

SR 502 Corridor Widening Project
FHWA-WA-EIS-09-01-F
Record of Decision
June 2010

Decision

The Federal Highway Administration concurs with the Washington State Department of Transportation in the choice to construct the preferred alternative. The preferred alternative is the selected alternative, which is the Build Alternative identified in the project's Final Environmental Impact Statement, and is summarized in this Record of Decision.

This decision is based on an evaluation of information presented in the Final Environmental Impact Statement, the project's purpose and need, input from the public and interagency coordination. One comment was received during the 30-day public review period after the Notice of Availability of the Final Environmental Impact Statement appeared in the Federal Register. Additional basis for this decision is contained in this Record of Decision document. The Final Environmental Impact Statement is incorporated by reference into this Record of Decision document.

06/24/2010

Date of Approval

Daniel M. Mathis

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1.0 Introduction

The SR 502 Corridor Widening Project proposes to add lanes and make safety and capacity improvements, including the addition of traffic signals and a median treatment, to SR 502 (NE 219th Street) in north Clark County, Washington. The segment to be improved extends five miles between NE 15th Avenue and NE 102nd Avenue. SR 502 serves as one of two primary access routes (along with SR 503) from Battle Ground, Washington to the regional highway system and the Portland–Vancouver metropolitan area.

In compliance with the National Environmental Policy Act, the Washington State Department of Transportation prepared an environmental impact statement to disclose and analyze the community and environmental beneficial and adverse effects of a range of alternatives. The purpose of this document is to be a Record of Decision documenting the alternative that the Washington State Department of Transportation and Federal Highway Administration have selected. The project's Final Environmental Impact Statement is incorporated by reference into this Record of Decision.

2.0 Purpose and Need

The purpose of the project is to improve mobility and safety along the SR 502 corridor between NE 15th Avenue and NE 102nd Avenue and to improve regional connectivity between Battle Ground, north Clark County, and Interstate 5 (I-5).

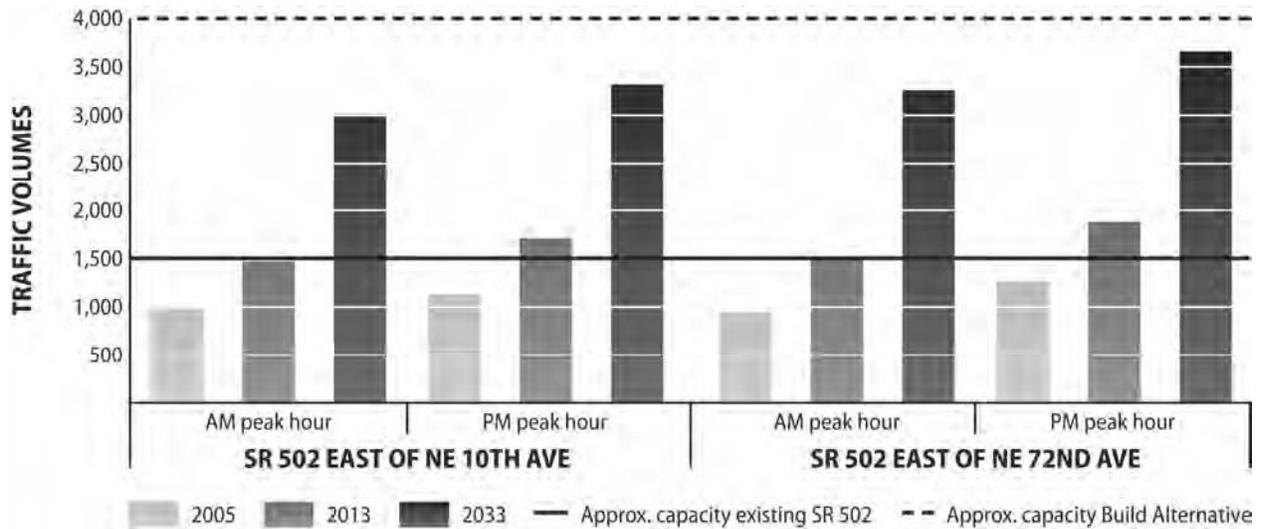
Traffic congestion and collision rates on SR 502 are increasing as more and more drivers use this highway. Population growth in Battle Ground and the surrounding areas is expected to substantially increase traffic on the corridor in the future. Therefore, the need for the project is to reduce collision rates and decrease congestion.

2.1 Mobility on SR 502

SR 502 is the primary route from I-5 into Battle Ground and surrounding areas in north Clark County. Additional capacity is needed to improve mobility on SR 502.

By the year 2033, projected traffic volumes on SR 502 would nearly triple compared to 2005 traffic volumes (Exhibit 1). During the 2033 peak traffic periods (morning and evening), both eastbound and westbound traffic volumes would exceed the single lane capacity. In addition, all intersections between I-5 and SR 503 would fall from “somewhat congested” (Level of Service C/D) to “highly congested” (Level of Service E/F).

Exhibit 1. Projected Average Daily Morning and Afternoon Peak Hour Traffic Volumes



As a result of this congestion, without any improvements, travel times from the I-5/SR 502 interchange to the SR 502/SR 503 intersection in central Battle Ground would nearly triple, increasing from an existing travel time of 8–11 minutes today to 19–32 minutes in 2033. By the year 2033, the increased traffic levels on SR 502 and traffic backups at approaching intersections would result in delays of five minutes or more for vehicles attempting to turn left onto SR 502 during peak periods.

2.2 Safety on SR 502

The rate of collisions on SR 502 in the study area has increased steadily over the past several years (Exhibit 2). Over a five-year period from 2001–2005, there were a total of 184 collisions in the study area with 47 percent of these resulting in injury or possible injury and two percent resulting in fatalities. Collision types for the same period are shown in Exhibit 3.

Exhibit 2. Number of Collisions per Million Vehicle Miles Traveled on SR 502, 2001-2005

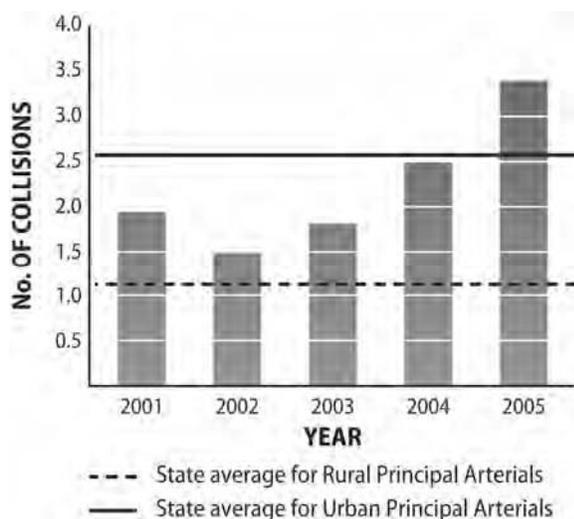
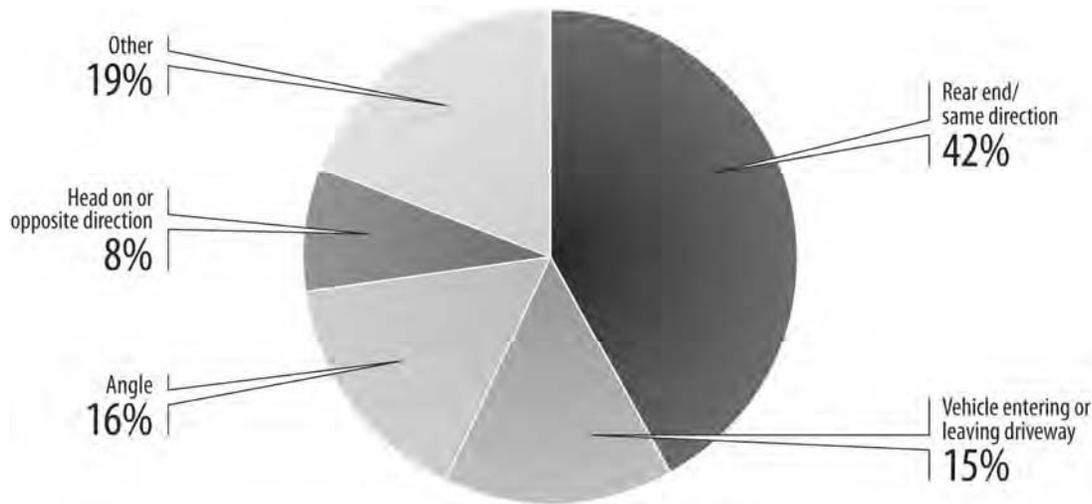


Exhibit 3. Collision Types along the SR 502 Corridor, 2001-2005



This number of collisions is associated with the high rate of speed and the high number of access points along the corridor. As traffic increases in the future, the proportion of injury and fatal collision levels to traffic volumes are expected to continue to increase over time. Collisions at major intersections comprise approximately 30 percent of the collisions in the study area.

SR 502 currently has managed access with permitted points of entry, with frequent driveway and side-street connections to the roadway. The many driveways along SR 502 represent uncontrolled turning movements, which contribute to approximately 38 percent of collisions along the corridor.

With the projected increase in delays for left-turns onto SR 502, drivers are likely to become increasingly frustrated and take higher risks to enter the roadway, which may exacerbate safety concerns. Drivers are likely to look for alternate routes such as NE 199th Street or NE 179th Street to bypass the congestion on SR 502. As more traffic diverts to alternate routes, the overall collision rate on these local roads would likely increase due to uncontrolled access and because these roads are not designed to handle the extra capacity. Since there are no designated bicycle lanes and few sidewalks and crosswalks along SR 502 in the study area, pedestrians and bicyclists would also face increasingly hazardous conditions along the corridor.

3.0 Alternatives Considered in the Final Environmental Impact Statement

Washington State Department of Transportation considered a range of alternatives for improving safety and mobility on SR 502 between I-5 and Battle Ground.

The Final Environmental Impact Statement evaluates the beneficial and adverse effects on the community and environment of a No Build Alternative as well as the Build Alternative. The following sections briefly describe the initial alternatives developed, summarize the values – community and environmental beneficial and adverse effects – that factored into the decision to

select the Build Alternative as the preferred alternative to construct, and provide greater details on the two alternatives that were considered in detail in the Final Environmental Impact Statement.

