

Appendix I

**I-205 Toll Project Social
Resources and Communities
Technical Report**

I-205 Toll Project

Social Resources and Communities Technical Report

February 2023



Urban Mobility
STRATEGY



Oregon
Department
of Transportation

This page intentionally left blank.

Social Resources and Communities Technical Report

February 2023

Prepared for:



Prepared by:



WSP USA
851 SW 6th Avenue, Suite 1600
Portland, OR 97204



Si desea obtener información sobre este proyecto traducida al español, sírvase llamar al 503-731-4128.

Nếu quý vị muốn thông tin về dự án này được dịch sang tiếng Việt, xin gọi 503-731-4128.

Если вы хотите чтобы информация об этом проекте была переведена на русский язык, пожалуйста, звоните по телефону 503-731-4128.

如果您想瞭解這個項目，我們有提供繁體中文翻譯，請致電：503-731-4128

如果您想了解这个项目，我们有提供简体中文翻译，请致电：503-731-4128

For Americans with Disabilities Act or Civil Rights Title VI accommodations, translation/ interpretation services, or more information call 503-731-4128, TTY (800) 735-2900 or Oregon Relay Service 7-1-1.

Table of Contents

| | | |
|----------|---|-----------|
| 1 | Introduction | 1 |
| 2 | Project Alternatives | 2 |
| 2.1 | Project Background and Environmental Review | 2 |
| 2.2 | No Build Alternative | 3 |
| 2.3 | Build Alternative..... | 3 |
| 2.3.1 | Bridge Tolls – Abernethy and Tualatin River Bridges..... | 3 |
| 2.3.2 | Improvements to I-205..... | 7 |
| 2.3.3 | Construction..... | 8 |
| 3 | Regulatory Framework..... | 9 |
| 4 | Methodology | 10 |
| 4.1 | Area of Potential Impact..... | 10 |
| 4.2 | Describing the Affected Environment | 12 |
| 4.2.1 | Defining Social Resources and Communities..... | 12 |
| 4.2.2 | Differences in Technical Data Methodology within the Portland Metropolitan Area | 15 |
| 4.2.3 | Published Sources and Databases..... | 15 |
| 4.2.4 | Contacts and Coordination..... | 16 |
| 4.3 | Effect Assessment Methods..... | 16 |
| 4.3.1 | Short-Term Direct Effect Assessment Methods..... | 16 |
| 4.3.2 | Long-Term Direct Effect Assessment Methods | 16 |
| 4.3.3 | Indirect Effects Assessment Methods..... | 18 |
| 4.4 | Cumulative Impacts Assessment Methods | 18 |
| 4.5 | Mitigation Approach | 18 |
| 5 | Affected Environment | 19 |
| 5.1 | Social Resources..... | 19 |
| 5.1.1 | Social Services Providers | 19 |
| 5.1.2 | Public Services..... | 19 |
| 5.1.3 | Religious Organizations..... | 20 |
| 5.1.4 | Schools..... | 21 |
| 5.1.5 | Parks and Recreational Facilities | 21 |
| 5.1.6 | Medical Facilities | 21 |
| 5.2 | Demographic Communities | 27 |
| 5.2.1 | People Experiencing a Disability | 28 |
| 5.2.2 | Older Adults (65+) | 28 |
| 5.2.3 | Children (18 and under)..... | 28 |
| 5.2.4 | Limited English Proficiency | 28 |
| 5.2.5 | Households with No Vehicle Access..... | 28 |
| 5.2.6 | LGBTQ+ | 29 |
| 5.3 | Geographic Communities..... | 35 |
| 5.3.1 | Canby..... | 35 |
| 5.3.2 | Gladstone | 35 |
| 5.3.3 | Lake Oswego..... | 35 |
| 5.3.4 | Oregon City..... | 35 |
| 5.3.5 | Tualatin..... | 36 |
| 5.3.6 | Unincorporated Clackamas County | 36 |
| 5.3.7 | West Linn..... | 36 |
| 5.4 | Heat Islands | 36 |
| 6 | Environmental Consequences | 38 |
| 6.1 | No Build Alternative | 38 |
| 6.1.1 | Long-Term Effects..... | 38 |
| 6.2 | Build Alternative..... | 40 |
| 6.2.1 | Short-Term Effects | 40 |
| 6.2.2 | Long-Term Effects..... | 42 |
| 6.3 | Summary of Effects by Alternative..... | 55 |

| | | |
|----------|---|-----------|
| 7 | Avoidance, Minimization, and/or Mitigation Commitments | 57 |
| 7.1 | Short-Term Impacts..... | 57 |
| 7.2 | Long-Term Impacts..... | 57 |
| 8 | Preparers | 59 |
| 9 | References | 60 |

Figures

| | | |
|--------------|--|----|
| FIGURE 1-1. | PROJECT AREA | 1 |
| FIGURE 2-1. | SCHEMATIC DIAGRAMS OF NO BUILD AND BUILD ALTERNATIVES | 4 |
| FIGURE 2-2. | BUILD ALTERNATIVE: BRIDGE TOLLS – ABERNETHY BRIDGE AND TUALATIN RIVER BRIDGES..... | 5 |
| FIGURE 2-3. | ELECTRONIC TOLL SYSTEM | 6 |
| FIGURE 4-1. | SOCIAL RESOURCES AND COMMUNITIES AREA OF POTENTIAL IMPACT | 11 |
| FIGURE 5-1. | PUBLIC SERVICES IN THE AREA OF POTENTIAL IMPACT | 22 |
| FIGURE 5-2. | RELIGIOUS ORGANIZATIONS IN THE AREA OF POTENTIAL IMPACT | 23 |
| FIGURE 5-3. | SCHOOLS IN THE AREA OF POTENTIAL IMPACT | 24 |
| FIGURE 5-4. | PARK AND RECREATIONAL FACILITIES IN THE AREA OF POTENTIAL IMPACT..... | 25 |
| FIGURE 5-5. | MEDICAL FACILITIES IN THE AREA OF POTENTIAL IMPACT | 26 |
| FIGURE 5-6. | CONCENTRATIONS OF PEOPLE EXPERIENCING A DISABILITY IN THE AREA OF POTENTIAL IMPACT | 30 |
| FIGURE 5-7. | CONCENTRATIONS OF OLDER ADULTS (65+) IN THE AREA OF POTENTIAL IMPACT | 31 |
| FIGURE 5-8. | CONCENTRATIONS OF CHILDREN (18 AND UNDER) IN THE AREA OF POTENTIAL IMPACT | 32 |
| FIGURE 5-9. | PERCENTAGES OF PERSONS WITH LIMITED ENGLISH PROFICIENCY IN THE AREA OF POTENTIAL IMPACT | 33 |
| FIGURE 5-10. | PERCENTAGES OF HOUSEHOLDS WITH NO VEHICLE ACCESS IN THE AREA OF POTENTIAL IMPACT | 34 |
| FIGURE 6-1. | INTERSECTIONS AFFECTED BY TRAFFIC REROUTING IN 2027 AND 2045: BUILD ALTERNATIVE COMPARED TO NO BUILD ALTERNATIVE | 52 |
| FIGURE 6-2. | INSET MAP OF INTERSECTIONS AFFECTED BY TRAFFIC REROUTING IN GLADSTONE, OREGON CITY, AND WEST LINN IN 2027 AND 2045: BUILD ALTERNATIVE COMPARED TO NO BUILD ALTERNATIVE | 53 |

Tables

| | | |
|------------|---|----|
| TABLE 4-1. | EQUITY FRAMEWORK COMMUNITIES BY TECHNICAL REPORT | 14 |
| TABLE 5-1. | DEMOGRAPHICS IN AREA OF POTENTIAL IMPACT AND RELEVANT GEOGRAPHIC AREAS | 27 |
| TABLE 5-2. | DEMOGRAPHICS IN COUNTIES WITHIN AREA OF POTENTIAL IMPACT | 27 |
| TABLE 6-1. | TRAVEL-TIME COMPARISON FOR REPRESENTATIVE SCENARIOS (BUILD ALTERNATIVE COMPARED TO NO BUILD ALTERNATIVE) | 43 |
| TABLE 6-2. | SUMMARY OF SOCIAL RESOURCES AND COMMUNITIES IMPACTS AND BENEFITS BY ALTERNATIVE | 55 |
| TABLE 8-1. | LIST OF PREPARERS | 59 |

Attachments

- Attachment A Social Resources and Communities Demographic Tables
- Attachment B Accessibility Analysis
- Attachment C Representative Scenarios for Travel-Time Effects

Acronyms and Abbreviations

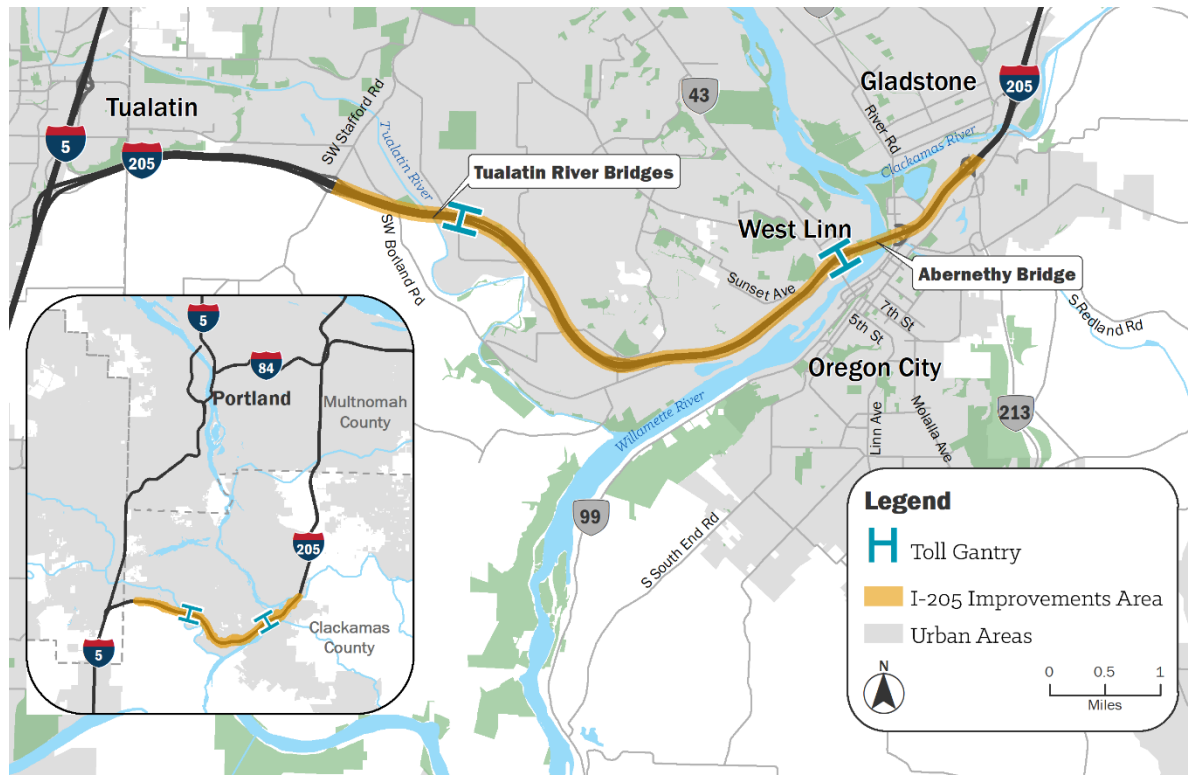
| Acronym/Abbreviation | Definition |
|----------------------------|---|
| 2018 CE | 2018 Categorical Exclusion for the I-205 Improvements Project |
| ACS | American Community Survey |
| API | Area of Potential Impact |
| CE | Categorical Exclusion |
| C.F.R. | Code of Federal Regulations |
| EFC | Equity Framework Community |
| EMAC | Equity and Mobility Advisory Committee |
| FHWA | Federal Highway Administration |
| FY | Fiscal Year |
| I- | Interstate |
| I-205 Improvements Project | I-205 Improvements: Stafford Road to OR 213 Project |
| LEP | Limited English Proficiency |
| LGBTQ+ | Lesbian, Gay, Bisexual, Transgender, Queer Peoples |
| MP | Mile Post |
| MSA | Metropolitan Statistical Area |
| MSAT | Mobile Source Air Toxics |
| NEPA | National Environmental Policy Act |
| ODOT | Oregon Department of Transportation |
| OR | Oregon Route |
| Phase 1A | I-205: Phase 1A Project |
| Project | Variable rate tolls on the Abernethy and Tualatin River Bridges and the toll-funded I-205 improvements between Stafford Road and OR 213 |
| TAZ | Transportation Analysis Zone |

This page intentionally left blank.

1 Introduction

This technical report supports the I-205 Toll Project Environmental Assessment developed by the Oregon Department of Transportation (ODOT) in partnership with the Federal Highway Administration (FHWA). ODOT proposes to use variable-rate tolls¹ on the Interstate 205 (I-205) Abernethy Bridge and Tualatin River Bridges to raise revenue for construction of planned improvements to I-205 from Stafford Road to Oregon Route (OR) 213, including seismic upgrades and widening, and to manage congestion. The environmental assessment evaluates the effects of variable rate tolls and the toll-funded I-205 improvements (together, the “Project”) on the human and natural environment in accordance with the National Environmental Policy Act (NEPA). Figure 1-1 illustrates the Project area.

Figure 1-1. Project Area



This technical report describes existing conditions for social resources and communities, discusses the potential impacts and benefits the Project would have on those conditions, and identifies measures to avoid, minimize, and/or mitigate adverse effects.

¹ Variable-rate tolls are fees charged to use a road or bridge that vary based on time of day and that can be used as a strategy to shift demand to less congested times of day.

2 Project Alternatives

ODOT evaluated two alternatives in the I-205 Toll Project Environmental Assessment and this technical report:

- No Build Alternative
- Build Alternative

Section 2.1 describes the previous environmental review that led up to the Environmental Assessment and associated technical analyses, and Sections 2.2 and 2.3 describe the alternatives in more detail.

2.1 Project Background and Environmental Review

Oregon House Bill 2017 identified improvements on I-205 as a priority project, known as the I-205: Stafford Road to OR 213 Improvements Project (I-205 Improvements Project). The purpose of the improvements was reducing congestion; improving mobility, travel time reliability, and safety; and providing seismic resiliency for I-205 to function effectively as a statewide north-south lifeline route after a major earthquake by widening I-205 and seismically upgrading or replacing 13 bridges. In 2018, ODOT and FHWA determined that, with respect to FHWA regulations implementing NEPA, the I-205 Improvements Project qualified as a categorical exclusion (CE) (Code of Federal Regulations [CFR] 23 771.117[d][13]). In December 2018, FHWA signed a CE Closeout Document (2018 CE) for the I-205 Improvements Project, which demonstrated that it would not involve significant environmental impacts. At that time, the potential locations for tolling on I-205 had not been determined, and tolling of I-205 was not included in any adopted long-term transportation plan;² therefore, tolling was not considered part of the I-205 Improvements Project nor analyzed in the 2018 CE.

After FHWA approved the 2018 CE, ODOT advanced elements of the I-205 Improvements Project as multiple phased construction packages; however, efforts to secure construction funding for the entirety of the project were unsuccessful. In 2021, Oregon House Bill 3055 provided financing options that allowed the first phase of the I-205 Improvements Project to be constructed without toll revenue³. This first phase, referred to as the I-205: Phase 1A Project (Phase 1A), includes reconstruction of the Abernethy Bridge with added auxiliary lanes and improvements to the adjacent interchanges at OR 43 and OR 99E. ODOT determined that toll revenue would be needed to complete the remaining construction phases of the I-205 Improvements Project as described in the 2018 CE (i.e., those not included in Phase 1A).

In May 2022, FHWA and ODOT reduced the scope of the project to include only Phase 1A and completed a NEPA re-evaluation that reduced the scope of the 2018 CE decision for the scaled back project (ODOT 2022a). Construction of Phase 1A began in summer 2022 and is estimated to be complete in 2025. The toll-funded improvements were removed from the I-205 Improvements Project and accompanying 2018 CE decision and are now included in the I-205 Toll Project. The environmental effects of the toll-funded improvements are analyzed in the Environmental Assessment and associated technical analyses.

² Federal regulations require that transportation projects be formally included in state and/or regional long-term transportation plans before they receive NEPA approvals.

³ If tolling is approved upon completion of environmental review of the I-205 Toll Project, tolls could be used to pay back loans for Phase 1A.

2.2 No Build Alternative

NEPA regulations require an evaluation of a No Build Alternative to provide a baseline to compare with the potential effects of a Build Alternative. The No Build Alternative consists of existing transportation infrastructure and any planned improvements that would occur regardless of the Project. The No Build Alternative includes the I-205: Phase 1A Project (reconstruction of the Abernethy Bridge with added auxiliary lanes and improvements to the adjacent interchanges at OR 43 and OR 99E) as a previously approved project that would be constructed by 2025. Under the No Build Alternative, tolling would not be implemented and the toll-funded widening and seismic improvements on I-205 between Stafford Road and OR 213 would not be constructed.

2.3 Build Alternative

Under the Build Alternative, drivers of vehicles on I-205 would be assessed a toll for crossing the Abernethy Bridge (between OR 43 and OR 99E) and for crossing the Tualatin River Bridges (between Stafford Road and 10th Street). The Build Alternative includes construction of a third through lane in each direction of I-205 between the Stafford Road interchange and the OR 43 interchange, a northbound auxiliary lane between OR 99E and OR 213, toll gantries and supporting infrastructure, as well as replacement of or seismic upgrades to multiple bridges along I-205 (shown schematically in Figure 2-1).

The following sections provide a more detailed description of the Build Alternative.

2.3.1 Bridge Tolls – Abernethy and Tualatin River Bridges

Two toll gantry areas have been identified for placement of the toll gantries and supporting infrastructure, as shown in Figure 2-2. The gantries and supporting infrastructure would be located entirely within the existing I-205 right-of-way.

Figure 2-1. Schematic Diagrams of No Build and Build Alternatives

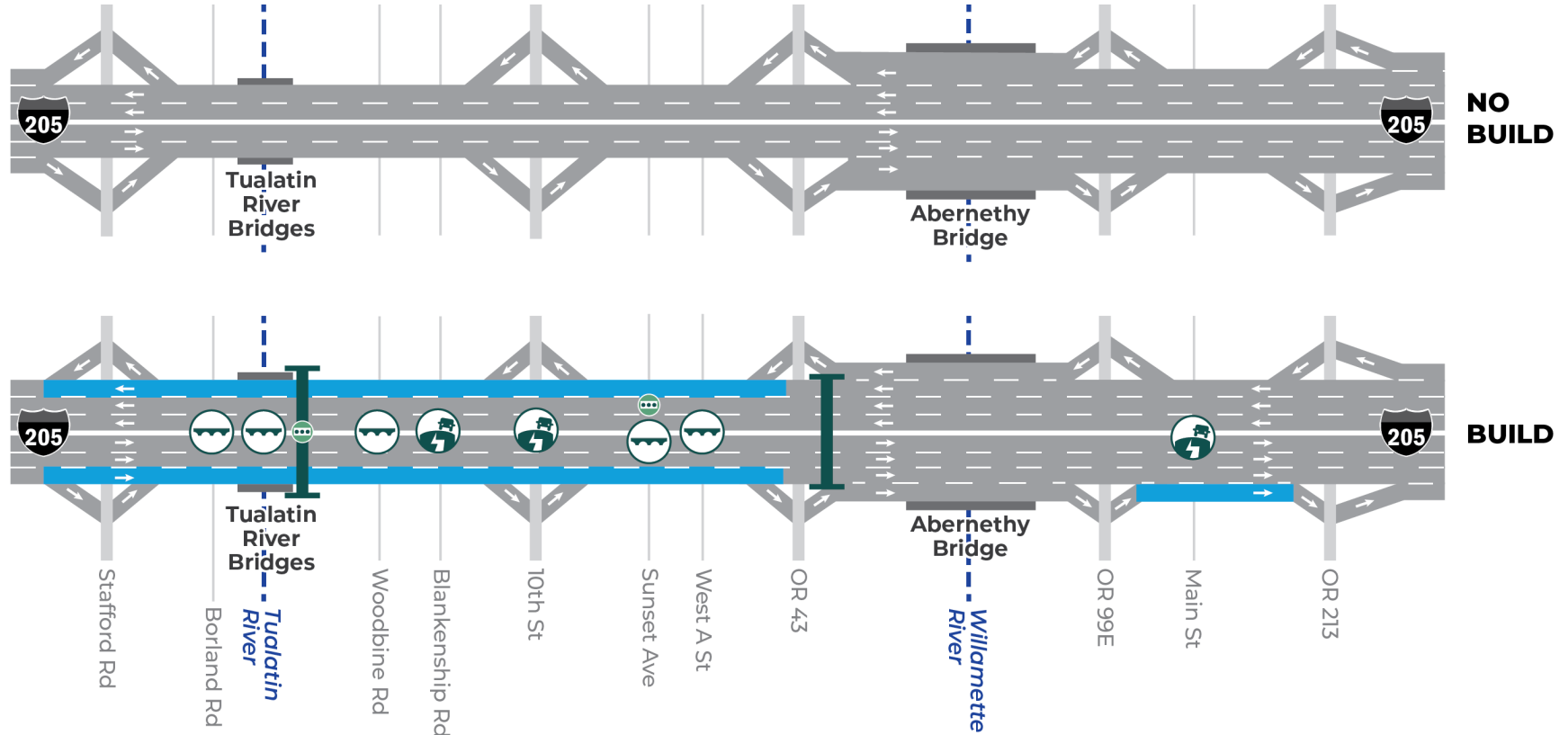


Illustration Not To Scale






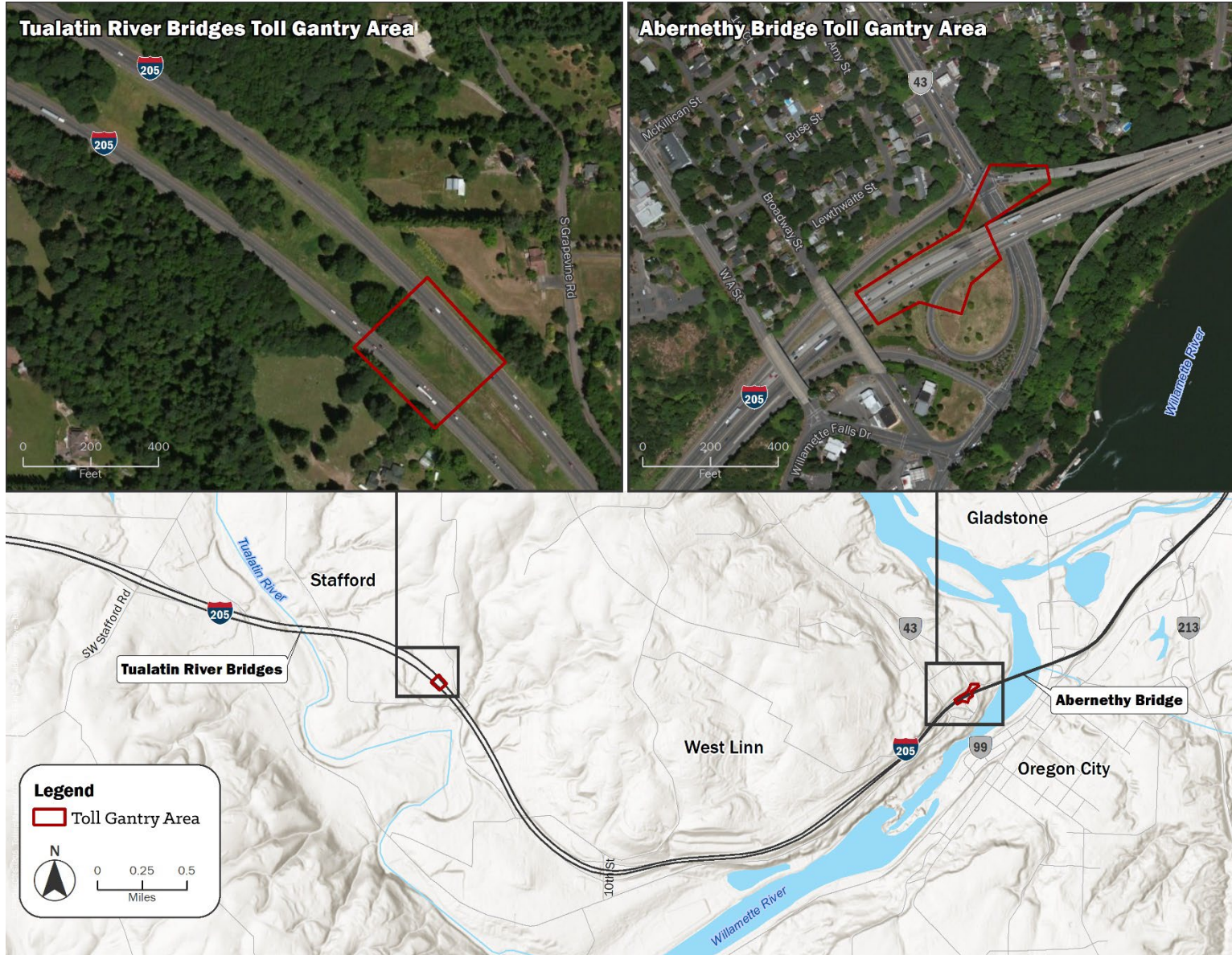
| | | | | |
|---|--|--|--|--|
|  Seismic upgrade |  Bridge replacement |  Traveler information signs |  Toll gantry area |  Build Alternative lane configuration |
|---|--|--|--|--|

Figure 2-2. Build Alternative: Bridge Tolls – Abernethy Bridge and Tualatin River Bridges



Tolling Technology

Under the Build Alternative, tolling would consist of an all-electronic system that would automatically collect tolls from vehicles traveling on the highway, as shown in Figure 2-3. There would be no toll booths requiring drivers to stop. Rather, antennae, cameras, lights, and other sensors would be mounted on the toll gantries spanning the roadway and would either (1) read a driver's toll account transponder (a small sticker placed on the windshield), or (2) capture a picture of a vehicle's license plate and send an invoice to the registered owner of the vehicle.

Tolling Infrastructure

Toll gantries would consist of vertical columns on the outside of the travel lanes and a horizontal structure that would span the travel lanes to which the electronic tolling equipment would be attached. Toll gantries would be constructed of a metal framework with metal or concrete support structures. Gantries and supporting infrastructure would be designed to ensure consistency with other improvements to I-205 included in the Project. The final structure type and design would be determined during the preliminary design of the gantries and would be based on cost, aesthetics, and ease of construction. The toll gantry areas would include paved parking for service vehicles, which would typically be protected by a safety barrier or guard rail.

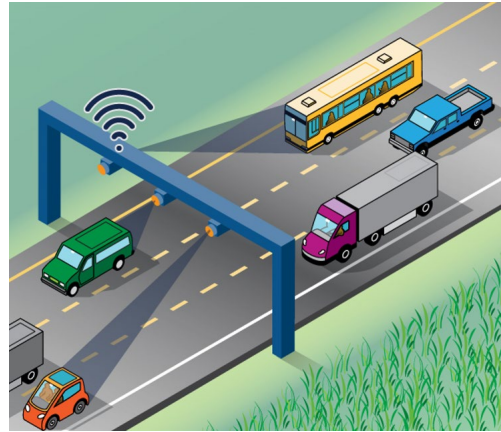
In addition to the toll technology mounted overhead on the gantries themselves, the gantries would require some additional toll system equipment for data processing, storage, and network operations. This equipment is generally enclosed within a small, access-controlled concrete structure, from which connections to existing ODOT data fiber and commercial power would be routed. ODOT currently operates a fiber data network with a 48-strand fiber-optic cable along the north side of I-205, to which the toll system equipment would be connected. A backup generator (typically fueled by diesel or natural gas) would be provided so the toll equipment would function during power outages. No relocation of existing utilities to accommodate construction of the gantries or any supporting infrastructure is expected.

The Abernethy Bridge toll gantry area would include three toll gantries: a mainline gantry structure that spans all highway lanes, and gantries over the northbound on-ramp and the southbound off-ramp. Each toll gantry would include a single gantry structure. The on-ramp and off-ramp gantries would likely be cantilevered structures. The Tualatin River Bridges toll gantry area would include two toll gantries: one over the mainline northbound travel lanes and one over the mainline southbound travel lanes. Each toll gantry would include a single gantry structure.

Toll Implementation

As Oregon's toll authority, the Oregon Transportation Commission will set toll rates, policies (including discounts and exemptions), and price escalation. If tolling is approved, the Oregon Transportation Commission would ultimately set toll rates at levels sufficient to meet all financial commitments, fund

Figure 2-3. Electronic Toll System



How electronic tolling works. An all-electronic system would automatically collect tolls from vehicles traveling on the highway. A transponder (a small sticker placed on the windshield) is read and connected to a prepaid account. If a vehicle doesn't have a transponder, a camera captures the car's license plate, and the registered owner is billed. This keeps traffic flowing without stopping to pay tolls.

Project construction and maintenance, and manage congestion. The Oregon Transportation Commission is expected to finalize toll rates in 2024. ODOT could begin tolling as early as December 2024, before the completion of construction of Project improvements to I-205 under the Build Alternative.

Toll Rate Assumptions

Toll rates have not been determined and will be set by the Oregon Transportation Commission if tolling is approved. For environmental analysis and financial planning purposes, a baseline weekday variable-rate toll schedule was identified that balances the objectives of revenue generation sufficient to meet the funding target for capital construction of the I-205 improvements, and alleviating congestion on I-205 during peak travel times. The identified toll rates would provide a sustainable source of revenue for ongoing corridor operations and maintenance and for periodic repair and replacement costs. For environmental analysis and financial planning purposes, the identified baseline toll rate schedule for the year of opening varies as follows:

- During off-peak hours, toll rates are assumed to be lowest, ranging from \$0.55 overnight (from 11 p.m. to 5 a.m.) to \$0.65 in the midday and evening (from 10 a.m. to 1 p.m. and 8 p.m. to 11 p.m.) to cross a single bridge.
- During peak hours (6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.), toll rates are assumed to be highest during peak hours, varying from \$1.65 to \$2.20 to cross a single bridge depending on which weekday peak hour.
- During the shoulder period hours just before and after the peak periods (5 a.m. to 6 a.m., 9 a.m. to 10 a.m., 1 p.m. to 3 p.m., 7 p.m. to 8 p.m.), toll rates are assumed to be \$1.00 to cross a single bridge.

These assumed rates would apply to each bridge crossing. The rates for a through trip (i.e., crossing both the Abernethy and Tualatin River bridges) would be double the assumed toll rate for only crossing one bridge. The assumed toll rates are provided in state fiscal year (FY) 2025 dollars, indicative of the year of opening, and are assumed to escalate annually with general price inflation, conservatively assumed to be 2.15% per year.

A recent financial analysis confirmed that under the assumed baseline toll rates, there would be sufficient net toll revenues to leverage bonds that would meet the toll funding contribution target for construction of the planned I-205 improvements (ODOT 2022b).

2.3.2 Improvements to I-205

Under the Build Alternative, a 7-mile portion of I-205 would be widened between Stafford Road and OR 213, with added through lanes between Stafford Road and OR 43, and a northbound auxiliary lane from OR 99E to OR 213. Eight bridges between Stafford Road and OR 213 would be replaced or reconstructed to withstand a major seismic event. New drainage facilities would be installed in both directions of I-205.

Bridge Reconstructions and Replacements

The following bridges would be reconstructed with foundation improvements and substructure upgrades for seismic resiliency but would not be replaced:

- Northbound I-205 bridge over Blankenship Road – Mile Post (MP) 5.84
- Southbound I-205 bridge over Blankenship Road – MP 5.90
- Northbound I-205 bridge over 10th Street (West Linn) – MP 6.40
- Southbound I-205 bridge over 10th Street (West Linn) – MP 6.42
- I-205 bridge over Main Street (Oregon City) – MP 9.51

The following bridges would be replaced to meet seismic design standards and to facilitate the widening of I-205:

- Northbound I-205 bridge over SW Borland Road – MP 3.82
- Southbound I-205 bridge over SW Borland Road – MP 3.81
- Northbound I-205 bridge over the Tualatin River – MP 4.1
- Southbound I-205 bridge over the Tualatin River – MP 4.08
- Northbound I-205 bridge over Woodbine Road – MP 5.14
- Southbound I-205 bridge over Woodbine Road – MP 5.19
- Sunset Avenue (West Linn) bridge over I-205 – MP 8.28
- West A Street (West Linn) bridge over I-205 – MP 8.64

The I-205 bridges over 10th Street and Blankenship Road would be widened and raised to meet the proposed new highway grade. The I-205 bridges over the Tualatin River and SW Borland Road would be replaced on a new alignment between the existing northbound and southbound directions to accommodate construction. The I-205 bridges over Woodbine Road would be replaced on the existing alignment and raised to meet the proposed new highway grade. The Broadway Street Bridge over I-205 would be removed to enhance the function of the OR 43 interchange.

2.3.3 Construction

Construction of the Build Alternative is expected to last approximately 4 years, beginning in late 2023 with construction of toll gantries and toll-related infrastructure and continuing from 2024 through 2027 with construction of I-205 widening and seismic improvements. Most toll-related construction would be conducted alongside I-205 within the existing right-of-way. For highway widening, it is anticipated that construction would be sequenced to widen one direction of I-205 at a time, enabling traffic to be moved to a temporary alignment while the remaining widening work is completed. Construction activities would include adding temporary crossover lanes to enable access to the temporary traffic configurations during roadway widening. Staging areas for construction equipment and supplies for the Build Alternative would be located primarily in the median of I-205 in ODOT right-of-way.

3 Regulatory Framework

The following federal, state, and local laws, regulations, plans, policies, and guidance documents informed the assessment of social resources and communities:

- **Federal**
 - National Environmental Policy Act of 1969
 - Title VI of the Civil Rights Acts of 1964, 42 United States Code 2000, Section 601
 - Title 23.109(h) United States Code, Federal-Aid Highway Act of 1970
 - Age Discrimination Act of 1975
 - Americans with Disabilities Act of 1990
 - Presidential Executive Order 13166 – Improving Access to Services for Persons with Limited English Proficiency
 - U.S. Department of Transportation Federal Transit Administration, Circular FTA C 4702.1B, Title VI Requirements and Guidelines for Federal Transit Administration Recipients (October 1, 2012)
- **State**
 - Oregon Department of Transportation Guidelines for Addressing Title VI and Environmental Justice in Transportation Planning (January 2015)
- **Regional**
 - Metro plans and reports including, but not limited to, the Metro Region 2040 Concept Plan, Metro Urban Growth Management and Functional Plan, and the Metro 2018 Urban Growth Report
- **Local**
 - Comprehensive plans for counties and cities

4 Methodology

This section summarizes the area of potential impact (API), the methods used to define the affected environment, and the methods used to analyze the potential effects on social resources and communities.

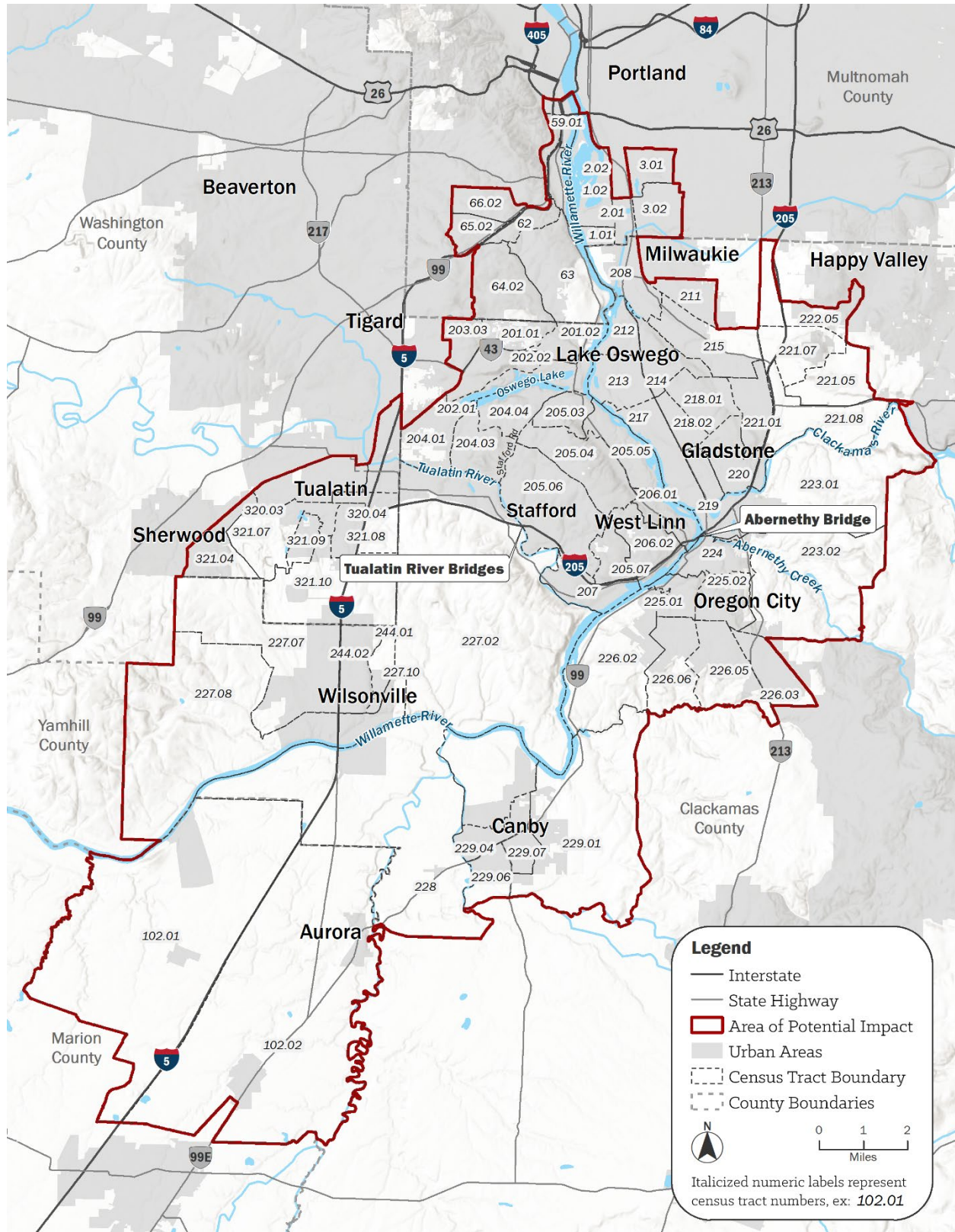
4.1 Area of Potential Impact

The API used to evaluate effects on social resources and communities is shown in Figure 4-1. An API is a geographic area within which the No Build and Build Alternatives could cause direct and indirect effects on the environmental resource or topic area under investigation. For the social resources and communities analysis, the API encompasses the roadway segments that could experience changes in congestion levels (e.g., due to changes in traffic volumes and speeds) under the No Build Alternative and Build Alternative and that could have associated effects on social resources and communities.

The API extends from the southern part of Portland along I-205 through Gladstone, West Linn, and Oregon City and includes areas in Milwaukie and Happy Valley; along OR 99E through Canby and Barlow; and along I-5 near Lake Oswego, Tigard, Tualatin, and Wilsonville. The social resources and communities analysis considers effects on populations in U.S. Census Bureau tracts that are entirely within or intersect the API, as shown in Figure 4-1. Within the API, analysts also identified geographic communities near intersections that would experience changes in traffic congestion based on the findings of the *I-205 Toll Project Transportation Technical Report*. Section 4.2.1 provides more information about how these geographic communities are defined.

Toll projects can also have effects on social resources and communities that are not geographically constrained to the API, such as the cost of the toll, and language or technological barriers to using the electronic toll payment system. Analysts also considered these potential effects on different populations that may travel through the API, such as households with no access to vehicles, persons with limited English proficiency (LEP), and older adults. Section 4.2.1 provides more information about these demographic communities.

Figure 4-1. Social Resources and Communities Area of Potential Impact



Sources: ESRI 2018; U.S. Census Bureau 2021

4.2 Describing the Affected Environment

4.2.1 Defining Social Resources and Communities

Social Resources

To evaluate the potential effects of the No Build Alternative and Build Alternative on access to social resources, analysts focused on the resources listed and described below:

- **Social services providers**, which cover a wide range of community needs and are delivered by a variety of entities to various populations. These social services can include counseling, food assistance, housing subsidies, healthcare and prescription plans, job training, and care services. They can be delivered by nonprofit organizations, social services agencies, community centers, medical facilities, schools, and religious organizations.
- **Public services**, which provide the community with services from the government and local jurisdictions. Examples of public services include police stations, fire and rescue services, libraries, museums, and community centers.
- **Religious organizations**, which provide community services to their congregations, their nondenominational community, and local community, such as clothing drives, food pantries, family services, migration services, homeless services, counseling, and temporary shelter.
- **Schools**, which provide community services throughout the school year as well as services when schools are not in session. Some schools are sites for free lunch distribution, summer programming, day camps, or enrichment programs; others include health clinics or nursing services.
- **Parks and recreational facilities**, which provide spaces for health-promoting activities and gathering places for families and social groups.
- **Medical facilities**, which include nursing homes, urgent care facilities, hospitals, dialysis centers, rehabilitation facilities, and mental health clinics.

For the accessibility analysis, described further in Section 4.3.2, social resources are defined as low-, medium-, and high-wage job⁴ centers and community places (i.e., places which provide services or items) including, but not limited to, libraries, grocery stores, credit unions, and medical facilities, consistent with the Metro 2018 Regional Transportation Plan Transportation Equity Evaluation (Metro 2018a). The travel time analysis, described in Section 4.3.2, refers to social resources in terms of “representative activity locations,” which are places people travel to from their homes for employment and basic needs, such as job centers, parks and open space, religious organizations, social service providers, medical facilities, retail and grocery stores.

Communities

To evaluate the potential effects of the No Build Alternative and Build Alternative on communities within the API, analysts defined communities by demographic groups and geographic locations, as described in the sections below.

⁴ Low-wage jobs pay between \$0 and \$39,999 annually, medium-wage jobs pay between \$40,000 and \$65,000 annually, and high-wage jobs pay over \$65,000 annually (c).

