Salem River Crossing Project
Description of Preferred Alternative

Prepared for

City of Salem

January 2019

Excerpted from Final EIS Technical Report Addenda Prepared by

ch2m

Printed on Recycled and Recyclable Paper

Introduction

This document describes the Salem River Crossing Project Preferred Alternative being evaluated in the project Final Environmental Impact Statement.

An overview of the preferred alternative is shown on Figure 1.

Crossing Location and Bridge Description

Under the Preferred Alternative, a new bridge would be constructed. The bridge would connect to Hope Avenue at Wallace Road on the west, cross Wallace Marine Park at its northern tip, cross the Willamette River and McLane Island, and cross over a realigned Front Street (see Figure 2). The bridge would connect to Pine and Hickory Streets at Commercial Street on the east. The bridge could be constructed as a single structure or two side-by-side structures.

In order to accommodate all modes, the new bridge would include, in each direction of travel:

- Two 12-foot-wide travel lanes
- 8-foot-wide left-hand shoulders
- 10-foot-wide right-hand shoulders
- 10-foot-wide multi-use paths on outermost part of both sides of the bridge that would be separated from the paved roadway raised by a barrier

The cross-section of the proposed new bridge main span is shown on Figure 3. The existing Center Street and Marion Street Bridges would remain in service, without modification.

Eastside Bridgehead and Distribution Network

This subsection describes the Preferred Alternative on the east side of the new bridgehead and on the road network east of the Willamette River (see Figure 4).

The Preferred Alternative new bridge would have an eastbound connection at Commercial Street (via an exit ramp aligned with Pine Street) and a westbound connection (via an entrance ramp aligned with Hickory Street). Entrance and exit ramps would connect at- grade to a proposed short Pine Street/Hickory Street couplet (that is, paired one-way streets) just east of Front Street. This couplet would be only two blocks in length, extending from the bridge ramps to Liberty Street, including the respective Pine and Hickory Street intersections with Commercial Street. Bridge access to and from Salem Parkway would be via the existing north-south Commercial/Liberty couplet. The new bridge would also be accessible from the north from River Road (via Commercial Street).

A portion of Front Street would be reconstructed closer to the river below the bridge ramps in the segment between Columbia Street and a point approximately 540 feet south of Tryon Street to maintain Front Street's north- south connectivity. The remnant segments of Front Street in this area would allow access to existing businesses (on both sides of the bridge approaches). The former segment of Front Street below the bridge approaches would be closed to vehicles.

Commercial Street would be widened in its segment between Tryon Avenue and Hickory Street to provide enough space for the installation of two right turn-only lanes from southbound Commercial Street to the westbound bridge approach on Hickory Street. The segment of Pine Street between Liberty Street and 4th Street would be widened slightly to accommodate the proposed double-right turn lane from westbound Pine Street to northbound Liberty Street. Bicycles on Commercial Street would be directed to a separated multi-use path from Taylor Street to south of Pine Street (see Figure 5).

Westside Bridgehead and Distribution Network

This subsection describes the Preferred Alternative on the west side of the new bridgehead and on the road network west of the Willamette River (see Figures 6 through 10).

The westside bridgehead approaches would combine into a single roadway at the intersection with Marine Drive (which would be constructed as part of the Preferred Alternative). This roadway ("Hope Avenue Extension") would then continue to the Wallace Road intersection at Hope Avenue. There would be no driveway access to the Hope Avenue Extension roadway (either westbound or eastbound) from Wallace Road eastward; all existing driveway access to Wallace Road and Hope Avenue (west of Wallace Road) would be maintained.

The Wallace Road/Hope Avenue intersection would be widened to accommodate the additional traffic traveling to and from the new bridge. There would also be a widening of the Wallace Road/Orchard Heights Road intersection to accommodate increased traffic volumes, including widening along Wallace Road between Taybin Road and Narcissus Court to accommodate the additional turn lanes; Orchard Heights Road would be widened at its intersection with Wallace Road but would remain in its current alignment (see Figures 6 and 7).

