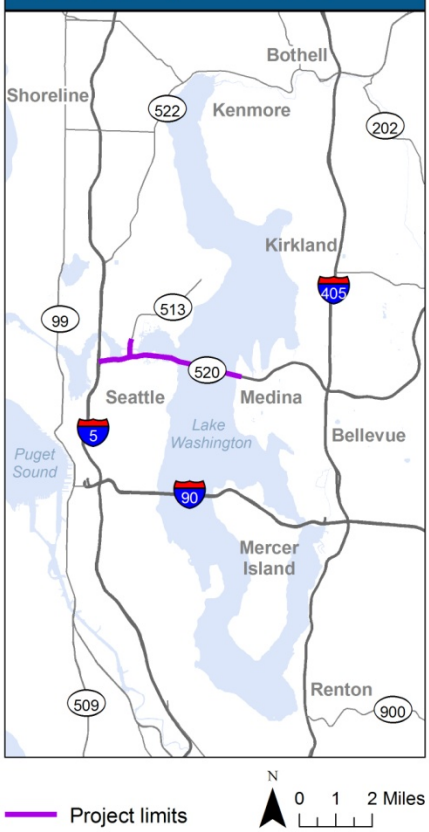
Chapter 1: Introduction to the Project

This chapter describes the purpose and history of the SR 520, I-5 to Medina: Bridge Replacement and HOV Project, including the progress made since the Supplemental Draft Environmental Impact Statement was published in 2010 (see Attachment 10). It also summarizes the input of the public and many stakeholders and presents the Preferred Alternative for the SR 520, I-5 to Medina project.

1.1 Introduction

The State Route (SR) 520, Interstate 5 (I-5) to Medina: Bridge Replacement and High-Occupancy Vehicle (HOV) Project (also referred to as the State Route (SR) 520, I-5 to Medina project) is located at the western end of the SR 520 corridor (Exhibit 1-1). It begins at SR 520's interchange with I-5, the main north-south artery through Seattle, and ends at Evergreen Point Road in Medina, east of Lake Washington. In addition to the I-5 interchange, the 5.2-mile-long corridor currently includes an interchange at Montlake Boulevard and ramps connecting to Lake Washington Boulevard, both in Seattle.

Exhibit 1-1. **Project Vicinity Map**



SR 520 is a critical link connecting the major population and employment centers of the Puget Sound region on either side of Lake Washington. The floating span of the Evergreen Point Bridge, opened in 1963, now carries approximately 115,000 vehicles per day across the lake, providing east-west access for commuters, freight, transit, and general-purpose traffic. The aging floating bridge is vulnerable to failure in a severe windstorm, and the fixed bridges along the corridor do not meet current seismic standards and could collapse in an earthquake. In addition, the corridor currently carries nearly twice as many vehicles as it was originally designed for, resulting in extended congestion and impaired mobility. The uninterrupted movement of people and goods across SR 520 and the floating bridge is essential to the region's economic vitality and quality of life.

The proposed project would improve safety and mobility in the SR 520 corridor by replacing the vulnerable bridges and adding eastbound and

westbound HOV lanes to move people more efficiently in transit and carpools. It would ensure the continued availability of SR 520 as a key corridor for transportation and commerce.

The SR 520, I-5 to Medina project is designated as a strategic project in the Puget Sound Regional Council's *Vision 2040* plan (PSRC 2009), the Metropolitan Transportation Plan for the Puget Sound region. It is accounted for in the financial strategy and air quality conformity analysis of the current regional transportation plan. Full funding is reasonably anticipated to be available for completion of all phases of the project within the time period anticipated for completion of the project. The project is also included in the Washington State Department of Transportation's (WSDOT's) 2009-2012 Statewide Transportation Improvement Program (WSDOT 2009a).

Why is this project important?

The 48-year-old Evergreen Point Bridge is fast becoming a victim of age and obsolescence. Despite the expansion of the Lake Washington Interstate 90 (I-90) bridge crossing to the south in 1989, the Evergreen Point Bridge and the adjoining stretches of SR 520 are choked with traffic for hours every weekday. Simply stated, more people want to use the highway than it can accommodate. Narrow shoulders and the lack of an HOV lane mean that a single breakdown can snarl traffic for hours, while buses and carpools creep along with general-purpose traffic in the resulting congestion. Meanwhile, strong winds and high waves threaten the integrity of the floating portion of the bridge and sometimes force its closure. In addition, the Portage Bay Bridge and both the west and east approaches to the Evergreen Point Bridge are supported by hollow columns that are especially vulnerable to damage in an earthquake.

For these reasons, the SR 520, I-5 to Medina: Bridge Replacement and HOV Project is one of the state's highest transportation priorities. Traffic safety and reliability need to be improved, and the vulnerable structures built in the 1960s must be replaced. Travel in the region must be made more efficient by providing better transit options in the SR 520 corridor. The neighborhoods and the region as a whole must be better served by the transportation infrastructure; at the same time, the built and natural environment must be protected as much as possible from the potential effects of a major transportation corridor.

Why is this Final EIS being prepared?

Environmental review for this project began in 2000, when the Federal Highway Administration (FHWA) and WSDOT filed a Notice of Intent to issue an environmental impact statement (EIS) under the National Environmental Policy Act (NEPA, implemented by 40 Code of Federal Regulations [CFR] Sections 1500 through 1508) and the State

Environmental Policy Act (SEPA, implemented by Washington Administrative Code [WAC] Chapter 197-11). Both NEPA and SEPA require that an EIS be prepared when an undertaking is likely to result in significant adverse impacts on the natural and/or built environment.

In August 2006, FHWA and WSDOT issued a Draft EIS evaluating the effects of the No Build, 4-Lane, and 6-Lane Alternatives, as well as several design options for the 6-Lane Alternative (Attachment 12). The Draft EIS covered improvements in the SR 520 corridor from I-5 in Seattle to just west of I-405 in Bellevue. Following its issuance, FHWA and WSDOT determined that the portion of the corridor east of Evergreen Point Road had independent utility and should be evaluated as a separate project. In January 2010, FHWA and WSDOT issued a Supplemental Draft EIS (SDEIS) for the SR 520 corridor from I-5 to Medina that evaluated three new 6-Lane Alternative design options developed by a legislatively mandated mediation group (Attachment 10). (More information on the development and evaluation of alternatives and options can be found in Chapter 2.) The Draft EIS and the SDEIS generated, in total, over 2,500 comment letters, e-mails, and oral testimonies, comprising thousands of individual comments from the public, regulatory agencies, and Native American tribes. Additional information on comments is provided later in this chapter and in Attachments 11 and 13.

After publishing the SDEIS and evaluating the comments received, FHWA and WSDOT identified a Preferred Alternative in April 2010. The Preferred Alternative is most similar to SDEIS Option A, but includes a number of improvements to reduce neighborhood and park effects, improve regional and local transit connections, and enhance compatibility with potential future light rail transit in the corridor. A description of the Preferred Alternative can be found in Chapter 2.

NEPA and SEPA require that FHWA and WSDOT prepare a Final EIS to respond to comments received on the Draft EIS and SDEIS (40 CFR Sec. 1503.4). NEPA also requires FHWA and WSDOT to discuss at appropriate points in the final EIS "any responsible opposing view which was not adequately discussed in the draft statement" (40 CFR Sec. 1502.9) and indicate their responses to the issues raised. In addition, a preferred alternative must be identified in the Final EIS (40 CFR Sec. 1502.14). Preparing this Final EIS provides FHWA and WSDOT the opportunity to respond to comments from agencies, tribes, and the public; further evaluate the Preferred Alternative identified in April 2010; supplement, improve, and modify previous analyses as appropriate; and make corrections to previous environmental documentation. The results of these additional analyses have been incorporated into the Final EIS.

How is this Final EIS organized?

This Final EIS is designed to provide readers with a complete record of the environmental analysis completed and the decision-making process that resulted in the identification of the Preferred Alternative. Accordingly, it includes the full analysis of Options A, K, and L from the SDEIS, as well as new analysis of the Preferred Alternative and updates to the No Build Alternative. The Preferred Alternative is compared with the No Build Alternative and the SDEIS options to allow readers to understand how future conditions would change from the baseline, and also how its effects would differ from Options A, K, and L for each aspect of the built and natural environment.

The Final EIS has the same chapter arrangement as the SDEIS, but adds three new chapters (9, 10, and 11):

- Chapter 1 introduces the project and its purpose and need.
- Chapter 2 describes the development and evaluation of project alternatives, provides information on the design of the Preferred Alternative, and compares the Preferred Alternative to the SDEIS options and the No Build Alternative.
- Chapter 3 describes project construction methods and sequencing.
- Chapter 4 repeats the information on the affected environment from Chapter 4 of the SDEIS, with updates as appropriate.
- Chapter 5 identifies the project's permanent direct and indirect effects on the built and natural environment, with new text on the Preferred Alternative added to the SDEIS discussions of Options A, K, and L. Updates to the No Build Alternative are also described for applicable disciplines.
- Chapter 6 identifies the effects of project construction on the built and natural environment, with new text on the Preferred Alternative added to the SDEIS discussions of No Build and Options A, K, and L.
- Chapter 7 discusses the project's cumulative effects, with new information provided for the Preferred Alternative as appropriate.
- Chapter 8 discusses other considerations, such as areas of controversy and unavoidable adverse effects.
- Chapter 9 is the final Section 4(f) Evaluation for the project (the draft Section 4(f)/Section 6(f) evaluation was Attachment 6 in the SDEIS).
- Chapter 10 is a summary of the Section 6(f) Environmental Evaluation for the project. The complete Section 6(f) Environmental Evaluation is provided in Attachment 15. (In the SDEIS, the draft Section 6(f) evaluation was combined with the Section 4(f) evaluation in Attachment 6.)

