

FINAL



Section 4(f) Technical Report

I-5 Rose Quarter Improvement Project



I-5 ROSE QUARTER
IMPROVEMENT PROJECT

Oregon Department of Transportation

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Acronyms and Abbreviations

ADA	Americans with Disabilities Act
API	Area of Potential Impact
CFR	Code of Federal Regulations
dBA	A-weighted decibel
DOE	Determination of Eligibility
DSL	[Oregon] Department of State Lands
EB	eastbound
FHWA	Federal Highway Administration
I-405	Interstate 405
I-5	Interstate 5
I-84	Interstate 84
mvmt	million vehicle miles travelled
NB	northbound
NAAC	Noise Abatement Approach Criteria
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
ODT	Oregon Department of Transportation
PPR	Portland Parks and Recreation
SAC	Stakeholder Advisory Committee
SB	southbound
SHPO	[Oregon] State Historic Preservation Office
SPIS	Safety Priority Index System
sq. ft.	square feet
U.S.C.	United States Code
USGS	United States Geological Survey
WB	westbound

Executive Summary

Introduction

As a part of the environmental review for the I-5 Rose Quarter Improvement Project (Project), this *Section 4(f) Technical Report* has been prepared to identify and evaluate Section 4(f) properties, as defined in 23 Code of Federal Regulations (CFR) 774.17, in the Project's Area of Potential Impact (API). These include historic sites and publicly owned parks, recreation areas, and wildlife and waterfowl refuges. It also assesses the Project's potential to affect those resources and provides recommendations for avoidance, minimization, and/or mitigation to Section 4(f) properties that are consistent with Section 4(f) of the U.S. Department of Transportation Act and the National Environmental Policy Act.

Identifying Section 4(f) Properties

The Oregon Department of Transportation (ODOT) and AECOM Section 4(f) specialists began their investigation of the Project's API for Section 4(f) properties with a historic resources baseline survey. AECOM carried out the field work for this survey in 2017-18. The specialists identified 107 resources in the API. Of these, 20 were identified as potentially meeting the Criteria for Evaluation of National Register of Historic Places (NRHP) and requisite levels of historic integrity and were advanced for additional research to determine if they were eligible individually for the NRHP and were historic sites as defined in 23 CFR 774.17. Of the 20, AECOM specialists determined that 14 were eligible for the NRHP and are considered Section 4(f) historic sites. The specialists also selected 18 individual resources for evaluation as contributing or non-contributing to three potential NRHP historic districts. Only one potential historic district (Eliot Historic District) was recommended as eligible for the NRHP with eight contributing historic properties. The Oregon State Historic Preservation Office (SHPO) provided concurrence on NRHP eligibility for the 14 individual historic properties and the Eliot Historic District and its eight contributing historic properties (Appendix B). For the purposes of this report, these 22 historic properties are Section 4(f) historic sites.

AECOM Section 4(f) specialists identified four publicly owned parks within the Project's API. They identified no publicly owned recreation areas or publicly owned wildlife or waterfowl refuges in the Project's API. There are no planned recreation resources within the Project's API.

Impacts

ODOT and AECOM evaluated potential Project impacts to three Section 4(f) properties to determine whether the Project would have Section 4(f) "uses" on those properties.

The Build Alternative would have a Section 4(f) temporary and permanent occupancy of portions of one historic site (Travelodge at the Coliseum) and permanent occupancies of portions of two publicly owned parks (Vera Katz Eastbank Esplanade and Willamette River Greenway Trail). If the Project satisfies all the conditions listed in 23 CFR 774.13(d), the Build Alternative would have Section 4(f) *de minimis* use for the one historic site and two publicly owned parks.

Avoidance, Minimization, and Mitigation Measures

The Build Alternative's cross-section and location would avoid and minimize impacts to all Section 4(f) historic sites and would avoid and minimize impacts to two of the four publicly owned parks in the API. For the historic site, the Project would convert only a minimal amount of property related to the historic site to transportation use such that no adverse effects would occur. If construction-related vibration exceeds certain thresholds within the applicable screening distance of the historic site, effect avoidance and minimization measures would be implemented. These measures would include pre- and post-construction assessments, on-site monitoring during construction, and stop-work authorization (Wilson, Ihrig & Associates, Inc., 2012; Johnson and Hannen 2015). If a resource is affected by vibration, a treatment plan consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties and thus consistent with the requirements of 36 CFR 800.5(b) would be prepared to make the applicable repairs. Implementing these minimization measures would ensure that historic properties are not adversely affected by the Project consistent with 36 CFR 800.5(d)(1). For the two parks, a permanent surface easement would require an intergovernmental agreement and a detour plan to minimize the duration of closures and provide for temporary reroutes and closures that may occur during construction and facility operation. The Project proposes Section 4(f) *de minimis* findings for these impacts provided the avoidance and minimization measures are implemented.

1 Introduction

1.1 Project Location

The I-5 Rose Quarter Improvement Project (Project) is located in Portland, Oregon, along the 1.7-mile segment of Interstate 5 (I-5) between Interstate 405 (I-405) to the north (milepost 303.2) and Interstate 84 (I-84) to the south (milepost 301.5). The Project also includes the interchange of I-5 and N Broadway and NE Weidler Street (Broadway/Weidler interchange) and the surrounding transportation network, from approximately N/NE Hancock Street to the north, N Benton Avenue to the west, N/NE Multnomah Street to the south, and NE 2nd Avenue to the east.

Figure 1 illustrates the Project Area in which the proposed improvements are located. The Project Area represents the estimated area within which improvements are proposed, including where permanent modifications to adjacent parcels may occur and where potential temporary impacts from construction activities could result.

1.2 Project Purpose

The purpose of the Project is to improve the safety and operations on I-5 between I-405 and I-84, of the Broadway/Weidler interchange, and on adjacent surface streets in the vicinity of the Broadway/Weidler interchange and to enhance multimodal facilities in the Project Area.

In achieving the purpose, the Project would also support improved local connectivity and multimodal access in the vicinity of the Broadway/Weidler interchange and improve multimodal connections between neighborhoods located east and west of I-5.

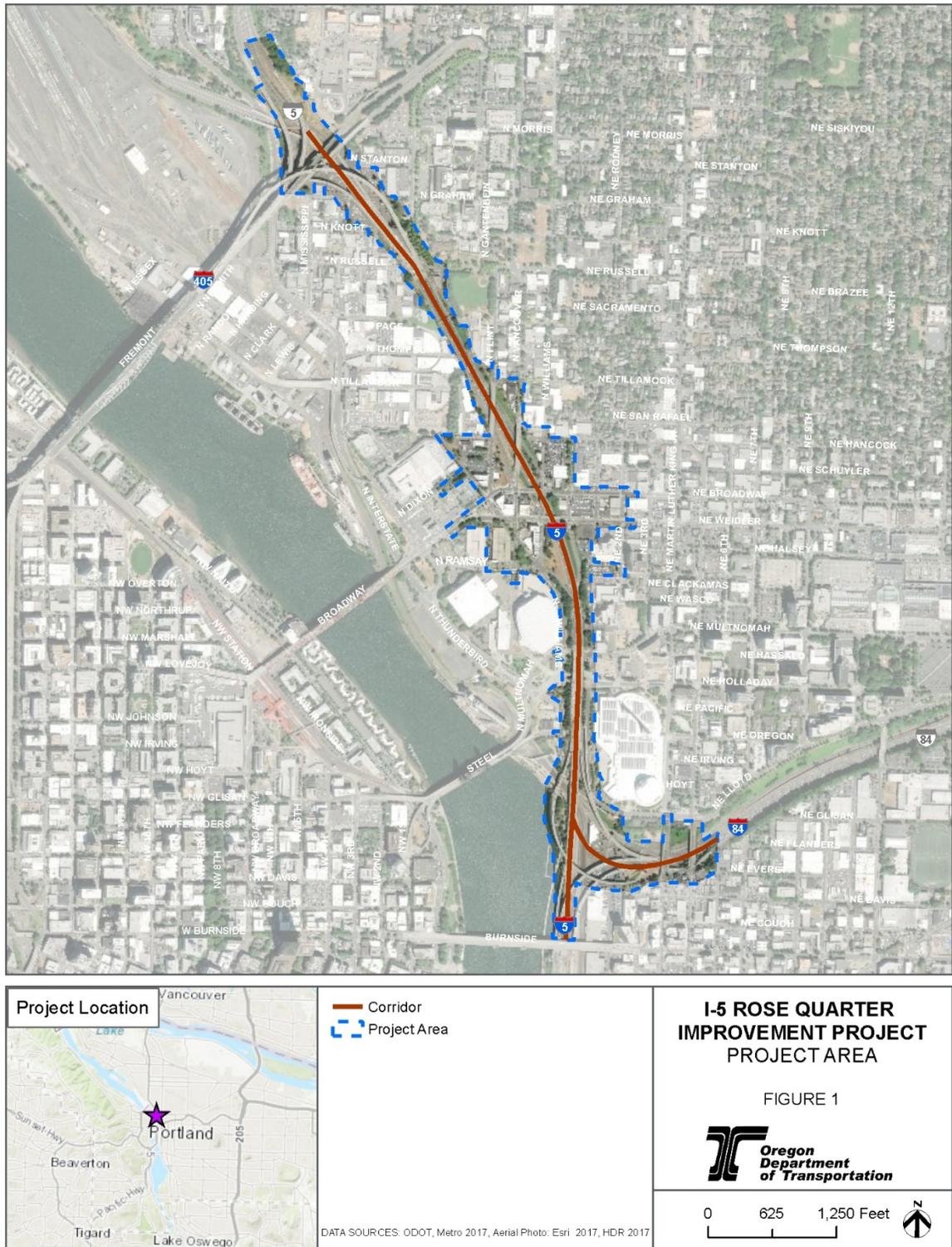
1.3 Project Need

The Project would address the following primary needs:

- **I-5 Safety:** I-5 between I-405 and I-84 has the highest crash rate on urban interstates in Oregon. Crash data from 2011 to 2015 indicate that I-5 between I-84 and the merge point from the N Broadway ramp on to I-5 had a crash rate (for all types of crashes²) that was approximately 3.5 times higher than the statewide average for comparable urban interstate facilities (ODOT 2015a).

² Motor vehicle crashes are reported and classified by whether they involve property damage, injury, or death.

Figure 1. Project Area



- Seventy-five percent of crashes occurred on southbound (SB) I-5, and 79 percent of all the crashes were rear-end collisions. Crashes during this 5-year period included one fatality, which was a pedestrian fatality. A total of seven crashes resulted in serious injury.
- The Safety Priority Index System (SPIS) is the systematic scoring method used by the Oregon Department of Transportation (ODOT) for identifying potential safety problems on state highways based on the frequency, rate, and severity of crashes (ODOT 2015b). The 2015 SPIS shows two SB sites in the top 5 percent and two northbound (NB) sites in the top 10 percent of the SPIS list.
- The 2015 crash rate on the I-5 segment between I-84 and the Broadway ramp on to I-5 is 2.70 crashes per million vehicle miles. The statewide average for comparable urban highway facilities is 0.77 crashes per million vehicle miles travelled (mvmt).
- The existing short weaving distances and lack of shoulders for accident/incident recovery in this segment of I-5 are physical factors that may contribute to the high number of crashes and safety problems.
- **I-5 Operations:** The Project Area is at the crossroads of three regionally significant freight and commuter routes: I-5, I-84, and I-405. As a result, I-5 in the vicinity of the Broadway/Weidler interchange experiences some of the highest traffic volumes in the State of Oregon, carrying approximately 121,400 vehicles each day (ODOT 2017), and experiences 12 hours of congestion each day (ODOT 2012a). The following factors affect I-5 operations:
 - Close spacing of multiple interchange ramps results in short weaving segments where traffic merging on and off I-5 has limited space to complete movements, thus becoming congested. There are five on-ramps (two NB and three SB) and six off-ramps (three NB and three SB) in this short stretch of highway. Weaving segments on I-5 NB between the I-84 westbound (WB) on-ramp and the NE Weidler off-ramp, and on I-5 SB between the N Wheeler Avenue on-ramp and I-84 eastbound (EB) off-ramp, currently perform at a failing level-of-service during the morning and afternoon peak periods.
 - The high crash rate within the Project Area can periodically contribute to congestion on this segment of the highway. As noted with respect to safety, the absence of shoulders on I-5 contributes to congestion because vehicles involved in crashes cannot get out of the travel lanes.
 - Future (2045) traffic estimates indicate that the I-5 SB section between the N Wheeler on-ramp and EB I-84 off-ramp is projected to have the most critical congestion in the Project Area, with capacity and geometric constraints that result in severe queuing.
- **Broadway/Weidler Interchange Operations:** The complexity and congestion at the I-5 Broadway/Weidler interchange configuration is difficult to navigate for

vehicles (including transit vehicles), bicyclists, and pedestrians, which impacts access to and from I-5 as well as to and from local streets. The high volumes of traffic on I-5 and Broadway/Weidler in this area contribute to congestion and safety issues (for all modes) at the interchange ramps, the Broadway and Weidler overcrossings of I-5, and on local streets in the vicinity of the interchange.

- The Broadway/Weidler couplet provides east-west connectivity for multiple modes throughout the Project Area, including automobiles, freight, people walking and biking, and Portland Streetcar and TriMet buses. The highest volumes of vehicle traffic on the local street network in the Project Area occur on NE Broadway and NE Weidler in the vicinity of I-5. The N Vancouver Avenue/N Williams couplet, which forms a critical north-south link and is a Major City Bikeway within the Project Area with over 5,000 bicycle users during the peak season, crosses Broadway/Weidler in the immediate vicinity of the I-5 interchange.
- The entire length of N/NE Broadway is included in the Portland High Crash Network—streets designated by the City of Portland for the high number of deadly crashes involving pedestrians, bicyclists, and vehicles.³
- The SB on-ramp from N Wheeler and SB off-ramp to N Broadway experienced a relatively high number of crashes per mile (50-70 crashes per mile) compared to other ramps in the Project Area during years 2011-2015. Most collisions on these ramps were rear-end collisions.
- Of all I-5 highway segments in the corridor, those that included weaving maneuvers to/from the Broadway/Weidler ramps tend to experience the highest crash rates:
 - SB I-5 between the on-ramp from N Wheeler and the off-ramp to I-84 (SB-S5) has the highest crash rate (15.71 crashes/mvmt).
 - NB I-5 between the I-84 on-ramp and off-ramp to NE Weidler (NB-S5) has the second highest crash rate (5.66 crashes/mvmt).
 - SB I-5 between the on-ramp from I-405 and the off-ramp to NE Broadway (SB-S3) has the third highest crash rate (4.94 crashes/mvmt).
- **Travel Reliability on the Transportation Network:** Travel reliability on the transportation network decreases as congestion increases and safety issues expand. The most unreliable travel times tend to occur at the end of congested areas and on the shoulders of the peak periods. Due to these problems, reliability has decreased on I-5 between I-84 and I-405 for most of the day. Periods of congested conditions on I-5 in the Project Area have grown over time from morning and afternoon peak periods to longer periods throughout the day.

³ Information on the City of Portland's High Crash Network is available at <https://www.portlandoregon.gov/transportation/54892>.

1.4 Project Goals and Objectives

In addition to the purpose and need, which focus on the state's transportation system, the Project includes related goals and objectives developed through the joint ODOT and City of Portland N/NE Quadrant and I-5 Broadway/Weidler Interchange Plan process, which included extensive coordination with other public agencies and citizen outreach. The following goals and objectives may be carried forward beyond the National Environmental Policy Act (NEPA) process to help guide final design and construction of the Project:

- Enhance pedestrian and bicycle safety and mobility in the vicinity of the Broadway/Weidler interchange.
- Address congestion and improve safety for all modes on the transportation network connected to the Broadway/Weidler interchange and I-5 crossings.
- Support and integrate the land use and urban design elements of the Adopted N/NE Quadrant Plan (City of Portland et al. 2012) related to I-5 and the Broadway/Weidler interchange, which include the following:
 - Diverse mix of commercial, cultural, entertainment, industrial, recreational, and residential uses, including affordable housing
 - Infrastructure that supports economic development
 - Infrastructure for healthy, safe, and vibrant communities that respects and complements adjacent neighborhoods
 - A multimodal transportation system that addresses present and future needs, both locally and on the highway system
 - An improved local circulation system for safe access for all modes
 - Equitable access to community amenities and economic opportunities
 - Protected and enhanced cultural heritage of the area
 - Improved urban design conditions
- Improve freight reliability.
- Provide multimodal transportation facilities to support planned development in the Rose Quarter, Lower Albina, and Lloyd.
- Improve connectivity across I-5 for all modes.

2 Project Alternatives

This technical report describes the potential effects of no action (No-Build Alternative) and the proposed action (Build Alternative).

2.1 No-Build Alternative

NEPA regulations require an evaluation of the No-Build Alternative to provide a baseline for comparison with the potential impacts of the proposed action. The No-Build Alternative consists of existing conditions and any planned actions with committed funding in the Project Area.

I-5 is the primary north-south highway serving the West Coast of the United States from Mexico to Canada. At the northern portion of the Project Area, I-5 connects with I-405 and the Fremont Bridge; I-405 provides the downtown highway loop on the western edge of downtown Portland. At the southern end of the Project Area, I-5 connects with the western terminus of I-84, which is the east-west highway for the State of Oregon. Because the Project Area includes the crossroads of three regionally significant freight and commuter routes, the highway interchanges within the Project Area experience some of the highest traffic volumes found in the state (approximately 121,400 average annual daily trips). The existing lane configurations consist primarily of two through lanes (NB and SB), with one auxiliary lane between interchanges. I-5 SB between I-405 and Broadway includes two auxiliary lanes.

I-5 is part of the National Truck Network, which designates highways (including most of the Interstate Highway System) for use by large trucks. In the Portland-Vancouver area, I-5 is the most critical component of this national network because it provides access to the transcontinental rail system, deep-water shipping and barge traffic on the Columbia River, and connections to the ports of Vancouver and Portland, as well as to most of the area's freight consolidation facilities and distribution terminals. Congestion on I-5 throughout the Project Area delays the movement of freight both within the Portland metropolitan area and on the I-5 corridor. I-5 through the Rose Quarter is ranked as one of the 50 worst freight bottlenecks in the United States (ATRI 2017).

Within the approximately 1.5 miles that I-5 runs through the Project Area, I-5 NB connects with five on- and off-ramps, and I-5 SB connects with six on- and off-ramps. Drivers entering and exiting I-5 at these closely spaced intervals, coupled with high traffic volumes, slow traffic and increase the potential for crashes. Table 1 presents the I-5 on- and off-ramps in the Project Area. Table 2 shows distances of the weaving areas between the on- and off-ramps on I-5 in the Project Area. Each of the distances noted for these weave transitions is less than adequate per current highway design standards (ODOT 2012b). In the shortest weave section, only 1,075 feet is available for drivers to merge onto I-5 from NE Broadway NB in the same area where drivers are exiting from I-5 onto I-405 and the Fremont Bridge.



Table 1. I-5 Ramps in the Project Area

I-5 Travel Direction	On-Ramps From	Off-Ramps To
Northbound	<ul style="list-style-type: none"> I-84 N Broadway/N Williams Avenue 	<ul style="list-style-type: none"> NE Weidler Street/NE Victoria Avenue I-405 N Greeley Avenue
Southbound	<ul style="list-style-type: none"> N Greeley Avenue I-405 N Wheeler Avenue/N Ramsay Way 	<ul style="list-style-type: none"> N Broadway/N Vancouver Avenue I-84 Morrison Bridge/Highway 99E

Notes: I = Interstate

Table 2. Weave Distances within the Project Area

I-5 Travel Direction	Weave Section	Weave Distance
Northbound	I-84 to NE Weidler Street/NE Victoria Avenue	1,360 feet
Northbound	N Broadway/N Williams Avenue to I-405	1,075 feet
Southbound	I-405 to N Broadway	2,060 feet
Southbound	N Wheeler Avenue/N Ramsay Way to I-84	1,300 feet

Notes: I = Interstate

As described in Section 1.3, the high volumes, closely spaced interchanges, and weaving movements result in operational and safety issues, which are compounded by the lack of standard highway shoulders on I-5 throughout much of the Project Area.

Under the No-Build Alternative, I-5 and the Broadway/Weidler interchange and most of the local transportation network in the Project Area would remain in its current configuration, with the exception of those actions included in the Metro 2014 *Regional Transportation Plan* financially constrained project list (Metro 2014).⁴ One of these actions includes improvements to the local street network on the Broadway/Weidler corridor within the Project Area. The proposed improvements include changes to N/NE Broadway and N/NE Weidler from the Broadway Bridge to NE 7th Avenue. The current design concept would remove and reallocate one travel lane on both N/NE Broadway and N/NE Weidler to establish protected bike lanes and reduce pedestrian crossing distances. Proposed improvements also include

⁴ Metro Regional Transportation Plan ID 11646. Available at: https://www.oregonmetro.gov/sites/default/files/Appendix%201.1%20Final%202014%20RTP%20%20Project%20List%208.5x11%20for%20webpage_1.xls

changes to turn lanes and transitions to minimize pedestrian exposure and improve safety. The improvements are expected to enhance safety for people walking, bicycling, and driving through the Project Area. Implementation is expected in 2018-2027.

2.2 Build Alternative

The Project alternatives development process was completed during the ODOT and City of Portland 2010-2012 N/NE Quadrant and I-5 Broadway/Weidler Interchange planning process. A series of concept alternatives were considered following the definition of Project purpose and need and consideration of a range of transportation-related problems and issues that the Project is intended to address.

In conjunction with the Stakeholder Advisory Committee (SAC) and the public during this multi-year process, ODOT and the City of Portland studied more than 70 design concepts, including the Build Alternative, via public design workshops and extensive agency and stakeholder input. Existing conditions, issues, opportunities, and constraints were reviewed for the highway and the local transportation network. A total of 19 full SAC meetings and 13 subcommittee meetings were held; each was open to the public and provided opportunity for public comment. Another 10 public events were held, with over 100 attendees at the Project open houses providing input on the design process. Of the 70 design concepts, 13 concepts advanced for further study based on SAC, agency, and public input, with six concepts passing into final consideration.

One recommended design concept, the Build Alternative, was selected for development as a result of the final screening and evaluation process. The final I-5 Broadway/Weidler Facility Plan (ODOT 2012a) and recommended design concept, herein referred to as the Build Alternative, were supported by the SAC and unanimously adopted in 2012 by the Oregon Transportation Commission and the Portland City Council.⁵ The features of the Build Alternative are described below.

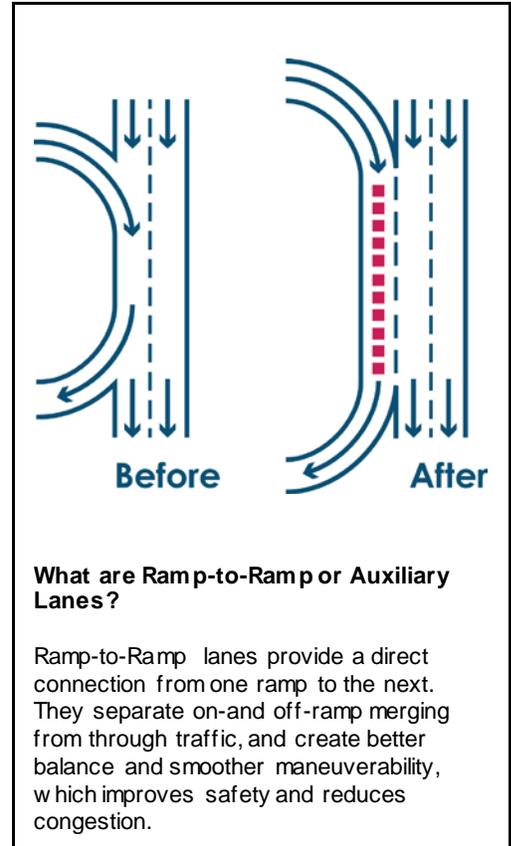
The Build Alternative includes I-5 mainline improvements and multimodal improvements to the surface street network in the vicinity of the Broadway/Weidler interchange. The proposed I-5 mainline improvements include the construction of auxiliary lanes (also referred to as ramp-to-ramp lanes) and full shoulders between I-84 to the south and I-405 to the north, in both the NB and SB directions. See Section 2.2.1 for more detail.

Construction of the I-5 mainline improvements would require the rebuilding of the N/NE Weidler, N/NE Broadway, N Williams, and N Vancouver structures over I-5.

⁵ Resolution No. 36972, adopted by City Council October 25, 2012. Available at: <https://www.portlandoregon.gov/citycode/article/422365>

With the Build Alternative, the existing N/NE Weidler, N/NE Broadway, and N Williams overcrossings would be removed and rebuilt as a single highway cover structure over I-5 (see Section 2.2.2). The existing N Vancouver structure would be removed and rebuilt as a second highway cover, including a new roadway crossing connecting N/NE Hancock and N Dixon Streets. The existing N Flint Avenue structure over I-5 would be removed. The I-5 SB on-ramp at N Wheeler would also be relocated to N/NE Weidler at N Williams, via the new Weidler/Broadway/Williams highway cover. A new bicycle and pedestrian bridge over I-5 would be constructed at NE Clackamas Street, connecting Lloyd with the Rose Quarter (see Section 2.2.4.3).

Surface street improvements are also proposed, including upgrades to existing bicycle and pedestrian facilities and a new center-median bicycle and pedestrian path on N Williams between N/NE Weidler and N/NE Broadway (see Section 2.2.4.4).



2.2.1 I-5 Mainline Improvements

The Build Alternative would modify I-5 between I-84 and I-405 by adding safety and operational improvements. The Build Alternative would extend the existing auxiliary lanes approximately 4,300 feet in both NB and SB directions and add 12-foot shoulders (both inside and outside) in both directions in the areas where the auxiliary lane would be extended. Figure 2 illustrates the location of the proposed auxiliary lanes. Figure 3 illustrates the auxiliary lane configuration, showing the proposed improvements in relation to the existing conditions. Figure 4 provides a cross section comparison of existing and proposed conditions, including the location of through lanes, auxiliary lanes, and highway shoulders.

A new NB auxiliary lane would be added to connect the I-84 WB on-ramp to the N Greeley off-ramp. The existing auxiliary lane on I-5 NB from the I-84 WB on-ramp to the NE Weidler off-ramp and from the N Broadway on-ramp to the I-405 off-ramp would remain.

The new SB auxiliary lane would extend the existing auxiliary lane that enters I-5 SB from the N Greeley on-ramp. The existing SB auxiliary lane currently ends just south of the N Broadway off-ramp, in the vicinity of the Broadway overcrossing structure.

Figure 2. Auxiliary Lane/Shoulder Improvements

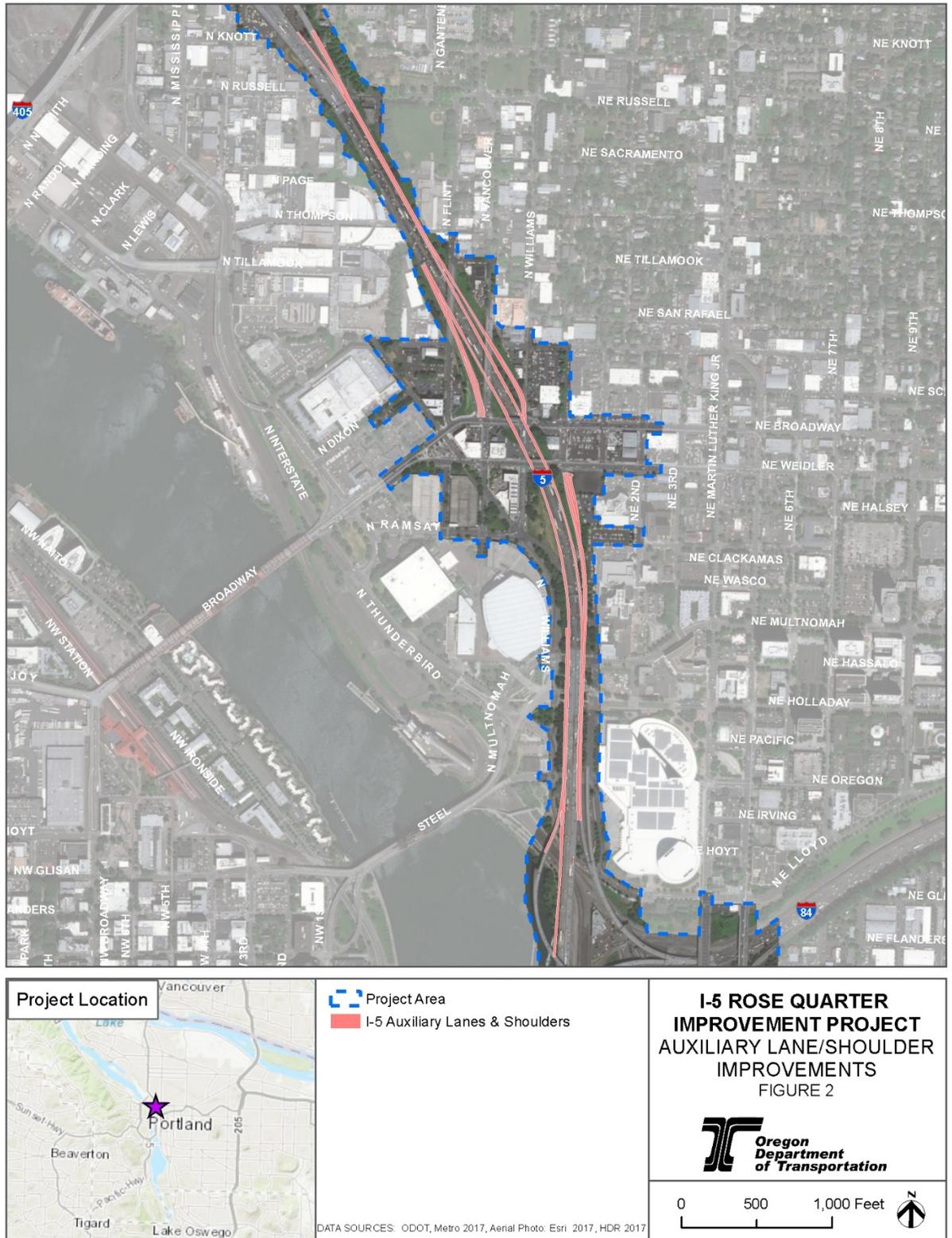


Figure 3. I-5 Auxiliary (Ramp-to-Ramp) Lanes – Existing Conditions and Proposed Improvements

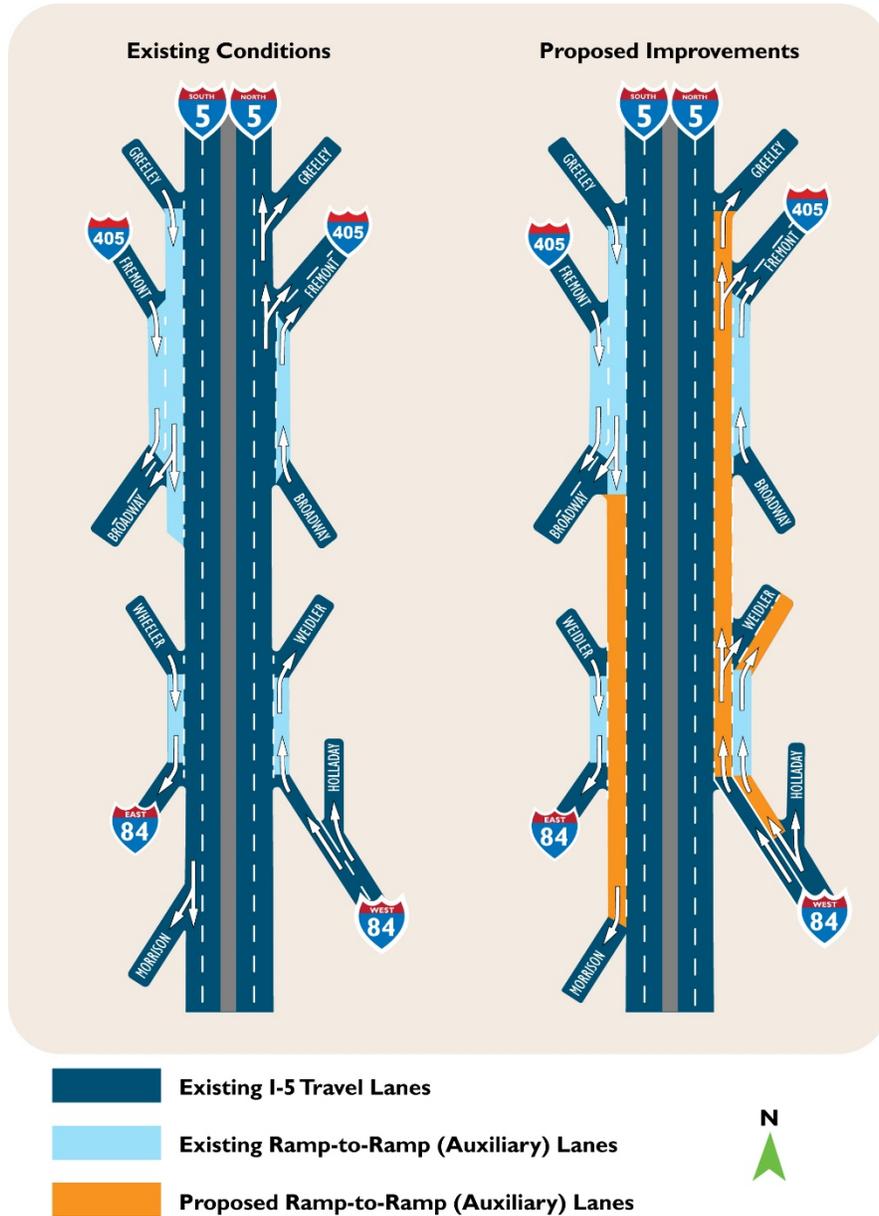
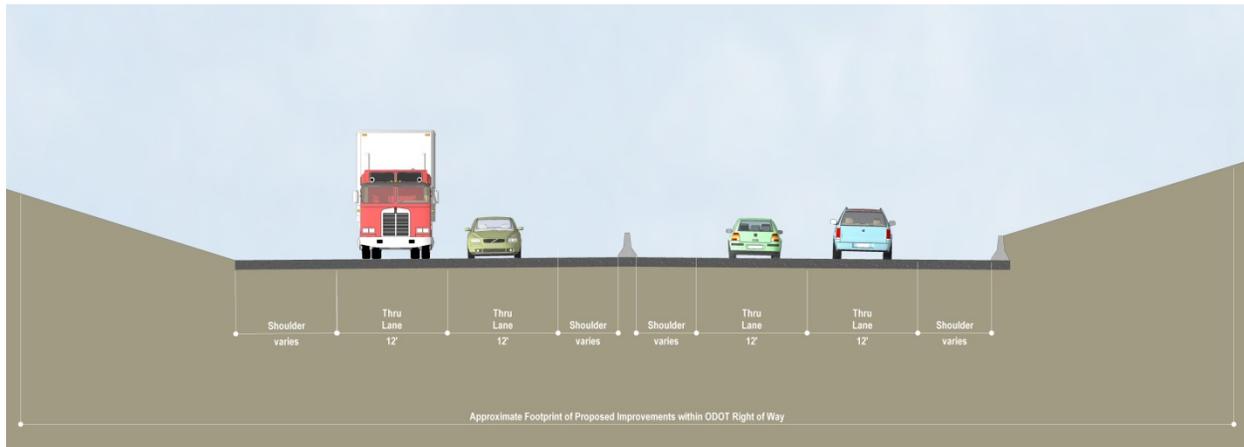
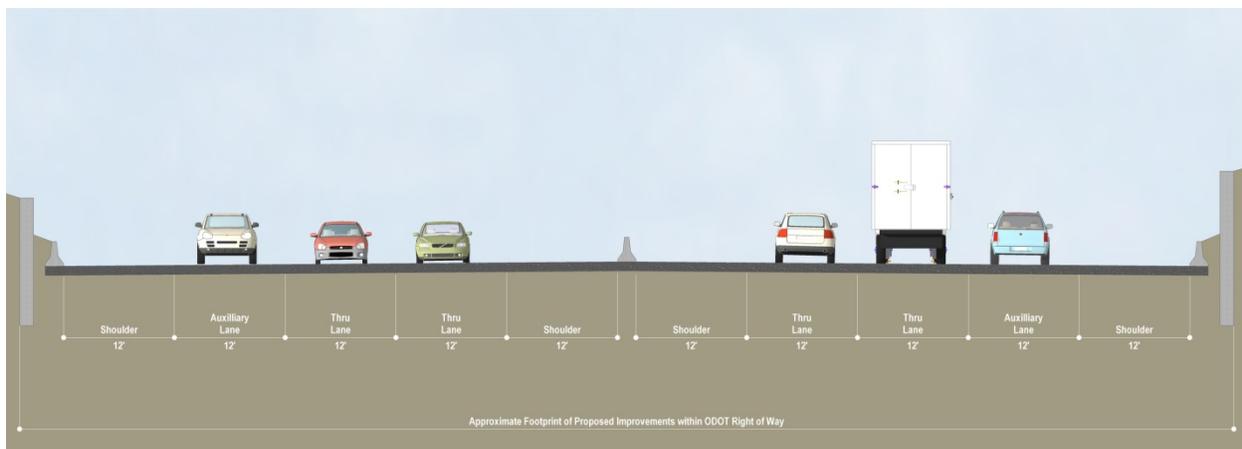


Figure 4. I-5 Cross Section (N/NE Weidler Overcrossing) – Existing Conditions and Proposed Improvements



Existing Lane Configuration



Proposed Lane Configuration

Under the Build Alternative, the SB auxiliary lane would be extended as a continuous auxiliary lane from N Greeley to the Morrison Bridge and the SE Portland/Oregon Museum of Science and Industry off-ramp. Figure 4 presents a representative cross section of I-5 (south of the N/NE Weidler overcrossing within the Broadway/Weidler interchange area), with the proposed auxiliary lanes and shoulder, to provide a comparison with the existing cross section.

The addition of 12-foot shoulders (both inside and outside) in both directions in the areas where the auxiliary lanes would be extended would provide more space to allow vehicles that are stalled or involved in a crash to move out of the travel lanes. New shoulders would also provide space for emergency response vehicles to use to access an incident within or beyond the Project Area.

No new through lanes would be added to I-5 as part of the Build Alternative; I-5 would maintain the existing two through lanes in both the NB and SB directions.

2.2.2 Highway Covers

2.2.2.1 Broadway/Weidler/Williams Highway Cover

To complete the proposed I-5 mainline improvements, the existing structures crossing over I-5 must be removed, including the roads and the columns that support the structures. The Build Alternative would remove the existing N/NE Broadway, N/NE Weidler, and N Williams structures over I-5 to accommodate the auxiliary lane extension and new shoulders described in Section 2.2.1.

The structure replacement would be in the form of the Broadway/Weidler/Williams highway cover (Figure 5). The highway cover would be a wide bridge that spans east-west across I-5, extending from immediately south of N/NE Weidler to immediately north of N/NE Broadway to accommodate passage of the Broadway/Weidler couplet. The highway cover would include design upgrades to make the structure more resilient in the event of an earthquake.

The highway cover would connect both sides of I-5, reducing the physical barrier of I-5 between neighborhoods to the east and west of the highway while providing additional surface area above I-5. The added surface space would provide an opportunity for new and modern bicycle and pedestrian facilities and public spaces when construction is complete, making the area more connected, walkable, and bike friendly.

Figure 5. Broadway/Weidler/Williams and Vancouver/Hancock Highway Covers



2.2.2.2 N Vancouver/N Hancock Highway Cover

The Build Alternative would remove and rebuild the existing N Vancouver structure over I-5 as a highway cover (Figure 5). The Vancouver/Hancock highway cover would be a concrete or steel platform that spans east-west across I-5 and to the north and south of N/NE Hancock. Like the Broadway/Weidler/Williams highway cover, this highway cover would provide additional surface area above I-5. The highway cover would provide an opportunity for public space and a new connection across I-5 for all modes of travel. A new roadway connecting neighborhoods to the east with the Lower Albina area and connecting N/NE Hancock to N Dixon would be added to the Vancouver/Hancock highway cover (see element “A” in Figure 6).

2.2.3 Broadway/Weidler Interchange Improvements

Improvements to the Broadway/Weidler interchange to address connections between I-5, the interchange, and the local street network are described in the following subsections and illustrated in Figure 6.

2.2.3.1 Relocate I-5 Southbound On-Ramp

The I-5 SB on-ramp is currently one block south of N Weidler near where N Wheeler, N Williams, and N Ramsay come together at the north end of the Moda Center. The Build Alternative would remove the N Wheeler on-ramp and relocate the I-5 SB on-ramp north to N Weidler. Figure 6 element “B” illustrates the on-ramp relocation.

2.2.3.2 Modify N Williams between Ramsay and Weidler

The Build Alternative would modify the travel circulation on N Williams between N Ramsay and N Weidler. This one-block segment of N Williams would be closed to through-travel for private motor vehicles and would only be permitted for pedestrians, bicycles, and public transit (buses) (Figures 6 and 7). Private motor vehicle and loading access to the facilities at Madrona Studios would be maintained.

2.2.3.3 Revise Traffic Flow on N Williams between Weidler and Broadway

The Build Alternative would revise the traffic flow on N Williams between N/NE Weidler and N/NE Broadway. For this one-block segment, N Williams would be converted from its current configuration as a two-lane, one-way street in the NB direction with a center NB bike lane to a reverse traffic flow two-way street with a 36-foot-wide median multi-use path for bicycles and pedestrians. These improvements are illustrated in Figures 6 and 7.

Figure 6. Broadway/Weidler Interchange Area Improvements

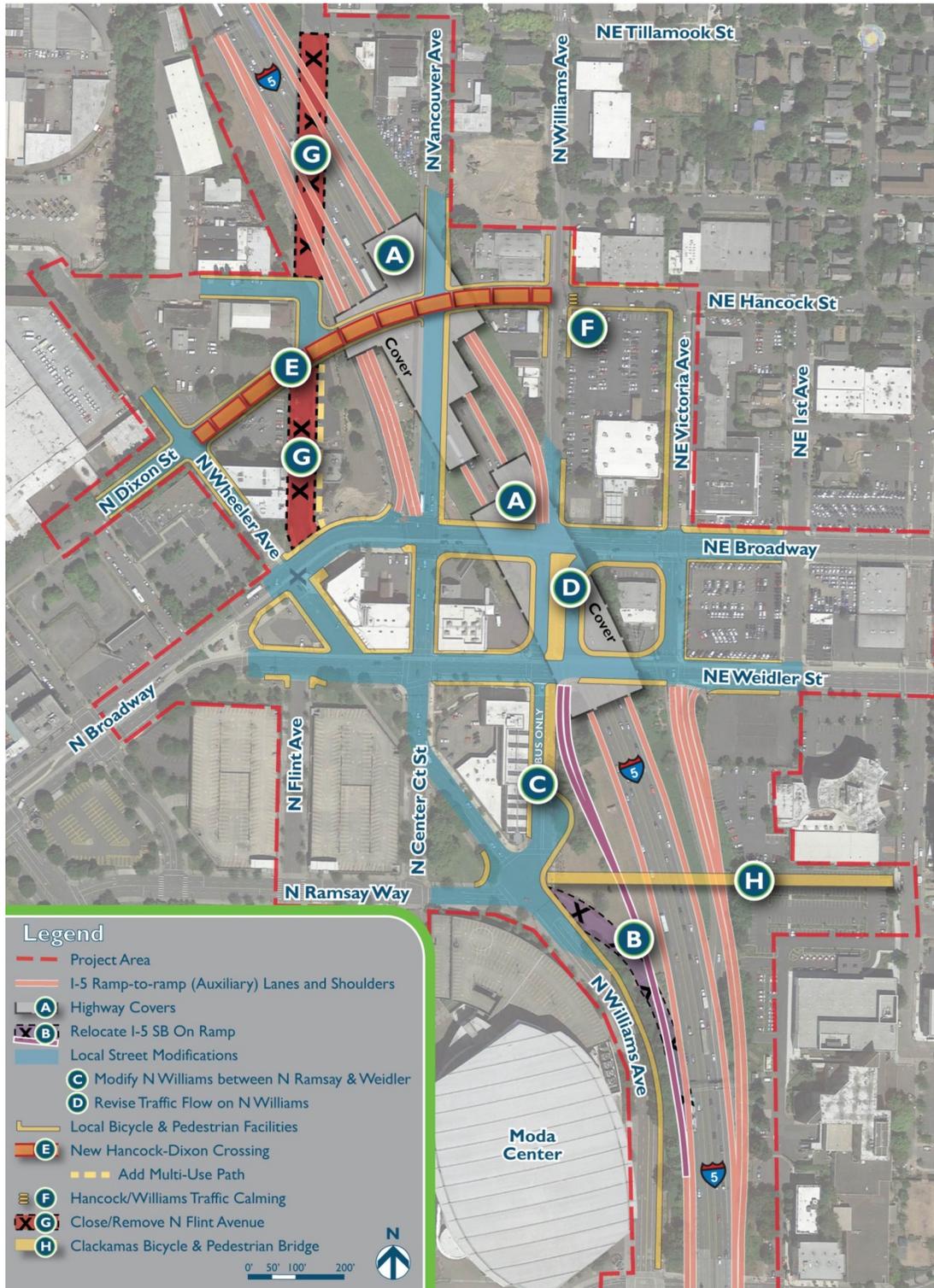


Figure 7. Conceptual Illustration of Proposed N Williams Multi-Use Path and Revised Traffic Flow



The revised N Williams configuration would be designed as follows:

- Two NB travel lanes along the western side of N Williams to provide access to the I-5 NB on-ramp, through movements NB on N Williams, and left-turn movements onto N Broadway.
- A 36-foot-wide center median with a multi-use path permitted only for bicycles and pedestrians. The median multi-use path would also include landscaping on both the east and west sides of the path.
- Two SB lanes along the eastern side of N Williams to provide access to the I-5 SB on-ramp or left-turn movements onto NE Weidler.

2.2.4 Related Local System Multimodal Improvements

2.2.4.1 New Hancock-Dixon Crossing

A new roadway crossing would be constructed to extend N/NE Hancock west across and over I-5, connecting it to N Dixon (see Figure 6, element “E”). The new crossing would be constructed on the Vancouver/Hancock highway cover and would provide a new east-west crossing over I-5. Traffic calming measures would be incorporated east of the intersection of N/NE Hancock and N Williams to discourage use of NE Hancock by through motor vehicle traffic. Bicycle and pedestrian through travel would be permitted (see Figure 6, element “F”).

2.2.4.2 Removal of N Flint South of N Tillamook and Addition of New Multi-Use Path

The existing N Flint structure over I-5 would be removed, and N Flint south of N Russell Street would terminate at and connect directly to N Tillamook (see Figure 6, element “G”). The portion of Flint between the existing I-5 overcrossing and Broadway would be closed as a through street for motor vehicles. Driveway access would be maintained on this portion of N Flint to maintain local access.

A new multi-use path would be added between the new Hancock-Dixon crossing and Broadway at a grade of 5 percent or less to provide an additional travel route option for people walking and biking. The new multi-use path would follow existing N Flint alignment between N Hancock and N Broadway (see Figure 6, element “G”).

2.2.4.3 Clackamas Bicycle and Pedestrian Bridge

South of N/NE Weidler, a new pedestrian- and bicycle-only bridge over I-5 would be constructed to connect NE Clackamas Street near NE 2nd Avenue to the N Williams/ N Ramsay area (see Figure 6, element “H,” and Figure 8). The Clackamas bicycle and pedestrian bridge would offer a new connection over I-5 and would provide an alternative route for people walking or riding a bike through the Broadway/Weidler interchange.

Figure 8. Clackamas Bicycle and Pedestrian Crossing



2.2.4.4 Other Local Street, Bicycle, and Pedestrian Improvements

The Build Alternative would include new widened and well-lit sidewalks, Americans with Disabilities Act (ADA)-accessible ramps, high visibility and marked crosswalks,

widened and improved bicycle facilities, and stormwater management on the streets connected to the Broadway/Weidler interchange.⁶

A new two-way cycle track would be implemented on N Williams between N/NE Hancock and N/NE Broadway. A two-way cycle track would allow bicycle movement in both directions and would be physically separated from motor vehicle travel lanes and sidewalks. This two-way cycle track would connect to the median multi-use path on N Williams between N/NE Broadway and N/NE Weidler.

The bicycle lane on N Vancouver would also be upgraded between N Hancock and N Broadway, including a new bicycle jug-handle at the N Vancouver and N Broadway intersection to facilitate right-turn movements for bicycles from N Vancouver to N Broadway.

Existing bicycle facilities on N/NE Broadway and N/NE Weidler within the Project Area would also be upgraded, including replacing the existing bike lanes with wider, separated bicycle lanes. New bicycle and pedestrian connections would also be made between the N Flint/N Tillamook intersection and the new Hancock-Dixon connection.

These improvements would be in addition to the new Clackamas bicycle and pedestrian bridge, upgrades to bicycle and pedestrian facilities on the new Broadway/Weidler/Williams and Vancouver/Hancock highway covers, and new median multi-use path on N Williams between N/NE Broadway and N/NE Weidler described above and illustrated in Figure 6.

⁶ Additional details on which streets are included are available at <http://i5rosequarter.org/local-street-bicycle-and-pedestrian-facilities/>

3 Regulatory Framework

Section 4(f) of the U.S. Department of Transportation Act (Transportation Act) of 1966 (49 United States Code [U.S.C.] 303[c]) applies to this Project because eligible recreational resources and historic sites that could potentially be affected by construction or operation of the Project are in or near the Project Area. The Transportation Act established that, “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

1. There is no prudent and feasible alternative to using the land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Additional requirements contained in Section 4(f) include consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the Oregon State Historic Preservation Office (SHPO) is also needed.

“Use” of a Section 4(f) resource is defined in Section 23 Code of Federal Regulations (CFR) 774.17 as follows:

1. When land is permanently incorporated into a transportation facility;
2. When there is temporary occupancy of land that is adverse in terms of the statute’s purpose as determined by the criteria in 23 CFR 774.13(d); or
3. When there is a constructive use of a Section 4(f) property as determined by the criteria in 23 CFR 774.15.

Per this regulation, use of a Section 4(f) property (as defined in CFR 774.17) may not be authorized unless a determination is made under paragraph (a) or (b) of this section.

- a) The Administration determines that: (1) There is no feasible and prudent avoidance alternative, as defined in §774.17, to the use of land from the property; and (2) The action includes all possible planning, as defined in §774.17, to minimize harm to the property resulting from such use; or

(b) The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, would have a *de minimis* impact, as defined in §774.17, on the property.

According to 23 CFR 774.17, the following criteria must be met to reach a *de minimis* impact determination. For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact determination may be made if the impact will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f). The *de minimis* impact determination includes any measures to minimize harm such as avoidance, minimization, mitigation, or enhancement (23 CFR 774.3). In addition, to make a *de minimis* impact determination, there must be:

1. Public notice and opportunity for public review and comment, and
2. Written concurrence received from the officials with jurisdiction over the property that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection.

For a historic site, a *de minimis* impact determination may be made only if, in accordance with the Section 106 process of the National Historic Preservation Act of 1966 (NHPA), it is found that the transportation program or project will have “no adverse effect” on historic properties or “no historic properties affected” with written concurrence from the Oregon SHPO. The Federal Highway Administration (FHWA) will inform the officials with jurisdiction of its intent to make a *de minimis* impact determination based on its concurrence with the findings of “no adverse effect” or “no historic properties affected” (23 CFR 774.5).

A temporary occupancy of a Section 4(f) property will not constitute a Section 4(f) use when all the conditions listed in 23 CFR 774.13(d) are satisfied:

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land.
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal.
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis.
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project.
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

In situations where the above criteria cannot be met, the temporary occupancy will be a use of Section 4(f) property and the appropriate Section 4(f) analysis, coordination, and documentation will be required (See 23 CFR 774.13(d)). In those cases where a temporary occupancy constitutes a use of Section 4(f) property and



the *de minimis* impact criteria are also met, a *de minimis* impact finding may be made. *De minimis* impact findings should not be made in temporary occupancy situations that do not constitute a use of Section 4(f) property.

A constructive use of a Section 4(f) property involves no actual physical use of the Section 4(f) property via permanent incorporation or temporary occupancy of land into a transportation facility. A constructive use occurs when a project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired and the resource can no longer perform its designated function (23 CFR 774.15).

4 Methodology and Data Sources

4.1 Project Area and Area of Potential Impact

Section 4(f) specialists analyzed the Area of Potential Impact (API) for Section 4(f) properties through review of the *Archaeological Resources Technical Report* (ODOT 2019a) and the *Historic Resources Technical Report* (ODOT 2019b), in addition to other sources, to identify publicly owned parks, recreation areas, and wildlife and waterfowl refuges. Figure 9 depicts the API for Section 4(f) properties. The API for Section 4(f) properties includes the Project Area, as shown on Figure 1. The API for Section 4(f) is larger than the Project Area alone to address concerns raised by the SHPO that the Project could have indirect effects (i.e., noise, atmospheric) to historic properties in the area east of the Project Area in the historic neighborhood of Albina.

4.2 Resource Identification and Evaluation

This section documents methods used to identify and evaluate impacts to Section 4(f) properties, as defined in 23 CFR 774.17 in the API. Section 4(f) properties include historic sites and publicly owned parks, recreation areas, and wildlife and waterfowl refuges.

This section also explains how recommendations for avoidance, minimization, and/or mitigation of impacts to Section 4(f) properties (that are consistent with Section 4(f) of the Transportation Act and NEPA) were developed.

The Section 4(f) evaluation considered properties that are eligible for or listed in the National Register of Historic Places (NRHP) and are considered historic sites as defined in 23 CFR 774.17. In addition to historic sites, the evaluation of Section 4(f) resources also included review of previous studies to identify publicly owned parks, recreation areas, wildlife or waterfowl refuges, and planned recreation resources in the API. Previous studies that investigated Section 4(f) resources in the Project Area, such as for the N/NE Quadrant and I-5 Broadway/Weidler Plans Environmental Baseline Report (URS 2011), were reviewed for accuracy and relevancy. The Project team coordinated closely with City of Portland bureaus, as appropriate, to ensure that Section 4(f) resources had been accurately identified.

Figure 9. Area of Potential Impact for Section 4(f) Properties



<p>Project Location</p>	<p> Area of Potential Impact (API)</p> <p><small>DATASOURCES: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBasis, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community</small></p>	<p>I-5 ROSE QUARTER IMPROVEMENT PROJECT AREA OF POTENTIAL IMPACT FOR SECTION 4(f) PROPERTIES FIGURE 9</p> <p>0 500 1,000 1,500 Feet </p> <p><small>PATH: K:\S_BROADWAY_VICTOR_INTERCHANGE\BOD\CULTURAL\ARCHAEOLOGICAL\RESOURCE\SPR\SPR\FOR\4(f) PROPERTIES\API - USDR: SE\THERBERGSON.DWG DATE: 11/15/16</small></p>
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4.2.1 Historic Sites

For the purposes of this Section 4(f) evaluation, and consistent with 23 CFR 774.17, historic sites include

...any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that are included in, or are eligible for inclusion in, the National Register.

These sites can include a broad range of resources, including historic buildings, historic transportation facilities, historic trails, and historic districts. Historic resource specialists who meet or exceed the U.S. Secretary of the Interior's Professional Qualifications Standards in Architectural History and Archaeology (36 CFR Part 61) completed research and conducted fieldwork within the API to identify historic sites.

4.2.1.1 Historic Sites: Historic Resources

According to the *Historic Resources Technical Report* (ODOT 2019a), AECOM specialists prepared Determinations of Eligibility (DOEs), which are included as an appendix to that document. Twenty DOEs evaluated individual historic properties, and three additional DOEs evaluated individual historic districts. Each DOE contains a statement of significance, application of the NRHP Criteria of Evaluation, background history, physical description, discussion of historical integrity, photographs, and depiction of the property boundaries. During the preparation of the DOEs, the Project team undertook a detailed analysis of each individual property. This analysis involved research at several local repositories, including the Multnomah County Division of Assessment, Recording, and Taxation; Multnomah County Library (Central Library); Oregon Historical Society; Portland City Archives; and Portland State University. The Project team also reviewed several online subscription and free research repositories, including the public records contained in Ancestry.com, Multnomah County Survey and Assessor Image Locator, GenealogyBank.com, Newsbank, newspapers.com, historicmapworks.com, jstor.com, Sanborn Fire Insurance Company Maps, Bureau of Land Management–United States General Land Office map collection, and United States Geological Survey (USGS) topographic quadrangle maps. One particularly important source, *Cornerstones of Community: The Buildings of Portland's African American History* (Bosco-Milligan Foundation 1995), was used to identify historic resources associated with the Albina area's cultural legacy.

The Project team specialists recommended 14 of the 20 individual resources as eligible for the NRHP. Of the three historic districts, only one is recommended as eligible for the NRHP: the Eliot Historic District, which contains eight contributing resources that are located within the API. Oregon SHPO provided concurrence on NRHP eligibility for the 14 individual historic properties and the Eliot Historic District (Appendix B). These 14 individual historic properties and the Eliot Historic District are considered Section 4(f) historic sites.

4.2.1.2 Historic Sites: Archaeology

In 2017, the Project team reviewed Oregon SHPO documents to determine if any previous archaeological resources studies had been completed or archaeological sites recorded in the vicinity of the API that are considered significant for Section 4(f) purposes as historic sites. The Project team also consulted historic maps and aerial photographs to determine the probability of previously unrecorded historic sites (archaeological) to be present beneath the existing improved landscape. Section 4(f) applies to archaeological sites that are eligible for or are listed in the NRHP, including those sites discovered during construction (except when the resource is important chiefly because of what can be learned by data recovery and the resource has minimal value for preservation in place). The Project team archaeologist that conducted research for the Project meets the U.S. Secretary of the Interior's Professional Qualifications Standards in Archaeology. The results of this research are contained in the *Archaeological Resources Technical Report* (AECOM 2019b).

The Project team's search of the Oregon SHPO Archaeological Database revealed that three cultural resources surveys have been conducted within the API. Previously recorded archaeological resources within a 1-mile radius of the API include 10 archaeological sites and two possible locations for archaeological sites. However, none of the previously recorded archaeological resources are located within the API.

The previously recorded archaeological sites consist of one historic cemetery (35MU126); two historic debris concentrations (35MU257 and 35MU197); four historic structural remains sites (35MU249, 35MU248, 35MU122, 35MU121); and three sites with both historic structural remains and debris concentrations (35MU253, 35MU246, and 35MU169). The two noted site locations include the "Possible (location of an) Indian Camp" per Le Gilson's digitized SHPO topo map (SHPO n.d.) and the location of Portland's "First Cabin" as identified from a 1911 article in *The Oregonian* (*The Oregonian* 1911).

Most of the previously identified sites are historic debris concentrations, historic structural remains, or sites that contain both components. With the exception of pilings (35MU248) and the remnants of a dock (35MU249) recorded on the banks of the Willamette River, the rest of the historic sites were discovered during construction phases or during the cultural survey phase of various projects, with the aid of a mechanical excavator. Most of these historic sites date from the late-nineteenth century to the early twentieth century. The historic cemetery site documents the Chinese section of the Lone Fir Cemetery, outside of the API.

Eligibility status for the sites include two recommended eligible for listing in the NRHP (the historic cemetery and a historic concentration [35MU197] recorded after a looter was observed exposing historic-period archaeological deposits); two recommended as not eligible (the pilings and dock recorded on the east bank of the Willamette River); and the remaining six sites recommended as undetermined.

Most of the sites are located on the west side of the Willamette River. The closest sites to the API, but not within the API, are the pilings and dock located on the east bank of the Willamette River, just south of the Hawthorne Bridge.

Several additional historic map sets were reviewed, including USGS maps, Metsker maps, Sanborn Fire Insurance Maps, historic aeriels, and historic photographs. These maps tend to show the area's gradual urban development from scattered homesites to dense urban environment—from agricultural to commercial, institutional, and residential types of land uses laid out on an orthogonal grid.

Therefore, archaeological sites, including those considered Section 4(f) historic sites, related to travel, homesteading, natural resources procurement (logging, mining, farming, etc.), and early urban development may exist below the current improved ground surface. The general area has also been home to Native American populations for thousands of years, and archaeological evidence, including Section 4(f) historic sites, in the form of habitation sites and temporary camps may also exist below the contemporary ground surface.

Highway and local roadway improvements associated with this Project are likely to extend beyond the existing disturbed strata and affect locations with archaeological resources that may be considered Section 4(f) historic sites.

4.2.2 Publicly Owned Parks, Recreation Areas, and Wildlife and Waterfowl Refuges

The Project team has identified four publicly owned parks in the API that are protected by Section 4(f). Two of the parks are located within the Project Area. The Project team did not identify any recreation areas or wildlife or waterfowl refuges protected by Section 4(f) in the API. The Vera Katz Eastbank Esplanade, a part of the Willamette River Greenway Trail, is situated within the southern end of the API. While a component of the Willamette River Greenway Trail, the Vera Katz Eastbank Esplanade is a City of Portland park, while the Willamette River Greenway Trail is an interconnected network of trails managed and/or owned by a number of entities (which include the City of Portland). The publicly owned Lillis-Albina Park is located at the northern end of the API. The publicly owned Portland Peace Memorial Park is located just east of the Vera Katz Eastbank Esplanade.

The Project is within the corporate boundaries of the City of Portland. The Lillis-Albina Park, Vera Katz Eastbank Esplanade, and that segment of the Willamette River Greenway Trail that extends through the Esplanade fall under the jurisdiction of City of Portland Parks and Recreation (PPR). The Portland Peace Memorial Park is located on City of Portland-owned property and is managed by the Bureau of Transportation (City of Portland 2007). The Project team consulted published City of Portland documents that address planned parks in the API. These documents included *Parks 2020 Vision Progress Report 2009* (City of Portland 2009), *The Portland Plan* (City of Portland 2012), and the *Willamette River Greenway Inventory* (City of Portland 2014). These sources do not identify any additional parks, recreation areas, or trails along or accessible within the API. The Project team also consulted with representatives of PPR to identify all existing and planned parks, recreation areas, or trails within the Project's API. No additional recreational facilities are currently planned within the API.

4.3 Assessment of Impacts

The Project team coordinated the evaluation of potential impacts to Section 4(f) properties with the FHWA to determine whether Project activities, such as minor acquisitions, would result in Section 4(f) uses and whether FHWA considers them minor, or *de minimis*. Any potential use of a historic site or a publicly owned park, recreation area, planned recreation resource, or wildlife and waterfowl refuge in the API or that would become part of a transportation facility required an assessment for potential Section 4(f) impacts. The Project team's Section 4(f) specialists carried out this assessment during the NEPA review process.

The potential Section 4(f) uses contemplated for the Project involve minor property acquisitions for transportation facilities. To determine how the acquisitions would affect Section 4(f) properties, the Project team prepared a justification of boundary for each potential Section 4(f) property. For historic sites, this justification included a description of that property's relative historical significance and integrity and a determination of whether the property boundary was inclusive of the characteristics that make that property eligible for the NRHP. Likewise, where a use of park property for a transportation facility constitutes a Section 4(f) use under 23 CFR 774, the boundaries of Section 4(f) publicly owned parks and recreational facilities were properly identified through coordination with PPR, the official with jurisdiction.

Section 4(f) requires FHWA to seek ways to avoid, minimize, or mitigate adverse impacts to Section 4(f) resources. Where necessary to avoid adverse impact to Section 4(f) resources, methods to avoid, minimize, or resolve impacts to resources protected by Section 4(f) of the Transportation Act (23 CFR Part 774) have been identified. These measures are provided in Section 7.

4.4 Cumulative Impacts

The cumulative impacts analysis considered the Project's impacts combined with other past, present, and reasonably foreseeable future actions that would have environmental impacts in the Project Area. A list of reasonably foreseeable future actions was developed through consultation with City of Portland and Metro staff (Appendix A). This list included any permitted public and private projects within the Project Area and projects that are in the permit application process. The cumulative impact assessment qualitatively assessed the magnitude of impacts expected from reasonably foreseeable future actions in combination with anticipated Project impacts. This assessment also identified the contribution of the Project to overall cumulative impacts.

5 Affected Environment

This section describes the historic sites and publicly owned parks and recreation areas within the API that are subject to Section 4(f) protections. The locations of the Section 4(f) resources that could be directly or indirectly affected by the Project's Build Alternative are shown in Figure 10.

5.1 Historic Sites: Historic Resources

The Project's cultural resources specialists identified 107 historic resources in the API that were 45 years old or older. Of these, 18 of the individual resources were evaluated as contributing or non-contributing resources to three different historic districts; the Eliot Historic District, N Page Street Historic District, and the NE 1st Avenue Historic District. Following completion of DOEs for these districts, only the Eliot Historic District was recommended as eligible for the NRHP, as 8 of the 12 resources contributed to the significance of the district. No contributing resources were located in either the N Page Street or NE 1st Avenue Historic Districts. For those individual resources that were identified as potentially meeting the NRHP Criteria for Evaluation in the baseline architectural survey, DOEs were prepared. Of the 20 individual property DOEs prepared, 14 met one or more of the NRHP criteria and are therefore recommended as historic properties. ODOT received Oregon SHPO concurrence on NRHP eligibility for the 14 individual historic properties and the Eliot Historic District and its eight contributing historic properties (Appendix B). These resources therefore are considered historic sites as defined in 23 CFR 774.17. Only one historic site, the TraveLodge at the Coliseum, has the potential to experience a temporary, permanent, or constructive Section 4(f) use with the Project's Build Alternative.

5.1.1 TraveLodge at the Coliseum

The TraveLodge at the Coliseum (Figure 11), currently known as the Crowne Plaza Hotel located at 1441 NE 2nd Avenue, was built in 1971 and had 243 rooms, the Raphael Restaurant and Lounge, a coffee shop, meeting rooms, ADA-compliant rooms, and a swimming pool (*The Oregonian* 1971a). It was also "said to be the first high-rise Travelodge in the Pacific Northwest and the second Travelodge in Portland, Oregon" (*The Oregonian* 1971a). An additional advertisement called it "America's tallest TraveLodge you've ever seen" (*The Oregonian* 1971b).

Figure 10. Section 4(f) Properties

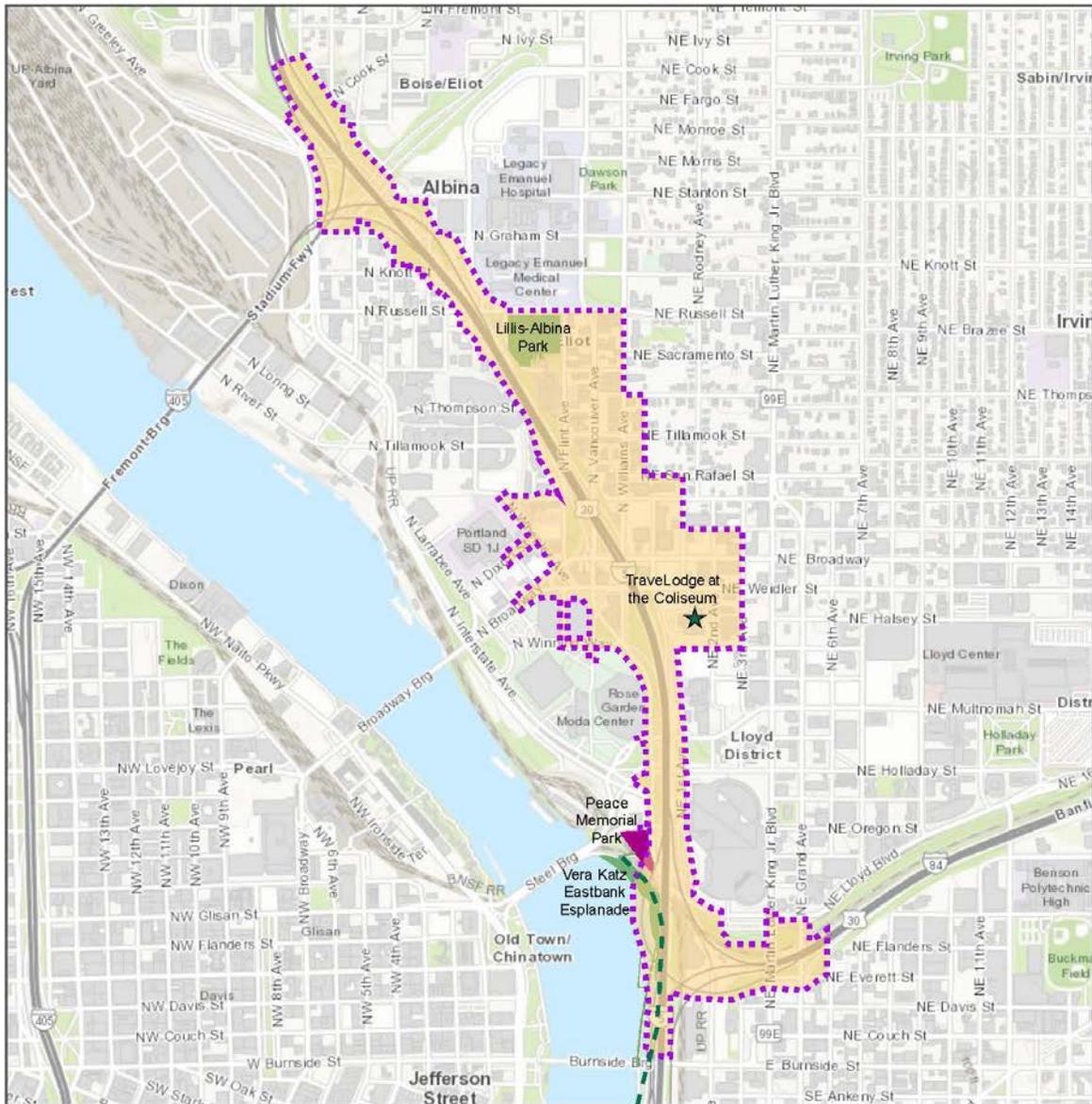


Figure 11. Travelodge at the Coliseum, looking west



The Travelodge at the Coliseum retains historic integrity of location, materials, workmanship, setting, feeling, and association due to its retention of location, use of materials and construction techniques common to its build date, 1970s-era redevelopment setting, and original function. It is recommended eligible under NRHP Criterion A, as the property reflects historically significant local and national development trends, including the redevelopment of the Albina and the Lloyd neighborhood after the construction of I-5. It is eligible under NRHP Criterion C as one of the first Travelodge “TriArc” plan-designed hotels in Western United States (ODOT 2019a). The Travelodge is therefore considered a historic site per 23 CFR 774.17. The Oregon SHPO provided concurrence with the FHWA determination of NRHP eligibility for the Travelodge at the Coliseum (Appendix B).

5.2 Historic Sites: Archaeology

No archaeological sites that would qualify as Historic Sites as defined in 23 CFR 774.17 have been identified to date within the API.

5.3 Publicly Owned Parks, Recreation Areas, and Wildlife and Waterfowl Refuges

5.3.1 The Vera Katz Eastbank Esplanade

The Vera Katz Eastbank Esplanade is a 1.5-mile-long publicly owned park that extends north from the Hawthorne Bridge, past the Morrison and Burnside Bridges, to the Steel Bridge, with connections to eastside neighborhoods as well as across

the river to Governor Tom McCall Waterfront Park. The Esplanade is also a part of the Willamette River Greenway Trail, which connects the Esplanade to a broader trail network that includes the Springwater Corridor Trail and crosses the Willamette River along the side of the Steel Bridge (Figure 12; City of Portland 2018).

The City of Portland developed the Esplanade after its completion of the Eastbank Riverfront Park Master Plan in 1994 (City of Portland 1994). Construction of the Esplanade began in October 1998, after the city acquired the park, and was completed in May 2001. PPR used federal funds for transportation enhancements from the Intermodal Surface Transportation Efficiency Act of 1991, overseen by the FHWA, for discrete sections of the Vera Katz Eastbank Esplanade Project, which included the segment from the Burnside Bridge to the Steel Bridge (which is within the API) (City of Portland 1995). These various improved segments of the Vera Katz Eastbank Esplanade have now become interconnected with and form a part of the larger Willamette River Greenway Trail (City of Portland 2014).

5.3.1.1 Ownership

The Vera Katz Eastbank Esplanade, at least that section of the park on land within the API, is owned by the City of Portland (City of Portland 2018a). A segment of the Esplanade and an associated canoe launch/dock within the API is on a floating structure above the Willamette River but is anchored into the river bed by piers (Figure 13). While the dock is owned by the City of Portland, the river bed and banks (up to the ordinary high water mark) of navigable rivers, which include this reach of the Willamette River, belong to the State of Oregon (Oregon Department of Justice 2005). The City of Portland has a license for the overwater structures from the Oregon Department of State Lands (DSL) to operate the structures as a Public Recreation Facility (DSL License No. 9978-LI 2014).

Figure 12. Vera Katz Eastbank Esplanade and Willamette River Greenway Trail, looking south



Figure 13. Vera Katz Eastbank Esplanade and Willamette River Greenway Trail, showing public moorage and floating dock



5.3.1.2 Activities, Features, and Attributes

Existing park facilities at the Vera Katz Eastbank Esplanade include a multi-use pedestrian and bicycle trail, public art, public dock, and viewpoints of the city skyline and the West Hills. The Esplanade is notable as it includes a 1,200-foot-long floating walkway that is the longest one of its kind in the United States and includes a 120-foot public dock that provides moorage for recreational boaters and canoe launch, as well as space for a future river taxi and other commercial uses. No opening or closing times are mentioned in the City of Portland's description of the park facilities. The Esplanade is interconnected with the Eastside Willamette River Greenway Trail (City of Portland 2014).

5.3.1.3 Access

The Vera Katz Eastbank Esplanade is accessed by the public via numerous surface sidewalks, roads, and walkways from the Hawthorne Bridge north to the Steel Bridge.

5.3.2 Willamette River Greenway Trail

5.3.2.1 Ownership

The Willamette River Greenway Trail, at least that section of the trail on land within the API, is owned by the City of Portland (City of Portland 2018). A segment of the trail and an associated canoe launch/dock within the API is on a floating structure above the Willamette River but is anchored into the river bed by piers. While the dock is owned by the City of Portland, the river bed and banks (up to the ordinary high water mark) of navigable rivers, which include the Willamette River, belong to the State of Oregon (Oregon Department of Justice 2005). The City of Portland has a license for the overwater structures from the DSL to operate the structures as a Public Recreation Facility (DSL License No. 9978-LI 2014).

5.3.2.2 Activities, Features, and Attributes

The City of Portland and other regional, state, and local government partners consider the Willamette River Greenway Trail as a recreational resource, although it is not necessarily in Portland's inventory of parks (City of Portland 2014). The Greenway Trail includes the trail, with its access to a public dock just south of the Steel Bridge, overlooks, and a multi-use path for bikes and pedestrians (Figures 12 and 13). The Greenway Trail provides connections to the Springwater Corridor Trail to the south and to Tom McCall Waterfront Park to the west via a crossing astride the lower deck of the Steel Bridge. In 2010, the Federal Transit Administration determined that a segment of trail known as the Eastside Willamette River Greenway Trail, located just south of the Hawthorne Bridge and an extension of the Willamette River Greenway Trail segment within the Vera Katz Eastbank Esplanade, was a Section 4(f) resource (Federal Transit Administration 2010).

5.3.2.3 Access

The Willamette River Greenway Trail is accessed by the public via numerous sidewalks, bike/pedestrian overpasses, roads, and walkways from the Hawthorne Bridge north to the Steel Bridge.

5.3.3 Lillis-Albina Park

Initially called Albina Park, the park was renamed in 1947 to Lillis-Albina Park (Figure 14). It consists of 3.94 acres and is a dual-use facility as it is used by students from the Harriet Tubman Middle School during the school day and the public at other times. The park is located at the northern end of the API.

5.3.3.1 Ownership

The City of Portland acquired the Lillis-Albina Park in 1940 (City of Portland 2018b).

5.3.3.2 Activities, Features, and Amenities

The park consists of open space, picnic tables, playground, and soccer field and softball field.

5.3.3.3 Access

The Lillis-Albina Park is accessed via ungated entries located at the north and south ends of the park along N Flint Street. The park is reserved for exclusive use by students of Harriet Tubman Middle School between 9:00 AM and 3:00 PM on school days. Other than the potential restrictions on use to accommodate school children, the park is available to the community. The park is open from 5:00 AM to midnight (City of Portland 2018).

5.3.4 Portland Peace Memorial Park

5.3.4.1 Ownership

The Portland Peace Memorial Park is owned by the City of Portland and managed by the Portland Bureau of Transportation and the Portland Bureau of Maintenance (City of Portland 2007).

5.3.4.2 Activities, Features, and Amenities

The Portland Peace Memorial Park is administered through a 2007 revocable permit granted to the Peace Memorial Park Foundation and consists of a landscaped garden dedicated to recognizing non-combatant and civilian casualties of violent conflicts (Figures 15 and 16). The park is not included on the City of Portland's list of recreational parks and does not have a master plan.

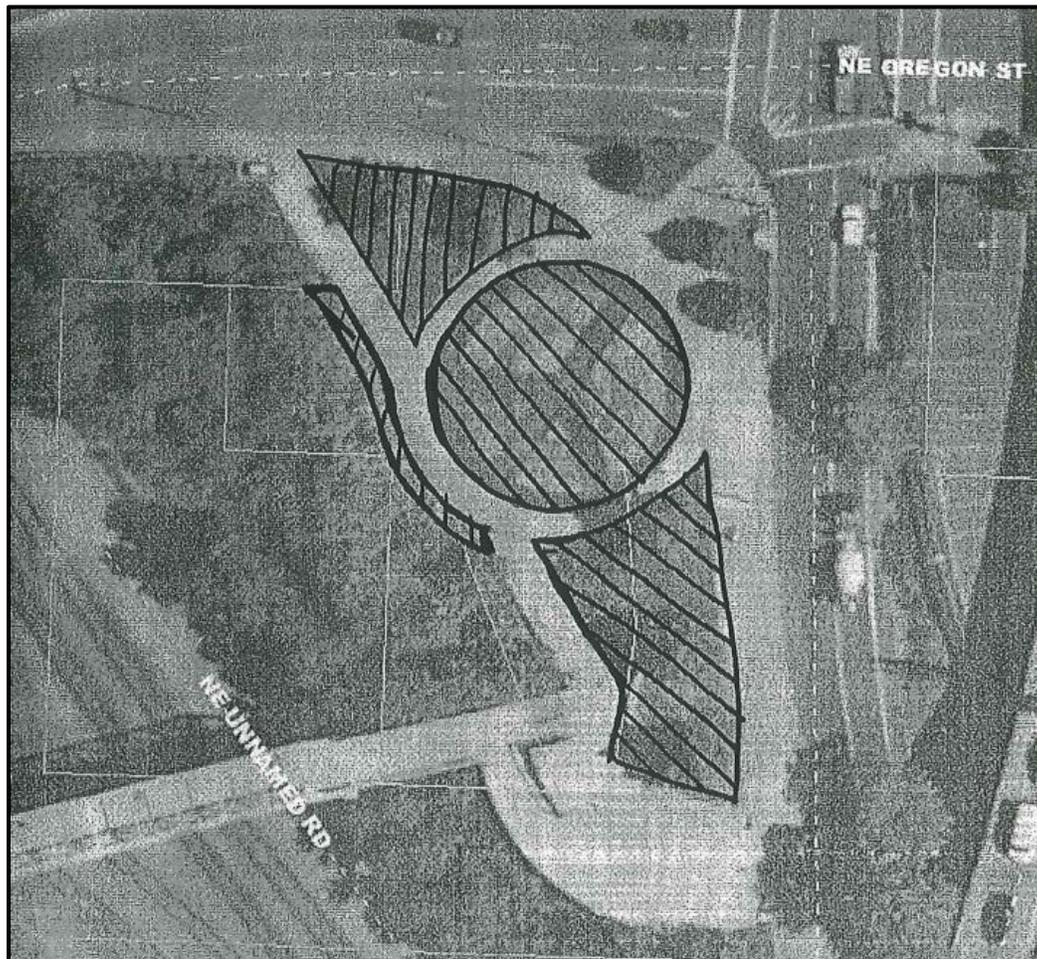
Figure 14. Lillis-Albina Park, looking northwest



Figure 15. Portland Peace Memorial Park, landscaped area in center of photograph, looking east towards Interstate 5



**Figure 16. Property Boundary for the Portland Peace Memorial Park
(City of Portland 2007)**



5.3.4.3 Access

The Portland Peace Memorial Park is accessed via the Vera Katz Eastbank Esplanade and via surface sidewalks located near the intersection of NE Oregon Street and NE Lloyd Boulevard. No restrictions on access to the park are currently advertised at the park site.

6 Environmental Consequences

This section describes the impacts of the No-Build and Build Alternatives to Section 4(f) resources identified within the API and provides a preliminary recommendation as to whether the proposed impacts constitute a “use” of the resource under Section 4(f). It should be noted that the amount of land impacted is an estimate based on GIS analysis, which will be updated at a future date with on-the-ground surveys. Existing preliminary designs showing locations of Project-related infrastructure were used to give a defined account of on-the-ground impacts wherever practicable.

6.1 No-Build Alternative

As described in Section 2.1, the No-Build Alternative consists of existing conditions and other planned and funded transportation improvement projects that would be completed in and around the Project Area by 2045.

6.1.1 Direct Impacts

Under the No-Build Alternative, the proposed I-5 mainline and Broadway/Weidler interchange area improvements would not be constructed, and the current road system would remain in place. Therefore, no direct impacts or benefits to Section 4(f) properties would occur.

6.1.2 Indirect Impacts

The No-Build Alternative would have no construction actions; therefore, no Project-related indirect impacts or benefits to Section 4(f) properties would occur.

6.2 Build Alternative

Under the Build Alternative, the Project’s proposed roadway, bicycle, and pedestrian improvements would be constructed, as described in Section 2.2.

6.2.1 Short-Term (Construction) Impacts

Short-term (construction) impacts relate to temporary impacts to resources resulting from the construction process. The temporary occupation of Section 4(f) properties during construction may constitute a use of the property. Criteria contained in 23 CFR 774.13 are applied to the specific circumstance of the occupation to ascertain whether it is a use and how impacts to the resource can be avoided and minimized.

6.2.1.1 Travelodge at the Coliseum

The Build Alternative would require a temporary construction easement of 4,009.5 square feet (sq. ft.) of the 109,206.5 sq. ft. (2.57 acres) parcel. The easements would take place along the west and north perimeter of the parking lots that surround the

Travelodge at the Coliseum (Figures 17 and 18). The temporary easement would consist of approximately 3.6 percent of the total area of the parcel. The historic building would not be physically impacted, and no physical features that contribute to the hotel's historical significance would be affected.

Other Project-related construction impacts to historic properties would be impacts to the vicinity of the resource or indirect impacts that include noise and vibration due to nearby construction activities, increased truck traffic, traffic congestion and changes to access, increased dust, and short-term visual changes due to construction equipment, staging areas, material storage, etc.

Short-term noise levels for construction activities are expected to range from approximately 70 to 100 A-weighted decibels (dBA). ODOT specifications and best management practices would be followed to help minimize high noise levels during construction. See the *Noise Study Technical Report* for further details (ODOT 2019c). Short-term vibration from construction activities would also potentially occur.

It is anticipated that the temporary easement, noise effects, and vibration potential from construction activities would have no adverse effects to the historic property pursuant to 36 CFR 800.5(d)(1). The FHWA, in writing, will notify the Oregon SHPO of the effect avoidance and minimization conditions contained in the *Historic Resources Technical Report* (ODOT 2019a) and in the Programmatic Agreement, and its intent to use the SHPO's concurrence with the Section 106 findings of no adverse effect, to reach a Section 4(f) *de minimis* determination for the property.

6.2.1.2 Vera Katz Eastbank Esplanade

The Build Alternative may require periodic temporary occupation of segments of the Vera Katz Eastbank Esplanade over the course of Project construction for safety, staging, and/or equipment access. Parts of the Eastbank Esplanade would potentially need to be closed to users during Project construction.

To meet the Section 4(f) statute's temporary occupation exception criteria (specifically 23 CFR 774.13[d][iii], which notes that the project cannot cause "interference with the activities or purpose of the resource, on either a temporary or permanent basis"), and thereby avoid a Section 4(f) use because of temporary occupation, the Project would need to create a temporary detour for users that would allow for the continued continuity of the trail during construction. ODOT has identified a potential location where temporary detour routes could be located that would allow for continued use of the Eastbank Esplanade during construction, thereby meeting the Section 4(f) statute's temporary occupation exception criteria.

Figure 17. Temporary Easements and Permanent Acquisitions for the TraveLodge at the Coliseum (west) (area of historic property to be subject to Project easement circled in black)

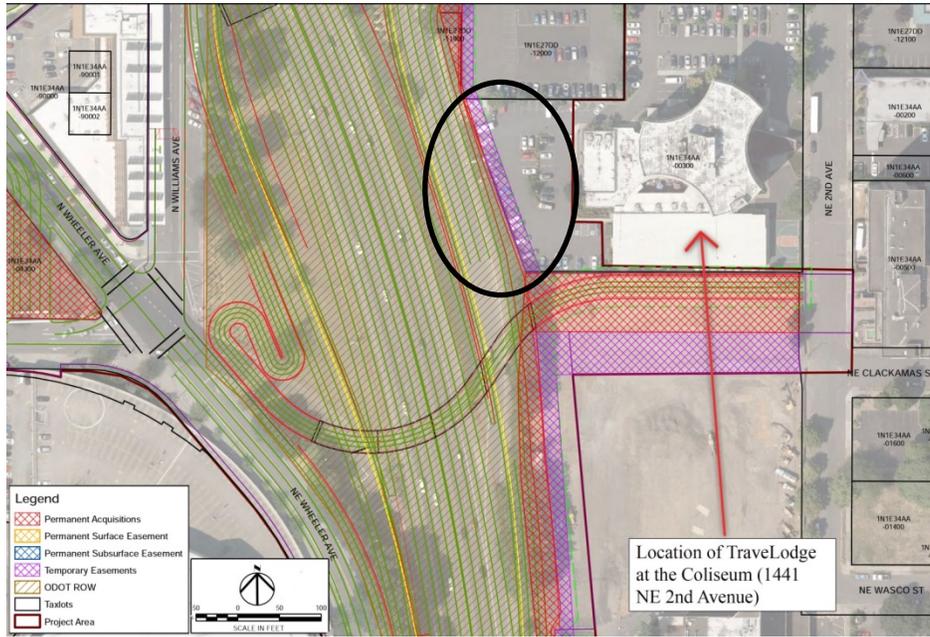
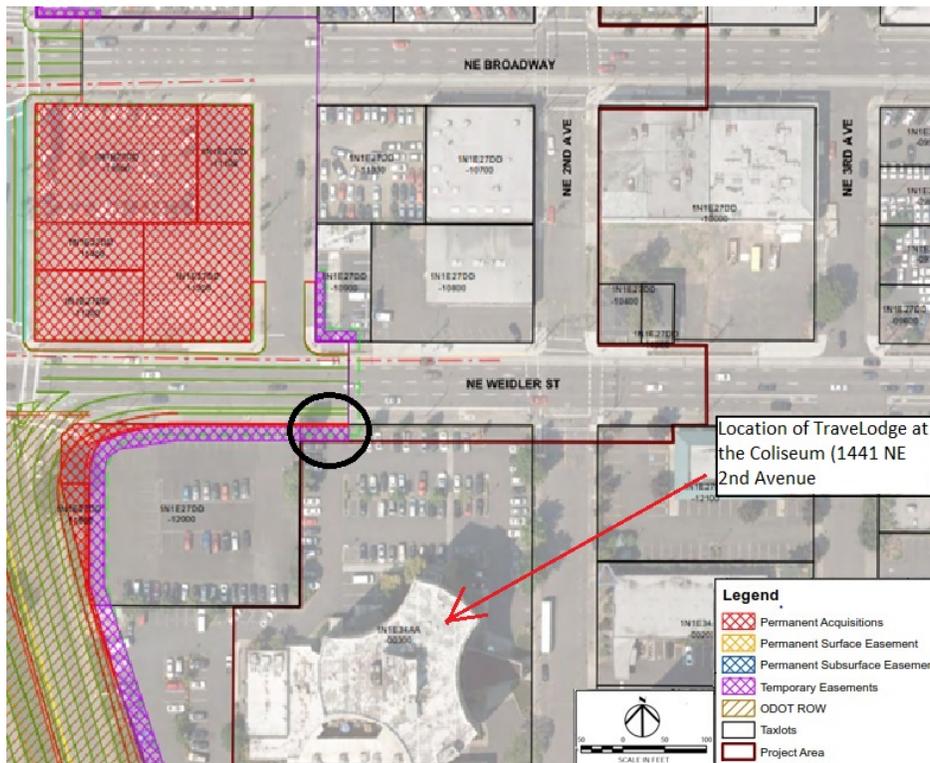


Figure 18. Temporary Easements and Permanent Acquisitions for the TraveLodge at the Coliseum (north) (area of historic property to be subject to Project acquisition and/or easement circled in black)



Construction-related noise would occur in proximity to the east perimeter of the Vera Katz Eastbank Esplanade. ODOT specifications and best management practices would be followed to help minimize high noise levels during construction (ODOT 2019c). The noise impact analysis of construction activities and facility operation reveals that noise levels would not exceed levels that would incur a constructive use of the property (ODOT 2019c).

6.2.1.3 Willamette River Greenway Trail

The Build Alternative may require the temporary occupation of segments of the Willamette River Greenway Trail over the course of Project construction for safety, staging, and/or equipment access. Parts of the Willamette River Greenway Trail would potentially need to be closed to users during Project construction.

As described above for the Eastbank Esplanade, to meet the Section 4(f) statute's temporary occupancy exception criteria (specifically 23 CFR 774.13[d][iii], which notes that the project cannot cause "interference with the activities or purpose of the resource, on either a temporary or permanent basis"), and thereby avoid a Section 4(f) use because of temporary occupation, the Project would need to create a temporary detour for users that would allow for the continued continuity of the trail during construction. ODOT has identified a potential location where temporary detour routes could be located that would allow for continued use of the Eastbank Esplanade during construction, thereby meeting the Section 4(f) statute's temporary occupancy exception criteria.

An intergovernmental agreement and detour plan, prepared in coordination with ODOT and the City of Portland, is pending completion (Appendix C).

Construction and facility operation-related noise would occur in proximity to the east perimeter of the Willamette River Greenway Trail. ODOT specifications and best management practices would be followed to help minimize high noise levels during construction (ODOT 2019c).

6.2.1.4 Lillis-Albina Park

Construction and facility operation-related noise would occur in proximity to the west perimeter of Lillis-Albina Park. ODOT specifications and best management practices would be followed to help minimize high noise levels during construction (ODOT 2019c).

6.2.1.5 Portland Peace Memorial Park

Construction and facility operation-related noise would occur in proximity to the east perimeter of Portland Peace Memorial Park. ODOT specifications and best management practices would be followed to help minimize high noise levels during construction (ODOT 2019c).

6.2.2 Long-Term and Operational Direct Impacts

Long-term, operation-related direct impacts come from the road-building process that results from such actions as converting land into the transportation facility during construction and subsequently during the operation of the facility. Operational impacts could include noise or atmospheric impacts.

6.2.2.1 Travelodge at the Coliseum

The Build Alternative would require a permanent acquisition of 173.74 sq. ft. of the 109,206.5 sq. ft. (2.57-acre) parcel. The acquisition would take place along the west and north perimeter of the parking lots that surround the Travelodge at the Coliseum (Figures 17 and 18). The permanent acquisition would consist of less than 0.2 percent of the total area of the parcel. The historic building would not be physically impacted, and no physical features that contribute to the hotel's historical significance would be affected.

A noise analysis performed for the project reveals that the building would experience a barely perceptible increase in operations-related noise generated by traffic (from the current noise level of 61 dBA to 62 dBA; a noise difference of +1 dBA). The proposed noise condition would not exceed the ODOT Noise Abatement Approach Criteria (NAAC) of 65 dBA. If a noise wall were to be installed between I-5 and the Travelodge, as recommended in the noise analysis, noise levels at the Travelodge would decrease to 57 dBA, which would be 8 dBA below the NAAC threshold for a Section 4(f) property (see *Noise Study Technical Report* [ODOT 2019c]).

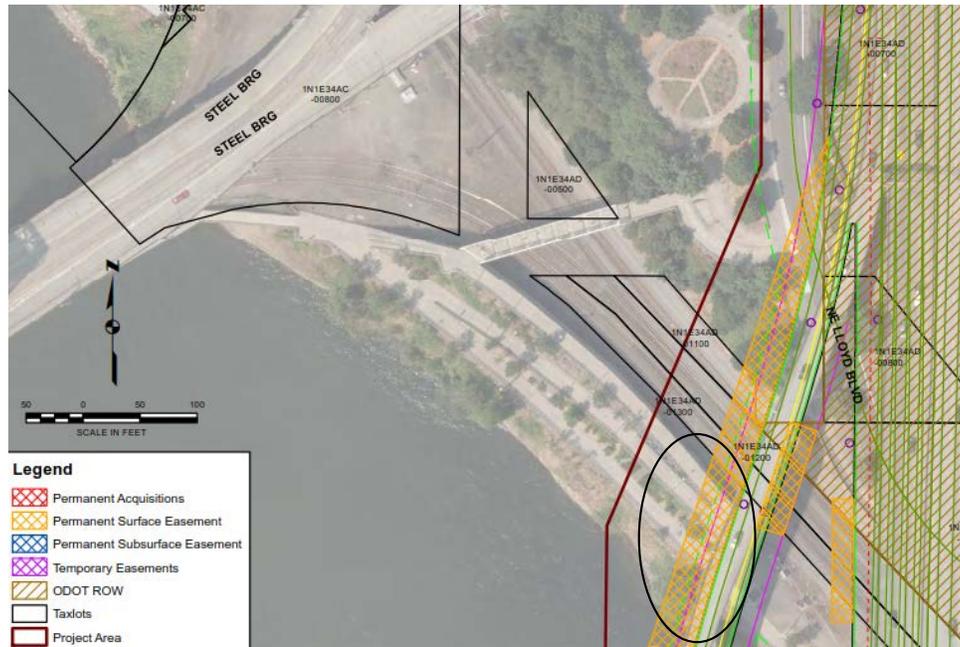
It is anticipated that the permanent acquisition would have no adverse effects to the historic property pursuant to 36 CFR 800.5(d)(1); therefore, the Project's acquisition of a portion of the Travelodge at the Coliseum property as part of the Build Alternative would be a *de minimis* Section 4(f) use. The FHWA, in writing, will notify the Oregon SHPO of the effect avoidance and minimization conditions contained in the *Historic Resources Technical Report* (ODOT 2019a) and in the Programmatic Agreement, and its intent to use the SHPO's concurrence with the Section 106 findings of no adverse effect, to reach a Section 4(f) *de minimis* determination for the property.

6.2.2.2 Vera Katz Eastbank Esplanade

The Build Alternative requires the acquisition of a permanent surface easement across a segment of the Vera Katz Eastbank Esplanade (Figure 19). Periodic closures may be required during facility operation, but they are expected to be short in duration. This would constitute a Section 4(f) use of the property as it would be permanently incorporated into the transportation facility. Measures to minimize impacts include the preparation of an intergovernmental agreement between ODOT and the City of Portland (the Official with Jurisdiction) that limits the duration of closures and creates a temporary detour for users that would allow for the continued use of the trail during closure periods associated with construction and operation. The implementation of the agreement would reduce impacts such that the features,

attributes, and activities that qualify the property for protection under Section (4) would not be adversely affected consistent with 23 CFR 774.17 and thus support a *de minimis* impact determination by the FHWA.

Figure 19. Location of the Permanent Surface Easement across the Vera Katz Eastbank Esplanade (circled in black)



In addition to the agreement, there must also be public notice and an opportunity for public review and comment as well as the written concurrence received from the officials with jurisdiction over the property that the project will not adversely affect the activities, features or attributes that make the property eligible for Section 4(f) protection.

6.2.2.3 Willamette River Greenway Trail

The Build Alternative requires the acquisition of a permanent surface easement across a segment of the Willamette River Greenway Trail. Periodic closures may be required during facility operation, but they are expected to be short in duration. This would constitute a Section 4(f) use of the property as it would be permanently incorporated into the transportation facility. Measures to minimize impacts include the preparation of an intergovernmental agreement between ODOT and the City of Portland (the Official with Jurisdiction) that limits the duration of closures and creates a temporary detour for users that would allow for the continued use of the trail during closure periods associated with construction and operation. The implementation of the agreement would reduce impacts such that the features, attributes, and activities that qualify the property for protection under Section 4(f) would not be adversely affected consistent with 23 CFR 774.17 and thus support a *de minimis* impact determination.

In addition to the agreement, there must also be public notice and an opportunity for public review and comment as well as the written concurrence received from the officials with jurisdiction over the property that the project will not adversely affect the activities, features or attributes that make the property eligible for Section 4(f) protection.

6.2.2.4 Lillis-Albina Park

The Build Alternative would not entail any actions that would result in long-term and operational direct impacts to the Lillis-Albina Park; therefore, no Section 4(f) use of the property would occur.

6.2.2.5 Portland Peace Memorial Park

The Build Alternative would not entail any actions that would result in long-term and operational direct impacts to the Portland Peace Memorial Park; therefore, no Section 4(f) use of the property would occur.

6.2.3 Long-Term and Operational Indirect Impacts

6.2.3.1 TraveLodge at the Coliseum

The Build Alternative is not anticipated to result in indirect impacts, such as noise from the operation of the transportation facility, that would exceed ODOT's NAAC standard. Noise impacts to the TraveLodge at the Coliseum, therefore, would not constitute a constructive use, as defined in 23 CFR 774.15.

6.2.3.2 Vera Katz Eastbank Esplanade

The Build Alternative is not anticipated to result in indirect impacts, such as noise from the operation of the transportation facility, to the Vera Katz Eastbank Esplanade such that a constructive use, as defined in 23 CFR 774.15, would occur (ODOT 2019c). Sensitive receptors in the vicinity would not experience a substantial increase in perceptible noise.

6.2.3.3 Willamette River Greenway Trail

The Build Alternative is not anticipated to result in indirect impacts, such as noise from the operation of the transportation facility, to the Willamette River Greenway Trail such that a constructive use, as defined in 23 CFR 774.15, would occur (ODOT 2019c). Sensitive receptors in the vicinity would not experience a substantial increase in perceptible noise, and if noise levels do exceed the applicable ODOT standards, sound walls would not provide adequate reductions in noise levels.

6.2.3.4 Lillis-Albina Park

The Build Alternative is not anticipated to result in indirect impacts, such as noise from the operation of the transportation facility, to the Lillis-Albina Park such that a constructive use, as defined in 23 CFR 774.15, would occur (ODOT 2019c). The noise analysis performed for the project indicated that sensitive receptors in the

vicinity of the park would experience a 1 dBA increase in operations-related noise generated by traffic (from the current 72 dBA to 73 dBA), such that noise levels would continue to exceed the ODOT NAAC standard for a public park of 65 dBA. If the noise wall between I-5 and the Lillis-Albina Park recommended in the noise analysis were to be installed (Noise Wall 2b), noise levels at the park would decrease from the current 72 dBA to 69 dBA. While this noise level would still be above the NAAC of 65 dBA, a noise wall at this location would provide a beneficial reduction in noise at the park (ODOT 2019c).

6.2.3.5 Portland Peace Memorial Park

The Build Alternative is not anticipated to result in indirect impacts, such as noise from the operation of the transportation facility, to the Portland Peace Memorial Park such that a constructive use, as defined in 23 CFR 774.15, would occur (ODOT 2019c). Sensitive receptors in the vicinity would not experience a substantial increase in perceptible noise, and if noise levels do exceed the applicable ODOT standards, sound walls would not provide adequate reductions in noise levels.

6.3 Cumulative Effects

Cumulative effects are those environmental effects that result from the incremental effect of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes those other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

The analysis of cumulative impacts involves a series of steps conducted in the following order:

- Identify the resource topics that could potentially experience direct or indirect impacts from construction and operation of the proposed project.
- Define the geographic area (spatial boundary) within which cumulative impacts would be assessed, as well as the time frame (temporal boundary) over which other past, present, and reasonably foreseeable future actions would be considered.
- Describe the current status or condition of the resource being analyzed, as well as its historic condition (prior to any notable change) and indicate whether the status or condition of the resource is improving, stable, or in decline.
- Identify other actions or projects that are reasonably likely to occur within the area of potential impact during the established time frame and assess whether they could positively or negatively affect the resource being analyzed.
- Describe the combined effect on the resource being analyzed when the direct and indirect impacts of the project are combined with the impacts of other actions or projects assumed to occur within the same geographic area during the established time frame.

6.3.1 Spatial and Temporal Boundaries

The geographic area used for the cumulative impact analysis is the same as the API described in Section 4.1 and shown in Figure 9. The time frame for the cumulative impact analysis extends from the beginning of large-scale urban development in and around the Project Area in the 1950s beginning with I-5 construction to 2045, the horizon year for the analysis of transportation system changes.

6.3.2 Past, Present, and Reasonably Foreseeable Future Actions

The following past, present, and reasonably foreseeable future actions were considered in assessing cumulative impacts:

6.3.2.1 Past Actions

Past actions include the following:

- Neighborhood and community development
 - Historical development of Portland area and accompanying changes in land use
 - Development of local transportation system (including roads, bicycle and pedestrian facilities, and bus transit)
 - Utilities (water, sewer, electric, and telecommunications)
 - Parks, trails, bikeways
- Commercial and residential development in and around the Project Area
 - Veterans Memorial Coliseum (1960)
 - Lloyd Center (1960)
 - Legacy Emanuel Medical Center (1970)
 - Oregon Convention Center (1990)
 - Rose Garden (1995)
- Regional transportation system development
 - Marine terminal facilities on the Willamette River
 - Port of Portland (1892)
 - Commission of Public Docks (1910)
 - Port of Portland (1970; consolidation of Port of Portland and Commission of Public Docks)
 - Freight rail lines (late 1800s and early 1900s)
 - Highways
 - I-84 (1963)
 - I-5 (1966)

- I-405 (1973)
- Rail transit system
 - MAX light rail (1986)
 - Portland Streetcar (2001)

6.3.2.2 Present Actions

Present actions include the ongoing operation and maintenance of existing infrastructure and land uses, including:

- Ongoing safety improvements for bicycles and pedestrians
- Local and regional transportation system maintenance
- Utility maintenance

6.3.2.3 Reasonably Foreseeable Future Actions

The following reasonably foreseeable future actions were identified collaboratively with the City of Portland:

- Redevelopment of existing urban areas in the Project Area and vicinity
- Ongoing maintenance and development of existing urban infrastructure in the Project Area and vicinity.

These actions include private redevelopment, public development, and infrastructure projects, as well as combined public/private redevelopments. Specific projects and the plans identifying them are described in detail in the memorandum presented in Appendix A. Given the highly developed nature of the Project Area and vicinity, the reasonably foreseeable future actions are not expected to substantially change the types or intensities of existing land uses. Section 4(f) would apply to those reasonably foreseeable future actions that use federal funds from a transportation agency.

6.3.3 Results of Cumulative Impact Analysis

Throughout the twentieth century, increased urbanization has affected the types and distribution of historical resources in the API. Past development projects have occurred without consideration of historical resources. For example, when I-5 was initially constructed in the 1960s, few environmental laws and regulations were in place to protect historical resources.

The trend for present actions, especially those with NEPA and NHPA applicability, requires consideration of historical resources early in the design process. Identification efforts are increasingly undertaken for local, state, and federal transportation projects in urban areas. For reasonably foreseeable future actions, only those qualifying properties (such as parks, wildlife refuges, and historic properties) subject to federal transportation agency-funded projects would be subject to Section 4(f).

When combined with past, present, and reasonably foreseeable future actions, the Project's contribution to overall cumulative impacts is expected to be less than the initial modifications in the overall built environment landscape resulting from past actions.

Based on the short-term construction impacts and long-term operational impacts, the Project is not expected to meaningfully contribute to a cumulative impact to archaeological or historic properties. Over time, archaeological or historic properties could be encountered during construction and redevelopment projects.

6.4 Conclusion

This section provides a conclusion to the Section 4(f) analysis as it applies to historic sites and publicly owned parks, recreation areas, and wildlife and waterfowl refuges.

6.4.1 No-Build Alternative

The No-Build Alternative would have no impacts to Section 4(f) resources.

6.4.2 Build Alternative

The Build Alternative would result in Section 4(f) *de minimis* use of the TraveLodge at the Coliseum. Similarly, a Section 4(f) *de minimis* use of the Vera Katz Eastbank Esplanade and the Willamette River Greenway Trail would result only if an intergovernmental agreement between ODOT and the City of Portland (the Official with Jurisdiction) limits the duration of closures and creates a temporary detour for users that would allow for the continued use of the trail during closure periods associated with construction and operation. For those segments of the Vera Katz Eastbank Esplanade and Willamette River Greenway Trail not subject to the permanent surface easement but subject to temporary occupancy during construction only, the intergovernmental agreement would ensure that the temporary occupancy of the parks meets the Section 4(f) temporary occupancy exception criteria (23 CFR 774.13[d][iii]).

7 Avoidance, Minimization, and Mitigation Measures

Section 4(f) requires the selection of a “feasible and prudent” alternative that avoids the use of Section 4(f) property (49 USC 303[c]; 23 CFR 774.3[a]) or one that will have a *de minimis* impact to Section 4(f) property (49 USC 303[d]; 23 CFR 774.3[b] and 23 CFR 774.17). From the analysis performed to date and pending additional interagency consultation, it is anticipated that the Build Alternative would require *de minimis* uses of three Section 4(f) resources: the Travelodge at the Coliseum, the Vera Katz Eastbank Esplanade, and the Willamette River Greenway Trail.

7.1 Historic Sites

Historic sites are protected by Section 4(f) of the Transportation Act (23 CFR 774). FHWA is required to determine whether there are Section 4(f) “uses” and whether these uses would be considered *de minimis*. Any conversion of a Section 4(f) resource to become part of a transportation facility would require a Section 4(f) analysis. Potential Section 4(f) impacts from this Project have been evaluated and are expected to be minimal and thus meet the definition of a *de minimis* impact. FHWA notifications and SHPO concurrence with Section 4(f) analysis, determinations are pending. No Section 4(f) archaeological resources were identified during the NEPA phase of this Project but Project effects to those resources would be considered within the Section 106 Programmatic Agreement (Appendix D). Further avoidance and minimization measures for Section 4(f) resources are discussed Section 7.1.1 and 7.1.2.

7.1.1 Historic Sites: Historic Resources

A temporary easement and permanent acquisition of property related to the Travelodge at the Coliseum are anticipated, but these uses would not adversely affect the historic property. Vibration impacts, however, could affect the use of the historic property and effect minimization measures are proposed. If construction-related vibration exceeds certain thresholds within the applicable screening distance, effect avoidance and minimization measures would be implemented. These measures would include pre- and post-construction assessments, on-site monitoring during construction, and stop-work authorization (Wilson, Ihrig & Associates, Inc., 2012; Johnson and Hannen 2015). If a resource is affected by vibration, a treatment plan consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties and thus consistent with the requirements of 36 CFR 800.5(b) would be prepared to make the applicable repairs. Implementing these minimization measures would ensure that historic properties are not adversely affected consistent with 36 CFR 800.5(d)(1), and no constructive use would occur, thus maintaining a *de minimis* impact to the property.

7.1.2 Historic Sites: Archaeology

The identification of archaeological resources would occur during the implementation of the Section 106 Programmatic Agreement which is pending approval by FHWA, ODOT, and SHPO (Appendix D).

If unevaluated historic materials were discovered during construction, all earth-moving activity within and around the immediate discovery area would cease. The area would be protected until a qualified archaeologist could assess the nature and significance of the find.

If human remains were discovered, all earth-moving activity related to the Project would cease immediately. The immediate area surrounding the find would be protected, and the State Police and the ODOT Regional Archaeologist would be contacted.

The procedures for Inadvertent Discoveries of Cultural Resources are more specifically stated in the Inadvertent Discovery Plan contained in the *Archaeological Resources Technical Report* (ODOT 2019b). Furthermore, the Programmatic Agreement would resolve potential effects to archaeological resources. The implementation of these measures and procedures would ensure that effects to potential Section 4(f) archaeological resources are avoided, minimized, and/or mitigated.

7.2 Publicly Owned Parks, Recreation Areas, and Wildlife and Waterfowl Refuges

Conversion of park property for a transportation facility constitutes a Section 4(f) “use” under the Transportation Act (23 CFR 774).

Temporary occupancies and permanent surface easements may be considered a use under Section 4(f). If a temporary occupancy satisfies the conditions in 23 CFR 774.13(d), the occupancy would not constitute a use of the property. For permanent surface easements, avoidance, minimization, mitigation, or enhancement measures would be required to reach a *de minimis* impact determination. The public is offered an opportunity to comment on proposed Section 4(f) *de minimis* findings for parks, recreation areas, and wildlife, and waterfowl refuges. In addition, the official with jurisdiction over the property, after being informed of the public comments and FHWA’s intent to make the *de minimis* impact finding, must concur in writing that the project will not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f).

A temporary occupancy the Vera Katz Eastbank Esplanade and the Willamette River Greenway Trail by the Build Alternative may occur to facilitate construction related to the Project. This temporary occupancy may result in a temporary park closure. The Project proponent would minimize the impacts of the Build Alternative on the Vera Katz Eastbank Esplanade and the Willamette River Greenway Trail to qualify for a Section 4(f) temporary occupancy exception. Measures to minimize impacts would include providing connectivity during construction through a detour plan that is

mutually agreeable to the City of Portland, ODOT, FHWA, and other potential parties.

During construction, the associated Willamette River Greenway Trail that extends through the Vera Katz Eastbank Esplanade would be temporarily rerouted away from construction activities, and adequate signage and way-finding mitigation would be implemented to ensure a safe and continuous pathway for the trail. The City of Portland, ODOT, FHWA, and other potential parties would reach agreements on the exact route for the temporary pathway during Project construction. The duration of construction would be less than the duration period for Project construction. Aside from the temporary occupancy of the Vera Katz Eastbank Esplanade, the park would be left essentially in the same location and with the same amenities as it has today. After construction, similar measures would be required during facility operations due to the acquisition of a permanent surface easement across the Vera Katz Eastbank Esplanade required by the Project. An intergovernmental agreement between the City of Portland and ODOT would ensure that periodic closures for maintenance related to facility operations meet all the conditions in 23 CFR 774.7(b) to maintain a *de minimis* Section 4(f) use.

If these measures are implemented and agreed to by the applicable parties, a *de minimis* impact to the property is anticipated.



8 Contacts and Coordination

Technical review provided by Robert W. Hadlow, ODOT Senior Historian.

9 Preparers

Name	Discipline	Education	Years of Experience
Kirk Ranzetta, AECOM	Senior Architectural Historian	Ph.D. and M.A., Urban Affairs and Public Policy with Specialization in Historic Preservation B.A., Historic Preservation	23
Robert W. Hadlow, ODOT	Senior Historian	Ph.D., U.S. and Public History M.A., U.S. History B.A., Economics	28

10 References

- ATRI (American Transportation Research Institute). 2017. "2017 Top 100 Truck Bottleneck List." Available: <http://atri-online.org/2017/01/17/2017-top-100-truck-bottleneck-list/> (accessed April 7, 2018).
- Bosco-Milligan Foundation. 1995. "Cornerstones of Community: Buildings of Portland's African American History." Portland, OR: Bosco-Milligan Foundation. August.
- City of Portland. 1994. Eastbank Riverfront Park Master Plan, Portland, Oregon. January.
- City of Portland. 1995. City Council Ordinance No. 168719. Agreement with ODOT for Improvements on the Eastbank Esplanade. April 19.
- City of Portland. 2007. City Council Ordinance No. 181397. Grant a Revocable Permit to Peace Memorial Park Foundation. October 31.
- City of Portland. 2009. "Parks 2020 Vision Progress Report 2009." Available: <https://www.portlandoregon.gov/parks/40182> (accessed March 3, 2018).
- City of Portland. 2012. City Council Resolution No. 36918. "The Portland Plan." Available: <http://www.portlandonline.com/portlandplan/index.cfm?c=58776> (accessed March 3, 2018).
- City of Portland. 2014. City Council Ordinance No. 186858. Willamette River Greenway Inventory: An Update to Portland's Statewide Planning Goal 15 Inventory. October 22.
- City of Portland. 2018a. "Find a Park: Eastbank Esplanade." Available: <https://www.portlandoregon.gov/parks/finder/index.cfm?action=ViewPark&PropertyID=105&searchtext=eastbank> and <https://www.portlandoregon.gov/parks/finder/index.cfm?action=ViewMap&PropertyID=105> (accessed March 3, 2018).
- City of Portland. 2018b. "Find a Park: Lillis-Albina Park." Available: <https://www.portlandoregon.gov/parks/finder/index.cfm?ShowResults=yes&SearchText=Lillis> (accessed March 3, 2018).
- City of Portland, ODOT, and Portland Bureau of Planning and Sustainability. 2012. Central City 2035: N/NE Quadrant Plan. Adopted by City Council October 25, 2012. Available: <https://www.portlandoregon.gov/bps/article/422031> (accessed April 7, 2018).
- DSL (Oregon Department of State Lands). 2014. Public Recreation Facility License No. 9978-LI. October.
- Federal Transit Administration. 2010. Portland-Milwaukie Light Rail Project Final Environmental Impact Statement. Appendix K. Portland-Milwaukie Light Rail Project Final Section 4(f) Evaluation.

- Johnson, Arne P., and W. Robert Hannen. 2015. "Vibration Limits for Historic Buildings and Art Collections." APT Bulletin Journal of Preservation Technology, vol. 46, pp. 2-3.
- Metro. 2014. Regional Transportation Plan. Available:
<https://www.oregonmetro.gov/sites/default/files/2015/05/29/RTP-2014-final.PDF>
(accessed April 7, 2018).
- ODOT (Oregon Department of Transportation). 2012a. Facility Plan: I-5 Broadway/Weidler Interchange Improvements. Available:
<https://www.portlandoregon.gov/bps/article/415777> (accessed April 7, 2018).
- ODOT. 2012b. ODOT Highway Design Manual. Available:
<http://www.oregon.gov/ODOT/Engineering/Pages/Hwy-Design-Manual.aspx>.
(accessed April 7, 2018).
- ODOT. 2015a. "State Highway Crash Rate Table." Available:
http://www.oregon.gov/ODOT/Data/Documents/Crash_Rate_Tables_2015.pdf
(accessed March 3, 2018).
- ODOT. 2015b. "On-State, Top 10% Groups – By Score." Available:
http://www.oregon.gov/ODOT/Engineering/DocSPIS/Top10SPISgroupsByScore_Statewide_2015.pdf (accessed March 3, 2018).
- ODOT. 2017. 2016 Transportation Volume Tables. Available:
http://www.oregon.gov/ODOT/Data/Documents/TVT_Complete_2016.pdf
(accessed April 7, 2018).
- ODOT. 2019a. Historic Resources Technical Report. I-5 Rose Quarter Improvement Project. Prepared for the Oregon Department of Transportation, Portland, Oregon. January.
- ODOT. 2019b. Archaeological Resources Technical Report. I-5 Rose Quarter Improvement Project. Prepared for the Oregon Department of Transportation. Portland, Oregon. January.
- ODOT. 2019c. Noise Study Technical Report. I-5 Rose Quarter Improvement Project. Prepared for the Oregon Department of Transportation, Portland, Oregon. January.
- Oregon Department of Justice. 2005. Questions Presented to the Oregon Department of Justice by the Oregon State Land Board Concerning Questions About the Ownership and Use of Waterways in This State. April. Available:
<http://www.doj.state.or.us/wp-content/uploads/2017/06/op8281.pdf> (accessed March 3, 2018).
- The Oregonian. 1911. "First Things in Oregon and Oregon Country Brought to Mind." February 4: 7.
- The Oregonian. 1971a. "Travelodge Motel Ready For Opening In Portland." February 2: 5.



The Oregonian. 1971b. "Completion of Marriott Hotel Expected by Early 1979."
June 24: B1.

SHPO (Oregon State Historic Preservation Office). n.d.

URS. 2011. Environmental Baseline Report. N/NE Quadrant and Broadway/Weidler
Plans Project, Portland, Multnomah County. Prepared for ODOT Region 1. May.

Wilson, Ihrig & Associates, Inc., ICF International, and Simpson, Gumpertz & Heger,
Inc. 2012. "Current Practices to Address Construction Vibration and Potential
Effects to Historic Buildings Adjacent to Transportation Projects." Available:
[http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP25-25\(72\)_FR.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP25-25(72)_FR.pdf)
(accessed April 30, 2018).

