ENVIRONMENTAL ASSESSMENT
SR 520 BRIDGE REPLACEMENT AND HOV PROGRAM

DECEMBER 2009

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

Washington State Department of Transportation

U.S. Department of Transportation
Federal Highway Administration

Executive Summary

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The project team engages the public to understand concerns and about the project.

WHAT IS THE PURPOSE OF THIS DOCUMENT?

This document is an executive summary of the Environmental Assessment (EA) prepared for the SR 520, Medina to SR 202: Eastside Transit and HOV Project (project). The EA was issued on Dec. 3, 2009 by Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA). As a summary, this document provides a high level overview of the project, including the project description, project benefits and key findings. This summary is not intended to provide all the information contained within the EA and the reader should refer to the complete EA for details on information provided herein. Exhibit numbers found in this document correspond with the exhibits found in the full EA, which is provided on the first of the enclosed CDs. The technical appendices can be found on the second of the enclosed CDs.

WHAT IS THE PURPOSE OF THE ENVIRONMENTAL ASSESSMENT?

The purpose of the EA is to: provide information to the public about a project's environmental effects; determine whether a proposed action has the potential to significantly affect the quality of the environment; and describe the measures that will be implemented to avoid, minimize, or mitigate project effects. The EA compares two alternatives: the Build Alternative and the No Build Alternative.

The EA fulfills WSDOT's obligation under the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA) to disclose project effects and mitigation. Following the public comment period (Dec. 3, 2009 through Jan. 7, 2010), WSDOT will consider all comments received. If FHWA determines that the project would have no significant effects, a Finding of No Significant Impact (FONSI) document will be prepared, which will conclude the environmental review process. Upon final environmental approval, WSDOT will finalize design, receive permits and the project will move into the construction phase as funding becomes available.

WHAT IS THE SR 520, MEDINA TO SR 202: EASTSIDE TRANSIT AND HOV PROJECT?

The SR 520, Medina to SR 202: Eastside Transit and HOV Project includes completion of the high-occupancy vehicle (HOV) system between Lake Washington and 108th Avenue NE and restriping the existing HOV lanes from the outside lanes to the inside between the 108th Avenue NE interchange and SR 202 in Redmond. The limits of the project extend approximately 8.8 miles along State Route (SR) 520 from the east shore of Lake Washington just west of Evergreen Point Road to the interchange with SR 202 in Redmond. The project is located in the communities of Medina, Hunts Point, Clyde Hill, Yarrow Point, Kirkland, Bellevue, and Redmond (hereafter collectively referred to as the Eastside). Exhibit 1-1 shows the project vicinity.

Approximately two miles of paved path are included as part of the project, improving connections for bicyclists and pedestrians on the Eastside.

WHY IS WSDOT PROPOSING TO BUILD THIS PROJECT?

WSDOT and FHWA are proposing to construct the project to reduce transit and HOV travel times and to enhance travel time reliability, mobility, access, and safety for transit and HOVs in rapidly growing areas along the SR 520 corridor east of Lake Washington.

The project is needed to provide transit capacity and mobility improvements along the east side of the SR 520 corridor. Much of the need for this project is in response to anticipated population and economic growth. This growth is expected to increase transit demand and has spurred plans for transit service improvements. Planned service improvements require the Eastside to have a continuous HOV system that meets current design standards and supports reliable travel times for transit and HOVs.

Is tolling included as part of this project?

The Washington State Legislature authorized tolling on the Evergreen Point Bridge in May 2009 (ESHB 2211). Tolling will begin between late 2010 and mid 2011 on the floating bridge only.

At this time, it is not anticipated that tolls would be required for vehicles using SR 520 between Medina and SR 202 in Redmond. Since the Build Alternative is not proposing tolling, it is not included in the baseline assumptions for this project.

