

Friends of Kenilworth Aquatic Gardens *Bicycle and Pedestrian Improvements*

FINAL Project Narrative



Image Source: U.S. DOT Volpe Center

*Prepared by the U.S. Department of Transportation Volpe National
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The Friends of Kenilworth Aquatic Gardens (FoKAG), a 501c3 nonprofit organization founded in 2007 by a small group of volunteers enthralled by the park's unique beauty and place in DC history, connects people to the park through stewardship, engagement, and educational programs. FoKAG works in cooperation with the National Park Service to ensure the park is well-maintained, well-enjoyed and welcoming for neighbors and visitors.



The National Park Service (NPS) Kenilworth Park & Aquatic Gardens (KEAQ) is the only national park site devoted to cultivated water-loving plants. KEAQ, located in Washington, D.C., features over 45 ponds filled with a variety of water lilies and lotus, an elevated boardwalk through the surrounding tidal marshes, and access to the Anacostia Riverwalk Trail. It is a place to experience and connect with nature and celebrate the best of every season. Nestled on the Eastern bank of the Anacostia River, Kenilworth has a rich and varied natural and cultural history. From the Nacotchtank Indians to Colonial settlers to contemporary African American communities, the area around Kenilworth Aquatic Gardens has been home to people for more than 4,000 years.



Financial and technical assistance for this study was provided by the National Park Service Chesapeake Gateways Office, Chesapeake Gateways Program.

Through Chesapeake Gateways, the NPS Chesapeake Gateways Office inspires and helps people discover, experience, and connect with the natural and cultural heritage and recreational opportunities of the Chesapeake Bay and the rivers, landscapes, and communities across its watershed. NPS Chesapeake Gateways works with people and partners to conserve and steward special places important to communities, visitors, and the nation, for this and future generations. Support through this program is typically in the form of collaborative partnerships, technical assistance, and grants. NPS Chesapeake Gateways provides technical assistance through staff expertise to aid the managers and partners of Chesapeake places and programmatic partners in conserving, restoring, interpreting, and providing access to cultural, natural, and recreational resources within the watershed.



The U.S. DOT Volpe Center was established within U.S. DOT in 1970 to bring technical capability and a future-oriented outlook to pressing national transportation issues. The DOT Volpe Center provides technical expertise and develops solutions to complex transportation challenges in support of U.S. DOT, other Federal, State, and local agencies, non-profit organizations, private entities, and others. NPS Chesapeake Gateways funds an interagency agreement with the DOT Volpe Center to bring transportation and access expertise and technical assistance to aid Chesapeake places and partners.

Friends of Kenilworth Aquatic Gardens Project Narrative

Bicycle and Pedestrian Improvements

Estimated Project Total Cost: [\$1,450,000 in FY 2024 dollars]

Project Description

The project will implement alternative transportation infrastructure improvements to improve safe, equitable access at Kenilworth Aquatic Gardens. The project includes the following components:

- Component A: Bicycle and Pedestrian Circulation Improvements (Design)
- Component B: Bicycle and Pedestrian Circulation Improvements (Construction)

Project Justifications

The Friends of Kenilworth Aquatic Gardens Bicycle and Pedestrian Circulation Improvements project is a crucial initiative aimed at addressing the increasing infrastructure demands at Kenilworth Aquatic Gardens. The site has experienced a substantial rise in visitation, driven by the completion of the Anacostia Riverwalk Trail (ART) and the ongoing popularity of the annual Lotus and Water Lily Festival. This project seeks to enhance the visitor experience by improving accessibility, safety, and infrastructure, ensuring the Gardens can sustainably accommodate this growing interest.

Need for the Project:

1. **Significant Increase in Visitation:** Since the completion of the Anacostia Riverwalk Trail (ART) in 2016, Kenilworth Aquatic Gardens visitation has surged. In 2018 the park reported 11,340 visitor interactions with National Park Service (NPS) staff; by 2023 that number grew to over 25,000¹ visitor interactions. The ART has become a major regional destination, drawing bicyclists, pedestrians, and nature enthusiasts alike who now visit the Gardens more frequently. Combined with the continued popularity of the annual Lotus and Water Lily Festival, the park is experiencing unprecedented levels of use, highlighting the urgent need for infrastructure upgrades to ensure a safe and enjoyable experience for all visitors.
2. **Infrastructure Deficiencies:** The existing infrastructure at Kenilworth Aquatic Gardens is inadequate to support the current levels of visitation. The half-mile loop around the ponds, the 0.25-mile boardwalk, and the other trails require significant repairs and upgrades. This project will address these deficiencies by resurfacing trails, improving drainage, and updating interpretive elements. In addition, pavement preservation on access roads, parking areas, and other routes is essential to prolong their lifespan and maintain quality.
3. **Accessibility Enhancements:** While Kenilworth Aquatic Gardens has designated handicapped parking and a wheelchair-accessible Visitor Center, the trails around the ponds are often muddy or uneven, creating challenges for visitors with mobility impairments. The project includes