- Chapter 11 discusses the comments received during the public comment periods for the 2006 Draft EIS and the 2010 SDEIS, and WSDOT's general approach to reviewing and providing responses to the principal issues raised.

Attachments 1 through 6 are provided in hard copy in this Final EIS, and Attachments 7 through 19 are included on the DVD attached to the cover of the Executive Summary. Updated discipline reports, addenda, and errata are presented in Attachment 7 along with the corresponding discipline reports from the 2010 SDEIS. The project mitigation plans and the Section 106 Programmatic Agreement are included in Attachment 9. The comments received on the SDEIS and WSDOT's responses are found in Attachment 11, and Attachment 13 contains the Comment Summary Report prepared in response to the comments on the 2006 Draft EIS. A complete set of the Draft EIS comments is also included in Attachment 13.

1.2 What is the project purpose?

In 2000, the Trans-Lake Washington Study Committee developed the statement of purpose, which has guided the environmental review process since that time:

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

The statement of purpose—part of a longer purpose and need statement also adopted in 2000—has helped the project team develop and evaluate alternatives for the EIS analysis by defining the objectives that the alternatives must meet. Although the project limits have changed since the original statement was adopted, the project still has the purpose of improving mobility within the SR 520 corridor, and its transportation performance is evaluated on a corridor-wide basis. However, the I-5 to Medina project also serves another important purpose: to replace the aging and vulnerable Evergreen Point, Portage Bay, and west approach bridges. The following section describes the need for the project in terms of both mobility and safety.

What is mobility, and how is it measured?

The fact that the project purpose statement reads, "improve mobility for people and goods"—rather than "for vehicles and goods"—is significant. Recognizing the importance of transit and carpooling in this urban corridor, the Trans-Lake Washington Study Committee adopted evaluation criteria that measured how well potential alternatives would move people in addition to how well they would move vehicles. For this reason, the transportation analysis estimates future person-trips as well as future vehicle trips in the corridor, with an objective of serving as many *people* as possible within a given roadway capacity. While this EIS looks at many measures of transportation performance—travel times, levels of service, areas, and hours of congestion—this emphasis on maximizing the flow of people and goods through the corridor is central to the project purpose. Please see Chapter 2 for more information on evaluation criteria, and Chapter 5 (Section 5.1) for a detailed analysis of the project's effects on mobility.

1.3 Why is the project needed now?

The Evergreen Point Bridge is a critical component of the Puget Sound region's transportation infrastructure. It is one of only two connections across Lake Washington that link urban centers in Seattle and the Eastside. The SR 520, I-5 to Medina: Bridge Replacement and HOV Project addresses two key issues facing the SR 520 corridor: 1) bridge structures that are vulnerable to catastrophic failure; and 2) worsening traffic levels

and congestion due to growth in jobs and housing over the last two decades.

SR 520's bridges are vulnerable to catastrophic failure.

The Evergreen Point Bridge and its approaches are in danger of structural failure. Recent WSDOT studies have demonstrated that the floating span of the Evergreen Point Bridge is highly vulnerable to windstorms, while the Portage Bay Bridge and the east and west approaches to the Evergreen Point Bridge are vulnerable to earthquakes. In 1999, WSDOT estimated the remaining service life of the floating portion of the Evergreen Point Bridge to be 20 to 25 years, based on its structural condition and the likelihood of severe windstorms. Its life expectancy now is only 10 to 15 years.

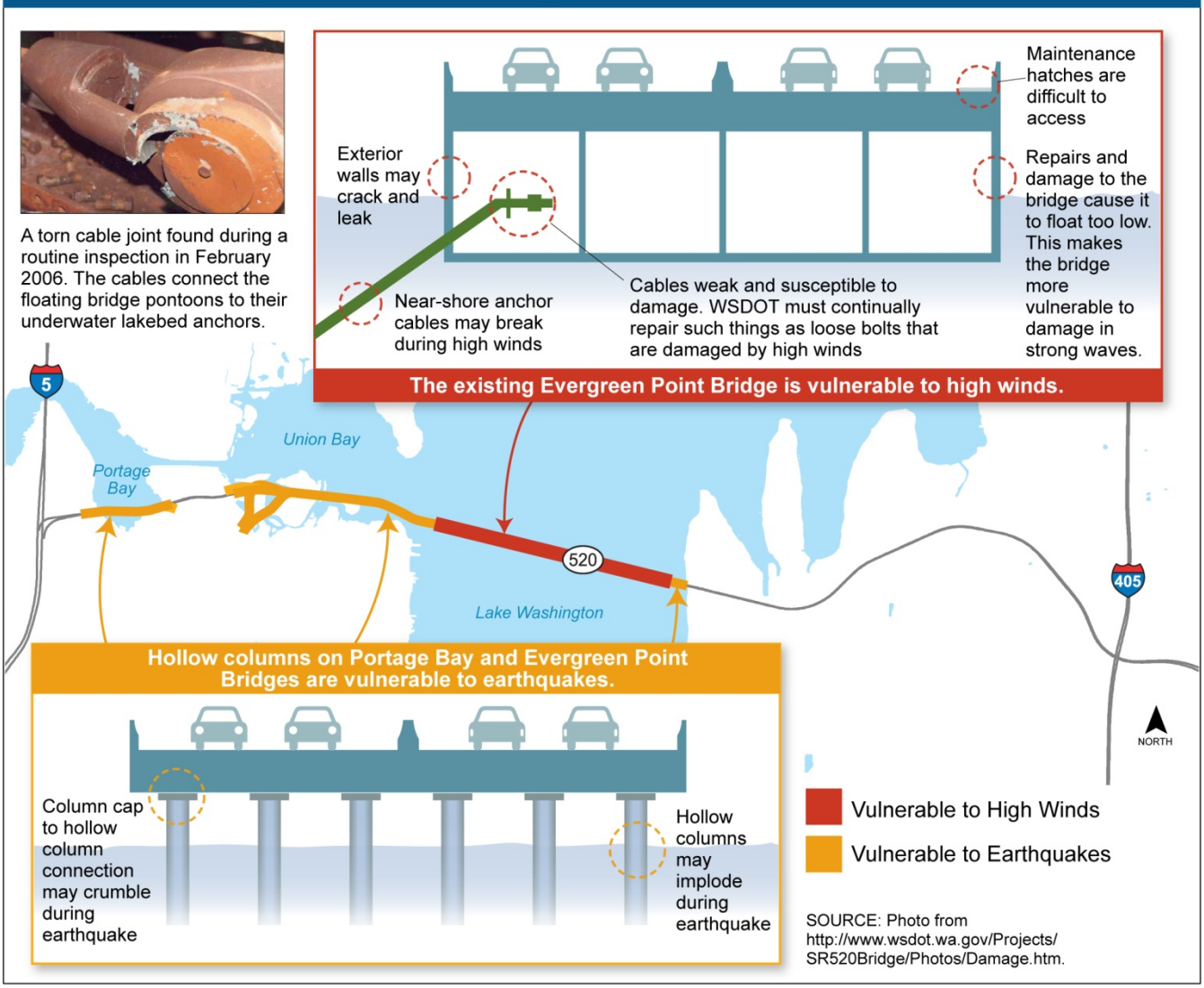
The floating span was originally designed for a sustained wind speed of 57.5 miles per hour (mph). In 1999, WSDOT rehabilitated the bridge to allow it to withstand sustained winds up to 77 mph. This still falls well short of the current design standard of 92 mph. Moreover, some bridge mechanisms have been damaged in recent storms. The floating pontoons currently float about 1 foot lower than originally designed, increasing the likelihood of waves breaking onto the bridge deck. Cracks in the structure leak water that WSDOT must pump out on a regular basis. The probability that the bridge will sustain serious structural damage (i.e., sink or become impassable to traffic) over the next 15 years is extremely high. To bring the Evergreen Point Bridge up to current design standards and eliminate the risk of its catastrophic failure, the existing span must be completely replaced. Exhibit 1-2 shows the vulnerable sections of SR 520.

The ever-present possibility of an earthquake in the Seattle area poses additional risks to other bridges in the SR 520 corridor. The columns of the Portage Bay Bridge and both the west and east approaches to the Evergreen Point Bridge are hollow and do not meet current seismic design standards. Hollow-core columns are difficult and costly to retrofit to today's accepted seismic protection levels; WSDOT studies indicate that such retrofitting would cost nearly as much as building new structures, and would have similar environmental effects. WSDOT estimates that over the next 50 years, there is a 20 percent chance of serious damage to these structures in an earthquake.

SR 520 is congested and unreliable, and does not encourage maximum transit and carpool use.

A second key reason for implementing this project now is the severe traffic congestion in the SR 520 corridor, which was the reason for initiating the original Trans-Lake Washington Study in 1998. The traffic demand in both directions exceeds the highway's capacity, creating several hours of congestion every weekday. The corridor was not built to handle as many

Exhibit 1-2. **Points along SR 520 Vulnerable to Earthquake or Windstorms**



vehicles as currently want to use it. All of these vehicles result in frequent breakdown of the traffic flow and long backups of vehicles traveling at very slow speeds.

A number of factors have contributed to today's traffic congestion on SR 520. One factor is the pattern of population growth and the changing location of jobs in the project area since the highway opened in 1963. The new crossing of Lake Washington made it much easier for people to live in Eastside communities and work in Seattle, increasing the number of westbound vehicles across the Evergreen Point Bridge in the morning and eastbound in the evening. Meanwhile, some of these Eastside communities began to develop their own commercial and employment centers, eventually leading to substantial growth of "reverse commute" traffic. Today, seven times more vehicles cross SR 520 each day than when the

bridge first opened in 1963, and there is no longer a reverse commute: traffic during peak hours is nearly equal in each direction.

Beyond the number of people and cars, another important factor causing today's congestion is the design of the Evergreen Point Bridge. By today's engineering standards, the bridge is too narrow. The narrow shoulders provide no room for vehicles to pull over after an accident or breakdown. Instead, disabled vehicles must stay in the through lane and block other traffic, immediately rendering a full lane of traffic unusable. This slows down traffic and impedes emergency vehicle response. In addition, the westbound HOV lane on the Eastside ends at the bridge. This creates congestion as westbound HOV traffic is forced to merge with general-purpose traffic.

Together, growth and physical limitations will make the future traffic situation on SR 520 worse if the corridor is not improved. Under average evening peak-hour conditions today, a single-occupant vehicle traveling westbound takes approximately 39 minutes to travel SR 520 from SR 202 in Redmond to I-5 in Seattle—a distance of about 13 miles. By 2030, if the project is not built, this same trip will take over an hour (Final Transportation Discipline Report, Attachment 7). This makes it imperative that commuters be provided with travel choices that allow them to avoid driving alone, and that the proposed project be built to support increased use of transit and HOVs.

Traffic congestion is more than an inconvenience for drivers. It also impairs the regional economy and the quality of our lives and communities. Delays increase business costs, discourage growth, and create disincentives for businesses to locate in the region. Congestion also generates pollutants from idling vehicles, which are much less efficient than vehicles operating at higher speeds.

1.4 What would the project accomplish?

The SR 520, I-5 to Medina: Bridge Replacement and HOV Project would improve safety and mobility in the SR 520 corridor by improving SR 520 from I-5 in Seattle to Evergreen Point Road in Medina.

The project would include the following components:

- A new Evergreen Point Bridge, designed to current standards for wind and wave resistance
- New Portage Bay and west and east approach bridges to a floating bridge designed to current seismic standards
- Four general-purpose lanes and two HOV lanes, providing increased mobility and reliability for transit and carpools as well as for general-purpose vehicles

- Wider shoulders and improved curves for greater safety and improved reliability
- Variable-rate tolling to provide project funding and improve mobility during peak periods
- Landscaped lids over sections of the highway to reconnect neighborhoods
- A regional bicycle/pedestrian path across Lake Washington with connections to existing bicycle and pedestrian facilities
- Stormwater treatment to improve the quality of runoff from SR 520, which is currently not treated
- Noise reduction strategies to lower sound levels in neighborhoods and parks adjacent to the corridor

1.5 What would happen if the project were not built?

If the project were not built, the section of SR 520 between I-5 and Evergreen Point Road would not be improved, and these critical needs would not be met:

- The risk of bridge failure in a storm or earthquake would increase as the structures continued to age, with consequences ranging from severe traffic congestion to loss of life. As the floating bridge becomes more fragile, it would require more frequent closures to protect its components from damage.
- Planned growth in the project area over time would cause continued growth in traffic volumes on SR 520, increasing congestion and raising the potential economic and social cost of traffic closures and/or bridge failures.
- Transit vehicles and carpools would remain in congested general-purpose lanes, increasing travel time, reducing reliability, and discouraging commuters from choosing transit.
- The facility's narrow shoulders would continue to result in blocked lanes and long delays when accidents occur.
- Without lids, SR 520 would continue to serve as a barrier between neighborhoods.
- Pedestrians and bicyclists would remain limited to I-90 as a choice for crossing Lake Washington.
- Stormwater discharging from SR 520 into Portage Bay and Lake Washington would remain untreated.

1.6 Who has been involved in the environmental process?

Who are the lead agencies?

NEPA and SEPA require that one or more lead agencies take responsibility for the environmental review process. For this project, FHWA is the federal lead agency under NEPA, and WSDOT is the project proponent and the state lead agency under SEPA. FHWA is providing highway design guidance and environmental oversight. WSDOT is leading the highway design efforts and development of the EIS. The lead agencies also give close consideration to public, agency, and tribal comments on the project.

Who are FHWA and WSDOT's cooperating agencies for this project?

Staff from the affected jurisdictions, representatives of state and federal natural resource agencies, and tribes have provided advice and recommendations to the lead agencies about the scope and content of environmental analysis. These "cooperating agencies" are defined under NEPA as those that have an interest in a proposed project for which environmental documents are being prepared. Most cooperating agencies issue or contribute to permit decisions for a project, and will use FHWA's and WSDOT's EIS under NEPA or SEPA in support of these decisions. A list of cooperating agencies for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project is shown in the box at right.

WSDOT worked with the cooperating agencies through a forum known as the Regulatory Agency Coordination process (RACp). All agencies with jurisdiction over the project were invited to attend, as were all tribes with fishing rights and/or cultural resource interests in the project area. While the RACp itself was primarily focused on sharing of information, smaller technical working groups (TWGs) met more often to focus on topics of specialized interest, including natural resource effects, in-water construction, mitigation, stormwater, parks, Endangered Species Act compliance, and the design of the bridge maintenance facility. In the TWGs, agency and tribal staff worked closely with WSDOT to collaborate on methods for impact assessment and mitigation planning. WSDOT also met regularly with resource agency directors to keep them apprised of project status.

Cooperating Agencies

- Federal Transit Administration
- National Marine Fisheries Service
- National Park Service
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- Muckleshoot Indian Tribe
- Snoqualmie Indian Tribe
- Washington State Department of Archaeology and Historic Preservation
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Washington State Department of Natural Resources
- Washington State Recreation and Conservation Office
- Sound Transit
- Puget Sound Clean Air Agency
- Puget Sound Regional Council
- King County
- City of Medina
- City of Seattle

How have FHWA and WSDOT consulted with Native American tribes?

FHWA and WSDOT have engaged with affected tribal nations through government-to-government consultation and conducted outreach through correspondence, individual meetings, and resource agency meetings. The Muckleshoot Indian Tribe and the Snoqualmie Indian Tribe are cooperating

agencies under NEPA for the SR 520, I-5 to Medina project. In this role, they had the opportunity to review discipline reports for the SDEIS (Attachment 7) and other environmental documents prior to public release.

The Muckleshoot Indian Tribe is the only tribe with usual and accustomed treaty fishing rights in Lake Washington and its tributaries. FHWA and WSDOT have coordinated and are continuing to coordinate with the tribe on effects on fishing access and fish habitat. Staff from the Muckleshoot Indian Tribe Fisheries Division (MITFD) participated in the RACp and the Natural Resource TWG, where they provided input on impact calculation methods and potential mitigation measures. MITFD staff also provided comments on the published SDEIS. Currently, formal government-to-government consultation is ongoing between FHWA, WSDOT, and the Muckleshoot Tribe to determine appropriate mitigation for the project's effects on resources protected by treaty fishing rights. A draft agreement identifying formal commitments is expected to be completed in summer 2011, with a final agreement in late 2011.

Section 106 of the NHPA and its implementing regulations require federal agencies to consult with tribes when proposed projects could affect properties with historic, religious, or cultural significance to those tribes. Tribes may have input on these cultural resources regardless of whether they have court-affirmed treaty rights or are federally recognized. FHWA and WSDOT have consulted with tribes whose cultural resources might be affected by the project, including the federally recognized Muckleshoot Indian Tribe, Snoqualmie Tribe, Suquamish Tribe, and Tulalip Tribes, as well as the non-federally recognized Duwamish Tribe. Although the project team has corresponded with the Yakama Indian Nation, the Yakama Indian Nation defers to tribes more local to the project and has not met with WSDOT since publication of the Draft EIS (Attachment 12). All affected tribes have had an opportunity to review the cultural resource evaluation for the project.

The results of tribal consultation under Section 106, including mitigation measures to which WSDOT has agreed, are memorialized in a Programmatic Agreement between FHWA, WSDOT, the tribes, and the Department of Archaeology and Historic Preservation (DAHP). WSDOT is also working in consultation with the tribes and DAHP to develop a Foster Island Treatment Plan (FITP). FHWA and WSDOT will continue to coordinate with the tribal nations throughout detailed project design to implement the mitigation measures committed to in the Programmatic Agreement and the FITP and to ensure that construction activities are monitored as necessary to ensure that any unanticipated discoveries of cultural resources are addressed appropriately. The Programmatic Agreement is included in Attachment 9 of this Final EIS.

WSDOT has worked with tribes to address cultural resource concerns, including by involving tribal staff in fieldwork in culturally sensitive areas,

and through development of the Programmatic Agreement and FITP. The FITP addresses effects to Foster Island, a traditional cultural property identified through the Section 106 process. For example, following identification of the project's Preferred Alternative, WSDOT conducted archaeological explorations at locations on Foster Island where new bridge columns were proposed. WSDOT involved tribal staff in the work plan development for this fieldwork, extended opportunities for tribal monitors to participate, notified tribes prior to beginning the work, and hosted tribal staff and members on field visits to observe WSDOT crews. Similar opportunities will be extended to tribal members for additional fieldwork and construction taking place in culturally sensitive areas.

For potential construction of supplemental stability pontoons in Aberdeen, WSDOT and FHWA have coordinated with the Quinault Indian Nation and the Chehalis Tribe as part of the SR 520 Pontoon Construction Project.

How have FHWA and WSDOT coordinated with other transportation agencies and projects?

FHWA and WSDOT have coordinated with executive and technical staff from King County Metro and Sound Transit on an ongoing basis. FHWA has delegated most technical coordination work to WSDOT, but has participated in meetings to provide strategic support and confirm interagency agreements, as appropriate.

In 2007, WSDOT, King County, and Sound Transit partnered with the University of Washington to develop the 2008 High Capacity Transit (HCT) Plan to accomplish the legislative directive of Engrossed Substitute Senate Bill (ESSB) 6099. ESSB 6099 called for the partner agencies to jointly develop a multimodal transportation plan that ensured coordination of bus and rail services throughout the SR 520 corridor, specifically calling out development of alternatives for a multimodal transit center in the Montlake interchange vicinity. The 2008 HCT Plan (WSDOT, Sound Transit, and King County Metro 2008) recommended implementation of bus rapid transit (BRT) in the SR 520 HOV lanes once the project was complete, and provided recommendations for routes and service levels. The SR 520, I-5 to Medina project would provide the needed infrastructure for BRT service, but implementation of enhanced service would be the responsibility of the transit agencies. The plan also recommended the development of a multimodal transportation center in the Montlake Triangle area to serve bus, light rail, bicyclists, and pedestrians.

Since completion of the HCT Plan, technical staff from WSDOT, Sound Transit, and King County Metro, and the Seattle Department of Transportation (SDOT) have met regularly to ensure coordination of planning for proposed projects and service. Most recently, the agencies collaborated on various transportation planning and financing

recommendations as part of the ESSB 6392 workgroup. More information on the workgroup's efforts can be found in Section 1.12 of this chapter.

1.7 How is the SR 520, I-5 to Medina project related to other projects and processes in the SR 520 Program?

The Draft EIS for the SR 520 HOV and Bridge Replacement Project, published in August 2006, evaluated the SR 520 corridor from I-5 in Seattle to 108th Avenue NE in Bellevue as a single project. Since that time, in response to changing conditions, WSDOT has worked with FHWA to develop new projects within the context of an overall SR 520 corridor program. Each project has a separate purpose and need; each provides independent benefit to the region. The four projects in the SR 520 program include:

- SR 520, I-5 to Medina: Bridge Replacement and HOV Project
- SR 520, Medina to SR 202: Eastside Transit and HOV Project
- SR 520 Pontoon Construction Project
- SR 520 Variable Tolling Project

This section briefly describes each of the other projects in the SR 520 Bridge Replacement and HOV Program, how they meet FHWA's criteria for logical termini under NEPA, and the status of their environmental planning processes.

The SR 520 Bridge Replacement and HOV Program

The SR 520 program projects are:

- SR 520, I-5 to Medina: Bridge Replacement and HOV Project
- SR 520, Medina to SR 202: Eastside Transit and HOV Project
- SR 520 Pontoon Construction Project
- SR 520 Variable Tolling Project

SR 520, Medina to SR 202: Eastside Transit and HOV Project

The SR 520, Medina to SR 202: Eastside Transit and HOV Project was initiated in 2008 to improve transit travel time and reliability in response to strong growth in jobs, housing, and transit demand east of Lake Washington. The project will complete the SR 520 HOV system from Evergreen Point Road in Medina to SR 202 in Redmond; build direct transit access from the South Kirkland Park-and-Ride; and provide community and environmental benefits, including lids, noise walls, a bicycle/pedestrian path, and stream and habitat enhancements. These improvements will support existing demand and planned improvements in transit use, and will enhance safety by improving HOV lane operations.

WSDOT and FHWA prepared an environmental assessment (EA) to evaluate the effects of the SR 520, Medina to SR 202 project. The EA was issued in December 2009 (WSDOT 2009b), and after a 30-day public comment period, an updated EA was issued in May 2010 (WSDOT 2010c). Based on the environmental assessment and public comment period, FHWA determined that project improvements would not result in significant adverse effects on the environment. These findings and the

mitigation measures that have been incorporated into the project are described in the Finding of No Significant Impact (FONSI), issued on May 21, 2010 (WSDOT 2010d). In November 2010, WSDOT awarded a contract for the project to Eastside Corridor Constructors, with construction expected to begin in early 2011 and conclude in 2014.

The termini of the SR 520, Medina to SR 202 project are Evergreen Point Road on the west and SR 202 on the east. The existing freeway transit stop at Evergreen Point Road is a key hub for transit on the Eastside, connecting north-south routes with east-west routes across Lake Washington; SR 202 is the end point of SR 520 and the Eastside HOV lanes. The project will provide benefit whether or not the SR 520, I-5 to Medina project is built, improving transit travel times significantly within the Eastside portion of the SR 520 corridor. The new transit stop proposed for Evergreen Point Road is designed not to restrict consideration of alternatives for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project, and will serve its intended purpose even if that project is not built.

SR 520 Pontoon Construction Project

The SR 520 Pontoon Construction Project was an outcome of planning conducted for the Evergreen Point Bridge in 2006-2007. The planning process evaluated the potential for catastrophic failure of the existing bridge and concluded that the pontoons had the longest lead time of any component of the bridge, and that it would be prudent for WSDOT to have replacement pontoons ready for an emergency. The project's purpose is to construct and store new pontoons, which would be used to restore the existing traffic capacity of the Evergreen Point Bridge in the event of a catastrophic failure. Having pontoons ready for such a catastrophic failure would allow the bridge to be restored several years faster than if the pontoons were constructed in response to a disaster. This would, in turn, reduce adverse effects on traffic and the regional economy.

FHWA and WSDOT prepared a Draft EIS on the project in May 2010 (WSDOT 2010e), and issued a Final EIS in December 2010 (WSDOT 2010e) and a Record of Decision in January 2011 (WSDOT 2011). WSDOT has awarded a design-build contract to Kiewit-General Joint Venture for building pontoons in Grays Harbor County. Final design and construction of a new pontoon construction facility is scheduled to begin in spring 2011, with the first pontoons being completed in 2012.

The project will build only enough pontoons to replace the existing 4-lane capacity of the bridge in a design that meets current standards. If the pontoons are not needed for catastrophic failure before construction begins on the SR 520, I-5 to Medina: Bridge Replacement and HOV Project, they will be used for the proposed replacement of the floating bridge. Additional supplemental stability pontoons would be needed to provide flotation for 6 lanes of traffic. The construction of these additional pontoons is needed

only for the SR 520, I-5 to Medina project, and therefore is being evaluated in this Final EIS.

The SR 520 Pontoon Construction Project has independent utility because the bridge is vulnerable and would need to be replaced if it failed, regardless of whether the SR 520, I-5 to Medina project goes forward. Its pontoons are designed for a 4-lane replacement bridge that can be expanded to 6 lanes; hence, it does not restrict consideration of alternatives for projects in the SR 520 corridor.

SR 520 Variable Tolling Project

The SR 520 Variable Tolling Project is part of the Lake Washington Congestion Management Program, funded by the U.S. Department of Transportation. In summer 2011, WSDOT will begin automated electronic tolling on SR 520 to relieve existing congestion. Variable pricing will encourage drivers to choose alternate routes, times, and travel modes, or to eliminate trips altogether. This is expected to result in reduced congestion, providing a more reliable trip for users of SR 520. WSDOT prepared an EA on this project (WSDOT 2009c) and received a FONSI from FHWA in June 2009 (WSDOT 2009d).

Under the Variable Tolling Project, users of the existing bridge will be charged a toll whose amount will vary based on time of day. The toll is designed to maintain travel time, speed, and reliability while generating revenue to fund improvements in the SR 520 corridor. Tolls will be completely automated, with no toll booths. All vehicles will be charged a toll to cross SR 520 except transit, registered vanpools, maintenance vehicles, and tow trucks responding to blocking incidents. Users who are required to pay the toll will have transponders (Good To Go! passes; www.goodtogo.org) that are read by an electronic reader. Cars without transponders will have their license plates photographed and will be billed by mail at a higher fee to defray the cost of processing and mailing.

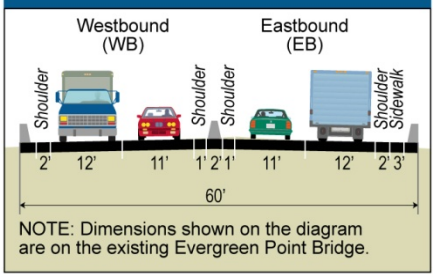
The Lake Washington Congestion Management Program includes tolling as a key component of the SR 520 program's financing plan, which is consistent with previous assumptions in the Draft EIS and SDEIS. Tolling was authorized by the legislature in 2009 under ESHB 2211, with variable toll rates also set by the legislature in 2011 under ESSB 6700. Any future changes to the toll rate structure after the new bridge is in place will be determined by the state tolling authority. Please see Section 1.11 for additional information on tolling assumptions made for the SR 520, I-5 to Medina project. Although the SR 520, I-5 to Medina project and the Variable Tolling Project would each impose a toll on SR 520, they would do so for different purposes. The Variable Tolling Project's tolls are designed primarily to reduce existing congestion, although the legislature has chosen to allocate their proceeds to funding projects in the SR 520 corridor. Tolls for the SR 520, I-5 to Medina project, on the other hand, would be set to

meet funding requirements. Congestion management would provide an independent benefit, regardless of whether the SR 520, I-5 to Medina project is built, and would not affect consideration of alternatives for improvements to the corridor.

1.8 What is the Preferred Alternative evaluated in the Final EIS?

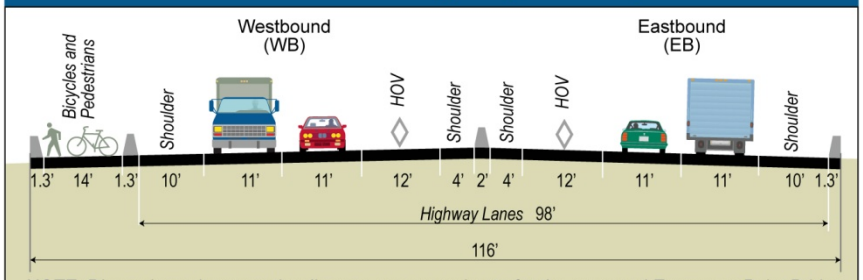
The new SR 520 corridor would be six lanes wide (two 11-foot-wide outer general-purpose lanes and one 12-foot-wide inside HOV lane in each direction), with 4-foot-wide inside shoulders and 10-foot-wide outside shoulders across the floating bridge. Exhibit 1-3 shows a cross section of the existing bridge and Exhibit 1-4 shows the proposed 6-lane cross section. The typical roadway cross-section across the floating bridge would be 116 feet wide, compared to the existing width of 60 feet.

Exhibit 1-3. **No Build Alternative Roadway Cross Section**



NOTE: Dimensions shown on the diagram are on the existing Evergreen Point Bridge.

Exhibit 1-4. **6-Lane Alternative Floating Bridge Roadway Cross Section**



NOTE: Dimensions shown on the diagram are approximate for the proposed Evergreen Point Bridge.

In response to community interests expressed during public review of the January 2010 SDEIS, the SR 520 corridor across the Portage Bay Bridge would operate as a boulevard or parkway with a widened, planted median and a posted speed limit of 45 miles per hour. To reduce width in this area while maintaining safe operations, a 14-foot managed shoulder (rather than an auxiliary lane) would carry westbound traffic destined for northbound I-5 during peak congestion periods. Elsewhere in this section of the corridor, the width of the inside shoulders would be narrowed from 4 feet to 2 feet, and the width of the outside shoulders would be reduced from 10 feet to 8 feet.

DEFINITION

Managed Shoulder

A managed shoulder provides the function of an auxiliary lane by using the shoulder to maintain acceptable traffic operations during the peak commute periods, special events, and for accident management. It also allows for a narrower footprint and maintains traffic operations on both the freeway and local system when needed to help relieve congestion.

The major components of the Preferred Alternative are illustrated in Exhibits 2-2 and 2-3 in Chapter 2.

The Preferred Alternative would include the following elements (listed from west to east):

- An enhanced bicycle/pedestrian crossing adjacent to the East Roanoke Street bridge over I-5
- Reversible transit/HOV ramp to the I-5 express lanes, southbound in the morning and northbound in the evening

- New undercrossings and an integrated lid at 10th Avenue East and Delmar Drive East
- A six-lane Portage Bay Bridge with a 14-foot-wide westbound managed shoulder that would be used as an auxiliary lane during peak commute hours
- An improved urban interchange at Montlake Boulevard integrated with a 1,400-foot-long lid configured for transit, pedestrian, and community connectivity
- A new bascule bridge (drawbridge) across the Montlake Cut to provide additional capacity for transit/HOV, bicycles, and pedestrians
- Improved bridge clearance over Foster Island and the Arboretum Waterfront Trail
- A new west approach bridge configured to be compatible with future high-capacity transit (including light rail)
- A new 14-foot-wide bicycle/pedestrian path with scenic pull-outs along the north side of the new Evergreen Point Bridge (including the west and east approaches), connecting regional trails on both sides of Lake Washington
- A new bridge maintenance facility and dock located underneath the east approach of the Evergreen Point Bridge
- Re-striped and reconfigured roadway between the east approach and 92nd Avenue NE, tying in to improvements made by the SR 520, Medina to SR 202: Eastside Transit and HOV Project
- Noise reduction strategies including 4-foot concrete traffic barriers with noise-absorptive coating, lid portals with noise-absorptive material, noise walls where recommended by the Final EIS noise analysis and approved by affected property owners, and quieter concrete pavement, which WSDSOT is evaluating as a noise reduction strategy
- Basic and enhanced stormwater treatment facilities

For a more detailed description of the Preferred Alternative, see Chapter 2 and the Description of Alternatives Discipline Report Addendum (Attachment 7).

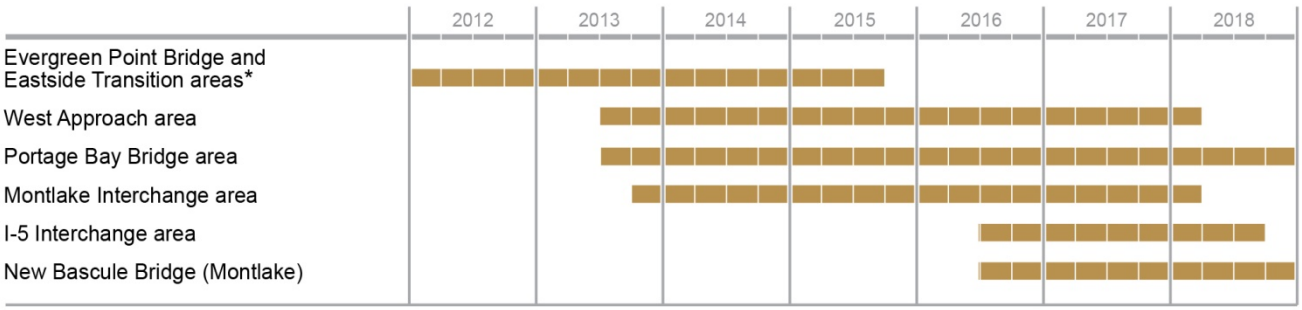
1.9 When would the project be built?

Construction is planned to begin in 2012, after project permits are received. The floating bridge would open to traffic as early as 2014. If full funding is provided by 2014, the rest of the project is currently planned for completion by 2018. As described in Section 2.8 of Chapter 2, construction may be phased if full funding is not available.

The most vulnerable structure (the Evergreen Point Bridge, including its east approach) would be built in the first stage of construction. The remaining components of the project would be built in subsequent stages,

as shown in Exhibit 1-5. Mitigation measures would be implemented concurrent with the portion of the project resulting in the impact.

Exhibit 1-5. **Preferred Alternative Construction Stages and Durations**



Note: Completion dates shown for construction stages assume full funding.

*Bridge opening would occur as early as 2014 but construction would be finalized in 2015.

1.10 How much would the project cost, and how much has been funded?

The total cost to construct the SR 520, I-5 to Medina project includes the costs of the Seattle portion, the Eastside (Medina) portion, the floating bridge (including the east approach and transition section), and 44 additional pontoons that are needed for a 6-lane bridge and are not included in the SR 520 Pontoon Construction Project. As shown in Table 1-1, these costs are estimated to total approximately $3.42 billion for the Preferred Alternative and between $3.39 and $5.54 billion for the SDEIS options, depending upon the suboptions chosen. Table 1-1 also compares the overall costs estimated in 2008 for the SR 520 Bridge Replacement and HOV Program—including the I-5 to Medina, Pontoon Construction, and Medina to SR 202 projects—to program costs estimated in 2010 after identifying the Preferred Alternative.

The totals shown for Options A, K, and L were estimated during a Cost Estimation Validation Process (CEVP®) workshop held in 2008, and range between $4.53 and $6.67 billion at year of expenditure. Since publication of the SDEIS, WSDOT has awarded contracts for the SR 520, Medina to SR 202 project and the SR 520 Pontoon Construction Project, and held another CEVP® workshop to estimate costs for the Preferred Alternative. While the cost of the pontoons in the 2010 cost estimates is higher than in the 2008 estimates, costs on the Eastside project are estimated to be lower than previously calculated. WSDOT continues to pursue cost savings in the form of contract delivery, cost estimate refinement, and design refinements wherever feasible.

Table 1-1. Cost Estimates for SR 520 Corridor Projects (millions of dollars)

	SR 520, I-5 to Medina Project[a]	Most Likely Total SR 520 Corridor Cost[c]
Preferred Alternative[b]	$3,419	$4,615
6-Lane Alternative with Option A	$3,392 to 3,668	$4,526 to 4,802
6-Lane Alternative with Option K	$5,440 to 5,538	$6,574 to 6,672
6-Lane Alternative with Option L	$3,932 to 4,012	$5,066 to 5,146

Note: Estimates are adjusted to account for risk and inflation using the Cost Estimate Validation Process® (CEVP) method. All estimates include anticipated mitigation costs.
[a]The ranges shown for Options A, K, and L reflect the cost of potential suboptions for each option. No suboptions were evaluated for the Preferred Alternative; therefore, a cost range is not provided.
[b]Costs were estimated for the Preferred Alternative during a 2010 CEVP® workshop.
[c]Total corridor cost includes the Pontoon Construction Project and the SR 520, Medina to SR 202 Project.

The budget established by the legislature in 2009 for the SR 520 program (including the I-5 to Medina, Medina to SR 202, and Pontoon Construction projects) is $4.65 billion. As shown in Table 1-2, WSDOT has secured a variety of state and federal funding sources to help pay for the SR 520 program.

Table 1-2. Committed Funding Sources for SR 520 Bridge Replacement and HOV Program

Funding Source	Amount
State gas tax	$550 million
Federal funds	$70 million
SR 520 Account (tolling and future federal funding)	$1,850 million
Sales tax deferral	$150 million
Total funding identified to date	**$2,620 million**
Total program cost[a]	**$4,650 million**
Unfunded portion of program cost	**$2,030 million**

[a]Total program cost is based on Engrossed Substitute House Bill (ESHB) 2211 legislation
Source: Washington State Legislature 2011 Legislative Budget.

However, the funding for the full corridor program falls approximately $2.03 billion short of the $4.65 billion total. WSDOT and the legislature are working to identify additional funding sources to fill the gap. In January 2010, the SR 520 legislative workgroup recommended a financing strategy that included:

- Use of previously authorized funding included in Scenario 7 of the 2008 SR 520 Finance Plan (WSDOT 2008b)
- Creating high occupancy toll (HOT) lanes on I-90 as soon as practicable
- Pursuing new federal and state revenue to be identified within 2 years
- General tolling of I-90 no sooner than 2014, only if other federal and state funds cannot be secured

Two tolling bills (House Bill 2211 and Senate Bill 6392) have allocated toll revenues to allow WSDOT to move forward with the following components of the SR 520 Bridge Replacement and HOV Program, pending completion of environmental review and permitting:

- Building a new pontoon construction facility in Grays Harbor and producing pontoons at that facility
- Beginning construction of the SR 520, Medina to SR 202 project
- Constructing a new floating bridge and approaches
- Advancing design on the Seattle side of the corridor

As shown in Exhibit 1-5, WSDOT has proposed project construction for completion by 2018, based on the assumption that full funding will be provided by 2012. Should full funding not be available, the project would be phased, with the floating bridge and landings comprising the initial construction phase. For more information on the potential for phased construction, please see Section 2.8 of Chapter 2.

1.11 How will tolling be used on SR 520?

Tolling is currently slated to begin on the existing Evergreen Point Bridge in summer 2011 as part as the implementation of the SR 520 Variable Tolling Project. Tolling is also planned on the new 6-lane Evergreen Point Bridge once it is completed as part of the SR 520, I-5 to Medina Project. The assumptions made for tolling the new bridge are somewhat different from the toll program for the existing bridge. Details on how tolling will be done for the Variable Toll Project are provided on page 1-15. The assumptions used for tolling under the SR 520, I-5 to Medina project are discussed in this section.

Tolling on the new Evergreen Point Bridge will be similar to the system discussed for the Variable Tolling Project. Tolls will be completely automated, with no toll booths. All one- or two-occupant vehicles will be charged a toll to cross the Evergreen Point Bridge. Users who are required to pay the toll will have transponders, or "cards," that will be read by an electronic card reader. Two types of transponders could be used: transponders that attach permanently to a vehicle's windshield and portable transponders that could be transferred among multiple vehicles. Cars

without transponders will have their license plates photographed and will be billed by mail, at a higher cost to defray the cost of mailing.

What legislation has been passed to authorize tolling?

The SR 520 Draft EIS identified tolling as a way to generate revenue for project construction, and assumed a toll as part of the traffic modeling analysis. Since that time, the discussion of tolling has continued. House Bill 1773, passed by the legislature in 2008, set statewide guidelines for the implementation and use of tolls on state highways. House Bill 3096, also passed in 2008, created a Tolling Implementation Committee to work with the public to evaluate a variety of tolling scenarios. The Tolling Implementation Committee evaluated tolling for financing the SR 520 Bridge Replacement and HOV Program, engaged citizens and regional leadership in the evaluation, and enhanced understanding of tolling alternatives. The committee hosted a series of public outreach events and input opportunities related to tolling in the SR 520 corridor during summer 2008, and reported to the Governor and legislature in January 2009. The results of this outreach identified general support for tolling as a way to manage congestion and fund improvements in the SR 520 corridor.

In fall 2007, the Lake Washington Urban Partnership (which includes WSDOT, King County, and the Puget Sound Regional Council) was awarded a grant from the U.S. Department of Transportation to help manage congestion on the corridors crossing Lake Washington. The total grant of up to $154 million funded several projects, including $63 million for the SR 520 Variable Tolling Project. As described in pages 1-14 and 1-15, this project would begin tolling the Evergreen Point Bridge *before* its planned replacement in order to reduce traffic congestion. ESHB 2211, passed in April 2009, authorized tolling on SR 520 for congestion management in accordance with the grant provisions. ESHB 2211 provides that if the tolls on the SR 520 corridor significantly alter the performance of nearby facilities, the legislature will reconsider the possibility of tolling on those facilities. The legislature authorized toll rates for the Variable Tolling Project in 2011 under ESSB 5700.

The project's financing plan includes long-term tolling to fund the SR 520 corridor, consistent with previous assumptions in the Draft EIS and the SDEIS. Future changes to the toll rate structure after the new bridge is in place will need to be separately authorized by the legislature based on the approved project budget, with toll rates to be set by the legislature. If the SR 520, I-5 to Medina project were not built (i.e., if the No Build Alternative were chosen), it is assumed that the toll authorized under ESHB 2211 and ESSB 5700 would expire once the bonds for the SR 520 Pontoon Construction Project and the SR 520, Medina to SR 202 project had been paid.

What assumptions were made about tolling in the Final EIS?

Both the 2006 SR 520 Draft EIS and the 2010 SDEIS identified tolling as a way to generate revenue for project construction, and assumed a toll as part of the traffic modeling analysis for all build alternatives. The SDEIS traffic analysis made the following assumptions for how the project would be tolled:

- Segmental tolling (i.e., tolls collected at multiple locations along the corridor) between I-5 and I-405.
- Variable toll rates depending on the time of day and whether trips are taken on a weekday or a weekend.
- A maximum toll rate of $3.81 for a full-length trip, with exemptions for transit and HOVs with three or more riders

These assumptions have been updated for the Final EIS traffic analysis based on new legislation and public comment received during outreach events for the Tolling Implementation Committee. The Final EIS traffic analysis made the following assumptions for how SR 520 would be tolled under the Preferred Alternative:

- Single-point tolling implemented on SR 520 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), with exemptions for transit and HOVs with three or more riders.

Tolling Assumptions

Tolling assumptions included in the transportation model for the Final EIS are:

- Single-point tolling implemented on SR 520 between I-5 and I-405
- Variable toll rates depending on the time of day and whether trips are taken during a weekday or during the weekend
- A maximum toll rate of $3.81, with exemptions for transit and HOVs with three or more riders (toll rates are in 2007 dollars for consistency with the *2007 SR 520 Finance Plan*).

Like the SDEIS, the Final EIS assumes that the 2030 No Build Alternative would not include tolls. For more information on how tolling was evaluated in the traffic model, please see section 5.1 and the Final Transportation Discipline Report (Attachment 7).

Why doesn't the Final EIS evaluate a tolled No Build Alternative?

Because the Lake Washington Variable Tolling Project will implement a toll on SR 520 beginning in summer 2011, it might seem logical to assume that this toll would continue indefinitely even if the SR 520, I-5 to Medina project were not built. However, this is not the case. As described in Section 1.7, the purpose of the Lake Washington Variable Tolling Project is to manage congestion on SR 520. For traffic modeling purposes, the toll was assumed to remain in place until construction of the SR 520, I-5 to Medina project began, at which point a new toll would be authorized by the legislature to fund project construction.

As discussed above, ESHB 2211 allocated funds from the Variable Tolling Project revenues toward completion of projects in the SR 520 corridor. Funding for the SR 520 Pontoon Construction Project was authorized by this legislation, and funding for the SR 520, Medina to SR 202 Eastside Transit and HOV Project was subsequently authorized by ESHB 6392. Under state law, the tolls will remain in place until construction bonds for

these projects are retired; if the I-5 to Medina Project were not built, current estimates suggest that this would occur prior to the project design year of 2030. Therefore, WSDOT assumed that no tolls would be in place in 2030 if the SR 520, I-5 to Medina project were not built. The traffic modeling for No Build is based on this assumption.

Even though funding of other projects in the SR 520 program would not necessitate tolling under No Build in 2030, FHWA and WSDOT recognize that there could be a toll on SR 520 under No Build in 2030 for other reasons. If the SR 520, I-5 to Medina project were not built, the legislature might choose to impose a toll to manage worsening levels of congestion as population and employment growth continued to exceed the capacity of a four-lane corridor. Region-wide tolling of major corridors, as recommended in the Puget Sound Regional Council's *Transportation 2040* plan (PSRC 2010a), might also be implemented by that time. Since it is not possible to say whether or how these tolls would be implemented, WSDOT did not include them in its baseline assumptions. However, traffic volumes for a tolled No Build Alternative were evaluated for comparison to the untolled No Build, to help readers understand how tolling of a 4-lane SR 520 would affect future demand. Section 5.1 of this Final EIS provides information on the analysis.

1.12 What else has happened since publication of the SDEIS?

Collaboration with Seattle, UW, and Transit Agencies under ESSB 6392

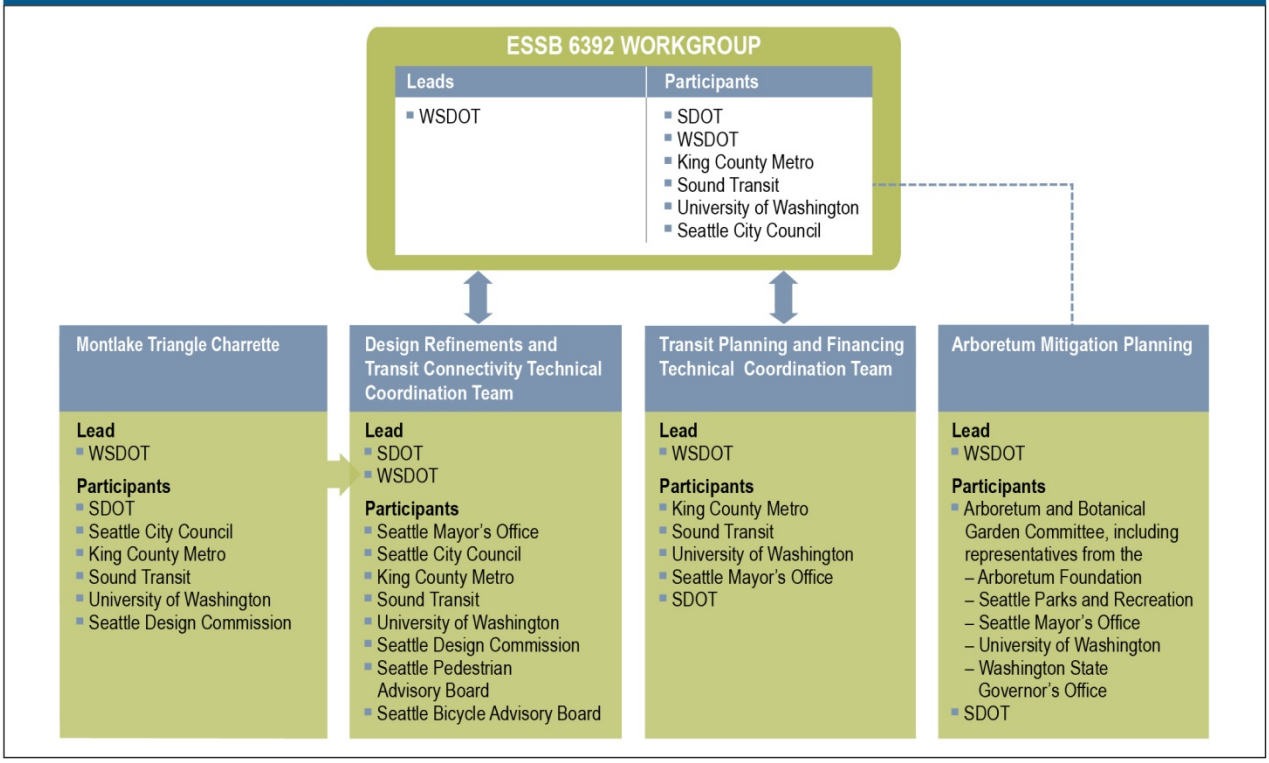
In March 2010, the Washington State legislature passed and Governor Gregoire signed ESSB 6392. The bill outlined the following design, schedule, and funding requirements for the SR 520 corridor:

- There will be six total lanes for the SR 520 corridor, with two transit/HOV lanes and four general-purpose lanes.
- Use of HOV lanes will require three or more people (3+) in the vehicle.
- WSDOT will report to the legislature when average transit speeds in HOV lanes fall below 45 miles per hour at least 10 percent of the time.
- Toll collection on the existing Evergreen Point Bridge for the Variable Tolling Project will begin in spring 2011.
- SR 520 toll revenue is to be used on projects within the full SR 520 corridor from I-5 to SR 202.
- $200 million of bond proceeds will be provided to the SR 520, I-5 to Medina: Bridge Replacement and HOV Project.

- A special account will be created for fines resulting from toll violations, which may be used as funding for the SR 520 program, including mitigation.
- A mitigation plan will be prepared for the Washington Park Arboretum.

In addition to the requirements listed above, ESSB 6392 also directed WSDOT to work with regional agencies to refine components of the Preferred Alternative, including design refinements and transit connections, and transit planning and financing. In response to this direction from the legislature, WSDOT led a workgroup process in collaboration with the City of Seattle, King County, the University of Washington, and Sound Transit. The ESSB 6392 workgroup was informed by two technical coordination teams established by WSDOT and the Seattle Department of Transportation, one on design refinements and transit connections and the other on transit planning and finance (Exhibit 1-6). These teams reported technical findings to the ESSB 6392 workgroup.

Exhibit 1-6. **ESSB 6392 Workgroup Process**



Members of the team working on design refinements and transit connections included staff from the Seattle Department of Transportation, Seattle Mayor's Office, Seattle City Council, WSDOT, King County Metro, Sound Transit, and the University of Washington. This technical coordination team also included members from the Seattle Design Commission, Seattle Pedestrian Advisory Board, and Seattle Bicycle

Advisory Board. Members of the transit planning and finance technical coordination team included staff from WSDOT, King County Metro, Sound Transit, City of Seattle, and University of Washington.

The team working on design refinements and transit connections developed a separate process, which evaluated opportunities to enhance pedestrian and bicycle connectivity in the Montlake Triangle area while respecting the schedules for the Sound Transit University Link light rail station and the University of Washington Rainier Vista project. The charrette members identified conceptual design options that would provide safe, efficient transfers for bicyclists, pedestrians, and transit users to connect to the Link light rail station near Husky Stadium. Participants in the Montlake Triangle charrette included representatives from WSDOT, Seattle Department of Transportation, the Seattle Design Commission, the University of Washington, King County Metro, and Sound Transit.

The ESSB 6392:Design Refinements and Transit Connections Workgroup Recommendations Report (Attachment 16) was submitted in October 2010. The High Capacity Transit Planning and Financing Finding and Recommendations Report (WSDOT, Sound Transit, and King County Metro 2010) was submitted in December 2010. Chapter 2 provides additional information on these recommendations and how they were incorporated into the Preferred Alternative.

Coordination with Agencies and Tribes to Develop Natural Resource Mitigation

In June 2010, the Natural Resources TWG was convened to guide the project team's development of permit applications and mitigation plans that clearly identify impacts, mitigation sequencing strategies, avoidance and minimization measures, and appropriate compensatory mitigation for the Preferred Alternative. This process also informed ongoing Endangered Species Act (ESA) consultation. Natural Resources TWG participants represented multiple local, state, and federal agencies that oversee compliance with environmental regulations, as well as the Muckleshoot Indian Tribe Fisheries Division and the University of Washington.

In 2010 the TWG worked through a series of eight all-day meetings. Initial meetings discussed construction activities and operation of the project in key geographic zones, while later meetings focused on project-wide construction sequencing, impacts, and mitigation. Between meetings, the project team used input from participants regarding ideal mitigation characteristics to determine which potential mitigation sites and opportunities would best fit the identified impacts. At the final two meetings, the TWG considered the full set of identified impacts and mitigation for construction, operational, and cumulative impacts.

The meetings provided guidance for natural resources mitigation, addressing topics such as in-water work windows, best management practices, wetland impact calculations and mitigation approach, aquatic resource impact calculations and mitigation approach, and proposed stormwater treatment methods. The guidance that WSDOT received through the Natural Resources TWG process was incorporated directly into the Biological Assessment (Attachment 18), conceptual wetland and aquatic habitat mitigation plans (Attachment 9), and this Final EIS. In April 2011, the project team reconvened the Natural Resources TWG to help prepare permit applications. The project team is continuing to work with individual agencies and the Muckleshoot Indian Tribe Fisheries Division to resolve outstanding issues related to specific jurisdictional requests.

Arboretum and Botanical Gardens Committee Coordination on Arboretum Mitigation Plan

As part of the ESSB 6392 workgroup process, a group was also convened to address potential effects and identify mitigation measures for the Washington Park Arboretum. A WSDOT staff team worked with the Arboretum and Botanical Gardens Committee (ABGC), which includes representatives of the City of Seattle, the University of Washington, the Arboretum Foundation, and the Washington State Governor's Office, to develop a plan for Arboretum mitigation. The Arboretum mitigation planning group met 12 times over an 8-month period. The Arboretum Mitigation Plan (ABGC 2000), submitted to the legislature on December 22, 2010, includes a number of mitigation recommendations agreed upon by WSDOT and the ABGC. The plan's recommendations are discussed in Chapter 9 of this Final EIS, and the plan itself is included as Attachment 9.

WSDOT, the City of Seattle, and the University of Washington have developed a Memorandum of Understanding (MOU) to define roles and responsibilities for implementation of the Arboretum Mitigation Plan. The MOU was executed in April 2011 and includes an implementation schedule, as well as commitments to develop more detailed scopes of work for the highest-priority projects. Funds for full plan implementation would be committed concurrently with construction of the west approach portion of the project (see Exhibit 1-5).

Section 106 Compliance Process: Consulting Party Outreach, DAHP Coordination, and Programmatic Agreement

Section 106 of the National Historic Preservation Act requires a project's lead federal agency (in this case FHWA) to involve consulting parties in a process "to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate

any adverse effects on historic properties" (36 CFR 800.1(a)). The Section 106 regulations outline specific points at which consulting parties must be involved. The lead federal agency (FHWA) or its delegate (WSDOT) evaluates potentially historic properties and makes a determination on their eligibility for the National Register of Historic Places, and requests the concurrence of the State Historic Preservation Officer (SHPO). Once the SHPO has concurred on this eligibility determination, FHWA determines the effects on historic properties according to Section 106, and again requests SHPO's concurrence. If the SHPO and FHWA disagree on the effects determination, and resolution is required, the Advisory Council on Historic Preservation (ACHP) is consulted.

In addition to the SHPO and tribal historic preservation officers (THPOs) for Native American tribes, consulting parties can include individuals and organizations with a demonstrated interest in the undertaking and a "concern with the undertaking's effects on historic properties" (see 36 CFR §800.2(c)(5)). These other entities may include local historic preservation officials, historic preservation groups, community organizations, individual property owners, and other stakeholders.

WSDOT and FHWA have signed a Programmatic Agreement under Section 106 with DAHP, ACHP, the U.S. Army Corps of Engineers, affected tribes, and other consulting parties (as defined above) that identifies the avoidance, minimization, and mitigation activities WSDOT will undertake. Tribal issues have primarily been addressed in a separate Foster Island Treatment Plan that is included in the Programmatic Agreement by reference.

ESA Consultation and Submittal of the Biological Assessment

Since May 2007, the ESA Steering Group—consisting of FHWA, WSDOT, NOAA Fisheries, and USFWS—has met biweekly to provide a forum for early ESA Section 7 coordination. The purpose of the ESA Steering Group has been to identify important issues or challenges and work together to establish the appropriate analytical framework for the consultation. Since publication of the SDEIS, the ESA Steering Group has met approximately 35 times to work through a variety of technical topics. The ESA Steering Group's work culminated in WSDOT's submittal of the Biological Assessment in November 2010 (Attachment 18). The project team completed consultation in May 2011 and received Biological Opinions from both NOAA Fisheries and USFWS (Attachment 18).

Design-Build Procurement

In late 2010, WSDOT solicited design-build proposals for construction of the Evergreen Point Bridge and landings. This is the first construction stage of the SR 520, I-5 to Medina project. The solicitation was conducted in

accordance with 23 U.S. Code (USC) 636.109, which allows design-build contracts to be initiated before completion of the NEPA process. Three teams submitted qualifications and were invited to submit proposals. WSDOT plans to select a contractor in mid-2011. Final design under the contract will take place following the issuance of the Record of Decision. Construction of the floating bridge and landings will begin in 2012 after final design has been completed and permits received.

1.13 How has the public been involved during the preparation of the Final EIS?

At the beginning of the environmental analysis and decision-making process, WSDOT developed and implemented an ongoing program to engage the public and to provide information about the project. This program started with a public involvement plan that established specific goals and activities. Some of the activities and resources to encourage public engagement are as follows:

- Newsletters
- Community and agency briefings
- Project Web site
- Media outreach
- Public meetings, workshops, and tours
- Interviews with social service providers and minority and low-income populations
- Outreach to the business community

The process of engaging the local communities during the Draft EIS and SDEIS development has encompassed nearly 30 open houses, more than 15 community design workshops, and more than 77 community group meetings. Additional information on how the public has had the opportunity to participate to date in the SR 520, I-5 to Medina project is found in the Agency Coordination and Public Involvement Discipline Report Addendum and Errata (Attachment 7).

What have we learned from these outreach efforts?

Comments provided during ongoing outreach activities have in many ways remained consistent with previous public input, addressing the following common themes:

- Protect and enhance neighborhoods and community connectivity.
- Maintain local parks and trails and add a new bicycle path to enhance bicycle and pedestrian mobility.
- Include noise reduction measures throughout the SR 520 corridor.

- Carefully consider potential project funding methods (tolling, taxes, private funding) and the project budget and costs.
- Improve and expand the HOV and bus system.

During the SDEIS public comment period, in addition to the themes noted above, the public provided more specific feedback about the range of alternatives presented in the document and specific engineering design considerations. For example, members of the public provided comments about bridge width, the Montlake Freeway Transit Stop, design components specific to different geographic areas, and accommodating light rail in the SR 520 corridor.

What groups of people has WSDOT worked with in the public outreach program?

A regional transportation facility like SR 520 affects a large number of people—those who travel on it, those who live and work near it, and, in a broader sense, any person or business that depends upon the region's ability to move people and goods across Lake Washington. WSDOT developed appropriate outreach methods to reach these different public audiences. (Engagement of resource agencies and tribes is discussed above in Sections 1.6 and 1.12.) Audiences immediately affected along the SR 520 corridor include:

- Cities and towns in the corridor
- Specific neighborhoods in Seattle, including Montlake, north Capitol Hill, Portage Bay/Roanoke, Madison Park, University District, Laurelhurst, and Eastlake
- Major institutions such as the University of Washington

The outreach also extended to a broader set of public audiences, which included:

- Commuters who use the corridor to travel via bus or car to and from Seattle and the Eastside
- Businesses that rely on the corridor for movement of employees, goods, and customers
- Chambers of commerce that are interested in transportation issues
- Minority, low-income, and limited-English-proficiency users of the corridor
- Social service and advocacy organizations that work with minority and low-income communities
- Other interested groups such as bicycle, environmental, and neighborhood organizations

WSDOT also has worked with a large number of local, state, and federal jurisdictions and agencies that are involved in transportation and natural

resource issues around the SR 520 corridor. WSDOT's work with these agencies is described in more detail in the Agency Coordination and Public Involvement Discipline Report Addendum and Errata (Attachment 7).

What comments has WSDOT received during the public comment periods for the Draft EIS and SDEIS?

WSDOT received a total of over 5,000 individual comments on the Draft EIS and SDEIS. These comments came from members of the public, community organizations, agencies, and tribes. Attachments 11 and 13 of this Final EIS contain all comments received, along with FHWA's and WSDOT's responses to them. Chapter 2 explains how the comments were considered in the environmental analysis and the evaluation of alternatives and design options for the SR 520, I-5 to Medina project.

What public involvement is still ongoing?

WSDOT will continue to inform and engage the public through venues such as community council briefings, fairs and festivals, the project and program Web sites, press releases, e-mails, and the Project Dialogue Center. As the NEPA process concludes, public outreach will shift to focus on permit acquisition (many permitting processes include public hearings and/or comment periods) and construction-related outreach. WSDOT has also committed to involving public stakeholders in processes to refine project design and construction methods, as appropriate.

What outreach has WSDOT done with low-income and minority populations?

From 2000 to the present, WSDOT has conducted outreach activities to provide low-income and minority populations with information about the project and to engage them in identifying potential adverse effects and benefits of the project. This outreach included the translation of informational materials into appropriate languages for the study area, which WSDOT identified by reviewing census data. For example, the SR 520 fact sheet was translated into Chinese, Vietnamese, and Spanish for distribution at public outreach events. Translated materials also provided information about how the Draft EIS and SDEIS could be reviewed, how to obtain a copy, and how to submit formal comments. In addition, interpretation services were made available at any time upon request. Please see the Agency Coordination and Public Involvement Discipline Report (Attachment 7) for more information.

To increase WSDOT's understanding of how tolling of the Evergreen Point Bridge might affect low-income or minority populations, WSDOT conducted the following surveys, interviews, and focus groups in 2008:

- A telephone survey of 685 individuals who use the Evergreen Point Bridge two or more days a week. Approximately 300 respondents

qualified as Black, Hispanic, Asian, Pacific Islander, American Indian, or Alaskan Native, or indicated that their household income fell below the federal poverty line.

- Telephone interviews in Spanish with Evergreen Point Bridge users.
- An intercept survey of 422 transit users on the Evergreen Point Bridge. About 3 percent of respondents had household incomes below the federal poverty level, nearly 23 percent of the respondents were minority, and 6 percent spoke a language other than English at home.
- Two focus groups composed of survey respondents and others who were recruited through social service agencies that serve low-income and minority populations who use the Evergreen Point Bridge.

Native Americans are a minority population, so coordination with the tribes that the project could affect is part of WSDOT's environmental justice outreach. Coordination with the tribes is discussed in Section 1.6.

1.14 What are the next steps?

After publication of the Final EIS, if FHWA determines the analysis to be adequate and to comply with necessary standards, the agency will prepare and sign a Record of Decision (ROD) that describes the decision, explains why it has taken a particular action, and presents the mitigation measures and commitments to be incorporated into project construction and operation. The ROD will identify the selected alternative, explain the alternatives considered, and specify an "environmentally preferable alternative." The ROD will also identify outstanding issues yet to be resolved. Any comments received after publication of the FEIS will be responded to in the ROD.

Although the ROD is the conclusion of the NEPA process, it signals the beginning of project implementation. WSDOT will further develop the engineering design for the project, including additional detail on project phasing, construction staging, and construction techniques. Having a preferred alternative identified also will allow WSDOT to develop more specific designs for mitigation measures, which will be documented in project permit applications. These designs will be prepared by WSDOT and FHWA, in cooperation with the affected jurisdictions, tribes, and resource agencies.

1.15 How can I be involved, and how will WSDOT communicate with the public?

Join the project mailing list. WSDOT will continue to keep the public informed about opportunities for input. If you provide your name, we will add you to the project mailing list, which allows you to receive regular e-mail updates. You may join the mailing list by logging onto our Web site at www.wsdot.wa.gov/projects/SR520Bridge or by calling the project hotline at 1-888-520-NEWS (6397).