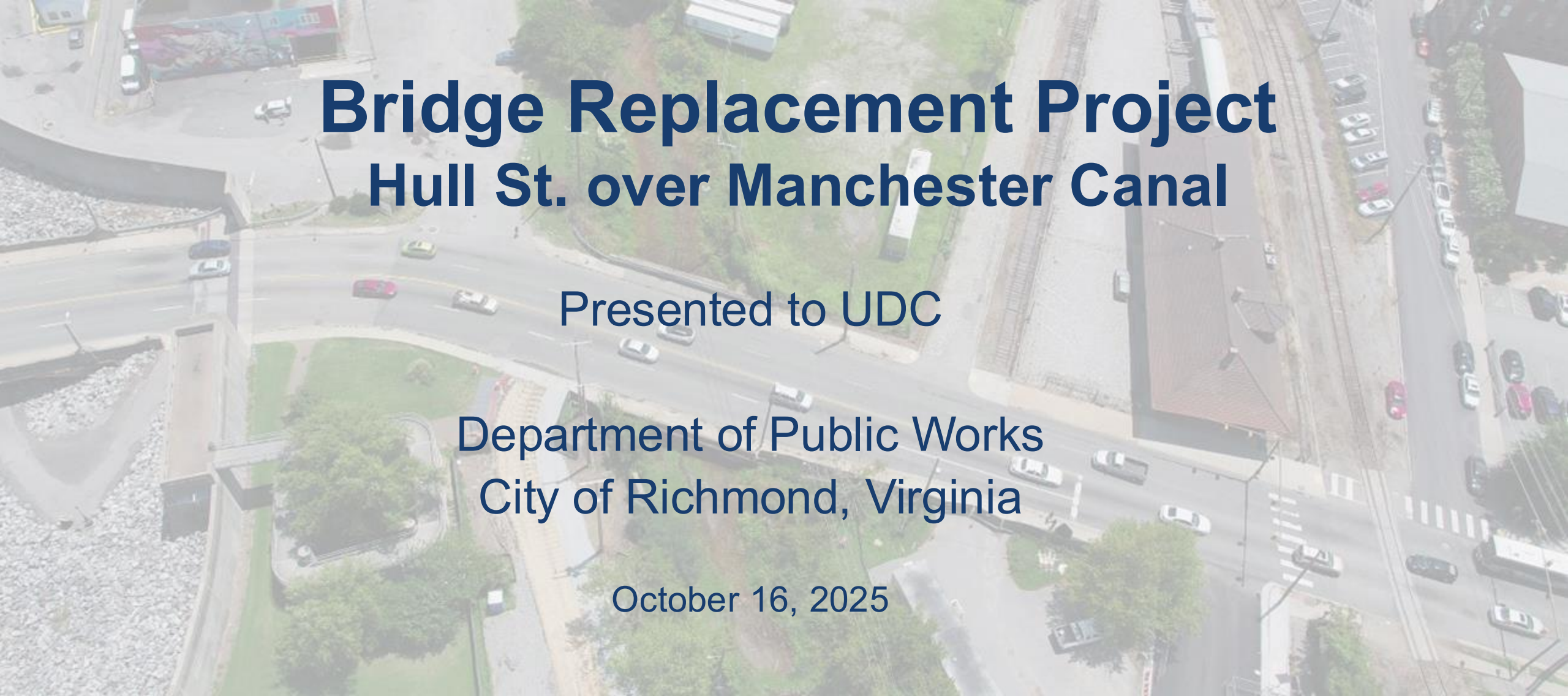


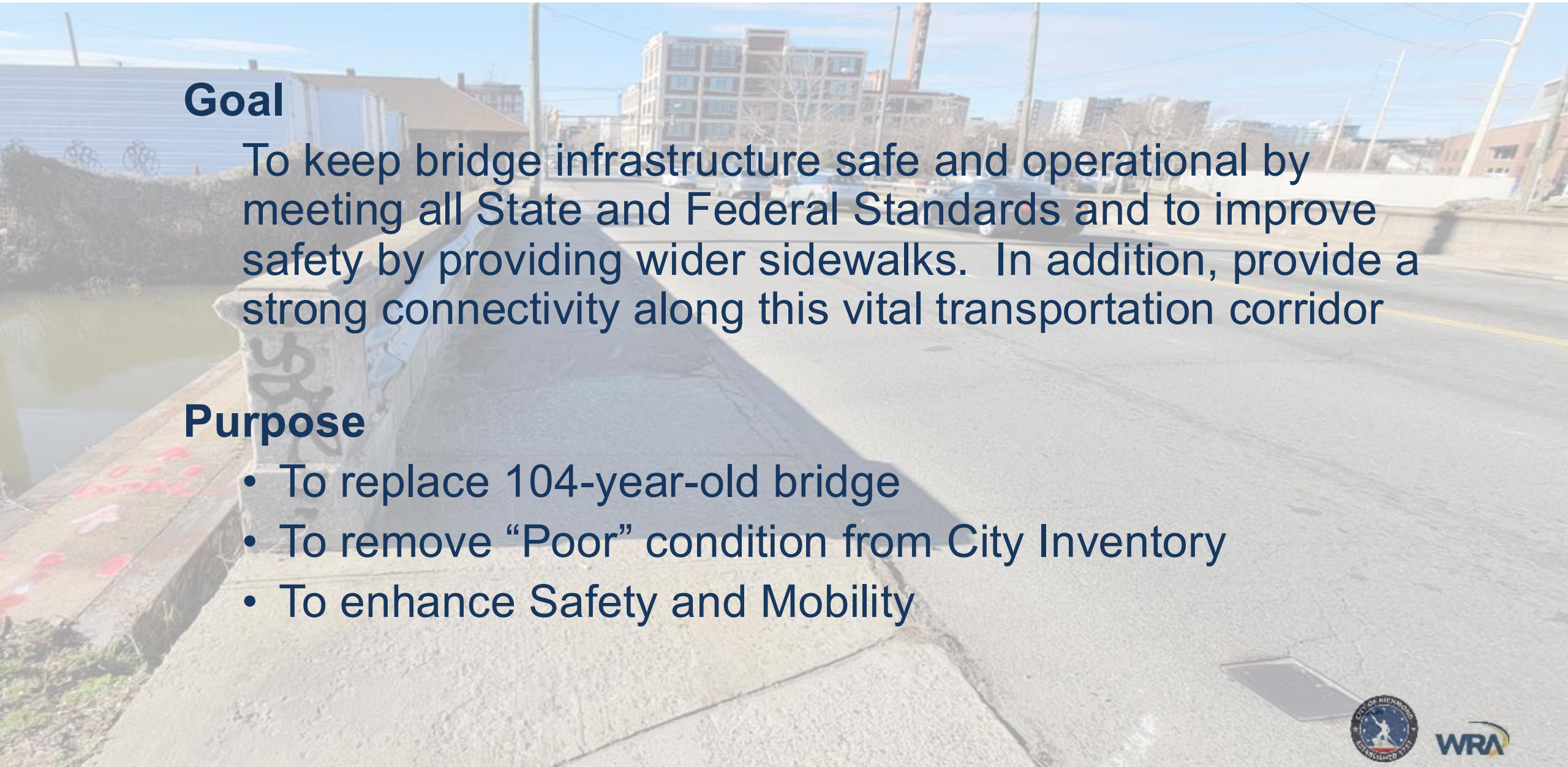
Bridge Replacement Project
Hull St. over Manchester Canal