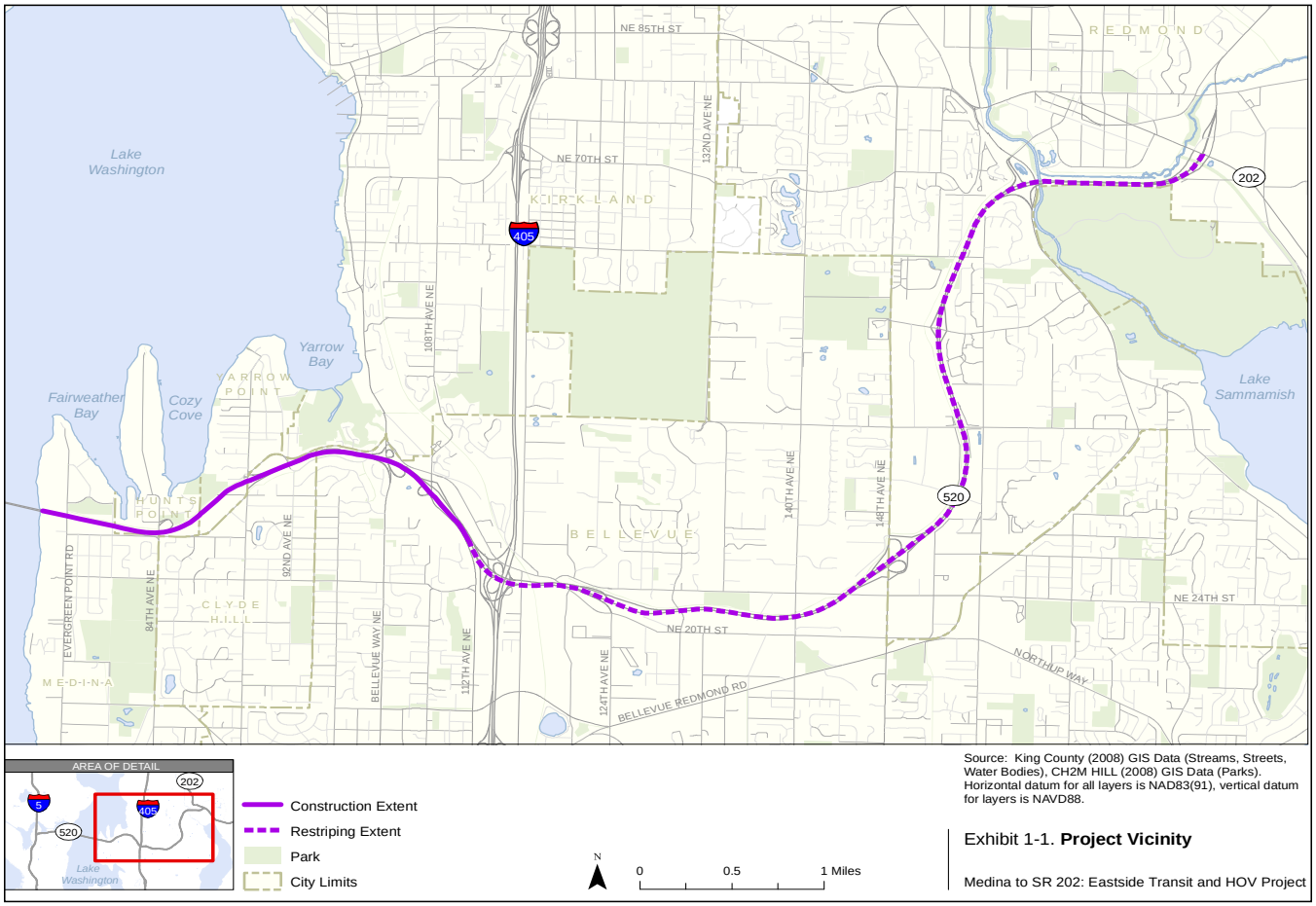


Exhibit 1-1: Project Vicinity, including construction between Lake Washington and 108th Avenue NE and lane restriping between 108th Avenue NE to SR 202.

WHAT ARE THE PROJECT DETAILS?

The project will provide six lanes (four general-purpose and two HOV) from just west of Evergreen Point Road to SR 202. New construction between Evergreen Point Road and 108th Avenue NE will provide continuous inside HOV lanes and standard 10-foot-wide shoulders both eastbound and westbound. Exhibit 4-1 shows the existing and proposed traffic cross sections.

The project would also rebuild or improve the existing interchanges and crossings between Evergreen Point Road and 108th Avenue NE. Exhibit 4-3 summarizes the changes proposed at each freeway interchange or bridge crossing from Evergreen Point Road to 108th Avenue NE.

As part of the project, lids will be constructed at Evergreen Point Road, 84th Avenue NE, and 92nd Avenue NE. The lids will carry the existing local streets over SR 520, provide new landscaped open space for passive recreation and reconnect communities on the north and south sides of SR 520.

Additional details about the project are provided in Chapter 4 of the EA.

