

I-405, Downtown Bellevue Vicinity Express Toll Lanes Project (MP 11.9 to 14.6)

Attachment D: Environmental Justice Discipline Report





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SUMMARY

What is the Project?

The Washington State Department of Transportation (WSDOT) is proposing to construct the *I-405, Downtown Bellevue Vicinity Express Toll Lanes Project* (MP 11.9 to 14.6) (referred to in this report as “the Project”) to improve traffic operations and safety on Interstate 405 (I-405) through Bellevue. This discipline report assesses the Project’s operational and construction effects on environmental justice populations as well as No Build conditions if the Project were not constructed.

The Project is part of a comprehensive strategy identified in the *2002 I-405 Corridor Program Final Environmental Impact Statement Environmental Impact Statement* and subsequent Federal Highway Administration (FHWA) *Record of Decision* to reduce traffic congestion and improve mobility along the state’s second-busiest highway. The Project is needed because travelers on Interstate 405 (I-405) face one of the most congested routes in the state, particularly during peak travel times.

What are the Primary features of the Project?

The Project would make roadway, structural, trail, and transit improvements in the I-405 corridor from just north of the Interstate 90 (I-90) interchange (MP 11.9) to north of the NE 6th Street interchange (MP 14.6), along with widening the I-405 northbound off-ramp to State Route 520 (SR 520) in Bellevue. Specifically, the Project will add one new lane in each direction (except between MP 13.5 north to tie-in with the existing express toll lane [ETL] system) and convert the one existing high-occupancy vehicle (HOV) lane to create a dual ETL system. When combined with other 405 projects, the Project would result in a continuous express tolling system from Interstate 5 (I-5) in Lynnwood to State Route 167 (SR 167) in Renton.

What is the purpose of this report?

This Environmental Justice Discipline Report evaluates the benefits and effects of the Project to environmental justice populations and then compares them to the effects of not building the Project (the No Build conditions).

What is an express toll lane (ETL)?

A limited-access freeway lane that is actively managed through a variable toll system to regulate its use and thereby maintain express travel speeds and reliability. Toll prices rise or fall in real time as the lane approaches capacity or becomes less used. This ensures traffic in the express toll lane remains flowing at express travel speeds of 45 to 60 miles per hour. Transit and carpools do not pay a toll.

What is the study approach?

When we evaluate the potential effects of a project on environmental justice populations, we ask whether the Project would have a disproportionately high effect on low-income, minority, or persons with limited English proficiency. To make this determination, we ask the following questions:

- Do individuals with low incomes, individuals who identify themselves as minorities, or persons with limited English proficiency live or work in the study area?
- If so, would the Project affect the livability of neighborhoods in the study area?
- Would the Project disrupt community cohesion, i.e., linkages that low income, minority, and limited English proficient individuals have with their neighbors and community?
- How would the Project affect access to transit, bicycle, and pedestrian facilities in neighborhoods where low income, minority, and limited English proficient individuals live?
- How would the Project affect public safety in these neighborhoods?
- How would the Project affect access to schools, recreational facilities, and religious organizations that are of importance to individuals with low incomes, individuals who identify themselves as minorities, or individuals with limited English proficiency?
- Would the Project help or hurt minority-owned businesses employing or serving individuals with low incomes, individuals who identify themselves as minorities, or individuals with limited English proficiency?

Because the Project also includes ETLs that would affect I-405 users, we determined whether individuals who identify as a minority, have low incomes, or are limited English proficient use I-405. Then, we examined how these users may be affected by the ETLs

We used two study areas for this report:

What is a disproportionately high effect?

According to the U.S. Department of Transportation (USDOT), A disproportionately high effect on minority and low-income populations means a disproportionate effect that (1) is predominantly borne by a minority population and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the disproportionate effect that will be suffered by the non-minority population and/or non-low-income population.

- To examine potential construction and operational effects of widening I-405, we looked at the geographic area within 0.50 mile of either side of I-405 from the project limits.
- To analyze potential benefits and effects of ETLs, we identified the travelshed for the study area (from MP 11.9 to 14.6). The travelshed includes census tracts along the entire I-405 project corridor.

To analyze effects that may be delayed or distant from the Project, we also looked at geographic areas outside the study area.

What are the existing conditions in the study areas?

There are minority, low-income, and limited English-proficient individuals living in the study areas who drive or use transit on I-405 between the project limits. These individuals—along with all other I-405 motorists and transit riders—deal with daily traffic congestion on I-405.

How would the Project affect environmental justice populations?

Benefits

All users of I-405—including those driving in the general purpose (GP) lanes—would benefit from faster, more reliable trips as a result of the Project. The additional capacity and an ETL system would improve most travel times for the GP lanes and ETLs compared to the No Build conditions. The improvements would result in an increase in person throughput; in other words, 1,000 to 3,000 more people would be able to move through the study areas compared to No Build conditions. WSDOT also anticipates improved safety compared to the No Build due to a reduction in congestion and congestion-related crashes.

In addition, Sound Transit's expansion of the regional mass transit system includes multiple future improvements in the study area. Sound Transit will be implementing bus rapid transit on I-405 between south Renton and Lynnwood and constructing freeway stations that will allow buses to pick up and drop off riders without having to exit and re-enter the I-405 corridor. The two-lane ETL system will provide the

infrastructure needed to facilitate a fast, reliable bus rapid transit system and will benefit transit riders, including those who identify as minority, have low incomes, or are limited English proficient.

Disproportionate Impacts

Environmental justice populations could be disproportionately affected by the proposed ETLs in two ways:

- The cost of the toll to use ETLs could disproportionately affect environmental justice populations because the cost to use the ETLs would represent a higher proportion of household income than for middle- and high-income users.
- Use of the electronic toll collection system could disproportionately affect environmental justice populations because some users may have difficulty understanding the electronic toll system and how to acquire a transponder. In addition, unbanked and underbanked individuals may have difficulty obtaining a responder and loading or replenishing a *Good To Go!* account.

Although our analysis concludes that ETLs would result in disproportionate impacts on environmental justice populations, we found that these effects would not be disproportionately high for the following reasons:

- All users, including low-income and limited English proficient users, would continue to have an accessible, convenient, and free travel option: the GP lanes on I-405.
- All lanes on I-405, including GP lanes, would experience improved travel times for most trips because of the Project.
- Most motorists, including individuals who have low incomes or are limited English proficient, would not lose a travel option because of the Project. The only exception are two-person carpools, which would have to pay a toll to use the ETLs during peak periods. These carpools can use the HOV lanes for free today. However, because travel times in the GP lanes are expected to improve with the Project, two-person

carpools would still have the same or faster travel times with the Project than without for most trips. As such, even two-person carpools would benefit from the Project compared to the No Build conditions.

What measures will WSDOT take to avoid or minimize disproportionate effects on environmental justice populations?

Although there is no need for additional mitigation, WSDOT will continue conducting targeted outreach to engage minority, low-income, and persons with limited English proficiency of the study area and I-405 travelshed. To reduce possible barriers to obtaining and maintaining a *Good To Go!* account for persons who have low-incomes or are underbanked:

- WSDOT will continue to offer the option for low-income persons who are eligible for public benefits to use their Electronic Benefit Transfer cards to open and maintain their *Good To Go!* accounts.

WSDOT is working to expand the network of retail locations where people can buy *Good To Go!* passes with cash, making it easier for people to purchase a pass without a bank account.

Note that, as of 2009, low-income individuals who are eligible for public benefits may use their Electronic Benefit Transfer cards to open and maintain their *Good To Go!* accounts. This option could offset some of the disproportionate effects. In addition, WSDOT is currently working to expand the network of retail location where people can buy *Good To Go!* passes with cash, making it easier for people to purchase a pass without a bank account. Would the Project result in unavoidable disproportionately high effects on environmental justice populations?

The Project would not result in any disproportionately high effects on environmental justice populations.

What would happen if the Project is not built?

If the Project is not built, congestion would continue to worsen on I-405, and travel times would increase in both GP lanes and HOV lanes. Carpools and single-occupant vehicles (SOVs) would experience increased delay.

As the regional population grows, demand for travel would make congestion worse than it is today, especially in bottleneck areas, where there would be longer queues to get on I-405 and more hours of congestion. Drivers unable to access I-405 due to congestion would seek alternative routes, including local roads through neighborhoods.

Transit experiences delay on I-405 because of congestion during peak periods in the HOV lanes and general-purpose lanes. Congested conditions would continue to worsen in future years, further delaying transit. This would further reduce transit reliability and could result in increased costs for transit agencies and compromised service for transit users. Sound Transit's bus-rapid transit would not be able to use the two-lane ETL system in the study area. The result would be the bus-rapid transit system would not meet its intent to provide fast, reliable service.

SECTION 1 INTRODUCTION

This environmental justice discipline report was prepared in support of the *I-405, Downtown Bellevue Vicinity Express Toll Lanes Project (MP 11.9 to 14.6)* (the Project) *Environmental Assessment* (EA) to evaluate environmental effects related to proposed improvements on I-405.

The Project is part of a comprehensive strategy identified in the 2002 *I-405 Corridor Program Final Environmental Impact Statement* (EIS) and subsequent Federal Highway Administration (FHWA) *Record of Decision* to reduce traffic congestion and improve mobility along the state's second-busiest highway. The Project is needed because travelers on I-405 face one of the most congested routes in the state, particularly during peak travel times.

What are the primary features of the Project?

The Project would make roadway, structural, trail, and transit improvements in the Interstate 405 (I-405) corridor from just north of the I-90 interchange (MP 11.9) to north of the NE 6th Street interchange (MP 14.6), along with widening the I-405 northbound off-ramp to State Route 520 (SR 520) in Bellevue. Specifically, the Project would add one new lane in each direction (except between MP 13.5 north to tie-in with the existing express toll land [ETL] system) and convert the one existing high-occupancy vehicle (HOV) lane to create a dual ETL system. When combined with other I-405 projects, the Project would result in a continuous express tolling system from Interstate 5 (I-5) in Lynnwood to State Route 167 (SR 167) in Renton.

What is the purpose of this report?

The Washington State Department of Transportation (WSDOT) prepared this report to comply with several federal laws, orders, regulations, and guidance that establish the need to evaluate the effects of publicly funded projects on environmental justice populations.

Why is environmental justice an important element to consider?

WSDOT builds transportation systems to improve the safety and mobility of people and goods. In addition, WSDOT

Minority Persons

A minority is an individual who identifies as Black (a person having origins in any of the black racial groups of Africa); Hispanic (a person of Mexican, Puerto Rican, Cuban, Central American, South American, or other Spanish culture or origin, regardless of race); Asian (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); American Indian/Alaskan Native (a person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition); or some other race.

acknowledges the state's vital interests in protecting and preserving natural resources and other environmental assets in addition to the health, safety, and wellbeing of its residents. Therefore, it is important to examine the potential effects of the Project on environmental justice populations during the environmental documentation phase of a transportation project.

Federal Orders, Regulations, and Guidance on Environmental Justice

The National Environmental Policy Act (NEPA) requires agencies to analyze and evaluate the social and economic effects of publicly funded projects.

Title VI of the Civil Rights Act of 1964 is the foundation for environmental justice. It requires that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

Presidential Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations in 1994; US Department of Transportation (USDOT Order 5610.2(a)), Order to Address Environmental Justice in Minority Populations and Low-Income Populations; and FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (FHWA Order 6640.23(a)) all guide agencies to identify and address potential disproportionate effects not only on minority populations, but also on low-income populations.

Other federal laws, such as the NEPA, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended, and the Transportation Equity Act (TEA-21) also include the non-discrimination requirements outlined in Title VI.

The President’s Executive Order 13166 on Improving Access to Services for Persons with Limited English Proficiency (August 11, 2000) reaffirms the Title VI prohibition against national origin discrimination and ensures that persons who are limited in English proficiency have meaningful access to federally funded programs and activities, consistent with Title VI. FHWA’s Order 6640.23A guides WSDOT to provide

Low-income Persons

A low-income person is an individual whose household income falls below the federal poverty guidelines, as defined by the U.S. Department of Health and Human Services. For 2017, the federal poverty guideline for a household of four in one of the 48 contiguous states and Washington D.C. was \$24,600.

Persons with Limited English Proficiency

A limited English proficient person is an individual who has difficulty speaking, reading, writing, or understanding the English language and whose difficulties may deny that individual the opportunity to meaningfully engage in the transportation decision-making process. This definition applies to an individual who:

- Was not born in the United States.
- Speaks a native language other than English and comes from an environment where a language other than English is dominant.
- Comes from an environment where a language other than English has had a substantial effect on that individual's English-language proficiency.

limited English proficient populations with fair and equal access to the decision-making processes for publicly funded projects, as well as the benefits of these projects. Consistent with FHWA policy guidance, our environmental review includes addressing effects on limited English proficient community members.

SECTION 2 PROJECT DESCRIPTION

What improvements are proposed with the Project?

The Project would extend along I-405 approximately 2.7 miles from just north of the I-90 interchange (MP 11.9) to north of the NE 6th Street interchange (MP 14.6). The Project proposes the following improvements by mile posts, as shown in Exhibit 2-1, sheets 1 and 2:

- **Northbound I-405, I-90 to NE 6th Street (MP 11.9 to 13.7)** – Develop approximately 1.6 miles of new lane in the northbound direction by widening or restriping I-405 from MP 11.9 to 13.5. In this same section of I-405, convert the existing HOV lane to an ETL. The new lane coupled with the existing HOV lane would create a dual ETL. Between MP 13.5 and 13.7, convert the existing HOV lane to an ETL. The ETL would connect to the existing ETLs from downtown Bellevue to Lynnwood. Westward expansion of I-405 is proposed south of SE 8th Street, and eastward expansion is proposed north of SE 8th Street.
- **Southbound I-405, I-90 to NE 6th Street (MP 11.9 to 13.7)** – From MP 11.9 to 12.5, reconfigure the existing outside HOV lane to the inner roadway and convert both of the existing HOV lanes to ETLs. From MP 12.5 to 13.5, develop a new lane by widening or restriping. This new lane coupled with the existing HOV lane would result in a dual ETL south of NE 4th Street. Between MP 13.5 and 13.7, convert the existing HOV lane to an ETL. The ETL would connect to the existing ETLs from downtown Bellevue to Lynnwood. Where new pavement is needed, eastward expansion is proposed.
- **I-405 Eastside Rail Corridor Overpass (MP 12.4)** – Build a new northbound I-405 bridge structure adjacent to the existing I-405 structure over the Eastside Rail Corridor Regional Trail. The new structure would carry the two ETLs and the GP lanes would remain on the existing structure.
- **Eastside Rail Corridor Regional Trail (MP 12.09 to 12.49)** – Construct a new bridge for nonmotorized

travel over southbound I-405 near MP 12.15. Build a section of nonmotorized trail to connect with the Eastside Rail Corridor Regional Trail.