Presented to UDC

Department of Public Works
City of Richmond, Virginia

October 16, 2025

Goal and Purpose



Goal

To keep bridge infrastructure safe and operational by meeting all State and Federal Standards and to improve safety by providing wider sidewalks. In addition, provide a strong connectivity along this vital transportation corridor

Purpose

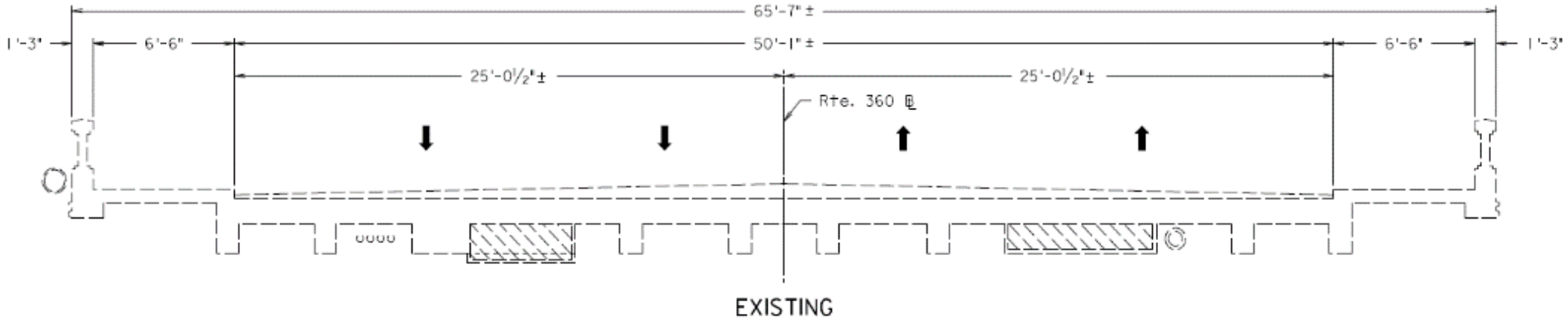
- To replace 104-year-old bridge
- To remove “Poor” condition from City Inventory
- To enhance Safety and Mobility

Project Location

- Project is located within the Manchester Industrial Historic District
- Fast Developing Area

Existing Bridge Description

- Constructed in ~1921
- 2-Span Bridge: 41 ft long, 65.5 ft wide (out-to-out)
- 50 ft Travel Lane Width (2 lanes in each direction)
- 6.5 ft sidewalk on both sides
- National Highway System (US Rte. 360)
- 17,000 AADT



Existing Bridge Conditions

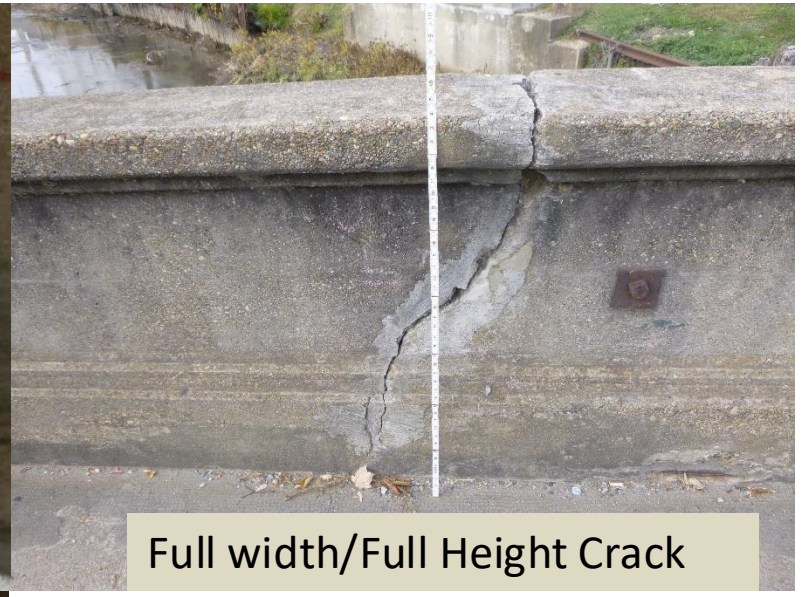
- Major Substructure Rehabilitation 2005
  - $400,000 cost for Emergency repair

Photo from 2005 Rehabilitation

Existing Bridge Conditions

Bottom of Concrete Deck

Bottom of Concrete Deck



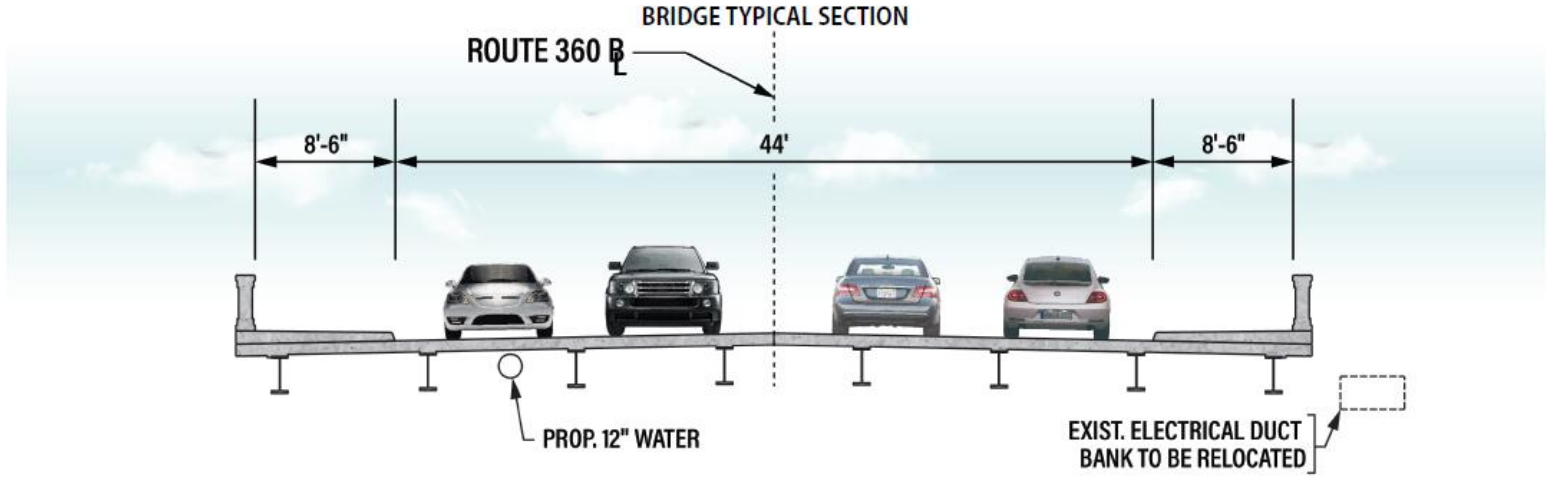
Full width/Full Height Crack

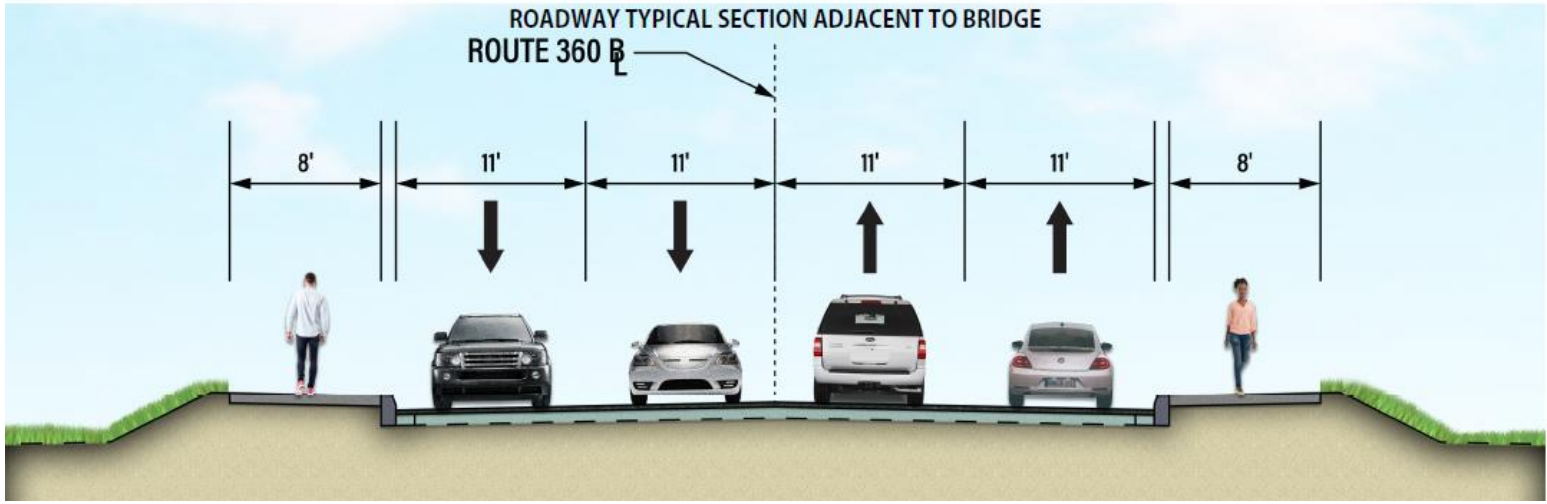
Deteriorated water line

Deteriorated concrete wrapping steel beam

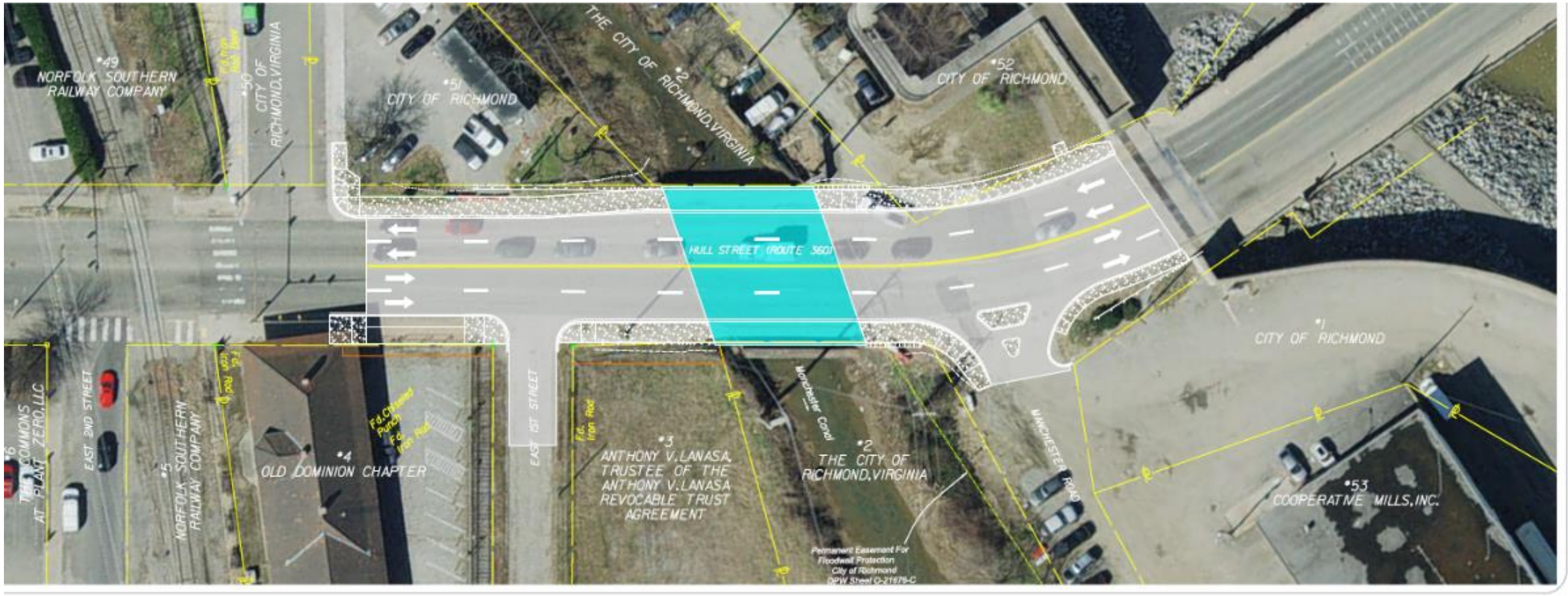
Proposed Canal Bridge Design

- Proposed Superstructure
  - Span Length = 62 ft
  - Bridge Width = 63 ft (out-to-out)
    - Originally 66 ft
  - Reduction in travel way to 44 ft
    - Originally 50 ft
  - Increased sidewalk width to 8’-6”
    - Originally 6.5 ft
  - Single Span Bridge
  - Structural Steel Beam
- Key Features
  - Lighting
    - Will be consistent with corridor
  - Architectural / Gateway parapet
  - Reduced Property Impacts
    - Only Temp. Constr. Easement Required



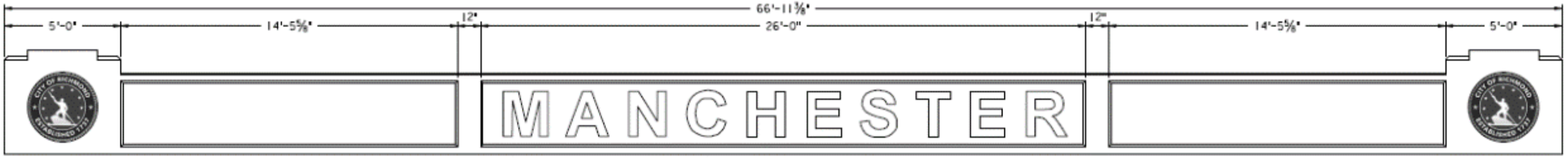


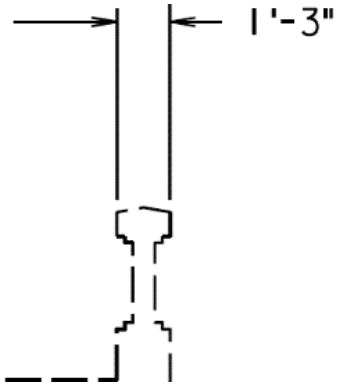
Proposed Canal Bridge Design



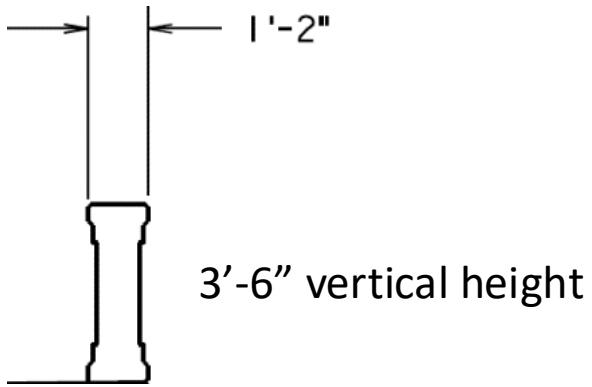
Proposed Parapet (Railing)

- Parapet Elevation View
  - Will have graffiti resistant coating
  - Parapet will have beige color
- Modified C411 (“Church Rail”) that has opening filled in to create a solid look which is similar to the existing parapet
- City of Richmond Seal



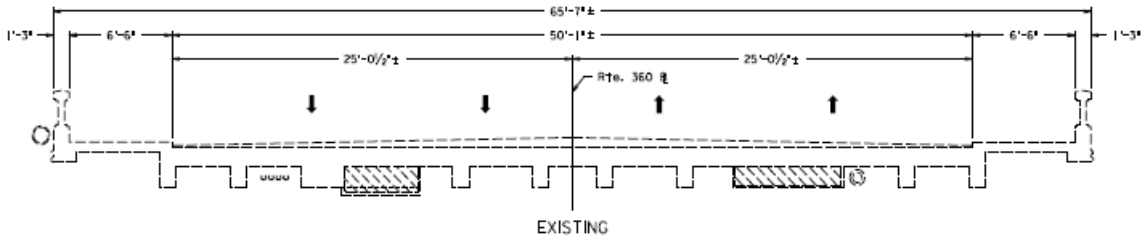


Existing Parapet Shape

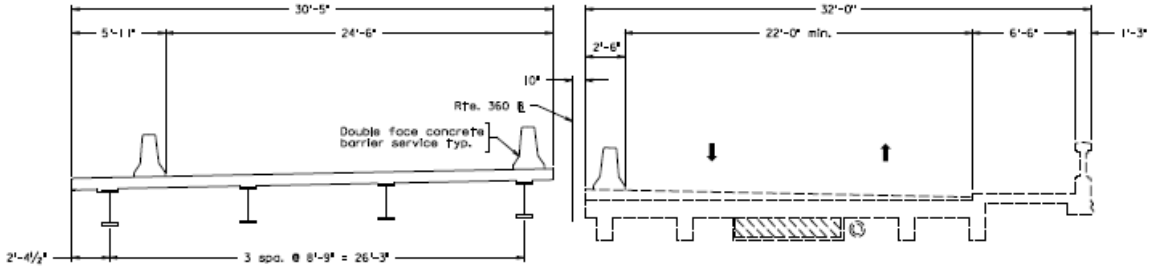


Proposed Modified C411 Parapet Shape

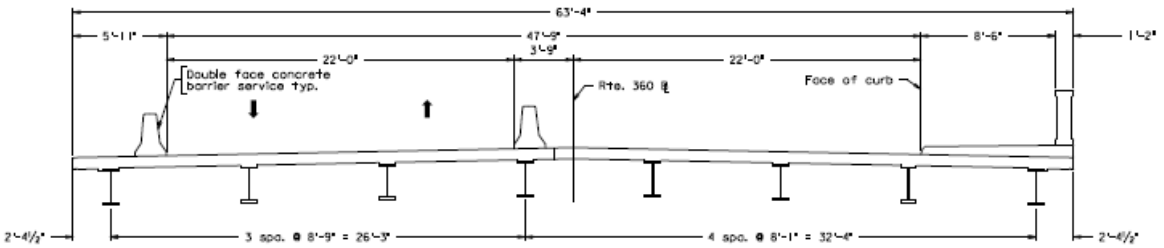
Proposed Sequence of Construction



EXISTING

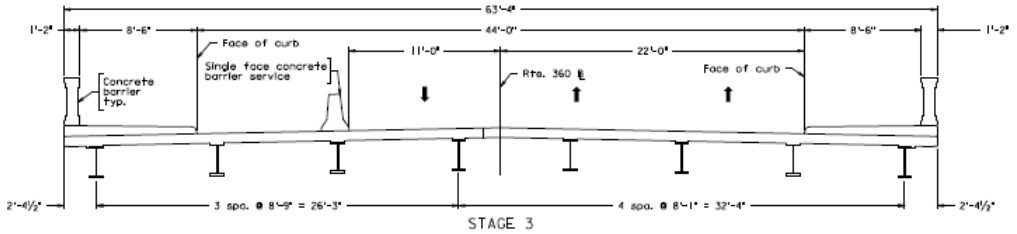


STAGE 1

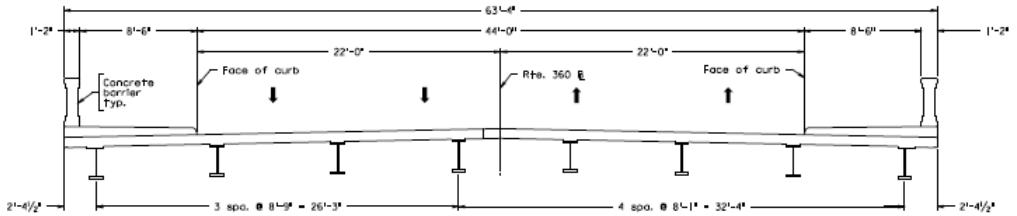


STAGE 2

SEQUENCE OF CONSTRUCTION
Scale: ¼" = 1'



STAGE 3



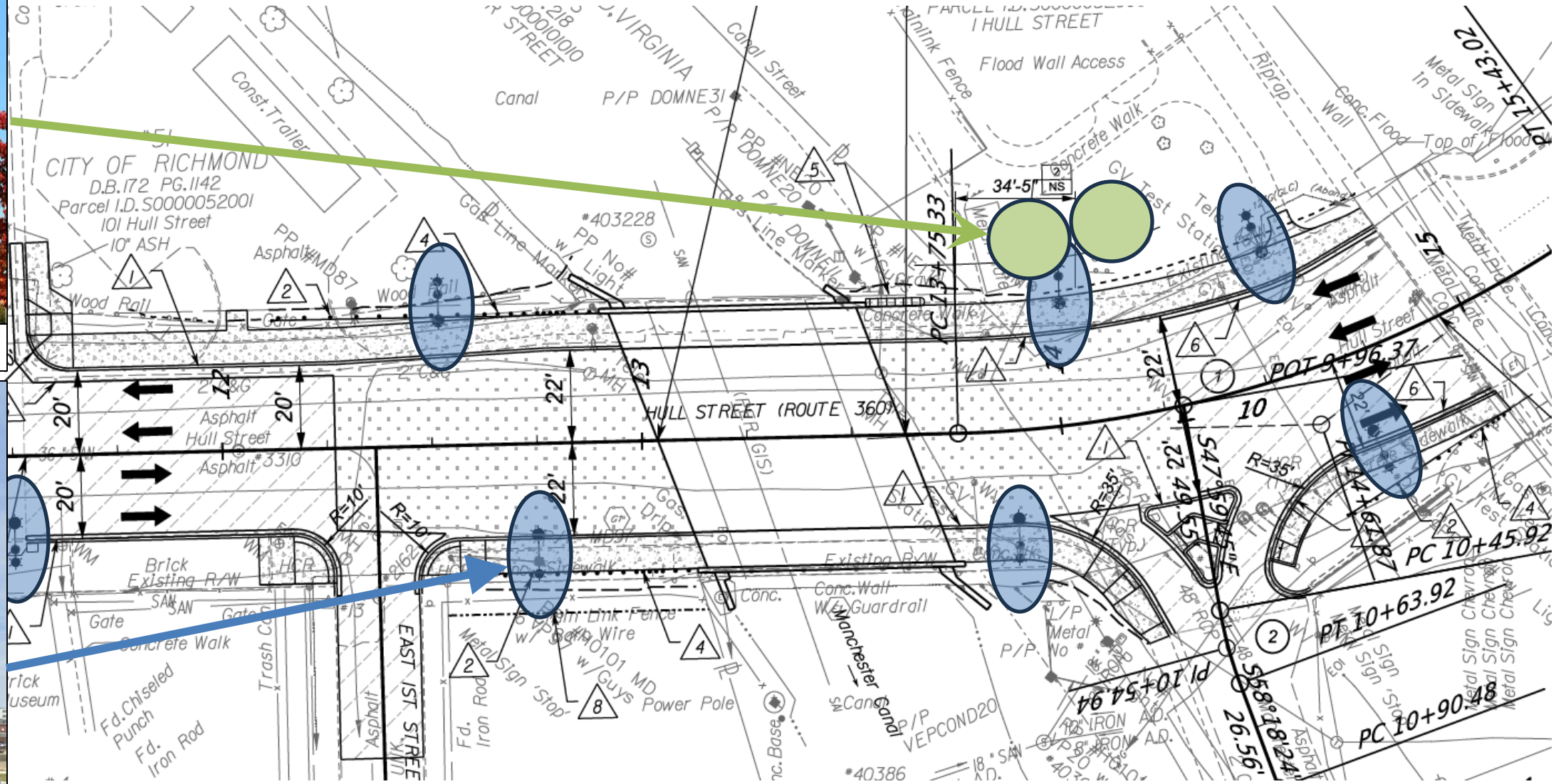
PROPOSED
SEQUENCE OF CONSTRUCTION
Scale: ¼" = 1'

- 2 Lanes of Traffic Maintained at all times
- Pedestrian Detour will be required using adjacent bridge near South Fall Tower
- Access to Manchester Road will be maintained

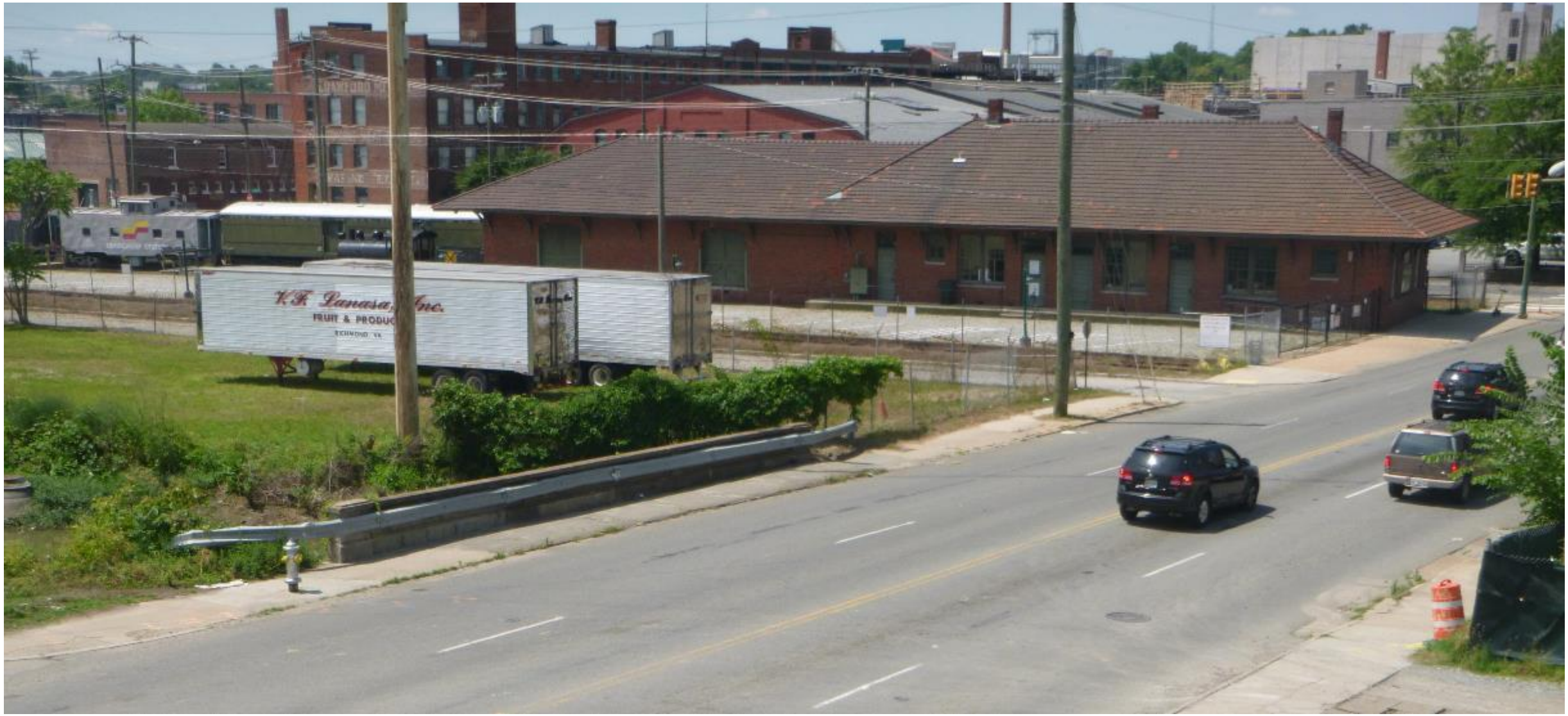
Landscape/Lighting Plan

Afterburner Tupelo

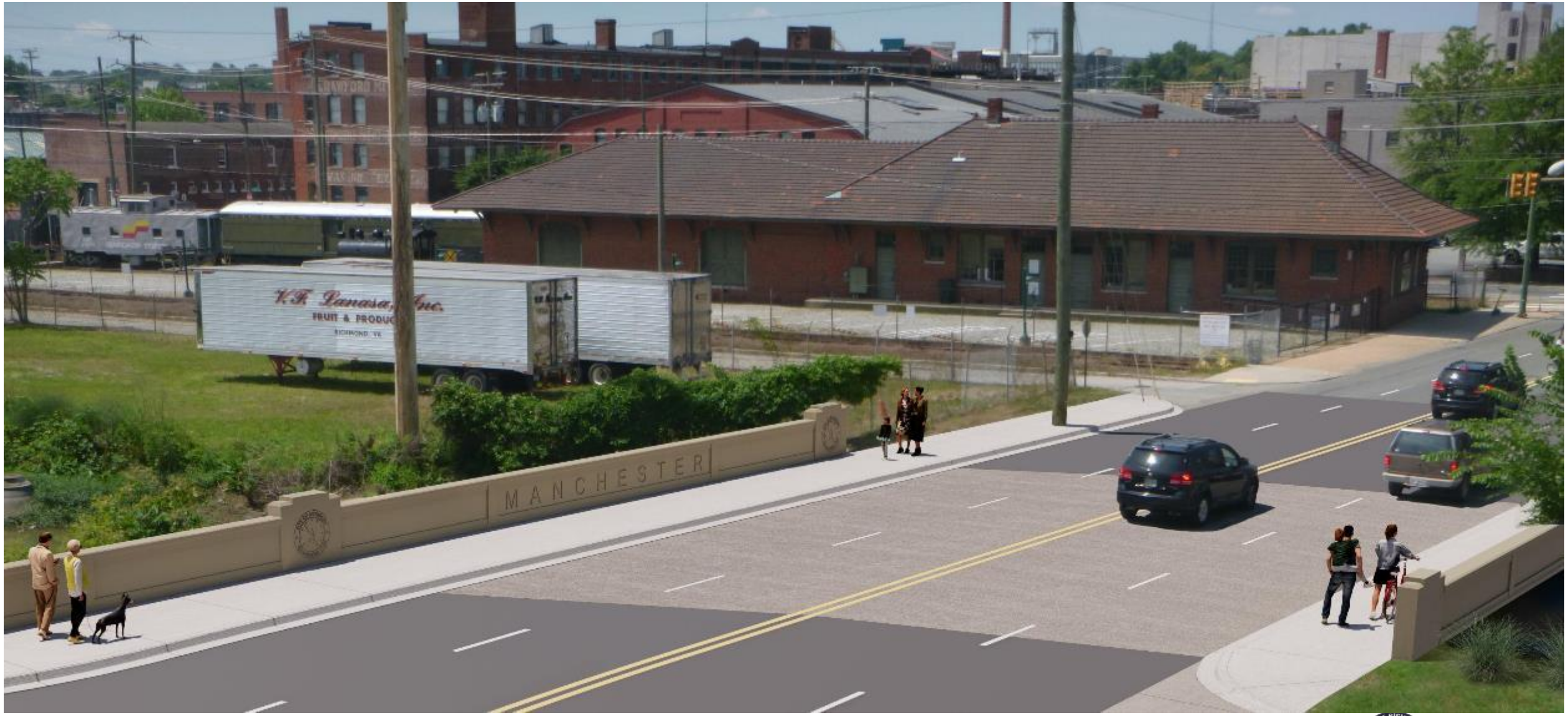
Manchester Light



Existing Parapet – Looking South East



Proposed Parapet – Looking South East



Existing Parapet – Looking South West

Proposed Parapet – Looking South West

Project Schedule

Public Engagement (Virtual)	• Feb.-May 2022
UDC Conceptual	• Feb. 2023
CPC Conceptual	• Feb. 2023
Design Public Hearing	• March 2025
Public Input Meeting	• August 2025
Final UDC	• October 2025
Final CPC	• Oct./Nov. 2025

Utility Relocation	• On-going
Right-of-Way/ Easements	• On-going
NEPA	• Completed, waiting final approval
100% Plans	• Early 2026
Construction Advertisement	• Early 2026
Start Construction	• Spring 2026
Completion	• Winter 2027

Project has to be completed prior to Mayo Bridge Project

Project Estimate and Budget

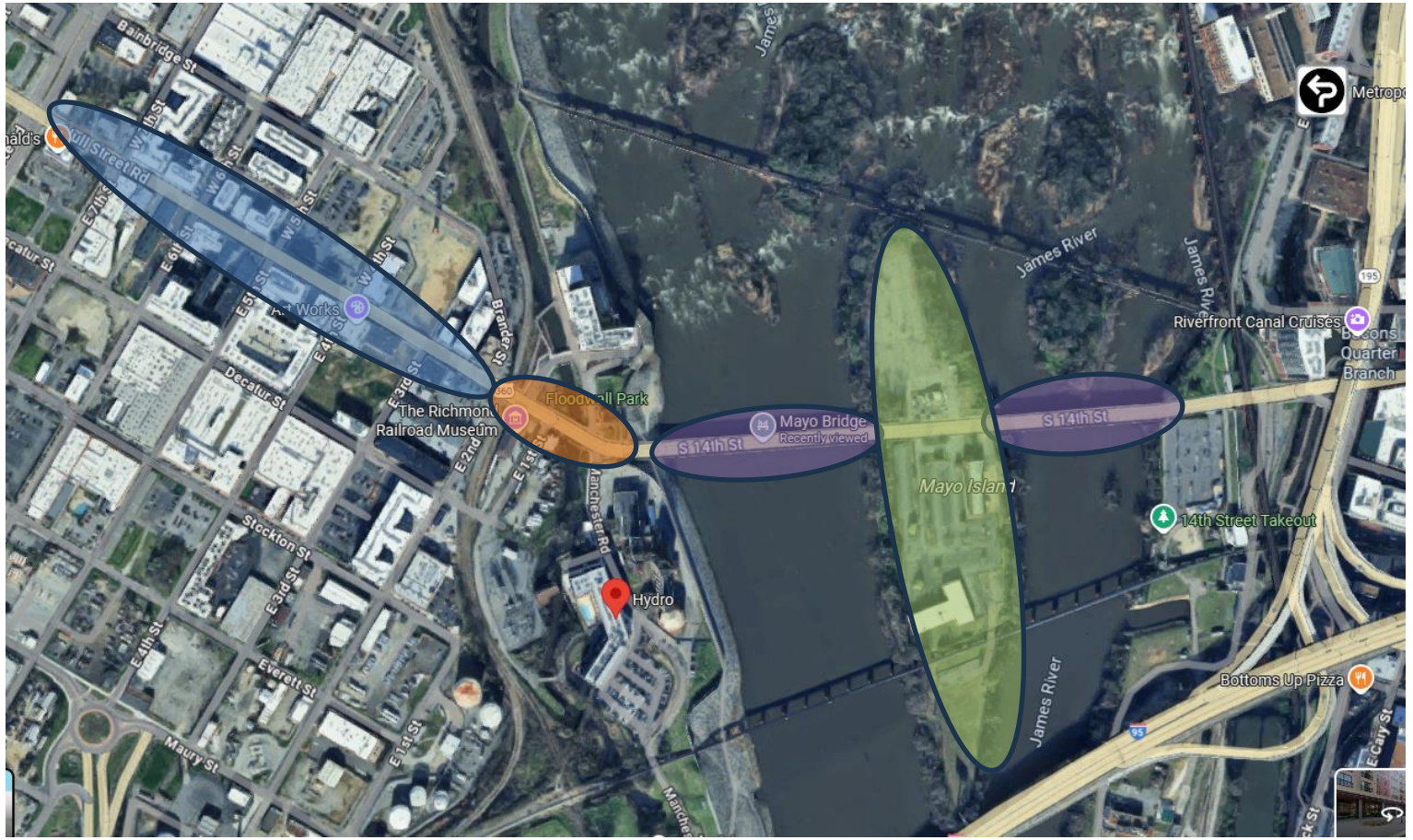
- Current Estimated Cost
  - $10.8M
    - Engineering = $2.8M
    - Right-of-Way = $0.2M
    - Construction = $8.0M
- Current Funding
  - State of Good Repair = $5.8M (Federal Funding)
  - Revenue Charing = $5.0M (City GO Bond and State Funding

Public Outreach/Input

- Project meets Expectations
- Project will have a Positive Impact
- Bike lanes are desired
- Fill in Manchester Canal for future development
  - Not a feasible option due to Historic District Designation
- Lighting – wants lights that do not contribute to light pollution
  - Proposed lighting is consistent with already approved Street Scape plans on Hull St
- Signage
  - The embedment of “Manchester” was complimented
  - Potential signs to announce crossing of Manchester Canal
- Additional Trail Connectivity
  - Outside the scope of this project

Project Coordination

- Hull St. Streetscape
- Mayo Bridge Replacement
- Mayo Island Park
- Hull St Bridge Replacement



Mayo Bridge Project

Scope: Replace 112 years old bridge, structurally deficient, 2 lanes each direction, proposed 1 lane with wider sidewalk, 66 ft wide bridge

Schedule: Construction begins in 2028 and completed in 2031

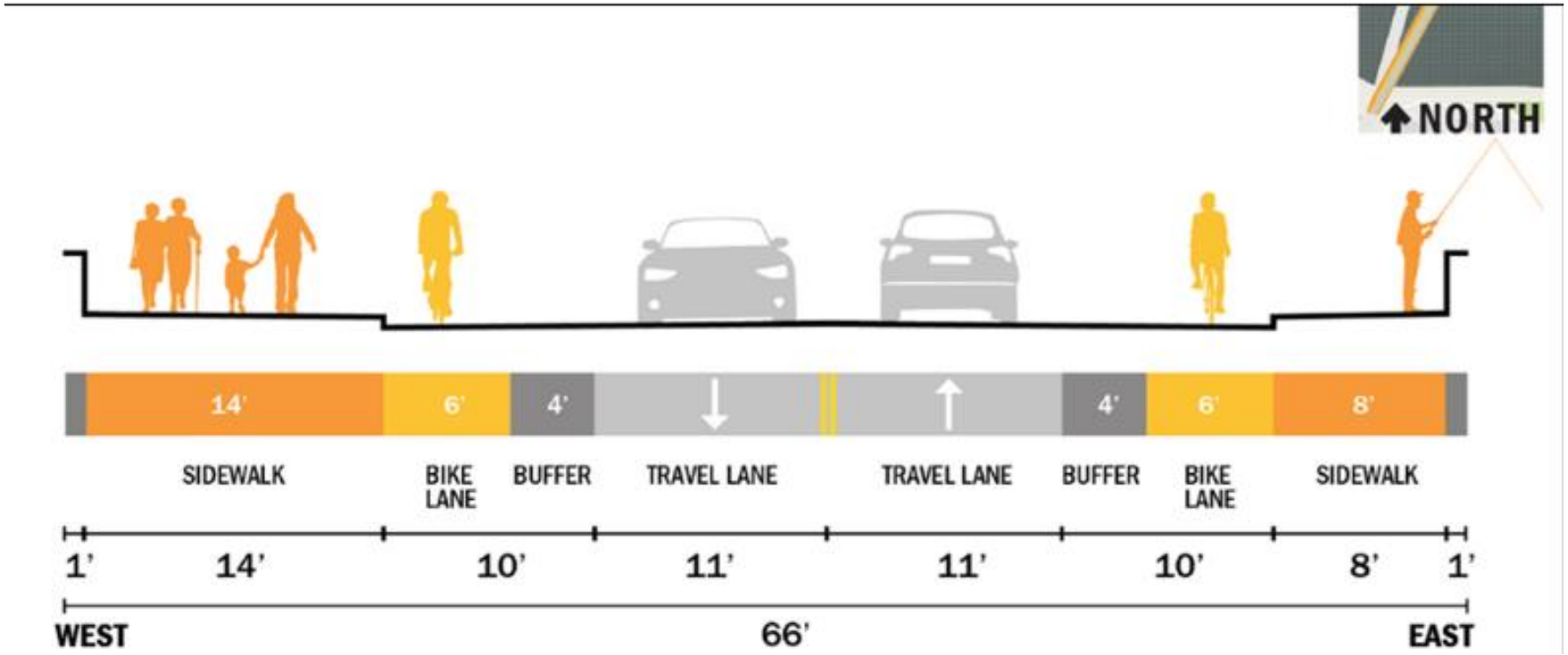
Cost: $194M total cost ($90M secured, $104M to be funded)

Coordination Point: The Hull St over Manchester Canal Bridge construction shall end before Mayo's Bridge construction begins in 2028

VDOT Managed Project – will be delivered by Design-Build Procurement

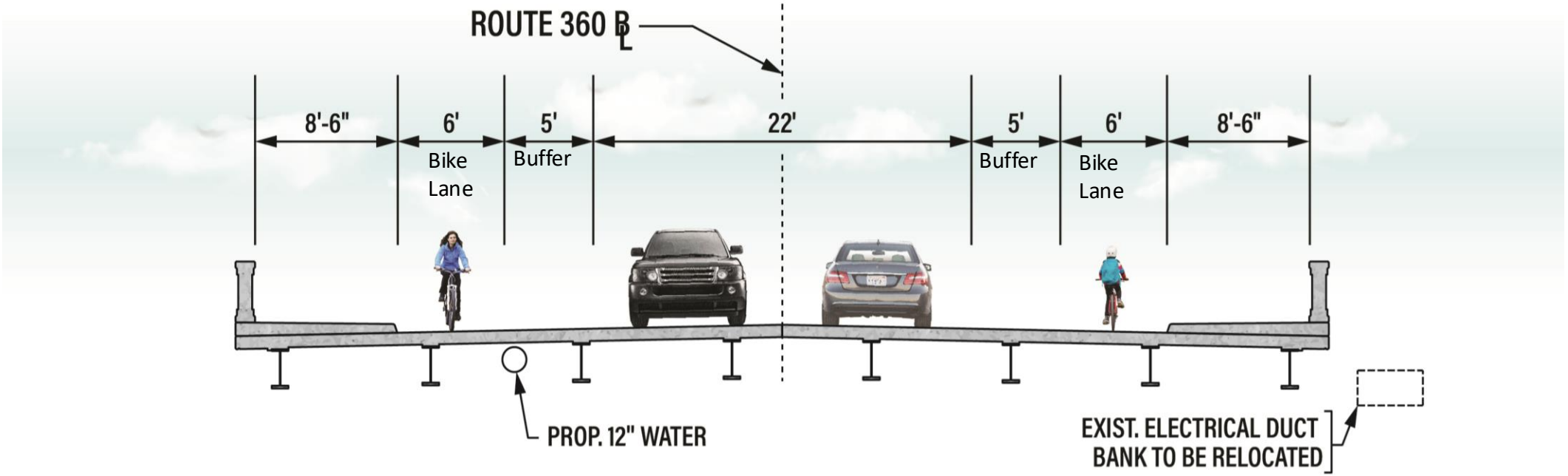
Mayo Bridge Typical Section

- Typical Section from VDOT Website 10/6/2025



Potential Future Typical Section

- Potential Typical Section AFTER Mayo Bridge Reconstruction is complete
- Painted Buffer Zone
  - No flexible delineators to allow emergency access to corridor and to allow easy access over side of bridge



Potential Future Rendering AFTER Mayo Bridge Reconstruction

Potential Future Rendering AFTER Mayo Bridge Reconstruction

Mayo Island Park

Scope: Convert Mayo Island into a 16-acre flood-resilient park with restoration, trails, picnic areas, and native plantings.

Schedule: Construction begins in Fall 2025 and ends in Fall 2026

Cost: $31M ($15M land acquisition + $16M park development) fully funded

Coordination point: The Island Park construction should end before Mayo's Bridge construction begins in 2028

Mayo Island Park

- Maintain 2 travel lanes in each direction as presented to CPC for conceptual approval 8/19/2025

Hull St. Streetscape

- Maintaining 2 travel lanes in each direction

Scope: Infrastructure improvement initiative aimed at enhancing safety and accessibility along Hull Street between 9th street to Mayo Bridge

Schedule: Construction begins in early 2026 and ends in 2027

Cost: $5.5M fully funded

Coordination point: The Streetscape construction should end before Mayo Bridge construction begins in 2028.

Recommendations

Construct the Hull St over Manchester Canal Bridge per current alignment and detailing

Revisit striping/lane configuration after Mayo Bridge is completed.