



I-90 ALLSTON INTERCHANGE
A MULTIMODAL TRANSPORTATION PROJECT
Task Force Meeting
February 15, 2024

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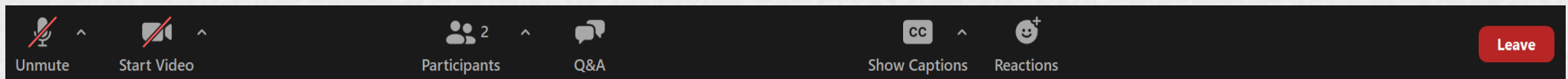
- To show video – Alt + V toggles video off/on



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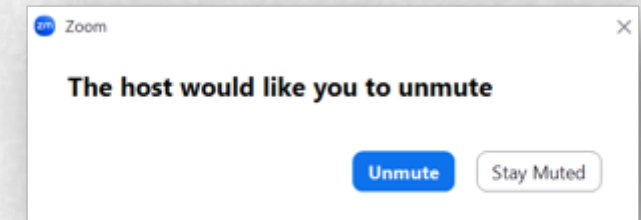
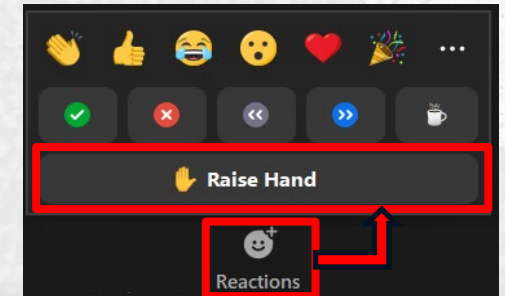
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- Submit your questions and comments; (Alt + H)
- "Raise your hand" to be unmuted for verbal questions; (Alt + Y)
- Please state your name before your question
- Please share only **1** question or comment at a time, limited to **2** minutes, to allow others to participate.
- To ask a question via phone, dial *9 and the moderator will call out the last 3-digits of your phone number and unmute your audio when it is your turn.
- Question priority goes to Task Force members



Please be advised that all comments are subject to disclosure for public records, therefore use these functions for project-related business only.

Today's Agenda

- Welcome/Introductions
- Cambridge Street Bridge Update
- West Station Bus Loop Layout
- Shoreline Alternatives
- General Updates
- Questions

Cambridge Street Bridge (B-16-056) Comparative Analysis – Summary



Goals / Criteria	Option 1 Rehabilitation	Option 2	
		Preservation	Replacement
Scope	<ul style="list-style-type: none"> • Replace deck • Clean and paint, repair, and strengthen structural steel • Substructure repairs • Replace approach sidewalks • Reconstruct Lincoln St switchback ramp • Install mid-block crossing/HAWK • Update pedestrian and bike accommodations to current standards • Substantial utility relocations to accommodate bypass road connection. 	<ul style="list-style-type: none"> • Replace westbound sidewalk • Isolated deck and eastbound sidewalk repairs • Limited substructure repairs • Deck joint replacement • Steel beam ends primed and repaired • Minor utility repair work 	<ul style="list-style-type: none"> • Must be either part of or after Multimodal project • Requires lowering of MBTA RR tracks and I-90 • Full bridge replacement • Replace approach sidewalks • Reconstruct Lincoln St switchback ramp • Install mid-block crossing and signal • Update pedestrian and bike accommodations to current standards • Lowers approach grades to be ADA compliant • Substantial utility relocations

Cambridge Street Bridge (B-16-056) Comparative Analysis (Cont.) – Summary



Goals / Criteria	Option 1 Rehabilitation	Option 2	
		Preservation	Replacement
Design Life	<ul style="list-style-type: none"> Approx. 25–30 year design life 	<ul style="list-style-type: none"> 10–15 year design life 	<ul style="list-style-type: none"> 75 year design life
Construction Start	<ul style="list-style-type: none"> 2025/2026 Construction start 	<ul style="list-style-type: none"> 2025/2026 construction start 	<ul style="list-style-type: none"> Approx. ½ – ¾ way through Multimodal – approx. 2030 construction start
Construction duration	<ul style="list-style-type: none"> 4–5 year construction duration 	<ul style="list-style-type: none"> 2 year construction duration 	<ul style="list-style-type: none"> 5 year construction duration (could be reduced as part of Multimodal staging)

Cambridge Street Bridge (B-16-056) Comparative Analysis (Cont.) – Accessibility & Access Points



Goals / Criteria	Option 1 Rehabilitation	Option 2	
		Preservation	Replacement
<ul style="list-style-type: none"> • ADA Compliant • <5% Profile Slope 	<ul style="list-style-type: none"> • Does not provide consistent roadway cross slopes. • Maintains approximate existing approach grades (average of 5%, maximum of 5.2% in places/not ADA compliant). 	<ul style="list-style-type: none"> • Preservation: see Rehabilitation column. 	<ul style="list-style-type: none"> • Provides consistent roadway cross slopes • Reduced approach grades (approximately 5% or less throughout/ADA compliant)
<ul style="list-style-type: none"> • Access Points for All Users • User Friendly 	<ul style="list-style-type: none"> • Maintains connection to existing Franklin Street Pedestrian bridge. • Reconstructs Lincoln Street switchback ramp. • Provides HAWK signal regulated mid-block crossing at Lincoln Street switchback ramp. 	<ul style="list-style-type: none"> • Maintains connection to existing Franklin Street Pedestrian bridge. • Does not reconstruct Lincoln Street switchback ramp. • Does not provide any signal regulated midblock crossing. 	<ul style="list-style-type: none"> • Severs connection to existing Franklin Street Pedestrian bridge. • Reconstructs Lincoln Street switchback ramp. • Can provide full signal with ped. accommodations at Bypass Road intersection.

Cambridge Street Bridge (B-16-056) Comparative Analysis (Cont.) – Safety & Pier Relocations



Goals / Criteria	Option 1 Rehabilitation	Option 2	
		Preservation	Replacement
<ul style="list-style-type: none"> • Safe for all non-motorized users • Structure condition 	<ul style="list-style-type: none"> • Updates pedestrian and bike accommodations to meet current standards. • Replaces and repairs deteriorating elements of the bridge sooner. 	<ul style="list-style-type: none"> • Does not further improve pedestrian and bike accommodations over changes made by City of Boston. • Repairs worst conditions only. 	<ul style="list-style-type: none"> • Updates pedestrian and bike accommodations to meet current standards. • Longer lead time to full replacement, structure condition worsens in that time.
Relocate piers	<ul style="list-style-type: none"> • No opportunity to relocate piers. 	<ul style="list-style-type: none"> • No opportunity to relocate piers. 	<ul style="list-style-type: none"> • Opportunity to provide minor adjustments to pier locations.

Cambridge Street Bridge Update (Cont.)



- Questions/Comments from December 7, 2023 Site Walk:
 - Maintenance concerns: WB sidewalk maintenance, lighting, etc.
 - MassDOT maintenance has recently removed the weeds and trash on the closed off portion of the sidewalk.
 - City of Boston owns the lighting over the bridge. MassDOT will coordinate with the City regarding lighting concerns mentioned on the sidewalk.
 - MassDOT has made NGRID gas aware of the gas smell noticed on the eastern side of the bridge.
 - Cambridge St EB: single lane between Harvard and Linden.
 - The current and projected future traffic volumes for this project and the Multimodal project were evaluated, which did not preclude potentially removing one lane eastbound from Harvard Avenue to Linden Street.
 - MassDOT's current step is coordinating with City of Boston, who will have final ownership of this section of the roadway, on a potential reduction to a single lane.

Cambridge Street Bridge Update (Cont.)

- Questions/Comments from December 7, 2023 Site Walk:
 - Community Input
 - A Better City submitted a design concept to MassDOT suggesting alternative bridge cross-section and operational designs to accommodate pedestrians and bicyclists. MassDOT is currently evaluating these designs for incorporation into a final cross section for either a rehabilitated or rebuilt bridge.
 - Raised crossings at Highgate and Linden
 - MassDOT will investigate the feasibility of integrating some type of raised crosswalk at one or both of these locations.
 - Median width
 - The median can be reduced to 6 feet minimum.
 - Landscape opportunities
 - MassDOT will look for opportunities for landscaping where practical. With the limited cross section availability, it would only reduce the cyclist and pedestrian space. No landscape areas will be permitted on the bridge.

Cambridge Street Bridge Update (Cont.)



•Questions/Comments from December 7, 2023 Site Walk:

- HAWK Pedestrian Signal at Mid-Block Crossing vs. Full Pedestrian Signal
 - For any traffic control signal to be installed, per the MUTCD, at a minimum a traffic signal warrant needs to be satisfied. MassDOT and all municipalities are bound by MGL Chapter 85 Section 2 to conform to the MUTCD. Based on data collected and observations, as well as assumptions related to recirculation of existing pedestrian patterns associated with a potential midblock crossing, the location does not appear to meet the criteria for a full stop and go signal.
 - VHB reviewed the pedestrian activity at both the existing pedestrian bridge and at the switchback location and with reasonable assumptions regarding pedestrian recirculation, a midblock crossing can likely meet the lower (20 pedestrians per hour) warrant requirement to support installation of a HAWK.
 - After installation, should a full signal be warranted (in excess of 100 pedestrians in an hour), the equipment would be in place to support a full pedestrian traffic signal.

Today's Agenda

- Welcome/Introductions
- Cambridge Street Bridge Update
- **West Station Bus Loop Layout**
- Shoreline Alternatives
- General Updates
- Questions

West Station Bus Loop Layout Concepts

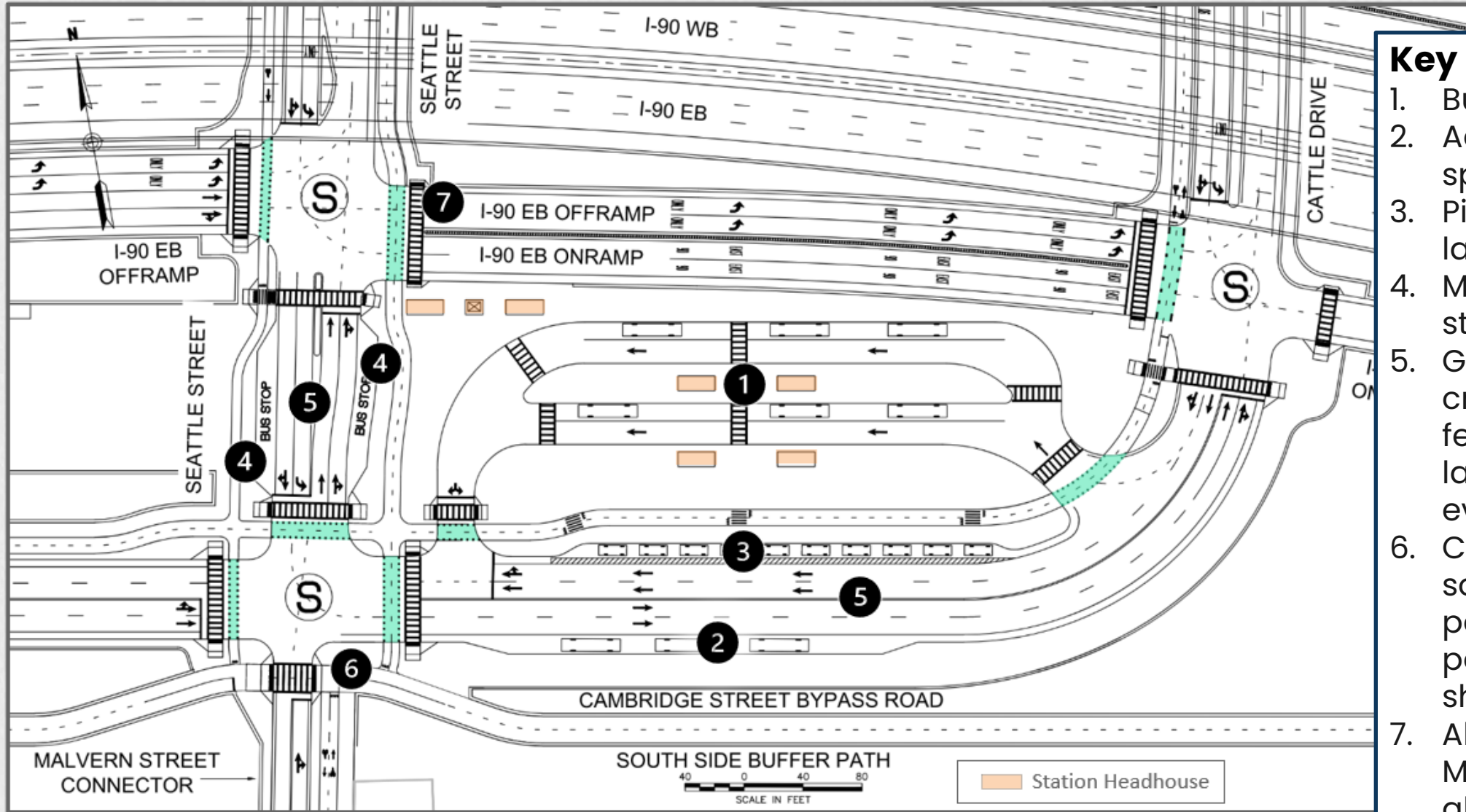
Assumptions for Planning Purposes

- Assumed 3 private shuttle routes, requiring 6 berthing positions
- Serve full-size transit buses (40-foot length)
- Allow for independent operations of each berth (buses able to pull in/out independently of one another)
- MBTA Route 64 assumed to stop on Seattle Street with no circulation within busway area