¹ The park received more visitors than this number, which represents those who the park records as going on tours and entering the visitor center.

necessary upgrades to meet ABA/ADA standards, such as widening trails to 10 feet and elevating pond trails to prevent flooding and provide a stable surface. These enhancements will ensure that all visitors, regardless of mobility, can fully enjoy the Gardens.

4. **Improved Connections to the Anacostia Riverwalk Trail:** The 0.25-mile connector trail linking Kenilworth Aquatic Gardens to the ART is a critical access point for the influx of cyclists and pedestrians. However, this connector and its integration with the larger trail network require upgrades to accommodate the increased traffic. By accessing the park through the ART, visitors bypass the Park's main entrance and visitor center, including any regulatory and interpretative signage. The project will enhance this connection, ensuring safe and seamless travel between the ART and the Gardens.
5. **Sustaining and Enhancing the Visitor Experience:** This project will also focus on updating interpretive elements to enrich the visitor experience, reflecting the Gardens' natural beauty and cultural significance. In addition, it will create a dedicated space for the Lotus and Water Lily Festival, enabling the event to grow while minimizing its environmental impact. The planned pavement preservation treatments will maintain high-quality access throughout the site, ensuring a positive experience for all visitors.
6. **Directional Wayfinding:** A key part of improving visitor circulation within Kenilworth Aquatic Gardens is the installation of clear and effective directional wayfinding signage to guide visitors to the various ponds and other key attractions. With the increase in visitation, many visitors — especially those entering from the ART — require better navigation aids to explore the park. This project will include the installation of strategically placed signs that ensure visitors can easily find their way to the key site features, enhancing both convenience and the overall visitor experience.

The Friends of Kenilworth Aquatic Gardens Bicycle and Pedestrian Circulation Improvements project is essential to meeting the needs of a growing visitor base. By upgrading trails, enhancing accessibility, repairing infrastructure, and improving connectivity to the ART, this project will ensure that Kenilworth Aquatic Gardens remains a safe, accessible, and enjoyable destination for all visitors, today and in the future.

Component A: Bicycle and Pedestrian Circulation Improvements (Design)

Component A Estimated Cost: [\$250,000 in FY 2024 dollars]

Component A Description:

This project involves comprehensive design and planning efforts to enhance bicycle and pedestrian circulation within and around the Kenilworth Aquatic Gardens. The design will focus on improving accessibility, connectivity, and overall user experience through various infrastructure upgrades and studies.

Key Aspects of the Design Phase:

1. Pre-Planning and Concept Design Development:

- This phase includes all necessary pre-planning activities and the development of concept designs. The objective is to create a cohesive plan that enhances both pedestrian and bicycle circulation throughout the Kenilworth Aquatic Gardens, while preserving the natural and cultural significance of the area.

2. Bicycle and Pedestrian Count Report:

- This report will document current usage patterns and identify potential areas for improvement in both bicycle and pedestrian traffic flow. The data gathered will inform the design process and ensure that the improvements meet the needs of all users.

3. Wayfinding and Signage Study:

- A detailed Wayfinding and Signage Study will be conducted to improve navigational aids throughout the park. The study will focus on the placement and design of signs that guide visitors through the Kenilworth Aquatic Gardens, particularly linking key features such as the ponds, boardwalk, and trails to the Anacostia River Trail (ART).

