

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

Appendix H

Environmental Justice Technical Memorandum

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

**Environmental Justice
Technical Memorandum**



Prepared for
Washington State Department of Transportation
Federal Highway Administration

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November 16, 2009

Contents

Acronyms and Abbreviations	v
1. Introduction	1
Why is environmental justice considered in an environmental assessment?	1
What laws, regulations, or guidance are related to environmental justice?	1
What is the project?.....	2
What are the key points of this technical memorandum?.....	5
2. Methodology	6
How did the project team collect information for this report?	6
How did the team evaluate information on the project’s potential effects on low- income or minority populations?	14
3. Affected Environment	14
What are the demographics of the study area?	15
Are there places of particular importance to low-income or minorities in the study area?.....	22
4. Potential Effects of the Project	23
How would construction of the project affect low-income or minority populations?.....	23
How would operation of the project affect low-income or minority populations?	26
5. Mitigation	29
How will the project avoid or minimize adverse effects on low-income or minority populations during construction?	29
How will the project avoid or minimize adverse effects on low-income or minority populations during operation?	30
6. Conclusion	30
7. References	31

Attachments

- 2000 U.S. Census Demographic Data for the Study Area
- 2006-2007 National Center for Education Statistics Demographic Data for the Study Area



Exhibits

- 1 Project Vicinity
- 2 Study Area
- 3 Census Block Groups
- 4 Percent Below Poverty in the Study Area
- 5 Percent Minority in the Study Area
- 6 Percent Limited English Proficient in the Study Area
- 7 Languages Spoken by 5% or More of the Population
- 8 Low-Income and Minority Populations in the Study Area
- 9 Noise Study Area Demographics



Acronyms and Abbreviations

BMP	best management practice
EA	environmental assessment
EIS	environmental impact statement
FHWA	Federal Highway Administration
GIS	geographic information system
GRSA	geographic resource study area
HOV	high-occupancy vehicle
LEP	limited English proficient/proficiency
NAC	noise abatement criteria
NCES	National Center for Education Statistics
NEPA	National Environmental Policy Act
SR	State Route
TEA-21	Transportation Equity Act
USDOT	United States Department of Transportation
WSDOT	Washington State Department of Transportation



1. Introduction

Why is environmental justice considered in an environmental assessment?

Environmental justice acknowledges that (a) the quality of people’s environment affects their lives, and (b) negative environmental effects should not disproportionately burden low-income or minority communities. Negative environmental effects associated with transportation projects may include limited access to a publicly-funded facility, disruptions in community cohesion, presence of hazardous materials, raised noise levels, or increased air or water pollution.

Community cohesion is the ability of people to communicate and interact with each other in ways that lead to a sense of community, as reflected in a neighborhood’s ability to function and be recognized as a singular unit.

Several federal and state laws, regulations, and guidance compel the Washington State Department of Transportation (WSDOT) to consider and address environmental justice and appropriately evaluate and document the potential effects of a project on low-income or minority populations in environmental impact statements, environmental assessments, and categorical exclusions.

What laws, regulations, or guidance are related to environmental justice?

In response to a concern that minority or low-income populations bear a disproportionate amount of adverse health and environmental effects of public projects, in 1994 U.S. President William J. Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. It directs each federal agency to make environmental justice part of its mission.

Following Executive Order 12898, the U.S. Department of Transportation (USDOT) issued Order 5610.2, *Order to Address Environmental Justice in Minority Populations and Low-Income Populations*. It provided guidelines for how environmental justice analyses should be performed and how environmental justice should be incorporated into the transportation decision-making process. The USDOT Order requires federal agencies under USDOT authority to do the following:

How is *minority* defined?

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

1. Explicitly consider human health and environmental effects related to transportation projects that may have a disproportionately high and adverse effect on minority and low-income populations; and
2. Implement procedures to provide “meaningful opportunities for public involvement” by members of those populations during project planning and development (USDOT Order 5610.2 §5(b)(1)).



The Federal Highway Administration (FHWA) issued a similarly-worded order, *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (FHWA Order 6640.23).

Title VI of the Civil Rights Act of 1964 requires that “no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Title VI also requires consideration of the effects of projects on people with limited-English proficiency (LEP) to avoid discrimination on the basis of national origin. In addition, *Presidential Executive Order 13166* orders improved access to federally funded activities for persons with limited-English proficiency.

Other federal laws, such as the National Environmental Policy Act (NEPA), Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended, the Civil Rights Restoration Act of 1987, and the Transportation Equity Act (TEA-21) also include the nondiscrimination requirements outlined in Title VI.

How is *low-income* defined?

An individual whose household income falls below the federal poverty guidelines, as defined by the U.S. Department of Health and Human Services, is considered low-income.

For 2008, the federal poverty guideline for a household of four in one of the 48 contiguous states and Washington, DC was \$21, 200.

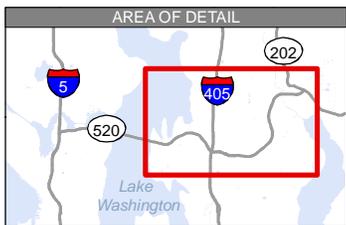
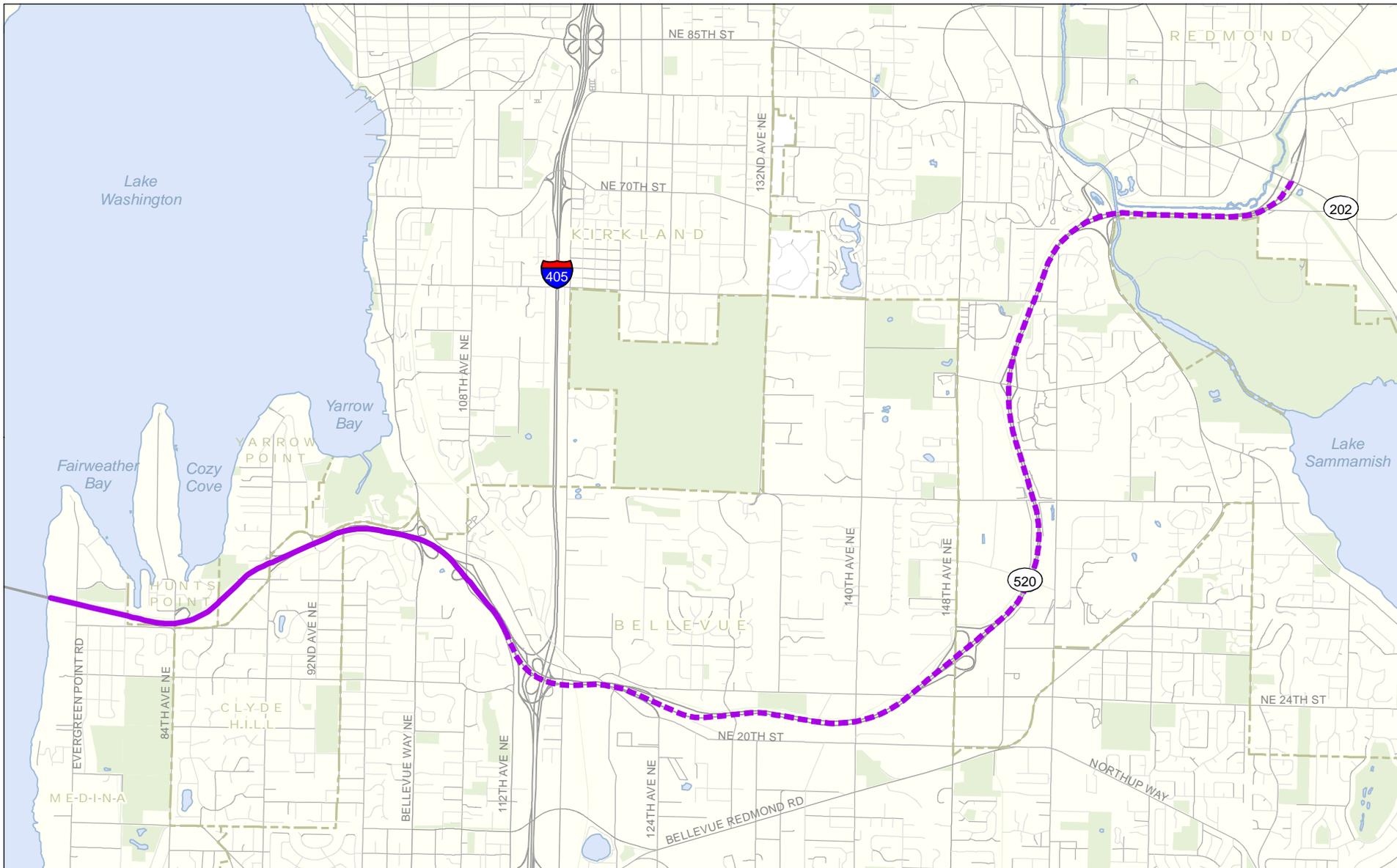
What is the project?

