FINAL

Land Use Technical Report

I-5 Rose Quarter Improvement Project

Oregon Department of Transportation

January 8, 2019

Contents

Acronyms and Abbreviations iii

Executive Summary ES-1

1 Introduction 1

1.1 Project Location 1

1.2 Project Purpose 1

1.3 Project Need 1

1.4 Project Goals and Objectives 5

2 Project Alternatives 6

2.1 No-Build Alternative 6

2.2 Build Alternative 8

2.2.1 I-5 Mainline Improvements 9
2.2.2 Highway Covers 13
2.2.3 Broadway/Weidler Interchange Improvements 14
2.2.4 Related Local System Multimodal Improvements 16

3 Regulatory Framework 19

3.1 State Laws, Plans, and Policies 19

3.1.1 The Oregon Statewide Planning Program 19
3.1.2 Oregon Revised Statute 366.514, Use of Highway Fund for Footpaths and Bicycle Trails 20

3.2 Regional and Local Plans 20

3.2.1 Metro Regional Transportation Plan 20
3.2.2 City of Portland Comprehensive Plan 20

4 Methodology and Data Sources 21

4.1 Area of Potential Impact 21

4.2 Resource Identification and Evaluation 21

4.3 Assessment of Impacts 21

4.4 Cumulative Impacts 23

5 Affected Environment 24

6 Environmental Consequences 27

6.1 No-Build Alternative 27

6.1.1 Direct Impacts 27
6.1.2 Indirect Impacts 27

6.2 Build Alternative 28

6.2.1 Direct Impacts 28
6.2.2 Indirect Impacts 30

6.3 Cumulative Effects 30

6.3.1 No-Build Alternative 31
6.3.2 Build Alternative 31

6.4 Compliance with Applicable State, Regional, and Local Transportation and Land Use Laws, Plans, and Policies 31

6.4.1 No-Build Alternative 31
6.4.2 Build Alternative 31

6.5 Conclusion 38

7 Avoidance, Minimization, and Mitigation Measures 39
8 Contacts and Coordination 40
9 Preparers 41
10 References 42

Tables

Table 1. I-5 Ramps in the Project Area 7
Table 2. Weave Distances within the Project Area 7

Figures[1]

Figure 1. Project Area 2
Figure 2. Auxiliary Lane/Shoulder Improvements 10
Figure 3. I-5 Auxiliary (Ramp-to-Ramp) Lanes – Existing Conditions and Proposed Improvements 11
Figure 4. I-5 Cross Section (N/NE Weidler Overcrossing) – Existing Conditions and Proposed Improvements 12
Figure 5. Broadway/Weidler/Williams and Vancouver/Hancock Highway Covers 13
Figure 6. Broadway/Weidler Interchange Area Improvements 15
Figure 7. Conceptual Illustration of Proposed N Williams Multi-Use Path and Revised Traffic Flow 16
Figure 8. Clackamas Bicycle and Pedestrian Crossing 17
Figure 9. Land Use Area of Potential Impact 22
Figure 10. Existing Land Use 25
Figure 11. Comprehensive Plan Designations 26
Figure 12. Land Converted to Transportation Use 29

Appendices

Appendix A. List of Reasonably Foreseeable Future Actions
Appendix B. Language Documenting Consideration of Land Use in the Development of the I-5 Rose Quarter Improvement Project
Appendix C. OAR 660-012-0060(10)
Appendix D. Figure Descriptions

[1] Appendix D includes written descriptions of all figures referenced in this Technical Report. If needed, additional figure interpretation is available from the ODOT Senior Environmental Project Manager at (503) 731-4804.

Acronyms and Abbreviations

API	Area of Potential Impact
DLCD	Department of Land Conservation and Development
EB	eastbound
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
I-5	Interstate 5
I-84	Interstate 84
I-405	Interstate 405
LCDC	Land Conservation and Development Commission
MMA	multimodal mixed-use area
mvmt	million vehicle miles traveled
NB	northbound
NEPA	National Environmental Policy Act
OAR	Oregon Administrative Rule
ODOT	Oregon Department of Transportation
ORS	Oregon Revised Statute
OTC	Oregon Transportation Commission
ROW	right of way
RTP	*Regional Transportation Plan*
SAC	Stakeholder Advisory Committee
SACP	State Agency Coordination Program
SB	southbound
SPIS	Safety Priority Index System
TPR	Transportation Planning Rule
TSP	Transportation System Plan
U.S.C.	United States Code
WB	westbound

Executive Summary

The Build Alternative of the I-5 Rose Quarter Improvement Project (Project) supports the realization of the City of Portland's vision for land use in the central city and immediate area of the Project, complies with all applicable state planning laws and regional and local plans, and, therefore, would not have adverse land use impacts. This conclusion is based on a detailed analysis of the Build Alternative and its compliance with state planning laws and plans, compatibility with local and regional plans, and impacts on land use. The analysis found the following:

- The Build Alternative complies with the requirement of the Oregon Statewide Planning Program that Oregon Department of Transportation (ODOT) projects be compatible with local comprehensive plans. The Build Alternative is an important transportation improvement included in the City of Portland's comprehensive plan.
- Inclusion of the Build Alternative in Portland's comprehensive plan is the consequence of an integrated land use and transportation planning process undertaken jointly by ODOT and the City of Portland. The process resulted in both the I-5: Broadway/Weidler Interchange Facility Plan, which is ODOT's facility plan for the Build Alternative, and the N/NE Quadrant Plan, which directs land use in the area of the Build Alternative and is a component of the City's Central City 2035 Plan. The Central City 2035 Plan is part of the City of Portland's comprehensive plan.
- Cities in Oregon, including Portland, have both the authority and obligation to ensure that their transportation plans support their land use plans. Inclusion of the Build Alternative in Portland's comprehensive plan means the Build Alternative supports planned land use. Because of this, both the Build Alternative's indirect and cumulative land use impacts would be positive.
- The Build Alternative is also in the 2014 Regional Transportation Plan.
- The Build Alternative's direct land use impacts (i.e., the change in the use of land from commercial or other use to transportation use when land is acquired for road right of way) would be small in scale, totaling approximately 2.54 acres.
- The No-Build Alternative would have implications for future development within the Project Area and the surrounding vicinity. Planned land use in the City of Portland's Central City 2035 Plan is premised on the inclusion in the plan of a Multimodal Mixed Use Area (MMA) designation. MMA designation waives the application of ODOT's vehicle traffic mobility (congestion) standards, other than safety standards, to both land use plan provisions and subsequent plan amendments within the MMA. State law requires ODOT concurrence with MMA designation by a City. ODOT concurrence with the MMA in the Central City 2035 Plan is conditioned on successful completion of the Project. The No-Build Alternative would nullify ODOT's concurrence. The City of Portland would have to

amend the land use plan component of the Central City 2035 Plan so that allowed development would not violate ODOT's vehicle traffic mobility (congestion) standards at the Broadway/Weidler interchange. Some land use plan designations would have to be changed to alter the types of development allowed and reduce allowed levels of employment or population.

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 crashes[2]) 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	• I-84 • N Broadway/N Williams Avenue	• NE Weidler Street/NE Victoria Avenue • I-405 • N Greeley Avenue
Southbound	• N Greeley Avenue • I-405 • N Wheeler Avenue/N Ramsay Way	• 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* (RTP) 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

[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

and reduce pedestrian crossing distances. Proposed improvements also include 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.

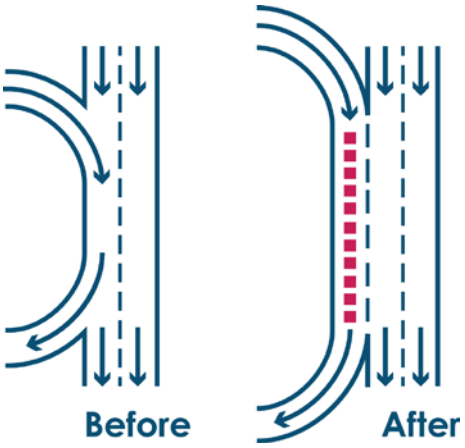
The Build Alternative includes I-5 mainline improvements and multimodal improvements to the surface street network in the vicinity of the Broadway/Weidler interchange. The proposed I-5 mainline improvements include the construction of auxiliary lanes (also referred to as ramp-to-ramp lanes) and full 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).



What are Ramp-to-Ramp or Auxiliary Lanes?

Ramp-to-Ramp lanes provide a direct connection from one ramp to the next. They separate on-and off-ramp merging from through traffic, and create better balance and smoother maneuverability, which improves safety and reduces congestion.

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

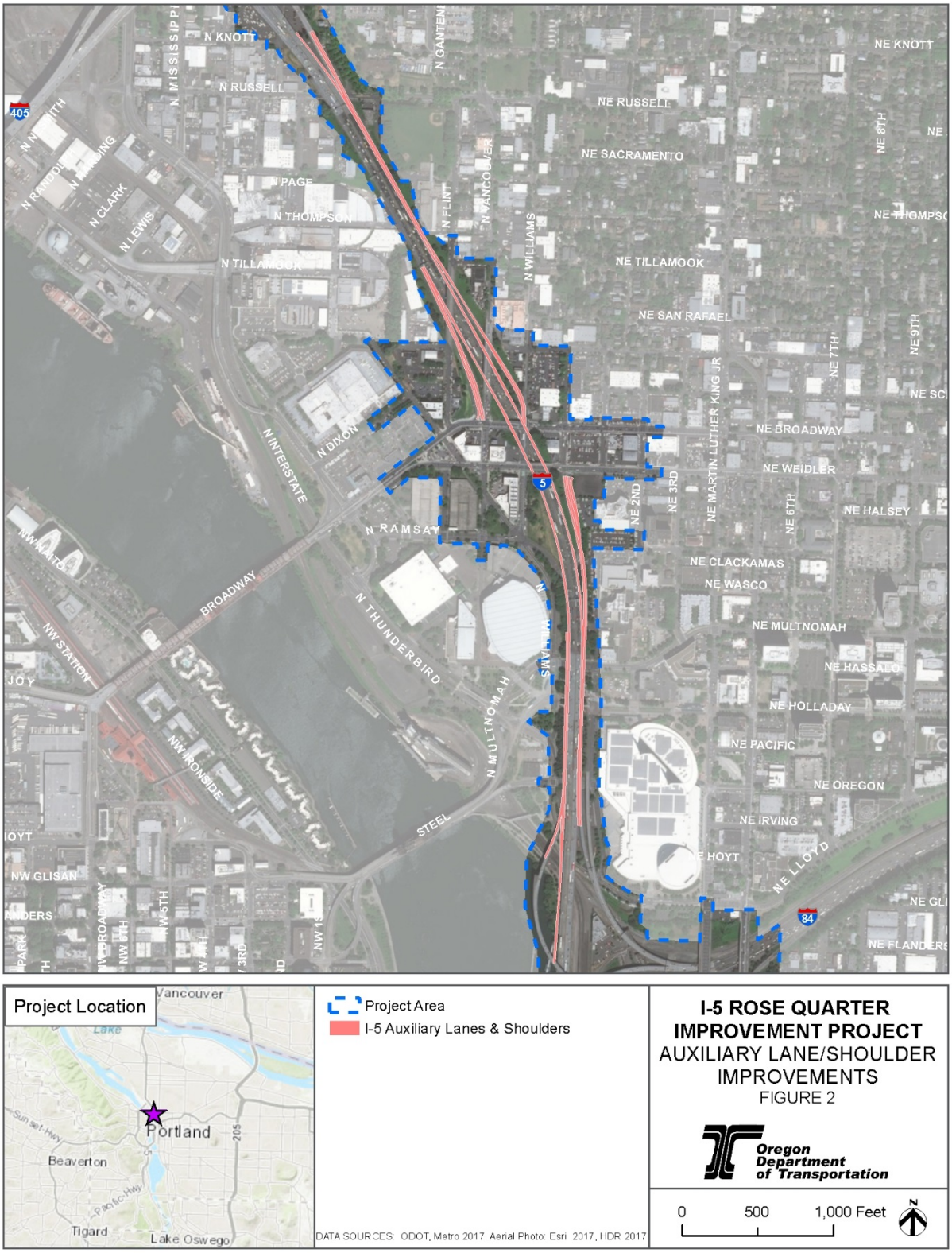


Figure 3. I-5 Auxiliary (Ramp-to-Ramp) Lanes – Existing Conditions and Proposed Improvements

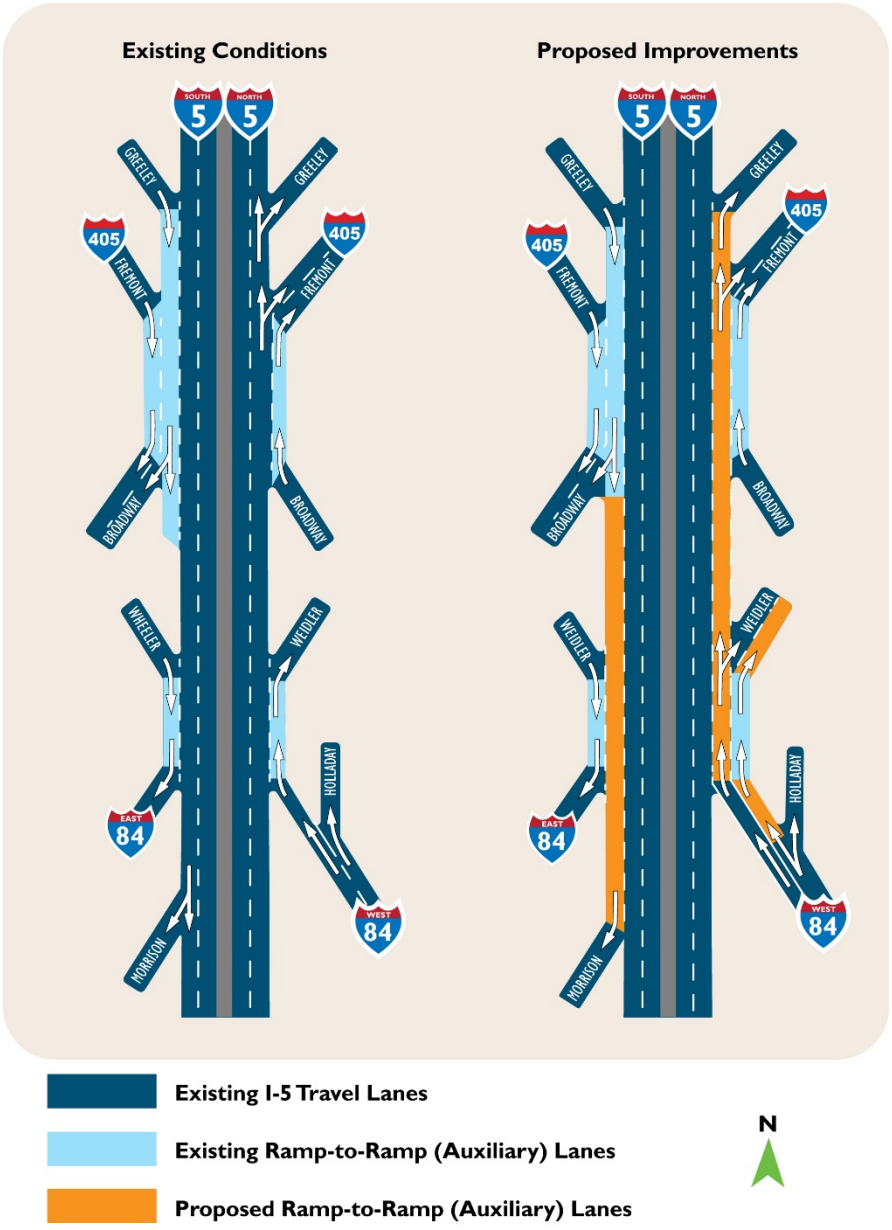
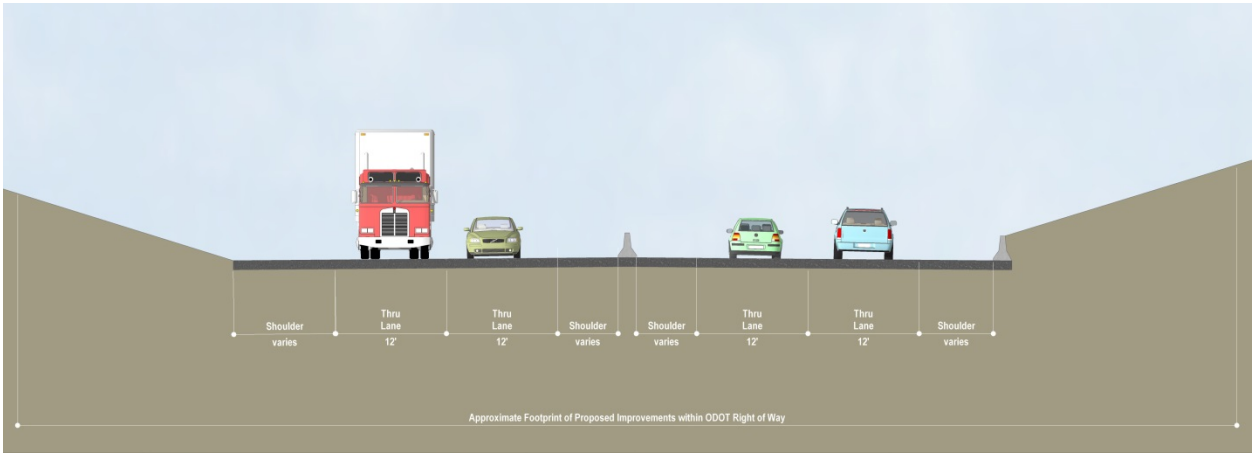
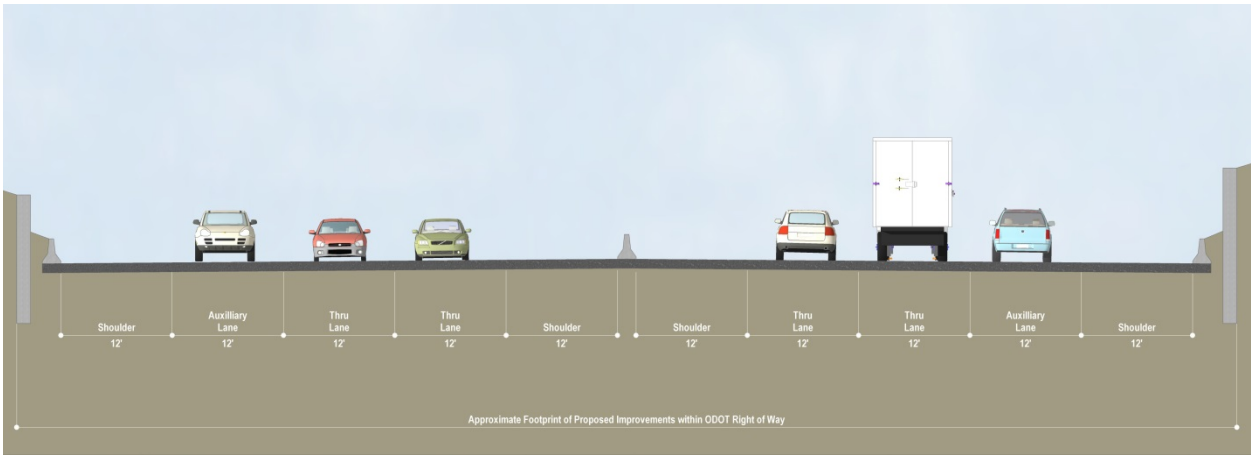


Figure 4. I-5 Cross Section (N/NE Weidler Overcrossing) – Existing Conditions and Proposed Improvements



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.

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

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.

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

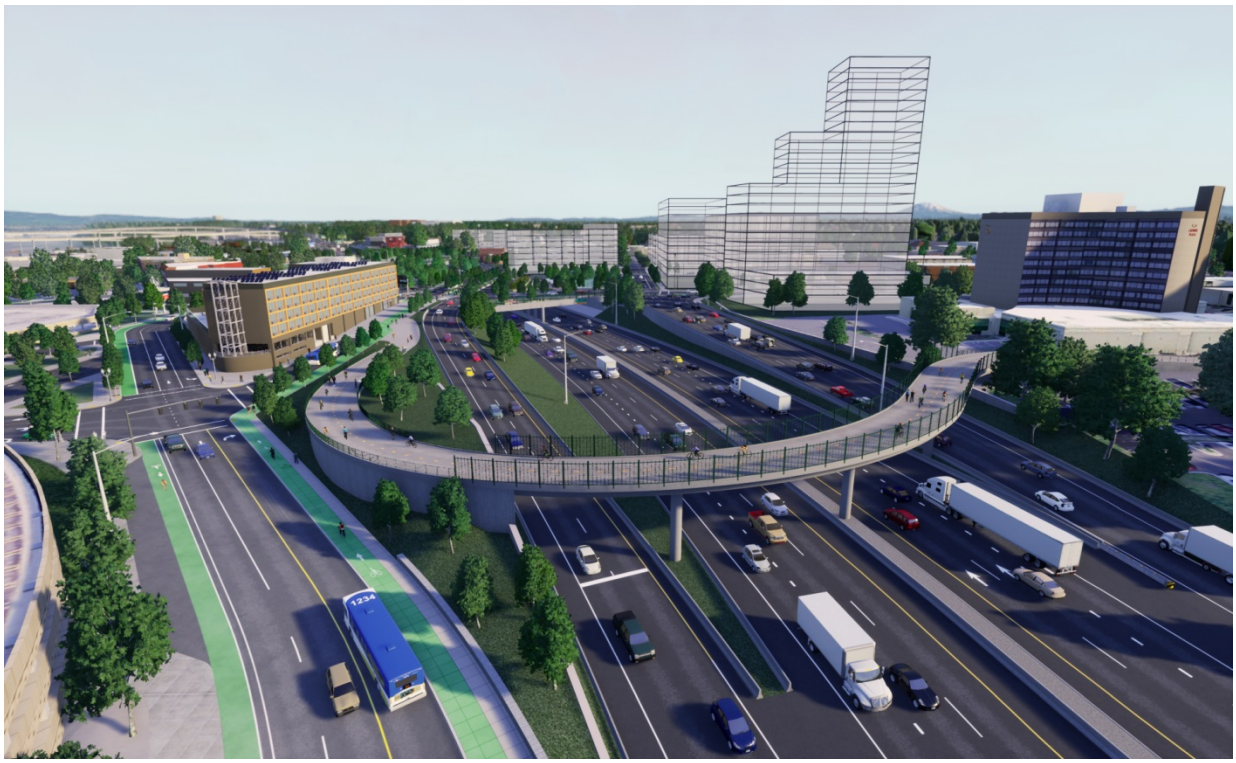
The existing N Flint structure over I-5 would be removed, and N Flint south of N Russell Street would terminate at and connect directly to N Tillamook (see Figure 6, element "G"). The portion of Flint between the existing I-5 overcrossing and Broadway would be closed as a through street for motor vehicles.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

NEPA requires that all actions sponsored, funded, permitted, or approved by federal agencies be reviewed to ensure that environmental considerations, including land use impacts, are given due weight in project decision-making. Section 1502.16(c) of the Council on Environmental Quality's implementing rules for NEPA require environmental impact statements (EISs) to address "possible conflicts between the proposed action and the objectives of federal, regional, state, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned." Under 23 Code of Federal Regulations (CFR) 771.119, the Federal Highway Administration (FHWA) administrative rule on environmental assessments, the FHWA must determine if a project would have significant adverse environmental impacts, which would require preparation of an EIS. This technical report addresses whether the Project conflicts with regional, state, and local land use plans, policies, and controls. It does not address compliance with all federal or tribal land use plans, policies, or control.[7]

3.1 State Laws, Plans, and Policies

3.1.1 The Oregon Statewide Planning Program

ODOT projects must comply with applicable provisions of Oregon's Statewide Planning Program. Applicable provisions include the following:

- Oregon Administrative Rule (OAR) 660-030-0065, which requires that ODOT projects be "compatible with the applicable acknowledged comprehensive plan(s)" of cities and counties, and OAR 660-012-0015(b), which states that "State transportation project plans shall be compatible with acknowledged comprehensive plans as provided for in OAR chapter 731, division 15." City comprehensive plans, which include their transportation system plans (TSPs), apply the Statewide Planning Goals within the city or county.
- OARs 731-015-0075 and 731-015-0085, provisions of ODOT's State Agency Coordination Program (SACP), which address coordination with cities and counties and other governmental entities in project development.

[7] The report does not address compliance with the Farmland Protection Policy Act, 7 United States Code (U.S.C.) 4201-4209 because the Project would not take farmland out of production. It does not address compliance with the Coastal Zone Management Act, 16 U.S.C. 1451–1464, Chapter 33, because the Project is located east of the summit of the Coast Range. It does not address the Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq., because the Willamette River is not a designated wild and scenic river. The Project is not within land managed by the U.S. Forest Service or Bureau of Land Management or within a reservation and so is not subject to their plans.

- The related requirements of OAR 660-012-0050(3)(b) and OAR 660-012-0050(4), which are parts of the Transportation Planning Rule (TPR). OAR 660-012-0050(3)(b) states:

  > When project development involves land use decision-making, all unresolved issues of compliance with applicable acknowledged comprehensive plan policies and land use regulations shall be addressed and findings of compliance adopted prior to project approval.

3.1.1.1 State Transportation System Plan

ODOT projects must comply with the policies in the State TSP, which include the Oregon Transportation Highway, Bicycle and Pedestrian, Freight, Rail, Public Transportation, and Aviation Plans.

3.1.2 Oregon Revised Statute 366.514, Use of Highway Fund for Footpaths and Bicycle Trails

Oregon Revised Statute (ORS) 366.514 requires that footpaths and bicycle trails, including curb cuts or ramps, be provided wherever a highway, road, or street is constructed, reconstructed, or relocated.

3.2 Regional and Local Plans

3.2.1 Metro Regional Transportation Plan

ODOT projects must be compatible with RTPs, in the same way that they must be compatible with city and county comprehensive plans, as stated above.

3.2.2 City of Portland Comprehensive Plan

As stated above, OARs 660-030-0065 and 660-012-0015(1)(b) require ODOT projects to be compatible with the City of Portland's comprehensive plan.

4 Methodology and Data Sources

This section presents the methodology used to evaluate the potential impacts to land use from the Project.

4.1 Area of Potential Impact

The Area of Potential Impact (API) is the area within which the Project can be expected to influence land use (Figure 9). This geographic area extends from the Willamette River east to NE 7th, north to NE Stanton Street, and south to the I-5 and I-84 interchange, with extensions along I-5 to the north and south. The API does not extend east and west of the north and south extensions along I-5 for two reasons. First, there are no proposed property acquisitions along the extensions, so there would be no direct land use impacts in these areas. Second, indirect land use impacts primarily result from changes in access, and the Project would have inconsequential impacts on access east and west of these areas. The eastern boundary of the API encompasses the commonly recognized 1-quarter-mile influence area of a highway interchange but extends to approximately one-third of a mile to provide additional context for the land use impact analysis. The Willamette River is the western boundary of the API.

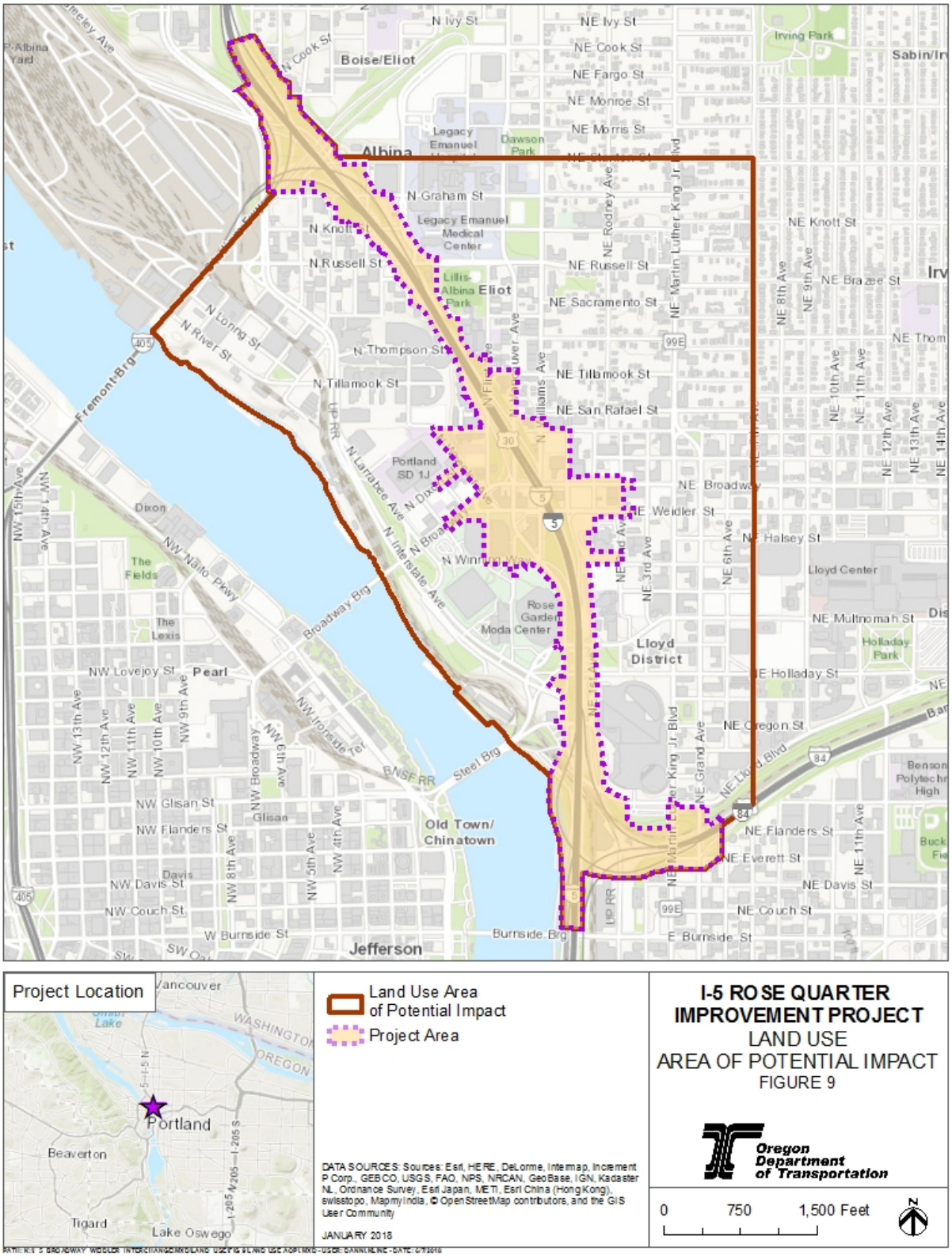
4.2 Resource Identification and Evaluation

Land use considerations were identified and assessed through review of state, regional, and local transportation and land use laws, plans, and policies identified in Section 3, Regulatory Framework. Land use plans and policies considered relevant are applicable to (within) the Project horizon year of 2045 and include the Central City 2035 Plan.

4.3 Assessment of Impacts

The impact analysis assessed land use impacts in three ways. First, it documented compliance or compatibility with state, regional, and local transportation and land use laws, plans, and policies applicable to the Project. Second, it identified direct land use impacts by quantifying the amount of land acquired and converted to right of way (ROW) to accommodate Project improvements. Third, it assessed indirect impacts by demonstrating how ODOT and the City of Portland integrated land use considerations into the development of the plan for the Project. Compatibility of the Project with the Metro RTP and City of Portland comprehensive plan was established through ODOT's coordination with the City of Portland and Metro. Under Oregon's Statewide Planning Program laws, cities are obligated to ensure that the land uses specified in comprehensive plans are supported by the existing and planned transportation facilities that serve them. By adopting its comprehensive plan, specifically the Central City 2035 Plan, including the N/NE Quadrant Plan (City of

Figure 9. Land Use Area of Potential Impact



Portland et al. 2012), in 2018, the City of Portland concluded that the Project supports existing and planned land use in the Project Area. This report addresses land use impacts by demonstrating the consideration of land use jointly by ODOT and the City of Portland in the development of the N/NE Quadrant Plan and ODOT's I-5: Broadway/Weidler Interchange Facility Plan.

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. For use in all technical reports, a list of reasonably foreseeable future actions was developed through consultation with City of Portland and Metro staff (Appendix A). This list includes any permitted public and private projects within the Project Area and projects that are in the permit application process. In some technical reports, the approach to cumulative impact assessment was to qualitatively assess the magnitude of impacts expected from reasonably foreseeable future actions in combination with anticipated Project impacts. That approach was not applicable to this report primarily because, as described in Section 4.3, this report assesses indirect impacts by demonstrating how ODOT and the City of Portland integrated land use considerations into the development of the plan for the Project. In addition, as described in Section 6.3.2, the comprehensive planning process that led to the inclusion of the Project in the City of Portland TSP and Central City 2035 Plan considered cumulative impacts by evaluating the impacts of the Project combined with past, present, and reasonably foreseeable future transportation improvements and land development, including the reasonably foreseeable future actions listed in Appendix A.

5 Affected Environment

Figure 10 shows existing land use in the API. Figure 11 shows the land use designations in Portland's comprehensive plan and the classification of streets and roadways within the API. The plan designations outside the Central City 2035 Plan area are from the comprehensive plan map (City of Portland 2016a). The plan designations within the Central City 2035 Plan area are from the map showing designations in the Central City 2035 Plan area (City of Portland 2017a:507). The street classifications outside the Central City 2035 Plan area are from the City's TSP (City of Portland 2016b:23). The street classifications within the Central City 2035 Plan area are from the Central City 2035 Plan (City of Portland 2017a:Map 7). Section 6.4.2.3 describes how the Project is included in the Central City 2035 Plan and the City's TSP.

Zoning in the API is consistent with the comprehensive plan land use designations.

The API includes part of Portland's central city and contains a diverse array of existing land uses. As Figure 10 shows, these include the following:

- The region's two major sports and entertainment arenas, the Moda Center and Veterans Memorial Coliseum
- The region's principal convention center
- The central offices and maintenance facilities for Portland Public Schools
- A mix of commercial and residential uses along and near the Broadway/Weidler corridor
- Residential neighborhoods in the northeast portion of the area
- Industrial uses in the northwest portion of the area

As Figures 10 and 11 show, in general terms, the City's comprehensive plan calls for a continuation of the existing pattern of land uses within the API.

Figure 10. Existing Land Use

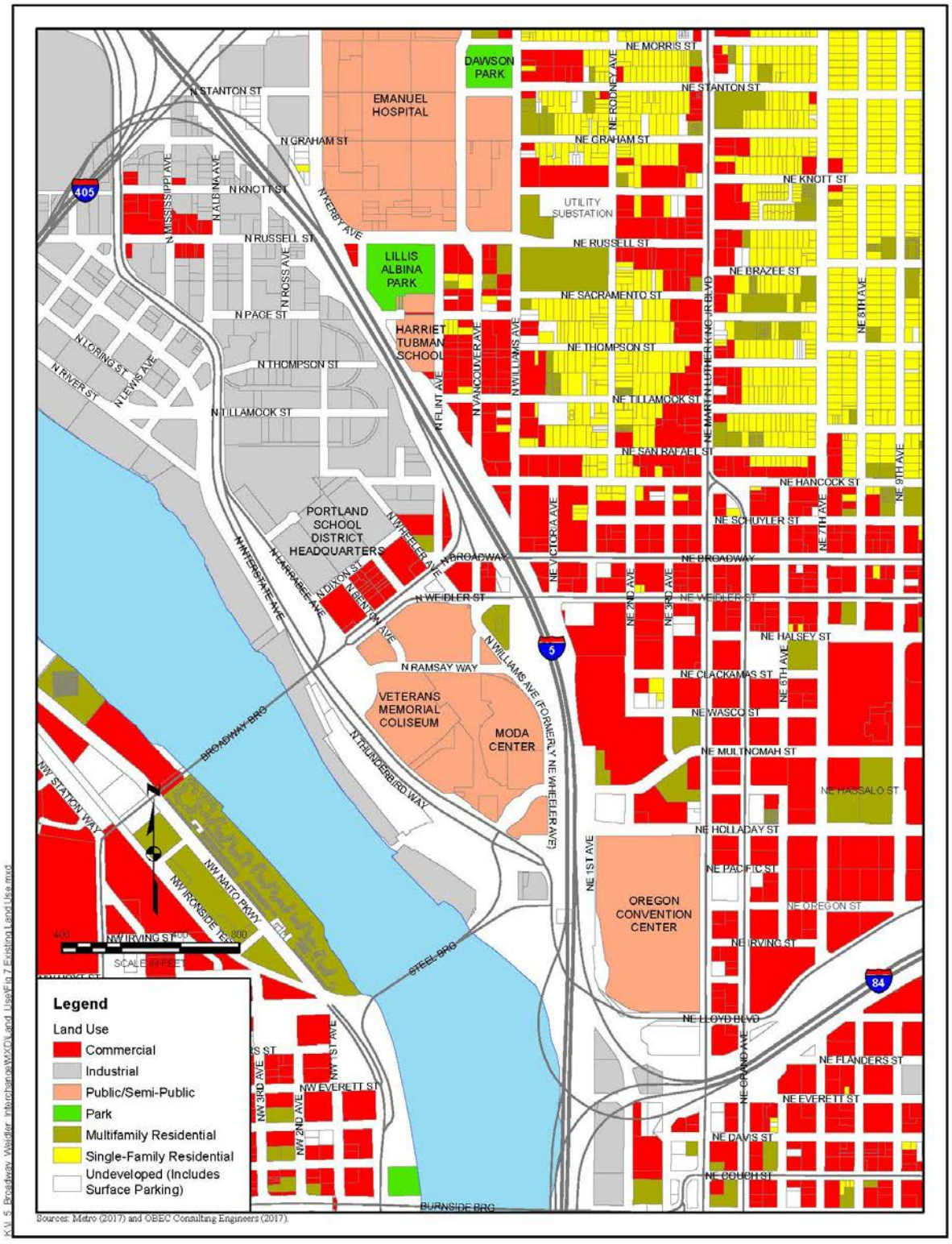
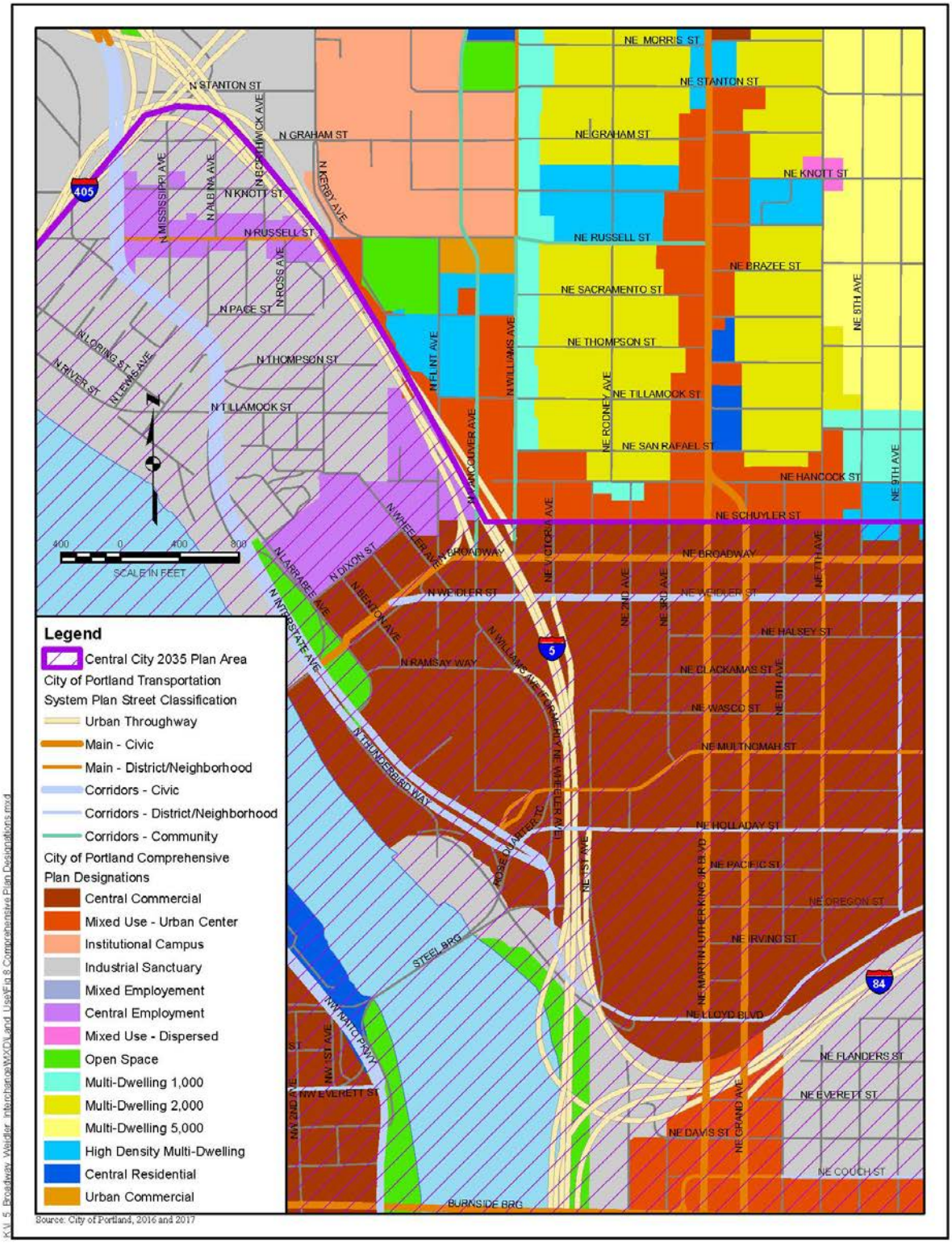


Figure 11. Comprehensive Plan Designations



6 Environmental Consequences

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. Actions included in the Metro 2014 RTP financially constrained project list (Metro 2014)[8] may be constructed and could result in impacts to land use. Direct land use impacts of roadway projects result when land, such as land occupied by a business, is acquired and converted to ROW, making the use transportation instead of commercial. The No-Build Alternative would not have any direct land use impacts, because no non-transportation land uses would be acquired and converted to transportation use.

6.1.2 Indirect Impacts

The No-Build Alternative would indirectly impact land use within the API. As explained in Section 6.4.2.1, Transportation Planning Rule subsection, the City of Portland's Central City 2035 Plan includes a multimodal mixed-use area (MMA), and ODOT concurrence with the MMA is conditioned on inclusion of the Project in the plan. The No-Build Alternative would nullify ODOT's concurrence with the MMA. This would have two consequences. First, the City of Portland would be unable to implement some aspects of the land use components of the Central City 2035 Plan as adopted. Some planned re-zonings to allow higher levels of employment or population density and land uses that generate high traffic volumes would not be allowed. TPR Section 660-012-0050(5) would likely require the City to amend the land use provisions of the Central City 2035 Plan. In addition, ODOT would require the City to apply ODOT vehicle traffic mobility (congestion) standards and possibly amend land use designations as defined in the Central City 2035 Plan near the Broadway/Weidler interchange. This would limit allowed development within the API.

[8] 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

6.2 Build Alternative

6.2.1 Direct Impacts

As stated above, direct land use impacts of roadway projects result when land is acquired and converted to ROW, making the use transportation. Figure 12 shows the location of the land that would be acquired and converted to transportation use under the Build Alternative.

At the current design stage, the Project would convert approximately 2.54 land acres zoned as follows to transportation use:

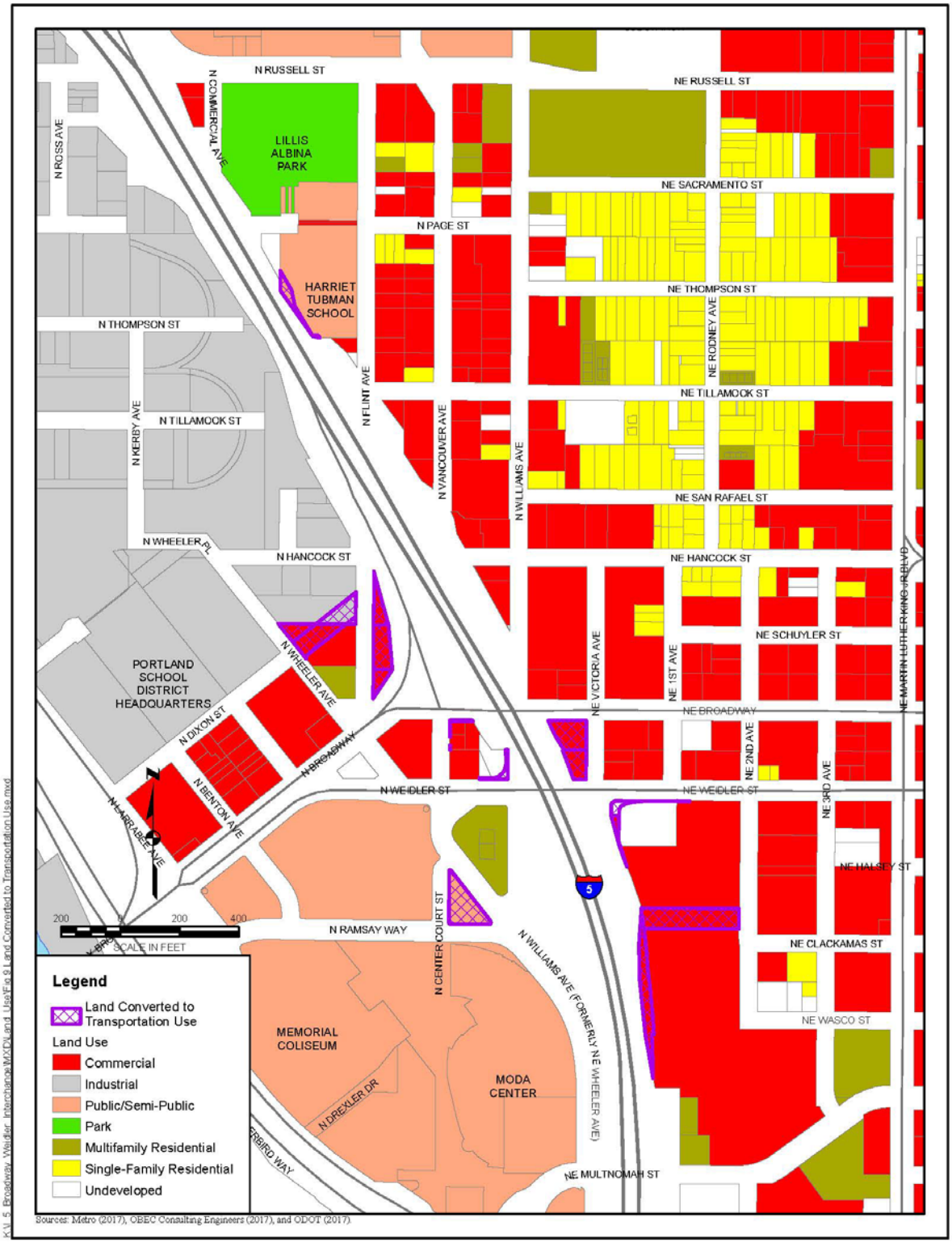
- Commercial Use: 81,626 square feet (1.87 acres)
- Industrial Use: 7,349 square feet (0.17 acres)
- Public/Semi-Public Use: 17,468 square feet (0.40 acres)
- Undeveloped: 4,356 square feet (0.10 acres)

Land acquired for the Project would remain in ODOT ownership or become City of Portland street ROW. Most of the land the Build Alternative improvements would occupy is owned by ODOT or is public street ROW owned by the City of Portland and already in transportation use.

Acquisitions would not cause any instances of non-conforming development. Non-conforming development can occur, for example, when a property acquisition reduces to below the required minimum the setback of a building from the property line of the parcel it occupies. All permanent acquisitions either result in the removal of the buildings that occupy the affected land parcel or are of land not occupied by a building. The scale of subsequent development of parcel remnants would be reduced, but the types of allowed uses would not change.

A number of parcels that would be subject to acquisition would not be converted to transportation use. For example, the block bounded by NE Victoria, NE 1st, NE Broadway, and NE Weidler would be acquired for construction staging (i.e., a designated area near a construction site where vehicles, supplies, and construction equipment are positioned for access and use). Land acquired and used for construction staging is not considered a conversion to transportation use. Likewise, the three parcels located on NE Broadway between NE Victoria and N Williams would be acquired but not converted to transportation use following construction of the Project. These parcels would be sold after construction is completed and would likely be developed for commercial, residential, or mixed use. See the *Right of Way Technical Report* (ODOT 2019a) for a more detailed description of property acquisitions and temporary and permanent easements required by the Project.

Figure 12. Land Converted to Transportation Use



6.2.2 Indirect Impacts

The Project would not have adverse indirect land use impacts. Under Oregon's Statewide Planning Program, cities are obligated to ensure that land uses specified in comprehensive plans are supported by the existing and planned transportation facilities that serve them. As described in Section 6.4.2.3, the City included the Project in its TSP. In addition, the Project is part of the Central City 2035 Plan adopted as part of the City of Portland's comprehensive plan. As described in the next paragraph, the planning process that formulated the Project was the same process that led to its inclusion in the TSP and Central City 2035 Plan. By formulating a plan that integrated transportation improvements, including the Project, with land use, the process considered the impacts of the Project on land use. In addition, by including the Project in its TSP, the City determined that the Project supports existing and planned land use in the API. The inclusion of the Project in the TSP and Central City 2035 Plan means the Project would not affect land use in ways that are contrary to planned land use and would not have growth-inducing impacts that are contrary to planned land use. Therefore, both ODOT and the City of Portland, which has exclusive authority over land use in the API, considered and provided for the impacts of the Project on land use, and the City of Portland has included the Project in its transportation plan to support its planned land uses.

The consideration of land use in the development of the Project is demonstrated by the documentation of the process by which ODOT and the City of Portland jointly developed the Project. They did this by collaboratively formulating ODOT's facility plan for the Project, i.e., the I-5 Rose Quarter Facility Plan, and the N/NE Quadrant Plan, a component of the City's Central City 2035 Plan. Appendix B quotes language documenting the consideration of land use in the development of the Project. The language is from the agreement under which ODOT and the City of Portland jointly developed the I-5 Rose Quarter Facility Plan and N/NE Quadrant Plan; the N/NE Quadrant Plan itself; the ordinance by which the City adopted the Central City 2035 Plan; and the findings supporting adoption of the ordinance. A feature of the Central City 2035 Plan that most clearly demonstrates how development of the Project considered land use is the Plan's inclusion of an MMA, as referenced above and described in Section 6.4.2.1, including that ODOT concurrence in the MMA is conditioned on inclusion of the Project in the Plan.

6.3 Cumulative Effects

Cumulative impacts 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 the 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 methods used in this report for cumulative impact assessment are described in Section 4.4

6.3.1 No-Build Alternative

The cumulative impact of the No-Build Alternative would be predicated on potential amendments to the Central City 2035 Plan to account for the removal of the Project and possibly the MMA designation from this Plan, as described in Section 6.1.2. As indicated there, removing the MMA designation would alter the types of allowed future development to reduce levels of employment, population, and traffic generation. The specifics would be determined by the outcome of the planning process the City would need to undertake.

6.3.2 Build Alternative

The planning processes that resulted in the inclusion of the Project in the City of Portland TSP and Central City 2035 Plan considered the impacts of the Project combined with past, present, and foreseeable transportation improvements and land development, including the reasonably foreseeable future actions listed in Appendix A. All future transportation improvements in the API must implement the TSP. All future land development in the API must comply with the City's zoning code, which implements the comprehensive plan, including the provisions of the Central City 2035 Plan. Therefore, the City of Portland has already considered and provided for the cumulative impacts of the Project and reasonably foreseeable future actions on land use and included the Project as part of the planned transportation system for the API to support planned land uses in the API, including land development projects.

6.4 Compliance with Applicable State, Regional, and Local Transportation and Land Use Laws, Plans, and Policies

6.4.1 No-Build Alternative

The analysis of the Build Alternative below demonstrates that it complies with applicable state, regional, and local transportation and land use laws, plans, and policies and implements them. Because state, regional, and local plans include the Project, the No-Build Alternative would not be consistent with those adopted plans.

6.4.2 Build Alternative

6.4.2.1 Oregon Statewide Planning Program

ODOT projects must comply with applicable provisions of Oregon's Statewide Planning Program.

Statewide Planning Goals and State Agency Coordination Requirements

The most prominent feature of Oregon's Statewide Planning Program is the set of Statewide Planning Goals. However, the Goals do not apply directly to the Project.

This is because, under the Statewide Planning Program, the comprehensive plans that cities and counties adopt apply the Goals within their borders. The Statewide Planning Program requires ODOT (and other state agencies) to align their projects with cities and counties as much as possible by requiring projects to be compatible with their comprehensive plans. The Oregon Department of Land Conservation and Development (DLCD) is the state agency that implements the Statewide Planning Program. Chapter 660, Division 30, of DLCD's administrative rules governs how ODOT and other state agencies comply with the Statewide Planning Program. Section 2 of OAR 660-030-0065, Agency Compliance with the Statewide Planning Goals, which is part of Division 30, states:

> Except as provided in section (3) of this rule, a state agency shall comply with the statewide goals by assuring that its land use program is compatible with the applicable acknowledged comprehensive plan(s) * * *

"Section (3) of this rule" refers to OAR 660-030-0065(3), which contains one provision applicable to the Project. OAR 660-030-0065(3) states:

> A state agency shall adopt findings demonstrating compliance with the statewide goals for an agency land use program or action if one or more of the following situations exists:
>
> * * *
>
> (d) A statewide goal or interpretive rule adopted by the Commission under OAR chapter 660 establishes a compliance requirement directly applicable to the state agency or its land use program; * * *

This means that ODOT would have to adopt findings demonstrating compliance with the Statewide Planning Goals only if required to by an administrative rule adopted by the Land Conservation and Development Commission (LCDC) (the Commission OAR 660-030-0065(3)(d) refers to). No LCDC rule requires such findings.

Chapter 660, Division 30, also requires state agencies, including ODOT, to adopt "state agency coordination programs," to set out how they will implement the Statewide Planning Program. The next section addresses provisions of ODOT's coordination program applicable to the Project.

ODOT State Agency Coordination Program

ODOT's SACP is Division 15 of Chapter 731 of the OARs. Because the Project falls within the definition of a Class 3 project in OAR 731-015-0015(6), it is subject to OAR 731-015-0075, Coordination Procedures for Adopting Plans for Class 1 and 3 Projects. OAR 731-015-0075 states:

> (1) The Department shall involve affected cities, counties, metropolitan planning organizations, state and federal agencies, special districts and other interested parties in the development of project plans. The Department shall include planning officials of the affected cities, counties and metropolitan planning organization on the project technical advisory committee.

(2) Goal compliance and plan compatibility shall be analyzed in conjunction with the development of the Draft Environmental Impact Statement or Environmental Assessment. The environmental analysis shall identify and address relevant land use requirements in sufficient detail to support subsequent land use decisions necessary to authorize the project.

(3) Except as otherwise set forth in section (4) of this rule, the Department shall rely on affected cities and counties to make all plan amendments and zone changes necessary to achieve compliance with the statewide planning goals and compatibility with local comprehensive plans after completion of the Draft Environmental Impact Statement or Environmental Assessment and before completion of the Final Environmental Impact Statement or Revised Environmental Assessment. These shall include the adoption of general and specific plan provisions necessary to address applicable statewide planning goals.

(4) The Department may complete a Final Environmental Impact Statement or Revised Environmental Assessment before the affected cities and counties make necessary plan amendments and zone changes in the following case:

(a) The Final Environmental Impact Statement or Revised Environmental Assessment identifies that the project be constructed in phases; and

(b) The Department finds:

(A) There is an immediate need to construct one or more phases of the project. Immediate need may include, but is not limited to, the facility to be improved or replaced currently exceeds or is expected to exceed within five years the level of service identified in the Oregon Highway Plan; and

(B) The project phase to be constructed meets a transportation need independent of the overall project, is consistent with the purpose and need of the overall project as identified in the FEIS and will benefit the surrounding transportation system even if no further phases of the project are granted land use approval.

(5) If a Final Environmental Impact Statement or Revised Environmental Assessment is completed pursuant to section (4) of this rule, all necessary plan amendments and zone changes associated with the particular phase of the project to be constructed shall be made by the city or county prior to constructing that phase of the project.

(6) If compatibility with a city or county comprehensive plan cannot be achieved, the Department may modify one or more project alternatives to achieve compatibility or discontinue the project.

(7) The Commission or its designee shall adopt the acknowledged comprehensive plans of affected cities and counties when it grants design approval for the project. Notice of the decision shall be mailed out to all interested parties.

(8) The Department shall obtain all other land use approvals and planning permits prior to construction of the project.

The Project complies with OAR 731-015-0075 as follows:

- ODOT complied with OAR 731-015-0075(1) by jointly developing with the City of Portland what ODOT adopted as the facility plan for the Project (ODOT 2012a) and the City adopted by resolution as the N/NE Quadrant Plan (City of Portland et al. 2012). The N/NE Quadrant Plan is now part of the City's Central City 2035 Plan, a component of the City's comprehensive plan. In addition, the Project is in the City's TSP. Therefore, the Project implements the City's comprehensive plan. See Section 6.4.2.3 of this report.
- This technical report meets the requirements of OAR 731-015-0075(2). As described in the subsection on the state agency coordination requirements of the Oregon Statewide Planning Program, OAR 660-030-0065 states that "a state agency shall comply with the statewide goals by assuring that its land use program is compatible with the applicable acknowledged comprehensive plan(s)." Section 6.4.2.3 of this report demonstrates that the Project is compatible with Portland's comprehensive plan. For the reasons outlined in Section 6.4.2.4, the Project would not require land use decisions, with the possible exception of design review of Project features like street furniture and public art. The need for design review would not be known until the design of the Project is more advanced than it is at present.
- ODOT would comply with OAR 731-015-0075(3) by relying on the City of Portland to make any plan amendments necessary. However, because, as described in Section 6.4.2.3, the City's comprehensive plan includes the Project, no such amendments are expected to be necessary.
- OAR 731-015-0075(4), (5), and (6) do not apply because the City of Portland has already made the necessary plan amendments.
- ODOT would comply with OAR 731-015-0075(7) by including findings of compatibility with Portland's comprehensive plan in the design approval of the Project and would mail notice of the approval to interested parties.
- Regarding OAR 731-015-0075(8), as described in Section 6.4.2.4, some Project improvements may require City design review. ODOT would obtain the design review approval, if required.

Transportation Planning Rule

Two provisions of the TPR (OAR Chapter 660, Division 12, Transportation Planning) apply to the Project. The first is OAR 660-012-0060(10), which allows a city to adopt an MMA, within which a city "may amend a functional plan, a comprehensive plan or a land use regulation without applying performance standards related to motor vehicle traffic congestion (e.g. [sic] volume to capacity ratio or V/C), delay or travel time," if the requirements of the rule are met. ODOT safety standards continue to apply. Appendix C contains the full text of OAR 660-012-0060(10). As described in

Section 6.4.2.3, the Central City 2035 Plan, which is part of Portland's comprehensive plan and applies to the API, includes an MMA designation. As applied to the Project, OAR 660-012-0060(10)(b)(E)(iii) required ODOT concurrence with the MMA designation. The Plan includes ODOT's concurrence. Pursuant to OAR 660-012-0060(10)(c)(B), ODOT and the City of Portland negotiated an agreement regarding traffic management that is part of the Central City 2035 Plan. The agreement includes the Project. The ODOT concurrence with the MMA in the Plan is contingent on inclusion of the Project in the City's comprehensive plan. Section 6.4.2.3 of this report also addresses the MMA.

The second TPR provision that applies to the Project is OAR 660-012-0015(b), which states, "state transportation project plans shall be compatible with acknowledged comprehensive plans as provided for in OAR chapter 731, division 15." As discussed in Section 6.4.2.3 of this report, the Project is compatible with the City of Portland's comprehensive plan because it implements projects in the City's TSP, which is part of the comprehensive plan.

A third TPR provision is relevant to the No-Build Alternative. Section 660-012-0050(5) states:

> If a local government decides not to build a project authorized by the TSP, it must evaluate whether the needs that the project would serve could otherwise be satisfied in a manner consistent with the TSP. If identified needs cannot be met consistent with the TSP, the local government shall initiate a plan amendment to change the TSP or the comprehensive plan to assure that there is an adequate transportation system to meet transportation needs.

The other project development provisions of Section 660-012-0050 of the TPR do not apply to the Project. Section 660-012-0050(1) states, "for projects identified by ODOT pursuant to OAR chapter 731, division 15, project development shall occur in the manner set forth in that division." OAR Chapter 731, Division 15, is the ODOT SACP addressed above. OAR 731-015-0025, part of the SACP, makes applicable the "adoption of project plans for Class 2 projects which would involve any of the activities listed OAR 731-015-0035." For the reasons outlined in the ODOT State Agency Coordination Program section above, this makes the project development process in the SACP applicable to the Project.

State Transportation System Plan

ODOT projects must comply with the policies in the State TSP, which include the Oregon Transportation, Aviation, Bicycle and Pedestrian, Freight, Highway, Public Transportation, Rail, Transportation Options, and Transportation Safety Action Plans. The State TSP plans with provisions applicable to the Project are the Transportation, Highway, and Bicycle and Pedestrian Plans. When the Oregon Transportation Commission (OTC) adopted the I-5: Broadway/Weidler Interchange Facility Plan in 2012, it adopted findings of facility plan compliance with these plans. In addition, the adoption of the facility plan made it part of the Oregon Highway Plan. Because the Project implements the facility plan, the Project also complies with the plans as of

2012. Subsequent to 2012, the OTC adopted a new Bicycle and Pedestrian Plan and the Transportation Options and Transportation Safety Action.

The Oregon Bicycle and Pedestrian Plan includes a policy directly applicable to the Project. Strategy 1.1G states, "Where pedestrian or bicycle crashes have occurred, or where there are significant safety risk factors, consider safety countermeasures whenever a road is built, rebuilt, relocated, or reconstructed." (ODOT 2016a:31) The Project includes several components that would result in compliance with this strategy:

- Inclusion on N Williams of a two-way cycle track between NE Hancock and NE Broadway and a two-way bicycle and pedestrian path between NE Broadway and N Ramsay (ODOT 2012a:Appendix C, 53). A two-way cycle track allows bicycle movement in both directions and is physically separated from motor vehicle travel lanes and sidewalks.
- A pedestrian and bicycle crossing of I-5 at NE Clackamas (ODOT 2012a:Appendix C, 54)
- Improved bicycle lanes, sidewalks, and protected, marked crossings along NE Broadway, NE Weidler, and N Vancouver (ODOT 2012a:Appendix A, 11)
- A new pedestrian/bicycle connection between the N Flint/N Tillamook intersection to the proposed new I-5 overcrossing at N/NE Hancock (ODOT 2012a:Appendix A, 11).

These features would better separate bicycle traffic from motor vehicle traffic and improve pedestrian safety. Cyclists now use painted bike lanes adjoining motor vehicle lanes.

The Oregon Transportation Options Plan (ODOT 2015c) does not contain policies applicable to the Project. Instead, its policies apply to programs and strategies.

The Transportation Safety Action Plan includes Policy 2.3, which applies to the Project. It states, "plan, design, construct, operate, and maintain the transportation system to achieve healthy and livable communities and eliminate fatalities and serious injuries for all modes." (ODOT 2016b:58). Addressing safety issues is a principal purpose of the Project. I-5 in the Project Area has the highest crash rate in the state. This is attributed to high traffic volumes and the close spacing of the I-5 interchanges with I-84, the Broadway/Weidler couplet, and I-405 and the resulting traffic weaving. Overall, the Project shows a reduced crash rate on I-5 in the API compared to the No-Build Alternative (ODOT 2018b). In addition, both north/south and east/west bicycle travel through the Project Area is high, but facilities for cyclists are limited. The Project would improve the facilities and make them safer. The Project would also increase pedestrian safety.

Oregon Revised Statute 366.514, Use of Highway Fund for Footpaths and Bicycle Trails

ORS 366.514 requires that footpaths and bicycle trails, including curb cuts or ramps, be provided wherever a highway, road, or street is constructed, reconstructed, or

relocated. As described in the preceding sections, the Project includes sidewalks and bike paths, which would meet this requirement.

6.4.2.2 Metro Regional Transportation Plan

The 2014 RTP includes the Project. RTP Project 10867 in the project list covers preliminary engineering and environmental review. RTP Project 10884 covers ROW, which includes the process of property acquisition. RTP Project 11176 covers the construction of the proposed Project improvements (Metro 2014).

Metro is now preparing a 2018 RTP update, which is scheduled to be adopted in December 2018. The Project is proposed for continued inclusion in the 2018 RTP for all phases – preliminary engineering, environmental review, ROW, and construction.

6.4.2.3 City of Portland Comprehensive Plan

As stated above, OARs 660-030-0065 and 660-012-0015(1)(b) require ODOT projects to be compatible with the City of Portland's comprehensive plan. The Project is in the City's TSP. The description of project 20120 in the TSP reads, "Acquire right-of-way to improve safety and operations on I-5, connection between I-84 and I-5, and access to the Lloyd District and Rose Quarter." The description of project 20121 reads, "Construct improvements to enhance safety and operations on I-5, connection between I-84 and I-5, and access to the Lloyd District and Rose Quarter" (City of Portland 2016c:8). Therefore, the Project is compatible with the comprehensive plan. In addition, the Project is part of the N/NE Quadrant Plan, adopted by the Portland City Council in 2012 (City of Portland et al. 2012). The Project is also part of the Central City 2035 Plan, which, in turn, is part of the City's comprehensive plan. One component of the Central City 2035 Plan is the MMA referenced in the TPR section of this memorandum. The Central City 2035 Plan includes ODOT's concurrence with the MMA, which is conditioned on City adoption of the MMA as contained in the draft plan, which specifically includes the Project (City of Portland 2017b:31, 38).

6.4.2.4 City of Portland Code

With two possible exceptions, Title 33, Planning and Zoning, of the City of Portland Code (the zoning code) would not apply to improvements constructed pursuant to the Facility Plan. Improvements the Facility Plan calls for would be made in public ROW. Title 33 does not apply to public ROW, except within design districts and certain overlay zones. Most of the Facility Plan area is within the Lloyd Subdistrict of the Central City Plan District design overlay zone. As a consequence, Project improvements would be subject to design review, if they fall within one of two categories. The first category includes non-standard improvements "such as street lights, street furniture, planters, public art, sidewalk and street paving materials, and landscaping" that the City Engineer has not approved. In the second category are instances when the "City Council requires design review of a proposal because it is considered to have major design significance to the City." ODOT would secure design approval of improvements that it constructs that are subject to design review.

In addition, changes to the ramp from I-5 SB to I-84 NB, and potential utility line relocations, may require City of Portland review under the Willamette River Greenway provisions of the zoning code (City of Portland 2015). Final design of the ramp improvements and utility relocations would determine if they qualify for an exemption from the provisions. ODOT would obtain design review from the City if the improvements are not exempt.

Title 17, Public Improvements, of the City of Portland Code would apply to Project improvements within City of Portland ROW. If ODOT constructs improvements that alter public ROW under the City's jurisdiction, Title 17 would require ODOT to obtain a permit from the Bureau of Transportation. ODOT would obtain such permits. Improvements within public ROW under the City of Portland's jurisdiction constructed by the Bureau of Transportation or under contract to the Bureau of Transportation would not require a permit.

The City's Planning Zoning Code would apply to temporary use of property in the Project Area for construction staging, including the block bounded by NE Victoria, NE 1st, Broadway, and Weidler that ODOT would acquire for that purpose. Use of properties for construction staging would require review by the City of Portland Bureau of Development Services and approval of a zoning permit. This requirement would also apply to any additional contractor-selected construction staging areas. Potential variables for compliance include construction equipment staging, soil/aggregate stockpiling, erosion control, storage, and composition of on-site personnel. At present, non-construction personnel such as design-team members are not anticipated to be assigned to temporary on-site modular trailers or other temporary office compounds located in construction staging areas.

6.5 Conclusion

Because the Project is identified as a planned transportation improvement in the City of Portland's comprehensive plan and ODOT developed the Project in cooperation with the City of Portland as part of an integrated transportation and land use planning process, the Build Alternative would not have significant adverse indirect or cumulative land use impacts and would support existing and planned land use. The Build Alternative's direct land use impacts would be relatively small, converting approximately 3 acres of land to transportation use. The Build Alternative would comply with all applicable state and local planning laws, plans, and policies.

The No-Build Alternative would not support the land use vision in the City of Portland's comprehensive plan and would necessitate amendments to the plan because it would remove the exemption from the application of ODOT traffic flow operational standards that underlie the land use provisions of the plan.

7 Avoidance, Minimization, and Mitigation Measures

The Project is part of the City of Portland's comprehensive plan and the RTP and complies with all applicable state laws, plans, and policies. No avoidance, minimization, or mitigation measures are needed to comply with the comprehensive plan, the RTP, or state land use laws, plans, and policies. If the Build Alternative is determined to be subject to the design overlay zone requirements of the Lloyd Subdistrict of the Central City Plan District or review under the Willamette River Greenway provisions of the City of Portland zoning code, adjustments to its design may be necessary.

8 Contacts and Coordination

In writing this report, the preparer consulted with Nicholas Starin of the Portland Bureau of Planning and Sustainability and Teresa Boyle and Mauricio Leclerc of the Portland Bureau of Transportation, as well as with members of the ODOT Project team and consultant team.

9 Preparers

Name	Discipline	Education	Years of Experience
John Kelly, OBEC Consulting Engineers	Planning	M.S., City and Regional Planning, *Juris Doctor*	41

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 March 3, 2018).

City of Portland. 2015. City of Portland Code Title 33, Planning and Zoning, Chapter 33.440, Greenway Overlay Zones.

City of Portland. 2016a. Adopted 2035 Comprehensive Plan Land Use Map. December 2016.

City of Portland. 2016b. Amendments to the Transportation System Plan. December 5, 2016.

City of Portland. 2016c. Transportation System Plan, TSP Major Projects List. May 16, 2016.

City of Portland. 2017a. Central City 2035 Plan, Revised Proposed Zoning and Comprehensive Plan Maps, Recommended Draft. June 2017.

City of Portland. 2017b. Central City 2035 Plan, Volume 2B, Transportation System Plan Improvements, Recommended Draft. June 2017.

City of Portland, Oregon Department of Transportation, 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).

Metro. 2014. Regional Transportation Plan. Available: https://www.oregonmetro.gov/sites/default/files/2015/05/29/RTP-2014-final.PDF (accessed March 3, 2018).

ODOT (Oregon Department of Transportation). 2012a. Facility Plan: I-5 Broadway/Weidler Interchange Improvements. October. Available: https://www.portlandoregon.gov/bps/article/415777 (accessed March 3, 2018).

ODOT. 2012b. "ODOT Highway Design Manual." Available: http://www.oregon.gov/ODOT/Engineering/Documents_RoadwayEng/HDM_09-Grade-Separation.pdf (accessed March 3, 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. 2015c. Transportation Options Plan. Adopted April 16, 2015. Available: http://www.oregon.gov/ODOT/Planning/Documents/OTOP.pdf (accessed January 2018).

ODOT. 2016a. Oregon Bicycle and Pedestrian Plan. Adopted May 19, 2016. Available: http://www.oregon.gov/ODOT/Planning/Documents/OBPP.pdf (accessed January 2018).

ODOT. 2016b. Transportation Safety Action Plan. 2016. Available: http://www.oregon.gov/ODOT/Safety/Documents/TSAP_2016.pdf (accessed January 2018).

ODOT. 2017. 2016 Transportation Volume Tables. Available: http://www.oregon.gov/ODOT/Data/Documents/TVT_Complete_2016.pdf (accessed March 8, 2018).

ODOT. 2019a. Right of Way Technical Report. I-5 Rose Quarter Improvement Project. Prepared for the Oregon Department of Transportation. Portland, Oregon. January.

ODOT. 2019b. Transportation Safety Technical Report. I-5 Rose Quarter Improvement Project. Prepared for the Oregon Department of Transportation. Portland, Oregon. January.