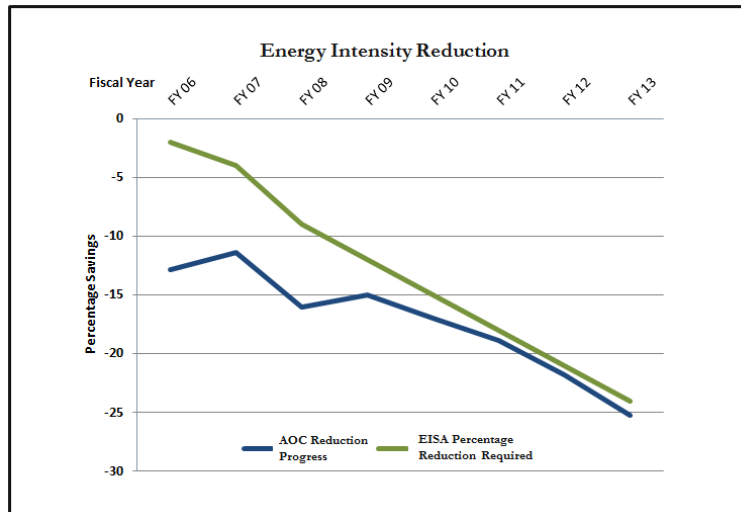
Saving Energy and Natural Resources

The AOC has successfully reduced energy consumption across the Capitol campus for the past several years. However, with the completion of the U.S. Capitol and U.S. Senate Energy Savings Performance Contracts (ESPCs) in Fiscal Year 2013, meeting the mandated energy reduction goals will be more difficult because the projects that yielded quick results have been completed. We will be required to achieve further operational energy savings to complement the energy savings performance projects that are ongoing or have been completed.

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The ESPCs allowed the AOC to pursue energy and water conservation projects without incurring significant up-front capital costs or obtaining appropriations to pay for improvements. In the Senate Office Buildings, the ESPCs completed in March 2013 will allow us to avoid \$3.9 million in annual costs. In addition, many facility infrastructure upgrades were made, including installing energy-efficient lamps and ballasts, adding state-of-the-art lighting controls in select areas for daylight harvesting and dimming, and upgrading heating, ventilation and air conditioning controls.



In Fiscal Year 2013, we exceeded the Energy Independence and Security Act of 2007 (EISA 2007) energy reduction goal of 24 percent by achieving a 25.2 percent reduction. This marks our eighth consecutive year of meeting energy reduction goals outlined in EISA 2007, and represents approximately \$14.5 million in avoided annual utility costs.

We've continued to make improvements to building automation systems by installing

direct digital controls on the air handling units and terminal equipment spaces; reducing water usage; installing more efficient lighting systems, and further implementing energy curtailment strategies in the office buildings to reduce energy use across the Capitol campus.

As part of our effort to reduce energy consumption, we began an aggressive metering program in Fiscal Year 2008 for electric, steam, chilled water, potable water and condensate services for all buildings on the Capitol campus. With the exception of a handful of meters, all buildings now have enhanced metering systems in place. A contract was awarded in Fiscal Year 2011 to build a Utility Metering Enterprise System, which incorporated our existing metering infrastructure. This web-based system allows us to easily and quickly sort, filter and analyze large amounts of real-time data and generate and export jurisdictional and executive-level reports to help manage energy consumption. Today, we have the ability to compare actual building performance against theoretical or realistic performance energy targets.

The CPP continues to play an essential role in the AOC's long-term energy conservation efforts. The CPP has made several operational improvements that contributed greatly to the reduction in energy consumption including the commissioning of a new chiller in December 2013, as part of the Refrigeration Plant Revitalization project. Not only does this project increase the CPP's energy efficiency, it will reduce its long-term operating costs and increase cooling system reliability. In addition, the CPP continues to utilize a "free cooling" process where we use cold, outside air to create chilled water without running chillers, thereby conserving electricity.