West Station Bus Loop Layout Concepts

- Bus Berthing/Station Layout Options
 - Concept 1 – “Parallel Busways”
 - Concept 2 – “Loop Busway”
- Design Coordination
 - Interchange Layout: 3L interchange layout is shown today, actively working on incorporating busway into the 3L-Mod interchange layout
 - 3L-Mod interchange has ped/bike benefits when compared to 3L interchange
 - MBTA: design reviewed by MBTA Bus Operations and Service Delivery teams, their input will be incorporated
 - E.g., adequate mid-block bus stop length on Seattle Street
 - Pedestrian and Bicycle Circulation

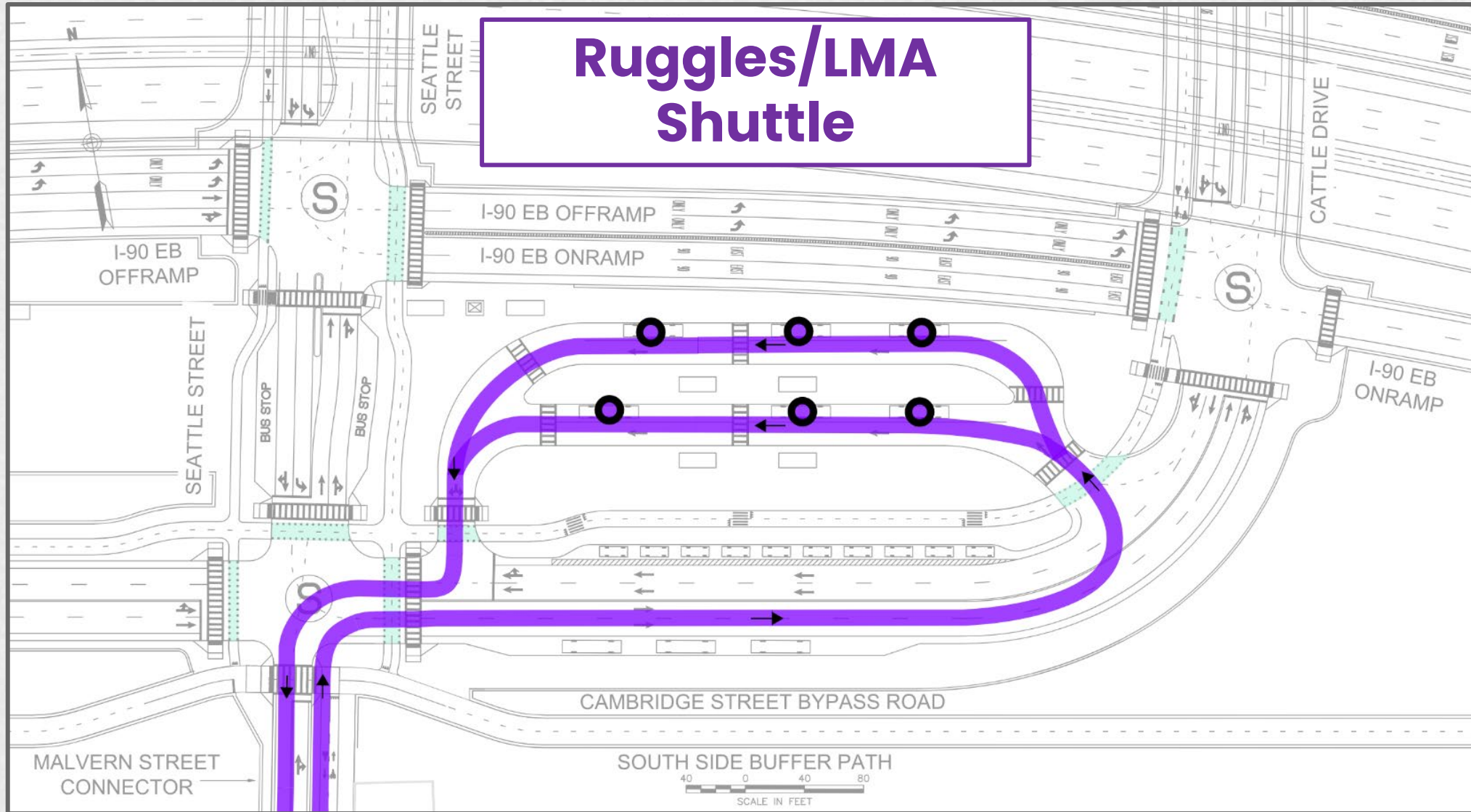
Station Layout Options – Concept 1 (Parallel Busways)



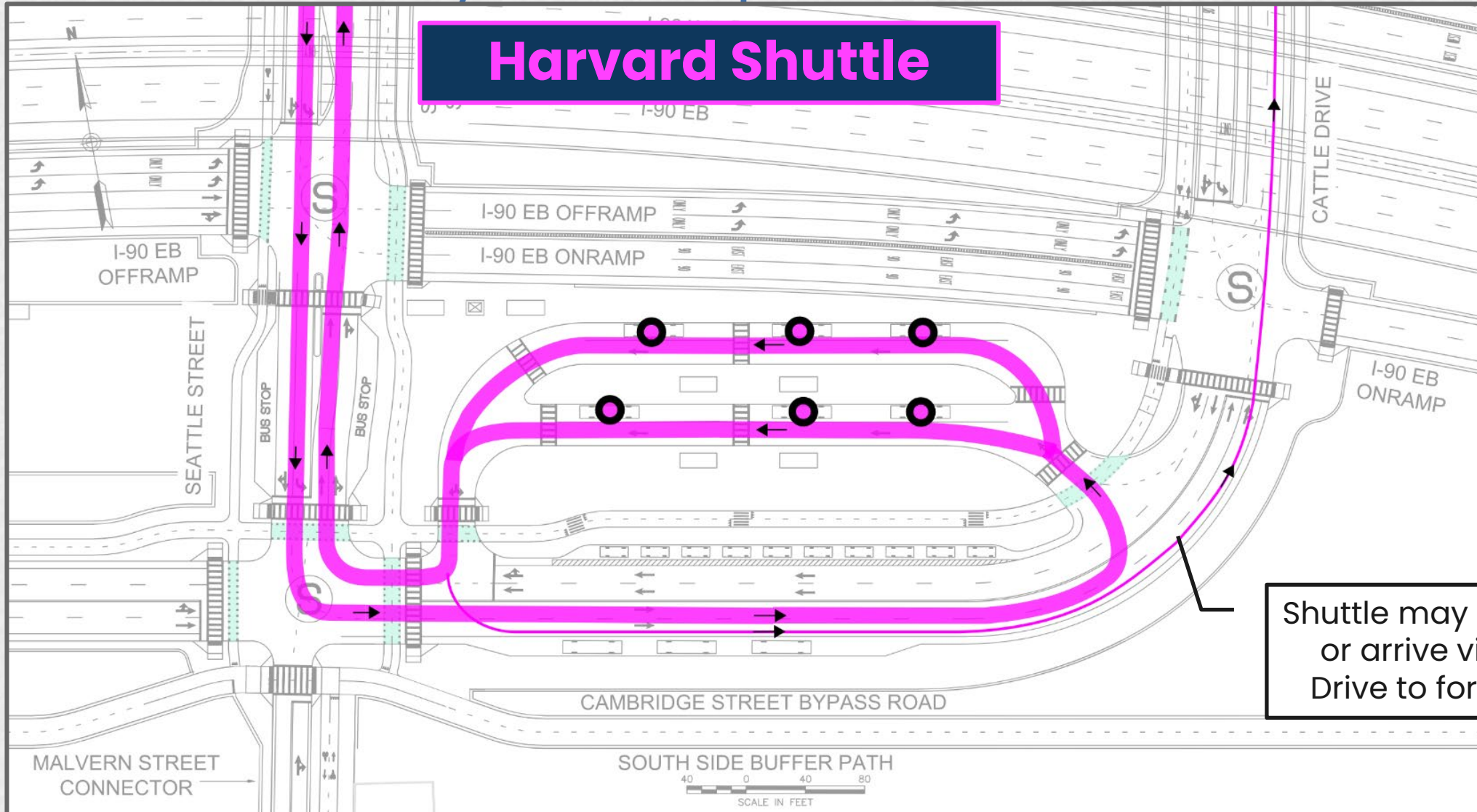
Key Elements

1. Busway area
2. Additional layover space
3. Pickup/drop-off lane
4. MBTA Route 64 bus stops
5. Generic roadway cross section – the feasibility of bus lanes will be evaluated
6. Connection to south side buffer path (elevated path concept shown)
7. Also works with 3L-Mod interchange alternative

Station Layout Options – Parallel Busways Concept Circulation

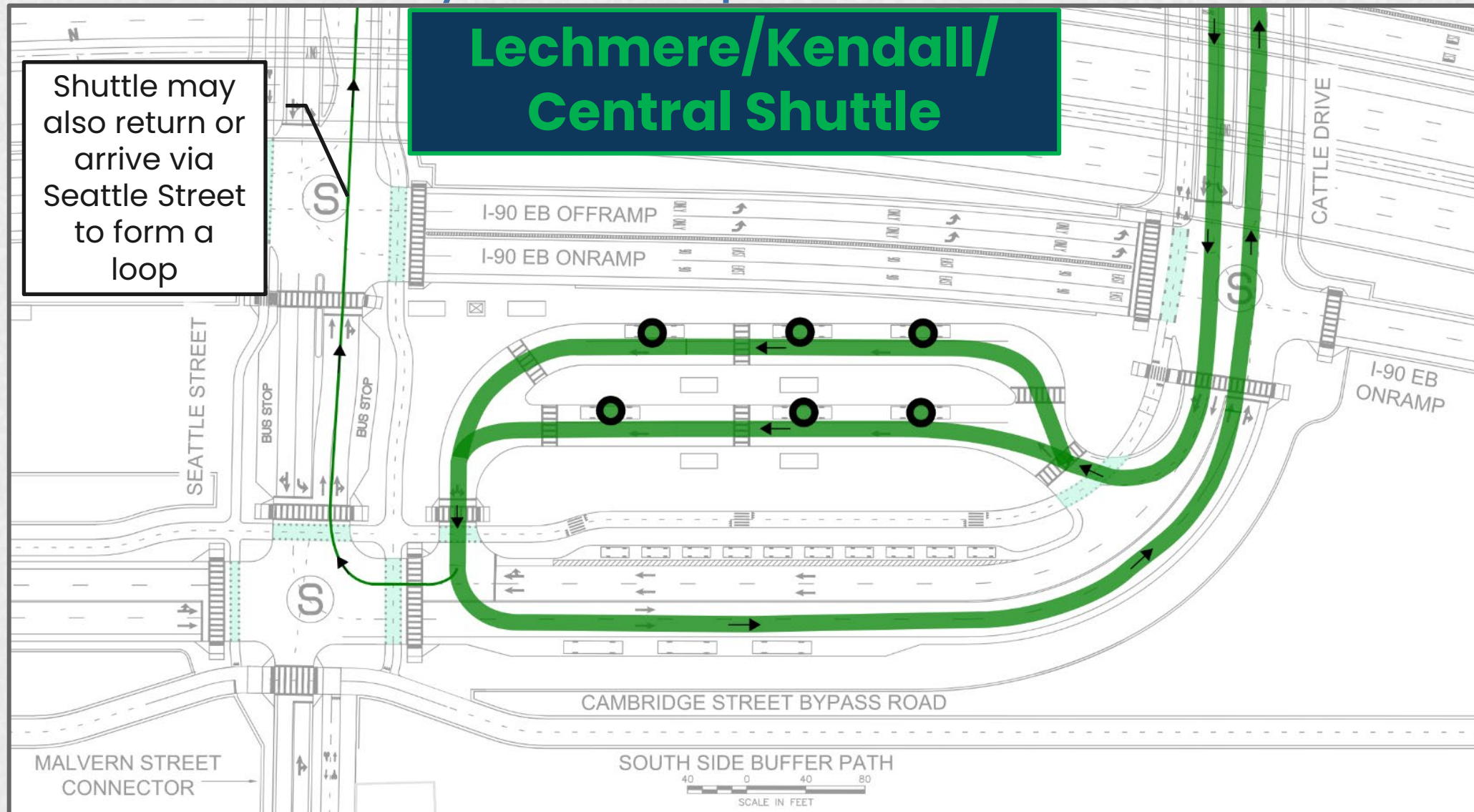


Station Layout Options – Parallel Busways Concept Circulation

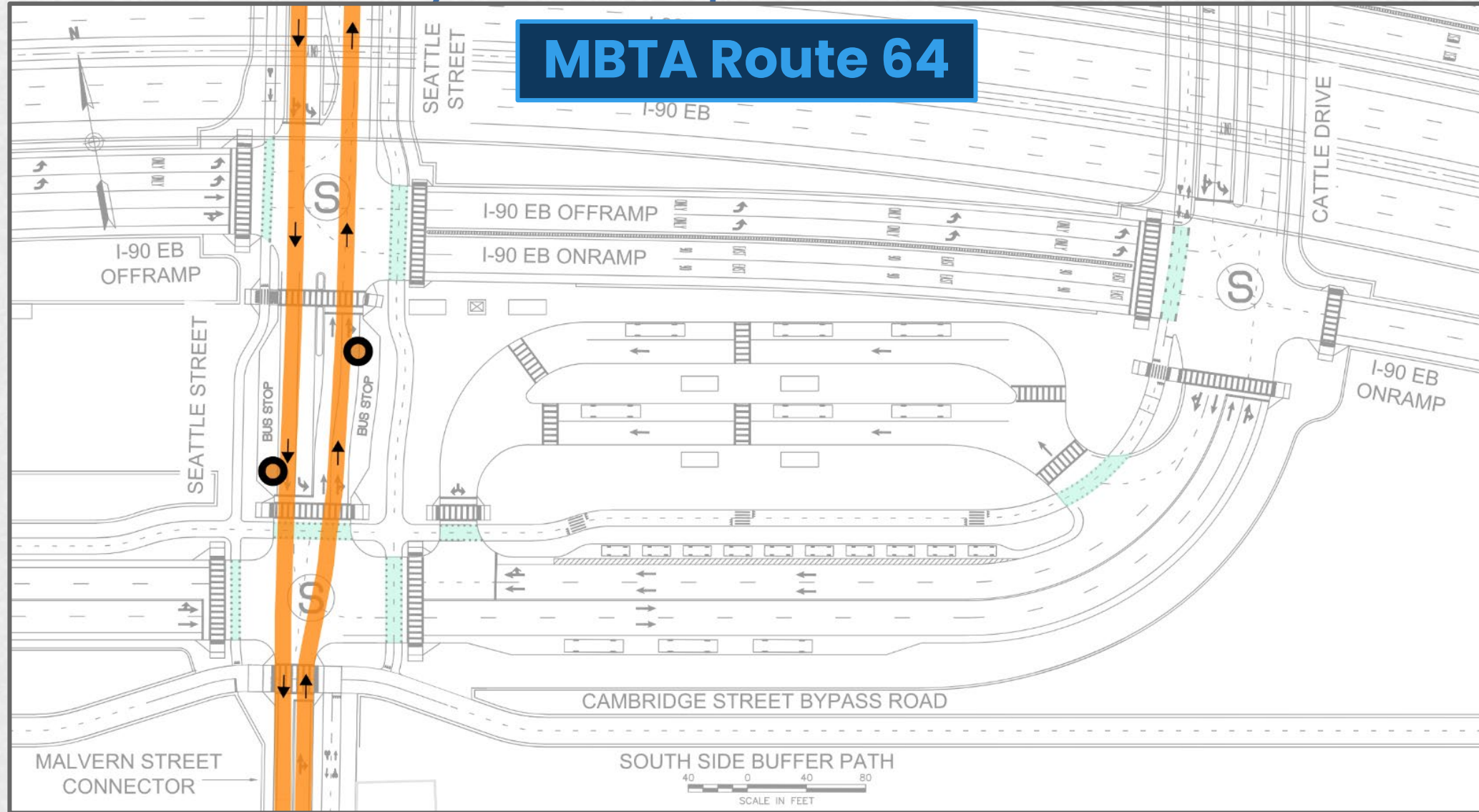


Shuttle may also return
or arrive via Cattle
Drive to form a loop

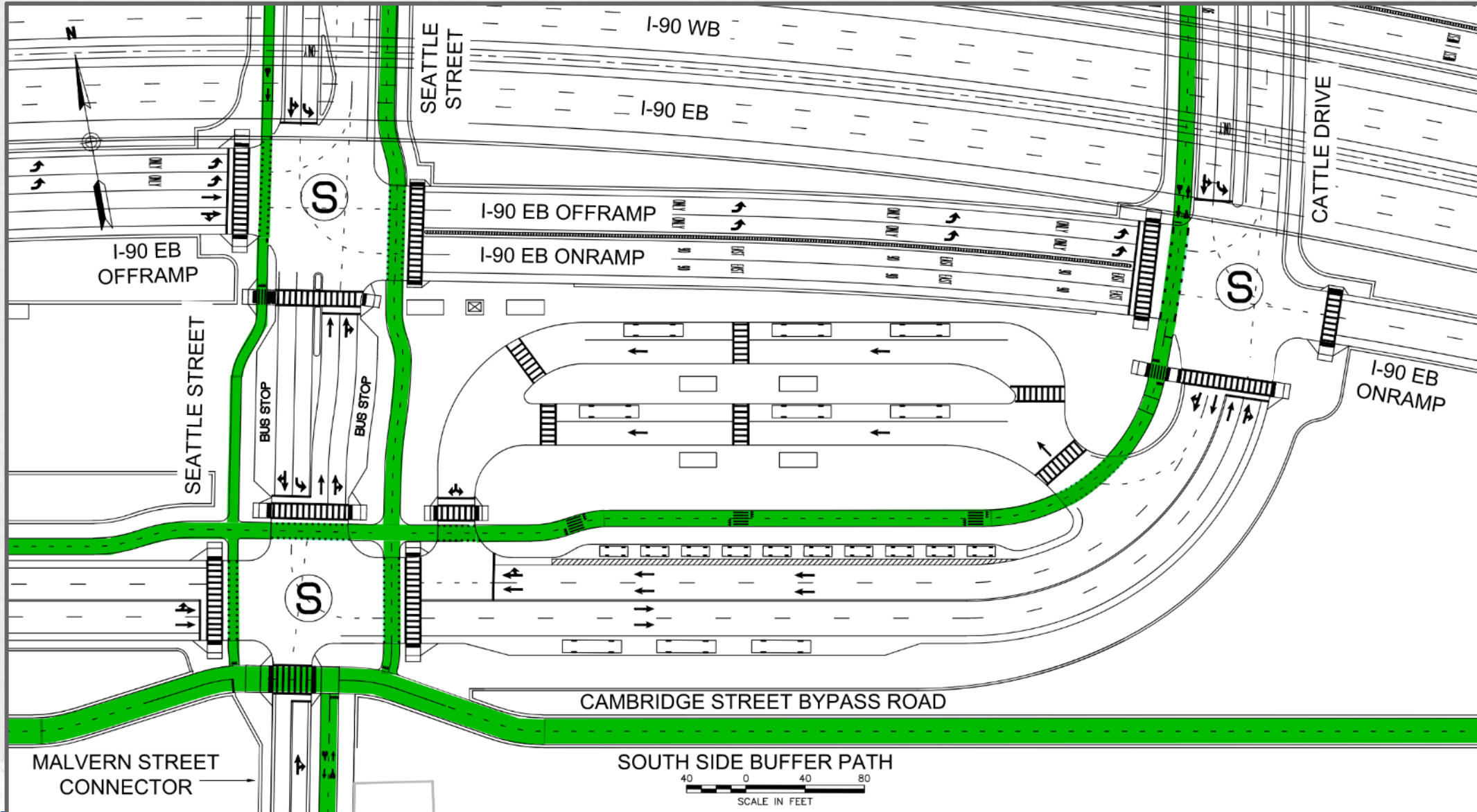
Station Layout Options – Parallel Busways Concept Circulation



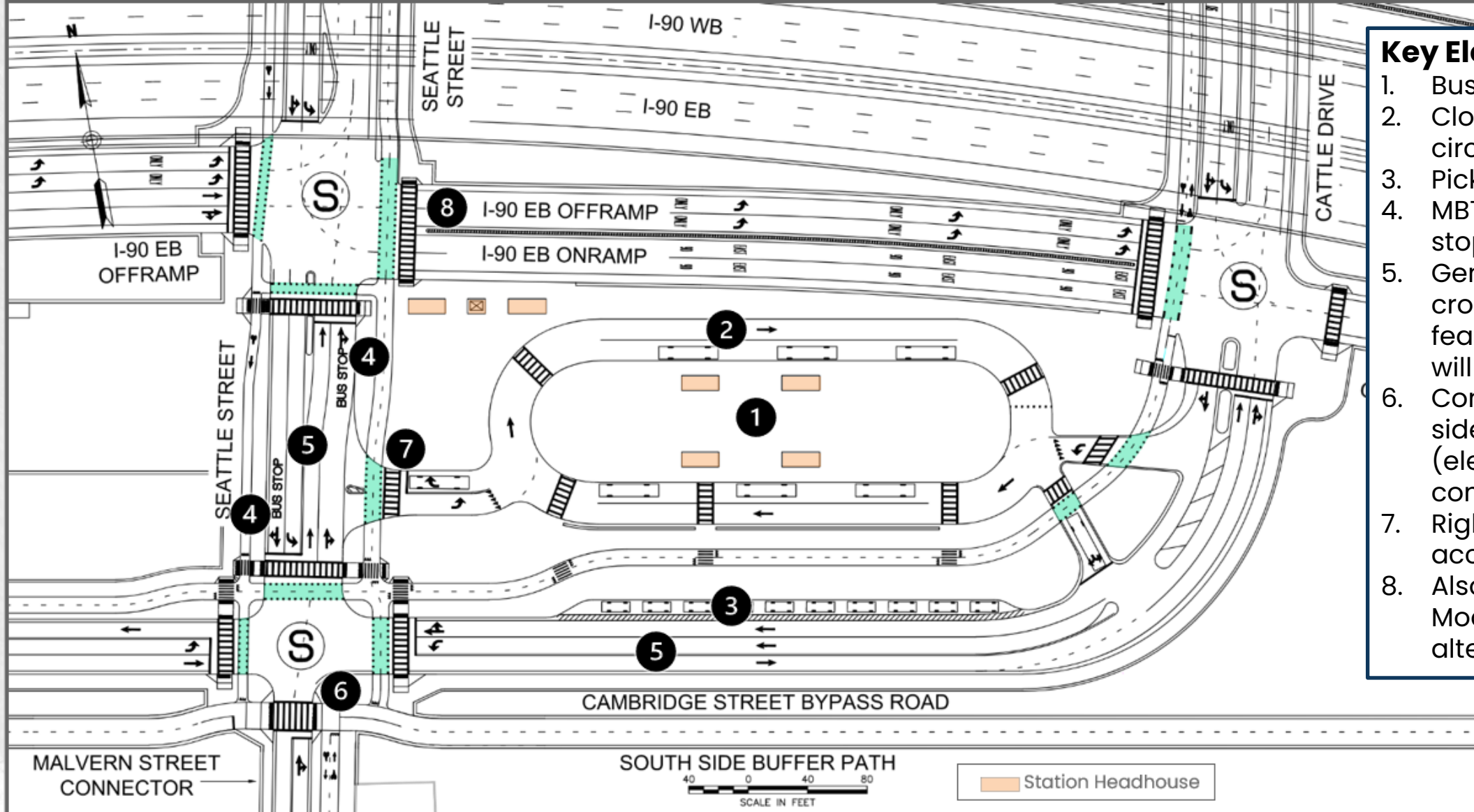
Station Layout Options – Parallel Busways Concept Circulation



Bike Circulation – Concept 1 (Parallel Busways)



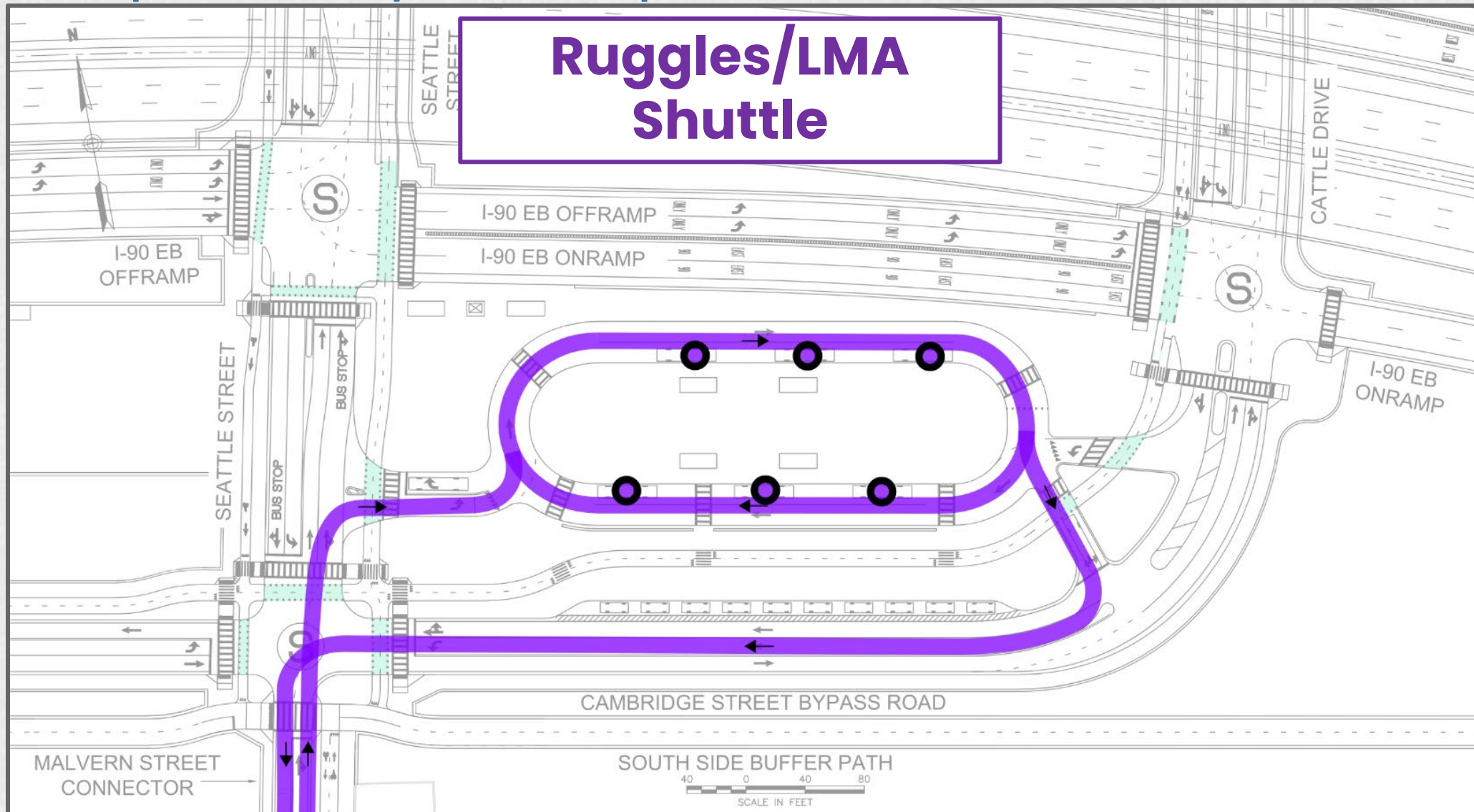
Station Layout Options – Concept 2 (Loop Busway)



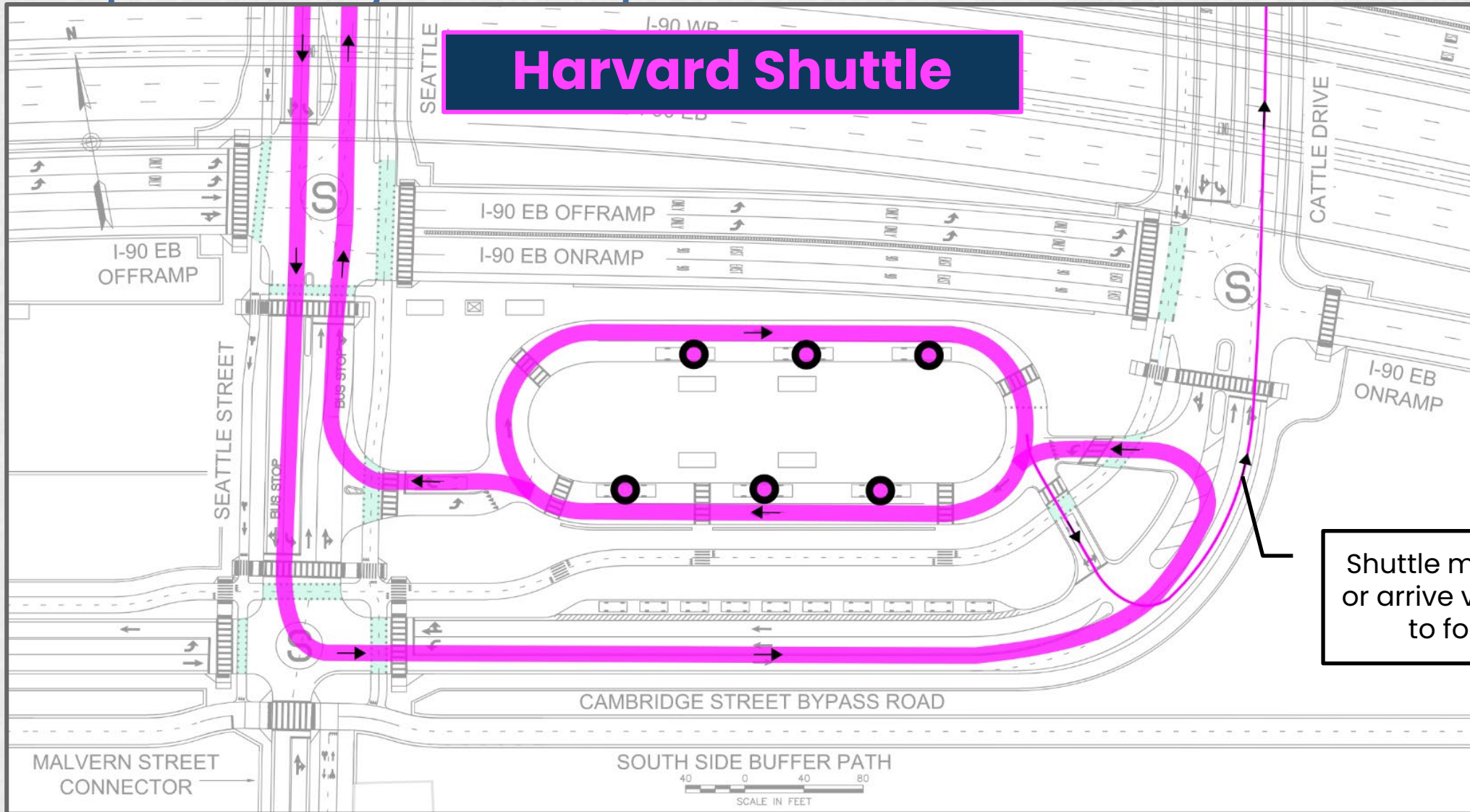
Key Elements

1. Busway area
2. Clockwise busway circulation
3. Pickup/drop-off lane
4. MBTA Route 64 bus stops
5. Generic roadway cross section – the feasibility of bus lanes will be evaluated
6. Connection to south side buffer path (elevated path concept shown)
7. Right-in/right-out access from Seattle St
8. Also works with 3L-Mod interchange alternative

Station Layout Options – Loop Busway Concept Circulation

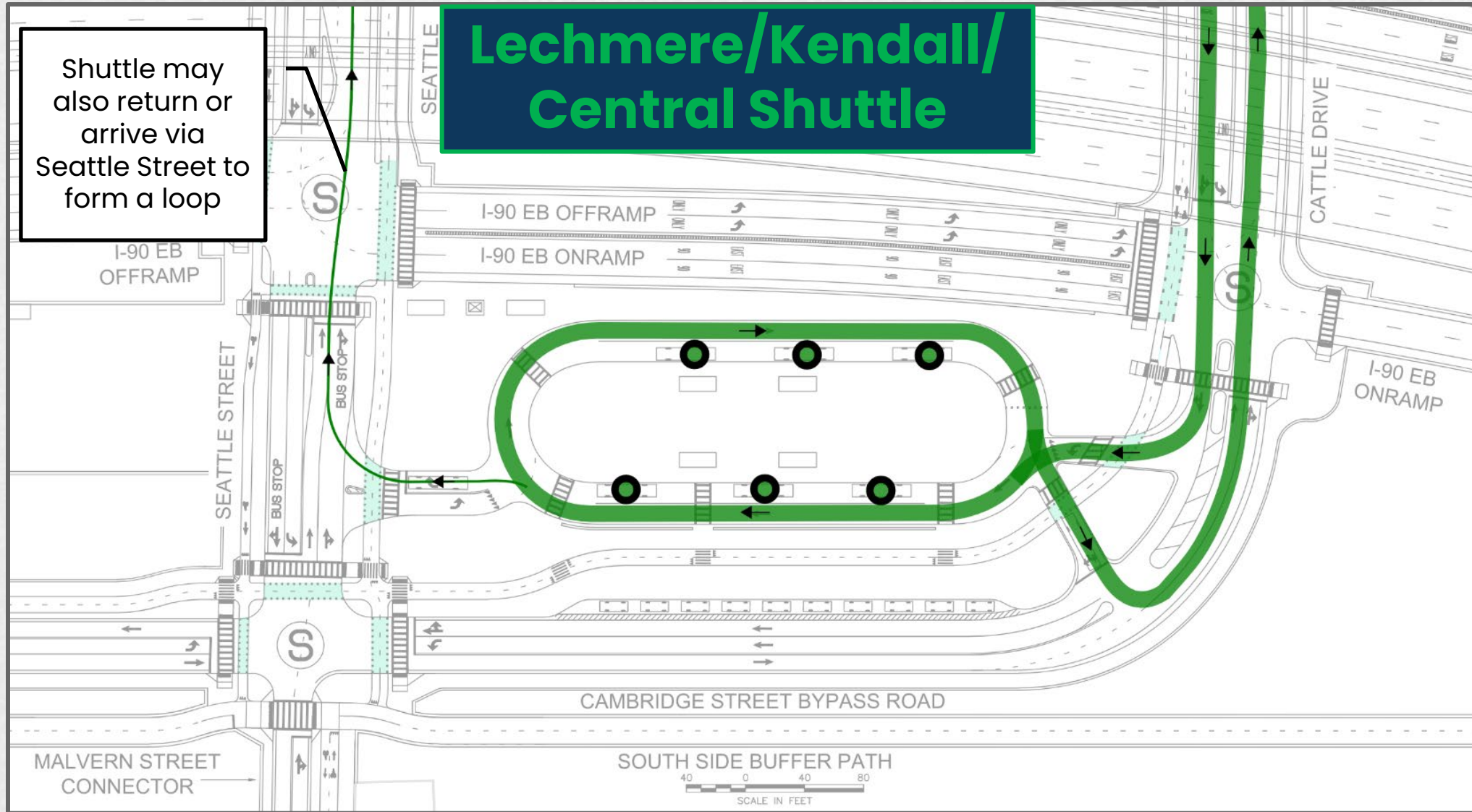


Station Layout Options – Loop Busway Concept Circulation

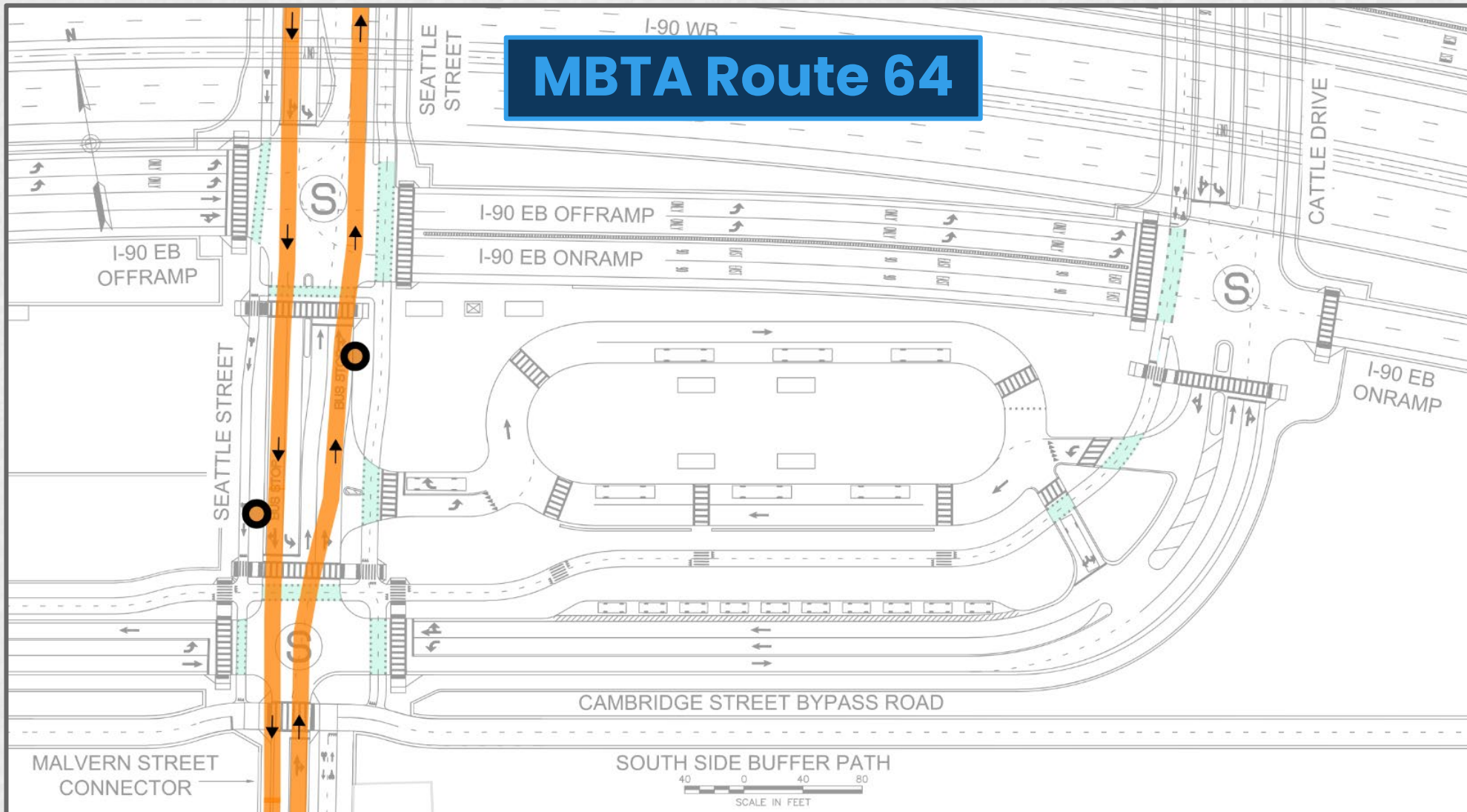


Shuttle may also return or arrive via Cattle Drive to form a loop

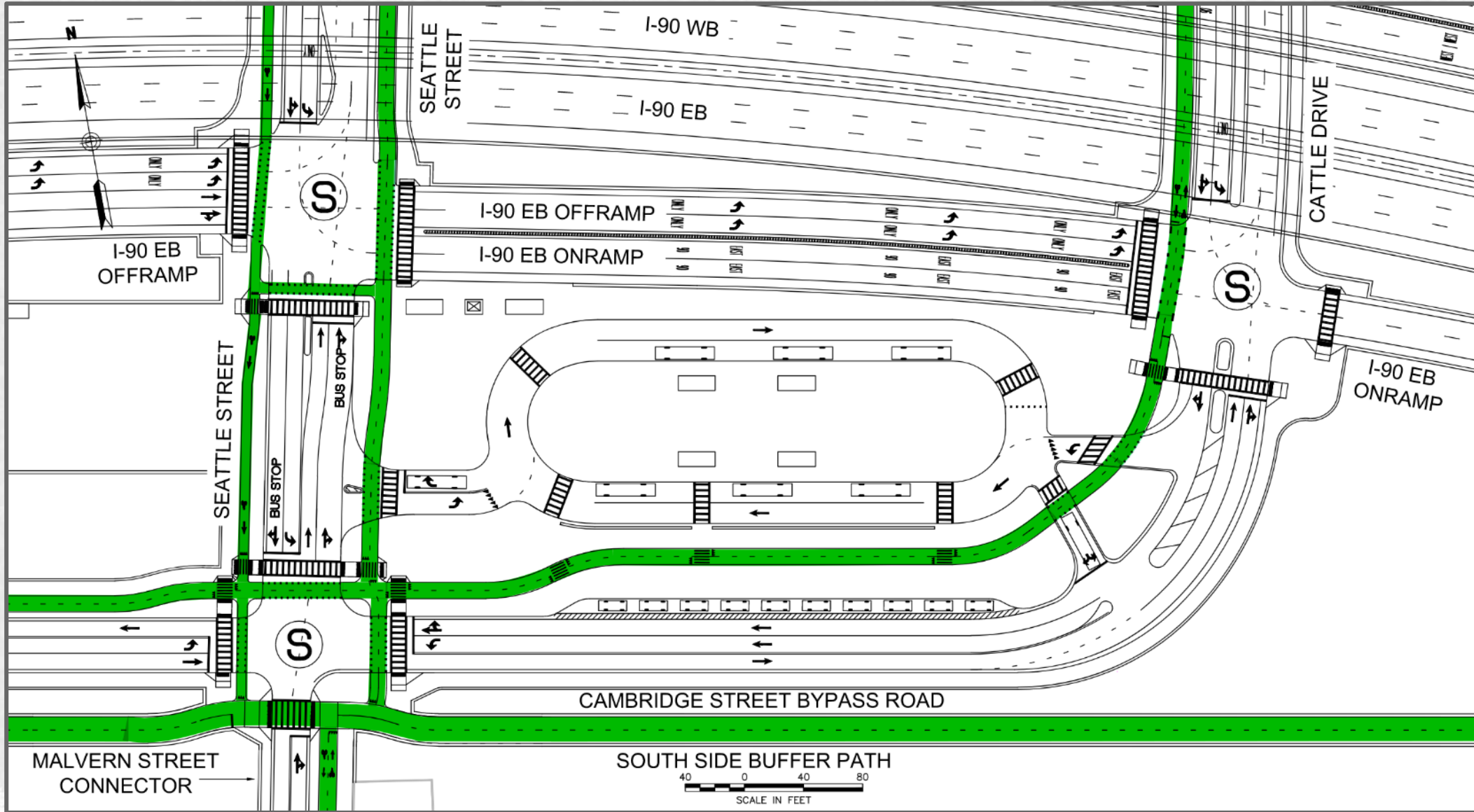
Station Layout Options – Loop Busway Concept Circulation



Station Layout Options – Loop Busway Concept Circulation



Bike Circulation – Concept 2 (Loop Busway)

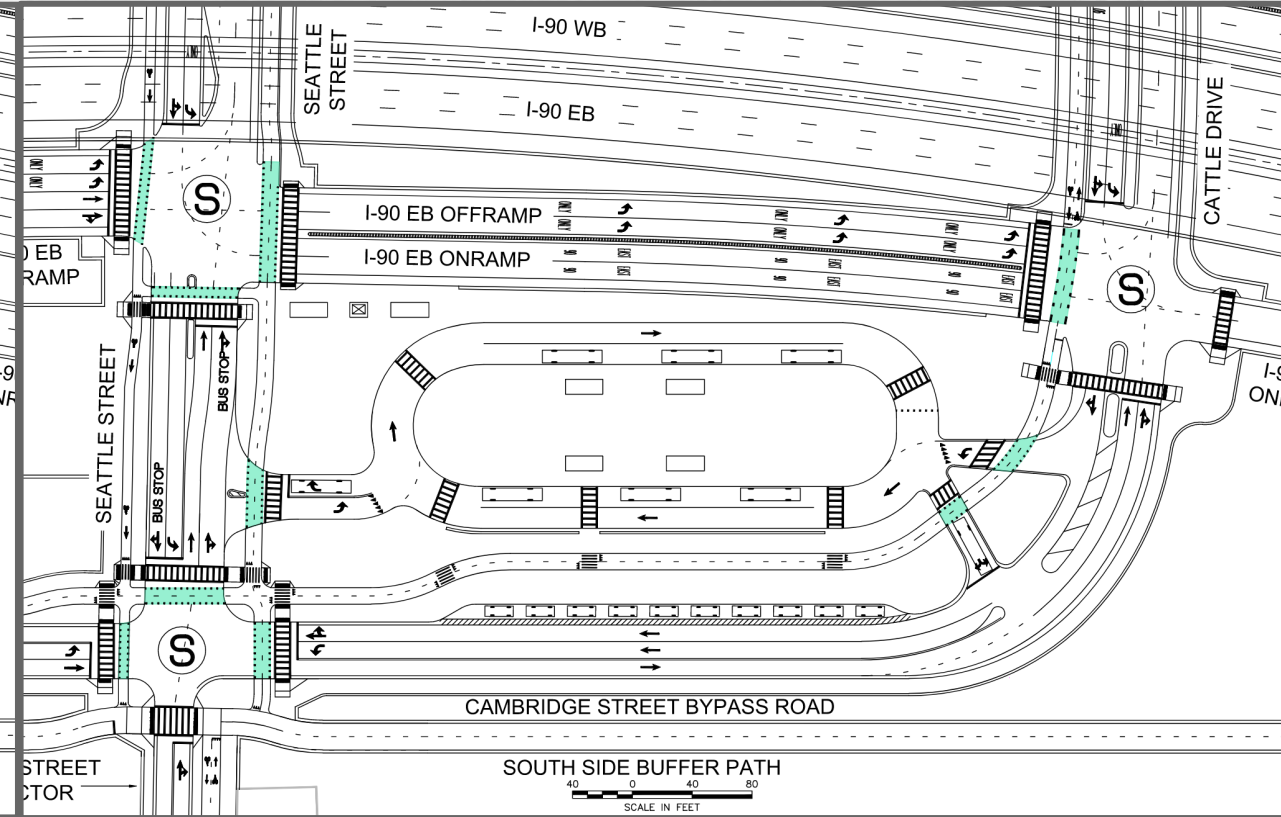
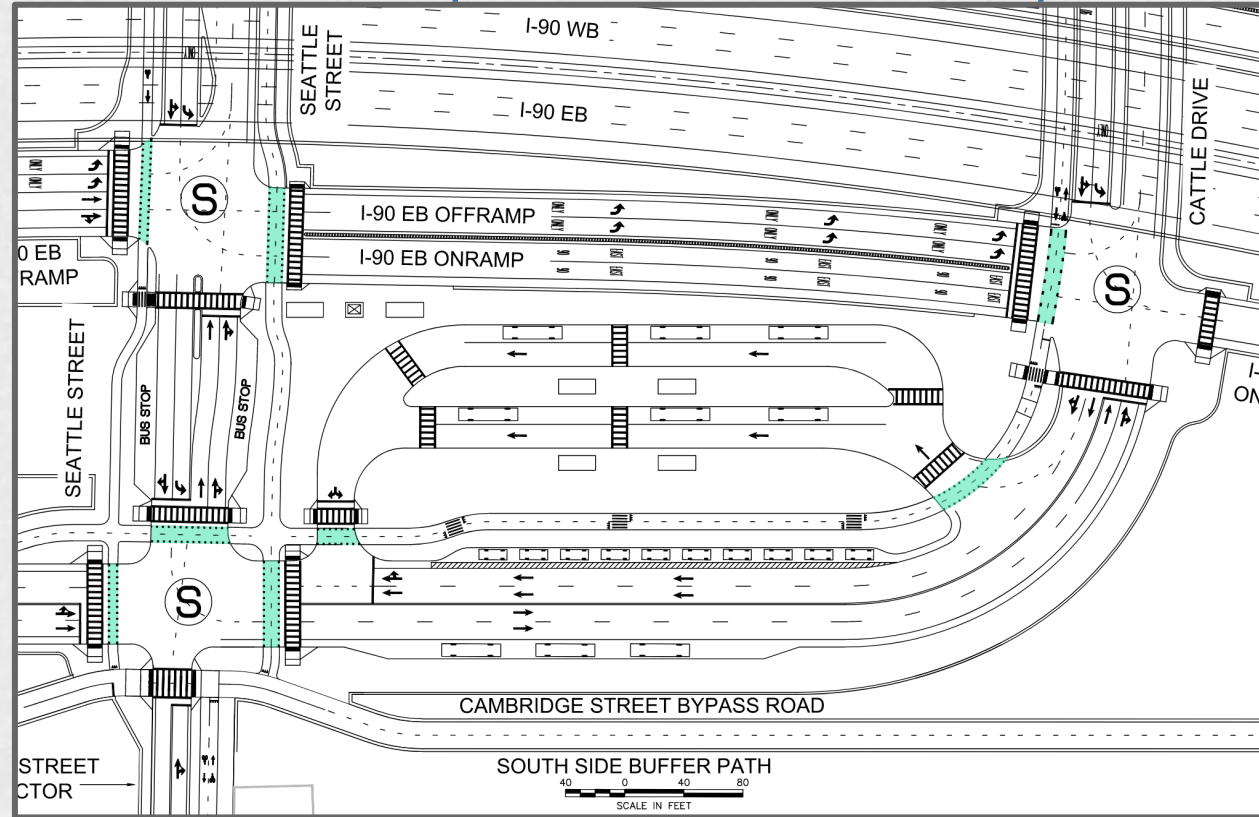


Station Layout Options – Concepts 1 & 2



Concept 1 – Parallel Busways

Concept 2 – Loop Busway



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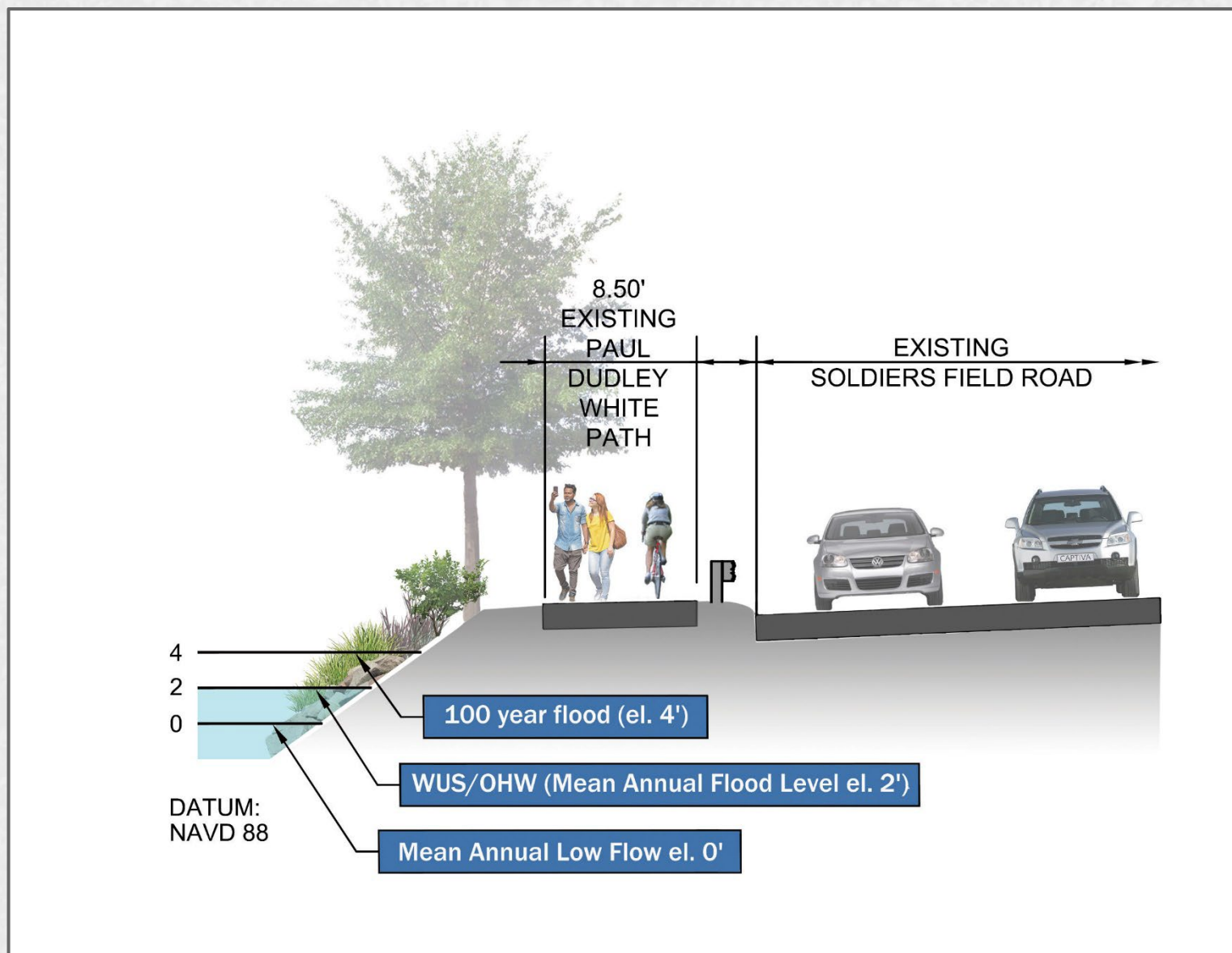
Existing Riverbank Conditions



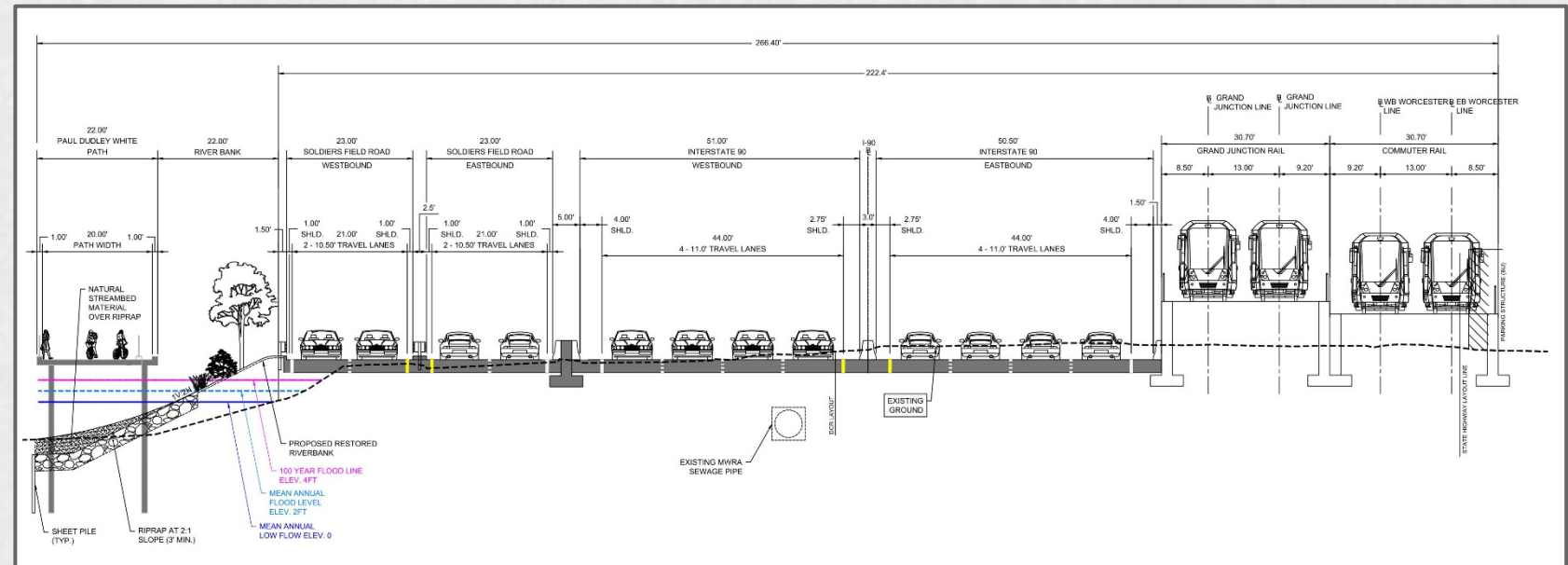
- Water level controlled by New Charles River Dam
- Man-made bank on historic fill
- Rip Rap shoreline below elevation 3
- No vegetated wetlands, bank is dominated by invasive and nuisance species including Tree of Heaven and False Indigo Bush
- Wildlife Habitat Assessment completed in 2019 – minimal wildlife habitat
- Minimal ecological functions and values



Existing Riverbank Conditions – Jurisdiction



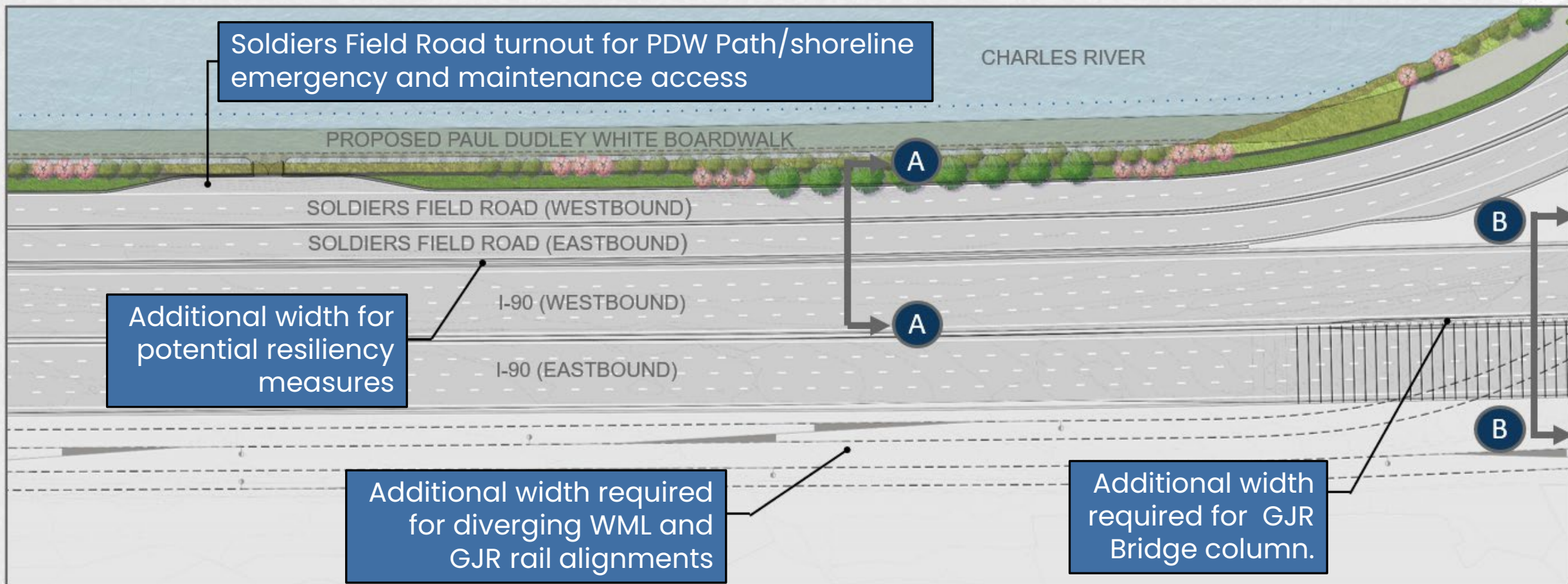
Project Overview: Modified At-Grade Alternative



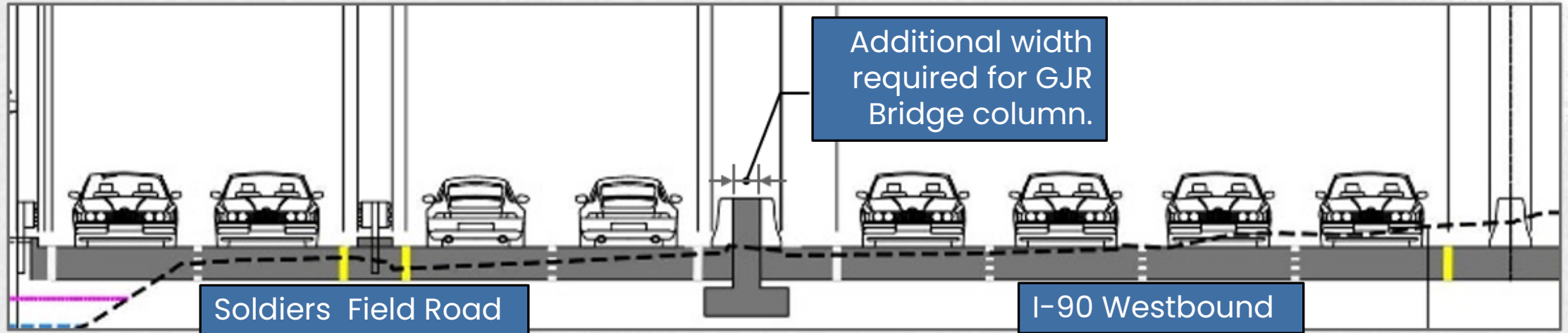
Project Overview: Modified At-Grade Alternative



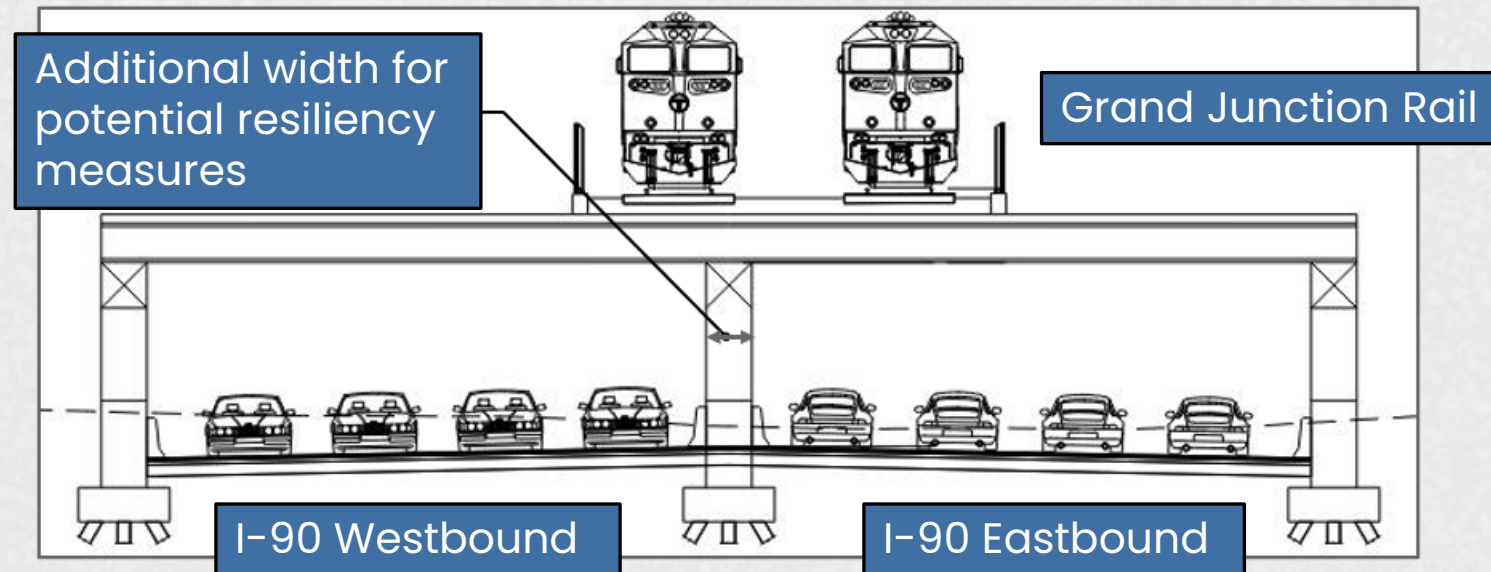
Throat Area Design Development



Throat Area Design Development

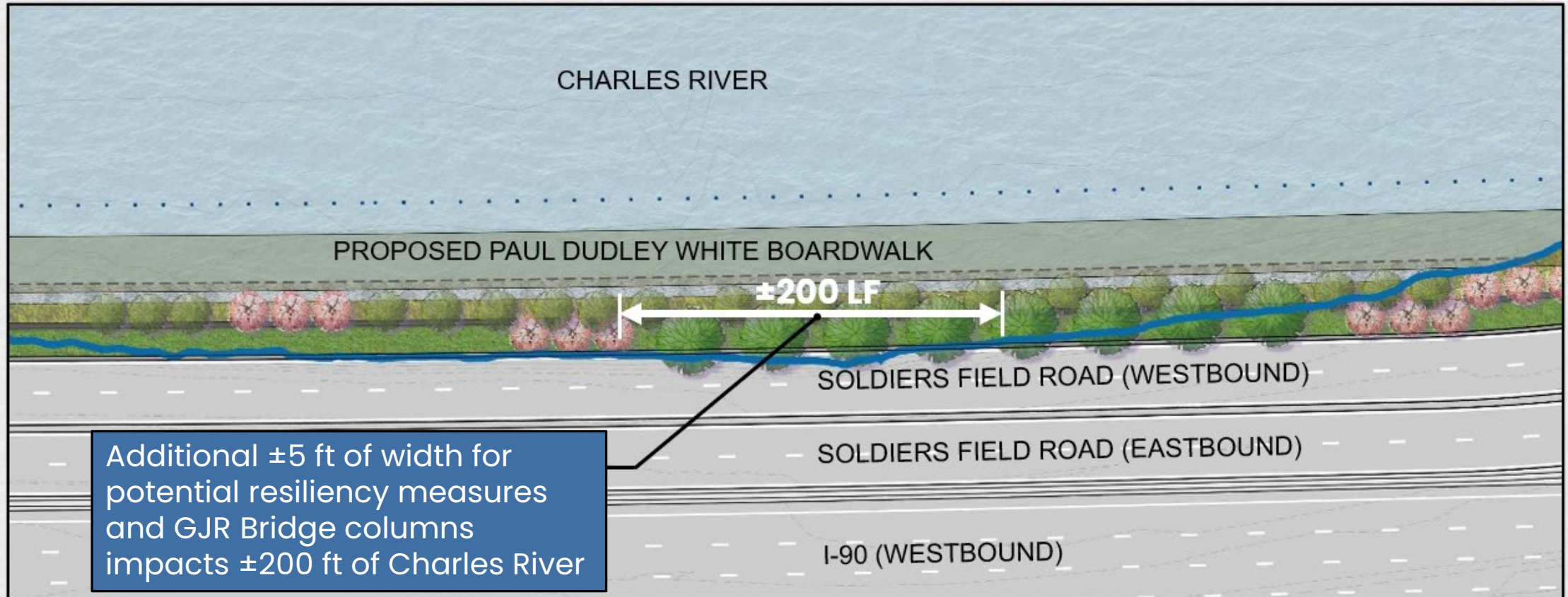


Section A-A



Section B-B

Throat Area Design Development



Proposed Riverbank Conditions – General Design Considerations



- The Project Team's framework for the proposed riverbank design includes:
 - Minimizing fill in Accordance with Federal, State and Local Environmental permitting requirements.
 - Preliminary discussions with Army Corp have indicated approval likely under MA General Permit that would limit fill in river to less than one acre
 - Address concerns of River Users
 - Future maintenance
 - Ecological Improvement: Enhancing and establishing habitat along the riverbank
 - Historic and Cultural Preservation: Improving and re-establishing the historic parkway experience of SFR
 - Visual Effects: Preserving and enhancing views

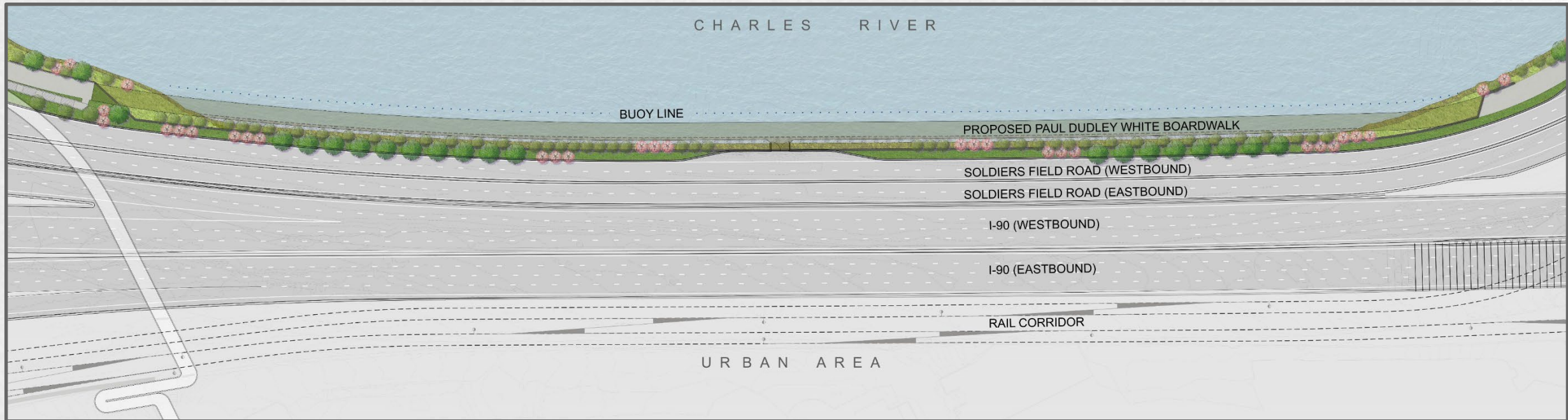
Project Overview: Shoreline Types



4,370 LF OF SHORELINE

- Shoreline treatment varies for project extents
- Opportunity for planted edge at appropriate locations
- Where required, hardened edge proposed (similar to other existing edge treatments on the Charles River)

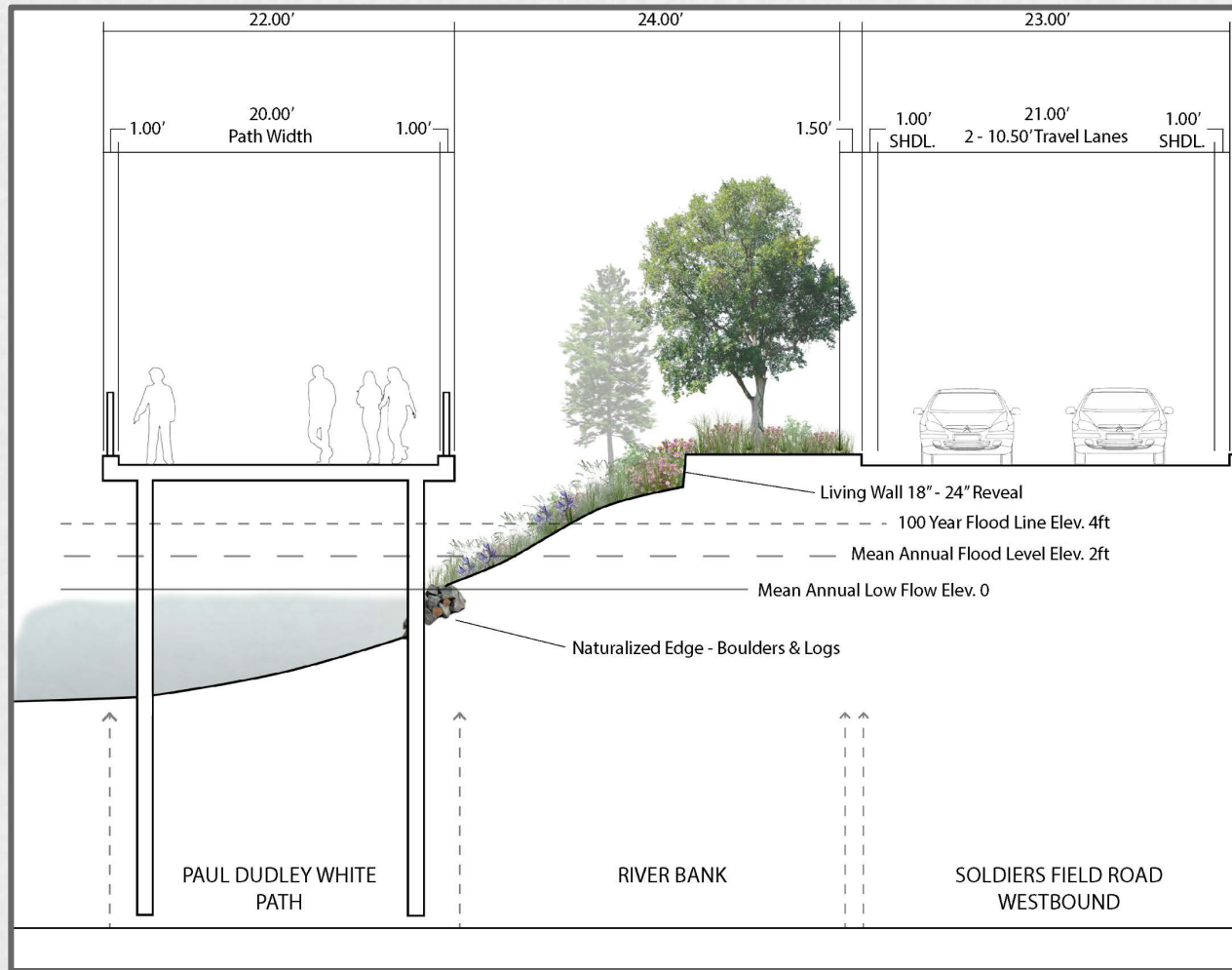
Shoreline Alternatives



THROAT AREA

- PDW location within limit of Buoy line
- Project fill impact occurring in Throat Area
- Challenging planting and maintenance environment
- Opportunity for unique PDW experience and views

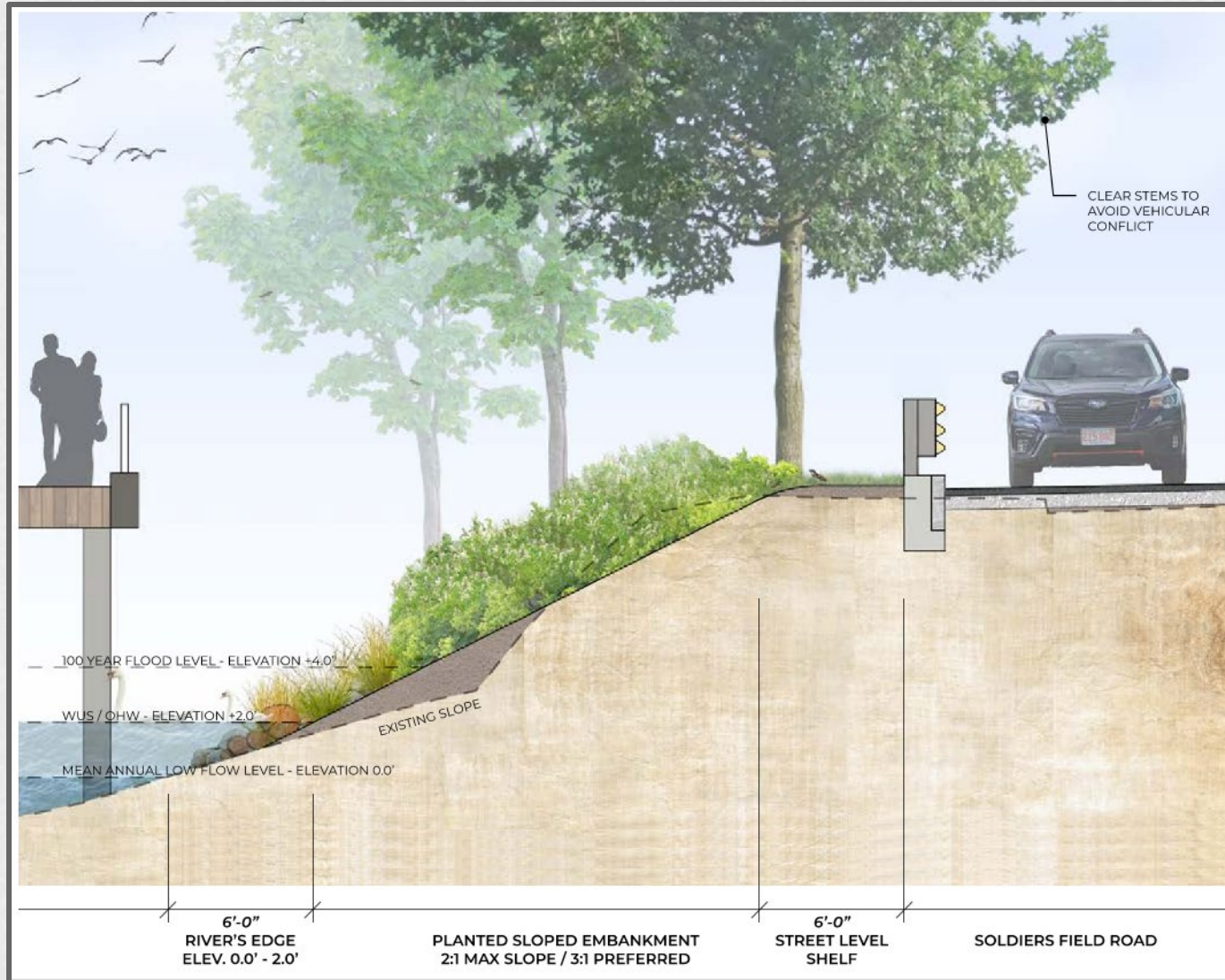
Proposed Riverbank Conditions – Design Evolution



Original Planted Slope Option

- Described in the Notice of Project Change
- 2:1 Slope
- +/- 43,500 sq. ft. of total permanent impacts
- 22-foot wide Boardwalk still under development
- Designed to address the community's desire for a natural shoreline
- One typical section for the entire shoreline
- Significant fill impact

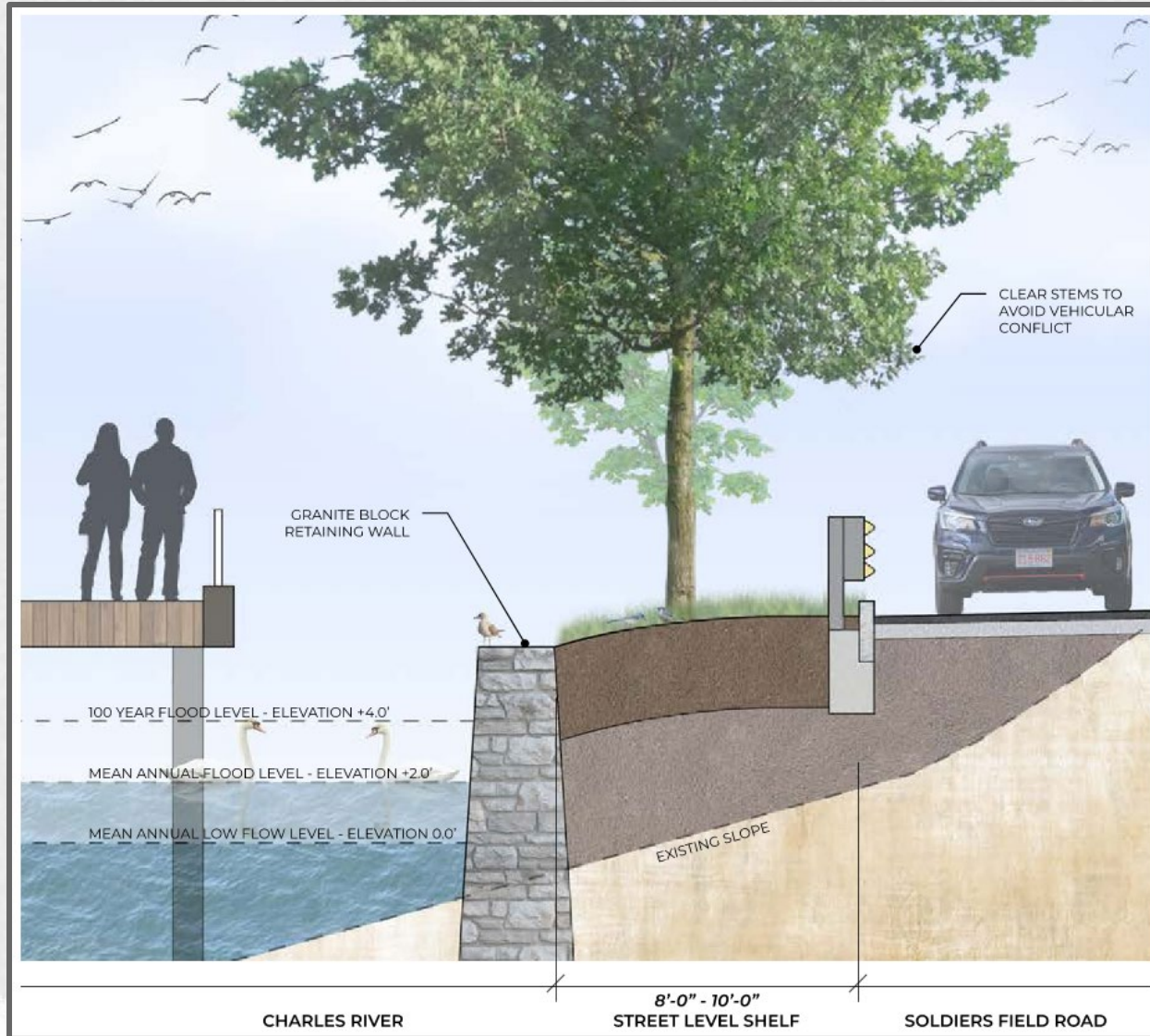
Shoreline Alternatives



Alternative Planted Slope Option #1

- Improves parkway experience, provides ecological restoration and habitat opportunities, and maintains attractive views from the river
- High fill impacts, difficulty implementing in area of significant grade change, and maintenance challenges
- Potential to use this approach in the DCR parkland and in areas with less grade change

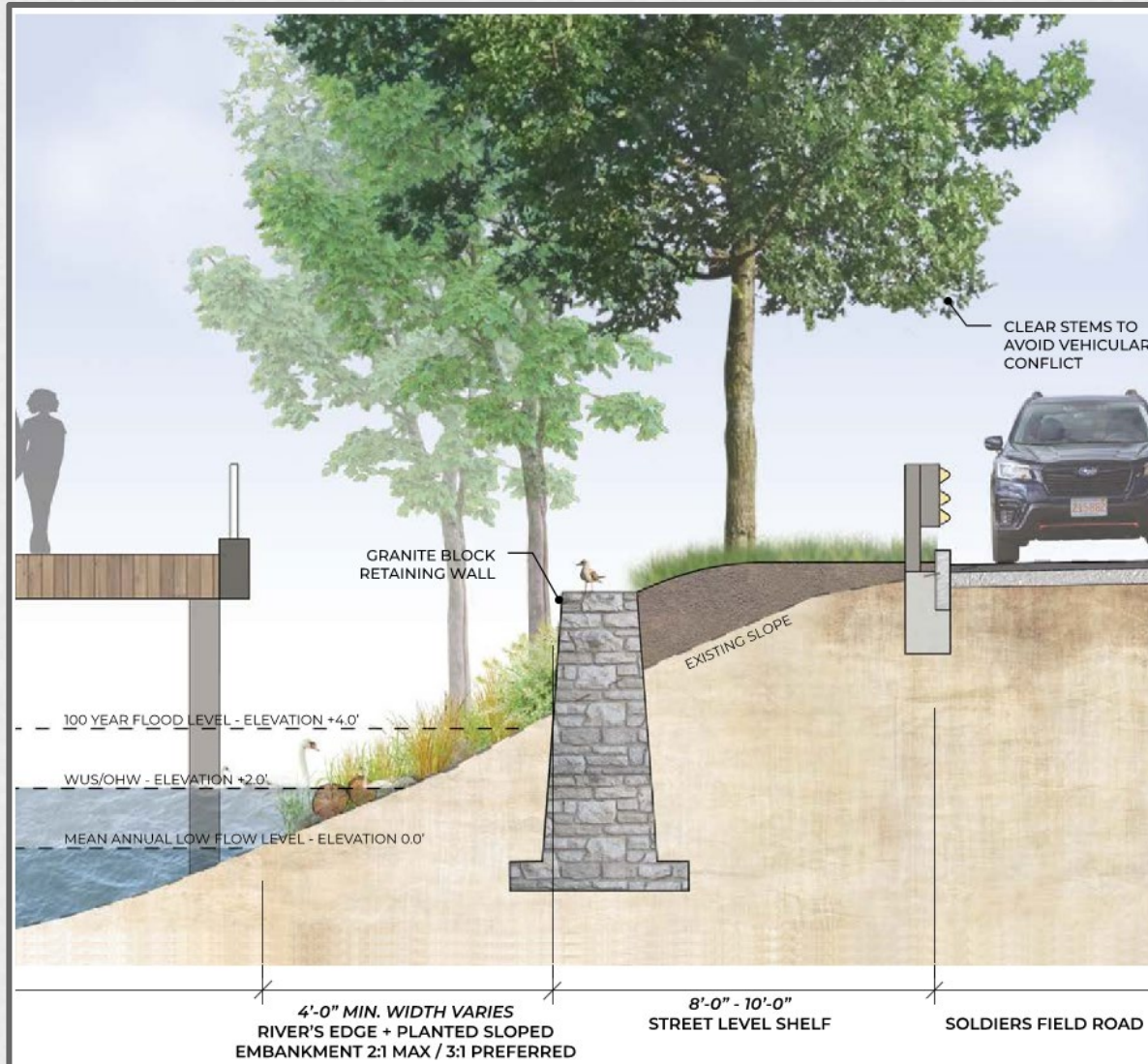
Shoreline Alternatives (Cont.)



Alternative Wall Option

- Improves parkway experience
- Similar to existing granite wall treatments elsewhere on the Charles
- Less ecological restoration or habitat opportunities
- Maintainable if turnouts are provided on the SFR

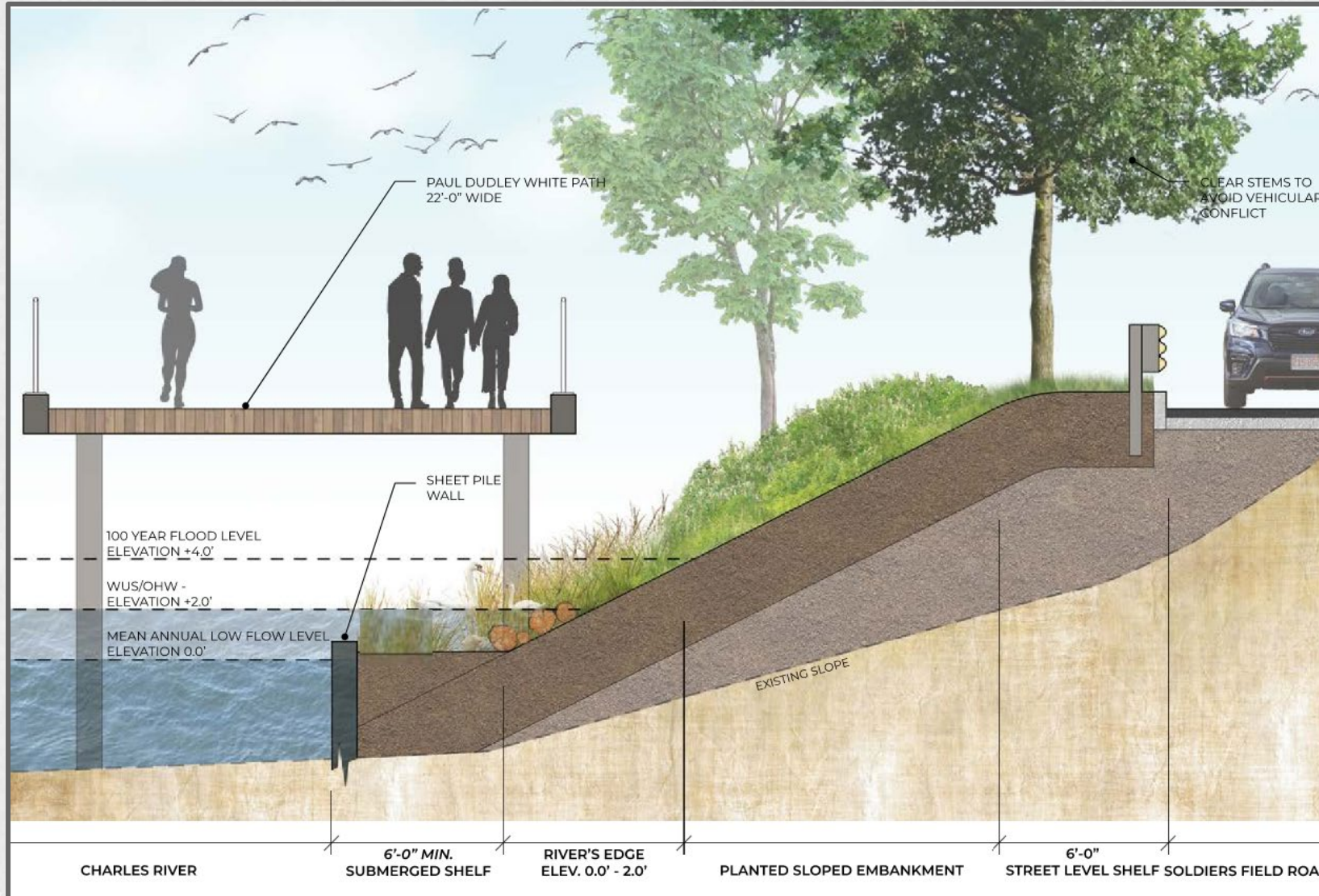
Shoreline Alternatives (Cont.)



Terraced Option

- Improves parkway experience, river's edge planting provides potential ecological restoration and habitat, improves views from river.
- Notable maintenance challenges for lower slope (requires access from river to maintain)

Shoreline Alternatives (Cont.)



Alternative Planted Slope Option #2

- Improves parkway experience, planted slope provides potential ecological restoration and habitat, improves views from river
- Reduces fill by use of sheet pile wall shelf
- Difficult to maintain due to PDW and need for water access

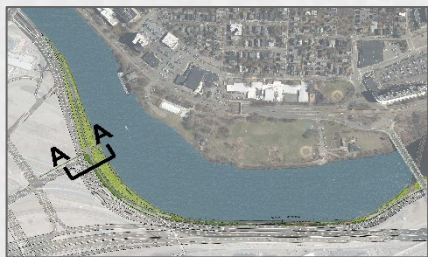
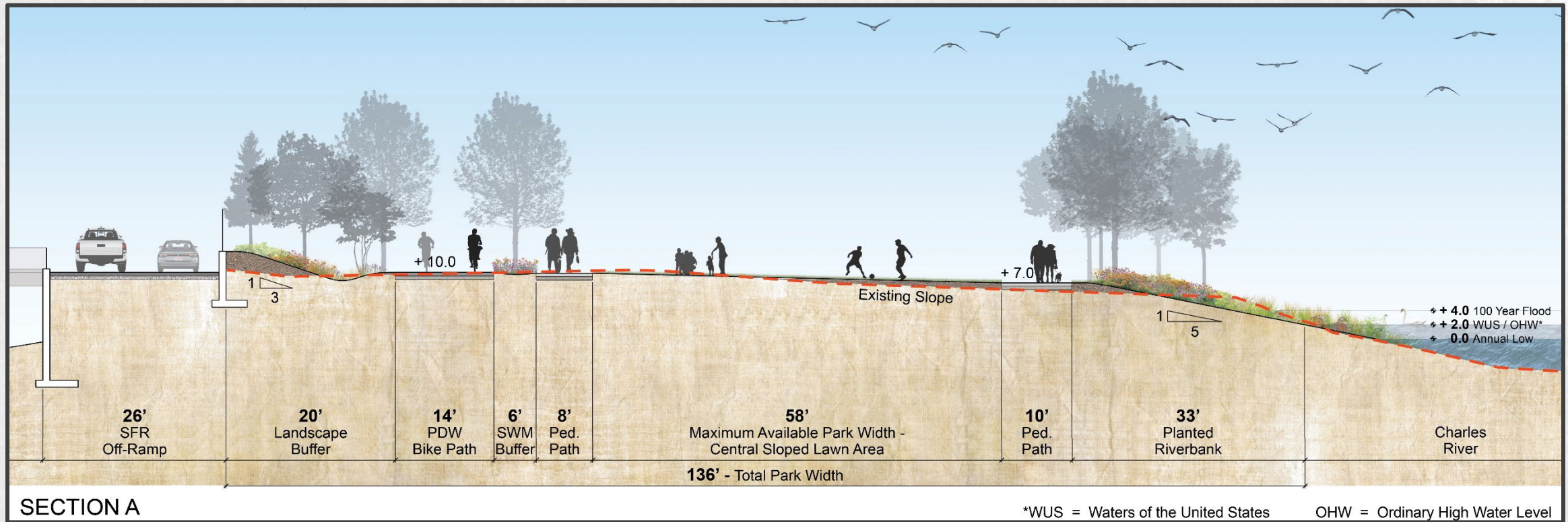
Shoreline Alternatives (Cont.)



DCR Parkland

- Beginning discussions and parkland design options with DCR
- New crescent-shaped, linear park with excellent river views
- Opportunity to improve access to and views of river
- New connections to future street grid and development

Proposed Riverbank Conditions – Design Evolution



KEY PLAN

Typical Park Conditions




- Opportunities for stormwater retention and infiltration combined with passive park use
- Opportunity to soften the steepness of the existing riverbank to improve ecological restoration and habitat opportunities without filling the river

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General Updates

- USDOT Grant Application
- Central Transportation Planning Staff (CTPS) Modeling
- Lincoln Street Noise Barrier



I-90 Allston Multimodal Project:
FY 2023
Reconnecting Communities and Neighborhoods Grant Program
September 28, 2023

Submitted to
Office of the Secretary of Transportation, USDOT

Submitted by
Massachusetts Department of Transportation
The City of Boston

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Modified At-Grade Option
(Looking West)