# National Capital Planning Commission
# Concept Review Submittal

**March 2, 2018**

## South Capitol Street Corridor Project Washington DC

## Introduction

In 2011, the Federal Highway Administration (FHWA) and the District Department of Transportation (DDOT) approved the release of the Final Environmental Impact Statement (FEIS) for the South Capitol Street Project. The Project proposed to make major changes to the South Capitol Street area from Independence Avenue on the north end to Suitland Parkway at Martin Luther King, Jr. Avenue SE on the southeast end. The Project Area also included New Jersey Avenue SE between M Street SE and Independence Avenue and the existing Frederick Douglass Memorial Bridge over the Anacostia River.

Since the publication of the FEIS, DDOT advanced the design of the FEIS Preferred Alternative to further minimize right-of-way and environmental impacts for the Project and to increase the opportunities for community and pedestrian access to the crossing of the Anacostia River, and the connecting roads. This was accomplished by modifying the alignment of the new Frederick Douglass Memorial Bridge parallel to the existing bridge and reconfiguring the traffic circle on the east side of the Anacostia River to an oval.

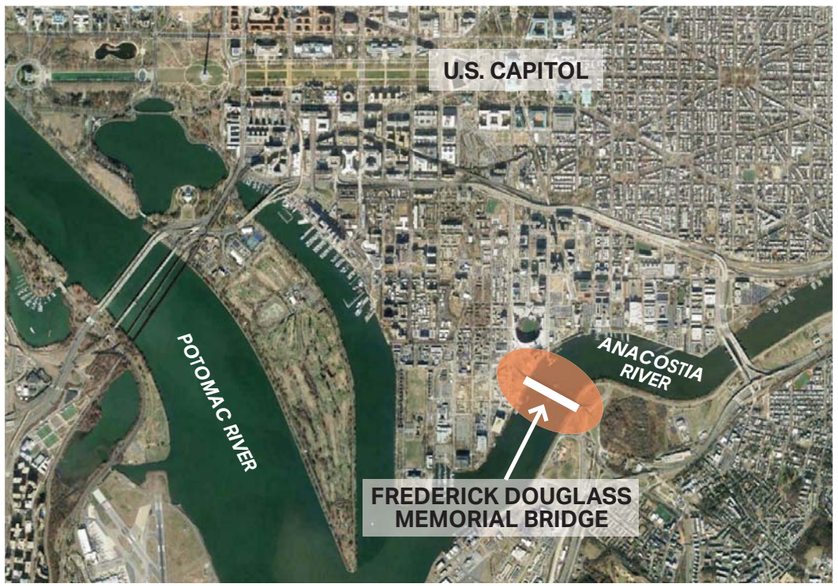
The National Capital Planning Commission reviewed a concept for the Reconstruction of South Capitol Street Corridor from the I-295 Suitland Parkway Interchange to P Street (Segments 1 and 2) in November 2013. The concept presented to NCPC was the modification to the FEIS Preferred Alternative.

Since that time, DDOT has completed a Supplemental FEIS (2015) to address the environmental benefits and impacts of the revised design and conducted an extended competitive procurement process to select the final bridge design. The bridge procurement process included an interactive design development phase that involved extensive input from Commission staff and other expert advisors. The bridge design developed by South Capitol Bridgebuilders was announced as the winner in August 2017 and a design-build contract has been awarded.

The Frederick Douglass Memorial Bridge design concept is intended to provide:

- An impressive gateway that seamlessly accommodates multiple forms of transportation
- A distinctive bridge that is a modern interpretation of a traditional form
- Attractive open spaces that are interconnected with the surrounding context

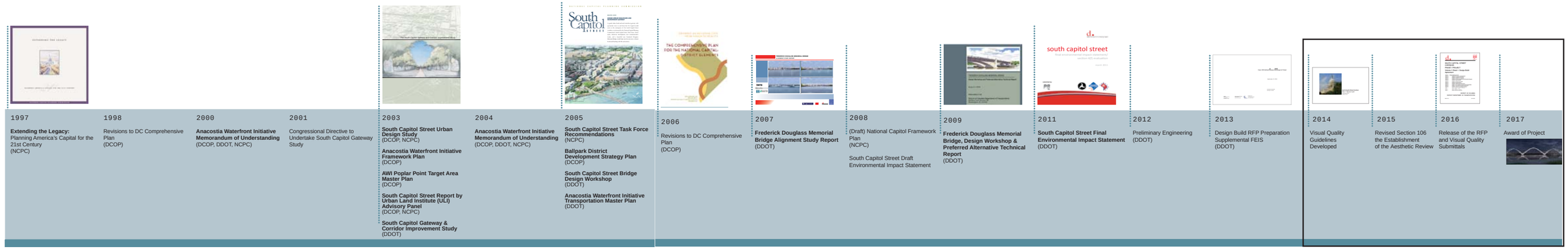
The South Capitol Bridgebuilders team consists of Archer Western Construction, LCC (Walsh Group) and Granite Construction Company and includes AECOM as the lead engineer and Brownlie Ernst and Marks as the lead bridge architect.




Project Location

# SECTION A:  Background on Project

## South Capitol Street Corridor Project  Washington DC

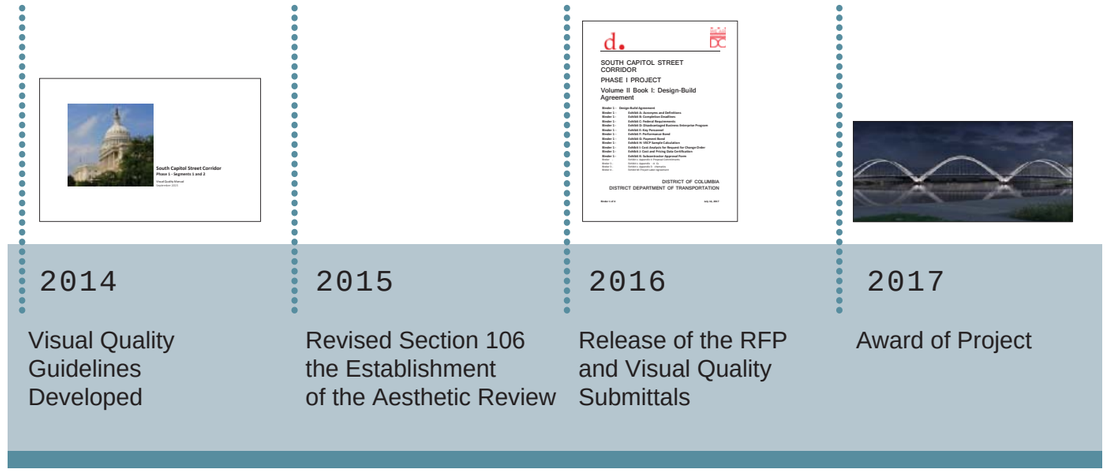



For the past 20 years, extensive planning efforts have been undertaken to transform South Capitol Street into a grand urban boulevard that responds to and serves its local context while restoring its function as a symbolic gateway. These planning efforts date back to 1997 when NCPC completed a landmark plan, *Extending the Legacy: Planning America's Capital for the 21st Century*, that extended the Monumental Core to include South Capitol Street, the Anacostia River, and adjacent areas. The Plan called for redeveloping South Capitol Street which "could serve as a new southern gateway to central Washington" and where "South Capitol Street's new energy will eventually flow across the Anacostia River to Poplar Point…"

Since *Extending the Legacy*, numerous planning studies, projects, and actions specifically related to improving South Capitol Street and involving NCPC and others have occurred, including the *South Capitol Street Open Space Study* (2005). More recently, DDOT's Visual Quality Manual for Phase 1 – Segments 1 and 2 of the South Capitol Street Corridor (2014) introduced a framework for approaching the urban design, visual quality, and aesthetic design of the project.

As part of the 2015 Amended and Restated Section 106 Memorandum of Agreement between FHWA, DC State Historic Preservation Office (SHPO), and DDOT, DDOT established an Aesthetic Review Committee (ARC) to "address visual effects of the new Frederick Douglass Bridge and to provide input on potential bridge design components." Staff representatives from NCPC, DC SHPO, and the U.S. Commission of Fine Arts (CFA) participated on this committee.

During DDOT's procurement process, the ARC provided detailed feedback on the visual quality on the 11 pre-proposal concepts from the short-listed teams and each final visual quality submittal. In August 2017, the bridge design developed by South Capitol Bridgebuilders was announced as the winner.



The Anacostia Waterfront Framework Plan

District of Columbia, Office of Planning November 2003

**Completed in Coordination with the Anacostia Waterfront Initiative Partner Agencies**

Government of the District of Columbia,General Services Administration,United States Department of the Interior, Naval District Washington,District of Columbia Housing Authority, District of Columbia Sports and Entertainment Commission
District of Columbia Water and Sewer Authority, Marine Barracks of Washington, National Capital Planning Commission, National Capital Revitalization Corporation, United States Army Military District of Washington, United States Army Corps of Engineers,
United States Department of Labor, United States Department of Transportation, United States Department of Housing and Urban Development, United States Environmental Protection Agency, United States Office of Management and Budget, United States Department of Agriculture,
United States Small Business Administration, Washington Metropolitan Area Transit Authority

The Anacostia Waterfront Initiative (AWI) was a major, multi-year effort to redefine the Anacostia River Corridor that involved more than 40 agencies. The Anacostia Waterfront Framework Plan (2003) envisions the Anacostia River Corridor uniting the city economically, physically, and socially as the center of 21st century Washington and a cornerstone of the National Capital Region.

The Plan's Design Guidelines for Public Destinations of Distinct Character comprise a riverfront design charter for all subsequent development along the Anacostia River and set the stage for how to strengthen neighborhoods along the Anacostia. The Guidelines state "The designs of new bridges and infrastructure along the waterfront must set high standards… These designs will help to **define Washington's new civic identity for the 21st century**." (91)

In order to achieve the overall AWI vision, the Plan defines ten principles. Principle 8 Achieve Design Excellence in Every Aspect of the Endeavor states:

"Design excellence must be achieved in all new projects no matter if they are large civil engineering projects or modest neighborhood improvements. **Reconnecting the river to the city is more than a physical problem, it is a symbolic challenge which requires new ways of creating civic identity along the river**. The symbolism of the river's neglect must be countered with a new commitment to integrate the waterfront environment into the urban landscape of the nation's capital. Superior architectural and landscape design must play a preeminent role in addressing the systemic neglect of the river and its environment." (125)

The vision: South Capitol Street as a grand urban boulevard with signature bridge

Source: Anacostia Waterfront Framework Plan (2003)

Alamillo Bridge, Seville, Spain

Zakim Bridge, Boston

Source: Anacostia Waterfront Transportation Architecture Design Guidelines

The Anacostia Waterfront Framework Plan cited contemporary bridge designs as viable precedents.

"Replacing the Frederick Douglass Bridge offers once-in-a-century opportunities: to reconfigure the existing highway ramps for better access to development areas and to introduce impressive civic architecture, forming a gateway to the Capitol." (120)

The Anacostia Waterfront Transportation Architecture Design Guidelines also cited contemporary bridges which have successfully incorporated the twin roles of providing:

- A pleasant and comfortable environment for pedestrians and bikers, to foster connections between neighborhoods across the Anacostia; and
- A distinct sense of entry to the District, underlining their role as major connectors.


Preliminary / EIS Design (2013)

Review agency comments in 2013 relating to the design-build process and the need for bold civic infrastructure included:

- "expressed discomfort with the **design-build process**" and recommended:
  - "**performance-based design criteria**."
  - "that the **selection panel … include designers**"
  - "that the **scoring process give great weight to design quality**"

As a result, DDOT revised the procurement process to include performance criteria, included staff from NCPC, CFA, and SHPO in the Aesthetic Review Committee (ARC) to advise the selection panel, and developed 15 Project Design Appearance Goals (PDAGs) to assess the bridge design during the procurement process.

These 15 PDAGs were established to guide bridge design efforts during the procurement process.

1. Transform South Capitol Street into grand urban boulevard and gateway to the District's Monumental Core.

2. Create an elegant and iconic new Frederick Douglass Memorial Bridge that reflects the classical sentiment of Washington's monumental bridges and is grounded in the traditions of great civic design in the District.

3. Enhance the Project Area by emphasizing:

    a. Historic views along primary and crucial street corridors, such as the South Capitol Street view shed.

    b. Views of the new bridge from various locations around the project site, especially from the existing and future riverfront parks and esplanades.

    c. Views along and across the Anacostia River to accentuate broad urban vistas.

    d. New views of the District and surrounding public spaces for users of the South Capitol Street bridge.

4. Respect and celebrate the cultural and architectural history of the District.

5. Design project elements to complement contextual urban elements and properties determined to have historic significance.

6. Harmonize the proposed scale and height of the new bridge with the long-term projected growth of surrounding neighborhoods.

7. Showcase the Anacostia River as a valuable natural resource by providing enhanced pedestrian and bicycle access to waterfront areas on both shorelines.

8. Connect adjacent neighborhoods by improving bicycle and pedestrian facilities and better managing motor vehicle traffic throughout the corridor.

9. Integrate a network of open spaces that provide high-quality, people-oriented urban parks and destinations.

10. Use materials that are timeless in their appearance, exceptionally durable, and inspired by the great civic architecture of the District.

11. Pursue state-of-the-art landscape design that attracts and supports intensive pedestrian activity, while integrating sustainable management and restoration strategies.

12. Interpret the cultural legacy of Frederick Douglass into the design of the bridge and streetscape.

13. Design all aspects of the Project to encourage subsequent public and private investments that further expand the public realm.

14. Anticipate future nationally-significant commemorative works in, and adjacent to, the Project Area.

15. Establish an interim use program and design for the traffic ovals at each end of the bridge to complement the adjacent land uses, and reinforce the views to and from the L'Enfant Plan.

The overall design concept uses the traditional arch form in a new way to reflect the sinuous river and span the waterway with uniting arches. The bridge arches extend into the landscape to embrace the ovals, anchor the bridge in the land, and extend the bridge landing to the river.

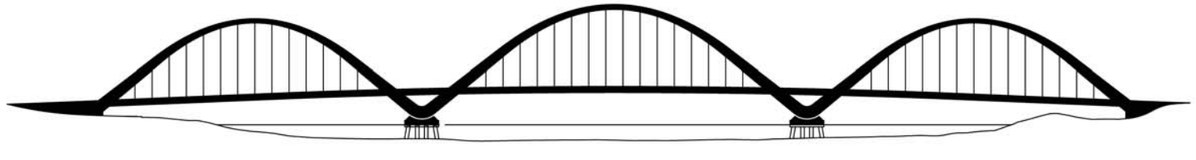
This aerial perspective looking west shows the curvilinear terraces and expansive open spaces on Poplar Point in the foreground, and the future development context of Buzzard Point in the background.

The multiple arch bridge will mark a symbolic passage across the Anacostia River, acting as a singular and iconic gateway into the Nation's Capital. Inviting traffic ovals bookend the signature bridge and complete the sense of traveling along a grand urban boulevard. The ovals are interconnected with their surroundings through urban open spaces and walkways.

11th Street Bridge
*Proposed*

Taft Memorial Bridge
*1907*

Frederick Douglass Memorial Bridge
*Proposed*

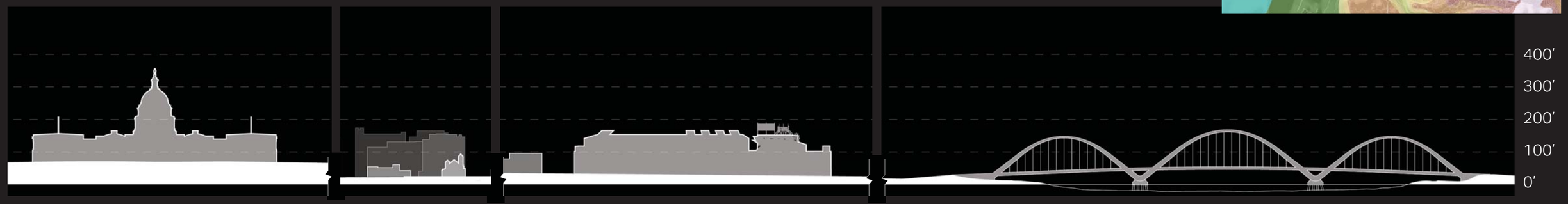


Francis Scott Key Memorial Bridge
*1923*

Arlington Memorial Bridge
*1932*

The multiple arch structure of the Frederick Douglass Memorial Bridge design is reflective of the existing arch bridge typology of DC. Compared to existing DC bridges, the two v-pier design of the Frederick Douglass Memorial Bridge will provide river users and waterfront visitors with greater unobstructed views under the bridge deck.

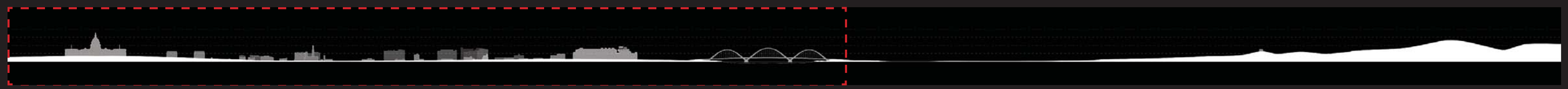

The three-span arch results in only two v-piers in the river. The unique above-deck arch design combined with the two v-piers allow for open views under the bridge deck. The v-piers seamlessly contribute to the geometry of the arches and are designed to appear as if they "spring" off the water to create a visual effect of continuity and flow from the deck to water surface. The central arch is slightly taller than the flanking arches to help signify the center of the river, while at the same time bringing unity and equality to both sides of the river.