3.1 Alternatives Development and Screening

The initial alternatives examined were developed through a public involvement process. Alternatives studied included: five on-corridor alternatives that would widen and reconfigure the existing SR 502 alignment; two off-corridor alternatives that would relocate SR 502 to a new roadway north or south of the existing alignment; and two options for a transportation system management/transportation demand management alternative that would make improvements to SR 502 within the existing right of way and increase transit service under the second option.

The Transportation System Management/Transportation Demand Management Alternative was not advanced for screening because neither of the options for this alternative could meet the project's purpose and need – specifically with regards to mobility.

The five on-corridor and two off-corridor alternatives were evaluated for their ability to meet the project purpose and need, to meet design standards, level of public support, mobility, safety, community effects, and environmental effects. The off-corridor alternatives were withdrawn from further study because of their significant adverse effects to wetlands and the strong opposition from the public to an alternative that routed traffic around Dollars Corner businesses. The Red/Brown and Orange on-corridor alternatives that would route SR 502 north or south of Dollars Corner withdrawn because of their significant effects on wetlands and residences, and the Orange Alternative did not meet design standards.

Because of the significant stream, wetland, and residential effects of the remaining Yellow, Purple, and White on-corridor alternatives, Washington State Department of Transportation developed a hybrid on-corridor alternative (named the Pink Alternative) to minimize these effects. The Pink Alternative addressed the project's purpose and need for safety and mobility and minimized adverse effects to resources by combining the best portions of the Yellow, Purple, and White alignments as well as elements of the Transportation System Management/Transportation Demand Management Alternative. The Pink Alternative was advanced as the Build Alternative (Preferred Alternative) studied in the Final Environmental Impact Statement.

As required by the National Environmental Policy Act, the No Build Alternative was also considered in the Final Environmental Impact Statement.

A center turn lane was not considered to be a reasonable design option for any of the on-corridor build alternatives because it would not satisfy the project purpose and need for safety improvements. Center turn lanes are designed for managed access, low speed urban roadways; they are not designed for highways designated as limited access, such as SR 502. Restrictive median treatments are designed and needed to ensure safety when a roadway is more than two lanes wide and has a high density of driveway and local road access points. When traffic volumes surpass 24,000 vehicles per day, studies indicate that motorists have a difficult time finding a gap in traffic to safely turn left from a center turn lane on a four-lane highway. The SR

502 highway is expected to increase to 42,000 vehicles per day by 2033. By using a median treatment to restrict traffic movements to right-in, right-out turns and by providing u-turn opportunities for drivers to safely reverse their direction of travel, the Build Alternative meets the project's purpose and need of improving safety and reducing congestion along the SR 502 corridor.

Chapter 2 of the Final Environmental Impact Statement describes the alternatives development and screening process.

3.2 No Build Alternative

Under the No Build Alternative, there would be no improvements to SR 502. This alternative would retain the existing facility along with programmed and funded projects elsewhere in the study area. While the No Build Alternative would not address the congestion and safety issues identified on the SR 502 corridor, it does provide a basis of comparison for the beneficial and adverse effects associated with the Build Alternative.

3.3 Build Alternative (Preferred Alternative)

The Build Alternative would improve SR 502 from just west of NE 15th Avenue to NE 102nd Avenue. Along this entire segment, the roadway would be widened to provide two lanes in each direction with a median treatment, such as a median barrier or curb, separating westbound and eastbound travel. New signals and turn pockets would be added at the intersections at NE 29th Avenue, NE 50th Avenue, and NE 92nd Avenue, and the existing signalized intersection at NE 72nd Avenue (Dollars Corner) would be improved and expanded.

Directional median openings would be provided in two locations to allow left-turns from SR 502 onto side streets, including an opening at NE 67th Avenue and one located between NE 79th Avenue and NE 82nd Avenue. Driveway connections to SR 502 would be consolidated or relocated to local streets, reducing the number of access points compared to today. Turns to and from SR 502 would be restricted to right-in/right-out turning movements at all driveways and non-signalized intersections along the corridor, except where directional median openings are provided. Signalized intersections will be designed to allow drivers (with the exception of very large vehicles) to safely make u-turns in order to change their direction of travel. Paved shoulders that could be used by pedestrians and bicyclists would be constructed along both sides of SR 502 for the entire corridor, while bicycle lanes and sidewalks would be provided in the vicinity of Dollars Corner. Crosswalks would be installed at all signalized intersections. Exhibit 4 shows comparative typical cross-sections of the No Build Alternative and the Build Alternative. Exhibit 5 shows the extent of the Build Alternative. Please refer to the Final Environmental Impact Statement for more design details.

Exhibit 4. Comparative Typical Cross-Sections of the No Build and Build Alternatives

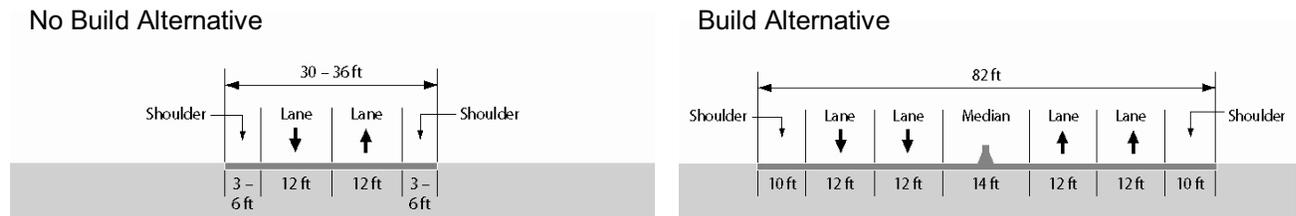
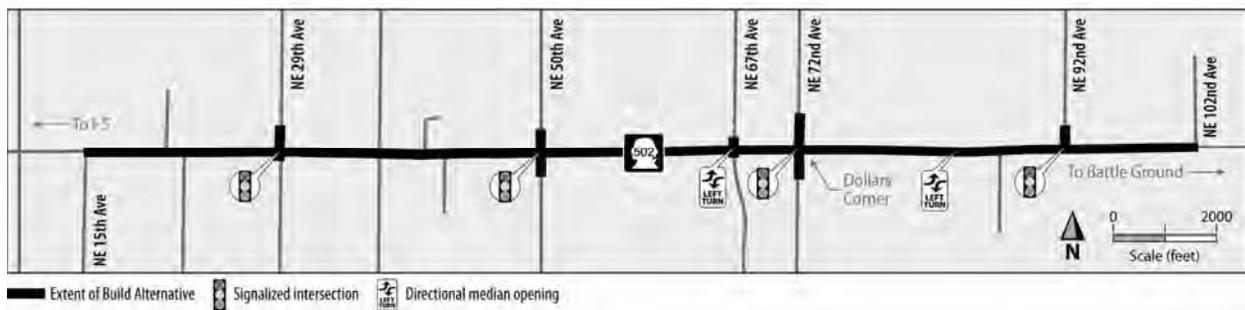


Exhibit 5. Extent of Build Alternative



4.0 Determinations and Findings

The environmental record for the SR 502 Corridor Widening project includes the Draft Environmental Impact Statement and Draft Section 4(f) Evaluation, the Final Environmental Impact Statement and Final Section 4(f) Evaluation, the Biological Assessment: SR 502 Corridor Widening Project, and the Biological Opinion: SR 502 Corridor Widening Project. These documents, incorporated here by reference, constitute the statements required by the National Environmental Policy Act and Title 23 of the United States Code on:

- The environmental impacts of the project
- The adverse environmental impacts that cannot be avoided should the project be implemented
- Alternatives to the proposed project
- Irreversible and irretrievable impacts on the environment that may be involved with the project should it be implemented

Having carefully considered the environmental record noted above, the project commitments as stated herein, the written and oral comments offered by other agencies and the public on this record, and the written response to comments, the Federal Highway Administration has determined that the preferred alternative is also the environmentally preferred alternative.

A summary of the determinations and findings under the applicable federal laws is provided below. Project commitments that would minimize adverse effects of the preferred alternative are documented in Appendix A.

4.1 Clean Air Act

Under the Clean Air Act, the US Environmental Protection Agency has established the National Ambient Air Quality Standards, which specify maximum concentrations for six criteria pollutants. The study area is in attainment for all criteria pollutants and therefore is considered to have air quality as good as or better than specified by the National Ambient Air Quality Standards. Thus, no air quality conformity is required. There would be no violations of the National Ambient Air Quality Standards under the preferred alternative.

Carbon monoxide levels would be similar under the preferred alternative as under the No Build Alternative.

4.2 Clean Water Act

The Clean Water Act (33 USC § 1251 et seq.) establishes the basic structure for regulating discharges of pollutants into the water of the US and regulating quality standards for surface waters. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System permit program controls water pollution by regulating point sources that discharge pollutants into waters of the US. This project will comply with all regulations based on the Clean Water Act.

The Clean Water Act also regulates the discharge of dredged or fill material into waters of the United States, including wetlands. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, and the wetland must be adjacent to one of the other waters of the United States, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

The project would create approximately 28 acres of new impervious surfaces (in addition to 23 acres of existing impervious surfaces). The Washington State Department of Transportation has committed to providing enhanced water quality treatment of stormwater runoff from all of the new impervious surfaces (28 acres) and about 6 acres of the currently untreated existing impervious surfaces.

The Build Alternative has been designed to avoid wetland effects to the extent practicable. The Build Alternative would affect 41 of the 74 wetlands in the study area. Based on the preliminary design, the project would fill 9 to 14 acres of wetlands. The total quantity of wetland fill may change slightly as the design is revised and finalized. Approximately half of the wetland effects would be minor because they would fill only relatively small (relative to the overall size of the wetland) and already disturbed portions of larger wetlands and wetland complexes. These wetlands generally provide high levels of water quality and water storage functions, and relatively low levels of habitat function. However, the affected portions of these wetlands are primarily adjacent to the SR 502 roadway and provide lower levels of all of these functions.

4.3 Endangered Species Act of 1973

The Endangered Species Act of 1973 (16 USC § 1531 et seq.), as amended, is intended to protect threatened and endangered species and the ecosystem on which they depend. When the federal

government takes an action subject to the Endangered Species Act, it must comply with Section 7 of the Endangered Species Act [found at 16 USC § 1536(a)(2)]. Section 7(a)(2) states:

Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an “agency action”) is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

The project may affect and is likely to adversely affect steelhead, coho salmon, and Chinook salmon. The project may affect, but is not likely to adversely affect, golden paintbrush, water howellia, Bradshaw’s lomatium, and chum salmon. The project would have no effect on bull trout.

A biological assessment for the project was submitted to the US Fish and Wildlife Service. A concurrence letter dated November 24, 2008 was received from the US Fish and Wildlife Service (included in Appendix D to the Final Environmental Impact Statement). The National Oceanic and Atmospheric Administration National Marine Fisheries Service provided a biological opinion (included in Appendix D to the Final Environmental Impact Statement) with an incidental take statement and permit containing reasonable and prudent measures to minimize harm outlined in the biological assessment and biological opinion.

4.4 Magnuson-Stevens Fishery Conservation and Management Act of 1970

The Magnuson-Stevens Fishery Conservation and Management Act of 1970 (16 USC 1801), administered by NOAA Fisheries, provides for the conservation and management of fishery resources. The Sustainable Fisheries Act (Public Law 104-297) (re-named from the Magnuson-Stevens Act) amended the habitat provisions of the Act. It calls for direct action to stop or reverse the continued loss of fish habitats. The Act requires federal agencies to protect, conserve, and enhance “essential fish habitat” for federally managed fish species. Essential fish habitat is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.”

The Pacific Fishery Management Council, implementing amendments to the federal 1996 Sustainable Fisheries Act, has designated essential fish habitat for Pacific salmon. Mill Creek North, which is a tributary of the East Fork Lewis River, and Mill Creek, which is a tributary of Salmon Creek, both represent essential fish habitat for Chinook and coho salmon, and both are documented habitat for Lower Columbia River coho salmon.

The project would result in approximately 3-5 acres of permanent effects to designated essential fish habitat for Chinook and coho salmon, although not all of the habitat is accessible to listed fish species.

4.5 Section 4(f) of the Department of Transportation Act of 1966

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC 303 and 23 USC 138, declares that

It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.

Section 4(f) specifies that

The Secretary [of Transportation] may approve a transportation program or project ... requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- 1. There is no prudent and feasible alternative to using that land; and*
- 2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.*

The preferred alternative would require use of two Section 4(f) properties - removing the existing historic J.B. Williams house and removing or relocating existing structures on the historic Thomas farmstead. These actions resulted in findings of adverse effect to the J.B. Williams house and the Thomas farmstead under Section 106.

As demonstrated in the project's Section 4(f) Evaluation, included as Appendix B in the Final Environmental Impact Statement, the Build Alternative causes the least overall harm through the incorporation of all possible planning measures to minimize harm, while also meeting the purpose and need for the project. There is no feasible and prudent alternative to the use of the J.B. Williams house and the Thomas farmstead because the No Build Alternative and the Transportation System Management/Transportation Demand Management alternative fail to meet the project's purpose and need of improving safety and mobility.

The Build Alternative is a hybrid of the other on-corridor alternatives studied and the Transportation System Management/Transportation Demand Alternative that blends the best aspects of these alternatives with its design carefully minimizing impacts to Section 4(f) property and those resources not protected by Section 4(f) to the extent possible, while still addressing the purpose and need of the project. The following design parameters are included as part of the Build Alternative in order to incorporate all possible planning to minimize harm or mitigate for adverse impacts to Section 4(f) property:

- The right of way was narrowed near the Bonneville Power Administration transmission line to avoid relocation or replacement of the tower located west of NE 41st Court.
- Right of way acquisition on the north and east edges of the parcel containing the Ed Allen/Wilson Heasley house has been limited, thus avoiding an impact to the historic house and minimizing removal of vegetation between the house and the roadway.

- Washington State Department of Transportation would implement mitigation measures for the unavoidable impacts to the J.B. Williams house and the Thomas farmstead through the memorandum of agreement signed with the Washington State Historic Preservation Officer on January 14, 2010, in compliance with Section 106 of the National Historic Preservation Act.
- The roadway was shifted south to avoid the house and other structures on the Blair farmstead and to minimize removal of vegetation between the structures and the roadway.
- Steeper slopes (4 to 1 dimension) can be utilized for the roadside ditch adjacent to the Blair farmstead in order to reduce the amount of vegetation removal required and minimizing changes to the setting of the historic farmstead.
- The right of way was narrowed near the Smith farmstead to avoid removal or relocation of the farmstead structures.

4.6 Section 106 of the National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 (16 USC 470) sets forth government policy and procedures regarding “historic properties,” that is, districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. See also Code of Federal Regulations Part 800.

Section 106 of the National Historic Preservation Act requires federal agencies to take the effects of their actions on historic properties into account. Within the project area, Washington State Department of Transportation found a total of 89 historic resources, six of which met the eligibility criteria to be nominated to the National Register of Historic Places. Washington State Department of Transportation analyzed the removal of the J.B. Williams house, removal or relocation of structures on the Thomas farmstead, and the removal of vegetation adjacent to the Smith farmstead and the Blair farmstead under Section 106 of the National Historic Preservation Act. The Bonneville Power Administration Vancouver-Covington transmission line and the Smith farmstead would not be affected by the project.

Also within the project area, Washington State Department of Transportation found a total of 19 archaeological sites, one of which met the eligibility criteria to be nominated to the National Register of Historic Places, but which would not be disturbed by the project.

The Federal Highway Administration and Washington State Department of Transportation, in consultation with the Washington State Historic Preservation Officer, the Chinook Tribe, and the Cowlitz Indian Tribe, determined that no cultural or archaeological resources would be adversely affected by the project. The J.B. Williams house and Thomas farmstead would be adversely affected, but the project would have no adverse effect on the Smith farmstead and Blair farmstead and no effect on the Bonneville Power Administration Vancouver-Covington transmission line and the Smith farmstead. The Washington State Department of Archaeology and Historic Preservation concurred with these determinations. The Federal Highway Administration, US Army Corps of Engineers, Washington State Department of Transportation, Washington State Historic Preservation Officer, Chinook Tribe, and Cowlitz Indian Tribe signed a Memorandum of Agreement on January 14, 2010 (included in Appendix C to the Final

Environmental Impact Statement). This agreement commits the Federal Highway Administration and Washington State Department to carry out measures to mitigate for adverse impacts to the J.B. Williams house and the Thomas farmstead.

4.7 Farmland Policy Protection Act

The Farmland Protection Policy Act (7 USC 4201-4209) requires federal agencies to coordinate with the Natural Resources Conservation Service if project activities may irreversibly convert farmland (directly or indirectly) to a non-agricultural use. Under the Farmland Protection Policy Act “farmland” includes prime farmland, unique farmland, and land of statewide or local importance.

The Natural Resource Conservation Service determined that the preferred alternative would convert approximately 101 acres of designated prime farmland to non-agricultural uses. This would include 12–16 acres of prime farmland soils adjacent to the SR 502 corridor, 63 acres of prime farmland soils at the Mill Creek North mitigation site, and 22 acres of prime farmland at the Sunset Oaks wetland mitigation.

The Natural Resource Conservation Service completed a farmland conversion impact rating for the preferred alternative, which is included in Appendix D of the Final Environmental Impact Statement.

4.8 Environmental Justice

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

... to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...

Federal Highway Administration Order 6640.23, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, establishes policies and procedures for use in complying with Executive Order 12898.

There are two minority-owned businesses within the project corridor; however, neither of the minority-owned businesses would be displaced under the preferred alternative. No other environmental justice resources exist in the project area. Thus, it was determined through the analysis that minority or low-income populations would not be disproportionately affected; the project’s effects would not be appreciably more severe to these populations compared to the whole community.

4.9 Section 6(f) of the Land and Water Conservation Fund Act

The Land and Water Conservation Fund Act State Assistance Program was established by the Land and Water Conservation Fund Act of 1965 (Section 6, Land and Water Conservation Fund

Act of 1965, as amended; Public Law 88-578; 16 U.S.C. 4601-4 et seq.) to stimulate a nationwide action program to assist in preserving, developing, and assuring to all citizens of the United States of present and future generations such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable for individual active participation. Any property acquired and/or developed with Land and Water Conservation Fund assistance cannot be converted to a use other than public outdoor recreation uses without the approval of the National Park Service pursuant to Section 6(f)(3) of the Land and Water Conservation Fund Act and these regulations.

There are no outdoor recreation facilities in the study area that were acquired or developed with Section 6(f) of the Land and Water Conservation Fund Act funding, and therefore a Section 6(f) evaluation is not required for the project.

4.10 Other Considerations

In addition to resources protected by federal laws, effects of the alternatives on other community and environmental resources were also examined in the Final Environmental Impact Statement. Displacements, effects to sound levels, and effects to floodplains were additional values which factored into the decision making process.

4.10.1 Residential and Business Displacements

Approximately 140–160 parcels are being investigated for partial or full acquisition to accommodate the right of way and mitigation area needed for the preferred alternative. Although only three to seven would be full acquisitions that would result in residential and business displacements, some of the partial acquisitions, where a strip of land adjacent to SR 502 would be acquired, would also lead to displacements due to the proximity of structures to the roadway. Approximately 25–35 residences and 22–28 commercial businesses (up to half of the businesses at Dollars Corner) would be displaced under the Build Alternative based on current design. The exact right of way acquisition area will be determined during the final design process and property negotiations.

During the development of alternatives for the project, business owners expressed strong support for selection of an on-corridor alternative. Despite the resulting business displacements, businesses and residents preferred an on-corridor alternative because it would keep potential customers, who travel SR 502, closer to remaining businesses at Dollars Corner rather than routing them around Dollars Corner. Prior to meeting with Washington State Department of Transportation on June 11, 2007, more than 350 residents and businesses, including all businesses at Dollars Corner, signed a “SR 502 Petition for Straight Thru Existing Route” stating, “We the undersigned affected by this project prefer the route straight thru Dollars Corner and not deviate to the north or south of the existing route.”

The displacement of up to half of the businesses at Dollars Corner may have an adverse effect on community cohesion along the SR 502 corridor because the businesses in this area provide gathering places for the neighborhood. Many of the businesses where neighbors may currently interact with each other would be displaced. However, the addition of sidewalks, marked crosswalks, pedestrian refuges, and bicycle lanes at Dollars Corner may benefit community

cohesion as these improvements would increase the safety for residents to walk among the remaining businesses, which could increase the opportunity for neighbors to interact.

The Build Alternative would change some of the social aspects of the rural community along the SR 502 corridor by displacing residences and businesses; decreasing community cohesion by changing the stability of the population in the area and reducing the number of gathering places at Dollars Corner; requiring the relocation of on-site septic systems or wells or connection to new waterlines for some property owners; and the high level of traffic on SR 502 would continue to act as a community barrier. However, despite these adverse effects, the Build Alternative is the selected alternative because it also offers beneficial social effects to the community along the corridor including: reduced travel times to access businesses and services in Ridgefield and Battle Ground, as well as jobs in Vancouver; shorter travel time for police, fire, and emergency medical vehicles; improved pedestrian and bicycle safety; and increased vehicle safety.

4.10.2 Sound

Greater increases in sound levels are expected under the preferred alternative than the No Build Alternative, since the widened roadway would bring vehicle traffic closer to the monitored sites. The preferred alternative would also result in higher traffic volumes traveling at or near the speed limit. Traffic sound levels are expected to increase by 1–11 decibels under the preferred alternative when compared to existing levels. Noise effects, ranging from 66–73 decibels would occur at 96 residences and three churches, exceeding the noise abatement criteria levels established by the Federal Highway Administration. However, approximately 26 of these affected residences would be displaced by the preferred alternative and likely be relocated further away from SR 502 and would not experience the noise effects at their new locations. The remaining 70 residences along SR 502 would have noise effects that exceed the noise abatement criteria.

Noise abatement was analyzed to determine if it would provide at least seven decibels of noise reduction (feasibility test) and if it would be cost effective to implement (reasonableness test). The results of this analysis indicated that none of the measures would be feasible and reasonable, so no noise abatement measures are proposed for the preferred alternative.

4.10.3 Floodplains

Under the preferred alternative, fill would be placed within the 100-year floodplain of Mill Creek, however no fill would be placed in the floodway or in the creek's channel. Clark County's regulations require no net loss of existing storage capacity for a 100-year flood event. The preferred alternative would comply with Clark County's regulations through the floodplain permit process.

5.0 Measures to Minimize Harm

The project's approach to mitigation began with designing the project to avoid and minimize effects to the community and environment. Efforts incorporated into the Build Alternative to minimize harm to the community and environment included:

- Selecting an alternative that would minimize realignment of stream channels or bisect wetland complexes.

- Making adjustments to avoid wetland fill or adverse effects to riparian areas to the extent possible. For example, a minor shift of roadway to the south made it possible to minimize fill to a Class I forested wetland, while another minor shift avoided adverse effects to the riparian area of Mill Creek, a fish-bearing stream.
- Applying measures to minimize effects to Section 4(f) properties. Small adjustments in alignment avoided adverse effects to the Bonneville Power Administration Vancouver-Covington transmission line tower, Blair farmstead and Smith farmstead.
- Designing the Build Alternative to provide stormwater detention and treatment facilities to treat runoff from approximately 34 acres of impervious surface.
- Replacing four existing culverts with new culverts that would likely benefit floodplain functions by increasing the flood storage capacity at these locations. The new “stream simulation” culverts would also enhance wildlife connectivity across SR 502.
- Selecting an alternative that would not route customers away from existing businesses.

The lead agencies have committed to using appropriate best management practices (BMPs) to mitigate for adverse effects during construction. Construction BMPs are designed to assure compliance with all applicable regulations and permit conditions. These BMPs are specified in Chapter 5 of the Final Environmental Impact Statement and are not repeated within this Record of Decision.

6.0 Project Commitments

The Federal Highway Administration and the Washington State Department of Transportation would have joint responsibility for adhering to the environmental commitments described in the Project Commitments (Appendix A). Washington State Department of Transportation would implement the commitments, and some of the commitments would become special provisions in the contract with the contractor selected to construct the project.

7.0 Monitoring and Enforcement

The Federal Highway Administration Division Administrator and the Washington State Department of Transportation Director of Environmental Services will be ultimately responsible for monitoring and enforcing mitigation measures. The Washington State Department of Transportation’s Southwest Region will be responsible for compliance assurance of all related commitments and regulatory permit conditions made or obtained for the project.

A number of federal, state, and local permits or approvals would be required for the project, and are identified in Exhibit 6.

Exhibit 6. Federal, State and Local Permits Required for the Project

Law	Agency and/or Tribe	Permit or Approval
<i>Federal Permits or Approvals</i>		
Clean Water Act	US Army Corps of Engineers	Section 404 Permit
Endangered Species Act	US Fish and Wildlife Service and National Oceanic and Atmospheric Administration National Marine Fisheries Service	Section 7 Consultation
Farmland Protection Policy Act	US Natural Resources Conservation Service	Farmland Conversion Impact Rating Score
National Historic Preservation Act	Washington State Department of Archaeological and Historic Preservation, Cowlitz Indian Tribe, and Chinook Tribe	Section 106 Consultation
US Department of Transportation Act	Federal Highway Administration	Section 4(f) evaluation
<i>State Permits or Approvals</i>		
Clean Water Act Section 401	Washington State Department of Ecology	Section 401 water quality certification
Clean Water Act Section 402 (RCW 90.48)	Washington State Department of Ecology	National Pollutant Discharge Elimination System Construction Stormwater Permit
Construction Projects in State Waters (RCW 77.55)	Washington State Department of Fish and Wildlife	Hydraulic Project Approval
<i>Local Permits or Approvals</i>		
City of Battle Ground Municipal Code	City of Battle Ground	Critical Areas Report Review
Clark County Code	Clark County	Wetland, floodplain and habitat permits to comply with the habitat conservation, floodplain regulation and wetland protection ordinances

8.0 Comments Received on the Final Environmental Impact Statement

One comment letter on the Final Environmental Impact Statement was received after the Notice of Availability for the Final Environmental Impact Statement was published on April 2, 2010. The letter received was submitted by the U.S. Environmental Protection Agency and dated May 3, 2010. Four topics were identified in this letter, and five recommendations were offered by the U.S. Environmental Protection Agency. A copy of this letter is included in Appendix B. Responses to these recommendations are provided below.

Topic: Air Quality

U.S. Environmental Protection Agency Recommendation: Include in the Record of Decision (ROD) a commitment to require or provide contractor incentives to obtain air quality construction mitigation measures to minimize construction-related emissions of air toxics and diesel particulates.

Response:

In addition to the mitigation measures listed in the Final Environmental Impact Statement (page 7-14) for temporary effect to air quality, the Washington State Department of Transportation will ensure that contractors adhere to applicable standard specifications, including compliance with air quality rules of local and state air pollution authorities. For this project, the local air pollution agency is the Southwest Clean Air Agency; air quality rules of the Washington State Department of Ecology may also govern project work. Further, Washington State Department of Transportation will encourage contractors to reduce idling and properly maintain equipment to minimize construction-related emissions of air toxics and diesel particulates. However, other mitigation measures (such as retrofitting diesel engines with verified technologies, replacing older equipment, using cleaner fuels, and repowering equipment) are independent business decisions made by each contractor.

Topic: Greenhouse Gas Emissions (GHGs), Public Transit Needs

U.S. Environmental Protection Agency Recommendation: Continue coordination and collaboration with C-TRAN and Clark County regarding the need and potential for improved transit. In partnership with C-TRAN and Clark County, conduct origin-destination studies to inform transit planning and service.

Response:

The Southwest Washington Regional Transportation Council is recognized by the US Department of Transportation as the metropolitan planning organization (23 USC Section 134) for Clark County as well as under Washington state law as the regional transportation planning organization (RCW 47.80). The council's mission, as expressed in their Metropolitan Transportation Plan (amended July 2008) is: "[Southwest Washington Regional Transportation Council], in cooperation with the Washington State Department of Transportation and C-TRAN, Clark County's transit operator, is responsible for carrying out federal transportation planning requirements." Additionally, under the regional transportation planning organization legislation (RCW 47.80.030), the Southwest Washington Regional Transportation Council "shall develop in cooperation with the department of transportation, providers of public transportation and high capacity transportation, ports, and local governments within the region, adopt, and periodically update a regional transportation plan that ... identifies existing or planned transportation facilities, services, and programs, including but not limited to major roadways including state highways and regional arterials, transit and non-motorized services and facilities..."

The SR 502 Corridor Widening project meets the consistency requirement of state law in RCW 47.80.030, which states: "all transportation projects, programs, and transportation demand management measures within the region that have an impact upon regional facilities or services

must be consistent with the plan and with the adopted regional growth and transportation strategies,” as well as RCW 36.70A.103 (Washington State Growth Management Act), which states: “State agencies shall comply with the local comprehensive plans and development regulations and amendments thereto adopted pursuant to this chapter...” This applies to Clark County’s and the City of Battle Ground’s comprehensive plans, which have been factored into the regional transportation planning process, as well as the travel demand forecasting undertaken for the SR 502 corridor project transportation analysis.

As such, Washington State Department of Transportation is required by state (RCW 47.80.070) and federal law (23 USC Sections 134: Metropolitan Transportation Planning and 135: Statewide Transportation Planning) to collaborate with the Southwest Washington Regional Transportation Council and C-TRAN for regional transportation planning activities, including highways and transit. As part of this collaboration, the Southwest Washington Regional Transportation Council undertakes refinements and updates to their regional travel demand model, which is used to forecast highway and transit trip-making into and through Clark County in support of maintaining the Metropolitan Transportation Plan. The Southwest Washington Regional Transportation Council utilizes household travel surveys, and works with C-TRAN to undertake on-board bus user surveys, which are used to calibrate and refine the regional travel demand model. The Southwest Washington Regional Transportation Council is currently going through a cooperative effort with Metro, the metropolitan planning organization for the Portland metropolitan area, to undertake such a set of surveys over the next year which will eventually lead to refinements to the model.

This travel demand model was used as the basis for vehicle and transit user projections for not only the SR 502 Corridor Widening project, but also for C-TRAN’s recently-completed 20-year Transit Development Plan. C-TRAN’s Transit Development Plan is analogous to Washington State Department of Transportation’s Highway System Plan – they both set policies and identify project needs over a 20-year period. Each agency is responsible for its own plan, but utilizes the same travel demand model within Clark County for their planning and to maintain consistency.

