

MEMORANDUM

DATE: January 24, 2022

TO: Mayor and City Council

FROM: Katherine Kelly, Senior Policy Advisor
Rebecca Kennedy, Deputy Director, Community Development

RE: Interstate Bridge Replacement (IBR) Program Update

CC: Eric Holmes, City Manager

Staff will present an update to Council on the status of the Interstate Bridge Replacement (IBR) Program at their January 24, 2022 workshop. This is the first of a series of workshops with Council through June, 2022, at which time it is anticipated that a Modified Locally Preferred Alternative (LPA) for the IBR Program will be selected. Prior to June, staff anticipates returning to Council to share additional technical details and for further discussion and direction on a Modified LPA. Components of the Modified LPA are yet to be formally defined but it is anticipated that they will include:

- 1) the type of bridge replacement over the Columbia River;
- 2) the general alignment of a dedicated guideway, mode, and terminus for high capacity transit;
- 3) conceptual designs of enhancements for interchanges in the Program area;
- 4) the general location and type of active transportation enhancements;
- 5) determination of whether to replace the North Portland Harbor Bridge; and
- 6) agreement on a process to define a tolling program to fund construction of the IBR Program components.

Background

The most recent workshop discussions with Council on the IBR Program were in June and July 2021. Those discussions focused on the status of the Program at that time and development of Resolution M-4140 (Attachment A) which defines the City's Desired Outcomes from the Program. In addition to workshop discussions in the summer of 2021, brief updates on preparing for and outcomes of the Program's Executive Steering Group meetings have been presented to Council monthly via Mayor's Communications. There have also been numerous technical staff meetings as well as community engagement events and forums to define potential community benefits and desired outcomes in development of design options for the LPA components.

In December, 2021, the IBR Program posted initial design options for consideration on their website with a survey seeking community feedback on those options. Attachment B summarizes the design options included on that survey.

Next Steps

Feedback from the December, 2021 survey along with additional feedback from partner agency Councils, Board, and Commissions along with the Program's advisory groups through Spring 2022 will inform drafting of the Modified LPA. Subsequent to approval of the Modified LPA anticipated in June, 2022, the Program will begin the Design Phase on a Modified LPA through 2024 with Construction slated to begin in 2025.

For additional IBR Program information see: www.interstatebridge.org. Program history and timelines, information on advisory groups, and information about the purpose and need for the Program are included.

Attachments:

- A. Resolution M-4140: Vancouver Interstate Bridge Replacement Program Desired Outcomes
- B. Summary of design options for consideration included in a December 2021 community survey.

July 26, 2021

RESOLUTION NO. M-4140

A RESOLUTION supporting the replacement of the Interstate Bridge between the State of Washington and State of Oregon, guided by the principles herein.

WHEREAS, Interstate 5 is a corridor of national significance that serves the entire west coast of the United States, as well as international commerce with Canada, Mexico, and all of the countries of the Pacific Rim that access US west coast seaports; and

WHEREAS, the Interstate Bridge is a key economic connector to two major ports and much of the industrial land in the Vancouver-Portland Metropolitan Region; and

WHEREAS, Interstate 5 between Vancouver, Washington and Portland, Oregon experiences some of the most severe congestion along the entire length of the Interstate 5 corridor, especially during the daily commuting periods, affecting travel time reliability and hindering the efficient movement of people, freight, goods, and services; and

WHEREAS, the existing Interstate Bridge spans are functionally obsolete and do not meet current seismic standards, and in their current condition will hinder regional emergency response and recovery from a major seismic event; and

WHEREAS, frequent crashes on the corridor and on the Bridge affect public safety; and

WHEREAS, bicycle and pedestrian facilities on the Bridge are unsafe and do not meet Americans with Disabilities Act standards; and

WHEREAS, existing bi-state public transit service is inadequate to meet demand, and existing service operates in mixed-traffic, which has significant negative impacts on performance and operational outcomes; and

WHEREAS, high capacity transit in a dedicated guideway does not currently connect Vancouver and Portland, and high capacity transit with a dedicated guideway would provide greatly improved transit service with much better schedule reliability and service than mixed-traffic operation and support existing and planned land uses; and

WHEREAS, replacement of the Interstate Bridge is needed to support critical trade routes, address congestion, improve safety, and provide transportation choices; and

WHEREAS, the City of Vancouver adopted Resolution M-3975 on August 6, 2018, in support of planning, design, and construction of an Interstate replacement bridge, high capacity transit with a dedicated guideway, and a multimodal approach to enhance regional travel needs;

WHEREAS, a Memorandum of Intent was signed by Oregon and Washington Governors Brown and Inslee on November 18, 2018 to formally kick off joint efforts between the two states to replace the Interstate Bridge;

WHEREAS, a program called the Interstate Bridge Replacements Program (IBRP) to plan, design, and construct the replacement Interstate Bridge across the Columbia River including associated multimodal and urban design enhancements was begun in 2018 by an Oregon-Washington Bi-State Legislative Committee; and

WHEREAS, the IBRP is now in the planning and environmental phase with development of a Locally Preferred Alternative anticipated for consideration in Spring of 2022; and

WHEREAS, the City of Vancouver has identified livability, equity and inclusion, safety, innovation, sustainability and resiliency, connectivity, aesthetics, and community trust and relationships as guiding principles for the IBRP program; and

WHEREAS, the City of Vancouver, as an IBRP partner agency, shall guide and influence development of design options in a timely manner and within the framework of identified principle values;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF VANCOUVER:

The City of Vancouver City Council supports IBRP design options with outcomes that:

- a. Meet or exceed climate and equity goals as defined by the city, region, and IBRP advisory groups during all phases of the program; and

Section 1 - The Built Environment.

- b. Construct the bridge and all related structures to be resilient in the event of a Cascadia Seismic event
- c. Support efforts to make current and future Downtown Vancouver a thriving and attractive place to live, work, and visit within the greater Portland-Vancouver region
- d. Improve connectivity for all users among key downtown and Historic Reserve destinations to support economic vitality and placemaking opportunities
- e. Extend Main Street to the Vancouver waterfront and identify additional opportunities to reconnect other local roadways within the bridge influence area
- f. Improve access to transit for all users
- g. Improve access and connectivity throughout local bikeway, roadway, and sidewalk systems

- h. Improve multimodal access and connectivity to, from, and across the Interstate 5 regional highway system to Downtown Vancouver and the Historic Reserve area
- i. Include a dedicated guideway for transit that accommodates multiple high capacity transit modes and is designed to serve both current and future transit needs as the region grows
- j. Replace and/or upgrade subsurface City assets where appropriate to support new infrastructure, and

Section 2 - Urban Design.

- k. Prioritize the movement of people, freight, and goods
- l. Emphasize and center human and natural systems
- m. Integrate and recognize the IBRP area's history, especially that of Indigenous Peoples
- n. Better connect the west side of Interstate 5, the City's core downtown area, with the east side of Interstate 5, the City's Historic Reserve area, via a lid or some other public open space over Interstate 5 south of Evergreen Street connecting Library Square to the Historic Reserve
- o. Create new public open spaces under the bridge that serve the region's diverse and growing community, connect Vancouver's waterfront, and integrate with existing and forthcoming open space investments
- p. Establish continuity and integration of design associated with transit improvements that complement existing and future downtown transit investments
- q. Integrate new aesthetic features to amplify Vancouver and associated bridge improvement elements as landmark destinations, and

Section 3 - Mobility.


- r. Focus on efficient, connected, and safe movement of people, freight, and goods
- s. Provide more reliable travel for all modes and all users
- t. Reduce overall Interstate Bridge congestion and length of peak congestion periods including no lift span on the bridge
- u. Reduce peak period impacts on the local road system
- v. Reduce collisions on local roads leading to and within downtown
- w. Incorporate tolling to fund construction of the Bridge and associated elements
- x. Retain three through travel lanes on Interstate 5 in the Bridge Influence Area and, based on updated analyses, accompanying auxiliary lanes to support the Program's Purpose and Need; and


Section 4 - Construction and Ongoing Operations and Maintenance.

- y. Meet or exceed requirements to employ Minority, Women, and Disadvantaged Business Enterprise (WMDBE) firms
- z. Create opportunities for inter-generational wealth through workforce investment programs during planning, design, and construction phases of the program
- aa. Implement tolling in an equitable manner that includes mitigation programs
- bb. Proactively mitigate construction impacts to Downtown Vancouver businesses, residents, and visitors
- cc. Efficiently manage post-construction operating and maintenance costs, and
- dd. Use climate smart construction materials built for existing and future types of transportation.

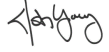
ADOPTED at a Regular Meeting of the Vancouver City Council this 26th day of July,
2021.

Attest:

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Natasha Ramras, City Clerk

DocuSigned by:

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Anne McEnerny-Ogle, Mayor

Approved as to form:

DocuSigned by:

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Jonathan Young, City Attorney

October 2021

IBR Preliminary List of Design Options

In 2011, a Final EIS and Record of Decision for the prior work on the program was published. In the years subsequent to that decision, the baseline conditions, regulatory and policy context, and community priorities have changed, including:

- Regional, state, and local equity policies and priorities
- Regional, state, and local climate goals and priorities
- Oregon tolling/congestion pricing programs being studied
- Demographics along the I-5 corridor and nearby neighborhoods
- COVID-19 impacts on transportation
- Environmental regulations
- Expanded transit service in the corridor (i.e., VINE BRT and bus-on-shoulder on I-5 in Vancouver)
- Current Regional Transportation Plans and City Comprehensive Plans
- Updates to USACE, USCG and FAA requirements
- Land use policies, planned development, and zoning changes
- Federal transit funding requirements
- Freight/industrial activity

To address these changes, the IBR program collaborated with lead Federal agencies (FHWA and FTA) and partner agencies to identify how these changes affected prior assumptions, data analysis, designs, anticipated impacts and benefits, as well as mitigation for adverse impacts. Building on past work, the program in collaboration with agency partners developed high-level design options to respond to changes while incorporating current regional values and priorities into the IBR Solution. Input on these design options will be gathered through a variety of community engagement strategies. The design options pertain to the following program areas:

- Hayden Island and Marine Drive interchanges including the North Portland Harbor bridge
- Bridge Crossing over the Columbia and Alignment
- Downtown Vancouver
- Vancouver Interchanges
- Transit
- Active transportation improvements

The design options will continue to be developed during the fall of 2021 to show more detail including local street connections and access to multi-use paths, ramps, and transit options. This fall, the program is sharing the design options with the community and is gathering feedback to inform the decision-making process. Following engagement with advisory groups, steering groups and the community, additional refinements, details, or options may be developed as needed to address feedback. Screening criteria are being developed

and aligned with the IBR Desired Outcomes. The criteria will help narrow the design options, which are being informed by multiple sources including:

- Original Purpose & Need and Vision & Values
- Feedback from the community and agencies around transportation problems and values
- Program climate framework
- Program equity framework developed by the Equity Advisory Group
- Community Values and Priorities informed by the Community Advisory Group
- Partner agency engagement and input
- Technical expertise
- Broad community engagement efforts

During November and December 2021, the design options will be evaluated using the screening criteria. Recommendations and decisions will be made through discussions with the program, partner agencies, lead Federal agencies, and the Bi-State Legislative Committee. Ultimately, these options will be woven together into the multimodal draft IBR Solution. Once the draft IBR solution is identified, the program will advance that solution into the detailed environmental review process in spring 2022.

NORTH PORTLAND HARBOR BRIDGE

Since previous studies, the North Portland Harbor bridge has aged another 10 years and it is no longer cost-effective to rehabilitate it. Replacing it will improve seismic resiliency throughout the entire program area and on I-5. Additional work will be done to identify impacts and considerations of replacing this bridge.

Equity considerations: Unclear at this stage.

Climate considerations: Replacement bridge will be designed with current and future river conditions in mind, and it will integrate as appropriate with the overall plan for transit and active transportation.

BRIDGE CROSSING OVER THE COLUMBIA RIVER AND ALIGNMENT OPTIONS

Summary: Initial options for the river crossing will look at the horizontal alignment and configuration of the bridge. The program will work through additional considerations like bridge height and bridge type in the future. Combinations of options being considered include configurations with two separate bridges, a single stacked bridge and alignments that include a curved alignment and a straight alignment. These configurations separate vehicles, high-capacity transit, and the multi-use path in various ways. Some of these options are easier to construct than others, and some result in a smaller footprint over the river. The modeling and screening process will help identify additional tradeoffs to consider when analyzing the options.

Equity considerations: All options provide dedicated transit guideway and dedicated wide multiuse path to create appealing and effective transit and active transportation opportunities. Exposure to noise – of particular importance to pedestrians who are blind or visually impaired and rely heavily on sound to navigate – could differ between the options. Options may also carry different implications in terms of displacement or other impacts to houseless populations living in the area.

Climate considerations: All options provide dedicated transit guideway and dedicated multi-use path space to create appealing and effective transit and active transportation opportunities. Current and future river conditions are taken into consideration.

Figure 1: The 2013 LPA alignment option has two bridges and a curved alignment, with highway lanes on the top level and transit and a multi-use path on the bottom level.

- **Technical considerations:** This option provides a narrowed footprint, with the transit and multi-use path under the highway (in comparison with all modes on one level). The curved alignment connects the new bridge to the existing North Portland Harbor bridge and the existing highway corridor in Vancouver.

Figure 1. 2013 LPA option

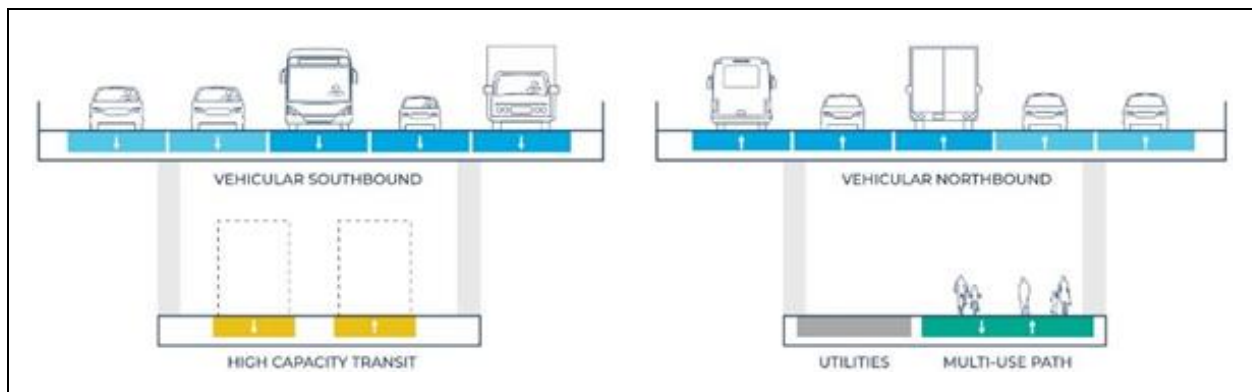


Figure 2. 2013 LPA option, continued



Figure 2: The straight alignment option removes the curve as much as possible while maintaining the two bridge/two-level highway over the transit/multi-use path configuration shown in Figure 2.

- **Technical considerations:** The straight alignment is west of the Interstate 5 (I-5) corridor on Hayden Island. This alignment makes the likely North Portland Harbor bridge replacement less complex. A straight alignment is less complex to construct than a curving structure.

Figure 3. Straight alignment option

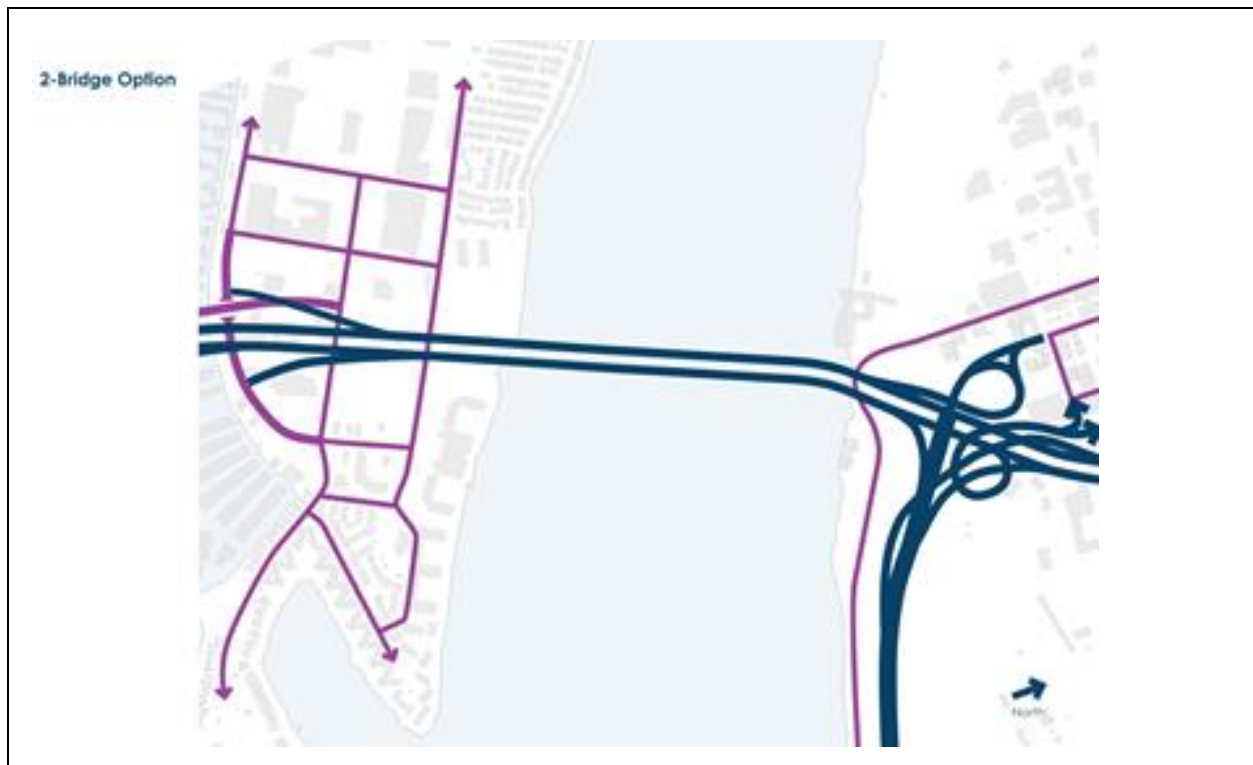
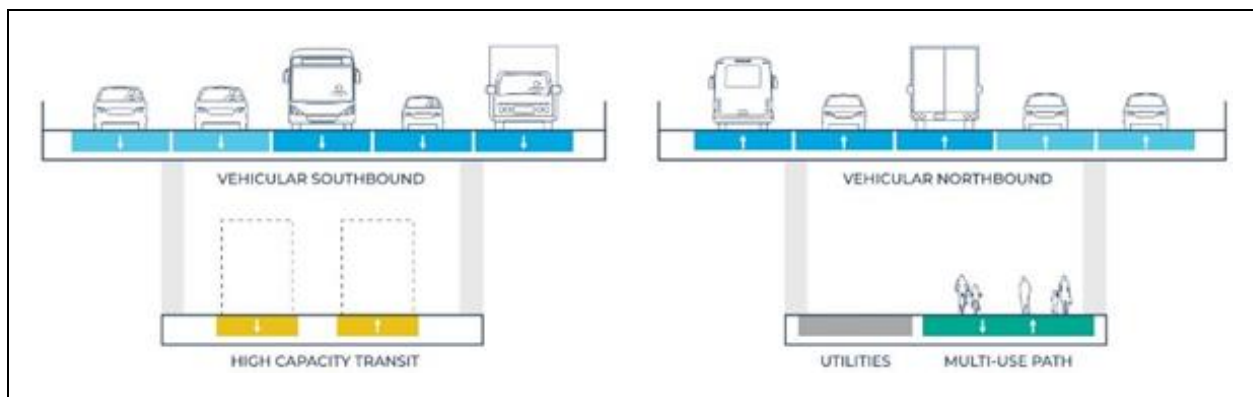
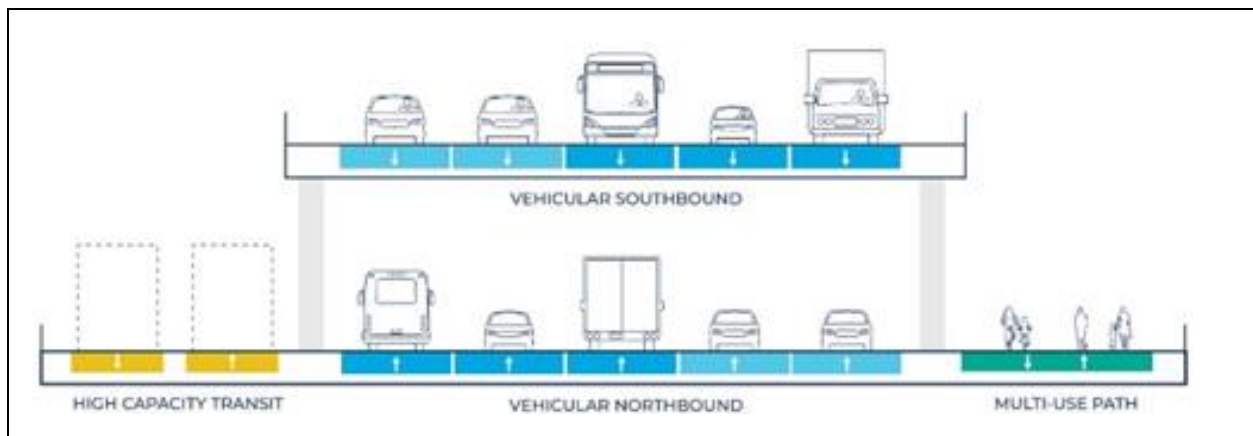


Figure 3: The stacked alignment option consolidates all elements into one bridge, with southbound highway lanes on top of northbound highway lanes. Transit and the multi-use path would be on the lower level on each side of the bridge.

- **Technical considerations:** This one-bridge solution would have a smaller footprint over the river and reduce the number of foundations in the water compared to the other options, thus minimizing impacts to the natural environment and surrounding areas.

Figure 4. Stacked alignment option



DOWNTOWN VANCOUVER OPTIONS

Summary: Preliminary design options in this location consider the alignment and configuration for the downtown and State Route 14 interchange. These options consider ways to connect downtown into a higher I-5 corridor (necessary for bridge replacement options), connect local roadways under I-5, extend Main Street connections under I-5, and connect pedestrian paths from local streets to the river crossing. Additional analysis is needed to identify how to connect from downtown into the river crossing options being considered. The modeling and screening process will help identify additional tradeoffs to consider when analyzing the options.

Equity considerations: Downtown Vancouver has a high proportion of low-income households, people with disabilities, and zero-vehicle households, underscoring the importance of convenient access to transit and active transportation options. East-west connectivity, as emphasized by the EAG, is improved. Options may carry different implications in terms of displacement or other impacts to houseless populations living in the area.

Climate considerations: All design options land the transit and multi-use path in downtown Vancouver creating walkable access to these transportation options.

Figure 4: The interchange option based on the 2013 LPA reconstructs all ramp connections that are currently available and connects the ramps to the higher I-5 corridor. Local roads are extended under the I-5 corridor to extend Main Street and extend the east-west connections under the bridge. The path connects the river crossing to Columbia Street. This configuration is possible with either the curved or the straight alignment river crossing option.

Figure 5. 2013 LPA option

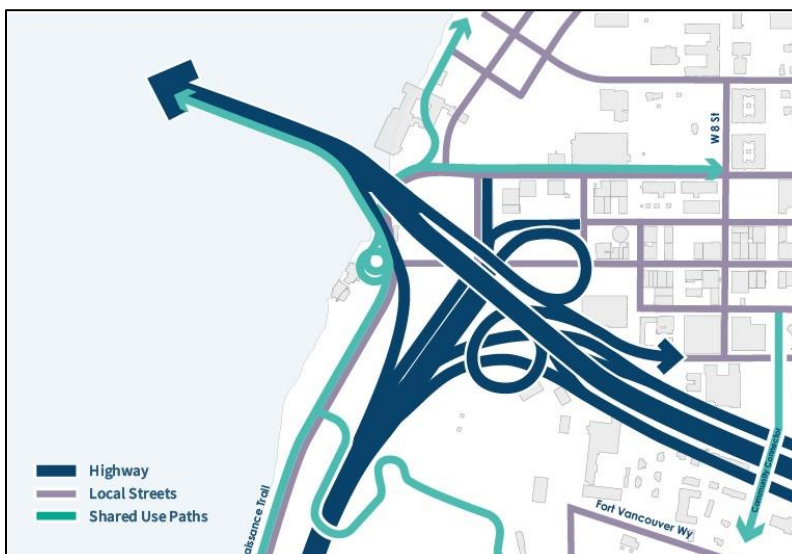
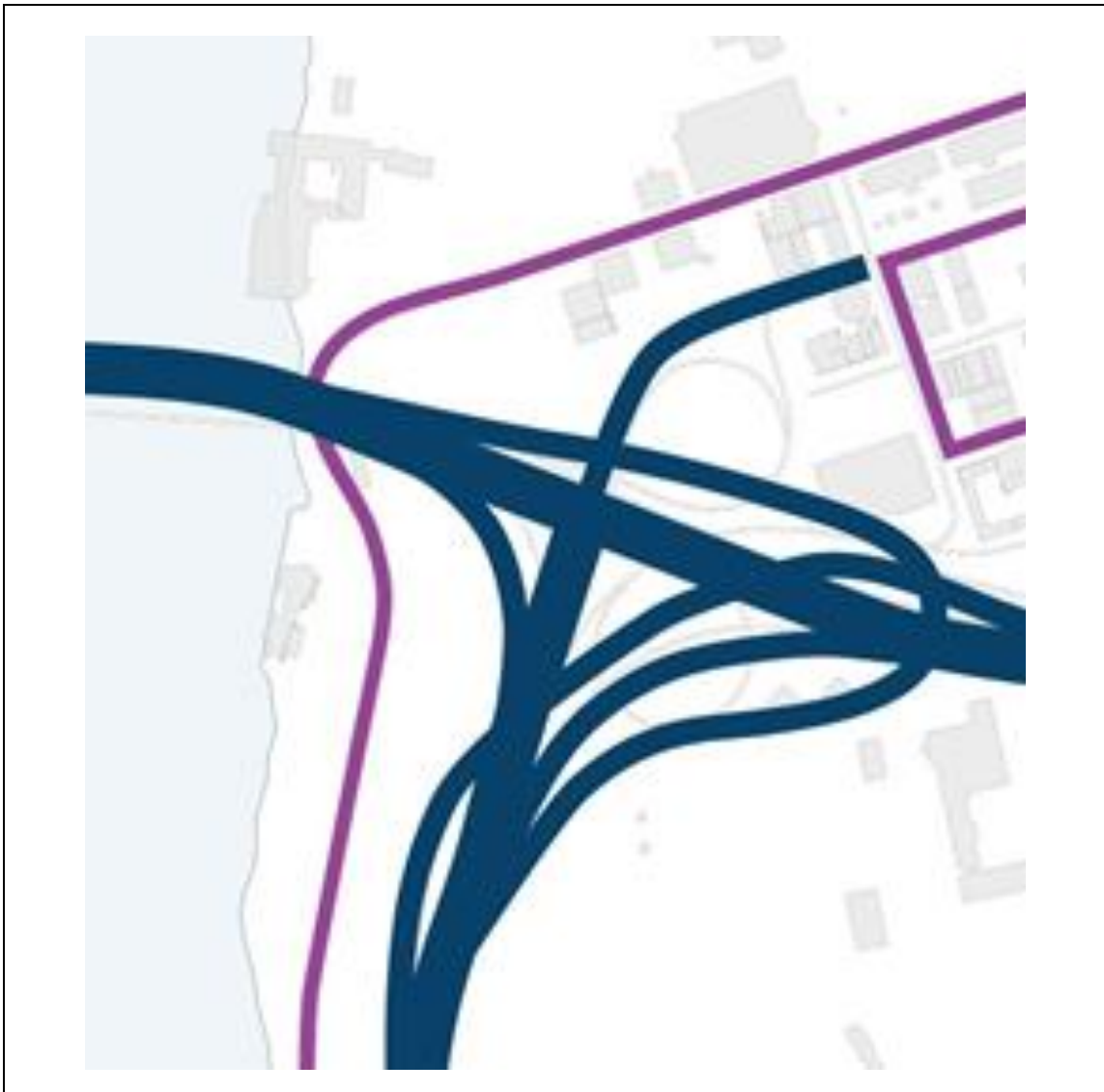


Figure 5: The stacked river crossing alignment over the river results in modified geometry for several ramps. Additional studies are needed to determine if C Street ramps to I-5 can be incorporated into the design.

- **Technical considerations:** The one-bridge solution requires a consistent bridge width across the water. Near land, the interchange can influence the structure width to accommodate ramps, but this location is farther north than it would be with the two-bridge configuration. Removing some ramps and reconfiguring others is required to fit within the bridge constraints.

Figure 6. Option with stacked river crossing alignment



VANCOUVER INTERCHANGE OPTION

Summary: The preliminary design option at the Mill Plain and Fourth Plain exits reconstructs the interchanges with braided ramps and auxiliary lanes at Mill Plain and Fourth Plain and replaces overpasses at other locations along I-5 leading up to the river. The option being considered will incorporate other improvements that require additional engagement, such as improvements to connect bike and pedestrian access across I-5. Additional work is needed after screening and into the design phase to look more closely at intersection improvements at Mill Plain and Fourth Plain.

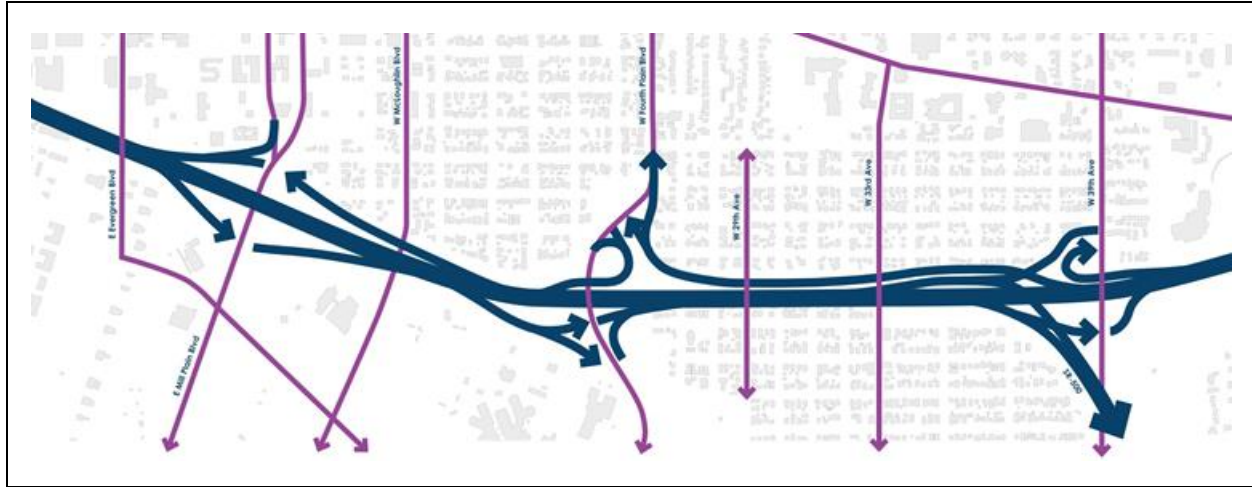
Equity considerations: All designs will improve pedestrian and bike pathways to support east to west travel (as emphasized by the EAG) and access to transit. Important destinations for equity priority communities include the Vancouver Community Library, the VA, Clark College, Hudson's Bay High School (a Title I school), and the Washington State School for the Blind. The Rose Village neighborhood (directly east of I-5 and south of SR-500) has a high proportion of multiple equity priority communities, including over half of households living below 200% of the federal poverty level.¹ Options may carry different implications in terms of displacement or other impacts to houseless populations living in the area.

Climate considerations: All designs will improve pedestrian and bike pathways to support east to west travel and access to transit.

Figure 6: The IBR program will reconstruct the interchanges at Mill Plain and Fourth Plain and will replace the crossing structures at Evergreen, 29th, and 33rd. Highway improvements include braided ramps and auxiliary lanes between closely spaced interchanges. Pedestrian and bike improvements will be incorporated into each bridge crossing I-5, streets under I-5, and a lid near Evergreen Road. As the project progresses into design phases, alternative intersection treatments will be considered at Mill Plain and Fourth Plain. These elements will be refined during the screening process and design.

¹ This is the threshold for the IBR program's definition of a low-income household.

Figure 7. Vancouver interchange option



HAYDEN ISLAND AND MARINE DRIVE INTERCHANGES OPTIONS

Summary: Design options being considered for roadway and interchange configurations include improvements to Marine Drive and a partial interchange, no interchange, or a full interchange on Hayden Island. The below drawings show high-level graphic representations of a variety of concepts being considered with small variations to local roadway connections. These options identify ways to access Hayden Island through Marine Drive if access from I-5 is not on the island and identify ways to connect local streets under I-5. Additional engagement is needed to determine details for connecting multi-use paths, with the intention to connect to the 40-mile loop trail.

Equity considerations: A significant number of retail and service industry jobs are located in this area. In terms of residents, Hayden Island has a high proportion of older adults and people with disabilities. All design options improve east-west connectivity, as emphasized by the Equity Advisory Group. A smaller footprint may result in more opportunities for ancillary development. Options may carry different implications in terms of displacement or other impacts to houseless populations living in the area that have not yet been determined.

Climate considerations: All design options strive to 1) improve access, safety and comfort for people walking and biking; 2) increase access and connection to transit options; and 3) foster walkable neighborhoods.

Figure 7: Full interchange configurations were included in the 2013 LPA. This configuration includes complete interchanges on both Hayden Island and Marine Drive. The multi-use path connects the river-crossing bridge to the 40-mile loop trail, with connections on Hayden Island. Local streets are reconnected under I-5 with some variations, including a third crossing under I-5 for Tomahawk Island Drive and an arterial bridge connecting Hayden Island to Expo Road. Roadway infrastructure is farther west in comparison with the LPA to replace the North Portland Harbor bridge. Note the graphic in Figure 7 is a sample and other options are also under consideration.

Figure 8. Full-interchange option

This shows a high-level graphic representation of a variety of concepts being considered with small variations to local roadway connections.

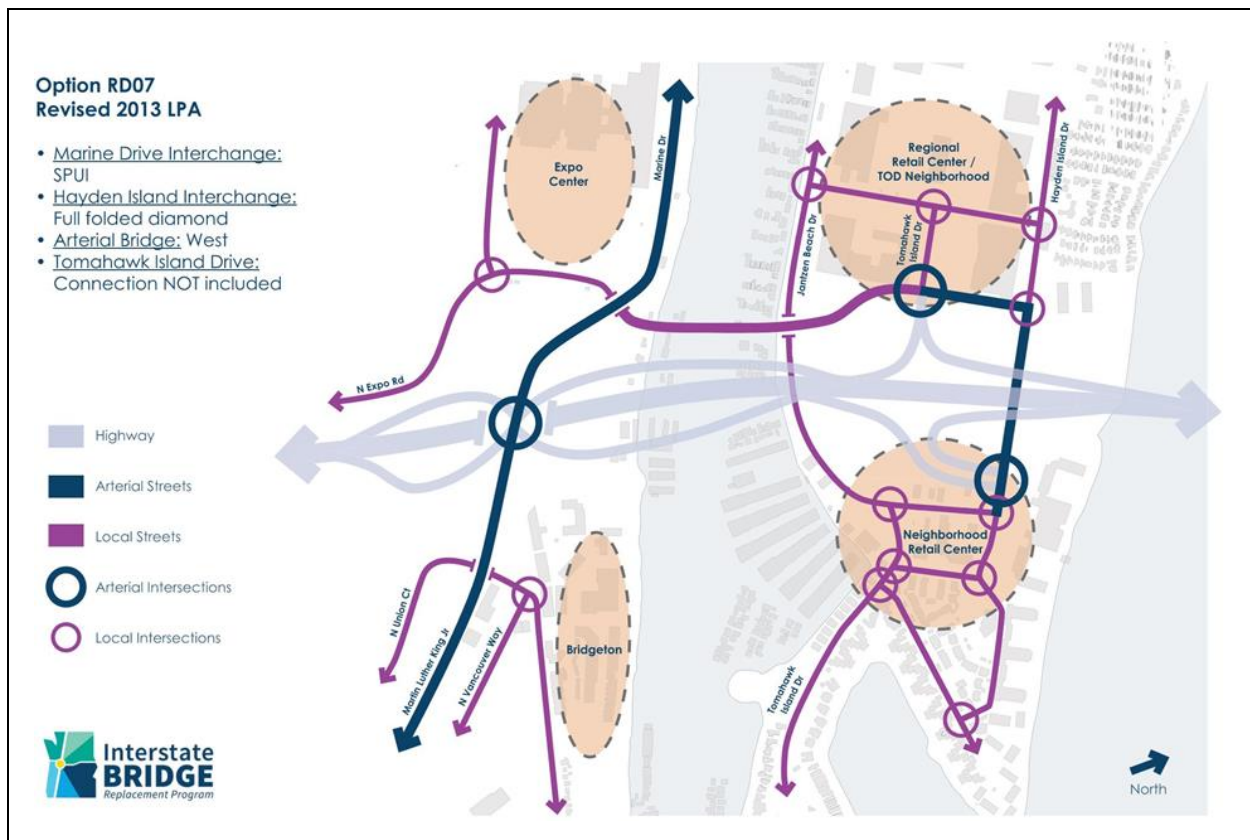


Figure 8: The partial interchange configurations provide ramps to/from the north to Hayden Island. A complete interchange at Marine Drive with access to/from the south is provided through the Marine Drive interchange and an arterial bridge connection between Marine Drive and Hayden Island. The multi-use path connects the river-crossing bridge to the 40-mile loop trail with connections on Hayden Island. Local streets are reconnected under I-5, including a third crossing under I-5 for Tomahawk Island Drive.

- **Technical considerations:** This configuration reduces the overall width, footprint, and associated impacts of the infrastructure improvements across North Portland Harbor and Hayden Island.

Figure 9. Partial-interchange option

This shows a high-level graphic representation of a variety of concepts being considered with small variations to local roadway connections.

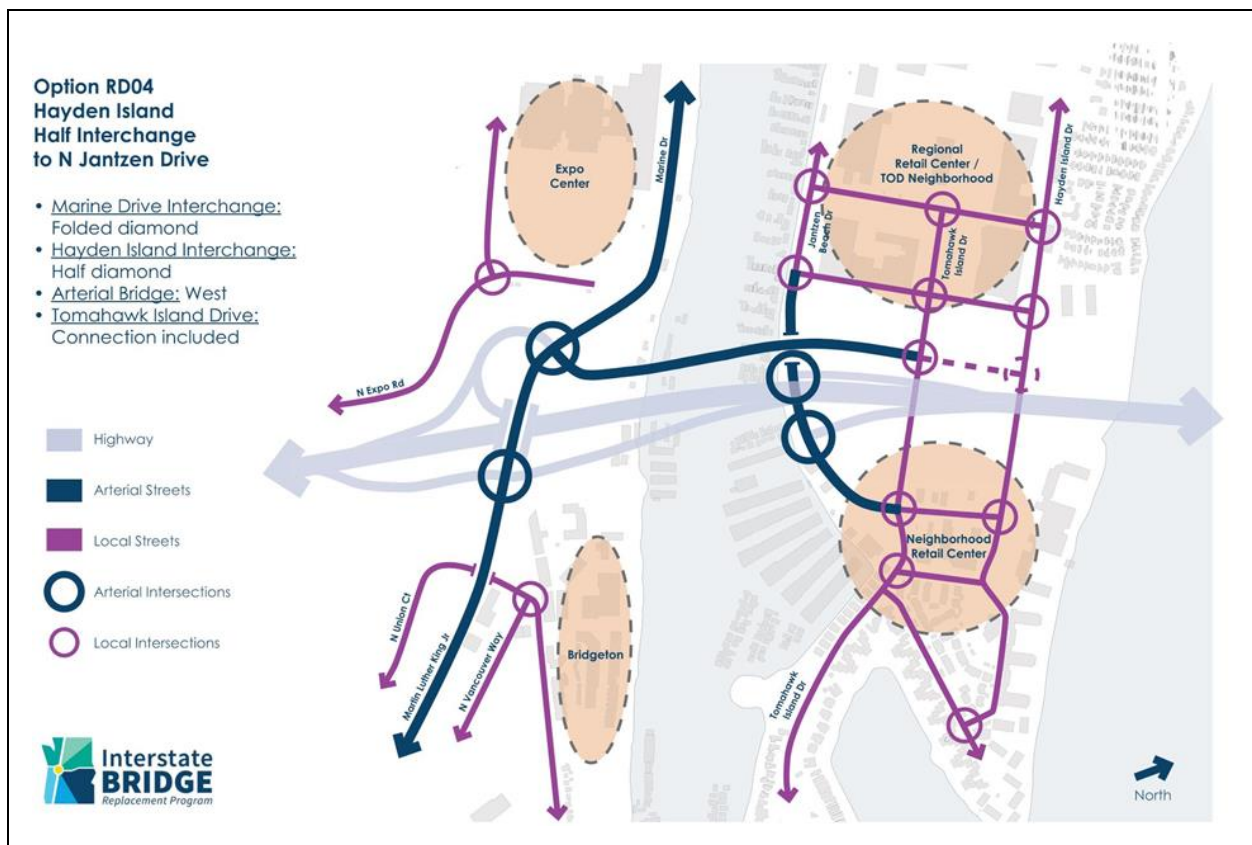
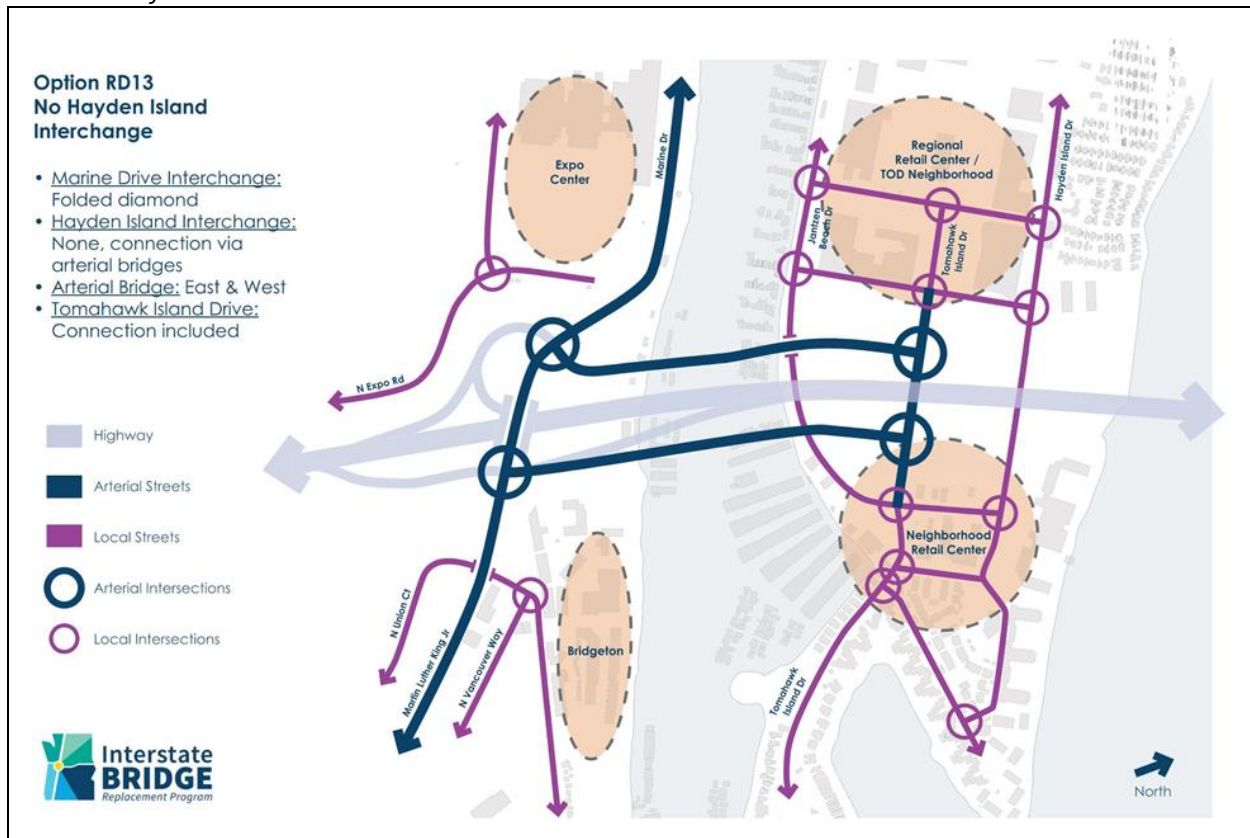


Figure 9: The no-interchange configurations provide a complete interchange on Marine Drive and access to Hayden Island through the Marine Drive interchange and arterial bridges.

- **Technical considerations:** This configuration minimizes the overall width, footprint, and associated impacts of the infrastructure improvements across North Portland Harbor and Hayden Island.















Figure 10. No-interchange option

This shows a high-level graphic representation of a variety of concepts being considered with small variations to local roadway connections.



TRANSIT OPTIONS

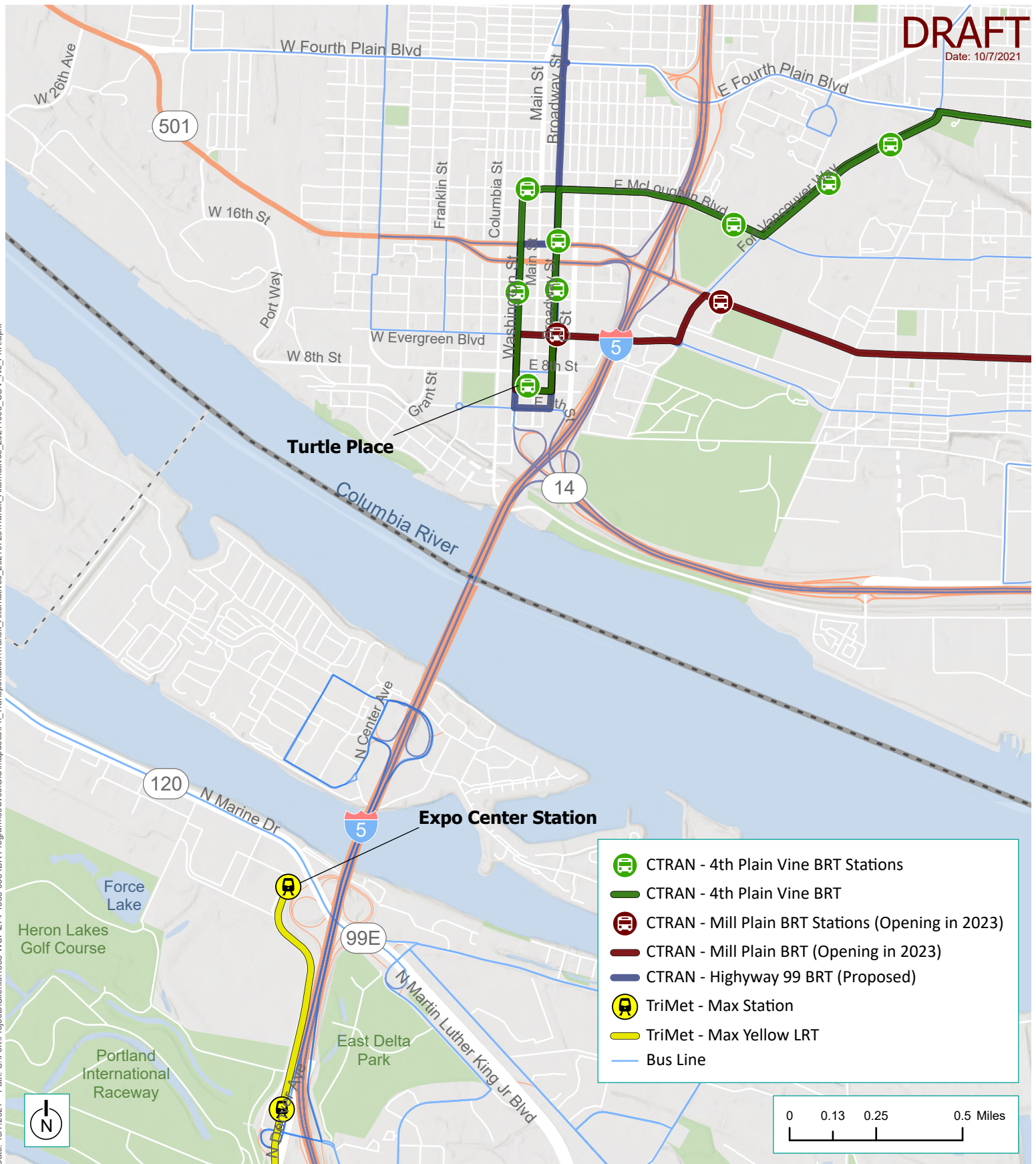
Transit options will have a unique set of data and analysis to inform decision making and support the data-driven process to identify how each transit option performs. The below measures will evaluate transit performance of the representative transit alignment options.

EVALUATION MEASURE	ALTERNATIVE SNAPSHOT
 Ridership	
 Transit Boardings	
 Corridor Transit Trips	
 I-5 Columbia River crossings	
 Station Mode of Access	
 Park and Ride Demand	
 Market Analysis	
 Transit Travel Time	
 Capital Costs	
 Operating and Maintenance Costs	
 Climate Resiliency	
 Proximity to HCT for Equity Priority Communities	
 Mobility for Equity Priority Communities	
 Potential Property Impacts	

Summary: Current preliminary transit options include various representative HCT alignments that expand transit service. These options extend both bus rapid transit and/or light rail from their current area of service to stations on Hayden Island and Vancouver. This list also includes an option with Express Bus.

Equity considerations: Station locations, mobility improvements, and property impacts are all key considerations in the development of transit options.

Climate considerations: All options increase transit choices for interstate travel in the program area.

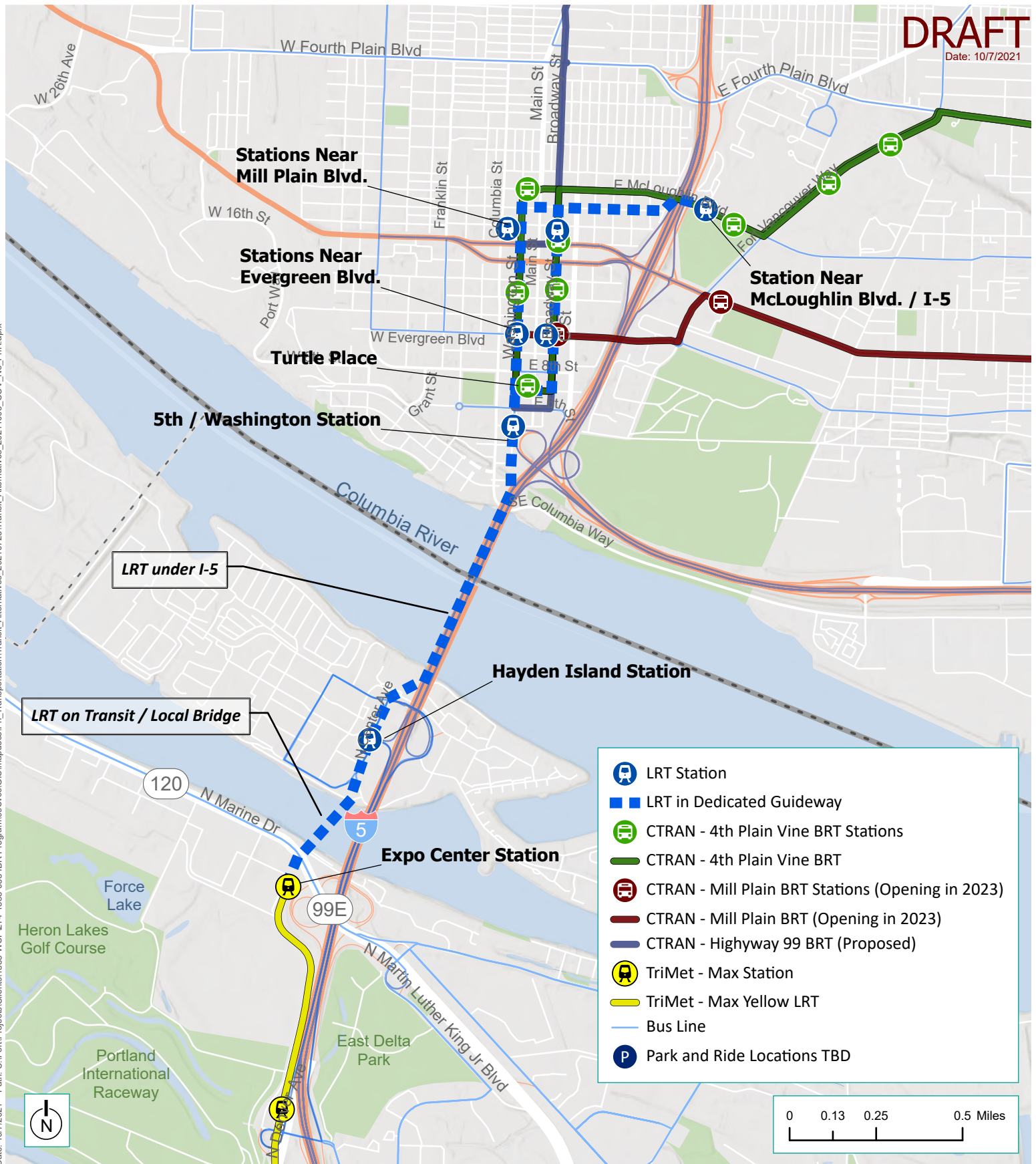


Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap

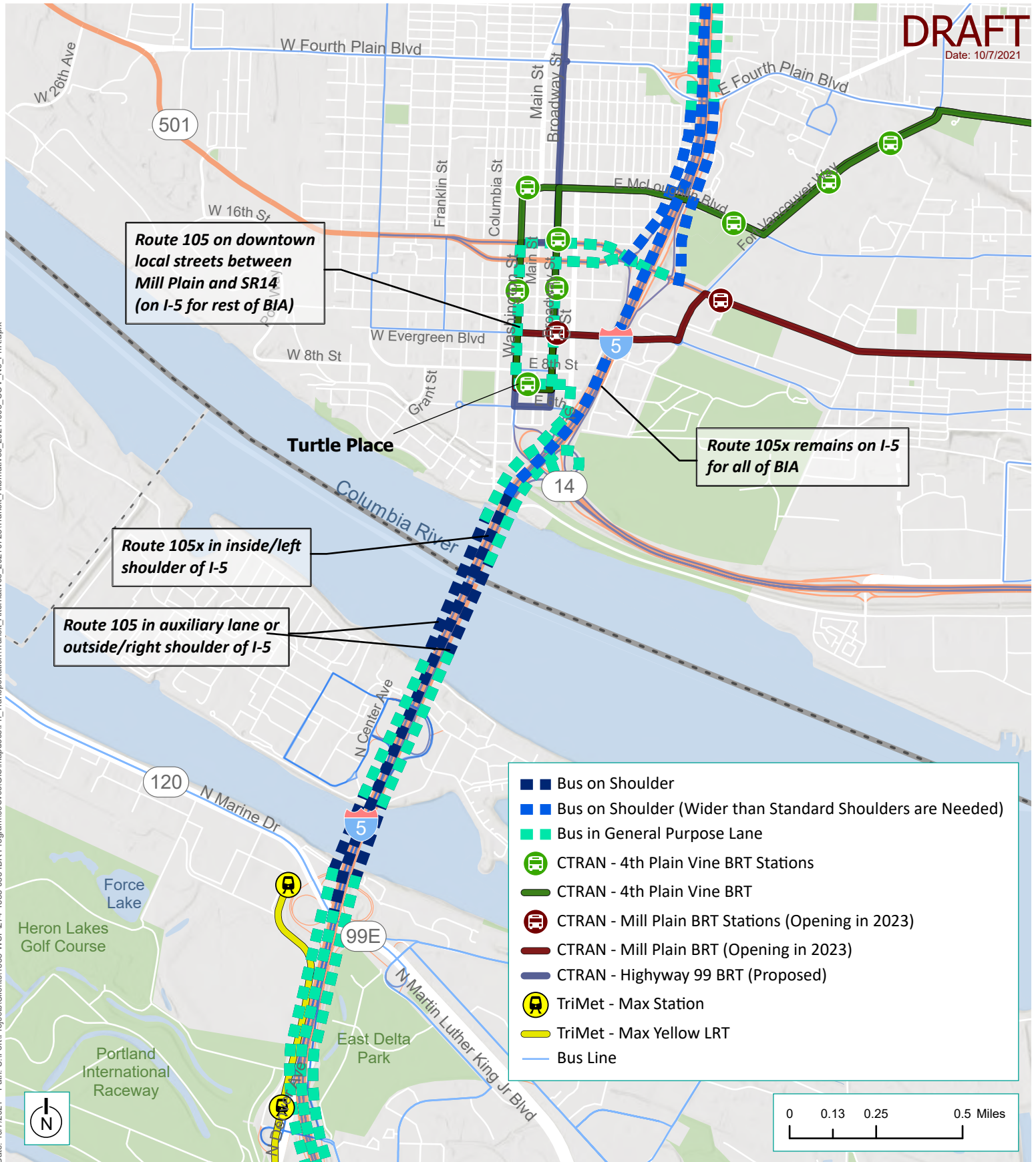
B 2045 Transit Project in the ROD

2045 IBR Model with RTP / MTP that includes CRC LPA

DRAFT
Date: 10/7/2021



Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap



Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap

D Dedicated BRT Turtle to Expo

Dedicated BRT Connection - Extend Vine(s) from Turtle Place to Expo Center

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Date: 10/7/2021

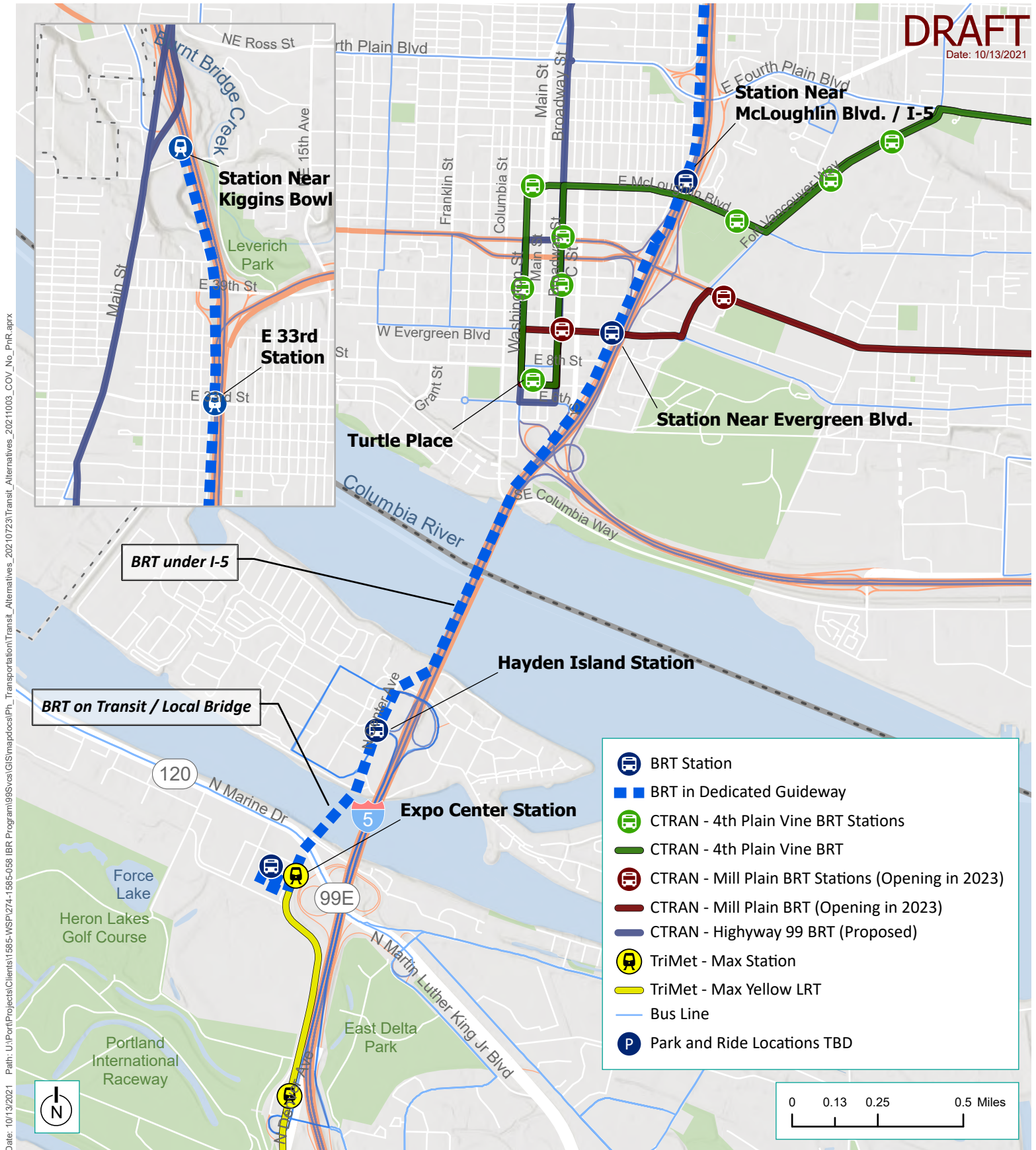


Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap

E Dedicated BRT Hugging I-5

Dedicated BRT Connection - Kiggins Bowl to Expo Center on an I-5 Adjacent Dedicated Guideway (West Side of I-5)

DRAFT
Date: 10/13/2021

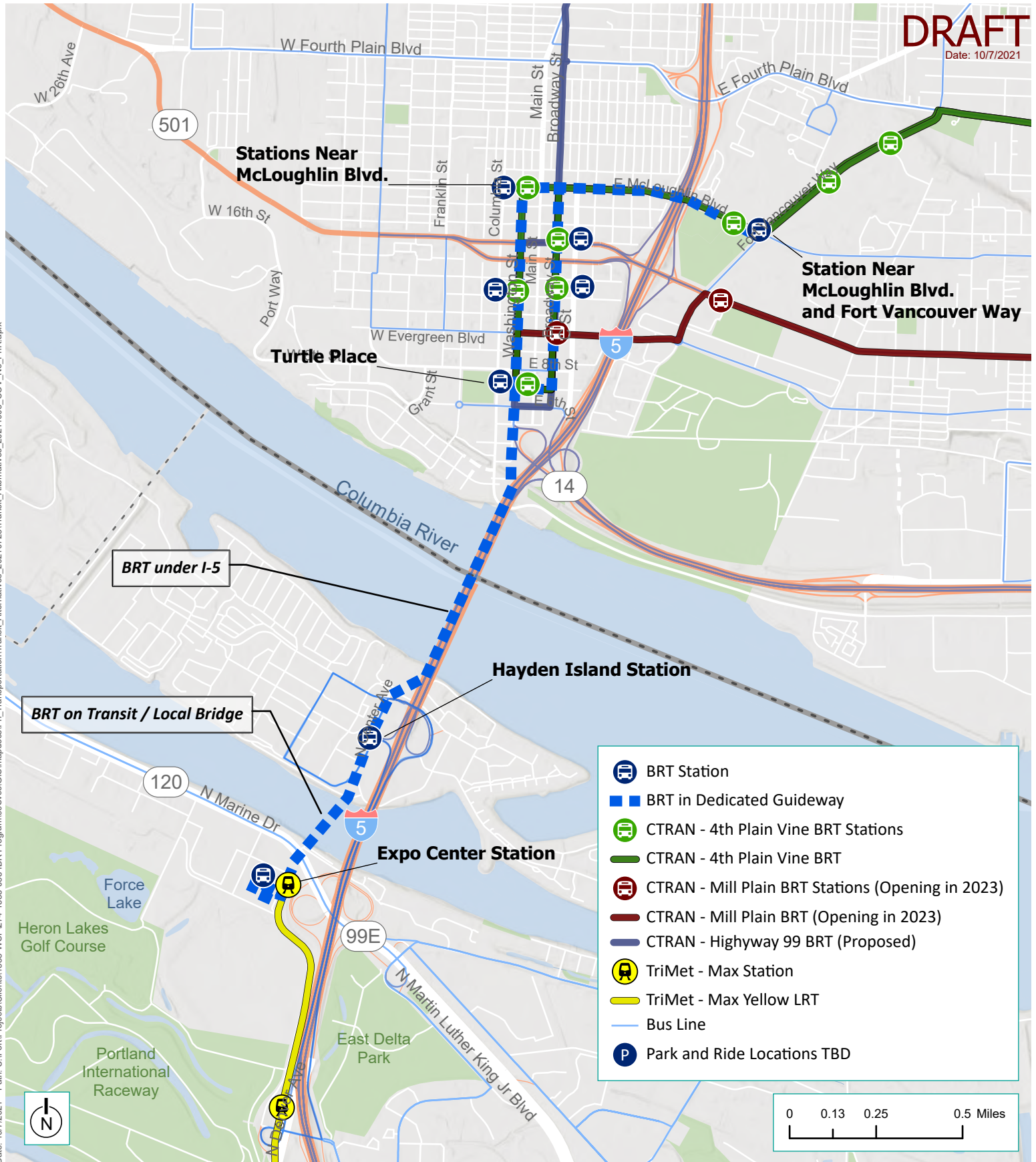


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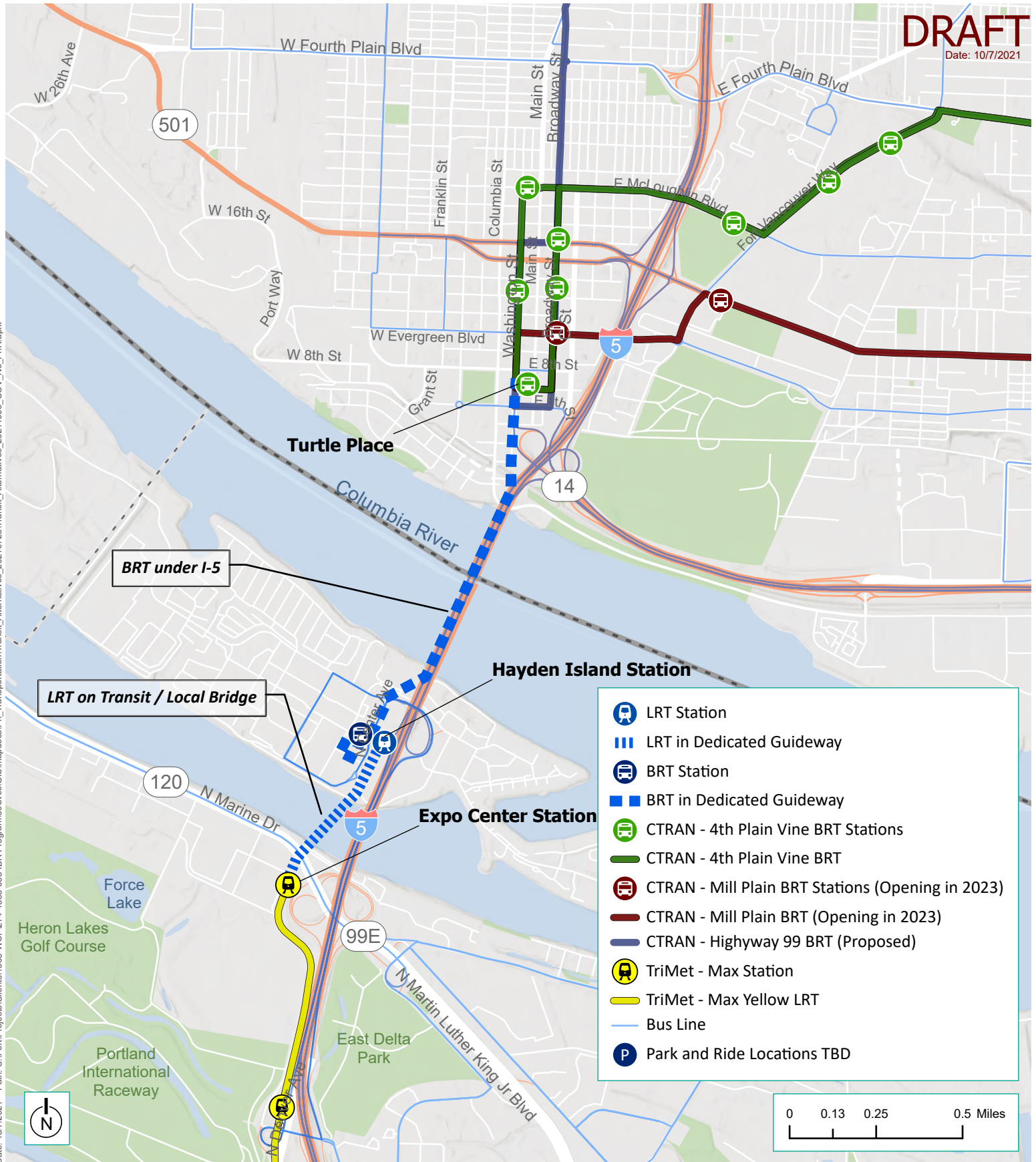
F Dedicated BRT through the CBD