WSDOT is proposing to construct the SR 520, Medina to SR 202: Eastside Transit and HOV Project to reduce transit and high-occupancy vehicle (HOV) travel times and to enhance travel time reliability, mobility, access, and safety for transit and HOVs in rapidly growing areas along the State Route (SR) 520 corridor east of Lake Washington. Exhibit 1 shows the project vicinity. Some of the improvements included in this project were originally part of the SR 520 Bridge and HOV Project. On June 18, 2008, FHWA authorized WSDOT to develop the SR 520, Medina to SR 202: Eastside Transit and HOV Project as an independent project. The project includes building a complete HOV system between Lake Washington and 108th Avenue NE and restriping the existing HOV lanes from the outside lanes to the inside lanes between the 108th Avenue NE interchange and SR 202 in Redmond.

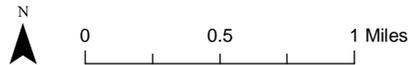
The portion of the project between Evergreen Point Road and 108th Avenue NE was previously part of the SR 520 Bridge Replacement and HOV Project. The SR 520, Medina to SR 202: Eastside Transit and HOV Project has been an independent project to address needs specific to the portion of SR 520 east of Lake Washington. The project limits extend approximately 8.8 miles along SR 520 from the east shore of Lake Washington (vicinity of Evergreen Point Road) to the interchange with SR 202 in Redmond.

WSDOT is considering two alternatives for the project: the Build Alternative and the No Build Alternative.





-  Construction Extent
-  Restriping Extent
-  Park
-  City Limits



Source: King County (2008) GIS Data (Street), King County (2007) GIS Data (Waterbody), and CH2M HILL (2008) GIS Data (Park and Stream). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 1. Project Vicinity

Medina to SR 202: Eastside Transit and HOV Project

Build Alternative

Under the Build Alternative, the proposed project would include the improvements described below.

SR 520 Improvements from Lake Washington to I-405

The proposed project would reconstruct SR 520 from just west of Evergreen Point Road to just east of 108th Avenue NE. Elements constructed as part of this section include the following:

- Construct a new eastbound HOV lane from Lake Washington to the existing eastbound HOV lane west of the I-405 interchange. This improvement would complete the currently discontinuous HOV network on the Eastside and improve travel time reliability for buses and carpools.
- Relocate the existing westbound HOV lane from the outside lane to the inside lane from Lake Washington to I-405. This change would enhance safety by eliminating the need for merging vehicles to weave across the faster-moving HOV lanes to reach the general-purpose lanes.
- Construct a lid with inside transit stop over SR 520 at Evergreen Point Road.
- Construct a new lid and modify the existing half-diamond interchange at 84th Avenue NE.
- Construct a new lid with inside transit stop over SR 520 at 92nd Avenue NE and modify the existing interchange.
- Reconfigure the existing interchange at Bellevue Way NE.
- Construct new HOV direct access ramps at 108th Avenue NE. This improvement would create a more efficient connection for transit and HOV from SR 520 to the South Kirkland Park-and-Ride via local streets.
- Add a bike/pedestrian path from Lake Washington to approximately 108th Avenue NE. This improvement would facilitate nonmotorized use of SR 520, provide transit connections for bikes and pedestrians, and complement the existing nonmotorized transportation network on the Eastside.

What is a lid?

The term "lid" is short for "lidded highway". Lids are long bridges that cover a length of highway. Lid surface areas can carry paths and trails to connect communities across the highway, landscaping to create open space and places for passive recreation, and items such as pergolas, seating, and transit waiting areas.

SR 520 Improvements from I-405 to SR 202

- Restripe existing eastbound and westbound HOV lanes from the outside to the inside lane. This change would enhance safety by eliminating the need for merging vehicles to weave across the faster-moving HOV lanes to reach the general-purpose lanes.

Other Improvements

- Provide noise walls between Evergreen Point Road and Bellevue Way NE.
- Provide retaining walls and stormwater management system improvements.



- Improve stream habitat by realigning portions of the Yarrow Creek channel and shortening some culverts.
- Improve fish passage culvert crossings to restore fish passage and open up habitat that was previously inaccessible to salmon and other fish species.
- Mitigate the project's effects on wetlands and streams at a site or sites as determined through future negotiations with permitting agencies.

No Build Alternative

Under the No Build Alternative, the project would not be built. Only routine maintenance, repair, and minor safety improvements would take place on SR 520 in the study area over the next 20 years. The No Build Alternative would not improve transit reliability and transit and HOV travel times on SR 520. Also included in the No Build Alternative for traffic modeling purposes is the assumption that the SR 520, Bridge Replacement and HOV Project would not be built until this project is complete.

WSDOT is evaluating the No Build Alternative to provide a reference point for comparing the effects, both positive and negative, associated with the proposed project.

What are the key points of this technical memorandum?

Low-income and minority populations live within the study area, but the project team does not anticipate that project construction or operation would have high and adverse disproportionate effects on low-income or minority populations.

The study area is within the “usual and accustomed” fishing areas of the Muckleshoot Indian Tribe. However, WSDOT will work with the Muckleshoot Tribe to avoid or minimize adverse effects.

During construction, WSDOT would apply applicable best management practices (BMPs) to minimize these construction-related effects, which would be relatively minor and of short duration and would also follow all permit requirements related to fish and aquatic habitat during construction. The scope and scale of these activities would not be expected to have a substantial negative effect on fish or overall in-stream or riparian habitat.

The project team anticipates that project operation would have positive effects on fish and aquatic resources, an important factor in the ability of tribes to exercise treaty fishing rights. The project includes improvement of fish passage conditions through culverts; fish would have greater downstream and upstream access to the in-stream and riparian habitats in the lower Yarrow Creek stream system. Long-term riparian conditions in many of the temporarily affected riparian areas would also improve.

Under the Build Alternative, project construction would temporarily increase congestion and noise and change access for the businesses and residents in the area, including low-income or minority populations.



Project operation would improve traffic circulation and access and reduce noise and improve visual conditions in the study area. This would benefit all residents in the study area, including low-income or minority populations.

Measures to mitigate potential effects of construction on low-income or minority populations might include the following:

- WSDOT would work with business owners to reconfigure or provide alternative access during construction, and would make special efforts to ensure that the access needs of minority and low-income businesses are met.
- WSDOT would continue to provide adequate public notice of construction activities, land closures, alternate routes, and detour routes and proactively work to reach low-income or minority populations through the use of print and electronic publications that serve low-income or minority populations.
- WSDOT would continue to conduct briefings to social service agencies that work with low-income and/or minority populations along the 520 corridor to ensure that information is reaching all residents and roadway users.
- WSDOT would continue to coordinate with interested tribes to ensure that construction methods and design plans adhere to the mitigation measures outlined in the Ecosystems Discipline Report (WSDOT 2009a) and do not adversely affect tribal fishing rights.

2. Methodology

How did the project team collect information for this report?

The team collected data on low-income and minority populations for this report. In this document, the phrase *low-income or minority populations* refers to groups identified in President Clinton's 1994 Executive Order on environmental justice: minorities and people with household incomes below federal poverty guidelines.

The team also collected data on LEP populations. While LEP is not included in the definition of an environmental justice population, the team examined the effects of the project on these groups because so many LEP people are also low-income and/or minority. These data also assist in complying with Presidential Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency*, which requires federal agencies to identify any need for and meaningful access to services for those who are limited-English proficient.

Project analysts used four approaches to collect data on low-income or minority populations:

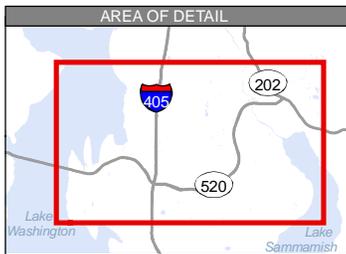
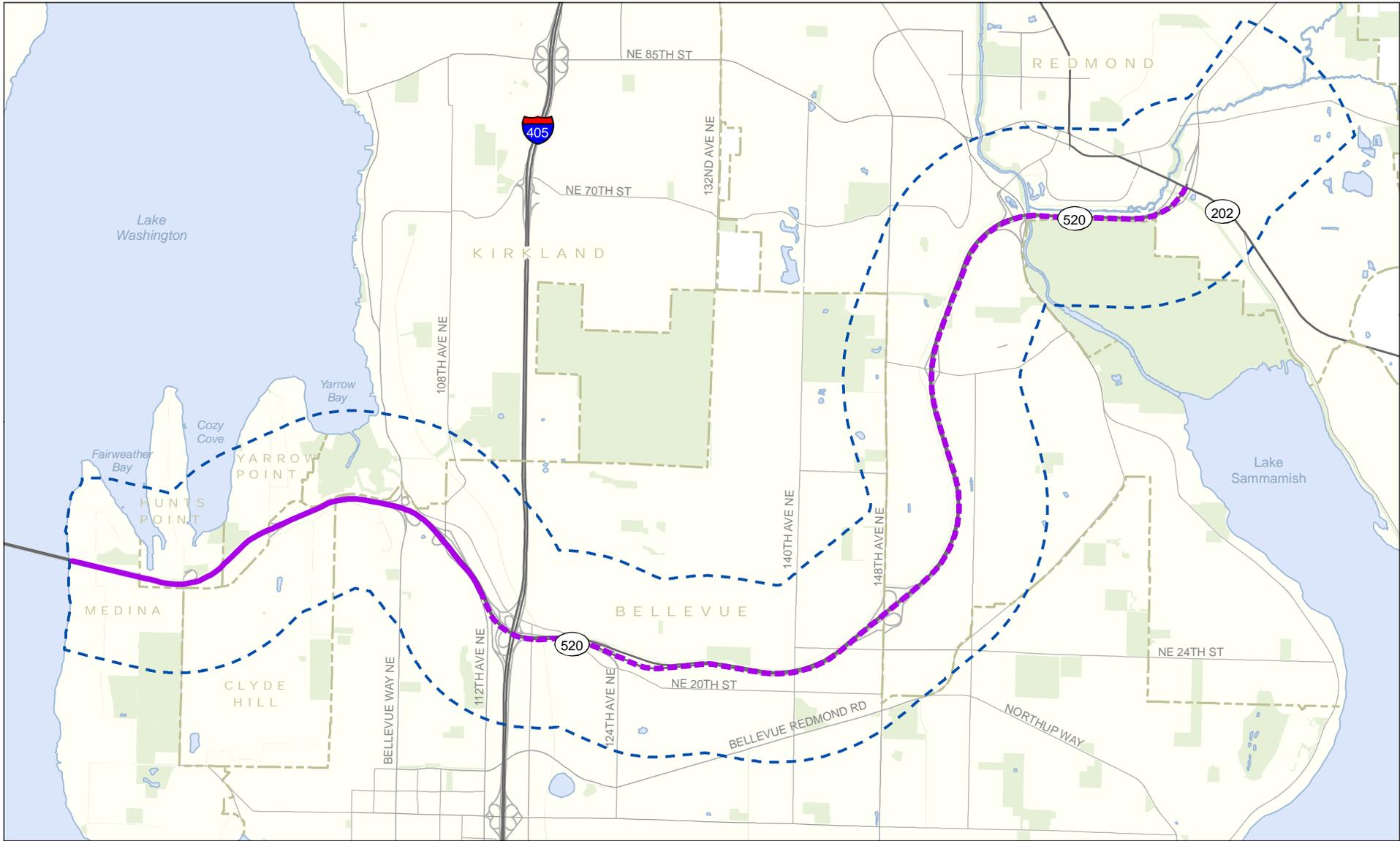
- Demographic analysis
- Public involvement activities
- Outreach to tribal governments



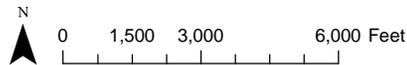
- Review of discipline reports and technical memoranda prepared for the SR 520, Medina to SR 202: Eastside Transit and HOV Project Environmental Assessment

Project analysts examined the effects of the project on the human environment within a half-mile radius of the centerline of the existing SR 520 roadway (see Exhibit 2). The team does not believe that the effects of constructing or operating this project – such as increased traffic or noise – would extend farther than this half-mile radius.





- Construction Extent
- - - Restriping Extent
- - - Study Area
- - - Park
- - - City Limits



Source: King County (2005) GIS Data (Street), CH2M HILL (2008) GIS Data (Parks), City of Bellevue (1999) GIS Data (City Limits), and King County (2007) GIS Data (Waterbody). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 2. Study Area

Medina to SR 202: Eastside Transit and HOV Project

Demographic Analysis

Project analysts used data from the 2000 U.S. Decennial Census to collect information on demographic characteristics of people in the study area. The U.S. Census Bureau provides statistics on minority and poverty status for block groups in the study area (see Exhibit 3 and Attachment 1).

To collect information on LEP populations, project analysts evaluated two sets of U.S. Census data. The first dataset identifies the number of residents in each census block group who are linguistically isolated, or those who indicated in the census survey that they speak English “not well” or “not at all.” Analysts then looked at a tract-level census dataset to identify the specific languages spoken by populations in the study area.

Analysts verified the findings with National Center for Education Statistics (NCES) demographic data on students enrolled in schools in the study area for the 2006–2007 school year.

Public Involvement Activities

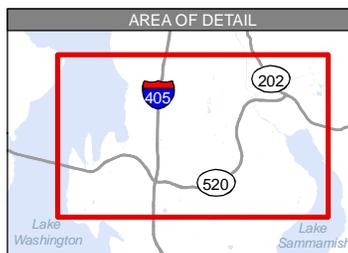
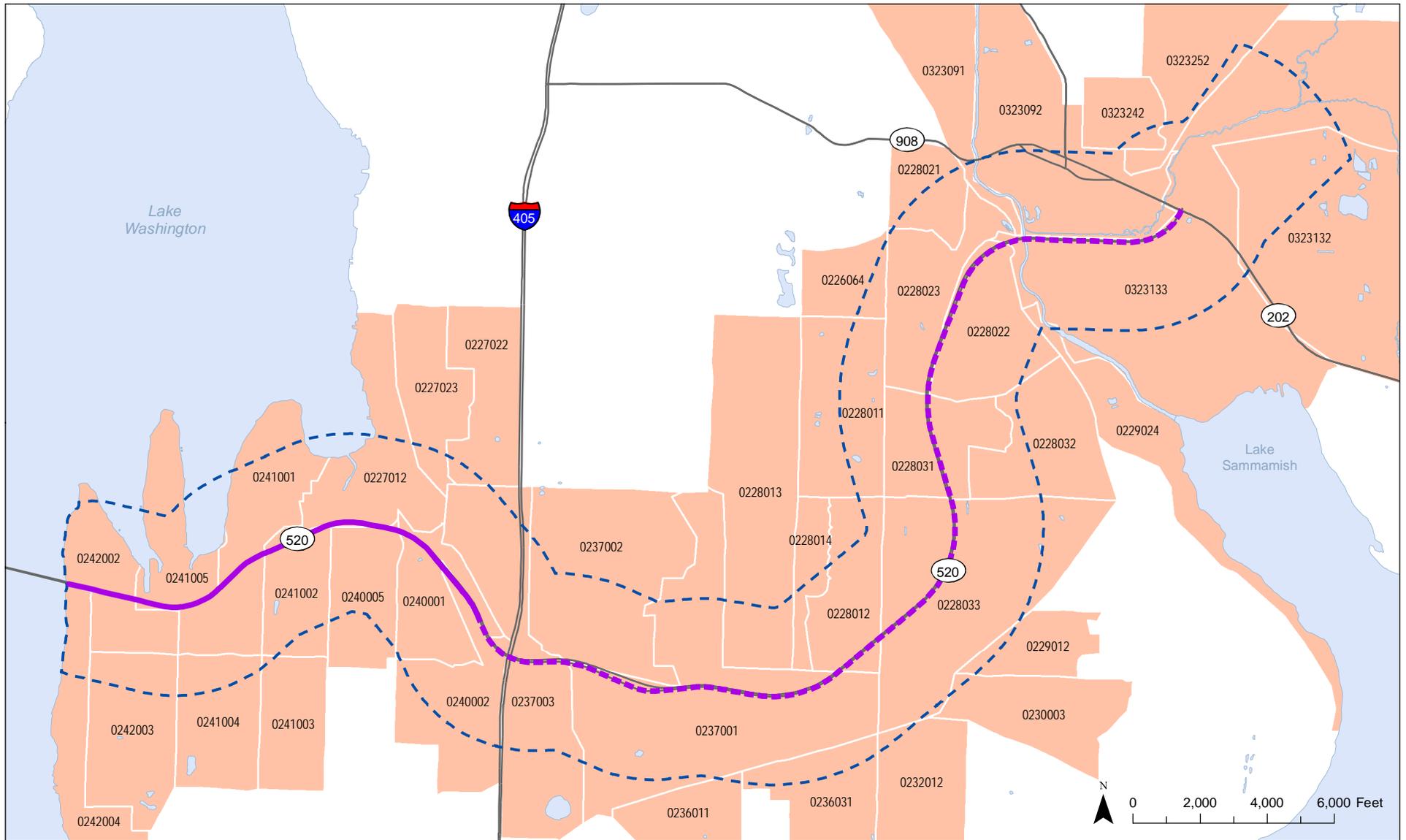
WSDOT conducted numerous activities to provide meaningful involvement opportunities for the public, including public meetings, community and jurisdictional briefings, community and jurisdictional design workshops, informational booths at community events, and Mayor’s meetings.

The project team held open houses on June 26, 2007 and June 25, 2008 to provide an informal setting for the public to obtain information about the Medina to SR 202: Eastside Transit and HOV Project elements, provide comments, and speak directly with project staff.

The team hosted a public scoping meeting on September 23, 2008 at the North Bellevue Community Center. The purpose of the meeting was to give interested parties the opportunity to comment on or provide information relevant to the project purpose and need, the proposed project features, and potential significant social, economic, or environmental issues related to the proposed project. Scoping comments are used to inform the substance and topics of addressed in the Environmental Assessment (EA). Specific approaches to reach minority, low-income and LEP populations included the following:

- Developing a project e-mail list and distributing a monthly e-newsletter. The project e-mail list was developed by compiling project contacts, including (1) property and business owners whose properties are adjacent to the project corridor, (2) people who had previously expressed interest in the project, (3) stakeholder groups and community organizations, (4) public agencies, and (5) elected officials. As of October 2008, the project e-mail list had approximately 9,900 contacts.
- Staffing information tables at community events and festivals organized and attended by low-income or minority people, including the Crossroads Farmers Market, Chinatown and International District Festival, Chinese Culture and Arts Festival, Seattle Fiestas Patrias, and Dia de los Muertos, A Mexican Remembrance.





-  Construction Extent
-  Restriping Extent
-  Census Block Group
-  Study Area

Source: WSDOT (2004) GIS Data (State Route), CH2M HILL (2008) GIS Data (Parks), US Census (2000) Demographic Data, City of Bellevue (1999) GIS Data (City Limits), and King County (2007) GIS Data (Waterbody). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 3. Census Block Groups

Medina to SR 202: Eastside Transit and HOV Project

- Locating a traveling project information display in places where it would be viewed by environmental justice populations, including at the North Bellevue Senior Community Center and the Bellevue Community College Library.
- Discussing issues relevant to the proposed project at meetings of special interest groups and community organizations that draw diverse populations.
- Staffing information tables at selected Eastside businesses.
- Holding public information events along the SR 520 corridor. The communications team posted notice of these events at transit stops along the corridor and in print and electronic publications that serve low-income or minority people.
- Providing briefings with social service providers working with low-income and/or minority people in neighborhoods along the corridor.
- Project materials have been translated into Mandarin, Russian, Spanish, and Vietnamese at key milestones during the project.

Outreach to Tribal Governments

Native Americans are a minority population, so coordination with tribes that could be affected by the project is part of WSDOT's environmental justice outreach. WSDOT Executive Order E1025.00 signed in 2003 directs WSDOT employees to consult with tribes who have ancestral homelands in affected areas.

In accordance with Section 106 of the National Historic Preservation Act, WSDOT is consulting with federally recognized tribes which have expressed an interest in the project: the Muckleshoot Indian Tribe, the Confederated Tribes and Bands of the Yakama Nation, the Snoqualmie Nation, the Suquamish Tribes, and the Tulalip Tribes. WSDOT is also coordinating with the Duwamish Tribe, a non-federally recognized tribe, as a consulting party. WSDOT will continue to coordinate with the tribes throughout the planning of the project as they may have crucial information on natural, cultural, and archaeological resources in the study area that WSDOT can incorporate into the environmental and design processes.

The Confederated Tribes and Bands of the Yakama Nation, the Snoqualmie Tribe, the Tulalip Tribes, the Suquamish Tribe, and the Duwamish Tribe have asked to be provided with regular information updates regarding the SR 520, Medina to SR 202: Eastside Transit and HOV Project, but so far have not raised specific issues regarding this project.

The project team held an agency and Tribal scoping meeting on October 2, 2008 to solicit comments from Tribal nations and federal, state, and local agencies on environmental topics to include in the EA. The Tribal nations listed above were invited to participate in the scoping meeting. The initial 30-day comment period for the scoping phase extended from September 23, 2008 to October 24, 2008. A one-week extension was granted at the request of the Muckleshoot Indian Tribe, extending the comment period to October 31, 2008. The Muckleshoot Indian Tribe submitted written scoping comments.



The study area is within the “usual and accustomed” fishing area of the Muckleshoot Tribe, which includes Lake Washington and contributing waters. The Muckleshoot Indian Tribe has biologists on its fisheries staff and the Tribe takes an active role in managing salmonids within the area. Tribal fishing can occur at multiple and variable locations within the Lake Washington system. WSDOT has been coordinating with the Muckleshoot Indian Tribal fisheries staff about natural resource issues and potential effects.

Usual and Accustomed Fishing Area

Indian tribes have a right to harvest fish free of state interference, subject to conservation principles; to co-manage the fishery resource with the state; and to harvest up to 50 percent of the harvestable fish. The Muckleshoot Tribe's usual and accustomed fishing area includes Lake Washington.

Please refer to the Agency Coordination and Public Involvement Discipline Report (WSDOT 2009g) for detailed information about outreach to Tribal nations and Tribal involvement in the project.

Review of Other Project Studies

The team reviewed the following discipline reports and technical memoranda to determine the location, intensity, and duration of anticipated project effects:

- Air Quality
- Cultural Resources
- Ecosystems
- Land Use, Economics, and Relocations
- Noise
- Social Elements
- Transportation
- Visual Quality and Aesthetics

The team also examined these analyses for information on whether there would be any indirect or cumulative effects as a result of the project. Indirect effects are effects that are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative effects result from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions regardless of which agency or person undertakes these actions. Cumulative effects can result from individually minor but collectively noticeable actions taking place over a period of time.

Analysts anticipate the following indirect effects on low-income, minority, and LEP populations. Some effects would be adverse and some would be beneficial:

- Soil erosion could *cause runoff into usual and accustomed tribal fishing areas, decrease water quality, and affect fish health*. Best management practices in design and construction would mitigate for these effects.



- Construction crews would clean up any contaminated soil, groundwater, sediment, asbestos-containing materials, and lead-based paint that they encounter during construction, creating beneficial indirect effects for all residents in the neighborhoods adjacent to the project, including low-income, minority, and LEP residents. This would also benefit usual and accustomed tribal fishing areas.
- The completion of the new HOV system would allow for safer operation of the roadway, which reduces risk for vehicles carrying hazardous materials. Reduced traffic accidents involving vehicles carrying hazardous materials would minimize the risk of materials being released into the environment. This would have a beneficial indirect effect for all residents throughout the corridor, including low-income, minority, and LEP residents.
- As noted in the Cultural Resources indirect and cumulative effects analysis, it is currently unknown if the proposed stormwater wetlands would affect any significant archaeological sites, including any sites that are of importance to low-income, minority, or LEP populations. Please refer to the Cultural Resources Technical Memorandum (WSDOT 2009h) for more information.

Analysts anticipate the following cumulative effects on low-income, minority, and LEP populations. Some effects would be adverse and some would be beneficial:

- The project's overall contribution to the health of fish and aquatic resources within the geographic resource study area (GSRA) would not help to measurably alleviate the overall cumulative effect on these resources and on usual and accustomed fishing areas.
- As mentioned earlier, crews would clean up any contaminated soil, groundwater, or sediment encountered during project construction. This, combined with clean-up efforts associated with other reasonably foreseeable projects in the region would create a positive cumulative effect for residents in the project area, including low-income, minority, and LEP populations. It would also benefit usual and accustomed tribal fishing areas.
- Construction-related traffic congestion for this project and the SR 520 I-5 to Medina: Bridge Replacement and HOV Project could contribute to a cumulative adverse effect on travel times. This would affect all SR 520 users, including low-income, minority, and LEP populations.
- This project, in combination with the SR 520 I-5 to Medina: Bridge Replacement and HOV Project would improve travel times for all vehicles using the SR 520 corridor. This would have a beneficial cumulative effect on all SR 520 users, including low-income, minority, and LEP users.
- The completion of the new HOV system between Redmond and Seattle will allow for a faster and more reliable trip throughout the corridor. This complete toll-free HOV system combined with increased transit options provided by the voter-approved Sound Transit 2 and King County Metro Transit Now packages could create a positive cumulative effect for low-income populations by providing viable alternatives to paying the tolls proposed by the I-5 to Medina: Bridge Replacement and HOV Project. If the cumulative effect of these projects results in reduced traffic congestion across Lake Washington, this would also have a beneficial effect on car-dependent low-income populations travelling through the corridor.



- See the Cultural Resources Technical Memorandum (WSDOT 2009h) for more information about the cumulative effects to archeological resources of importance to low-income and minority populations.

A complete analysis of indirect and cumulative effects is provided in the Indirect and Cumulative Effects Technical Memorandum (WSDOT 2009b).

How did the team evaluate information on the project's potential effects on low-income or minority populations?

The team examined two sources of information to determine if the proposed project would result in disproportionately high and adverse human health and environmental effects on minority and low-income people:

1. Results of public involvement efforts with low-income or minority communities and outreach to tribal governments.
2. Discipline reports and technical memoranda prepared for the SR 520, Medina to SR 202: Eastside Transit and HOV Project Environmental Assessment, as referenced above.

After identifying adverse effects or benefits, the team isolated those effects that would affect people differently, such as increases in neighborhood traffic. Then, the geographic information system (GIS) team mapped the adverse effects over census block groups to create a visual comparison of the minority and poverty status of those affected by the project with those not affected by the project. The project team also compared LEP status of those affected by the project with those not affected.