Thus, the origin-destination studies mentioned in the U.S. Environmental Protection Agency’s comments have already been taken and incorporated into the travel demand model used for the SR 502 transportation impacts analysis process as well as C-TRAN’s planning efforts, which have been incorporated into this analysis.

Washington State Department of Transportation has been coordinating with C-TRAN during the course of planning and designing the project and will continue coordination with C-TRAN throughout the duration of the project. If requested by C-TRAN or other agencies, the Washington State Department of Transportation will provide input into any future transit planning efforts.

U.S. Environmental Protection Agency Recommendation: Explore with C-TRAN and Clark County how current and future transit facility needs, such as, transit pullouts and Park and Ride facilities, could be integrated and implemented with construction of the proposed project.

Response:

Washington State Department of Transportation will continue coordinating with C-TRAN on any planned transit services and facilities related to the SR 502 roadway, including bus pullouts and a park-and-ride facility. As stated on pages 2-17 and 3-12 of the Final Environmental Impact Statement, future bus pullouts could be accommodated within the design of the Build Alternative. C-TRAN has not made any specific service changes that would enable identification of specific bus pullout locations along SR 502. Furthermore, the Build Alternative does not preclude a park-and-ride facility along SR 502; however, C-TRAN has not identified a specific location for a park-and-ride facility, thus Washington State Department of Transportation cannot integrate bus pullouts or a park and ride facility into the construction of the Build Alternative.

Washington State Department of Transportation is prohibited by the State of Washington's constitution as far as spending state gas tax funds (to be utilized for the SR 502 Corridor Widening project) on transit facilities of any kind, including buses, park-and-rides, and transitways. Washington State Department of Transportation will provide input, as requested by C-TRAN, into any future transit planning efforts, which is required by 23 USC (Metropolitan Planning) and the Washington State Growth Management Act.

Topic: Ecological Connectivity

U.S. Environmental Protection Agency Recommendation: Consider a modest enlargement of the stream simulation culverts to provide for larger upland species movement.

Response:

Washington State Department of Transportation is working with Washington State Department of Fish and Wildlife technical experts to design the project's stream simulation culverts in accordance with the Washington State Department of Fish and Wildlife guidelines for this type of culvert. The stream simulation culverts proposed as part of the Build Alternative will enable upland wildlife up to the size of rodents to pass through the culverts, as described on page 4-8 of the Final Environmental Impact Statement. Because there is a very low rate of large wildlife collisions along the corridor, and the project is not located in an area managed as priority wildlife habitat (as noted on page 4-6 of the Final Environmental Impact Statement), there is little need for further enlargement of the culverts to address upland mammals. Further, fencing to "funnel" large upland wildlife to designated crossing areas is not practical or feasible along SR 502 because of the many landowners and driveways that intersect the roadway, which would lead to many breaks in the fencing, thereby defeating the purpose of the fencing.

Topic: Farmland Losses

U.S. Environmental Protection Agency Recommendation: Please consider analyses such as the one described above [induced travel from the proposed project and potential conversion of farm and resource lands] for this and other future transportation projects and disclose the results in the NEPA document to inform the public and decision makers.

Response:

There are two important considerations in this response:

- The Federal Highway Administration definition of induced travel or latent demand will be used here to provide a response as to whether or not the project is assumed to induce travel as an outcome of the preferred alternative¹.
- Clark County, under the state's Growth Management Act (RCW 36,70A)², is the agency required to maintain the county's comprehensive plan. They are required to coordinate with Washington State Department of Transportation on the transportation planning aspects of the plan, and concurrently Washington State Department of Transportation is required to coordinate with Clark County on the development of the state highway system as it pertains to the local comprehensive plan.

“Induced travel” describes the observed increase in traffic volume that occurs soon after a new highway is opened or a previously congested highway, such as SR 502, is widened. The potential for induced travel was considered for the SR 502 Corridor Widening project during the project traffic modeling and analysis under the following scenarios:

1. Do alternative transportation trips (walking, bicycling, and transit) under the No Build Alternative shift to vehicle trips under the Build Alternative?
2. Do vehicle trips increase as a result of latent demand, which comprises trips that would not occur unless a facility is built or improved?
3. Or, do vehicle trips that are traveling on other routes relocate to the SR 502 corridor as a result of the project?

Standard traffic modeling does not necessarily enable a quantitative method to answer these questions; however, typical modeling assumptions and post-processing were applied during the traffic analysis to assess these potential changes to traffic volumes.

Under the first scenario regarding mode shifts, transit use in the corridor is minimal; there is no current or projected transit service that would provide boarding or deboarding in the project area. Only one commuter bus route travels along SR 502 with one morning and one evening trip between the Battle Ground Transit Center and the Delta Park/Vanport MAX Station in Portland, Oregon, with a potential addition of a second peak period trip being considered as part of C-TRAN's 20-Year Transit Development Plan. Pedestrian and bicycle trips are minimal. Traffic analysis of the minimal transit, pedestrian and bicycle trips assumed there would be no change in the split between these modes and vehicle travel as there is a low population and employment density in the corridor. Thus, no induced travel would result from a transportation mode shift.

Under the second scenario regarding latent demand, the traffic study area included other parallel east-west transportation corridors, including NE 239th Street, NE 199th Street and NE 179th Street, all of which are and will be available to use as alternative routes in the future No Build Alternative for SR 502. None of these alternate corridors are at capacity or are expected to reach capacity by 2033; and therefore, drivers are not expected to forgo trips altogether under the No

¹ <http://www.fhwa.dot.gov/planning/itfaq.htm>.

² <http://apps.leg.wa.gov/rcw/default.aspx?cite=36.70A>.

Build Alternative. All vehicle trips would use either SR 502 or an alternate route to reach their destination under the No Build Alternative. Thus, widening SR 502 would likely not lead to any measurable induced travel demand.

For the third scenario, transportation modeling for the SR 502 Corridor Widening project shows that there could be a shift in distribution of trips under the Build Alternative versus the No Build Alternative. The modeling showed that if no improvements were made, SR 502 would become so congested that approximately 10 percent of trips would divert to an alternate route such as NE 239th, NE 199th or NE 179th streets. Under the Build Alternative, there would be no diversion and all trips that would logically use SR 502 would remain on SR 502. Thus, total traffic volumes would not increase and cause induced travel; however, traffic volumes would be distributed differently between SR 502 and parallel routes under the No Build and Build Alternatives.

The relationship between induced travel due to transportation improvements and the potential for induced growth is extremely complex. While improved transportation accessibility in a particular corridor may make land more attractive for development, other factors such as water and sewer lines, quality of schools and other public services, undevelopable land, land acquisition and development costs, impact fees, and zoning ordinances also play a major role in shaping where land development will take place, its nature and intensity. In the case of states such as Washington, where growth management acts are in place, the establishment of urban growth boundaries by county-adopted comprehensive plans also is a substantial factor. Highway construction projects support locally-approved land use planning, consistent with the Washington State Growth Management Act. Chapter 4 of the Final Environmental Impact Statement summarizes the project's compatibility with local, regional, and state plans and development regulations.

In the case of the SR 502 corridor and the study area included in the Final Environmental Impact Statement, the transportation analysis used the currently-adopted Clark County Comprehensive Plan in developing opening year and design year travel projects and analysis. Based on discussions with Clark County as part of the initial transportation analysis methodology, the County gave no indication that the SR 502 Corridor Widening project would lead to changes in the comprehensive plan designations or zoning code as an outcome of the project. The only potential change that was mentioned was a potential development of a traffic circulation plan for the area within Dollars Corner, a rural center, but there were no land use changes considered or resulting from that effort, which has concluded with adoption of a circulation plan (and which was incorporated into the project analysis). It should be noted that there is no "Clark County urban growth boundary" as mentioned in the comment; the urban growth boundaries in the transportation study area are the cities of Vancouver, Battle Ground, and Ridgefield urban growth boundaries, and the Dollars Corner Rural Center (not an urban growth area), all of which are components of the overall county comprehensive plan. There are no provisions in the comprehensive plan for expansions of urban growth boundaries, conversion from rural to urban land uses, or changes in comprehensive plan land use designations as a direct result of the SR 502 Corridor Widening project. The Build Alternative is not anticipated to cause any changes in existing land uses beyond minor commercial redevelopment around Dollars Corner, as explained on page 6-6 of the Final Environmental Impact Statement. While access to all parcels

along SR 502 would be maintained, access management control changes included in the Build Alternative would restrict access to parcels and would be expected to curtail future growth.

Similarly, no changes in land use patterns such as farm or other resource lands conversions beyond the SR 502 corridor are anticipated. While the Clark County Comprehensive Plan may call for the conversion of farmland into other uses, Washington State Department of Transportation has no regulatory control over those decisions. Washington State Department of Transportation is required to consistently plan for and develop the state transportation system consistent with counties' comprehensive plans. In this case, the Clark County's comprehensive plan has anticipated and accounted for the SR 502 Corridor Widening project in its overall transportation capital facilities plan. As noted above, no induced travel is expected from mode shifts or latent demand. Further, land conversions would be dependent on many other factors such as utility infrastructure improvements, local land use plan and zoning amendments, and available developable lands, which are not related to the Build Alternative. Although some redistribution of the traffic volumes would likely occur under the Build Alternative, the project traffic analysis indicates more traffic will remain on SR 502 rather than being diverted to nearby east-west corridors.

Washington State Department of Transportation and the Federal Highway Administration will coordinate with the U.S. Environmental Protection Agency and other agencies as needed to evaluate the need for induced growth analyses for future Washington State Department of Transportation and Federal Highway Administration projects on a case-by-case basis.

9.0 Conclusion

For the reasons outlined above in this record or decision, the preferred alternative (Build Alternative) is the alternative that best meets the purpose and need for the project. As discussed in Section 5.0, the preferred alternative was developed to minimize adverse effects to environmental and community resources, so the preferred alternative is also the environmentally preferred alternative.

The decision is based on an evaluation of information presented in the Final Environmental Impact Statement, the project's purpose and need, interagency coordination, input from the public, and the factors and commitments outlined above. One comment was received during the 30-day public review period after the Notice of Availability of the Final Environmental Impact Statement appeared in the Federal Register.

The Federal Highway Administration selects the preferred alternative (Build Alternative) for construction. The Federal Highway Administration finds that all practicable measures to minimize harm to the community and environment have been incorporated into the project. The Federal Highway Administration will ensure that the commitments outlined above and in the Final Environmental Impact Statement will be implemented as part of the project design, construction and post-construction monitoring.

10.0 References

Washington State Department of Transportation (2010). *SR 502 Corridor Widening Project Final Environmental Impact Statement and Final Section 4(f) Evaluation*. March 2010.

Appendix A. Project Commitments

The attached project commitments are excerpted in whole from the project's Final Environmental Impact Statement, Chapter 7.

7 | Environmental Commitments



Chapter 7 discusses the environmental commitments by resource that would be used to avoid or minimize adverse effects that may result from constructing, operating, or maintaining the Build Alternative. For some resources, additional conservation measures are proposed to avoid affecting resources. In the case where effects cannot be avoided, mitigation measures are proposed. Measures are proposed separately for temporary effects that can occur during construction and those long-term, permanent effects. The mitigation measures are intended to be consistent with the requirements of the anticipated permits listed in the *Fact Sheet*; Washington State Department of Transportation will also comply with any additional permit requirements.

The Federal Highway Administration and Washington State Department of Transportation would have joint responsibility for adhering to the environmental commitments described in this chapter. Washington State Department of Transportation would implement the commitments, and some of the commitments would become special provisions in the contract with the contractor selected to construct the project.

Surface water, floodplains, and groundwater

Conservation measures for temporary effects

- A temporary erosion and sediment control plan shall be prepared prior to the start of construction and adhered to throughout the process. All reasonable measures shall be used to assure that construction activity will be in compliance with local and state standards.



KEY POINT

Potential mitigation measures are discussed for the temporary effects and the long-term effects of the Build Alternative only.

1
Introduction
to the Project

2
Developing the
Alternatives

3
Comparison of the
Alternatives –
Safety and Mobility

4
Comparison of the
Alternatives –
Environmental Effects

5
Construction
Effects

6
Other
Considerations

7
Environmental
Commitments

**DEFINITION****WHAT IS NTU?**

Nephelometric Turbidity Units, measured with a turbidimeter, shows how light is scattered by suspended material in water. NTU is an indicator of water clarity.

- During project construction, all erosion and stormwater control measures will aim to either meet or exceed the current *Washington State Department of Transportation Highway Runoff Manual* requirements.
- Stormwater discharges from the project site meeting the National Pollutant Discharge Elimination System General Construction Stormwater permit benchmark from 0–25 NTU are presumed to be in compliance with the state surface water quality standards (Chapter 173-201 of the Washington Administrative Code). Construction monitoring will follow the *2008 Washington State Department of Transportation Highway Runoff Manual* requirements.
- In addition to a temporary erosion and sediment control plan, the project will include a spill prevention control and countermeasures plan. These plans will guide actions to control spills and associated pollutants throughout the project work areas. Spill prevention control and countermeasures plan components will include but are not limited to staging, storage, maintenance, refueling areas and waste sites. It will be the responsibility of the project sponsor and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterways or wetlands and provide for the prompt and effective cleanup of spills. The spill prevention control and countermeasures plan will help to avoid and mitigate when necessary for potential contaminant spills that could affect groundwater as there are public and private water wells in the study area.
- Spill control best management practices, including the spill prevention control and countermeasures plan, proper storage, and containment facilities shall be used during construction to minimize the effects of a spill. Contractors are required to prepare and implement the spill prevention, control, and countermeasures plan in accordance to Washington State Department of Transportation Standard Specification 1-07.15(1). Specific spill control best management practices can be found in Volume 2 of the Washington State Department of Ecology *Stormwater Runoff Manual for Western Washington*.

Conservation measures for long-term effects

- Stormwater treatment and flow attenuation would be a part of the project. The proposed locations of water quality and quantity BMPs for highway runoff as well as stormwater management requirements are described in the *Preliminary Hydrology Analysis Report* for the project.
- All stormwater facilities require routine inspection and maintenance and would be designed to facilitate these functions. Maintenance will be based on regular inspections as deemed necessary and by the level

of funding provided by the Washington state legislature. Maintenance practices will follow Washington State Department of Transportation standards for protecting roads and the environment including the BMPs established in Section 5-5 of the current *Washington State Department of Transportation Highway Runoff Manual*.

- To comply with Federal Emergency Management Agency and Clark County's floodway criteria, the culvert replacements and extensions must not cause an increase in the 100-year floodway elevations, relative to the existing condition.

Mitigation measures for long-term effects

- Wetland mitigation will likely involve a combination of wetland re-establishment, creation, rehabilitation, and/or enhancement. The Wetland Delineation Report presents the Washington State Department of Ecology baseline replacement ratios for wetland mitigation, and the acreage of mitigation that will likely be required under each scenario. Buffers will be applied to all wetland mitigation areas in accordance with state and federal guidelines, as published in *Wetlands in Washington State – Volume 2: Guidance for Protecting and Managing Wetlands*.
- When possible, trees removed from the riparian areas could be salvaged and used for woody debris placement within environmental mitigation sites
- Disturbed riparian areas will be seeded to improve water quality and planted with woody species to provide long-term bank stabilization and in-stream shading.
- Because there are no existing stormwater treatment facilities, the project would retrofit approximately six acres of additional existing impervious surfaces for enhanced water quality treatment.
- Restoration activities will include restoration of in-stream habitat, stream channel reconstruction to restore natural channel morphology, reestablishment of floodplain connectivity, and restoration of riparian plant communities.

Biological resources

- Comply with and implement the terms and conditions for protection of biological resources as specified in the Biological Opinion issued by the National Oceanic and Atmospheric Administration – National Marine Fisheries Service.

Mitigation for temporary effects

Temporary erosion sediment control, spill control, and water quality

- Implement a site-specific temporary erosion sediment control plan to minimize erosion and sedimentation.
- Implement a site-specific spill prevention, control and counter-measures plan to minimize spills and ensure all harmful materials are properly stored, contained, and disposed.
- Comply fully with state water quality standards.
- Materials will be clean, covered where appropriate, and placed in a manner to prevent erosion.
- Treat any sediment-laden wastewater (in an upland area) produced by the project prior to discharge.
- Ensure that equipment operating below the ordinary high water mark use only vegetable based oils in hydraulic lines.
- Equipment, such as generators, within 50 feet of the ordinary high water mark will be diapered or provided another type of containment as approved by Washington State Department of Transportation.
- Protect all inlets and catchments from fresh concrete, tackifier, paving or paint striping, as necessary, in case inclement weather unexpectedly occurs.
- Avoid conducting paving or stripe painting operations during rainy weather.
- Fresh concrete and/or concrete by-products shall be prevented from entering surface waters during construction. Any water having direct contact with uncured concrete shall be contained and treated or removed from the site (as appropriate) to prevent discharge to surface waters and/or wetlands.
- Establish concrete chute cleanout areas to properly contain wet concrete and wash water outside of environmentally sensitive areas.
- Inspect equipment daily for leaks and proper function. Ensure that equipment is clean and free of external petroleum-based products.
- To the extent practicable, fuel and maintain equipment at least 150 feet from wetlands marked for preservation and from the ordinary high water mark of streams or as approved by a Washington State Department of Transportation biologist.
- Any waste resulting from the project shall become the responsibility of the contractor and will be disposed at a properly permitted site of their choosing.

Temporary access

- Locate staging areas beyond the ordinary high water mark and outside of environmentally sensitive areas.
- Staging and temporary access areas will occur on existing roadways whenever possible.

Footprint minimization

- Install high visibility fencing around preservation areas before construction to avoid unintended effects to vegetation, wetlands, historic or archaeological resource sites, riparian zones, or other sensitive areas.
- Limit vegetation removal and retain large trees to the extent practicable. Protect root zones of the trees that will be retained.

Revegetation

- Restore vegetation and roadside/environmental function to areas of permanent and temporary disturbance in accordance with Washington State Department of Transportation *Roadside Classification Plan*.

In-water work

- Comply fully with the terms and conditions of the hydraulic project approval issued for the project by the Washington State Department of Fish and Wildlife.
- Comply with the terms and conditions of the biological opinion issued by the National Oceanic and Atmospheric Administration – National Marine Fisheries Service and the US Fish and Wildlife Service.
- Any temporary dewatering of the in-water work zones shall be preceded by work area isolation and fish removal/relocation (as necessary). Fish handling shall be conducted by a trained and qualified biologist.
- Dewater identified in-water work areas and relocate fish outside of the study area before in-water work begins. The National Oceanic and Atmospheric Administration – National Marine Fisheries Service and Washington State Department of Fish and Wildlife will be notified in case of accidental fish kills.
- Conduct in-water work during the appropriate in-water work window for each watershed, as determined by the Washington State Department of Fish and Wildlife:
 - East Fork Lewis River watershed: July 16 – September 30
 - Salmon Creek watershed: July 16 – September 30
 - Gee Creek watershed: July 16 – September 30

- The project will, to the extent practicable, complete all necessary bank protection prior to releasing water back into the in-water work zone.
- Reintroduction of water to the in-water work zone shall be done gradually and in stages so as to minimize the mobilization of sediments.

Mitigation for long-term effects

Vegetation and wildlife resources

- Planting trees of size comparable to the mature trees proposed for removal in riparian zones is not practicable. Revegetate and restore disturbed areas, including clear and grub slopes, areas within or adjacent to riparian zones, and wetlands with dense native vegetation as appropriate. Native woody and herbaceous vegetation would be used to restore and enhance functions (including wildlife habitat) lost to construction in the study area.

Fish resources

- When possible, use trees removed from the riparian areas to enhance habitat at Mill Creek North, Sunset Oaks, and other environmental mitigation areas. Disturbed riparian areas would be seeded and planted with a preference for woody vegetation to provide in-stream shading and prevent sediment loading to streams.
- Re-establish riparian vegetation in currently developed areas:
 - South of SR 502 and on the west side of NE 72nd Avenue, a tattoo business would be demolished and the land adjacent to Mill Creek (less than 0.1 acre) would be planted with riparian plant species and restored to riparian habitat.
 - On the southeast side of SR 502 at Dollars Corner, a realty business would be demolished and the land adjacent to Mill Creek (approximately 0.2 acres) would be planted with riparian plant species and restored to riparian habitat.
- At the Sunset Oaks wetland mitigation site, restore Curtin Creek to a more natural, functioning stream. The Curtin Creek channel would be reconstructed to provide gradual winding across the site with the new channel ranging between 3,000 and 5,000 linear feet and would be approximately three feet deep and 10 feet wide. In-stream work would occur within the designated in-water work window.
- Improve habitat at the Mill Creek North mitigation site. A section of the creek would be reconstructed to restore natural channel morphology, re-establish floodplain connectivity, and restore native riparian plant communities. In-stream work would occur in the designated in-water work window.

Wetlands

Mitigation for temporary effects

- Implement compensatory mitigation for unavoidable effects to wetlands in accordance with the Clark County Code 40.450, Section 404 of the Clean Water Act, Governor's Executive Order 90-04, Washington State Department of Ecology, US Army Corps of Engineers and US Environmental Protection Agency Wetland Mitigation in Washington State - Part 1: Agency Policies and Guidance, and Washington State Department of Transportation Directive 31-12.
- Conduct all construction activities in or near waterways and wetlands in accordance with Washington State Department of Transportation Standard Specifications in order to minimize erosion and sedimentation. Best management practices will be used and could include temporary and permanent erosion control methods comprised of silt fences, retention basins, detention ponds, interceptor ditches, seeding, riprap of exposed embankments, erosion mats, mulching, and a number of other measures.
- When designing stormwater treatment facilities, maintain the existing drainage courses to the full extent practicable.
- Use standard erosion control techniques during construction.
- Leave as much native vegetation as possible in the right of way as a buffer for wildlife habitat and to maintain habitat connectivity.
- Minimize clearing of trees. Unavoidable clearing should be mitigated by planting suitable native trees along nonforested sections of stream banks within or near the study area.
- Restore native vegetation where possible in the right of way to provide buffers for sensitive areas and to enhance habitat connectivity.

Conservation measures for long-term effects

- Bridge piers and/or retaining walls should be placed as far upslope as possible from the wetland and/or stream channel to minimize effects.
- Replace highway ditches with new flat-bottom ditches adjacent to the widened highway.
- To the extent possible, avoid effects to wetlands with the greatest structural and species diversity.

Mitigation for long-term effects

- Implement a comprehensive watershed/landscape based mitigation plan for wetland, wetland buffer, and aquatic resources affected by

the project. Wetland mitigation sites would be constructed within the affected watersheds to replace and enhance hydrologic, water quality, and wildlife functions affected as part of project development and following all applicable federal, state, and local mitigation requirements.

- Adopt a soils and landscape-based approach to selecting potential wetland mitigation sites within the Gee Creek, East Fork Lewis River, and Salmon Creek watersheds to provide maximum watershed and ecological benefits. Data obtained from the Soil Survey of Clark County will be used to research a suite of soil characteristics including; hydrologic soil groupings, infiltration rate, hydraulic conductivity (Ksat), estimated depth to seasonal high water tables, suitability for agricultural ponds, shallow slopes, soil texture, woodland suitability, and forestland productivity.
- Create multiple mitigation sites within the Gee Creek, East Fork Lewis River, and Salmon Creek watersheds. The selection of all mitigation sites will follow current watershed approach requirements as defined by Washington State Department of Ecology and the US Army Corps of Engineers in order to maximize overall environmental and aquatic function in the affected watersheds. The Sunset Oaks and Mill Creek North mitigation sites have been identified as locations for compensatory wetland mitigation and fish habitat restoration for the project. Planting of woody vegetation species would be part of the mitigation. If additional mitigation sites are identified, each would be analyzed and receive necessary environmental clearance.
- Develop detailed goals, performance criteria, and contingency plans for all mitigation sites as part of the final wetland mitigation plan consistent with local, state, and federal wetland permits and requirements.
- Apply rigorous monitoring methods, integrated plant establishment techniques, and principles of adaptive management during the 10 year establishment phase of the mitigation sites to assure compliance with documented performance criteria. If monitored performance criteria are not met, the contingency plan would be implemented to correct any potential problems.

Geology and soils

Mitigation for temporary effects

- Effects related to soil erosion would be minimized through best management practices during construction. The construction contractor would be required to prepare and implement a temporary

erosion and sedimentation control plan prior to construction. The plan would include measures to reduce erosion of exposed soils, excavated material, and fill material. The contractor would also be required to implement dust control during construction.

- Effects related to high groundwater and wet weather working conditions would be minimized through the inclusion of special provisions for construction delays for weather, excavation in wet soil conditions, dewatering when excavating, erosion control, and drainage.

Mitigation for long-term effects

Long-term effects such as subsidence and liquefaction will be adequately addressed if the Washington State Department of Transportation *Geotechnical Design Manual* is followed and a proper geotechnical investigation is performed. Poor subgrade materials can also be addressed by following the *Geotechnical Design Manual*. Sections of the *Geotechnical Design Manual* that address these effects include, but are not limited to, Section 5.9.2 – Peat/Organic Soils, 6.5.2 – Liquefaction, 9.2.4 – Embankment Settlement Assessment, 9.3 – Stability Mitigation, 9.4 – Settlement Mitigation, 11 – Ground Improvement, 16 – Geosynthetic Design, and 17.4 – Culverts. Additionally, by following the applicable Washington State Department of Transportation maintenance procedures for the new facility, long-term effects from operation and maintenance of the facility would be minimized.

Land use, relocations, farmlands and public lands

Mitigation for temporary effects

- Provide notice of upcoming traffic effects to property and business owners in the study area on a weekly basis.
- Provide residents, tenants, and property owners in the study area with advance notice of potential access or utility disruptions as a result of construction activities.

Mitigation for long-term effects

- Comply with all permit conditions of approval and/or mitigation measures.
- Conduct all right of way acquisitions and residential and commercial relocations in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, as well as the Washington State Relocation Assistance – Real Property Acquisition Policy. All affected property owners will be compensated,



DEFINITION

WHAT IS SUBSIDENCE?

Subsidence is the sinking or downward movement of the ground surface.



DEFINITION

WHAT IS LIQUEFACTION?

Liquefaction is a process in which water-saturated soil temporarily loses its strength and acts as a fluid. Liquefaction in fill soils can be triggered by earthquakes

**DEFINITION****WHAT IS PRIME FARMLAND?**

Prime farmland is highly productive cropland as designated by the US Department of Agriculture's Natural Resources Conservation Service.

**KEY POINT**

Washington State Department of Transportation offers language interpretation services by calling (360) 759-1310 or 1 (866) 279-0730. It is necessary to speak at least limited English so that your request can be responded to appropriately.

at fair market value, for property rights acquired and relocation assistance will be provided. The Uniform Act provides protection and assistance for people affected by the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. This law was enacted by Congress to ensure that people whose real property is acquired, or who move as a direct result of projects receiving federal funds, are treated fairly and equitably and receive assistance in moving from the property they occupy.

- Follow the substantive requirements of the applicable federal, state, and local land use statutes, including zoning and critical area regulations, to protect land uses, resource lands, and critical areas.
- Minimize the conversion of prime farmland to non-agricultural uses.

Social, environmental justice, utilities, and economic resources

Mitigation for temporary effects

- Plan construction activities to allow reasonable access to all private properties at all times during the construction period.
- Notify community residents, business owners, property owners, and tenants of planned construction activities, planned temporary road closures and detours, expected congestion and delays, changes in commonly used travel routes, and the schedule for these activities. Notification methods could include press releases, newsletters, mailers, meetings, variable message signs in the project corridor, or fliers. Notification should be given in foreign languages commonly spoken in the community (e.g. Spanish and Russian).
- Plan temporary roadway closures to minimize effects on community gatherings, special celebrations, or other similar events or activities.
- Inform Clark County, City of Battle Ground, public transit agencies, school districts, and other relevant local government agencies as well as community businesses of planned construction activities, temporary road closures and detours, and the schedule for these activities.
- Provide advance notice if utilities would be disrupted, and schedule major utility shut-offs during low use times of the day.
- Develop methods by which residents and business owners can convey their concerns about construction activities and the effectiveness of mitigation measures during the construction period (e.g. advertise a project phone number, address, and email).
- Conduct public information campaigns to encourage patronage of businesses remaining in the project corridor during the construction period.

Mitigation for long-term effects

- Implement provisions as required under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, as well as the Washington State Relocation Assistance – Real Property Acquisition Policy, for all properties purchased for needed right of way. Compensate, at fair market value, all affected property owners for property rights acquired and provide relocation assistance.
- Provide housing of last resort if needed. The available housing in the vicinity is expected to provide suitable relocation housing for displaced residents. But sufficient numbers of comparable replacement housing may not be available.
- Compensate property owners affected by new access control along SR 502 through Washington State Department of Transportation access control hearing procedures.

Historic and archaeological resources

Mitigation for temporary effects

- Develop and implement an inadvertent discovery plan. If unidentified archaeological resources or human remains are encountered during construction, work should immediately cease in the vicinity of the discovery to avoid further damages to the resource. Washington State Department of Transportation, Federal Highway Administration, Washington State Department of Archaeology and Historic Preservation Office, and affected Native American tribes should be notified so the significance of the discovery can be evaluated and the appropriate course of action implemented.

Mitigation for long-term effects

- Implement and comply with the mitigation stipulations contained in the memorandum of agreement signed by the Federal Highway Administration, the US Army Corps of Engineers, the Washington State Historic Preservation Officer, Washington State Department of Transportation, and the Chinook Tribe, and Cowlitz Indian Tribe (see Appendix C, *Memorandum of Agreement for Historic and Archaeological Resources*).

Visual quality

Mitigation for temporary effects

- To the extent practicable, shield construction lighting and/or focus it on work areas to minimize spillover of artificial light into adjacent areas.



DEFINITION

WHAT IS THE UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION POLICIES ACT?

The Uniform Relocation Assistance and Real Property Acquisition Policies Act requires that comparable decent, safe, and sanitary replacement housing within a person's financial means be made available before that person may be displaced. When such housing cannot be provided by using replacement housing payments, the Act provides for "housing of last resort." This housing may involve the use of replacement housing payments that exceed the Act's maximum amounts. Housing of last resort may also involve the use of other methods of providing comparable decent, safe, and sanitary housing within a person's financial means (Washington State Department of Transportation, 2005).

- To the extent practicable, limit traffic stoppage and lane closures to off peak travel hours.

Mitigation for long-term effects

- To the extent practicable, contour leftover material within the study area in a way that blends the material with the surrounding landscape.
- Use luminaires (lighting units) and sign structures that are consistent with the I-5/SR 502 interchange.
- Implement the Washington State Department of Transportation *Roadside Classification Plan* policies pertinent to permanent vegetation restoration to blend disturbed areas with the surrounding landscape, reduce negative visual effects to surrounding properties, and to restore environmental function.

Noise

Abatement for temporary effects

- Limit noisier construction activities, such as pile-driving and jack-hammering, to between 7 a.m. and 10 p.m. to reduce construction noise levels during sensitive nighttime hours.
- Equip and maintain construction equipment engines with adequate mufflers to reduce their noise by five to 10 decibels (US Environmental Protection Agency, 1971).
- Turn off construction equipment during prolonged periods of nonuse to eliminate noise.
- Locate stationary equipment such as compressors or generators away from noise-sensitive receptors to decrease noise.

Abatement for long-term effects

Analysis of traffic noise levels for the build alternative concluded that 61 residences and three churches would exceed the Federal Highway Administration Noise Abatement Criteria as described in the Washington State Department of Transportation *Traffic Noise Analysis and Abatement Policy and Procedures*. Abatement of long term noise effects was thoroughly analyzed at each of the affected sites. The following is a list of typical traffic noise abatement measures that Washington State Department of Transportation considers.

- Implementing traffic management measures
- Acquiring land as buffer zones of for constructing noise barriers or berms.
- Realigning the roadway

- Sound insulation of public use or nonprofit institutional structures
- Constructing noise barriers or berms

None of these measures were found to be feasible or reasonable, as they did not meet criteria stated in the Washington State Department of Transportation *Traffic Noise Analysis and Abatement Policy and Procedures*.

Hazardous materials

Mitigation for temporary effects

- Conduct initial site assessments of all properties where a full or partial acquisition is planned to accurately assess the potential for existing environmental contaminants on each property, including any soils, groundwater, sediments, surface water, and vapors present.
- Arrange with utilities to remove and relocate transformers as necessary along the corridor.
- Conduct pre-demolition asbestos and lead surveys for all structures to be demolished. If necessary, proceed with removal and disposal in accordance with regulations.
- Evaluate structures to be demolished for the presence of hazardous materials. Conduct site assessments as necessary to evaluate soil and groundwater conditions in the vicinity of the hazardous materials. Remove and dispose of hazardous materials, and remediate contaminated soil and groundwater in accordance with applicable regulations.
- Evaluate soil conditions in the vicinity of identified hazardous materials sites during construction excavation and grading. In the event hazardous materials are encountered, soil and groundwater shall be characterized to determine appropriate handling and disposal requirements in accordance with applicable regulations. In the event an abandoned underground storage tank is encountered, the underground storage tank and associated contamination will be addressed in accordance to the regulations.
- Remediate as necessary in accordance with applicable regulations.
- Comply with applicable federal, state, and local regulations that govern the storage, use, transportation, and disposal of petroleum products and other toxic materials, including asbestos, lead, and PCBs.

Mitigation for long-term effects

- During highway operation after construction, traffic accidents and hazardous materials spills are managed in accordance with the Washington State Department of Transportation *Southwest Region Emergency Response Plan*. Washington State Department of Transportation maintenance employees coordinate with the

Washington State Patrol who is responsible for implementing safety measures at the site and coordinating with the Department of Ecology for the cleanup of hazardous materials.

Air quality

Mitigation for temporary effects

- Set up construction areas, staging areas, and material transfer sites in a manner that reduces standing wait times for equipment, engine idling, and the need to block the movement of other activities on the site. These strategies could reduce fuel consumption by reducing wait times and ensuring that construction equipment operates efficiently.
- Spray soils exposed during construction to vehicle traffic with water or other dust palliatives.
- Remove particulate matter deposited on paved public roads to reduce mud and resultant windblown dust on area roadways.
- Maintain as many traffic lanes as possible during peak travel times to reduce air quality effects caused by increased congestion.
- Place quarry spill aprons where trucks enter public roads to reduce the amount of mud tracked out.
- Use the Best Management Practice (BMP) of planting vegetative cover on graded areas that would be left vacant for more than one season to reduce windblown particulates in the area.



DEFINITION

WHAT ARE DUST PALLIATIVES?

Dust palliatives are chemicals or compounds applied to road surfaces to reduce dust created by traffic, including emissions of particulate matter (size 10) and deposition of particulate matter.

Mitigation for long-term effects

Because the mobile source air toxic emissions are not expected to increase, effects on the climate changing greenhouse gases are expected to be minimal, no exceedances of the National Ambient Air Quality Standards are anticipated, and no significant adverse air quality effects are expected from the project. Therefore, no mitigation measures would be required.

Energy

Mitigation for temporary effects

- Implement traffic management plans that minimize delay and vehicle idling.

Mitigation for long-term effects

Since the project would have no effect on long-term energy consumption, there would be no adverse effects, and therefore, no mitigation is necessary.

Appendix B. Comments on Final Environmental Impact Statement

This appendix contains the one comment letter on the Final Environmental Impact Statement that was received after the Notice of Availability for the Final Environmental Impact Statement was published on April 2, 2010.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

May 3, 2010

Ms. Yamilee Volcy
Federal Highway Administration
711 South Capitol Way, Suite 501
Olympia, Washington 98501

Re: SR 502 Corridor Widening Final Environmental Impact Statement
and Section 4(f) Evaluation; EPA Project Number: 08-033-FHW

Dear Ms. Volcy:

The U.S. Environmental Protection Agency has reviewed the SR 502 Corridor Widening Final Environmental Impact Statement and Section 4(f) Evaluation (FEIS). We are submitting comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

We would like to thank the SR 502 project team for their response to our comments on the Draft EIS and for the site visit on March 17, 2010. We appreciate that FHWA and WSDOT gave thoughtful consideration to our comments and did explore potential implementation for recommendations such as providing permeability for wildlife along the widened roadway. There are clearly efforts to provide high quality compensatory mitigation for impacts to aquatic resources as well. The NEPA document is well written and presented, and is appropriate in length. Thank you for all the attention to these matters. Additional comments on the FEIS are offered below.

Air quality

The response to our comments issued February 24, 2010 indicates WSDOT will look for opportunities to encourage contractors to mitigate air toxics and diesel particulates from construction vehicles and equipment. However we note that this statement is not included in the list of environmental commitments in Section 7 of the FEIS. We hope that this action will be carried forward and perhaps strengthened with requirements or incentives to contractors to provide these construction mitigation measures.

Recommendation: Include in the Record of Decision (ROD) a commitment to require or provide contractor incentives to obtain air quality construction mitigation measures to minimize construction-related emissions of air toxics and diesel particulates.

Greenhouse gas emissions (GHGs), public transit needs

The project proponents are generally accepting of the fact that the SR 502 travel corridor is an auto-dependent environment where traffic volumes are expected to triple with either alternative (although both traffic volumes and vehicle miles travelled (VMT) would be higher with the Build Alternative (p.3-3)). With the Build Alternative, there is projected to be no reduction in pounds of carbon dioxide emissions by 2033. We are concerned about this because, on a global basis, we have exceeded the threshold of harm from GHGs in the atmosphere. This together with our responsibility to meet state and national GHG reduction commitments make it important for every proposed project to explore ways to reduce GHG emissions.

To address this we encourage WSDOT to continue coordination with C-TRAN and Clark County with a focus on providing improved transit service and facilities sooner than currently projected. The FEIS indicates (p. 3-1) that about 60% of the traffic using SR 502 travels to and from Battle Ground; 25% travels to areas north of Battle Ground; and 15% travels to outlying areas east and south of Battle Ground. This is good information, which could become even more helpful if both origins and destinations were known to inform transit planning.

Recommendation: Continue coordination and collaboration with C-TRAN and Clark County regarding the need and potential for improved transit. In partnership with C-TRAN and Clark County, conduct origin-destination studies to inform transit planning and service.

The FEIS states (p. 3-12, 3-13) that the SR 502 corridor widening would not preclude the installation of future bus stops and pullouts or establishment of a Park and Ride facility along the corridor. We encourage FHWA, WSDOT, and local land use planning and transit partners to evaluate the time and cost savings of constructing transit pull outs at the most heavily used intersections as part of this proposed corridor widening. We also encourage early identification and acquisition of the Park and Ride facility along the corridor so that development, which is anticipated to occur, does not preclude and/or unduly increase the cost for such a facility.

Recommendation: Explore with C-TRAN and Clark County how current and future transit facility needs, such as, transit pullouts and Park and Ride facilities, could be integrated and implemented with construction of the proposed project.

Ecological connectivity

We appreciate that 4 stream simulation culverts would be included in the proposed project. The FEIS states that these culverts would provide passage for amphibians, birds, and rodents, as well as fish. Because the at-grade roadway would not provide permeability for wildlife, it would be helpful to examine whether a slight enlargement of the culverts could accommodate larger mammals as well.

Recommendation: Consider a modest enlargement of the stream simulation culverts to provide for larger upland species movement.

Farmland losses

The FEIS states (p. 6-6) that "There are no indirect effects of the Build Alternative that contribute to cumulative effects on agriculture and farmlands." This conclusion is apparently based on the Clark County 2007 Comprehensive Plan, which would allow conversion of approximately 7,100 acres of prime farmlands to other land uses. While the Comprehensive Plan is an important piece of information to consider, we believe an analysis of induced travel from the proposed project should be conducted before concluding that no additional growth outside the urban growth boundary (UGB) would occur. The analysis should answer the question: Given the reduced travel time from the corridor widening project, are there more distant destinations and/or geographic areas that would become more accessible to travelers, which could in the longer term result in farm (or other resource) land conversion to commercial, recreational, residential, industrial, or other uses and, if so, are these areas located within or outside the Clark County UGB?

Recommendation: Please consider analyses such as the one described above for this and other future transportation projects and disclose results in the NEPA document to inform the public and decision makers.

Thank you for the opportunity to comment on the Final EIS for the SR 502 Corridor Widening. If you would like to discuss the project further, please contact Elaine Somers at, (206) 553-2966 or me at, (206) 553-1601.

Sincerely,



Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit