Windmill Hill Park
Shoreline Rehabilitation
Project Update Meeting
December 10, 2015
Project Location

Windmill Hill Park Area

Potomac River
Project Area

- Windmill Hill Park
- Gibbon Street
- S. Union Street
- Potomac River
- Bulkhead Failure & Shoreline Erosion
Why We Are Here

- **Project Progress Update**
- Living Shoreline Concept approved by City Council
- Design Refinements
- Next Steps
Project Phases & Work Scopes

Phase I (2014/15)
- Concept Development
- Public Engagement
- 30% Design

Phase II (2015/16)
- Construction Plans, Specifications, and Estimates

Phase III (2016/17)
- Construction

WE ARE HERE NOW
PUBLIC MEETINGS

Community Meetings 1, 2, Stakeholder, & City Council

#1 – Feb. 12, 2015 - Project Overview, Review of Approved 2003 Concept and Replacement Opportunities, Community Input

#2 – April 13, 2015 - Presentation of Three Concepts, Community Input

#3 – May 2015 - Series of meetings with stakeholder groups including Environmental Policy Commission, Waterfront Commission, and the Park and Recreation Commission

#4 – June 13, 2015 - City Council unanimously approves Living Shoreline Concept. Council requests Union Street Improvements
CURRENT CONDITIONS
PERMITTING CONSIDERATIONS
Permitting Considerations

• Army Corps will be permitting agency
• Requires coordination with large number of state and federal agencies
• Wetland delineation is complete – Site visit with Army Corps Dec. 3, 2015 to confirm delineation
• Permit submission mid December
CONCEPT PLANS
Approved 2003 Plan
City Council Approved Concept Plan (2003)

• Recommended combination approach

• Accommodation for canoes/kayaks and dogs

• Included overlook accommodation
MEAN HIGH WATER (MHW)
STONE SILL
EXISTING BULKHEAD EDGE
MEAN LOW WATER (MLW)
STONE REVETMENT
EXISTING STREET TREES TO REMAIN
EXISTING DOLPHINS TO REMAIN
STREAM/OUTFALL RESTORATION
SLOPED WATER ACCESS
BRIDGE
OPTIONAL PATH
HARBORSIDE
OVERLOOK POINT
POTOMAC RIVER
FORD’S LANDING
Council Approved Plan
S. UNION ST.
GIBBON ST.
S. UNION ST.

FORD'S LANDING

HARBORSIDE

RE-CONSTRUCTED ACCESS

STONE REVETMENT

PIER

OVERLOOK POINT

LIVING SHORELINE

RE-CONSTRUCTED SIDEWALK

STONE SILL

EXISTING PIER LINE

EXISTING BULKHEAD LINE

EXISTING DOLPHINS TO REMAIN

SLOPED WATER ACCESS

STREAM/OUTFALL RESTORATION

BRIDGE

Current Plan

RE-CONSTRUCTED SIDEWALK

STONE SILL

EXISTING PIER LINE

EXISTING BULKHEAD LINE

EXISTING DOLPHINS TO REMAIN

SLOPED WATER ACCESS

STREAM/OUTFALL RESTORATION

BRIDGE

Current Plan
Plan Progression

2003 Approved Plan

Council Approved Plan

Current Plan
PARK ELEMENTS
Existing Trees
Trees to be Removed
Proposed Trees

Crown Coverage Required = 35,605 sf  
Existing Crown Coverage = 49,550 sf  
Existing Coverage to Remain = 7,100 sf  
Proposed Crown Coverage = 58,508 sf
Living Shoreline Elements
Living Shoreline
Living Shoreline

1. **Living Shoreline: Typical Section**

2. **Living Shoreline with Stone Revetment and Sill**

3. **Imbricated Stone and Revetment: Typical Section**
Riparian and Tidal Plantings

Tidal Grasses and Perennials

Typical Riparian Plantings
Detail Site Elements
North Point Pedestrian Areas
Southern Pedestrian Areas
Stream Restoration
Union Street Improvements
Living Shoreline Construction

- Pre construction
- Bank construction
- Pre construction
- Post construction
- Sill construction
- Post construction
Living Shoreline Construction

Sill Construction

Slope Grading

Plant Installation

45 days

9 months

12-18 months
Additional Design Options Based on Budget
Design Alternate 1: Union Street Improvements
Design Alternate 2: Seat Walls and Berms
Design Alternate 3: Entry Piers & Walls
Design Alternate 4: Viewing Platforms
Design Alternate 5: 
Pier Extensions & Construction Types
Design Alternate 6: Bollard Lighting
Design Alternate 7: Resin Bound Aggregate
Next Steps

• **Spring 2016 – Pre-Construction Meeting**
  
  • U.S. Army Corps of Engineers – Permit
    • April 2016
  
  • Final Design Completion
    • April 2016
  
  • Preconstruction/Contractor Procurement
    • May/June 2016
  
  • **Construction Start**
    • July 2016
  
  • **Construction Substantially Complete**
    • October 2017
Questions? Contact Us

• **Tony Gammon, P.E.**  
  Project Manager  
  *City of Alexandria*  
  *Department of Project Implementation*

• **Jack Browand, CPRP**  
  Division Manager  
  *City of Alexandria*  
  *Department of Recreation Parks & Cultural Activities*

• **Contact**  
  Phone: 703.746.4155  
  Email: [anthony.gammon@alexandriava.gov](mailto:anthony.gammon@alexandriava.gov)

• **Website**  