- **SE 8th Street Interchange (MP 12.78)** – Widen the northbound I-405 overpass over SE 8th Street.
- **Main Street Overpass (MP 13.31)** – Reconstruct the Main Street bridge (photo on right) over I-405.
- **Northbound I-405 to SR 520 Ramp (MP 14.6)** – Widen the existing northbound off-ramp to SR 520 from two lanes to three lanes for approximately 600 feet beginning where the NE 10th Street on-ramp merges onto the I-405 ramp.
- **Stormwater** – Build new flow control and runoff treatment facilities.
- **Other Improvements** – Provide pavement markings, drainage improvements, permanent signing, illumination, intelligent transportation systems, barriers, and tolling gantries.
- **Context Sensitive Solutions** – Incorporate CSS to enhance mobility, safety, the natural and built environment, and aesthetics throughout the Project corridor.
- **Property Acquisitions** – Acquire portions of five commercial and public properties to accommodate the Project.
- **Minimization Measures** – Implement avoidance and minimization measures or compensate for unavoidable effects on the environment, as described in Chapter 6, Measures to Avoid or Minimize Effects.



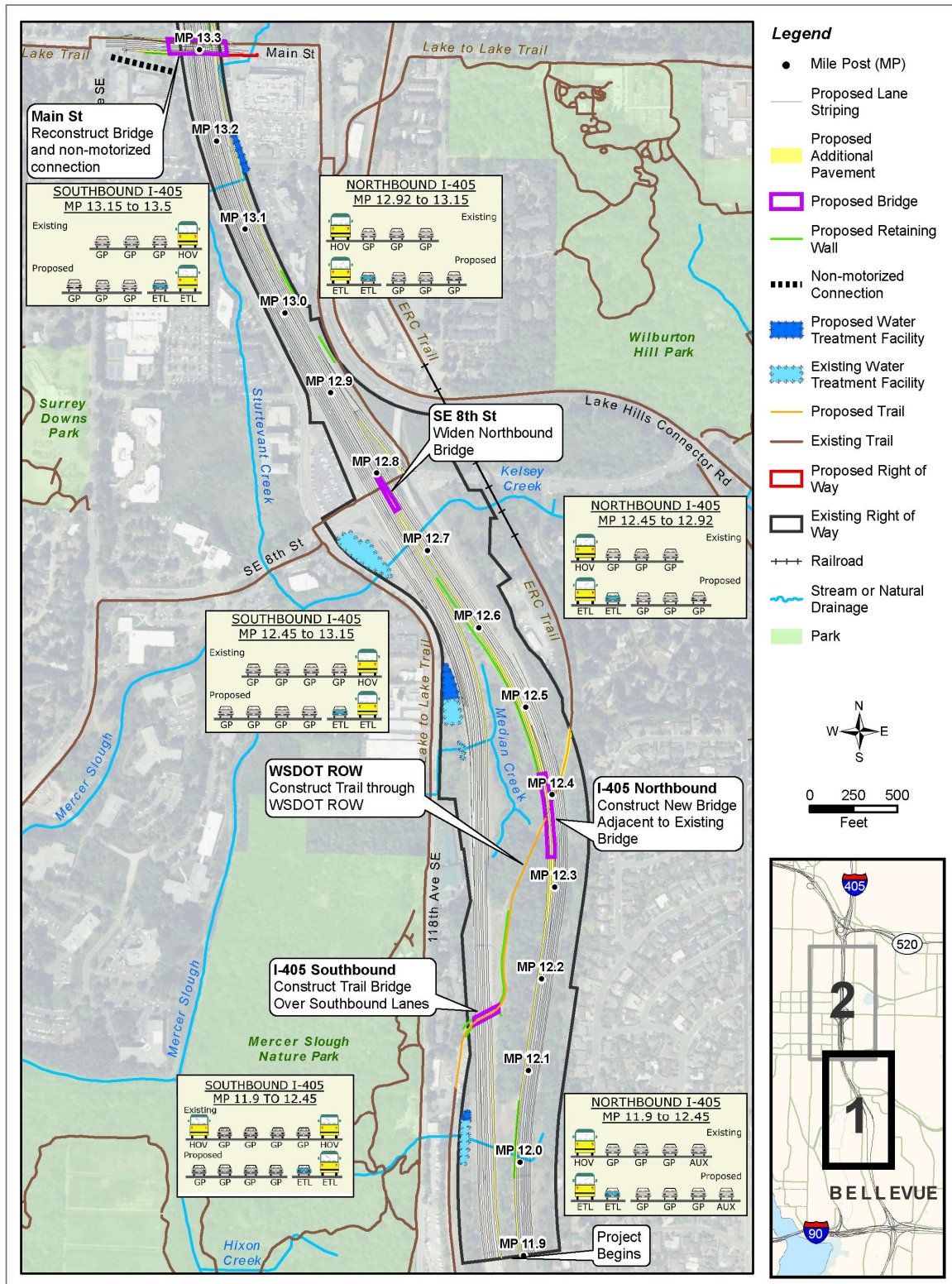
Existing Main Street Overpass

What are Context Sensitive Solutions?

The *Context Sensitive Solutions (CSS)* process is a model for transportation project development that has received much discussion and broad acceptance. Its essence is that a proposed transportation project must be planned not only for its physical aspects and road serving specific transportation objectives, but also for its effects on the aesthetic, social, economic, and natural environment, as well as the needs, constraints, and opportunities in a larger community setting.

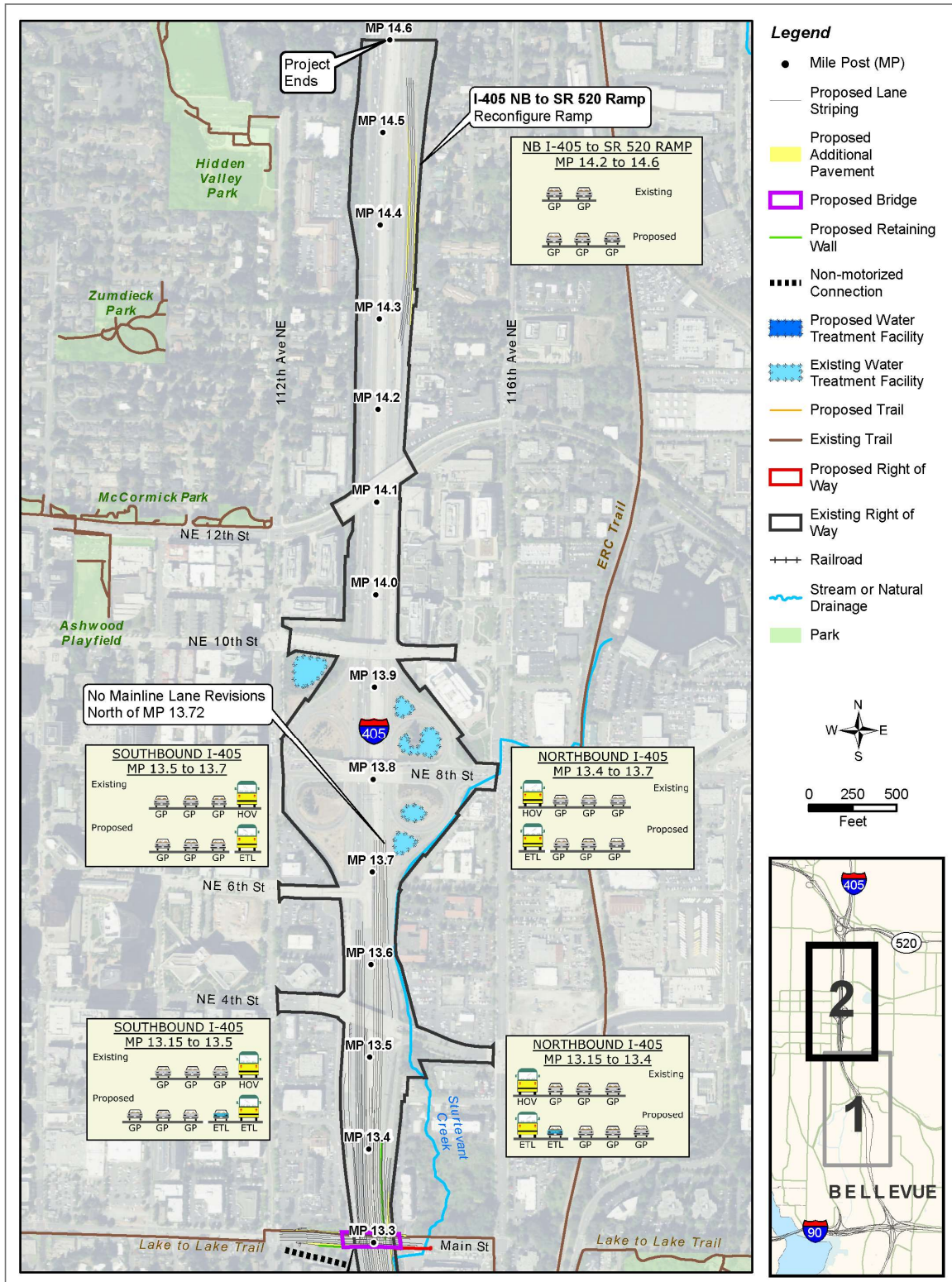
I-405, DOWNTOWN BELLEVUE VICINITY EXPRESS TOLL LANES PROJECT (MP 11.9 TO 14.6)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

Exhibit 2-1. Project Improvements, Sheet 1 of 2



I-405, DOWNTOWN BELLEVUE VICINITY EXPRESS TOLL LANES PROJECT (MP 11.9 TO 14.6)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

Exhibit 2-1. Project Improvements, Sheet 2 of 2



How would the express toll lanes work?

At this time, the Washington State Transportation Commission (WSTC) has not established operational hours, user exemptions, occupancy requirements, and operating parameters for ETLs proposed with the Project. WSTC would set operational requirements for the ETLs prior to opening day. For this analysis, we assumed the requirements for the current I-405, Bellevue to Lynnwood ETL system would be used for the Project. These assumptions, listed below, represent the most recent operating guidance from the WSTC for ETLs:

- **Limited Access** – The system would have designated entry and exit points, with a buffer between the ETLs and the GP lanes. These access points would vary in length, depending on the location.
- **Dynamic and Destination Pricing** – The I-405 ETL system would use both dynamic and destination pricing to determine a driver’s toll at the time they enter the ETL. With *dynamic pricing*, toll rates vary based on congestion within the corridor to maintain performance. Electronic signs are used to communicate the current toll rate for drivers. Toll rates are updated every few minutes, but the driver’s price is set when they enter the system. With *destination pricing*, the toll is based on the driver’s destination. Toll signs show up to three toll rates for different toll zones, or destinations. Drivers pay the rate they see upon entering the ETLs to reach their destination, even if they see a different toll rate for their destination further down the road. When both pricing approaches are used together, it means the toll that drivers pay is based both on the congestion in the corridor and the distance they are traveling.
- **Operating Hours and Good To Go! Passes** – The ETL system is expected to operate from 5 a.m. to 7 p.m. on weekdays, with the system toll-free and open to all at other hours and on major holidays. Transit, HOVs, and motorcycles would need to have a *Good To Go!* pass to use the ETLs for free during operating hours. Eligible HOV users would

How does dynamic pricing work?

Electronic monitors along the roadway measure real-time information on speed, congestion, and number of vehicles in the *express toll lanes (ETLs)*. This information is used to determine whether tolls go up or down to optimize lane use.

As the ETLs become congested, toll rates increase, and as congestion decreases, toll rates decrease. The use of dynamic pricing allows the lanes to operate with high volumes, but avoid becoming congested.

When would tolls be charged to use the ETLs?

It is assumed the ETLs would operate from 5 a.m. to 7 p.m. on weekdays. At all other times and major holidays, the lanes would be free and open to all without a *Good To Go!* pass.

During operating hours:

- **SOVs** would pay a toll to use the lanes.
- **Transit, HOV 3+, and Motorcycles** would travel for free with a *Good To Go!* pass.
- **HOV 2+** would travel for free from 9 a.m. to 3 p.m. with a *Good To Go!* pass. From 5 a.m. to 9 a.m. and 3 p.m. to 7 p.m. HOV2+ would pay a toll to use the ETLs with or without a *Good To Go!* pass.
- **Large vehicles** over 10,000 pounds gross vehicle weight would not be able to use the ETLs at any time.

be required to set the *Good To Go!* pass to the HOV mode to avoid charges. SOVs could choose to pay a toll to use the ETLs during operating hours with or without a *Good To Go!* pass.

- **Occupancy Requirements** – During the peak periods (weekdays from 5 a.m. to 9 a.m. and 3 p.m. to 7 p.m.), transit vehicles and carpools with three or more persons (HOV 3+) would be able to use the lanes for free with a *Good To Go!* pass. From 9 a.m. to 3 p.m., the system would be open toll-free to those with two or more passengers with a *Good To Go!* pass. Motorcycles ride toll-free in the ETLs with a *Good To Go!* pass.
- **Vehicle Weight** – Vehicles over 10,000 pounds gross vehicle weight will be prohibited, which is consistent with HOV lane restrictions throughout Washington.
- **Electronic Tolling** – Payments will be made via electronic tolling with a *Good To Go!* pass. For drivers who choose not to use a *Good To Go!* Pass, WSDOT offers optional photo billing (pay by mail) for an extra fee.

	MONDAY TO FRIDAY	WEEKENDS/ HOLIDAYS
Midnight	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Tolling hours of operation</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">3+ HOV free with Good To Go/ Flex Pass*</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">2+ HOV free with Good To Go/ Flex Pass*</div> </div>	Open to all without toll or pass
5 a.m.		
9 a.m.		
3 p.m.		
7 p.m.		
Midnight	Open to all without toll or pass	

*Motorcycles free with Good To Go! motorcycle pass

How would tolling revenue be used?

Federal law and state law provide specific requirements on how toll revenues can be used. Federal law regarding the use of toll revenues is contained in 23 United States Code (USC) Section 129 (a)(3). This law states that all toll revenues received from operation of the toll facility are used for such things as debt service, a reasonable return on investment for any private financiers of the Project, operations and maintenance costs, and payments associated with any public-private partnership agreements.

In addition to these federal requirements, the Revised Code of Washington (RCW) 47.56.820 requires that all revenue from an eligible toll facility must be used only to construct, improve, preserve, maintain, manage, or operate the eligible toll facility on or in which the revenue is collected. Similar to the federal law, expenditures of toll revenues must be approved by the

Legislature and must be used only to cover operations and maintenance costs; to repay debt, interest and other financing costs; and to make improvements to the eligible toll facilities.

As required by state law, all toll revenue generated from the Project ETLs would be used to construct, improve, preserve, maintain, manage, or operate the I-405 corridor.

What is the Project construction schedule?

Construction of the Project is expected to last up to 5 years beginning in 2019 and ending in 2024.

SECTION 3 STUDY APPROACH

What is the study area and how was it determined?

The study area varies depending on the resource and potential effect or benefit being evaluated. This Environmental Justice Discipline Report includes two study areas, described below:

- To examine potential construction and operational effects of widening I-405, we looked at the geographic area within 0.50 mile of either side of I-405 between the project limits.
- To analyze potential benefits and effects of ETLs, we identified the travelshed for the study area (from MP 11.9 to 14.6). The travelshed includes census tracts along the entire I-405 project corridor.

For this discipline report, we refer to the geographic area within 0.50 mile of either side of I-405 between the project limits as the study area. We refer to the geographic area from which I-405 users come as the I-405 travelshed.

To analyze effects that may be delayed or distant from the Project, we also considered geographic areas outside the study areas.

What policies or regulations are related to effects on environmental justice populations?

The methodology for this Environmental Justice Discipline Report is consistent with federal and state policies and plans that inform FHWA and WSDOT guidance. These include the guidance described in Section 1, Introduction, of this report, as well as the following federal and state policies:

- FHWA's Community Impact Assessment: A Quick Reference for Transportation
- WSDOT's *Environmental Procedures*, Section 458, Social and Economic, and Section 470, Public Services and Utilities (WSDOT 2017a)
- Federal Highway Administration *Environmental Justice Reference Guide* (FHWA 2015)

How did we collect information for this report?

To evaluate the affected environment, we used EJScreen, a website developed and maintained by the U.S. Environmental Protection Agency. EJScreen uses data from the 2010 U.S. Decennial Census and American Community Survey (ACS) 3- and 5-year estimates. EJScreen allows us to collect information on demographic characteristics of populations in the study area.

We verified Census and ACS findings with Washington State Office of Superintendent of Public Instruction demographic data on students enrolled in elementary schools in each study area for the most recent school year available.

We met with the Transportation technical lead for the Project to do the following:

- Determine the travelshed for I-405.
- Understand potential increases or reductions in traffic congestion, travel delays, and the level of service for the I-405 GP lanes, ETLs, and transit routes that serve the corridor.
- Identify any transit routes that would not be able to access ETLs because of where they enter and exit I-405, and determine how these routes would be affected.

In addition, we met with the technical lead and/or reviewed analyses for the following disciplines:

- Economics, to identify potential effects on businesses in the study areas—including those that are owned by, employ, or serve low-income or minority populations—as a result of roadway widening in the Project and implementing ETLs.
- Visual Quality, Air Quality, Noise, Hazardous Materials, Public Services and Utilities, Cultural Resources, Social, and Section 4(f) to identify potential benefits and effects on surrounding communities—especially those with low-income, minority, and persons with limited English proficiency—as a result of widening in the Project and implementing ETLs.
- Land Use, to identify potential benefits to affected communities as a result of widening in the Project and

potential effects on surrounding neighborhoods as a result of changes to land use.

- Relocations, to identify potential property acquisitions and relocations as a result of the Project, especially in neighborhoods where there are low-income, minority, and limited English proficient populations.

We conducted a literature review of existing research on the effects of ETLs on affected communities and environmental justice populations. We also referenced previous environmental justice analyses of ETL projects, including the *SR 167 High-Occupancy Toll (HOT) Lanes Pilot Program, I-405 Bellevue to Lynnwood Project*, and the *I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Re-evaluation*.

Several additional data sources and databases informed the demographic analysis, existing conditions, and analysis of the effects of the Project on environmental justice populations, including:

- King County Metro Transit rider/nonrider surveys (2016).
- U.S. Bureau of Transportation Statistics, which compiles, analyzes, and makes accessible information on the nation's transportation systems.
- U.S. Census TIGER/Line Files, an acronym for the "Topologically Integrated Geographic Encoding and Referencing" system. These are the maps prepared for the U.S. Census Bureau that contain all of the essential census geography, including street addresses, governmental unit boundaries, and submunicipal boundary data such as Census Tracts, Block Groups, and Blocks. These maps enable transportation analysts and decision-makers to closely examine the spatial patterns of socioeconomic characteristics such as income and race.

Public Involvement

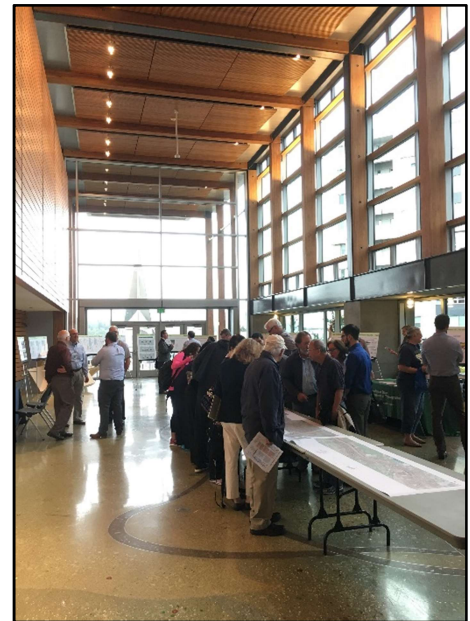
Public involvement with communities in the study area has influenced the Project. Members of the public have had an opportunity to review and provide input, starting in 1998 when WSDOT, FHWA, King County Metro Transit, and local jurisdictions came together to address congestion and improve mobility in the I-405 corridor. Extensive public involvement

with communities along the I-405 corridor continues today. Public input influenced WSDOT's decision to advance the Project.

Most of the public outreach to date has been provided in English. Section 6, Measures to Avoid or Minimize Effects, of this document, which describes mitigation, includes outreach in multiple languages.

Outreach activities specific to the proposed improvements are listed below:

- Held two public open houses about the Project in Bellevue (photo on right) in both August 2015 and September 2016:
 - Mailed approximately 4,600 postcards announcing the public open houses that occurred in both Bellevue and Renton.
 - Published display advertisements in area papers and online publications, in languages other than English, announcing the open houses.
 - Hung posters and distributed postcards to community gathering places, such as libraries, throughout the corridor announcing the open houses.
 - Emailed notices of the open houses to WSDOT project listservs and other agency or community group lists.
 - Sent press releases announcing the open houses to local and regional media outlets.
- Briefed community groups and councils, such as the Bellevue Downtown Association, Bellevue Chamber of Commerce, Bellevue Sunrise Rotary, and Bellevue City Councils.



Public Open House in Bellevue

- Hosted targeted meetings regarding noise and project design with neighborhoods along the Project alignment, including the Woodridge neighborhood in Bellevue.
- Responded to area residents' and commuters' questions and comments through telephone, email, and in-person conversations. Major topics of interest have included preliminary Project designs, ETL operations, property acquisition, noise walls, landscaping and clarifications regarding the funded Project versus Master Plan improvements.
- Provided a project website with information such as project benefits, finances, timeline, and public involvement opportunities.

From 2014 to the present, WSDOT has been conducting public involvement throughout the I-405 corridor regarding ETLs. This includes the following:

- Holding over 200 briefings with community and neighborhood organizations, local jurisdictions (staff and elected officials), and other interested groups.
- Staffing booths at 10 fairs and festivals in the corridor, including Renton River Days and Bellevue Strawberry Festival.
- To supplement this outreach with more targeted engagement for environmental justice populations, WSDOT conducted seven interviews with social service providers who serve environmental justice populations in the study area and I-405 travelshed, including:
 - City of Bellevue Human Services Division (August 15, 2016)
 - City of Burien Department of Human Services (September 23, 2016)
 - City of Redmond Human Services (August 29, 2016)
 - City of Renton Department of Human Services (August 11, 2016)
 - Coal Creek YMCA (January 12, 2017)

How does WSDOT communicate with the public?

Speaker's Bureau: Formal presentations by WSDOT personnel to community organizations.

Environmental Outreach: Field studies put I-405 environmental team members in touch with neighbors in the corridor.

Project Website:
www.wsdot.wa/projects/I-405 was designed as a resource for the public and has been updated regularly.

Newsletters/Project Updates:
Newsletter mailings and email updates offer an ideal opportunity to inform the public on project progress.

- Hopelink (August 25, 2016)
- Youth Eastside Services (August 16, 2016)

The purpose of these interviews was to share information about the Project—including the introduction of ETLs—and gather insight on how environmental justice populations may benefit or experience effects as a result of the Project. Most questions and concerns raised in these interviews were about how ETLs may affect low-income and limited English proficient individuals.

WSDOT reached out to 28 other human service agencies and social service providers to offer project briefings, but did not receive a response or the request was turned down. WSDOT will continue to reach out to these organizations as the Project progresses.

Engagement with Tribes

American Indians are environmental justice populations. WSDOT coordinates with Tribal Governments to identify and address social, cultural, environmental, and other issues of significance to tribal members.

WSDOT is committed to respectful, effective consultation and communication with tribal governments in recognition that project activities may affect their rights and interests. WSDOT Executive Order E1025.01 on Tribal Consultation reaffirms the commitment to an effective working relationship with tribal governments.

WSDOT participated in government-to-government consultation with four federally recognized tribes during preparation of the I-405 Corridor Program EIS: Muckleshoot Indian Tribe, Snoqualmie Tribe, Tulalip Tribes, and the Confederated Tribes and Bands of the Yakama Nation. WSDOT also consulted with the Duwamish Tribe as an interested party.

More recently, WSDOT consulted with the tribes to discuss ecosystems effects and approach to wetlands and stream mitigation for the Project. During those discussions, WSDOT informed the tribes about the ETLs, but did not receive any feedback specific to the tolling.

On February 11, 2016, WSDOT sent letters to the Muckleshoot Tribe, the Snoqualmie Nation, and the Confederated Tribes and Bands of the Yakama Nation requesting tribal participation

in the identification of cultural resources in and around the study area. To date, there has been no response.

WSDOT continues to consult with these tribes as it advances the Project, engaging tribal governments at each stage of the environmental analysis.

How did we evaluate effects?

Analytic Techniques to Address Non-Toll-Related Effects

To identify potential effects on minority or low-income populations, as well as persons with limited English proficiency (in addition to reviewing findings from other disciplines such as transportation and land use) we considered the outcomes from WSDOT's interviews with social service providers and public outreach for the Project to find answers to the following questions:

- How would construction and operation of the Project potentially affect environmental justice populations, compared to if the Project is not built?
- How would construction and operation benefit environmental justice populations?

In reviewing summaries from the interviews and social service providers and public outreach, we considered feedback from low-income, minority, and limited English proficient community members about the potential benefits and effects of the Project, magnitude of those effects, and suitability of proposed mitigation to avoid or minimize effects.

After we identified potential effects and benefits, we isolated the Project effects that would affect people differently, such as noise or increased traffic congestion.

We also examined whether the Project could affect community cohesion—linkages that people in a community have with their neighbors and social resources like schools, community centers, recreational facilities, and churches.

Next, we determined whether any effects or benefits would disproportionately affect low-income or minority populations. FHWA directs WSDOT to apply two criteria to determine whether an effect is disproportionately high:

- The effect is predominantly borne by a minority population and/or a low-income population
- The effect would be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the effect on the nonenvironmental justice populations/general population.

We used a geographic information system (GIS) to map the potential effects over census block group demographic data. This approach compared the minority and poverty status of those who would be affected by the Project to those who would not be affected. We also compared the limited English proficient status of those affected by the Project to those not affected.

In determining whether there would be disproportionately high effects on low-income or minority populations, we also considered project benefits that affect low-income or minority populations.

In addition, we considered the following:

- Are there reasonable and feasible measures to avoid or minimize effects?
- Are there any project benefits that would affect low-income or minority populations?
- Did WSDOT modify the Project to avoid or minimize effects?

Analytic Techniques to Address Toll-Related Effects

To identify potential effects and benefits of the ETL system and the all-electronic toll system on low-income, minority, and limited English proficient populations, we relied on outcomes from the interviews with social service providers, the results from surveys with SR 167 users on their experiences with HOT lanes, and our literature review.

To determine the proportion of I-405 users who are low-income, minority, or limited English proficient, we overlaid the map of the travelshed for I-405 with demographic data from EJScreen. We created three overlaid travelshed maps: low-income populations in the travelshed, minority populations in the travelshed, and limited English proficient populations in the travelshed.

We evaluated whether any effects of the ETL system and all-electronic tolling on low-income populations would be considerably more severe or greater in magnitude than the effects suffered by the general population. To make this determination, we compared modeled travel times with and without the addition of or conversion to ETLs for the following user types:

- Drivers of SOVs who would use the GP lanes.
- Drivers of SOVs who would pay to use the ETLs.
- Two-person carpools who can now use the HOV lanes for free, but must pay during peak travel periods when the HOV lane is converted to an ETL.
- Three-person carpools who would be able to use the ETL for free when it is converted.
- Transit riders.
- Paratransit providers and riders.

We examined the distribution of *Good To Go!* passes to see if there are any demographic differences between geographic areas that have higher *Good To Go!* penetration compared to geographic areas with lower *Good To Go!* usage.

SECTION 4 EXISTING CONDITIONS

This section describes the existing conditions in the two study areas described in Section 2, Study Approach.

Why do we evaluate existing conditions?

Existing conditions describe the study area today, before any project construction takes place. By evaluating existing conditions and comparing them to our expectations for future conditions during operation of the Project, we can understand how the Project would benefit or affect environmental justice populations.

What information did we use to evaluate the existing conditions?

To evaluate existing conditions, we first described the current demographic characteristics of the study area using EJScreen and data from the Office of Superintendent of Public Instruction (OSPI).

In addition, we collected information on the following in the study area:

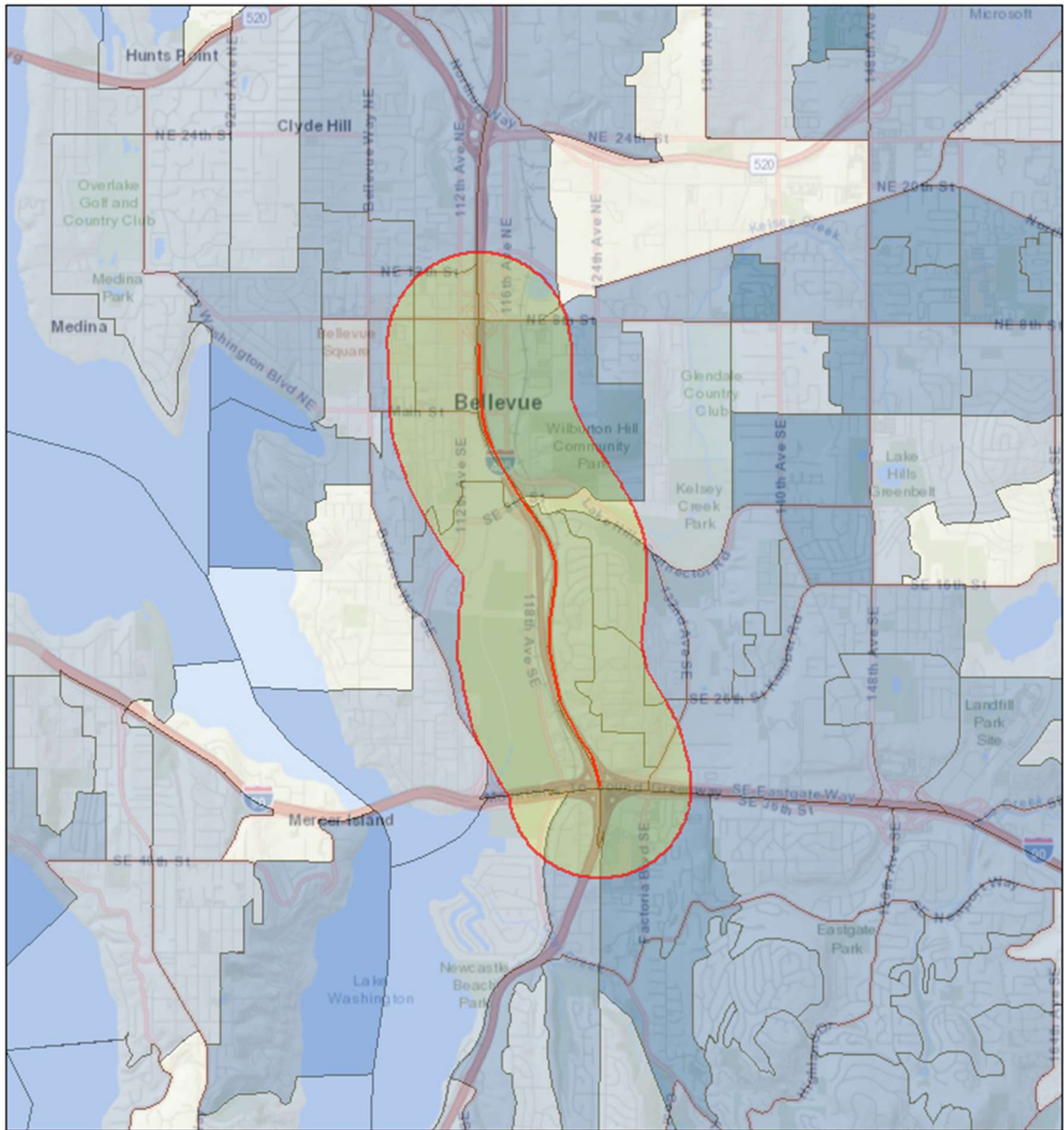
- Neighborhoods
- Community cohesion
- Religious and social facilities and services, specifically those that serve low-income, minority, or limited English proficient populations
- Pedestrian, transit, and bicycle facilities
- Parks and recreation activities and facilities that low-income, minority, or limited English proficient populations use
- Community gathering places that are important to low-income, minority, or limited English proficient populations
- Businesses that are owned by or serve low-income, minority, or limited English proficient populations

What are the existing conditions for environmental justice populations in the study area?

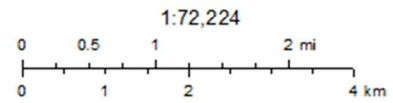
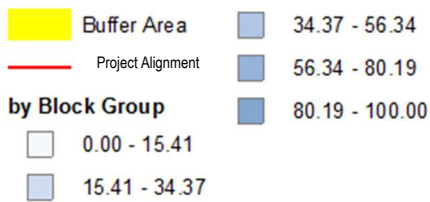
When conducting an environmental justice analysis of a project or projects, the first question we ask is whether individuals who identify as minorities, individuals with low incomes, or individuals with limited English proficiency live or work in the neighborhoods surrounding or affected by the Project.

According to EJScreen, there are environmental justice populations in the study area, defined as 0.50 mile on either side of I-405 between the project limits. Exhibits 4-1 through 4-3 show EJScreen maps with the percentage of residents who identify as minority, have incomes at or below the poverty level, or are limited English proficient, respective.

Exhibit 4-1. Percent of Minority Residents in the Study Area



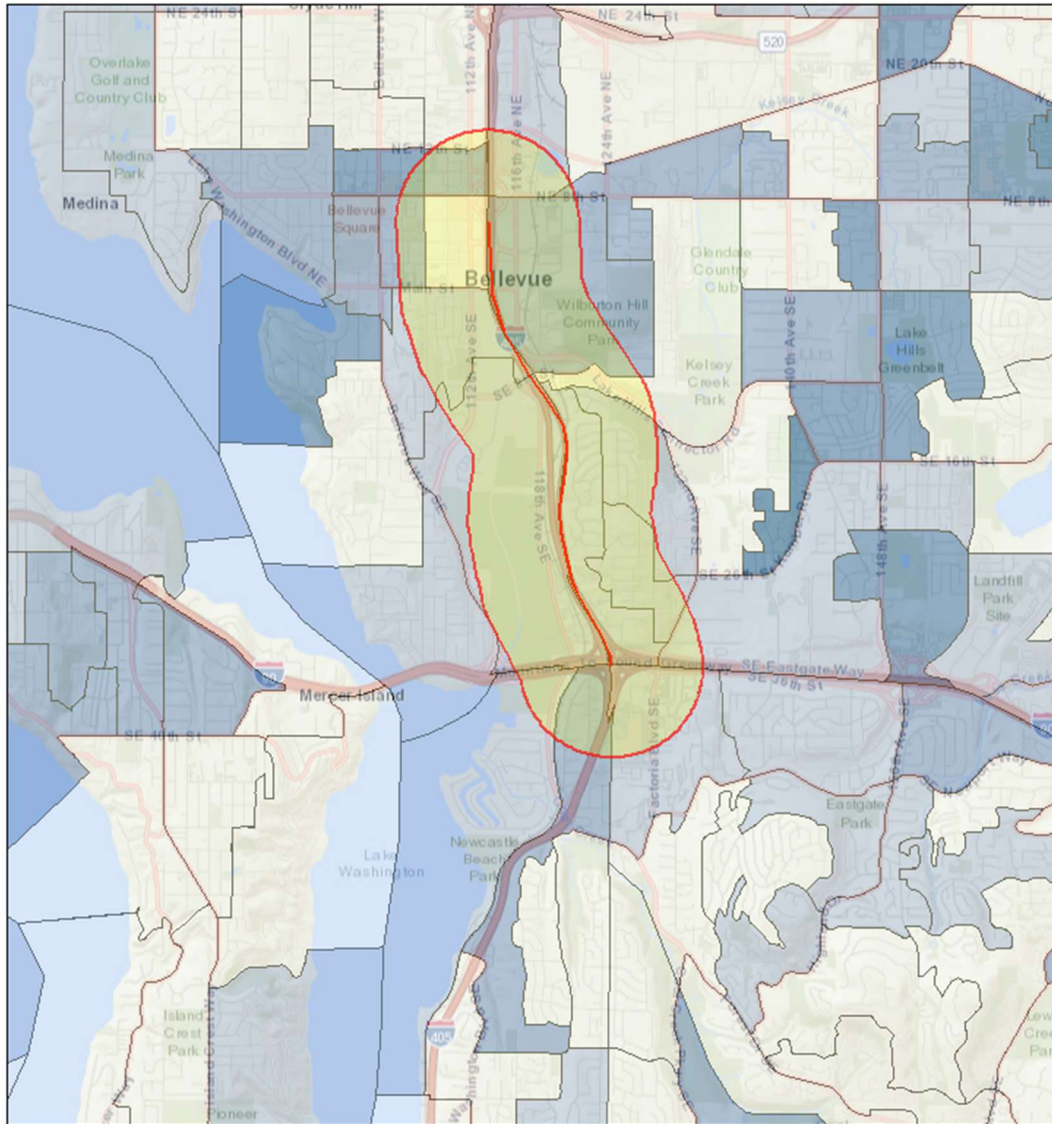
February 14, 2018



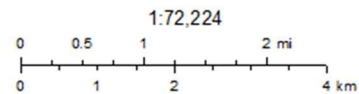
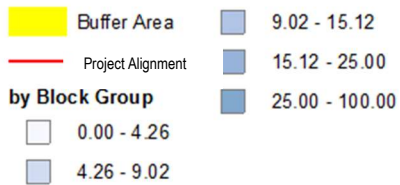
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 Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

EJSCREEN 2017

Exhibit 4-2. Percent of Low-Income Residents in the Study Area



February 14, 2018



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 Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Swisstopo, IGN, Esri India, NGCC, © OpenStreetMap contributors, and the GIS User Community

EJSCREEN 2017

Exhibit 4-3. Percent of Linguistically Isolated Residents in the Study Area

Project Alignment

Exhibit 4-4 shows demographics in the study area. Exhibit 4-5 shows the census block groups on a map. Our analysis confirms there are minority and low-income populations living in the study area.

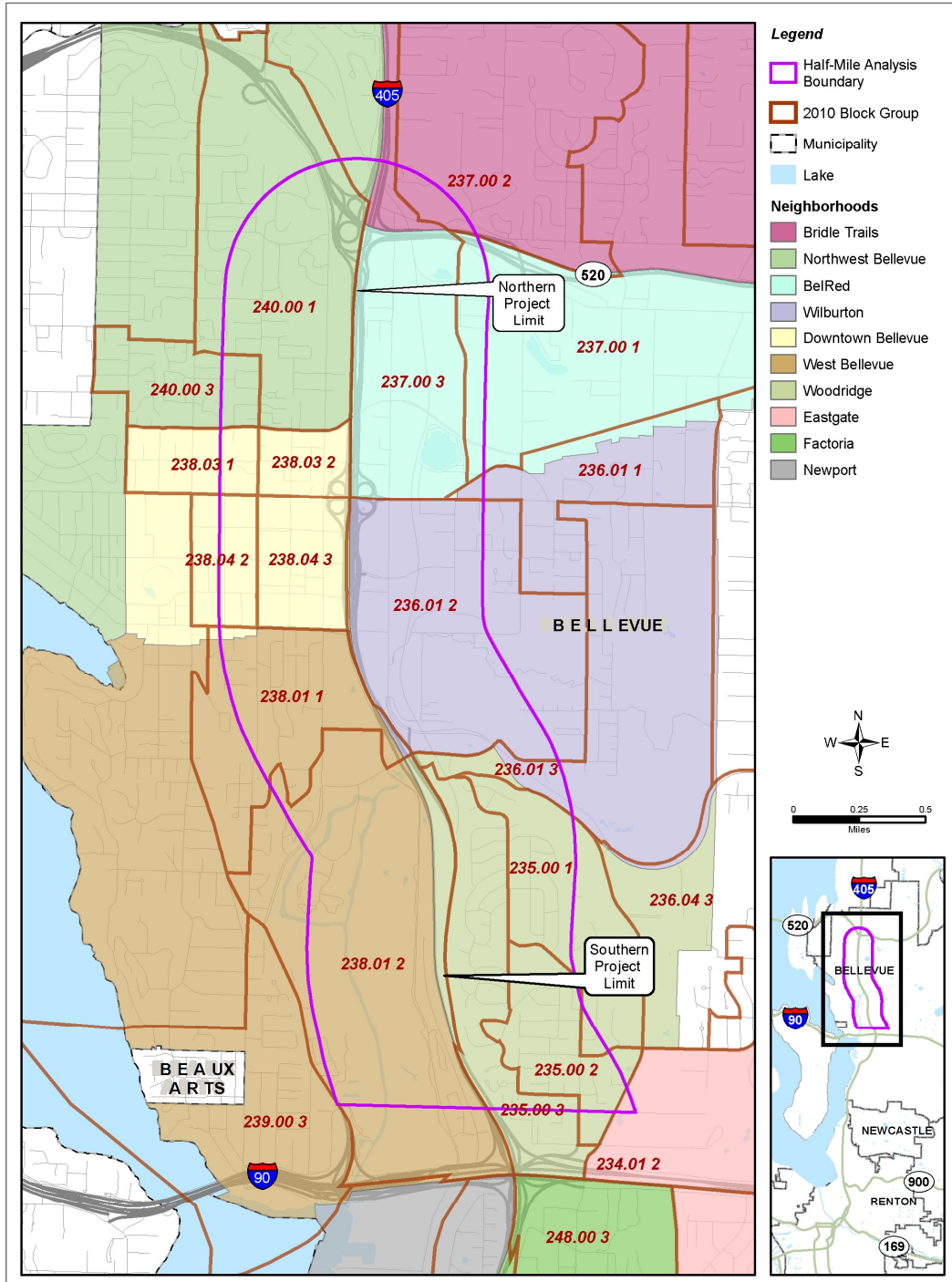
Exhibit 4-4. Minority and Low-Income Populations in the Study Area

Neighborhood	Census Block Group	Percent Identifying as Minority	Percent Population at or below Federal Poverty Level
Woodridge	235001	34	4
Woodridge	235002	37	4
Woodridge	235003	42	12
Wilburton	236012	60	13
Bel-Red	237003	35	7
West Bellevue	238011	46	9
West Bellevue	238012	37	8
Downtown Bellevue	238032	52	14
Downtown Bellevue	238042	51	12
Downtown Bellevue	238043	45	8
Project Area Average		44	9

Source: U. S. Census Bureau 2015 American Community Survey Five-Year Estimates (2016a)

Exhibit 4-5. Census Block Groups in the Study Area

Note: Census block numbers correspond with the last six digits in Exhibit 4-4.



These data echo the results of the demographic analysis of elementary schools in the study area. Exhibit 4-6 shows the demographics of students enrolled in elementary schools in the study area.

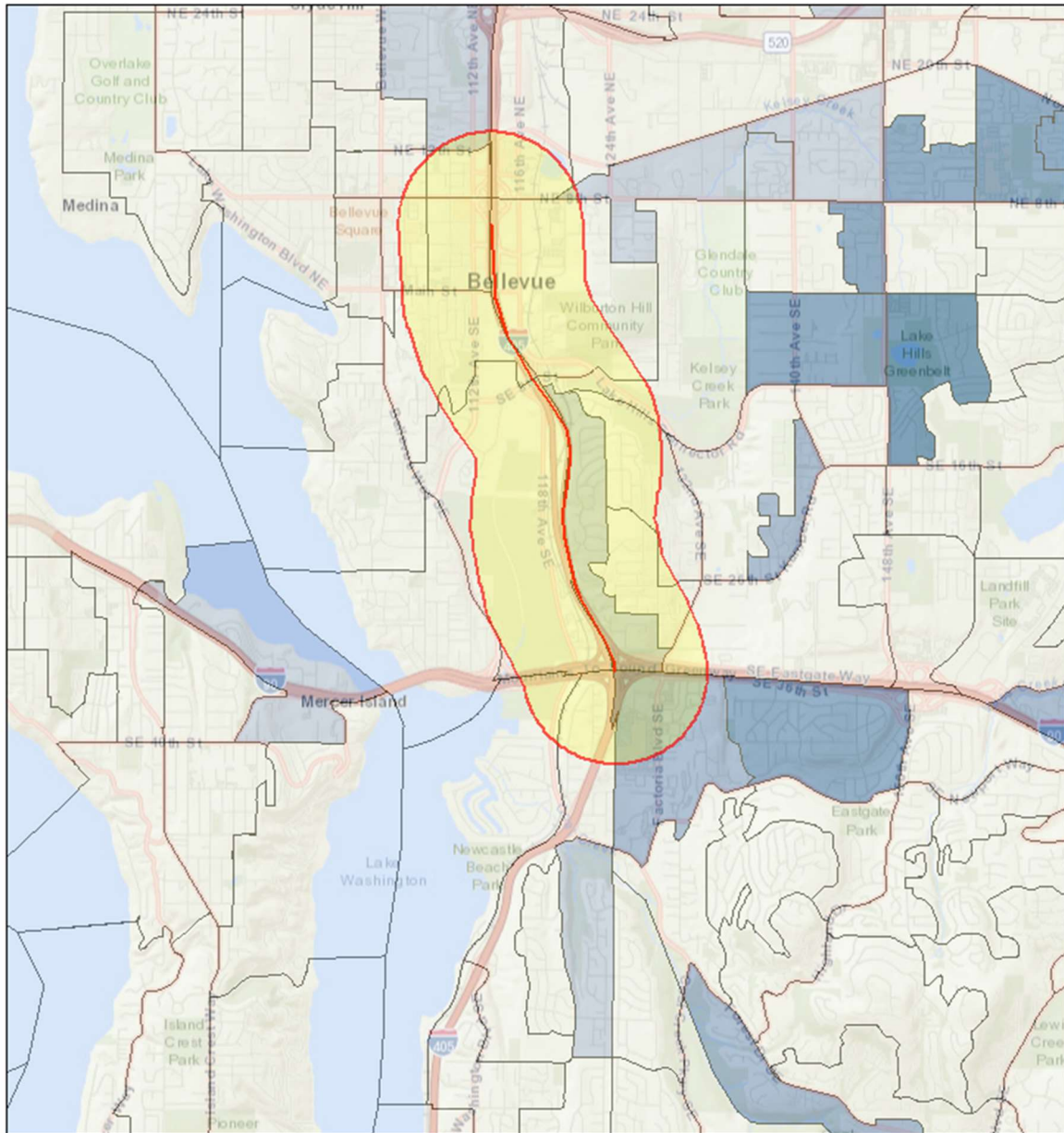
Exhibit 4-6. Demographic Data for Students at Elementary Schools in the Study Area, 2017

School	Percent Identifying as a Race other than White	Percent Hispanic (of any race)	Percent Free- or Reduced-Price Lunch Eligible	Percent Bilingual or Transitional
Enatai	55	12	18	23
Woodridge	63	10	19	23
Study Area Average	59	11	19	23

Source: WA Office of Superintendent of Public Instruction, School Report Card in 2015–16 (2016)








We conducted a deeper analysis to determine if specific language needs exist in the study area. The U.S. Department of Justice recommends translating materials when 5 percent or more of a study area speak that language at home. This recommendation has some limitations; not everyone who speaks a language other than English at home is unable to speak and read English well. To understand language needs in the study area, therefore, we used EJScreen, which has a tool for identifying “linguistically isolated households.” EJScreen defines linguistically isolated households as those in which all members age 14 and over speak a language other than English and do not speak English “very well” (2017). Exhibit 4-7 shows the percentage of individuals who live in linguistically isolated households in each census block group in the study area. Based on this demographic analysis, we recommend translating project information into Spanish.

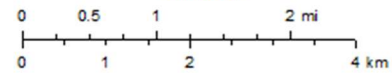
Exhibit 4-7. Percent of Population Living in Linguistically Isolated Households Who Speak Spanish in the Study Area



February 14, 2018

1:72,224

- | | |
|---|--|
|  Buffer Area |  2.48 - 5.61 |
|  Project Alignment |  5.61 - 12.50 |
| by Block Group |  12.50 - 100.00 |
|  0.00 - 0.00 | |
|  0.00 - 2.48 | |



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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapbox, Swire, Swire, Swire, Swire, Swire, NGCC, OpenStreetMap contributors, and the GIS User Community

EJSCREEN 2017

Several social service providers interviewed by WSDOT indicated that they translate their own written materials into Spanish. In addition, social services work with clients who speak the following languages:

- Arabic
- Farsi
- Korean
- Mandarin
- Russian
- Somali
- Vietnamese

None of the above languages are spoken by 5 percent or more of the study area population, but WSDOT may consider translating and interpreting into some of these languages if it appears there is a need over the duration of project design and construction.

Neighborhoods where Environmental Justice Populations Live

There are five recognized neighborhoods in the study area: Downtown Bellevue, Wilburton, Woodridge, Bel-Red, and West Bellevue.

Based on the demographic analysis, environmental justice populations live in all five neighborhoods. Census block groups do not overlap exactly with designated neighborhood boundaries, but the analyst can make inferences about the demographic makeup of each neighborhood by overlaying 2011–2015 American Community Survey estimates with neighborhood maps.

The Wilburton neighborhood appears to have concentrations of linguistically isolated populations. Small pockets of West Bellevue and Downtown Bellevue also have linguistically isolated residents. A linguistically isolated person is the U.S. Census Bureau’s term for a person who speaks limited to no English.

The Crossroads neighborhood in Bellevue, which is 2 miles outside the study area, is known as one of East King County’s most ethnically and linguistically diverse neighborhoods. Residents of the Crossroads neighborhood represent

10 percent of Bellevue's population. Crossroads Mini City Hall is a neighborhood service center extending city services and community connections to East Bellevue residents. As a fully equipped satellite office inside Crossroads Shopping Center, the Mini City Hall provides customer service and outreach in eight languages to Bellevue's diverse population.

Community Cohesion in Neighborhoods

The neighborhoods—including those with substantial minority, low-income, and persons with limited English proficiency—in the study area are well established. These neighborhoods have existed for a long time, and the city of Bellevue supports community cohesion in its neighborhoods. The city assigns a city employee to serve as a neighborhood liaison to each of the recognized neighborhoods. The liaison links the neighborhood to city departments and services. The city offers neighborhood grant programs that provide funds and technical assistance to support neighborhoods in making self-identified improvements.

Religious and Social Service Facilities and Providers that Serve Environmental Justice Populations

Religious Facilities

Through interviewing social service providers and conducting a community profile, we identified the following places of worship that are important to minority, low-income, and/or persons with limited English proficiency in the study area.

- Bellevue Korean Presbyterian Church, located in Bellevue and serving Korean-speaking residents
- Bread of Life Christian Church, located in Bellevue and serving Chinese-speaking residents
- Korean Pilgrim Presbyterian Church, located in Bellevue and serving Korean-speaking residents

Social Service Providers

There are dozens of community-based and social service providers who serve minority, low-income, and persons with limited English proficiency in the study area. Appendix C, Social Service Providers Interviewed by WSDOT, includes a full list of these service providers.

Pedestrian and Bicycle Facilities in Study Area Neighborhoods

Although pedestrian and bicycle travel is prohibited on I-405, there are several pedestrian and bicycle facilities located adjacent to I-405 in neighborhoods:

- Two bicycle/pedestrian trail crossings of I-405. The Mountains to Sound Greenway, which runs parallel to I-90, and the Lake to Lake Trail, which crosses I-405 at Main Street in Bellevue.
- Several sidewalks alongside roads that cross over or under I-405, as well as some dedicated bicycle lanes. These are located throughout the study area.

Although not yet constructed, the right-of-way that would become the future Eastside Rail Corridor Regional Trail runs alongside I-405 until I-405 bisects the trail just north of the I-90 interchange. WSDOT would construct a crossing over I-405 to connect both sides of the trail as part of the Project. The Eastside Rail Corridor right-of-way south of I-90 is a gravel trail that is open to the public; King County Parks Division would construct a fully paved trail when funding is available.

Businesses or Community Gathering Places of Importance to Environmental Justice Populations

Interviews with social service providers in the study area and a community profile did not turn up any businesses or community gathering places of importance to environmental justice populations within the study area.

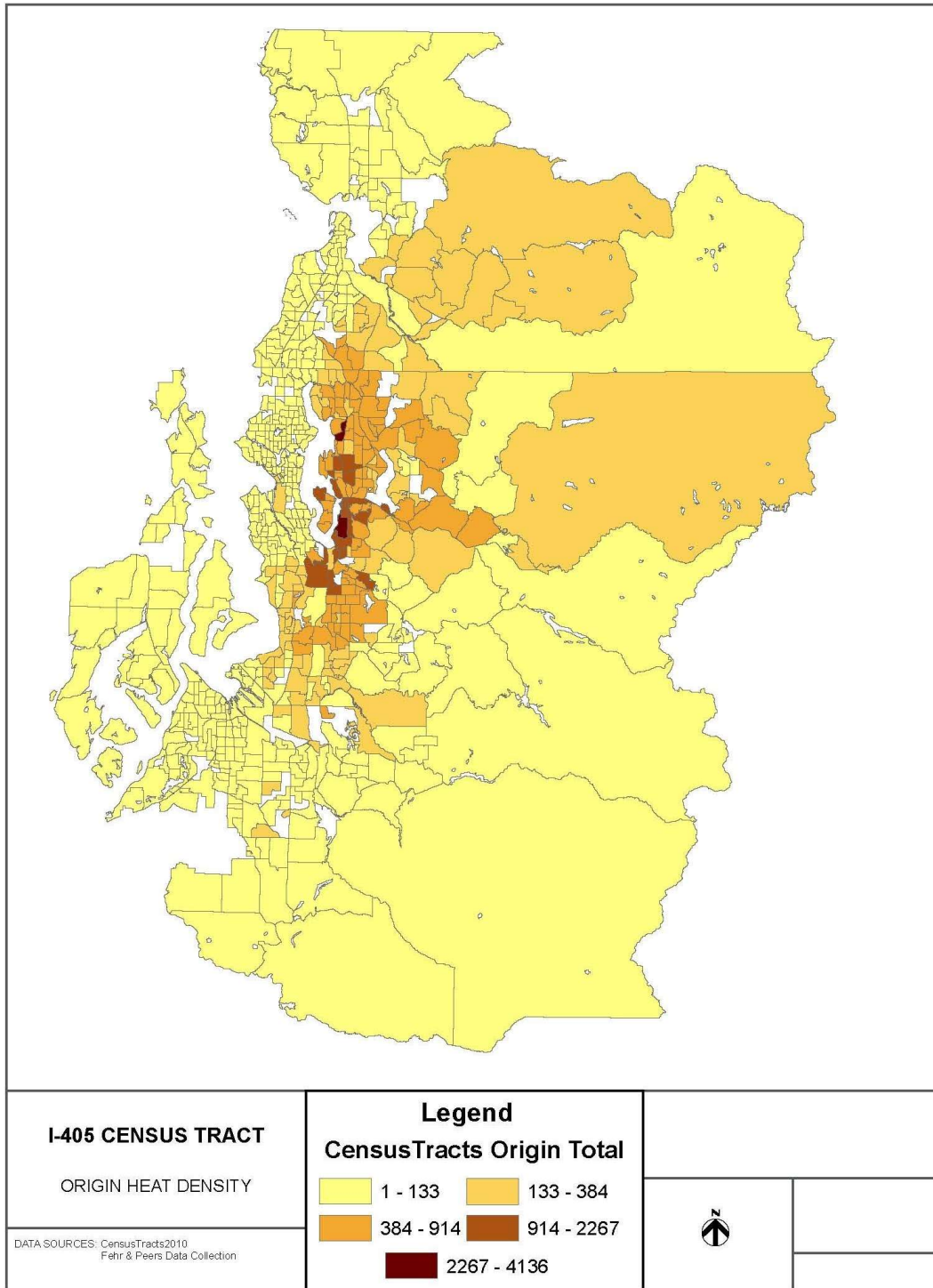
What are the existing conditions for environmental justice populations in the I-405 travelshed?

ETLs could affect not just residents within the study area, but also residents who use the entire I-405 corridor. To identify the travelshed for the study area (from MP 11.9 to 14.6), WSDOT generated a heat map of users based on the census tracts from which their trips originated. Exhibit 4-8 shows this heat map. The travelshed includes census tracts along the entire I-405 corridor.

What is a travelshed?

A travelshed is the geographic area from which most trips on a specific corridor originate.

Exhibit 4-8. Census Tracts Trip Origin



Are there environmental justice populations who use I-405?

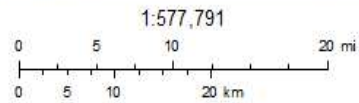
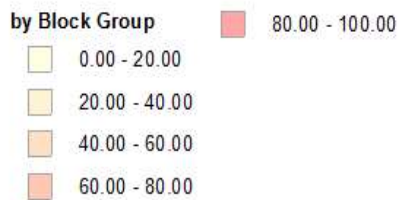
Our analysis of the travelshed for the Project indicates there are minority, low-income, and persons with limited English proficiency living in the travelshed. Most I-405 users in the study area come from the census tracts in Renton and south Bellevue, where there are substantial minority and low-income populations as well as some persons with limited English proficiency (Exhibits 4-9 through 4-11).

Based on our demographic analysis of the I-405 travelshed, we can infer that individuals who identify as a minority, have low incomes, or are limited English proficient use I-405.

Exhibit 4-9. I-405 Travelshed – Percent Minority



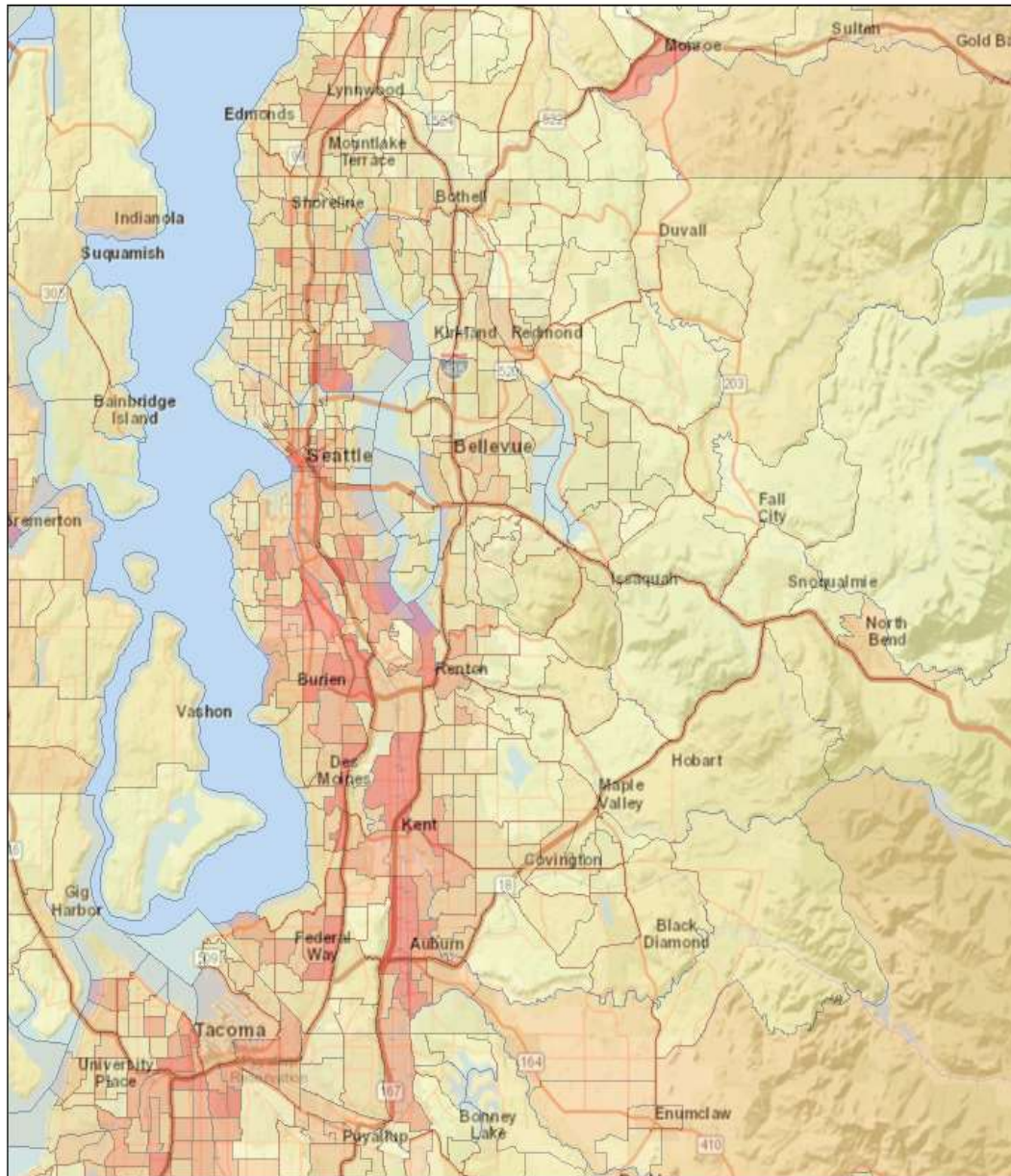
July 28, 2017



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 Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

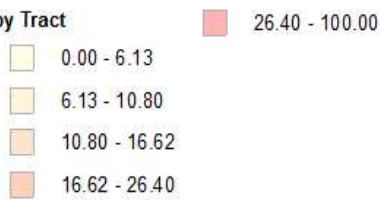
EJSCREEN 2016

Exhibit 4-10. I-405 Travelshed – Percent Low-income

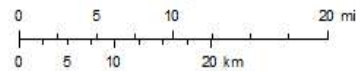


July 28, 2017

by Tract



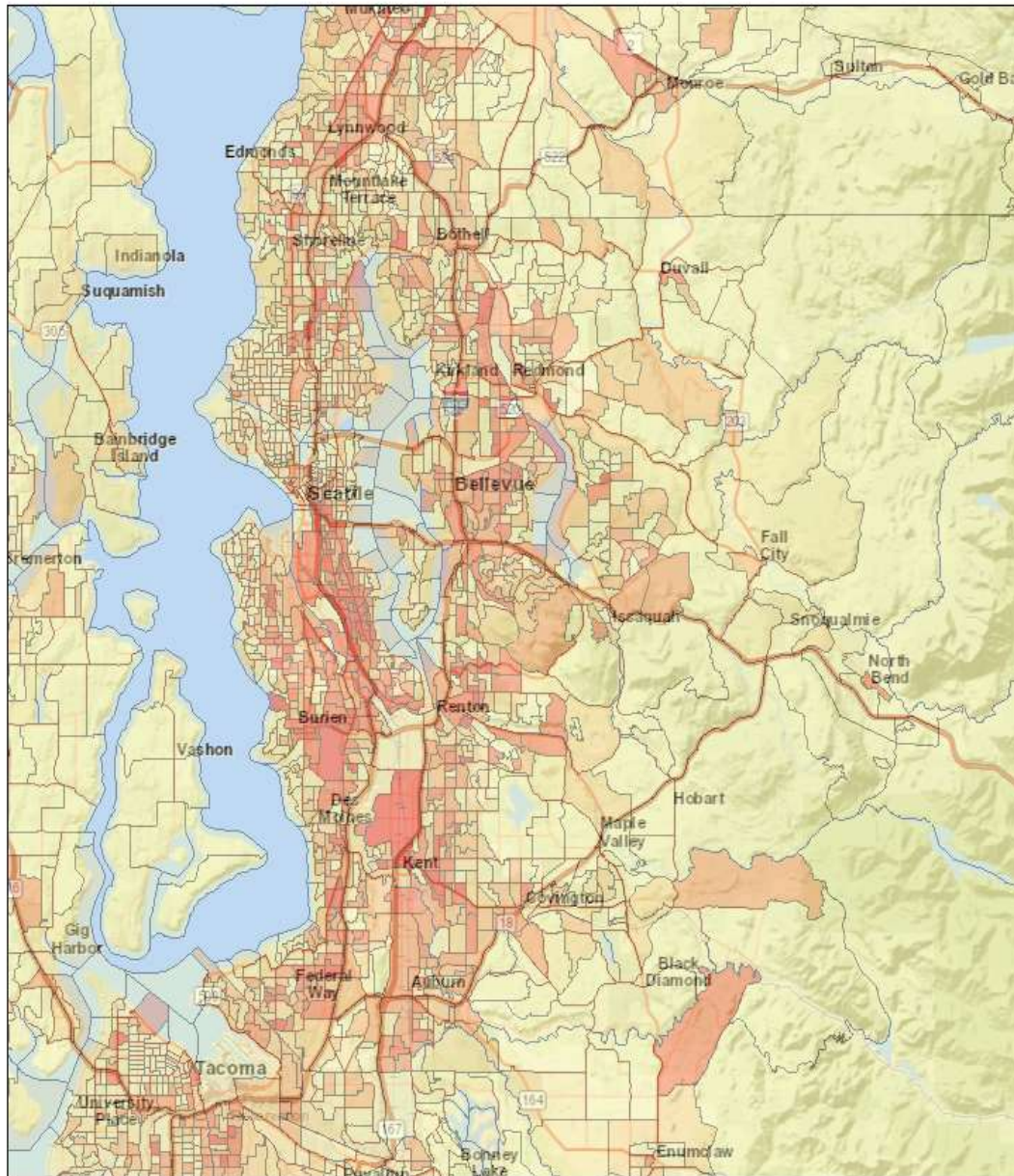
1:577,791



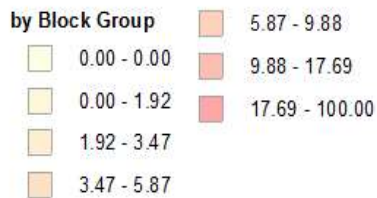
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 Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

EJSCREEN 2016

Exhibit 4-11. I-405 Travelshed – Percent Linguistically Isolated



July 28, 2017



EPA
 Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, OpenStreetMap contributors, and the GIS User Community

EJSCREEN 2016

Transportation and Travel that Affects Environmental Justice Populations

Congestion on I-405 Travelshed

In the study area, I-405 experiences traffic congestion in both directions and in both the HOV and GP lanes. This congestion lasts for many hours of the day.

WSDOT has a statewide goal of maintaining a 45-miles per hour (mph) speed in the HOV lanes, but the I-405 HOV lanes regularly do not meet this goal. This typically happens when the GP lanes are congested because slower GP lanes cause HOV users to drive more slowly and cautiously. The HOV lanes on I-405 in the study area are open access, meaning drivers can enter or exit these lanes at any point. HOV drivers are likely to slow down when the GP lanes are moving slowly, out of concern for sudden lane changes to and from the HOV lanes.

Similarly, many intersections in the study area are congested during peak travel periods.

Transit Service on I-405 Travelshed

Based on our demographic analysis, we can infer there are minority, low-income, and persons with limited English proficiency who use transit on I-405 in the study area.

According to the *2015 King County Metro Transit Rider/Non-Rider Survey* (2015), approximately 30 percent of transit riders identified as belonging to a minority group. Interestingly, there were no significant differences between transit riders and nonriders in terms of how likely they are to identify as a minority. There are also low-income transit riders; of those transit riders who live in East King County, 12 percent have annual household incomes below \$35,000. Regular transit riders in King County are more likely than nonriders to have annual household incomes below \$35,000.

Transit service is available throughout the study area. King County Metro Transit and Sound Transit provide this service. All bus routes in the study area offer weekday service, and three routes offer weekend service. Many of these buses use I-405 between MP 11.9 and 14.6 for at least a portion of their trip. The I-405, Tukwila to I-90 Vicinity Express Toll Lanes Project (MP 0.0 to 11.9) and Downtown Bellevue Vicinity Express Toll Lanes Project (MP 11.9 to 14.6) Transportation Discipline Report (Transportation Discipline Report) provides

more detailed information about existing transit service in the study area. Transit vehicles use the HOV lanes as well as an HOV-only ramp at NE 6th Street that provides direct HOV lane access.

Transit vehicles experience delay because the HOV lanes are congested during peak periods throughout the study area. This reduces transit reliability and means passengers are sitting on buses or waiting at transit stops for longer periods.

Regional Trends that Affect Environmental Justice Populations

East King County, along with the rest of the greater Puget Sound region, has experienced rapid job and population growth since the end of the Great Recession. In addition to increased traffic congestion on the region's highways and arterials, this boom has increased demand for housing, thus driving up purchase prices and rents. A May 2017 article by the *Seattle Times* reports home prices in the region have been rising faster than any other metro region in the country. Rents have also been increasing, rising 57 percent in the last six years (Seattle Times, May 2017).

According to the U.S. Department of Housing and Urban Development (HUD), households spending more than 30 percent of income for housing costs are "cost-burdened" and may have difficulty affording necessities such as food, clothing, transportation, and medical care. Households spending more than 50 percent are "severely cost-burdened" (HUD 2017).

A Regional Coalition for Housing (ARCH) is a partnership of King County and East King County cities that assist with preserving and increasing the supply of affordable housing in the area. According to a 2015 analysis by ARCH, in East King County, nearly 40 percent of renters and 35 percent of homeowners with a mortgage are cost-burdened, and over 14 percent of households are severely cost-burdened. This percentage has increased somewhat since 2000. Perhaps most relevant to this environmental justice analysis, nearly 75 percent of low-income households in East King County are cost-burdened, compared to only 13 percent of higher income households. (ARCH 2015)

When households are cost-burdened, it makes it that much harder for them to pay for other needs, such as transportation.

In addition, Washington State is considered to have the most regressive tax structure in the United States, according to the Institute on Taxation and Economic Policy (ITEP), a nonprofit, nonpartisan research organization. ITEP uses modeling to project the real-life economic effects of tax policies on taxpayers at every income level. Washington State's tax policies have multiple features that disproportionately burden lower-income taxpayers. According to ITEP, for households earning less than \$21,000 a year, state and local taxes represent nearly 17 percent of household income, compared to families making over \$100,000, who pay less than 7 percent of household income in state and local taxes (ITEP 2015). When considering the effect of tolls—another regressive form of taxation—on low-income people, it is important to consider them in the context of an already regressive tax structure. Section 5, Project Effects, discusses the cumulative effects of these regressive tax policies plus tolling on low-income people.

SECTION 5 PROJECT EFFECTS

To evaluate the how operation of the Project would affect environmental justice populations, we asked three questions:

1. Would the Project result in effects or benefits compared to No Build conditions?
2. Would those effects or benefits disproportionately affect minority, low-income, or persons with limited English proficiency, or would the effects be appreciably greater for these groups than for the general population?
3. If there is a disproportionate effect, would it be high or severe?

How would operation of the Project affect environmental justice populations?

Non-Toll-Related Effects

Exhibit 5-1 compares the non-toll-related effects of the Project on environmental justice populations to effects under No Build conditions.

Exhibit 5-1. Project Operational Effects on Environmental Justice

Evaluation Element	No Build	The Project
Historic and cultural resources of significance to Tribes	No effects on historical and cultural resources of significance to Tribes.	No effects on historic and cultural resources of significance to Tribes.
Fishing and aquatic resources of significance to Tribes	No effects on fish or aquatic resources of significance to Tribes.	No effects on fish or aquatic resources of significance to Tribes.
Noise in neighborhoods	Conditions for the No Build are similar to those discussed for the Project.	<p>With the Project, noise levels are projected to stay the same or increase by 1 dBA or 2 dBA over existing noise levels in 2016, and would be similar to the 2045 No Build. Noise modeling results showed that a hospital and a hotel were predicted to be at or above WSDOT's noise impact level with the Project. However, these facilities do not have outdoor use areas; therefore, interior noise levels must be considered under WSDOT and FHWA noise policies. When interior noise levels were considered, these sites were expected to be below FHWA's interior noise impact level of 51 dBA under Category D, as described in Attachment C, <i>Noise Discipline Report</i>. Therefore, an evaluation of mitigation is not required.</p> <p>Based on the demographic analysis, the population affected by noise would not be predominantly minority or low-income.</p>
Air quality, water quality, public services, utilities, and visual effects in neighborhoods	No changes in air quality, water quality, public services, utilities, and visual effects in neighborhoods.	<p>Improvements on I-405 would not require relocation, service outages, or delayed response time of emergency services due to detours, as most of the widening would be achieved through restriping instead of roadway expansion, and any necessary widening would occur within the median of I-405 between the northbound and southbound lanes.</p> <p>Public service providers (police, fire, and ambulance services) would benefit from a more reliable trip in the ETLs. The new lanes would also provide an overall benefit to public services by improving access to service locations and reducing response time for emergency vehicles.</p> <p>No other effects on air quality, water quality, public services, utilities, or visual effects.</p>

Exhibit 5-1. Project Operational Effects on Environmental Justice

Evaluation Element	No Build	The Project
Bicycle and pedestrian facilities	No improvement to the Lake to Lake Trail in Bellevue as it crosses over I-405. WSDOT has a letter of understanding with King County to build a structure across I-405 to connect the future Eastside Rail Corridor Regional Trail, so even with No Build, WSDOT would build that crossing.	WSDOT would construct a new trail crossing to connect the future Eastside Rail Corridor Regional Trail at Wilburton, just north of the I-90 interchange. This would improve connectivity for bicyclists and pedestrians in the corridor. WSDOT would also provide a wide multiuse path on the south side of the rebuilt Main Street crossing, making the Lake to Lake Trail in Bellevue more bicycle and pedestrian friendly as it crosses over I-405.
Displacement of residents	No residents would be displaced.	No residents would be displaced.
Community cohesion	Traffic congestion would increase on I-405 and at local intersections, which could affect individuals' access to community resources. This would have a negative effect on community cohesion.	No residents or businesses would be displaced. No communities would be bisected. No community gathering places would be disproportionately affected. The Project would have no effect on community cohesion.
Effects on businesses, community gathering places, and faith-based organizations of importance to environmental justice populations	No effect on businesses, community gathering places, or faith-based organizations of importance to environmental justice populations.	No effect on businesses, community gathering places, or faith-based organizations of importance to environmental justice populations.

dBA = A-weighted decibels; ETL = electronic toll lane; FHWA = Federal Highway Administration; WSDOT = Washington State Department of Transportation

Toll-Related Effects

Travel Time Benefits

With the ETLs, all I-405 users would benefit from a faster, more reliable trip. According to Transportation Discipline Report, the additional capacity from the ETL system would improve travel times for most trips in the ETLs and the GP lanes compared to No Build conditions.

Motorists using the GP lanes between the project limits would experience faster travel times for most trips during morning and afternoon peak periods compared to No Build. The Transportation Discipline Report provides specific forecasted travel times in 2025 and 2045.

Travel times in the ETLs would also improve for most trips as compared to the travel times in the HOV lanes under No Build. WSDOT expects the ETLs to operate near posted speed limits through most of the study area, even during peak periods.

It is assumed the ETLs would operate from 5 a.m. to 7 p.m. on weekdays. At all other times and major holidays, the lanes would be free and open to all without a *Good To Go!* pass.

During operating hours:

- SOVs would pay a toll to use the lanes.
- Transit, HOV 3+, and Motorcycles would travel for free with a *Good To Go!* pass.
- HOV 2+ would travel for free from 9 a.m. to 3 p.m. with a *Good To Go!* pass. From 5 a.m. to 9 a.m. and 3 p.m. to 7 p.m. HOV2+ would pay a toll to use the ETLs with or without a *Good To Go!* pass.
- Large vehicles over 10,000 pounds gross vehicle weight would not be able to use the ETLs at any time.

With the Project, most two-person carpools travelling in either the GP lanes or ETLs would benefit from improved travel times compared to travelling in the HOV lane under the No Build. No Build assumes the occupancy requirement for the existing HOV lane would not change from two or more persons in a vehicle to three or more people in a vehicle.

To understand how two-person carpools would be affected by the ETLs, we compared forecasted travel times for two-person

carpools in the GP lanes during peak periods to travel times in the HOV lanes under the No Build. According to the Transportation Discipline Report, most trips in 2025 and 2045 in the GP lanes would be the same or faster than trips in the HOV lanes under the No Build conditions, even during peak periods.

The ETL system is expected to reduce delay and improve reliability for transit service that use these lanes. Some transit routes would continue to operate in the GP lanes. These transit routes would also benefit from expected decreases in most travel times for the GP lanes.

Sound Transit's expansion of the regional mass transit system includes multiple future projects in the study area. These include funding for bus rapid transit on I-405 between south Renton and Lynnwood, as well as freeway stations that would allow buses to pick up and drop off riders without having to exit and re-enter the I-405 corridor. These projects, along with the Project, would benefit transit riders. There may also be effects on environmental justice populations associated with the expansion of mass transit on I-405. Sound Transit is evaluating the effects of the I-405 Bus Rapid Transit project in a separate environmental process and documenting potential benefits on environmental justice populations.

By adding capacity and improving traffic operations, the ETLs would reduce congestion-related crashes in the study area. Such crashes are typically rear-end and sideswipe crashes, which make up most existing freeway crashes in the study area.

Cost and Use of the Tolls

The cost of using the ETLs to gain a faster trip could be a barrier for some I-405 travelers. The ETLs in the study area would use an electronic toll system to collect tolls (see the sidebar for an explanation on how the ETL system would work).

The electronic toll collection system could be a barrier for I-405 travelers who do not understand the system or how to acquire a transponder. To use the electronic toll collection system, individuals who do not have a credit or debit card—the “unbanked” or “underbanked”—must travel to a customer service center in Seattle, Bellevue, Tacoma, or Gig Harbor to open an electronic toll account and preload or replenish it

How will electronic toll collection work for the ETLs?

WSTC has not yet set toll rates and other policies for the ETL system, so for this analysis we assume the policies will be the same as those set for the Bellevue to Lynnwood ETLs, in operation since 2015.

To use the ETL system, drivers would have to acquire a transponder to place in their vehicle windshield and use a credit card, debit card, or checking account or travel to a customer service center in Seattle, Bellevue, Tacoma, or Gig Harbor to preload and replenish their electronic toll account. Pay by Mail would allow drivers without a transponder to use the ETLs and receive a bill in the mail. WSDOT assesses a surcharge to such users. The current Pay by Mail surcharge for the Bellevue to Lynnwood ETLs is \$2.

ETLs would operate from 5 a.m. to 7 p.m. on weekdays. The system would be toll free and open to all during other hours. Carpools of 3+ could use the ETLs for free during hours of operation but would need a transponder, which has a switch the user can activate when driving as a carpool. This tells the communications system that the vehicle should not be charged for the trip. Carpools with two occupants would be able to use the ETLs for free between 9 a.m. and 3 p.m. weekdays.

using cash.¹ This may discourage some unbanked and underbanked I-405 motorists from using the ETLs, or they may incur additional costs in Pay by Mail surcharges.

Ramp Metering

WSDOT is considering some potential modifications to HOV ramp metering to prioritize transit and further improve transit reliability.

Would the Project result in a disproportionately high effect on environmental justice populations?

Non-Toll-Related Effects

We did not find any disproportionately high effects from the Project on environmental justice populations in the study area.

Toll-Related Effects

In determining whether an effect is “disproportionately high”, the U.S. Department of Transportation Environmental Justice Order notes that agencies should consider planned mitigation measures, offsetting benefits to the affected minority and environmental justice populations, and the relevant number of similar existing system elements in non-minority and non-environmental justice areas. There are two ways in which ETLs could disproportionately affect environmental justice populations:

- The cost of the toll to use ETLs could disproportionately affect environmental justice populations because the cost to use the ETLs would represent a higher proportion of household income than for middle- and high-income users.
- Use of the electronic toll collection system could disproportionately affect environmental justice populations because some users may have difficulty understanding the electronic toll system and how to acquire transponder. In addition, unbanked and

¹The Federal Deposit Insurance Corporation (FDIC) defines “unbanked” as those adults without an account at a bank or other financial institution, and no ability to conduct transactions electronically. “Underbanked” individuals have limited access to mainstream financial services and typically rely on nontraditional forms of finance, including check cashing services, loan sharks, and pawnbrokers. The FDIC estimates there are 10 million unbanked or underbanked individuals in the United States, most which are immigrants and/or people with low incomes.

underbanked individuals may have difficulty obtaining a responder and loading or replenishing a *Good To Go!* account.

Although our analysis concludes that ETLs would result in disproportionate impacts on environmental justice populations, we found that these effects would not be high for the following reasons:

- All users, including low-income and limited English proficient users, would continue to have an accessible, convenient, and free travel option: the GP lanes on I-405.
- All lanes on I-405, including GP lanes, would experience improved travel times for most trips because of the Project.
- Most motorists, including individuals who have low incomes or are limited English proficient, would not lose a travel option because of the Project. The only exception are two-person carpools, which would have to pay a toll to use the ETLs during peak periods. These carpools can use the HOV lanes for free today. However, because most travel times in the GP lanes are expected to improve with the Project, two-person carpools would still have the same or faster travel times with the Project than without for most trips. As such, even two-person carpools would benefit from the Project compared to the No Build conditions.

The following paragraphs describe our analysis and conclusions.

Any toll that charges all users the same amount, regardless of income, disproportionately affects environmental justice users. This is because, compared to users with moderate and high incomes, the toll represents a higher proportion of annual income. It becomes even more important to consider the effect tolls may have on environmental justice households in the Puget Sound region, where 75 percent of environmental justice families are cost-burdened by their housing costs.

Some social service providers interviewed by WSDOT expressed concern about this, indicating many environmental justice motorists do not have the financial resources to pay the toll. Outcomes from WSDOT's interviews with community-

based organizations and social service providers in the study area suggest there may be some differences between income groups on how they use the ETLs. In general, interview participants expressed concern a toll would dissuade environmental justice individuals from using them. A few interview participants explained their clients cannot afford gas for their automobiles and expressed skepticism that these clients would be able to afford a toll. On the other hand, some interview participants felt that, because the GP lanes would continue to be available, their clients would not be disproportionately affected.

Multiple studies on ETL use indicate users of all incomes value the faster trip and use the lanes when they absolutely need to be somewhere on time. In 2009, WSDOT conducted a survey of SR 167 HOT lane users, a system in South King County similar to the ETLs on I-405, and found HOT lane users spanned all income categories, including households with relatively low incomes. The survey showed most SR 167 HOT lane users had household incomes of \$50,000 to \$124,000, and nearly 16 percent of users had household incomes under \$50,000 (WSDOT 2012). Studies of State Route 91 (SR 91) express lanes in California indicate about three-quarters of vehicles using the express lanes at any given time belong to low- and middle-income users. Furthermore, environmental justice drivers are as likely to approve of the lanes as drivers with higher incomes. In fact, over half of commuters with household incomes under \$25,000 a year approved of providing toll lanes in public opinion surveys (FHWA 2017). Some social service providers interviewed by WSDOT echoed these findings, indicating that, after initial confusion about and frustration with the Bellevue to Lynnwood ETLs, the negative feedback from staff and clients has subsided and some people appreciate having the option of purchasing a faster trip when they need it.

To understand the extent to which these tolls may disproportionately affect environmental justice users, we estimated the annual cost for a typical user. The sidebar to the right explains how we developed this estimate. We estimated the annual cost for the average ETL user to be \$106.56 for users with a *Good To Go!* pass and \$178.56 for users who pay by

How did we estimate the annual cost to a typical user of ETLs?

Estimating the annual cost for a typical user proved to be challenging, for two reasons. First, toll rates to use the lanes would vary, depending on the amount of traffic congestion in the lanes. During relatively quiet periods, toll rates in the I-405 Bellevue to Lynnwood ETLs can be as low as \$0.75. During peak periods, toll rates in the Bellevue to Lynnwood ETLs can go as high as \$10. Second, toll rates for the Project have not yet been set.

Given these uncertainties, we based our estimate on what has been happening with the Bellevue to Lynnwood ETLs over the past 21 months. According to the WSDOT I-405 Express Toll Lanes 21-Month Update (2017), the average toll during the peak period in the peak direction was \$2.96. The average user makes between two to five trips per month, so we assumed three trips per month for our estimate.

mail.² Exhibit 5-2 shows the percentage of annual household income the toll represents for low-, middle-, and high-income users.

Exhibit 5-2. Comparison of Percentage of Household Income for Different User Types

User Type	Environmental justice User	Middle-Income User	High-Income User
Description of user type	\$28,780/year or less (HHS federal poverty level of household of 5 people)	Median household income for King County: \$82,000/year	1.5 times median household income for King County (\$123,000/year or more)
Percent of annual income for <i>Good To Go!</i> passholders	0.4%	0.1%	0.1%
Percent of annual income for Pay by Mail users	0.6%	0.2%	0.2%

HHS = U.S. Department of Health and Human Services

While this exhibit demonstrates the tolls would represent a higher proportion of household income for environmental justice users, these estimates do not suggest the tolls are unaffordable for these users. Given the relative infrequency with which the average I-405 motorists chooses to pay the toll and use the ETLs, the annual cost of making this choice tends to be relatively small for most users. Furthermore, because the ETLs are free for all users at night and on weekends, the tolls would only affect environmental justice and other ETL users during the daytime. As such, while we believe the toll to use ETLs would disproportionately affect environmental justice users, we do not believe it would be a high impact. Furthermore, this disproportionate effect would be offset by increased travel speeds for drivers traveling toll-free in the GP lanes.

²To calculate these average annual costs, we assumed an average toll of \$2.96 x three times per month x 12 months per year. For Pay by Mail users, we added a \$2-per-trip surcharge.

The electronic toll collection system would disproportionately affect limited English proficient travelers. These users may have difficulty understanding the electronic toll system and how to acquire a transponder such that they may be less likely to use the ETL system or could incur additional costs in Pay by Mail surcharges. Social service providers interviewed by WSDOT echoed this concern, adding that when WSDOT opened the ETLs from Bellevue to Lynnwood, there was a lot of confusion amongst clients about how to use them and whether there would still be a non-tolled option available.

Because most unbanked and underbanked individuals are immigrants and individuals with low incomes, the barrier for these individuals to obtaining a transponder and loading or replenishing a *Good To Go!* account could have a disproportionate effect on environmental justice populations.³ However, as of 2009, environmental justice individuals who are eligible for public benefits may use their Electronic Benefit Transfer cards to open and maintain their *Good To Go!* transponder accounts. This option could offset some of the disproportionate effect.

To determine if there is an economic difference between *Good To Go!* passholders and people who do not hold a *Good To Go!* pass, we consulted a 2016 WSDOT survey of *Good To Go!* pass users (WSDOT 2016) and obtained zip code data for people who have purchased a *Good To Go!* pass from WSDOT (WSDOT, 2016). Based on our analysis of these data, it appears that the current distribution of *Good To Go!* passes is related more to geographic proximity to a tolled facility and population density than economic conditions. Given the data currently available, there is not enough information to conclude whether there is an economic difference between *Good To Go!* passholders and people who do not hold a *Good To Go!* pass.

To understand the severity of the effect of the toll and electronic toll collection system on environmental justice or limited English proficient individuals, we compared forecasted average travel times during the peak hours of the day for people who would use the GP lanes and people who

³ According to a telephone survey conducted by WSDOT in 2009 for the SR 520: I-5 to Medina Bridge Replacement and HOV Project, more than 25 percent of low-income respondents indicated they would not be able to use a credit, debit, or checking account to prepay their electronic transponder account (2009).

would use the ETLs. Exhibits 5-3 and 5-4 shows these comparisons. When the ETLs are operating, we anticipate that some two-person carpools will choose to use the GP lanes during peak periods instead of paying the toll to use the ETLs. The travel time forecasts in the transportation analysis consider the expected increase in traffic volumes as two-person carpools move into the GP lanes.

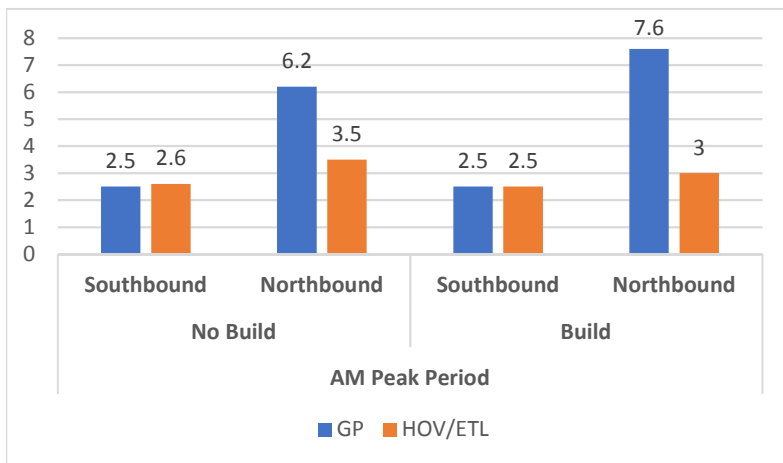
Travel Times

Overall, greater traffic volumes would travel through the study area at speeds similar to or higher than the No Build for most trips due to the ETLs and increased capacity. Vehicles would operate at higher speeds in the ETLs and would have a more reliable trip than the No Build HOV lanes. This would give more users, including transit and carpools, a faster trip.

In the year 2025, most trips during the AM and PM peak periods would be the same or better than the No Build conditions in both directions of travel. The one exception is 2025 northbound AM peak trips; these trips would increase by about 1 minute in the GP lanes.

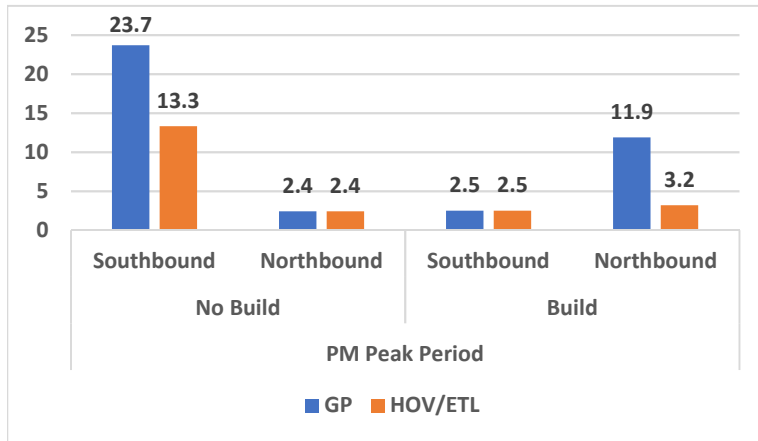
The remainder of this section focuses on travel times in 2045, i.e., the design year for the Project. In 2045, as shown in Exhibit 5-3, average travel times during the AM peak period would be the same in the southbound direction for both the No Build and Build alternatives. In the northbound direction, travel times would increase by about 1 minute in the GP lanes with the Build Alternative.

Exhibit 5-3. 2045 Average Travel Times during the AM Peak Period between I-90 and SR 520 (minutes)



As shown in Exhibit 5-4, average travel times during the 2045 PM peak period in the southbound direction would improve greatly. With the Project, travel times would be under 3 minutes for both the GP lanes and ETLs as compared to 23 minutes in the GP lanes and 11 minutes in the HOV lane under the No Build Alternative.

Exhibit 5-4. 2045 Average Travel Times during the PM Peak Period between I-90 and SR 520 (minutes)



By 2045 in the PM peak period, northbound I-405 travel times would increase by 9 minutes between I-90 and SR 520 compared to the No Build Alternative. Under the No Build PM peak period, congestion from southbound I-405 spills back onto I-90 and SR 520, which meters traffic to northbound I-405. With the Build Alternative, southbound I-405 operations improve, relieving congestion at interchanges on I-90 and SR 520. In the northbound direction of I-405, this results in more congestion and longer travel times in the greater Bellevue area. Southbound I-405 is able to accommodate the shift in congestion through Bellevue with no negative effects. Other I-405 Master Plan improvements are planned in this area of the corridor and are expected to provide future benefits that will improve travel times.

This leads us to conclude that, while the cost of the tolls and use of the all-electronic toll system would have a disproportionate effect on environmental justice populations, that effect would not be high because of faster travel times for most trips as compared to the No Build, even for motorists who do not use the ETLs.

How would construction of the Project affect environmental justice populations?

Construction of the Project is anticipated to take 5 years and would have the following benefits and effects:

- The Project would cost \$750 to \$800 million to construct, which would require construction jobs that could benefit all populations.
- Construction vehicles would increase traffic delay on the I-405 mainline, ramps to and from I-405, and local arterials in the study area during the construction period. The exact haul routes and quantity of construction vehicles would not be known until a construction contract is signed, but we anticipate most construction vehicles would use I-405, SR 167, and I-90 to bring materials to and from construction sites. This would affect all I-405 users and motorists on local streets, including minority, low-income, and limited English proficient motorists.
- Transit riders—including minority, low-income, and limited English proficient riders—could face revised routes and closed transit stops during construction.
- Additional temporary construction-related effects to neighborhoods within the study area would also include noise, dust, visual effects, and reduced access to community resources such as parks, recreational facilities, public services, and utilities.

In addition, we expect the Main Street overpass in Bellevue to be constructed in phases, with an anticipated closing of up to two lanes for over a year. WSDOT would maintain bi-directional traffic flow during construction to the extent possible.

Would the Project have other effects that may be delayed or distant from the Project?

An indirect effect is caused by the proposed action, but would take place later in time than the direct effects, or would have an impact outside the study area. Indirect effects may include future changes to land use patterns or population growth. According to the WSDOT Environmental Manual (WSDOT 2017), in general, projects in new locations or that cause

dramatic changes to the transportation facility are more likely to contribute to indirect impacts than projects in areas that are already developed or that rely primarily on existing right-of-way.

To determine if the Project would contribute indirect effects, we examined local and regional comprehensive plans that affect the study area. We looked for whether the Project would support or disproportionately impact changes in the type, rate, or timing of planned growth. The Project is consistent with PSRC's *Vision 2040* and *Transportation 2040* long-range plans, King County's Countywide Planning Policies, and local policies for the City of Bellevue.

Would the Project have cumulative effects on environmental justice populations?

Under NEPA, cumulative effects result from the incremental effects of a project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes the action. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. Cumulative effects include past, present, and reasonably foreseeable future actions within the study area that, together with the Project, may have a cumulative effect on the environment. Past and present actions affecting environmental resources are reflected in the existing conditions of the study area.

As described earlier in Section 2, Project Description, the ETLs for the Project would—in combination with the I-405, Tukwila to I-90 Express Toll Lanes Project (MP 0.0 to 11.9), Bellevue to Lynnwood ETLs, and SR 167 HOT Lanes—create a 40-mile-long ETL system from Auburn on SR 167 to Lynnwood on I-405. The WSTC has not yet set toll policy and toll rates for the entire SR 167/I-405 ETL system, so we do not know how much it would cost a motorist to travel from Auburn to Lynnwood in the ETLs. Regardless of the toll policy, the cost to use the entire ETL system would disproportionately affect low-income users, for whom the total cost would represent a higher proportion of annual household income. However, these disproportionate effects would be offset by improved travel time, reliability, and travel conditions in both the GP lanes and the ETLs systemwide. As concluded in the analysis of ETLs on these and other segments of I-405, we do not anticipate the full

ETL system would result in disproportionately high indirect effects on environmental justice populations.

Other current and future projects include many transportation improvements by WSDOT, Sound Transit, and the City of Bellevue on I-405 and local networks to address traffic congestion and safety; add bicycle and pedestrian facilities; and expand or improve transit service. Lastly, we considered regional and local trends that affect environmental justice populations, including population growth in the study area and I-405 travelshed, an increase in minority and low-income populations, and increasing traffic congestion.

The Project would not have direct or indirect effects on environmental justice populations in the study area except as related to tolling. The ETLs would contribute to a positive cumulative effect on regional transportation, and would likely contribute to a negative cumulative effect on the economic burdens of low-income users of I-405.

While projected job and population growth in the region is likely to increase traffic congestion, the ETLs—in conjunction with other reasonable and foreseeable transportation investments in the I-405 travelshed—would improve transportation conditions for all I-405 users, including environmental justice populations.

As described earlier in Section 5, Project Effects, the operation of ETLs would affect low-income populations because the cost to use the ETLs would represent a higher proportion of their household income than middle- and high-income users. The all-electronic toll system would also affect low-income populations because they are more likely than middle and high-income populations to be unbanked or underbanked, making it more difficult to use the system. In combination with rising housing costs in the I-405 travelshed and Washington State's regressive tax system described in Section 4, Existing Conditions, the ETLs would have a minor contribution to a negative cumulative effect on economic burdens of low-income users of I-405.

Although the Project would result in a minor contribution to negative cumulative effects on environmental justice populations the impacts would be offset by improved travel times for all users of I-405. We conclude the Project would not result in disproportionate cumulative effects on environmental

justice populations. As such, we do not propose mitigation measures for cumulative effects. That said, there are state, regional, and local efforts to improve transportation and land use planning to accommodate growth and reduce effects on all, including environmental justice populations. Refer to the Socioeconomic and Environmental Justice section of the I-405, Downtown Bellevue Vicinity Express Toll Lanes Project (MP 11.9 to 14.6) *Environmental Assessment* for more information about these efforts.

SECTION 6 MEASURES TO AVOID OR MINIMIZE EFFECTS

What measures will WSDOT take to mitigate effects of the Project on environmental justice populations during construction?

We did not identify any construction effects for the Project that would disproportionately affect environmental justice populations. WSDOT will implement the following measures for construction effects of the Project on all populations in the study area:

- Apply best management practices to control dust, noise, and visual effects.
- Develop and implement traffic management plans to minimize traffic congestion and the effects of increased construction-related truck traffic on surrounding neighborhoods and arterials.
- Require the contractors to provide at least one week’s notice for major or highly disruptive construction activities.
- Provide temporary accommodations during highly disruptive construction activities.
- Maintain existing roadway capacity during construction activities to the extent possible.
- Minimize lane or roadway closures and schedule them to occur when there will be the least effect on traffic within the study area, such as during overnight and weekend periods.

WSDOT will continue to conduct targeted outreach to minority, low-income, and persons with limited English proficiency of the study area and I-405 travelshed before and during construction. The following measures are part of WSDOT’s commitment to public involvement for the Project:

- Translate project materials about construction effects—especially those related to transit re-routes and temporary closures of transit stops—into Spanish

- Distribute project materials—especially prior to construction-related closures that will affect motorists and transit riders—through social service agencies, Crossroads Mini-City Hall, community-based organizations, libraries, community groups, and schools

What measures will WSDOT take to mitigate effects of the Project on environmental justice populations during project operation?

Although there is no need for additional mitigation, WSDOT will continue conducting targeted outreach to engage minority, low-income, and persons with limited English proficiency of the study area and I-405 travelshed. Ongoing public involvement activities when the Project is constructed will include the following measures:

- Maintaining ongoing communications with community-based organizations and social service providers throughout design of the Project, and scheduling briefings with them at project milestones.
- Developing a summary of the EA for this Project and posting the summary to the WSDOT website and in libraries throughout the study area. As part of its standard outreach practice, WSDOT will translate outreach materials related to the environmental documents, such as flyers and newspaper announcements, as well as any documents for which the agency receives a request for translation.
- Distributing project materials through social service agencies, community-based organizations, libraries, community groups, and schools and host booths at community events in the study area.
- Planning and implementing a public information campaign in multiple languages to explain ETLs, how to obtain a *Good To Go!* pass, and how to set up an account, with the goal of increasing the proportion of passholders who identify as minority, have low incomes, or are limited English proficient.
- Including information about how to use the ETLs in Spanish and other languages, as needed, as part of the public information campaign, such as how to enter and

exit the lanes, how to determine the cost, and how to obtain a free *Good To Go!* pass for carpools.

- Conducting outreach about the Project and ETLs at community fairs and festivals, including events at Bellevue's Crossroads Mini-City Hall, in one of the Eastside's most ethnically and linguistically diverse neighborhoods.
- Conducting media outreach, specifically with ethnic media outlets serving the study area.

To reduce possible barriers to obtaining and maintaining a *Good To Go!* account for persons who have low-incomes or are underbanked:

- WSDOT will continue to offer the option for low-income persons who are eligible for public benefits to use their Electronic Benefit Transfer cards to open and maintain their *Good To Go!* accounts.

WSDOT is working to expand the network of retail locations where people can buy *Good To Go!* passes with cash, making it easier for people to purchase a pass without a bank account.

Note that, as of 2009, low-income individuals who are eligible for public benefits may use their Electronic Benefit Transfer cards to open and maintain their *Good To Go!* accounts. This option could offset some of the disproportionate effects. In addition, WSDOT is currently working to expand the network of retail location where people can buy *Good To Go!* passes with cash, making it easier for people to purchase a pass without a bank account.

SECTION 7 UNAVOIDABLE EFFECTS

Would the Project have any disproportionately high effects on environmental justice populations that cannot be avoided?

While the cost of the tolls and use of the all-electronic toll system would have a disproportionate effect on environmental justice populations, that effect would not be high because it would be offset by faster travel times for most trips as compared to the No Build, even for motorists who do not use the ETLs.

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APPENDIX A ACRONYMS AND ABBREVIATIONS

Term	Meaning
ACS	American Community Survey
ADA	American with Disabilities Act
ARCH	A Regional Coalition for Housing
CSS	Context Sensitive Solutions
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	federal Endangered Species Act
ETL	express toll lane
FHWA	Federal Highway Administration
GIS	geographic information system
GP	general purpose
HOT	high-occupancy toll
HOV	high-occupancy vehicle
I-405	Interstate 405
I-5	Interstate 5
I-90	Interstate 90
ITEP	Institute on Taxation and Economic Policy
mph	miles per hour
MP	milepost
NEPA	National Environmental Policy Act
OSPI	Office of Superintendent of Public Instruction
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SOV	single-occupant vehicle
SR 167	State Route 167
SR 91	State Route 91
USC	United States Code

Term	Meaning
USDOT	U.S. Department of Transportation
WSDOT	Washington State Department of Transportation
WSTC	Washington State Transportation Commission

APPENDIX B GLOSSARY

Term	Meaning
Environmental justice	Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.
Express toll lane	A limited-access freeway lane that is actively managed through a variable toll system to regulate its use and thereby maintain express travel speeds and reliability. Toll prices rise or fall in real time as the lane approaches capacity or becomes less used. This ensures traffic in the express toll lane remains flowing at express travel speeds of 45 to 60 miles per hour. Transit and carpools do not pay a toll.
Limited English proficient	A limited English proficient person is an individual who has difficulty speaking, reading, writing, or understanding the English language and whose difficulties may deny that individual the opportunity to meaningfully engage in the transportation decision-making process. This definition applies to an individual who: <ul style="list-style-type: none">• Was not born in the United States;• Speaks a native language other than English and comes from an environment where a language other than English is dominant; or• Comes from an environment where a language other than English has had a substantial effect on that individual's English language proficiency.
Low-income	A low-income person is an individual whose household income falls below the federal poverty guidelines, as defined by the U.S. Department of Health and Human Services. For 2017, the federal poverty guideline for a household of four in one of the 48 contiguous states and Washington D.C. is \$24,600.
Minority	Minority means a person who is: (1) Black: a person having origins in any of the black racial groups of Africa; (2) Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; (3) Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent; (4) American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural

Term	Meaning
	identification through tribal affiliation or community recognition; or (5) Native Hawaiian and Other Pacific Islander: people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands
Travelshed	The geographic area from which I-405 users come is referred to as the I-405 travelshed.

APPENDIX C SOCIAL SERVICE PROVIDERS INTERVIEWED BY WSDOT

City of Bellevue Human Services Division

City of Burien Department of Human Services

City of Redmond Human Services

City of Renton Department of Human Services

Coal Creek YMCA

Hopelink

Youth Eastside Services