Marine Drive would be constructed at-grade from River Bend Road in the north to Glen Creek Road in the south. South of Glen Creek Road, Marine Drive would ramp up to an elevated structure that would cross over the existing pedestrian/bicycle multi-use trail as well as the existing Marion Street Bridge exit ramp before descending back to grade near its connection with Oregon State Route 22 (OR 22). Marine Drive would contain one through-lane in each direction of travel with turn lanes at intersections. A 12-foot-wide paved multi-use path would be constructed adjacent to the east side of Marine Drive from River Bend Road to Glen Creek Road. The proposed alignment of Marine Drive, as well as all new proposed roadway connections from Marine Drive to Wallace Road, is consistent with the Salem Transportation System Plan (TSP).

At its northern terminus, Marine Drive would intersect with River Bend Road via a three-legged roundabout (see Figure 7). The segment of Marine Drive between River Bend Road and the Hope Avenue Extension would include a connection to existing Harritt Drive. South of the Hope Avenue Extension, a new roadway would be built between Marine Drive and Wallace Road ("Beckett Street") as well as between Marine Drive and the Cameo Street/5th Avenue intersection ("5th Avenue"). There would be a new full intersection at Marine Drive and Glen Creek Road (at the entrance to Wallace Marine Park; see Figure 8).

Eastbound OR 22 would need to be widened out onto the riverbank (not into the river itself) to allow for the installation of the flyover ramp from OR 22 to Marine Drive. When the

Marine Drive-OR 22 connection ramps are installed, the existing Rosemont Avenue westbound exit-ramp would be closed (see Figure 10). This closure would be done for safety reasons – the existence of both a Marine Drive-to-OR 22 ramp and a westbound Rosemont exit-ramp at its current location would result in undesirable weaving conditions; the potential for conflict would occur during all periods of the day, but would likely be more severe during the off-peak periods when speeds are higher. With the closure of the Rosemont Avenue exit-ramp, it is forecasted that former Rosemont Avenue-bound traffic wishing to access West Salem neighborhoods would shift to the Wallace Road exit (either to access Edgewater Street or to continue north on Wallace Road) or would continue west on OR 22 to Rosewood Drive, College Drive, or Doaks Ferry Road. The eastbound on-ramp from Rosemont Avenue to OR 22 would continue to function as it does today, but motorists entering eastbound OR 22 from this on-ramp would not have access to the proposed ramps exiting OR 22 toward northbound Marine Drive.

Bridge Type

In September 2014, the project Oversight Team identified a segmental precast concrete box as the recommended bridge type for the Preferred Alternative new bridge over the Willamette River. A visual simulation and engineering plan/ profile drawing of this bridge type are provided on Figures 11 and 12.

This bridge type would have 300-foot spans between piers across the river, thereby allowing for full navigational clearance in both channels of the river astride McLane Island (see the orange pier symbols on Figure 12). This bridge type would have a vertical clearance of 45 feet over mean high water and 53 feet over mean low water.

Construction Activities

The estimated total project cost of the Preferred Alternative is $424.6 million (in 2020 dollars); this includes the cost associated with purchasing right-of-way. If built as a single project, the Preferred Alternative would take approximately four years to construct.

Construction Impacts on East Side of Willamette River

Construction staging on the east side of the river would be relatively minor due to the localized nature of the work. Modifications of the Commercial Street/Liberty Street and Pine Street/Liberty Street intersections would interrupt traffic for one construction season and would include lane closures. Front Street would be out of service for at least two construction seasons due to overhead bridge construction and realignment of the street. Other construction activities on the east side of the river would primarily be offline of the existing transportation system. Temporary construction impacts to properties in the immediate four-block area such as noise, dust, and traffic delays could be high for at least one construction season. Alternate routes for impacted traffic include Broadway Street and Cherry Avenue.