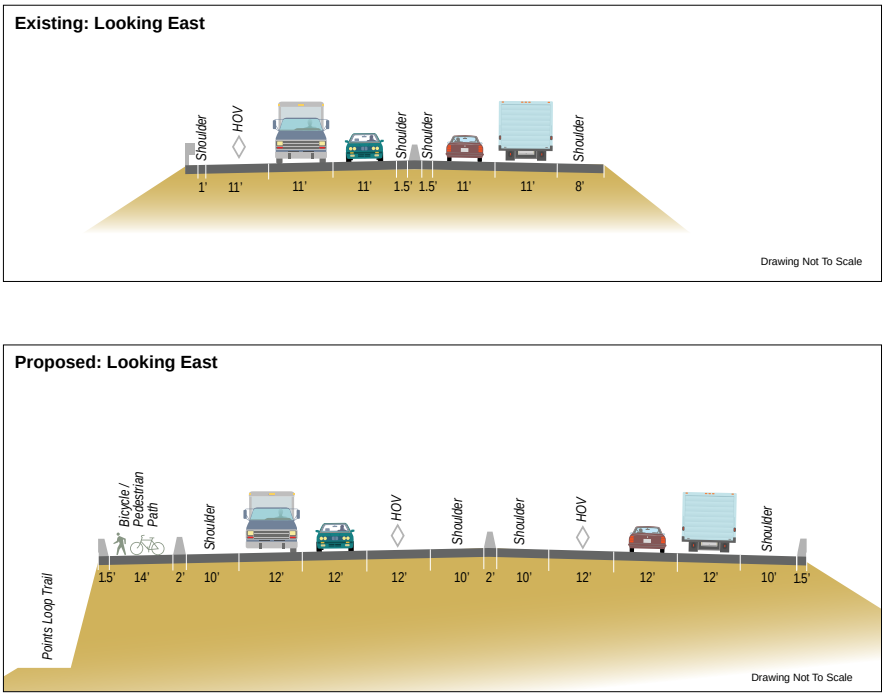


Exhibit 4-1. Existing and proposed traffic cross sections. An additional four-foot buffer width has been provided in each direction at the undercrossing at Bellevue Way NE at lids, and at major retaining walls to accommodate future planned high capacity transit (not shown in proposed cross section).

Exhibit 4-3. Summary of Interchange Improvements
Evergreen Point Road to 108th Avenue NE

Interchange with SR 520	Improvement
Evergreen Point Road vicinity	Inside transit stop, improvements to park and ride lot, new lid
84th Avenue NE	Half-diamond interchange, new lid
92nd Avenue NE	Inside transit stop, local intersection modification at off-ramp, new lid
Bellevue Way NE	Half-diamond interchange
108th Avenue NE	HOV direct access, improved ramp design

WHAT BENEFITS WILL THE PROJECT PROVIDE?

Both the local and regional community will benefit from this project through a number of transportation, community and environmental improvements. Key benefits of the SR 520, Medina to SR 202: Eastside Transit and HOV Project include the following.

Transit and transportation improvements

- A continuous HOV system using the inside lane to complete the currently discontinuous HOV system for buses and carpools.
- Direct access ramps and in-line median transit stops to improve transit efficiency.
- Reduced travel times for afternoon commuters.
- Improved transit reliability and safety.
- Regional bicycle and pedestrian path on the north side of SR 520, connecting to local trails and providing a continuous route between Evergreen Point Road and 108th Avenue NE.

Community and environmental benefits

- Lids at freeway overcrossings to provide open space, local trail connections and neighborhood connectivity.
- Improved transit stops.
- Improved stream habitat by removing barriers to fish passage and realigning stream channels.
- Improved water quality by treating all stormwater runoff from the roadway between Evergreen Point Road and 108th Avenue NE.
- Reduced noise levels through proposed noise walls between Evergreen Point Road and just west of Bellevue Way NE.

Additional details about the benefits of the project are provided in Chapter 4 of the EA.

The new SR 520 corridor will include inside HOV lanes and direct access ramps for transit, as shown in this visualization for 108th Avenue NE.

Lids, such as the one in this visualization at 92nd Avenue NE, will help reconnect communities and provide access to median transit stops. The proposed 92nd Avenue NE lid will include a passenger drop-off area, passive open space and connections to transit and to local and regional bicycle and pedestrian paths.

WHAT ARE THE KEY FINDINGS OF THE ENVIRONMENTAL ASSESSMENT?