Dedicated BRT Connection - McLoughlin/I-5 to Expo Center in a
Dedicated Guideway on the 2013 Transit Alignment

DRAFT
Date: 10/7/2021



Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap

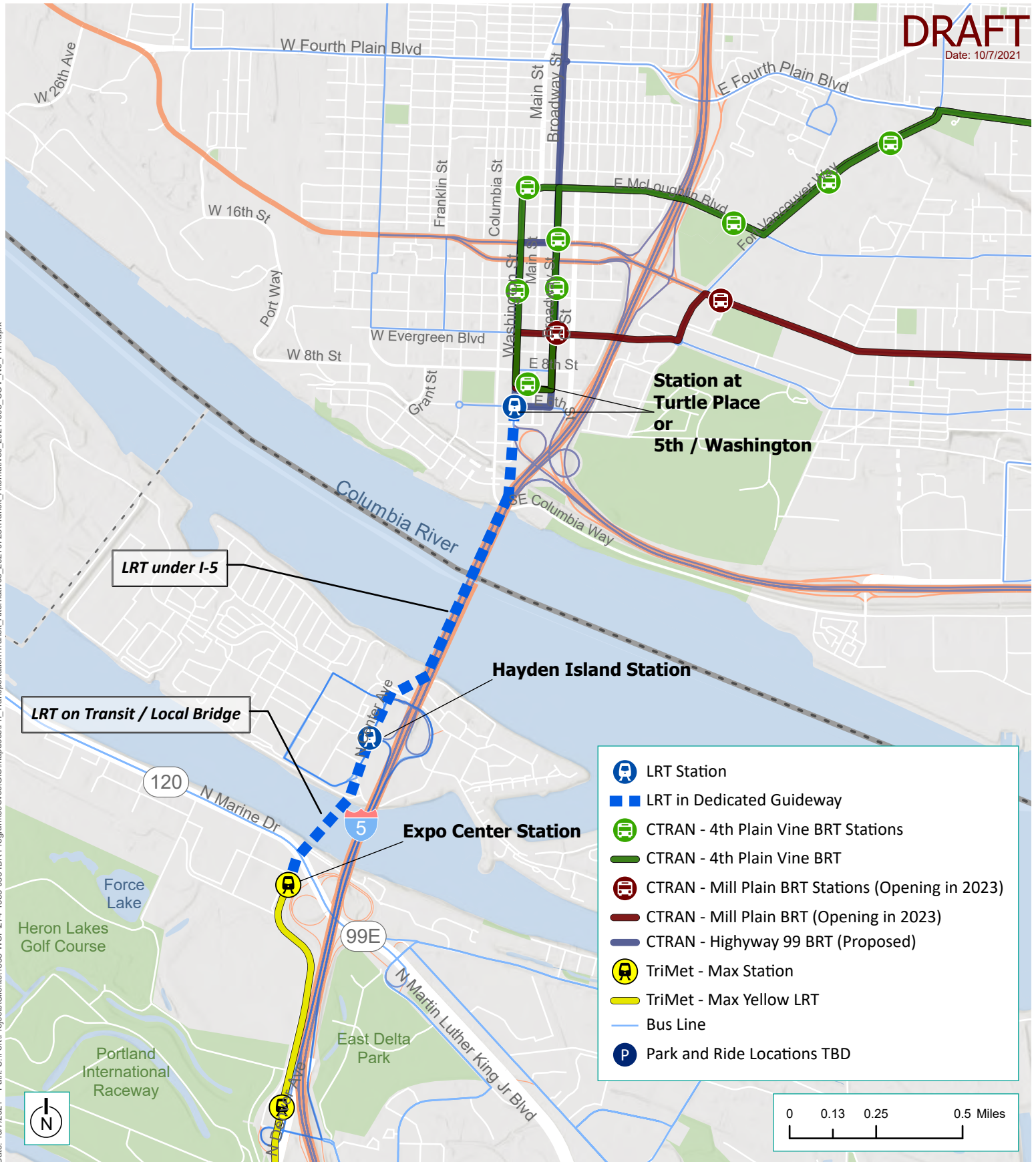


Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap

LRT One Station in Vancouver

LRT Extension from Expo Center to Hayden Island to a Single Station with Terminus in Vancouver

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Date: 10/7/2021

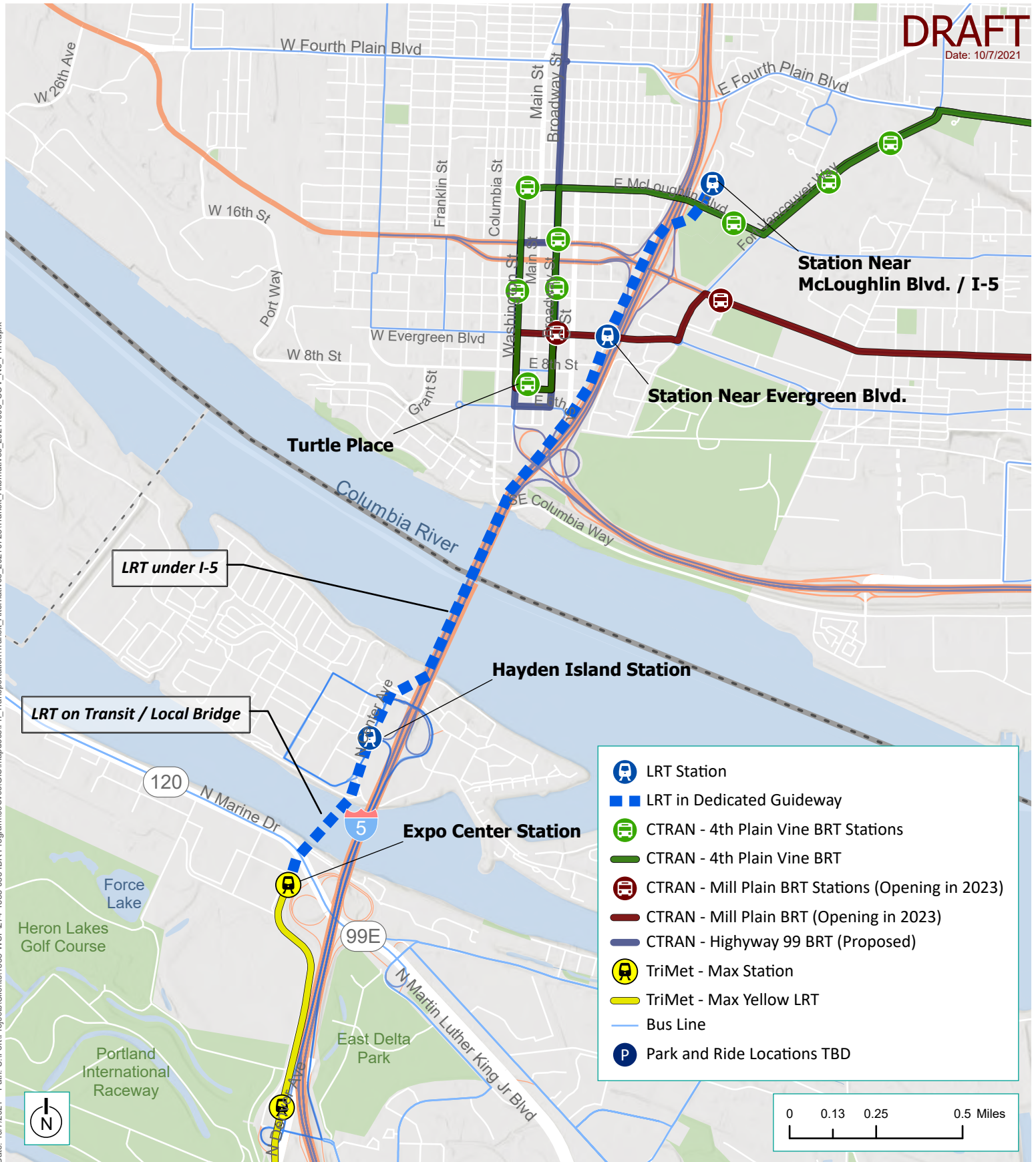


Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap

I LRT Hugging I-5 to near McLoughlin

LRT Extension from Expo Center to a Terminus near McLoughlin/I-5 on an I-5 Adjacent Alignment (Center/West Side of I-5)

DRAFT
Date: 10/7/2021



Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap

J LRT Hugging I-5 to Kiggins Bowl

LRT Extension from Expo Center to a Terminus near Kiggins Bowl on an I-5 Adjacent Alignment (Center / West Side of I-5)

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Date: 10/7/2021

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Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap