MassDOT
Massachusetts Department of Transportation
Highway Division

Working Group Meeting #2

Rourke Bridge Replacement Project

Lowell, MA | February 03, 2022 | 3:00pm

MassDOT #607887

ROURKE BRIDGE

Working Group Meeting Notes and Procedures

Notification of Recording

- This virtual meeting will be recorded. The Massachusetts Department of Transportation will retain and distribute the video, still images, audio, and/or chat transcript, as appropriate. Meeting recordings are typically posted on project websites for those who cannot attend.
- By continuing attendance with this virtual meeting, you are consenting to participate in a recorded event.
- All recordings and chat transcripts will be considered a public record.
- If you are not comfortable being recorded, refrain from chatting in the transcript box or asking questions via Q&A, or you may choose to excuse yourself from the meeting.

Other Important Notes

- Please note that you will be automatically muted upon entering the meeting and your video will be turned off.
- This is a working session for the project working group and is intended to advance the group's deliberation to provide input to MassDOT. The meeting will be open to public questions and answers at the end of the presentation, as time permits.
- There are other opportunities to submit comments and questions, such as the project inbox, which can be accessed on the project website (www.mass.gov/rourke-bridge-replacement-project). We will also schedule a public meeting in the near future, so be sure to sign up for project update emails.
- Please state your name prior to asking a question or commenting whether written or verbal.
- We will take one initial comment or question from each person, time permitting. Please keep your initial comment/question to 2 minutes.
- We will unmute you for your input and then mute you again.
- We will provide a chance for additional comments and questions, as time permits.

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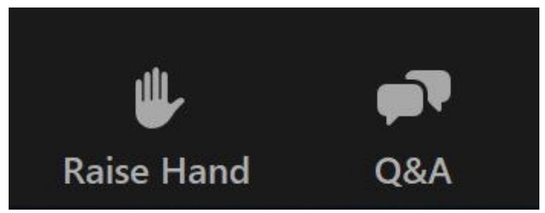
Questions and Answers

Instructions

- During the Q&A portion of the presentation, participants may indicate they would like to submit a verbal question by using the **“Raise Hand”** button (see below). Kindly wait for the moderator to recognize and call on you before speaking, you will be unmuted at this time.



- If you prefer to type your question, you can use the **“Q&A”** button at any point throughout the presentation (see above). Written questions will be answered in the order received and read out by the moderator to the project team.
- To ask a question via phone, dial *9 and the moderator will call out the last 4-digits of your phone number and unmute your audio when it is your turn.

Please share only one question or comment at a time, limited to 2 minutes, to allow others to participate.

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Working Group Rules of Engagement

- Microphones will be muted during presentations and cameras will be turned off.
- Please be respectful of established timeframes and others' opinions.
- Please focus your comments on the agenda topic under discussion at the time.
- Please use the Raise Hand or chat feature for questions or comments.
- We will unmute you for your question/comment and mute you again. If you submit a written question/comment, we will consolidate similar topics and attempt to provide a response that encompasses the major themes of the written input to avoid redundancy.
- Questions submitted in writing that are not answered due to meeting time constraints will be responded to in the meeting minutes that will be made available on the website.
- Participants are encouraged to provide additional feedback online using the project feedback links on the website: https://www.mass.gov/rourke-bridge-replacement-project
- This is a working session for Working Group members. A limited time is reserved at the end of the working session for public comment, if time permits.
- Subsequent public input opportunities include the email inbox and the next public information meeting.

Agenda

- Welcoming Remarks (Steve McLaughlin)
- Meeting Agenda, Ground Rules, Introductions (Kate Barrett)
- Project Recap and Updates: (Steve McLaughlin)
- Discussion on Select Issues for Alignment Alternatives
  - Preferred Alignment (Steve McLaughlin)
  - Bridge Type Evaluation (Shaun St. Hilaire)
  - Bicycle and Pedestrian Accommodations (Jonathan Kapust)
  - Bridge Aesthetics (Etty Padmodipoetro)
  - Cost & Schedule Update (Steve McLaughlin)
- Working Group Q&A using Raise Hand Feature (Kate Barrett)
- Meeting Adjourn

Project Update

Project Purpose - Recap

- Bridge Replacement

- Enhance safety and connectivity for Pedestrians, Bicycles, Emergency Vehicles and Watercraft

- Improve Traffic Operations at the Wood Street intersections with Pawtucket Boulevard, Middlesex Street, and Princeton Boulevard

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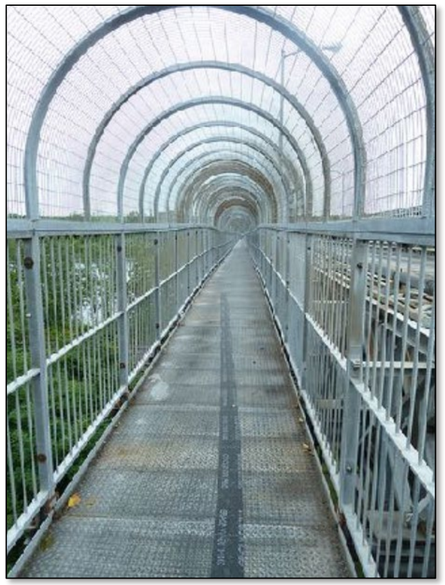
Project Need - Recap



Functionally Obsolete

- Substandard Pedestrian Walkway
- No Shoulders for Emergency Vehicles
- No Bicycle Accommodations
- Inadequate Approach Intersection Capacity

Maintenance Issues

- Deck Patching
- Replacement Parts

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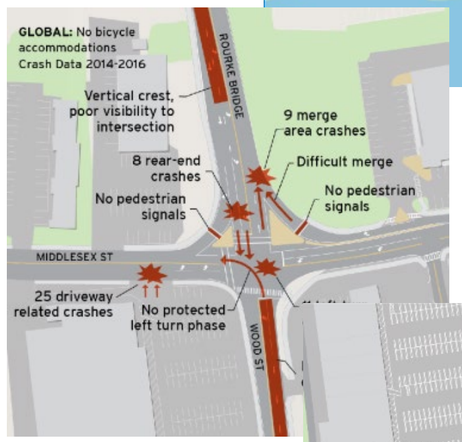
Project Need - Recap

Safety & Operations

Lack of Bike/Ped Accommodation

Wood Street &
Pawtucket Boulevard

Wood Street &
Middlesex Street



Wood Street &
Princeton Boulevard

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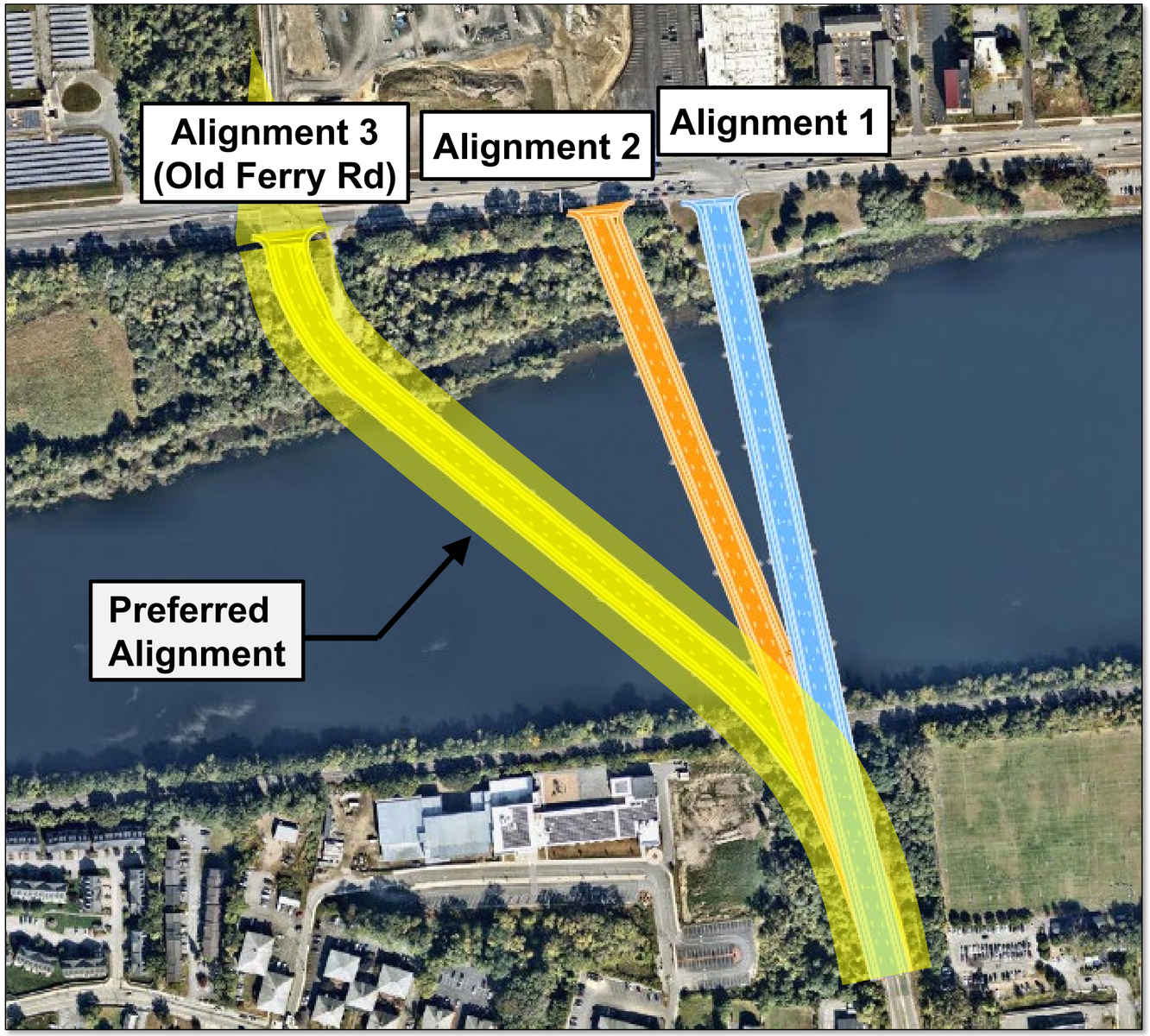
Progress To-Date