WSDOT conducted analyses for over a dozen disciplines to determine the potential effects the project could have on people and the environment. The key findings of these evaluations are summarized below.

Transportation

The project will provide the following transit and transportation benefits:

- Improved westbound transit and HOV travel times in the afternoon commute of between 18 and 45 minutes over the No Build Alternative.
- Improved eastbound transit and HOV travel times in the afternoon commute of between five and 16 minutes over the No Build Alternative.
- Improved travel time reliability between Medina and SR 202.
- Improved safety through wider shoulders and relocating the HOV lane to the inside of the corridor.
- Direct transit and HOV connections to and from the west between SR 520 and the South Kirkland Park and Ride lot.

Points Loop Trail visualization.

The project also includes new facilities for improving bicycle and pedestrian connections and enhancing non-motorized travel. Approximately two miles of paved path will be added for exclusive non-motorized use between Evergreen Point Road and Bellevue Way. The SR 520 regional path and the Points Loop Trail provide increased options for travel in the corridor and provide direct connections for pedestrians and cyclists to access transit facilities.

Project construction will result in temporary effects to travel along the SR 520 corridor, including reduced speed limits, reduced lanes on arterial streets, decreased access to non-motorized facilities, and limited freeway access from some arterials. The project would result in the permanent loss of some parking spaces in areas that are owned by or will be permanently acquired by WSDOT.

This graphic shows the features proposed as part of the Bellevue Way Interchange design.

Cultural Resources

The project will not adversely affect any significant historic or archaeological resources.

Several aspects of the project will have beneficial effects on historic properties adjacent to the roadway. These include noise walls incorporated into the project design to reduce highway noise, and landscaped lids that will enhance the setting of historic properties.

Ecosystems

Project construction activities will occur in and adjacent to wetlands, streams, and their associated buffers. The project is designed to avoid or minimize effects to ecosystems to the extent practicable. In all cases where direct temporary or permanent effects on ecosystems are unavoidable, minimization and mitigation will be implemented in accordance with applicable local, state, and federal regulations to compensate for affected resources. The identified ecosystem within the study area includes:

A typical wetland in the SR 520 Eastside corridor.

Wetlands

The project will temporarily disturb approximately 1.6 acres of wetlands and 0.9 acres of wetland buffer, and permanently remove approximately 7.0 acres of wetlands and 1.7 acres of wetland buffer. Wetlands and wetland buffers temporarily affected by construction activities will be restored and replanted with appropriate native vegetation. For permanent effects, WSDOT will provide wetland mitigation at an offsite location.

Operation of the project is not likely to permanently affect the habitat or behaviors of sensitive wildlife species in the area.

Wildlife and habitat

The project will temporarily disturb approximately 14 acres of wildlife habitat. During construction, noise and other activity may temporarily disturb wildlife. A total of approximately 65 acres of wildlife habitat will be permanently removed by the project. The majority is narrow, linear forested areas, grassy slopes, and commercial and residential areas that provide limited habitat for common birds, small mammals, and amphibians. Operation of the project will not likely affect the habitat or behaviors of sensitive wildlife species recognized by federal, state, or local agencies.

Typical wildlife habitat in the SR 520 Eastside corridor.

Fish and aquatic habitat

The project will improve fish passage, increase open channel habitat and improve Yarrow Creek. Six existing culverts that are currently barriers to fish passage will be completely removed and open channel restored. Nine other fish barriers

will be replaced with fully fish-passable structures. Project-wide, channel realignments and culvert removals and replacements will result in a gain of 980 linear feet of open channel habitat within fish-bearing streams, including daylighting approximately 860 linear feet of stream channel currently confined in culverts. Construction activities could temporarily disturb in-water sediments, affecting fish and aquatic species and their habitat. These effects will be avoided, minimized, and mitigated through the use of construction best management practices. The project will temporarily disturb approximately 3.0 acres of stream buffer. Effects due to project operation on stream buffers will occur along three streams in the study area, totaling approximately 1.7 acres. Depending on the stream, the amount of permanent buffer that will be removed because of placement of fill will range from less than 0.1 acres to 0.6 acres. All impacts to fish and aquatic species will be mitigated within the project limits.

Several urban streams such as this one will be improved as part of the project.

The project will improve fish passage by removing or replacing culverts in the project area, like this one under SR 520 near 108th Avenue NE.

