Pedestrian Bridge and Connecting Trail Over Arizona Avenue, NW

Public Meeting

April 10th, 2018
Agenda

• Project Purpose and Limits
• Project Process
• Draft Preliminary Project Design
  • Pedestrian Bridge Reconstruction/Rehabilitation
  • Pedestrian Access Ramps
  • Trail Typical Section and Surfaces
• Context Sensitive Design & Landscape
• Guided Discussion
• Next Steps
Purpose and Project Area

This project is for the rehabilitation/reconstruction of a 110 feet long pedestrian bridge over Arizona Avenue, NW and improvements to the connecting trail from Galena Place, NW to Sherier Place-Nebraska Avenue, NW.
Related Citywide Policies

• MoveDC
• GreenDC
• Vision Zero
• FitDC
• Sustainable DC

“Expand provision of safe, secure infrastructure for cyclists and pedestrians.”
Process

Phase 1 (current phase)

• Data Collection
• Two meetings with ANC 3D & Palisades Citizens Association representatives
• Public Meeting
• Development of preliminary design
• Environmental documentation
Process

Phase 2

• Environmental approval
• Final bridge, ramp, and trail design
• Detailed landscape plans
• Construction documents and cost estimate
Key Elements of Bridge and Trail Improvements

• Bridge and Pedestrian Ramp Rehabilitation and Reconstruction
• Multi-Use Trail Designed to Meet Accessibility Guidelines
• Stormwater Management and Green Infrastructure
• Environmental Documentation
• Context Sensitive Design and Aesthetics
Community Leader Feedback

- Replace the Existing Pedestrian Bridge
- Minimize Trail Grade Changes
- Minimize Adjoining Property Impacts
- Improve the Trail to All-Weather Surface
- Provide Natural-Looking Trail
Pedestrian Bridge
Existing Pedestrian Bridge

• Constructed in Early 1980’s
• Vertical Clearance
  – Existing Minimum = 14’-2”
  – AASHTO/DDOT Standard Minimum = 17’-6”
• Structural Condition
  – Recent Inspection (2017) = 5 (Fair Condition) (0 to 9 scale)
  – Prestressed Concrete Box Beams
Pedestrian Bridge

- Main Span over Arizona Avenue – Possible Solutions
  - Prefabricated Steel Trusses

- Parallel Chord Truss
- Bowstring Arch Truss
- Modified Bowstring Arch Truss
Prefabricated Steel Trusses

Parallel Chord Truss

Bowstring Arch Truss

Modified Bowstring Arch Truss
Prefabricated Steel Trusses

- Parallel Chord “Box” Truss
Pedestrian Bridge

- Main Span over Arizona Avenue
  - Prefabricated Steel "Box" Truss
  - Safety Rubrails at 42"
  - Mesh Panels
  - Concrete Deck
  - Minimal Camber
Pedestrian Bridge

- Abutments
  - Modifications
    - Modify/Extend Abutment Using Lightweight Backfill
    - Evaluate Existing Foundations
  - Repair Existing Defects
    - Spalls and cracks
Pedestrian Bridge

• Pedestrian Access Ramps
  – Design Follows Accessibility Guidelines
  – Raised Trail Profile = Longer Ramp
  – Replace Existing West Ramp Structure
  – New Ramp on East Side of Arizona Avenue
Preliminary Plans
Preliminary Plans

- View from South Side of Bridge
Preliminary Plans

• Typical Section
Ramps & Railings
Preliminary Plans

WEST RAMP – ELEVATION
Preliminary Plans

EAST RAMP – ELEVATION
Aesthetic Treatments

- West Ramp

West Side of Arizona Ave NW

Proposed Pedestrian Bridge
Existing Bridge Abutment

Proposed Access Ramp

Proposed Plantings

Existing Conditions
Aesthetic Treatments

- West Ramp

West Side of Arizona Ave NW

Existing Conditions
Aesthetic Treatments

• East Ramp

East Side of Arizona Ave NW

Existing Conditions
Aesthetic Treatments

- Railings
Aesthetic Treatments

- Railings: Typical Components
Aesthetic Treatments

• Railings: Potential Alternatives

HORIZONTAL RAILS

VERTICAL RAILS

METAL INFILL
Aesthetic Treatments

- Color Scheme: Potential Alternatives (Truss and Railings)

- BLACK
- MEDIUM GREY
- WEATHERING STEEL/RED-BROWN
Plantings
Plantings

• Planting Mix - Sun

TREES:
- Cercis canadensis - Eastern Redbud
- Amelanchier alnifolia 'Obelisk' - Standing Ovation
- Serviceberry
- Juniperus scopulorum 'Blue Arrow' - Blue Arrow Juniper
- Thuja occidentalis 'Smaragd' - Arborvitae

STRUCTURAL / ANCHOR:
- Rhus copallinum - Winged Sumac
- Clethra alnifolia - Summersweet

GROUNDCOVER MATRIX:
- Carex amphibola - Creek Sedge
- Carex radiata - Eastern Star Sedge
- Carex pennisilvica - Pennsylvania Sedge
- Hypericum calycinum - St. John’s Wort
- Pachysandra procumbens - Allegheny Spurge

FLOWERING ACCENTS:
- Liatris spicata - Blazing Star
- Eupatorium dubium 'Phantom' - Joe Pye Weed
- Achillea 'Coronation Gold' - Yanow
Plantings

- Planting Mix - Shade

**TREES:**
- Amelanchier laevis - Allegheny Serviceberry
- Buxus sempervirens 'Dee Runk' - Dee Runk Boxwood
- Thuja occidentalis 'Smaragd' - Arborvitae

**STRUCTURAL / ANCHOR:**
- Baptisia australis - Blue False Indigo
- Viburnum acerifolia - Mapleleaf Viburnum

**GROUNDCOVER MATRIX:**
- Carex eburnea - Bristle-leaf Sedge
- Carex appalachia - Appalachian Sedge
- Carex leavenworthii - Lawn Sedge
- Hypericum calycinum - St. John’s Wort
- Pachysandra procumbens - Allegheny Spurge

**FLOWERING ACCENTS:**
- Amsonia tabernaemontana 'Blue Ice' - Amsonia Blue Ice
- Galium odoratum - Sweet Woodruff
Trail
Trail Typical Section

TYPICAL SECTION
PALISADES TRAIL
N.T.S.
Proposed Trail and Surfaces

• Primary Trail Material Alternatives

ASPHALT

POROUS ASPHALT
Proposed Trail and Surfaces

• Primary Trail Material Alternatives

PERVIOUS CONCRETE

DECOMPOSED GRANITE (Stabilized)
Proposed Trail

• Trail Material: Decomposed Granite

COLOR ALTERNATIVES

- Pewter
- Imperial Grey
- Sierra Black
Proposed Trail

• Local Examples

FOUNDERS PARK (ALEXANDRIA VA)

C&O CANAL TOWPATH (DC TO MD)
Next Steps
April/May 2018
• Complete Environmental Documentation
• Complete Preliminary Bridge and Trail Design
• Perform Geotechnical Borings for Access Ramps
• Completes Phase I
Discussion

- Comments on Pedestrian Bridge?
- Comments on Pedestrian Access Ramps?
- Comments on Trail, Landscape?
- Other?
Thank you!

Zahra Dorriz  
Zahra.dorriz@dc.gov  
202-671-4584

Anna Bentley  
annab@rhodeside-harwell.com  
703-683-7447

Project Website:  