Construction Impacts on West Side of Willamette River

Construction staging of the Preferred Alternative on the west side of the river would consist of work both online and offline of the existing transportation system. Offline work would include the construction of Marine Drive from Glen Creek Road to River Bend Road, the

new river crossing and its connection to Marine Drive, the extension of 5th Avenue to Marine Drive, and Beckett Street between Wallace Road and Marine Drive.

Online work would include the intersection construction work on Wallace Road, Orchard Heights Road, Glen Creek Road, and River Bend Road. Construction activities on Wallace Road would entail widening for additional turn lanes at Hope Avenue and Orchard Heights Road. On River Bend Road, activities would entail the construction of a roundabout at the new intersection with the proposed Marine Drive. On Glen Creek Road, activities would entail a new intersection with proposed Marine Drive.

A major component of the Preferred Alternative is the construction of a new elevated flyover roadway connection from proposed Marine Drive to OR 22. This work would cause disruptions to OR 22 for at least two to three construction seasons.

If built as a single project, the duration of construction activities on the west side of the river would be completed in approximately 3 years.

Construction Mitigation Measures

The Preferred Alternative creates opportunities to implement best practices for construction staging. Many measures can be implemented to mitigate temporary impacts caused by construction, including the following:

- Minimize construction duration by considering the use of alternative delivery methods that place a high emphasis on an accelerated construction schedule.
- Implement a highly effective public involvement/public relations plan to educate travelers about the project and keep them regularly informed of construction activities.
- Place a high priority on maintaining regional mobility during construction; the existing Marion/Center Street Bridge river crossing is pivotal and must continue to operate during construction.
- Develop high-quality construction staging and traffic control plans that balance the needs of the construction contractor with the ongoing needs of the traveling public and local landowners.

River Traffic

No permanent impacts to river traffic (e.g., recreational boating, Willamette River Queen tours) in the Willamette River are anticipated as a result of the Preferred Alternative. The Preferred Alternative new bridge would have full navigational clearance in both channels of the river around McLane Island and it is located far north of the boat ramp. During construction there would be temporary closure periods when overhead roadway structures were being put in place.