Demographic Communities

Analysts identified the following demographic communities across the entire API using decennial U.S. Census and American Community Survey (ACS) data at the census tract level:⁵

- **General population**, which includes all individuals and households who live in the API. Some measures considered in this report, such as age group (older adults and children), disability status, and LEP, are presented at the individual level, whereas others, such as households with no vehicle access and LGBTQ+ populations, are estimated at the household level. All of the technical reports for the I-205 Toll Project, except for this report and the Environmental Justice Technical Report, focus on effects on the general population. This report supplements those more broadly based analyses by focusing primarily on describing existing conditions and potential effects on a subset of excluded and underserved communities across the API (see Table 4-1), as well as the social resources and communities near areas that would experience changes in traffic volumes under the No Build and Build Alternatives, as described in the Geographic Communities subsection below.
- **Excluded and underserved populations**, referred to in this report as Equity Framework Communities (EFC), are populations that are currently or have historically been disproportionately affected by local transportation projects. As discussed in the Oregon Toll Program's Equity Framework,⁶ EFCs include low-income populations, minority populations, older adults, children, people experiencing a disability, persons with LEP, and households with no vehicle access. The *I-205 Toll Project Environmental Justice Technical Report* includes analysis of effects on low-income and minority populations only to meet the requirements of Presidential Executive Order 12898, Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations. Table 4-1 identifies the EFCs assessed in the *I-205 Toll Project Environmental Justice Technical Report* and in this technical report.

The following key terms and definitions are used throughout this technical report when discussing the affected environment and effects related to demographic communities and populations:

- **People experiencing a disability**: The ACS covers six disability types: Hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty.
- **Limited English Proficiency**: LEP is defined as people who speak English "not at all" or "not well" according to the U.S. government.
- **Households with No Vehicle Access**: The ACS asks households about vehicle availability and reports on the number of passenger cars, vans, and pickup or panel truck of 1-ton capacity or less that are kept at home and available for the use of household members. Although this metric potentially includes households of all income levels, it is included in this report as a potential indicator of households that may be transit-dependent and/or historically underrepresented and underserved by transportation projects.

⁵ Although the 2020 U.S. Census was under way, that data was not available at the time this report was prepared. Census data is rolled out in packages over time, so for some measures 2010 and 2019 data were the most recent available data. Therefore, the census tract boundaries used for this analysis were the 2010 census tract boundaries, not the 2020 census tract boundaries.

⁶ ODOT's Oregon Toll Program published an Equity Framework in December 2020 that discusses communities and populations disproportionately affected by local transportation projects (ODOT 2020).

Social Resources and Communities Technical Report

- **Lesbian and Gay (LGBTQ+) population:** While data specifically identifying the LGBTQ+ population in the API does not exist, census data collected and reported at the state level and the Portland-Vancouver-Hillsboro, OR – WA (Portland metropolitan statistical area [MSA]) for same-sex households provides some indication of this population.

Table 4-1. Equity Framework Communities by Technical Report

| Population | Technical Report |
|---|----------------------------------|
| Minorities (Race and Ethnicity)* | Environmental Justice |
| Low-Income* and Poverty | Environmental Justice |
| Houseless and Geographically Dispersed/Transient* | Environmental Justice |
| Migrant Workers | Environmental Justice |
| People Experiencing a Disability | Social Resources and Communities |
| Older adults (Age 65+) | Social Resources and Communities |
| Children (under age 18) | Social Resources and Communities |
| Limited English Proficiency | Social Resources and Communities |
| Households with No Vehicle Access | Social Resources and Communities |
| Lesbian and Gay (LGBTQ+) | Social Resources and Communities |

* Per FHWA and ODOT Environmental Justice Orders, minority populations and low-income populations are defined as any readily identifiable group of minority or low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons of those groups who would be similarly affected by a proposed FHWA/U.S. Department of Transportation program, policy, or activity. Per ODOT Environmental Justice Order, minority includes Black, Hispanic or Latino, Asian American, American Indian and Alaskan Native, Native Hawaiian or Other Pacific Islander. The *I-205 Toll Project Environmental Justice Technical Report* provides the effects analysis for these populations.

Geographic Communities

Analysts used projections of future intersection traffic conditions from the *I-205 Toll Project Transportation Technical Report* to identify geographic communities in the API that could experience effects on social resources and communities. The *I-205 Toll Project Transportation Technical Report* evaluated AM peak-hour and PM peak-hour congestion levels and delays at 50 study intersections and projected whether those intersections would operate within identified mobility standards⁷ for their respective jurisdictions under the No Build and Build Alternatives in 2027 and 2045. Section 3.2 of the *I-205 Toll Project Transportation Technical Report* provides a list of the 50 study intersections and maps showing their locations.

Intersections in the following geographic communities would experience changes in performance (whether they meet identified mobility standards) under the Build Alternative compared with the No Build Alternative:

- Canby
- Gladstone

⁷ Mobility standards for intersections vary by jurisdiction, with most measured as volume-to-capacity ratios and others as level of service. *Volume-to-capacity* ratio measures the ability of a roadway to serve motorized vehicle traffic volume over a given time period under ideal conditions such as good weather, no incidents, no heavy vehicles, and no geometric deficiencies. *Level of service* is a performance measure or index that is commonly used in transportation studies to represent congestion levels for vehicles on arterials, rural highways, freeways, and intersections, ranging from little to no delay through very high delays.

- Lake Oswego
- Oregon City
- Tualatin
- Unincorporated Clackamas County, including areas near Stafford Hamlet and Canby
- West Linn

4.2.2 Differences in Technical Data Methodology within the Portland Metropolitan Area

Past land use and transportation investments have resulted in negative cultural, health, and economic effects on local communities and populations and have disproportionately affected historically and currently excluded and underserved communities. Additionally, these communities are often left out of transportation planning and decision-making processes. With input from the Oregon Toll Program's Equity and Mobility Advisory Committee (EMAC), ODOT is prioritizing equity throughout the I-205 Toll Project development process.

Consistent with ODOT's equity goals and objectives, the demographic data collected for the Project is more comprehensive and uses more updated data than other existing local area analyses to report on equity, such as the Clackamas County Transportation Equity Index and the Metro Equity Focus Areas. For data use comparison, the Clackamas County Transportation Equity Index uses ACS 2013-2017 data and Metro created Equity Focus Areas in 2016 using 2010 Census data, whereas the Project uses ACS 2015-2019 data. For geographic comparison, the Clackamas County Transportation Equity Index includes only one of the four counties in the API, and while the Metro Equity Focus Areas include Multnomah, Clackamas, and Washington Counties, they are mostly located outside of the API in north and northeast Portland, Gresham, Beaverton, and Hillsboro.⁸ The API includes part of Marion County, which is not included in the Clackamas County Transportation Equity Index or Metro Equity Focus Areas. There is geographic overlap between the Metro Equity Focus Areas and the API in Tualatin and Oregon City.

4.2.3 Published Sources and Databases

The following data sources were used to determine and describe existing conditions for social resources and communities, to develop a demographic profile for populations that reside within the API and those traveling in or through the API, and to collect data on the location of social resources described in Section 4.2.1:

- U.S. Census Bureau
 - Most recent (at time of report preparation), available complete 5-Year Estimates from ACS (see Attachment A for full demographic tables)
 - Most recent (at time of report preparation) complete available decennial Census data
- Metro Regional Travel Demand Model
- Google Maps, Google Street View, Google Earth, MetroMap, CMap, PortlandMaps, local jurisdiction zoning maps and land use plans, and/or Metro's Regional Land Information System

⁸ See the adopted [2018 Regional Transportation Plan](#), page 301, for a map of Metro Equity Focus Areas.

4.2.4 Contacts and Coordination

In addition to reviewing published information, the Project Team conducted outreach activities to gather qualitative information on issues of concern specific to geographic communities and the presence of EFCs, as well as facilities and services that are culturally specific or of cultural importance to these populations. The Project Team has conducted ongoing briefings with community and business groups, neighborhood associations, cultural organizations, regional committees, elected officials, and community engagement liaisons, as well as comprehensive public engagement efforts such as surveys and open houses, as documented in the *I-205 Toll Project Engagement Summary Summer-Fall 2020* (ODOT 2021a), *I-205 Toll Project Public Involvement Plan* (ODOT 2021c), and *I-205 Toll Project Equitable Engagement Plan* (ODOT 2021d). The Project team consulted with the EMAC to confirm social and community resources (e.g., community gathering places, social services, ethnic grocery stores, health clinics, religious organizations) and demographic data gathered for the description of existing conditions. EMAC has prepared recommendations to advance equity, which informed the avoidance, minimization, and mitigation measures for the potential impacts on EFCs.

4.3 Effect Assessment Methods

The effects analysis addresses the short-term, long-term, and indirect effects on social resources and communities from the No Build Alternative and Build Alternative. The topic areas discussed in this analysis draw from the I-205 Toll Project Performance Measures, which received input from the EMAC and include a qualitative evaluation of “impacts to quality of life factors, such as health, noise, safety, job access, travel costs and environmental quality for local communities from traffic rerouting” (ODOT 2021b).

The effects analysis draws on information and analysis from the following technical reports:

- *I-205 Toll Project Transportation Technical Report*
- *I-205 Toll Project Air Quality Technical Report*
- *I-205 Toll Project Economics Technical Report*
- *I-205 Toll Project Noise Technical Report*

4.3.1 Short-Term Direct Effect Assessment Methods

The analysis of short-term direct effects addresses how construction of the Build Alternative would affect social resources and communities in the API, including the general population and EFCs, based on the reports listed above. The short-term effects analysis also evaluates potential effects on social resources and communities related to the implementation of tolling during construction of the improvements to I-205, referred to as “pre-completion tolling,” based on the findings of the *I-205 Toll Project Transportation Technical Report*.

4.3.2 Long-Term Direct Effect Assessment Methods

The analysis of long-term direct effects addresses how the No Build Alternative and the Build Alternative would affect quality of life factors for the general population and EFCs across the entire API and in specific geographic communities within the API. The analysis generally focuses on evaluating future conditions in 2045, except for the rerouting and air quality analysis, which also evaluated conditions in 2027 to represent an interim future year after the start of tolling. The Project Team added the 2027 analysis to help determine the timing for potential mitigation needed to address transportation impacts from the Build Alternative.

Social Resources and Communities Technical Report

To assess effects on EFCs, analysts identified home Transportation Analysis Zones (TAZs), which are geographic areas that have a higher percentage of one or more EFCs compared to the respective county data, based on U.S. Census data and Oregon Department of Education School Reports. Analysts also identified activity TAZs, which are geographic areas that have a higher percentage of social resources, such as social service providers, business areas and employment centers, religious organizations, schools, healthcare facilities, and parks and recreational facilities.

The long-term direct effects analysis focuses on the following topics consistent with the I-205 performance measures:

- **Access to social resources** such as jobs, community places, and medical facilities across the API for households in the general population (including the API and Portland metropolitan area) and EFCs. Attachment B provides more details on the methodology for the accessibility analysis.
- **Travel-time scenarios** to analyze changes in travel time to representative destinations for people who live within and outside the API, including EFCs, comparing paths that would be tolled and paths that would not be tolled. Representative travel scenarios between EFC TAZs and activity TAZs were developed in consultation with the EMAC and community engagement liaisons.⁹ Attachment C provides more details on the methodology for the representative scenarios.
- Effects of the **cost of tolls** on social and public service providers, as well as changes in household transportation costs for motorists paying tolls (based on the *I-205 Toll Project Economics Technical Report*).
- **Ability to understand and use an electronic toll system**, including by people who are experiencing language or technological barriers.
- **Rerouting traffic to local streets**, including differences in local intersection operations, that could affect access to social resources located in specific geographic communities within the API (based on findings of the *I-205 Toll Project Transportation Technical Report*). The affected intersections in this analysis were determined based on whether they would meet operational mobility standards, as described in the Geographic Communities subsection of Section 4.2.1.
- **Roadway safety**, including differences in predicted numbers of crashes, that could affect health and safety in specific geographic communities within the API (based on findings of the *I-205 Toll Project Transportation Technical Report*).
- **Noise** level differences in specific geographic areas that may experience traffic rerouting under the No Build and Build Alternatives (based on findings of the *I-205 Toll Project Noise Technical Report*).
- **Air quality** differences anticipated in the API (based on findings of the *I-205 Toll Project Air Quality Technical Report*).
- Potential **heat island** impacts related to the Project (based on a review of existing research on heat islands in the Portland area).

This technical report references the *I-205 Toll Project Public Involvement Plan* (ODOT 2021c) and the *I-205 Toll Project Equitable Engagement Plan* (ODOT 2021d), which describe affected groups and other stakeholders that have been involved in the analysis and how their input has been used to analyze impacts and benefits of the Build Alternative. The *I-205 Toll Project Public Involvement Plan* and

⁹ *Community engagement liaisons* conduct targeted outreach and engagement to ensure the voices of historically and currently excluded and underserved people are included in the Project.

Equitable Engagement Plan include descriptions of activities to increase participation of historically and currently excluded and underserved communities, the views of the affected population(s) about the Project, and what steps are being taken to resolve existing controversy.

4.3.3 Indirect Effects Assessment Methods

The analysis considered, as appropriate, potential indirect effects on social resources and communities based on those identified in the Project's air quality, noise, economic, and transportation technical reports.

4.4 Cumulative Impacts Assessment Methods

The *I-205 Toll Project Cumulative Impacts Technical Report* includes an analysis of the Project's potential to contribute to cumulative impacts on social resources and communities. Therefore, cumulative impacts are not discussed in this technical report.

4.5 Mitigation Approach

To avoid, minimize, or mitigate potential impacts on social resources and communities, analysts reviewed mitigation measures identified in the Project's transportation and environmental justice technical reports and their applicability to social resources and communities. The measures listed in those reports have been applied to social resources and communities, as applicable. ODOT considered equity strategies discussed and recommended by EMAC in development of these mitigation measures. Section 7, Avoidance, Minimization, and/or Mitigation Commitments, describes the measures proposed to minimize impacts on social resources and communities, including EFCs.

5 Affected Environment

This section describes existing social resources and community conditions and trends in the API, including demographic communities and specific geographic communities that would be affected by the Project. As described in Section 4.2.1, the *I-205 Toll Project Environmental Justice Technical Report* focuses on low-income populations and minority populations; therefore, these EFCs are not discussed herein.

5.1 Social Resources

This section summarizes the social resources within the API, including social services and public service providers, religious organizations, schools, parks and recreation facilities, and medical facilities. Section 4.2.1 defines each category of social resources.

5.1.1 Social Services Providers

Social services near OR 99E in Canby include the Canby Center, which partners with a local church to provide food assistance, medical assistance, and other educational programs for youth and families. Canby also has an Oregon Department of Human Services office, which provides services for seniors and people with disabilities.

Social services in Lake Oswego include HAKI Community Organization (for East African immigrants) in the western part of the city and Hunger Fighters food pantry on Monroe Parkway.

Social services in downtown Oregon City include an Oregon Department of Human Services office and Department of Justice's Child Support Office on Molalla Avenue. Oregon City has a cluster of social services near downtown, including Connections, which provides skill-training for individuals with developmental disabilities, and Father's Heart Street Ministry, a food pantry and shelter. The Clackamas Housing Authority office is located on OR 213 northeast of downtown Oregon City. In addition, there is a cluster of service providers in the Hillendale commercial area, including Clackamas Family Support Division, Oregon City Women Infant and Children, Clackamas County Social Services, A Safe Place Family Justice Center, and CASA of Clackamas County, which provides advocacy for children in foster care.

Social services in south Portland in the API include the National Indian Child Welfare Association on Macadam Avenue. Social services in Tualatin include Community Warehouse on SW Nyberg Street. Social services in Milwaukie include Northwest Housing Alternatives on SE Willard Street and Esther's Pantry on SE 32nd Avenue. Social services in West Linn include the West Linn Food Pantry on Willamette Falls Drive just south of I-205, which provides emergency food services to West Linn and Lake Oswego. Social services in unincorporated Clackamas County include the Tualatin Food Pantry on SW Borland Road west of SW Stafford Road.

A map of social service providers is not provided in this report because accurate, maintained geospatial data for these resources is not readily available.

5.1.2 Public Services

Police stations in the API include the Canby Police Department on NW 3rd Avenue near the western edge of the city, the Gladstone Police Department on Portland Avenue north of the city center, Lake Oswego Police Department on A Avenue west of N State Street, Oregon City Police Department on Linn

Social Resources and Communities Technical Report

Avenue south of downtown Oregon City, Milwaukie Police Department on SE Harrison Street near OR 224, Tualatin Police Department on SW Tualatin Road west of I-5, West Linn Police Department on 8th Avenue just south of I-205, Wilsonville Police Department in the Wilsonville town center, and Clackamas County Sheriff Office and Oregon State Police Department in unincorporated Clackamas County northwest of the I-205 and OR 224 interchange.

Fire and rescue services in the API include Canby Fire District Station 62 on S Pine Street; Gladstone Fire Department on Portland Avenue east of OR 99E, Lake Oswego Fire Stations 212 and 214 on South Shore Boulevard and B Avenue respectively; the Clackamas Fire District Station 2 on OR 224 and Clackamas County Fire Marshal on OR 99E in Milwaukie; Portland Fire Station 5 on SW Dewitt Street, Station 10 on SW Taylors Ferry Road, Station 18 on SW 30th Avenue, and Station 20 on SE Bybee Boulevard in South Portland; Clackamas Fire District #1 Station 15 on 7th Street, Station 16 on Molalla Avenue, and Station 17 on South End Road in Oregon City; Tualatin Valley Fire and Rescue Station 34 on SW 90th Court in Tualatin; Tualatin Valley Fire and Rescue Station 55 on Hidden Springs Road, Station 58 on Failing Street, and Station 59 on Willamette Falls Drive in West Linn; Tualatin Valley Fire and Rescue Station 52 on SW Kinsman Road and Station 56 on SW Elligsen Road in Wilsonville.

Libraries in the API include Canby Public Library near the intersection of Pacific Highway E and S Ivy Street; Gladstone Public Library on E Dartmouth Street; Lake Oswego Public Library on 4th Street; Ledding Library at the intersection of OR 224 and OR 99E in Milwaukie; Oregon City Public Library on John Adams Street and Clackamas County Law Library on Main Street near downtown Oregon City; two Multnomah County Library branches (Sellwood-Moreland branch on SE 13th Avenue and Woodstock branch on SE 49th Avenue) in south Portland; Tualatin Public Library on SW Martinazzi Avenue; West Linn Public Library on Burns Street near OR 43; and Wilsonville Public Library on SW Wilsonville Road.

Museums in the API include the Canby Depot Museum on NE 4th Avenue; Iron Workers Museum on Wilbur Street and Oswego Heritage House on 10th Street in Lake Oswego; Milwaukie Museum off SE Railroad Avenue; Museum of the Oregon Territory on Tumwater Drive, Francis Ermatinger House on 6th Street, and End of the Oregon Trail Interpretive Center on Washington Street in downtown Oregon City; Portland Puppet Museum on SW Umatilla Street in South Portland; Oregon Military Museum east of the I-205 and OR 212 interchange in unincorporated Clackamas County.

Community centers in the API include Gladstone Senior Center on Portland Avenue, Lake Oswego Adult Community Center on G Avenue, Sellwood Community House on SE Spokane Street, Woodstock Community Center on SE 43rd Avenue, and Fulton Park Community Center on SW Miles Street in south Portland; Pioneer Community Center on 5th Street in Oregon City; Juanita Pohl Center on SW Tualatin Road in Tualatin; Robinwood Station Community Center on Cedar Oak Drive and West Linn Adult Community Center on Rosemont Road in West Linn; and Wilsonville Community Center on SW Wilsonville Road.

Figure 5-1 shows the location of public services in the API, except for museums, for which map data was not readily available.

5.1.3 Religious Organizations

Most of the religious organizations in the API are Christian churches of various denominations. A few mosques, synagogues, non-Christian temples, and other religious organizations are also located in the API. Figure 5-2 shows that many of these religious organizations are clustered along major arterial streets and most are in Oregon City and Canby.

5.1.4 Schools

Most of the schools in the API are public schools. Private schools tend to cluster with public schools on the same school lands or along the same corridor. Schools are often clustered near other social resources, such as religious organizations and community centers. A few higher education institutions, such as community colleges and universities (both public and private) are located in the API, including the Oregon Institute of Technology, National University of Natural Medicine, the Oregon Health and Sciences University's School of Dentistry, Lewis & Clark College, Reed College, and Clackamas Community College. Figure 5-3 identifies schools, community colleges, and universities within the API.

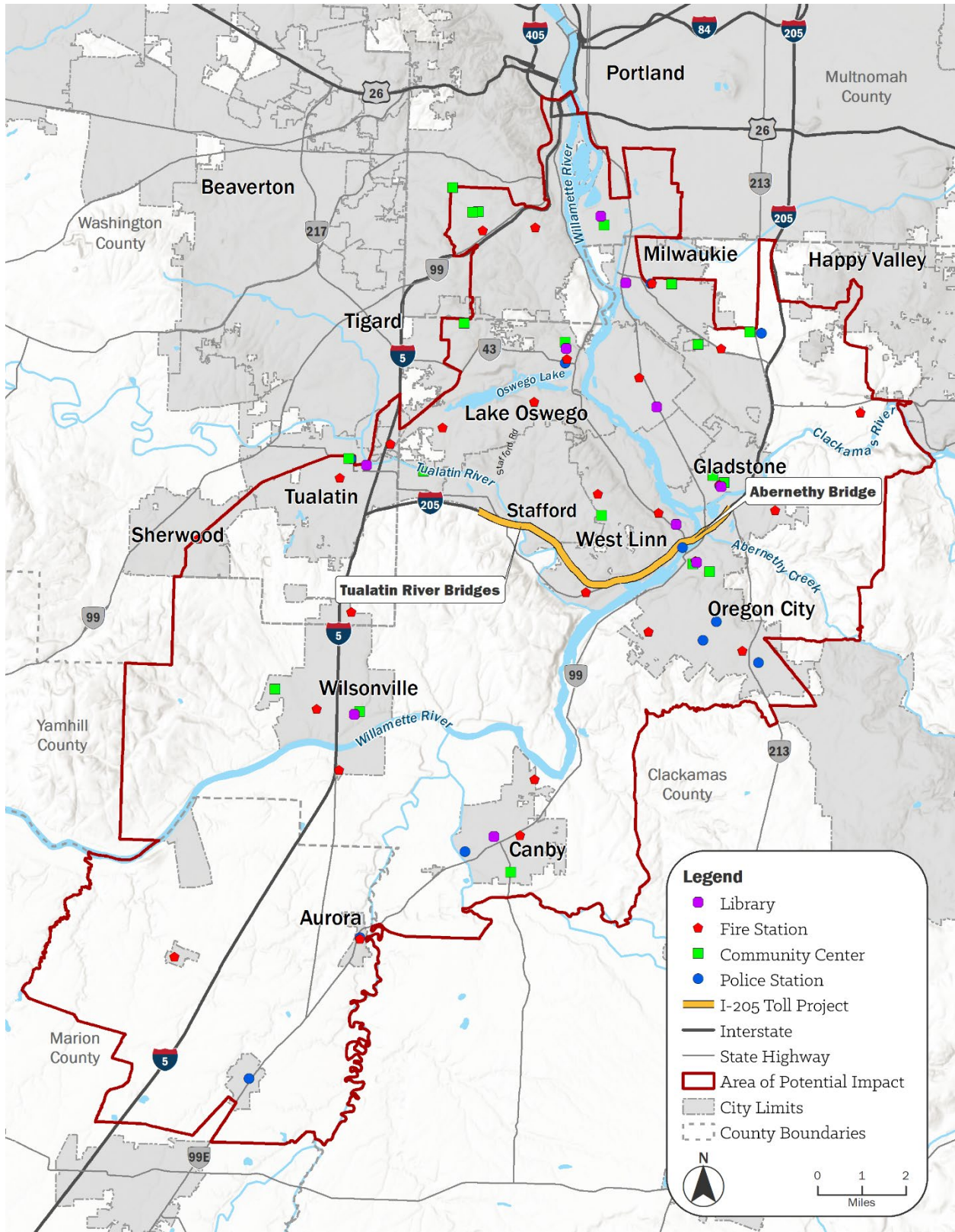
5.1.5 Parks and Recreational Facilities

Figure 5-4 displays the parks and recreational facilities within the API. Most of the parks and recreational facilities are along or near the Willamette River.

5.1.6 Medical Facilities

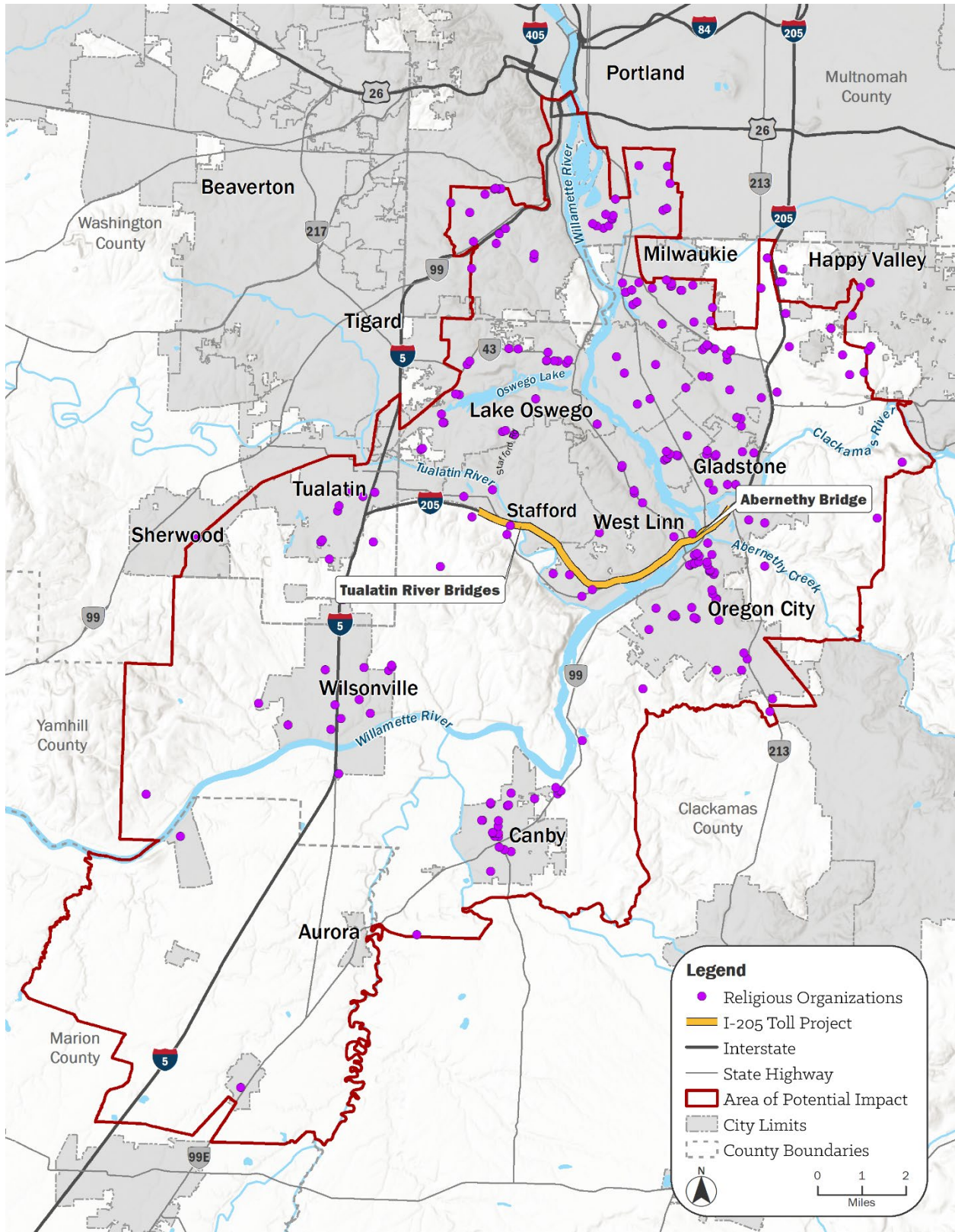
Figure 5-5 displays the medical facilities in the API. The map of medical facilities is limited to hospitals, urgent care facilities, and nursing homes because of lack of map data availability for other types of medical facilities. There is a concentration of medical facilities between in Lake Oswego, Gladstone, and Oregon City. Dialysis centers in the API include multiple sites near I-205 in Oregon City and near I-5 in Tualatin. Rehabilitation facilities in the API are located between OR 99E and I-205 in Gladstone, on Division Street in Oregon City, and on SW 65th Avenue in Tualatin. Mental health clinics include multiple facilities located throughout Oregon City and one site on OR 43 in West Linn.

Figure 5-1. Public Services in the Area of Potential Impact



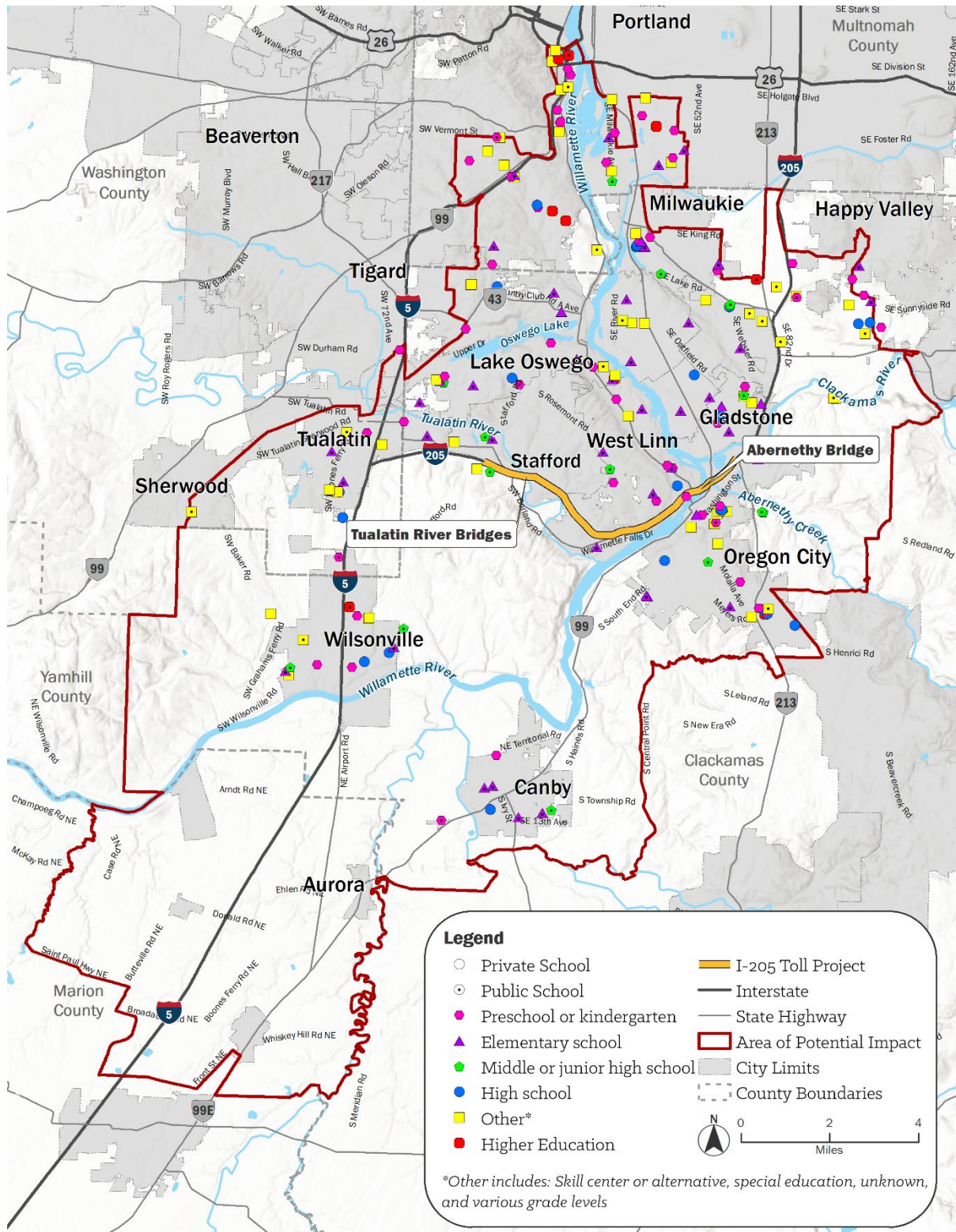
Sources: ESRI 2018; Metro 2022; U.S. Census Bureau 2021; U.S. Department of Homeland Security 2022

Figure 5-2. Religious Organizations in the Area of Potential Impact



Sources: ESRI 2018; U.S. Census Bureau 2021

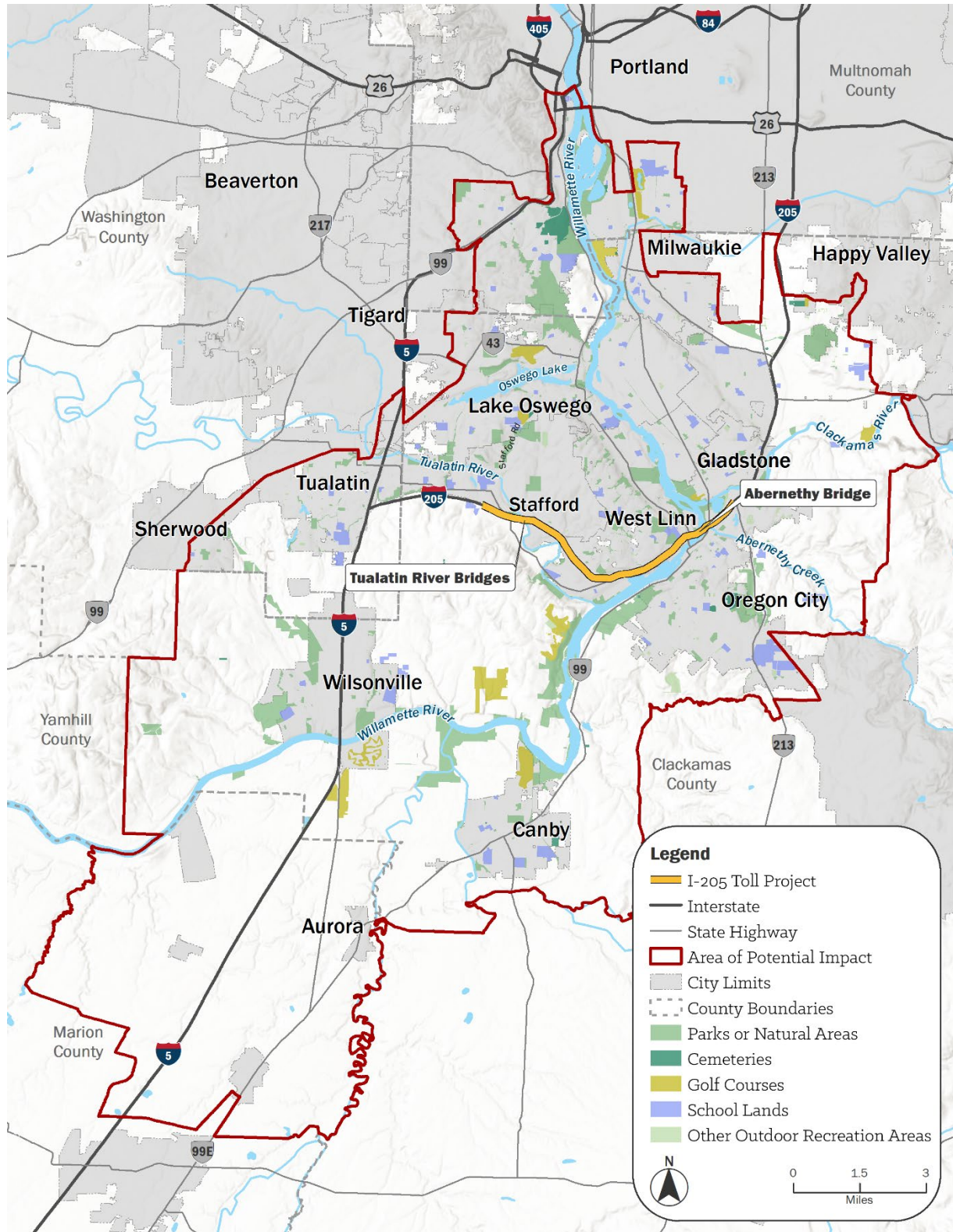
Figure 5-3. Schools in the Area of Potential Impact



*School symbol color represents level of education and symbol shape represents private versus public ownership).

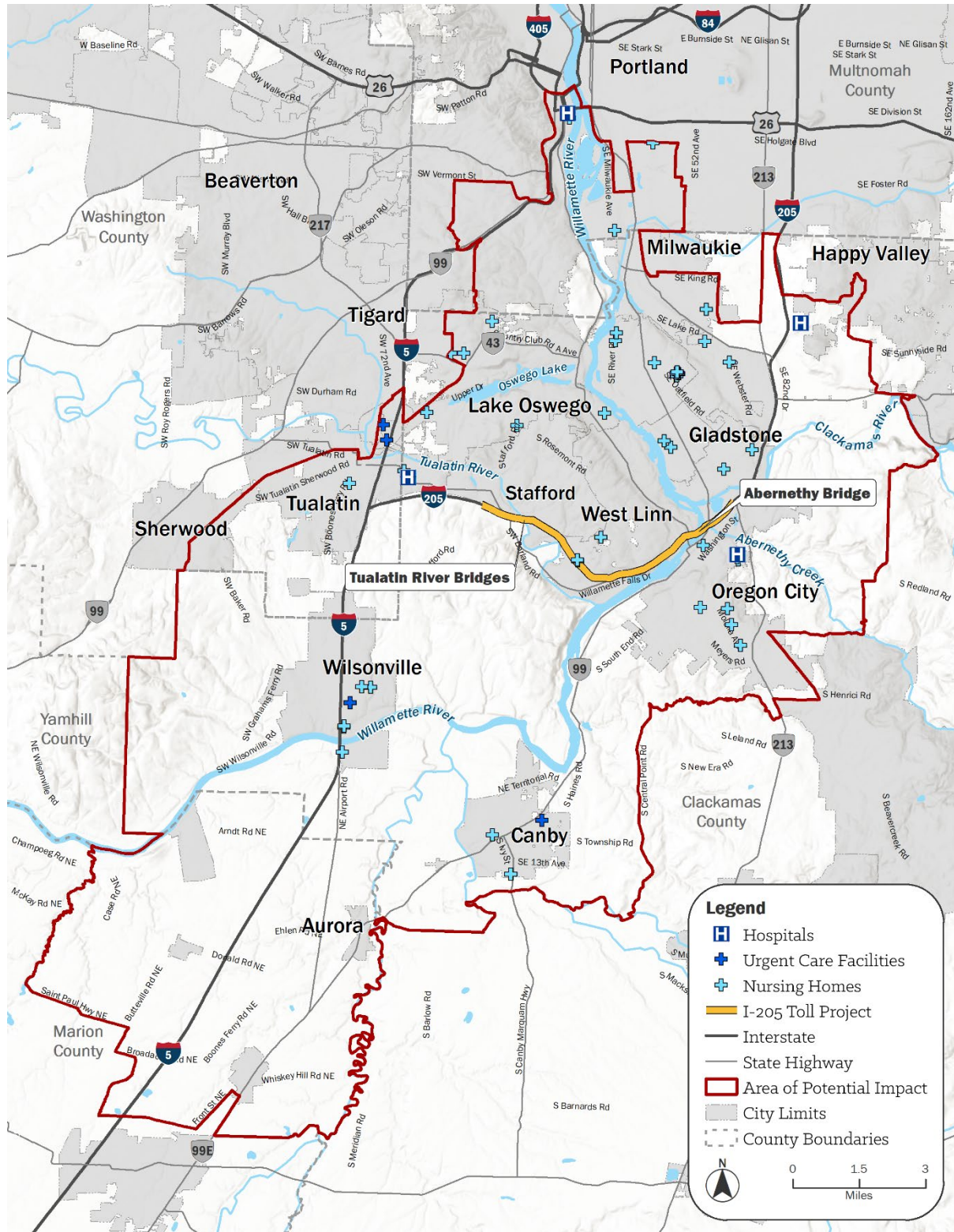
Sources: ESRI 2018; Metro 2022; U.S. Census Bureau 2021

Figure 5-4. Park and Recreational Facilities in the Area of Potential Impact



Sources: ESRI 2018; Metro 2022; U.S. Census Bureau 2021

Figure 5-5. Medical Facilities in the Area of Potential Impact



Sources: ESRI 2018; Metro 2022; U.S. Census Bureau 2021; U.S. Department of Homeland Security 2022

5.2 Demographic Communities

Table 5-1 provides demographic data for the four counties that overlap the API, the Portland Metropolitan Statistical Area (MSA), and Oregon and Washington State to provide a comparison with the total population, households, and percentages of EFCs in the API. Table 5-2 lists the total population, total households, and percentages of EFCs present for each of the four counties within the API boundaries only.

Table 5-1. Demographics in Area of Potential Impact and Relevant Geographic Areas

| Demographic Group | API | Clackamas County | Multnomah County | Washington County | Marion County | Portland MSA ^[1] | Oregon State | Washington State |
|--|---------|------------------|------------------|-------------------|---------------|-----------------------------|--------------|------------------|
| Total Population | 344,280 | 410,463 | 804,606 | 589,481 | 339,641 | 2,445,761 | 4,129,803 | 7,404,107 |
| Total Households | 136,786 | 157,408 | 326,229 | 219,053 | 118,038 | 938,646 | 1,611,982 | 2,848,396 |
| Persons Experiencing a Disability | 11% | 12% | 12% | 10% | 14% | 12% | 14% | 13% |
| Older Adults (65+) | 17% | 18% | 13% | 13% | 15% | 15% | 17% | 15% |
| Children (18 and under) | 21% | 22% | 19% | 23% | 25% | 22% | 21% | 23% |
| LEP | 2% | 2% | 4% | 4% | 5% | 3% | 3% | 4% |
| Households with No Vehicle Access ^[2] | 7% | 5% | 13% | 6% | 6% | 8% | 7% | 7% |

Source: U.S. Census Bureau 2021

[1] Portland MSA refers to the Portland-Vancouver-Hillsboro, OR-WA Metropolitan Statistical Area.

[2] Percentages of Households with No Vehicle Access based on number of households.

API = area of potential impact; LEP = limited English proficiency; MSA = metropolitan statistical area

Table 5-2. Demographics in Counties within Area of Potential Impact

| Demographic Group | Clackamas County in API | Multnomah County in API | Washington County in API | Marion County in API |
|--|-------------------------|-------------------------|--------------------------|----------------------|
| Total Population | 245,714 | 58,036 | 29,853 | 10,677 |
| Total Households | 96,991 | 25,125 | 10,926 | 3,744 |
| People Experiencing a Disability | 12% | 9% | 9% | 13% |
| Older Adults (65+) | 18% | 16% | 9% | 16% |
| Children (18 and under) | 22% | 17% | 23% | 25% |
| LEP | 2% | 1% | 1% | 5% |
| Households with No Vehicle Access ^[1] | 7% | 10% | 5% | 2% |

Source: U.S. Census Bureau 2021

[1] Percentages of Households with No Vehicle Access based on number of households.

API = area of potential impact; LEP = limited English proficiency

Sections 5.2.1 through 5.2.6 provide more information about EFCs analyzed in this report, including maps showing their concentrations by geographic area within the API. The colors on the maps are defined in each map legend, split equally into five quintiles depending on the distribution of each EFC. The quintiles are not the same on each map because the concentration of EFCs varies by demographic group. The demographic data for the LGBTQ+ community in Section 5.2.6 is presented at the household level.

5.2.1 People Experiencing a Disability

As shown in Table 5-2, Marion County and Clackamas County have the largest percentages of people experiencing a disability within the API. These percentages are slightly higher than the percentages for the whole API and similar to the respective counties as a whole, as shown in Table 5-1. The percentage of people experiencing a disability in Multnomah County and Washington County in the API is lower than in those counties as a whole.

Figure 5-6 shows that higher concentrations of people experiencing a disability are located in the eastern and southern parts of the API near Gladstone, Oregon City, Canby, and Aurora.

5.2.2 Older Adults (65+)

As shown in Tables 5-1 and 5-2, Clackamas County has a similar percentage of older adults within the API as in the county as a whole. Marion and Multnomah Counties have higher percentages of older adults within the API than in their respective counties as a whole. Washington County has a lower percentage of older adults within the API than in the county as a whole. As shown in Figure 5-7, the highest concentrations of older adults in the API live in Lake Oswego, West Linn, Gladstone, and between Canby and Aurora.

5.2.3 Children (18 and under)

As shown in Tables 5-1 and 5-2, Marion County has the highest percentage of children within the API, which is also higher than the county and API as a whole. Clackamas and Washington Counties have similar percentages of children within the API compared with their respective counties and the API as a whole. Multnomah County has lower percentages of children in the API than the county and the API as a whole.

As shown in Figure 5-8, there are higher percentages of children in West Linn, Wilsonville, Canby, and Aurora than in the rest of the API.

5.2.4 Limited English Proficiency

As shown in Tables 5-1 and 5-2, Marion County has the highest percentage of LEP populations in the API and the county as a whole, and these percentages are greater than the API as a whole. Clackamas County has a similar percentage of LEP populations as the county as a whole and the API. Multnomah and Washington Counties have lower percentages of LEP populations within the API than their respective counties and the API as a whole.

As shown in Figure 5-9, there are higher percentages of LEP populations near Gladstone, and in Canby and Aurora. According to the ACS data, the primary non-English languages people in the API speak at home are Spanish, Russian, Chinese, and Vietnamese.

5.2.5 Households with No Vehicle Access

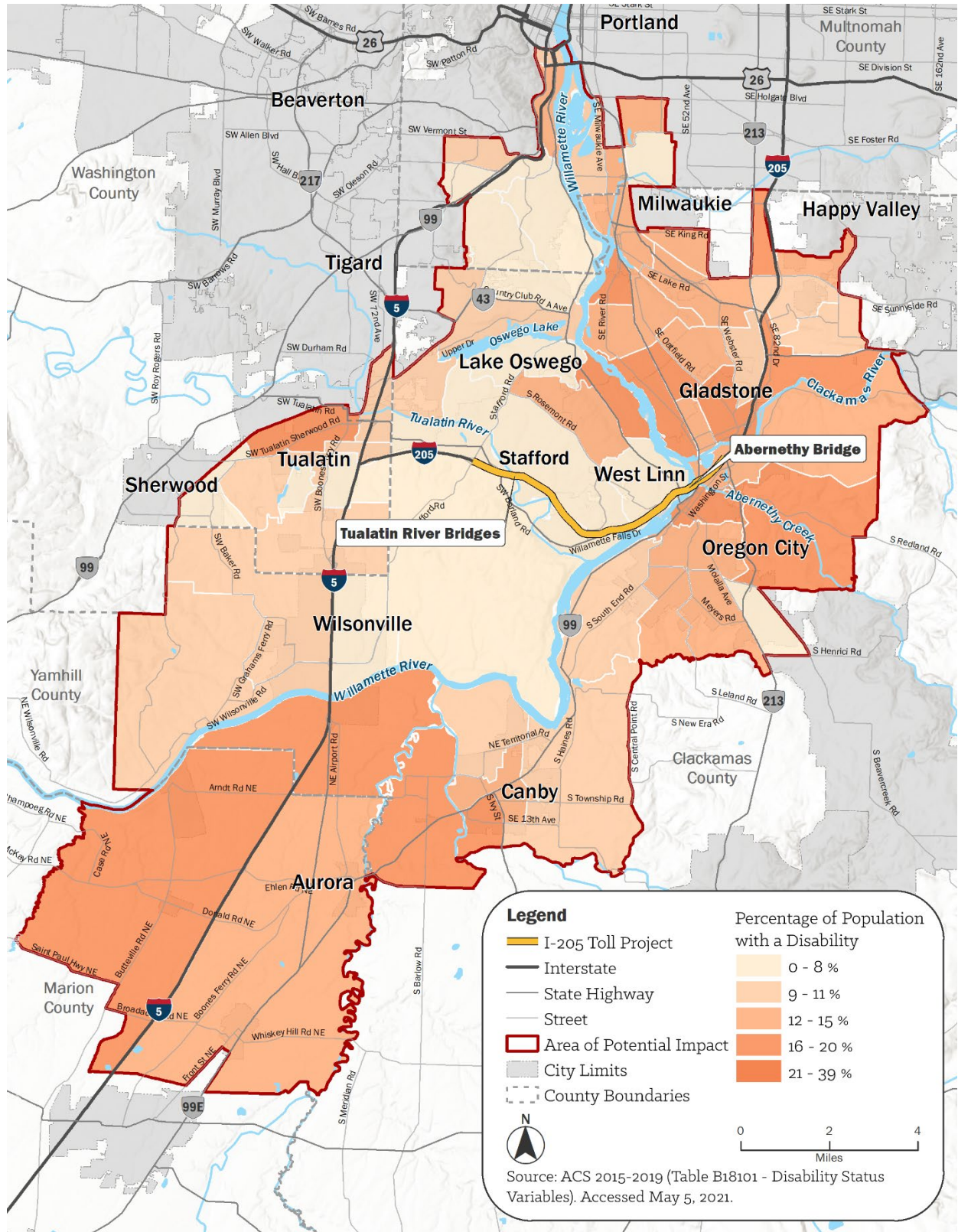
As shown in Tables 5-1 and 5-2, Multnomah County has the highest percentage of households with no vehicle access, both in the API and the county as a whole. The percentage of households with no vehicle access in Multnomah County in the API is also substantially higher than the other counties in the API, the Portland MSA, and Oregon and Washington State as a whole. Marion County has a much lower percentage of households with no vehicle access within the API as compared to the county and API as a whole. Clackamas and Washington Counties have similar percentages of households with no vehicle access within the API as compared to the respective counties and the API as a whole.

As shown in Figure 5-10, the highest percentages of households in the API without access to a vehicle are in Gladstone, Milwaukee, and south Portland.

5.2.6 LGBTQ+

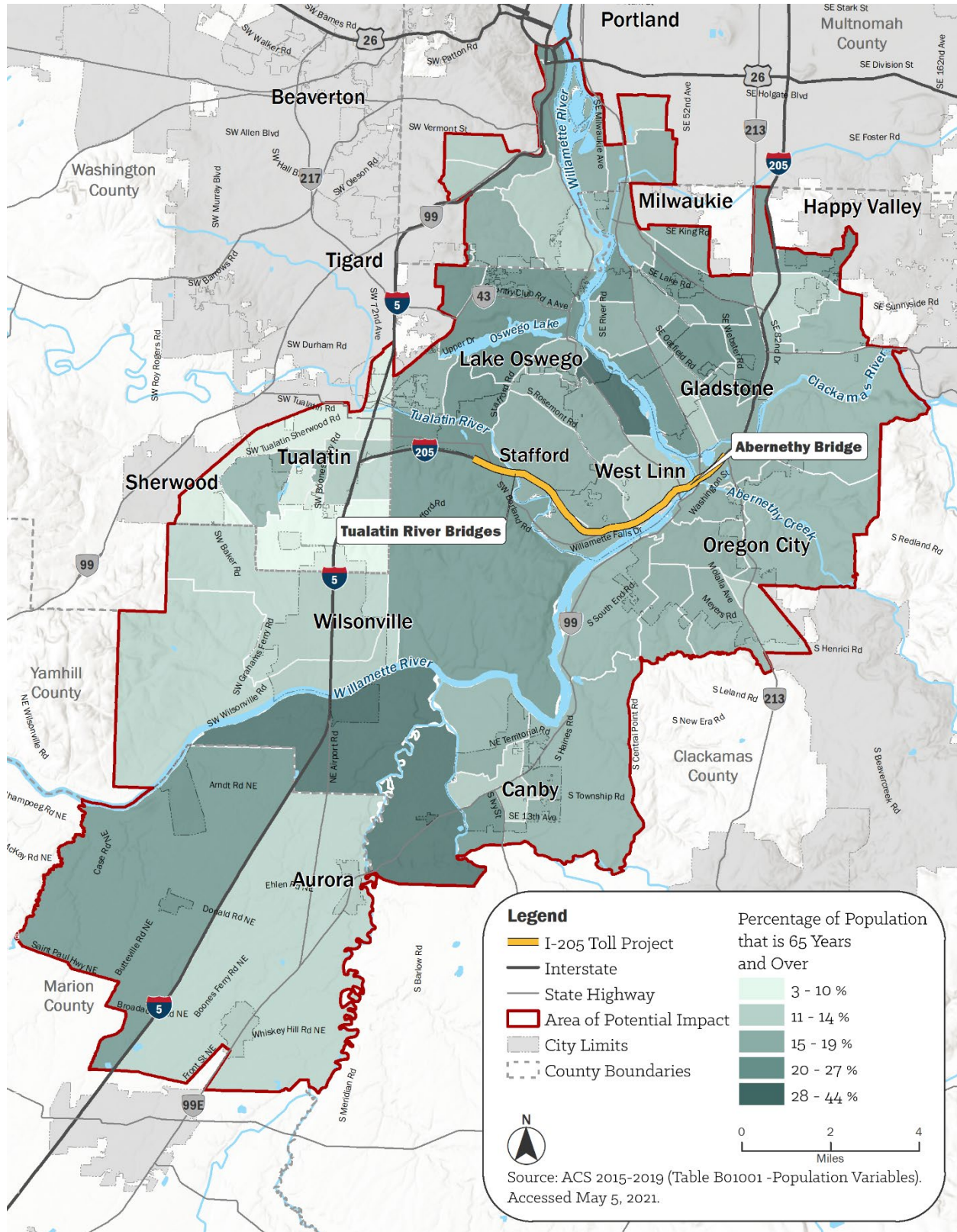
In 2019, Oregon had one of the highest percentages of same-sex couple households, including married couples and unmarried (2.2%), compared to the national average (1.5%) (Walker and Taylor 2021). The Portland MSA, which overlaps and contains much of the API, had the second highest percentage of same-sex couple households for an MSA in the nation, at 2.6% (Walker and Taylor 2021). Furthermore, the percentage of same-sex unmarried partner households in the Portland MSA (1.2%) was about two times the national rate (0.6%) (Walker and Taylor 2021). No map is available because data identifying the spatial distributions of LGBTQ+ populations in the API does not exist.

Figure 5-6. Concentrations of People Experiencing a Disability in the Area of Potential Impact



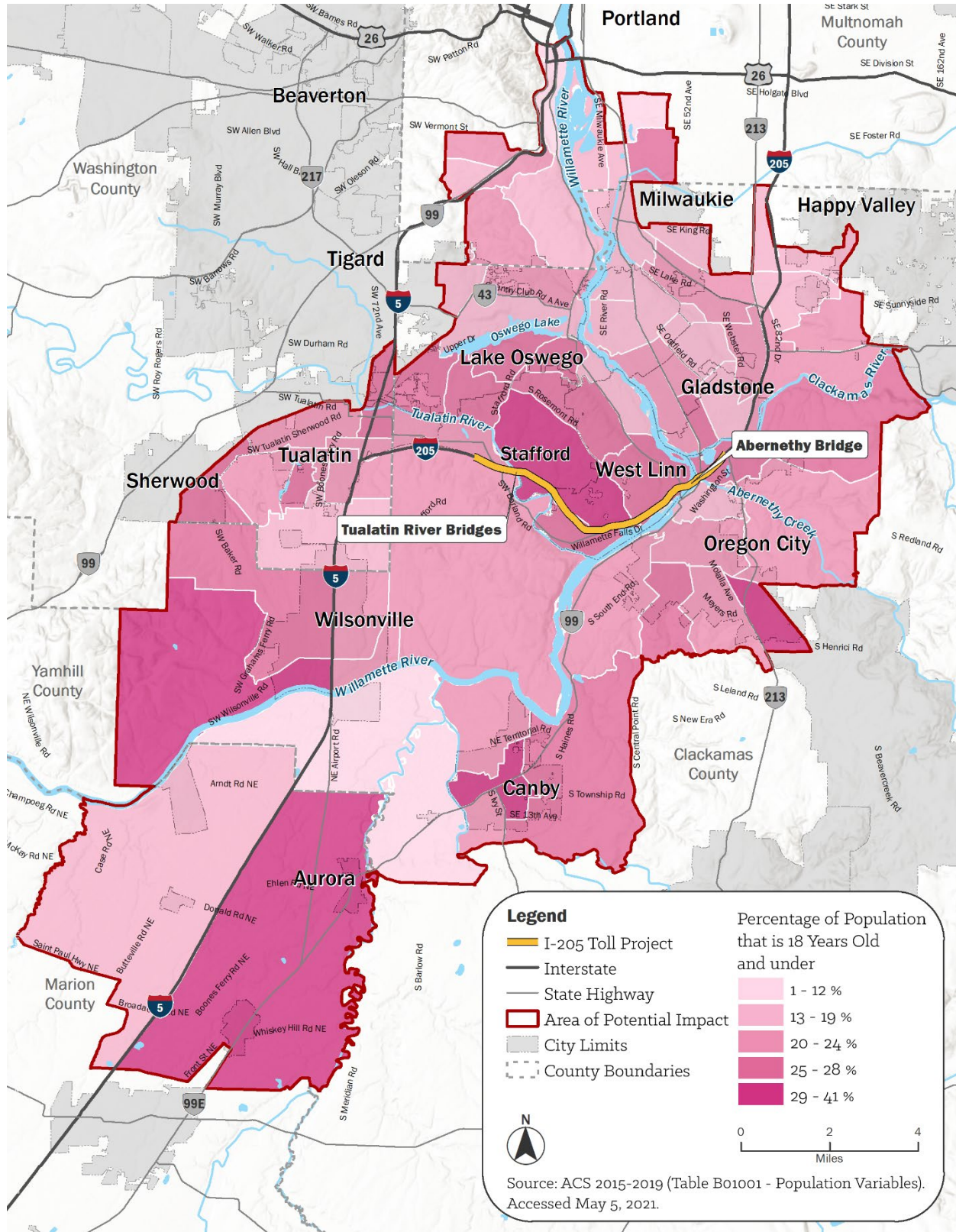
Sources: ESRI 2018; U.S. Census Bureau 2021

Figure 5-7. Concentrations of Older Adults (65+) in the Area of Potential Impact



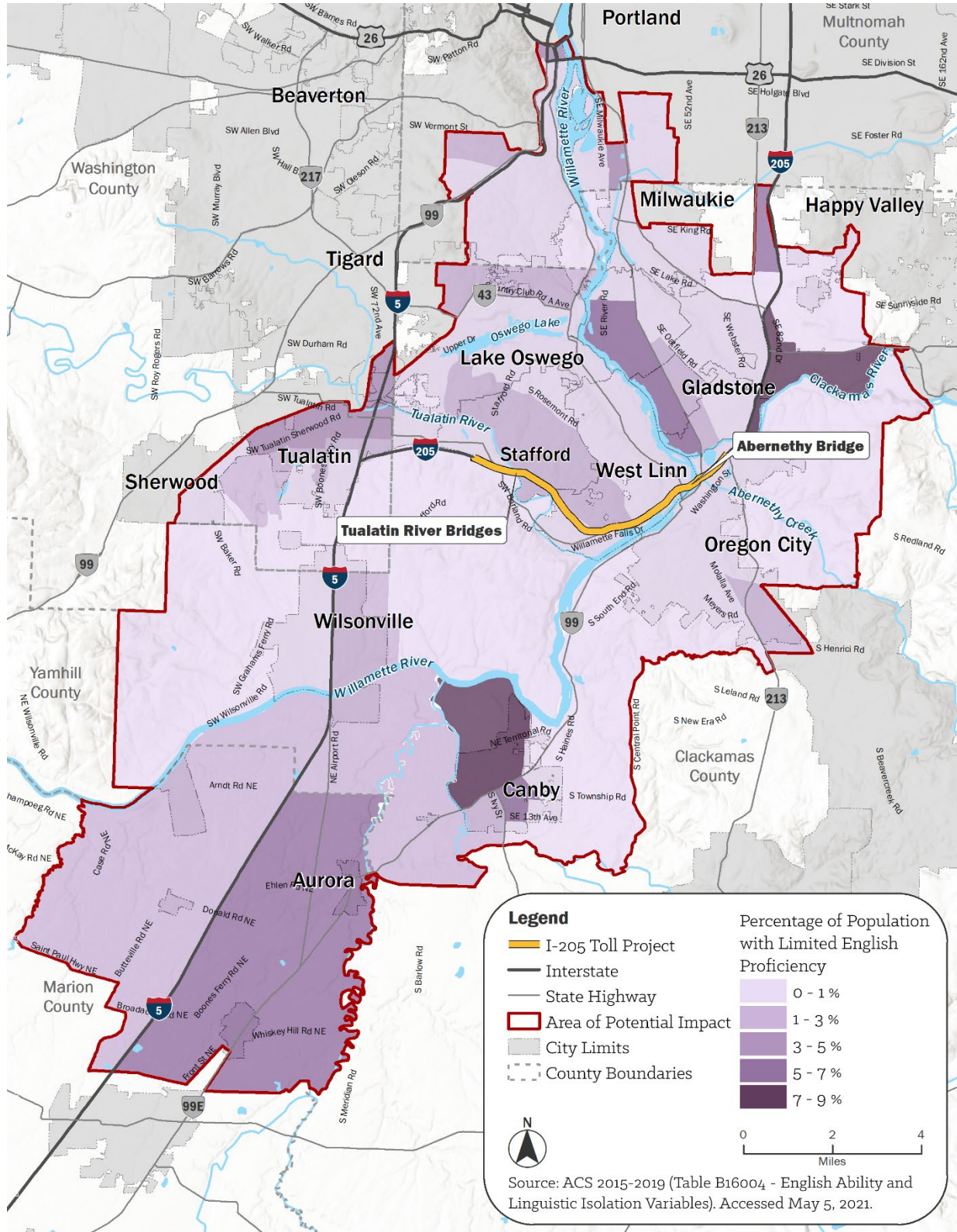
Sources: ESRI 2018; U.S. Census Bureau 2021

Figure 5-8. Concentrations of Children (18 and under) in the Area of Potential Impact



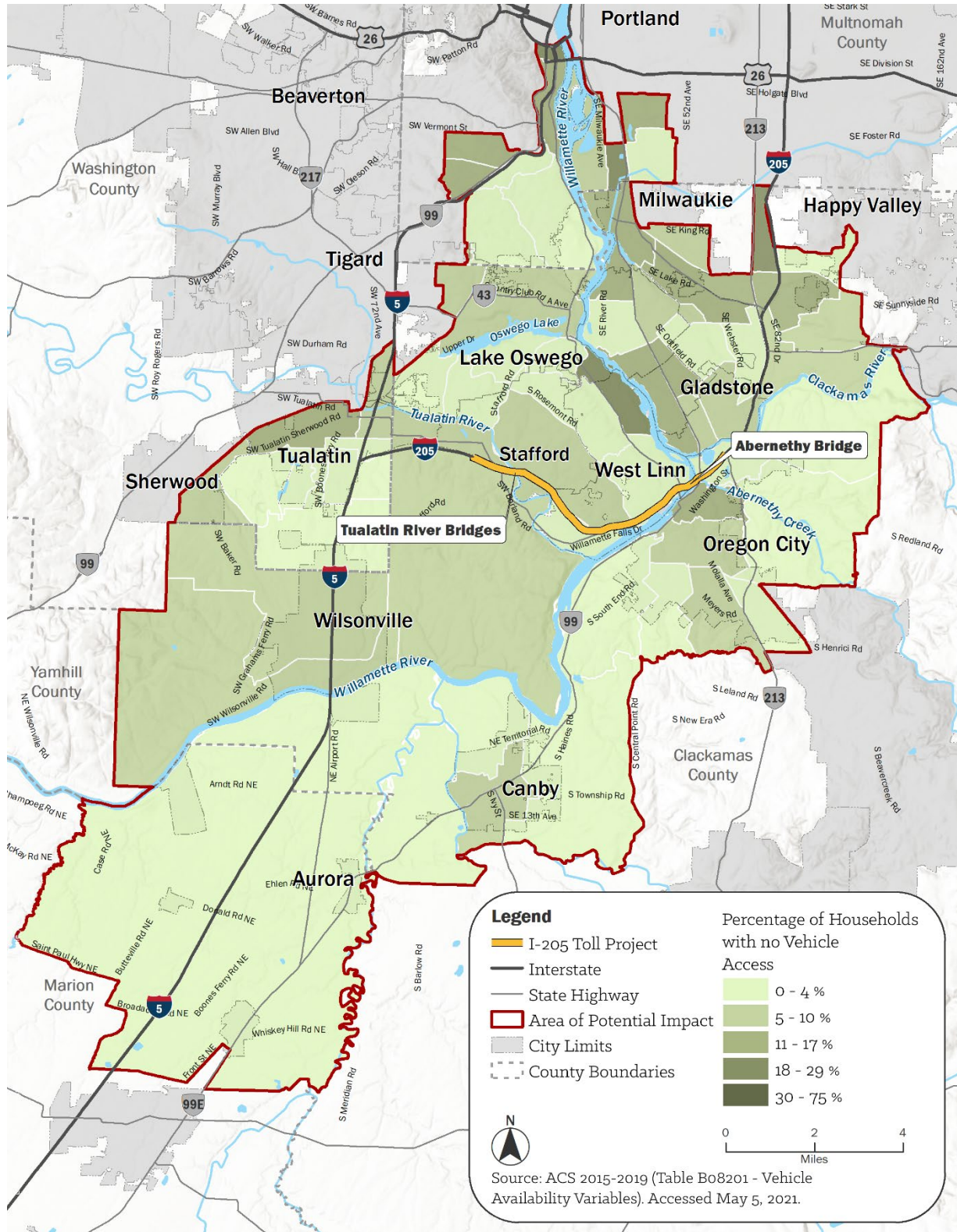
Sources: ESRI 2018; U.S. Census Bureau 2021

Figure 5-9. Percentages of Persons with Limited English Proficiency in the Area of Potential Impact



Sources: ESRI 2018; U.S. Census Bureau 2021

Figure 5-10. Percentages of Households with No Vehicle Access in the Area of Potential Impact



Sources: ESRI 2018; U.S. Census Bureau 2021

5.3 Geographic Communities

As described in Section 4.2.1, several geographic communities in the API were selected for further analysis based on potential changes in intersection performance. This section provides an overview of existing conditions in each community, including size, location, major land uses, and presence of EFCs. Section 5.1 describes the social resources in these communities.

5.3.1 Canby

Canby is a small city in Clackamas County located south of I-205, east of I-5 and centered around OR 99E. Canby has a land area of approximately 4 square miles and a population of about 18,000 people (U.S. Census Bureau 2021, 2022). Residential communities make up most of the city, with a downtown business district along OR 99E and a cluster of manufacturing and industrial businesses in the southwest corner (City of Canby 2019). As shown in the figures in Section 5.2, moderate to high percentages of EFCs, including people experiencing a disability, older adults, children, and persons with LEP, were identified in Canby.

5.3.2 Gladstone

Gladstone is a small suburban city south of Portland in Clackamas County located adjacent to the Willamette River and Clackamas River and close to the I-205 Abernethy Bridge. Gladstone has a land area of approximately 3 square miles and a population of about 12,000 (U.S. Census Bureau 2021, 2022). Residential communities make up most of the city, with commercial districts along McLoughlin Boulevard (OR 99E) and near the I-205 and 82nd Drive interchange, as well as with riverfront parks (City of Gladstone 2014). As shown in the figures in Section 5.2, high concentrations of EFCs, including people experiencing a disability, older adults, children, persons with LEP, and households with no vehicle access, were identified in Gladstone.

5.3.3 Lake Oswego

Lake Oswego is a small suburban city adjacent to the southwest boundary of Portland primarily in Clackamas County (with portions extending into Multnomah and Washington Counties), located north of the Tualatin River and Abernethy Bridges on I-205. Lake Oswego has a land area of approximately 11 square miles and a population of about 40,000 (U.S. Census Bureau 2021, 2022). Residential communities make up most of the city, with a mixed-use district featuring businesses and offices along OR 43 and numerous large parks within the city limits (City of Lake Oswego 2019). As shown in the figures in Section 5.2, moderate concentrations of EFCs, including older adults and children, were identified in Lake Oswego.

5.3.4 Oregon City

Oregon City, the county seat of Clackamas County, is located on the Willamette and Clackamas Rivers and generally south of I-205 near the Abernethy Bridge. Oregon City has a land area of approximately 9 square miles and a population of about 36,000 (U.S. Census Bureau 2021, 2022). Residential communities make up most of the city, with a mix of businesses, museums, and government buildings clustered near the historic downtown district along the eastern city boundary and the Willamette River; there are many parks throughout the city (City of Oregon City 2020). As shown in the figures in Section 5.2, moderate to high concentrations of EFCs, including people experiencing a disability, older adults, children, and households with no vehicle access, were identified in Oregon City.

5.3.5 Tualatin

Tualatin is a small suburban city southwest of Portland, primarily located in Washington County along I-5 and north of I-205 on the west side of the API. Tualatin has a land area of approximately 8 square miles and a population of about 28,000 (U.S. Census Bureau 2021, 2022). Residential communities make up most of the city, with commercial areas clustered near I-5 and a large manufacturing district on the west side (City of Tualatin 2022). As shown in the figures in Section 5.2, moderate to high concentrations of EFCs, including people experiencing a disability, children, persons with LEP, and households with no vehicle access, were identified in Tualatin.

5.3.6 Unincorporated Clackamas County

The API includes areas designated by Clackamas County as non-urban lands, including primarily residential and forested lands in the Stafford area and agricultural and residential lands just east and west of Canby (see Section 5.3.1) on OR 99E (Clackamas County 2022). Stafford is a primarily residential rural community, classified as a hamlet, and generally located in the central portion of the API near I-205 and the Tualatin River Bridges. As shown in the figures in Section 5.2, high concentrations of older adults and children were identified in Stafford hamlet. Moderate concentrations of children, people experiencing a disability, and persons with LEP, and high concentrations of older adults, were identified outside of Canby.

5.3.7 West Linn

West Linn is a small city located on the Willamette and Tualatin Rivers in Clackamas County and along I-205 west of the Abernethy Bridge. West Linn has a land area of approximately 7 square miles and a population of about 27,000 (U.S. Census Bureau 2021, 2022). Residential communities make up most of the city, with commercial areas clustered near the two I-205 interchanges in the city and on OR 43 near the northern city limits, an industrial area along the Willamette River on the southern edge of the city, and many parks throughout the city (City of West Linn 2015). As shown in the figures in Section 5.2, moderate to high concentrations of EFCs, including people experiencing a disability, older adults, and children, were identified in West Linn, with higher concentrations of households with no vehicle access on the eastern edge of the city.

5.4 Heat Islands

Heat islands are urbanized areas that experience higher temperatures than their surrounding areas. This effect occurs because structures and impervious surfaces such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat at a higher rate than natural landscapes such as forests and water bodies, and urban areas typically have higher concentrations of structures and lower, more limited vegetation (U.S. Environmental Protection Agency 2022a). Extreme heat in urban areas has been found to pose risks to public health, economic stability, and quality of life, particularly for EFCs who have additional sensitivities and lack options to avoid the heat (Fahy et al. 2019; Voelkel and Shandas 2017; Voelkel et al. 2018).

Historic community settlement patterns and land use policies, including discriminatory housing policies, have combined to result in concentrations of EFCs in areas within the Portland metropolitan area where there is more development and that are close to transportation options, jobs, and social services. A Portland-based study of vulnerability to urban heat found that areas with higher numbers of low-income, non-white, low educational attainment, or LEP populations and higher concentrations of affordable housing are associated with areas that experience higher temperatures, while areas with more high-

income, white, educated, English-speaking populations tend to live in areas with cooler temperatures (Voelkel et al. 2018).

Researchers have identified areas with lower tree canopy cover (such as industrial, port and airport areas, and train yards), and neighborhoods adjacent to highways and arterial streets as places with the hottest temperatures and therefore greatest risks of heat island exposure in Portland (Voelkel and Shandas 2017). Although existing studies of heat islands do not cover the full extent of the Project API, previous studies suggest that existing heat islands in the API are sections of highways, such as I-205, and arterial streets, including portions of OR 99E, that have limited tree cover, as well as commercial and industrial areas, especially those that have large surface parking lots and limited vegetation. As discussed in Section 5.3, existing industrial areas in the API are located near Canby and West Linn, while major commercial development areas are located in Gladstone, Lake Oswego, Oregon City, Tualatin, and West Linn. Areas with higher tree cover, such as parks and open spaces (shown in Figure 5-4) and forested lands, would be expected to have lower risks of heat exposure (U.S. Environmental Protection Agency 2022b).

6 Environmental Consequences

This section describes anticipated effects, including benefits and impacts, of the Project on social resources and communities under the No Build Alternative and the Build Alternative.

6.1 No Build Alternative

This section describes long-term and indirect effects on social resources and communities under the No Build Alternative. The No Build Alternative would have no short-term effects.

6.1.1 Long-Term Effects

This section discusses the long-term effects on social resources and communities under the No Build Alternative, including effects related to access to social resources, travel time scenarios, rerouting traffic to local streets as a result of congestion on I-205, roadway safety, noise, and air quality.

Access to Social Resources

The Project Team used Metro's regional travel demand model to determine the average number of jobs and social resources (community places¹⁰ and medical facilities) that households would be able to access by automobile or transit during peak hours or non-peak hours under existing conditions to allow for a comparison to the No Build and Build Alternatives in 2045. Access is measured by calculating a regional average number of resources that can be reached within a given travel-time from home locations in the region and API. When comparing the No Build Alternative to existing conditions, the model accounted for the expected future growth in land use and transportation system investments consistent with the adopted 2018 Regional Transportation Plan (Metro 2018b). A more detailed description of the methodology and results of the accessibility analysis is included in Attachment B.

Under the No Build Alternative in 2045 compared to existing conditions:

- During peak hours, all households in the API would experience access to more high-paying jobs and access to similar or fewer low- and medium-paying jobs¹¹ within a 30-minute drive. Compared with the general population, EFC households would experience access to slightly fewer low- and medium-paying jobs.
- During off-peak hours, all households, including EFC households, in the API would experience access to more jobs of all pay levels within a 30-minute drive.
- During both peak and off-peak hours, all households, including EFC households, in the API would experience access to fewer community places and medical facilities within a 20-minute drive.

¹⁰ *Community places* are defined as places that provide services or items including but not limited to libraries, grocery stores, credit unions, and medical facilities (Metro 2018a). For this analysis, medical facilities were analyzed separately from community places.

¹¹ Low-wage jobs pay between \$0 and \$39,999 annually, medium-wage jobs pay between \$40,000 and \$65,000 annually, and high-wage jobs pay over \$65,000 annually (Metro 2018a).

- All households, including EFC households, in the API would experience access to more job centers, community places, and medical facilities within a 30- or 45-minute transit trip during both peak and off-peak hours.

Consistent with Metro's approved long-range planning documents (i.e., Regional Transportation Plan), the future scenario modeling assumes that regional population and employment growth would continue over time, which would result in more jobs, community places, and medical facilities throughout the API in 2045, as detailed in Attachment B. Growth in the number of jobs and community resources can improve accessibility; however, the population and employment growth are also expected to result in higher demand for travel across modes, which would challenge the transportation system and can result in longer delays that would affect accessibility.

Travel-Time Scenarios

Under the No Build Alternative in 2045, travel times for the general population and EFCs in the API between their homes and 16 representative activity locations would be similar to or longer than travel times under existing conditions. Representative scenarios include trips that start in areas with higher concentrations of EFCs and end in areas with social resources such as parks, hospitals, libraries, large employment centers, or retail locations, in a variety of geographic areas within the API, including Canby, Gladstone, Lake Oswego, Oregon City, Tualatin, and West Linn. The Travel-Time Scenarios subsection of Section 6.2.2 and Attachment C provide more details on the travel-time analysis results.

Similar to analysis presented the Access to Social Resources subsection above, these changes would occur because of projected population and employment growth throughout the API. Certain trips would take more time because of increased congestion on I-205 and connecting roadways in 2045 compared to existing conditions, as described in the Rerouting Traffic to Local Streets subsection and the *I-205 Toll Project Transportation Technical Report*.

Rerouting Traffic to Local Streets

AM and PM peak-period travel times on both directions of I-205 between I-5 in Tualatin and 82nd Drive in Gladstone would be longer under the No Build Alternative compared to existing conditions, which would have impacts on access to social resources and communities by people using I-205, according to the *I-205 Toll Project Transportation Technical Report*. As a result, local communities would continue to experience rerouting to other roadways as drivers attempt to avoid higher congestion levels on I-205 under the No Build Alternative.

Under existing conditions, 5 intersections (in Lake Oswego, Oregon City, unincorporated Clackamas County, and West Linn) currently do not meet jurisdictional mobility standards¹² for intersection performance during the AM peak hour, and 10 intersections (in Gladstone, Oregon City, unincorporated Clackamas County, and West Linn) currently do not meet standards during the PM peak hour. Most of

¹² Mobility standards for intersections vary by jurisdiction, with most measured as volume-to-capacity ratios and others as level of service. *Volume-to-capacity* ratio measures the ability of a roadway to serve motorized vehicle traffic volume over a given time period under ideal conditions such as good weather, no incidents, no heavy vehicles, and no geometric deficiencies. *Level of service* is a performance measure or index that is commonly used in transportation studies to represent congestion levels for vehicles on arterials, rural highways, freeways, and intersections, ranging from little to no delay through very high delays.

those intersections would continue to not meet standards, and some of the intersections would experience worse congestion under the No Build Alternative in both 2027 and 2045, which would result in continued impacts on people traveling to nearby social resources and communities.

Roadway Safety

In areas with continuing or increasing congestion, such as I-205 and certain local roads, the number of crashes is generally expected to be slightly higher under the No Build Alternative in 2045 compared to existing conditions because of the anticipated higher traffic volumes. The No Build Alternative is expected to have impacts on health and safety for all populations related to the use of these roadways to access social resources and communities.

Noise

Under the No Build Alternative in 2045, traffic noise levels in the study area would vary based on location, with a similar range as existing conditions, according to the *I-205 Toll Project Noise Technical Report*. Similar to existing conditions, traffic noise levels would continue to be loudest at outdoor land uses located closest to I-205 and would continue to exceed ODOT noise criteria at SouthLake church/preschool/daycare in West Linn, Jon Storm Park in Oregon City, and the Atlas Immersion Academy School in West Linn.

Air Quality

Under the No Build Alternative in 2027, emissions of air pollutants would be lower compared to existing conditions due to implementation of fuel and engine regulations, according to the *I-205 Toll Project Air Quality Technical Report*. Consistent with national trends, MSAT emissions would continue to decrease over time and would be lower in 2045 than existing conditions and 2027. These lower air pollution levels would benefit all communities, including EFCs.

Heat Islands

The No Build Alternative would have no new long-term impacts on vegetation and land uses because the proposed improvements would not be built. Therefore, exposure to heat islands is expected to be similar under the No Build Alternative as compared with existing conditions.

6.2 Build Alternative

This section describes short-term, long-term, and indirect effects on social resources and communities under the Build Alternative.

6.2.1 Short-Term Effects

Construction would require short-term lane and roadway closures on I-205 and some nearby local roadways, typically during nighttime hours. Full roadway closures would be scheduled during overnight periods when many social resources are closed to the public. Short-term detours would be in place during the closures, and access to all social resources and geographic communities, including emergency services, would be maintained. ODOT would prepare a temporary traffic management plan to minimize construction effects on nearby social resources and communities.

Construction activities would temporarily increase noise levels and dust in and near construction areas; however, any impacts on nearby social resources and geographic communities (such as Stafford and West Linn) are expected to be minor because contractors would be required to comply with ODOT regulations regarding noise and air pollution. Contractors would be required to comply with ODOT

Standard Specifications for Construction Section 290, which includes noise control measures. Contractors would also be required to comply with Division 208 of Oregon Administrative Rules 340, which addresses visible emissions and nuisance requirements, and ODOT Standard Specifications for Construction Section 290, which also includes air-pollution control measures (ODOT 2021e).

Because limited temporary construction easements would be required for the Build Alternative, as described in the *I-205 Toll Project Land Use Technical Memorandum*, there would be minimal physical impacts on neighboring communities. No relocations of businesses or residences would be required.

Tolling during Construction of Roadway Improvements

ODOT anticipates starting tolling on the Abernethy Bridge and possibly on the Tualatin River Bridges before completing construction of the Build Alternative. That time period, referred to as pre-completion tolling, is expected to last 2 to 3 years (between 2024 and 2027). During this period, I-205 would continue to have two lanes in each direction between Stafford Road and OR 213 (same as existing conditions). As described in more detail in the *I-205 Toll Project Transportation Technical Report*, traffic volumes were modeled for two pre-completion tolling scenarios based on projected 2027 traffic volume demand:¹³ (1) tolling across the Abernethy Bridge during its construction and (2) tolling across the Abernethy and Tualatin River Bridges during their construction. Both scenarios would have two through lanes in each direction of I-205 between Stafford Road and OR 213, which is the same as existing conditions, because the third lane would not yet be complete.

Compared with the No Build Alternative in 2027, tolling only the Abernethy Bridge before its completion would result in 10% to 15% lower total average daily traffic volumes on I-205 in the API, with the highest reduction on the Abernethy Bridge. Tolling both the Abernethy Bridge and Tualatin River Bridges prior to their completion would result in 20% to 30% lower average weekday traffic volumes on I-205 in the API, with the largest reductions occurring between OR 99E and OR 43, and between 10th Street and SW Stafford Road. Similarly, compared with the No Build Alternative in 2027, traffic volumes would generally be higher on segments of Borland Road, Stafford Road, OR 99E, OR 213, and OR 43 if both bridges are tolled during the pre-completion period. The largest differences are expected on Borland Road east of Stafford Road near Stafford Hamlet in unincorporated Clackamas County and OR 99E west of Lone Elder Road just south of Canby, where volumes may be 5% to 10% higher. These changes could temporarily affect people traveling to social resources in these areas, which include religious institutions and schools. The TAZ that includes the segment of 99E west of Lone Elder Road has a higher percentage of EFCs (older adults) than Clackamas County as a whole.

Any effects resulting from the pre-completion tolling scenarios would last for 2 to 3 years and would be comparable to effects under the Build Alternative in 2027. The Rerouting Traffic to Local Streets subsection of Section 6.2.2 provides a more detailed discussion of rerouting effects on social resources and communities in 2027.

¹³ 2027 volumes were used for the pre-completion tolling scenarios because 2027 volumes represent the highest volumes for the pre-completion tolling analysis years (2024-2027).

6.2.2 Long-Term Effects

This section discusses the long-term effects on social resources and communities under the Build Alternative, including effects related to access to social resources, travel time scenarios, cost of tolls, ability to understand and use the electronic toll system, rerouting traffic to local streets, roadway safety, noise, air quality, and heat islands.

Access to Social Resources

The Build Alternative would result in the same or improved access to social resources such as jobs, community places,¹⁴ and medical facilities for households in the API¹⁵ during peak and off-peak periods, compared with the No Build Alternative in 2045. When compared with general population households in the API, EFC households¹⁶ would generally experience the same or improved access to jobs, community places, and medical facilities, depending on the time of day and mode of travel.

During peak periods, general population households in the API would experience improved access to jobs of all wage levels within a 30-minute drive and a 45-minute transit trip and improved access to community places and medical facilities within a 20-minute drive. EFC households would experience even greater improvements in access to jobs, community places, and medical facilities compared to households in the API, except for medical facilities, for which accessibility would remain the same under the Build and the No Build Alternatives. General population and EFC households in the API would experience the same access to community places and medical facilities within a 30-minute transit trip.

During off-peak periods, general population households in the API would experience improved access to jobs of all wage levels within a 30-minute drive and to community places and medical facilities within a 20-minute drive. EFC households would experience greater improvement in access to jobs, community places, and medical facilities compared to general population households in the API. There would be no difference in access for the general population or EFC households for jobs of all wage levels within a 45-minute transit trip and to community places and medical facilities within a 30-minute transit trip.

In general, these changes in accessibility under the Build Alternative would occur because of lower levels of traffic congestion on I-205 and some neighboring roadways. The model also accounts for regional growth in population and employment through 2045. The transportation improvements included in the Build Alternative would enable households to access similar or greater numbers of jobs and social resources within a given travel time during peak and off-peak hours compared to the No Build Alternative.

¹⁴ For the accessibility analysis, community places are defined as places that provide services or items including but not limited to libraries, grocery stores, credit unions, and medical facilities as defined in the Metro 2018 Regional Transportation Plan Appendix E: Transportation Equity Evaluation (Metro 2018a). For this analysis, medical facilities were analyzed separately from community places.

¹⁵ The accessibility analysis provides the number of jobs, community places, and medical facilities accessible to each household, not at the population level, because the analysis is based on the Metro Regional Travel Demand Model, which uses household level data.

¹⁶ The geographic location of EFC households was determined by identifying geographic areas that have a higher percentage of one or more EFCs compared to the respective county data, based on U.S. Census data and Oregon Department of Education School Reports. Section 4.2.1 defines EFCs, and Attachment B provides more information on this approach.

Attachment B provides more details on methodology and the full results of the accessibility analysis, as well as a comparison of changes in accessibility for households in the Portland metropolitan area.

Travel-Time Scenarios

Both the general population and EFCs in the API would experience the same or shorter travel times for trips from their homes to representative activity locations under the Build Alternative compared to the No Build Alternative in 2045. Table 6-1 summarizes the representative scenario travel-time comparison between the alternatives. The Toll Path refers to a route that includes traveling on the proposed tolled bridges on I-205 (the Abernethy and Tualatin River Bridges). The Toll-Free Path refers to a route that does not include traveling on the tolled bridges on I-205. It was assumed that the Toll Path in the No Build Alternative would not have tolling but would involve traveling on I-205 where the tolled bridges are proposed under the Build Alternative.

None of the 16 representative scenarios would result in longer travel times for the Toll Path under the Build Alternative compared to the No Build Alternative. Three of the scenarios would result in longer travel times on the Toll-Free Path under the Build Alternative compared to the No Build Alternative. Six of the representative scenarios do not have a Toll Path option, as noted in Table 6-1. Most of the scenarios focus on travel by private vehicle, but for comparison and at the request of the EMAC, three scenarios were evaluated for transit travel times based on existing fixed routes for the representative trip. It is assumed that the transit trips would not use the Toll Path based on existing routing.

Attachment C provides the full representative scenarios dataset and results for the Toll Path and the Toll-Free Path, including transit trips, and includes maps showing the paths in each scenario.

Table 6-1. Travel-Time Comparison for Representative Scenarios (Build Alternative Compared to No Build Alternative)

| Scenario # | Scenario Description | Build Alternative Compared to the No Build Alternative ^[1] |
|------------|---|--|
| 1 | Person A lives in Tualatin and travels to Mount Talbert Nature Park in Happy Valley once a week after work (around 5 p.m.) to walk with their children and grandchildren who live in Gladstone. | Shorter travel time on the Toll Path. Longer travel time on the Toll-Free Path. |
| 2 | Person B lives in an affordable housing unit in Tualatin with two elementary school-aged children, works at a small business in Oak Grove Monday to Friday from 7 a.m. to 2:30 p.m., and takes the bus. | Shorter travel time on the Toll Path. No difference in travel time on the Toll-Free Path. |
| 3 | Person C lives in Southwest Portland and has struggled to find work since the start of the COVID-19 pandemic. They were recently hired by a farm for seasonal work outside of Oregon City and will be commuting there a few days a week at 4 p.m. for the late shifts. | Shorter travel time on the Toll Path. No difference in travel time on the Toll-Free Path. |
| 4 | Person D recently moved from Portland to Wilsonville and purchased a home for their family. They work as a human resources professional at the Oregon Health & Science University Waterfront campus in South Portland and commute during the peak hour (8 to 9 a.m. and 4 to 5 p.m.) in each direction, Monday through Friday. | No Toll Path for this scenario—assumed route would not use the proposed tolled bridges on I-205. No difference in travel time on the Toll-Free Path. |
| 5 | Person E is a junior in high school and lives in affordable housing in Southeast Portland. They want to go to college for environmental science and are volunteering at Friends of Tryon Creek. They take the bus after school to volunteer at Tryon Creek State Nature Area in South Portland from 3 p.m. to 5 p.m. on Tuesdays and Thursdays for community service credits. | No Toll Path for this scenario—assumed route would not use the proposed tolled bridges on I-205. No difference in travel time via transit. |
| 6 | Person F is a teacher at River Grove Elementary School in Lake Oswego and drives to work. They have a chiropractic appointment every other Wednesday at 6 p.m. in Oregon City, which is the location of the closest practitioner who takes their insurance. | Shorter travel time on the Toll Path. No difference in travel time on the Toll-Free Path. |

Social Resources and Communities Technical Report

| Scenario # | Scenario Description | Build Alternative Compared to the No Build Alternative ^[1] |
|------------|--|---|
| 7 | Person G is living in an affordable apartment with their partner near Oregon City. They work evening shifts as a nurse at Legacy Meridian Park Medical Center in Tualatin five nights a week, with a shift that starts around 11 p.m. | Shorter travel time on the Toll Path. No difference in travel time on the Toll-Free Path. |
| 8 | Person H resides in a senior living facility near Wilsonville. After a fall one morning, they call their neighbor for a ride and leave for Sunnyside Medical Center in the Sunnyside area of Clackamas County around 11 a.m. | No difference in travel time on the Toll Path. Longer travel time on the Toll-free Path. |
| 9 | Person I, a native Russian speaker, lives in an affordable housing unit in Canby. They take the bus to Ebenezer Church in Milwaukie, which provides full Russian services, every Friday at 7 p.m. | No Toll Path for this scenario—assumed route would not use the proposed tolled bridges on I-205. No difference in travel time via transit. |
| 10 | Person J lives in Canby. They travel to Clackamas Town Center in Happy Valley almost every day for their job as a restaurant manager, to their gym membership, and to perform live music twice a week at a local bar and music venue. Typically, they travel in around noon and return home about 11 p.m. They take OR 99E in Oregon City and do not get on I-205 until north of the Abernethy Bridge. | No Toll Path for this scenario—assumed route would not use the proposed tolled bridges on I-205. No difference in travel time on the Toll-Free Path. |
| 11 | Person K is a formerly houseless individual in Portland who is struggling to find consistent work and transportation. They haven't had a car for the past 5 years and travel mainly by bus. They were able to find a minimum wage job working at a fast-food restaurant in downtown Oregon City, working the day shift from 8 a.m. to 4 p.m. | No Toll Path for this scenario—assumed route would not use the proposed tolled bridges on I-205. No difference in travel time via transit. |
| 12 | Person L is a recent high school graduate and is attending an online college. They share their small apartment in Tualatin with two roommates. To get some exercise and time to themselves, they take their dog for a morning walk (around 8 a.m.) on the McLoughlin Promenade in Gladstone twice a week. | Shorter travel time on the Toll Path. No difference in travel time on the Toll-Free Path. |
| 13 | Person M and their family live in Lake Oswego. They've been going to the same dentist near Clackamas Town Center in Happy Valley for over 15 years. They leave their full-time, salaried job at 3 p.m. to take each of their family members to appointments twice a year. | No difference in travel time on the Toll Path or Toll-Free Path. |
| 14 | Person N is a bus driver living in Tualatin. Three days a week, after school drop-off at around 5 p.m., they drive to the Sunnyside Medical Center in the Sunnyside area of Clackamas County to receive dialysis treatment. | Shorter travel time on the Toll Path. No difference in travel time on the Toll-Free Path. |
| 15 | Person O works from home in a suburb in southern Lake Oswego. They enjoy going to a Moroccan restaurant in Wilsonville because it is the only place where they can find Moroccan food made the way they had it growing up. Typically, they like to visit during their lunch break around noon on Wednesdays. | No Toll Path for this scenario—assumed route would not use the proposed tolled bridges on I-205. No difference in travel time on the Toll-Free Path. |
| 16 | Person P is a single parent, living in a suburban neighborhood in West Linn. They bring their child to the Gladstone Public Library for a weekly youth program after work and school twice a week at 4 p.m. | No difference in travel time on the Toll Path. Longer travel time on the Toll-Free Path. |

[1] Analysts identified the shortest trip path from home locations to activity locations that would include travel on the proposed tolled bridges on I-205 (called the "Toll Path"), as well as a path that would not include travel on the proposed tolled bridges on I-205 (called the "Toll-Free Path").

Cost of Tolls

Social and public service providers and households, including EFCs, could experience higher costs as a percentage of their operating or household transportation budgets compared to the No Build Alternative if they choose to take tolled routes, as discussed in the *I-205 Toll Project Economics Technical Report*. However, overall, the improved I-205 traffic performance under the Build Alternative is expected to lead to

economic benefits that would reduce costs for social resource providers and community members. The benefits include lower vehicle emissions, shorter travel times, vehicle operating cost savings, and fewer vehicle incidents.

The cost of tolls would have impacts on low-income households, which could also include populations on a fixed income, such as older adults and people experiencing a disability. This potential impact is discussed in more detail in the *I-205 Toll Project Environmental Justice Technical Report*, and mitigation is discussed in Section 7.2.

Effects related to the cost of tolls would start when tolling is implemented (2 to 3 years before completing construction of the planned I-205 improvements, as discussed further in the Tolling During Construction of Roadway Improvements subsection of Section 6.2.1.)

Ability to Understand and Use Electronic Toll System

Because roadway signage will be in English, the tolling system could introduce challenges for persons with LEP in the API. Through community engagement and outreach for the Project, analysts also identified potential technological barriers related to the electronic toll system for the general population and for EFCs. People who are less proficient with technology may have difficulty registering for an account, purchasing a transponder, and paying bills online. These technological barriers could discourage use of the tolling system among all populations and contribute to rerouting from I-205 to avoid the toll system. These effects would start when tolling is implemented (2 to 3 years before completing construction of the planned I-205 improvements, as discussed further in the Tolling During Construction of Roadway Improvements subsection of Section 6.2.1.)

Rerouting Traffic to Local Streets

With the added capacity in both directions and tolling on I-205, the Build Alternative would result in faster I-205 highway travel times in 2045 in both the AM and PM peak periods compared with the No Build Alternative. These improved travel times could facilitate faster access to social resources and geographic communities for travelers using I-205 under the Build Alternative relative to the No Build Alternative. However, under the Build Alternative in 2027 and 2045, some traffic would reroute to local streets in order to avoid tolls, resulting in potential impacts on local trips and communities.

The following sections analyze effects on social resources in specific geographic communities near intersections affected by rerouting, as identified in the *I-205 Toll Project Transportation Technical Report* and described in Sections 4.2.1 and 5.3. Section 5.1 provides additional descriptions and/or maps of the locations of social resources in the API. The *I-205 Toll Project Transportation Technical Report* provides more specific data about the differences in traffic performance under the 2027 and 2045 No Build and Build Alternatives for the AM and PM peak hours.

Figures 6-1 and 6-2 summarize the location of the affected intersections in Canby, Gladstone, Lake Oswego, Tualatin, West Linn, and unincorporated Clackamas County for 2027 and 2045. Figure 6-1 shows the whole transportation API, and Figure 6-2 focuses on the intersections in the area of Gladstone, West Linn, and Oregon City.

In 2027, 1 intersection would have better operations (i.e., meet standards) under the Build Alternative as compared with the No Build Alternative; 5 intersections would have worse operations (i.e., would not meet standards) under the Build Alternative compared with the No Build Alternative; and 9 intersections would not meet standards under both alternatives during the AM and/or PM peak hour and would have worse operations under the Build Alternative than the No Build Alternative.

In 2045, 1 intersection would experience better operations (i.e., meet standards) under the Build Alternative compared with the No Build Alternative, 3 would experience worse operations (i.e., do not meet standards) under the Build Alternative compared with the No Build Alternative, and 13 intersections would not meet standards under both alternatives during the AM and/or PM peak hour and would have worse operations under the Build Alternative compared to the No Build Alternative.

This analysis also considered potential effects on transit and active transportation users seeking to access social resources. Transit travel times would experience the largest differences between the No Build and Build Alternatives in downtown Oregon City and the Stafford Road area in 2045, as discussed in the sections below. One intersection would experience a higher level of traffic stress¹⁷ for pedestrians and two roadway segments would experience worse pedestrian level of service¹⁸ under the Build Alternative in 2045, as described in the Oregon City, unincorporated Clackamas County, and West Linn subsections below. No other intersections would experience large differences between the Build and No Build Alternatives in 2045 related to level of stress for bicyclists and pedestrians.

On Figure 6-1 and Figure 6-2, the yellow hatched areas are TAZs with a higher existing percentage of EFCs as compared to the county in which they are located. Attachment B describes the predominant EFC demographic groups that reside in each TAZ by corresponding TAZ number shown on the figures.

Canby

One intersection in Canby, the OR 99E and Ivy Street intersection, would not meet local standards in both alternatives and would be worse under the Build Alternative compared to the No Build Alternative during the PM peak hour in 2027 and 2045. Although severe congestion¹⁹ would occur under both alternatives at this intersection, the Build Alternative would have longer delays (by more than 2 minutes in 2027 and about 40 seconds in 2045) compared to the No Build Alternative that would have impacts on people and public service providers, such as emergency vehicles, traveling to nearby social resources, which currently include retail stores and restaurants, medical clinics, parks, religious organizations, a fire station, and schools. EFCs with a higher percentage of people experiencing a disability, older adults, people with LEP, and children than in Clackamas County as a whole are present in the four TAZs surrounding the intersection. In addition, the two TAZs south of OR 99E have a higher percentage of ethnic (Hispanic/Latino) minority populations than Clackamas County as a whole. Effects specific to minority populations are discussed in the *I-205 Toll Project Environmental Justice Technical Report*.

Gladstone

One Gladstone intersection, the OR 99E and W Arlington Street intersection, would not meet standards under the Build Alternative and would meet standards under the No Build Alternative during the PM peak hour in 2027. Although severe congestion would occur at this intersection under both alternatives in 2027, the Build Alternative would have longer delays (by about 30 seconds) than the No Build Alternative. This

¹⁷ Level of traffic stress is an analysis method used to quantify multimodal conditions by estimating the perceived safety of bicycle and pedestrian infrastructure.

¹⁸ Level of Service for pedestrians is used to convey pedestrian conditions and performance on roadways in the study area.

¹⁹ The term severe congestion refers to intersections that do not meet local mobility standards and generally have Level of Service of E or F according to the *I-205 Toll Project Transportation Technical Report*.

difference would have impacts on people traveling to nearby social resources, which currently include religious institutions, schools, and a nursing home. A second Gladstone intersection, the 82nd Drive and I-205 northbound ramps intersection, would not meet standards in both alternatives in 2027 and 2045 during the PM peak hour. Although moderate to severe congestion²⁰ would occur at this intersection under both alternatives in 2045, the Build Alternative would have longer delays (by about 40 seconds) compared to the No Build Alternative that would have impacts on people traveling to nearby social resources, which currently include a sports club. This intersection is not located in a TAZ that has higher percentages of EFCs than Clackamas County as a whole.

Lake Oswego

One Lake Oswego intersection, OR 43 and McVey Avenue, would not meet standards in both alternatives and would be worse under the Build Alternative than the No Build Alternative during the AM peak hour in 2027 and 2045. A second Lake Oswego intersection, OR 43 and A Avenue, would meet local mobility standards under the No Build Alternative but would not meet those standards under the Build Alternative during the AM peak hour in 2027. By 2045, that intersection would not meet local mobility standards under both alternatives and would be worse under the Build Alternative than the No Build Alternative during the AM peak hour.

Both intersections are located at opposite ends of a primarily commercial district north of downtown Lake Oswego. Although moderate to severe congestion would occur at these intersections under both alternatives, the Build Alternative would have longer delays (by less than 30 seconds) compared to the No Build Alternative that would have an impact on people traveling to nearby social resources, which include shopping centers, restaurants, an arts center, and offices. Neither intersection is in a TAZ with a higher percentage of EFCs than Clackamas County as a whole.

Oregon City

Four intersections in the downtown area of Oregon City would have worse traffic operations under the Build Alternative compared to the No Build Alternative in 2027 and/or 2045:

- **7th Street and Main Street intersection:** In 2027, this intersection would not meet standards under the Build Alternative and would meet standards under the No Build Alternative during the PM peak hour, and moderate congestion would occur.
- **OR 99E and 10th Street intersection:** In 2045, this intersection would not meet standards under the Build Alternative and would meet standards under the No Build Alternative during the PM peak hour.
- **OR 99E (McLoughlin Boulevard) and 14th Street intersection:** In 2027, this intersection would not meet standards under both alternatives during the PM peak hour. Delays would be longer (by more than 1 minute) and congestion would be more severe under the Build Alternative compared with the No Build Alternative. In 2045, this intersection would not meet standards under both alternatives during the AM and PM peak hours, and there would be longer delays (by up to about 20 seconds) under the Build Alternative compared to the No Build Alternative.
- **OR 99E and 15th Street intersection:** During the AM peak hour in 2045, this intersection would not meet standards under the Build Alternative and meet standards under the No Build Alternative, and longer delays (by nearly 3 minutes) would occur under the Build Alternative. During the PM peak hour

²⁰ The term moderate congestion refers to intersections that do not meet local mobility standards and generally have Level of Service D according to the *I-205 Toll Project Transportation Technical Report*.

Social Resources and Communities Technical Report

in 2045, this intersection would have severe congestion and would not meet standards under both alternatives, but there would be longer delays (by about 1 minute) under the Build Alternative compared to the No Build Alternative.

Worsening traffic performance at these downtown Oregon City intersections under the Build Alternative would have an impact on people traveling to nearby social resources, which currently include shops, restaurants, the Clackamas County Court House, City Hall, a community center, religious organizations, nursing homes, and parks. None of the downtown Oregon City intersections are in a TAZ with a higher percentage of EFCs than Clackamas County as a whole. However, the two adjacent TAZs have a higher proportion of people experiencing a disability than Clackamas County as a whole. Furthermore, because of the larger concentration of social services in Oregon City, it is expected that EFC populations would regularly travel through this area and may experience impacts from higher congestion levels under the Build Alternative.

Transit travel times along OR 99E near these affected intersections would be similar under the Build and No Build Alternatives in 2045. However, transit multimodal level of service (MMLOS)²¹ would be lower under the Build Alternative as compared to the No Build Alternative on southbound OR 99E from 11th Street to Main Street and on northbound OR 99E from Railroad Avenue to MP 12.74 in downtown Oregon City. Additionally, there would be longer travel times under the Build Alternative compared to the No Build Alternative on northbound Main Street from 11th Street to 15th Street during the AM peak hour and on southbound Main Street from 14th Street to OR 99E during the PM peak hour in 2045. These travel-time delays would have an impact on transit access to social resources in the downtown Oregon City area during those times. One segment of this corridor, 11th Street to Main Street in Oregon City, would experience worse MMLOS under the Build Alternative than under the No Build Alternative in 2045 because of increasing traffic volumes.

Two intersections near I-205 ramps in Oregon City would have worse traffic operations under the Build Alternative than the No Build Alternatives in 2027 and/or 2045:

- **OR 99E and I-205 northbound ramps:** Although moderate to severe congestion would occur under both alternatives during the AM and PM peak hours in 2027, there would be worse congestion under the Build Alternative during the PM peak hour compared with the No Build Alternative, which would have impacts on people traveling to nearby social resources, including shopping centers, restaurants, and parks. Although severe congestion would continue to occur under both alternatives at this intersection in 2045, the Build Alternative would have worse congestion and delays (by about 25 seconds during the AM peak hour) than the No Build Alternative.
- **OR 99E and I-205 southbound ramps:** Although congestion would be moderate to severe under both alternatives during the 2027 AM and PM peak hours, delays would be worse (by about 1 minute) under the Build Alternative compared to the No Build Alternative during the PM peak hour and would have an impact on people traveling to nearby social resources, including shopping centers, restaurants, and parks.

²¹ Multimodal level of service can be used to measure the performance of bicycle, pedestrian, and transit facilities. Transit LOS analysis quantifies user perception of quality of transit service based on various transit and roadway characteristics, including transit speed, frequency, estimated ridership, and on-time performance. Similar to vehicle LOS, LOS A is the best or most suitable level and LOS F is the worst or least suitable level.

None of the Oregon City intersections near I-205 are in a TAZ with a higher percentage of EFCs than Clackamas County as a whole.

Tualatin

In 2027, two Tualatin intersections would meet standards under the No Build Alternative and would not meet standards under the Build Alternative during the PM peak hour: at the I-5 northbound ramps and Nyberg Street and at the I-5 southbound ramps and Nyberg Street. The Build Alternative would have longer delays (by less than 10 seconds at the I-5 northbound ramps and about 20 seconds at the I-5 southbound ramps) than the No Build Alternative. These differences would have an impact on people and public service providers, such as emergency vehicles, traveling to nearby social resources, including medical facilities, parks, and shopping centers. The southbound ramps intersection is in a TAZ with a higher percentage of low-income populations, minority populations, and people experiencing a disability than Clackamas County as a whole. Effects specific to low-income populations and minority populations are discussed in the *I-205 Toll Project Environmental Justice Technical Report*.

In 2045, one intersection, the SW Borland Road and SW 65th Avenue intersection, would meet standards during the AM peak hour under the No Build Alternative and would not meet standards under the Build Alternative. Although severe congestion would occur at this intersection under both alternatives, the Build Alternative would have longer delays (by about 20 seconds) in 2045. This difference would have impacts on people and public service providers, such as emergency vehicles, traveling to nearby social resources, which currently include a medical center, schools, an assisted living facility, and parks. This intersection is not in a TAZ with a higher percentage of EFCs than Clackamas County as a whole.

West Linn

Two West Linn intersections would meet standards under the Build Alternative and would not meet standards under the No Build Alternative in 2027 and/or 2045:

- **OR 43 and I-205 southbound ramps intersection:** During the AM peak hour in 2027, there would be slightly shorter delays (by about 15 seconds) under the Build Alternative compared to the No Build Alternative. During the PM peak hour in 2045, there would be shorter delays (by almost 1 minute) under the Build Alternative compared to the No Build Alternative. These shorter delays would provide benefits for people traveling to nearby social resources, which currently include parks, schools, religious organizations and shopping centers.
- **Hidden Springs Road and Santa Anita Drive:** During the PM peak hour in 2045, there would be shorter delays (by about 10 seconds) under the Build Alternative compared to the No Build Alternative, which would provide benefits for people and public service providers, such as emergency vehicles, traveling to nearby social resources, which currently include a fire station, parks, and schools.

One West Linn intersection, the 12th Street and Willamette Falls Drive intersection, would not meet standards in both alternatives and would be worse under the Build Alternative compared to the No Build Alternative in 2045: Although severe congestion would occur under both alternatives at this intersection during the PM peak hour, the Build Alternative would have longer delays (by about 2 minutes) than the No Build Alternative and would have an impact on people or public service providers, such as emergency vehicles, traveling to nearby social resources, which currently include a fire station, a school, religious organizations, medical offices, and restaurants. In addition, the 12th Street and Willamette Falls Drive intersection would experience a higher level of pedestrian traffic stress under the Build Alternative compared to the No Build Alternative based on increased traffic volumes, which would potentially impact people walking to nearby social resources.

None of the affected intersections in West Linn are in a TAZ with a higher percentage of EFCs than Clackamas County as a whole.

Unincorporated Clackamas County

In the Stafford Hamlet area, three intersections on SW Stafford Road would have worse traffic operations under the Build Alternative compared to the No Build Alternative in 2027 and/or 2045:

- **SW Stafford Road and SW Mountain Road intersection:** During the PM peak hour in 2045, this intersection would meet standards under the Build Alternative and not meet standards under the No Build Alternative. However, during the AM peak hour in 2027 and 2045, this intersection would not meet standards under both alternatives. Although severe congestion would occur under both alternatives at this intersection, the Build Alternative would have more severe congestion and longer delays (by about 20 to 40 seconds) compared to the No Build Alternative and would have an impact on people traveling to nearby social resources, which currently include schools and religious organizations. Transit travel times on both directions of Stafford Road between the Tualatin River and SW Mountain Road would be about the same under both alternatives during the AM peak hour and would improve under the Build Alternative compared to the No Build Alternative during the PM peak hour, which would benefit people traveling to social resources via transit.
- **SW Stafford Road and SW Childs Road intersection:** During the AM and PM peak hour in 2045, this intersection would not meet standards under both alternatives. Although medium to severe congestion would occur under both alternatives at this intersection, the Build Alternative would have longer delays (by less than 20 seconds) compared to the No Build Alternative and would have an impact on people traveling to nearby social resources, which currently include parks, schools, and religious organizations.
- **SW Stafford Road and SW Rosemont Road intersection:** During the AM peak hour in 2027 and the AM and PM peak hours in 2045, this intersection would not meet standards in both alternatives. Although moderate congestion would occur under both alternatives at this intersection, the Build Alternative would have longer delays (by about 10 seconds to more than 1 minute) compared to the No Build Alternative. During the PM peak hour in 2027, this intersection would not meet standards under the Build Alternative but would meet standards under the No Build Alternative. This congestion in 2027 and 2045 would have an impact on people traveling to nearby social resources, which currently include parks, schools, religious organizations, and an assisted living facility.

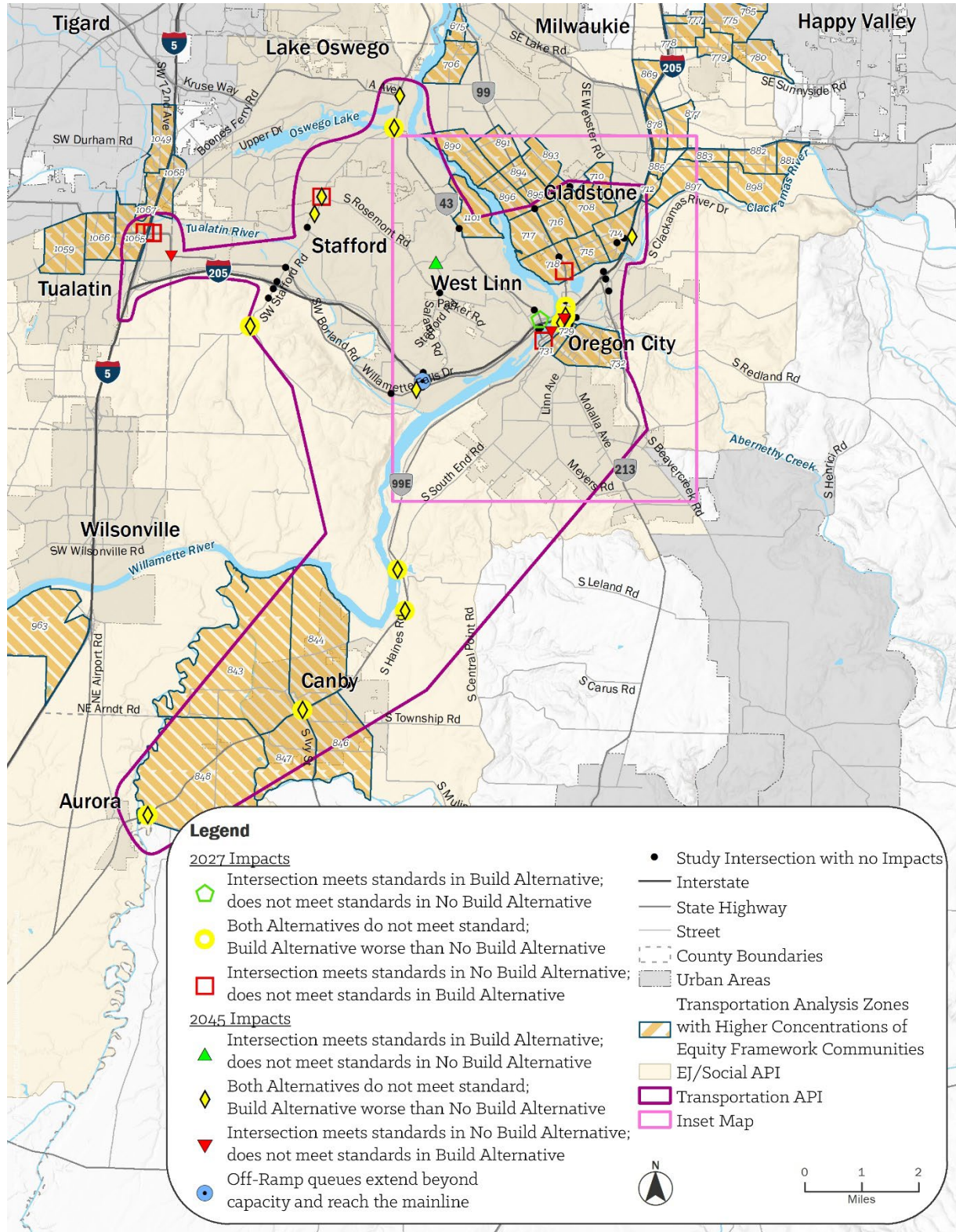
There would be worse MMLOS for pedestrians in 2045 on southbound Borland Road from Stafford Road to Ek Road under the Build Alternative compared to the No Build Alternative, which could cause delays in their access to nearby social resources. None of the affected Stafford intersections are in a TAZ with a higher percentage of EFCs than Clackamas County as a whole.

In the Canby area, three intersections on OR 99E outside of the city limits would not meet standards in both alternatives and would have worse traffic operations under the Build Alternative in 2027 and/or 2045:

- **OR 99E and South End Road intersection:** Although severe congestion would occur under both alternatives at this intersection during the AM and PM peak hours in 2027 and 2045, the Build Alternative would have more congestion than the No Build Alternative and would have an impact on people traveling to nearby social resources, which currently include religious organizations. This intersection is not in a TAZ with a higher percentage of EFCs than Clackamas County as a whole.

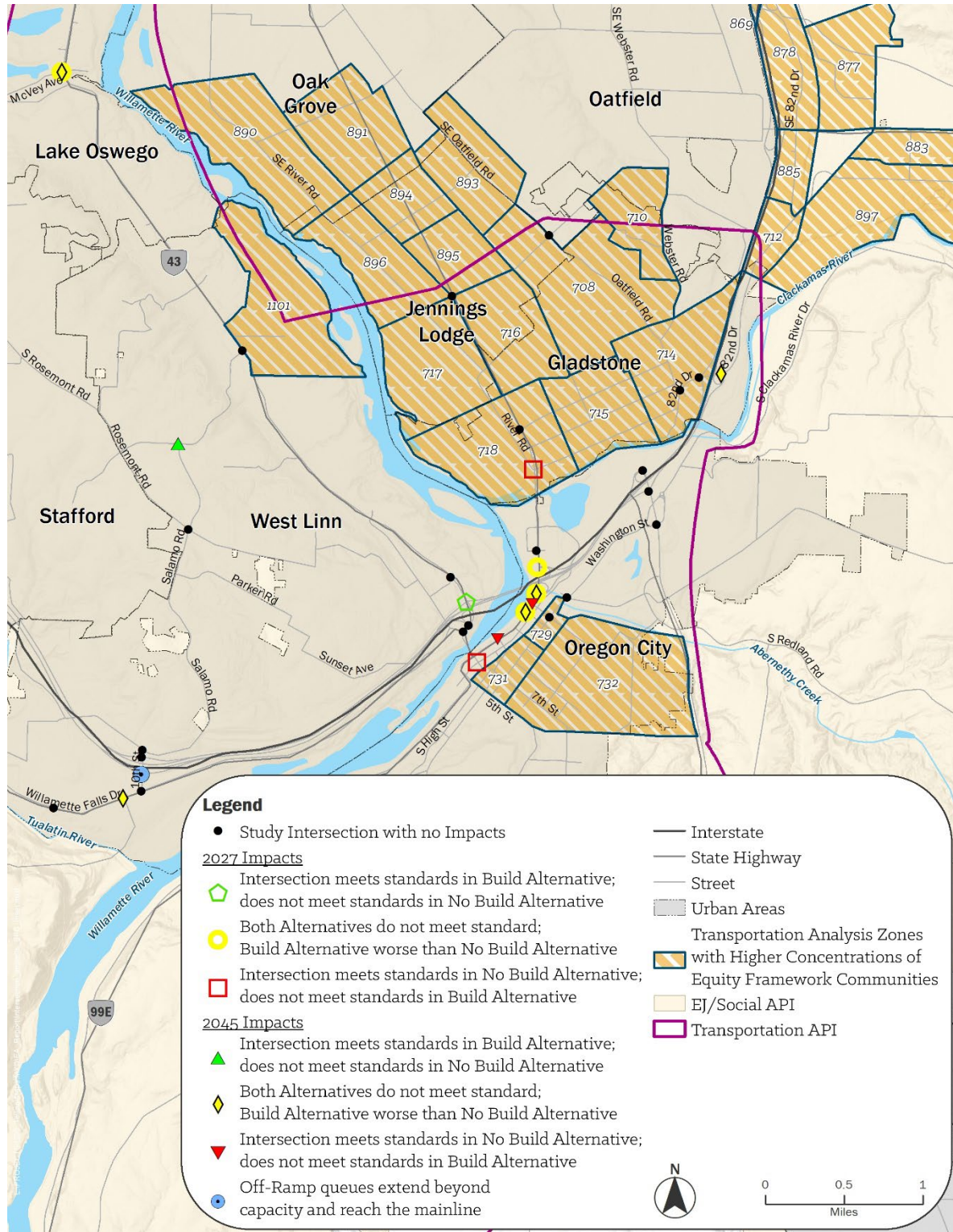
- **OR 99E and New Era Road intersection:** Although severe congestion would occur under both alternatives at this intersection during the PM peak hour in 2027 and 2045, the Build Alternative would have more congestion than the No Build Alternative and would have an impact on people traveling to nearby social resources, which currently include religious organizations. This intersection is not in a TAZ with a higher percentage of EFCs than Clackamas County as a whole.
- **OR 99E and Lone Elder Road:** Although severe congestion would occur under both alternatives at this intersection during the AM and PM peak hours in 2027 and 2045, the Build Alternative would have more congestion during the 2027 and 2045 AM peak hours than the No Build Alternative. There are limited social resources near this rural intersection. However, the greater congestion levels could have an impact on people traveling to social resources in nearby Aurora or Canby. The TAZ surrounding this intersection has a higher percentage of older adults than Clackamas County as a whole.

Figure 6-1. Intersections Affected by Traffic Rerouting in 2027 and 2045: Build Alternative Compared to No Build Alternative



Sources: ESRI 2018; Metro 2022, I-205 Toll Project Transportation Technical Report

Figure 6-2. Inset Map of Intersections Affected by Traffic Rerouting in Gladstone, Oregon City, and West Linn in 2027 and 2045: Build Alternative Compared to No Build Alternative



Sources: ESRI 2018; Metro 2022; I-205 Toll Project Transportation Technical Report

Roadway Safety

According to the *I-205 Toll Project Transportation Technical Report*, the total number of annual predictive crashes at intersections and on roadway segments in the API would vary by location but would generally be similar in 2027 and/or 2045 under the Build Alternative compared to the No Build Alternative. Four intersections and portions of OR 99E and SW Stafford Road in Canby, Gladstone, Tualatin, unincorporated Clackamas County would experience safety impacts in 2027 that would require consideration of mitigation, according to criteria identified in the *I-205 Toll Project Transportation Technical Report*. Segments of OR 99E, OR 213, and Willamette Falls Drive in the API would each experience more crashes in 2027 and/or 2045 under the Build Alternative compared to the No Build Alternative because of changes in traffic volumes in those areas. Most of the additional crashes would be property damage only crashes. Because there would be a combination of benefits and impacts depending on location, and safety impacts would be mitigated, the Build Alternative would generally have no adverse effects on health and safety on local roadways and intersections.

Due to the proposed improvements on I-205, the number of crashes, including crashes resulting in fatalities and injuries, is expected to be 26% lower (representing about 144 fewer crashes) in 2045 under the Build Alternative compared to the No Build Alternative. Therefore, the Build Alternative would have health and safety benefits related to the use of I-205 to access social resources and communities.

Noise

According to the *I-205 Toll Project Noise Technical Report*, minimal noise differences would occur under the Build Alternative compared with the No Build Alternative. Similar to the No Build Alternative, traffic noise levels would continue to be loudest at outdoor land uses located closest to I-205 and would continue to exceed ODOT noise criteria at SouthLake church/preschool/daycare, Jon Storm Park, and the Atlas Immersion Academy School. Three noise walls recommended for construction under the Build Alternative would result in lower highway noise levels for nearby residences in unincorporated Clackamas County and West Linn. The noise walls would not be adjacent to areas with higher concentrations of EFCs than the county as a whole.

Air Quality

According to the *I-205 Toll Project Air Quality Technical Report*, overall emissions of air pollutants (MSAT) would be lower in 2027 and in 2045 under the Build Alternative compared to the No Build Alternative. These lower emissions of air pollutants would benefit all communities, including EFCs.

There may be localized areas where ambient concentrations of MSAT could be different under the Build Alternative compared to the No Build Alternative. The localized changes in MSAT concentrations would likely be most pronounced on roadway segments where traffic volumes would be higher under the Build Alternative relative to the No Build Alternative due to rerouted trips. However, the magnitude and the duration of these potential higher emissions compared to the No Build Alternative cannot be reliably quantified due to incomplete or unavailable information about forecasting project-specific MSAT concentrations and related health impacts.

Heat Islands

The Build Alternative would have minimal long-term impacts on the built environment, vegetation, and land uses in the API, as the toll gantries and supporting infrastructure would be constructed within existing state right-of-way. The Build Alternative would require permanent conversion of about 415 square feet of land to transportation uses, but those parcels are currently vacant. Any required vegetation

removal would be mitigated in accordance with applicable regulations. Therefore, exposure to heat islands is expected to be similar under the Build Alternative as compared with the No Build Alternative.

6.3 Summary of Effects by Alternative

Table 6-2 summarizes and compares the impacts and benefits for the 2045 No Build and Build Alternatives, as identified in Section 6.2.

Table 6-2. Summary of Social Resources and Communities Impacts and Benefits by Alternative

| Effects | No Build Alternative | Build Alternative |
|-------------------|--|---|
| Short-Term Direct | <ul style="list-style-type: none"> • None. | <ul style="list-style-type: none"> • Temporary noise and dust increases in the vicinity of construction activities on I-205 but minimal construction impacts on neighboring social resources and communities. • Brief I-205 roadway closures and detours with maintenance of access to all social resources and geographic communities, including emergency services. |
| Long-Term Direct | <p>Compared to existing conditions, there would be:</p> <ul style="list-style-type: none"> • Differences in access (a mix of greater, less, and similar) to social resources (e.g., job centers, community places, medical facilities) for EFCs and the general population in 2045. • Similar or longer travel times to representative activity centers (e.g., parks, businesses, medical facilities) for EFCs and the general population traveling on routes that include the proposed tolled bridges on I-205 in 2045. • Longer travel times and more crashes on I-205, which would have an impact on access to social resources and communities in 2045. • Similar range of noise impacts on local communities. • Lower air pollutant emissions. • No difference in exposure to heat islands. | <p>Compared to the No Build Alternative, there would be:</p> <ul style="list-style-type: none"> • Similar or greater access to social resources (e.g., job centers, community places, medical facilities) for EFCs and the general population because of projected regional growth and transportation improvements related to the Build Alternative in 2045. • Similar or shorter travel times to representative activity centers (e.g., parks, businesses, medical facilities) for EFCs and the general population traveling on routes that include the proposed tolled bridges on I 205 in 2045. • Potential higher transportation costs for social and emergency service providers, which may be offset by other user and social benefits associated with improved I-205 traffic performance (e.g., reduced emissions, shorter travel times, vehicle operation cost savings, fewer crashes), which would start when tolling is implemented (2 to 3 years before completing construction of the planned I-205 improvements). • Potential impacts from the cost of tolls on low-income households, which could also include populations on a fixed income, such as older adults and people experiencing a disability, which would start when tolling is implemented (2 to 3 years before completing construction of the planned I-205 improvements). • Potential language and technological barriers to using and understanding the electronic toll system, which would start when tolling is implemented (2 to 3 years |

Social Resources and Communities Technical Report

| Effects | No Build Alternative | Build Alternative |
|---------|----------------------|--|
| | | <p>before completing construction of the planned I-205 improvements).</p> <ul style="list-style-type: none"> • Potential delays and longer travel times near intersections, which could affect access to social resources in Canby, Gladstone, Lake Oswego, Oregon City, Tualatin, West Linn, and unincorporated Clackamas County (near Stafford Hamlet and Canby) in 2027 and/or 2045 during the AM and/or PM peak hours. • Similar numbers of crashes on local streets in 2027 and 2045, and a lower number of crashes on I-205 in 2045, which would have benefits for all communities. Four intersections and portions of OR 99E and SW Stafford Road in Canby, Gladstone, Tualatin, unincorporated Clackamas County would experience safety impacts in 2027 that would require consideration of mitigation. • Minimal difference in noise impacts on social resources and communities. • Lower air pollutant emissions benefitting all communities. • Minimal difference in exposure to heat islands. |

7 Avoidance, Minimization, and/or Mitigation Commitments

7.1 Short-Term Impacts

Construction contractors would be required to comply with federal, state, and local regulations and implement best management practices to manage and reduce construction-related impacts, including implementing noise, air quality, and traffic control measures. No specific additional mitigation is required. The following additional measures would be implemented to avoid, minimize, and/or mitigate construction impacts on social resources and communities:

- Conducting outreach in multiple languages (e.g., simplified and traditional Chinese, Russian, Spanish, Vietnamese) and plain language to provide advance information about construction activities and potential effects.

7.2 Long-Term Impacts

The *I-205 Toll Project Transportation Technical Report* provides a list of potential measures to avoid, minimize or mitigate roadway, transit, and active transportation impacts under the Build Alternative, which would also help to avoid, minimize, or mitigate impacts on social resources and communities near affected intersections in particular geographic areas.

The following additional measures would be implemented prior to and/or during tolling to avoid, minimize, or mitigate long-term impacts on social resources and communities:

- As part of the Oregon Toll Program development, ODOT has committed to providing a low-income toll program when tolling begins. ODOT presented an approach for developing a low-income toll program in the Low-Income Toll Report submitted to the Oregon Transportation Commission and Oregon State Legislature in September 2022 (ODOT 2022c). The report presents options for consideration by the Oregon Transportation Commission, which include: (1) providing a substantial toll discount (i.e., credits, free trips, percentage discount, or tax credit) or a full exemption for households with incomes equal to or below 200% of the federal poverty level, (2) providing a smaller, more focused toll discount for households with incomes above 200% and up to 400% of the Federal Poverty Level, and (3) using a verification process that leverages existing low-income service programs or exploring self-certification to qualify for enrollment.

Next steps for the low-income toll program include the following:

- Continuing partner and public engagement and meetings of the EMAC to inform low-income toll program development (through at least 2023)
- Development of the back-office system and operations management to support a low-income toll program (through 2023)
- Establishment of a Statewide Toll Rule Advisory Committee to develop recommendations for the toll rate-setting process and for the rules that apply to the low-income toll program (through the end of 2023)
- Further analysis of income thresholds and discount options through final traffic and revenue studies (through 2024 for the I-205 Toll Project)

Social Resources and Communities Technical Report

- Adoption of toll rates and rules for the I-205 Toll Project by the Oregon Transportation Commission (in mid-2024).
- Ongoing monitoring after tolling begins to ensure it is meeting equity and project goals (starting in 2024)
- ODOT would continue public outreach through final design and construction to mitigate barriers to using the electronic toll system, including:
 - Conducting outreach in multiple languages (e.g., simplified and traditional Chinese, Russian, Spanish, Vietnamese) and plain language to provide information about the Toll Program, including how to purchase a transponder, establish an account, and use the system. This outreach would also include raising awareness about travel options in the region to help offset the cost of tolls, such as a subsidized vanpool program that reduces costs for participants and tools operated by the Get There Oregon program to match commuters with carpool opportunities.
 - Implementing an electronic toll system interface (e.g., website, mobile application, printed materials) that is simple, easy to use, uses plain language and a combination of text and simple graphics, and complies with Section 508 of the Rehabilitation Act of 1973.²²
 - Distributing information about the I-205 Toll Project throughout toll operations, in coordination with other transportation projects (e.g., Oregon Toll Program, Regional Mobility Pricing Project) in the region via community-based organizations, public and social service offices, religious organizations, and schools.
 - Directly advertising in newspapers and radio stations that have an audience representative of limited English proficiency populations and establishing hotlines with multilingual customer service agents (e.g., simplified and traditional Chinese, Russian, Spanish, Vietnamese) in advance of the start of tolling.
- ODOT would establish permanent customer service centers across the region to mitigate barriers to using the electronic toll system, so drivers could:
 - Purchase transponders, establish prepaid accounts, and pay invoices in person and/or with cash.
 - Call customer service centers for assistance navigating the toll system and answer questions about how the program works.

The *I-205 Toll Project Environmental Justice Technical Report* discusses other measures specific to low-income populations and minority populations.

²² Federal regulation ensuring agencies comply with requirements that information and communication technology is accessible to, and usable by, people experiencing a disability. See more at www.section508.gov.

8 Preparers

Individuals involved in preparing the *I-205 Toll Project Social Resources and Communities Technical Report* are identified in Table 8-1.

Table 8-1. List of Preparers

| Name | Role | Education | Years of Experience |
|---------------------------------|--|---|---------------------|
| Emily Benoit | Technical Report Author | MBA Candidate, Data Analytics MCP, Community Planning BA, Sociology | 5 |
| Anne Broache, AICP | Technical Report Author | MUP, Urban Planning BSJ, Journalism | 15 |
| Rebecca Steiner | Technical Report Author | MUP, Urban Planning BA, Environmental Studies and Public Policy | 1 |
| Zahra Sadegh | Technical Report Author | MS, Environmental Science MS, Agroecology BS, Environmental Engineering | 5 |
| Stephanie Sprague, PMP, AICP | Technical Report Reviewer | MS, Natural Resource Policy BS, Environmental Microbiology | 20 |
| Jeff Crisafulli | Technical Report Editorial Reviewer | BA, English | 25 |

9 References

- City of Canby. 2019. Zoning Map. https://www.canbyoregon.gov/sites/default/files/fileattachments/development_services/page/6591/zoningmapsept2019.pdf. Accessed April 6, 2022.
- City of Gladstone. 2014. Zoning Map. https://www.ci.gladstone.or.us/sites/default/files/fileattachments/planning_commission/page/1251/zoning_small.pdf. Accessed April 6, 2022.
- City of Lake Oswego. 2019. Zoning Map. <https://www.ci.oswego.or.us/maps/lake-oswego-zoning-map>. Accessed April 6, 2022.
- City of Oregon City. 2020. Zoning Map. <https://www.orcity.org/maps/zoning-map>. Accessed April 6, 2022.
- City of Tualatin. 2022. Zoning Map Interactive Viewer. <https://www.tualatinoregon.gov/planning/zoning-map-interactive-viewer>. Accessed April 6, 2022.
- City of West Linn. 2015. West Linn City Map. <https://westlinnoregon.gov/maps/city-map>. Accessed April 6, 2022.
- Clackamas County. 2022. Comprehensive Plan Map 4-07a: Non-Urban Area Land Use Plan. <https://www.clackamas.us/planning/maptoc.html>. Accessed April 6, 2022.
- ESRI. 2018. GIS data for county, city, urban area boundaries, locations of religious organizations.
- Fahy, Benjamin, Emma Brenneman, Heejun Chang, and Vivek Shandas (Fahy et al.). 2019. *Spatial analysis of urban flooding and extreme heat hazard potential in Portland, OR*. International Journal of Disaster Risk Reduction.
- Metro. 2018a. *2018 Regional Transportation Plan, Appendix E: Transportation Equity Evaluation: An Evaluation of Equity, Environmental Justice and Title VI outcomes*. <https://www.oregonmetro.gov/sites/default/files/2019/03/13/Transportation-Equity-Evaluation-Final-3.12.19.pdf>. Accessed July 8, 2020.
- Metro. 2018b. *Regional Transportation Plan*. <https://www.oregonmetro.gov/sites/default/files/2020/07/29/Adopted-2018-RTP-all-chapters.pdf>
- Metro. 2022. Regional Land Information System. <https://rlisdiscovery.oregonmetro.gov/>. Accessed May 25, 2022.
- Oregon Department of Transportation (ODOT). 2020. *I-5 and I-205 Toll Projects: Toll Projects' Equity Framework*. https://www.oregon.gov/odot/tolling/Documents/Toll_Projects_Equity_Framework.pdf. Accessed May 12, 2022.
- Oregon Department of Transportation (ODOT). 2021a. *I-205 Toll Project Engagement Summary Summer-Fall 2020*. https://www.oregon.gov/odot/tolling/Documents/I-205_Engagement%20Summary_Final_508.pdf. Accessed May 18, 2022.
- Oregon Department of Transportation (ODOT). 2021b. *Updated Performance Measures*. https://www.oregon.gov/odot/tolling/Documents/I205_PerformanceMeasures_Updated%2010-7-2021.pdf. Accessed April 19, 2022.
- Oregon Department of Transportation (ODOT). 2021c. *I-205 Toll Project Public Involvement Plan*. March 23, 2021. https://www.oregon.gov/odot/tolling/Documents/I205_Tolling_PIP_Draft%20Clean%20%28002%29.pdf. Accessed May 13, 2022.

- Oregon Department of Transportation (ODOT). 2021d. *I-205 Toll Project Equitable Engagement Plan*. March 23, 2021. https://www.oregon.gov/odot/tolling/Documents/I-205_EquitableEngagementPlan_revised_draft_3.23.2021_clean%20%28002%29.pdf. Accessed May 13, 2022.
- Oregon Department of Transportation (ODOT). 2021e. *Oregon Standard Specifications for Construction*. https://www.oregon.gov/odot/Business/Specs/2021_STANDARD_SPECIFICATIONS.pdf. Accessed May 13, 2022.
- Oregon Department of Transportation (ODOT). 2022a. Re-Evaluation of the Categorical Exclusion for the I-205: Stafford Road to OR 213 Improvements Project. https://www.oregon.gov/odot/tolling/I205%20Files/I-205%20Improvements%20Project%20CE_Reevaluation_050422_signed.pdf. Accessed August 31, 2022.
- Oregon Department of Transportation (ODOT). 2022b. *I-205 Toll Project: Level 2 Toll Traffic and Revenue Study Report*. August 2022.
- Oregon Department of Transportation (ODOT). 2022c. *Low-Income Toll Report: Options to Develop a Low-Income Toll Program and Best Practices for Implementation*.
- U.S. Census Bureau. 2021. *American Community Survey 2015-2019 Estimates*. <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2019/>. Accessed June 13, 2022.
- U.S. Census Bureau. 2022. *U.S. Census Bureau QuickFacts*. <https://www.census.gov/quickfacts/fact/table/US/PST045221>. Accessed June 13, 2022.
- U.S. Department of Homeland Security. 2022. *Homeland Infrastructure Foundation-Level Data*. <https://hifld-geoplatform.opendata.arcgis.com/>. Accessed May 25, 2022.
- U.S. Department of Transportation. 2021. *U.S. Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. May 16, 2021. <https://www.transportation.gov/sites/dot.gov/files/Final-for-OST-C-210312-003-signed.pdf>. Accessed May 18, 2022.
- U.S. Environmental Protection Agency. 2022a. *Heat Island Effect*. <https://www.epa.gov/heatislands>. Accessed April 25, 2022.
- U.S. Environmental Protection Agency. 2022b. *EnviroAtlas*. <https://enviroatlas.epa.gov/enviroatlas/interactivemap/?featuredcollection=5a2372e6464246828510e7c34cadc22d>. Accessed June 16, 2022.
- Voelkel, Jackson and Vivek Shandas (Voelkel and Shandas). 2017. *Towards Systematic Prediction of Urban Heat Islands: Grounding Measurements, Assessing Modeling Techniques*.
- Voelkel, Jackson, Dana Hellman, Ryu Sakuma, and Vivek Shandas (Voelkel et al.). 2018. *Assessing Vulnerability to Urban Heat: A Study of Disproportionate Heat Exposure and Access to Refuge by Socio-Demographic Status in Portland, Oregon*. *International Journal of Environmental Research and Public Health*. <https://pubmed.ncbi.nlm.nih.gov/29601546/>. Accessed August 3, 2021.
- Walker, Laquitta, and Danielle Taylor. 2021. *Same-Sex Couple Households: 2019*. U.S. Census Bureau. <https://www.census.gov/content/dam/Census/library/publications/2021/acs/acsbr-005.pdf>.

This page intentionally left blank.

Attachment A Social Resources and Communities Demographic Tables

This attachment includes the following demographic tables:

- Table A-1. People Experiencing a Disability
- Table A-2. Older Adults (65+)
- Table A-3. Children (18 and Under)
- Table A-4. Limited English Proficiency
- Table A-5. Households with No Vehicle Access

Table A-1. People Experiencing a Disability

| County | Geography | Total Population ⁽¹⁾ | Total Population Margin of Error ⁽²⁾ | Population with a Disability | Population with a Disability Margin of Error | Percent Disabled (%) | Percent Disabled Margin of Error (%) |
|-------------------------|-------------------------------------|---------------------------------|---|------------------------------|--|----------------------|--------------------------------------|
| Clackamas County | Clackamas County (Total) | 408,754 | | 48,254 | | 11.8 | |
| Clackamas County | Clackamas County (API Total) | 246,116 | | 28,982 | | 11.8 | |
| Clackamas County | Census Tract 201 | 3,984 | 255 | 202 | 80 | 5.1 | 2.0 |
| Clackamas County | Census Tract 202 | 6,258 | 332 | 660 | 195 | 10.5 | 3.1 |
| Clackamas County | Census Tract 203.03 | 6,065 | 338 | 497 | 181 | 8.2 | 2.9 |
| Clackamas County | Census Tract 204.01 | 6,037 | 292 | 506 | 152 | 8.4 | 2.5 |
| Clackamas County | Census Tract 204.03 | 3,720 | 184 | 186 | 75 | 5.0 | 2.0 |
| Clackamas County | Census Tract 204.04 | 3,781 | 207 | 282 | 95 | 7.5 | 2.5 |
| Clackamas County | Census Tract 205.01 | 7,227 | 299 | 420 | 148 | 5.8 | 2.0 |
| Clackamas County | Census Tract 205.03 | 2,363 | 161 | 153 | 59 | 6.5 | 2.5 |
| Clackamas County | Census Tract 205.04 | 6,620 | 298 | 782 | 203 | 11.8 | 3.0 |
| Clackamas County | Census Tract 205.05 | 2,431 | 186 | 415 | 103 | 17.1 | 4.0 |
| Clackamas County | Census Tract 206 | 8,556 | 423 | 665 | 188 | 7.8 | 2.2 |
| Clackamas County | Census Tract 207 | 4,064 | 245 | 254 | 86 | 6.3 | 2.1 |
| Clackamas County | Census Tract 208 | 4,109 | 320 | 510 | 139 | 12.4 | 3.2 |
| Clackamas County | Census Tract 211 | 5,032 | 378 | 663 | 170 | 13.2 | 3.2 |
| Clackamas County | Census Tract 212 | 3,883 | 285 | 699 | 151 | 18.0 | 3.7 |
| Clackamas County | Census Tract 213 | 6,014 | 636 | 700 | 201 | 11.6 | 3.1 |
| Clackamas County | Census Tract 214 | 5,010 | 487 | 694 | 280 | 13.9 | 5.4 |
| Clackamas County | Census Tract 215 | 5,003 | 354 | 681 | 196 | 13.6 | 3.8 |
| Clackamas County | Census Tract 217 | 6,853 | 561 | 1,213 | 273 | 17.7 | 3.7 |
| Clackamas County | Census Tract 218.01 | 6,138 | 328 | 711 | 205 | 11.6 | 3.3 |
| Clackamas County | Census Tract 218.02 | 4,568 | 418 | 764 | 169 | 16.7 | 3.4 |
| Clackamas County | Census Tract 219 | 3,674 | 410 | 500 | 127 | 13.6 | 3.1 |
| Clackamas County | Census Tract 220 | 6,570 | 603 | 1,089 | 251 | 16.6 | 3.5 |
| Clackamas County | Census Tract 221.01 | 7,475 | 724 | 845 | 174 | 11.3 | 2.1 |
| Clackamas County | Census Tract 221.05 | 6,354 | 420 | 530 | 179 | 8.3 | 2.8 |
| Clackamas County | Census Tract 221.07 | 4,404 | 376 | 456 | 143 | 9.7 | 3.1 |
| Clackamas County | Census Tract 221.08 | 3,348 | 254 | 576 | 157 | 17.2 | 4.5 |
| Clackamas County | Census Tract 222.01 | 5,580 | 562 | 1,097 | 241 | 19.7 | 3.8 |
| Clackamas County | Census Tract 222.05 | 5,580 | 562 | 1,130 | 127 | 12.4 | 3.2 |
| Clackamas County | Census Tract 223.01 | 4,239 | 301 | 505 | 140 | 11.9 | 3.2 |
| Clackamas County | Census Tract 223.02 | 5,938 | 433 | 941 | 233 | 15.8 | 3.7 |
| Clackamas County | Census Tract 224 | 3,897 | 263 | 769 | 182 | 19.7 | 4.5 |
| Clackamas County | Census Tract 225 | 7,587 | 464 | 958 | 237 | 12.6 | 3.0 |
| Clackamas County | Census Tract 226.02 | 4,750 | 287 | 439 | 121 | 9.2 | 2.5 |
| Clackamas County | Census Tract 226.03 | 4,080 | 298 | 304 | 104 | 7.5 | 2.5 |
| Clackamas County | Census Tract 226.05 | 7,573 | 643 | 1,037 | 257 | 13.7 | 3.2 |
| Clackamas County | Census Tract 226.06 | 5,475 | 385 | 687 | 152 | 12.5 | 2.6 |
| Clackamas County | Census Tract 227.02 | 6,544 | 450 | 473 | 171 | 7.2 | 2.6 |
| Clackamas County | Census Tract 227.07 | 6,826 | 386 | 726 | 193 | 10.6 | 2.8 |
| Clackamas County | Census Tract 227.08 | 4,342 | 335 | 415 | 126 | 9.6 | 2.8 |
| Clackamas County | Census Tract 227.10 | 2,805 | 229 | 165 | 71 | 5.9 | 2.5 |
| Clackamas County | Census Tract 228 | 3,875 | 405 | 615 | 166 | 15.9 | 3.9 |
| Clackamas County | Census Tract 229.01 | 3,873 | 299 | 423 | 123 | 10.9 | 3.1 |
| Clackamas County | Census Tract 229.04 | 3,801 | 272 | 462 | 119 | 12.2 | 3.0 |
| Clackamas County | Census Tract 229.05 | 4,545 | 261 | 434 | 113 | 9.5 | 2.4 |
| Clackamas County | Census Tract 229.06 | 3,088 | 282 | 574 | 124 | 18.6 | 3.6 |
| Clackamas County | Census Tract 229.07 | 4,170 | 334 | 542 | 148 | 13.0 | 3.4 |

| County | Geography | Total Population ^[1] | Total Population Margin of Error ^[2] | Population with a Disability | Population with a Disability Margin of Error | Percent Disabled (%) | Percent Disabled Margin of Error (%) |
|--------------------------|--------------------------------------|---------------------------------|---|------------------------------|--|----------------------|--------------------------------------|
| Clackamas County | Census Tract 244 | 8,007 | 464 | 633 | 201 | 7.9 | 2.5 |
| Marion County | Marion County (Total) | 333,411 | | 48,354 | | 14.5 | |
| Marion County | Marion County (API Total) | 10,677 | | 1,410 | | 13.2 | |
| Marion County | Census Tract 102.01 | 2,721 | 310 | 474 | 120 | 17.4 | 3.9 |
| Marion County | Census Tract 102.02 | 7,956 | 530 | 936 | 189 | 11.8 | 2.2 |
| Multnomah County | Multnomah County (Total) | 799,365 | | 99,841 | | 12.5 | |
| Multnomah County | Multnomah County (API Total) | 57,917 | | 5,114 | | 8.8 | |
| Multnomah County | Census Tract 1 | 6,644 | 457 | 554 | 170 | 8.3 | 2.5 |
| Multnomah County | Census Tract 3.01 | 5,673 | 439 | 709 | 213 | 12.5 | 3.6 |
| Multnomah County | Census Tract 3.02 | 7,578 | 325 | 532 | 165 | 7.0 | 2.2 |
| Multnomah County | Census Tract 57 | 4,107 | 400 | 356 | 146 | 8.7 | 3.5 |
| Multnomah County | Census Tract 59 | 8,885 | 523 | 1,024 | 259 | 11.5 | 2.8 |
| Multnomah County | Census Tract 62 | 3,185 | 207 | 214 | 91 | 6.7 | 2.8 |
| Multnomah County | Census Tract 63 | 5,585 | 376 | 388 | 93 | 6.9 | 1.6 |
| Multnomah County | Census Tract 64.02 | 5,658 | 439 | 370 | 129 | 6.5 | 2.2 |
| Multnomah County | Census Tract 65.02 | 4,621 | 499 | 349 | 182 | 7.6 | 3.9 |
| Multnomah County | Census Tract 66.02 | 5,981 | 432 | 618 | 169 | 10.3 | 2.7 |
| Washington County | Washington County (Total) | 585,945 | | 57,772 | | 9.9 | |
| Washington County | Washington County (API Total) | 28,488 | | 2,605 | | 9.1 | |
| Washington County | Census Tract 320.03 | 4,658 | 358 | 823 | 226 | 17.7 | 4.7 |
| Washington County | Census Tract 320.04 | 2,050 | 169 | 192 | 66 | 9.4 | 3.1 |
| Washington County | Census Tract 320.05 | 4,780 | 382 | 488 | 143 | 10.2 | 2.9 |
| Washington County | Census Tract 321.04 | 5,034 | 252 | 325 | 97 | 6.5 | 1.9 |
| Washington County | Census Tract 321.07 | 2,085 | 185 | 210 | 61 | 10.1 | 2.8 |
| Washington County | Census Tract 321.08 | 4,177 | 210 | 228 | 85 | 5.5 | 2.0 |
| Washington County | Census Tract 321.09 | 3,251 | 159 | 105 | 47 | 3.2 | 1.4 |
| Washington County | Census Tract 321.10 | 2,453 | 258 | 234 | 80 | 9.5 | 3.1 |
| API Total | API Total | 343,198 | | 38,111 | | 11.1 | |
| Oregon State | Oregon State | 4,089,521 | 573 | 587,093 | | 14.4 | |
| Washington State | Washington State | 7,293,096 | 1,288 | 924,708 | | 12.7 | |
| Portland MSA | Portland MSA | 2,429,760 | 886 | 289,745 | | 11.9 | |

Source: U.S. Census Bureau American Community Survey 2015-2019 Estimates, Table B18101

[1] The total population varies among Equity Framework Communities because the American Community Survey data-gathering approach varies by category.

[2] The *Margin of Error* describes the precision of an American Community Survey estimate at a given level of confidence. The confidence level indicates the likelihood that the American Community Survey sample estimate is within a certain range of the population value. The margins of error for published American Community Survey estimates are provided at a 90% confidence level.

API = area of potential impact; MSA = metropolitan statistical area

Table A-2. Older Adults (65+)

| County | Geography | Total Population ^[1] | Total Population Margin of Error ^[2] | Population 65 Years and Over | Population 65 Years and Over Margin of error | Percent 65 Years and Over (%) | Percent 65 Years and Over Margin of Error (%) |
|------------------|------------------------------|---------------------------------|---|------------------------------|--|-------------------------------|---|
| Clackamas County | Clackamas County (Total) | 410,463 | | 72,125 | | 17.6 | |
| Clackamas County | Clackamas County (API Total) | 245,714 | | 44,409 | | 18.1 | |
| Clackamas County | Census Tract 201 | 3,984 | 255 | 823 | 137 | 20.7 | 3.2 |
| Clackamas County | Census Tract 202 | 6,258 | 332 | 1,591 | 250 | 25.4 | 3.8 |
| Clackamas County | Census Tract 203.03 | 6,112 | 339 | 1,341 | 249 | 21.9 | 3.9 |
| Clackamas County | Census Tract 204.01 | 6,053 | 292 | 1,040 | 184 | 17.2 | 2.9 |
| Clackamas County | Census Tract 204.03 | 3,725 | 183 | 743 | 129 | 19.9 | 3.3 |
| Clackamas County | Census Tract 204.04 | 3,781 | 207 | 887 | 149 | 23.5 | 3.7 |
| Clackamas County | Census Tract 205.01 | 7,298 | 306 | 1,238 | 249 | 17.0 | 3.3 |
| Clackamas County | Census Tract 205.03 | 2,363 | 161 | 407 | 84 | 17.2 | 3.4 |
| Clackamas County | Census Tract 205.04 | 6,625 | 297 | 1,174 | 211 | 17.7 | 3.1 |
| Clackamas County | Census Tract 205.05 | 2,481 | 186 | 832 | 136 | 33.5 | 4.9 |
| Clackamas County | Census Tract 206 | 8,556 | 423 | 1,182 | 201 | 13.8 | 2.2 |
| Clackamas County | Census Tract 207 | 4,064 | 245 | 602 | 122 | 14.8 | 2.9 |
| Clackamas County | Census Tract 208 | 4,143 | 308 | 766 | 159 | 18.5 | 3.6 |
| Clackamas County | Census Tract 211 | 5,106 | 378 | 952 | 193 | 18.6 | 3.5 |
| Clackamas County | Census Tract 212 | 3,941 | 289 | 1,027 | 177 | 26.1 | 4.1 |
| Clackamas County | Census Tract 213 | 6,014 | 636 | 1,117 | 196 | 18.6 | 2.6 |
| Clackamas County | Census Tract 214 | 5,010 | 487 | 870 | 287 | 17.4 | 5.5 |
| Clackamas County | Census Tract 215 | 5,009 | 354 | 1,194 | 228 | 23.8 | 4.2 |
| Clackamas County | Census Tract 217 | 6,855 | 560 | 1,601 | 289 | 23.4 | 3.8 |
| Clackamas County | Census Tract 218.01 | 6,138 | 328 | 1,406 | 258 | 22.9 | 4.0 |
| Clackamas County | Census Tract 218.02 | 4,568 | 418 | 811 | 166 | 17.8 | 3.3 |
| Clackamas County | Census Tract 219 | 3,674 | 410 | 430 | 107 | 11.7 | 2.6 |
| Clackamas County | Census Tract 220 | 6,620 | 600 | 1,207 | 237 | 18.2 | 3.2 |
| Clackamas County | Census Tract 221.01 | 7,529 | 725 | 1,484 | 229 | 19.7 | 2.4 |
| Clackamas County | Census Tract 221.05 | 6,354 | 420 | 923 | 219 | 14.5 | 3.3 |
| Clackamas County | Census Tract 221.07 | 4,422 | 379 | 472 | 120 | 10.7 | 2.6 |
| Clackamas County | Census Tract 221.08 | 3,359 | 253 | 476 | 118 | 14.2 | 3.3 |
| Clackamas County | Census Tract 222.01 | 5,686 | 569 | 1,140 | 239 | 20.0 | 3.7 |
| Clackamas County | Census Tract 222.05 | 3,704 | 355 | 765 | 137 | 20.7 | 3.1 |
| Clackamas County | Census Tract 223.01 | 4,258 | 302 | 697 | 133 | 16.4 | 2.9 |
| Clackamas County | Census Tract 223.02 | 5,951 | 434 | 1,096 | 215 | 18.4 | 3.4 |
| Clackamas County | Census Tract 224 | 3,999 | 292 | 675 | 175 | 16.9 | 4.2 |
| Clackamas County | Census Tract 225 | 7,703 | 463 | 1,195 | 238 | 15.5 | 2.9 |
| Clackamas County | Census Tract 226.02 | 4,750 | 287 | 885 | 134 | 18.6 | 2.6 |
| Clackamas County | Census Tract 226.03 | 4,080 | 298 | 461 | 116 | 11.3 | 2.7 |
| Clackamas County | Census Tract 226.05 | 8,019 | 669 | 1,362 | 273 | 17.0 | 3.1 |
| Clackamas County | Census Tract 226.06 | 5,497 | 383 | 828 | 139 | 15.1 | 2.3 |
| Clackamas County | Census Tract 227.02 | 6,544 | 450 | 1,341 | 236 | 20.5 | 3.3 |
| Clackamas County | Census Tract 227.07 | 6,826 | 386 | 680 | 170 | 10.0 | 2.4 |
| Clackamas County | Census Tract 227.08 | 4,342 | 335 | 592 | 135 | 13.6 | 2.9 |
| Clackamas County | Census Tract 227.10 | 2,822 | 228 | 305 | 85 | 10.8 | 2.9 |
| Clackamas County | Census Tract 228 | 3,875 | 405 | 1,716 | 259 | 44.3 | 4.8 |
| Clackamas County | Census Tract 229.01 | 3,873 | 299 | 616 | 141 | 15.9 | 3.4 |
| Clackamas County | Census Tract 229.04 | 3,835 | 273 | 512 | 103 | 13.4 | 2.5 |
| Clackamas County | Census Tract 229.05 | 4,545 | 261 | 813 | 137 | 17.9 | 2.8 |
| Clackamas County | Census Tract 229.06 | 3,137 | 299 | 810 | 145 | 25.8 | 3.9 |
| Clackamas County | Census Tract 229.07 | 4,170 | 334 | 462 | 110 | 11.1 | 2.5 |

| County | Geography | Total Population ^[1] | Total Population Margin of Error ^[2] | Population 65 Years and Over | Population 65 Years and Over Margin of error | Percent 65 Years and Over (%) | Percent 65 Years and Over Margin of Error (%) |
|--------------------------|--------------------------------------|---------------------------------|---|------------------------------|--|-------------------------------|---|
| Clackamas County | Census Tract 244 | 8,056 | 467 | 862 | 210 | 10.7 | 2.5 |
| Marion County | Marion County (Total) | 339,641 | | 52,093 | | 15.3 | |
| Marion County | Marion County (API Total) | 10,677 | | 1,686 | | 15.8 | |
| Marion County | Census Tract 102.01 | 2,721 | 310 | 670 | 122 | 24.6 | 3.5 |
| Marion County | Census Tract 102.02 | 7,956 | 530 | 1,016 | 201 | 12.8 | 2.4 |
| Multnomah County | Multnomah County (Total) | 804,606 | | 104,899 | | 13.0 | |
| Multnomah County | Multnomah County (API Total) | 58,036 | | 9,042 | | 15.6 | |
| Multnomah County | Census Tract 1 | 6,650 | 457 | 1,223 | 228 | 18.4 | 3.2 |
| Multnomah County | Census Tract 3.01 | 5,777 | 448 | 764 | 174 | 13.2 | 2.8 |
| Multnomah County | Census Tract 3.02 | 7,578 | 325 | 1,101 | 195 | 14.5 | 2.5 |
| Multnomah County | Census Tract 57 | 4,107 | 400 | 833 | 189 | 20.3 | 4.2 |
| Multnomah County | Census Tract 59 | 8,885 | 523 | 1,791 | 295 | 20.2 | 3.1 |
| Multnomah County | Census Tract 62 | 3,194 | 205 | 487 | 109 | 15.2 | 3.3 |
| Multnomah County | Census Tract 63 | 5,585 | 376 | 723 | 109 | 12.9 | 1.7 |
| Multnomah County | Census Tract 64.02 | 5,658 | 439 | 894 | 194 | 15.8 | 3.2 |
| Multnomah County | Census Tract 65.02 | 4,621 | 499 | 490 | 150 | 10.6 | 3.0 |
| Multnomah County | Census Tract 66.02 | 5,981 | 432 | 736 | 170 | 12.3 | 2.7 |
| Washington County | Washington County Total) | 589,481 | | 76,361 | | 13.0 | |
| Washington County | Washington County (API Total) | 29,853 | | 2,809 | | 9.4 | |
| Washington County | Census Tract 320.03 | 4,658 | 358 | 419 | 144 | 9.0 | 3.0 |
| Washington County | Census Tract 320.04 | 2,050 | 169 | 281 | 63 | 13.7 | 2.9 |
| Washington County | Census Tract 320.05 | 4,780 | 382 | 181 | 66 | 3.8 | 1.3 |
| Washington County | Census Tract 321.04 | 5,034 | 252 | 446 | 108 | 8.9 | 2.1 |
| Washington County | Census Tract 321.07 | 2,085 | 185 | 366 | 66 | 17.6 | 2.8 |
| Washington County | Census Tract 321.08 | 4,177 | 210 | 558 | 127 | 13.4 | 3.0 |
| Washington County | Census Tract 321.09 | 3,251 | 159 | 305 | 69 | 9.4 | 2.1 |
| Washington County | Census Tract 321.10 | 3,818 | 188 | 253 | 60 | 6.6 | 1.5 |
| API Total | API Total | 344,280 | | 57,946 | | 16.8 | |
| Oregon State | Oregon State | 4,129,803 | | 709,555 | | 17.2 | |
| Washington State | Washington State | 7,404,107 | | 1,117,673 | | 15.1 | |
| Portland MSA | Portland MSA | 2,445,761 | | 353,885 | | 14.5 | |

Source: U.S. Census Bureau American Community Survey 2015-2019 Estimates, Table B01001

[1] The total population varies among Equity Framework Communities because the American Community Survey data-gathering approach varies by category.

[1] The *Margin of Error* describes the precision of an American Community Survey estimate at a given level of confidence. The confidence level indicates the likelihood that the American Community Survey sample estimate is within a certain range of the population value.

The margins of error for published American Community Survey estimates are provided at a 90% confidence level.

API = area of potential impact; MSA = metropolitan statistical area

Table A-3. Children (18 and Under)

| County | Geography | Total Population ^[1] | Total Population Margin of Error ^[2] | Population 18 Years and Under | Population 18 Years and Under Margin of Error | Percent less than 18 Years (%) | Percent 18 Years and Under Margin of Error (%) |
|-------------------------|-------------------------------------|---------------------------------|---|-------------------------------|---|--------------------------------|--|
| Clackamas County | Clackamas County (Total) | 410,463 | | 89,020 | | 21.7 | |
| Clackamas County | Clackamas County (API Total) | 245,714 | | 53,536 | | 21.8 | |
| Clackamas County | Census Tract 201 | 3,984 | 255 | 875 | 156 | 22.0 | 3.7 |
| Clackamas County | Census Tract 202 | 6,258 | 332 | 1,034 | 200 | 16.5 | 3.1 |
| Clackamas County | Census Tract 203.03 | 6,112 | 339 | 1,169 | 290 | 19.1 | 4.6 |
| Clackamas County | Census Tract 204.01 | 6,053 | 292 | 1,451 | 230 | 24.0 | 3.6 |
| Clackamas County | Census Tract 204.03 | 3,725 | 183 | 929 | 151 | 24.9 | 3.9 |
| Clackamas County | Census Tract 204.04 | 3,781 | 207 | 923 | 161 | 24.4 | 4.0 |
| Clackamas County | Census Tract 205.01 | 7,298 | 306 | 2,078 | 282 | 28.5 | 3.7 |
| Clackamas County | Census Tract 205.03 | 2,363 | 161 | 603 | 118 | 25.5 | 4.7 |
| Clackamas County | Census Tract 205.04 | 6,625 | 297 | 1,615 | 283 | 24.4 | 4.1 |
| Clackamas County | Census Tract 205.05 | 2,481 | 186 | 475 | 114 | 19.1 | 4.4 |
| Clackamas County | Census Tract 206 | 8,556 | 423 | 2,251 | 352 | 26.3 | 3.9 |
| Clackamas County | Census Tract 207 | 4,064 | 245 | 1,003 | 160 | 24.7 | 3.7 |
| Clackamas County | Census Tract 208 | 4,143 | 308 | 761 | 165 | 18.4 | 3.7 |
| Clackamas County | Census Tract 211 | 5,106 | 378 | 850 | 268 | 16.6 | 5.1 |
| Clackamas County | Census Tract 212 | 3,941 | 289 | 574 | 164 | 14.6 | 4.0 |
| Clackamas County | Census Tract 213 | 6,014 | 636 | 996 | 233 | 16.6 | 3.5 |
| Clackamas County | Census Tract 214 | 5,010 | 487 | 836 | 250 | 16.7 | 4.7 |
| Clackamas County | Census Tract 215 | 5,009 | 354 | 989 | 248 | 19.7 | 4.8 |
| Clackamas County | Census Tract 217 | 6,855 | 560 | 1,464 | 345 | 21.4 | 4.7 |
| Clackamas County | Census Tract 218.01 | 6,138 | 328 | 1,058 | 232 | 17.2 | 3.7 |
| Clackamas County | Census Tract 218.02 | 4,568 | 418 | 977 | 212 | 21.4 | 4.2 |
| Clackamas County | Census Tract 219 | 3,674 | 410 | 1,028 | 221 | 28.0 | 5.1 |
| Clackamas County | Census Tract 220 | 6,620 | 600 | 1,187 | 235 | 17.9 | 3.2 |
| Clackamas County | Census Tract 221.01 | 7,529 | 725 | 1,489 | 356 | 19.8 | 4.3 |
| Clackamas County | Census Tract 221.05 | 6,354 | 420 | 1,462 | 303 | 23.0 | 4.5 |
| Clackamas County | Census Tract 221.07 | 4,422 | 379 | 820 | 237 | 18.5 | 5.1 |
| Clackamas County | Census Tract 221.08 | 3,359 | 253 | 775 | 199 | 23.1 | 5.7 |
| Clackamas County | Census Tract 222.01 | 5,686 | 569 | 1,008 | 255 | 17.7 | 4.1 |
| Clackamas County | Census Tract 222.05 | 3,704 | 329 | 677 | 167 | 18.3 | 4.2 |
| Clackamas County | Census Tract 223.01 | 4,258 | 302 | 1,045 | 223 | 24.5 | 4.9 |
| Clackamas County | Census Tract 223.02 | 5,951 | 434 | 1,219 | 285 | 20.5 | 4.6 |
| Clackamas County | Census Tract 224 | 3,999 | 292 | 677 | 150 | 16.9 | 3.5 |
| Clackamas County | Census Tract 225 | 7,703 | 463 | 1,551 | 295 | 20.1 | 3.6 |
| Clackamas County | Census Tract 226.02 | 4,750 | 287 | 962 | 192 | 20.3 | 3.9 |
| Clackamas County | Census Tract 226.03 | 4,080 | 298 | 1,160 | 208 | 28.4 | 4.7 |
| Clackamas County | Census Tract 226.05 | 8,019 | 669 | 1,800 | 354 | 22.4 | 4.0 |
| Clackamas County | Census Tract 226.06 | 5,497 | 383 | 1,508 | 264 | 27.4 | 4.4 |
| Clackamas County | Census Tract 227.02 | 6,544 | 450 | 1,513 | 332 | 23.1 | 4.8 |
| Clackamas County | Census Tract 227.07 | 6,826 | 386 | 1,776 | 328 | 26.0 | 4.6 |
| Clackamas County | Census Tract 227.08 | 4,342 | 335 | 1,238 | 206 | 28.5 | 4.2 |
| Clackamas County | Census Tract 227.10 | 2,822 | 228 | 662 | 159 | 23.5 | 5.3 |
| Clackamas County | Census Tract 228 | 3,875 | 405 | 268 | 139 | 6.9 | 3.5 |
| Clackamas County | Census Tract 229.01 | 3,873 | 299 | 955 | 214 | 24.7 | 5.2 |
| Clackamas County | Census Tract 229.04 | 3,835 | 273 | 1,145 | 209 | 29.9 | 5.0 |
| Clackamas County | Census Tract 229.05 | 4,545 | 261 | 966 | 183 | 21.3 | 3.8 |
| Clackamas County | Census Tract 229.06 | 3,137 | 299 | 637 | 169 | 20.3 | 5.0 |
| Clackamas County | Census Tract 229.07 | 4,170 | 334 | 1,276 | 256 | 30.6 | 5.6 |

| County | Geography | Total Population ^[1] | Total Population Margin of Error ^[2] | Population 18 Years and Under | Population 18 Years and Under Margin of Error | Percent less than 18 Years (%) | Percent 18 Years and Under Margin of Error (%) |
|--------------------------|--------------------------------------|---------------------------------|---|-------------------------------|---|--------------------------------|--|
| Clackamas County | Census Tract 244 | 8,056 | 467 | 1,821 | 302 | 22.6 | 3.5 |
| Marion County | Marion County (Total) | 339,641 | | 84,244 | | 24.8 | |
| Marion County | Marion County (API Total) | 10,677 | | 2,693 | | 25.2 | |
| Marion County | Census Tract 102.01 | 2,721 | 310 | 396 | 100 | 14.6 | 3.3 |
| Marion County | Census Tract 102.02 | 7,956 | 530 | 2,297 | 281 | 28.9 | 3.0 |
| Multnomah County | Multnomah County (Total) | 804,606 | | 153,081 | | 19.0 | |
| Multnomah County | Multnomah County (API Total) | 58,036 | | 9,725 | | 16.8 | |
| Multnomah County | Census Tract 1 | 6,650 | 457 | 1,279 | 285 | 19.2 | 4.1 |
| Multnomah County | Census Tract 3.01 | 5,777 | 448 | 580 | 135 | 10.0 | 2.2 |
| Multnomah County | Census Tract 3.02 | 7,578 | 325 | 2,048 | 310 | 27.0 | 3.9 |
| Multnomah County | Census Tract 57 | 4,107 | 400 | 235 | 96 | 5.7 | 2.3 |
| Multnomah County | Census Tract 59 | 8,885 | 523 | 578 | 191 | 6.5 | 2.1 |
| Multnomah County | Census Tract 62 | 3,194 | 205 | 633 | 125 | 19.8 | 3.7 |
| Multnomah County | Census Tract 63 | 5,585 | 376 | 991 | 139 | 17.7 | 2.2 |
| Multnomah County | Census Tract 64.02 | 5,658 | 439 | 1,328 | 256 | 23.5 | 4.1 |
| Multnomah County | Census Tract 65.02 | 4,621 | 499 | 866 | 222 | 18.7 | 4.4 |
| Multnomah County | Census Tract 66.02 | 5,981 | 432 | 1,187 | 230 | 19.8 | 3.6 |
| Washington County | Washington County (Total) | 589,481 | | 136,892 | | 23.2 | |
| Washington County | Washington County (API Total) | 29,853 | | 6,957 | | 23.3 | |
| Washington County | Census Tract 320.03 | 4,658 | 358 | 1,045 | 237 | 22.4 | 4.8 |
| Washington County | Census Tract 320.04 | 2,050 | 169 | 415 | 92 | 20.2 | 4.2 |
| Washington County | Census Tract 320.05 | 4,780 | 382 | 1,342 | 237 | 28.1 | 4.4 |
| Washington County | Census Tract 321.04 | 5,034 | 252 | 1,416 | 201 | 28.1 | 3.7 |
| Washington County | Census Tract 321.07 | 2,085 | 185 | 428 | 102 | 20.5 | 4.5 |
| Washington County | Census Tract 321.08 | 4,177 | 210 | 932 | 174 | 22.3 | 4.0 |
| Washington County | Census Tract 321.09 | 3,251 | 159 | 905 | 122 | 27.8 | 3.5 |
| Washington County | Census Tract 321.10 | 3,818 | 188 | 474 | 108 | 12.4 | 2.8 |
| API Total | API Total | 344,280 | | 72,911 | | 21.2 | |
| Oregon State | Oregon State | 4,129,803 | | 867,943 | | 21.0 | |
| Washington State | Washington State | 7,404,107 | | 1,643,546 | | 22.2 | |
| Portland MSA | Portland MSA | 2,445,761 | | 530,693 | | 21.7 | |

Source: U.S. Census Bureau American Community Survey 2015-2019 Estimates, Table B01001

[1] The total population varies among Equity Framework Communities because the American Community Survey data-gathering approach varies by category.

[2] The *Margin of Error* describes the precision of an American Community Survey estimate at a given level of confidence. The confidence level indicates the likelihood that the American Community Survey sample estimate is within a certain range of the population value.

The margins of error for published American Community Survey estimates are provided at a 90% confidence level.

API = area of potential impact; MSA = metropolitan statistical area

Table A-4. Limited English Proficiency

| County | Geography | Total Population ^[1] | Total Population Margin of Error ^[2] | Limited English Proficiency Population | Percent of Population that is Limited English Proficient (%) |
|-------------------------|-------------------------------------|---------------------------------|---|--|--|
| Clackamas County | Clackamas County (Total) | 388,445 | | 7,303 | 1.9 |
| Clackamas County | Clackamas County (API Total) | 231,978 | | 4,288 | 1.8 |
| Clackamas County | Census Tract 201 | 3,842 | 258 | 72 | 1.9 |
| Clackamas County | Census Tract 202 | 6,169 | 312 | 0 | 0.0 |
| Clackamas County | Census Tract 203.03 | 5,862 | 347 | 172 | 2.9 |
| Clackamas County | Census Tract 204.01 | 5,702 | 301 | 40 | 0.7 |
| Clackamas County | Census Tract 204.03 | 3,499 | 193 | 64 | 1.8 |
| Clackamas County | Census Tract 204.04 | 3,634 | 215 | 9 | 0.2 |
| Clackamas County | Census Tract 205.01 | 6,910 | 320 | 152 | 2.2 |
| Clackamas County | Census Tract 205.03 | 2,214 | 142 | 0 | 0.0 |
| Clackamas County | Census Tract 205.04 | 6,266 | 297 | 6 | 0.1 |
| Clackamas County | Census Tract 205.05 | 2,394 | 194 | 10 | 0.4 |
| Clackamas County | Census Tract 206 | 8,090 | 420 | 55 | 0.7 |
| Clackamas County | Census Tract 207 | 3,824 | 234 | 22 | 0.6 |
| Clackamas County | Census Tract 208 | 3,885 | 284 | 33 | 0.8 |
| Clackamas County | Census Tract 211 | 4,919 | 346 | 8 | 0.2 |
| Clackamas County | Census Tract 212 | 3,693 | 264 | 46 | 1.2 |
| Clackamas County | Census Tract 213 | 5,777 | 600 | 336 | 5.8 |
| Clackamas County | Census Tract 214 | 4,726 | 515 | 30 | 0.6 |
| Clackamas County | Census Tract 215 | 4,745 | 362 | 6 | 0.1 |
| Clackamas County | Census Tract 217 | 6,637 | 583 | 377 | 5.7 |
| Clackamas County | Census Tract 218.01 | 5,855 | 336 | 0 | 0.0 |
| Clackamas County | Census Tract 218.02 | 4,237 | 368 | 125 | 3.0 |
| Clackamas County | Census Tract 219 | 3,419 | 381 | 87 | 2.5 |
| Clackamas County | Census Tract 220 | 6,477 | 584 | 82 | 1.3 |
| Clackamas County | Census Tract 221.01 | 7,189 | 554 | 99 | 1.4 |
| Clackamas County | Census Tract 221.05 | 5,871 | 392 | 50 | 0.9 |
| Clackamas County | Census Tract 221.07 | 4,052 | 343 | 29 | 0.7 |
| Clackamas County | Census Tract 221.08 | 3,125 | 261 | 252 | 8.1 |
| Clackamas County | Census Tract 222.01 | 5,332 | 496 | 397 | 7.4 |
| Clackamas County | Census Tract 222.05 | 3,514 | 338 | 1 | 0.0 |
| Clackamas County | Census Tract 223.01 | 3,749 | 262 | 39 | 1.0 |
| Clackamas County | Census Tract 223.02 | 5,513 | 396 | 79 | 1.4 |
| Clackamas County | Census Tract 224 | 3,895 | 277 | 21 | 0.5 |
| Clackamas County | Census Tract 225 | 7,213 | 413 | 64 | 0.9 |
| Clackamas County | Census Tract 226.02 | 4,497 | 277 | 0 | 0.0 |
| Clackamas County | Census Tract 226.03 | 3,756 | 290 | 78 | 2.1 |
| Clackamas County | Census Tract 226.05 | 7,342 | 769 | 34 | 0.5 |
| Clackamas County | Census Tract 226.06 | 5,090 | 361 | 0 | 0.0 |
| Clackamas County | Census Tract 227.02 | 6,194 | 531 | 20 | 0.3 |
| Clackamas County | Census Tract 227.07 | 6,134 | 351 | 78 | 1.3 |
| Clackamas County | Census Tract 227.08 | 4,099 | 311 | 43 | 1.0 |
| Clackamas County | Census Tract 227.10 | 2,631 | 206 | 41 | 1.6 |
| Clackamas County | Census Tract 228 | 3,814 | 396 | 69 | 1.8 |
| Clackamas County | Census Tract 229.01 | 3,748 | 284 | 47 | 1.3 |
| Clackamas County | Census Tract 229.04 | 3,653 | 270 | 321 | 8.8 |
| Clackamas County | Census Tract 229.05 | 4,293 | 252 | 323 | 7.5 |
| Clackamas County | Census Tract 229.06 | 2,946 | 292 | 88 | 3.0 |
| Clackamas County | Census Tract 229.07 | 3,962 | 330 | 247 | 6.2 |

| County | Geography | Total Population ^[1] | Total Population Margin of Error ^[2] | Limited English Proficiency Population | Percent of Population that is Limited English Proficient (%) |
|--------------------------|--------------------------------------|---------------------------------|---|--|--|
| Clackamas County | Census Tract 244 | 7,590 | 415 | 136 | 1.8 |
| Marion County | Marion County (Total) | 316,989 | | 17,420 | 5.5 |
| Marion County | Marion County (API Total) | 9,927 | | 485 | 4.9 |
| Marion County | Census Tract 102.01 | 2,636 | 298 | 70 | 2.7 |
| Marion County | Census Tract 102.02 | 7,291 | 564 | 415 | 5.7 |
| Multnomah County | Multnomah County (Total) | 760,424 | | 34,886 | 4.6 |
| Multnomah County | Multnomah County (API Total) | 55,028 | | 528 | 1.0 |
| Multnomah County | Census Tract 1 | 6,162 | 441 | 14 | 0.2 |
| Multnomah County | Census Tract 3.01 | 5,566 | 452 | 17 | 0.3 |
| Multnomah County | Census Tract 3.02 | 6,917 | 336 | 74 | 1.1 |
| Multnomah County | Census Tract 57 | 4,054 | 395 | 171 | 4.2 |
| Multnomah County | Census Tract 59 | 8,666 | 475 | 79 | 0.9 |
| Multnomah County | Census Tract 62 | 2,983 | 203 | 0 | 0.0 |
| Multnomah County | Census Tract 63 | 5,353 | 380 | 38 | 0.7 |
| Multnomah County | Census Tract 64.02 | 5,229 | 397 | 16 | 0.3 |
| Multnomah County | Census Tract 65.02 | 4,465 | 487 | 0 | 0.0 |
| Multnomah County | Census Tract 66.02 | 5,633 | 438 | 119 | 2.1 |
| Washington County | Washington County (Total) | 553,510 | | 21,031 | 3.8 |
| Washington County | Washington County (API Total) | 28,051 | | 403 | 1.4 |
| Washington County | Census Tract 320.03 | 4,253 | 309 | 183 | 4.3 |
| Washington County | Census Tract 320.04 | 1,952 | 156 | 37 | 1.9 |
| Washington County | Census Tract 320.05 | 4,398 | 388 | 164 | 3.7 |
| Washington County | Census Tract 321.04 | 4,645 | 233 | 19 | 0.4 |
| Washington County | Census Tract 321.07 | 2,005 | 186 | 39 | 1.9 |
| Washington County | Census Tract 321.08 | 3,952 | 207 | 17 | 0.4 |
| Washington County | Census Tract 321.09 | 3,137 | 164 | 18 | 0.6 |
| Washington County | Census Tract 321.10 | 3,709 | 173 | 23 | 0.6 |
| API Total | API Total | 324,984 | | 5,704 | 1.8 |
| Oregon State | Oregon State | 3,899,246 | 408 | 111,860 | 2.9 |
| Washington State | Washington State | 6,949,743 | 418 | 251,866 | 3.6 |
| Portland MSA | Portland MSA | 2,305,238 | 194 | 77,733 | 3.4 |

Source: U.S. Census Bureau American Community Survey 2015-2019 Estimates, Table B16004

[1] The total population varies among Equity Framework Communities because the American Community Survey data-gathering approach varies by category.

[2] The *Margin of Error* describes the precision of an American Community Survey estimate at a given level of confidence. The confidence level indicates the likelihood that the American Community Survey sample estimate is within a certain range of the population value. The margins of error for published American Community Survey estimates are provided at a 90% confidence level.

API = area of potential impact; MSA = metropolitan statistical area

Table A-5. Households with No Vehicle Access

| County | Geography | Total Households ^[1] | Total Household Margin of Error ^[2] | Number of households with no vehicles available | Number of households with no vehicles available Margin of Error | Percent with No Vehicles Available (%) | Percent with No Vehicles Available Margin of Error (%) |
|-------------------------|-------------------------------------|---------------------------------|--|---|---|--|--|
| Clackamas County | Clackamas County (Total) | 157,408 | | 8,561 | | 5.4 | |
| Clackamas County | Clackamas County (API Total) | 96,991 | | 6,279 | | 6.5 | |
| Clackamas County | Census Tract 201 | 1,696 | 116 | 102 | 69 | 6.0 | 4.0 |
| Clackamas County | Census Tract 202 | 2,914 | 140 | 127 | 90 | 4.4 | 3.1 |
| Clackamas County | Census Tract 203.03 | 2,750 | 139 | 169 | 93 | 6.1 | 3.4 |
| Clackamas County | Census Tract 204.01 | 2,219 | 94 | 17 | 24 | 0.8 | 1.1 |
| Clackamas County | Census Tract 204.03 | 1,327 | 58 | 9 | 15 | 0.7 | 1.1 |
| Clackamas County | Census Tract 204.04 | 1,439 | 77 | 60 | 49 | 4.2 | 3.4 |
| Clackamas County | Census Tract 205.01 | 2,757 | 126 | 177 | 87 | 6.4 | 3.1 |
| Clackamas County | Census Tract 205.03 | 940 | 66 | 21 | 18 | 2.2 | 1.9 |
| Clackamas County | Census Tract 205.04 | 2,438 | 120 | 41 | 38 | 1.7 | 1.6 |
| Clackamas County | Census Tract 205.05 | 1,129 | 88 | 202 | 76 | 17.9 | 6.6 |
| Clackamas County | Census Tract 206 | 3,054 | 131 | 53 | 43 | 1.7 | 1.4 |
| Clackamas County | Census Tract 207 | 1,445 | 88 | 30 | 27 | 2.1 | 1.9 |
| Clackamas County | Census Tract 208 | 2,057 | 125 | 225 | 91 | 10.9 | 4.4 |
| Clackamas County | Census Tract 211 | 2,241 | 144 | 120 | 66 | 5.4 | 2.9 |
| Clackamas County | Census Tract 212 | 1,944 | 141 | 292 | 123 | 15.0 | 6.2 |
| Clackamas County | Census Tract 213 | 2,405 | 152 | 22 | 33 | 0.9 | 1.4 |
| Clackamas County | Census Tract 214 | 2,055 | 118 | 154 | 85 | 7.5 | 4.1 |
| Clackamas County | Census Tract 215 | 2,098 | 112 | 243 | 120 | 11.6 | 5.7 |
| Clackamas County | Census Tract 217 | 2,910 | 108 | 394 | 136 | 13.5 | 4.6 |
| Clackamas County | Census Tract 218.01 | 2,237 | 45 | 56 | 49 | 2.5 | 2.2 |
| Clackamas County | Census Tract 218.02 | 1,993 | 60 | 238 | 88 | 11.9 | 4.4 |
| Clackamas County | Census Tract 219 | 1,452 | 116 | 95 | 68 | 6.5 | 4.7 |
| Clackamas County | Census Tract 220 | 2,517 | 228 | 191 | 83 | 7.6 | 3.2 |
| Clackamas County | Census Tract 221.01 | 2,713 | 92 | 91 | 52 | 3.4 | 1.9 |
| Clackamas County | Census Tract 221.05 | 2,238 | 135 | 115 | 106 | 5.1 | 4.7 |
| Clackamas County | Census Tract 221.07 | 1,877 | 110 | 310 | 94 | 16.5 | 4.9 |
| Clackamas County | Census Tract 221.08 | 1,382 | 89 | 99 | 56 | 7.2 | 4.0 |
| Clackamas County | Census Tract 222.01 | 2,814 | 152 | 778 | 199 | 27.6 | 6.9 |
| Clackamas County | Census Tract 222.05 | 1,454 | 97 | 35 | 27 | 2.4 | 1.8 |
| Clackamas County | Census Tract 223.01 | 1,577 | 76 | 53 | 43 | 3.4 | 2.7 |
| Clackamas County | Census Tract 223.02 | 2,130 | 135 | 76 | 72 | 3.6 | 3.4 |
| Clackamas County | Census Tract 224 | 1,687 | 118 | 252 | 85 | 14.9 | 4.9 |
| Clackamas County | Census Tract 225 | 3,022 | 163 | 149 | 80 | 4.9 | 2.6 |
| Clackamas County | Census Tract 226.02 | 1,670 | 77 | 25 | 27 | 1.5 | 1.6 |
| Clackamas County | Census Tract 226.03 | 1,512 | 96 | 62 | 57 | 4.1 | 3.8 |
| Clackamas County | Census Tract 226.05 | 2,651 | 156 | 162 | 98 | 6.1 | 3.7 |
| Clackamas County | Census Tract 226.06 | 1,872 | 117 | 11 | 16 | 0.6 | 0.9 |
| Clackamas County | Census Tract 227.02 | 2,557 | 189 | 110 | 83 | 4.3 | 3.2 |
| Clackamas County | Census Tract 227.07 | 2,710 | 131 | 162 | 72 | 6.0 | 2.6 |
| Clackamas County | Census Tract 227.08 | 1,557 | 93 | 68 | 45 | 4.4 | 2.9 |
| Clackamas County | Census Tract 227.10 | 1,202 | 64 | 72 | 36 | 6.0 | 3.0 |
| Clackamas County | Census Tract 228 | 1,989 | 148 | 59 | 42 | 3.0 | 2.1 |
| Clackamas County | Census Tract 229.01 | 1,382 | 70 | 48 | 44 | 3.5 | 3.2 |
| Clackamas County | Census Tract 229.04 | 1,373 | 91 | 80 | 47 | 5.8 | 3.4 |
| Clackamas County | Census Tract 229.05 | 1,636 | 95 | 32 | 28 | 2.0 | 1.7 |
| Clackamas County | Census Tract 229.06 | 1,251 | 95 | 89 | 45 | 7.1 | 3.6 |

| County | Geography | Total Households ^[1] | Total Household Margin of Error ^[2] | Number of households with no vehicles available | Number of households with no vehicles available Margin of Error | Percent with No Vehicles Available (%) | Percent with No Vehicles Available Margin of Error (%) |
|--------------------------|--------------------------------------|---------------------------------|--|---|---|--|--|
| Clackamas County | Census Tract 229.07 | 1,400 | 109 | 80 | 76 | 5.7 | 5.4 |
| Clackamas County | Census Tract 244 | 3,318 | 172 | 223 | 125 | 6.7 | 3.8 |
| Marion County | Marion County (Total) | 118,038 | | 6,925 | | 5.9 | |
| Marion County | Marion County (API Total) | 3,744 | | 71 | | 1.9 | |
| Marion County | Census Tract 102.01 | 1,086 | 85 | 3 | 4 | 0.3 | 0.4 |
| Marion County | Census Tract 102.02 | 2,658 | 192 | 68 | 60 | 2.6 | 2.2 |
| Multnomah County | Multnomah County (Total) | 326,229 | | 42,027 | | 12.9 | |
| Multnomah County | Multnomah County (API Total) | 25,125 | | 2,981 | | 10.5 | |
| Multnomah County | Census Tract 1 | 2,938 | 193 | 129 | 74 | 4.4 | 2.5 |
| Multnomah County | Census Tract 3.01 | 2,077 | 158 | 342 | 148 | 16.5 | 7.0 |
| Multnomah County | Census Tract 3.02 | 2,696 | 109 | 40 | 41 | 1.5 | 1.5 |
| Multnomah County | Census Tract 57 | 2,452 | 179 | 564 | 180 | 23.0 | 7.1 |
| Multnomah County | Census Tract 59 | 5,230 | 191 | 815 | 197 | 15.6 | 3.7 |
| Multnomah County | Census Tract 62 | 1,273 | 52 | 0 | 12 | 0.0 | 0.9 |
| Multnomah County | Census Tract 63 | 1,710 | 71 | 13 | 19 | 0.8 | 1.1 |
| Multnomah County | Census Tract 64.02 | 2,135 | 149 | 28 | 33 | 1.3 | 1.5 |
| Multnomah County | Census Tract 65.02 | 2,099 | 112 | 259 | 159 | 12.3 | 7.5 |
| Multnomah County | Census Tract 66.02 | 2,515 | 143 | 251 | 126 | 10.0 | 5.0 |
| Washington County | Washington County (Total) | 219,053 | | 12,723 | | 5.8 | |
| Washington County | Washington County (API Total) | 10,926 | | 571 | | 5.2 | |
| Washington County | Census Tract 320.03 | 2,036 | 115 | 285 | 111 | 14.0 | 5.4 |
| Washington County | Census Tract 320.04 | 832 | 53 | 26 | 17 | 3.1 | 2.0 |
| Washington County | Census Tract 320.05 | 2,026 | 119 | 118 | 51 | 5.8 | 2.5 |
| Washington County | Census Tract 321.04 | 1,684 | 116 | 89 | 71 | 5.3 | 4.2 |
| Washington County | Census Tract 321.07 | 769 | 52 | 0 | 12 | 0.0 | 1.6 |
| Washington County | Census Tract 321.08 | 1,573 | 65 | 38 | 30 | 2.4 | 1.9 |
| Washington County | Census Tract 321.09 | 1,026 | 52 | 7 | 10 | 0.7 | 1.0 |
| Washington County | Census Tract 321.10 | 980 | 136 | 8 | 9 | 0.8 | 0.9 |
| API Total | API Total | 136,786 | | 9,362 | | 6.8 | |
| Oregon State | Oregon State | 1,611,982 | 3,890 | 119,945 | 2,390 | 7.4 | |
| Washington State | Washington State | 2,848,396 | 5,857 | 194,383 | 2,981 | 6.8 | |
| Portland MSA | Portland MSA | 938,646 | 2,166 | 74,362 | 1,775 | 7.9 | |

Source: U.S. Census Bureau American Community Survey 2015-2019 Estimates, Table B08201

[1] The total population varies among Equity Framework Communities because the American Community Survey data-gathering approach varies by category.

[2] The *Margin of Error* describes the precision of an American Community Survey estimate at a given level of confidence. The confidence level indicates the likelihood that the American Community Survey sample estimate is within a certain range of the population value.

The margins of error for published American Community Survey estimates are provided at a 90% confidence level.

API = area of potential impact; MSA = metropolitan statistical area

This page intentionally left blank.

Attachment B Accessibility Analysis

This attachment outlines the process used to identify and analyze the number of jobs, community places, and medical facilities that would be accessible to the general population and Equity Framework Communities (EFCs)²³ within the Social Resources and Communities Area of Potential Impact (API) under existing conditions, and under the Build and No Build Alternatives for the I-205 Toll Project.

B.1 Methodology

The approach for the accessibility analysis is consistent with the “access to jobs” and “access to community places” evaluation measures described in Oregon Metro’s 2018 Regional Transportation Plan, Appendix E: Transportation Equity Evaluation.²⁴

The analysis uses discrete geographic areas called Transportation Analysis Zones (TAZs) from the Oregon Metro Regional Travel Demand Model (RTDM). The RTDM includes 2,162 TAZs in Washington, Clark, Multnomah, and Clackamas Counties. A variety of data including land use characteristics, street connectivity, parking and transit fare costs, planned projects, and assumptions regarding households and employments are incorporated into the Metro RTDM for each TAZ. The boundaries of a TAZ may be consistent with census tract boundaries but are typically smaller and encompass or intersect multiple census tracts. As a result, in some cases, multiple TAZs fall within a single census tract.

Analysts identified the TAZs that have a higher percentage of EFC populations compared with the county in which they are located. These TAZs were determined based on demographic data from the U.S. Census Bureau’s 2019 American Community Survey 5-year Estimates and Oregon Department of Education School Reports, as well as input from the fall 2020 community engagement for the Project about key considerations for particular populations. Additionally, preliminary information from the draft *I-205 Toll Project Transportation Technical Report* on the locations of potential traffic volume changes under the Build Alternative informed the selection of TAZs.

Table B-1 identifies the TAZs used to represent the locations of EFC households and the information that supports the selection of those TAZs. Figure B-1 shows the geographic location of the TAZs with higher percentages of EFCs than their respective counties as a whole, TAZs with higher percentages of environmental justice (EJ) populations than their respective counties as a whole, and TAZs with higher percentages of both EFC and EJ populations than their respective counties as a whole. EJ populations

²³ Excluded and underserved populations, known in this report as Equity Framework Communities (EFCs), are populations that are currently or have historically been disproportionately affected by local transportation projects. As discussed in the Oregon Toll Program’s Equity Framework, EFCs include people experiencing low-income, racial/ethnic minorities, seniors, children, persons with a disability, persons with limited English proficiency, and households with no vehicle access. Low-income populations and minority populations are discussed in the *I-205 Toll Project Environmental Justice Technical Report*.

²⁴ Metro. 2018. *2018 Regional Transportation Plan, Appendix E: Transportation equity evaluation: An evaluation of equity, Environmental Justice and Title VI Outcomes*.
<https://www.oregonmetro.gov/sites/default/files/2019/03/13/Transportation-Equity-Evaluation-Final-3.12.19.pdf>.

are defined as low-income populations and minority populations within the API, with census tract boundaries included for reference. The TAZ numbers on Figure B-1 correspond to the TAZ numbers listed in Table B-1.

Table B-1. Representative Equity Framework Community Transportation Analysis Zones

| TAZ | Rationale for Recommendation |
|-----|---|
| 716 | CENSUS TRACT 219 has a higher percentage of people below the poverty level (20.6%) than Clackamas County (8.0%). |
| 717 | CENSUS TRACT 217 has a higher percentage of people experiencing a disability (17.7%) than Clackamas County (11.8%). |
| 718 | CENSUS TRACT 217 has a higher percentage of people experiencing a disability (17.7%) than Clackamas County (11.8%). |
| 890 | CENSUS TRACT 217 has a higher percentage of people experiencing a disability (17.7%) than Clackamas County (11.8%). |
| 896 | CENSUS TRACT 217 has a higher percentage of people experiencing a disability (17.7%) than Clackamas County (11.8%). |
| 891 | CENSUS TRACT 217 has a higher percentage of people experiencing a disability (17.7%) than Clackamas County (11.8%). |
| 893 | CENSUS TRACT 218.02 has a higher percentage of people experiencing a disability (16.7%) than Clackamas County (11.8%). |
| 895 | CENSUS TRACT 218.02 has a higher percentage of people experiencing a disability (16.7%) than Clackamas County (11.8%). |
| 843 | CENSUS TRACT 228 has a higher percentage of older adults (65+) (44.3%) than Clackamas County (17.6%) CENSUS TRACT 229.05 has a higher percentage of people with limited English proficiency (7.5%) than Clackamas County (1.9%). CENSUS TRACT 229.04 has a higher percentage of children (29.9%) and people with limited English proficiency (8.8%) than Clackamas County (21.7% children, 1.9% limited English proficiency). |
| 844 | CENSUS TRACT 229.05 has a higher percentage of people with limited English proficiency (7.5%) than Clackamas County (1.9%). |
| | The Fall 2020 Public Engagement activities identified Canby as an area of potential concern for rerouting. |
| 846 | CENSUS TRACT 229.06 has a higher percentage of people with a disability (18.6%) and ethnic (Hispanic/Latino) minority population (23.5%) than Clackamas County (11.8% disability, 8.7% ethnic minority). CENSUS TRACT 229.07 has a higher percentage of children (30.6%) and ethnic (Hispanic/Latino) minority population (24.1%) than Clackamas County (21.7% children, 8.7% ethnic minority). |
| 847 | CENSUS TRACT 229.06 has a higher percentage of people with a disability (18.6%) and ethnic (Hispanic/Latino) minority population (23.5%) than Clackamas County (11.8% disability, 8.7% ethnic minority). |
| 848 | CENSUS TRACT 228 has a higher percentage of older adults (65+) (44.3%) than Clackamas County (17.6%) |
| 857 | CENSUS TRACT 222.01 has a higher percentage of low-income (21.5%), ethnic (Hispanic/Latino) minority population (27.6%), minority population (40.1%), limited English proficiency (7.4%), and households with no vehicle available (27.6%) than Clackamas County (19.4% low-income, 8.7% ethnic minority, 18.1% minority, 1.9% limited English proficiency, 5.4% households with no vehicle access). CENSUS TRACT 222.01 has a higher proportion of American Indian and Alaskan Native residents (3.9%) than Clackamas County (0.6%). About 23.2% of students from Linwood Elementary, which is the closest elementary school to the TAZ, are of ethnic minority (Hispanic/Latino), 20.4% are of racial minority, and 61.0% of students are eligible for the Free and Reduced-Price Lunch Program. Linwood Elementary has a higher percentage of students who are a racial minority, ethnic minority, and low income than Clackamas County (9.4% racial minority, 19.4% ethnic minority, 19.4% low-income). The Fall 2020 Public Engagement found that the American Indian and Alaskan Native population is a group most opposed to tolling. |

| TAZ | Rationale for Recommendation |
|-----|--|
| 712 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%), and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). About 43.4% of students from Bilquist Elementary School, which is the closest elementary school to the TAZ, are eligible for the Free and Reduced-Price Lunch Program. This is a higher proportion of low income than Clackamas County (19.4%). |
| 714 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). CENSUS TRACT 220 has a higher percentage of people experiencing a disability (16.6%) than Clackamas County (11.8%). |
| 882 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). |
| 883 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). |
| 885 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). |
| 877 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). |
| 878 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). |
| 894 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). CENSUS TRACT 217 has a higher percentage of people experiencing a disability (17.7%) than Clackamas County. CENSUS TRACT 218.02 has a higher percentage of people experiencing a disability (16.7%) than Clackamas County (11.8%). |
| 881 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). |
| 897 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). |
| 898 | CENSUS TRACT 221.08 has a higher proportion of people living below the poverty line (19.9%), ethnic (Hispanic/Latino) minority population (25.2%), people with limited English proficiency (8.1%) and people experiencing a disability (17.2%) than Clackamas County (8.0% poverty, 8.7% ethnic minority, 1.9% limited English proficiency, 11.8% disability). |
| 963 | CENSUS TRACT 228 has a higher percentage of older adults (65+) (44.3%) than Clackamas County (17.6%) |

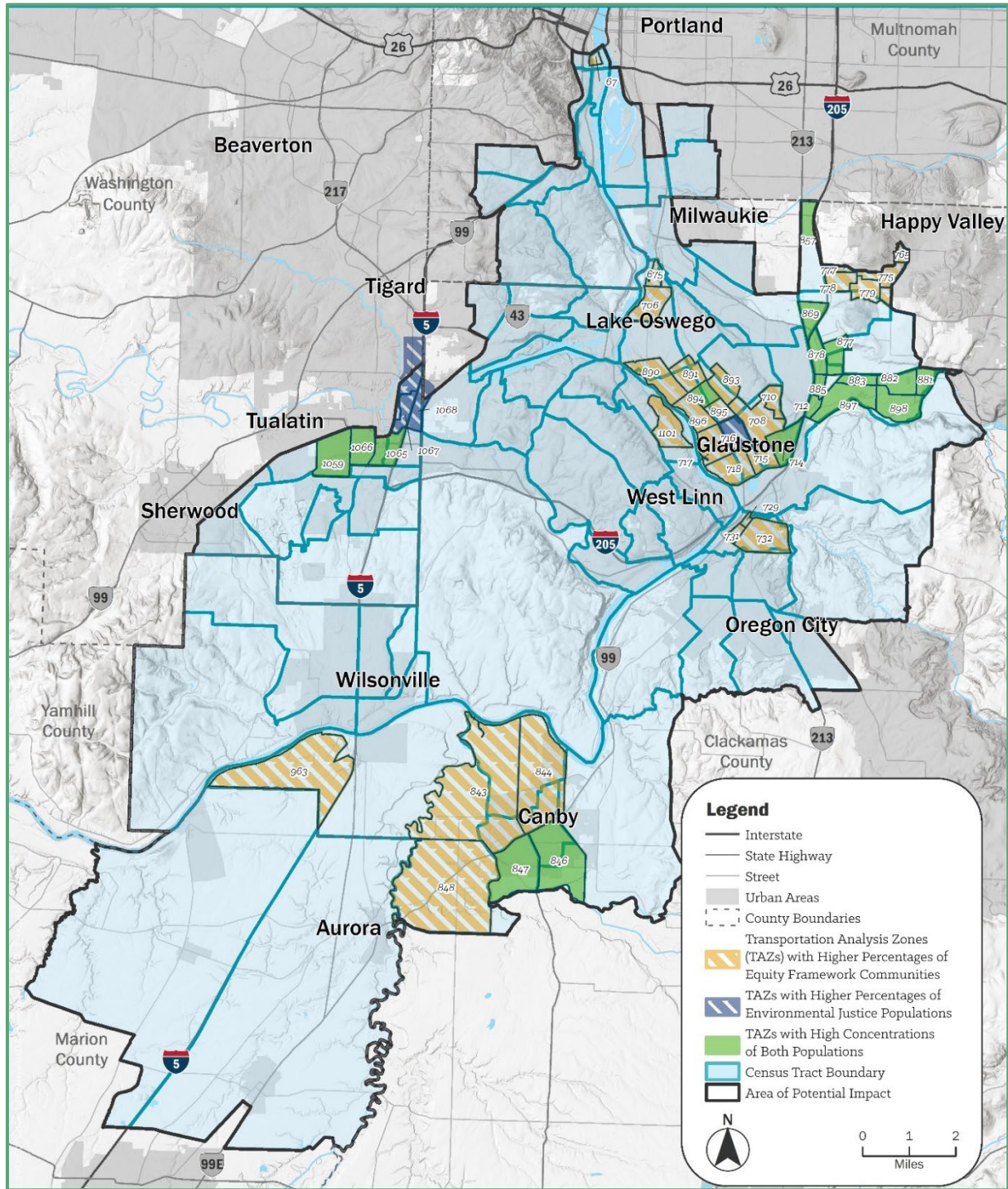
| TAZ | Rationale for Recommendation |
|------|--|
| 1059 | <p>CENSUS TRACT 320.03 has a higher percentage of people who are low-income (42.3%), living below the poverty level (21.8%), ethnic (Hispanic/Latino) minority population (26.9%), minority population (47.8%) and people experiencing a disability (17.7%) than Washington County (21.9% low-income, 8.9% poverty, 16.7% ethnic, 34.3% minority, 9.9% disability).</p> <p>CENSUS TRACT 320.03 has a higher proportion of Black population residents (8.3%) than Clackamas County (1.9%). The Fall 2020 Public Engagement found that the Black/African American population is a group most opposed to tolling.</p> <p>Tualatin Elementary School, located in CENSUS TRACT 320.03, has an ethnic (Hispanic/Latino) minority population of 35.3%, and about 39.8% of students are eligible for the Free and Reduced-Price Lunch Program. This is a higher proportion of ethnic minority populations and low-income populations than Washington County (16.7% ethnic minority, 21.9% low income).</p> |
| 1065 | <p>CENSUS TRACT 320.03 has a higher percentage of people who are low-income (42.3%), living below the poverty level (21.8%), ethnic (Hispanic/Latino) minority populations (26.9%), minority populations (47.8%) and people experiencing a disability (17.7%) than Washington County (21.9% low-income, 8.9% poverty, 16.7% ethnic, 34.3% minority, 9.9% disability).</p> <p>CENSUS TRACT 320.03 has a higher proportion of Black population residents (8.3%) than Clackamas County (1.9%). The Fall 2020 Public Engagement found that the Black/African American population is a group most opposed to tolling.</p> <p>Tualatin Elementary School, located in CENSUS TRACT 320.03, has an ethnic (Hispanic/Latino) minority population of 35.3%, and about 39.8% of students are eligible for the Free and Reduced-Price Lunch Program. This is a higher proportion of ethnic minority populations and low-income populations than Washington County (16.7% ethnic minority, 21.9% low income).</p> |
| 1066 | <p>CENSUS TRACT 320.03 has a higher percentage of people who are low-income (42.3%), living below the poverty level (21.8%), ethnic (Hispanic/Latino) minority population (26.9%), minority population (47.8%) and people experiencing a disability (17.7%) than Washington County (21.9% low-income, 8.9% poverty, 16.7% ethnic, 34.3% minority, 9.9% disability).</p> <p>CENSUS TRACT 320.03 has a higher proportion of Black population residents (8.3%) than Clackamas County (1.9%). The Fall 2020 Public Engagement found that the Black/African American population is a group most opposed to tolling.</p> <p>Tualatin Elementary School, located in CENSUS TRACT 320.03, has an ethnic (Hispanic/Latino) minority population of 35.3%, and about 39.8% of students are eligible for the Free and Reduced-Price Lunch Program. This is a higher proportion of ethnic minority populations and low-income populations than Washington County (16.7% ethnic minority, 21.9% low income).</p> |
| 1067 | <p>CENSUS TRACT 320.05 has a higher percentage of people who are low-income (42.1%), living below the poverty level (26.2%), ethnic (Hispanic/Latino) minority population (35.7%), and minority population (48.8%) than Washington County (21.9% low income, 8.9% poverty, 16.7% ethnic minority, 34.3% minority).</p> |
| 1068 | <p>CENSUS TRACT 320.05 has a higher percentage of people who are low-income (42.1%), living below the poverty level (26.2%), ethnic (Hispanic/Latino) minority (35.7%), and minority (48.8%) than Washington County (21.9% low income, 8.9% poverty, 16.7% ethnic minority, 34.3% minority).</p> |
| 1049 | <p>CENSUS TRACT 320.05 has a higher percentage of people who are low-income (42.1%), living below the poverty level (26.2%), ethnic (Hispanic/Latino) minority (35.7%), and minority (48.8%) than Washington County (21.9% low income, 8.9% poverty, 16.7% ethnic minority, 34.3% minority).</p> |
| 1101 | <p>CENSUS TRACT 205.05 has a higher percentage of people with a disability (17.1%) and seniors (33.5%) than Clackamas County (11.8% disability, 17.6% seniors).</p> |
| 869 | <p>CENSUS TRACT 222.01 has a higher percentage of low-income populations (21.5%), ethnic (Hispanic/Latino) minority population (27.6%), minority population (40.1%), people with limited English proficiency (7.4%), and households with no vehicle access (27.6%) than Clackamas County (19.4% low-income, 8.7% ethnic minority, 18.1% minority, 1.9% limited English proficiency, 5.4% households with no vehicle available).</p> <p>CENSUS TRACT 222.01 has a higher proportion of American Indian and Alaskan Native residents (3.9%) than Clackamas County (0.6%). The Fall 2020 Public Engagement found that the American Indian and Alaskan Native population is a group most opposed to tolling.</p> |
| 706 | <p>CENSUS TRACT 212 has a higher percentage of people experiencing a disability (18.0%) than Clackamas County (11.8%)</p> |
| 675 | <p>CENSUS TRACT 212 has a higher percentage of people experiencing a disability (18.0%) than Clackamas County (11.8%)</p> |
| 710 | <p>CENSUS TRACT 220 has a higher percentage of people experiencing a disability (16.6 %) than Clackamas County (11.8%).</p> |

| TAZ | Rationale for Recommendation |
|-----|--|
| 708 | CENSUS TRACT 220 has a higher percentage of people experiencing a disability (16.6 %) than Clackamas County (11.8%). |
| 715 | CENSUS TRACT 220 has a higher percentage of people experiencing a disability (16.6 %) than Clackamas County (11.8%). |
| 777 | CENSUS TRACT 222.05 has a higher proportion of people experiencing a disability (20.2%) than Clackamas County (11.8%). |
| 778 | CENSUS TRACT 222.05 has a higher proportion of people experiencing a disability (20.2%) than Clackamas County (11.8%). |
| 779 | CENSUS TRACT 222.05 has a higher proportion of people experiencing a disability (20.2%) than Clackamas County (11.8%). |
| 775 | CENSUS TRACT 222.05 has a higher proportion of people experiencing a disability (20.2%) than Clackamas County (11.8%). |
| 765 | CENSUS TRACT 222.05 has a higher proportion of people experiencing a disability (20.2%) than Clackamas County (11.8%). |
| 780 | CENSUS TRACT 222.05 has a higher proportion of people experiencing a disability (20.2%) than Clackamas County (11.8%). |
| 729 | CENSUS TRACT 224 has a higher percentage of people experiencing a disability (19.7%) than Clackamas County (11.8%). |
| 731 | CENSUS TRACT 224 has a higher percentage of people experiencing a disability (19.7%) than Clackamas County (11.8%). |
| 732 | CENSUS TRACT 224 has a higher percentage of people experiencing a disability (19.7%) than Clackamas County (11.8%). |
| 67 | CENSUS TRACT 57 has a higher percentage of people with no vehicle access (23.0%) than Multnomah County (12.9%). |

Sources: Oregon Department of Education School Reports; U.S. Census American Community Survey 2015-2019 Estimates.

TAZ = transportation analysis zone

Figure B-1. Equity Framework Community Home Transportation Analysis Zones



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates.

Analysts used Metro’s existing RTDM and MetroScope models to determine how many jobs, community places, and medical facilities could be reached within a 20- or 30-minute drive or 30- or 45-minute transit trip during peak and off-peak periods in the Portland metropolitan area, the Social Resources and Communities API, and EFC households (based on the EFC TAZs described earlier in this section) under existing conditions, the No Build Alternative in 2045, and the Build Alternative in 2045. The 2018 Regional Transportation Plan Transportation Equity Evaluation provides more detailed information about the datasets and tools for this analysis.

The accessibility analysis used the same key assumptions and definitions as described in the 2018 RTP Transportation Equity Evaluation. Table B-2 describes the travel-time assumptions by mode, Table B-3 provides the definition of peak and off-peak times of day, and Table B-4 provides the definition of wage level for low-, medium-, and high-wage jobs.

Table B-2. Accessibility Analysis – Travel-Time Assumptions by Mode

| Mode | Travel Time Assumption: Jobs | Travel Time Assumption: Community Places and Medical Facilities |
|---------|---------------------------------|--|
| Auto | 30 minutes | 20 minutes |
| Transit | 45 minutes | 30 minutes |

Table B-3. Accessibility Analysis - Definition of Peak vs. Off-Peak

| Mode | Peak | Off-Peak |
|---------|------------------------------------|-------------------|
| Auto | 6:00 – 9:00 a.m., 3:00 – 6:00 p.m. | All other hours |
| Transit | 4:00 – 6:00 p.m. | 12:00 – 1:00 p.m. |

Table B-4. Accessibility Analysis – Definition of Jobs’ Wage Level

| Wage Level | Dollar Amount |
|------------|-------------------|
| Low | \$0-\$39,999 |
| Medium | \$40,000-\$65,000 |
| High | \$65,001+ |

B.2 Results

Tables B-5 to B-12 present the results of the accessibility analysis for jobs, community places, medical facilities during peak and off-peak time periods under existing conditions, the No Build Alternative in 2045, and the Build Alternative in 2045. The numerical results from the Metro RTDM for the accessibility analysis are rounded because it is beyond the model accuracy to show the results to the last digit/decimal place. Job accessibility numbers are rounded to the nearest 100, community places and medical facility numbers are rounded to the nearest five, and percentage changes are rounded to the nearest two decimal places.

This page intentionally left blank.

Table B-5. Peak 30-Minute Drive Accessibility Analysis – Jobs

| Geography | Number of Low-Wage Jobs Accessible within 30-minute Drive | | | | Number of Medium-Wage Jobs Accessible within 30-minute Drive | | | | Number of High-Wage Jobs Accessible within 30-minute Drive | | | |
|--|---|---------------|------------|--------------------|--|---------------|------------|--------------------|--|---------------|------------|--------------------|
| | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build |
| Portland Metropolitan area Average per Household | 178,900 | 201,400 | 202,100 | +0.35% | 101,100 | 117,900 | 118,200 | +0.25% | 91,100 | 108,200 | 108,600 | +0.37% |
| Social Resources and Communities API Average per Household | 153,300 | 148,100 | 150,600 | +1.69% | 86,900 | 86,900 | 88,300 | +1.61% | 78,400 | 80,000 | 81,200 | +1.50% |
| Equity Framework Community Average per Household | 132,100 | 127,600 | 131,400 | +2.98% | 74,000 | 73,600 | 75,800 | +2.99% | 66,500 | 67,400 | 69,400 | +2.97% |

Existing conditions data is 2015 data from the Metro Regional Travel Demand Model.
API = area of potential impact; TAZ = transportation analysis zone

Table B-6. Peak 20-Minute Drive Accessibility Analysis – Community Places and Medical Facilities

| Geography | Community Places Accessible within 20-minute Drive | | | | Medical Facilities Accessible within 20-minute Drive | | | |
|--|--|---------------|------------|--------------------|--|---------------|------------|--------------------|
| | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build |
| Portland Metropolitan area Average per Household | 855 | 715 | 715 | 0.00% | 450 | 395 | 395 | 0.00% |
| Social Resources and Communities API Average per Household | 870 | 650 | 655 | +0.77% | 480 | 390 | 395 | +1.28% |
| Equity Framework Community Average per Household | 645 | 485 | 490 | +1.03% | 310 | 260 | 260 | 0.00% |

The Metro Travel Demand Model defines community places as medical facilities, food locations, and other community places, such as parks. However, for this analysis, medical Facilities are counted as a separate category from Community Places.
Existing conditions data is 2015 data from the Metro Regional Travel Demand Model.
API = area of potential impact; TAZ = transportation analysis zone

Table B-7. Peak 45-Minute Transit Trip Accessibility Analysis – Jobs

| Geography | Number of Low-Wage Jobs Accessible within 45-minute Transit Trip | | | | Number of Medium-Wage Jobs Accessible within 45-minute Transit Trip | | | | Number of High-Wage Jobs Accessible within 45-minute Transit Trip | | | |
|--|--|---------------|------------|--------------------|---|---------------|------------|--------------------|---|---------------|------------|--------------------|
| | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build |
| Portland Metropolitan area Average per Household | 26,800 | 51,900 | 51,900 | 0.00% | 15,100 | 30,300 | 30,400 | +0.33% | 13,700 | 27,900 | 28,000 | +0.36% |
| Social Resources and Communities API Average per Household | 15,700 | 36,400 | 36,600 | +0.55% | 8,800 | 21,400 | 21,500 | +0.47% | 8,000 | 19,800 | 19,900 | +0.51% |
| Equity Framework Community Average per Household | 12,600 | 31,600 | 31,900 | +0.95% | 7,400 | 18,300 | 18,500 | +1.09% | 6,700 | 17,000 | 17,200 | +1.18% |

Existing conditions data is 2015 data from the Regional Metro Travel Demand Model.
API = area of potential impact; TAZ = transportation analysis zone

Table B-8. Peak 30-Minute Transit Trip Accessibility Analysis – Community Places and Medical Facilities

| Geography | Community Places Accessible within 30-Minute Transit Trip | | | | Medical Facilities Accessible within 30-Minute Transit Trip | | | |
|--|---|---------------|------------|--------------------|---|---------------|------------|--------------------|
| | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build |
| Portland Metropolitan area Average per Household | 145 | 230 | 230 | 0.00% | 85 | 135 | 135 | 0.00% |
| Social Resources and Communities API Average per Household | 90 | 160 | 160 | 0.00% | 45 | 90 | 90 | 0.00% |
| Equity Framework Community Average per Household | 55 | 105 | 105 | 0.00% | 20 | 65 | 65 | 0.00% |

The Metro Travel Demand Model defines community places as medical facilities, food locations, and other community places, such as parks. However, for this analysis, medical Facilities are counted as a separate category from Community Places.
Existing conditions data is 2015 data from the Metro Regional Travel Demand Model.
API = area of potential impact; TAZ = transportation analysis zone

Table B-9. Off-Peak 30-Minute Drive Accessibility Analysis – Jobs

| Geography | Number of Low-Wage Jobs Accessible within 30-minute Drive | | | | Number of Medium- Wage Jobs Accessible within 30-minute Drive | | | | Number of High- Wage Jobs Accessible within 30-minute Drive | | | |
|--|---|---------------|------------|--------------------|---|---------------|------------|--------------------|---|---------------|------------|--------------------|
| | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build |
| Portland Metropolitan area Average per Household | 210,700 | 260,100 | 260,600 | +0.19% | 118,900 | 152,100 | 152,400 | +0.20% | 107,200 | 139,700 | 139,900 | +0.14% |
| Social Resources and Communities API Average per Household | 196,400 | 229,400 | 230,900 | +0.65% | 111,100 | 134,200 | 135,100 | +0.67% | 100,100 | 123,300 | 124,100 | +0.65% |
| Equity Framework Community Average per Household | 179,000 | 205,800 | 208,200 | 1.17% | 100,500 | 118,800 | 120,100 | 1.09% | 90,600 | 108,600 | 109,800 | 1.10% |

Existing conditions data is 2015 data from the Metro Regional Travel Demand Model.
 API = area of potential impact; TAZ = transportation analysis zone

Table B-10. Off-Peak 20-Minute Drive Accessibility Analysis – Community Places and Medical Facilities

| Geography | Community Places Accessible within 20-minute Drive | | | | Medical Facilities Accessible within 20-minute Drive | | | |
|--|--|---------------|------------|--------------------|--|---------------|------------|--------------------|
| | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build |
| Portland Metropolitan area Average per Household | 1,075 | 980 | 980 | 0.00% | 585 | 560 | 560 | 0.00% |
| Social Resources and Communities API Average per Household | 1,170 | 1,015 | 1,020 | +0.49% | 650 | 615 | 620 | +0.81% |
| Equity Framework Community Average per Household | 900 | 735 | 745 | +1.36% | 460 | 415 | 425 | +2.41% |

Existing conditions data is 2015 data from the Metro Regional Travel Demand Model.
 API = area of potential impact; TAZ = transportation analysis zone

Table B-11. Off-Peak 45-Minute Transit Trip Accessibility Analysis – Jobs

| Geography | Number of Low-Paying Jobs Accessible within 45-minute Transit Trip | | | | Number of Medium-Paying Jobs accessible within 45-minute Transit Trip | | | | Number of High-Paying Jobs Accessible within 45-minute Transit Trip | | | |
|--|--|---------------|------------|--------------------|---|---------------|------------|--------------------|---|---------------|------------|--------------------|
| | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build |
| Portland Metropolitan area Average per Household | 21,500 | 47,400 | 47,400 | 0.00% | 12,100 | 27,700 | 27,700 | 0.00% | 10,900 | 25,500 | 25,500 | 0.00% |
| Social Resources and Communities API Average per Household | 11,600 | 32,700 | 32,700 | 0.00% | 6,500 | 19,200 | 19,200 | 0.00% | 5,900 | 17,700 | 17,700 | 0.00% |
| Equity Framework Community Average per Household | 8,300 | 28,000 | 28,100 | 0.36% | 4,900 | 16,300 | 16,300 | 0.00% | 4,400 | 15,100 | 15,100 | 0.00% |

Existing conditions data is 2015 data from the Metro Regional Travel Demand Model.
 API = area of potential impact; TAZ = transportation analysis zone

Table B-12. Off-Peak 30-Minute Transit Trip Accessibility Analysis – Community Places and Medical Facilities

| Geography | Community Places Accessible within 30-Minute Transit Trip | | | | Medical Facilities Accessible within 30-Minute Transit Trip | | | |
|--|---|---------------|------------|--------------------|---|---------------|------------|--------------------|
| | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build | Existing Conditions | 2045 No Build | 2045 Build | Build vs. No-Build |
| Portland Metropolitan area Average per Household | 110 | 205 | 205 | 0.00% | 65 | 125 | 125 | 0.00% |
| Social Resources and Communities API Average per Household | 65 | 140 | 140 | 0.00% | 30 | 80 | 80 | 0.00% |
| Equity Framework Community Average per Household | 35 | 95 | 95 | 0.00% | 15 | 60 | 60 | 0.00% |

The Metro Regional Travel Demand Model defines community places as medical facilities, food locations, and other community places, such as parks. However, for this analysis, medical Facilities are counted as a separate category from Community Places. Existing conditions data is 2015 data from the Metro Regional Travel Demand Model.
 API = area of potential impact; TAZ = transportation analysis zone

Attachment C Representative Scenarios for Travel-Time Effects

This attachment outlines the process for identifying and analyzing 16 representative scenarios to estimate potential travel-time effects on the general population and Equity Framework Communities (EFCs) under the Build and No Build Alternatives for the I-205 Toll Project.

C.1 Methodology

Analysts developed 16 representative scenarios using the census tracts with higher concentrations of EFC populations than the county average as the trip starting point, and Activity TAZs as the trip end point. Activity TAZs were selected by identifying the TAZs with high concentrations of social resources, such as social service providers, business areas and employment centers, religious organizations, schools, healthcare facilities, and parks and recreational facilities. Table C-1 lists the identified Activity TAZs and explains what social resources led to their identification. Figure C-1 shows the geographic locations of the Activity TAZs in the API.

Each representative scenario includes a general description of where a sample traveler lives (trip start point), a brief sample trip description (purpose of trip and time of day), and a sample traveler destination (trip end point within an Activity TAZ). Analysts applied the following considerations when developing the representative scenarios:

- Geographic distribution of the scenarios across the area of potential impact (API).²⁵
- U.S. Census demographic data for populations residing in each geographic area.
- Social resources and places of interest identified by the Equity and Mobility Advisory Committee (EMAC).

²⁵ The API is defined in the Environmental Justice Technical Report and Social Resources and Communities Technical Report. The API is the same geography for both reports.

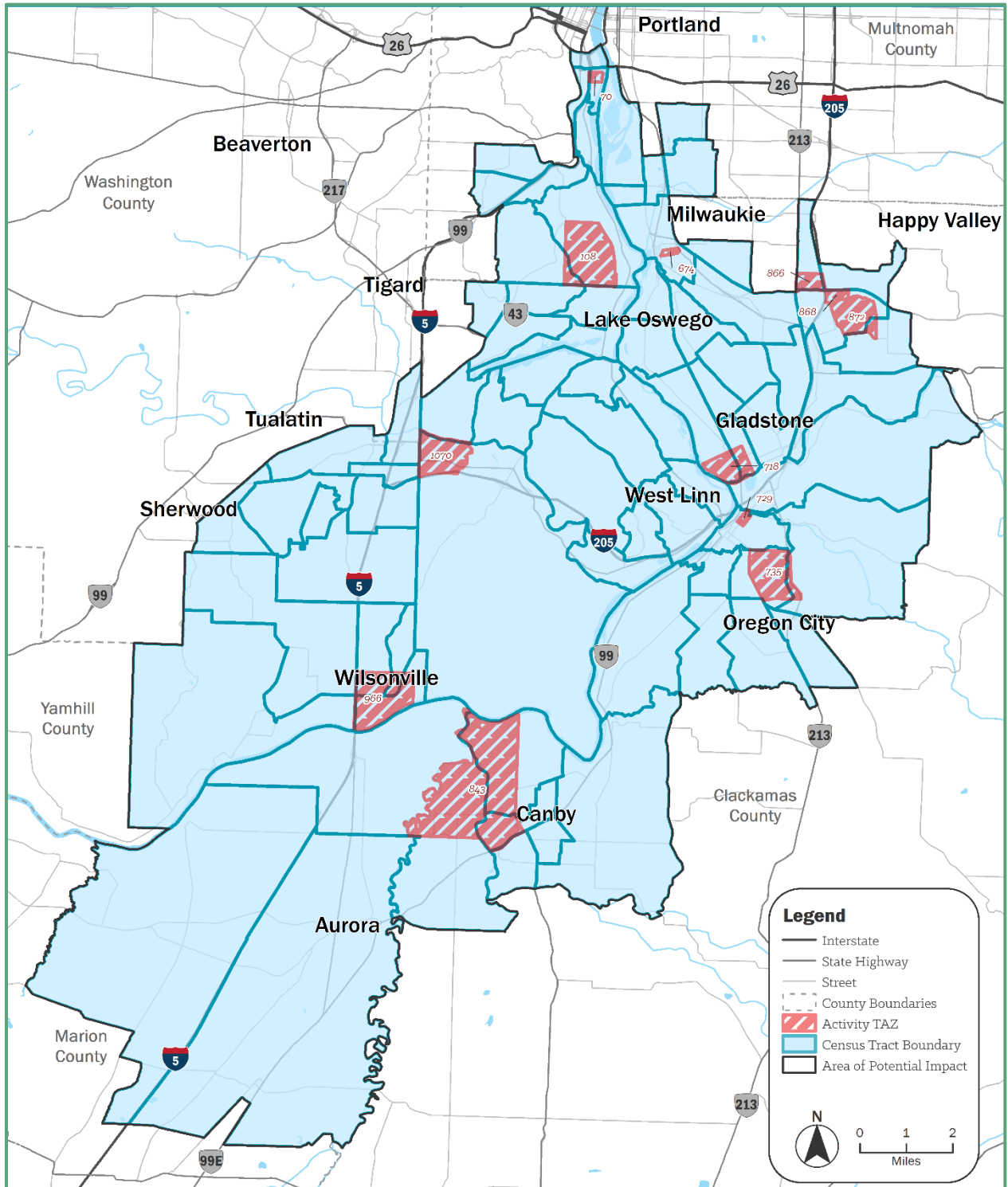
Table C-1. Representative Equity Framework Community Activity Transportation Analysis Zones

| Activity TAZ | Rationale for Recommendation |
|--------------|---|
| 70 | TAZ 70 represents the OHSU South Waterfront campus, where there are preschools, higher education, and hospital/health care center/nursing home. Healthcare facilities also serve as job centers. |
| 674 | TAZ 674 represents a concentration of religious organizations. Denominations and affiliations of the religious organizations include Methodist, Pentecostal, United Reformed, and Presbyterian. Religious organizations provide social services such as food pantries, clothing drives, counseling, education, and community gathering spaces. |
| 729 | TAZ 729 represents downtown Oregon City, where there are numerous amenities such as retail locations, groceries, restaurants, jobs centers, and religious organizations. Downtown Oregon City also has a State Unemployment Office and the Oregon City Public Library. The Fall 2020 Public Engagement activities identified Oregon City as an area of potential concern for rerouting. |
| 735 | TAZ 735 contains nursing homes, parks and recreational facilities, including Hilltop Mall, Clackamas Community College, and the Oregon City Social Security Office, as well as Rivercrest, Singer Creek and Barclay Hills parks which provide green space, recreational opportunities, and natural areas |
| 843 | TAZ 843 represents downtown Canby, which has many business types (e.g., retail, restaurants, grocery stores) employment centers, and a variety of religious organization denominations and affiliations, such as Catholic, Lutheran, and Evangelical. Religious organizations provide social services such as food pantries, clothing drives, counseling, education, and community gathering spaces. This TAZ also contains Canby High School. The Fall 2020 Public Engagement activities identified Canby as an area of potential concern for rerouting. |
| 866 | TAZ 866 is the location of Clackamas Town Center, which is an employment center and provides amenities, such as restaurants, grocery stores, and retail shopping. TAZ 866 also contains the Clackamas County Sheriff Office. |
| 868 | TAZ 868 represents where Sunnyside Medical Center is located, which is an employment center with various healthcare facilities and departments. This TAZ represents Sunnyside Town Center and Sunnyside Plaza, which has numerous retail locations, businesses, restaurants, and employment centers. |
| 872 | TAZ 872 includes Mount Talbert Nature Park, which provides green space, recreational opportunities, and natural areas. This TAZ represents a manufacturing employment center. |
| 1070 | TAZ 1070 includes Legacy Meridian Park Medical Center, which is an employment center and has various healthcare facilities and departments. This TAZ also contains the Nyberg Woods Shopping center, which provides retail, businesses, employment, and restaurants. |
| 108 | TAZ 108 includes Tryon Creek State Natural Area and the Visitor Center. The Tryon Creek State Natural Area provides green space, recreational opportunities, and a natural area. This TAZ also has a preschool, summer camps, an educational center. |
| 966 | TAZ 966 represents Wilsonville, which contains retail locations including businesses, restaurants, and grocery stores. |
| 718 | TAZ 718 represents Gladstone, which contains retail locations, including businesses, restaurants, and grocery stores. |

Sources: Google Maps, Oregon Department of Transportation (ODOT). 2021. *I-205 Toll Project Engagement Summary Summer-Fall 2020*. https://www.oregon.gov/odot/tolling/Documents/I-205_Engagement%20Summary_Final_508.pdf.

TAZ = Transportation Analysis Zones; OHSU = Oregon Health and Science University

Figure C-1. Equity Framework Communities Activity Transportation Analysis Zones



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates.

C.2 Representative Scenarios Identification Process

1. The focus of this analysis is on potential travel time effects on EFCs. Estimating travel times requires a fixed start point and end point for analysis. Start points and end points were selected to develop the representative scenarios from the previously identified EFCs home locations and activity locations, as discussed in the Methodology sections of Attachments B and C.
 - Analysts picked start points as the previously identified home locations from the accessibility analysis (see Attachment B) or a proxy residential use (e.g., apartment complex, suburban single-family home, townhouse, senior living facility).
 - Analysts picked end points with a diversity of destinations or activities (e.g., job/employment, doctor office or health care needs, visits with family or friends, nature recreation). End points incorporate feedback from engagement activities and best professional practices from the project team.
2. Analysts developed traveler characteristics such as the type of trip (e.g., work trip, recreational trip, shopping trip, social trip), the time of the trip and assumed day(s) of the trip (e.g., a part-time worker who travels off-peak hour on some days). The representative scenarios cover a variety of traveler characteristics.
3. Analysts identified the shortest trip path from start point to end point that would include travel on the proposed tolled bridges on I-205 (Abernethy and Tualatin River Bridges) under the Build Alternative (called the “Toll Path”) to compare to travel that would not include the proposed tolled bridges on I-205 under the Build Alternative (called the “Toll-Free Path”). Most of the scenarios focus on travel by private vehicle, but for comparison and at the request of the EMAC, three scenarios were evaluated for transit travel times based on existing fixed routes for the representative trip. It is assumed that the transit trips would not use the Toll Path based on existing routing.
4. Analysts used the trip paths for the representative scenario to calculate sample travel time for the routes. Since the Regional Travel Demand Model does not have travel routes for the representative scenarios or travel time projections for the representative scenario paths, the Google Maps website was used to acquire travel routes and times by entering origin and destination addresses to find travel times and whether I-205 would be taken or avoided. Due to these limitations in the Regional Travel Demand Model, calculating travel times for the representative scenarios had different methodologies for different path types, modes, and condition. Table C-2 describes how the calculation methods differ, and Table C-3 provides the definition of peak and off-peak periods assumed in the travel time analysis.

Table C-2. Definition of Methodology for Travel Time Route Calculations

| Path | Existing Conditions | | Future Build and No Build Alternatives | |
|-----------|---|--|--|--|
| | Auto | Transit | Auto | Transit |
| Toll | Shortest travel time projected by Google Maps. | Entering home location and activity location addresses into Google Maps. | Nodes closest to home locations and activity locations identified and paths generated using Emme’s Shortest Path Tree tool ^[1] . | EFC TAZs and activity TAZs were identified, and growth factors were calculated using total transit travel time between TAZs. |
| Toll-Free | Shortest travel time generated with the Metro Regional Travel Demand Model 2015 Base Year and recreated in Google Maps. | | Nodes closest to home locations and activity locations identified in the Metro Regional Travel Demand Model 2015 Base Year, recreated in Google Maps and paths generated using Emme’s Shortest Path Tree tool. | |

[1] Emme’s Shortest Path and Tree Tool use the same algorithms to find the path between two nodes, trying to minimize the sum of the path cost. This cost can be length, travel time, toll, etc. For this analysis, the cost is loaded travel time - the travel time a vehicle needs to go through a link (roadway segment) when the model reaches equilibrium. Emme software can display this path in its interface. For this analysis, each travel path needed to be consistent between Google Maps and the model scenarios for all the hours, so some mid-path nodes were manually added between the origin and the destination. For example, for origin H1 to destination A1, nodes B, C, D were added along the path, for a shortest path of H1 -> B -> C -> D -> A1 from the model being as close to the same as the shortest path we get from Google Maps as possible.

TAZ = Transportation Analysis Zone

Table C-3. Definition of Peak vs. Off-Peak by Mode for Travel Time Calculations

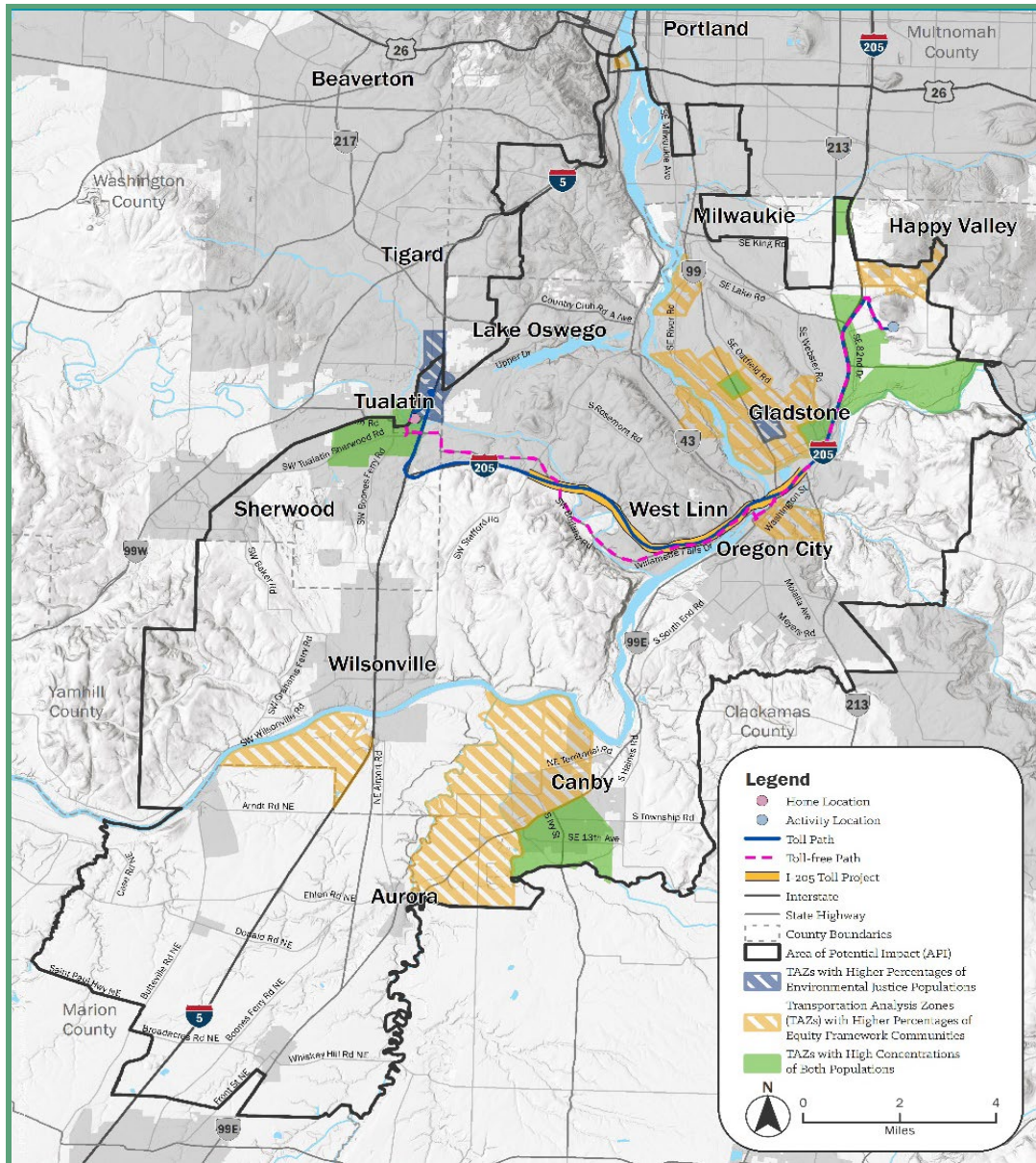
| Mode | AM Peak | Midday | PM Peak | Off-Peak |
|---------|------------------|------------------|-----------------|---|
| Auto | 8 – 9 a.m. | 12 – 1 p.m. | 4 – 5 p.m. | 12 – 1 p.m., 2 – 3 p.m., and 11 p.m. – 12 a.m., |
| Transit | 6 a.m. – 10 a.m. | 10 a.m. – 3 p.m. | 3 p.m. – 7 p.m. | 10 a.m. – 3 p.m., 7 p.m. – 6 a.m. |

C.3 Results

Table C-4 through Table C-19 present descriptions of the 16 representative scenarios and travel times under existing conditions, the No Build Alternative in 2045, and the Build Alternative in 2045.

Table C-4. Description of Representative Scenario 1

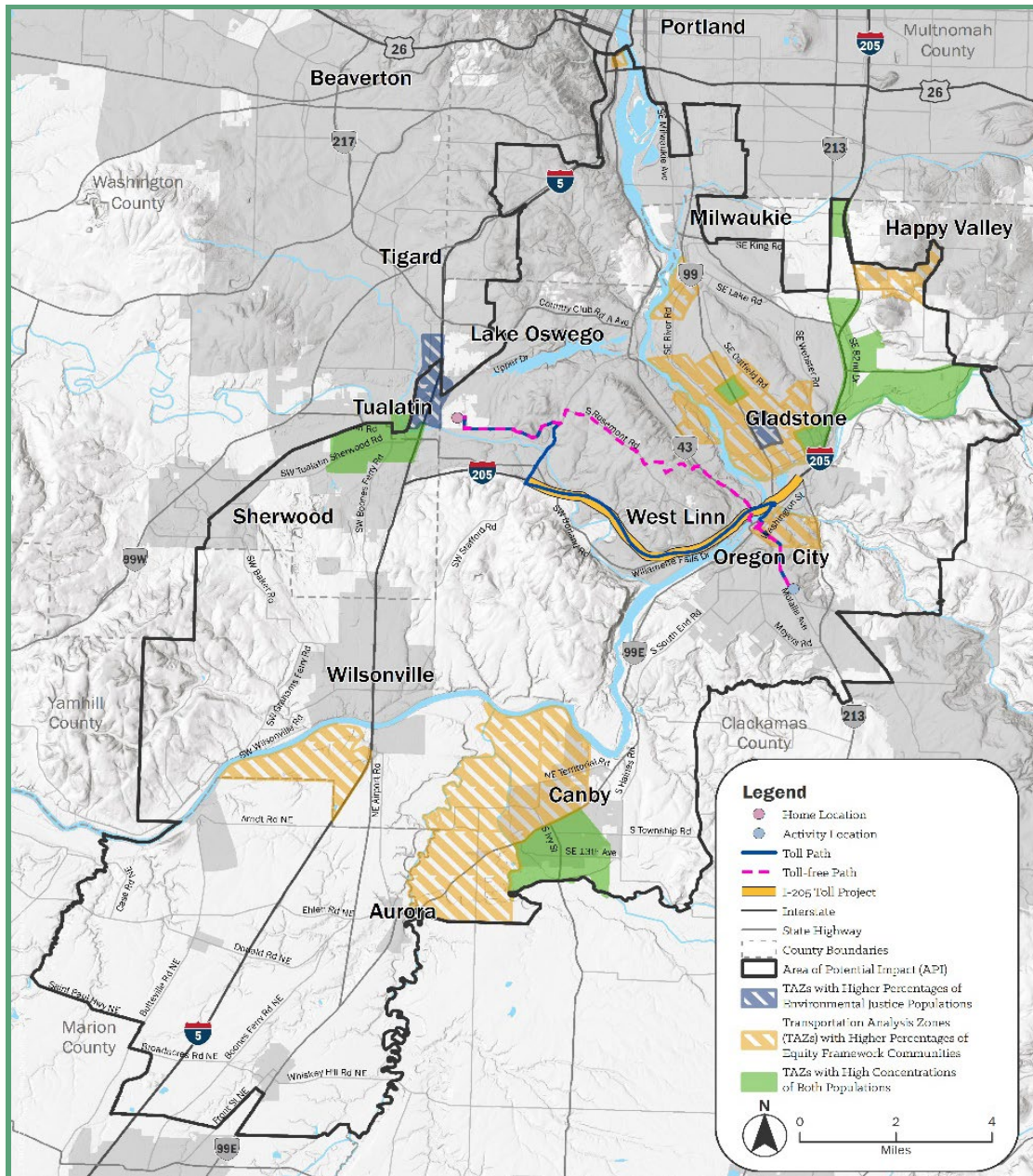
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|--|---|---|--|
| 1 | Person A lives in Tualatin. They travel to Mount Talbert Nature Park in Happy Valley once a week after work (around 5 p.m.) to walk with their children and grandchildren who live in Gladstone. | The Toll Path trip takes 40 to 50 minutes. The Toll-Free Path trip takes 40 to 50 minutes. | The Toll Path trip would take 40 to 50 minutes. The Toll-Free Path trip would take 50 to 60 minutes. | The Toll Path trip would take 30 to 40 minutes. The Toll-Free Path trip would take longer than an hour. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-5. Description of Representative Scenario 2

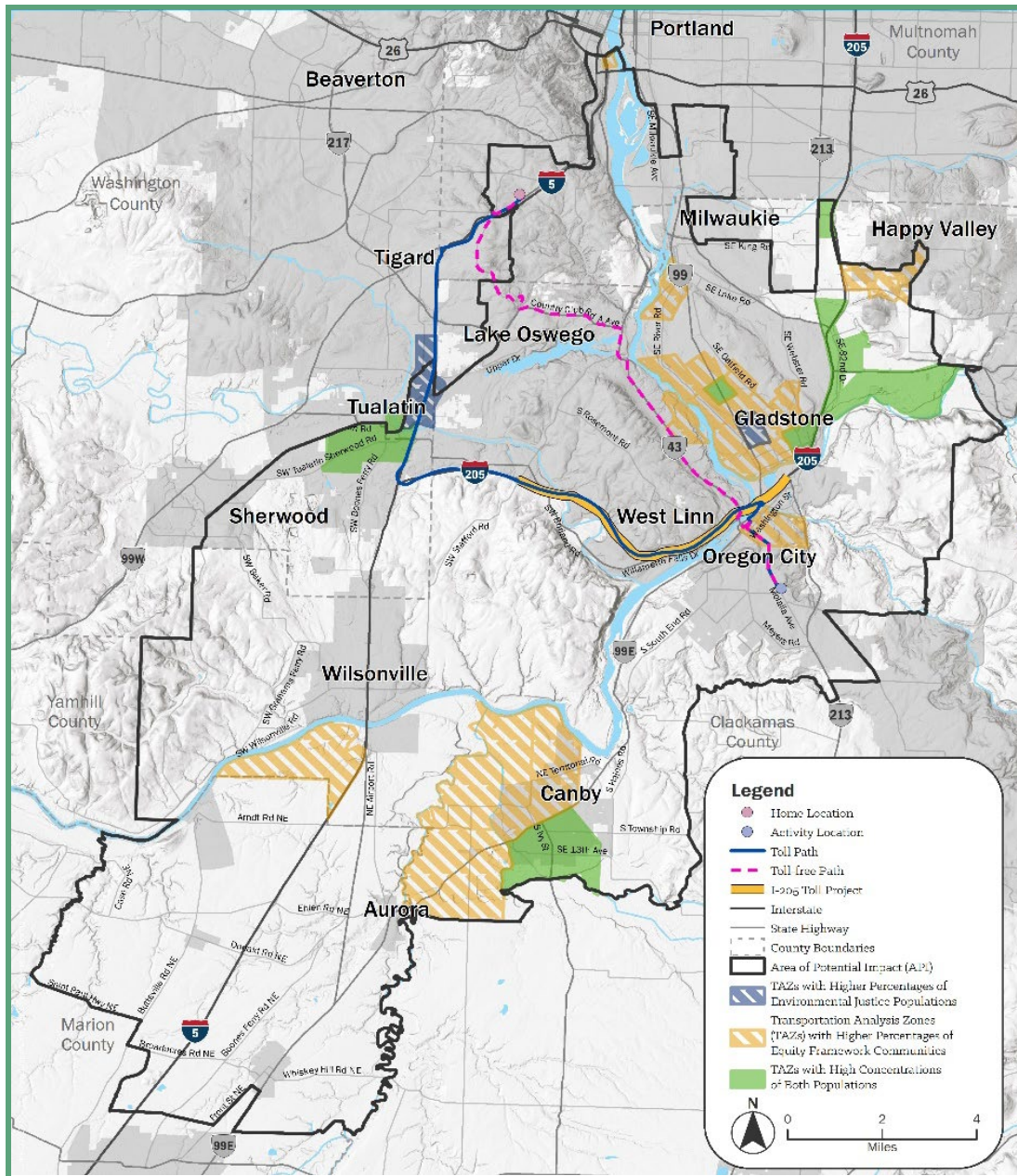
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|---|---|
| 2 | Person B lives in an affordable housing unit in Tualatin with two elementary school-aged children. They work at the small business in Oak Grove Monday to Friday from 7 a.m. to 2:30 p.m. and take the bus. | The Toll Path trip takes 20 to 30 minutes. The Toll-Free Path trip takes 30 to 40 minutes. | The Toll Path trip would take 30 to 40 minutes. The Toll-Free Path trip would take 40 to 50 minutes. | The Toll Path trip would take 20 to 30 minutes. The Toll-Free Path trip would take 40 to 50 minutes. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-6. Description of Representative Scenario 3

| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|--|---|---|---|
| 3 | Person C lives in Southwest Portland and has struggled to find work since the start of the Covid-19 pandemic. They were recently hired by a farm for seasonal work outside of Oregon City and will be commuting there a few days a week at 4 p.m. for the late shifts. | The Toll Path trip takes 40 to 50 minutes. The Toll-Free Path trip takes 40 to 50 minutes. | The Toll Path trip would take 50 to 60 minutes. The Toll-Free Path trip would take 50 to 60 minutes. | The Toll Path trip would take 40 to 50 minutes. The Toll-Free Path trip would take 50 to 60 minutes. |

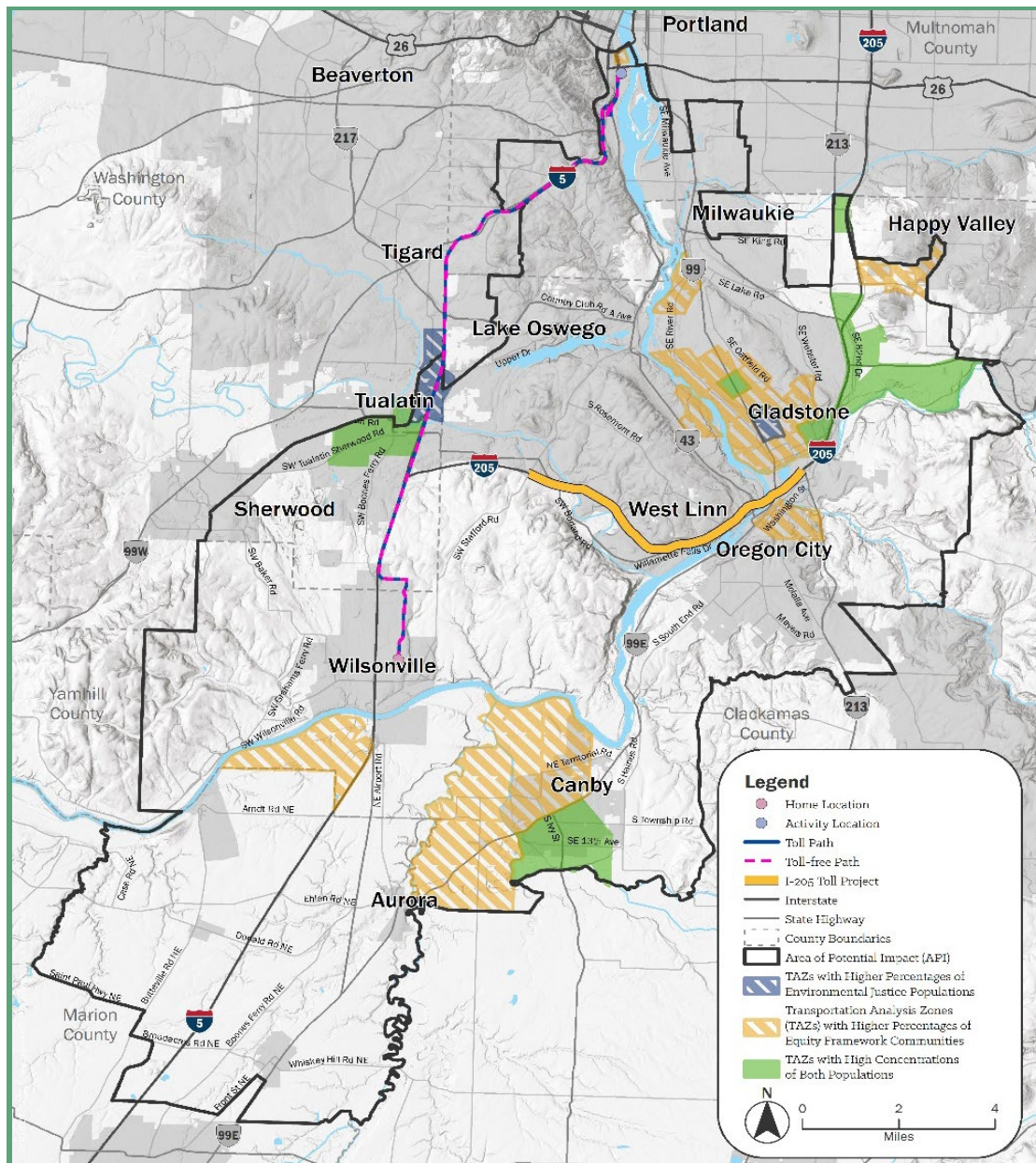


Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-7. Description of Representative Scenario 4

| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|--|---|--|--|
| 4 | Person D recently moved from Portland to Wilsonville and purchased a home for their family. They work as a human resources professional at the OHSU Waterfront campus in South Portland and commute during the peak hour (8-9 a.m. and 4-5 p.m.) in each direction, Monday through Friday. | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip takes 30 to 40 minutes. | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip would take 30 to 40 minutes. | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip would take 30 to 40 minutes. |

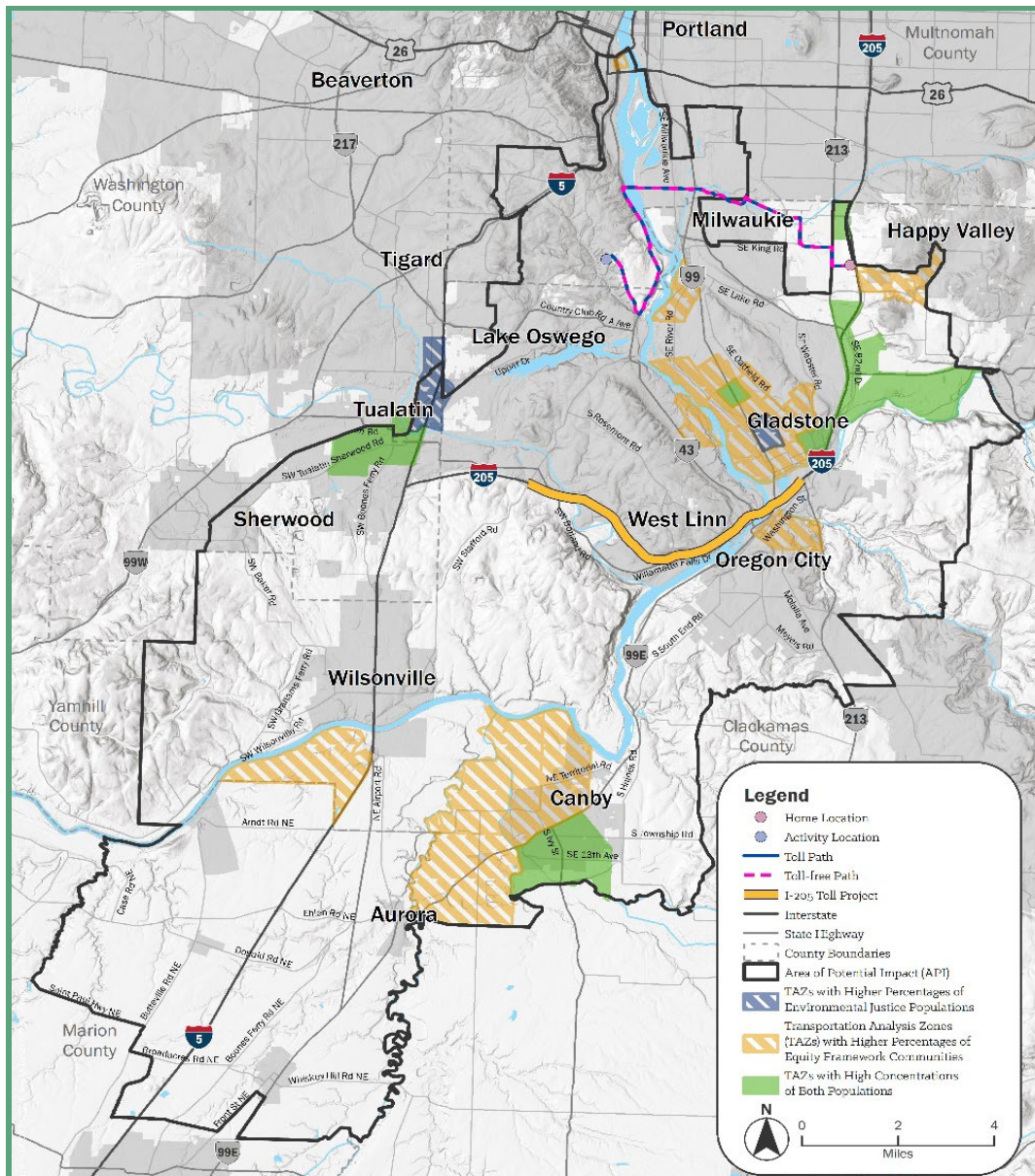
OHSU = Oregon Health and Science University; N/A = not applicable



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-8. Description of Representative Scenario 5

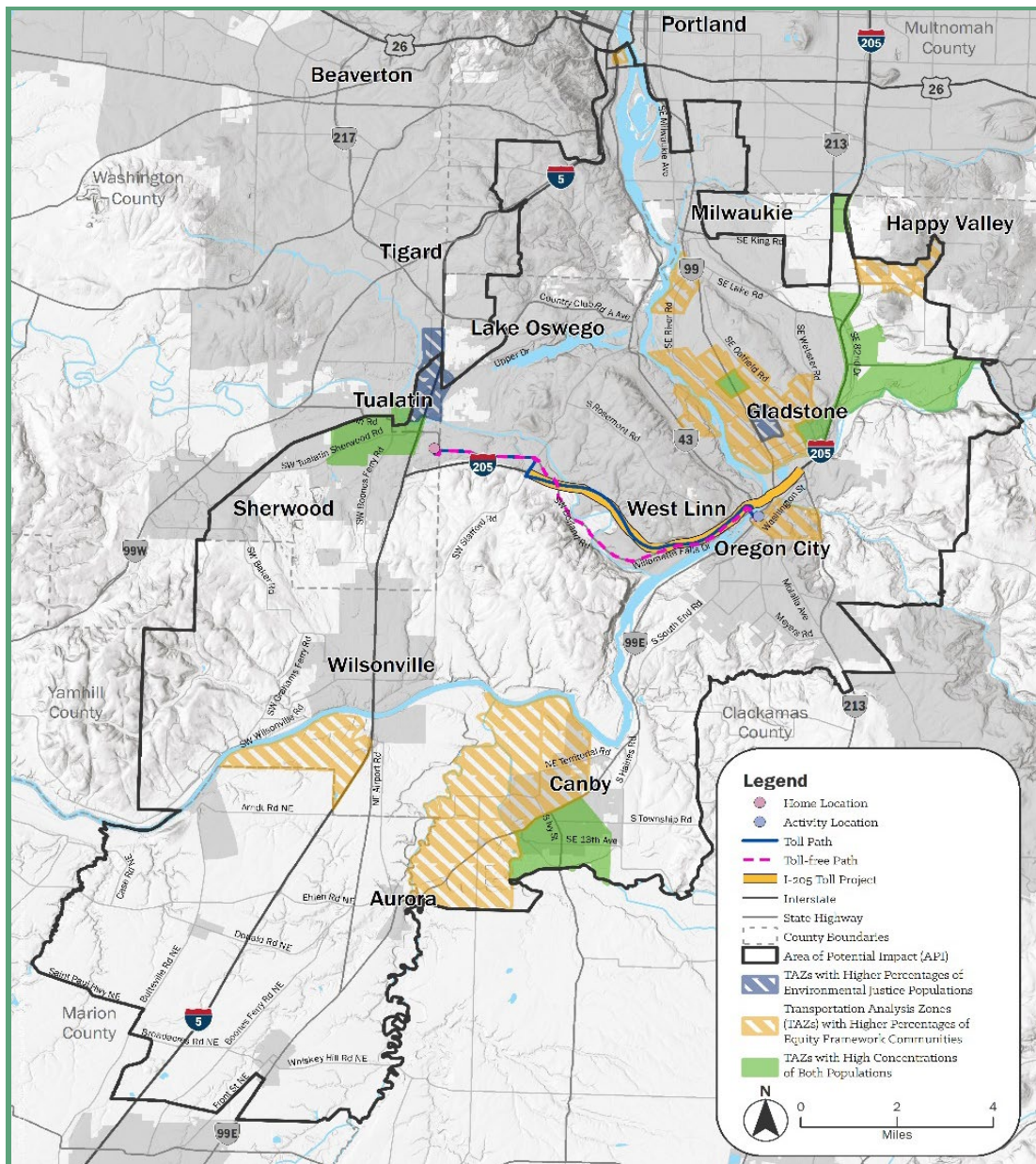
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|--|--|---|
| 5 | Person E is a junior in high school and lives in affordable housing in Southeast Portland. They want to go to college for environmental science and are volunteering at Friends of Tryon Creek. They take the bus after school to volunteer at Tryon Creek State Nature Area in South Portland from 3 p.m. to 5 p.m. on Tuesdays and Thursdays for community service credits. | PM Peak transit ride takes 1 to 2 hours. | The trip would take 1 to 2 hours. | The trip would take 1 to 2 hours. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-9. Description of Representative Scenario 6

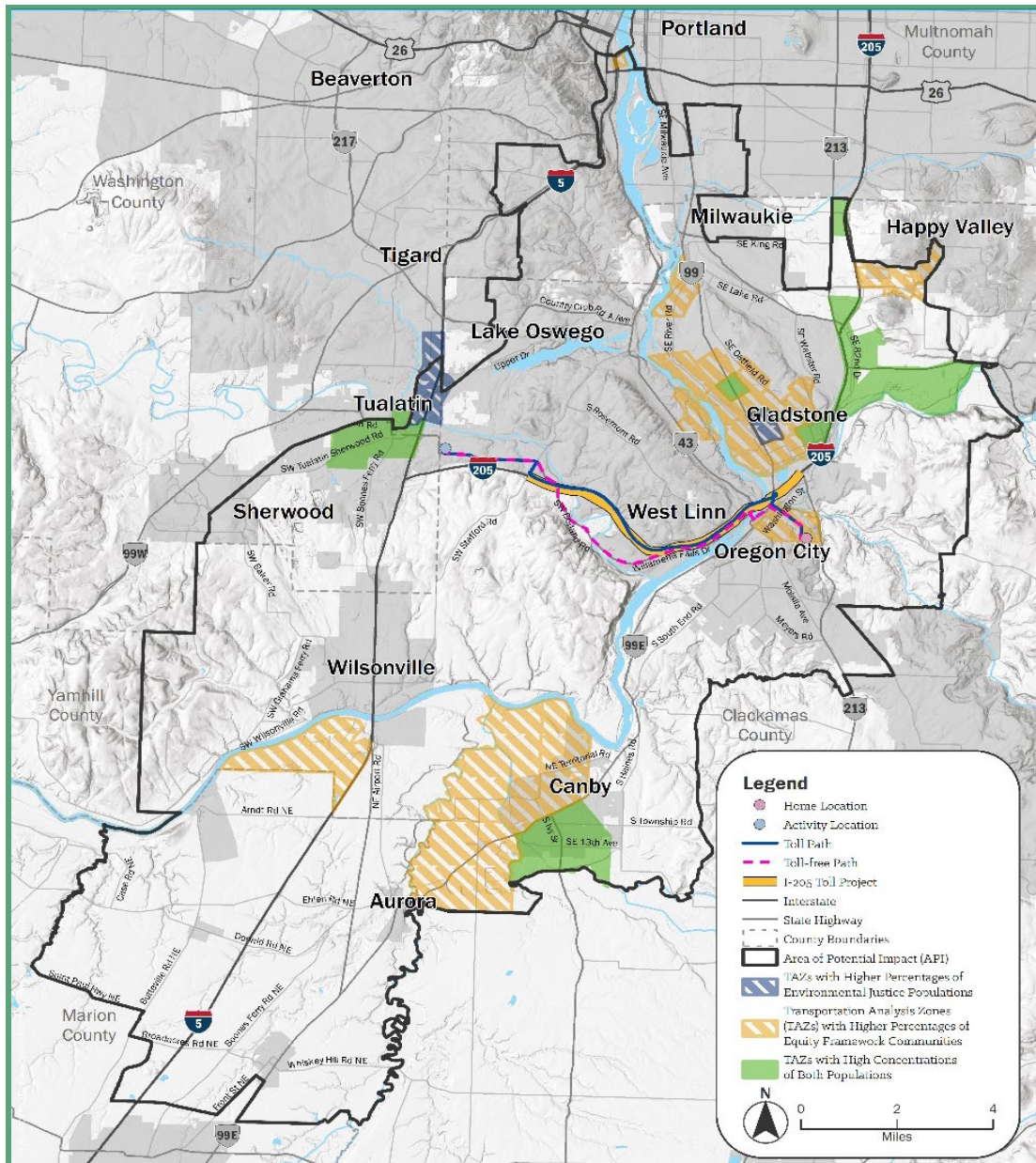
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|---|---|
| 6 | Person F is a teacher at River Grove Elementary School in Lake Oswego and drives to work. They have a chiropractic appointment every other Wednesday at 6 p.m. in Oregon City, which is the location of the closest practitioner who takes their insurance. | The Toll Path trip takes 30 to 40 minutes. The Toll-Free Path trip takes 30 to 40 minutes. | The Toll Path trip would take 40 to 50 minutes. The Toll-Free Path trip would take 40 to 50 minutes. | The Toll Path trip would take 30 to 40 minutes. The Toll-Free Path trip would take 40 to 50 minutes. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-10. Description of Representative Scenario 7

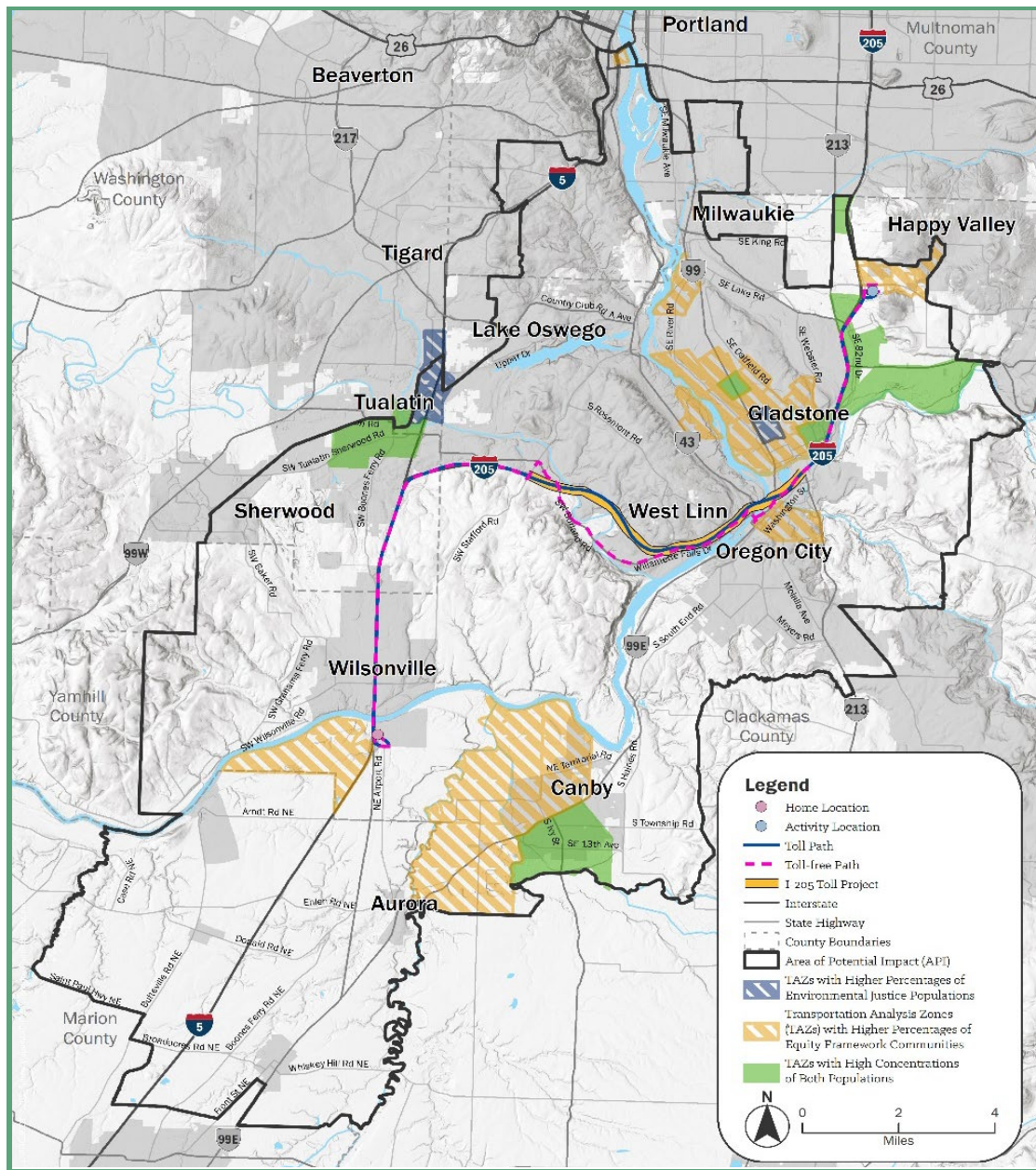
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|--|--|
| 7 | Person G lives in an affordable apartment with their partner near Oregon City. They work evening shifts as a nurse at Legacy Meriden Park in Tualatin five nights a week, with a shift that starts around 11 p.m. | The Toll Path trip takes 10 to 20 minutes. | The Toll Path trip would take 20 to 30 minutes. | The Toll Path trip would take 10 to 20 minutes. |
| | | The Toll-Free Path trip takes 20 to 30 minutes. | The Toll-Free Path trip would take 20 to 30 minutes. | The Toll-Free Path trip would take 20 to 30 minutes. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-11. Description of Representative Scenario 8

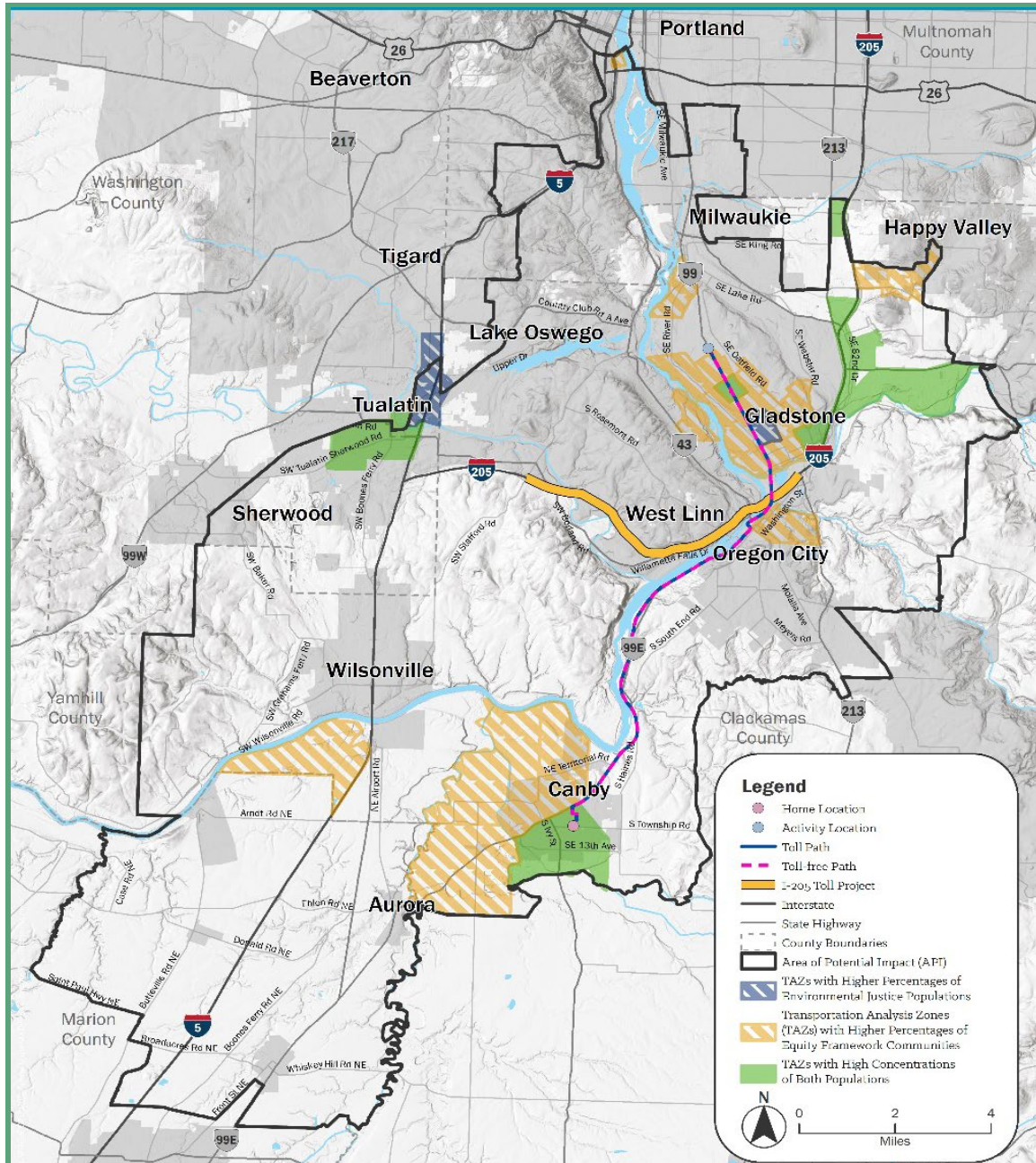
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|--|---|---|---|
| 8 | Person H resides in a senior living facility near Wilsonville. After a fall one morning, they call their neighbor for a ride to the nearest Kaiser emergency room and left for Sunnyside Medical Center in the Sunnyside area of Clackamas County around 11 a.m. | The Toll Path trip takes 30 to 40 minutes. The Toll-Free Path trip takes 40 to 50 minutes. | The Toll Path trip would take 30 to 40 minutes. The Toll-Free path trip would take 40 to 50 minutes. | The Toll Path trip would take 30 to 40 minutes. The Toll-Free Path trip would take 50 to 60 minutes. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-12. Description of Representative Scenario 9

| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|--|--|---|
| 9 | Person I, a native Russian speaker, lives in an affordable housing unit in Canby. They take the bus to Ebenezer Church in Milwaukie, which provides full Russian services, every Friday at 7 p.m. | An Off-Peak transit trip takes 50 to 60 minutes. | Transit ride would take 50 to 60 minutes. | Transit ride would take 50 to 60 minutes. |

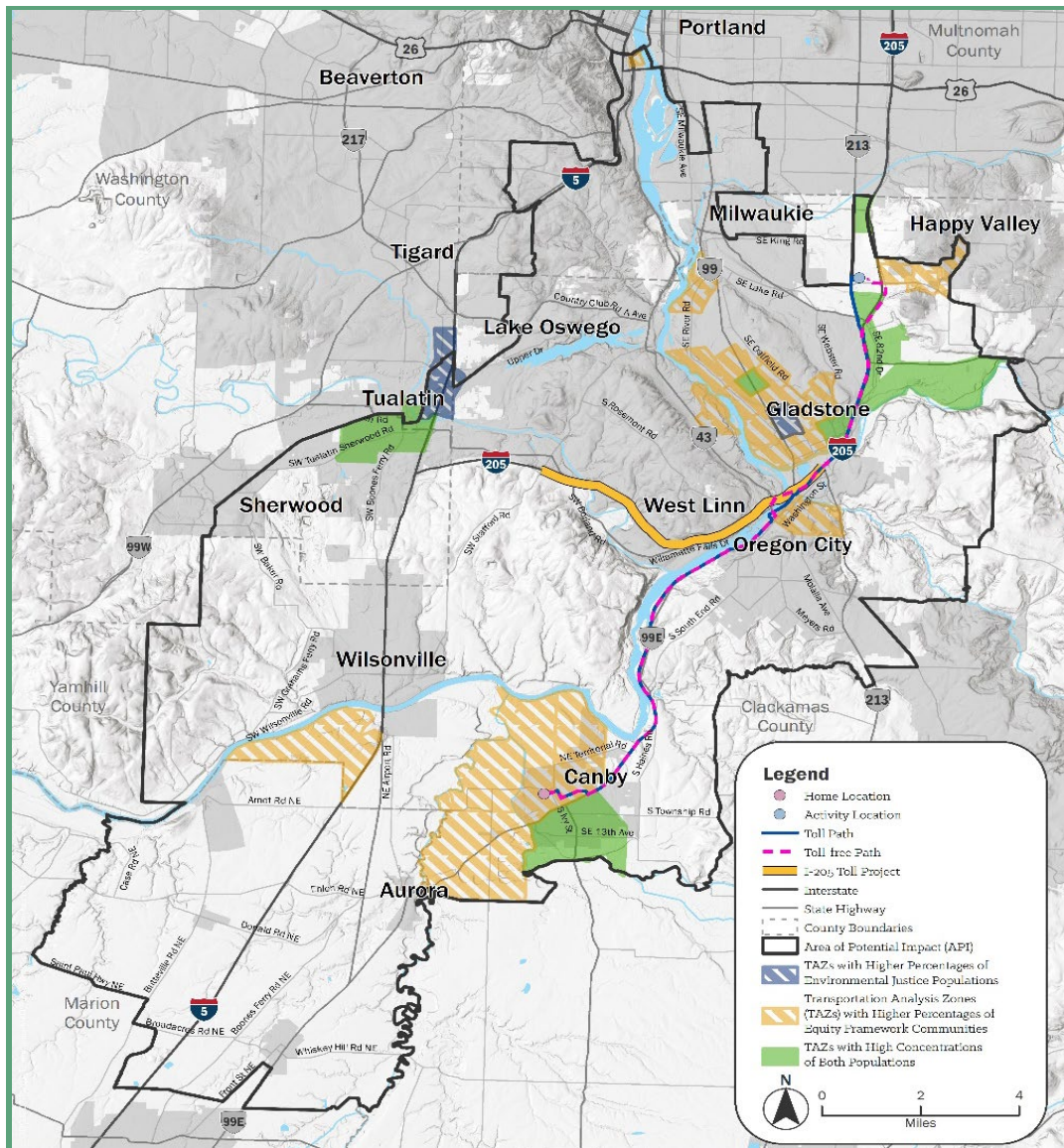


Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-13. Description of Representative Scenario 10

| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|--|---|
| 10 | Person J lives in Canby. They travel to Clackamas Town Center in Happy Valley almost every day for their job as a restaurant manager, their gym membership, and to perform live music twice a week at a local bar and music venue. Typically, they travel in around noon and return home about 11 p.m. They take OR 99E in Oregon City and don't get on I-205 until north of the Abernethy Bridge | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip takes 30 to 40 minutes. | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip would take between 30 to 40 minutes. | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip would take between 30 to 40 minutes |

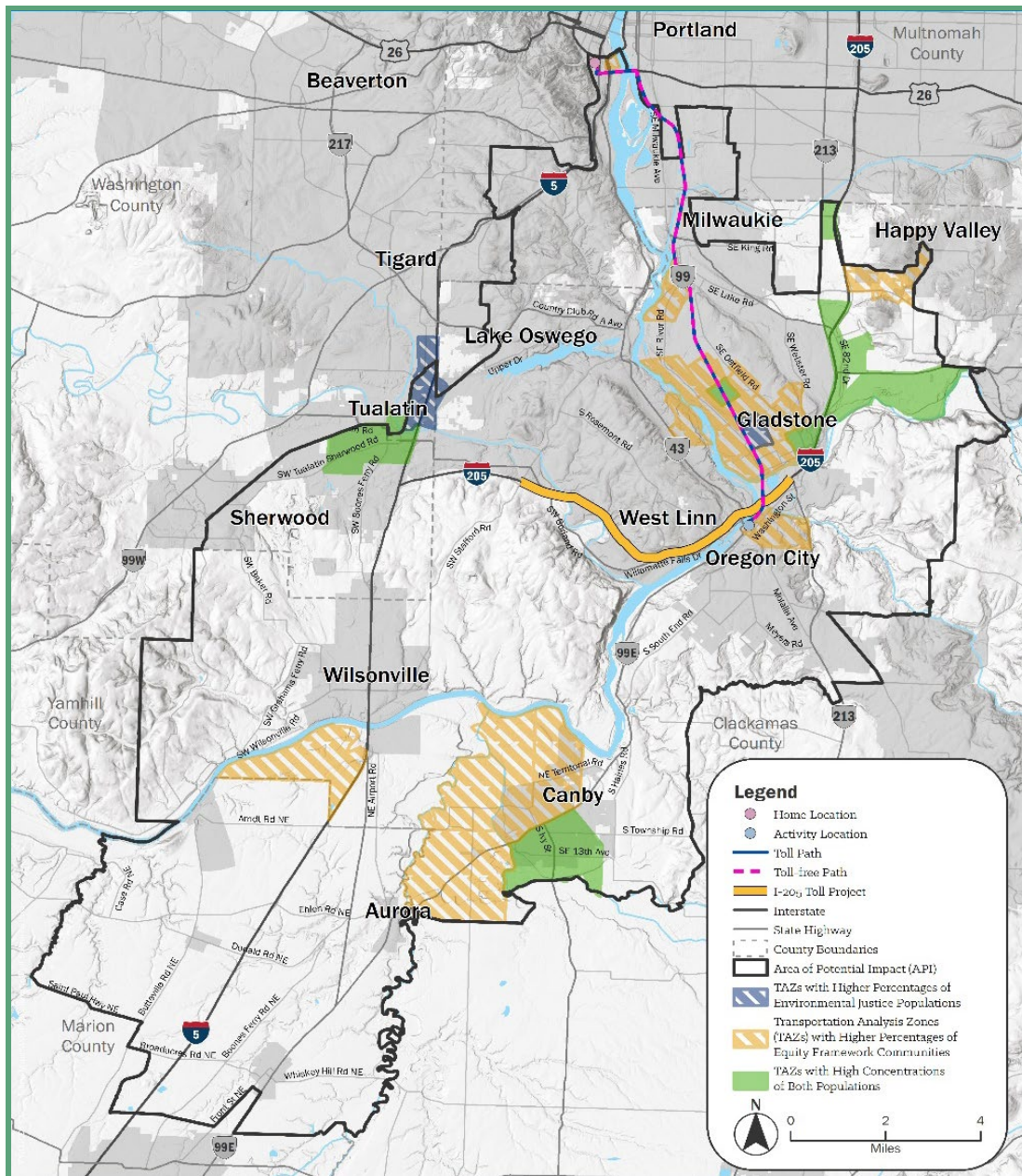
I-205 = Interstate 205; OHSU = Oregon Health and Science University; OR = Oregon Route; N/A = not applicable



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-14. Description of Representative Scenario 11

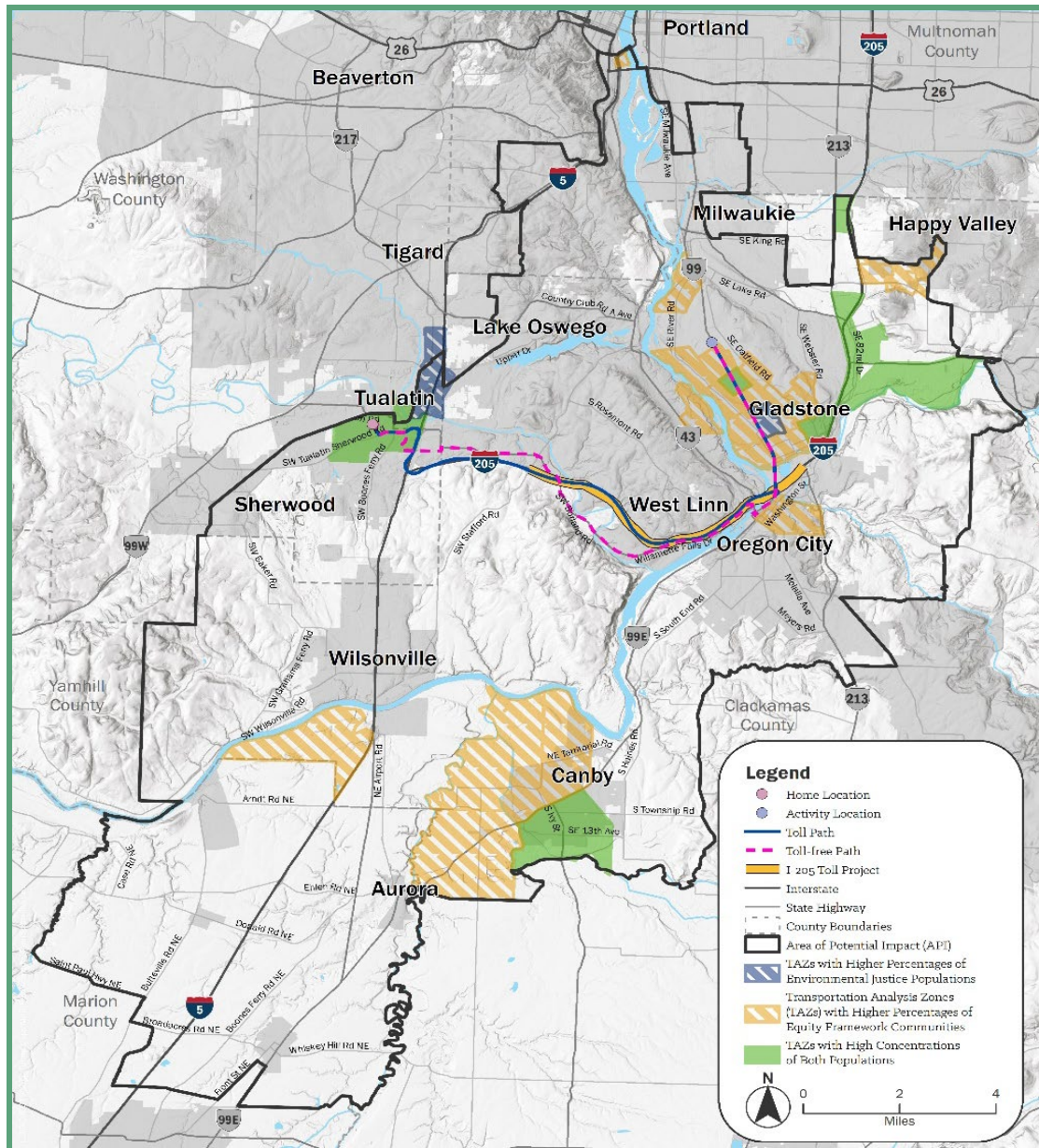
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|--|---|--|---|
| 11 | Person K is a formerly houseless individual in Portland who is struggling to find consistent work and transportation. They haven't had a car for the past 5 years and travel mainly by bus. They were able to find a minimum wage job working at a fast-food restaurant in downtown Oregon City, working the day shift from 8 a.m. to 4 p.m. | An AM peak transit ride takes 50 to 60 minutes. | Transit ride would take 50 to 60 minutes. | Transit ride would take 50 to 60 minutes. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-15. Description of Representative Scenario 12

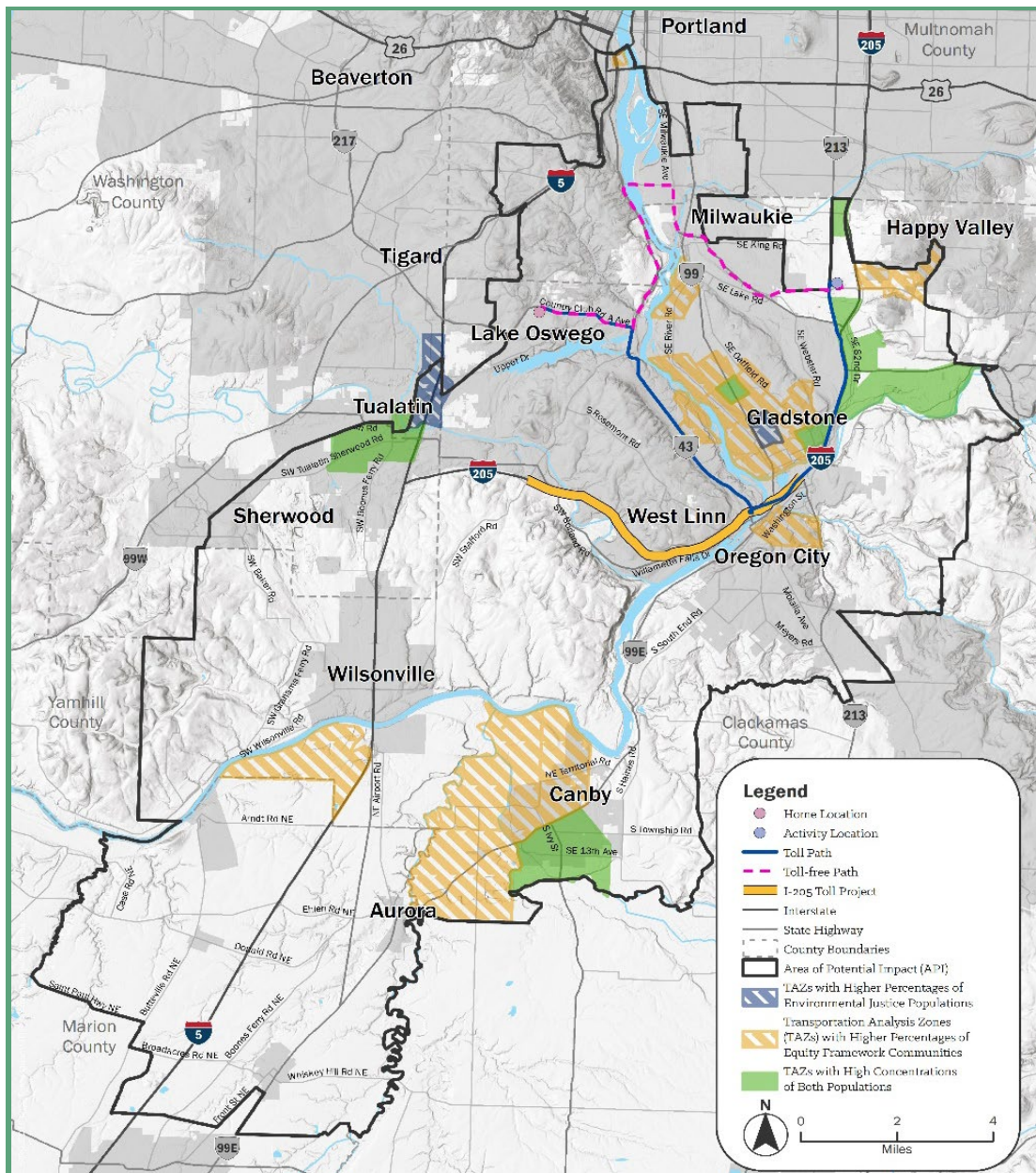
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|---|---|
| 12 | Person L is a recent high school graduate and is attending an online college. They share their small apartment in Tualatin with two roommates. To get some exercise and time to themselves, they take their dog for a morning walk (around 8 a.m.) on the McLoughlin Promenade in Gladstone twice a week. | The Toll Path trip takes 10 to 20 minutes. The Toll-Free Path trip takes 10 to 20 minutes. | The Toll Path trip would take 20 to 30 minutes. The Toll-Free Path trip would take between 20 to 30 minutes. | The Toll Path trip would take 10 to 20 minutes. The Toll-Free Path trip would take between 20 to 30 minutes. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-16. Description of Representative Scenario 13

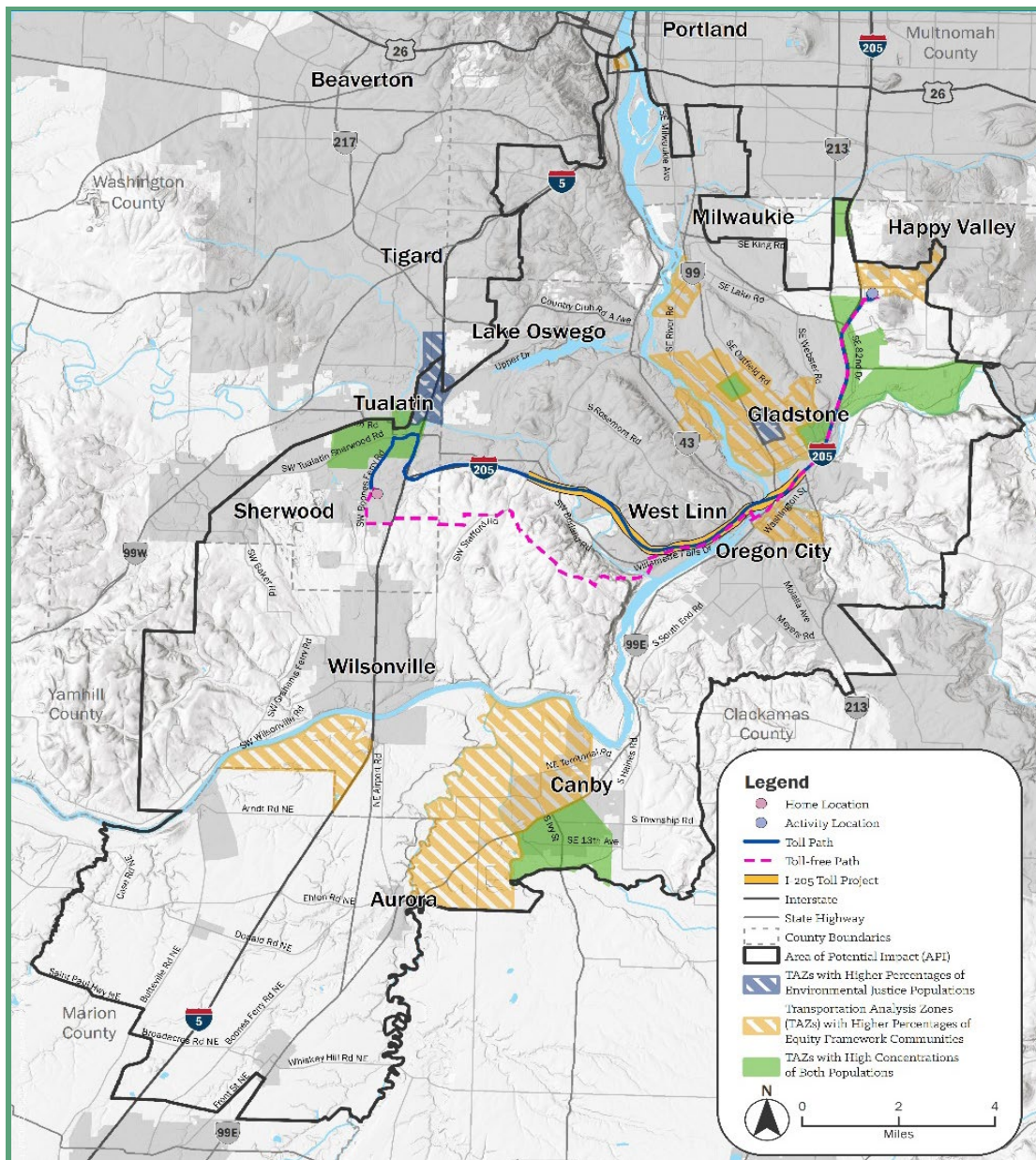
| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|---|---|
| 13 | Person M and their family live in Lake Oswego. They've been going to the same dentist near Clackamas Town Center in Happy Valley for over 15 years. They leave their full-time, salaried job at 3 p.m. to take each of their family members to appointments twice a year. | The Toll Path trip takes 30 to 40 minutes. The Toll-Free Path trip takes 30 to 40 minutes. | The Toll Path trip would take 30 to 40 minutes. The Toll-Free Path trip would take between 40 to 50 minutes. | The Toll Path trip would take 30 to 40 minutes. The Toll-Free Path trip would take between 40 to 50 minutes. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-17. Description of Representative Scenario 14

| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|---|---|
| 14 | Person N is a bus driver living in Tualatin. Three days a week, they drive after school drop off, around 5 p.m., to the Sunnyside Medical Center in the Sunnyside area of Clackamas County to receive dialysis treatment. | The Toll Path trip takes 40 to 50 minutes. The Toll-Free Path trip takes 40 to 50 minutes. | The Toll Path trip would take 50 to 60 minutes. The Toll-Free Path trip would take 50 to 60 minutes. | The Toll Path trip would take 40 to 50 minutes. The Toll-Free Path trip would take 50 to 60 minutes. |

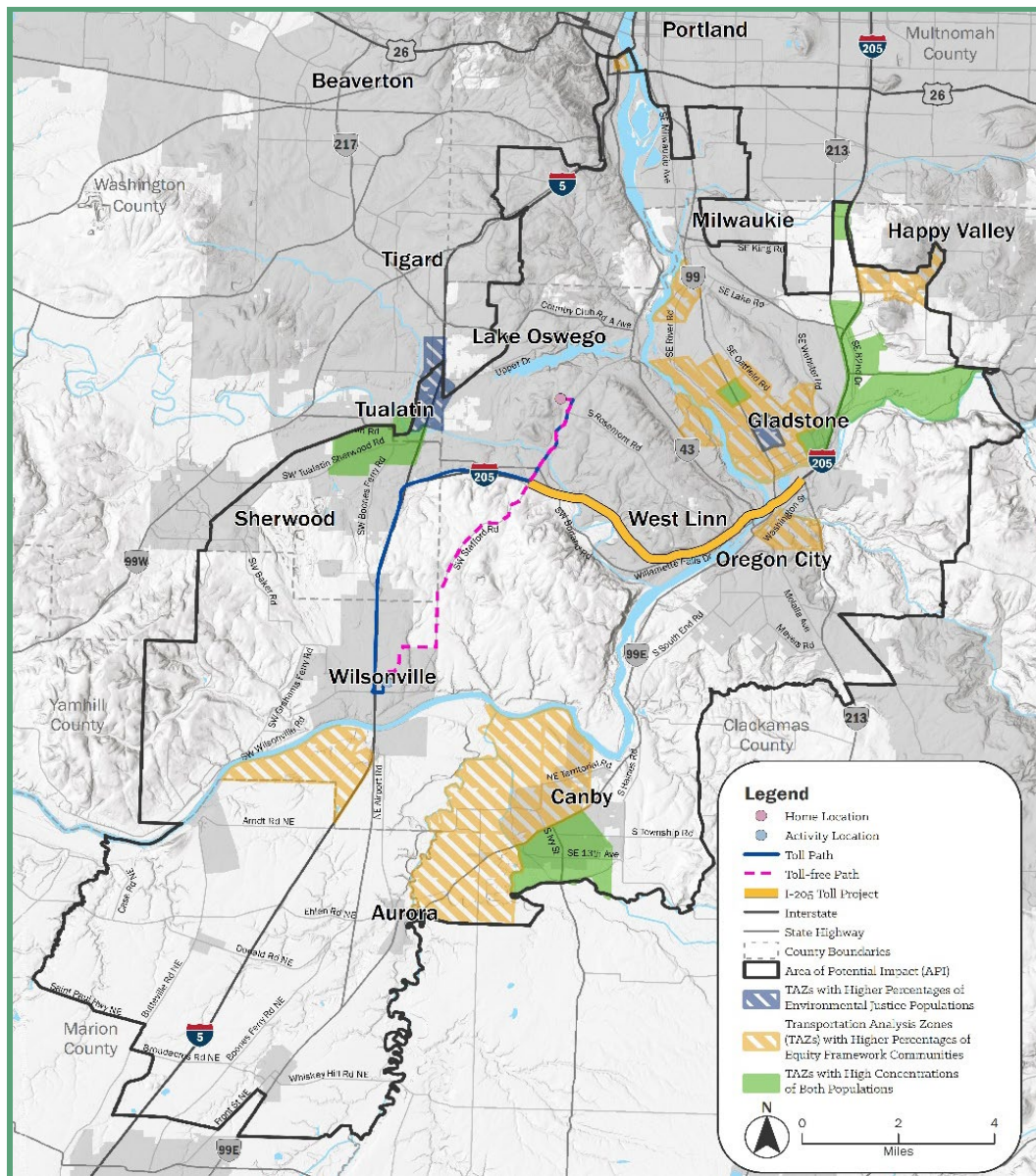


Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-18. Description of Representative Scenario 15

| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|--|--|
| 15 | Person O works from home in a suburb in southern Lake Oswego. They enjoy going to a Moroccan restaurant in Wilsonville because it's the only place where they can find Moroccan food made the way they had it growing up. Typically, they like to visit during their lunch break around noon on Wednesdays. | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip takes 10 to 20 minutes. | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip would take between 10 to 20 minutes. | N/A – No Toll Path exists for this scenario. The Toll-Free Path trip would take between 10 to 20 minutes. |

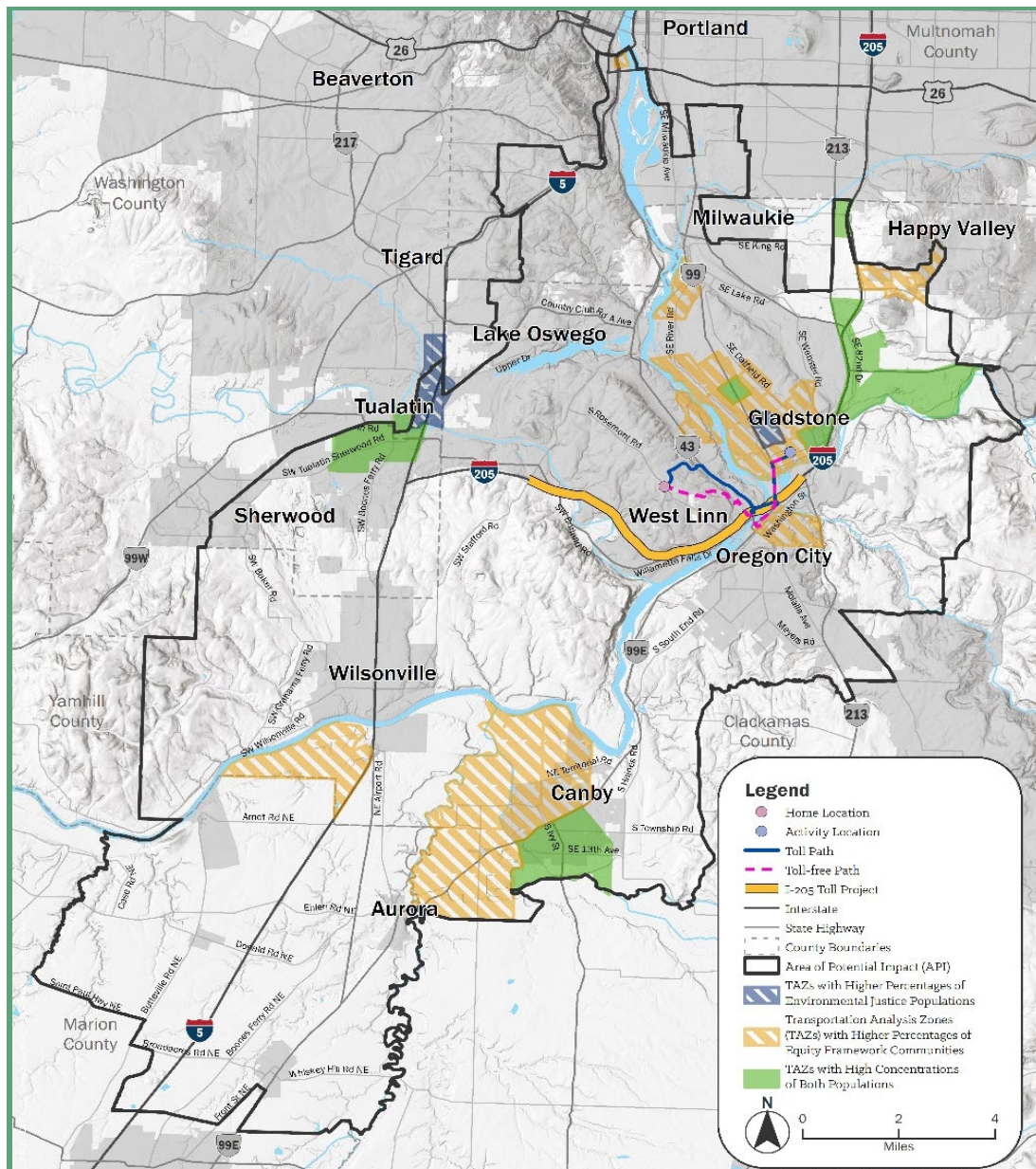
N/A = not applicable



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

Table C-19. Description of Representative Scenario 16

| Scenario | Scenario Description | Travel Time under Existing Conditions | Travel Time under Future 2045 No Build Alternative | Travel Time under Future 2045 Build Alternative |
|----------|---|---|---|---|
| 16 | Person P is a single parent, living in a suburban neighborhood in West Linn. They bring their child to the Gladstone Public Library for a weekly youth program after work and school twice a week at 4 p.m. | The Toll Path trip takes 20 to 30 minutes. The Toll-Free Path trip takes 20 to 30 minutes. | The Toll Path trip would take 20 to 30 minutes. The Toll-Free Path trip would take between 20 to 30 minutes. | The Toll Path trip would take 20 to 30 minutes. The Toll-Free Path trip would take between 30 to 40 minutes. |



Sources: ESRI 2018; Oregon Metro Regional Land Information System published 2018, updated 2021; U.S. Census American Community Survey 2015-2019 Estimates, Accessed 2021.

This page intentionally left blank.