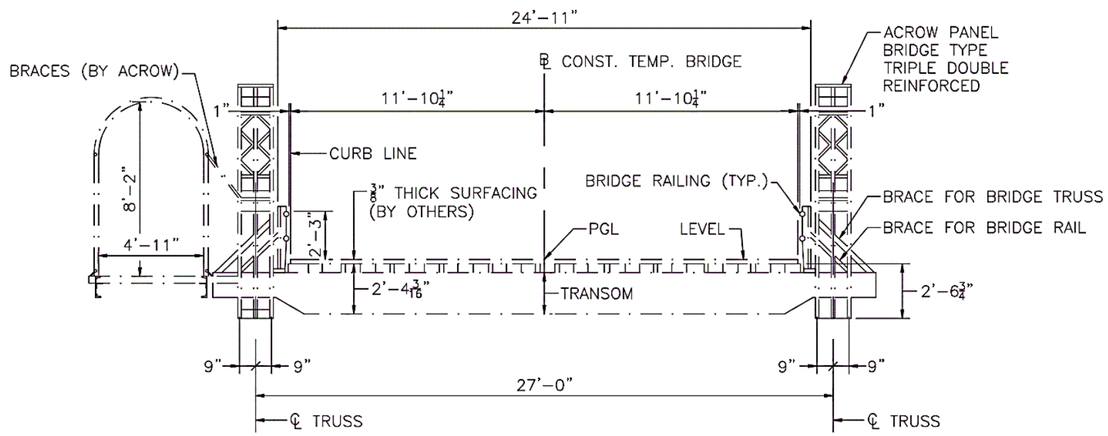
- Completed Alignment Alternative Memo
- Completed Bridge Type Study
- Confirmed and selected 4-lane roadway configuration



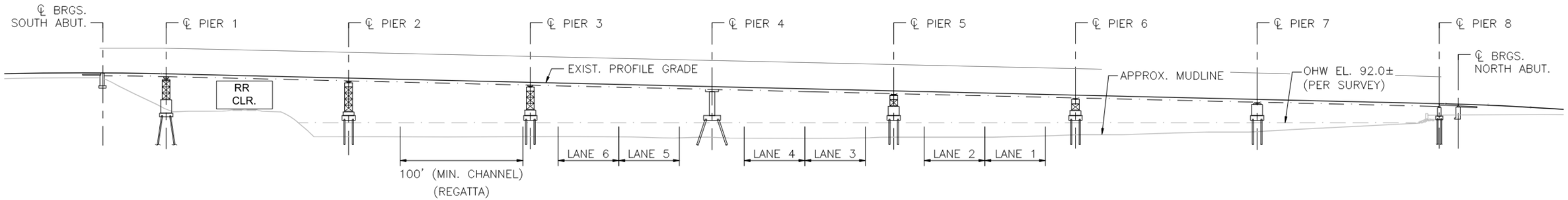
Bridge Design Elements & Criteria

Existing Bridge Configuration

- Limited width 2-lane structure with no shoulders
- Isolated and confined pedestrian walkway
- Obstructed views of Merrimack River
- Restricted Regatta rowing course size, due to pier configuration



Existing Bridge Cross Section



Existing Bridge Profile

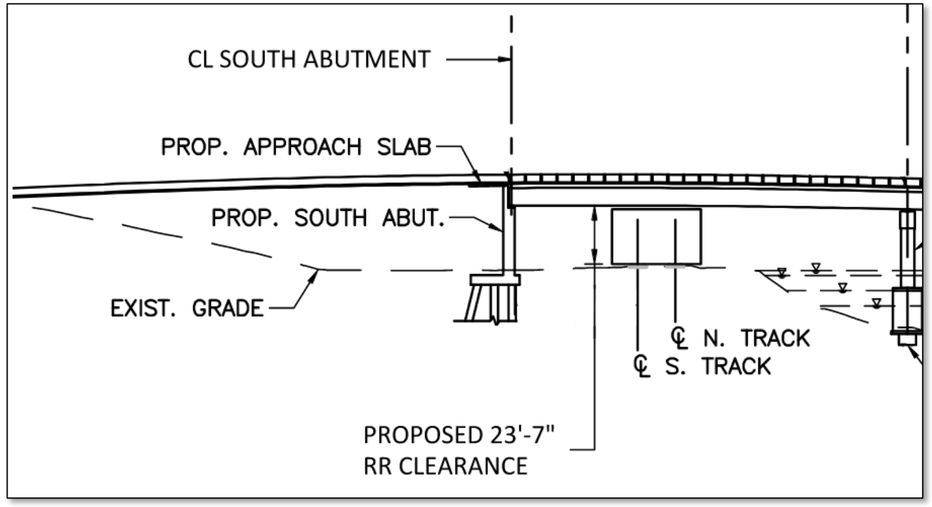
Key Bridge Design Metrics

- Pedestrian/Bike Functionality and Recreation
- Water Recreation
- Views to/from Bridge
- Constructability
  - Staging
  - Construction Duration
  - Time of Bridge Opening
- Vertical clearance
- Optimize Pier Locations:
  - Maximize width of usable riverway

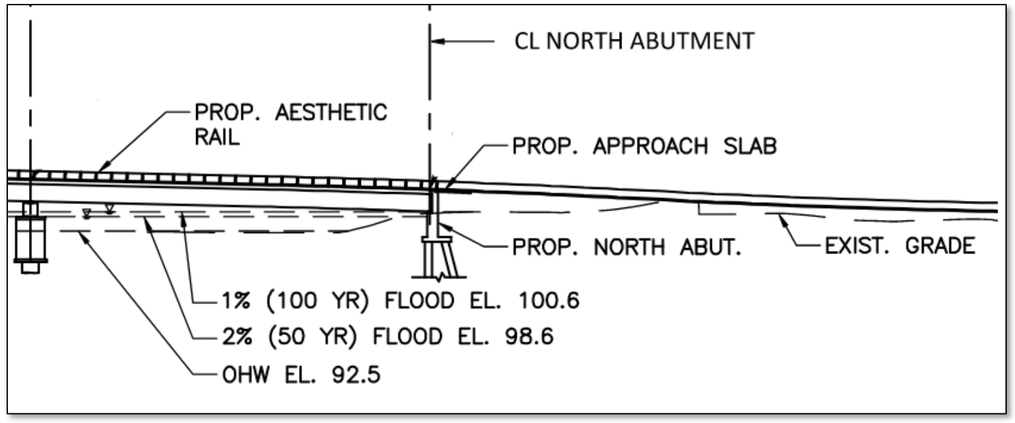
Proposed Old Ferry Rd Roadway Alignment

Bridge Profile Considerations

- At South Abutment – Minimum clearance requirements over RR
- At North Approach – Tie-in to existing Pawtucket Boulevard
  - Limits profile changes and potential for retaining walls along Pawtucket Blvd
- Over the River – Maximize vertical clearance over main portion of Merrimack River
- Clearances for 30” Watermain across Bridge



Railroad Crossing at South Abutment

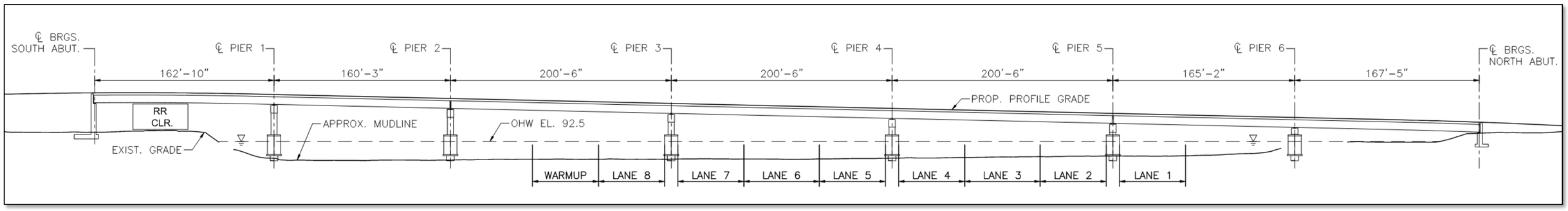


Pawtucket Boulevard Approach
Tie-in at North Abutment

Waterway Considerations - Functionality and Activities

Large Regatta and crew events held within Merrimack River

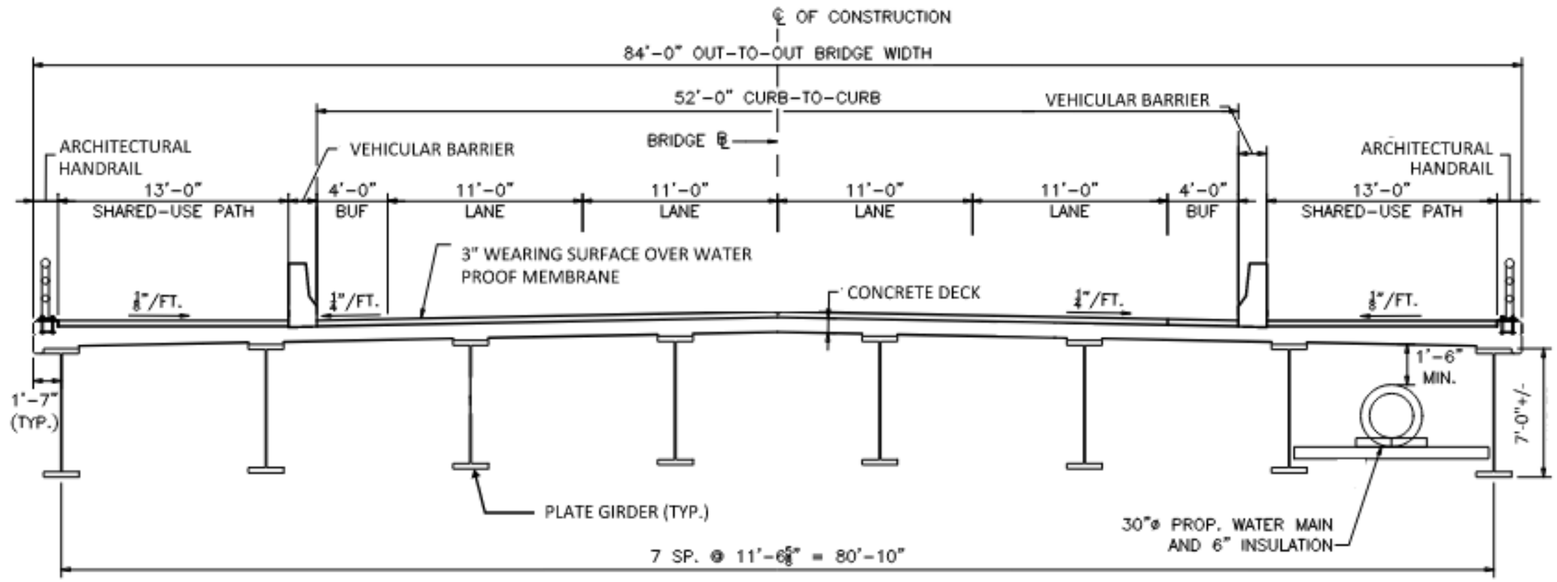
- Existing bridge configuration limits course size to six (6) race lanes.
- Proposed bridge configuration optimized to provide nine (9) lanes
  - Olympic course criteria for minimum course size (45’ wide lanes)
- Roadway profile and structure depth maximize vertical clearance to river.



Proposed 9-Race Lane Configuration & Roadway Profile

Proposed Bridge Configuration

- Plate girder structure
- 4 lanes with shoulders
- Accommodates various options for pedestrian/bicycle path configurations
- Overlooks at select piers
- Watermain supported between girders



Proposed Bridge Cross Section

Creating Improved Bicycle and Pedestrian Connections

Overview

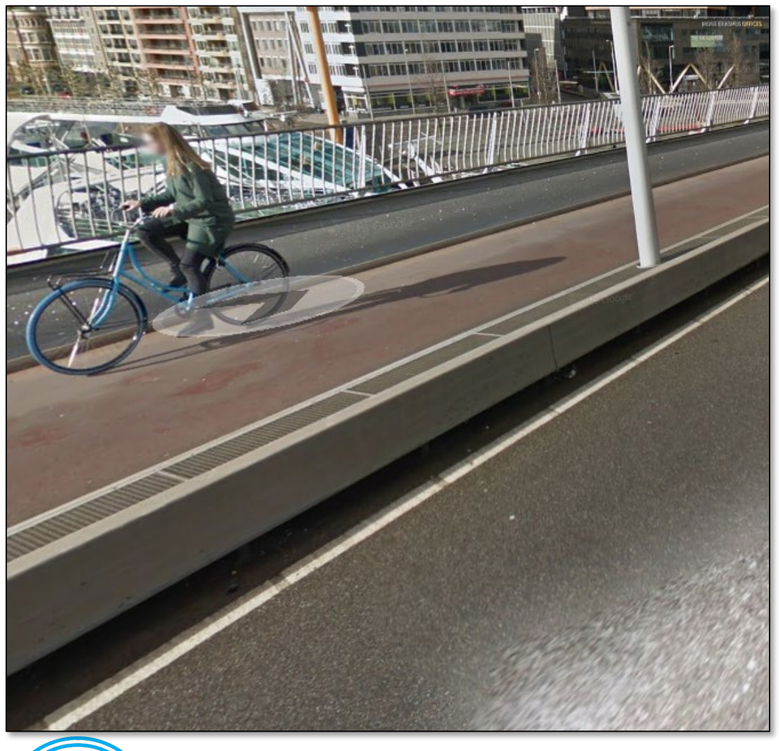
Existing crossing is a bare bones connection for non motor vehicle users

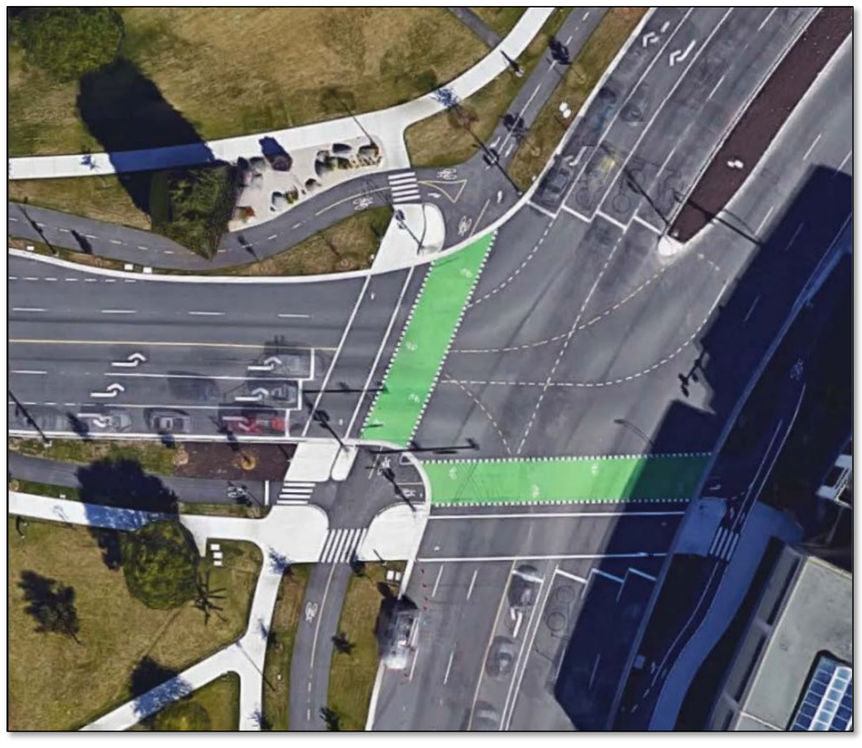
- Missing connections
- No crosswalks at Pawtucket Blvd. intersections
- Not ADA compliant

Overview

Bicycle and Pedestrian facility goals for the project:

- Connectivity - Link users to north/south destinations, and the river and recreation areas
- Safety – Defined and separate facilities all users over the river, and on approach roadways
- Comfort – Create accessible paths for all users and separation from motor vehicles





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Overview

What we're constrained by:

- Right of way
- Environmental resources
- Elevation over the river

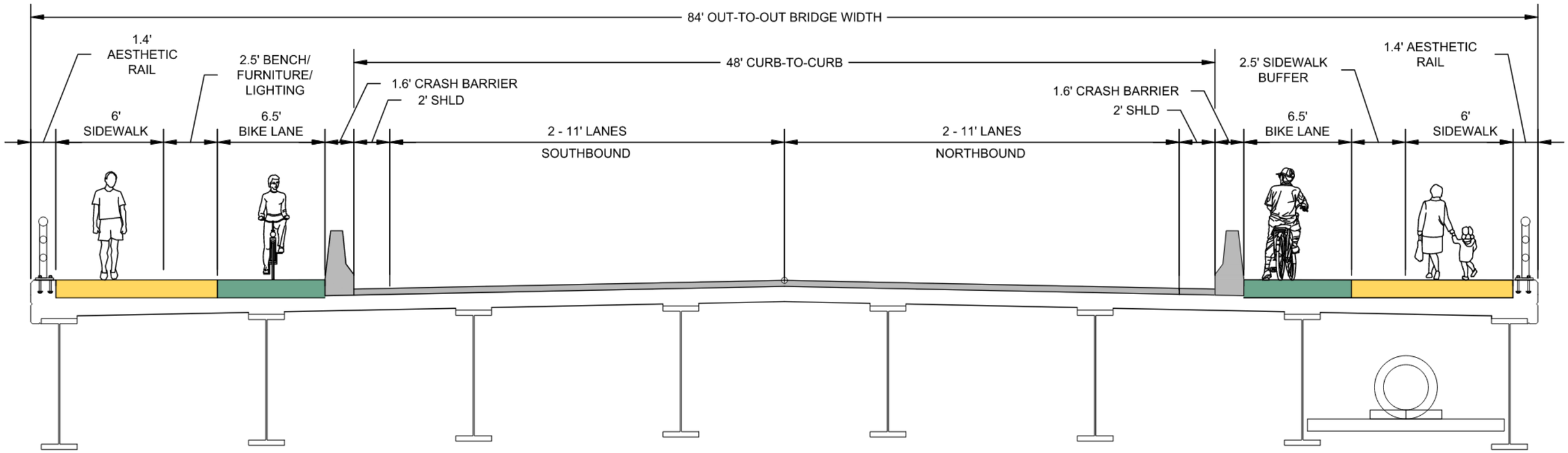
What we're designing with:

- MassDOT Separated Bike Lane Planning & Design Guide
- NACTO Urban Bikeway Design Guide
- 2012 AASHTO Guide for the Development of Bicycle Facilities Standard

Facility options:

- Separated One-way Bike lanes and Sidewalk (NB and SB)
- Separated Bi-directional Bike lanes (NB only) and Sidewalk (NB and SB)
- Shared Use Paths (NB and SB)

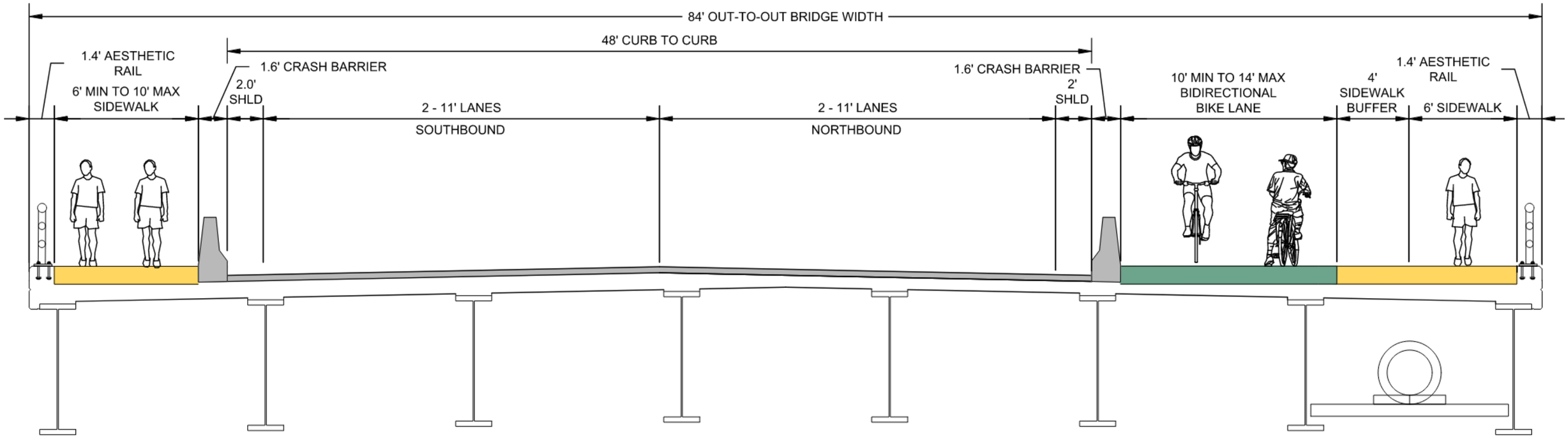
Bourke Bridge Options



ONE-WAY SEPARATED BIKE LANE AND SIDEWALKS ROURKE BRIDGE (LOOKING NORTH)
NOT TO SCALE

- 6' minimum width for sidewalk.
- Sidewalk buffers are narrow – minimum space for benches/lighting/etc.
- Low flexibility for event programing or changes in use.
- Could result in wrong way bicycles
- Less bicycle/pedestrian conflict.

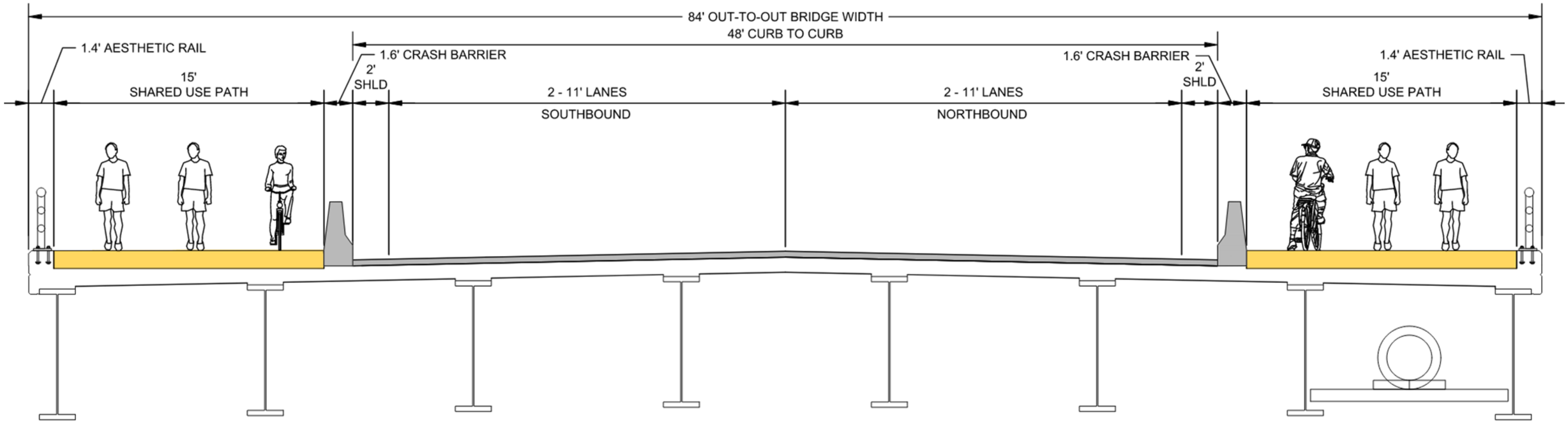
Rourke Bridge Options



SEPARATED BIDRECTIONAL BIKE LANE ON NORTHBOUND WITH SIDEWALKS (LOOKING NORTH)
NOT TO SCALE

- 6' minimum width for sidewalk.
- Sidewalk buffer is wide and can allow for benches/lighting/etc and transition for bicycle dismount.
- Some flexibility for event programing or changes in use.
- Bicycles on Southbound sidewalk would comingle with pedestrians.
- Southbound connection is constrained compared to Northbound.

Rourke Bridge Options



SHARED USE PATH ON NORTHBOUND AND SOUTHBOUND (LOOKING NORTH)
NOT TO SCALE

- Shared use paths minimum width is 12'.
- Street furniture could narrow effective width of shared use path.
- 15' allow flexibility to add one-way bike paths in the future.
- Equal use and width for Northbound and southbound.
- Bicycles and pedestrians would comingle.

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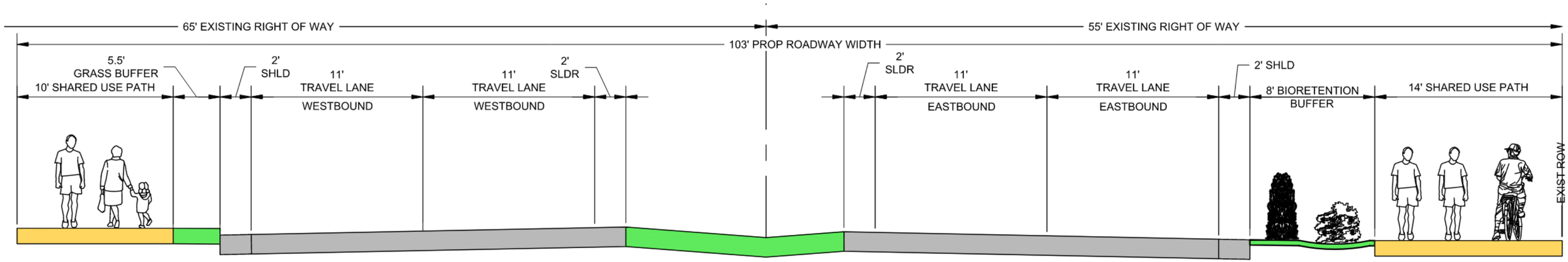
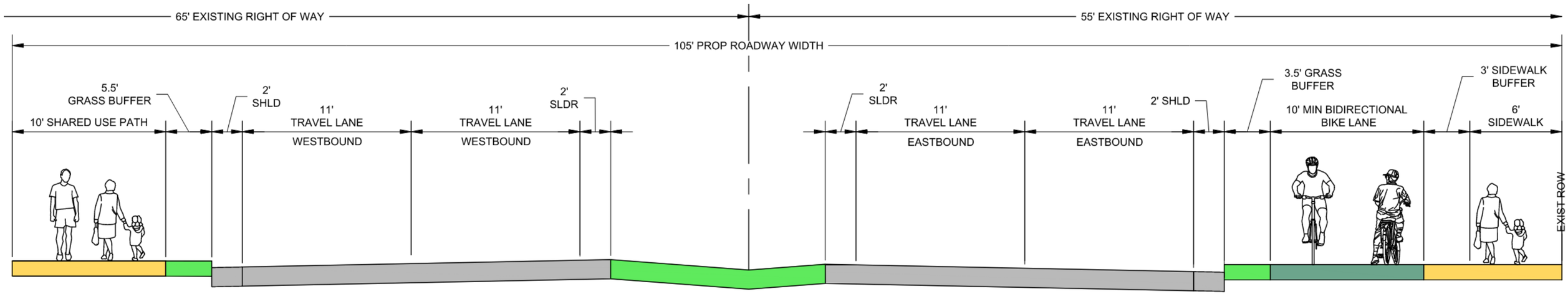
Pawtucket Boulevard - Approach Roadway Cross-Section



PAWTUCKET BOULEVARD SHARED USE PATH ON BOTH SIDES
NOT TO SCALE



BIDIRECTIONAL SEPARATED BIKE LANE AND SIDEWALKS PAWTUCKET BOULEVARD
NOT TO SCALE

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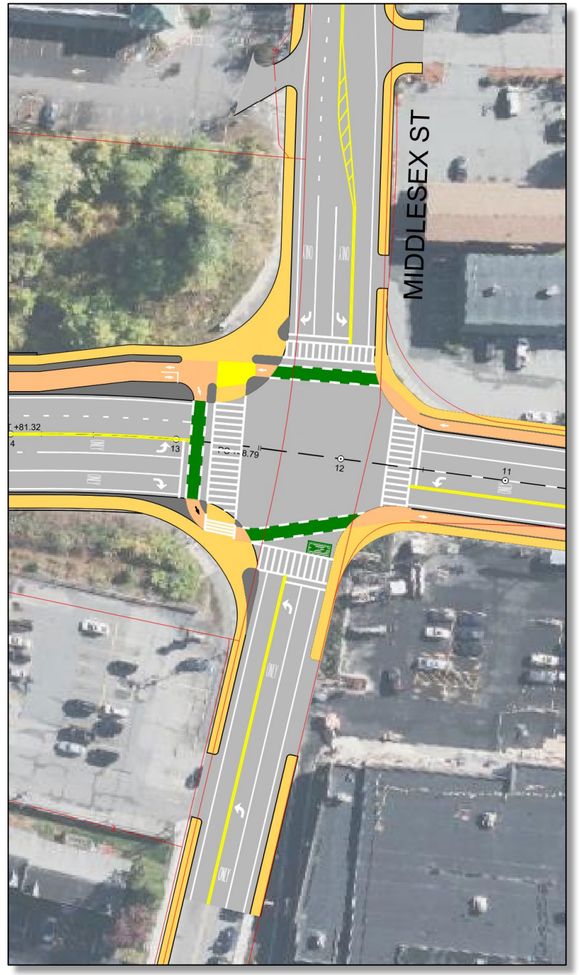
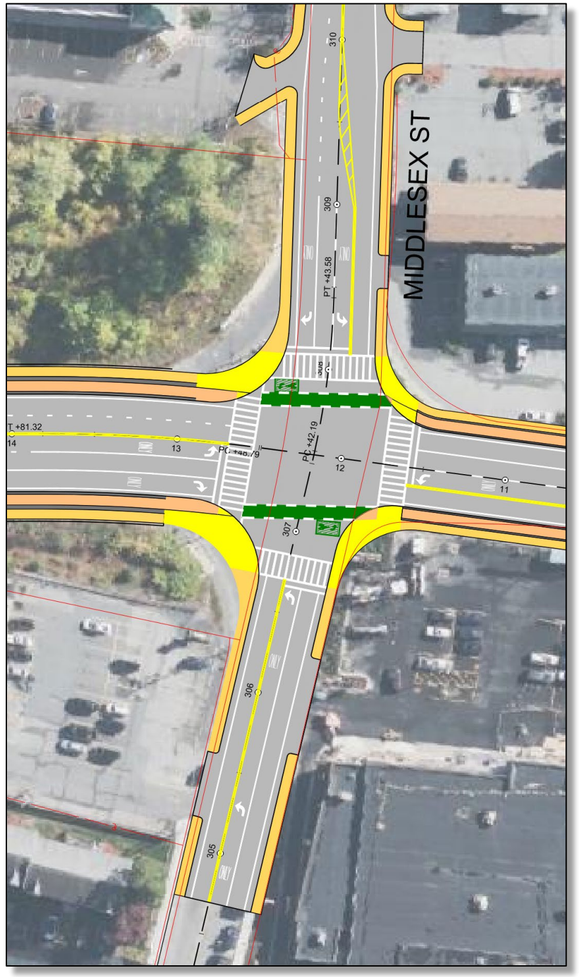
Initial Intersection Concept – Wood Street