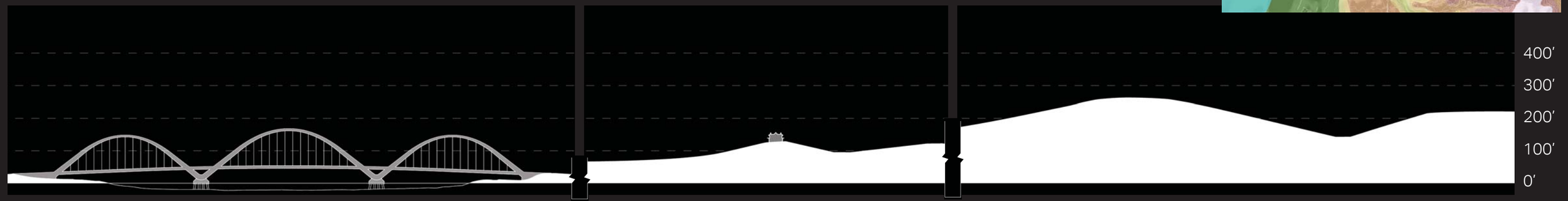

1. Capitol Hill

2. Nationals Park

3. Frederick Douglass Memorial Bridge
*Proposed*

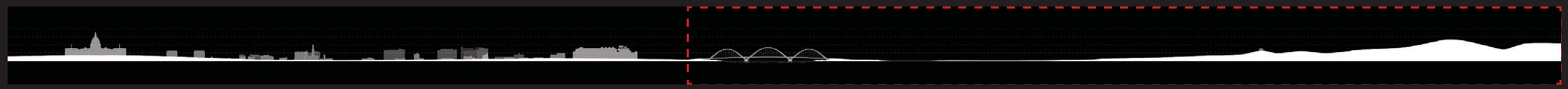


The combined elevation and height of the bridge is lower than the U.S. Capitol, yet similar to the nearby Nationals Park.


3. Frederick Douglass Memorial Bridge
*Proposed*

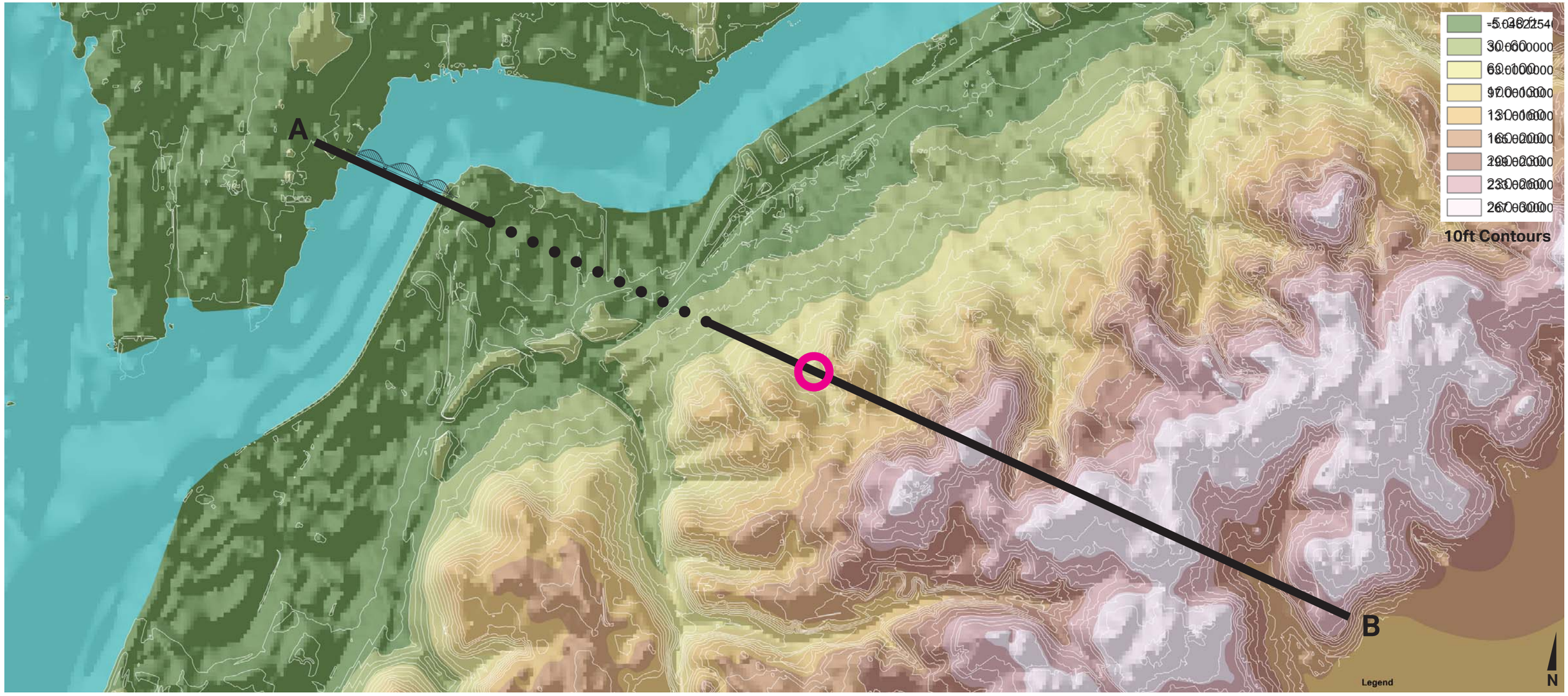
4. Frederick Douglass House (Cedar Hill)



The combined elevation and height of the bridge is lower than the Frederick Douglass House and Anacostia Hills.

District Department of Transportation

# **Long Section** - Height Comparison





Frederick Douglass Memorial Bridge

Frederick Douglass Home

Anacostia Hills

The Anacostia Hills and the home of Frederick Douglass would remain at a higher elevation than the arches of the bridge.

# ADDITIONAL BRIDGE IMAGES

**South Capitol Street Corridor Project** Washington DC


The section provides perspectives of the bridge in the current and future context of the Anacostia River waterfront.

# Perspective View Location Map


The Anacostia River runs between the increasing density and scale of Buzzard Point and the Capitol Riverfront on the western waterside and the parkland setting of Poplar Point and Anacostia on the east.

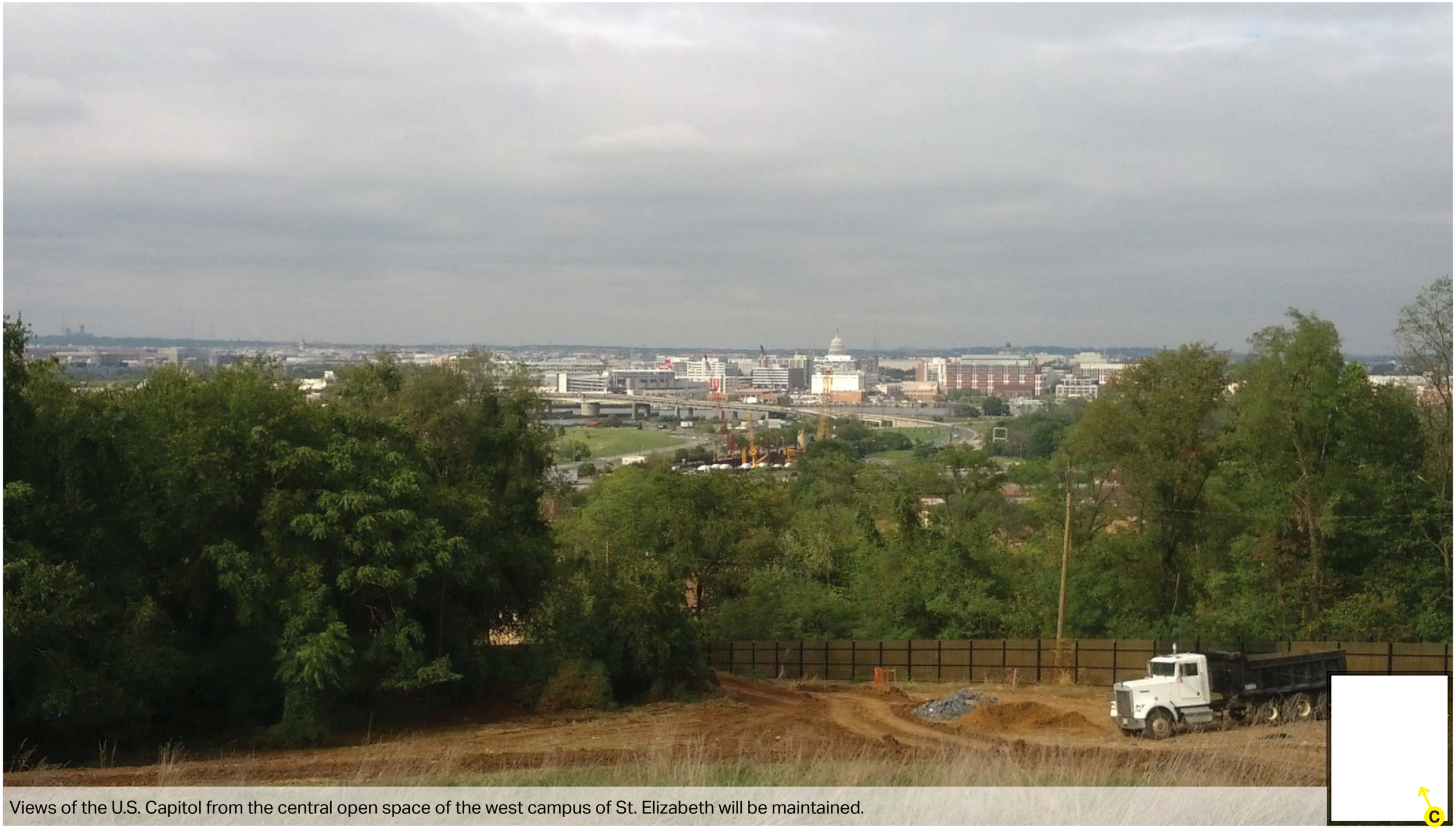
## A. **West Aerial/Long Perspective** - from above Poplar Point (current context)


The bridge and ovals are designed both to mediate between the differentials in scale and atmosphere, and to provide a legible gateway experience in both directions as the parcels on Howard Road and Poplar Point develop.