Energy

This project is consistent with statewide and regional efforts to reduce vehicle miles travelled and greenhouse gas emissions. Energy will be consumed during construction of the project by activities such as site preparation, equipment operation, and construction lighting. WSDOT will work to conserve energy and reduce greenhouse gas emissions during construction. Once complete, the amount of energy used and greenhouse gases emitted by vehicles traveling on the finished project would be similar to that of the No Build Alternative.

Traffic on the existing SR 520 corridor. The Eastside Transit and HOV Project is consistent with statewide and regional efforts to reduce vehicle miles travelled and greenhouse gas emissions.

Land Use, Economics, and Relocation

Project effects on land use patterns in the study area and the local economy include the permanent effects of property acquisitions needed for project construction. To construct the project, 10 parcels will need to be fully acquired, and 23 parcels will need to be partially acquired, which total approximately 10 acres. WSDOT will provide mitigation for residents and businesses displaced by the project in accordance with state and federal laws.

While the affected properties will have a change in land use, this effect is minor compared with the entire study area. Land use is well established outside of the affected properties and is not expected to change as a result of this project.

An additional 1.3 acres will be temporarily affected during construction. Construction of the project could also have minor short-term effects on properties in the study area, including increased noise, dust, traffic, odor from equipment operations, and/or glare from construction lighting.

Project construction would result in 2,480 direct, indirect, and induced jobs during the peak year of construction (2012) and over 7,000 person-years (one person employed for one year) of employment over the six years of engineering and construction.

Noise

Project construction will temporarily increase noise levels in some areas. WSDOT would incorporate measures to minimize construction noise.

Noise walls are proposed for the project on both sides of SR 520 from Evergreen Point Road to just west of Bellevue Way NE, a distance of approximately two miles. Overall, the project will lower the number of residences where noise levels currently exceed FHWA standards from 128 to 20 residences. The project will meet noise reduction objectives by providing an average of 7 to 10 decibel noise reduction. For reference, a five decibel change is clearly noticeable and a 10 decibel reduction decreases the noise level by about half.

Exhibit 5-17: Noise Walls Locations. Noise walls not shown in lid locations.

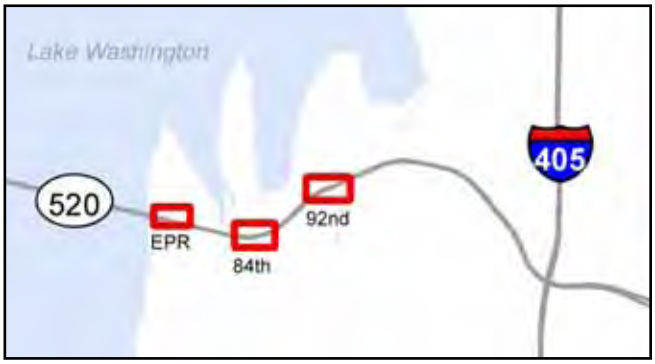
Social Elements

Social elements analyzed for the project include:

- Community cohesion.
- Regional and community growth.
- Community services.
- Recreational resources.
- Pedestrian, bicycle, and transit facilities.

Communities in the study area could experience temporary effects from construction activities, including increases in noise and dust, decrease in visual quality from construction equipment and activities, and glare from construction lighting. The project will likely be constructed in phases as funding becomes available, which will minimize the amount of time any individual area is disturbed.

Once completed, the project will provide a variety of benefits to communities along the SR 520 corridor. For example, construction of lids over the freeway at three designated locations will provide open space and local trail connections, and will improve neighborhood connectivity. Other benefits include decreased traffic noise, improved emergency response times, improved traffic circulation and access, improved transit times, access, and safety, and new and improved opportunities for community interaction and recreation.



Locations of proposed lids with transit stops at Evergreen Point Road, 84th Avenue NE, and 92nd Avenue NE along the Eastside portion of the SR 520 corridor.

Conceptual rendering of proposed Evergreen Point Road lid and transit stop.

Conceptual rendering of proposed 84th Avenue NE lid.

Conceptual rendering of proposed 92nd Avenue NE lid and transit stop.

Exhibit 5-26: Existing and proposed non-motorized facilities.

Visual Quality and Aesthetics

Project construction will result in noticeable changes to visual quality wherever demolition and construction occur. For example, viewers looking from and toward the project area will notice temporary changes due to demolition of existing bridges, excavation near the existing highway, removal of mature vegetation and presence of construction equipment.

Under the Build Alternative, some areas of the SR 520 highway would assume a more urban character due to loss of mature trees, construction of noise walls and/or retaining walls, and new transit stops. Operation of the project could also create new sources of shadow, glare, or light. Views from some nearby properties could improve because of landscaped lids. WSDOT has incorporated approaches to minimize project effects on visual quality in the project design, and will adhere to all applicable aesthetic design guidelines and visual quality standards.

Although the completed highway will look different than it does today, that look is intended to fit the character of the area as the highway serves the transportation needs of the community. Exhibits 5-32, 5-33, and 5-34 (on the next page) show existing views and conceptual visualizations 15 to 20 years in the future at the same locations.

Exhibit 5-32: Evergreen Point Road.

Existing view. Looking west from mid-span of Evergreen Point Road overcrossing. Existing characteristics include views of the SR 520 floating bridge, Lake Washington, and the Olympic Mountains.

Visualization. Looking west from a landscaped lid at Evergreen Point Road. The lid includes a viewpoint for the panoramic view of the SR 520 floating bridge, Lake Washington, and the Olympic Mountains.

Exhibit 5-33: Evergreen Point Road.

Existing view. Looking west from entrance of the Evergreen Point Road Park and Ride.

Visualization. Looking west from entrance of new Evergreen Point Road Park and Ride, which includes a landscaped lid with a transit plaza and elevators and stairs for access to the transit stop. The new striped park and ride will be at the same level as the lid service, with a transit rider drop-off area and space for 60 to 65 vehicles.

Exhibit 5-34: 92nd Avenue NE.

Existing view. Looking east from SR 520 mainline toward 92nd Avenue NE. The existing view includes a mix of coniferous and deciduous trees.

Visualization. Looking east from SR 520 mainline toward 92nd Avenue NE lid. The visualization shows a new transit stop at the edge of the lid, a pedestrian walkway over the eastbound on-ramp, and noise walls.

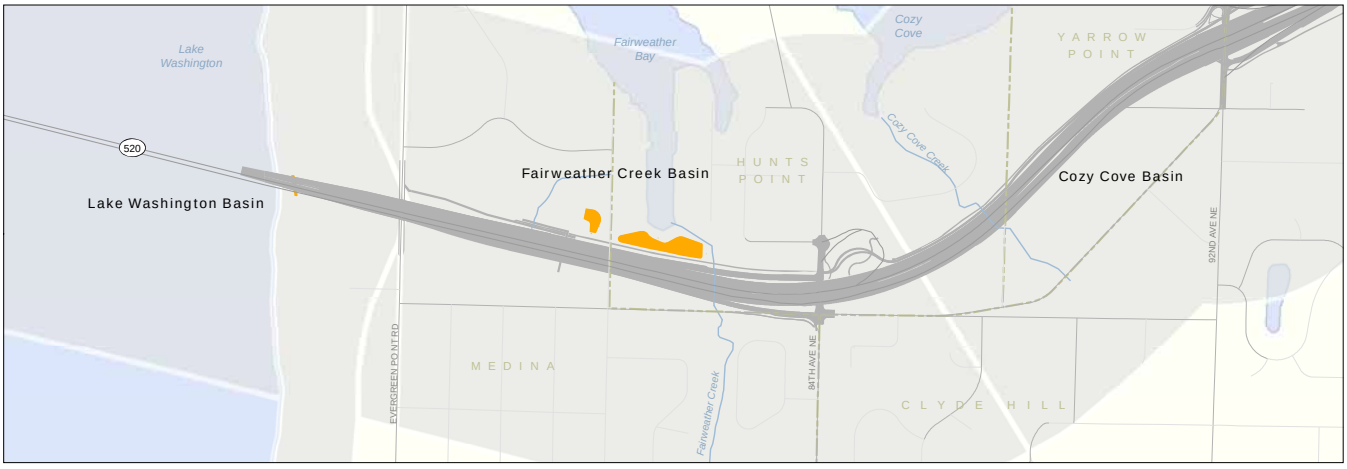
Additional visualizations can be found in Chapter 5 of the EA.

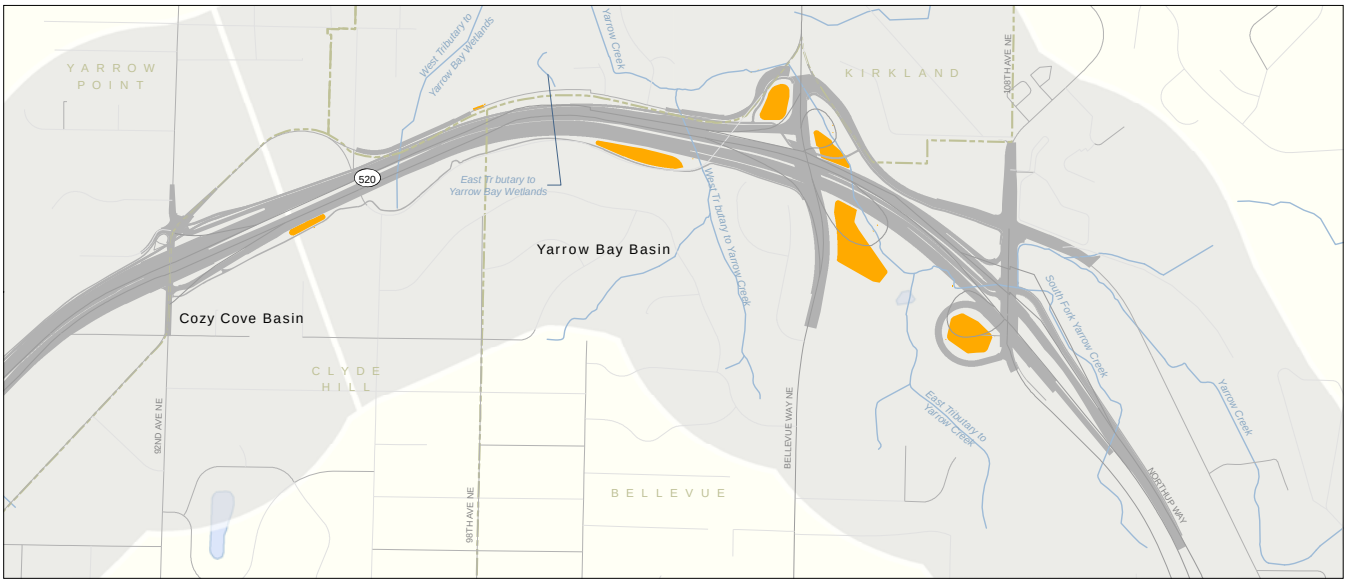
Water Resources

Water resources could be temporarily affected by construction of the project. Construction activities such as replacing culverts or installing retaining walls could temporarily alter the quality or flow of surface water or groundwater in the study area.

The completed project will add approximately 24 acres of new impervious surface due to road widening. To protect water resources, a new stormwater management system will be installed to treat, detain (where required), and release stormwater runoff, which will meet the requirements of the Highway Runoff Manual. All stormwater runoff associated with impervious surfaces within the construction area will be treated for pollutants and, where needed, controlled for flow increases. The project will have minimal or no effect on groundwater.

Constructed wetlands such as this one are typically used to treat stormwater runoff.





Stream | Proposed Stormwater Facility | Creek Basin | Pavement

This graphic identifies locations in the project area where facilities are proposed to store and treat stormwater runoff (Water Resources Discipline Report, Exhibit 12).

Section 4(f) Resources

Section 4(f) of the U.S. Department of Transportation Act of 1966 declares that a special effort must be made to preserve, where possible, public parks and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) resources within the study area include the Points Loop Trail, four parks, and three historic properties eligible for listing in the National Register of Historic Places (NRHP).

The construction and operational activities of the proposed project meets the *de minimis* criteria for the Points Loop Trail and two of the parks (Fairweather Park and Wetherill Nature Preserve). This means that the project would not permanently alter the use of these resources. In addition, the analysis demonstrates that there would be no Section 4(f) use of the two other parks located within the study area (Hunts Point Park and Yarrow Bay Wetlands), but there would be temporary occupancy. Finally, there would be no Section 4(f) use of the three historic properties.

Additional details about potential effects of the project are provided in Chapter 5 of the EA.

Source: City of Bellevue (2008) GIS Data (Paths), King County (2008) GIS Data (Parks, Streams, Streets, Water Bodies), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 5-38. **Section 4(f) Resources**

Medina to SR 202: Eastside Transit and HOV Project

Exhibit 5-38: Section 4(f) Resources.

If fully funded, project construction could begin in late 2010 and be complete by 2014.

Negligible effects

Analysis determined that effects were negligible to the following disciplines:

- Air quality.
- Geology and soils.
- Environmental justice.
- Hazardous materials.

This means the project is not anticipated to cause appreciable effects within these disciplines. WSDOT did not identify any significant indirect effects on any resource. The Build Alternative would have a negligible contribution to the cumulative effects of past, present, and future actions.

WHEN WILL CONSTRUCTION BEGIN AND HOW LONG WILL IT TAKE?

If fully funded, it is anticipated that project construction will begin in late 2010, with major construction beginning in spring 2011. WSDOT plans to complete the project prior to the proposed opening of the new Evergreen Point Bridge, which is planned for 2014. If the project is not fully funded, the project will be constructed in phases as funds become available.

WHAT MEASURES WILL BE TAKEN TO AVOID, MINIMIZE, OR MITIGATE EFFECTS OF THE PROJECT?

The project design will incorporate best management practices that are standard practices for WSDOT. The project design incorporates measures to avoid and minimize project effects, including the following:

- Limiting construction to a relatively small area immediately adjacent to the existing roadway to minimize vegetation clearing.
- Replanting areas affected by construction with native vegetation.
- Using retaining walls instead of standard fill slopes to reduce the footprint of the at-grade roadway sections and reduce the amount and extent of wetland fill.
- Constructing stormwater treatment facilities to treat roadway runoff before discharging to downstream aquatic habitat.

In cases where WSDOT cannot avoid or minimize impacts, WSDOT will provide appropriate mitigation. Specific mitigation is proposed to address potential increases in highway noise, as well as effects from the project to streams, riparian areas, and wetlands.

Mitigation measures are listed in Chapter 6 of the EA.

Best Management Practices (BMPs): Physical, structural, and/or managerial practices that, when used singly or in combination with other practices, have been determined to be the most effective, practical means of avoiding or reducing environmental effects. The term "BMP" is widely used to refer to a variety of common management techniques. Examples of BMPs are (1) using silt fences during construction to minimize erosion, (2) using biofiltration swales and other facilities to control and treat stormwater, and (3) limiting work periods to when the fewest fish are expected to be present to protect fish and streams during in-water work.

HOW HAS THE PUBLIC BEEN INVOLVED IN THE DEVELOPMENT OF THE PROJECT AND THE EA?

WSDOT has implemented a public outreach process for the project. Over the past ten years, WSDOT has worked with the communities and jurisdictions on the east side of Lake Washington that could be affected by the project. In addition to talking to the general public about the project, WSDOT has conducted outreach with minority, low-income, and limited English proficiency populations to understand their concerns about the project. WSDOT conducted public outreach to better understand the possible effects and benefits to commuters who travel by bus or car in the Eastside SR 520 corridor and to businesses that rely on the corridor for movement of goods and services.

Additional detail about WSDOT's public outreach, agency and tribal coordination efforts are provided in Chapter 3 of the EA.

WSDOT involved the general public to explain the project and answer questions.

The public has the opportunity to formally comment on all aspects of the EA. All comments must be postmarked by Jan. 7, 2010.

HOW CAN I GET MORE INFORMATION ABOUT THE PROJECT?

The SR 520, Medina to SR 202: Eastside Transit and HOV Project Environmental Assessment is available for viewing online at www.wsdot.wa.gov/projects/SR520Bridge. Hard copies are available for review through the Seattle Public Library and King County Library Systems.

Copies of the Environmental Assessment are available in either hard copy form or on a CD (enclosed). Printed copies may be purchased for $16.00, which does not exceed the cost of production. Additional CDs are available for free. Contact the project office at 206-770-3500 for either the hard copy or CD version.

WSDOT invites comments on all aspects of the EA. WSDOT will consider all comments received in making its final decision in the environmental review process. All comments must be postmarked by Jan. 7, 2010.

You can provide comments through the following methods:

Mail: Bill Blaylock
SR 520 Eastside Environmental Manager
Washington State Department of Transportation
600 Stewart Street, Suite 520
Seattle, WA 98101

E-mail: SR520Eastside_EA@wsdot.wa.gov

In person: Environment Assessment Public Hearing
Dec. 16, 2009, 5 – 7 p.m.
Chinook Middle School
2001 98th Avenue NE
Bellevue, WA, 98004

Washington State Department of Transportation

U.S. Department of Transportation
Federal Highway Administration

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Materials can be provided in alternative formats: large print, Braille, cassette tape, or on computer disk for people with disabilities by calling the Office of Equal Opportunity (OEO) at 360-705-7097. Persons who are deaf or hard of hearing may contact OEO through the Washington Relay Service at 7-1-1.

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