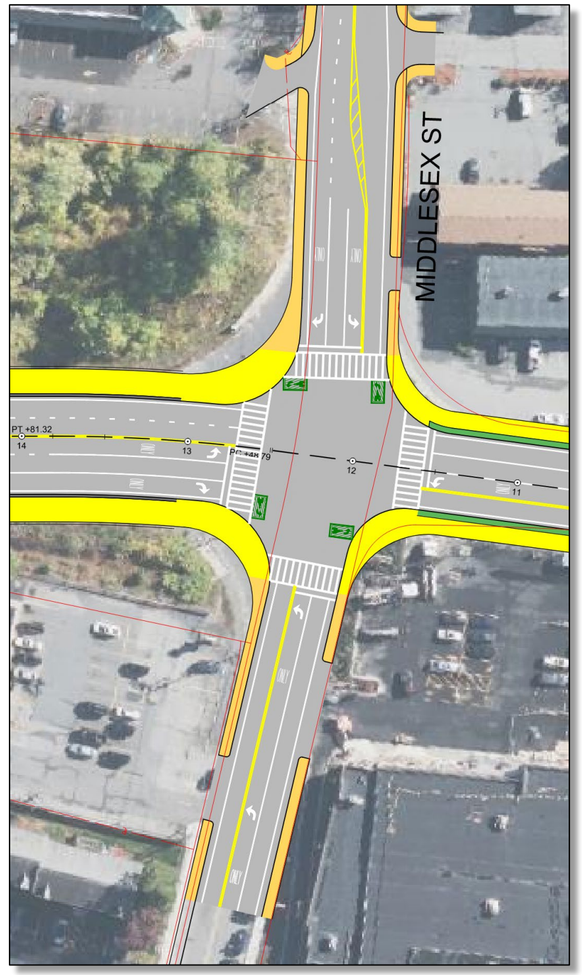
Bi-Directional Bike Lane



One Way Bike Lanes



Shared Use Path



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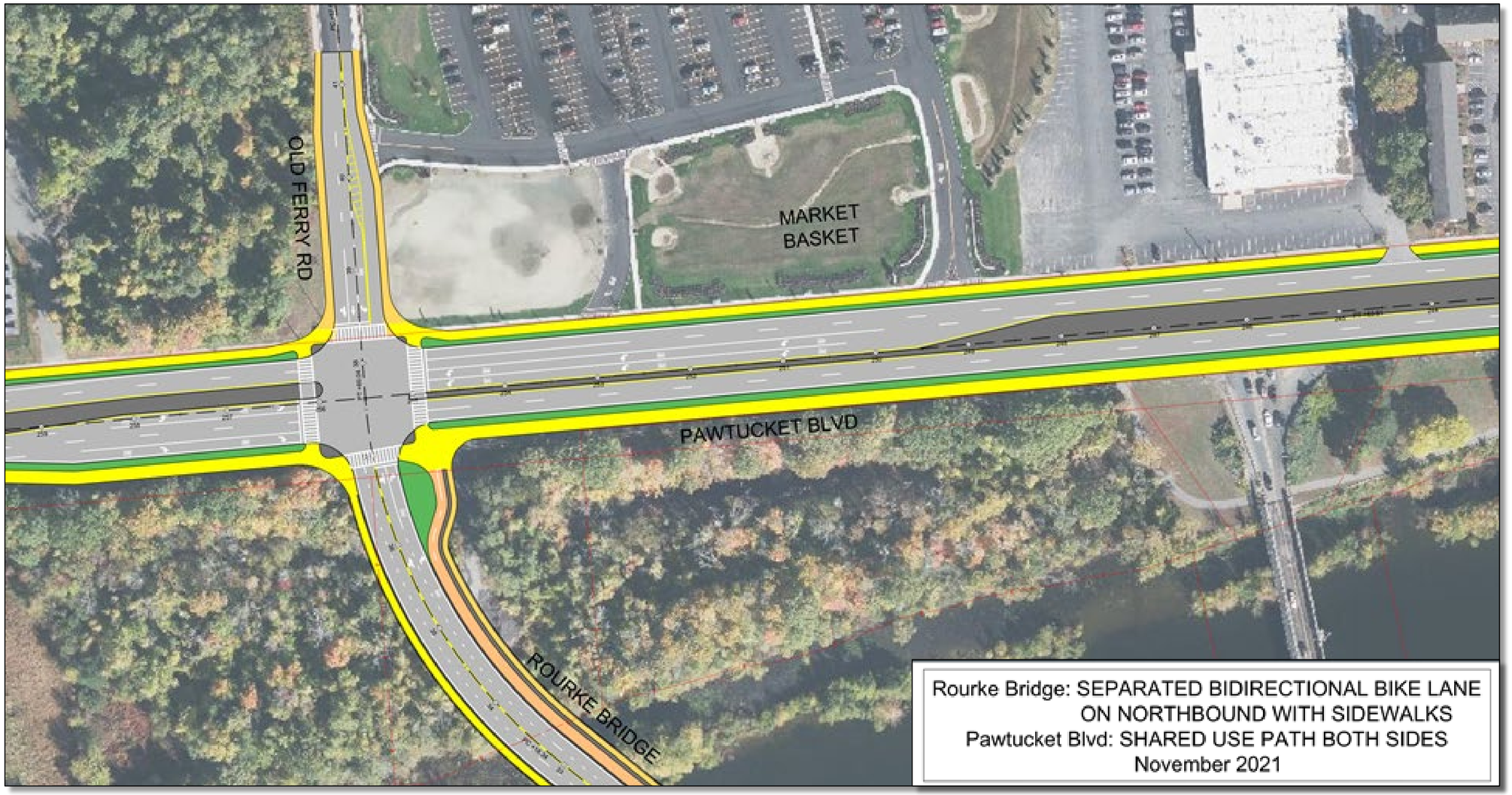
Initial Plan Concept – Pawtucket Blvd



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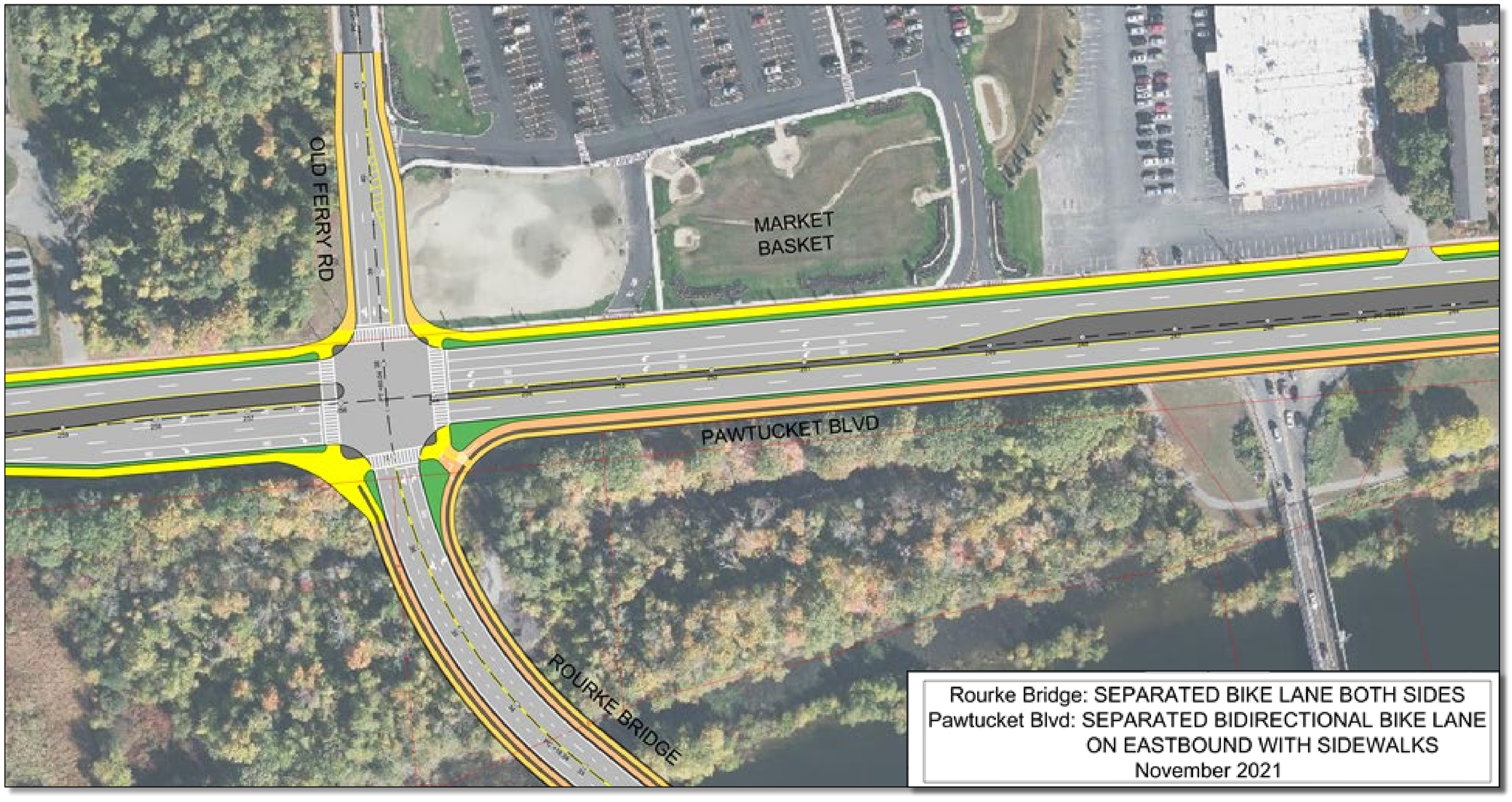
Initial Plan Concept – Pawtucket Blvd



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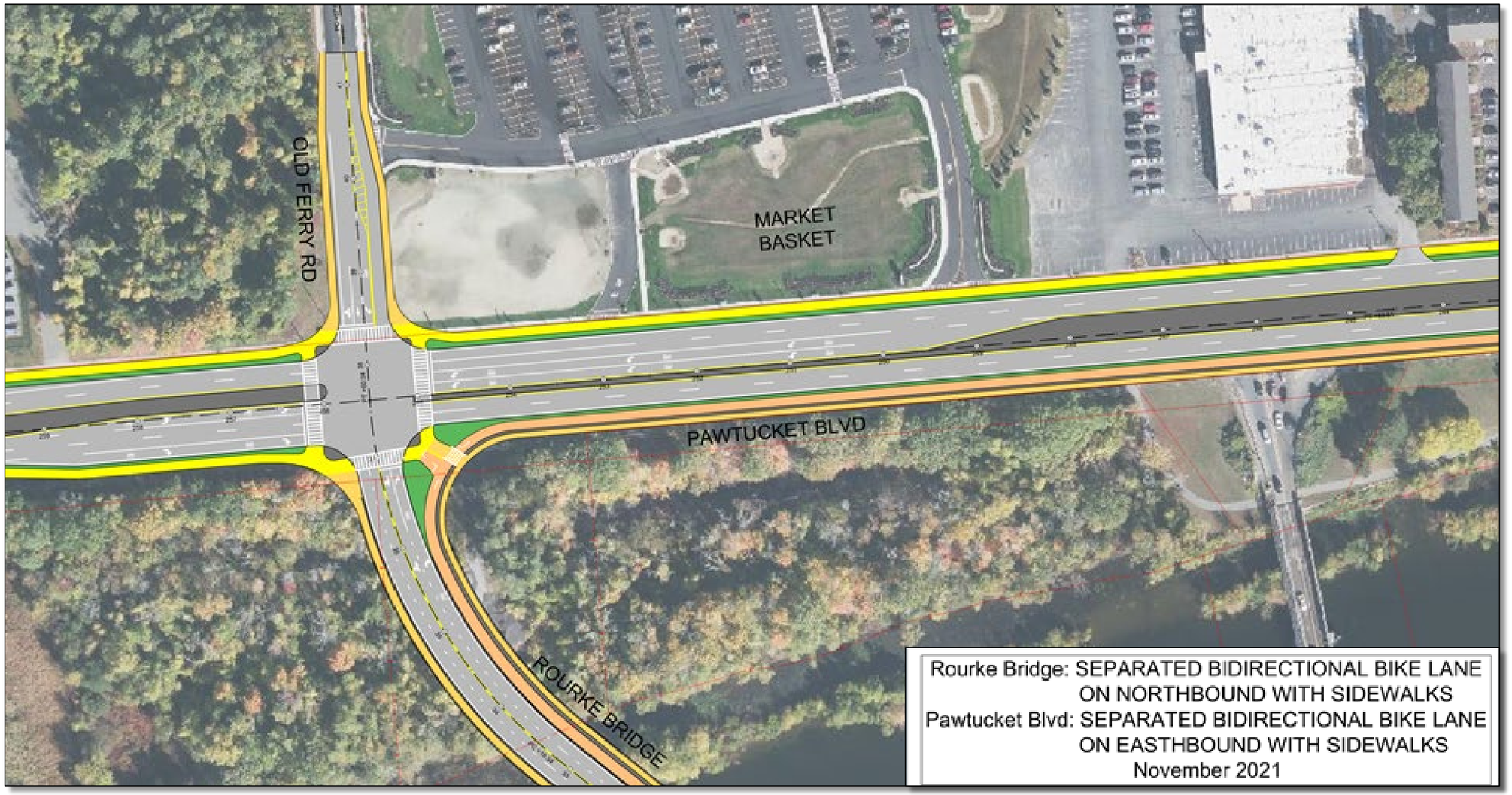
Initial Plan Concept – Pawtucket Blvd



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What are the important features for crossing the bridge as a bicyclist or pedestrian?

Flexibility in the path use

Separation of bicyclists and pedestrians

Simple wayfinding connections

Space for furniture lighting and signing

Equal use for northbound and southbound

Which pedestrian paths section is preferred or not preferred one way lanes, bi directional, shared use path?

- More Preferable
- Less Preferable

Bridge Aesthetics

Architecture – Bridge Characteristics and Aesthetics

Context

Connections

Components

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Architecture – Bridge Context

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Architecture – Bridge Context

Urban context for most of Lowell's bridges emphasizes verticality, drawing the eye upward

Natural context around the Rourke Bridge emphasizes horizontality and the proposed bridge design follows this aesthetic.

Architecture – River Activities

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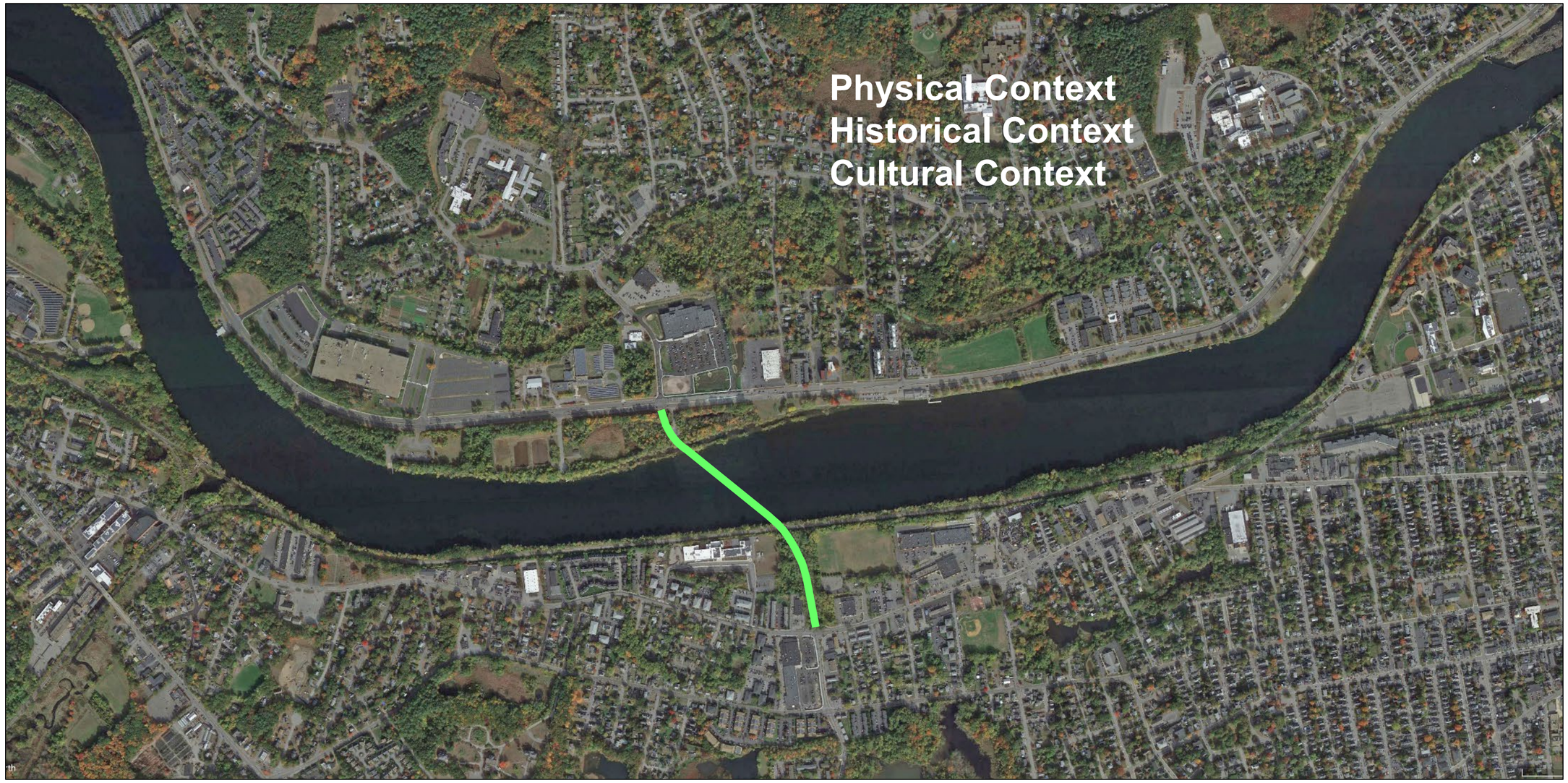
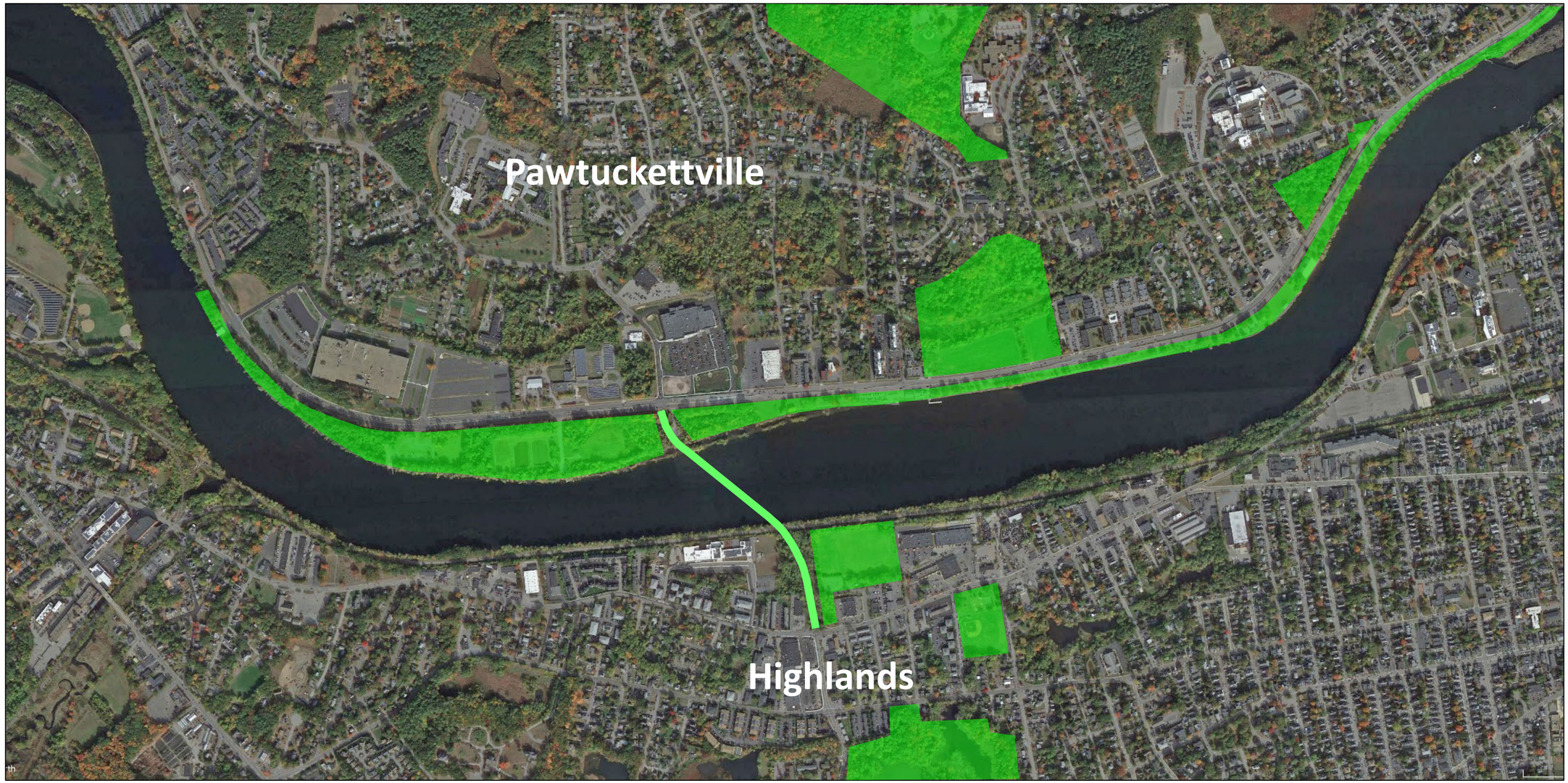
Architecture – Bridge Open Space Context

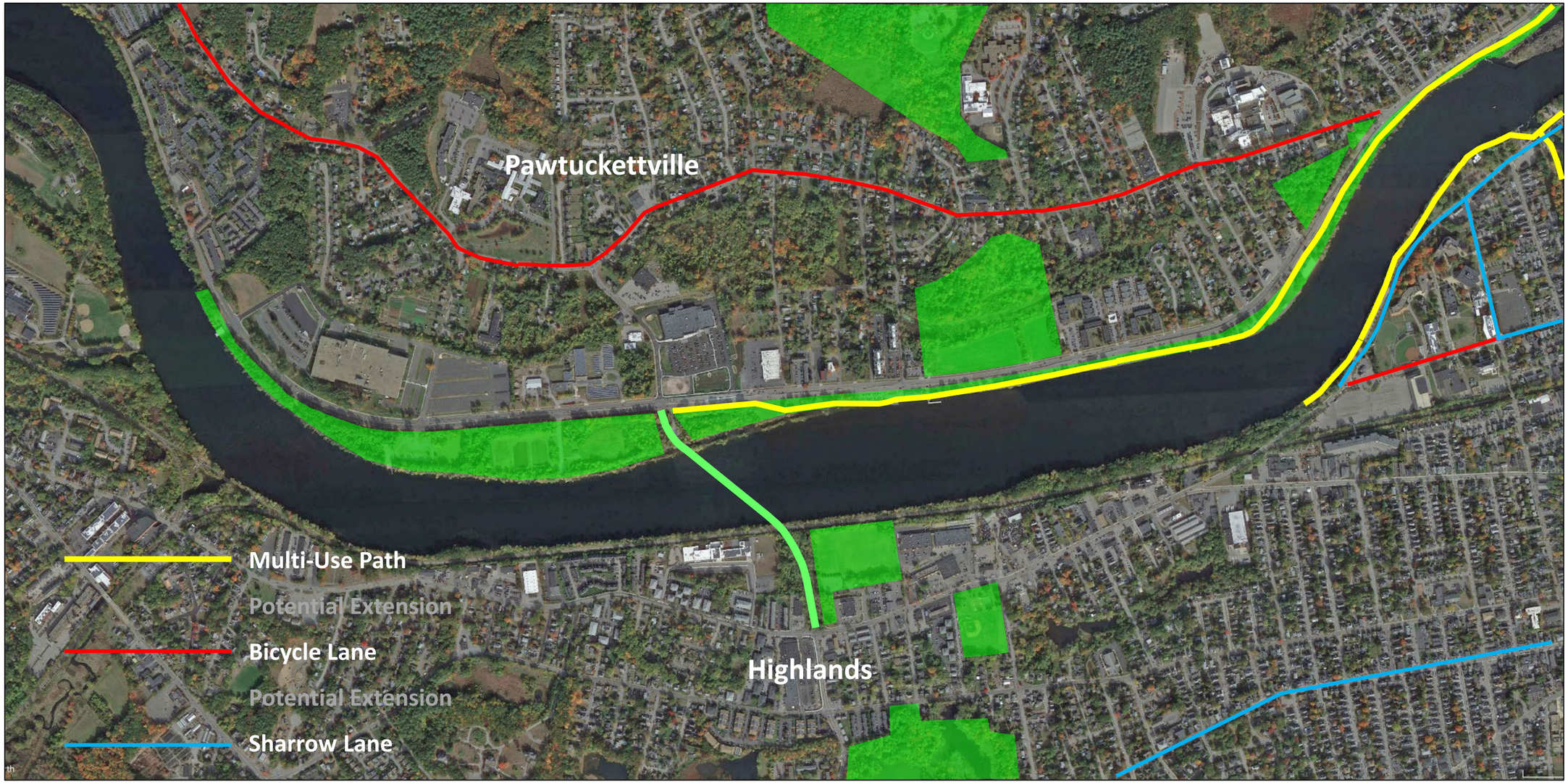


Architecture – Bridge Open Space Context



2. Create an interconnected network of open spaces throughout the city that are linked with the region by integrating activities to preserve natural resources and provide recreational facilities;
-Lowell Open Space and Recreation Plan

Architecture – Bridge Open Space Context



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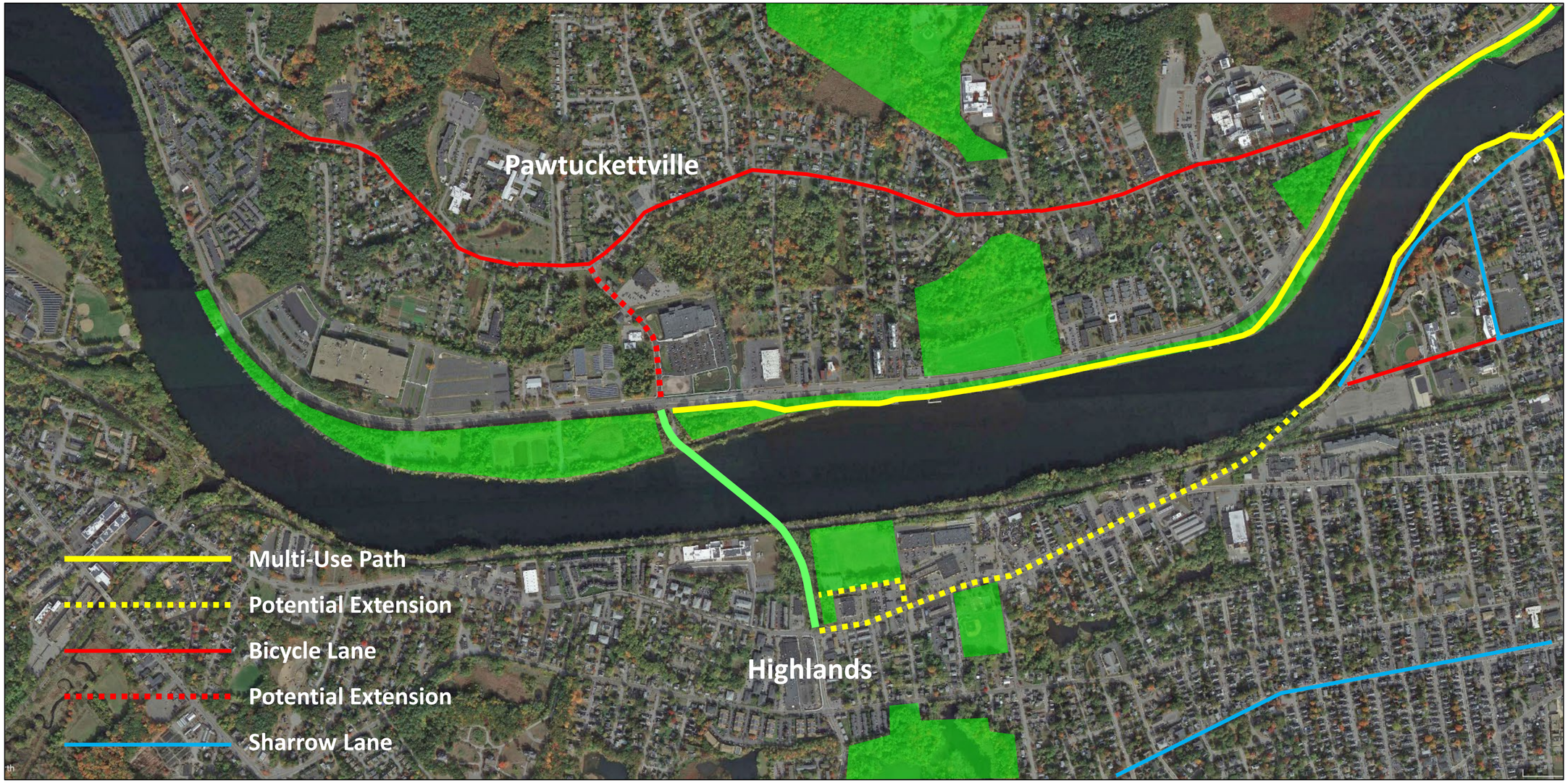
Architecture – Bridge Connections



2. Create an interconnected network of open spaces throughout the city that are linked with the region by integrating activities to preserve natural resources and provide recreational facilities;
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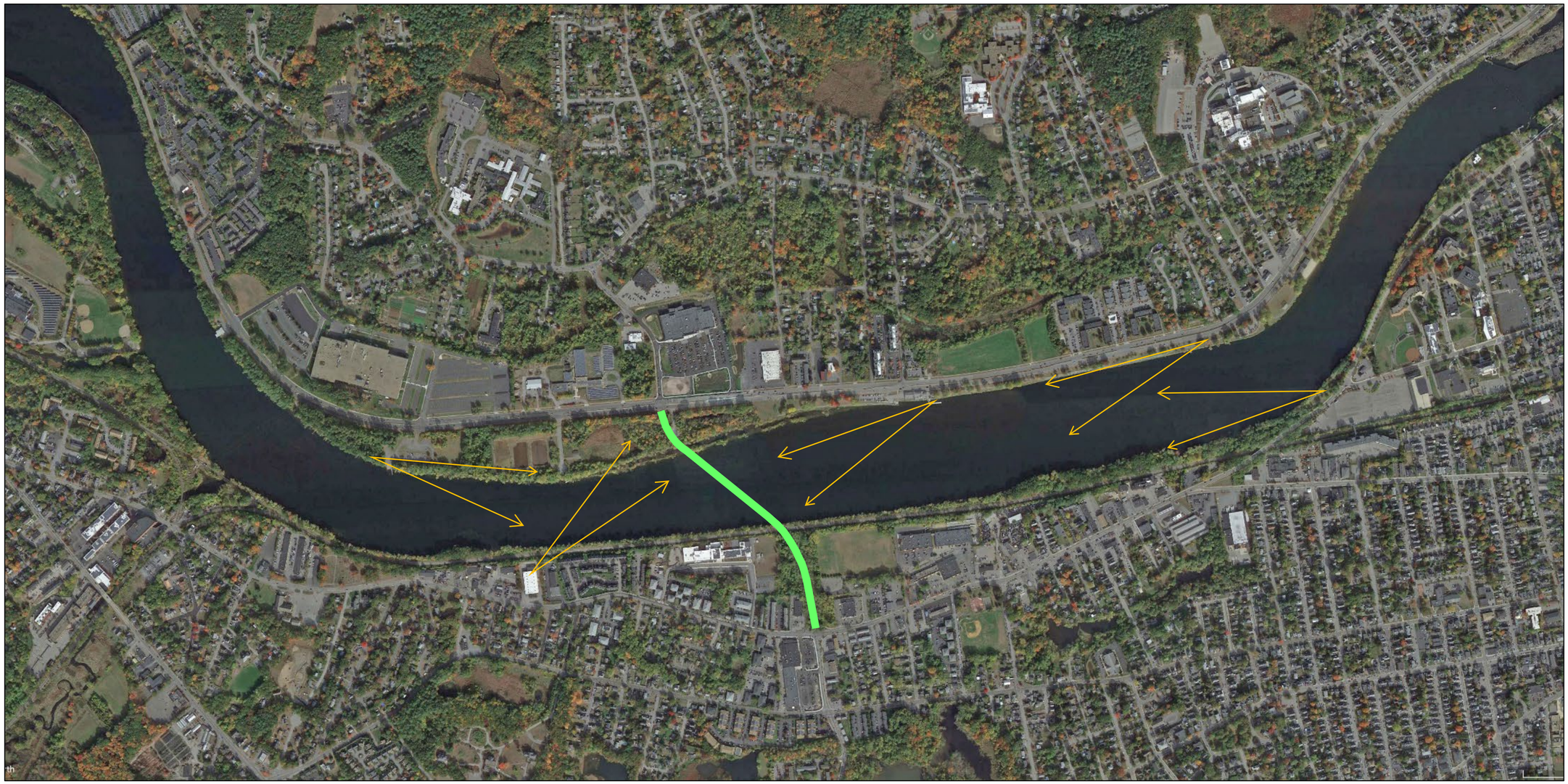
Architecture – Views *of* the Bridge



Architecture – Views *from* the Bridge

Architecture – Views *from* the Bridge

Architecture – Potential Overlooks

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Architecture – Potential Overlooks

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Architecture – Interpretive Signage

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Architecture – Pier Examples

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Architecture – Vehicular Barrier Examples

Burns Bridge, Worcester

Crash-Tested Barrier with Decorative Barrier at Right

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Architecture – Railing Examples

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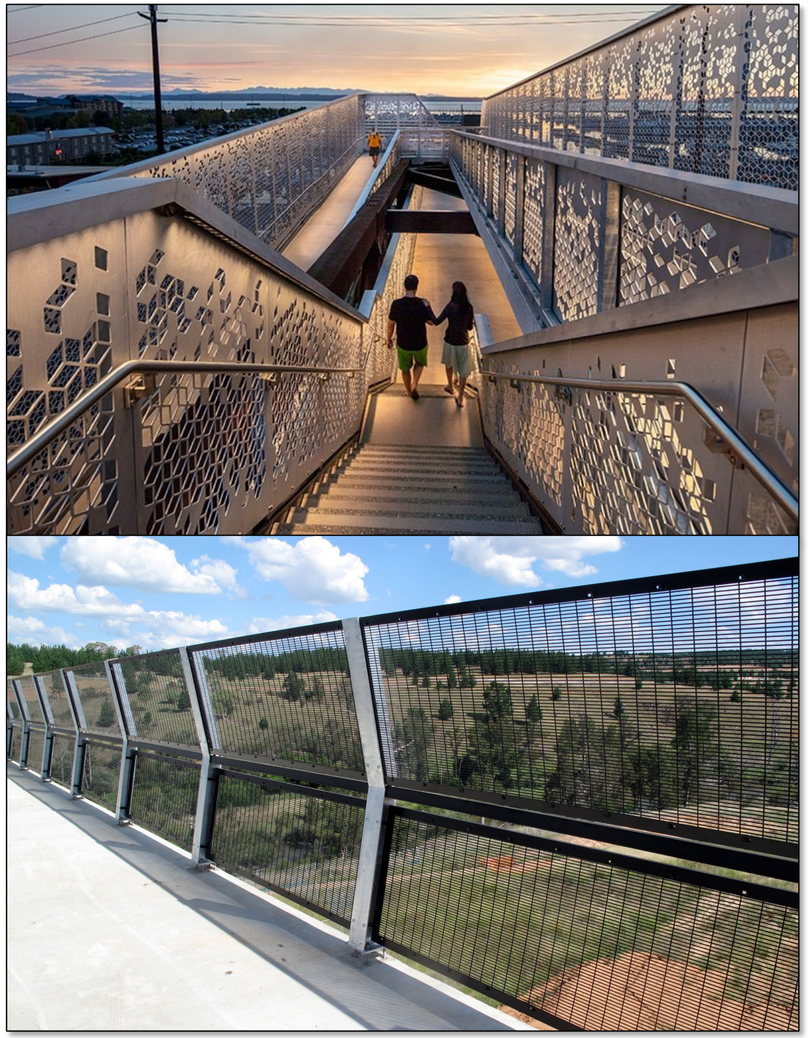
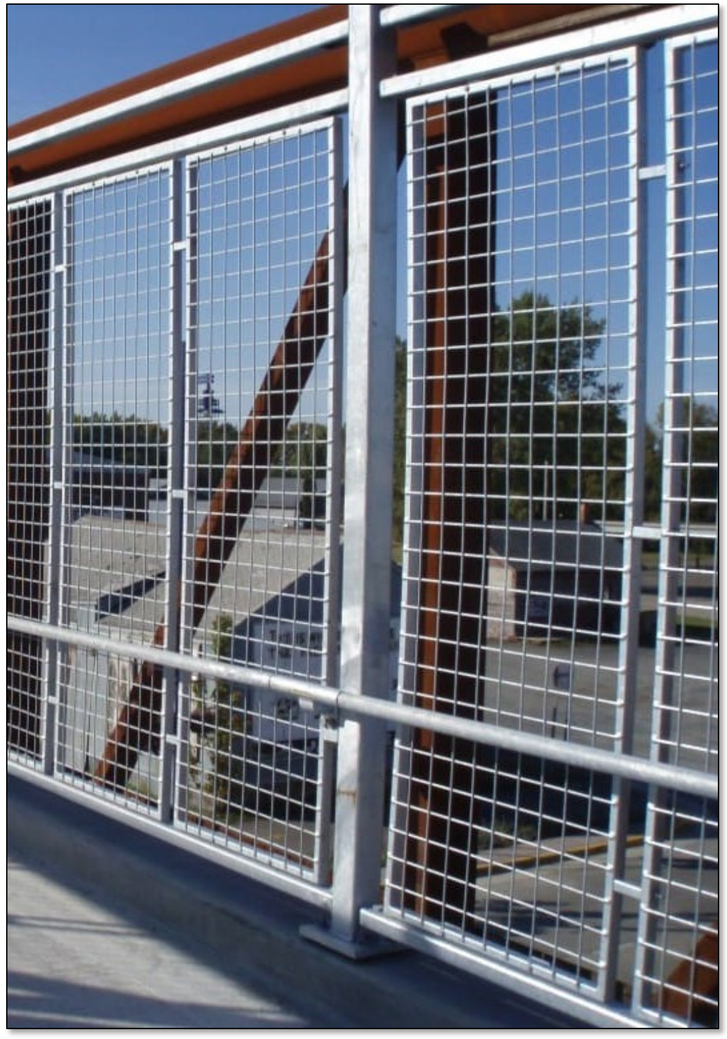
Architecture – Railing Examples over Railroad





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Architecture – Lighting Examples

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What are the important bridge aesthetic components?

Overlooks – curvilinear or orthogonal

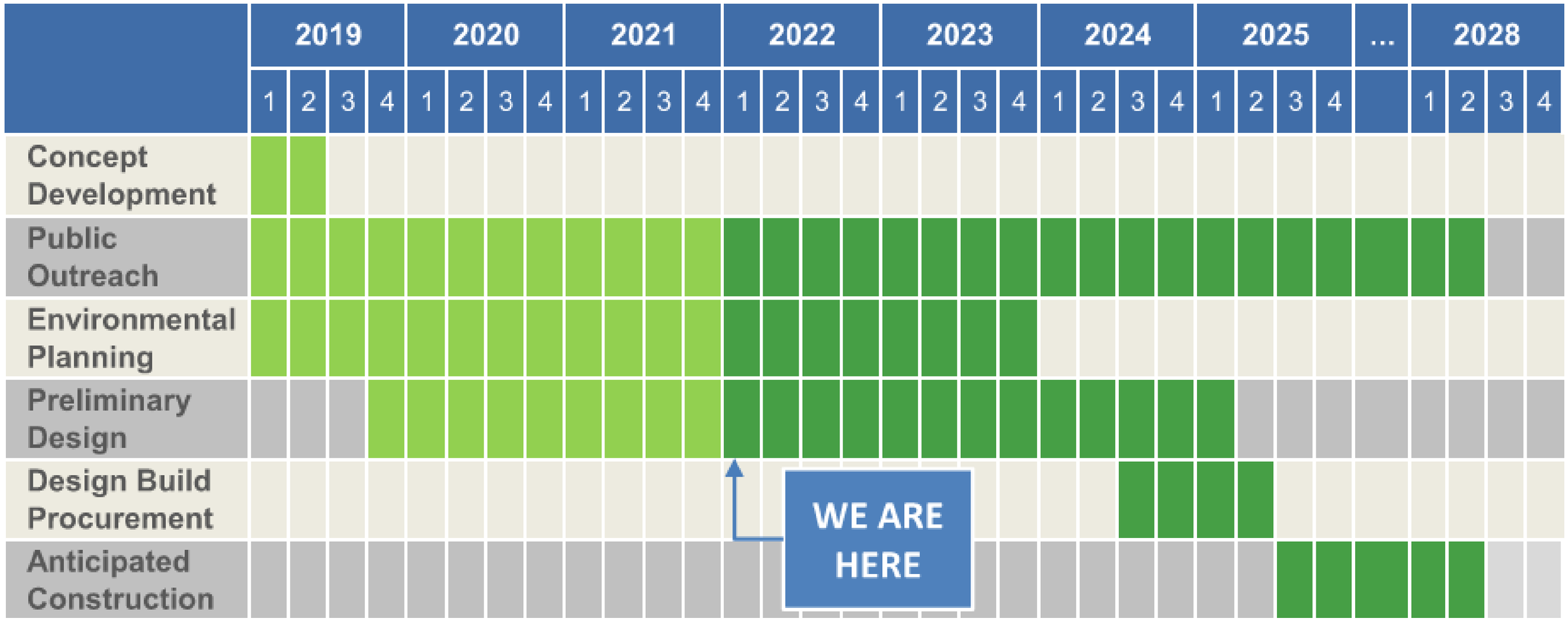
Bridge railing – preference

Fencing over the railroad tracks – preference

Opportunities to incorporate Lowell's history and cultural heritage – interpretative signs

Project Timeline

Schedule & Cost



Anticipated Project Cost - $170 Million

Our next steps

2019-2020
Data
Collection

Winter 2020
Working Group
& Public Meeting #1
Project Status
& Listening Session

Spring 2020
Legislative,
& City Council
Briefings

February 2022
Working Group Meeting #2
Present Recommended
Alignment & Bridge Type, and
Present Options for
Intersection Design
& Bike/Ped Facilities

Summer 2022
Working Group
Meeting #3
& Public Information
Meeting #2

2022-2023
Preliminary
Design

2023
Design
Public
Hearing

2024-2025
Environmental
Permitting & ROW
Plans and
Acquisitions

Community Feedback

What are the important features for crossing the bridge as a bicyclist or pedestrian?

Flexibility in the path use – Separation of bicyclists and pedestrians – Simple wayfinding connections – Space for furniture lighting and signing – Equal use for northbound and southbound

Which pedestrian paths section is preferred or not preferred one way lanes, bi directional, shared use path?

- More Preferable
- Less Preferable

What are the important bridge aesthetic components?

Overlooks – Bridge railing – Fencing over the railroad tracks – Interpretive signs

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Please provide feedback online
via the link below:
www.mass.gov/rourke-bridge-replacement-project

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How will we keep you informed?

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Questions and discussion

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Thank You

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Rourke Bridge Replacement Project

Lowell, MA | February 03, 2022 | 3:00pm

MassDOT #607887