## A. **West Aerial/Long Perspective** - from above Poplar Point (future context)


The bridge reflects the design influence of existing buildings on Buzzard Point in terms of color and scale.


The scale of the bridge is in harmony with the height of the evolving urban context on the west side. The bridge can encourage dynamic architecture in nearby communities.




Views of the U.S. Capitol from the central open space of the west campus of St. Elizabeth will be maintained.

Even with the bridge, the view of the U.S. Capitol from St. Elizabeth is uninterrupted.  Broad views of the District west of the river are not obstructed.


District Department of Transportation

## C.  **Long View from St. Elizabeth** - Photo Match Simulation


The pedestrian bridge at Yards Park is a contemporary curvilinear bridge.


The contemporary design of the new bridge and the Yards Park bridge will complement each other. Visitors to Yards Park will be able to enjoy longer views of the river which are currently obstructed by the existing bridge.


The v-piers seamlessly contribute to the geometry of the arches and result in the arches “springing” off the water.

## E. **View of Bridge Pier** (future context)

The pedestrian overlooks push out from the bridge between the arches as they pass the deck and offer pedestrians and passing drivers with generous views.
The split-use path will extend the Riverwalk and seamlessly connect both sides of the river while providing a relaxed, contained environment for users.

## F. **View on Bridge** - Driver Perspective (future context)


The LED system will be the subject of an operational agreement to determine brightness, duration, when special colors are deployed, etc.

# SECTION B: Urban Design

## South Capitol Street Corridor Project Washington DC

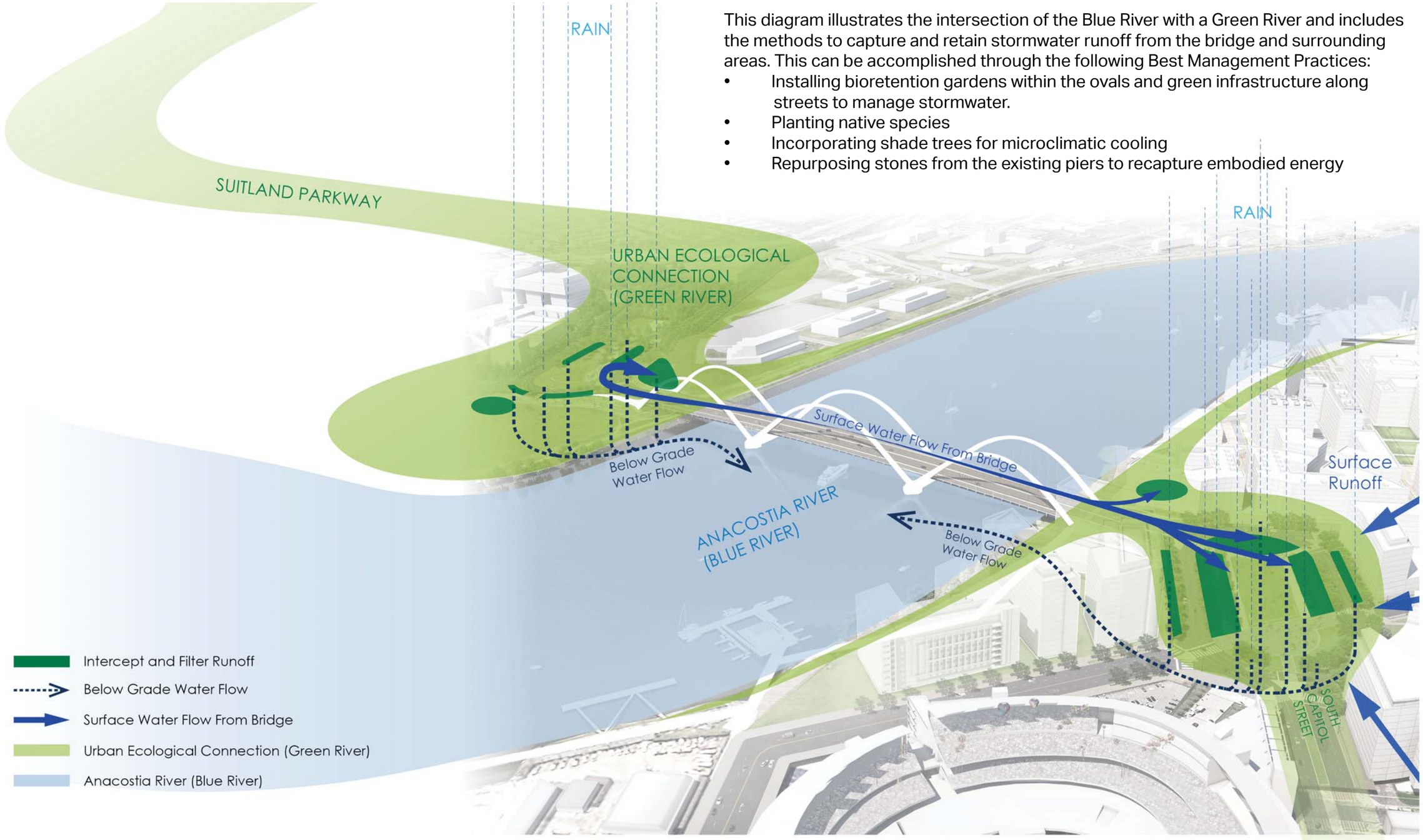

The two sides of the Anacostia River have markedly different urban contexts. The Anacostia River runs between the increasing density and scale of Buzzard Point and the Capitol Rivefront areas on the western waterside, and the open space and finer-grain neighborhood setting of Poplar Point and Historic Anacostia, respectively, on the eastern side.

