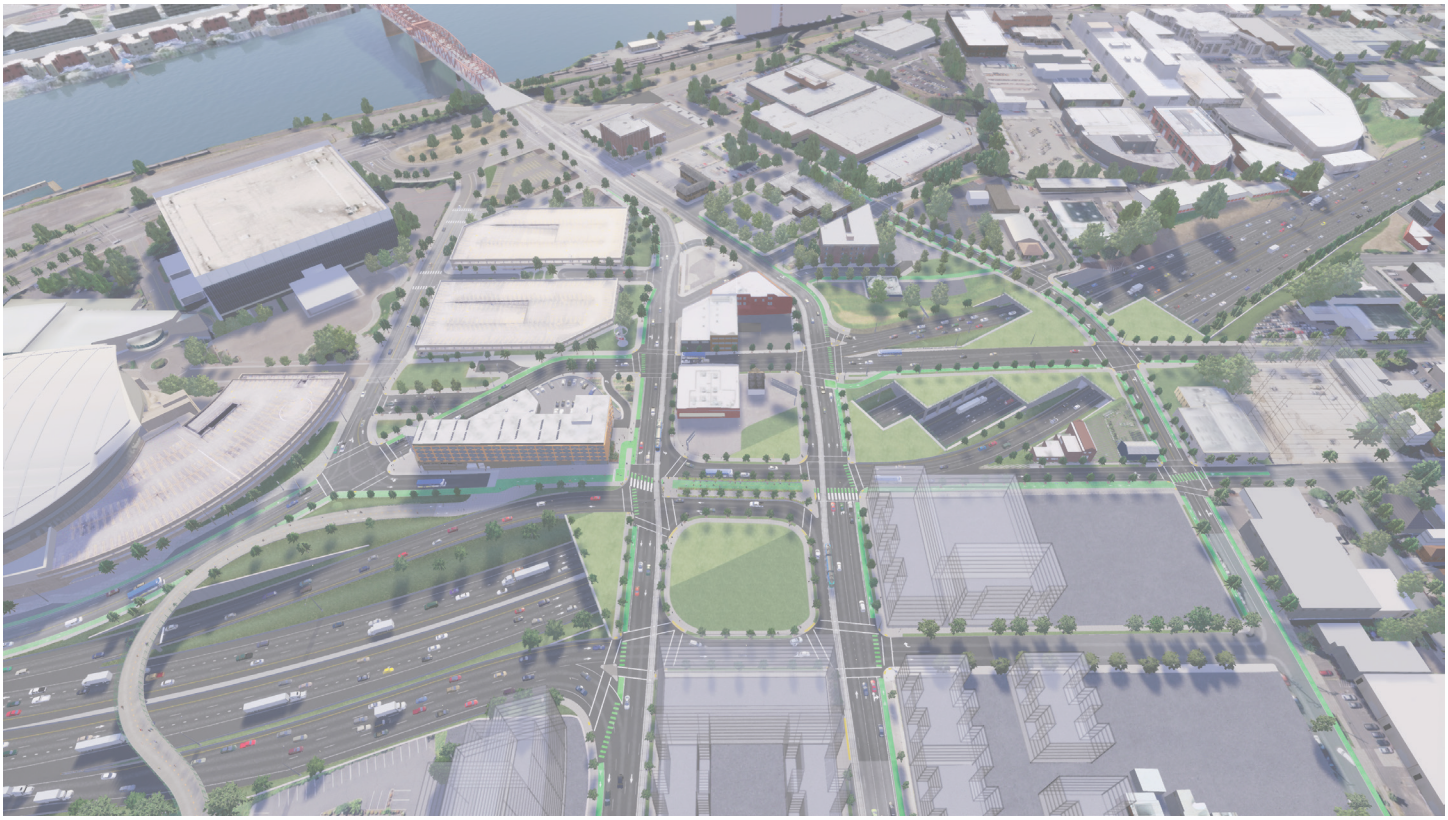
I-5 ROSE QUARTER
IMPROVEMENT PROJECT

I-5 Rose Quarter Improvement Project

Finding of No Significant Impact and Revised Environmental Assessment



Federal Highway Administration

Oregon Department of Transportation

October 30, 2020

U.S. Department of Transportation
Federal Highway Administration

Oregon Department of Transportation

Oregon
Kate Brown, Governor

Department of Transportation
Urban Mobility Office
123 NW Flanders St.
Portland, OR 97209-4012
Phone: (503) 731-8200
Fax: (503) 731-8259

October 30, 2020

TO THE INTERESTED PARTIES OF THE: **I-5 Rose Quarter Improvement Project**
Interstate 5
Multnomah County, Oregon
Key No. 19071

This Revised Environmental Assessment and Finding of No Significant Impact is being distributed for your information in accordance with state and federal regulations.

The Environmental Assessment was published on February 15, 2019 for a 45-day public comment period, ending April 1, 2019. As a result of the comments received, revisions were made to the Environmental Assessment. Copies of comments received on the Environmental Assessment and a summary of comment responses are included within the Revised Environmental Assessment.

An electronic version of the Revised Environmental Assessment and Finding of No Significant Impact can be found on the I-5 Rose Quarter Improvement Project website at https://www.i5rosequarter.org/.

Should you have any questions, please contact:

Emily Cline
Federal Highway Administration, Oregon Division
530 Center Street N.E., Suite 420
Salem, OR 97301
emily.cline@dot.gov

And

Megan Channell
Oregon Department of Transportation, Urban Mobility Office
123 N.W. Flanders Street
Portland, OR 97209
megan.channell@odot.state.or.us

Thank you for your interest in this project.

Sincerely,

Megan Channell
Rose Quarter Project Director

Federal Highway Administration

Finding of No Significant Impact

I-5 Rose Quarter Improvement Project
Multnomah County, Oregon
Key Number 19071

The Federal Highway Administration (FHWA) has determined that this project would not have a significant adverse impact on the human or natural environment. This finding is based on information provided in the Environmental Assessment (February 2019) and the Revised Environmental Assessment (inclusive of Errata), included herein, which have been found to adequately disclose the environmental impacts of the Project. These documents provide sufficient evidence and analysis for determining that an environmental impact statement is not required.

The Oregon Department of Transportation (ODOT) and FHWA worked together to develop the proposed design concept for the Project to improve the safety and operations on Interstate 5 (I-5) between Interstate 84 and Interstate 405, and improve multimodal community connections in the Broadway/Weidler interchange, with the objective to avoid and minimize impacts to the natural and human environment to the greatest extent possible.

The Project impacts described herein would primarily be minor to moderate in degree; short term in duration; and limited to the existing I-5 corridor, local surface streets, and adjacent properties and would end once Project construction is complete. Project impacts include the following:

- Minor short-term air quality impacts would occur within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity (including haul routes). Minor long-term air quality impacts would be equal to or lower than for the No-Build Alternative.
- During construction, nine historic properties could be affected by minor noise and vibration impacts, increased truck traffic, traffic congestion, changes to access, increased dust, and temporary changes to the historic setting. FHWA and ODOT have developed a Project-specific Programmatic Agreement (PA) in consultation with the Oregon State Historic Preservation Office (SHPO) to avoid and/or minimize the potential for Project-related vibration impacts to historic properties. Long-term impacts to historic properties could include minor to moderate changes to the settings of historic properties by the introduction of new transportation structures and other improvements. None of these potential impacts is expected to adversely affect the characteristics that make these historic properties eligible for listing in the National Register of Historic Places (NRHP).
- During construction, there would be limited potential for minor spills or releases of oil and fuel from mechanical equipment and the mobilization or release of existing contamination in soil and groundwater.

- Construction activities would result in moderate to substantial increases in short-term noise levels in the immediate vicinity (i.e., at a distance of 50 feet).
- No substantial long-term operations-related traffic noise impacts are anticipated.
- Construction activities would result in minor to moderate short-term impacts to highway traffic; local street motor vehicle traffic; driveway access; transit operations; and to people who walk, bike, and roll.
- Existing above- and below-ground utilities could be impacted during construction, with effects ranging from minor brief temporary service interruptions to moderately complex relocations of electric transmission and distribution lines and water supply lines.
- Previously undiscovered archaeological resources could experience minor to substantial impacts from the operation of heavy equipment during compaction, excavation, or grading of soils during construction and subsurface maintenance activities. Potential impacts to archaeological resources have been addressed through an Inadvertent Discovery Plan and a Project-specific PA between FHWA, Oregon SHPO, and ODOT that identifies mandatory protocols to be followed to protect archaeological resources in the event of an inadvertent discovery.
- The Project could result in minor to moderate short-term impacts to minority and low-income populations from the temporary relocation of bus routes, adjustments to streetcar service, temporary closures of key walking and bicycling routes, and minor air impacts and moderate to substantial noise impacts from construction equipment. ODOT is committed to implementing mitigation measures to ensure potential impacts to environmental justice populations do not rise to the level of “disproportionately high and adverse effects” as defined in Executive Order 12898.

The Project would provide numerous beneficial effects, including the following:

- The Project would improve traffic operations on I-5 in both the AM and PM time periods, and weaving segment operations on the highway would improve, thereby improving safety. Potential queue lengths would be reduced on I-5, and travel speeds and times would be improved for all I-5 segments compared to the No-Build Alternative.
- Long-term beneficial effects to transit would result from implementation of relevant elements of TriMet’s Enhanced Transit Corridors Plan, such as business access transit lanes, far-side bus stops, street/traffic modifications, curb extensions, and transit signal priority to reduce bus and streetcar travel times.
- Long-term beneficial effects to active transportation and transportation safety would include improved conditions for pedestrians and bicyclists from increased travel route options, improved ramp terminal intersections, physical separation from motorized users, and reduced complexity of intersections.
- Long-term emissions of mobile source air toxics (MSAT) and National Ambient Air Quality Standards (NAAQS) criteria pollutants from vehicles operating on the highway

and local surface streets would be equal to or lower than emissions for the No-Build Alternative and would be substantially lower in 2045 compared to existing conditions (2017).

- Two noise walls proposed along the eastern edge of I-5 would reduce existing and future traffic noise levels at sensitive receptors in the Project Area, including Harriet Tubman Middle School, thereby addressing public health and safety concerns raised by Portland Public Schools.
- The Project would provide long-term benefits to environmental justice populations in the Project Area in the form of improved access to transit; improved mobility and safety for pedestrians, bicyclists, and transit riders; and improved physical connections to areas east and west of I–5 provided by the new highway covers and the Clackamas bicycle/pedestrian overcrossing. Improved transit service within and near the Project Area and the addition of transit boarding islands on N/NE Broadway, N/NE Weidler, and Multnomah would provide a more accessible, comfortable, and attractive transit stop environment.

The Project would maintain or improve public health and safety in the following ways:

- Traffic operations would improve on I-5 in both the AM and PM time periods, and weaving segment operations on the highway would improve, thereby improving safety.
- Conditions for pedestrians and bicyclists would improve from increased travel route options, improved ramp terminal intersections, physical separation from motorized users, and reduced complexity of intersections.
- Long-term emissions of MSAT and NAAQS criteria pollutants during Project operations would be equal to or lower than emissions for the No-Build Alternative and would be substantially lower in 2045 compared to existing conditions (2017).
- Proposed noise walls would reduce existing and future traffic noise levels at sensitive receptors in the Project Area, including Harriet Tubman Middle School and Lillis-Albina Park. Interior noise levels at Harriet Tubman Middle School would be reduced by up to 5 A-weighted decibels by constructing a 22-foot-high noise wall between eastern edge of I-5 and the school.
- ODOT will conduct Phase I Environmental Site Assessments for any properties to be acquired to construct the Project, and Phase II Environmental Site Assessments will be conducted on properties where the Phase I Environmental Site Assessment indicated that contamination may be present. Collectively, these actions would reduce risk of exposure of workers and public to hazardous materials.

The Project would not adversely affect any unique characteristics of the geographic area, including historic buildings, archaeological resources, or park lands. The Project is located in a highly urbanized and built portion of the City of Portland, within the existing I-5 transportation corridor. No prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas are

present in the Project Area and would therefore not be affected by the Project. FHWA and ODOT have developed a Project-specific PA in consultation with the SHPO to avoid and/or minimize the potential for Project-related construction impacts to historic properties in the Project Area. FHWA and ODOT have also developed an Inadvertent Discovery Plan and a Project-specific PA between FHWA, Oregon SHPO, and ODOT that identifies mandatory protocols to be followed to protect archaeological resources in the event of an inadvertent discovery.

In considering the intensity of impacts, ODOT considered the degree to which anticipated effects on the quality of the human environment presented in the Environmental Assessment are controversial per 40 Code of Federal Regulations 1508.27(4). ODOT acknowledges the controversy surrounding the resource analyses presented in the Environmental Assessment, particularly for those analyses completed for air quality, climate change, and traffic operations. Numerous comments were received questioning the methodologies used to analyze the impacts associated with these topics and the results reported in the Environmental Assessment.

Regarding air quality, the FHWA and ODOT maintain that the United States Environmental Protection Agency (EPA) Mobile Vehicle Emission Simulator (MOVES) model that was used to analyze long-term air quality impacts, following FHWA and EPA guidance, represents the most contemporary emissions model available to estimate mobile sources at the project level for criteria air pollutants and air toxics.

Similarly, ODOT properly followed FHWA and EPA guidance to conduct the analysis of potential climate change–related impacts that could result from the Project. ODOT included the analysis of climate change in the Environmental Assessment due to the high level of agency and stakeholder interest in this topic, despite this analysis not being required for National Environmental Policy Act (NEPA) compliance since the Council on Environmental Quality withdrew its previous guidance on this topic on April 5, 2017.

In Spring 2020, following publication of the Environmental Assessment and at the direction of the Oregon Transportation Commission (OTC), ODOT hired an independent panel of six technical experts from across the country to conduct a peer review to evaluate the methodologies, analyses, conclusions, and mitigation measures for the air quality, noise, and greenhouse gas (GHG) emissions analyses conducted for the Environmental Assessment. This effort was intended to address the observed controversy by establishing an objective position on the defensibility of the analyses presented in the Environmental Assessment. Regarding the air quality analysis, the peer review concluded:

- ODOT properly followed FHWA and EPA guidance to conduct the air quality analysis for the Project,
- ODOT exhibited best practices as it followed FHWA guidance on quantitative analysis of MSATs, and
- ODOT's conclusion was technically correct in that there would be no adverse long-term air quality impacts.

ODOT also acknowledges the numerous comments that were received on the Environmental Assessment concerning ODOT's traffic modelling, particularly how tolling, induced demand, and the Columbia River crossing were addressed in the analysis. As described in the Environmental Assessment and herein, highway operations were analyzed using VISSIM 10, a widely used, behavior-based multi-purpose traffic microsimulation program. Traffic operations for the local street network were analyzed using Synchro 9, a widely used traffic optimization and simulation tool. The VISSIM model was used to assign traffic volumes from the Regional Travel Demand Model based on approved land use and employment projections found in the 2040 Distributed Forecast produced by the Portland Metro Council.[1] Additional traffic volume data for I-5 was obtained from the Portland area transportation data archive (PORTAL), supplemented with updated ramp volumes at the Broadway/Weidler interchange using more recent intersection turning movement counts. FHWA has carefully reviewed the methods and results of the traffic analysis, and the agency concurs with the findings and conclusions reported in the Environmental Assessment and supporting *Traffic Operations Technical Report*. The Project's consideration of tolling, induced demand, and the Columbia River Crossing (CRC)[2] is described below:

- **Tolling:** Tolling (also referred to as congestion pricing or value pricing) on I-5 was not considered to be reasonably foreseeable at the time the Environmental Assessment was being prepared because tolling on I-5 was not included in the financially constrained project list in the 2014 Regional Transportation Plan (RTP), nor is it currently included in the financially constrained project list in the 2018 RTP. Congestion pricing on I-5 is currently (as of October 2020) being studied by ODOT, consistent with Legislative direction to the OTC in House Bill 2017 "to pursue and implement tolling on I-5 and I-205 in the Portland metropolitan region to help manage traffic congestion." During the 2018 ODOT Value Pricing Feasibility Analysis, the I-5 corridor segment between SW Multnomah and N Going was identified for further study. Managing traffic congestion and mobility through tolling on this I-5 segment could provide one of the largest benefits to the most regional travelers and the state-wide economy. Further, additional traffic and mobility analysis will be initiated that will help identify where tolling would begin and end on I-5 and the type of tolling to be utilized; this planning work and technical analysis is expected to be completed by the end of 2022. The results of this analysis will inform the starting timeframe and alternatives for a formal environmental review process.
- **Induced Demand:** As described above, future traffic was projected using Metro's Regional Travel Demand Model, a sophisticated, four-step, computer-based procedure used for analyzing regional travel demand within the Portland metropolitan area consistent with best practices nationally and internationally. The traffic operations analysis was based on trip data from the Regional Travel Demand Model and involved assigning the regional trip tables to the City of Portland Transportation System Plan

[1] Available at https://www.oregonmetro.gov/2040-distributed-forecast.

[2] Currently referred to as the Interstate Bridge Replacement Project

networks because they contain higher resolution in the street network (more local facilities) and a finer detailed zone system. Overall, the Regional Travel Demand Model results did not indicate trip increases on I-5 much beyond the Project limits (i.e., no induced demand). The 5 to 14 percent trip increase on I-5 within the Project Area is expected for an auxiliary lane project intended to improve flow between entrance ramps and exit ramps and is indicative of primarily local through-traffic.

- **Columbia River Crossing Project:** The CRC is included in the 2014 RTP Financially Constrained Lists of Projects and Programs[3] from Metro and was therefore built into the baseline assumptions for the traffic operations analysis in the Environmental Assessment. Because transportation impacts typically occur on a broader, system-wide scale, the traffic operations analysis considered actions within and immediately beyond the Project Area. The forecast of the performance and operation of the highway and local transportation system described in the Environmental Assessment is based on Metro's Regional Travel Demand Model and on analysis tools that rely on the regional model data projected to the year 2040. The Regional Travel Demand Model is built on population and employment growth forecasts adopted by the Metro Council and the financially constrained project list included in the technical appendix to the RTP. These growth forecasts and planned transportation projects incorporate the reasonably foreseeable future growth and major actions that would potentially impact transportation operations in the area of potential impact. Consequently, these reasonably foreseeable future actions were analyzed as part of the Build Alternative.

  The 2014 RTP was used in the environmental review and analysis of the Project because that planning document, not the 2018 RTP, was applicable when the environmental review was conducted. Note that the CRC is also included in the 2018 RTP but does not have committed funding.[4] The Washington State legislature has authorized funding to begin a re-evaluation of the I-5 crossing of the Columbia River between Portland, Oregon, and Vancouver, Washington. Both the Washington Department of Transportation and ODOT have recently begun a re-evaluation process on this river crossing project.

The analysis and conclusions presented in the Environmental Assessment are not highly uncertain and do not involve unique or unknown risks. Project impacts would occur primarily during the construction phase, have been readily identified, and have been addressed with appropriate mitigation measures. ODOT will address the potential risks from encountering undiscovered hazardous materials by conducting a full Hazardous Materials Corridor Study prior to acquiring properties or commencing construction activities. The study will review historical information and existing databases to identify potential hazardous materials in the Project Area and on surrounding properties. ODOT will conduct Phase I Environmental Site Assessments for

[3] Available at https://www.oregonmetro.gov/sites/default/files/2014/08/20/2014%20RTP%20Appendix.pdf.

[4] Available at https://www.oregonmetro.gov/sites/default/files/2019/04/02/2018-RTP-Appendices-A-and-B-Constrained-Project-List.pdf.

any properties to be acquired to construct the Project, and Phase II Environmental Site Assessments will be conducted on properties where the Phase I Environmental Site Assessment indicated that contamination may be present. As described previously, FHWA and ODOT have developed an Inadvertent Discovery Plan and a Project-specific PA between FHWA, Oregon SHPO, and ODOT that identifies mandatory protocols to be followed to protect archaeological resources in the event of an inadvertent discovery.

The Project would not establish a precedent for future actions with significant effects nor represent a decision in principle about a future consideration. The Project would complement the land use, urban design, and transportation system envisioned for the planning districts of Lower Albina and Lloyd in the City of Portland's Adopted Central City 2035 Plan, the City of Portland's Transportation System Plan, and Metro's RTP, and support community priorities for improved multimodal connections and access in the vicinity of the interchange and between neighborhoods located east and west of I-5.

The Environmental Assessment and the Revised Environmental Assessment have provided sufficient documentation to allow FHWA to conclude that the Project would not have significant cumulative impacts and is not related to other actions with individually insignificant but cumulatively significant impacts. The cumulative impacts analysis was conducted consistent with the financially constrained project list included in Metro's RTP and considering projects to 2045. None of these projects, in combination with this Project, would result in significant cumulative impacts, and the Project's contribution would not be substantial.

The Project would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the NRHP or cause loss or destruction of significant scientific, cultural, or historical resources. The Project is located in a highly urbanized and built portion of the City of Portland, within the existing I-5 transportation corridor. The analysis of potential impacts to historic resources listed in or eligible for listing in the NRHP determined that construction and operation of the Project would not result in significant short-term or long-term impacts to historic resources. FHWA and ODOT have developed a Project-specific PA in consultation with the SHPO to avoid and/or minimize the potential for Project-related construction impacts to historic properties in the Project Area. FHWA and ODOT have also developed an Inadvertent Discovery Plan and a Project-specific PA between FHWA, Oregon SHPO, and ODOT that identifies mandatory protocols to be followed to protect archaeological resources in the event of an inadvertent discovery.

The Project would not adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973. On October 19, 2020, the National Marine Fisheries Service (NMFS) notified ODOT that the Project was consistent with the Federal Aid Highway Program (FAHP) opinion. Based on NMFS' review and verification that the Project is consistent with the FAHP opinion, FHWA has determined that the Project would not adversely affect ESA-listed species, designated critical habitats, or Essential Fish Habitat, pursuant to Section 7(a)(2) of the ESA and Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act.

The Project would not threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment.

The Project is expected to have a cost range between $715 million and $795 million. It is important to note that this cost estimate reflects a design that is 15 percent complete and requires continued, extensive public engagement to inform design refinement and Project decision.

The FHWA takes full responsibility for the accuracy, scope, and content of the information in this decision document.

PHILLIP A DITZLER Digitally signed by PHILLIP A DITZLER
Date: 2020.10.30 09:52:09 -07'00'

Date

Phillip A. Ditzler, Division Administrator,
Oregon Division,
Federal Highway Administration

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Figures

Appendices

This document was prepared in compliance with Section 508 of the Rehabilitation Act of 1973. Requests for descriptions or clarification regarding items such as technical drawings or maps should be directed to the ODOT Senior Environmental Project Manager at (503) 731-4804.

Acronyms and Abbreviations

AASHTO	American Association of Highway and Transportation Officials
ADA	Americans with Disabilities
API	Area of Potential Impact
BES	City of Portland Bureau of Environmental Services
BMP	best management practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
dBA	A-weighted decibel
DBE	Disadvantaged Business Enterprise
DLCD	Department of Land Conservation and Development
EA	Environmental Assessment
EJ	Environmental Justice
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FAHP	Federal-Aid Highway Program
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
HB	House Bill
I-405	Interstate 405
I-5	Interstate 5
I-84	Interstate 84
LLC	Limited Liability Corporation
MMA	multimodal mixed-use area
MOVES	Mobile Vehicle Emission Simulator
MSA	Magnuson-Stevens Act
MSAT	mobile source air toxics
NAAC	Noise Abatement Approach Criteria
NAAQS	National Ambient Air Quality Standards
NACTO	National Association of City Transportation Officials

NB	northbound
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
OAR	Oregon Administrative Rule
ODOT	Oregon Department of Transportation
OMSI	Oregon Museum of Science and Industry
ORS	Oregon Revised Statute
OTC	Oregon Transportation Commission
PA	Programmatic Agreement
PBO	Programmatic Biological Opinion
PBOT	Portland Bureau of Transportation
PCB	polychlorinated biphenyl
Project	I-5 Rose Quarter Improvement Project
ROW	right of way
RTP	Regional Transportation Plan
SB	southbound
SHPO	State Historic Preservation Office
TMOS	transportation management and operation strategies
TPR	Transportation Planning Rule
TSP	Transportation System Plan
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USCG	U.S. Coast Guard

1. Introduction

This Revised Environmental Assessment (Revised EA) for the I-5 Rose Quarter Improvement Project (Project) completes the Environmental Assessment (EA) that was released in February 2019. The Revised EA is not intended to be read as a stand-alone document but rather as a continuation of the EA and its 18 supporting technical reports, incorporated by reference (Appendix A). Changes and new information added to the Revised EA are presented in Section 12.

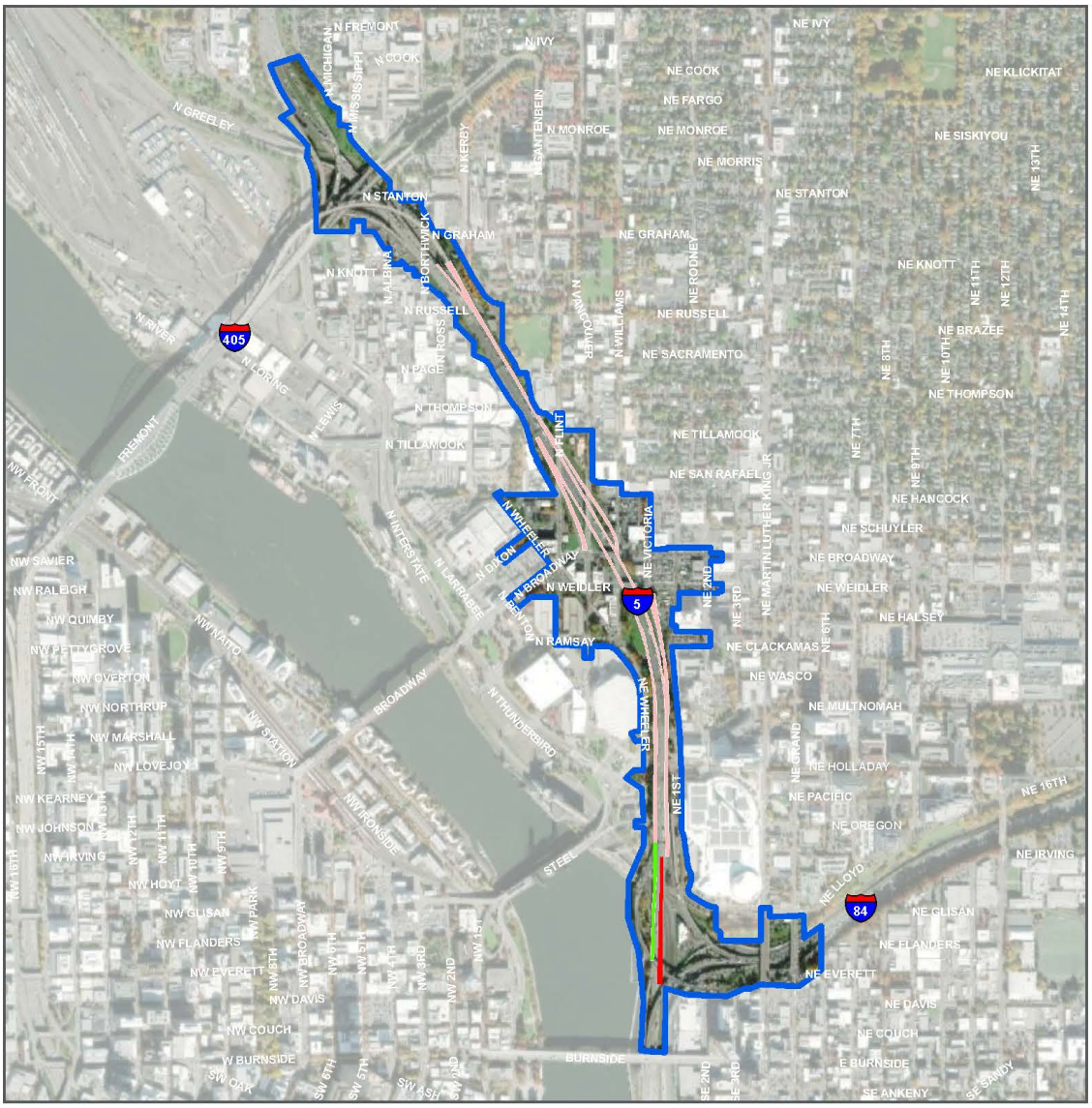
The Revised EA has been independently evaluated by the Federal Highway Administration (FHWA) and determined to adequately and accurately discuss the need, environmental issues, and impacts of the Project, as well as appropriate mitigation measures. The FHWA has determined that the Revised EA provides sufficient evidence and analysis for determining that an Environmental Impact Statement (EIS) for the Project is not required pursuant to 23 Code of Federal Regulations (CFR) 771.121. Should the anticipated effects of the Project change during subsequent phases of design, FHWA will conduct a National Environmental Policy Act (NEPA) re-evaluation to determine whether the NEPA decision document remains valid in accordance with FHWA regulations.

Project Purpose

The purpose of the Project is to improve the safety and operations on Interstate 5 (I-5) between Interstate 405 (I-405) and Interstate 84 (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 (Figure 1).

In achieving the purpose, the Project also would 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.

Figure 1. Project Area



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 the State of Oregon. Crash data from 2011 to 2015 indicate that I-5 between I-84 and the merge point from the NE Broadway ramp onto I-5 had a crash rate (for all types of crashes[1]) that was approximately 3.5 times higher than the statewide average for comparable urban interstate facilities (ODOT 2015[2]). Between 2011 and 2015, there were 881 crashes on the highway and ramps in the Project Area. Most of the crashes were in the southbound (SB) direction, most frequently between 11:00 AM and 6:00 PM. Between 2011 and 2015, there were 268 crashes on the local street network in the Project Area.

I-5 Operations: The Project Area is at the crossroads of three regionally important 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[3]), and experiences 12 hours of congestion each day (ODOT 2012a[4]).

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) and people who walk, bike, and roll, 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.

Travel Reliability: Travel reliability on the transportation network decreases as congestion increases and safety issues expand. The most unreliable travel times tend to occur in congested areas and at the beginning and end 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.

Additional Project-Related Goals

In addition to the purpose and need described above, the following related goals guided early planning efforts during development of the City of Portland's N/NE Quadrant Plan (City of

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

[2] State Highway Crash Rate Table: https://www.oregon.gov/ODOT/Data/Documents/Crash_Rate_Tables_2015.pdf.

[3] 2016 Transportation Volume Tables: https://www.oregon.gov/odot/Data/Documents/TVT_Complete_2016.pdf

[4] Facility Plan: I-5 Broadway/Weidler Interchange Improvements: https://www.i5rosequarter.org/wp-content/uploads/2017/08/I-5_BW_FacilityPlan.pdf

Portland et al. 2012[5]) and Oregon Department of Transportation's (ODOT's) I-5 Broadway/Weidler Facility Plan (ODOT 2012a[6]), both of which were incorporated into the City's Central City 2035 Plan (City of Portland 2018[7]):

- 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 following land use and urban design elements of the Adopted Central City 2035 Plan (which includes the N/NE Quadrant Plan) related to I-5 and the Broadway/Weidler interchange:
    - A 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 subdistricts.
- Improve connectivity across I-5 for all modes.

2. Description of Proposed Action

The Project 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 new 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 SB and northbound (NB) directions, as well as re-striping of the I-5 mainline to provide the I-5 SB

[5] N/NE Quadrant Plan: https://beta.portland.gov/sites/default/files/2020-01/complete-adopted-plan_lores_0.pdf

[6] Facility Plan: I-5 Broadway/Weidler Interchange Improvements: https://www.i5rosequarter.org/wp-content/uploads/2017/08/I-5_BW_FacilityPlan.pdf

[7] Adopted Central City 2035 Plan: https://www.portlandoregon.gov/bps/2035-comp-plan.pdf

auxiliary lane between the I-84 off-ramp and the Morrison Bridge/SE Portland/Oregon Museum of Science and Industry off-ramp (Figure 1).

Construction of the I-5 mainline improvements would require the rebuilding of the N/NE Weidler Street, N/NE Broadway, N Williams Avenue, and N Vancouver Avenue structures over I-5 (Figure 2). The existing N Flint Avenue structure over I-5 would be removed and not be rebuilt. 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 (Figure 3). The existing N Vancouver structure would be removed and rebuilt as a second highway cover, including a new roadway crossing at N Hancock and N Dixon Streets. The I-5 SB on-ramp at N Wheeler would be relocated to N/NE Weidler at N Williams via the new Weidler/Broadway/Williams highway cover.

Surface street improvements are also proposed, including upgrades to existing bicycle and pedestrian facilities, a new center-median bicycle and pedestrian path on N Williams between N/NE Weidler and N/NE Broadway, and new multi-use paths to the north of the Broadway/Weidler interchange. 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 of the EA for more details on the Project.

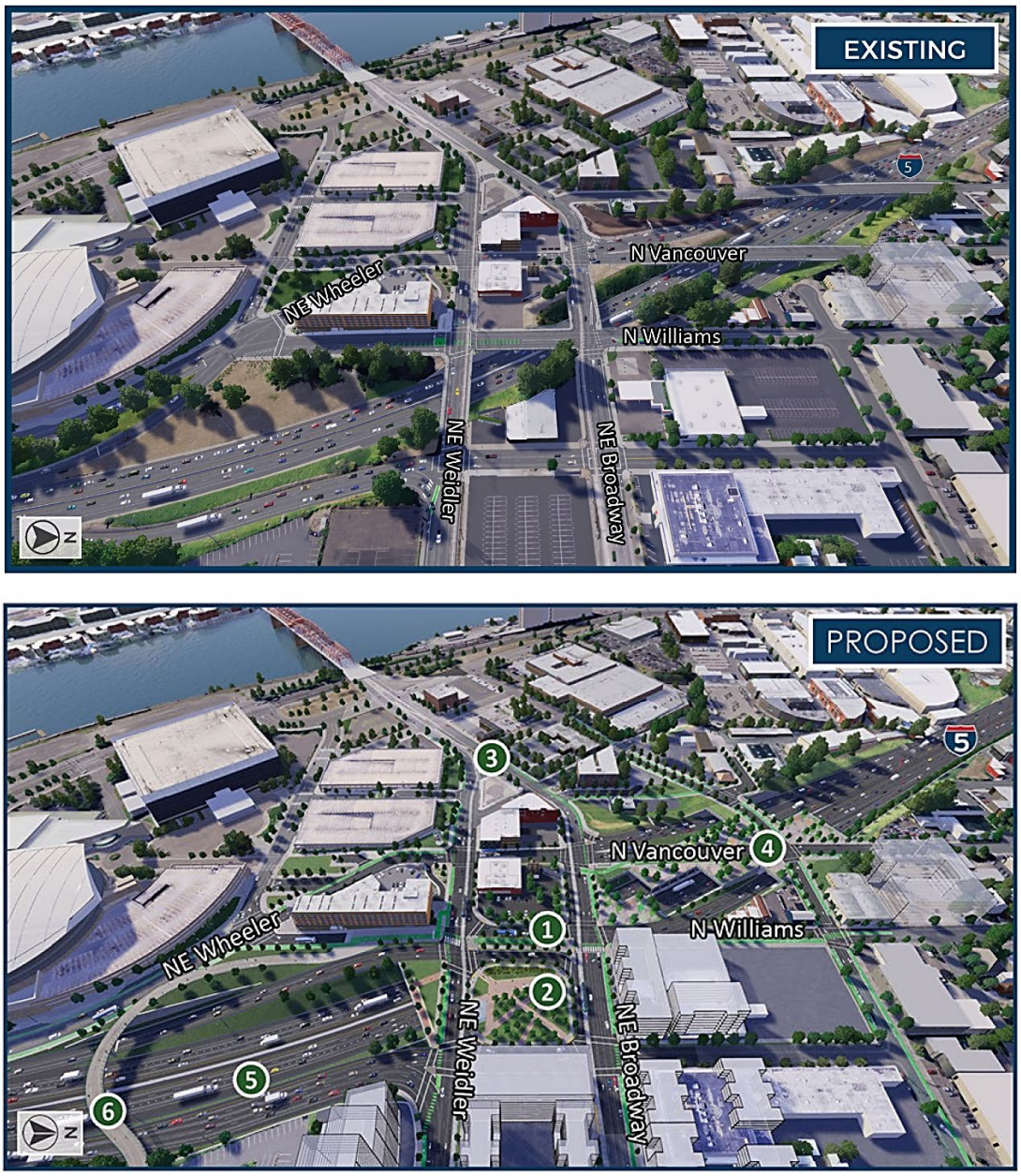
Since issuance of the EA in February 2019, the Project design has been modified to avoid impacts to the Eastbank Esplanade. Several comments on the EA, including comments from the City of Portland, were received expressing concern about potential impacts to the Eastbank Esplanade resulting from the proposed I-5 SB mainline improvements south of I-84, including widening of the existing viaduct to accommodate the I-5 SB auxiliary lane and shoulders near the Project's southern boundary. Following receipt of and in response to these comments, this portion of the Project design was reconsidered and modified.

The Project design has been modified to no longer widen the viaduct immediately east of the Eastbank Esplanade between the I-84 off-ramp to the Morrison Bridge/SE Portland/Oregon Museum of Science and Industry off-ramp. Under the modified design, the I-5 SB auxiliary lane in this segment would be added by re-striping the I-5 mainline in both the NB and SB directions. The I-5 center median would be shifted to the east, and the existing shoulders on I-5 in the approximately 1,200-foot segment between the two off-ramps would be narrowed to approximately 3 to 9 feet in both the NB and SB directions.

No structures would be added south of the I-84 off-ramp in the Project Area. All work on the I-5 SB mainline and the I-84 off-ramp that would have widened the structures and encroached on the air space over the Eastbank Esplanade to the west has been eliminated. The design modification also avoids the need for any in-water work associated with Project improvements. With these changes, no substantial impacts to the Eastbank Esplanade, or to fish and other species that use the Willamette River, are expected. The Project will continue to provide water quality treatment measures for new impervious surface area created by the proposed improvements to avoid potential impacts to the Willamette River.

Figure 2. Highway and Interchange Improvements

Figure 3. Existing Conditions and Proposed Design Concept



1. New, upgraded pedestrian and bicycle paths in the area of Broadway/Weidler and Vancouve
2. Covers over the highway where bridges cross over I-5
3. Improved pedestrian and bicycle access to transit
4. A direct road connection over I-5 between N Hancock St and N Dixon St
5. New shoulders and ramp-to-ramp lanes (auxiliary lanes) along I-5 between I-84 and I-405
6. New bicycle and pedestrian bridge over I-5

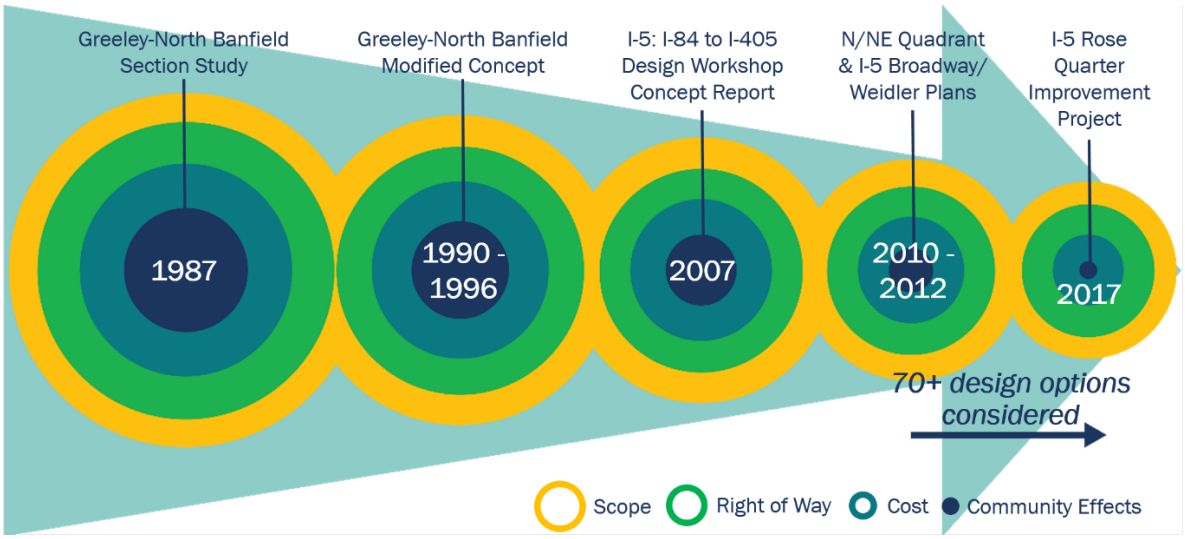
This modification will continue to further the Project's purpose and need of improving safety and operations on I-5, while at the same time minimizing potential adverse impacts along the Eastbank Esplanade and in the Willamette River. Appendix B provides documentation that the design modification, with the narrowed shoulders, continues to meet the purpose and need for safety improvements, providing an overall safety benefit in the Project Area.

3. Range of Alternatives Considered

Consistent with NEPA regulations, the Project's EA evaluated both a No-Build Alternative and Build Alternative in analyzing potential impacts. The No-Build Alternative defined existing conditions as a baseline against which potential impacts associated with constructing and operating the proposed Build Alternative improvements were compared. Prior to advancing the proposed Build Alternative for environmental review, an extensive consideration of alternatives for addressing safety and operational impacts on the highway and local streets in the Broadway/Weidler interchange area was conducted.

The proposed Build Alternative was developed through a three-decade planning process considering potential solutions to the highway and local street concerns in this area. Figure 4 summarizes the Project's planning history.

Figure 4. Project Planning History



Previous studies by ODOT and the City of Portland have attempted to address the considerable safety and operational issues of I-5 between I-84 and I-405, including with the previously considered Greeley–North Banfield Section Study in 1987, the Greeley–North Banfield Modified Concept in the 1990s, and the I-5: I-84 to I-405 Design Workshop Concept Report in 2007. The segment of I-5 between I-84 and I-405 has not been improved since it was built in the 1960s, and it remains one of the few sections of highway in the Portland metro region where there are only two through lanes in each direction. The safety and operational issues here derive largely

from the close spacing of the I-84, Broadway/Weidler, I-405, and Greeley interchanges that occur within this short segment of I-5 and the high proportion of traffic volume entering onto and exiting from I-5 that create “weave” maneuvers between motorists entering and exiting the highway.

As these prior studies were conducted and concept plans developed between 1987 and 2007, both ODOT and the City of Portland recognized that, although the design concepts addressed the safety and operational issues of I-5 between I-84 and I-405, the physical impacts of the solutions were greater than desired. These previous efforts relied on the use of braided ramps to eliminate the weave conditions. While the traffic benefits of these solutions were demonstrated, concerns over their cost, the widened highway footprint, the need for additional public right of way (ROW), and the visual impacts of multiple new structures prevented their implementation.

Between 2010 and 2012, ODOT and the City of Portland initiated a partnership to begin co-developing land use and transportation concepts for the N/NE quadrant of the Central City through an iterative process involving the public and area stakeholders. The planning process evaluated over 70 design concepts to improve I-5 between I-84 and I-405 and the I-5 Broadway/Weidler interchange area. This joint effort represented a new land use–transportation approach in planning improvements to urban highway interchanges. This approach combined the planning of local strategies for land use, urban design, and local transportation improvements, typically a City responsibility, with the planning of interstate highway improvements, which is an ODOT responsibility. This approach for highway improvements was to address long-demonstrated safety and operational issues that would contribute to the continued vitality of the Central City and the mobility needs of the region and state. See Section 10 for more information on the public engagement during this planning phase.

The planning processes that culminated with the issuance of the *North/Northeast Quadrant Plan* (City of Portland et al. 2012[8]), which was incorporated into the City’s *Central City 2035 Plan* in 2018 (City of Portland 2018[9]), and the *Facility Plan: I-5 Broadway/Weidler Interchange Improvements* (ODOT 2012a[10]) in 2012 both defined and evaluated numerous design concepts to address safety issues on the highway and local street network. Concepts for potential operational improvements, new interchange designs, and alteration of existing intersection configurations, as well as for leaving the current design unchanged, were identified through agency meetings and public engagement during the planning efforts.

These efforts included development of alternative screening criteria used to narrow the more than 70 initial concepts to 13 potential designs for further consideration, as described in the *I-5*

[8] N/NE Quadrant Plan: https://beta.portland.gov/sites/default/files/2020-01/complete-adopted-plan_lores_0.pdf

[9] Adopted Central City 2035 Plan: https://www.portlandoregon.gov/bps/2035-comp-plan.pdf

[10] Facility Plan: I-5 Broadway/Weidler Interchange Improvements: https://www.i5rosequarter.org/wp-content/uploads/2017/08/I-5_BW_FacilityPlan.pdf

Broadway/Weidler Interchange Improvements Report (ODOT 2012b[11]). The final 13 concepts were further evaluated in a second round of screening, which resulted in development and adoption of the Build Alternative for advancement to environmental review. See Section 2.4 of the EA for additional details on the alternative evaluation process.

4. Rationale for Selecting the Build Alternative

Based on analysis provided by the EA, and information obtained through extensive public outreach for the Project, the FHWA and ODOT have decided to pursue the Build Alternative proposed concept, with the Oregon Transportation Commission's (OTC's) final adoption of the Build Alternative design pursuant to Oregon Administrative Rule (OAR) 731-015-0075(7). In reaching this decision, it was determined that the Build Alternative would effectively address the following concerns:

- The Build Alternative would meet the Project's stated purpose and need to provide important safety and operation improvements in the Portland metropolitan area on I-5 between I-405 and I-84, and on adjacent surface streets at the Broadway/Weidler interchange. Appendix B provides documentation that the Build Alternative, with the design modification described in Section 2 of this Revised EA, meets the Project's purpose and need for safety improvements, providing an overall safety benefit in the Project Area.
- The Build Alternative would minimize potential impacts to the built and natural environment while improving traffic flow and safety on I-5 and adjacent surface streets (Appendix B).
- The Build Alternative would provide local connectivity and multimodal access between the communities east and west of I-5 and would be consistent with the land use, urban design, and transportation system proposed in the City of Portland *Central City 2035 N/NE Quadrant Plan*.

The Build Alternative was also selected because it would satisfy several additional goals developed jointly by ODOT and the City of Portland during the planning processes for the N/NE Quadrant Plan and the I-5 Broadway/Weidler Facility Plan. These goals included the following:

- Enhancements to pedestrian and bicycle safety in the Broadway/Weidler interchange area
- Safety improvements and congestion reduction for all modes on the transportation network connected to the I-5 Broadway/Weidler interchange
- Support for land use and design elements identified during the planning processes noted in Section 3 above

[11] I-5 Broadway/Weidler Interchange Improvements Report: https://www.i5rosequarter.org/wp-content/uploads/2020/04/nne-quadrant-and-i-5-broadway-weidler-plans-freeway-local-transportation-interface-charrette-summary-2012.pdf

- Improvements in freight reliability
- Provisions for multimodal transportation facilities in support of planned development in the Rose Quarter, Lower Albina, and Lloyd neighborhoods, and improvements in connectivity across I-5 for all modes of travel

Additionally, the Build Alternative is consistent with relevant federal, state, and local plans and policies as described in Sections 8 and 9 of this Revised EA.

5. Anticipated Project Benefits

The Build Alternative would provide a variety of transportation and environmental benefits, the most notable of which include the following:

- Operations (speed and travel time reliability) on I-5 would improve in both the AM and PM commute periods.
- Conditions for people who walk, bike, and roll would be improved by increased physical separation between motorized and non-motorized users, sidewalk gap closures, and reduction in the complexity of intersections along N/NE Broadway, N/NE Weidler, N Wheeler, N Williams, N Vancouver, and the new Hancock-Dixon connection.
- The Clackamas bicycle and pedestrian bridge would establish a new connection for people who walk, bike, and roll not otherwise offered by the street system.
- Multimodal benefits would include improved access to transit, improved mobility and safety for people walking and biking and transit riders, and improved physical connections to areas east and west of I-5 provided by the new highway covers and the Clackamas bicycle/pedestrian overcrossing.
- The Build Alternative would include improved sidewalks, add safe bicycle lanes and additional Americans with Disabilities Act (ADA)–compliant street crossings, and provide safer ingress and egress to commercial properties.
- Police, fire, and emergency responders would experience beneficial effects from reduced delays and crashes on I-5 and in the Broadway/Weidler interchange area.
- Safety improvements and reductions in congestion and delays on I-5 would have beneficial effects on the regional economy by improving the movement of goods and people.
- Improved traffic operations on the local street system and the addition of new pedestrian and bicycle enhancements would provide benefits to the local business environment.
- New highway covers over I-5 and the Clackamas bicycle/pedestrian overcrossing would enhance east-west connectivity and improve overall community cohesion within the Project Area.

- Stormwater runoff (that is currently untreated) from impervious areas both within and outside the Build Alternative's contributing impervious area would be treated prior to discharge to the Willamette River.
- An increased rate of redevelopment within the Project Area facilitated by the Build Alternative, including properties currently containing hazardous materials, would be a long-term indirect benefit of the Project.
- Completing the Build Alternative would fulfill the City's obligation to ensure that the City's transportation plan is compatible with the Central City 2035 Plan and consistent with OAR 660-012-0015(b).
- The ODOT Disadvantaged Business Enterprises (DBE) program would maximize DBE contracting opportunities for small and minority-owned businesses.

6. Anticipated Project Impacts

ODOT and FHWA have worked together to develop the current design concept for the Build Alternative with the objective to avoid and minimize impacts to the natural and human environment to the greatest extent possible. As a result, adverse environmental impacts from the Build Alternative would primarily result from construction activities and would therefore be short term.

The most likely short-term impacts during the temporary construction phase include the following:

- Short-term air quality impacts during construction would include the release of fugitive dust generated by soil excavation, surface grading, hauling, and various other construction activities, as well as exhaust emissions from construction equipment. These construction-phase impacts would be temporary and limited to areas within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity (including haul routes) and would end once Project construction is complete. ODOT will monitor construction contractors to ensure a range of mitigation measures are implemented to control dust and exhaust emissions from construction equipment and vehicles. In addition, road or lane closures will be focused to non-peak traffic periods, when possible, to reduce the impact of construction delays on traffic flow and resultant vehicle emissions. Implementation of the mitigation measures described above will avoid substantial short-term adverse impacts to air quality.
- During construction, nine historic properties could be affected by noise and vibration, increased truck traffic, traffic congestion, changes to access, increased dust, and temporary changes to the historic setting due to the presence of construction equipment, staging areas, and materials storage areas. These impacts will be temporary and limited to areas within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity and would end once Project construction is complete. ODOT will monitor construction contractors to ensure best management practices (BMPs) to

minimize these types of impacts are implemented. ODOT and FHWA have also developed a Project-specific Programmatic Agreement (PA) in consultation with the Oregon State Historic Preservation Office (SHPO) to avoid and/or minimize the potential for Project-related vibration impacts to historic properties (Appendix C). The PA, and the avoidance and minimization measures contained therein, will ensure construction of the Project results in no adverse effects to the characteristics that make historic properties within the Project Area eligible for the National Register of Historic Places (NRHP).

- During construction, there would be the potential for spills or releases of oil and fuel from mechanical equipment, including the mobilization or release of existing contamination in soil and groundwater. These impacts would be temporary and limited to areas within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity and would end once Project construction is complete. ODOT will monitor construction contractors to ensure a range of measures are implemented to address hazardous materials concerns, including testing procedures for identifying the presence of lead-based paint and asbestos; requirements for the safe transport, use, and storage of hazardous materials; and the obligation to develop a Health and Safety Plan, a Project-specific Pollution Control Plan, and a Contaminated Media Management Plan. Implementation of these mitigation measures will ensure that substantial adverse effects from spills or releases of hazardous materials will not occur during construction of the Project.
- Construction activities would result in short-term noise levels in the range of 70 to 100 A-weighted decibels (dBA) at a distance of 50 feet. These impacts would be temporary and limited to areas within the existing I-5 corridor that currently experience traffic noise levels that exceed ODOT Noise Abatement Approach Criteria (NAAC). These temporary noise impacts would end once Project construction is complete. ODOT will monitor construction contractors to ensure ODOT standard specifications and BMPs for control of noise sources during construction are implemented to minimize the potential for substantial adverse noise effects from Project-related construction activity. ODOT will also conduct an additional construction-phase noise analysis during the future design phase of the Project, when greater design and construction method details are defined. As required by the City of Portland, ODOT will follow the City's Noise Review Board process to obtain the required noise variance approvals for construction work and address noise concerns.

  While no substantial operations-related traffic noise impacts are anticipated, ODOT is committed to constructing two noise walls along I-5 to mitigate operational traffic noise. In compliance with the ODOT Noise Manual (ODOT 2011[12]), construction of the noise walls will depend on the outcome of a public engagement process and vote by eligible property owners and tenants (including Portland Public Schools and the City of Portland Bureau of Parks and Recreation) who would benefit from the wall. The public

[12] ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf

involvement process will include surveying residents and property owners that will benefit from installation of a proposed noise wall to determine their viewpoints concerning the proposed noise abatement measure (i.e., the noise wall). After the results of the noise abatement survey have been documented, and if the noise abatement evaluation results in a positive decision, the proposed noise wall will be incorporated into the Project design. Through this process, affected receptors have the opportunity to play a direct role in the decision of whether to construct the noise wall.

- Short-term construction-related impacts to transit would include temporary bus stop closures or relocations, bus route detours, and changes to streetcar operations. ODOT will continue to address short-term impacts during construction in close coordination with TriMet and Portland Streetcar in the future design phase to maintain transit and streetcar service connections through the Project Area, including temporary bus detours for the duration of the construction period to avoid multiple temporary changes for a single bus route. Transit demand and agency collaboration will determine accommodations needed for streetcar service during Project construction. This coordination and implementation of measures to maintain transit and streetcar service connections through the Project Area will ensure that substantial adverse effects to transit and streetcar operations will not occur during Project construction.
- Construction would result in short-term impacts to highway traffic; local street motor vehicle traffic; transit; people who walk, bike, and roll; and event access at Moda Center and the Oregon Convention Center. ODOT will develop a comprehensive transportation management plan that documents construction staging and schedule, alternate routes for all modes of travel during road closure, and lane closure restrictions as well as transportation management and operation strategies (TMOS). ODOT will also coordinate with the Moda Center, City of Portland, and Oregon Convention Center to avoid traffic disruptions during major events to the extent practicable. These measures will avoid adverse impacts to highway traffic; local street motor vehicle traffic; transit; people who walk, bike, and roll; and event access at Moda Center and the Oregon Convention Center.
- Highway lane closures are likely on I-5 during removal and construction of the overcrossing structures and retaining walls, including potential late night and weekend closure of all directional lanes. ODOT will develop a comprehensive transportation management plan to minimize construction impacts on I-5 operations and traffic delays on local streets. Temporary local street closures or turn restrictions will be implemented as necessary to limit traffic diversion onto local streets in residential neighborhoods, thereby avoiding substantial adverse traffic impacts to neighborhood streets.
- Existing above- and below-ground utilities would likely be impacted during construction, with effects ranging from brief temporary service interruptions to major relocations of electric transmission and distribution lines, water supply lines, and large capacity sewer lines. Impacts to the City of Portland Bureau of Environmental Services (BES) 264-inch sewer (East Side Combined Sewer Overflow Tunnel), sanitary pump station, and pump

station piping will be avoided. Additionally, direct impact to the BES 56-inch sewer line that crosses I-5 at NE Hancock Street will be avoided or minimized. Coordination with utility providers and the use of standard construction procedures and techniques will minimize disturbance to system users and avoid damage or substantial adverse impacts to existing utilities.

- Previously undiscovered archaeological resources could be altered, damaged, or destroyed by the operation of heavy equipment or during compaction, excavation, or grading of soils during construction and subsurface maintenance activities. These impacts would be limited to areas within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity. Potential impacts to archaeological resources during construction have been addressed through an Inadvertent Discovery Plan and a Project-specific PA between FHWA, Oregon SHPO, and ODOT that identifies mandatory protocols to be followed in the event of an inadvertent discovery (Appendix C). The Inadvertent Discovery Plan and Project-specific PA (and the mandatory protocols contained therein) will ensure substantial adverse effects to undiscovered archaeological resources will be avoided.
- The Project could cause small, short-term, adverse impacts to minority and low-income populations (i.e., Environmental Justice [EJ] populations). These small, short-term, adverse impacts may result from the temporary relocation of bus routes and adjustments to streetcar service during the multi-year construction period and from temporary closures of key walking and bicycling routes. Additional potential short-term impacts to EJ populations from construction of the Build Alternative could include temporary exposure to noise, exhaust, and dust emissions from various types of construction equipment, including the release of hazardous materials from spills and leaks from construction equipment or exposure to existing contamination that was previously not exposed. While these potential unavoidable adverse impacts to EJ populations would be small and not rise to the level of “disproportionately high and adverse effects” as defined in Executive Order 12898, ODOT will implement a variety of mitigation measures to ensure potential short-term adverse impacts to EJ populations are avoided or minimized.

7. Mitigation Commitments

This section describes Project mitigation commitments. These commitments have been adopted as part of FHWA’s final decision on the Project.[13] They are listed to “assist with agency planning and decision-making” and to “aid an agency’s compliance with NEPA when no Environmental Impact Statement is necessary” [40 CFR 1501.3(b) and 1508.9(a)(2)]. The following sections describe the established design and construction practices that ODOT will include to avoid or minimize impacts to the various environmental resources during both the construction and operation phases of the Project. ODOT will also use resource-specific BMPs, ODOT Standard

[13] These commitments supersede mitigation listed in the I-5 Rose Quarter Improvement Project EA. Revisions to EA text are shown in Section 12 of this document (“Additions/Changes to Environmental Assessment”).

Specifications for Construction,[14] and design elements to avoid or minimize potential effects on the environment from the Project, as described further below.

Air Quality

Potential short-term impacts to air quality during the construction phase of the Project will be addressed by monitoring construction contractors to ensure the following mitigation measures are implemented to control dust and exhaust emissions from construction equipment and vehicles, consistent with OAR 340-208-0210, *Requirements for Fugitive Emissions*:[15]

- Use of water or chemicals, where possible, for dust control during demolition of existing buildings or structure, construction operations, grading of roads, or clearing of land
- Application of asphalt, oil, water, or other suitable chemicals on unpaved roads, material stockpiles, and other surfaces that can create airborne dust
- Full or partial enclosure of materials stockpiles in cases where application of oil, water, or chemicals is not sufficient to prevent particulate matter from becoming airborne
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials
- Adequate containment during sandblasting or similar operations
- Using covers on open-bodied trucks during transport of materials that are likely to become airborne
- Prompt removal of soil, dust, or other airborne-prone material from paved streets

ODOT will also monitor construction contractors to ensure contractor compliance with ODOT Standard Specifications for Construction Section 290, *Environmental Protection*, which includes the following:

- Limits the idling time of trucks and other diesel-powered equipment to 5 minutes when not in use or in motion
- Requires truck staging areas to be located in areas where emissions will have a minimum impact on sensitive populations (such as schools and residences)
- Requires the removal of all loose dirt and debris from trucks prior to leaving the construction areas.

In addition, road or lane closures will be focused to non-peak traffic periods, when possible, to reduce the impact of construction delays on traffic flow and resultant vehicle emissions. It

[14] ODOT Standard Specifications for Construction: https://www.oregon.gov/ODOT/Business/Documents/2018_STANDARD_SPECIFICATIONS.pdf

[15] Air quality BMPs: https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=256141

should also be noted the Project will be subject to provisions in the Clean Diesel bill (House Bill [HB] 2007[16]) passed by the Oregon Legislature on June 30, 2019. The Clean Diesel bill is expected to help reduce harmful emissions by phasing out old diesel engines in Multnomah, Clackamas, and Washington Counties and requiring all diesel-powered medium-duty and heavy-duty trucks to run on an engine that is 1997 or newer by 2023. This requirement will apply to all contractor-operated medium- and heavy-duty trucks used during the Project's anticipated 4-year construction period. Implementation of the mitigation measures described above will avoid substantial short-term adverse impacts to air quality.

Archaeology

If impacts to archaeological resources discovered during construction of the Project are unavoidable and will diminish integrity of a site that is eligible for the NRHP, the impacts have been be resolved through implementation of an Inadvertent Discovery Plan and a Project-specific PA between FHWA, Oregon SHPO, and ODOT that outlines protocol for identifying, evaluating, and resolving impacts pursuant to 36 CFR 800.13 and 36 CFR 800.14. A copy of the signed Project-specific PA is included in Appendix C.

ODOT's standard protocol in the event of an inadvertent discovery is described in ODOT Specification 290.50, *Protection of Cultural Resources*[17] and is as follows:

> Comply with all Laws governing preservation of cultural resources. Cultural resources may include, but are not limited to, dwellings, Bridges, trails, fossils, and artifacts. If cultural resources are encountered on the Project Area or in material sources, and their disposition is not addressed in the Special Provisions, do the following:
>
> - Immediately discontinue operations or move to another area of the Project Site or material source.
> - Protect the cultural resource from disturbance or damage.
> - Notify the Engineer.
>
> The Engineer will do the following:
>
> - Arrange immediate investigations.
> - Arrange for disposition of the cultural resources. The Engineer may direct the Contractor to perform salvage operations according to 00140.30 or 00140.60.
> - Notify the Contractor when to begin or resume construction operations in the affected area.

[16] Enrolled House Bill 2007: https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2007/Enrolled

[17] ODOT Standard Specifications for Construction: https://www.oregon.gov/ODOT/Business/Documents/2018_STANDARD_SPECIFICATIONS.pdf

ODOT will require the contractor to follow ODOT Specification 290.51, *Protection of Sensitive Cultural Sites*,[18] throughout the duration of construction.

ODOT's requirement that the contractor follow the above specification along with the Inadvertent Discovery Plan and Project-specific PA (and the mandatory protocols contained therein) will ensure substantial adverse effects to undiscovered archaeological resources will be avoided.

Climate Change

While consideration of greenhouse gas emissions and the effects of climate change has not been a NEPA requirement for EAs and EISs since the Council on Environmental Quality (CEQ) withdrew its previous guidance on April 5, 2017, ODOT included an analysis of climate change in the Project EA due to the high level of agency and stakeholder interest in these issues. As reported in Section 3.5 of the EA, the 2045 operational greenhouse gas emission total for the Build Alternative is projected to decrease by approximately 22 percent compared to the 2017 emission total due to federal, state, and local efforts to develop more stringent fuel economy standards and vehicle inspection and maintenance programs and the transition to cleaner low-carbon fuels for motor vehicles. These trends are expected to continue over the life of the Build Alternative. The Build Alternative would contribute to this reduction due to higher speeds, less stop-and-go traffic, and less idling on I-5. Therefore, no mitigation is proposed.

The recently passed (June 30, 2019) Clean Diesel bill (HB 2007[19]) will help reduce harmful emissions by phasing out old diesel engines in Multnomah, Clackamas, and Washington Counties and requiring all diesel-powered medium-duty and heavy-duty trucks to be powered by newer cleaner burning engines by 2023. This requirement will apply to all contractor-operated medium- and heavy-duty trucks used during the Project's anticipated 4-year construction period.

Environmental Justice

The Project could cause small, short-term, adverse impacts to minority and low-income populations from the temporary relocation of bus routes, adjustments to streetcar service, and temporary closures of key walking and bicycling routes. Additional potential small, short-term, adverse impacts to EJ populations could include temporary exposure to noise, exhaust, and dust emissions and the release of hazardous materials from spills and leaks or exposure to existing contamination that was previously not exposed. While these potential short-term, unavoidable, adverse impacts to EJ populations would be small and not rise to the level of "disproportionately high and adverse effects" as defined in Executive Order 12898, ODOT will

[18] Ibid.

[19] Enrolled House Bill 2007: https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2007/Enrolled

implement the following mitigation measures to ensure potential adverse impacts to EJ populations are avoided or minimized:

- ODOT will monitor construction contractors to ensure ODOT standard construction specifications are followed to limit vehicle and equipment idling time, prevent dirt and other materials from being tracked out of construction zones on vehicle tires, minimize the release of fugitive dust, and prevent the release of hazardous materials from spills and leaks or exposure to existing contamination to address the potential for short-term exposure of EJ populations to noise, exhaust, dust emissions, and hazardous materials during construction of the Project.
- ODOT will coordinate with the City of Portland and TriMet to monitor the effects of relocated bus routes on EJ populations during the anticipated 4-year construction period. If it is determined that EJ populations are experiencing disproportionate impacts, ODOT, the City, and TriMet will coordinate with the community to identify alternative bus routes to better serve EJ populations, possibly including an increase in the frequency of service on those routes.
- ODOT will coordinate with the City of Portland and members of the community to identify alternative routes for people who walk, bike, and roll to use during periods when key walking and biking routes are closed during construction.
- ODOT will monitor the effects the temporary closure of key walking and biking routes may have on EJ populations. This will be accomplished by assigning observers to monitor the use of alternative routes and conducting surveys and voluntary one-on-one interviews. If it is determined that disproportionate impacts to EJ populations are occurring, ODOT will identify additional reasonable measures to reduce those impacts, including providing free shuttle service through areas of construction.

In addition to the mitigation described above, ODOT's DBE and Workforce program for the Project will maximize DBE contracting opportunities, including for small and minority-owned businesses.

Hazardous Materials

Prior to acquiring properties or commencing construction activities, ODOT will conduct a full Hazardous Materials Corridor Study. The study will review historical information and existing databases to identify potential hazardous materials in the Project Area and on surrounding properties. ODOT will conduct Phase I Environmental Site Assessments for any properties to be acquired to construct the Project, and Phase II Environmental Site Assessments will be conducted on properties where the Phase I Environmental Site Assessment indicated that contamination may be present.

The following mitigation measures will be implemented to address hazardous materials concerns:

- Prior to any demolition or removal activities, all structures will be tested for lead-based paint and asbestos-containing building materials with a Hazardous Building Materials Assessment by a qualified contractor in accordance with worker protection and material disposal regulations (refer to ODOT's 2010 *Hazardous Materials Program Procedures Guidebook*[20]). Potential polychlorinated biphenyl (PCB)-containing hydraulic or electrical equipment will be tested for PCBs by a qualified contractor prior to handling or disposal.
- During construction, ODOT will monitor contractor activities to ensure that all applicable regulations regarding the transport, use, and storage of hazardous materials are followed.
- The contractor will be required to develop a Health and Safety Plan for all construction activities consistent with applicable laws and best practices in effect at the time of construction.
- The contractor will be required to prepare a Project-specific Pollution Control Plan to prevent spills and contain their potential spread.
- The contractor will be required to develop a Contaminated Media Management Plan that specifies the correct handling and disposal of hazardous materials encountered during construction and includes procedures to be used if encountering previously unexpected hazardous materials.

Implementation of these mitigation measures will help ensure that substantial adverse effects from spills or releases of hazardous materials will not occur during construction of the Project.

Historic Resources

ODOT construction specifications and BMPs identified in the ODOT Noise Manual (ODOT 2011[21]) will be followed to help minimize high noise levels during construction. These will be similar to the mitigation measures described in the Noise section below. Effect avoidance and minimization measures for potential construction-related vibration will include pre- and post-construction assessments, on-site monitoring during construction, and stop work authorization if vibration thresholds exceed limits suitable for the building materials, conditions, and soil types.

ODOT and FHWA have developed a Project-specific PA in consultation with the Oregon SHPO and other consulting parties to avoid and/or minimize the potential for Project-related vibration to historic properties, as the extent of these potential effects will not be known prior to the implementation of the Project. If a resource is anticipated to be affected by vibration exceeding 0.2 inches per second for transient vibration and 0.1 inch per second for continuous vibration at a distance within 500 feet of the source, a treatment plan for repairs will be prepared, consistent

[20] Hazardous Materials Program Procedures Guidebook: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_GeologyGeotech/HazMatProgProcedures.pdf

[21] ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf

with the Secretary of the Interior's Standards for the Treatment of Historic Properties,[22] and thus consistent with the requirements of 36 CFR 800.5 (b). With the execution of the PA, and the avoidance and effect minimization measures contained therein, the Project will result in no adverse effects to the characteristics that make historic properties within the Area of Potential Impact (API) eligible for the NRHP.

Land Use

Because the Project complies with the City of Portland comprehensive plan, the Metro Regional Transportation Plan (RTP), and applicable state land use laws, plans, and policies, no avoidance, minimization, or mitigation measures related to land use are proposed.

In general, the City of Portland zoning code (Title 33, Planning and Zoning[23]) does not apply to the Project because most improvements will be made in public ROW. Title 33 does not apply to public ROW, except within design districts and certain overlay zones. Because most of the Project Area is within the Lloyd Subdistrict of the Central City Plan District design overlay zone, non-standard Project improvements "such as street lights, street furniture, planters, public art, sidewalk and street paving materials, and landscaping" that the City Engineer has not approved will be subject to design review. Design review will also be required when a proposal in an overlay zone is "considered to have major design significance to the City."

Where the Project is determined to be subject to the design overlay zone requirements of the Lloyd Subdistrict of the Central City Plan District, or require review under the Willamette River Greenway provisions of the City of Portland zoning code, or if the City Council considers the Project to have a major design significance to the City, adjustments to its design may be necessary. Such design adjustments would be intended to help the Project comply with land use regulations, thus revisions to do so would not be expected to have adverse impacts on land use. ODOT will secure design approval of improvements that it constructs that are subject to design review. All Project-related property acquisition and business relocation activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (49 CFR 24[24]), Oregon Revised Statute (ORS) 35,[25] and the ODOT Right of Way Manual (2016a[26]) to ensure fair and equitable treatment of all persons affected by the Project.

As of the date of issuance of the Revised EA, the OTC has not made a final decision approving the design of the Project for purposes of OAR 731-015-0075(7). OTC's final design approval

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[22] Secretary of the Interior's Standards for the Treatment of Historic Properties: https://www.nps.gov/history/local-law/arch_stnds_8_2.htm

[23] City of Portland zoning code: https://www.portlandoregon.gov/citycode/28197

[24] Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs: https://www.law.cornell.edu/cfr/text/49/part-24

[25] ORS 35: https://www.oregonlaws.org/ors/chapter/35

[26] ODOT Right of Way Manual: https://www.oregon.gov/ODOT/ROW/Pages/ROW-Manual.aspx

under OAR 731-015-0075(7) is anticipated to be made based on FHWA's approval of the Revised EA, evidenced by its issuance of the Revised EA. After the Revised EA is issued, ODOT will comply with OAR 731-015-0075(7) by presenting approval of the design of the Project to the OTC at a future meeting for final adoption of the design and supporting findings of compatibility. A notice of the approval will be mailed to interested parties.

Regarding OAR 731-015-0075(8), some Project improvements may require City design review and permits. ODOT will obtain any design review approvals or permits prior to construction.

Noise

ODOT will monitor the construction contractor to ensure the following noise abatement measures identified in the ODOT Noise Manual[27] are implemented to minimize the adverse effects of construction activity on the local community:

- No construction will be performed within 1,000 feet of an occupied dwelling unit on Sundays, legal holidays, or between the hours of 10:00 PM and 6:00 AM on other days, without the approval of the ODOT construction project manager.
- All equipment used will have sound-control devices no less effective than those provided on the original equipment. No equipment shall have unmuffled exhaust.
- All equipment will comply with pertinent equipment noise standards of the U.S. Environmental Protection Agency (EPA).

ODOT will also conduct an additional construction-phase noise analysis during the future design phase of the Project, when greater design and construction method details are defined. As required by the City of Portland, ODOT will follow the City's Noise Review Board process to obtain the required noise variance approvals for construction work and address noise concerns.

If a specific noise impact complaint occurs during the construction of the Project, one or more of the following noise mitigation measures may be required at the construction contractor's expense as directed by the ODOT construction project manager:

- Stationary construction equipment will be located as far from nearby noise-sensitive properties as feasible.
- Idling equipment will be shut off when not in use.
- Construction operations will be rescheduled to avoid periods of noise annoyance identified in the complaint.
- Nearby residents will be notified whenever extremely noisy work will be occurring.

[27] ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf

- Temporary or portable acoustic barriers will be installed around stationary construction noise sources.

As described in Section 7.2, Operational Noise Mitigation, in the *Noise Study Technical Report* (ODOT 2019a), long-term traffic noise impacts from I-5 could be addressed by installing noise walls in the following locations:

- A 22-foot-high and approximately 1,011-foot-long noise wall (Wall 2b) extending along the eastern edge of I-5 ROW from approximately N Russell Street to N Flint to shield Lillis-Albina Park, Harriet Tubman Middle School, and a single-family residence (and historic building) near the intersection of N Tillamook Street and N Vancouver from highway noise
- A 23-foot-high and approximately 1,715-foot-long noise wall (Wall 4) along the eastern edge of the I-5 ROW between NE Weidler and a point approximately 265 feet south of NE Holladay Street to shield an outdoor recreational area (a basketball court) at the Crown Plaza hotel; outdoor and indoor use areas at a medical facility; 104 residential balconies at the Calaroga Terrace building; 12 residential balconies at a new mixed-use building on the northeast corner of the intersection of NE Wasco Street and NE 2nd Avenue; and 5 residential balconies at the Milano Apartment Building.

Full details of the noise wall mitigation analysis, including figures depicting the locations of proposed mitigation features, are presented in Appendix G in the *Noise Study Technical Report* (ODOT 2019a). Further evaluation of these two noise walls will be made during final design, including a more detailed analysis of constructability.

In compliance with the ODOT Noise Manual[28], construction of the noise walls will depend on the outcome of a public engagement process and vote by eligible property owners and tenants (including Portland Public Schools and the City of Portland Bureau of Parks and Recreation) who would benefit from the wall. The public involvement process will include polling (i.e., surveying) residents and property owners that would benefit from installation of a proposed noise wall to determine their viewpoints concerning the proposed noise abatement measure (i.e., the noise wall). After the results of the noise abatement survey have been documented, and if the noise abatement evaluation results in a positive decision, the proposed noise wall will be incorporated into the Project design. Through this process, affected receptors have the opportunity to play a direct role in the decision of whether to construct the noise wall.

Right of Way

Measures that will be implemented by ODOT during ROW acquisition include the following:

- Ensure fair and equitable treatment of all persons affected by the Project by performing all ROW acquisition and relocation activities in accordance with the Uniform Relocation

[28] ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf

Assistance and Real Property Acquisition Policies Act of 1970 (49 CFR 24[29]), ORS 35[30], and the ODOT Right of Way Manual (2016a[31]).

- Conduct relocation interviews early in the ROW acquisition process to identify and address any special needs.
- Provide interpreter and translation services for owners and tenants, as needed.
- Work with design and construction to identify ways to minimize or mitigate impacts to individual properties through design and/or construction staging, temporary traffic control plans, and temporary access plans.
- Explore the use of alternative acquisition methods such as early or advance acquisition for full site acquisitions where design cannot be changed.
- Phase any work adjacent to schools, such as retaining wall and column work, to occur during summer months to avoid disruptions.
- When the design level is more advanced, ODOT, in coordination with FHWA, will revisit whether construction activities would have an effect on adjacent properties and businesses with sensitive patients, medical equipment, or machinery, including hospitals, elderly or psychiatric patient care services, and emergency response units. If additional impacts are identified, they will be appropriately mitigated including, if required, acquisition and relocation in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
- Conduct early discussions with Union Pacific Railroad Company regarding ROW needs and processes for work near their lands.

Section 4(f)

Measures that will be implemented by ODOT to minimize impacts to Section 4(f) resources include the following:

- ODOT will monitor construction contractors to ensure ODOT specifications and noise reduction BMPs in the ODOT Noise Manual (ODOT 2011[32]) are followed to minimize high noise levels in the vicinity of Section 4(f) properties during construction (ODOT 2019b). These will be similar to the mitigation measures described in the Noise section above.

[29] Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs: https://www.law.cornell.edu/cfr/text/49/part-24

[30] ORS 35: https://www.oregonlaws.org/ors/chapter/35

[31] ODOT Right of Way Manual: https://www.oregon.gov/ODOT/ROW/Pages/ROW-Manual.aspx

[32] ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf

- ODOT will coordinate with FHWA and the Oregon SHPO to implement the avoidance and minimization conditions contained in the *Historic Resources Technical Report* (ODOT 2019c) and the Project-specific PA described in Section 3.8.2.3 of the EA to avoid and/or minimize the potential for Project-related vibration impacts to the TraveLodge at the Coliseum.
- ODOT is committed to constructing noise walls in two locations along the eastern edge of the I-5 that will shield Lillis-Albina Park and the TraveLodge at the Coliseum, provided approval from affected noise receptors (including Portland Public Schools and the City of Portland Bureau of Parks and Recreation) is obtained through the public involvement process as required by the ODOT Noise Manual.[33]

Socioeconomics

The following mitigation measures will be implemented to reduce the potential for substantial, short-term, adverse socio-economic impacts during the construction phase of the Project:

- Temporary traffic management plans will be prepared to minimize construction impacts on I-5 operations and traffic delays on local streets. These plans will address all modes of transportation, including bicycles, pedestrians, and public transit. The plans will be prepared by the construction contractor(s).
- ODOT will monitor contractors to ensure the Oregon Standard Specifications for Construction (ODOT 2018a[34]) are followed to minimize impacts to neighborhoods, businesses, schools, emergency responders, and utilities and public service providers located or operating in the API.
- ODOT will coordinate with TriMet, the City of Portland, and Portland Streetcar to follow those agencies' standard procedures regarding temporary impacts to transit services. This coordination will follow standard communication procedures for temporary transit stop closures or relocations, schedule changes, route diversions, and relocation of existing motor vehicle/transit lanes that will be required during construction.
- Construction activities near Harriet Tubman Middle School will be scheduled for summer months to avoid potential disruptions during the school year.

Public outreach to residents and businesses in the API conducted by ODOT will continue throughout final design and construction.

[33] ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf

[34] ODOT Standard Specifications for Construction: https://www.oregon.gov/ODOT/Business/Documents/2018_STANDARD_SPECIFICATIONS.pdf

Transportation – Transit

The Project is anticipated to increase bus travel times under operational conditions for some routes during the morning peak period. However, continued implementation of the City of Portland and TriMet's Enhanced Transit Corridors Plan (City of Portland 2018a[35]) will help reduce bus and streetcar travel times throughout the City, including within the API. The Enhanced Transit Corridors Plan includes a range of capital and operational treatments throughout the system to improve transit capacity, reliability, and travel time. Within the API, these treatments include business access transit lanes, far-side bus stops, street/traffic modifications, curb extensions, and transit signal priority.

ODOT will continue to address short-term impacts during construction in close coordination with TriMet and Portland Streetcar in the future design phase to maintain transit and streetcar service connections through the Project Area, including temporary bus detours during for the duration of the construction period to avoid multiple temporary changes for a single bus route. Transit demand and agency collaboration will determine accommodations needed for transit and streetcar service during Project construction. This coordination and implementation of measures to maintain transit and streetcar service connections through the Project Area will ensure that substantial adverse effects to transit and streetcar operations will not occur during Project construction.

Transportation – Active Transportation

Intersection design is a critical component of enhancing pedestrian and bicycle safety in the Project Area, and the impacted intersections on the local street system in the API will be designed to meet the City of Portland bicycle and pedestrian design standards. The Project design will reduce stressful conditions for people who walk, bike, and roll at all Project intersections using best available design practices in accordance with City of Portland approval.

Where applicable and in compliance with the City of Portland bicycle and pedestrian standards, the following best practices will be considered in the intersection designs:

- Address potential bicycle/motor vehicle conflicts through proactive signing, striping, and signal phasing. Provide physical and temporal separation between modes at all signalized intersections, including the intersection of Wheeler and Vancouver.
- Include signal control of the slip ramp at the intersection of the SB off-ramp at Broadway to prohibit vehicles from turning right across the crosswalk on a red light.

[35] Enhanced Transit Corridors Plan: https://www.portlandoregon.gov/transportation/article/686885

- Review, and remove if necessary, adjacent on-street parking to improve stopping and intersection sight distance. Follow the City of Portland's Vision Clearance Guidelines (City of Portland 2018b[36]) for uncontrolled intersections.
- Ensure that intersection turning radii are consistent with desired interactions between motorists and people who walk, bike, and roll. The turn radii and corresponding design speed will be consistent with the appropriate design vehicle.
- Ensure that signal timing provides sufficient crossing time. Include a Leading Pedestrian Interval where possible, to eliminate conflict points at all crossings.
- Provide adequately scaled two-stage bicycle turn boxes for left-turn movements at locations where bicycle routes intersect.
- Provide protection and warning for bicycle and pedestrian movements during "contraflow" operations, when bicycles and pedestrians and motor vehicles are travelling in opposite directions on the same street.
- To minimize delay for people cycling through the Broadway/Weidler corridor, consider timing signals for the pace of bicycle travel.

While approximately 800 feet of existing sidewalk gaps along portions of N Wheeler and N Williams (formerly NE Wheeler segment) will be filled, other existing sidewalk gaps (approximately 2,600 feet) within the API will remain. During the design phase, ODOT will address the remaining gaps in the sidewalk network, such as at the intersections of Weidler with Vancouver, and cross spacing gaps, such as at the east leg of the intersection of Broadway with Williams, within the area of construction. Where feasible, the remaining gaps in the sidewalk network will be filled during construction of the Project.

A Temporary Traffic Control Plan will be developed following the City of Portland's Traffic Design Manual Volume 2: Temporary Traffic Control (City of Portland 2019[37]) to minimize construction-phase impacts to people who walk, bike, and roll. The following City of Portland priorities will guide the development of the Temporary Traffic Control Plan:

- Use the City of Portland guidelines identified in Portland's Neighborhood Greenways Assessment Report (City of Portland 2015[38]) for both daily and hourly traffic volumes to limit vehicle volumes on bikeways.
- Monitor and employ traffic diversions to maintain recommended hourly and daily automobile volumes on existing routes and other corridors that serve as bicycle detour routes.

[36] Vision Clearance Guidelines: https://www.portlandoregon.gov/transportation/article/697586

[37] Traffic Design Manual, Volume 2: Temporary Traffic Control: https://www.portlandoregon.gov/transportation/article/648243

[38] Neighborhood Greenways Assessment Report: https://www.portlandoregon.gov/transportation/article/735768

- Prohibit established neighborhood greenways from being used as formal motor vehicle detour routes.
- Ensure that conditions for people walking, biking, and rolling through the area will remain safe and comfortable (consistent with City policies) by providing physical separation from vehicular traffic and implementing traffic calming measures on bikeway detour routes also used by vehicles.
- Design detour routes for walking and biking that minimize out-of-direction travel.
- Design detour routes for walking that maintain a robust and complete sidewalk network, without gaps in facilities.
- Where detour routes for bikeways also carry detouring vehicular traffic, as may be the case on Tillamook, identify locations for traffic calming measures--including traffic diversion--to ensure the speed and volumes of traffic do not exceed the Neighborhood Greenway thresholds for both daily and hourly motor vehicle traffic (City of Portland 2015). Established Neighborhood Greenways should not be used as formal motor vehicle detour routes.
- Include design details for temporary pedestrian and bicycle facilities (e.g., facility typologies, widths, and signage) in the Temporary Traffic Control Plan.
- Include details for maintaining pedestrian and bicycle movement throughout the Project's entire construction timeline in the Temporary Traffic Control Plan.

The Temporary Traffic Control Plan will ensure that the temporary facilities provide fully accessible, safe, and comfortable routes for people who walk, bike, and roll throughout the API over the course of construction and do not depress the levels of active transportation in the area. During construction, the Project will meet the highest level of accommodation for people who walk, bike, or roll. The Project will also fill gaps in the sidewalk network with a focus on establishing and maintaining a robust pedestrian network during construction.

Transportation – Safety

The Build Alternative would reduce the crash rate on I-5, providing a safety benefit to the I-5 corridor. Numerous improvements to the local street network would increase safety for all road uses by providing safer connections for people who walk, bike, and roll. While no mitigation is proposed, the following best practices will be considered for the local street system to maximize short-term and long-term safety:

- Apply best practice design treatments, such as those recommended by the Portland Bureau of Transportation (PBOT), the National Association of City Transportation Officials (NACTO), and the American Association of Highway and Transportation Officials (AASHTO), to integrate transit vehicles, separated bicycle lanes, pedestrians, and motorists on the local road system, specifically as this relates to the potential risks associated with right turn movements or other potential conflict points between modes.

- The following documents provide example best practices for transportation facility design for this Project.
    - Portland Protected Bicycle Lane Planning and Design Guide (see: https://drive.google.com/file/d/1e65h0K7ylDYKR6txMWgtmqh4Q7X22d8W/view)
    - NACTO Urban Bikeway Design Guide (see: https://nacto.org/publication/urban-bikeway-design-guide/)
    - AASHTO Guidance (see: https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/aashto_guidancecfm.cfm)
    - Portland Pedestrian Design Guide (see: https://www.portlandoregon.gov/article/437808)
    - Portland Traffic Design Manual (see: https://www.portlandoregon.gov/transportation/article/648243)
- Construction and traffic management plans developed for the Project will include best practices for work zone safety to reduce risk to construction workers and the traveling public. In Oregon between 2011 and 2015, there were an average of 488 work-zone-related crashes per year. The distribution of crash severity in work zones vs. non-work zones is very similar; however, there are slightly more fatal crashes in a work zone. Best practices from the following ODOT resources will be used for work zone safety within the API:
    - Traffic Control Plan Design Manual (see: https://www.oregon.gov/odot/Engineering/Pages/TCP-Manual.aspx)
    - Oregon Temporary Traffic Control Handbook (see: https://www.oregon.gov/odot/Engineering/Pages/OTTCH.aspx)
    - Work Zone Traffic Analysis Manual (see: https://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/Work-Zone-Analysis-Manual.pdf)
    - Transportation Management Plan Project-Level Guidance Manual (see: https://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/TMP-Manual.pdf)

Transportation – Traffic Operations

The following mitigation strategies will be implemented by ODOT, as appropriate, to avoid, minimize, and/or mitigate short-term construction impacts to highway drivers and local street road users in all modes of travel:

- Development of a comprehensive transportation management plan that documents construction staging and schedule, alternate routes for all modes of travel during road closure, and lane closure restrictions as well as transportation management and

operation strategies (TMOS). Specific TMOS elements may include public information and outreach to encourage changes in travel behavior, provision of real-time information to road users through the use of an Intelligent Transportation System, and incident/emergency management to detect and remove incidents and restore traffic quickly.

- In the Broadway/Weidler interchange area, streetcar operations will continue during construction either through temporary tracks or through use of a bus bridge that will require streetcar passengers to transfer to a bus to pass through areas of active construction within the API. With temporary tracks, streetcar tracks will be included on the temporary structures that will be constructed to carry the east-west bicycle, pedestrian, and motor vehicle trips through the Broadway/Weidler corridor. With a bus bridge, streetcar operations will terminate with turn-arounds at the west and east ends of Project construction within the API. A bus or shuttle connection will transfer passengers through the active Project construction area to reconnect with streetcar service.
- Extensive TMOS strategies will be developed to minimize traffic disruption to other streets beyond the API. In addition, ODOT will continue to address short-term impacts during construction in close coordination with TriMet and Portland Streetcar in the future design phase to maintain transit and streetcar service connections through the Project Area, including temporary bus detours during for the duration of the construction period to avoid multiple temporary changes for a single bus route. Transit demand and agency collaboration will determine accommodations needed for streetcar service during Project construction. Ongoing discussion and negotiations between ODOT, TriMet, the City of Portland, and Portland Streetcar will determine the specific accommodations needed for streetcar service and comparable bus routes.
- Event access will be maintained during construction with enhanced TMOS strategies before and after events. The Project will coordinate with the Moda Center, City of Portland, and Oregon Convention Center to avoid traffic disruptions during major events to the extent practicable. Several post-event circulation options were presented to the Moda Center and City of Portland (owners of the Veterans Memorial Coliseum) as potential mitigation for post-event operations. ODOT will coordinate with the Moda Center and the City to develop appropriate access and egress routes and post-event traffic management plans.

Transportation – Access

ODOT will work closely with businesses in the Project Area to implement strategies to limit disruption to business access. ODOT will use temporary signage as needed and attempt to maintain access to businesses during construction.

Event access will be maintained during construction and may require an increased level of active traffic management before and after events. ODOT will coordinate closely with the Moda

Center, City of Portland, and Oregon Convention Center to coordinate major traffic disruptions to avoid major events to the extent practicable.

Utilities

Proactively addressing special constraints or design considerations to avoid or minimize impacts to major utilities will occur during final design. In particular, impacts to the City of Portland BES 264-inch sewer (East Side Combined Sewer Overflow Tunnel), sanitary pump station, and pump station piping will be avoided. Additionally, direct impact to the BES 56-inch sewer line that crosses I-5 at NE Hancock Street will be avoided or minimized. Although a cost has been included for impacts to these BES facilities, relocation of these utilities will not be a viable option. ODOT standard process in these instances is to prepare a "Design Acceptance Package" report in the initial stages of design for Project-critical success factors. Obtaining vertical and horizontal limits of these key underground utilities will occur in subsequent phases of the design process for the Project, and recommended actions to minimize utility conflicts will be included as part of the design acceptance package.

Proper coordination and the use of standard construction procedures and techniques will minimize disturbance to system users and avoid damage or impacts to existing facilities that are deemed, during final design, to not require relocation or upgrades. Typically, new facilities such as poles or ducts are installed, and then service is switched over to the new facilities, thereby minimizing any disruption of service to the utility users.

Utility coordination will occur in accordance with the ODOT Right of Way Manual, Chapter 10, (ODOT 2016a[39]) and is expected to occur early enough in the development of the Project to allow new or relocated utilities to be brought online prior to any major disruptions. Compliance with ODOT guidance will minimize or avoid disruption in service to the utility providers or users and avoid damage or substantial adverse impacts to existing utilities. Relocation plans will be prepared and service disruptions approved by affected utility providers before construction begins. Coordination will occur with utility owners to ensure that contingency plans for management of potential utility service disruptions during construction are accommodated.

Water Resources

Potential impacts to water quality during construction will be avoided by monitoring contractors to ensure standard best management and erosion control practices in the ODOT Erosion Control Manual (2005[40]), ODOT Standard Specifications for Construction (2018a[41]), ODOT

[39] ODOT Right of Way Manual: https://www.oregon.gov/ODOT/ROW/Pages/ROW-Manual.aspx

[40] ODOT Erosion Control Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Pages/Erosion-Manual.aspx

[41] ODOT Standard Specifications for Construction: https://www.oregon.gov/ODOT/Business/Documents/2018_STANDARD_SPECIFICATIONS.pdf

Boilerplate Special Provisions (2018b[42]), and City of Portland stormwater requirements are followed. The following measures will be implemented to minimize potential impacts to water resources:

- Comply with the requirements of the ODOT Regional 1200-CA National Pollutant Discharge Elimination System permit for all construction runoff, including non-stormwater discharges such as concrete washout water.
- Comply with City of Portland Title 10, Erosion and Sediment Control Regulations.[43]
- Prepare a Pollution Control Plan and Erosion Control Plan that contain the elements outlined in Sections 00280 and 00290 of the Standard Specifications for Construction (ODOT 2018a[44]) and that meets requirements of all applicable laws and regulations. Measures outlined in these plans will include the following:
    - Provide a description of any hazardous products or materials that will be used, including procedures for inventory, storage, handling, and monitoring.
    - Prepare a spill containment and control plan with notification procedures, specific clean-up and disposal instructions for different products, quick response containment and clean-up measures that will be available on-site, proposed methods for disposal of spilled materials, and employee training for spill containment.
    - Obtain and comply with all required permits and facility approvals for discharges to surface water, storm drains, or sanitary sewers or for land application.

8. Applicable Federal Environmental Laws, Executive Orders, and Environmental Findings

This section documents the required clearance and concurrences required as part of the NEPA process, in compliance with applicable federal environmental laws and Executive Orders. A summary of environmental findings related to the required regulations is provided below. A list of federal, state, and local regulatory permits and approvals required prior to implementation of the Project is provided in Appendix D.

[42] ODOT Boilerplate Special Provisions: https://www.oregon.gov/ODOT/Business/Pages/Boilerplate-SP-2018.aspx

[43] Title 10, Erosion and Sediment Control Regulations: https://www.portlandoregon.gov/citycode/28175

[44] ODOT Standard Specifications for Construction: https://www.oregon.gov/ODOT/Business/Documents/2018_STANDARD_SPECIFICATIONS.pdf

Air Quality Conformity Statement

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the State Implementation Plan, a state plan for complying with the federal Clean Air Act. Conformity with the Clean Air Act is analyzed at the regional level and at the project level.[45] Transportation Conformity does not apply after the revocation date for pollutants for which the EPA has revoked a standard. In 2005, the EPA revoked the 1979 1-hour ozone National Ambient Air Quality Standards (NAAQS) for which Portland was a "maintenance area." Additionally, Transportation Conformity generally does not apply after the Clean Air Act Section 175A 20-year maintenance planning period. The maintenance planning period for the Portland carbon monoxide maintenance area ended on October 2, 2017 (62 Federal Register 46208). The air quality analysis for the Project was prepared after October 2, 2017. Transportation Conformity no longer applies to projects in the Portland metropolitan area because the area is an attainment area for all pollutants and has passed the 20-year maintenance planning period. ODOT conducted an air quality analysis for the Project Area, including I-5 and surface streets, using the EPA-approved Mobile Vehicle Emission Simulator (MOVES) model. The analysis concluded that the Project would comply with all NAAQS over the life of the Project.

A mobile source air toxics (MSAT) analysis was also performed using the MOVES model. The model estimated MSAT emissions from highway operations for the Build Alternative in 2045 would be equal to or lower than the MSAT emissions for the No-Build Alternative. The estimated reduction in future MSAT emissions compared to the No-Build Alternative is likely due to the higher speeds and reduced congestion that the Build Alternative would allow. MSAT emission estimates for surface street operations for the Build Alternative in 2045 also showed a slight decrease or remained the same. Overall, estimated long-term emissions of MSAT from the Build Alternative would be low and substantially lower in 2045 compared to existing conditions (2017). Based on the results of the MSAT modeling analysis, the Project would not be expected to have long-term adverse air quality impacts. Therefore, FHWA finds that the Project meets all applicable requirements of the Clean Air Act (42 United States Code [U.S.C.] 7401).

Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act

Compliance with the Endangered Species Act (ESA) and the Magnuson-Stevens Fishery Conservation and Management Act (MSA) is documented in a completed notification form prepared by ODOT and signed by the National Marine Fisheries Service (NMFS) on October 19, 2020, for coverage under the *Endangered Species Act Programmatic Biological Opinion and Magnuson-Stevens Act Essential Fish Habitat Response for the Federal-Aid Highway Program in the State of Oregon* (FAHP PBO; NMFS 2012). The FAHP PBO issued on

[45] https://www.epa.gov/state-and-local-transportation/transportation-conformity

November 28, 2012, covers capital improvements of the transportation system in the State of Oregon funded in whole or in part by the FAHP (Appendix E). The notification form requests that the NMFS verify that the Project is consistent with the November 2012 FAHP PBO in regard to Project elements that have an on-site stormwater treatment deficit, as well as other modifications to FAHP design standards.

The FAHP ESA-MSA Programmatic Notification Review and Verification is included as Appendix E to this Revised EA; this includes the written notification from the NMFS that the Project design is consistent with the FAHP opinion. The NMFS-approved notification commits ODOT to implement a range of conservation measures, general construction measures, and BMPs to minimize impacts to water quality during construction and operation of the Project. Based on NMFS' review and verification that the Project is consistent with the FAHP opinion, FHWA finds that the Project would not adversely affect ESA-listed species, designated critical habitats, or Essential Fish Habitat, pursuant to Section 7(a)(2) of the ESA and Section 305(b) of the MSA.

Section 106 of the National Historic Preservation Act of 1966

Compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA) is documented through a Project-specific PA with the Oregon SHPO signed July 12, 2019 (Appendix C). ODOT, FHWA, and SHPO developed the Project-specific PA to establish a general agreement and a framework to ensure completion of the identification and evaluation of buried historic properties, to address the effects of construction-related vibration upon built historic properties, and to provide for the resolution of any adverse effects on historic properties subsequent to SHPO's approval of the Project. With the execution of the PA, and the use of the avoidance and minimization measures therein, it is the finding of FHWA that the Project would result in no adverse effects to historic properties, pursuant to the NHPA (36 CFR 800).

Section 4(f) of the U.S. Department of Transportation Act of 1966

The small permanent acquisition (approximately 174 square feet) and temporary easement (approximately 4,010 square feet) on the property of the TraveLodge at the Coliseum would qualify as a "*de minimis*"[46] use of a Section 4(f) property, as described in Section 3.12.2.2 of the EA. The historic hotel on the property would not be physically impacted, and no physical features that contribute to the building's historical significance would be affected. The effect avoidance and minimization conditions contained in the Project-specific PA signed by the Oregon SHPO on July 12, 2019 (Appendix C), would ensure that potential construction-related vibration impacts to the TraveLodge at the Coliseum do not exceed the *de minimis* impact threshold. In addition, the potential noise wall (Wall 4) described in Section 3.10.2.3 of the EA

[46] A *de minimis* impact involves the use of Section 4(f) property that is generally minor in nature. For historic properties, a *de minimis* impact is one that results in a Section 106 determination of "no adverse effect" or "no historic properties affected."

will shield the TraveLodge at the Coliseum from future direct and indirect noise impacts from I-5 and further ensure that the Build Alternative will not result in noise impacts that would exceed ODOT's NAAC standard. Therefore, FHWA has concluded there would be no Section 4(f) "constructive use" of the TraveLodge at the Coliseum.

Since issuance of the EA in February 2019, the Project design has been modified to avoid impacts to the Eastbank Esplanade. Several comments on the EA, including comments from the City of Portland, were received expressing concern about potential impacts to the Eastbank Esplanade resulting from the proposed I-5 SB mainline improvements south of I-84, including widening of the existing viaduct to accommodate the I-5 SB auxiliary lane and shoulders near the Project's southern boundary. Following receipt of and in response to these comments, this portion of the Project design was reconsidered and modified. As described in Section 2 of this Revised EA, the Project design has been modified to no longer widen the viaduct immediately east of the Eastbank Esplanade between the I-84 off-ramp to the Morrison Bridge/SE Portland/Oregon Museum of Science and Industry off-ramp. Under the modified design, the I-5 SB auxiliary lane south of I-84 would be accommodated through re-striping on the existing I-5 mainline. All work on the I-5 SB mainline and the I-84 off-ramp that would have widened the structures and encroached on the air space over the Eastbank Esplanade to the west has been eliminated. With this modification, the Build Alternative will not include any actions that would constitute a Section 4(f) use of the Vera Katz Eastbank Esplanade or the Willamette River Greenway Trail. Project-related construction activity and operation-related traffic noise would occur on the existing I-5 mainline east of the Vera Katz Eastbank Esplanade and the Willamette River Greenway Trail. However, these activities would not result in a substantial increase in perceptible noise such that a constructive use would occur. Since publication of the February 2019 EA, a noise receptor near the Eastbank Esplanade was added to the noise analysis, and modeling indicated that the Build Alternative would result in an increase in noise at the Esplanade of 1 dBA under future (2045) conditions. The 1 dBA difference between the existing (2017) traffic noise level (71 dBA) and the Build Alternative (2045) noise level (72 dBA) is not perceivable by the human ear, so the noise environment would not be noticeably changed by the Project (Appendix F). Therefore, the FHWA has concluded that the Build Alternative would not result in direct or indirect noise impacts to the Vera Katz Eastbank Esplanade or the Willamette River Greenway Trail such that the protected activities, features, or attributes that qualify the park and trail for protection under Section 4(f) would be substantially impaired.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

As documented in Section 3.6 of the EA, EJ populations have been identified in the Project Area. These EJ populations may experience small adverse impacts during construction and operation of the Project; however, none of those impacts is expected to rise to the level of "disproportionately high and adverse effects" as defined in Executive Order 12898. ODOT has committed to a range of mitigation measures to ensure this outcome, as described in Section 7

of this Revised EA and as previously noted in Section 3.6.2.3 of the EA. Therefore, it is the finding of FHWA that the Project would not cause disproportionately high and adverse effects on minority or low-income populations, pursuant to Executive Order 12898 and FHWA Order 6640.23A.

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

ODOT projects must comply with applicable provisions of Oregon's Statewide Planning Program. A summary of how the Project complies with the state's program is presented below.

Oregon Statewide Planning Program

The Statewide Planning Program requires ODOT (and other state agencies) to align its 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) * * *

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 State Agency Coordination Program 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*.

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, 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 Transportation System Plan (TSP). Therefore, the Project complies with and implements the City's comprehensive plan.

- The *Land Use Technical Report* (ODOT 2019d) prepared for the Project, incorporated by reference, 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 3.9.2.2 of the EA, and Section 6.4.2.3 of the *Land Use Technical Report*, demonstrate that the Project is compatible with Portland's comprehensive plan, and no further land use decisions are required. Project features like street furniture and public art may be subject to design review prior to construction.
- The Project is identified as a major transportation improvement project in the City's comprehensive plan (OAR 731-015-0075(3)). Therefore, the Project is compatible with the City's acknowledged Comprehensive Plan. As a result, no plan amendments are necessary.
- OAR 731-015-0075(4), (5), and (6) do not apply because the City of Portland has already made the necessary plan amendments when it incorporated the Project into its plans.
- As of the date of issuance of the Revised EA, the OTC has not made a final decision approving the design of the Project for the purposes of OAR 731-015-005(7). OTC's final design approval under OAR 731-015-0075(7) is anticipated to be made based on FHWA's approval of the Revised EA, evidenced by its issuance of the Revised EA. After the Revised EA is issued, ODOT will comply with OAR 731-015-0075(7) by presenting approval of the design of the Project to the OTC at a future meeting for final adoption of the design and supporting findings of compatibility. A notice of the approval will be mailed to interested parties.
- Regarding OAR 731-015-0075(8), some Project improvements may require City design review and permits. ODOT will obtain any design review approvals or permits prior to construction.

Transportation Planning Rule

Two provisions of the Transportation Planning Rule (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 multimodal mixed-use area (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.

The Central City 2035 Plan,[47] 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 was contingent on inclusion of the Project in the City's comprehensive plan.

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." 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.

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 OTC adopted the I-5 Broadway/Weidler 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 2016b). The Project includes several components (as referenced in the Facility Plan [ODOT 2012a]) that are intended to 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. 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.
- Improved bicycle lanes, sidewalks, and protected, marked crossings along NE Broadway, NE Weidler, and N Vancouver.

[47] Central City 2035 Plan: https://www.portlandoregon.gov/bps/2035-comp-plan.pdf

- A new pedestrian/bicycle connection between the N Flint/N Tillamook intersection to the proposed new I-5 overcrossing at N/NE Hancock. These features will better separate bicycle traffic from motor vehicle traffic and improve pedestrian safety. Cyclists now use painted bike lanes adjoining motor vehicle lanes.

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 2016c[48]). 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 would result in a reduced crash rate on I-5 in the API compared to the No-Build Alternative. 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 increase the amount of protected bike lanes, sidewalks, and pedestrian crossings within the API, which would improve overall safety for people who walk, bike, and roll.

State of Oregon Executive Order No. 20-04

On March 10, 2020, after the February 2019 publication of the EA, Oregon Governor Kate Brown issued Executive Order No. 20-04,[49] directing state agencies, including ODOT, to take actions to reduce and regulate greenhouse gas emissions. Executive Order No. 20-04 established new science-based emissions reduction goals for Oregon and directs certain state agencies to take specific actions to reduce emissions and mitigate impacts of climate change. The Executive Order also provides direction to state agencies to exercise their statutory authority to help achieve Oregon's climate goals.

While consideration of greenhouse gas emissions and the effects of climate change has not been a NEPA requirement for EAs and EISs since the CEQ withdrew its previous guidance on April 5, 2017, ODOT included an analysis of climate change in the Project EA due to the high level of agency and stakeholder interest in these issues. As reported in Section 3.5 of the EA, the 2045 operational greenhouse gas emission total for the Build Alternative is projected to decrease by approximately 22 percent compared to the 2017 emission total due to federal, state, and local efforts to develop more stringent fuel economy standards and vehicle inspection and maintenance programs and the transition to cleaner low-carbon fuels for motor vehicles. These trends are expected to continue over the life of the Build Alternative. The Build Alternative would contribute to this reduction due to higher speeds, less stop-and-go traffic, and less idling on I-5.

[48] Transportation Safety Action Plan: http://www.oregon.gov/ODOT/Safety/Documents/TSAP_2016.pdf

[49] Executive Order No. 02.04, https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf

Metro Regional Transportation Plan

The 2014 RTP was applicable to the Project during the EA analysis phase and includes the Project (Metro 2014). 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 Project improvements (Metro 2014). Metro has updated the 2014 RTP (now referred to as the 2018 RTP), which still includes all phases of the Project (preliminary engineering, environmental review, ROW, and construction). Therefore, the Project is also consistent with the 2018 RTP.

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." Therefore, the Project is compatible with the comprehensive plan because it is included as a project in the City's TSP. 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 (City of Portland 2018), 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 document. The Central City 2035 Plan includes ODOT's concurrence with the MMA, which is conditioned on City adoption of the MMA and also which specifically includes the Project (City of Portland 2018).

10. Interagency Coordination and Public Involvement

In 2010, ODOT, PBOT, and the City of Portland's Bureau of Planning and Sustainability initiated a partnership in planning future land use and transportation concepts for the North/Northeast planning district (N/NE Quadrant) in the City of Portland's Central City planning area. This planning effort focused on identifying improvements to I-5 between I-84 and I-405 (at the Fremont Bridge) and improvements to the I-5 Broadway/Weidler interchange area. This partnership incorporated strategies for land use, urban design, and local transportation improvements (typically a City responsibility), with the planning of highway improvements (an ODOT responsibility). The goal was to address long-demonstrated safety and operational issues that, if scaled according to community aspirations, would contribute to the continued vitality of the Central City and the mobility needs of the region and state.

This planning exercise was implemented in five phases, over a period of 2 years, and involved extensive collaboration with the N/NE Portland community through a 30-person Stakeholder

Advisory Committee. This partnership allowed for joint planning and decision-making to develop a design concept for the I-5 Broadway/Weidler interchange that would complement the land use, urban design, and transportation system envisioned for the planning districts of Lower Albina and Lloyd, culminating in the development of the Facility Plan for the I-5 Broadway/Weidler Interchange (ODOT 2012a), which provided the foundation for the Project. The I-5 Broadway/Weidler Facility Plan and recommended design concept was adopted by the OTC and Portland City Council in 2012 (City of Portland et al. 2012), as part of Metro's RTP (Metro 2014) and as part of the City's Central City 2035 Plan (City of Portland 2018).

Over the course of Project development and the preparation of the EA, ODOT consulted with federal, state, and local agencies, tribes, the City of Portland, and FHWA to obtain pertinent information, assist with the development of appropriate impact assessment methodologies, review analysis and draft documents, and identify issues and mitigation measures. Extensive public outreach was also completed, including engagement of minority communities affected by past transportation and infrastructure actions within the Project Area. These agency, tribal, and public engagement efforts are further described below.

Agency Coordination

Numerous agencies were invited to participate in the EA process as cooperating or participating agencies, as described in the Project's Agency Coordination Plan (Appendix G). These agencies were invited to:

- Provide comments on the purpose and need and range of alternatives,
- Review methodologies to address technical topics consistent with special expertise or jurisdiction of the agency,
- Review the EA for sufficiency and provide comments,
- Identify any issues of concern regarding the Project's potential environmental or socioeconomic impacts, and
- Provide timely input on unresolved issues.

Cooperating federal agencies with jurisdiction by law and special expertise with respect to the Project included NMFS, the U.S. Army Corps of Engineers (USACE), and the U.S Coast Guard (USCG). NMFS reviewed methodologies for water quality and endangered species; the USACE reviewed methodologies for water quality and compliance with Clean Water Act Section 10 and Section 404 regulations; and the USCG reviewed methodologies for compliance with navigable waters and structural clearance requirements.

Participating agencies with special expertise and an interest in the Project included the Oregon SHPO, TriMet, Metro, the Port of Portland, Portland Streetcar, and the City of Portland's Bureau of Planning and Sustainability and Bureau of Transportation. Oregon SHPO reviewed methodologies for historic resources and archaeological resources; TriMet reviewed methodologies for transportation; Metro reviewed methodologies for land use and

transportation; the Port of Portland reviewed methodologies for transportation and compatibility with Port operations and freight operations; and Portland Streetcar reviewed methodologies for transportation.

Building on early planning, the City of Portland's Bureaus of Planning and Sustainability and Transportation participated in refinement of the Project's design components, public engagement, and review of the methodologies and individual technical reports for air quality, aquatic biology, archaeological resources, climate change, environmental justice, hazardous materials, historic resources, land use, noise, right of way, Section 4(f), socioeconomics, transportation, utilities, and water quality.

Following the publication of the EA, the City of Portland withdrew from its role as a participating agency, effective July 6, 2020, with a City Council-issued stop work directive. As a result, the City of Portland is removed as a participating agency in the Project's Agency Coordination Plan. In withdrawing as a participating agency, the City of Portland stated that the Project concept as defined in the EA is not aligned with the values of the City. The Project's Build Alternative design concept is, however, included in the City's adopted comprehensive plan as a result of ODOT and the City's integrated land use and transportation planning process. As a result, the design concept is in the City's N/NE Quadrant Plan, which is a component of the City's adopted comprehensive plan, as well as the City's adopted Transportation System Plan.

Several agencies declined the original invitations to be a cooperating or participating agencies, including the United States Fish and Wildlife Service, Portland Parks and Recreation, Multnomah County, and the Oregon Department of Environmental Quality.

Tribal Coordination

Northwest tribes, including the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Grand Ronde Community of Oregon, Confederated Tribes of Siletz Indians, Confederated Tribes of the Warm Springs Reservation of Oregon, and the Cowlitz Indian Tribe were invited to become participating agencies with FHWA and ODOT in the development of the NEPA EA for the Project through letters sent December 20, 2016. However, no response was received. These tribes were also asked for input on the Area of Potential Effects for the historic and archaeological resources evaluations for the EA and compliance with Section 106 of the NHPA through letters sent on September 11, 2017. ODOT also sent letters to those same tribes to invite them to participate in the public comment period for the EA on February 15, 2019. No responses were received. On May 28, 2019, ODOT sent letters to the tribes offering the opportunity to review and make comments on the draft Project PA created for the Project Section 106 compliance. No responses were received. ODOT discussed the Project at five meetings with the Grand Ronde Community of Oregon and two meetings with the Confederated Tribes of Siletz Indians. ODOT also discussed the Project during a meeting with the Confederated Tribes of the Warm Springs Reservation of Oregon.

Public Engagement

ODOT, in partnership with the City of Portland, conducted extensive public engagement regarding the environmental review process throughout the EA preparation phase of the Project, which began in July 2017 and finished in spring 2019 upon the close of the EA public comment period. While the Project team studied potential environmental benefits and impacts, ODOT and the City also engaged in broad public engagement to inform communities about the Project, the EA, and how to provide input on the Project. Prior to and during the public comment period for the EA, the team conducted outreach to inform the public, interested stakeholders, and environmental justice interests about the EA findings and ways to comment on the EA. The team's engagement strategy was guided by the Public Involvement Plan, which documented Project messages, tools, and strategies for engagement, the schedule of public outreach events, and key stakeholders. ODOT also continued community engagement following the close of the EA public comment period, throughout 2019 and into 2020. The Public Involvement Summary Report and the Public Involvement Plan for the Project summarize these engagement activities and are included in Appendix H.

A summary of public engagement efforts related to the EA is presented below.

Project Website

ODOT developed a Project website at www.i5RoseQuarter.org that was accessible to the public throughout the EA preparation phase. The website provided information about the Project and its history, as well as ways to get involved, submit comments, or sign up for Project updates. During the EA public comment period, the website provided access to an online Open House. Use of the website was promoted in all Project materials and at public events as a convenient online location to access the most extensive and up-to-date information on the Project.

Email Newsletters

Between September 2017 and March 2019, 13 email newsletters were sent to individuals who signed up to receive periodic Project updates. Topics included notifications about upcoming meetings and events as well as general Project information and updates.

Fact Sheets

At the beginning of the EA preparation phase, a general Project fact sheet was used to describe the proposed improvements and the overall Project timeline. As public interests and key messages were identified, the Project team developed a brochure that highlighted the history of the Project Area, the need for improvements, and three key areas that the Project would address: a safer, more reliable I-5; a better-connected community; and economic growth. In advance of the release of the EA, an environmental process fact sheet was developed to inform people about the FHWA's NEPA process and the various ways to review and comment on the EA.

Mailers

Two Project mailers were sent to all stakeholders who signed up to receive information, as well as to all businesses and residences within the Project Area. The first mailer was sent in advance of the Open House in September 2017, and the second mailer was sent in advance of the EA public comment period that began in February 2019.

Social Media

Social media posts were published on Facebook, Instagram, LinkedIn, and NextDoor through ODOT and City of Portland social media accounts.

Media Releases

Media releases were created and distributed by ODOT prior to public events and at key Project milestones.

Advertisements

In February and March 2019, advertisements were placed in the following publications to invite the pubic to participate in the EA comment period:

- *Daily Journal of Commerce* – February 25 and March 4
- *The Oregonian* – February 24, February 26, March 3, and March 5
- *El Latino de Hoy* – February 20 and March 6
- *Asian Reporter* – February 18 and March 4
- *The Skanner* – February 27 and March 6
- *Portland Observer* – February 20 and March 6

Project Videos

ODOT developed a Project video that included a visual simulation of the Project with aerial and ground-level views along with an audio narration explaining key Project elements. Project videos were available for viewing at public meetings and at the online Open House.

Briefings, Presentations, and Community Events

Throughout the duration of the EA phase, ODOT and the City hosted or attended more than 55 community events to share information and gather feedback about the Project. These events included briefings and presentations to agencies, local agency committees, community groups and neighborhood associations, as well as tabling.

Community Liaisons Group

Early in the environmental study phase, a Community Liaisons Group was formed to engage individual and organizations with current and historical ties to the Project Area. The purpose of the group was to help the Project team understand the communities' interests and concerns early in the EA process and to incorporate that input into the public involvement process and Project design decisions. The group consisted of 14 members representing various organizations and interests. Members were asked to provide feedback on outreach materials and strategies and to offer ideas on how to best reach interested communities. Group members were also encouraged to share Project information and opportunities with their affiliates. Four meetings were held between September 2017 and November 2018.

Open House #1

The first Open House was a "drop-in" style event and had three key features: 1) display stations describing the various Project components, the Project's purpose and need, and the range of alternatives being considered in the EA, 2) an electronic PowerPoint presentation providing an overview of the Project, and 3) a large-scale map showing the Project Area and various design elements. Members of the Project team were present to answer questions and record attendee concerns. Open House #1 was attended by approximately 85 people.

Community and Neighborhood Forum

ODOT and the City of Portland hosted a Community and Neighborhood Forum on the evening of September 28, 2017. The purpose of the event was to engage the local community, provide an overview of the Project, and encourage dialogue about the planned transportation improvements in the area. The event also provided the public an opportunity to provide written and verbal comment on the Project's purpose and need and range of alternatives. ODOT also conducted outreach to members of the Project Area's historic Black community, inviting over 20 organizations and faith-based groups that support or represent minority populations. A total of 65 people attended the event.

Community Walk & Bike Ride

The Community Walk & Bike Ride was an opportunity to guide members of the public through the Project Area, both on bike and foot, to help people understand the current issues and visualize the proposed improvements. Groups toured the area and stopped at several viewpoints where ODOT and City of Portland staff explained the proposed improvement and attendees had the opportunity to ask questions and give suggestions. Approximately 32 people attended the event, with an even split between those participating by bike and on foot.

Pastors' Breakfast

Two breakfasts with local area church leaders were organized to discuss the Project and seek feedback. The first breakfast attended by 15 church leaders was held on March 20, 2018, at the

Village Restaurant. The second breakfast attended by 12 church leaders was held on March 11, 2019, at the Vancouver Avenue First Baptist Church. During each meeting, ODOT staff provided an overview of environmental findings and an introduction to ODOT's Disadvantaged Business Enterprise and On-the-Job Training and Apprenticeship Program.

Community Survey

ODOT conducted a survey to learn how stakeholders travel in the Rose Quarter area and what their preferences are for bicycle and pedestrian facility improvements as well as highway cover amenities. Overall, 379 people participated in the survey. Of those, 72 surveys were taken in person and 307 were taken online. The online survey was shared through a link on the home page of the Project website (www.i5RoseQuarter.org) and was also featured in email newsletters sent to the Project stakeholder email list. The survey was available from June through October 2018. The in-person survey was also made available to the public at three summer events: Juneteenth, Good in the Hood, and Sunday Parkways.

Business Canvassing

To gain feedback from businesses in the Project Area, members of the Project team went door-to-door to approximately 60 businesses to talk to business owners, provide information about the Project, and listen to their concerns. Overall, businesses were concerned about access to their business locations (both for customers and distributors), future land use and zoning, and Project ROW requirements. Other concerns included homelessness and criminal activity in the area and how the Project might affect those activities.

Black Community Outreach Event

Representatives from ODOT and PBOT attended the "What's Happening in Our Streets? A Transportation Open House for the Black Community" event on June 6, 2018. The event provided an opportunity to engage with the Black community to discuss transportation investments being made in N/NE Portland. During the event, attendees could talk with ODOT and PBOT representatives about various projects in the area, have their questions answered, identify where they lived in relationship to infrastructure projects shown on maps, and participate in a survey.

Open House #2 and Online Open House

Following the notice of publication of the EA, ODOT and the City of Portland hosted both an in-person Open House and an online Open House during which people could learn about the Project, review the findings in the EA, and provide comments. The online open house was open for the duration of the 45-day public comment period, February 15 through April 1, 2019, and included the same content as the in-person Open House, with the addition of informational videos to guide viewers through the stations. The in-person Open House was held on the evening of March 7, 2019, and was attended by approximately 85 people.

Environmental Justice Interviews

In winter 2016/2017, ODOT staff conducted initial interviews with 17 members of the Black community to gain a better understanding of the Project Area's history and how to meaningfully engage communities of color and low-income populations during the Project's upcoming environmental review and public involvement phase. The interviews were conducted in advance of the formal public involvement process so the respondent's feedback could be used to shape the Project direction. Interviewees were selected because of their ties to the local Black community, including current and former residents who were affected by the original construction of I-5 and other public infrastructure projects (i.e., Veterans Memorial Coliseum and expansion of Emanuel Hospital) within the Albina neighborhood.

11. Comments and Responses on the EA

On February 15, 2019, FHWA approved the EA for public and agency review. The formal comment period ran from February 15, 2019, through April 1, 2019, inclusive of a 15-day extension to allow additional time for public and agency review. ODOT received 1,942 submittals (i.e., letters, emails, and comment forms) containing over 4,500 unique comments on the EA.

This section documents comments received by ODOT on the Project during the 45-day public comment period from February 15, 2019, through April 1, 2019.

Summary of Public and Agency Comment Submittals

Comments were received via the following methods: email, in-person Open House, online Open House, testimony provided at Public Hearing, handwritten letter, and phone message. A total of 1,942 comment submittals were received from individuals, public agencies, advisory committees, community groups, non-government organizations, private industry and limited liability corporations (LLCs), and labor unions. The following lists document the agencies, advisory committees, community organizations, non-government organizations, private industry, and labor unions that submitted comments during this period. Appendix A of the Comment Summary Report includes the full list of all public comments received, inclusive of comment letters submitted by individuals or other entities.

Public and agency comments and FHWA/ODOT responses are summarized in a Comment Summary Report included as Appendix I. All comment letters are available, and have been available since May 30, 2019, on the Project website at https://www.i5rosequarter.org/library/.

A public hearing was held on March 12, 2019, as an opportunity to help facilitate understanding of the Project as well as to accept verbal and written comments on the EA. A complete transcript of the comments received during the public hearing is included in Appendix H.

Agencies:

- City of Portland
- Bureau of Development Services
- Bureau of Planning and Sustainability
- Bureau of Transportation
- Hillsboro Economic Community Development Department
- Oregon Metro
- Multnomah County Health Department
- Portland Development Commission
- Portland Parks Board
- Southwest Washington Regional Transportation Council
- United States Coast Guard
- Washington County Department of Land Use and Transportation

Advisory Committees:

- City of Portland Planning and Sustainability Commission
- City of Portland Bicycle Advisory Committee
- City of Portland Freight Committee
- City of Portland Pedestrian Advisory Committee
- School Advisory Committee for the City of Portland

Community Organizations:

- Albina Vision Trust
- Boise Neighborhood Board Land Use and Transportation committee member
- Brooklyn Action Corps Neighborhood Association
- Cully Association of Neighbors
- Eliot Livability Team
- Eliot Land Use and Transportation Committee Meeting
- Eliot Neighborhood Association
- Friends of the Green Loop
- Identity Clark County
- Irvington Community Association
- Neighbors for Clean Air
- North/Northeast I/5 Rose Quarter Stakeholders Advisory Committee Member
- North/Northeast Quadrant Advisory Committee
- Northeast Coalition of Neighborhoods
- Parents of Harriet Tubman Middle School Students
- Portland Bus Lane Project
- Portland Youth Climate Council
- Soul District Business Association Transportation Committee

Non-Government Organizations:

- 350 PDX
- Association of Oregon Rail and Transit Advocates
- Audubon Society of Portland
- Bike Loud PDX
- Business for a Better Portland
- Center for Sustainable Economy
- Central City Concern
- City Observatory
- Climate Solutions
- Community Cycling Center
- Disability Rights Oregon
- Go Lloyd
- NECA-IBEW Electrical Training Center
- Neighbors for Clean Air
- No More Freeways
- OPAL – Environmental Justice Oregon
- Oregon Association of Rail and Transit Advocates
- Oregon League of Conservation Voters
- Oregon Trucking Associations
- Oregon State Public Interest Research Group
- Oregon Walks
- Pacific Northwest Regional Council of Carpenters
- Portland Institute for Contemporary Art
- Portland Streetcar
- Portland Streetcar Advisory Committee
- ROSE Community Development
- Safe Routes to School National Partnership
- Sierra Club
- Sightline Institute
- The Street Trust for Portland
- Urban Greenspaces Institute

Private Industry (Including LLCs)

- Cascadia High-Speed Rail
- PacWest Energy
- Blue Line Transportation
- Portland Trailblazers

Labor Unions

- Local 1503 Carpenters Union
- Operating Engineers Local 701 Union
- Columbia Pacific Building Trades Union
- United Brotherhood of Carpenters Union

12. Additions/Changes to Environmental Assessment (Errata)

This section documents additions and changes to the text of the EA since its publication in February 2019. Additions and changes are organized into two major subsections: "Minor Revisions" and "Substantive Revisions." "Minor Revisions" are considered to be edits that clarify or add more detail to an aspect of the analysis or Project that was addressed in the Technical Reports. "Substantive Revisions" are edits that introduce new information that was not present in the EA or its appendices. Text with strikeout (e.g., ~~location~~) has been deleted as part of this Revised EA, and italicized text (e.g., *location*) means the text is revised or new as part of this Revised EA. Page numbers cited correspond to page numbers in the EA dated February 15, 2019, available on the ODOT Project website (www.i5RoseQuarter.org).

Minor Revisions

Global Edits

References to ADA ramp upgrades or transit islands as part of the Broadway Weidler Plan (i.e., No-Build Alternative) are removed.

Reference to N/NE Quadrant and I-5 Broadway/Weidler Interchange Plan is replaced with reference to the Central City 2035 N/NE Quadrant Plan where applicable.

References to the N/NE Quadrant Plan are clarified as the N/NE Quadrant Plan *process*.

The term "would" is changed to "will" in discussions of mitigation to reinforce ODOT's commitments to avoid or minimize impacts to environmental resources during Project construction and operation.

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Page v. Reference to "signature in progress" is removed as follows:

Appendix C. Federal Aid Highway Programmatic Agreement for Endangered Species Act Section 7 Consultation ~~(Signature in Progress; FAHP PA to be incorporated following signature)~~

Appendix D. Section 106 Programmatic Agreement between FHWA, ODOT, and SHPO ~~(Signature in Progress; PA to be incorporated following signature)~~

Page v. The description of Section 508 compliance measures is revised to read:

This Environmental Assessment and associated documents were prepared in compliance with Section 508 of the Rehabilitation Act of 1973. ~~Additionally, an appendix containing detailed figure descriptions is provided for reference.~~ Requests for further information or clarifications

regarding items such as technical drawings or maps should be directed to the ODOT Senior Environmental Project Manager at (503) 731-4804.

Acronyms and Abbreviations

The following acronyms and abbreviations are added due to new text contained in this erratum:

AASHTO	American Association of Highway and Transportation Officials
HB	House Bill
NACTO	National Association of City Transportation Officials

Executive Summary

Page ES-4. The second and third bullets are changed to read:

- Conditions for ~~pedestrians and bicyclists~~ *people who walk, bike, and roll* would be improved by increased physical separation between motorized and non-motorized users, sidewalk gap closures, and reduction in the complexity of intersections along N/NE Broadway, N/NE Weidler, N Wheeler, N Williams, N Vancouver, and the new Hancock-Dixon connection.
- The Clackamas bicycle and pedestrian bridge would establish a new connection for people ~~walking and biking~~ *who walk, bike, and roll* not otherwise offered by the street system.

Page ES-5. The sentence introducing the bullet list is changed to read:

The most likely *short-term* impacts *that would occur during the temporary construction phase of the Project, and the measures that will be implemented to reduce those impacts below a level of significance, are described below* ~~include the following~~:

Page ES-9. The last bullets in the list of agencies and organizations are changed to read:

- Portland Parks and Recreation ~~(declined)~~ *(participated as part of the City of Portland's involvement)*
- *City of Portland (withdrew as participating agency, effective July 6, 2020, following publication of the EA)*

Section 1 Introduction

Page 2, Section 1.3. The first sentence under "Broadway/Weidler Interchange Operations" is changed to read:

The complexity and congestion at the I-5 Broadway/Weidler interchange configuration is difficult to navigate for vehicles (including transit vehicles)~~, bicyclists, and pedestrians~~ *and people who walk, bike, and roll*, which impacts access to and from I-5 as well as to and from local streets.

Page 4, Section 1.4. The third bullet is changed to read:

- Support and integrate the land use and urban design elements of the Adopted ~~N/NE Quadrant Plan~~ *Central City 2035 Plan* (City of Portland et al. 2012) related to I-5 and the Broadway/Weidler interchange, which include the following:

Section 2 Project Alternatives

Page 6, Section 2.1. The first sentence of the last paragraph on this page is changed to read:

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 RTP financially constrained project list (Metro 2014) *and a series of funded local projects identified by the City of Portland to address safety for people walking and biking*.

Page 7, Section 2.1. The second paragraph on this page is changed to read:

The Broadway multimodal improvements project, an independent City of Portland project, would improve pedestrian safety in the Broadway/Weidler couplet by addressing several curb deficiencies and would provide greater separation between users ~~but could introduce increased potential of right-hook collision potential for bicyclists where the protected bike lane would be added~~. Outside of the Broadway/Weidler couplet, pedestrian and bicycle safety would generally be the same as existing conditions.

Page 7, Section 2.1, Figure 2-1. The bottom right legend in Figure 2-1 is changed to read: Broadway, Eastbound~~ East of 2nd Avenue~~ *West of Benton* (No-Build)

Page 12, Section 2.2.2.1. The first paragraph on this page is changed to read:

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~~ *could* 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.

Page 14, Section 2.2.3.3. The second paragraph is changed to read:

Conflicting zones created because of the reversed flow are resolved under signal control and yield signing. At the NE Broadway/N Williams intersection, the WB left-turn traffic would yield to pedestrians on the south crosswalk. ~~Bicycles WB on NE Broadway crossing Williams would have their own protected signal phase.~~ *People biking and walking WB would have their own protected signal phase, as currently exists.* At the NE Weidler/N Williams intersection, the EB

through and right-turn movements would not move concurrently with the SB reversed flow. Bicycles eastbound on NE Weidler crossing Williams and NB crossing NE Weidler would have their own protected signal phase.

Page 16, Section 2.2.4.1. The paragraph is changed to read:

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 2-6, 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 *and diversion* 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 *and ensure it continues to meet City of Portland performance standards for Neighborhood Greenways*. Bicycle and pedestrian through travel would be ~~permitted~~ *allowed* (see Figure 2-6, element "F"). Figure 2-8 illustrates the proposed cross-section for the Hancock-Dixon connection and the associated multi-use path. The new crossing would create improved connectivity between Lower Albina, Lloyd, and the N/NE neighborhoods, provide greater east-west multimodal access across I-5, and provide multimodal route alternatives to the congested Broadway/Weidler corridor. Given the existing topography and need to maintain clearances over I-5, the western-most portion of the Hancock-Dixon crossing would have a grade of *up to* approximately 9 *to 10* percent. A new multi-use path with a lower, *ADA-compliant* grade would be added to provide an accessible route *between Hancock and Broadway, as* described in Section 2.2.4.2 below.

Page 16-17, Section 2.2.4.2. The second paragraph (third paragraph following insertion of new paragraph described above) in this section is changed to read:

The new Hancock-Dixon crossing would include sidewalks with grades of up to approximately 7 percent. To provide a less steep route option, ~~A~~ *a* new *north-south* multi-use path ~~would be added~~ *is proposed* between the new Hancock-Dixon connection and Broadway at a grade of 5 percent or less to provide an additional travel route option for people walking and biking. ~~The Hancock-Dixon crossing would include a new bicycle and pedestrian path between the new road and Broadway at a grade of 5 percent or less to provide an accessible route option for people walking and biking. This route would provide an option to the approximately 9 percent grade required for safe operation of a portion of the new Hancock-Dixon crossing.~~ The new multi-use path would follow the ~~configuration of the~~ existing N Flint alignment between N Hancock and N Broadway (see Figure 2-6, element "G").

Page 18, Section 2.2.4.4. The fifth paragraph in this section is changed to read:

Approximately 800 feet of existing sidewalk gaps along portions of N Wheeler and N Williams would be filled. *This would address the sidewalk gaps within the area of direct construction. This* ~~These improvements~~ would improve walking connections in the vicinity of the Moda Center and increase pedestrian convenience, comfort, and safety by allowing for direct ADA-accessible crossings.

Page 18, Section 2.2.4.4. A new sentence between the fourth and fifth paragraph is added to read:

A new multi-use path would also include a potential bicycle and pedestrian path on the east boundary of I-5, connecting N Flint and N Vancouver, based on future community and partner agency input.

Section 3 Affected Environment and Environmental Consequences

Page 26, Section 3.2.2.1. The last sentence in this section is changed to read:

This reduction in *MSAT and criteria pollutants* is consistent with national trends~~.~~ *and is attributed to the implementation of tighter tailpipe emissions standards over time.*

Page 27, Section 3.2.2.2. The second paragraph is changed to read:

During long-term operations, the estimated MSAT emissions from highway operations for the Build Alternative in 2045 would be equal to or lower than the MSAT emissions for the No-Build Alternative. The estimated *0.1-ton* reduction in MSAT emissions compared to the No-Build Alternative is likely due to the higher speeds and reduced congestion that the Build Alternative would allow. MSAT emission estimates for surface street operations for the Build Alternative in 2045 ~~also show a slight decrease or remain the same~~ *remain similar to estimates for the No-Build Alternative*.

Page 27, Section 3.2.2.3. The first paragraph of this section is changed and a footnote added:

Potential short-term impacts to air quality during the construction phase of the Project ~~would~~ *will* be addressed by ~~requiring~~ *monitoring* construction contractors to ~~implement the following~~ *ensure the following* mitigation measures *are implemented* to control dust and exhaust emissions from construction equipment and vehicles, consistent with ~~Oregon Administrative Rules (~~OAR~~s)~~ 340-208-0210, Requirements for Fugitive Emissions:[50]

Page 28, Section 3.2.2.3. The last paragraph of this section is changed to read:

ODOT *will* ~~would~~ also ~~require~~ *monitor* construction contractors ~~to comply~~ *to ensure contractor compliance* with ODOT Standard Specifications *for Construction* Section 290, Environmental Protection which *includes the following*…In addition, road or lane closures ~~would~~ *will* be ~~restricted~~ *focused* to non-peak traffic periods, when possible, to reduce the impact of construction delays on traffic flow and resultant vehicle emissions.

Page 39, Section 3.6.2.3. The bullets in the mitigation section are changed to read:

- ODOT ~~would require~~ *will monitor* construction contractors to *ensure* ~~follow~~ ODOT standard construction specifications *are followed to* ~~that~~ limit vehicle and equipment

[50] *Air quality BMPs: https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=256141*

idling time, prevent dirt and other materials from being tracked out of construction zones on vehicle tires, ~~and~~ minimize the release of fugitive dust*, and prevent the release of hazardous materials from spills and leaks or exposure to existing contamination* to address the potential for short-term exposure *of EJ populations* to noise, exhaust, ~~and~~ dust emissions, *and hazardous materials* during construction of the Project.

- ODOT ~~would~~ *will* coordinate with the City of Portland and TriMet to monitor the effects of relocated bus routes on EJ populations during the anticipated 4-year construction period. If it is determined that EJ populations are experiencing disproportionate impacts, ODOT, the City, and TriMet ~~would~~ *will* coordinate with the community to identify alternative bus routes to better serve EJ populations, possibly including an increase in the frequency of service on those routes.
- ODOT ~~would~~ *will* coordinate with the City of Portland and members of the community to identify alternative routes for *people who walk, bike, and roll* ~~pedestrians and bicyclists~~ to use during periods when key walking and biking routes are closed during construction.
- ODOT ~~would~~ *will* monitor the effects the temporary closure of key walking and biking routes *may* ~~could~~ have on EJ populations. *This will be accomplished by assigning observers to monitor the use of alternative routes and conducting surveys and voluntary one-on-one interviews.* If it is determined that disproportionate impacts to EJ populations are occurring, ODOT ~~would~~ *will* identify additional reasonable measures to reduce those impacts, including providing free shuttle service through areas of construction.
- ~~ODOT would provide substantial opportunities for participation in design and construction of the Build Alternative to qualified Disadvantaged Business Enterprises (DBEs), including local small and minority- owned businesses.~~

In addition to the mitigation described above, ODOT's Disadvantaged Business Enterprises (DBE) and Workforce program for the Project will maximize DBE contracting opportunities, including for small and minority-owned businesses.

Page 42, Section 3.7.2.3. The second bullet is changed to read:

- During construction, *ODOT will monitor* ~~the~~ contractor *activities to ensure that all* ~~would be required to follow the~~ applicable regulations regarding the transport, use, and storage of hazardous materials *are followed*.

Page 52, Section 3.10.2.1. The first paragraph is changed to read:

Under the No-Build Alternative, the model predicted future (2045) noise levels in the API to range from 56 to 75 dBA for outdoor use areas and 34 to 49 dBA for interior areas. The predicted noise levels for the No-Build Alternative ranged from 1 dBA lower to 1 dBA higher than predicted existing noise levels. ~~Sixty-nine~~ *Seventy* receivers representing 112 residential receptors, 2 medical facility outdoor use areas, ~~1~~ *2* park*s*, and 1 day care outdoor use area were predicted to have noise levels that meet or exceed the NAAC of 65 dBA for residential land uses, parks, day care centers, and medical facilities (exterior).

Page 53, Section 3.10.2.2. The second paragraph is changed to read:

The long-term noise levels for the Build Alternative predicted by the noise model ranged between 56 to 76 dBA for outdoor use areas and 36 to 51 dBA for interior areas. Seventy-~~six~~ *seven* receivers representing 117 residential receptors, 66 medical facility indoor use areas, 1 school indoor use area, 2 medical facility outdoor use areas, ~~1~~ *2* park*s*, and 1 day care outdoor use area were predicted to meet or exceed the NAAC. Noise levels in exceedance of the NAAC under the Build Alternative were predicted throughout the API, predominantly east of the I-5 corridor.

Page 54, Section 3.10.2.3. The first paragraph of the mitigation section is changed to read:

~~During the construction phase of the Build Alternative,~~ ODOT ~~would~~ *will* ~~require~~ *monitor* the construction contractor to ~~implement~~ *ensure* the following noise abatement measures *identified in the ODOT Noise Manual*[51] *are implemented* to minimize the adverse effects of construction activity on the local community:

Page 55, Section 3.10.2.3. The first sentence in the first bullet describing Wall 2b is changed to read:

- Wall 2b would be 22 feet high and approximately ~~1,101~~ *1,011* feet long, extending along the eastern edge of I-5 ROW from approximately N Russell to N Flint.

Page 58, Section 3.11.2.3. The introduction and fourth and seventh bullets of this section are changed to read:

Measures that ~~would~~ *will* be ~~considered~~ *implemented* by ODOT during ROW acquisition include the following:

- *Work with design and construction to* ~~i~~*I*dentify ways to minimize or mitigate impacts to individual properties through design and/or construction staging, ~~such as through BMPs~~, temporary traffic control plans, and temporary access plans.
- When the design level is more advanced, *ODOT, in coordination with FHWA, will* revisit whether construction activities would have an effect on adjacent properties and businesses with sensitive patients, medical equipment, or machinery*, including hospitals, elderly or psychiatric patient care services, and emergency response units. If additional impacts are identified, they will be appropriately mitigated including, if required, acquisition and relocation in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.*

[51] *ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf*

Page 62, Section 3.12.2.2. The section describing impacts to the Portland Peace Memorial Park as a result of the Build Alternative is changed to read:

The Build Alternative would not include any actions that would constitute a Section 4(f) use of Portland Peace Memorial Park. *No ROW acquisition would be required in the Park.* Project-related construction and operation noise would occur near the east perimeter of the park, but because sensitive receptors in the vicinity of the park would not experience a substantial increase in perceptible noise, no constructive use would occur. Similarly, the Build Alternative would not result in direct or indirect noise impacts to the Portland Peace Memorial Park such that the protected activities, features, or attributes that qualify the park for protection under Section 4(f) would be substantially impaired.

Page 66, Section 3.13.2.3. The section identifying mitigation measures to reduce the potential for socio-economic impacts is changed to read:

The following ~~BMPs~~ *mitigation measures* ~~would~~ *will* be implemented to reduce the potential for *substantial, short-term,* adverse socio-economic impacts during the construction phase *of the Project*:

- Temporary traffic management plans ~~would~~ *will* be prepared to minimize construction impacts on I-5 operations and traffic delays on local streets. These plans ~~would~~ *will* address all modes of transportation, including bicycles, pedestrians, and public transit. The plans ~~would~~ *will* be prepared by the construction contractor(s)~~, approved by ODOT and the City of Portland, and implemented by the construction contractor(s)~~.
- ODOT ~~would~~ *will* ~~require~~ *monitor* contractors to *ensure* ~~follow construction BMPs such as the 2018~~ Oregon Standard Specifications for Construction (ODOT 2018a) *are followed* to minimize impacts to neighborhoods, businesses, schools, emergency responders, and utilities and public service providers located or operating in the API.
- ODOT ~~would~~ *will* coordinate with TriMet*, the City of Portland,* and Portland Streetcar to follow *those agencies'* standard procedures ~~with regard to~~ *regarding* temporary impacts to transit services. This coordination ~~would~~ *will* follow standard communication procedures for temporary transit stop closures or relocations, schedule changes, ~~and~~ route diversions*, and relocation of existing motor vehicle/transit lanes* that ~~would~~ *will* be required during construction.
- Construction activities near Harriet Tubman Middle School ~~would~~ *will* be scheduled for summer months to avoid potential disruptions during the school year.

Public outreach to residents and businesses in the API conducted by ODOT ~~and the City of Portland would~~ *will* continue throughout final design and construction.

Page 67, Section 3.14.1.1. The following sentence is added to the end of the second paragraph:

Federal Transit Administration Small Start funds were utilized to construct existing streetcar facilities; therefore, there is an obligation to continue to provide service.

Page 68, Section 3.14.2.1. The first paragraph in this section (under "No-Build Alternative") is changed to read:

Transit travel time impacts in the API would roughly correspond to those experienced by motor vehicles, as described for traffic in Section 3.14.2.4. No direct light rail impacts are anticipated. ~~The addition of transit boarding islands on Multnomah would improve passenger conditions, as the new bus stops would provide an opportunity to include enhancements such as lighting, shelters, ADA-accessible ramps, and rider information.~~ Under the No-Build Alternative, ridership is expected to grow compared to existing conditions. Growth in ridership could lead to longer dwell times at stops and could contribute to increased transit travel times and delays.

The following bus lines could experience temporary short-term impacts: Line 17 WB and Portland Streetcar "B" Loop (on N/NE Broadway), *"A" loop (on Weidler*), Lines 4 and 44 NB (on Williams), 85, 8, 35, and 77. There is a risk that the MAX Red, Blue and Green lines, which operate on NE Holladay through the Rose Quarter Transit Center, could have temporary service disruptions due to construction activities.

Page 69, Section 3.14.2.2. A link to ODOT methodology is added to footnote 21 as follows:

[21]Tolerable stress levels were based on "Level of Traffic Stress" data provided by ODOT and future-year regional bicycle demand data provided by Metro. *https://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf*

Page 69, Section 3.14.2.2. The first and second paragraphs in this section (under "No-Build Alternative") are changed to read:

Under the No-Build Alternative, additional protected bike lanes and upgraded sidewalks in the Broadway/Weidler couplet associated with the Broadway multimodal improvements project would improve conditions for people who walk or ride bicycles. ~~Additional north-south and east-west regional bikeways and walkways would be created, including the Sullivan's Gulch Trail, Sullivan's Crossing (bicycle/pedestrian bridge traversing I-84 in the vicinity of NE 7th), North Portland Greenway, and NE 7th/9th Avenue Neighborhood Greenway.~~

Despite these improvements, over half the intersections in the API would continue to exceed tolerable stress levels for pedestrians.[52] All intersections would continue to operate at ~~acceptable~~ stress levels for bicyclists *that are defined as acceptable according to the ODOT*

[52] Tolerable stress levels were based on "Level of Traffic Stress" data provided by ODOT and future-year regional bicycle demand data provided by Metro. https://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch14.pdf

methodology for evaluating intersections.[53] Those intersections exceeding tolerable stress levels for pedestrians are primarily located along the N/NE Broadway corridor.

Page 70, Section 3.14.2.2. Under "Increased Non-Motorized Route Options," the following changes are made to the first sentence and the first and third bullet:

Long-term direct and indirect impacts ~~from~~ *related to* increased non-motorized route options, as described in Section 2.2.4, include the following:

- The Hancock-Dixon crossing would provide connectivity and safety benefits. The new roadway crossing and associated multi-use path would directly connect Lower Albina, Lloyd, and the N/NE communities and provide multimodal route alternatives over I-5. ~~The removal of Flint would also reduce cut through auto traffic in this area.~~
- Improved bicycle and pedestrian facilities on the local street system would include the new jug-handle at the N Vancouver and N Broadway, upgraded and separated bicycle facilities on N/NE Broadway and N/NE Weidler, and new bicycle and pedestrian connections between the N Flint/N Tillamook intersection and the new Hancock-Dixon crossing. *The new path connection from the Hancock-Dixon connector to Broadway would follow steeper grades than the existing Flint structure but would be within ADA maximum grades.*

Page 70, Section 3.14.2.2. The section discussing "Improved Ramp Terminal Intersections" is changed to read:

The number of ramp terminal intersections potentially encountered by people walking and biking would be the same as under the No-Build Alternative. *The location of the SB ramp terminal intersection would, however, lie along the primary pedestrian route to the Broadway Bridge and Downtown.* Under the Build Alternative, ~~however,~~ new east-west bicycle and pedestrian routes that avoid crossing ramp terminals would be available with the Clackamas bicycle and pedestrian bridge and the Hancock-Dixon crossing. People walking or biking NB from the Rose Quarter Transit Center on N Williams could avoid crossing the existing ramp terminal at N Ramsay. However, people walking and biking in the EB direction from the Broadway Bridge on N Weidler would pass through one additional ramp terminal intersection with the relocated I-5 SB on-ramp at the Weidler and Williams intersection. *The two intersections impacted by the I-5 SB entrance ramp change (current and future) are both located at the intersections of two Major City Walkways and Major City Bikeways.*

[53] *A total of 13 intersections in the API were studied (including N Hancock and Flint) (see Active Transportation Technical Report [ODOT 2019o]).*

Page 72, Section 3.14.2.2. The first two paragraphs under "Short-Term Construction Impacts" are changed to read:

Pedestrians and bicyclists traveling through and near the API would experience ~~temporary~~ impacts during construction. In the Broadway/Weidler/Williams highway cover area, demolition of the Williams, Weidler, and Broadway structures over I-5 would result in temporary closures in those areas; however, access would be maintained through temporary structures that would accommodate all modes of travel. Temporary structures would be designed to minimize multimodal conflicts *and maintain access*.

In the Vancouver/Hancock highway cover area, demolition of the Vancouver and Flint structures over I-5 during construction would close bicycling and walking connections between N/NE Portland and the City's central core~~; however~~*, including the area's principal walking routes of Broadway/Weidler. However,* temporary structures could be provided to maintain access. Because these activities would occur sequentially, Flint would serve as a SB detour route for bicycle and pedestrian trips that would otherwise use Vancouver. During the demolition of the Flint structure and construction of the Hancock-Dixon connection, SB bicyclists and pedestrians could use the new Vancouver structure and NB bicyclists could use the new Williams structure. ~~Multimodal conflicts could increase because Flint would be a motor vehicle detour route during the Vancouver structure demolition and re-construction and would also be used as a detour route for bicyclists.~~ Additionally, when the Flint structure is demolished, motor vehicle traffic from Flint would be diverted to Vancouver or Williams, where bicycle traffic would also be diverted.

Page 74, Section 3.14.2.4. The third and fourth sentences of the last paragraph are changed to read:

Vehicles ~~would~~ *could* be directed north on N Wheeler to N Weidler (N Wheeler would be one-way SB under typical operation). This routing could be accomplished with active traffic management using cones and traffic management personnel *and will be determined during the design phase.*

Page 75, Section 3.14.2.5. The second paragraph under "Build Alternative" is changed to read:

The one intersection expected to close to motor vehicles is located at N Flint/N Broadway but would be replaced with a new intersection at N Flint/N Hancock. Because the closed intersection would be replaced with a new intersection; it is not counted as a closure in Table 3-8. *A new intersection would be created at Hancock/Vancouver.* There would be no long-term indirect impacts to transportation access with the Build Alternative. For additional information on impacts to transportation access, see the Transportation Access Technical Report (ODOT 2019q).

Page 75, Section 3.14.2.5. Table 3-8 is changed to indicate 16 intersections would be modified and 3 intersections would be closed, thereby accounting for the additions of the following intersections: 527, 53, Multnomah/Wheeler, Weidler/Wheeler, Weidler/1st,

Broadway/Vancouver, Dixon/Wheeler, and Hancock/Williams; reclassification of Hancock/Flint from “modified” to “closed”; and closure of Intersections 515 and 537.

Page 80, Section 3.15.2.3. The final paragraph in the utility mitigation section is changed to read:

Utility coordination ~~would~~ *will* occur in accordance with the ODOT Right of Way Manual, Chapter 10, (ODOT 2016) and is expected to occur early enough in the development of the ~~Build Alternative~~ *Project* to allow new or relocated utilities to be brought online prior to any major disruptions. Compliance with ODOT guidance ~~should~~ *will* minimize or avoid disruption in service to the utility providers or users *and avoid damage or substantial adverse impacts to existing utilities*. Relocation plans ~~would~~ *will* be prepared and service disruptions approved by affected utility providers before construction begins. Coordination ~~would~~ *will* occur with utility owners to ensure that contingency plans for management of potential utility service disruptions during construction are accommodated.

Page 80-81, Section 3.16.1. The second sentence is changed to read:

~~According to DEQ,~~ *The* ~~the~~ Willamette River is listed as an impaired waterbody under Section 303(d) of the Clean Water Act~~.~~[54]; *the Oregon DEQ is required to establish total maximum daily loads (TMDLs) for impaired waterbodies*.

Page 81, Section 3.16.1. The last paragraph in this section is changed and footnotes added as follows:

Small portions of the API in the southern portion of the Project Area are located within the Federal Emergency Management Agency (FEMA) 100-year floodplain[55] *and the 1996 flood inundation area* of the Willamette River. A small portion of the API may be located in the FEMA floodway.[56] For additional details, see the Water Resources Technical Report (ODOT 2019c).

Page 82, Section 3.16.2.2: The second paragraph is revised as shown below following a reassessment of the impervious area for the Build Alternative:

The construction of auxiliary lanes and full shoulders between I-84 and I-405, ramp modifications, and full pavement reconstruction of I-5 from the Fremont Bridge to the I-84 overcrossing would result in a net increase in impervious area within the ODOT ROW of

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[54] Section 303(d) of the 1972 Clean Water Act (33 U.S.C. 1251 et seq.) requires states to identify waters where current pollution control technologies alone cannot meet the water quality standards set for that waterbody. Every 2 years, states are required to submit a list of impaired waters, plus any that may soon become impaired, to the U.S. Environmental Protection Agency for approval. The impaired waters are prioritized based on the severity of the pollution and the designated use of the waterbody (e.g., fish propagation or human recreation). States must establish the total maximum daily load(s) of the pollutant(s) in the waterbody for impaired waters on their list.

[55] *The 100-year floodplain is land that is predicted to flood during a 100-year storm, which has a 1 percent chance of occurring in any given year.*

[56] *A FEMA floodway includes the channel of the river and adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.*

approximately ~~6 acres~~ *5.6 acres* and a total contributing impervious area of approximately ~~30 acres~~ *29.3 acres*. Surface street improvements, including new overcrossing structures and roadway, bike, and pedestrian improvements, would result in a net increase in impervious area within the City ROW of approximately 2 acres and a total contributing impervious area of 11 acres.

Page 88, Section 3.17.2.13. The first sentence is changed to read:

Long construction periods (coupled with circuitous bus detour routes) could temporarily suppress transit ridership due to passenger inconvenience*; however, maintaining streetcar transit service through the Project Area during construction through either a temporary structure or bus bridge could ameliorate that loss and support continued transit use.*

Section 4 Public Involvement and Agency Coordination

Page 92-93, Section 4.2.2.1. The last sentence in this section is changed to read:

The signed PA is provided in Appendix D ~~(signature in progress)~~ and filed with the Advisory Council on Historic Preservation.

Page 93, Section 4.2.2.4. The section is changed to read:

Building on early planning, ODOT is working the City of Portland's Bureau of Planning and Sustainability and the Bureau of Transportation to refine design components of the Build Alternative and to develop the EA. In this capacity, the City of Portland has participated as a partner in the Build Alternative's technical development and public engagement and as reviewer of methodology and technical reports for the following technical areas: Air Quality, Aquatic Biology, Archaeological Resources, Climate Change, Environmental Justice, Hazardous Materials, Historic Resources, Land Use, Noise, Right of Way, Section 4(f), Socioeconomics, Transportation, Utilities, and Water Quality.

Following the publication of the EA, the City of Portland withdrew from its role as a participating agency, effective July 6, 2020, with a City Council-issued stop work directive. As a result, the City of Portland is removed as a participating agency in the Project's Agency Coordination Plan.

~~With the multiple transportation modes that converge within the Project Area (streetcar, bike, pedestrian realm, automobiles, etc.) and other multimodal investments in this area, the City of Portland continues to be an engaged partner in rethinking how these modes interact and perform in the Project Area. The City of Portland and ODOT will continue to meet regularly for Transportation Advisory Committee Meetings.~~

Page 93, Section 4.2.2.6. The paragraph was changed to read:

In addition to tasks listed in Section 4.2 above, ~~the~~ Portland Streetcar reviewed methodologies for the following technical areas: Transportation. *Portland Streetcar also provided the Project team with a conceptual outline of how Project construction and continued streetcar service*

during construction could be phased together to maintain service. Further discussions with the City of Portland and Portland Streetcar are underway concerning how streetcar service and Project construction can be phased together.

Page 93, Section 4.2.3. The first sentence is changed to read:

Northwest tribes, including the ~~The~~ Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Grand~~e~~ Ronde Community of Oregon, Confederated Tribes of Siletz Indians, Confederated Tribes of the Warm Springs Reservation of Oregon, and the Cowlitz Indian Tribe were invited to become participating agencies with FHWA and ODOT in the development of the NEPA EA for the Project through letters sent December 20, 2016.

Page 94, Section 4.3.2. The first paragraph of this section is changed to read:

~~Early in the Project~~ *In winter 2016/2017,* ODOT *staff* conducted *initial* interviews with 17 members ~~and leaders~~ of the Black community to *gain a* better understand*ing* ~~perception of ODOT, local agencies, and the proposed action considered in the Build Alternative~~ *of the Project Area's history and how to meaningfully engage communities of color and low-income populations during the Project's upcoming environmental review and public involvement phase. The interviews were conducted in advance of the formal public involvement process so the respondent's feedback could be used to shape the Project direction. Interviewees were selected because of their ties to the local Black community, including current and former residents who were affected by the original construction of I-5 and other public infrastructure projects (i.e., Veterans Memorial Coliseum and expansion of Emanuel Hospital) within the Albina neighborhood.* ~~Their feedback helped to inform the planning of engagement activities and to refine the Project team's public involvement strategies.~~

Section 8 References

The following references were added due to new citations contained in this erratum:

City of Portland. 2015. Portland Bureau of Transportation. Portland's Neighborhood Greenways Assessment Report. Available at: https://www.portlandoregon.gov/transportation/article/735768.

City of Portland. 2019. City of Portland's Traffic Design Manual Volume 2: Temporary Traffic Control. Available at: https://www.portlandoregon.gov/transportation/article/648243 (accessed November 21, 2019).

Substantive Revisions

Executive Summary

Page ES-4. "Aquatic Biology" is deleted from the bullet list of environmental topics addressed in the EA, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments.

Page ES-5. The following new bullet is added to the list of Project anticipated benefits:

- *ODOT's Disadvantaged Business Enterprises (DBE) and Workforce program would maximize DBE contracting opportunities for small and minority-owned businesses.*

Pages ES-5 and ES-6. The bullet list listing anticipated adverse impacts is changed to read:

ODOT ~~and its partners at the City of Portland~~ and FHWA have worked together to develop the current design concept for the Build Alternative with the objective to avoid and minimize impacts to the natural and human environment to the greatest extent possible. As a result, adverse environmental impacts from the Build Alternative would primarily result from construction activities and would therefore be short term.

The most likely *short-term* impacts *during the temporary construction phase* include the following:

- Short-term air quality impacts during construction would include the release of fugitive dust generated by soil excavation, surface grading, hauling, and various other construction activities, as well as exhaust emissions from construction equipment. *These construction-phase impacts would be temporary and limited to areas within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity (including haul routes) and would end once Project construction is complete.* ODOT *will* ~~would require~~ *monitor* construction contractors *to ensure* ~~to implement a variety of~~ *a range of* mitigation measures *are implemented* to control dust and exhaust emissions from construction equipment and vehicles. *In addition, road or lane closures will be focused to non-peak traffic periods, when possible, to reduce the impact of construction delays on traffic flow and resultant vehicle emissions. Implementation of the mitigation measures described above will avoid substantial short-term adverse impacts to air quality.*
- During construction, nine historic properties could be affected by noise and vibration, increased truck traffic, traffic congestion, changes to access, increased dust, and temporary changes to the historic setting due to the presence of construction equipment, staging areas, and materials storage areas. *These impacts will be temporary and limited to areas within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity and would end once Project construction is complete.* ODOT *will* ~~would require~~ *monitor* construction contractors to *ensure* ~~follow a variety of~~ best management practices (BMPs) to minimize these types of impacts *are implemented*. ODOT and FHWA have also developed a *Project-specific* Programmatic Agreement (PA) in consultation with the Oregon State Historic Preservation Office (SHPO) to avoid and/or minimize the potential for Project-related vibration to historic properties. *The PA, and the avoidance and minimization measures contained therein, will ensure construction of the Project results in no adverse effects to the characteristics that make historic properties within the Project Area eligible for the National Register of Historic Places.*

- During construction, there would be the potential for spills or releases of oil and fuel from mechanical equipment, including the mobilization or release of existing contamination in soil and groundwater. *These impacts would be temporary and limited to areas within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity and would end once Project construction is complete.* ~~Such spills or releases could potentially increase human health and safety hazards for construction workers and the general public.~~ ODOT *will* ~~would~~ ~~require~~ *monitor* the construction contractor ~~to implement~~ *to ensure a* range of measures *are implemented* to address hazardous materials concerns, including testing procedures for identifying the presence of lead-based paint and asbestos; requirements for the safe transport, use, and storage of hazardous materials; and the obligation to develop a Health and Safety Plan, a Project-specific Pollution Control Plan, and a Contaminated Media Management Plan. *Implementation of these mitigation measures will ensure that substantial adverse effects from spills or releases of hazardous materials will not occur during construction of the Project.*

- Construction activities would result in short-term noise levels in the range of 70 to 100 A-weighted decibel at a distance of 50 feet. *These impacts would be temporary and limited to areas within the existing I-5 corridor that currently experience traffic noise levels that exceed ODOT Noise Abatement Approach Criteria (NAAC). These temporary noise impacts would end once Project construction is complete.* ODOT *will* ~~would require~~ *monitor* the construction contractor to *ensure ODOT standard specification and BMPs for control of noise sources* ~~implement noise abatement measures~~ *are implemented* to minimize *the potential for substantial* ~~the~~ adverse *noise* effects *from Project-related* ~~of~~ construction activity. *ODOT will also conduct an additional in-depth construction-phase noise analysis during the future design phase of the Project, when greater design and construction method details are defined. As required by the City of Portland, ODOT will follow the City's Noise Review Board process to obtain the required noise variance approvals for construction work and address noise concerns.*

  While no substantial operations-related traffic noise impacts are anticipated, ODOT ~~propses~~ *is committed* to construct*ing* two noise walls along I-5 to mitigate operational traffic noise. ~~for receptors located in residential areas, parks, and a school,~~ *In compliance with the ODOT Noise Manual, construction of the noise walls will depend on the outcome of a public engagement process and vote by eligible property owners and tenants (including Portland Public Schools and the City of Portland Bureau of Parks and Recreation) who would benefit from the wall. The public involvement process will include surveying residents and property owners that will benefit from installation of a proposed noise wall to determine their viewpoints concerning the proposed noise abatement measure (i.e., the noise wall). After the results of the noise abatement survey have been documented, and if the noise abatement evaluation results in a positive decision, the proposed noise wall will be incorporated into the Project design. Through this process, affected receptors have the opportunity to play a direct role in the decision of whether to construct the noise wall.*

- Short-term construction-related impacts to transit would include temporary bus stop closures or relocations, bus route detours, and changes to streetcar operations. *ODOT will continue to* ~~To~~ address short-term impacts during construction *in close coordination with TriMet and Portland Streetcar in the future design phase to maintain transit and streetcar service connections through the Project Area, including temporary bus detours* ~~during~~ for the~~, TriMet has indicated that it may consider implementing bus route detours around the impacted area for the~~ duration of the construction period to avoid multiple temporary changes for a single bus route. *Transit demand and agency collaboration will determine accommodations needed for transit and streetcar service during Project construction. This coordination and implementation of measures to maintain transit and streetcar service connections through the Project Area, will ensure that substantial adverse effects to transit and streetcar operations will not occur during Project construction.*

- Construction would result in short-term impacts to highway traffic; local street motor vehicle traffic; ~~bicyclists, pedestrians~~, transit; *people who walk, bike, and roll;* and event access at Moda Center and the Oregon Convention Center. ODOT *will also* ~~would~~ coordinate with the Moda Center, City of Portland, and Oregon Convention Center to avoid traffic disruptions during major events to the extent practicable. *These measures will avoid adverse impacts to highway traffic; local street motor vehicle traffic; transit; people who walk, bike, and roll; and event access at Moda Center and the Oregon Convention Center.*

- Highway lane closures are likely on I-5 during removal and construction of the overcrossing structures and retaining walls, including potential late night and weekend closure of all directional lanes. *ODOT will develop a comprehensive transportation management plan to minimize construction impacts on I-5 operations and traffic delays on local streets.* ~~ODOT would develop a comprehensive transportation management plan that documents construction staging and schedule, alternate routes for all modes of travel during road closure, and lane closure restrictions as well as transportation management and operation strategies.~~ Temporary local street closures or turn restrictions *will* ~~would~~ be implemented as necessary to limit traffic diversion onto local streets in residential neighborhoods*, thereby avoiding substantial adverse traffic impacts to neighborhood streets.*

- Existing above- and below-ground utilities would likely be impacted during construction, with effects ranging from brief temporary service interruptions to major relocations of electric transmission and distribution lines, water supply lines, and large capacity sewer lines. *Impacts to the City of Portland Bureau of Environmental Services (BES) 264-inch sewer (East Side Combined Sewer Overflow Tunnel), sanitary pump station, and pump station piping will be avoided. Additionally, direct impact to the BES 56-inch sewer line that crosses I-5 at NE Hancock Street will be avoided or minimized.* Coordination with utility providers and the use of standard construction procedures and techniques *will* ~~would~~ minimize disturbance to system users and avoid damage or *substantial adverse* impacts to existing utilities.

- Previously undiscovered archaeological resources could be altered, damaged, or destroyed by the operation of heavy equipment or during compaction, excavation, or grading of soils during construction and subsurface maintenance activities. *These impacts would be limited to areas within the existing I-5 corridor and surface streets in the immediate vicinity of construction activity.* Potential impacts to archaeological resources during construction *have been* ~~would be~~ addressed through an Inadvertent Discovery Plan and a Project-specific PA between FHWA, Oregon SHPO, and ODOT that *identifies* ~~would identify~~ mandatory protocols to be followed in the event of an inadvertent discovery. *The Inadvertent Discovery Plan and Project-specific PA (and the mandatory protocols contained therein) will ensure substantial adverse effects to undiscovered archaeological resources will be avoided.*
- *The Project could cause small, short-term, adverse impacts to minority and low-income populations (i.e., Environmental Justice [EJ] populations). These small, short-term, adverse impacts may result from the temporary relocation of bus routes and adjustments to streetcar service during the multi-year construction period and from temporary closures of key walking and bicycling routes. Additional potential short-term impacts to EJ populations from construction of the Build Alternative could include temporary exposure to noise, exhaust, and dust emissions from various types of construction equipment, including the release of hazardous materials from spills and leaks from construction equipment or exposure to existing contamination that was previously not exposed. While these potential unavoidable adverse impacts to EJ populations would be small and not rise to the level of "disproportionately high and adverse effects" as defined in Executive Order 12898, ODOT will implement a variety of mitigation measures to ensure potential short-term adverse impacts to EJ populations are avoided or minimized.*

Page ES-7. The last bullet in the list of anticipated adverse impacts is deleted as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

- ~~In-water construction activities could result in short-term impacts to protected fish and California sea lions from increased turbidity and underwater noise. In-waer construction activities would be restriced to an in-water work window to avoid peak timing of species presense within proposed work areas. The Project would also include provisions to protect adult and juvenile fish species including a Federal-Aid Highway Program PA to address potential water quality and aquatic wildlife issues.~~

Section 2 Project Alternatives

Page 8, Figure 2-2. Auxiliary Lane/Shoulder Improvements

Figure 2-2 is revised to indicate the Build Alternative, including re-striping in segments south of the I-84 off-ramp and the Morrison Bridge/SE Portland/Oregon Museum of Science and Industry off-ramp (see revised Figure 2-2 below).

Page 9, Section 2.2.1. The first paragraph is revised as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

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 *between I-405 to the north and I-84 to the south* ~~in the areas where the auxiliary lane would be extended~~. Figure 2-2 illustrates the location of the proposed auxiliary lanes. Figure 2-3 illustrates the auxiliary lane configuration, showing the proposed improvements in relation to the existing conditions. Figure 2-4 provides a cross section comparison of existing and proposed conditions including the location of through lanes, auxiliary lanes, and highway shoulders.

Page 10, Section 2.2.1. New paragraphs between the second and third paragraphs, along with modifications to the third paragraph, are added as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

South of the I-84 off-ramp, the I-5 SB auxiliary lane would be added by re-striping the I-5 mainline in both the NB and SB directions. The I-5 center median would be shifted to the east, and the existing shoulders on I-5 in the approximately 1,200-foot segment between the two off-ramps would be narrowed to approximately 3 to 9 feet in both the NB and SB directions. The viaduct immediately east of the Eastbank Esplanade between the I-84 off-ramp to the Morrison Bridge/SE Portland/Oregon Museum of Science and Industry off-ramp would not be widened.

The addition of 12-foot shoulders (both inside and outside) in both directions *between I-405 to the north and I-84 to the south* ~~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.

Page 16, Section 2.2.4.2. A new paragraph is added following the first paragraph:

Elimination of the Flint overcrossing structure over I-5 between Tillamook and Hancock would remove a north-south bicycle connection. However, changes at the Broadway/Vancouver intersection would facilitate southbound access to the Broadway Bridge, along with improvements to the Williams Avenue corridor. The Hancock-Dixon connector also would provide another option, though this new connection would involve a steeper grade as compared with the existing Flint structure.

Page 18. Section 2.2.4.4. The first paragraph in this section is changed to read:

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. *Most of the signalized crossings would include temporal separation of the pedestrian phase from the vehicular right-turn phase.*

Page 18, Section 2.2.4.4. The fourth paragraph in this section is changed to read:

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, *as described in Section 2.2.4.2 above. ODOT will continue to explore the potential to fill the gap in the sidewalk on the west side of N Vancouver at the intersection with Broadway.*

Section 3 Affected Environment and Environmental Consequences

Page 28, Section 3.2.2.3. The following text is added at the end of the section:

It should also be noted the Project will be subject to provisions in the recently passed Clean Diesel bill (House Bill [HB] 2007[57]) passed by the Oregon Legislature on June 30, 2019. The Clean Diesel bill is expected to help reduce harmful emissions by phasing out old diesel engines in Multnomah, Clackamas, and Washington Counties and requiring all diesel-powered medium-duty and heavy-duty trucks to run on an engine that is 1997 or newer by 2023. This requirement will apply to all contractor-operated medium- and heavy-duty trucks used during the Project's anticipated 4-year construction period. Implementation of the mitigation measures described above will avoid substantial short-term adverse impacts to air quality.

Pages 28 through 31, Section 3.3. The "Aquatic Biology" section is deleted as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

~~3.3 Aquatic Biology~~

~~Aquatic environments within the Project Area include National Marine Fisheries Service (NMFS)-designated critical habitat. These areas also contain fish and aquatic mammals protected under the Endangered Species Act (ESA) and Marine Mammals Protection Act. These species use the waters within the site at various times throughout the year.~~

~~3.3.1 Existing Conditions~~

~~The API for aquatic resources includes the Willamette River under the I-5 SB exit to the Morrison Bridge and adjacent upland areas. The API is bounded on the west by the Willamette River and the flyover off-ramp bridge (SB I-5 to EB I-84 and on the east by railroad right of way (ROW) and elevated I-5.~~

~~Existing conditions include a mix of natural, landscaped, and developed impervious surfaces. The site includes a portion of open water along the Willamette River. The existing flyover off-ramp bridge extends over the river on the west side and is supported by concrete pilings located in the water. There is also a large concrete stormwater pipe that extends out into the flow of the~~

[57] *Enrolled House Bill 2007: https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2007/Enrolled*

river. The concrete pipe and pilings may influence shading, flow patterns, and affect scour and deposition patterns differently upstream and downstream of the existing structures.

The Willamette River within the API includes NMFS-designated critical habitat and multiple ESA-listed anadromous species of fish: Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), and steelhead salmon (*Oncorhynchus mykiss*). These species are present within the river at various times throughout the year. Additionally, this portion of the Willamette River is also used at times by the California sea lion and the Steller sea lion, both species under the jurisdiction of NMFS and regulated under the Marine Mammals Protection Act. A technical memorandum summarizing ESA considerations associated with potential in-water work is provided in Appendix B to the *Water Resources Technical Report* (ODOT 2019c).

3.3.2 Environmental Consequences

3.3.2.1 No-Build Alternative

Under the No-Build Alternative, no in-water work is anticipated. There would therefore be no potential for increased turbidity, hydroacoustic impacts, or contamination from equipment and materials used in construction. Existing alteration of natural river flow patterns, shading, and sediment movement and deposition would continue from existing columns.

3.3.2.2 Build Alternative

Under the Build Alternative, the following in-water construction activities would likely result in direct and indirect effects to fish and may cause indirect effects to California sea lions. These activities would be restricted to an in-water work window to avoid peak timing of species presence within proposed work areas.

- **Drilled Shafts:** Approximately eleven 6-foot-diameter drilled shafts would be installed below the the Ordinary High Water Mark (OHWM). Each drilled shaft includes oscillation of an outer steel canister to depth, followed by interior excavation (drill), followed by a rebar cage, and concrete pour. The noise levels associated with all activities have not been shown to generate injurious levels of sound. Avoidance of areas in close proximity to work areas by fish and California sea lions is assumed to be the indirect effect.
- **Temporary Structures:** Installation of the drilled shafts would be completed using up to two pile-supported temporary work bridges. The temporary work bridges would be constructed with pilings and short structural spans (50 to 60 feet in length). The piles supporting the work bridges would be installed using vibratory and impact pile driving. Sheet pile and or underwater wire-sawing would be used to remove one existing 6-foot-diameter pier. Sheet pile (uncertain construction use) will use vibratory techniques only. The pilings and temporary structures would be removed when the permanent structure is complete.

  Impact pile driving can produce underwater sound levels ranging from disturbance, injury, and death for fish. Vibratory pile driving is capable of generating levels of sound

associated with disturbance. Additionally, impact driving is capable of causing injury (hearing) and disturbance to sea lions. Following best management practices (BMPs) and use of a bubble curtain during pile installation would reduce potential impacts to fish and sea lions. Marine mammal observers would be used beginning in September, and the Project would employ shutdowns if sea lions are observed in close proximity to in-water work areas. However, the frequency and duration of such encounters within the observation zone are expected to be minimal given the overall width of the channel and the expected migration of approximately five individual sea lions through the area upstream to Willamette Falls.

- **Temporary Barge:** A temporary barge is expected to be used year-round in areas of proposed in-water work. Minor disturbance to ESA fish (through avoidance behavior) would likely occcur when barge anchoring is repositioned.

Minor turbidity would occur during the advancement of the drilled shaft casings and installation of the pilings for the temporary work bridges. Disturbance would be limited to their perimeters.

If underwater obstructions are encountered during in-water work, dredging may be required to facilitate casing and pile placement. Dredging, if necessary, commonly employs BMPs through the use of a clamshell bucket to grab and move the obstruction (thereby reducing water column impacts) or to remove the obstruction to a contained barge deck. Buckets must be allowed to drain free prior to barge transfer. These activities are considered brief, and their range of effects to ESA species have been documented through several previous NMFS consultations.

The Lower Willamette River sediments are considered to be contaminated. However, periods when these sediments would suspended in the water column are expected to be minimal and brief and do not represent concentrations classified as hazardous. Such levels likely cause accumulative effects with chronic exposure and do not include the potential for sudden acute effects if encountered by listed species.

The Project would include several provisions to assure protection for adult and juvenile fish species and a Federal-Aid Highway Program (FAHP) ESA Programmatic Agreement (PA) has been prepared to address potential water quality and aquatic wildlife issues associated with construction activities in and near the Willamette River associated with the Project. These protective measures would ensure that direct and indirect impacts to aquatic resources would be minimized. When signed, the FAHP will be provided in Appendix C and as part of the NEPA decision document.

Proposed improvements to the stormwater management system under the Build Alternative described in Section 3.16 would have long-term beneficial effects for water quality and aquatic species in the Willamette River. Three new water quality treatment facilities would be constructed to treat stormwater runoff from approximately 30 acres of impervious area that is currently not treated for water quality prior to discharge to the Willamette River. ESA-listed species would benefit from the improved stormwater treatment, in compliance with the FAHP ESA PA.

~~3.3.2.3 Mitigation~~

~~Potential impacts to water quality during construction that could potentially harm aquatic species would be avoided by requiring contractors to follow standard best management and erosion control practices in the ODOT Erosion Control Manual (2005), ODOT Standard Specifications (2018a), ODOT Boilerplate Special Provisions (2018b), and City of Portland stormwater requirements.~~

~~Additional special provisions to protect sensitive species in and around areas of proposed in-water work areas are described in Appendix B (as an appendix to the *Water Resources Technical Report* (ODOT 2019c). These provisions are consistent with requirements in the Federal Highway Administration (FHWA) FAHP Programmatic Biological Opinion (PBO) that would apply to construction and operation of the Build Alternative.~~

~~ODOT would implement the following additional measures to protect fish and marine mammals:~~

- ~~The Project would first avoid species presence by shortening the published in-water work window (i.e., July 1–October 31) by 25 days.~~
- ~~Minimization via BMPs would comply with the FAHP through use of a bubble curtain to reduce sound levels generated by in-water work.~~
- ~~Marine mammal observers would be used beginning in September, and the Project would employ shutdowns if sea lions are observed in close proximity to in-water work areas.~~

~~The installation of approximately eleven 6-foot-diameter piers would increase artificial fill within the functional floodplain or general scour defined within the FAHP and the ODOT FAHP User's Guide (ODOT and FHWA 2016). Per the FAHP, the Project must mitigate the artificial fill by removing an equivalent amount from the Project Area or an approved off-site location. To comply with this requirement, ODOT would remove, at minimum, an equivalent amount of fill from an off-site location within the lower Willamette River. Initial investigations demonstrate likely opportunities existing within that portion of the Willamette River that includes the Multnomah Channel. Otherwise ODOT would identify and seek approval from FHWA and NMFS for an off-site restoration project that would provide ecological function that meets or exceeds impacts to critical habitat, including its primary constituent elements, as defined by NMFS under ESA critical habitat designations.~~

Page 33, Section 3.4.2.3. The following text is added:

ODOT's standard protocol in the event of an inadvertent discovery is described in ODOT Specification 290.50, Protection of Cultural Resources[58] and is as follows:

[58] *ODOT Standard Specifications for Construction: https://www.oregon.gov/ODOT/Business/Documents/2018_STANDARD_SPECIFICATIONS.pdf*

Comply with all Laws governing preservation of cultural resources. Cultural resources may include, but are not limited to, dwellings, Bridges, trails, fossils, and artifacts. If cultural resources are encountered on the Project Area or in material sources, and their disposition is not addressed in the Special Provisions, do the following:

- *Immediately discontinue operations or move to another area of the Project Site or material source.*
- *Protect the cultural resource from disturbance or damage.*
- *Notify the Engineer.*

The Engineer will do the following:

- *Arrange immediate investigations.*
- *Arrange for disposition of the cultural resources. The Engineer may direct the Contractor to perform salvage operations according to 00140.30 or 00140.60.*
- *Notify the Contractor when to begin or resume construction operations in the affected area.*

ODOT will require the contractor to follow ODOT Specification 290.51, Protection of Sensitive Cultural Sites,[59] throughout the duration of construction.

ODOT's requirement that the contractor follow the above specification along with the Inadvertent Discovery Plan and Project-specific PA (and the mandatory protocols contained therein) will ensure substantial adverse effects to undiscovered archaeological resources will be avoided.

Page 35, Section 3.5.2.3. The following paragraph is added:

The recently passed (June 30, 2019) Clean Diesel bill (HB 2007[60]) will help reduce harmful emissions by phasing out old diesel engines in Multnomah, Clackamas, and Washington Counties and requiring all diesel-powered medium-duty and heavy-duty trucks to be powered by newer cleaner burning engines by 2023. This requirement will apply to all contractor-operated medium- and heavy-duty trucks used during the Project's anticipated 4-year construction period.

Page 39, Section 3.6.2.2. The first paragraph in this section is changed to read:

The Project could cause small, short-term, adverse impacts to minority and low-income populations from the temporary relocation of bus routes, adjustments to streetcar service, and temporary closures of key walking and bicycling routes. Additional ~~P~~*p*otential short-term impacts to EJ populations from construction of the Project could include temporary exposure to noise, exhaust, and dust emissions and the release of hazardous materials from spills and leaks or

[59] *Ibid.*

[60] *Enrolled House Bill 2007: https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2007/Enrolled*

exposure to existing contamination that was previously not exposed.~~; temporary disruptions in transit service, including changes to normal bus routes and schedules; temporary closures of key walking and biking routes; and potential short-term interruptions in utility service~~.

Page 39, Section 3.6.2.3. The introduction paragraph and first bullet in the mitigation section are changed to read:

~~Potential impacts to minority or low-income populations would be avoided or minimized by the following mitigation measures.~~ *While these potential short-term, unavoidable, adverse impacts to EJ populations would be small and not rise to the level of "disproportionately high and adverse effects" as defined in Executive Order 12898, ODOT will implement the following mitigation measures to ensure potential adverse impacts to EJ populations are avoided or minimized:*

- *ODOT will* ~~would require~~ *monitor construction contractors to* ~~follow~~ *ensure ODOT standard construction specifications* ~~that limit~~ *are followed to* limit vehicle and equipment idling time, prevent dirt and other materials from being tracked out of construction zones on vehicle tires, ~~and~~ minimize the release of fugitive dust, *and prevent the release of hazardous materials from spills and leaks or exposure to existing contamination* to address the potential for short-term exposure of EJ populations to noise, exhaust, ~~*and*~~ dust emissions, *and hazardous materials during construction of the Project.*

Page 40, Section 3.6.2.3. The following paragraph is added:

> *In addition to the mitigation described above, DBE and Workforce program for the Project will maximize DBE contracting opportunities, including for small and minority-owned businesses*.

Pages 40 and 41, Section 3.7.1. The final two paragraphs are deleted as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

~~Some Project work may also occur in, or near, the Willamette River. A portion of the Willamette River, downstream from proposed Project in-water work, is within the Portland Harbor Cleanup Superfund site, an area of past contamination. The portion of the river where in-water work would occur is within an additional study area, identified as the Lower Downtown Reach, in which ODOT and the City of Portland have conducted additional contaminated sediment investigations.~~

~~Preliminary sediment sampling was conducted in April 2018 between River Miles 12.1 and 12.2 of the Willamette River, which includes the area of potential in-water work for the Project. Several contaminants were identified in this area including some that exceed Oregon Department of Environmental Quality (DEQ) screening levels for certain metals and pesticides, polychlorinated biphenyls (PCBs), phthalates, and polycyclic aromatic hydrocarbons. The preliminary conclusion based on recent sampling indicates that contamination in the River Mile 12.1 to 12.2 area is not substantial, and these results "do not alter Oregon Department of~~

~~Environmental Quality's (DEQ's) prior conclusion that this subarea is of low priority, and additional investigation appears unwarranted at this time." (GSI Water Solutions Inc. 2018). These preliminary sampling results are undergoing DEQ review.~~

Page 41, Section 3.7.2.2. The second paragraph in the section is deleted as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

~~The Build Alternative would include in-water work to install up to 11 columns beneath the I-5 highway at, or near, the OHWM, and up to six columns supporting the SB I-5. This action is not expected to impact the Portland Harbor Superfund Site. Impacts on water quality are addressed in the Water Resources section.~~

Page 42, Section 3.7.2.3. The last paragraph in this section is changed to read:

Implementation of ~~the~~ *these* mitigation measures ~~listed above~~ ~~would~~ *will* help ensure that *substantial* adverse effects from *spills or releases of* hazardous materials ~~would~~ *will* not occur during construction ~~and operation~~ of the ~~Build Alternative~~ *Project*. ~~Additional mitigation measures related to water resources are provided in Section 3.16.2.3.~~

Page 45, Section 3.8.2.3. The second and third paragraphs are changed to read:

ODOT construction specifications and BMPs *identified in the ODOT Noise Manual (ODOT 2011)* ~~would~~ *will* be followed to help minimize high noise levels during construction. Effect avoidance and minimization measures for potential construction-related vibration ~~would~~ *will* include pre- and post-construction assessments, on-site monitoring during construction, and stop work authorization. If a resource is anticipated to be 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~~ *will* be prepared to make the applicable repairs.

ODOT and FHWA have developed a *Project-specific* PA in consultation with the Oregon SHPO and other consulting parties to avoid and/or minimize the potential for Project-related vibration to ~~seven~~ historic properties, as the extent of these potential effects ~~would~~ *will* not be known prior to the implementation of the ~~Build Alternative (Appendix D [signature in progress; PA to be incorporated following signature])~~ Project. *If a resource is anticipated to be affected by vibration exceeding 0.2 inches per second for transient vibration and 0.1 inch per second for continuous vibration at a distance within 500 feet of the source, a treatment plan for repairs will be prepared, consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties,*[61] *and thus consistent with the requirements of 36 CFR 800.5 (b).* With the execution of the PA, and the avoidance and effect minimization measures contained therein ~~and in the Historic Resources Technical Report (ODOT 2019i)~~, the Project ~~would~~ *will* result in no adverse

[61] *Secretary of the Interior's Standards for the Treatment of Historic Properties: https://www.nps.gov/history/local-law/arch_stnds_8_2.htm*

effects to the characteristics that make historic properties within the API eligible for the NRHP. ~~Thus, a finding of "no historic properties adversely effected" pursuant to 36 CFR 800.5(b) is appropriate. Additional details on the effects assessment for historic properties are included in the Historic Resources Technical Report (ODOT 2019i).~~

Page 51, Section 3.9.2.3. The section describing mitigation for land use impacts is changed to read:

Because the ~~Build Alternative~~ *Project* complies with the City of Portland comprehensive plan, the *Metro* RTP, and applicable state land use laws, plans, and policies, no ~~additional~~ avoidance, minimization, or mitigation measures *related to land use* are proposed.

In general, the City of Portland zoning code (Title 33, Planning and Zoning) does not apply to the Project because most improvements will be made in public ROW. Title 33 does not apply to public ROW, except within design districts and certain overlay zones. Because most of the Project Area is within the Lloyd Subdistrict of the Central City Plan District design overlay zone, non-standard Project improvements "such as streetlights, street furniture, planters, public art, sidewalk and street paving materials, and landscaping" that the City Engineer has not approved will be subject to design review. Design review will also be required when a proposal in an overlay zone is "considered to have major design significance to the City."

~~If the Build Alternative~~ *Where the Project* is determined to be subject to the design overlay zone requirements of the Lloyd Subdistrict of the Central City Plan District, or require review under the Willamette River Greenway provisions of the City of Portland zoning code*, or if the City Council considers the Project to have a major design significance to the City*, adjustments to its design may be necessary. Such design adjustments would be intended to help the Project comply with land use regulations, thus revisions to do so would not be expected to have adverse impacts on land use. *ODOT will secure design approval of improvements that it constructs that are subject to design review. All Project-related property acquisition and business relocation activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (49 CFR 24), Oregon Revised Statute (ORS) 35, and the ODOT Right of Way Manual (2016a) to ensure fair and equitable treatment of all persons affected by the Project.*

As of the date of issuance of the Revised EA, the Oregon Transportation Commission (OTC) has not made a final decision approving the design of the Project for purposes of OAR 731-015-0075(7). OTC's final design approval under OAR 731-015-0075(7) is anticipated to be made based on FHWA's approval of the Revised EA, evidenced by its issuance of the Revised EA. After the Revised EA is issued, ODOT will comply with OAR 731-015-0075(7) by presenting approval of the design of the Project to the OTC at a future meeting for final adoption of the design and supporting findings of compatibility. A notice of the approval will be mailed to interested parties.

Regarding OAR 731-015-0075(8), some Project improvements may require City design review and permits. ODOT will obtain any design review approvals or permits prior to construction.

Page 54, Section 3.10.2.3. The following paragraph is added below the first bullet list:

ODOT will also conduct an additional construction-phase noise analysis during the future design phase of the Project, when greater design and construction method details are defined. As required by the City of Portland, ODOT will follow the City's Noise Review Board process to obtain the required noise variance approvals for construction work and address noise concerns.

Page 55, Section 3.10.2.3. The final paragraph in the section on noise mitigation is changed to read:

Full details of the noise wall mitigation analysis, including figures depicting the locations of proposed mitigation features, are presented in Appendix G in the Noise Study Technical Report. Further evaluation ~~of feasibility and reasonableness~~ of these two noise walls *will* ~~would~~ be made during final design, including a more detailed analysis of constructability~~, as well as the potential visual impacts of these walls on affected property owners and residents. A final decision of the installation of the abatement measure(s) will be made upon completion of the Project's final design, a cost-estimating process, constructability review, and the public involvement process. For more information on these two recommended noise walls, see the Noise Technical Report (ODOT 2019g).~~ *In compliance with the ODOT Noise Manual,*[62] *construction of the noise walls will depend on the outcome of a public engagement process and vote by eligible property owners and tenants (including Portland Public Schools and the City of Portland Bureau of Parks and Recreation) who would benefit from the wall. The public involvement process will include polling (i.e., surveying) residents and property owners that would benefit from installation of a proposed noise wall to determine their viewpoints concerning the proposed noise abatement measure (i.e., the noise wall). After the results of the noise abatement survey have been documented, and if the noise abatement evaluation results in a positive decision, the proposed noise wall will be incorporated into the Project design. Through this process, affected receptors have the opportunity to play a direct role in the decision of whether to construct the noise wall.*

Page 58, Section 3.11.2.3. The fourth, seventh, and final mitigation bullets are changed to read:

- Work with design and construction to identify ways to minimize or mitigate impacts to individual properties through design and/or construction staging, ~~such as through BMPs,~~ temporary traffic control plans, and temporary access plans.

- When the design level is more advanced, *ODOT, in coordination with FHWA, will* revisit whether construction activities would have an effect on adjacent properties and businesses with sensitive patients, medical equipment, or machinery~~.~~*, including hospitals, elderly or psychiatric patient care services, and emergency response units. If additional impacts are identified, they will be appropriately mitigated including, if required, acquisition and*

[62] *ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf*

relocation in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

- Conduct early discussions with ~~Oregon Department of State Lands and~~ Union Pacific Railroad Company regarding ROW needs and processes for work near their lands~~, including new and existing structures over the Union Pacific Rail Corridor~~.

Pages 60 through 62, Section 3.12.2.2. The portions of the environmental consequences discussion for the Build Alternative related to the Vera Katz Eastbank Esplanade and the Willamette River Greenway Trail have been revised as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

Vera Katz Eastbank Esplanade

The Build Alternative *would not include any actions that would constitute a Section 4(f) use of the Vera Katz Eastbank Esplanade. Project-related construction activity and operation-related traffic noise would occur on the existing I-5 mainline east of the Vera Katz East Bank Esplanade. However, these activities would not result in a substantial increase in perceptible noise such that a constructive use would occur. A receptor near the Eastbank Esplanade was added to the noise analysis, and modeling indicated that the Build Alternative would result in an increase in noise at the Esplanade of 1 dBA under future (2045) conditions. The 1 dBA difference between the existing (2017) traffic noise level (71 dBA) and the Build Alternative (2045) noise level (72 dBA) is not perceivable by the human ear, so the noise environment will not be noticeably changed by the Project (Appendix F).* ~~could require temporary occupation of segments of the Vera Katz Eastbank Esplanade during the construction phase of the Project to ensure public safety for park visitors or to accommodate equipment staging and/or access. Portions of the Eastbank Esplanade, primarily along the western edge of I-5 and between the Steel Bridge to the north and the overwater portion of the Esplanade to the south, could periodically be closed to users during Project construction. Temporary occupancy of a Section 4(f) property (e.g., Vera Katz Eastbank Esplanade) to conduct construction activities is permitted when all of the conditions listed in 23 CFR 774.13(d) are satisfied. 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.~~

~~The Build Alternative would also require the acquisition of a 0.11-acre permanent surface easement from the Eastbank Esplanade along the western edge of the SB ramp from I-5 to I-84. The easement would be needed to provide potential intermittent access to the ramp by ODOT maintenance crews. Temporary, periodic closures of the park within the boundaries of the permanent easement may be required to accommodate ODOT maintenance activities.~~

~~The acquisition of a permanent surface easement across the Eastbank Esplanade would constitute a Section 4(f) use of the property because that portion of the trail would be permanently incorporated into the Build Alternative. By providing detours around closed areas of the park during maintenance activities, the features, attributes, and activities that qualify the~~

~~property for protection under Section 4(f) would not be adversely affected by acquisition of the permanent surface easement. Because of this, the permanent surface easement constitutes a Section 4(f) *de minimus* use of the Eastbank Esplanade.~~

~~ODOT would execute an intergovernmental agreement with the City of Portland prior to preparing the NEPA decision document for the Project. The agreement would designate a temporary detour route that allows for the continued use of the park during Project construction thus ensuring that ODOT fulfills the five temporary occupancy conditions outlined in 23 CFR 774.13(d) during Project construction. In this intergovernmental agreement, ODOT would also agree to minimize impacts to park users from the permanent easement when it temporarily closes the Esplanade to perform maintenance on the structure after completion of the Project's construction.~~

The Build Alternative would not result in direct or indirect noise impacts to the Vera Katz Eastbank Esplanade such that the protected activities, features, or attributes that qualify the park for protection under Section 4(f) would be substantially impaired. *No mitigation is recommended for this location because it is not cost reasonable based on usage.*

Willamette River Greenway Trail

The Build Alternative would *not include any actions that would constitute a Section 4(f) use of the Willamette River Greenway Trail.* ~~also require the temporary occupation of segments of the Willamette River Greenway Trail along the western edge of I-5 and between the Steel Bridge to the north and the overwater portion of the trail to the south to ensure public safety or to accommodate equipment staging and/or access. A permanent surface easement across the trail near the western edge of the SB ramp from I-5 to I-84 would also be acquired to provide long-term access to ODOT maintenance crews.~~

~~The acquisition of a permanent surface easement across the Willamette River Greenway Trail would constitute a Section 4(f) use of the property because that portion of the trail would be permanently incorporated into the Build Alternative. By providing detours around closed areas of the park during maintenance activities, the features, attributes, and activities that qualify the property for protection under Section 4(f) would not be adversely affected by acquisition of the permanent surface easement. Because of this, the permanent surface easement constitutes a Section 4(f) *de minimis* use of the Willamette River Greenway Trail.~~

~~In a manner similar to what is described above for the Eastbank Esplanade, ODOT would execute an intergovernmental agreement with the City of Portland prior to preparing the NEPA decision document for the project. The agreement would designate a temporary detour route that allows for the continued use of the trail during Project construction thus ensuring that ODOT fulfills the five temporary occupancy conditions outlined in 23 CFR 774.13(d) during Project construction. In this intergovernmental agreement, ODOT would also agree to minimize impacts to trail users from the permanent easement when it temporarily closes the trail to perform maintenance on the structure after completion of the Project's construction.~~

While construction *activities* and ~~facility~~ operation-related traffic noise would occur *on the existing I-5 mainline*~~in proximity to the~~ east ~~perimeter~~ of the Willamette River Greenway Trail,

the Build Alternative would not result in noise impacts such that a constructive use would occur. *A receptor near the Eastbank Esplanade and Willamette River Greenway Trail was added to the noise analysis, and modeling indicated that the Build Alternative would result in an increase in noise at the Esplanade of 1 dBA under future (2045) conditions. The 1 dBA difference between the existing (2017) traffic noise level (71 dBA) and the Build Alternative (2045) noise level (72 dBA) is not perceivable by the human ear, so the noise environment will not be noticeably changed by the Project (Appendix F).* Similarly, the Build Alternative would not result in direct or indirect noise impacts to the Willamette River Greenway Trail such that the protected activities, features, or attributes that qualify the trail for protection under Section 4(f) would be substantially impaired.

Page 62-63, Section 3.12.2.3. The section describing mitigation measures for potential Section 4(f) impacts is changed to read:

- ODOT *will* ~~would require~~ *monitor* construction contractors to ~~follow~~ *ensure* ODOT specifications and *noise reduction* BMPs ~~identified~~ in the ODOT Noise Manual (ODOT 2011) *are followed* to minimize high noise levels in the vicinity of Section 4(f) properties during construction (ODOT 2019b). These *will* ~~would~~ be similar to the mitigation measures described in the Noise section above.
- ODOT *will* ~~would~~ coordinate with FHWA and the Oregon SHPO to implement the avoidance and minimization conditions contained in the Historic Resources Technical Report (ODOT 2019c) and the *Project-specific* PA described in Section 3.8.2.3 of the EA to avoid and/or minimize the potential for Project-related vibration impacts to the TraveLodge at the Coliseum.
- ~~ODOT would execute an intergovernmental agreement between ODOT and the City of Portland to minimize impacts to the Eastlake Esplanade and Willamette River Greenway Trail from temporary closures during construction and the acquisition of the permanent surface easements. The public would have an opportunity to review and comment on the agreement, as well as the written concurrence received from the officials with jurisdiction over the property eligible for Section 4(f) protection (i.e., City of Portland Parks and Recreation).~~
- ~~ODOT would consider and further evaluate during final design the recommendations in the ODOT *Noise Technical Report* (ODOT 2019g) that~~ *ODOT is committed to constructing* noise walls ~~be considered~~ in two locations along the eastern edge of the I-5 that *will* ~~would~~ shield Lillis-Albina Park and the TraveLodge at the Coliseum ~~from traffic noise.~~*, provided approval from affected noise receptors (including Portland Public Schools and the City of Portland Bureau of Parks and Recreation) is obtained through the public involvement process as required by the ODOT Noise Manual.*[63]

[63] *ODOT Noise Manual: https://www.oregon.gov/ODOT/GeoEnvironmental/Docs_Environmental/Noise-Manual.pdf*

Page 67, Section 3.14.1.2. This section is changed to read:

"Active Transportation" refers to human-powered, self-propelled travel and includes walking, bicycling, and mobility assistance devices (e.g., wheelchairs). Within the API, major active transportation destinations include the Moda Center, Veterans Memorial Coliseum, Rose Quarter Transit Center, and businesses along the Broadway/Weidler and Vancouver/Williams couplets. *The API is also a City-designated Pedestrian District. City Policy 9.6, "Transportation strategy for people movement" in the City's 2035 Comprehensive Plan directs that pedestrian comfort and mobility take precedence over competing multimodal needs. This Policy prioritizes walking and biking as the top two modes for people movement within the transportation system.*

The majority of the API has existing sidewalk coverage, with less than 10 percent of the Project Area having gaps in sidewalk coverage. Formalized bikeways exist on most major streets, generally consisting of a mix of conventional bike lanes and neighborhood greenways. The Vera Katz Eastbank Esplanade is a shared-use path serving walkers and bikers traveling to, from, and through the API. *The streets in the API include numerous sections that do not meet the City's pedestrian crossing spacing standards, including the Major City Walkways of N Vancouver, N Williams, and N Lloyd.*

Most signalized intersections include infrastructure that serves pedestrians, including crosswalks, pedestrian signal heads on all corners where crossings are permitted, pedestrian push buttons at crosswalks, and dual curb ramps with detectable warning strips at most corners. *Not all signals include temporal separation of bicycle and pedestrian movements from vehicular turn movements. This is a critical element of intersection design for pedestrian safety and addressing it is a high priority for the City.*

Page 68, Section 3.14.2.1. The second and third paragraphs in this section (under "Build Alternative") are changed to read:

Construction-related impacts would include temporary bus stop closures or relocations, bus route detours, and changes to streetcar operations. Temporary bus stop closures and relocations could require some passengers to walk farther to reach a bus stop. Bus route detours could result in increased bus travel times and could also result in closure or relocation of bus stops outside of construction areas. Streetcar operations would continue during construction either through:

- temporary tracks (including on a temporary cover structure over I-5), or
- through use of a bus bridge that would require streetcar passengers to transfer to a bus to pass through areas of active construction within the API *and could include construction of new turnbacks on the west and east side of the Broadway/Weidler interchange.*

With temporary tracks, streetcar tracks would be constructed as part of the temporary structures that would be constructed to carry the east-west bicycle, pedestrian, and motor vehicle trips through the Broadway/Weidler interchange.

The term "bus bridge" refers to temporarily replacing rail transit service with buses serving the same stations during a rail service disruption; streetcar users would transfer to a bus to travel through the Project Area and then transfer back to a streetcar to complete their trip. With a bus bridge, streetcar riders would be offloaded from the cars and transferred onto buses to shuttle them through the construction limits. Temporary track turnouts, where the streetcar can reverse direction, would be installed at the east and west end of the Project. East of the Project, the temporary track turnout would be located on NE 1st Avenue between NE Broadway and NE Weidler Street. West of the Project, the temporary track turnout would be located at the intersection of N Ross Avenue and N Broadway.

Maintaining streetcar service may also require a combination of tracks on temporary structures over I-5 as well as bus bridges. Streetcar operations through the Project construction work zone are expected to be interrupted for a 2- to 3-year period.

When Project construction is complete, the streetcar would operate in the same alignment as what currently exists on N/NE Broadway and N/NE Weidler Street.

Page 69, Section 3.14.2.1. The mitigation section is changed to read:

The *Project* ~~Build Alternative~~ is anticipated to increase bus travel times *under operational conditions* for some routes during the morning peak period. However, *continued implementation* ~~Implementing the relevant elements~~ of TriMet's Enhanced Transit Corridors Plan *(City of Portland 2018a) will help* ~~could~~ reduce bus and streetcar travel times, *including within the API*. The Enhanced Transit Corridors Plan ~~projects~~ include*s* a range of capital and operational treatments throughout the system to improve transit capacity, reliability, and travel time. Within the API, these treatments include business access transit lanes, far-side bus stops, street/traffic modifications, curb extensions, and transit signal priority

~~To address short-term impacts during construction,~~ *ODOT will continue to address short-term impacts during construction in close coordination with TriMet and Portland Streetcar in the future design phase to maintain transit and streetcar service connections through the Project Area, including temporary bus detours during for the duration of the construction period to avoid multiple temporary changes for a single bus route.* ~~TriMet has indicated that it may consider implementing bus route detours around the impacted area for the duration of the construction period to avoid multiple temporary changes for a single bus route. Discussion and negotiations would determine accommodations needed for streetcar service and comparable transit connections.~~ *Transit demand and agency collaboration will determine accommodations needed for transit and streetcar service. This coordination and implementation of measures to maintain transit and streetcar service connections through the Project Area will ensure that substantial adverse effects to transit and streetcar operations will not occur during Project construction.*

Page 69, Section 3.14.2.2. The third paragraph in this section is changed to read:

Under the Build Alternative, conditions for pedestrians and bicyclists would improve in the API due to increased route options, ~~improved ramp terminal~~ *additional temporal separation from turning movements at* intersections, physical separation from motorized users, and reduced

complexity of intersections. For additional information on impacts to active transportation under the Build Alternative, see the Active Transportation Technical Report (ODOT 2019o).

Page 70-71, Section 3.14.2.2. The section discussing "Physical Separation of Motorized and Non-Motorized Use" is changed to read:

Physical separation between motorized and non-motorized *roadway* users would increase compared to the No-Build Alternative with the following improvements.

- Transformation of N Williams between N Ramsay and Broadway from a standard road with on street parking, to a street dedicated to transit, bicycles, and pedestrians only
- Development of a new 36-foot-wide multi-use path on N Williams between Broadway and NE Weidler
- Development of the new Clackamas bicycle and pedestrian bridge over I-5
- Creation of new space provided by the highway covers for wider, separated bike facilities and sidewalks on Broadway and NE Weidler
- Development of protected bike lanes on N/NE Broadway and N/NE Weidler (as described for the No-Build Alternative)[64]
- *Filling sidewalk gaps in the area of construction.*

Page 71, Section 3.14.2.2. The section discussing "Reduced Complexity of Intersections" is changed to read:

Conditions in the API would also be improved by ~~reduction in the complexity~~ *reducing the "complexity"* of intersections*, as defined by the presence of one or more of the elements that introduce conflict points with people walking and biking (e.g., narrow refuge islands, crossing more than six travel lanes at once, or non-standard roadway geometry).* Such improvements*, (e.g., providing physical and temporal separation between modes, and standardizing geometry) could encourage more walking and biking in the area and* could allow walking and biking activity to be more evenly distributed throughout the API.

Sidewalks, crossings, *signals with temporal separation of pedestrian and right turn phases,* and other active transportation infrastructure along new or reconstructed streets would be built (or rebuilt) according to applicable design standards. These enhancements would reduce the degree of intersection complexity, particularly for pedestrians, as compared to the No-Build Alternative. *For example, including separate pedestrian and vehicle phases at most intersections would reduce conflicts between modes.* These enhancements would generally concentrate along N/NE Broadway, N/NE Weidler, N Wheeler, Williams, Vancouver, and the new Hancock-Dixon connector. While existing sidewalk gaps would be filled on portions of N

[64] The potential for reduced motor vehicle/bicycle conflicts (e.g., "right-hook" collisions) at intersections and driveways as a result of protected bike lanes on N/NE Broadway and N/NE Weidler would depend on final design.

Wheeler and N Williams, some crossing gaps (including on Major City Walkways) would remain in portions of the API, *outside of the area of construction.*

Page 71, Section 3.14.2.2. The first paragraph discussing "Bicycle and Pedestrian Stress Levels" is changed to read:

Bicycle and pedestrian analyses studying "levels of traffic stress" were conducted for the 13 existing Build Area intersections. Utilizing readily available GIS data, ODOT conducted analysis at the intersection level following ODOT's Analysis Procedure Manual methodology (ODOT 2016b). See the Active Transportation Technical Report for more detail on the methodology.

With the Build Alternative, three of the *13* studied intersections would improve from "exceeding tolerable stress levels" to "meeting tolerable stress levels" for pedestrians. *Similar to the No-Build Alternative, most intersections with higher-stress conditions would be concentrated along the N/NE Broadway corridor. Under the Build Alternative, pedestrian LTS scores would improve at three intersections (N Williams at N/NE Hancock, N Hancock at N Flint, N Wheeler/N Williams [formerly NE Wheeler] at N Ramsey). The addition of signalized intersection control would improve crossing conditions at the intersections along N/NE Hancock.* ~~*These three improved intersections are located at intersections with Local Streets.*~~ Pedestrian stress levels would increase at the intersection of N/NE Weidler and N Williams~~; however, this is the~~ *as a* result of the relocation of the I-5 SB on-ramp from N Ramsay *to Weidler. The two intersections impacted by the I-5 SB entrance ramp are located along the principal pedestrian corridor connecting Downtown and the Broadway Bridge with the Lloyd and Irvington Neighborhood. At these crossings, temporally separate walk/turn phases should be considered during the Project's design phase. Overall, fewer intersections under the Build Alternative would exceed thresholds for levels of stress when compared with the No-Build Alternative.* Overall, the pedestrian network level of stress would improve.

~~All studied intersections would continue to operate at tolerable stress levels for bicyclists.~~ With the Build Alternative*,* stress levels *for people biking through* ~~bicyclists at~~ API *study* intersections would be similar to the No-Build Alternative, *largely because the intersections include signalized traffic control. However, characteristics would vary at each intersection, and other factors (e.g., intersection complexity) could further influence a user's perception of safety and comfort. See the Local Street Multimodal Risk/Safety Assessment in the Transportation Safety Technical Report (ODOT 2019c) for further details.*

Page 71, Section 3.14.2.2. The following text is added after the third sentence in the second paragraph under "Bicycle and Pedestrian Stress Levels."

In addition, the Project would create conditions that make biking more attractive than driving for most trips of approximately 3 miles or less in compliance with Policy 9.20 "Bicycle transportation."

Page 72, Section 3.14.2.2. The final paragraph under "Short-Term Construction Impacts" is changed to read:

Construction activities near the Moda Center would result in few or no construction impacts along the detour route because the Broadway/Weidler corridor improvements would already be complete. Construction of the Clackamas bicycle and pedestrian bridge could require detours or produce delays for bicyclists along Williams between N Ramsay and N/NE Weidler and near the NE 2nd/NE Clackamas intersection. ~~Additionally, the Eastbank Esplanade could be temporarily closed during modifications to the off-ramp linking I-5 SB with I-84 EB, which could require out-of-direction travel for non-motorized users.~~

Page 72, Section 3.14.2.2. The text and bullets under "Mitigation" describing the priorities of the Temporary Traffic Control Plan, are changed to read:

A Temporary Traffic Control Plan ~~would~~ *will* be developed *following the City of Portland's Traffic Design Manual Volume 2: Temporary Traffic Control (City of Portland 2019)* to minimize construction-phase impacts to people who walk ~~and ride bicycles~~*, bike, and roll. The following City of Portland priorities will guide the development of the Temporary Traffic Control Plan* ~~by addressing the following priorities~~:

- *Use the City of Portland guidelines identified in Portland's Neighborhood Greenways Assessment Report (City of Portland 2015) for both daily and hourly traffic volumes to limit vehicle volumes on bikeways.*
- *Monitor and employ traffic diversions to maintain recommended hourly and daily automobile volumes on existing routes and other corridors that serve as bicycle detour routes.*
- *Prohibit established neighborhood greenways from being used as formal motor vehicle detour routes.*
- *Ensure that conditions for people walking, biking, and rolling through the area will remain safe and comfortable (consistent with City policies) by providing physical separation from vehicular traffic and implementing traffic calming measures on bikeway detour routes also used by vehicles.*
- Design detour routes for walking and biking that minimize out-of-direction travel.
- ~~Design temporary detour facilities to provide separation from traffic and meet City of Portland Standards.~~
- *Design detour routes for walking that maintain a robust and complete sidewalk network, without gaps in facilities.*
- Where detour routes for bikeways ~~would~~ also carry detouring vehicular traffic*, as may be the case on Tillamook,* identify locations for traffic calming measures*–including traffic diversion–*to ensure the speed and volumes of traffic do not exceed the Neighborhood Greenway thresholds *for both daily and hourly motor vehicle traffic (City of Portland 2015). Established Neighborhood Greenways should not be used as formal motor vehicle detour routes.*

- *Include design details for temporary pedestrian and bicycle facilities (e.g., facility typologies, widths, and signage) in the Temporary Traffic Control Plan.*
- *Include details for maintaining pedestrian and bicycle movement throughout the Project's entire construction timeline in the Temporary Traffic Control Plan.*

Intersection design is a critical component of enhancing pedestrian and bicycle safety in the ~~Build Alternative~~ *Project Area*, and the ~~designs for the~~ impacted intersections *on the local street system* in the API ~~will strive for low stress levels for bicycle and pedestrian traffic.~~ *will be designed to meet the City of Portland bicycle and pedestrian design standards*. *The Project design will reduce stressful conditions for people who walk, bike, and roll at all Project intersections using best available design practices in accordance with City of Portland approval.*

~~The intersection designs would incorporate the following priorities, w~~*W*here applicable *and in compliance with the City of Portland bicycle and pedestrian standards, the following best practices will be considered in the intersection designs:*

- Address potential bicycle/motor vehicle conflicts through proactive signing, striping, and signal phasing. Provide physical and temporal separation between modes at all signalized intersections ~~(i.e., ramp locations, double turn lanes, weaving bus, and bike lanes).~~*, including the intersection of Wheeler and Vancouver*.
- *Include signal control of the slip ramp at the intersection of the SB off-ramp at Broadway to prohibit vehicles from turning right across the crosswalk on a red light.*
- Review, and remove if necessary, adjacent on-street parking to improve stopping and intersection sight distance. Follow the City of Portland's Vision Clearance Guidelines (City of Portland 2020b) for uncontrolled intersections.
- ~~Verify~~ *Ensure* that intersection turning radii are consistent with desired interactions between motorists~~, pedestrians, and bicyclists~~ *and people who walk, bike, and roll*. The turn radii and corresponding design speed ~~would~~ *will* be consistent with the appropriate design vehicle.
- ~~Verify~~ *Ensure that* signal timing provides sufficient crossing time. *Include a Leading Pedestrian Interval where possible, to eliminate conflict points at all crossings.*
- Provide *adequately scaled* two-stage bicycle turn boxes for left-turn movements at locations where bicycle routes intersect.
- Provide protection and warning for bicycle and pedestrian movements during *"*contraflow*"* operations*, when bicycles and pedestrians and motor vehicles are travelling in opposite directions on the same street*.
- *To minimize delay for people cycling through the Broadway/Weidler corridor, consider timing signals for the pace of bicycle travel.*

While approximately 800 feet of existing sidewalk gaps along portions of N Wheeler and N Williams (formerly NE Wheeler segment) will be filled, other existing sidewalk gaps

(approximately 2,600 feet) within the API will remain. During the design phase, ODOT will address the remaining gaps in the sidewalk network, such as at the intersections of Weidler with Vancouver, and cross spacing gaps within the area of construction. Where feasible, the remaining gaps in the sidewalk network will be filled during construction of the Project.

The Temporary Traffic Control Plan ~~would~~ *will* ensure that the temporary facilities provide fully accessible, safe, and comfortable routes for people ~~walking and biking~~ *who walk, bike, and roll* throughout the API over the course of construction *and do not depress the levels of active transportation in the area. During construction, the Project will meet the highest level of accommodation for people who walk, bike, or roll. The Project will also fill gaps in the sidewalk network with a focus on establishing and maintaining a robust pedestrian network during construction.*

Page 73-74, Section 3.14.2.3. The section describing mitigation best practices for transportation safety is changed to read:

The Build Alternative would reduce the crash rate on I-5, providing a safety benefit to the I-5 corridor. Numerous improvements to the local street network would increase safety for all road uses by providing safer connections for people who walk, bike, and roll. While no mitigation is proposed, ~~Safety must be a consideration both during construction and for the long-term operation of the Project.~~ *the following best practices will be considered for the local street system to maximize short-term and long-term safety:*

~~Best practices that can maximize both short-term and long-term safety are discussed below:~~

- Apply best practice design treatments*, such as those recommended by the Portland Bureau of Transportation (PBOT), the National Association of City Transportation Officials (NACTO), and the American Association of Highway and Transportation Officials (AASHTO), to* integrate transit vehicles, separated bicycle lanes, pedestrians, and motorists on the local road system*,* specifically as this relates to the potential risks associated with right turn movements or other potential conflict points between modes.

  ~~The Oregon Bicycle and Pedestrian Plan and the City of Portland's Portland Bicycle Plan for 2030 provide example best practices for transportation facility design that should be considered for this Project.~~

  - ~~Oregon Bicycle and Pedestrian Plan https://www.oregon.gov/ODOT/Planning/Pages/Plans/aspx#accordian-collapse-ctl00_ctl00_ctl22_g_85545598_99ee_4a1b_acd0_f0bee524051a_ctl03~~
  - ~~Portland Bicycle Plan for 2030 https://www.portalndoregon.gov/transportation/article/289122~~

- *The following documents provide example best practices for transportation facility design for this Project.*
  - *Portland Protected Bicycle Lane Planning and Design Guide (see: https://drive.google.com/file/d/1e65h0K7ylDYKR6txMWgtmqh4Q7X22d8W/view)*

- *NACTO Urban Bikeway Design Guide (see: https://nacto.org/publication/urban-bikeway-design-guide/)*
- *AASHTO Guidance (see: https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/aashto_guidancecfm.cfm)*
- *Portland Pedestrian Design Guide (see: https://www.portlandoregon.gov/article/437808)*
- *Portland Traffic Design Manual (see: https://www.portlandoregon.gov/transportation/article/648243)*

- Construction and traffic management plans *developed for the Project will* ~~should consider~~ *include* best practices ~~and opportunities~~ *for work zone safety* to reduce risk to construction workers and the traveling public. In Oregon between 2011 and 2015, there were an average of 488 work-zone-related crashes per year. The distribution of crash severity in work zones vs. non-work zones is very similar; however, there are slightly more fatal crashes in a work zone. *Best practices from the following ODOT resources will be used for work zone safety within the API:* ~~ODOT provides a variety of resources that describe best practices for work zone safety, including the following:~~
  - Traffic Control Plan Design Manual *(see: https://www.oregon.gov/odot/Engineering/Pages/TCP-Manual.aspx*)
  - Oregon Temporary Traffic Control Handbook *(see: https://www.oregon.gov/odot/Engineering/Pages/OTTCH.aspx*)
  - Work Zone Traffic Analysis Manual *(see: https://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/Work-Zone-Analysis-Manual.pdf*)
  - Transportation Management Plan Project-Level Guidance Manual *(see: https://www.oregon.gov/ODOT/Engineering/Docs_TrafficEng/TMP-Manual.pdf*)

Page 75, Section 3.14.2.4. The section describing mitigation for short-term construction impacts on traffic is changed to read:

The following mitigation strategies *will* ~~would~~ be ~~considered~~ *implemented by ODOT, as appropriate,* to avoid, minimize, and/or mitigate short-term construction impacts to highway drivers and local street road users in all modes of travel:

- Development of a comprehensive transportation management plan that documents construction staging and schedule, alternate routes for all modes of travel during road closure, and lane closure restrictions as well as transportation management and operation strategies (TMOS). Specific TMOS elements may include public information and outreach to encourage changes in travel behavior, provision of real-time information to road users through the use of an Intelligent Transportation System, and incident/emergency management to detect and remove incidents and restore traffic quickly.

- *In the Broadway/Weidler interchange area, streetcar operations will continue during construction either through temporary tracks or through use of a bus bridge that will require streetcar passengers to transfer to a bus to pass through areas of active construction within the API. With temporary tracks, streetcar tracks will be included on the temporary structures that will be constructed to carry the east-west bicycle, pedestrian, and motor vehicle trips through the Broadway/Weidler corridor. With a bus bridge, streetcar operations will terminate with turn-arounds at the west and east ends of Project construction within the API. A bus or shuttle connection will transfer passengers through the active Project construction area to reconnect with streetcar service.*

- *Extensive TMOS strategies will be developed to minimize traffic disruption to other streets beyond the API. In addition, ODOT will continue to address short-term impacts during construction in close coordination with TriMet and Portland Streetcar in the future design phase to maintain transit and streetcar service connections through the Project Area, including temporary bus detours during for the duration of the construction period to avoid multiple temporary changes for a single bus route. Transit demand and agency collaboration will determine accommodations needed for streetcar service during Project construction. Ongoing discussion and negotiations between ODOT, TriMet, the City of Portland, and Portland Streetcar will determine the specific accommodations needed for streetcar service and comparable bus routes.*

- Event access *will* ~~would~~ be maintained *during construction* with enhanced TMOS strategies before and after events. ~~ODOT~~ *The Project will* ~~would~~ coordinate with the Moda Center, City of Portland, and Oregon Convention Center to avoid traffic disruptions during major events to the extent practicable. ~~The Build Alternative would affect event access.~~ Several post-event circulation options were presented to the Moda Center and City of Portland (owners of the Veterans Memorial Coliseum) as potential mitigation for post-event operations. ODOT will coordinate with the Moda Center and the City to develop appropriate *access and egress routes and* post-event ~~mitigation measures~~ *traffic management plans*.

Page 82, Section 3.16.2.3. The discussion of mitigation for potential impacts to water quality is changed to read:

Potential impacts to water quality during construction *will* ~~would~~ be avoided by ~~requiring~~ *monitoring* contractors to ~~follow~~ *ensure* standard best management and erosion control practices in the ODOT Erosion Control Manual (2005), ODOT Standard Specifications for Construction (2018a), ODOT Boilerplate Special Provisions (2018b), and City of Portland stormwater requirements *are followed*. ~~Additional special provisions to protect water quality and sensitive species in and around areas of proposed in-water work are described in Section 3.3.2.3.~~ *The following measures will be implemented to minimize potential impacts to water resources:*

- *Comply with the requirements of the ODOT Regional 1200-CA National Pollutant Discharge Elimination System permit for all construction runoff, including non-stormwater discharges such as concrete washout water.*

- *Comply with City of Portland Title 10, Erosion and Sediment Control Regulations.*[65]
- *Prepare a Pollution Control Plan and Erosion Control Plan that contain the elements outlined in Sections 00280 and 00290 of the Standard Specifications for Construction (ODOT 2018a) and that meets requirements of all applicable laws and regulations. Measures outlined in these plans will include the following:*
    - *Provide a description of any hazardous products or materials that will be used, including procedures for inventory, storage, handling, and monitoring.*
    - *Prepare a spill containment and control plan with notification procedures, specific clean-up and disposal instructions for different products, quick response containment and clean-up measures that will be available on-site, proposed methods for disposal of spilled materials, and employee training for spill containment.*
    - *Obtain and comply with all required permits and facility approvals for discharges to surface water, storm drains, or sanitary sewers or for land application.*

Page 85, Section 3.17.2.2. The aquatic biology cumulative impacts section is deleted as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

~~3.17.2.2 Aquatic Biology~~

~~The Build Alternative would not be expected to have substantial impacts on habitat and aquatic species. Only a small portion of the Build Alternative would occur in the water where sensitive species are present; therefore, the Build Alternative's contribution to the potential in-water effects of future reasonably foreseeable future actions would not be great.~~

Page 89, Section 3.17.2.13. The first paragraph of the active transportation cumulative impacts section is changed to read:

Cumulative active transportation impacts of past and future actions combined with the Build Alternative include more even distribution of active transportation corridors due to establishment of new active transportation corridors outside of the API and enhance*ment of* the overall attractiveness of walking and biking due to additional connections, increased coverage of lower-stress bikeways, improved sidewalk*s* and pedestrian crossings, and reduced complexity of *most* intersections. *Some of these gains could be tempered by the challenging crossing conditions that would remain at several major intersections and relocated ramp terminals. For example, people walking and biking in the eastbound direction from the Broadway Bridge on N Weidler (a Major City Walkway/Bikeway) would pass through one additional ramp terminal intersection with the relocated I-5 southbound on-ramp at the Weidler and Williams intersection. In addition,*

[65] *Title 10, Erosion and Sediment Control Regulations:* https://www.portlandoregon.gov/citycode/28175

construction-related impacts to key walking and biking routes could temporarily impact access between N/NE Portland and Downtown.

Section 5 Anticipated Permits and Approvals

Page 97, Section 5. Table 5-1 is revised as follows, as a result of the design modification incorporated following the February 2019 publication of the EA and in response to public and agency comments:

Type of Permit/Approval	Permit Required (Y=yes, N=no, P=potentially)	Comments
Access Permit or Temporary Easement	Y	Approximately 1.5 – 2.5 acres of temporary easement for construction work areas, driveway reconnections, and staging.
Archaeology Clearance (SHPO)	Y	Compliance with Section 106.
Endangered Species Act Permits (USFWS, NMFS)	Y	Consultation with NMFS/USFWS.
Floodplain Permits (Local)	Y	Construction activities could occur within the floodplain.
~~U.S. Army Corps of Engineers Permits (Section 10 and/or 404)~~	~~Y~~	~~Excavation would be required in waters of the U.S.~~
~~Oregon Department of State Lands Fill and Removal Permits~~	~~P~~	~~Could be required if the final Project design includes removal or fill in a wetland or waterbody.~~
Historical / Cultural Resources Approval (SHPO, FHWA)	Y	A Programmatic Agreement is required.
Land Use Permits (Local)	Y	Local land use permits would be required.
Local Permits	Y	Local building permits.
Magnuson-Stevens Act clearance (NMFS, USFWS)	Y	Consultation with NMFS; authorization under the FHAP PBO.
Materials Source Permit (DOGAMI)	P	Required if fill would be excavated off-site exceeding 1 acre and/or 5,000 cubic yards of new disturbance.
Stormwater Permit	Y	1200-C permit for construction. ODOT already has this permit.
UST Decommissioning Notification	P	There are numerous USTs within the API. If a UST needs to be decommissioned as part of the Project, a decommissioning notice would be required. This is considered unlikely.
Utility Permits	Y	Utility permits would be required for relocates.

Notes: API = Area of Potential Impact; DEQ = Oregon Department of Environmental Quality; DOGAMI = Oregon Department of Geology and Mineral Industries; FAHP = Federal-Aid Highway Program; FHWA = Federal Highway Administration; NMFS = National Marine Fisheries Service; ODOT = Oregon Department of *Transportation*~~State~~

~~Lands~~; PBO = Programmatic Biological Opinion; SHPO = State Historic Preservation Office; USFWS = U.S. Fish and Wildlife Service; UST = underground storage tank.

Appendices

Appendix F. Mitigation measures summarized in Section 7 of this Revised EA supersede the mitigation measures summarized in Appendix F of the EA. Revisions to mitigation commitments are shown in the preceding sections of this erratum and are not repeated again here.

Appendix G. The written description of Figure 2-2 is changed to read:

Figure 2-2 shows the locations of the proposed auxiliary lanes and shoulder improvements on I-5. One new northbound (NB) auxiliary lane would be added to connect the I-84 westbound onramp to the N Greeley Avenue off-ramp. A new southbound (SB) auxiliary lane would extend the existing auxiliary lane that enters I-5 SB from the N Greeley on-ramp. *South of the I-84 off-ramp, the SB auxiliary lane would be added by narrowing the existing shoulders and re-striping the I-5 mainline in both the NB and SB direction.* The extent of proposed auxiliary lanes and shoulder improvements begin near where I-5 crosses over N Russell Street and extends south to I-84. Figure 2-2 also shows the Project Area.

13. Conclusion

Based on the evaluation of the I-5 Rose Quarter Improvement Project, the Federal Highway Administration has concluded that the Project will not have a significant adverse impact on the human or natural environment. Therefore, an environmental impact statement is not required for this Project.

A Finding of No Significant Impact (FONSI) is included at the beginning of this document. The FONSI affirms that no significant impacts were identified through the environmental analysis performed for this Project.

14. References

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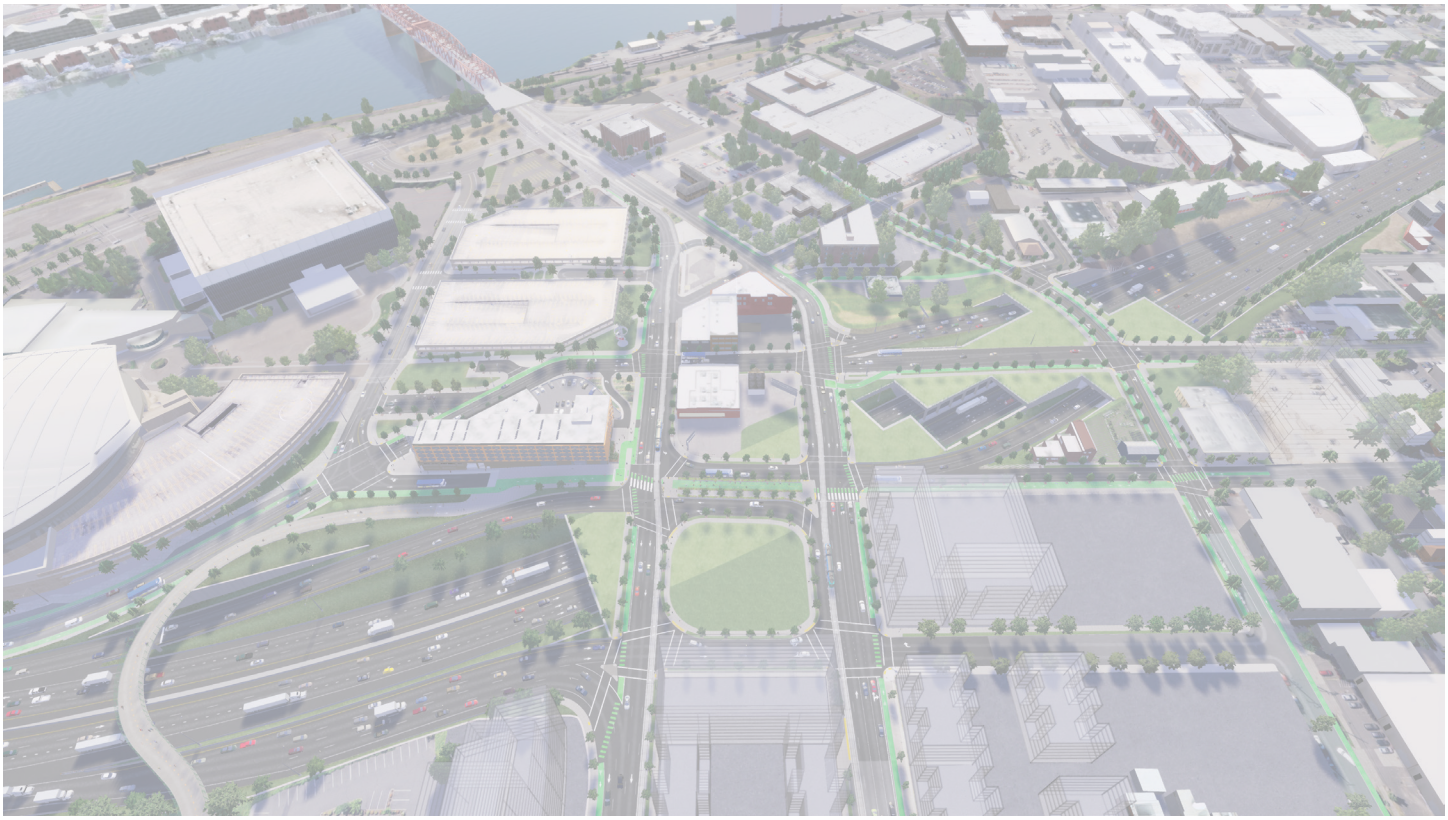

This Environmental Assessment and associated documents were prepared in compliance with Section 508 of the Rehabilitation Act of 1973. Additionally, an appendix containing detailed figure descriptions is provided for reference. Requests for descriptions or clarifications regarding items such as technical drawings or maps should be directed to the ODOT Senior Environmental Project Manager at (503) 731-4804.