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We are always looking to the future and strategizing how to save energy and resources in innovative and forward-thinking ways. As part of our Strategic Long Term Energy Plan for the CPP, Cogeneration technology was identified as an energy efficient and cost effective way to meet future energy requirements. Installing a Cogeneration plant will allow the CPP to generate both steam and electricity using one source of fuel. Cogeneration is a proven technology that will allow the CPP to increase system reliability, reduce its environmental impact, improve efficiency and help save taxpayer money. We are currently working with local utility providers to plan and install an energy efficient Cogeneration system at the CPP.

Working Leaner

The AOC's team of skilled craftsmen and professionals is our greatest resource and each employee's contribution is vital to our success. They understand that we must find new and innovative ways of doing business to improve efficiency and productivity. During Fiscal Years 2013 and 2014, we addressed the challenges of sequestration by undertaking cost avoidance measures to work smarter and leaner.

Even in a challenging fiscal climate, we continued to reduce our overtime costs by improving project planning, restructuring work shifts and establishing overtime budgets. As a result, the AOC cut more than 18,600 overtime hours from Fiscal Year 2012 to Fiscal Year 2013. A great example of this occurred in the Capitol Building jurisdiction, which reduced its overtime to less than five percent of the available hours.

Across the AOC, we are implementing a new initiative that capitalizes on the exchange of institutional and professional knowledge. The Exchange of Critical Expertise and Learning (ExCEL) Program uses internal resources for training in an effort to combat dwindling training budgets, a growing number of employee retirements and the loss of institutional memory, and filling gaps in essential workplace competencies due to ongoing hiring freezes. It's also an innovative opportunity for AOC jurisdictions to work together and share their knowledge and expertise with their fellow colleagues. Now when employees who have participated in the program are working on equipment and need assistance, they can reach out to others across the organization for guidance.

Another cost avoidance strategy that was developed and implemented was the Return to Work program, which is intended to return long-term workers' compensation employees to positions that have been designed to accommodate their limitations. This effort provides opportunities for these employees to be productive and affords reductions in workers' compensation costs for the AOC.

In Fiscal Year 2013, recognizing tight budgets and limited resources, we decreased our investment in employee training. Sensing a need, our Training and Employee Development Branch and Acquisition and Material Management Division worked together to enroll the agency in the Federal Acquisitions Institute, which offers courses and webinars on various topics for a nominal fee or at no cost to the AOC. By creatively approaching problems, we open up doors to new and additional resources to meet our growing demands with limited funds.

Pursuing Safety Excellence

Reducing energy consumption and conserving natural resources saves money, as does preventing injuries and accidents within the AOC's workforce. Our philosophy of *People First, Safety Always* serves as the foundation for continuous improvements in safety.

The AOC strives to integrate safety into everything we do as we pursue our zero-injury safety culture. We are standardizing and coordinating operational best practices. Safety continues to be a top consideration in planning and allocating funds for capital projects.

As we pursue safety excellence, we continue to develop and rollout our agency-wide, safety enhancement programs. During Fiscal Year 2013, AOC employees experienced an injury rate reduction from 3.91 percent down to 3.28 percent. Specifically in the Senate Office Buildings, employees achieved an injury rate reduction of 13 percent from January 2013 to January 2014. And since the beginning of Fiscal Year 2014, there has been only one injury claim filed in the Senate Office Buildings jurisdiction. These gains were achieved by focusing on individual awareness, inspections and identifying and correcting at-risk behaviors through employee engagement.

Enhancing Visitor Experiences

The AOC is dedicated to creating a safe, welcoming and informative experience for all who visit Capitol Hill. For many visitors, this may be their first and only time seeing the nation's Capitol, and we work hard to ensure the experience is worthy of this working symbol of American democracy and freedom.