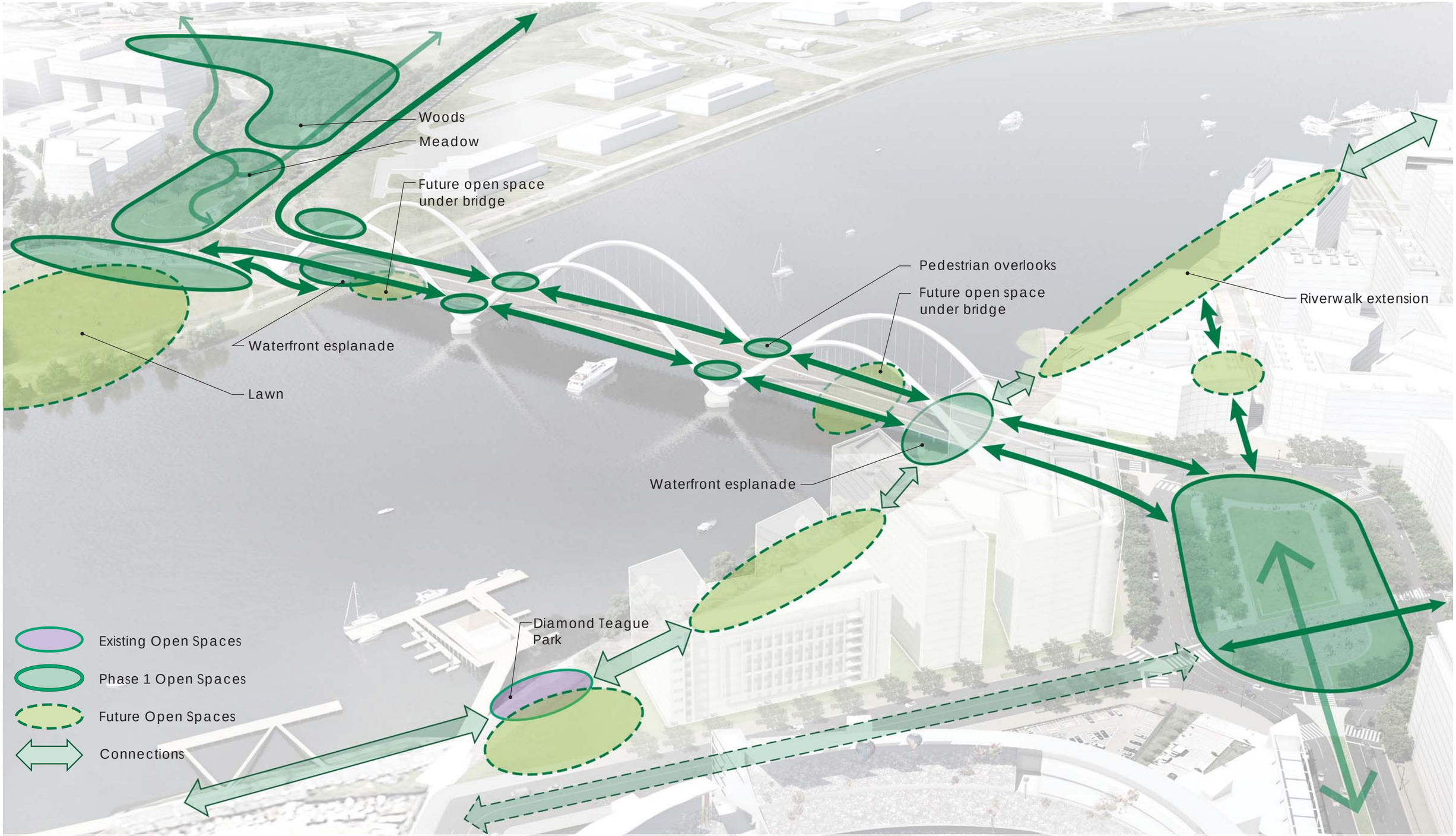
Winter 2018


This image shows the Frederick Douglass Memorial Bridge project within the future context of the Anacostia Waterfront, which includes planned improvements to Buzzard Point, Joint Base Anacostia-Bolling, Poplar Point, Barry Farm, and Historic Anacostia.

This diagram illustrates the intersection of the Blue River with a Green River and includes the methods to capture and retain stormwater runoff from the bridge and surrounding areas. This can be accomplished through the following Best Management Practices:

- Installing bioretention gardens within the ovals and green infrastructure along streets to manage stormwater.
- Planting native species
- Incorporating shade trees for microclimatic cooling
- Repurposing stones from the existing piers to recapture embodied energy






This open space diagram highlights the parks and public space of the Frederick Douglass Memorial Bridge and their connections with adjacent and nearby open spaces.

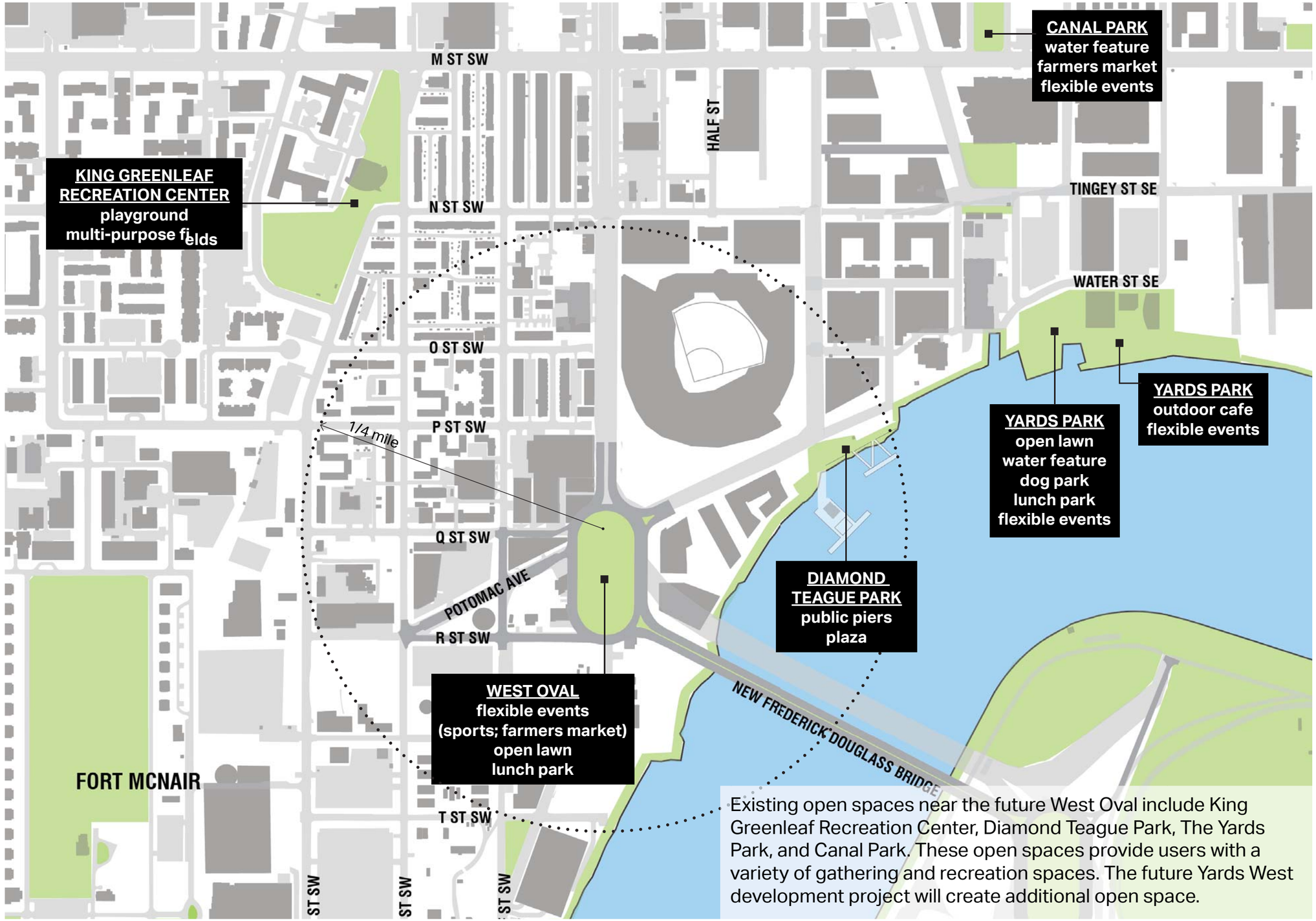
## Open Space and Connections Diagram


The Capitol Riverfront area is rapidly developing with the addition of several office, hotel, apartment, and condo buildings with ground-floor restaurants and retail. The area is home to Nationals Park, U.S. Department of Transportation, and one of the oldest operating Naval facilities in the country, the historic Washington Navy Yard. The new DC Water headquarters is also currently under construction.

Winter 2018

Buzzard Point is currently a predominantly industrial area with few public amenities. However, Buzzard Point is on the verge of transforming to a mixed-use, highly walkable neighborhood oriented toward an enhanced waterfront. New development within Buzzard Point will provide a mix of activities, including residential, commercial, and institutional uses.  Audi Field, the new D.C. United Soccer Stadium, is currently under construction in this area and expected to open later this year.

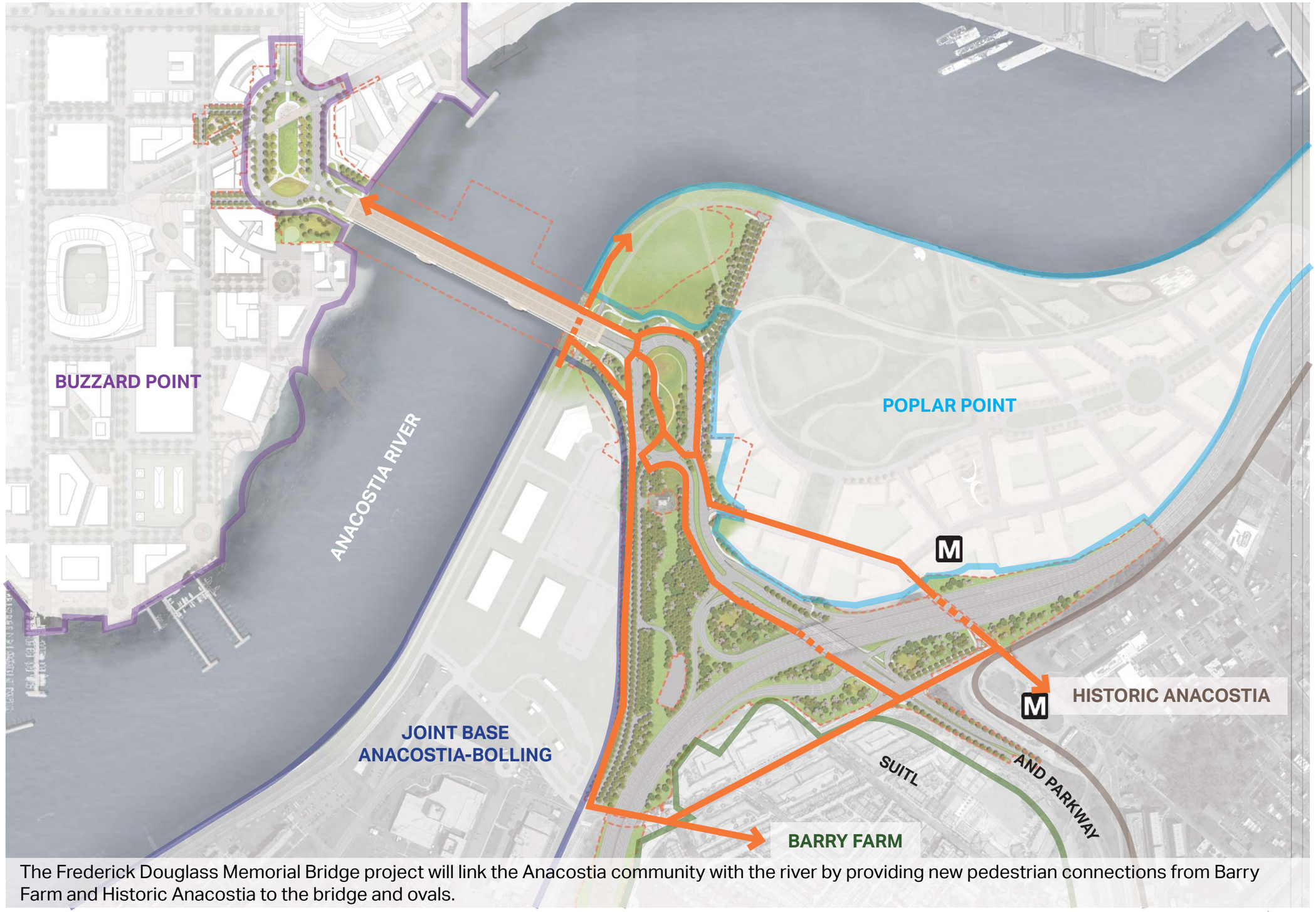
## Buzzard Point Context




Existing open spaces near the future West Oval include King Greenleaf Recreation Center, Diamond Teague Park, The Yards Park, and Canal Park. These open spaces provide users with a variety of gathering and recreation spaces. The future Yards West development project will create additional open space.


Anacostia Park is a riverfront recreational park with ample linear open space and a river trail. The park's southern end begins at Poplar Point. However, open space availability at Poplar Point is limited due to the presence of a large heavily wooded area that is contaminated and inaccessible, and secure National Park Service and U.S. Park Police operations. I-295 also separates the neighborhoods of Historic Anacostia and Barry Farm from Anacostia Park and the riverfront.

Winter 2018




The Frederick Douglass Memorial Bridge project will link the Anacostia community with the river by providing new pedestrian connections from Barry Farm and Historic Anacostia to the bridge and ovals.

# SECTION C: Landscape

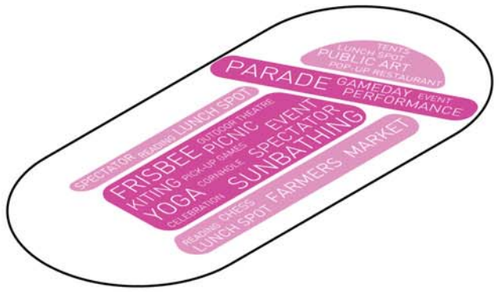
## South Capitol Street Corridor Project Washington DC

The West Oval is intended as a formal urban park intended for active and passive recreation and to accentuate the direct symbolic views of the U.S. Capitol. The West Oval is also designed to be complementary with the new Buzzard Point development, which will provide residential, commercial and institutional uses. The oval will be framed by development generating heightened pedestrian activity. New buildings will frame the bridge and the approach to the river.

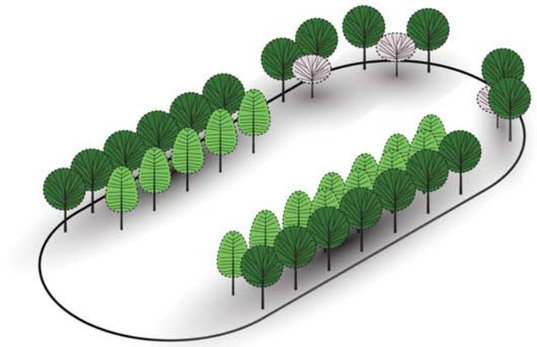
Another potential option for the South Capitol Street view corridor is to terminate the vista with a building framing the oval. Such an option (to be built later and separate from the bridge project) would allow the corridor to pivot from the West Oval toward the bridge.

The West Oval provides pedestrian circulation in all directions within the oval. The pathways connect the oval with the surrounding community through five crosswalks.

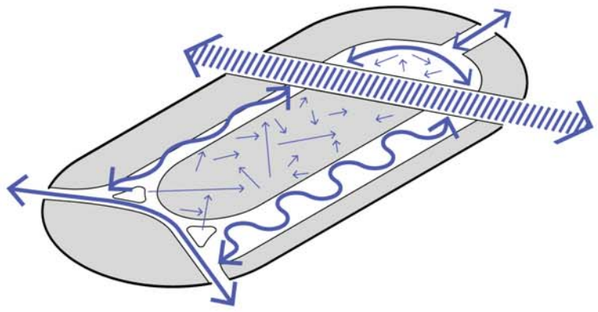
An open lawn located in the center of the West Oval provides direct views to the U.S. Capitol. Trees surrounding the center lawn and pathways provide canopy cover and reinforce the South Capitol Street axis. Bioretention areas within the West Oval receive stormwater from the oval and surrounding streets.



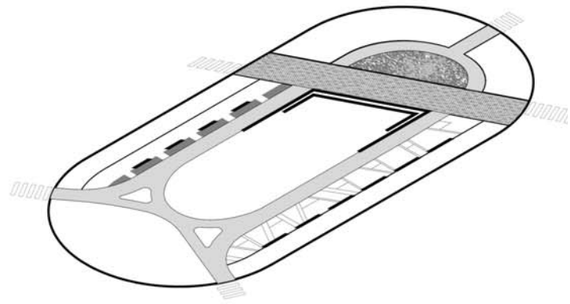

**Program**
- Passive
- Active



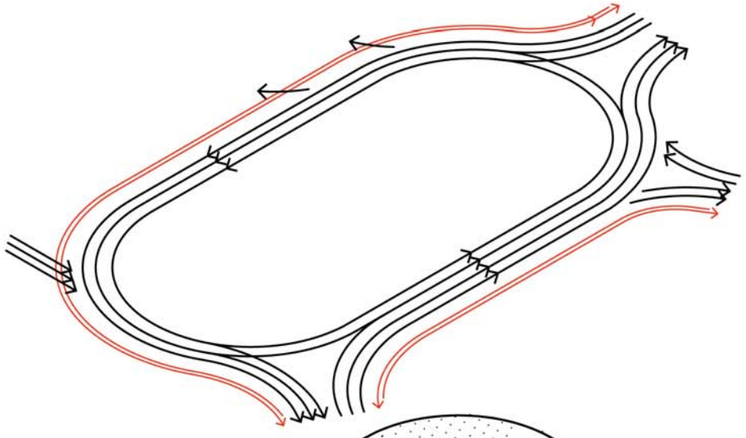
**Trees**
- Flowering
- Medium Canopy
- Canopy



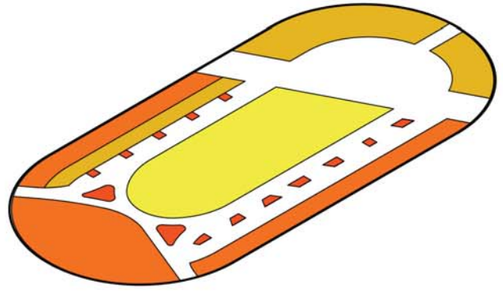
**Pedestrian Circulation**
- Primary
- Secondary
- Tertiary



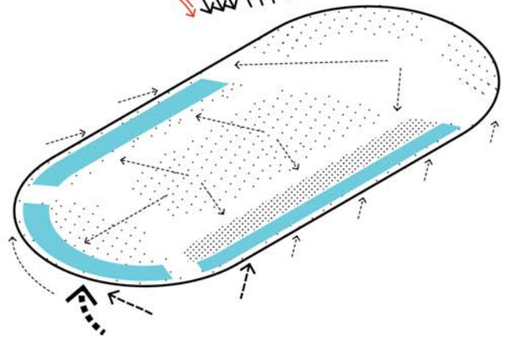
**Hardscape**
- Bench
- Stone Paver 1
- Stone Paver 2
- Concrete



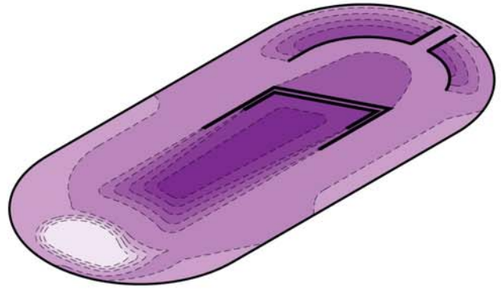
**Vehicular Circulation**
- Vehicular
- Bicycle



**Ground Plane Planting**
- Lawn
- Feature
- Bioretention



**Stormwater**
- Bioretention
- Pervious Paving (Gravel)
- Pervious
- Water Conveyance



**Topography**
- 29'-0"
- 22'-0"

A wide diagonal plaza pathway connecting Potomac Avenue through the West Oval would contain special pavers and accommodate heavy pedestrian traffic during events at Nationals Park and Audi Field.

A grove of trees along the east and west sides of the West Oval will provide visitors with shade relief.

The eastern panel of the West Oval will create a flexible space for events.

Diagonal Pathway

Grove of Trees

Regular Event\ Farmers' Market

## Play Space

The West Oval's central lawn panel will provide an area for active and passive recreation. The lawn will also provide a space for temporary and/or movable features.

## Community\ Movable Playground

## Central Lawn

Georgetown Waterfront Park serves as a useful example for the West Oval in terms of activities and character.

A central lawn panel within the West Oval will provide a space for active and passive recreation and special events. The lawn's openness provides direct unobstructed views towards the U.S. Capitol framed by trees and future development.

The eastern panel in the West Oval will provide pedestrian circulation and a shaded gathering space for festivals and regular events such as farmers markets.

Consistent with the plans for the future Buzzard Point neighborhood, the Anacostia RiverWalk trail will be expanded under the western end of the bridge to provide a lively plaza. The West Esplanade is envisioned as an active and vibrant public space with distinctive features and program serving the adjoining urban neighborhood as well as that of the surrounding area.

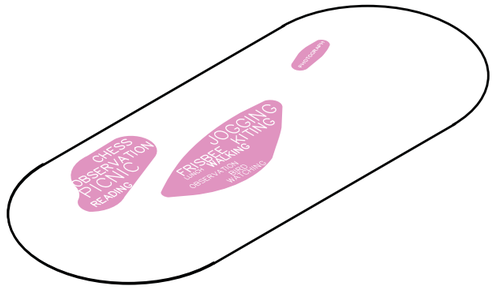
Gently sloped pathways and stairs will guide pedestrians and bicyclists to the broad esplanade of the Anacostia RiverWalk trail. Because the land rises to meet the base of the new development, the West Esplanade will allow for direct visual and physical contact with the water's edge. The West Esplanade will be a waterfront amenity, offering people direct access to the Anacostia River, affording unique views of the bridge, and providing shade in which to gather.

Extending from the oval to the riverfront, the open spaces at the Buzzard Point landing connect the bridge and the waterfront with stairs, a sloped walkway, and dramatic plantings. Envisioned as a vibrant public space, the Buzzard Point esplanade is the dynamic extension of the Riverwalk connecting Nationals Park with Buzzard Point.

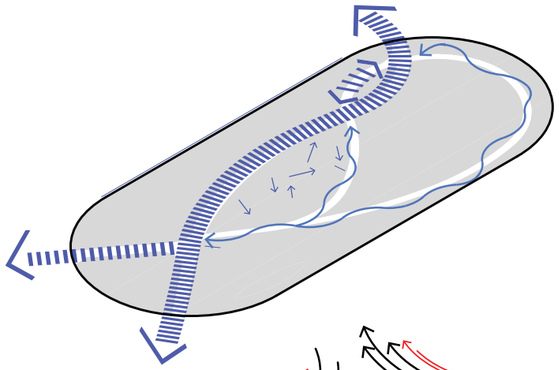
The East Oval is envisioned as a more natural meadow to provide a distinctive transition from the river-edge lawn to the nearby woods of Suitland Parkway within the future context of Poplar Point. The East Oval is designed as a more informal and natural landscape that offers an accessible natural area for Anacostia, where much of the existing open space is fenced off from use. As Poplar Point develops, the oval will continue to provide motorists, pedestrians and bicyclists with wide vistas of the river and the city skyline to the north.

The East Oval contains a variety of pedestrian pathways. Primary pathways provide circulation in north and south directions within the oval and connect to the surrounding community through three crosswalks. Secondary pathways branch off primary pathways and allow visitors to further explore the oval interior.

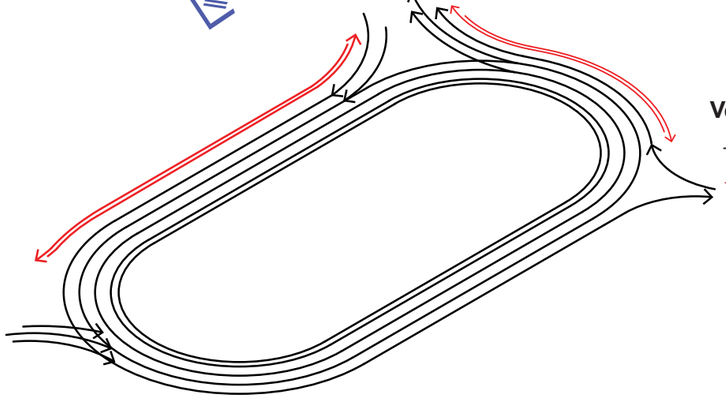
Clusters of trees are predominately located in the southern portion of the East Oval providing canopy cover to users while allowing for open views of the Anacostia River and beyond. Given the topography of the oval, the two bioretention areas are located in the southern portion of the East Oval and receive stormwater from the oval and surrounding street. Twin sewer lines traverse the oval north to south and prevent any tree planting above the lines.



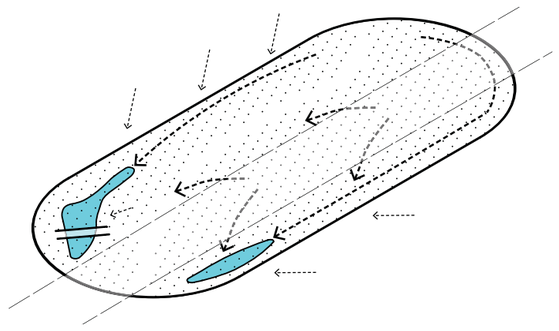

**Program**
- Passive



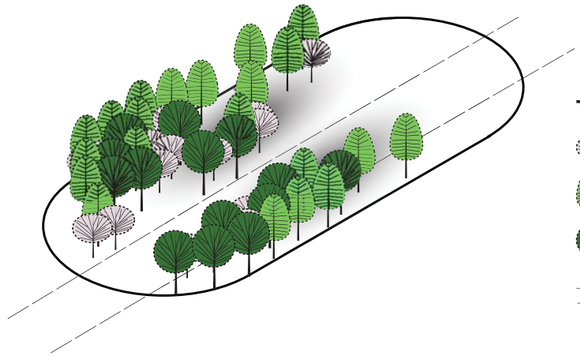
**Pedestrian Circulation**
- Primary
- Secondary
- Tertiary



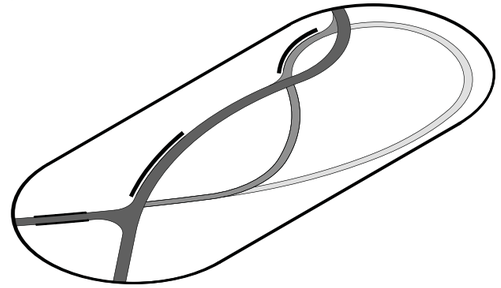
**Vehicular Circulation**
- Vehicular
- Bicycle



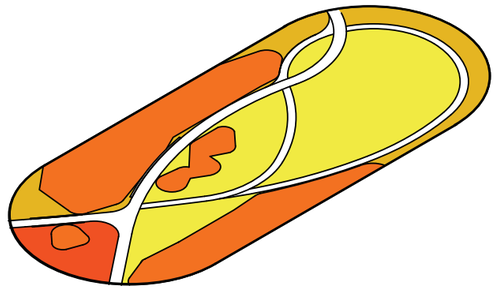
**Stormwater**
- Bioretention
- Pervious
- Water Conveyance
- Utility Line (Surface Conveyance Only)



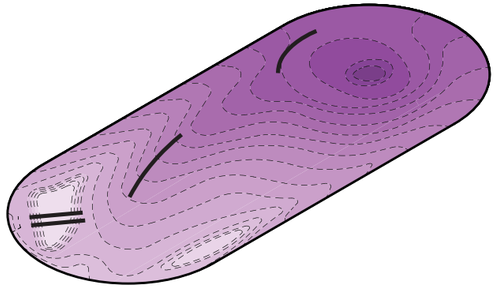
**Trees**
- Flowering
- Medium Canopy
- Canopy
- Utility Line (Load restrictions; no trees permitted)



**Hardscape**
- Bench
- Concrete
- Stone Gravel A
- Natural Stone Gravel B

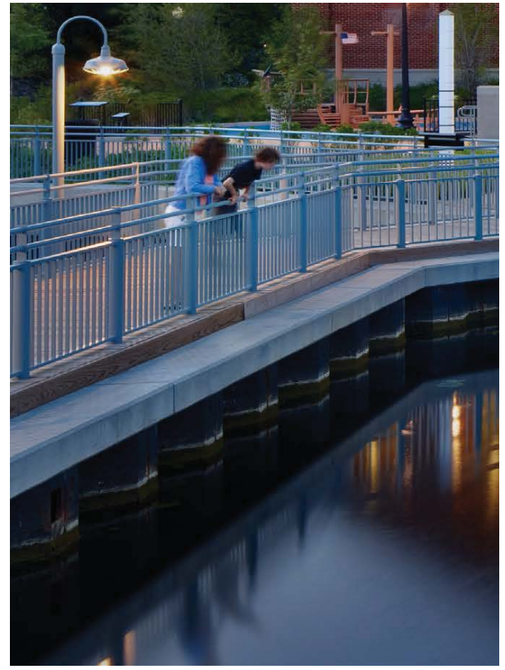


**Ground Plane Planting**
- Sun Meadow
- Accent Planting A
- Grove Shade Grasses
- Accent Planting B



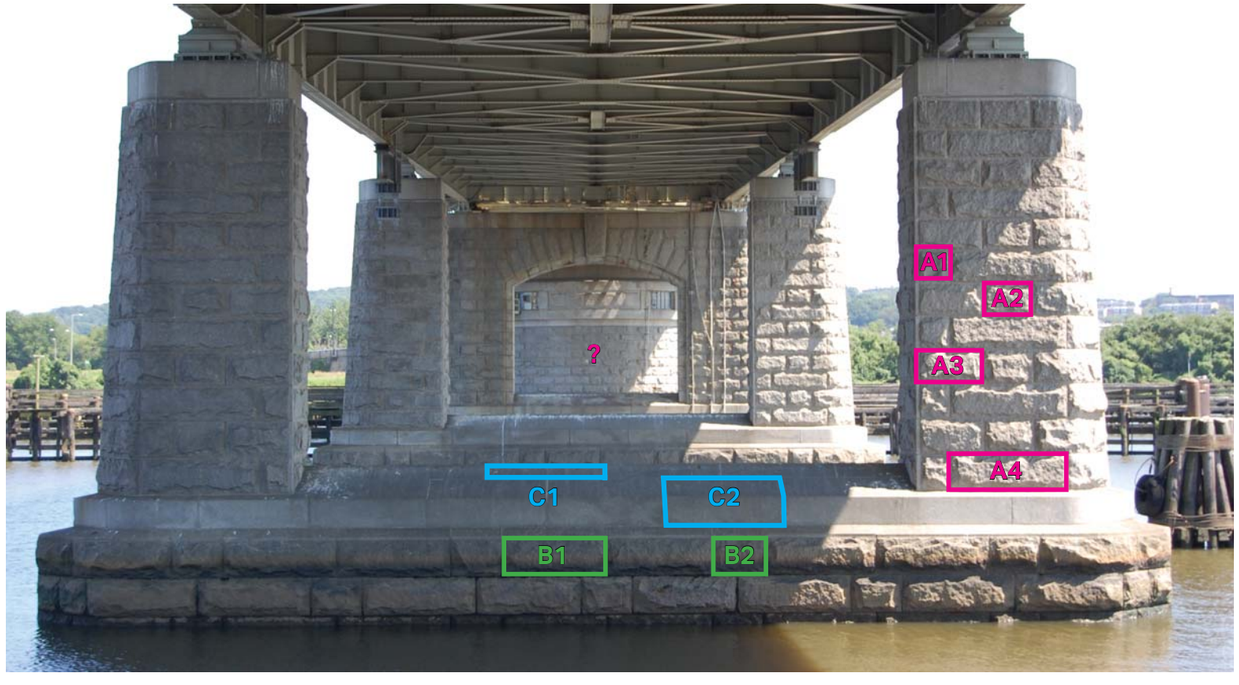
**Topography**
- 27'-0"
- 13'-0"

The East Oval will contain both formal paved primary pathways and secondary pathways composed of more natural materials. A bridge will carry visitors over a bioretention area.



The East Oval's design will allow visitors to stroll through, rest, and enjoy the oval's more naturalistic environment and views towards the river.

Pier stones from the existing Frederick Douglass Bridge could be salvaged and re-purposed within the ovals, abutments, or esplanades to provide additional character. If so, the pier stones would become available for re-use after the new bridge is constructed and operational and the existing bridge is removed.



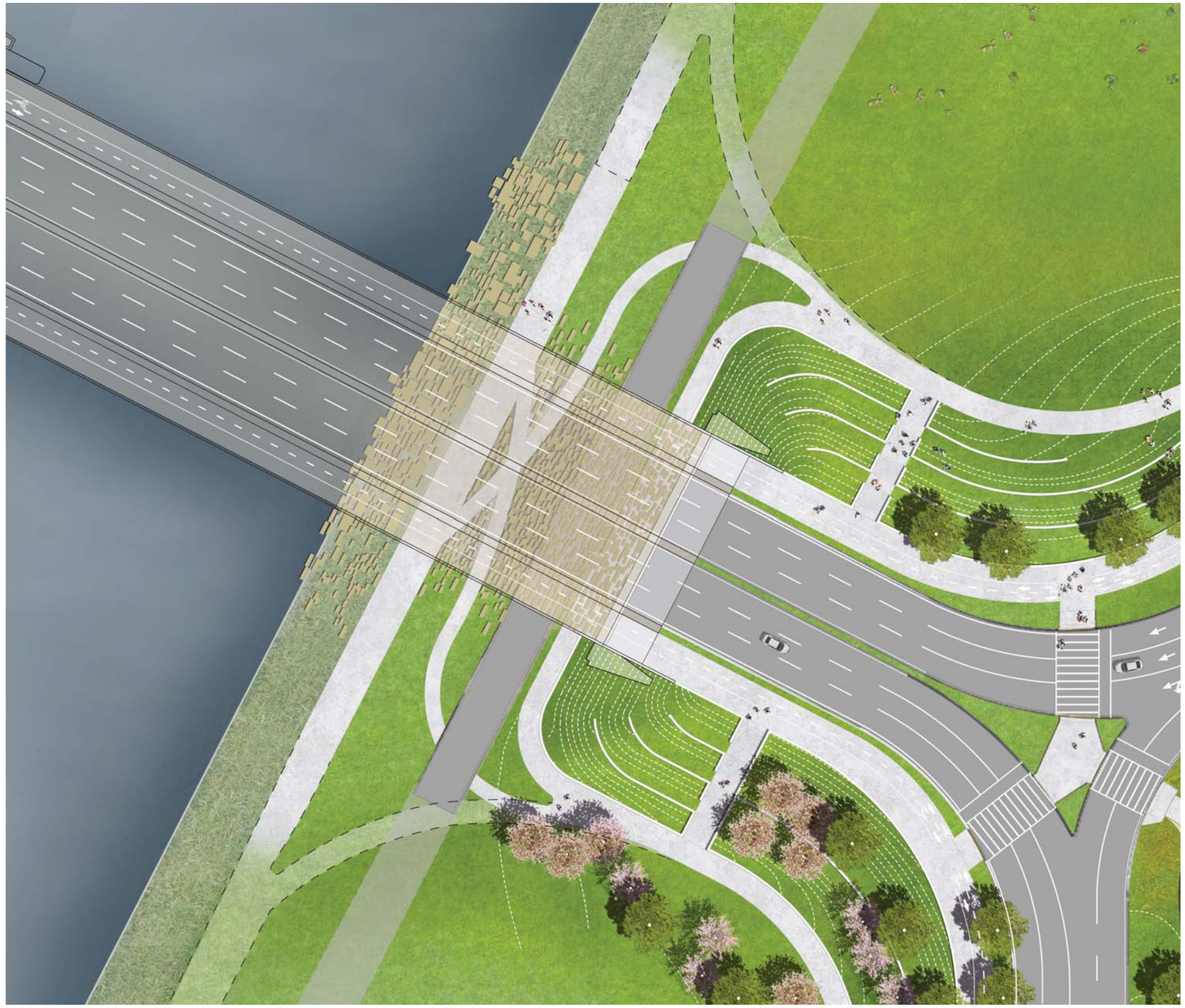
Lady Bird Johnson Park serves as a useful example for the East Oval in terms of character.

The open northern end of East Oval will provide nature walks and allow for expansive views of the bridge and beyond the Anacostia River.

Wide pathways will provide comfortable pedestrian movement through the East Oval. Near the southern end of the oval, the pathway will bridge over a bioretention area surrounded by trees.

A series of curving terraces and sloped walkways express a curvilinear geometry that extends the bridge form and is reflective of the river itself. Staircases are provided next to each arch touchdown to directly connect pedestrians with the riverfront esplanade.

The East Esplanade will be located under and adjacent to the bridge and the surrounding Poplar Point area. Staircases are provided near each arch touchdown to directly connect pedestrians with the riverfront East Esplanade. Given the wide and steeper configuration at Poplar Point, the stairs are perpendicular to the curving terraces to accomodate the change in grade. The stairs and pathways extend to the top of a levee in the form of a walkway suitable for strolling along the water's edge. The location of the esplanade will offer views of the Anacostia River and beyond.



Extending from the oval to the riverfront, the open spaces at the Poplar Point landing connect the bridge and the waterfront with stairs, trails, and accessible sloped walkways as a terminus for the Riverwalk.

Stairs and ramp will provide pedestrian and bicyclists with riverfront access from the bridge. The curvilinear, stepped terrace walls will provide directly accessible sitting areas next to the esplanade for bicyclists, pedestrians, and visitors and offer views of the river and beyond. The terrace walls will naturally terminate into the sloped landscape.