Figure 1: Overview of Preferred Alternative

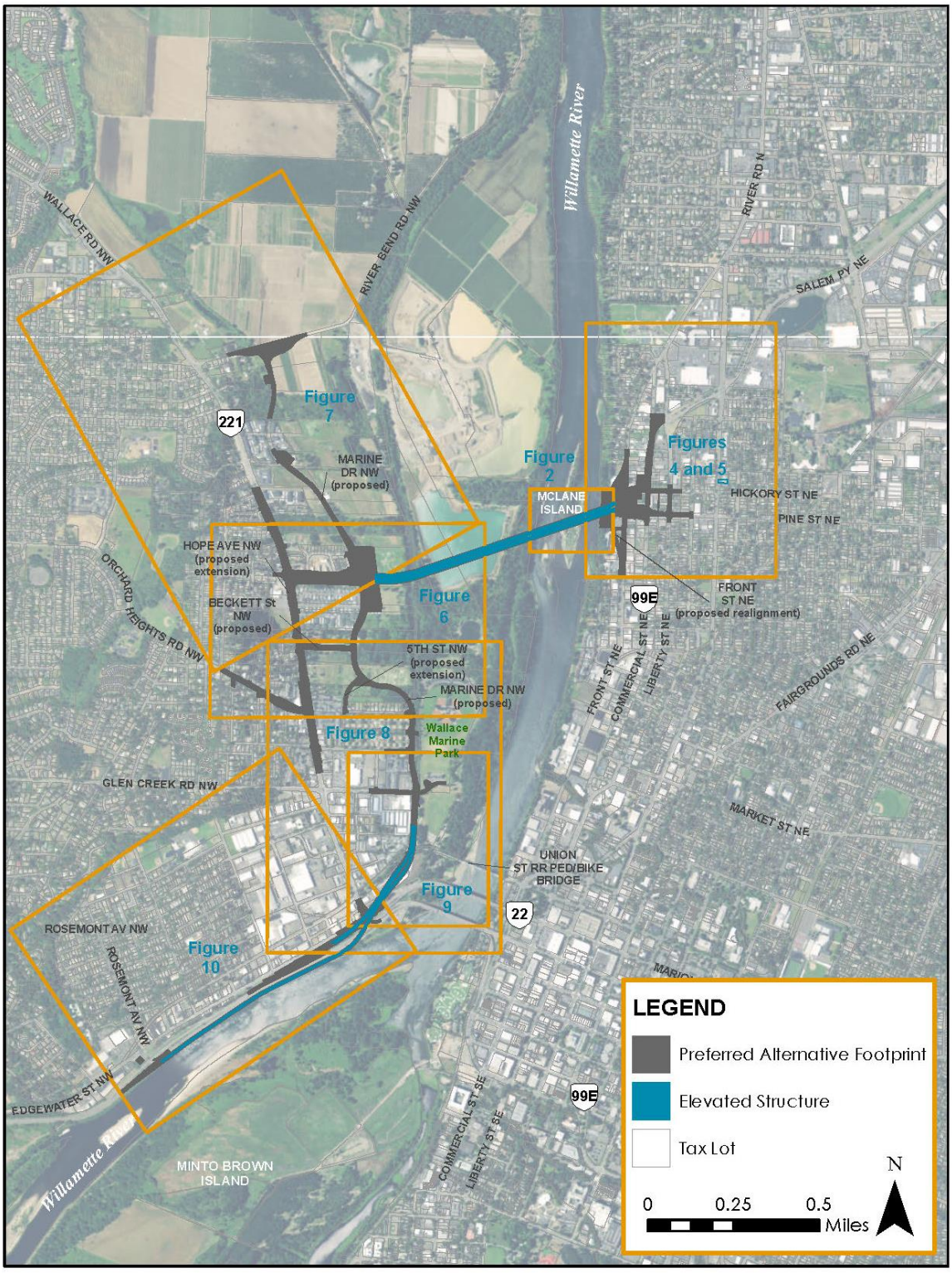

Figure 2: Preferred Alternative Crossing Location

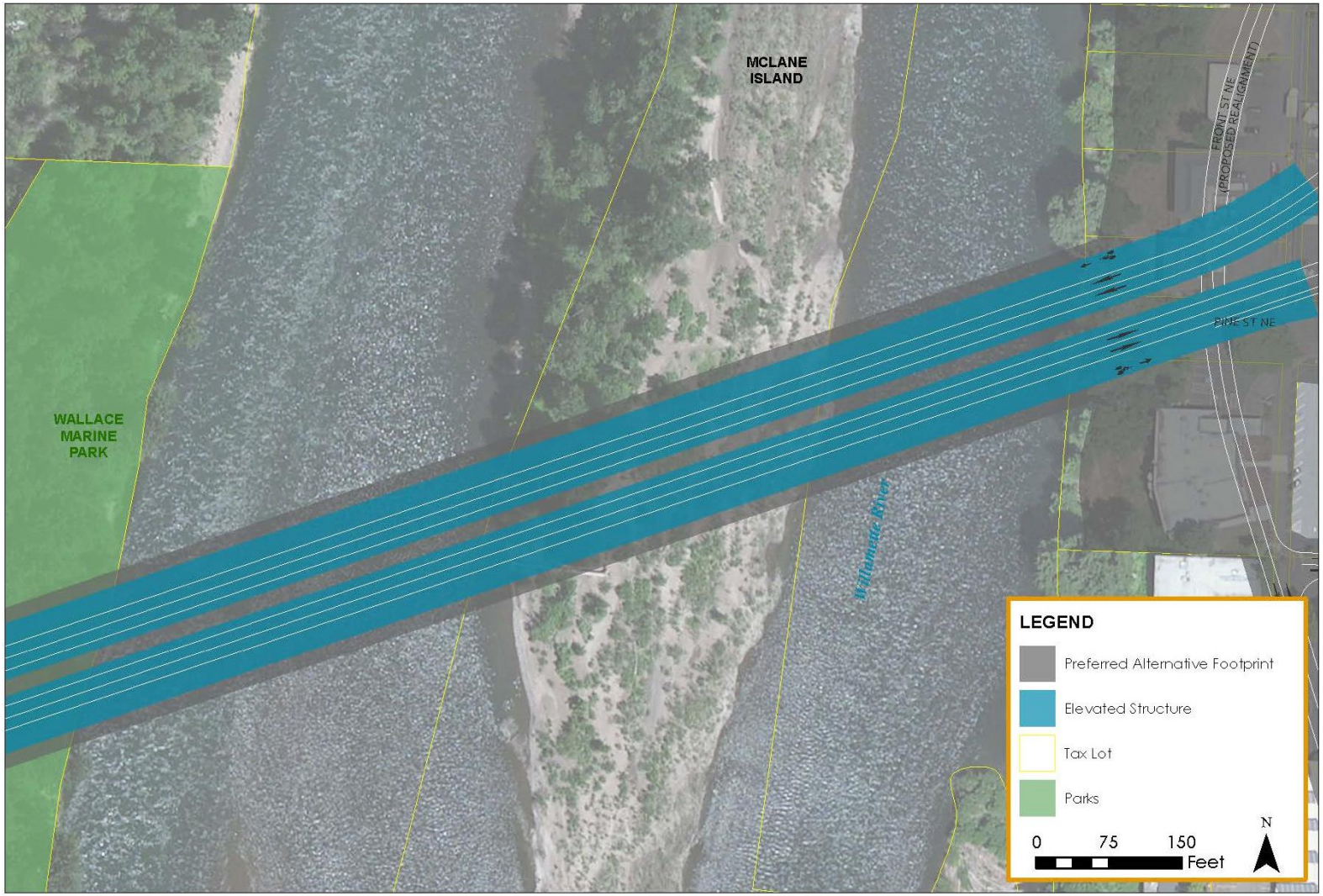

Figure 3: Cross-Section of Preferred Alternative New Bridge (Main Span)

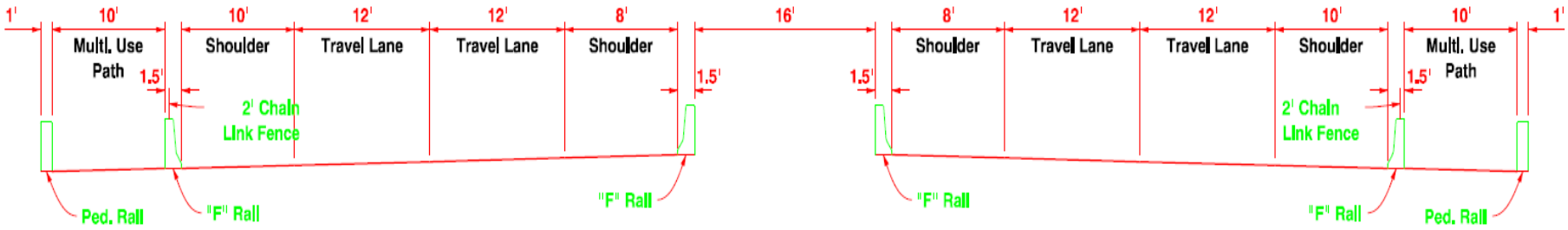

Figure 4: Preferred Alternative – Eastside Bridgehead and Distribution Network

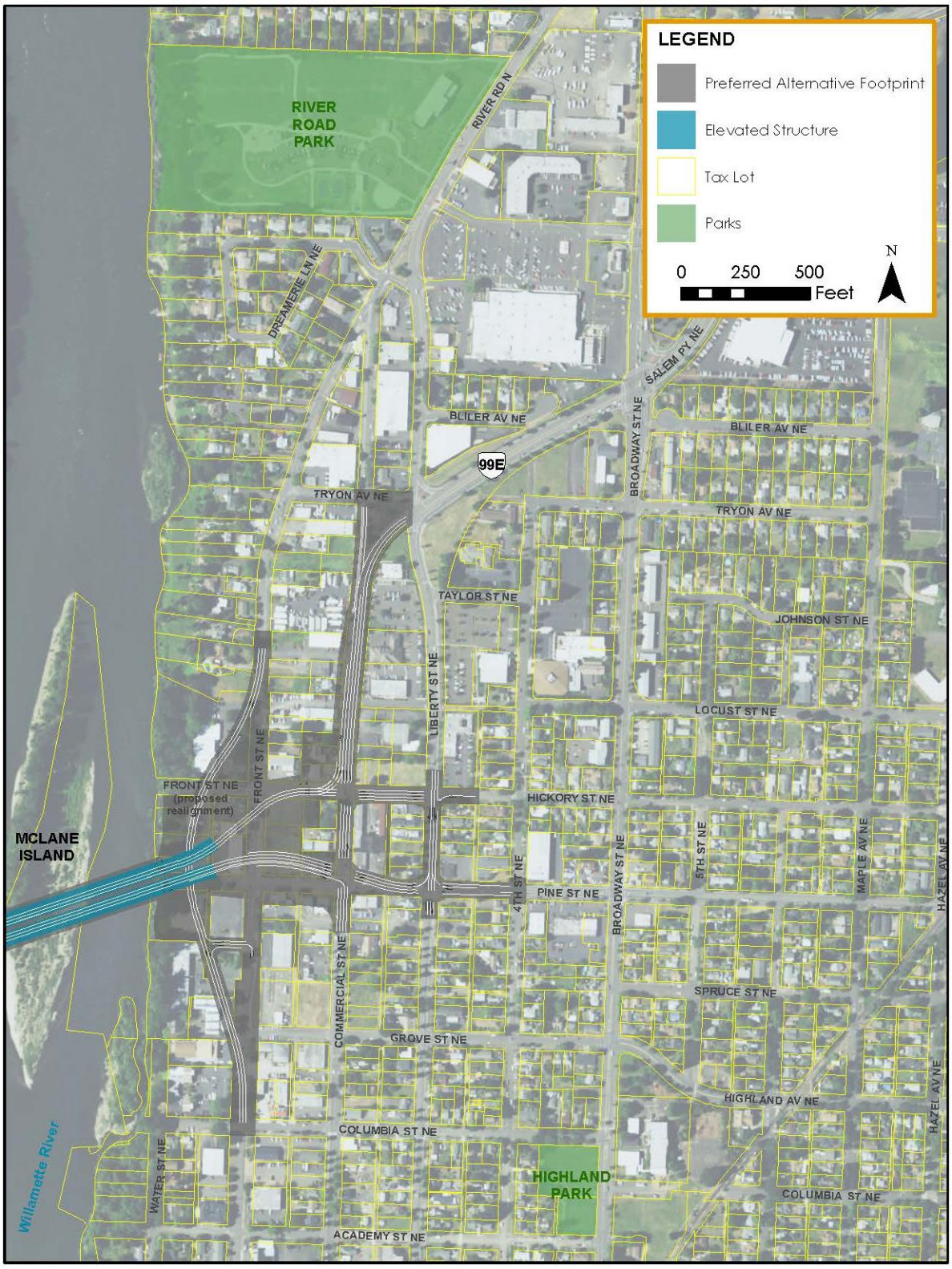

Figure 5: Preferred Alternative – Eastside Bridgehead and Distribution Network (Multi-Use Path Shown in Blue Outline)

Figure 6: Preferred Alternative – Westside Bridgehead and Distribution Network

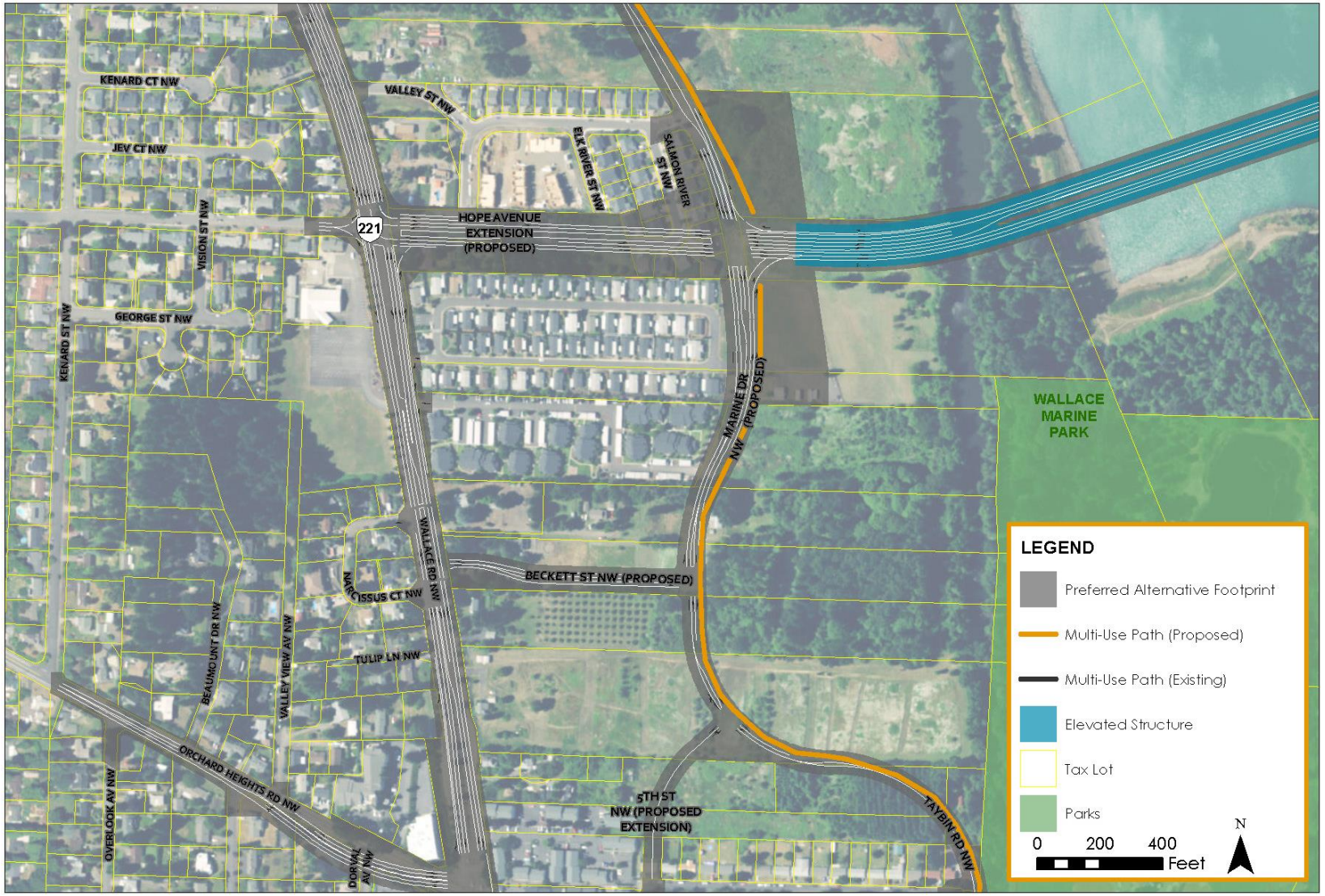

Figure 7: Preferred Alternative – Westside Distribution Network

Figure 8: Preferred Alternative – Westside Distribution Network

Figure 9: Preferred Alternative – Westside Distribution Network

Figure 10: Preferred Alternative – Westside Distribution Network

Figure 11: Visual Simulation of Segmental Precast Concrete Box Bridge Type

Figure 12: Plan/Profile of Segmental Precast Concrete Box Bridge Type