The U.S. Capitol Visitor Center (CVC), with its mission to "inform, involve and inspire," introduces visitors to Congress and the legislative process, as well as the history and development of architecture and art of the U.S. Capitol. On December 2, 2013, the CVC marked the fifth anniversary of the day its doors were first opened to the public. And since that day, the CVC team has welcomed more than 11 million people to the U.S. Capitol. The dedicated employees of the CVC team work to enhance customer service, hospitality and visitor engagement in a seamless, positive visitor experience. For example, the CVC staff initiated two new informational programs, "What's Happening in the Chambers," and "Encounters in Exhibition Hall." They also provided tour training for nearly 4,000 congressional staffers. Overall, the CVC continues to welcome nearly two million visitors annually and ensure that visitors receive an enriching, memorable and inspirational tour experience.

The USBG is a living plant museum with a mission to educate the public about the value of plants in our society by providing visitors with a unique and inspiring experience. In 2013, the USBG had a record-setting year with a total annual visitation of nearly 1.7 million, an increase of almost 500,000 visitors over the previous record. With the blooming of the titan arum (also known as the corpse flower) on July 22, 2013, the USBG had its highest visitation day on record with more than 22,000 people. During its 13-day public display, more than 140,000 people saw the titan arum in person and over 670,000 unique viewers watched on the live web stream, making it one of the most publicly

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viewed flowers in the history of U.S. gardens. In addition to displaying rare plants in bloom, the USBG also hosts special exhibits like the popular annual holiday show and a biennial orchid exhibit in partnership with Smithsonian Gardens. The enthusiastic employees of the USBG continue their dedication to educating the public about ways to nurture the plants that support life on our planet and explaining the importance of plants to the well-being of our nation and the world.

Accomplishments

Congress and the American people can trust that the AOC is an exceptional steward of the resources provided to us every year. We carefully manage taxpayer money to ensure the very best value and prudent use of funds.

The AOC is dedicated to meeting the highest standards of government reporting by cultivating an atmosphere of accountability and responsibility. For the second consecutive year, we were recognized by the Association of Government Accountants (AGA) with its Certificate of Excellence in Accountability Reporting (CEAR) Award for our Fiscal Year 2012 Performance and Accountability Report. The annual CEAR award recognizes high-quality Performance and Accountability Reports and Annual Financial Reports that effectively illustrate and assess financial and program performance, accomplishments and challenges, and cost and accountability. We also received our ninth consecutive Clean Audit Opinion from independent auditors on our financial statements. In addition, the AOC cleared the material weakness from past years regarding our Internal Control Program and for the first time have neither material weaknesses nor significant deficiencies resulting from our annual audit.

Small businesses are the cornerstone of our success and developing partnerships by working with local small companies is a sustainable practice on which we will continue to build. In Fiscal Year 2013, we exceeded all of our small business goals, even surpassing the accomplishments achieved in Fiscal Year 2012. Specifically, we beat our goals for women-owned, veteran-owned and HUBZone small businesses, and awarded more than \$25 million to small businesses.

In 2013, the AOC successfully completed the planning and construction activities in support of the Presidential Inauguration and the orchestration of 222 post-election office moves for the U.S. House of Representatives and 32 office moves for the U.S. Senate. In addition, we completed the restoration of the House Chamber ceiling during the August District Work Period.

We are true professionals, recognized by our peers, and Congress can count on us to get the job done. Industry professionals regularly acknowledge our work on construction projects. For example, the Construction Management Association of America recognized the AOC with multiple awards, including our work on the East and West House Underground Garages and the Capitol Dome Skirt Restoration project.



Conclusion

Members of the subcommittee, our mission is to care for and preserve the iconic buildings on Capitol Hill for generations to come. Continued deterioration and deferment of critical maintenance poses great challenges to the AOC, but we will continue to work with the Congress to provide our best professional advice and counsel on how to address these projects.

We appreciate Congress' support, and that of the American people, as together we make the investments necessary to preserve and maintain our national treasures. We developed our Fiscal Year 2015 budget request by prioritizing projects that allow us to be good stewards of our buildings and taxpayer dollars. There is much work to be done, but we believe that preserving the historic fabric of our nation is well worth the effort.

We look forward to our continued collaboration with you to serve the Congress and the American people, preserve the historic facilities entrusted to our care, and inspire and educate those who visit the U.S. Capitol.