4. Trail and Pathway Enhancements:

- **Pavement Study:** To assess the structural integrity, performance, and overall condition of the trail surface while determining the most suitable materials for long-term use, with a focus on sustainable and locally sourced materials such as native stone. The study aims to evaluate the durability and environmental impact of various pavement materials, including asphalt, concrete, and local stone aggregates, to recommend the most cost-effective and eco-friendly options.
- **ABA/ADA Trail/Walkway Improvements:** The project will include upgrades to existing trails to meet ABA/ADA standards, focusing on optimizing the trail/walkway design that enhances accessibility for all users, including those in wheelchairs.
- **New Trail Loop:** A new 0.25-mile trail loop will be constructed to provide direct access to the Lily grow/display ponds behind the administration building, connecting the ponds to the existing trail network and improving overall circulation and visitor access to these features. The trail will connect to the existing trail network via two access points. Access point one is an existing trail head, located on the southern edge of the staff parking area. Access point two is a proposed new trail head that will be constructed south of the Kenilworth Aquatic Gardens Visitor Center.
- **Main Entrance:** The project will include an enhancement of the main entrance trail from the parking lot to give visitors a sense of arrival to the aquatic gardens. This will function as the main entrance into the aquatic gardens for visitors.
- **Connector Trail:** The 0.25-mile connector trail linking the Kenilworth Aquatic Gardens to the Anacostia River Trail (ART) will undergo improvements, ensuring a seamless connection for cyclists and pedestrians.

- **Pond Loop and Boardwalk:** Inside the Kenilworth Aquatic Gardens, improvements will be made to the existing half-mile loop around the ponds and the 0.25-mile boardwalk above the freshwater tidal marsh. These trails will be elevated and widened to six feet where possible, ensuring better access and durability.
- **Rest Areas:** Additional benches will be placed along trails in the park and especially on the periphery of the pond area for visitors to relax/contemplate and for those with mobility issues to take a break.

5. Pavement Repair and Resurfacing:

- This project will address the repair, resurfacing, and preservation of various public routes, including access roads, parking areas, and other asphalt-paved paths. Depending on local conditions, a variety of pavement preservation treatments will be utilized, including full-depth repair, resurfacing, spot repair, crack sealing, overlay, and pavement marking milling.
- New pavement markings will be applied to match existing ones, ensuring consistency and clarity in navigation.
- Additional work will include the replacement and repair of existing drainage structures, shoulders, turf, and signage (information and regulatory). Deteriorated sections of concrete curb and gutter will also be replaced as necessary.

6. Accessibility Improvements:

- The project will enhance accessibility features within Kenilworth Aquatic Gardens. While the Visitor Center and designated handicapped parking are already wheelchair-accessible, improvements to paths around the ponds will be made to address current challenges such as mud and uneven surfaces, making these areas more navigable for wheelchair users.
- The paved path within Kenilworth Park, which is wheelchair-friendly, will also be maintained and upgraded as needed.

Component B: Bicycle and Pedestrian Circulation Improvements (Construction)

Component B Estimated Cost: [\$1,200,000 in FY 2024 dollars]

Component B Description:

This project will enhance bicycle and pedestrian circulation within and around the Kenilworth Aquatic Gardens, integrating key trail and pavement improvements to ensure accessibility, safety, and environmental compatibility.

Location and Scope of Work:

1. Kenilworth Aquatic Gardens Loop and Boardwalk:

- **Half-Mile Loop:** Construction will focus on elevating and improving the existing half-mile loop around the ponds. The trail will be widened to optimize compliance with ABA/ADA standards. In addition, the pond trails will be elevated to a six-foot width to prevent flooding and improve accessibility.
- **Boardwalk:** The 0.25-mile boardwalk above the freshwater tidal marsh will be upgraded to enhance durability and accessibility, ensuring a seamless experience for all users.

2. Connector Trail to Anacostia Bike Trail:

- A 0.25-mile connector trail linking the Kenilworth Aquatic Gardens to the Anacostia Bike Trail (ART) will be improved. The trail will be widened to optimize compliance with ABA/ADA standards and provide safe access for both pedestrians and cyclists.

3. New Trail Loop:

- A new 0.25-mile, ABA/ADA compliant trail loop will be constructed to connect the Lily grow/display ponds behind the administration building to the existing trail network. This loop will enhance visitor access to these areas, providing a continuous and accessible route.

4. Pavement Repair and Preservation:

- Comprehensive pavement preservation and repair work will be conducted across multiple public routes within the Gardens, including access roads, parking areas, and other asphalt-paved paths. Treatment types will vary based on specific conditions and may include full-depth repair, resurfacing, spot repair, crack sealing, overlay, and pavement marking milling. New pavement markings will be applied to match existing markings, ensuring clarity and safe navigation.
- In certain areas, the project will address drainage by replacing or repairing existing drainage structures, shoulders, and turf. Deteriorated sections of concrete curb and gutters, along with outdated ADA sidewalk access ramps, will be replaced to meet current standards.

5. Accessibility Improvements:

- Enhancements will be made to improve ADA accessibility throughout the Kenilworth Aquatic Gardens. This includes ensuring that all paths leading to and within the Gardens are compliant with ABA/ADA standards. The Visitor Center, already wheelchair-accessible, will be better integrated with the surrounding paths, and additional upgrades will be made to the accessible parking areas.

Responses to Evaluation Criteria for Alternative Transportation Implementation Projects

Criteria #1. Demonstration of Need:

a. System Need

Kenilworth Gardens is a popular destination for school trips and other visitors, featuring between 1/4- and 1/2-mile-long trails, along with a parking lot that serves as the primary access point. Walking along causeways and boardwalks is central to the visitor experience, while the parking lot is essential for guests of all mobility needs. A full rehabilitation of the trails, marsh bridge, and parking lot is critical for enhancing accessibility and safety. In addition, upgrading boardwalk seating/observation areas for ADA compliance and improving ramps in the parking lot would address current inadequacies and enhance visitor comfort. This project represents both a lifestyle enhancement and improvement in future life cycle operation and maintenance needs.

b. Problems or Issues Solved

The trail system within the park faces challenges such as flash flooding, potholes, beaver activity, pond dredging, causeway deterioration, inadequate walkway width, and sinkholes. The parking lot has issues related to the lack of ramps for wheelchair access, and overall accessibility features need improvement. Addressing these issues would significantly improve the safety and functionality of the park's infrastructure.

Criteria #2. Visitor Experience

a. Improve Visitor Experience

A comprehensive project to rehabilitate the trails, boardwalks, bridges, and parking lot would significantly enhance the visitor experience at Kenilworth Aquatic Gardens. Safe, high-quality trails would allow visitors to comfortably explore groves, marshlands, and wildlife habitats. Improved ramps and ADA features in the parking lot would make visiting the gardens more pleasant and accessible for all, including those with mobility challenges.

b. Access

Widened, pothole-free trails, intact, wheelchair-accessible bridges, improved vegetation maintenance, and ramps in the parking lot would create a universally accessible environment. A cleanup effort throughout the park would further ensure that all recreational amenities are accessible and debris-free, contributing to a more welcoming, park-like experience.

c. Safety

Addressing safety concerns such as the marsh bridge's instability, potholes, and beaver interference on the trails, as well as the absence of ramps in the parking lot, is crucial. These improvements would not only enhance the day-to-day safety of visitors, but also ensure better preparedness for rapid evacuations, if necessary. This project would directly address and rectify documented unsafe conditions.

Criteria #3. Cost Effectiveness

a. Financial Planning

The total cost of the trail construction project is estimated to be **\$1,450,000 in FY 2024 dollars**, which includes both the adjusted construction costs and high-end design fees. Funding can be secured through a combination of government allocations, state grants, and private donations. Initial startup costs, including permits, environmental studies, and design, are projected to account for approximately 20 percent of the total budget. Capital investment will cover construction materials, labor, and equipment, constituting the remaining 80 percent of the budget. To ensure the long-term sustainability of the trail, a dedicated fund will be established for lifetime operations and maintenance (O&M), estimated at 2-3 percent of the total project cost per year.

b. Funding Sources and Financial Sustainability

The project seeks to leverage a mix of funding sources, including National Park funds, to ensure comprehensive financial coverage throughout its lifetime. By aligning with National Park objectives, the project will seek federal and non-federal grants aimed at enhancing public access to natural spaces. Partnerships with local organizations in DC, such as community groups and private sponsors, can further contribute by providing matching funds and in-kind resources. This combined funding strategy will allow for not only the initial construction but also long-term maintenance and operational costs. Through this collaborative approach, the project can ensure sustainable funding, maximizing community benefits and preserving the trail for future generations.

Criteria #4. Protection of Resources

a. Protect Resources

The project will extend the service life of Kenilworth Aquatic Gardens' infrastructure, including trails, bridges, and parking areas. By addressing issues such as flash flooding, litter, and environmental degradation, the project will improve the park's resilience to climate change and ensure the preservation of its natural resources.

Criteria #5. Deferred Maintenance

a. Level 3 Construction

This project will involve major structural rehabilitation, including bridge replacement, drainage improvements, and the construction of ADA-compliant ramps in the parking lot. In addition, overall park accessibility will be enhanced, addressing deferred maintenance and improving visitor safety and convenience.