



Building a Safer, More Reliable Bridge and Roadway while avoiding Environmental Justice Impacts

SR 520: I-5 TO MEDINA, SEATTLE AREA, WASHINGTON

Case Highlights

Description: The SR 520: I-5 to Medina Project in Seattle, Washington, addresses the two key issues facing the SR 520 corridor: (1) bridge structures that are vulnerable to catastrophic failure; and (2) traffic demand that exceeds capacity. As part of the National Environmental Policy Act (NEPA) process, the Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA) conducted an extensive environmental justice analysis to study the potential of disproportionately high and adverse impacts on minority and low-income populations from: replacing the floating bridge and expanding the Portage Bay and Evergreen Point bridges; rebuilding the bridges over SR 520; expanding the capacity of SR 520 (from 4 to 6 lanes); and tolling. Most of the Census block groups within the study area have relatively low concentrations of minority and low-income populations, with the exception of a few block groups with relatively high concentrations of minority and low-income populations. Key environmental justice issues were related to tolling and impacts to resources important to Native American tribes. From the beginning of the environmental analysis and decision-making process, the WSDOT and FHWA developed and implemented an ongoing program to engage the public and to provide information about the project, and to reach out to all potentially affected members of the public, including low-income and minority populations and those with limited English proficiency (LEP). WSDOT coordinated with tribes through a government-to-government relationship. The Record of Decision (ROD) was signed on August 4, 2011, with a finding of no disproportionately high and adverse effects on environmental justice populations. The first phase of the project is currently under construction.

Effective Practices: Effective practices in addressing environmental justice include: addressing project issues and concerns identified during public outreach as part of the environmental justice analysis; utilizing outcomes of outreach and research conducted for projects to inform outreach to low-income and minority populations for later project phases; techniques for addressing limited English proficiency; determining the need to expand the study area and identifying a travelshed for the purposes of environmental justice analysis; research, analysis, and public outreach as it relates to the equity of tolling projects; and working with tribes through a government-to-government relationship to identify, avoid, minimize, and mitigate impacts to important resources.

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Introduction

The SR 520: I-5 to Medina Project in Seattle, Washington, addresses the two key issues facing the SR 520 corridor: (1) bridge structures that are vulnerable to catastrophic failure; and (2) traffic demand that exceeds capacity. As part of the National Environmental Policy Act (NEPA) process, the Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA) conducted an extensive environmental justice analysis to study the potential of disproportionately high and adverse impacts on minority and low-income populations. Key environmental justice issues were related to tolling and impacts to resources important to Native American tribes. From the beginning of the environmental analysis and decision-making process, the WSDOT and FHWA developed and implemented an ongoing program to engage the public and to provide information about the project, and to reach out to all potentially affected members of the public. The Record of Decision (ROD) was signed on August 4, 2011, with a finding of no disproportionately high and adverse effects on environmental justice populations.

Project Context

The SR 520, I-5 to Medina: Bridge Replacement and High Occupancy Vehicle (HOV) Project (SR 520: I-5 to Medina Project) (see Figure 1) is part of the larger State Route (SR) 520 Program. The 12.80-mile SR 520 Program area begins at Interstate 5 (I-5) in Seattle, Washington (WA),

and extends to SR 202 in Redmond, WA (see Figure 2).

SR 520 and its floating bridge (also known as the Evergreen Point Bridge) opened in 1963 and have been a vital link in the Puget Sound region's transportation system. After floating for nearly 50 years, the four-lane bridge is showing its age and is often clogged by traffic. The bridge and landings must be replaced because of the danger of structural failure of the components. There is also severe traffic congestion in the SR 520 corridor, where traffic demand exceeds capacity in both directions, between I-5 in Seattle and the eastern shore of Lake Washington. As it is one of only two major connections across Lake Washington that link urban centers in Seattle and the Eastside (that is, the eastside of Lake Washington), it is a key regional route for commuters and freight.

The purpose of the SR 520, I-5 to Medina Project is to improve mobility for people and goods across Lake Washington within the SR 520 corridor in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing, and/or mitigating impacts on affected neighborhoods and the environment.

Project Alternatives and Status

Potential environmental justice issues associated with the larger SR 520 Bridge Replacement and HOV project were first reported in the 2006 Draft Environmental Impact Statement (DEIS). The DEIS evaluated three primary alternatives:



Figure 1. I-5 in Seattle, WA, to Medina, WA, bridge replacement and HOV project.



Figure 2. Regional SR 520 project area from Seattle to Redmond, WA.

- **No Build Alternative**—under the No Build Alternative, SR 520 would continue to operate as it did at the time of the EIS, as a 4-lane highway with nonstandard shoulders and without a bicycle/pedestrian path, and neither the Portage Bay nor the Evergreen Point bridges would be replaced.
- **Four-Lane Alternative**—under the Four-Lane Alternative, SR 520 would be rebuilt from I-5 to Bellevue Way. Both the Portage Bay and Evergreen Point bridges would be replaced, and the bridges over SR 520 would also be rebuilt. This alternative also included electronic toll collection. As part of this alternative, the floating bridge pontoons of the Evergreen Point Bridge would be sized to carry future high-capacity transit.
- **Six-Lane Alternative**—the Six-Lane Alternative was similar to the Four-Lane Alternative, except that it proposed six lanes (two outer general purpose lanes and one inside HOV lane in each direction). This alternative also included replacement of both the Portage Bay and Evergreen Point bridges, and rebuilding the bridges along SR 520. It would include electronic toll collection.

Following the issuance of the DEIS, WSDOT worked with FHWA to develop new projects within the context of an overall SR 520 corridor program. Each project had a separate purpose and need; each provided independent benefit to the region. In addition, a legislatively mandated mediation group was formed to develop new design options for the Six-Lane Alternative in Seattle. Improvements to the western portion of the SR 520 corridor are known as the I-5 to Medina Project (the focus of this case).

While the project limits were changed, the purpose did not. A Supplemental DEIS (SDEIS) for the I-5 to Medina project was prepared in

SR 520: I-5 to Medina Project Timeline

- 2006: Draft Environmental Impact Statement (DEIS)
- 2009: Environmental Justice Discipline Report
- 2010: Supplemental DEIS
- 2011: Final Environmental Impact Statement (FEIS)
- 2011: Record of Decision

2010, and was informed by a 2009 Environmental Justice Discipline Report. The Final Environmental Impact Statement (FEIS) was published in Spring 2011. According to the FEIS, the I-5 to Medina Project Preferred Alternative would widen the SR 520 corridor to six lanes from I-5 in Seattle to Evergreen Point Road in Medina and would restripe and reconfigure the lane channelization in the corridor from Evergreen Point Road to 92nd Avenue Northeast in Yarrow Point. It would replace the vulnerable Evergreen Point Bridge, including the floating bridge, its west and east approaches, and the Portage Bay Bridge with new structures. The project would complete the regional HOV-lane system across SR 520, as called for in regional and local transportation plans.

The ROD was issued in summer 2011. Construction of the SR 520 floating bridge started in 2012. The target date for opening the new floating bridge to drivers is 2014. The information presented in this case study includes pieces of each of these studies that supported the overall environmental justice analysis and conclusions.

The Environmental Justice Analysis

Overview of the Methodology

The general methodology for the environmental justice analysis was reported in the DEIS and is summarized here. Additional analysis was conducted for the supplemental studies and is described throughout the case. The analysis was conducted in accordance with FHWA and WSDOT guidance documents and the best available project-specific and demographic data. The environmental justice analysis was developed in a manner consistent with Executive Order 12898, USDOT 5610.2, FHWA Order 6640.23, and the following guidance documents:

- Section 458 Environmental Justice from the WSDOT Environmental Procedures Manual, M31-11, March 2004.
- Environmental Justice: What You Should Know, FHWA Washington Division, June 13, 2003.

Information reviewed by the environmental justice discipline team included:

- Demographic data from the 2000 U.S. Census
- Data from the National Center for Education Statistics (NCES)
- The components of the public outreach program specifically focused on minority and low-income populations, and the results to date
- Environmental-Discipline Reports prepared for the DEIS, SDEIS, and FEIS
- Research into the effects of highway tolls on low-income populations.

The following describes the steps taken to perform the analysis:

1. **Define the study purpose.** In compliance with Executive Order 12898, USDOT 5610.2, and FHWA Order 6640.23, the purpose of the analysis was to determine whether the proposed project would result in disproportionately high and adverse effects on minority, low-income, and limited English proficiency (LEP) populations. The environmental justice analysis considered impacts to LEP populations because there was substantial overlap between impacts to low-income populations and impacts to LEP populations.
2. **Identify the study area and conduct a demographic analysis.** The environmental justice discipline team identified and defined the limits of the demographic analysis, and mapped where minority and low-income populations live in the study area using data from the 2000 U.S. Census. The environmental justice discipline team also reviewed information on the distribution of populations with LEP; this information was used to inform the public-involvement team where outreach materials in alternative languages should be distributed.
3. **Conduct targeted public outreach and solicit feedback on the project.** The SR 520 program's public-involvement team supplemented the results of the demographic analysis discussed under step 2 by researching and documenting other local demographic information sources. They held interviews with local social-service organizations to develop a more refined understanding of the study area population to inform their public-involvement strategy.

This research gave the public-involvement team a better understanding of the locations and potential concerns of minority and low-income populations. Based on all of this information, the public-involvement team developed a strategy that outlined specific outreach activities designed to reach minority and low-income populations and solicit feedback on the project.

4. **Review and assess potential effects in relation to minority, low-income, and LEP populations.** The environmental justice discipline team evaluated the location, intensity, and duration of environmental effects that would result from the proposed project. The team relied principally on the information documented in the discipline reports; and also interviewed key discipline report authors to further clarify the information contained in the reports. While a comprehensive study was completed, tolling and impacts to tribal resources were key aspects of this analysis and are targeted in this case study.
5. **Assess whether the project would result in disproportionately high and adverse effects on minority and/or low-income populations.** The environmental justice discipline team conducted a qualitative assessment of the likelihood that the project would result in disproportionately high and adverse effects on minority and/or low-income populations. This assessment is a subjective review of the following:
 - Magnitude of the anticipated project effects (e.g., minor, moderate, or major)
 - Nature of the effects (either negative or positive)
 - Effectiveness of the proposed mitigation in reducing the effects

- If effects are adverse, whether they disproportionately affect minority and low-income populations.

Demographic Analysis

The 2009 Environmental Justice Discipline Report used three study areas: the project study area, the Evergreen Point Bridge travelshed study area, and the Pontoon Construction and Transport study area. The project study area and travelshed are particularly relevant to this case study. Information in this section is summarized from that report.

Project Study Area

To determine the effects of project construction and operation, the project study area included the area within an approximately 0.5-mile radius of the construction limits of the Six-Lane Alternative studied in the SDEIS, from I-5 in Seattle to 92nd Avenue NE in Yarrow Point. The project study area includes seven neighborhoods within Seattle (Eastlake, North Capitol Hill, Roanoke/Portage Bay, University District, Montlake, Madison Park, and Laurelhurst) and portions of the neighborhoods of Medina, Hunts Point, and Yarrow Point. The 2000 Census block groups making up the study area were used for the demographic analysis. When a Census block group fell partially within the 0.5-mile radius, analysts modified the study area boundaries to include the entire block group. When only a small portion of the Census block group fell within the 0.5-mile radius, analysts excluded that block group from the study-area boundaries.

According to the 2000 U.S. Census, just over five percent of the population of the study area in total has a household income at or below the Federal poverty level. Figure 3 shows the

percentage of the population in each Census block group with household incomes at or below the Federal poverty level. The highest concentrations of residents living in poverty in the project study area are in parts of the University District, Laurelhurst, and Roanoke/Portage Bay neighborhoods.

Just over 15 percent of all residents in the project study area are part of a minority population. Figure 4 shows the percentage of the population in each Census block group that is part of a minority population. The highest concentrations of minority populations in the project study area are in the University District. Minority populations also live in parts of the Laurelhurst, Montlake, Roanoke/Portage Bay, and Eastlake neighborhoods.

Nearly two percent of residents in the project study area are LEP. The highest concentrations of residents who are LEP live in the University District and in parts of Laurelhurst.

Analysts verified the presence of minority and low-income populations in the project study area by obtaining data from the National Center for Education Statistics (NCES) for the 2006– 2007 school year for the Free Lunch Program.

Travelshed

To identify SR 520 users who would be affected by tolling, environmental justice analysts examined the communities from which trips on the Evergreen Point Bridge originated. The travelshed is shown in Figure 5.

To determine the Evergreen Point Bridge travelshed, WSDOT placed video cameras on SR 520 in May 2008. WSDOT placed cameras at on- and off-ramps and on the mainline during the morning and evening peak periods as well as

midday and weekends. The Washington State Department of Licensing provided WSDOT with the addresses associated with the registered owners of each videotaped vehicle. Using those addresses, analysts developed a map of the Evergreen Point Bridge travelshed.

The project team conducted a telephone survey of 685 Evergreen Point Bridge users. Ten percent of respondents had household incomes at or below the Federal poverty level, 43 percent were minorities, and 9 percent spoke a language other than English at home. Based on these results, the analysts concluded that at least some Evergreen Point Bridge users are low-income, minority, or LEP.

The project team also conducted an intercept survey of transit users. For the intercept survey, the project team went to a transit center and conducted one-on-one interviews and distributed paper surveys to be completed and mailed back. From the survey of 422 transit users on the Evergreen Point Bridge, nearly 3 percent of respondents had household incomes below the Federal poverty level and nearly 23 percent of the respondents were minority. Six percent spoke a language other than English at home.

According to the 2000 U.S. Census, nearly 9 percent of households in the Evergreen Point Bridge travelshed study area have incomes below the Federal poverty level, and 28 percent are minority. More than 18 percent speak a language other than English at home. This information supports the analysts' conclusion that low-income, minority, and LEP populations use the Evergreen Point Bridge. Maps similar to those shown in Figures 3 and 4 were prepared for the entire travelshed, but are not reproduced here.

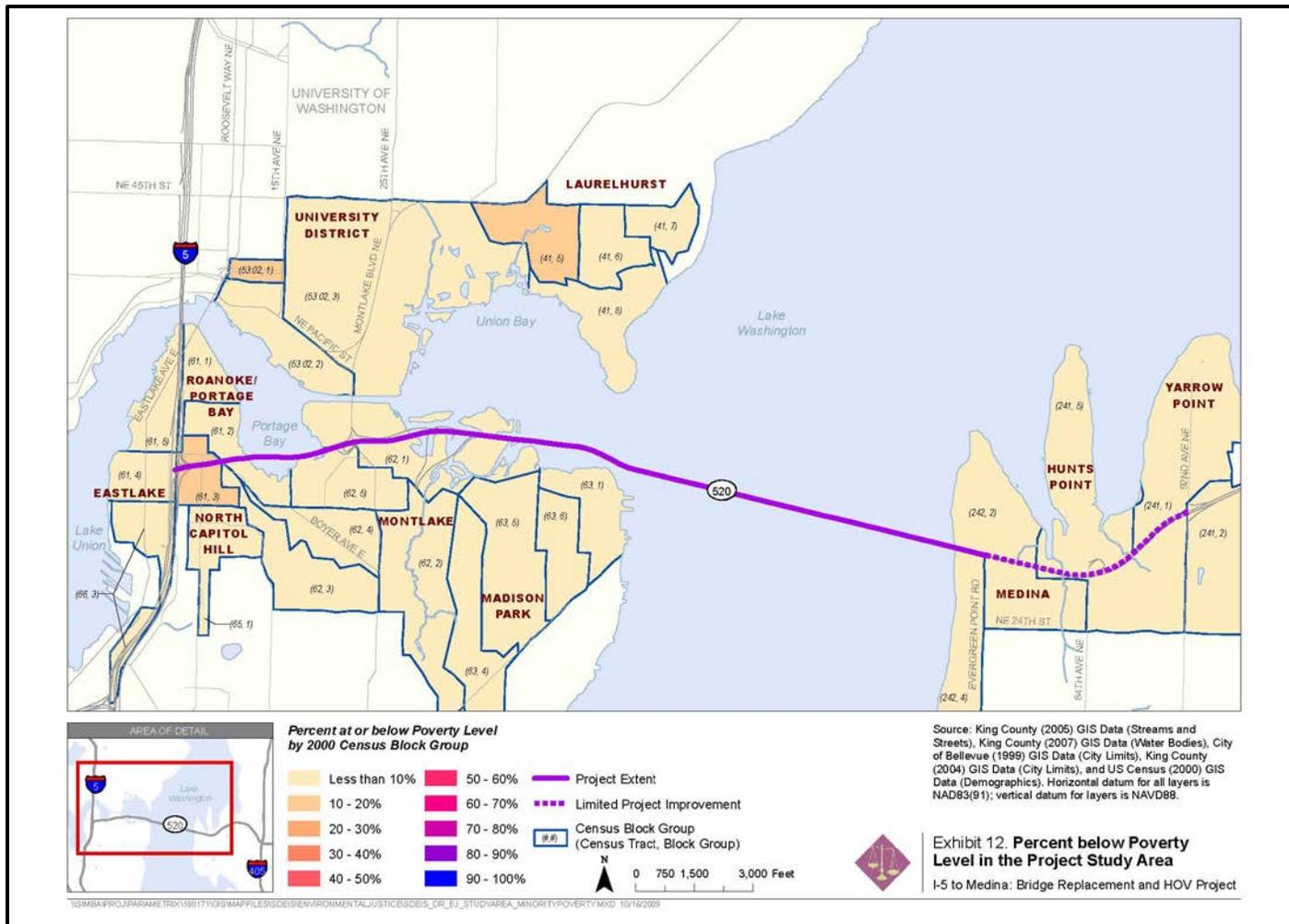


Figure 3. The percentage of the population in each Census block group of the Seattle-Medina, WA Project Study Area with household incomes at or below the 2000 Federal poverty level.

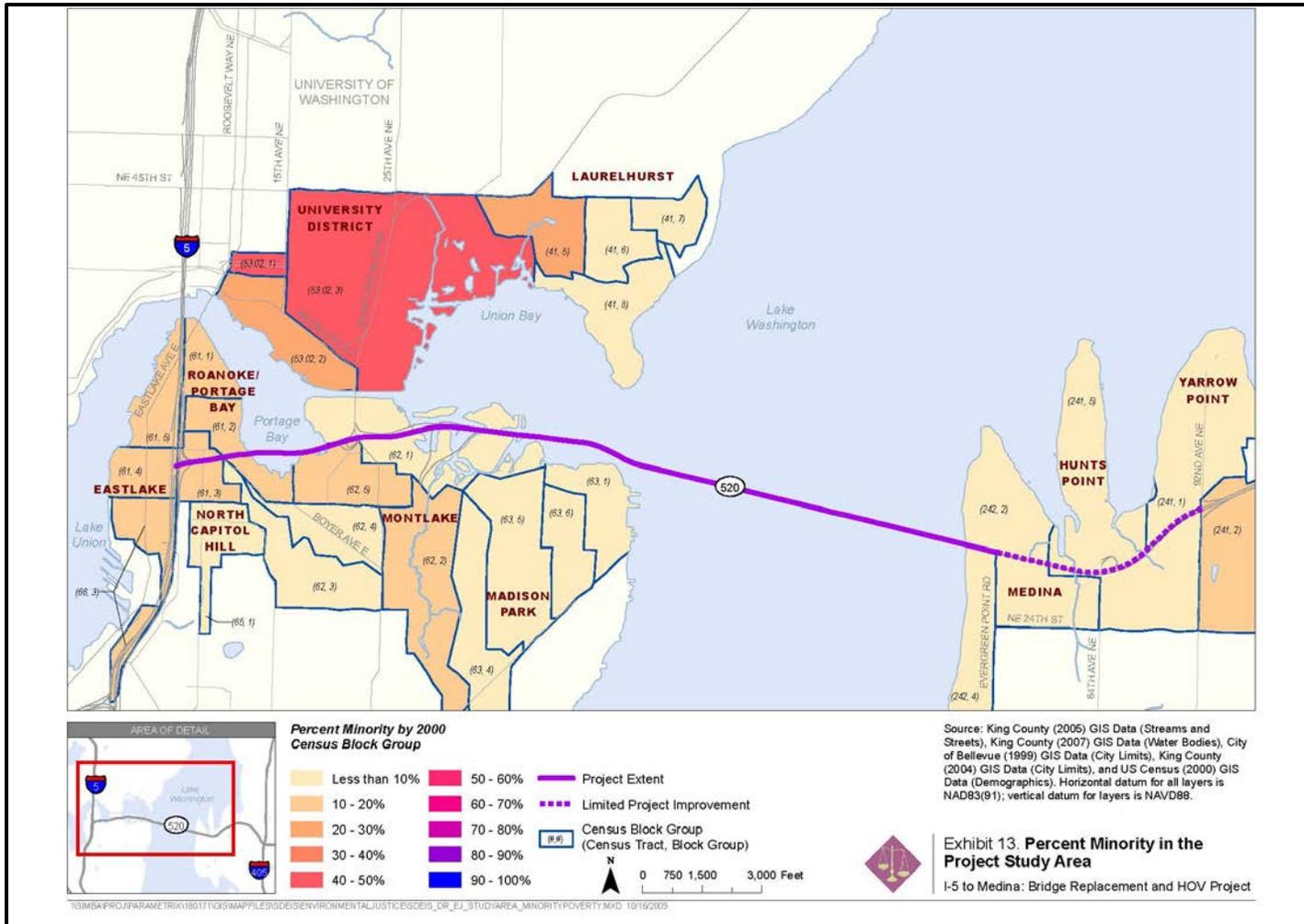


Figure 4. The percentage of the population in each Census block group in the Seattle-Medina, WA, Project Study area that is part of a minority population.

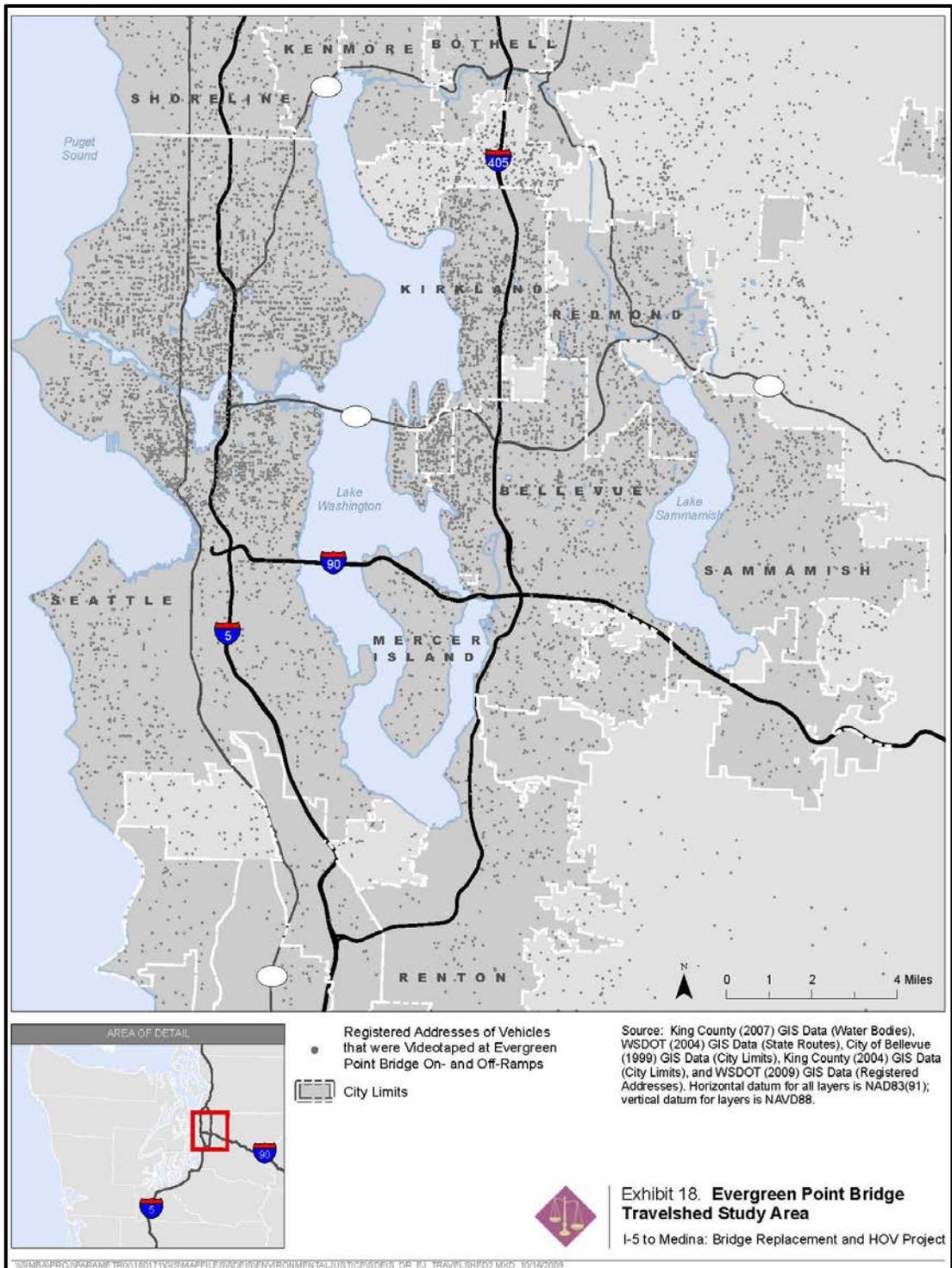


Figure 5. Evergreen Point bridge travelshed study area in Seattle-Medina, WA.

Outreach and Coordination

Extensive outreach informed the environmental study for the I-5 in Seattle to Medina project, with specific strategies targeted at ensuring meaningful participation of low-income, minority, and LEP populations. Some strategies included: outreach to social-service organizations, printing material in multiple languages, information kiosks in areas important to environmental justice populations, use of media, informational meetings, and attendance at local events. Two types of impacts became particularly important in the environmental justice analysis: impacts associated with tolling, and impacts to resources important to Native Americans. Outreach and coordination conducted to support those two areas of analysis are further summarized from the 2009 Environmental Justice Discipline Report.

Outreach to Support the Tolling Analysis

Tolling Implementation Committee. The Tolling Implementation Committee, created by the Washington State Legislature, conducted public outreach in 2008 to evaluate tolling as a means of financing a portion of the SR 520 Bridge Replacement and HOV Program.

Public-outreach activities included hosting open houses, conducting telephone and Web surveys, attending public committee meetings, and maintaining a project Web site. The Tolling Implementation Committee hosted two rounds of open houses—five open houses in July and August 2008 and three open houses in November 2008. To promote the meetings, the Tolling Implementation Committee placed paid advertisements in *Northwest Asian Weekly*, *Siete Dias*, *The Seattle Medium*, and the *Northwest Observer* (which targets an African-American audience). They also placed placards advertising

the open houses on 1,300 King County Metro and Sound Transit buses.

In November and December of 2008, the Tolling Implementation Committee interviewed staff from agencies that serve low-income, minority, or LEP populations, including the following:

- Catholic Community Services
- King County Housing Authority
- YWCA of East King County

Surveys of Evergreen Point Bridge Users. To understand how tolling of the existing Evergreen Point Bridge might affect low-income or minority populations, environmental justice analysts conducted a telephone survey of 685 individuals who use the Evergreen Point Bridge two or more days a week. Three hundred and eighteen respondents qualified as a member of a population protected under environmental justice laws and guidance. In other words, 318 respondents either identified themselves as Black/African American, Hispanic/Latino, Asian or Pacific Islander, American Indian, or Alaskan Native, or indicated that their household income fell below the Federal poverty level.

Surveys were translated into Spanish to identify Evergreen Point Bridge users who are LEP. Only very small concentrations of survey respondents spoke other languages and surveys were not translated into these languages. WSDOT refers to the U.S. Department of Justice guidelines in deciding when to translate documents into other languages. The Department of Justice recommends that if an ethnic group with a primary language other than English comprises 5 percent or more of an area or 1,000 or more persons in an area, project materials should be translated into that language. For example, if 5 percent or more of an area's

population is Hispanic/Latino, there is a strong possibility that some individuals may have limited understanding of English. Therefore, project materials should be translated into Spanish.

In addition to demographic questions, survey respondents were asked how their travel behavior would be affected by a toll on the Evergreen Point Bridge. Questions about the effects of a toll on SR 520 included the following:

- Would they continue to use the bridge if they had to pay the toll?
- Would they choose an alternate route?
- Would they change their time of travel to a time when the toll would be less expensive?
- Would they use transit or rideshare?
- Would they forgo the trip altogether?

The survey moderator explained that tolls would be collected by a transponder or “card” that would be read by an electronic card reader. Respondents were asked to indicate if they would be likely to have difficulty obtaining a transponder.

Transit intercept survey. Because the license-plate videotaping used to define the travelshed did not capture regular transit users who travel across the Evergreen Point Bridge, analysts conducted a transit intercept survey in June 2008. The survey was conducted before the University of Washington finished its regular session to capture responses from students, faculty, and staff who use transit to travel across the Evergreen Point Bridge. Transit-intercept survey questions were similar to those asked during the telephone survey.

Focus Groups. To collect more detailed information about how tolling might affect low-income or minority populations, analysts conducted two focus groups comprised of survey respondents who indicated a willingness to participate and others who were recruited through social-service agencies that serve environmental justice populations in the Evergreen Point Bridge travelshed study area. The first focus group included English-speaking, low-income bridge users (eight people). The second included English-speaking individuals who are not in low-income or minority populations (12 people). A third focus-group was planned for low- to moderate-income Spanish speakers. Nine individuals were recruited for this group, but only one attended the focus group meeting. As a contingency plan, telephone interviews were conducted with six of the intended participants (see next section).

Spanish-language Telephone Interviews. To collect information on how tolling might affect LEP populations, researchers conducted six telephone interviews in Spanish with Evergreen Point Bridge users (note that these interviews were meant to be consistent with, but shorter than, the focus group meetings). Two of the six interviewees had household incomes below the Federal poverty level. The remaining four interviewees had household incomes below 130 percent of the Federal poverty level. (Note that researchers opted to include Spanish speakers with incomes slightly higher than the Federal poverty level because it is typically more difficult to recruit low-income interview participants than general-population interview participants.)

Coordination with Native Americans

The I-5 to Medina: Bridge Replacement and HOV Project site is located in an area of central Puget Sound that several Native American tribes have occupied. The project is likely to affect the adjudicated “usual and accustomed” treaty fishing and hunting areas of the Muckleshoot Indian Tribe and the nontreaty-based interests of other tribes.

National Historic Preservation Act (NHPA) Section 106 and its implementing regulations require Federal agencies to consult with tribes when proposed projects could affect properties with historic, religious, or cultural tribal significance. Tribes may have input on these cultural resources regardless of whether they have court-affirmed treaty rights or they are federally recognized tribes.

Federally recognized tribes possess sovereignty over their members and their territory, meaning that tribes have the power to make and enforce laws and to establish courts and other forums for resolution of disputes. Recognizing this sovereignty, WSDOT maintains government-to-government relations with federally recognized tribal governments in the State.

In 2004, agencies and tribes with special expertise or permitting authority with respect to any environmental effects associated with the project or alternatives were invited to serve as cooperating agencies (40 CFR 1508.5). As cooperating agencies for the project, the Muckleshoot Indian Tribe and Snoqualmie Nation were involved in the following activities during the NEPA process:

- Participated in agency coordination meetings, joint field reviews, and public-involvement events

- Identified issues of concern regarding the project’s environmental and socio-economic effects and provided timely input on technical issues
- Provided comments on the range of alternatives, methodologies for analysis, technical studies, Discipline Reports, and the EIS.

In addition to consulting with the Muckleshoot Indian Tribe and the Snoqualmie Tribe, WSDOT also consulted with the Confederated Tribes and Bands of the Yakama Nation, the Tulalip Tribes, the Suquamish Tribe, and the Duwamish Tribe, as part of the consultation under Section 106. Input from tribes provided important information on natural, cultural, and archaeological resources in the study area that WSDOT incorporated into the environmental and design process.

Analysis of Impacts on Environmental Justice Populations

To identify the ways in which the project would specifically benefit or adversely affect low-income or minority populations in the study area, environmental justice analysts examined the discipline-specific reports prepared for the SDEIS and outcomes from the public-involvement process – including input into and comments pertaining to the DEIS. After identifying adverse effects and benefits, analysts isolated project effects that would affect people differently. Next, analysts determined whether low-income or minority populations would experience disproportionately high and adverse effects because of the project. For the effects of project construction and operation on the project study area, analysts used geographic information system (GIS) data to map the adverse effects over Census block groups. This allowed a

comparison of the poverty and minority status of those who would be affected by the project with those who would not be affected by the project. The analysts also assessed the possibility that LEP populations would be disproportionately affected.

In addition, analysts considered the following:

- Would measures to avoid or minimize disproportionately high and adverse effects be implemented?
- Are there any project benefits that would affect low-income or minority populations? According to the FHWA implementing order, to offset disproportionately high and adverse effects on low-income or minority populations, project benefits also would have to disproportionately benefit low-income or minority populations.
- Did WSDOT modify the project to avoid or minimize disproportionately high and adverse effects?

The burden of tolling on low-income populations and impacts on important resources to Native American tribes were two areas of impact determined to potentially have disproportionately high and adverse effects. Information from the 2009 Environmental-Justice Discipline Report and the FEIS about those two areas of impact and what was done to avoid, minimize, and mitigate these impacts is summarized in this section.

Effects of Tolling

The assumptions associated with tolling changed over the study period. The traffic analysis conducted for the FEIS made the following assumptions for how SR 520 would be tolled:

- Single-point tolling at one location for vehicles crossing the Evergreen Point Bridge
- Variable toll rates depending on the time of day and whether trips are taken on a weekday or a weekend
- A peak toll rate of \$3.81 (year 2007 dollars) for all vehicle types for the bridge crossing, with exemptions for transit and HOVs with three or more riders.

All vehicles with one or two occupants would be charged a toll to cross the Evergreen Point Bridge. Users who are required to pay the toll would have transponders, or “cards,” that would be read by an electronic card reader. Transponders allow drivers to pay tolls without stopping at a toll booth. Drivers who do not purchase a transponder would have their license plates photographed as they crossed the tolling point, and bills would be sent by mail to the address at which the vehicle is registered.

When applying USDOT and FHWA criteria to determine whether an effect would be disproportionately high and adverse, analysts determined that the effects of the tolls do not meet the first criterion. Low-income, minority, or LEP populations would not predominately bear the effects of tolls, because the toll would be charged to all bridge users, and all bridge users would need either to purchase transponders or be billed for the toll. Analysts could not determine the exact proportion of bridge users who are low-income, minority, or LEP. After overlaying the Evergreen Point Bridge travelshed study area map with U.S. Census data, it did not appear that more bridge users come from Census block groups with higher proportions of low-income, minority, or LEP residents.

The effects of the tolls do meet the second criterion in the USDOT and FHWA guidance. The tolls on SR 520 would be appreciably more severe for low-income users, because low-income users would have to spend a greater proportion of their income on tolls than the general population.

In determining whether the project would have disproportionately high and adverse effects on low-income, minority, or LEP populations, analysts considered whether any benefits would at least partially offset the adverse effects. While it is important to note that many low-income populations would benefit greatly from a faster, more reliable trip, the FHWA implementing order holds that to offset a disproportionately adverse effect on low-income populations, the benefit also needs to have a disproportionately positive effect on low-income populations. In this case, the benefits of a faster, more reliable trip apply to all populations, not just to low-income populations.

For the 2009 report and SDEIS, analysts also considered measures to mitigate for adverse effects, such as transit options along the SR 520 corridor. Using the results of the surveys, focus groups, and one-on-one interviews conducted for the project, at that time it was determined that:

- Many low-income SR 520 users did not feel that transit service would be a viable alternative to paying the toll because of issues with frequency or distance.
- Results from the transit-intercept survey suggested that low-income users do not use transit service on SR 520 at a higher rate than the general population.
- Although many survey respondents indicated that they would use non-tolled

routes as an alternative to paying the toll, these routes would add substantial time, distance, and cost to the trip.

- Only four percent of low-income telephone survey respondents indicated they would carpool to avoid paying the toll.
- The burden of purchasing a transponder and setting up a prepaid account would also be appreciably more severe for low-income bridge users, because they are more likely to be without a credit or debit card and would need to prepay their accounts with cash. Low-income populations are also less likely to have the initial deposit that might be required to prepay an account.
- The burden of purchasing a transponder and setting up a prepaid account or paying a surcharge would also be appreciably more severe for LEP bridge users, who might have difficulty understanding how to use the system.

In the SDEIS it was concluded that, even with mitigation measures, some low-income populations—especially car-dependent populations or populations living in areas without adequate transit service—would experience a disproportionately high and adverse effect as a result of tolling.

Between the SDEIS and FEIS, new information became available that provided a basis for changing that conclusion. First, there were substantial improvements to alternatives to paying the toll, including new investments in transit services across SR 520 and rideshare and vanpool options. As a result of these improvements, fewer low-income populations would be adversely affected by the toll than previously assumed, because there are now more affordable alternatives to paying the toll.

According to guidance that WSDOT received from FHWA, this minimizes the effect of the toll on low-income populations.

Second, FHWA provided WSDOT with guidance that overall project benefits –including those that apply broadly to all users – should be considered in determining whether there is a disproportionately high and adverse effect on low-income or minority populations. All SR 520 users – including low-income users – would benefit from a safer bridge that is less vulnerable to catastrophic failure. In addition, all SR 520 users – including low-income users – would benefit from a faster, more reliable trip across SR 520. Coupled with the new actions taken to provide more affordable alternatives to paying the toll, along with the targeted outreach to environmental justice populations and other mitigation measures, analysts determined that the overall project benefits offset the adverse effects of the toll on low-income populations. Analysts conclude that there would be no disproportionately high and adverse effect as a result of the toll.

Effects on Native American Tribes

In consultation with area tribes, WSDOT and FHWA determined that Foster Island (shown in Figure 6) is a traditional cultural property (TCP) that is eligible for listing in the National Register of Historic Places (NRHP). As defined by 36 CFR 800, a TCP is an established place associated with the cultural practices or beliefs of a living community, that are rooted in the community’s history, and are important in maintaining the continuing cultural identity of the community.

Foster Island, retains significance as an important place to the people of Duwamish descent. The Muckleshoot Indian Tribe,

Snoqualmie Tribe, Suquamish Tribe, and Confederated Tribes; and Bands of the Yakama Nation indicated interest in Foster Island because many tribal members are descended from families who lived near the Evergreen Point Bridge. Parts of Foster Island may contain important archaeological deposits and Native American artifacts that could be uncovered during new excavations.

The construction limits for the Six-Lane Alternative would be within the usual and accustomed fishing areas of federally recognized Native American tribes. The Muckleshoot Indian Tribe may harvest salmon from the study area pursuant to judicially recognized treaty rights, as interpreted by the Boldt Decision of 1974. The Boldt Decision provided the Yakama Tribe “the right to enjoy all these fisheries as they had beforehand.” In effect, the Boldt Decision affirmed that tribes had retained the right to fish at “usual and accustomed” fishing areas when they signed treaties with the U.S. government in 1854 and 1855, according to the Web site Historylink.org.

In the SDEIS, it was determined that, if not avoided or minimized, some construction effects would have disproportionately high and adverse effects on a minority population:

- Because project construction would adversely affect ancient burial grounds of significance to Native American tribes, a minority population would predominately bear construction effects on Foster Island.
- Because project construction and operation would adversely affect the usual and accustomed fishing areas of tribes, a minority population would experience the adverse effect on fishing and the effect would be appreciably more severe than



Figure 6. The location of Foster Island, as shown by the “A” marker, on this Google map. Foster Island is important to many Seattle, WA, Native American tribes.

effects on the general population.

For the Preferred Alternative in the FEIS, WSDOT made a number of design refinements to minimize effects to Foster Island. For example, the bridge height across Foster Island was increased to provide open views at ground level for Arboretum Waterfront Trail users while still maintaining a relatively low-road profile. To minimize the effects to the Foster Island TCP, the Preferred Alternative would not include a stormwater treatment facility on Foster Island and WSDOT limited the additional bridge width needed to accommodate project-design refinements. WSDOT also committed to using low-impact construction techniques, such as work bridges, to further reduce ground disturbance.

FHWA and WSDOT actively engaged in government-to-government consultation with the Muckleshoot Indian Tribe, to determine appropriate mitigation for the project’s effects on resources protected by treaty fishing rights. A number of best management practices to minimize disruption and pollution that could impact fishery resources were included in the FEIS. In addition WSDOT coordinated with the

Muckleshoot Indian Tribe to document important access points in an effort to avoid or minimize effects to tribal fishers. WSDOT is also coordinating with the Muckleshoot Indian Tribe to schedule the closure of the Montlake Cut at a time when the Muckleshoot Indian Tribe is not accessing its fisheries resources in Lake Washington, and is coordinating with all tribes with treaty rights in the pontoon construction and transport area to minimize the effects of pontoon construction and towing on access to tribal fishing areas and fish habitat.

In the FEIS, WSDOT committed to continuing to work through government-to-government consultation with the Muckleshoot Indian Tribe on an agreement to fully and fairly resolve issues associated with the impacts of the project on treaty rights. As a result, WSDOT determined that there would not be a disproportionately high and adverse effect to tribal fishing as a result of the Preferred Alternative.

Record of Decision

Shortly after the release of the FEIS in June 2011, FHWA signed the ROD on August 4, 2011, which allowed WSDOT to further the

design for the I-5 to Medina Bridge Replacement and HOV Project and obtain construction permits.

In addition to the ROD, two separate agreements were developed::

- To address cultural resources effects, tribes were consulting parties to the Section 106 Programmatic Agreement to satisfy the requirements of the NHPA. The agreement includes development of a separate Foster Island Treatment Plan to mitigate for adverse effects on Foster Island. It also includes development of an archaeological treatment plan to address further cultural resources analyses as project design and construction progress.
- WSDOT and FHWA are engaged in government-to-government consultation with the Muckleshoot Indian Tribe to determine appropriate mitigation for the project's effects on resources protected by treaty fishing rights. A Memorandum of Agreement documents FHWA's and WSDOT's commitment to a set of specific mitigation measures. WSDOT and FHWA are also engaged in consultation with the Suquamish Tribe to develop a coordination plan that would avoid and minimize potential temporary effects on their protected resources during construction.

The ROD includes FHWA's conclusion that, considering mitigation, the Selected Alternative would not disproportionately affect low-income or minority populations. The ROD also lists many commitments made by WSDOT and FHWA to surrounding communities before, during, and after project construction.

Effective Practices & Lessons Learned

Effective practices and lessons learned helped to shape the ongoing public-involvement and public-outreach campaigns regarding the project and tolling as well as alternative selection and mitigation development. Results of the outreach and analysis conducted for the project continues to be invaluable to inform outreach to the community about the project status, construction phases, and the tolling program.

Consider the need to expand the study area to include travelshed users in the environmental justice analysis. The 2006 DEIS and 2010 SDEIS recognized that tolls associated with the build alternatives for the I-5 to Medina Project could negatively affect low-income individuals. While these tolls would have to be paid by all users of the new bridge except for vehicles in the HOV lanes (transit, emergency vehicles, and carpools with three or more people), they would represent a proportionally greater expense burden for low-income individuals than for non-low income individuals.

WSDOT conducted research on the equity of tolling for the project, and was initially unable to find any studies on the equity of tolling facilities like the one proposed for the Evergreen Point Bridge, although the research revealed that many studies exist on the equity of high occupancy toll (HOT) lanes.

As part of the SDEIS, analysts determined the need to expand its study area of analysis for purposes of environmental justice. To identify SR 520 users who would be affected by tolling, environmental justice analysts examined the communities from which trips on the Evergreen Point Bridge originated (that is, the Evergreen Point Bridge travelshed). Extensive outreach was conducted to gather opinions regarding

tolling from the public in this travelshed. This analysis was key to determining potential impacts on travelshed users and potential measures to mitigate and/or minimize the burden that tolls would present on low-income and LEP populations.

Consider addressing issues and concerns identified during public outreach as part of the environmental justice analysis. WSDOT learned about concerns regarding tolling through the public-outreach activities including the ability of low-income individuals to afford the tolls, which would limit their ability to cross the bridge; hindrance of the ability for social-service organizations that work with minority and low-income populations, given their limited budgets, to provide services for their clients with tolling; and need for assurances that transit services would be improved and expanded because transit is an important optional form of transportation for those minority and low-income populations.

These concerns about tolling impacts of environmental justice populations helped to shape the depth and breadth of the analysis regarding the tolling component of the project. Specifically, because of the input provided by social-service organizations and advocates for low-income populations regarding the equity of tolling: (1) the environmental justice analysis addressed the topic of equity of tolling in great detail, and even included research as to how this topic has been addressed in other parts of the country for comparable programs; (2) additional outreach specific to tolling effects to the Evergreen Point Bridge travelshed study area was included as part of the FEIS.

The tolling analyses conducted for the project as part of the various environmental documents,

from the 2006 DEIS to the 2011 FEIS, was critical. Further, the analysis contributed to the development of mitigation measures to help address the impacts of tolling on low-income individuals.

Utilize outcomes of outreach and research conducted for a project to inform outreach to low-income and minority populations for later project phases. WSDOT has capitalized on information gained through the earlier public outreach and environmental analysis to inform its ongoing public-outreach program for the SR 520 program. For example, based on the demographic profile of the travelshed study area, WSDOT is also translating information about electronic tolling into multiple languages.

As part of an Urban Partnership Agreement, WSDOT and King County Metro Transit began taking action to provide an affordable alternative to paying tolls. This included expanding transit service and ridesharing service on a number of routes in and near the SR 520 corridor, working with community-based agencies that serve low-income users of the SR 520 travelshed to train them on helping their clients find affordable alternatives to paying tolls, including vanpools and ridesharing; and offering free crossing of the Evergreen Point Bridge between 11 p.m. and 5 a.m. (which does not benefit all affected users, but would benefit service or shift workers).

Government-to-government coordination with Native American tribes is critical to understanding potential project impacts and appropriate mitigation. The important cultural and fishery resources within the I-5 to Medina project study area created a need for very close coordination with area tribes. Working with tribes through a government-to-government relationship was critical for the project team to

understand and characterize potential impacts of the project on the tribes and to define and come to agreement on measures that would avoid, minimize, and mitigate those impacts.

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