Next, the project team determined whether the adverse effects would disproportionately affect low-income or minority populations, and examined whether the project would have any beneficial effects for low-income or minority populations that could offset any high and disproportionate adverse effects. FHWA directs WSDOT to apply two criteria to determine whether an effect falls disproportionately on low-income or minority populations:

1. Low-income and/or minority people would predominately bear the effects; or
2. Low-income and/or minority people would suffer the effects and the effects would be considerably more severe or greater in magnitude than the adverse effects suffered by the general population.

3. Affected Environment

The study area is comprised of the following cities and towns in King County: Medina, Hunts Point, Clyde Hill, and Yarrow Point (the Points communities), and portions of Kirkland, Bellevue, and Redmond (see Exhibit 2).



What are the demographics of the study area?

Approximately 10 percent of the 1,826,732 King County residents live below the federal poverty level, according to 2006 US Census estimates. (Note that data for King County is supplied for comparison purposes only. King County as a whole is not part of the study area.) Exhibit 4 shows the percentage of households with incomes below the federal poverty level for each census block group in the study area.

Approximately 70 percent of the population in King County is white, non-Hispanic; 13 percent is Asian; and 6 percent is African American according to US Census 2006 estimates for King County. Approximately 1 percent of the population is Native American and less than 1 percent of the population is Native Hawaiian/Other Pacific Islander. About 7 percent of the area's population is Hispanic. (The term *Hispanic* is used by the U.S. Census Bureau for anyone who is of Hispanic origin, regardless of race.) Exhibit 5 shows the percentage of residents who are minority in the study area.

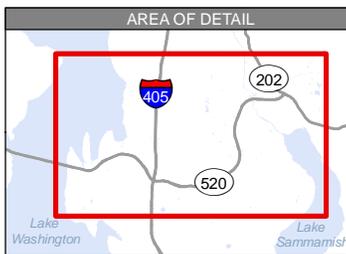
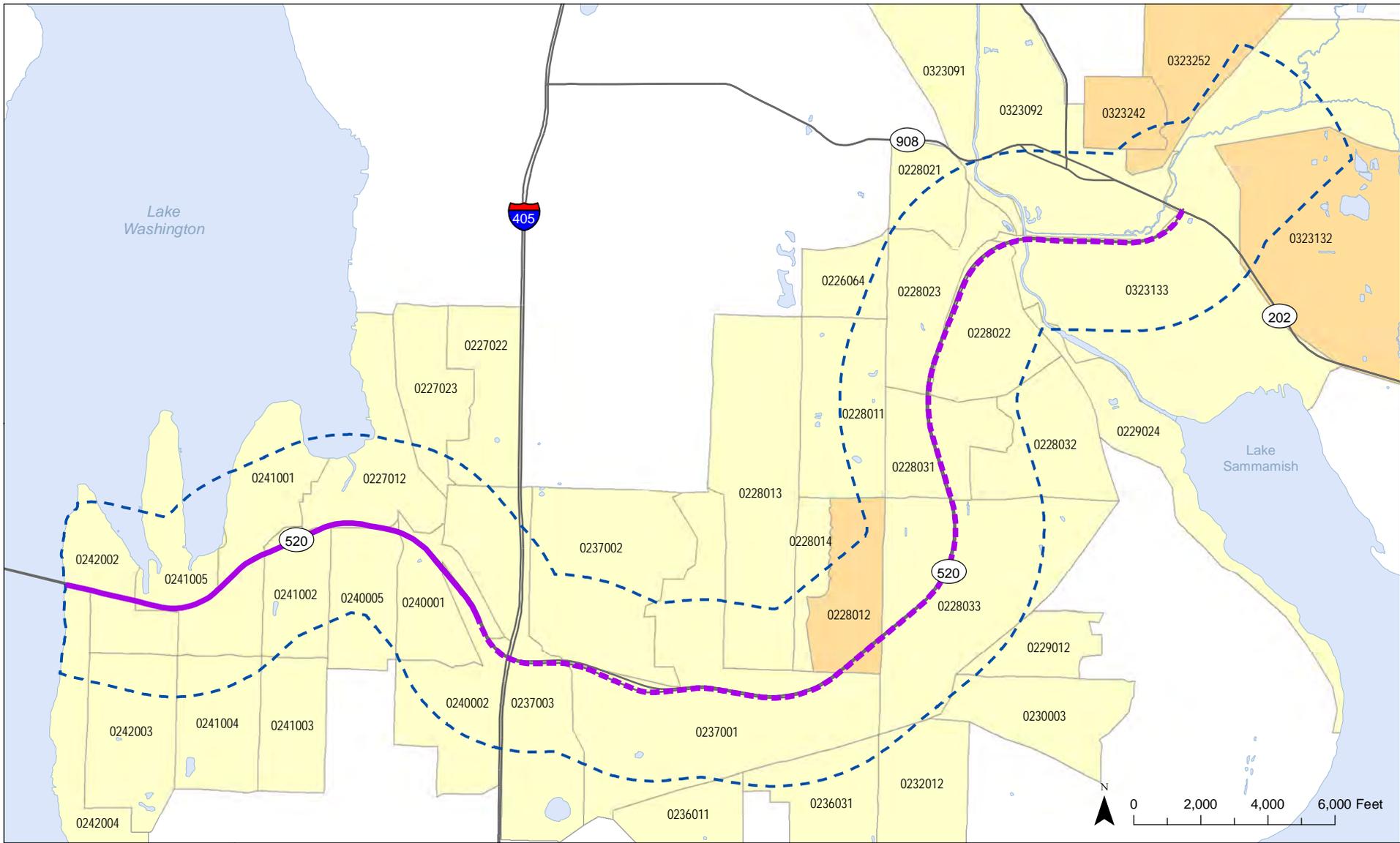
As mentioned earlier, Title VI of the Civil Rights Act of 1964 compels WSDOT to avoid discrimination on the basis of national origin. For this reason, the team identified populations that may be limited-English proficient. Approximately 5 percent of King County residents are linguistically isolated; that is, they indicated in their responses to the 2000 census survey that they speak English "not well" or "not at all." Exhibit 6 shows the percentage of residents who are linguistically isolated for each census block group in the study area.

WSDOT refers to the U.S. Department of Justice guidelines in deciding when to translate documents into other languages. The Department of Justice recommends that if demographics indicate that 5 percent or 1,000 persons in a given geographic area speak a language other than English, project materials should be translated into that language. Information on the specific languages that residents speak is available at the census tract level. Exhibit 7 shows the census tracts in which 5 percent or more of the population speaks a language other than English and the languages represented in those census tracts. The languages spoken in the study area are listed below.

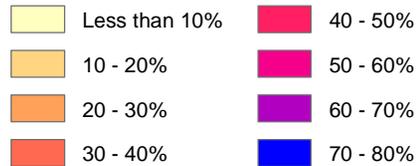
- Chinese
- Russian
- Spanish
- Other Asian Languages

WSDOT and its partner agencies can use this information to improve their outreach to environmental justice populations during the planning and construction phases of this project.





Percent Below Poverty



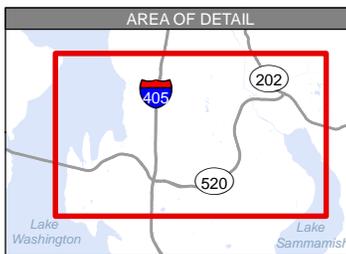
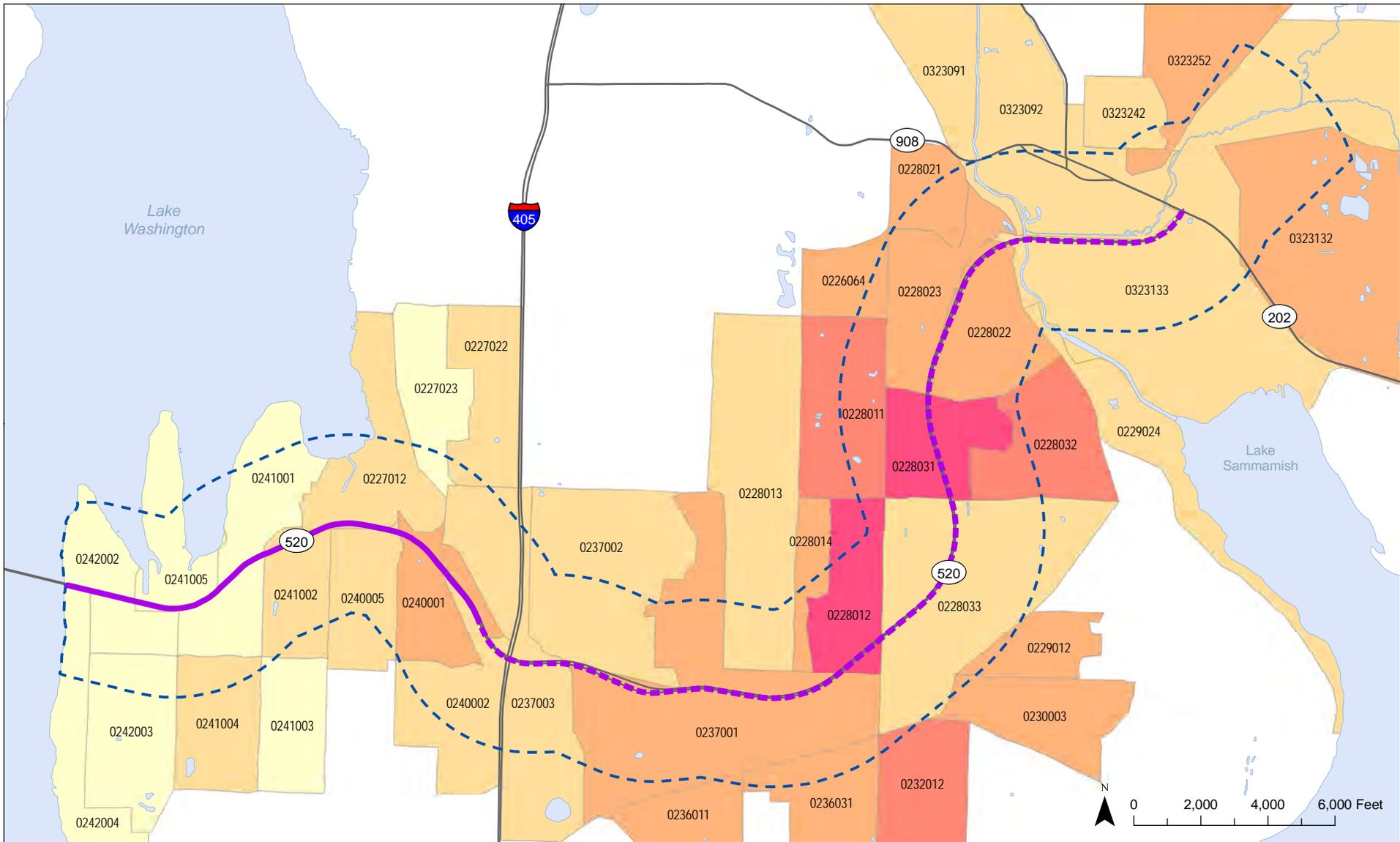
- Construction Extent
- Restriping Extent
- Study Area

Source: WSDOT (2004) GIS Data (State Route), CH2M HILL (2008) GIS Data (Parks), US Census (2000) Demographic Data, City of Bellevue (1999) GIS Data (City Limits), and King County (2007) GIS Data (Waterbody). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

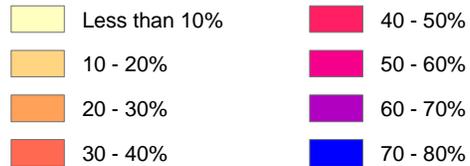


Exhibit 4. Percent Below Poverty in the Study Area

Medina to SR 202: Eastside Transit and HOV Project



Percent Minority Population



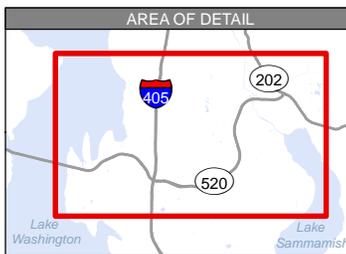
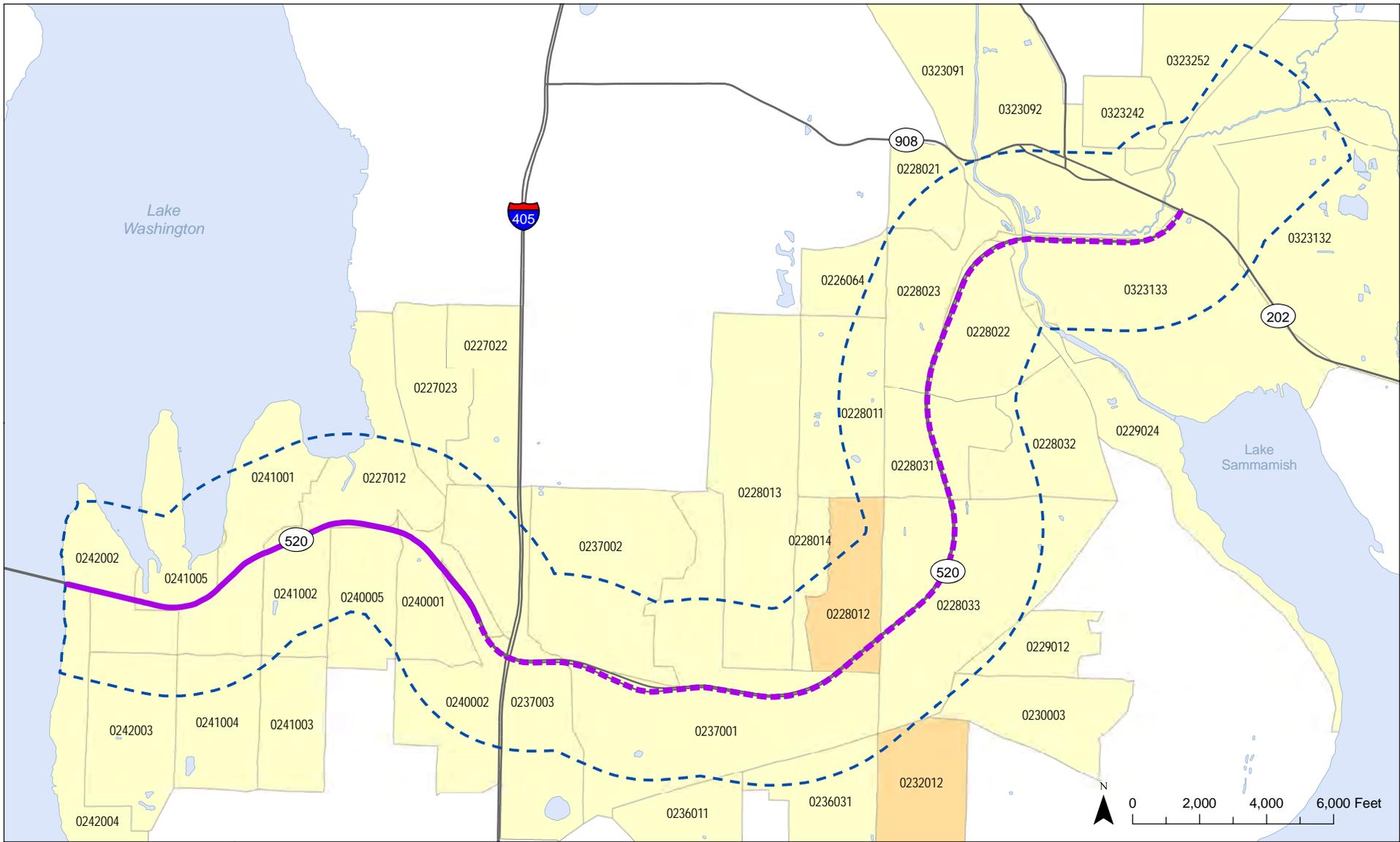
- Construction Extent
- Restriping Extent
- Study Area

Source: WSDOT (2004) GIS Data (State Route), CH2M HILL (2008) GIS Data (Parks), US Census (2000) Demographic Data, City of Bellevue (1999) GIS Data (City Limits), and King County (2007) GIS Data (Waterbody). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 5. Percent Minority in the Study Area

Medina to SR 202: Eastside Transit and HOV Project



Percent Limited English Proficient



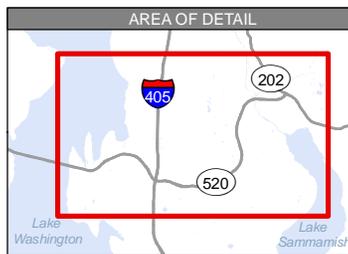
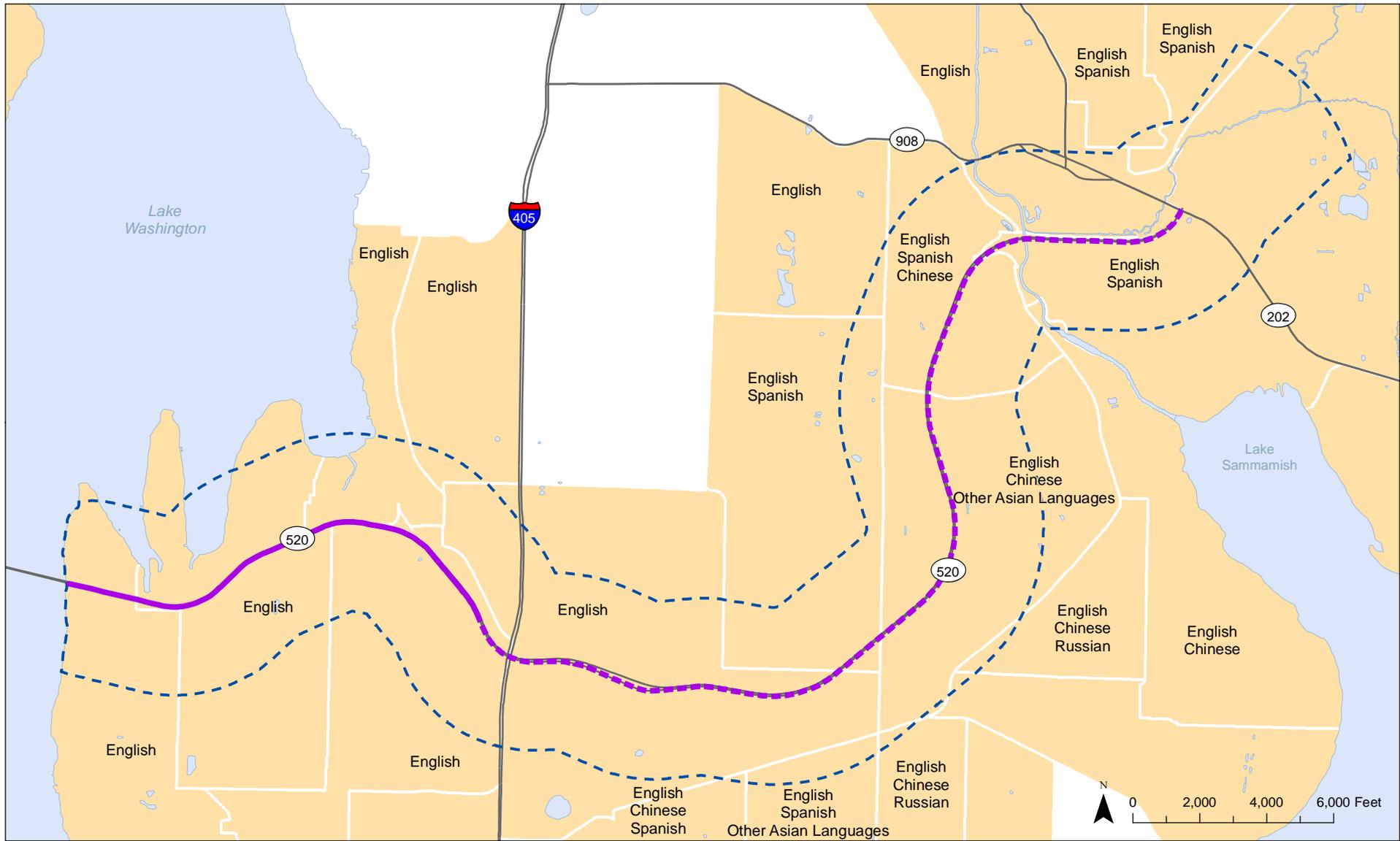
- Construction Extent
- Restriping Extent
- Study Area

Source: WSDOT (2004) GIS Data (State Route), CH2M HILL (2008) GIS Data (Parks), US Census (2000) Demographic Data, City of Bellevue (1999) GIS Data (City Limits), and King County (2007) GIS Data (Waterbody). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 6. Percent Limited English Proficient in the Study Area

Medina to SR 202: Eastside Transit and HOV Project



- Construction Extent
- - - Restriping Extent
- Census Tract
- Study Area

Source: WSDOT (2004) GIS Data (State Route), CH2M HILL (2008) GIS Data (Parks), US Census (2000) Demographic Data, City of Bellevue (1999) GIS Data (City Limits), and King County (2007) GIS Data (Waterbody). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 7. Languages Spoken by 5% or More of the Population
 Medina to SR 202: Eastside Transit and HOV Project

According to the analysis, 6 percent of residents in the study area had household incomes at or below the federal poverty level in 1999. The percentage of residents within each block group with household incomes at or below the federal poverty level ranged from less than 1 percent to 13 percent. There were no residents with incomes below the federal poverty level in three census block groups in the study area. In the study area, 23 percent of residents were non-white and 6 percent were Hispanic. The percentage of residents in each block group who were non-white ranged from 6 percent to 45 percent and the percentage of residents who were Hispanic ranged from less than 1 percent to 16 percent. Block groups within the construction limits of the project (the portion of the project between Lake Washington and 108th Avenue NE) have fewer minority and low-income populations than the block groups within the restriping limits of the project (the area between the 108th Avenue interchange and SR 202 in Redmond), as indicated in Exhibit 8.

Analysts verified the presence of minority and low-income populations in the study area by obtaining data from the National Center for Education Statistics (NCES) for the 2006–2007 school year. Analysts determined that the following elementary schools serve the neighborhoods adjacent to SR 520: Alcott, Audubon, Community, Lakeview, Redmond, and Rush elementary schools in the Lake Washington School District and Ardmore, Cherry Crest, Clyde Hill, Medina, Sherwood Forest, Stevenson, and Woodridge elementary schools in the Bellevue School District.

Within the 13 schools in the study area, 19 percent of students were eligible to participate in the Free Lunch Program (which means they come from families with household incomes below 130 percent of the federal poverty level), and 36 percent of students were non-white. Within the Lake Washington and Bellevue school districts, 7 percent of students were LEP. (Note: NCES collects LEP data at the district level only). See Attachment 2 for detailed findings.

Exhibit 8. Low-Income and Minority Populations in the Study Area

Characteristic	Study Area		Construction Limit ^a		Restriping Limit ^b	
	Average	Range	Average	Range	Average	Range
% Below Federal Poverty Level	6%	1%–13%	2%	0–5%	7%	0.4%–13%
% Non-White	23%	6–45%	11%	6–22%	26%	1–45%

^a The construction limit is the portion of the study area between Lake Washington and 108th Avenue NE.

^b The restriping limit is the portion of the study area between the 108th Avenue NE interchange and SR 202 in Redmond.

Source: 2000 U.S. Census

Note that the NCES school data cannot be compared directly with 2000 U.S Census data for the following reasons:

- School boundaries encompass an area larger than the study area, so the data include some students from households outside of the study area.



- NCES does not collect data on the percentage of students from families below the federal poverty level. The closest measure is the percentage of students eligible for the Free Lunch Program. Income eligibility for the Free Lunch Program (130 percent of the federal poverty level) is higher than the low-income threshold for environmental justice.
- NCES data reports the demographics of students, rather than households.

Low-income or minority populations that could be affected by the project include the following:

- Those living in neighborhoods adjacent to SR 520 within the construction limit that would be affected by the construction of the new eastbound HOV lane from Lake Washington to the existing eastbound HOV lane west of the I-405 interchange. This includes those living in neighborhoods within the vicinity of lid and interchange construction projects at Evergreen Point Road, 84th Avenue NE, 92nd Avenue NE, Bellevue Way, and 108th Avenue NE.
- The Muckleshoot Indian Tribe's "usual and accustomed" fishing area is within the study area.

The project team does not anticipate that effects would occur on low-income or minority populations living in neighborhoods inside the restriping from I-405 to SR 202, because improvements would be limited to restriping of existing lanes and placing new signs. No construction would occur and restriping would occur at night, outside peak traffic hours, and would be relatively short in duration, lasting up to 5 nights.

Neighborhoods Affected by Lid Construction

Neighborhoods adjacent to SR 520 within the construction limit include the communities of Medina, Hunts Point, Clyde Hill, and Yarrow Point, the Lakeview neighborhood of Kirkland, and the Northtown neighborhood of Bellevue. Construction of SR 520 in the 1960s bisected the study area and created a barrier to interaction between its northern and southern portions.

Although some minority populations live in Medina, Hunts Point, Clyde Hill, and Yarrow Point, very few (if any) are low-income households. These areas are mostly single-family residential and offer few commercial services or any multifamily residential housing. The eastern portion of the construction limit includes the Lakeview neighborhood of Kirkland and Northtown in Bellevue. The households in this portion of the study area have incomes two times those of the households in the cities of Bellevue and Kirkland and in King County, and a relatively small percentage of the population is below the poverty level. Nearly all of the households speak English as a first language.

See the Land Use, Economics, and Relocations Technical Memorandum (WSDOT 2009c) and the Social Elements Technical Memorandum (WSDOT 2009d) for a more complete description of the social and land use characteristics of these neighborhoods.



Are there places of particular importance to low-income or minorities in the study area?

Social Services

The project team identified three social service agencies within the study area that serve low-income and minority populations: Washington Women in Need, Bellevue Community College, and Catholic Community Services. Washington Women in Need provides financial assistance for health care and education to low-income women. Bellevue Community College/North Campus is an important educational resource to low-income or minority populations. Catholic Community Services provides services to help families transition from homelessness and helps families with basic needs.

Public Services

King County Metro, Sound Transit, and Community Transit provide transit service in the study area. Residents can access transit routes along SR 520 at the transit stops located at Evergreen Point Road, 92nd Avenue NE, and the South Kirkland Park-and-Ride. King County Metro provides local service, with many of the routes located in Bellevue and Kirkland. Routes provide service within Clyde Hill, and other routes travel along 84th Avenue NE to provide service to Medina residents.

Three park-and-ride facilities are located in the study area. The South Kirkland Park-and-Ride at 10610 NE 38th Place includes 596 parking spaces, bicycle lockers, and racks, and is serviced by 8 transit routes. The Saint Luke's Park-and-Ride facility includes 30 parking spaces and is serviced by 3 routes. The Evergreen Point Bridge lot has 51 spaces and includes access to 25 routes.

Community Centers

There are three community centers in the study area. However, they are used by the general population and are not of particular importance to low-income or minority populations.

Recreational Facilities

There are five recreational facilities in the study area. However, they are used by the general population and are not of particular importance to low-income or minority populations in the study area.

Religious Institutions

Analysts found nine churches of particular importance to low-income or minority populations in the study area. All but one of these churches is located in the restriping limit and should not experience any adverse effects from the proposed project. One church, the Eastside Korean Presbyterian Church of Bellevue, is located within the construction limit at 10936 NE 24th Street, just west of 112th Avenue NE.



Businesses

Analysts identified 16 minority-owned businesses in the study area. Of these, 14 are in the restriping area on SR 520 between I-405 and SR 202. Two firms are located within the construction limit, Beyaz & Patel, Inc. and Hatzman Group. Beyaz & Patel, Inc. is a firm specializing in structural engineering applied to water, wastewater, and transportation infrastructure projects. The firm's northwest regional office is located at 2820 Northup Way, near I-405. Hatzman Group specializes in economic analysis and is located at 3501 108th Street NE.

4. Potential Effects of the Project

This section describes potential adverse effects and benefits associated with construction and operation of the Build Alternative and No Build Alternative on environmental justice populations in the study area.

How would construction of the project affect low-income or minority populations?

Build Alternative

Analysts reviewed the relevant discipline reports and technical memoranda to determine the location, intensity, and duration of anticipated project effects relating to construction. Findings are presented below for each discipline.

Air Quality

Project construction would temporarily affect air quality as a result of excavation and earth moving activity and emissions from diesel-fueled construction equipment. However, WSDOT would comply with established procedures and regulations to avoid or minimize construction-related effects on air quality. Further, project-related construction would be most intense in the area between Evergreen Point Road and I-405, and the block groups in this area have lower percentages of minority and low-income populations. As such, construction-related noise would not disproportionately affect low-income or minority populations.

Cultural Resources

No adverse effects from project construction are expected on any historic built environment properties. As such, there would be no adverse effect on historic built environment resources that are particularly important to minority or low-income populations. Note: no archeological resources were identified during preparation of the *SR 520 Bridge Replacement and HOV Project Draft Environmental Impact Statement (Draft EIS)* (WSDOT 2006). We will validate this when additional archeological information is made available in late summer 2009.



Fish and Aquatic Habitat

Construction has the potential to affect the Muckleshoot Indian Tribe's usual and accustomed fishing area, which is within the study area. These effects could result in a small, temporary loss of riparian function, some temporary increases in stream sedimentation, and a temporary loss of habitat access due to stream diversions. However, WSDOT would apply applicable best management practices (BMPs) to minimize these effects, which would be relatively minor and of short duration. WSDOT would also follow all permit requirements related to fish and aquatic habitat during construction. The scope and scale of these activities would not be expected to have a substantial negative effect on fish or overall in-stream or riparian habitat.

Displacement of Homes, Businesses, or Community Facilities

Widening of SR 520 would occur mostly within existing WSDOT-owned property. Ten full acquisitions would be required (about 6 acres), resulting in five residential displacements. Based on conversations with WSDOT staff working with property owners and tenants, it does not appear that any of the property owners are low-income or minority. No businesses would be displaced as a result of this project.

Twenty-three parcels (totaling about 4 acres) would be affected by partial acquisitions. Most of the properties are located in areas that have low percentages of low-income or minority populations. The partial acquisitions would occur as narrow strips of land from the backyards of residences adjacent to SR 520, bringing the right of way closer to the homes. However, for the majority of the residences in the study area, the construction of the noise walls included as part of the project would do much to dampen noise from the highway, lower noise levels beneath the FHWA noise abatement criteria (NAC), and screen the highway from view. Most partial acquisitions would be small relative to the total size of the affected properties, and the loss of land would not have an adverse effect on the overall function of the properties.

Project construction would temporarily increase congestion and noise and would affect access for businesses and residents in the area. The Bellevue Way interchange provides a main route to many businesses in downtown Bellevue and Kirkland and along Bellevue Way, Lake Washington Boulevard, and Northrup Way. The 108th Avenue NE interchange provides a main route to many businesses in downtown Bellevue and Kirkland. Some businesses could experience fluctuations in retail sales as project construction modified access to their business or to those of competitors. As noted in the section, "Are there places of particular importance to low-income or minorities in the study area," the Eastside Korean Presbyterian Church of Bellevue is located on 10936 NE 24th Street (on NE 24th between 108th Avenue NE and 112th Avenue NE) and could be affected by project construction at the Bellevue Way interchange and 108th Avenue NE interchange. There are two minority-owned businesses that could be affected by project construction at the 108th Avenue NE interchange, Beyaz & Patel, Inc, at 2820 Northrup Way and Hatzman Group, at 3501 108th Street NE. However, effects of construction would be minimal; therefore, it is unlikely that property values would be greatly affected or that many businesses would experience substantial negative economic effects during construction.



Refer to the Land Use Economics, and Relocations Technical Memorandum (WSDOT 2009c) for complete information on the effects of project construction for this discipline.

Noise

Project-related construction would be most intense in the construction limit between Evergreen Point Road and I-405. However, the block groups in this area have lower percentages of minority and low-income populations than the block groups in the sections that would not experience construction effects. As such, construction-related noise would not disproportionately affect low-income or minority populations.

Neighborhoods and Social Resources

The project would not result in any significant effects on social elements after mitigation measures were implemented. There would be no disproportionately adverse effects on social resources that are particularly important to minority or low-income populations.

<p>Social Resources</p> <p>Elements of the community or social environment include population characteristics, housing, community facilities, religious institutions, social and employment services, cultural and social institutions, and government institutions.</p>

Construction activities would not bisect or isolate any established communities or change the existing community character, nor would they result in physical impediments that would make it more difficult for people to reach community services or affordable housing. Project construction would not result in the relocation of any community resources or affordable housing. There would be no construction-related effects on the religious institution or government facilities located in the study area.

Refer to the Social Elements Technical Memorandum (WSDOT 2009d) for complete information on social effects of project construction.

Transportation

Construction-related transportation effects would be most intense in the study area between Evergreen Point Road and I-405. However, the block groups in this area have lower percentages of minority and low-income populations than the block groups in the sections that would not experience construction-related transportation effects. The team concluded that construction-related transportation effects would not disproportionately affect low-income or minority populations.

Construction phasing would help minimize the need for full road closures, lessening the effect of construction on SR 520 and on the arterials where lids and interchange work would occur. Construction effects to traffic on SR 520 during weekday peak commute times would be minimal and are anticipated to be no more than short-term localized slowdowns caused by construction-related activities. All lanes, including the westbound HOV lane, would remain open during these times. Nighttime lane and ramp closures would be restricted to set hours that minimized the effects to traffic.

While the southbound Bellevue Way NE westbound on-ramp may be closed for 2 to 3 months during construction and the 108th Avenue NE westbound on-ramp may be closed for 6 to 9 months, construction restrictions would be in place to prevent both ramps from closing at the same time. The freeway transit stations at Evergreen Point Road and 92nd Avenue NE would generally remain open



during construction. Periodic short-term closures may be necessary, but restrictions would be in place so that both stations are not closed at the same time.

Visual Quality

Construction-related visual effects would occur in areas that have low percentages of minority or low-income residents. The most noticeable temporary changes to the visual character and quality of the SR 520 corridor would result primarily from construction of temporary bridges, demolition of existing bridges, construction of new roadway and bridges, vegetation loss and excavation outside the roadway, temporary erosion control measures, equipment staging, temporary traffic or construction signage, temporary retaining and screening walls, and nighttime construction lighting. Changes could also result from possible increased traffic congestion during construction including changed or reduced access and detours through neighborhoods, and from the addition of construction traffic, parking, and heavy equipment. Light and glare could be increased by construction equipment, especially if work were performed at night.

No Build Alternative

Under the No Build Alternative, there would be no construction-related effects on low-income or minority populations in the study area because no action would be undertaken. Low-income or minority residents would not be adversely affected by noise, dust, and increased traffic congestion. The No Build Alternative would not require acquisition of property and no effects to fish or other aquatic species and habitat would result.

How would operation of the project affect low-income or minority populations?

Build Alternative

The project team reviewed the relevant discipline reports and technical memoranda to determine the location, intensity, and duration of anticipated project effects relating to operation of the project. Findings are presented below for each discipline.

Air Quality

The project team concluded that the project is not expected to worsen regional air quality compared with the No Build Alternative and that no permanent effects on air quality are anticipated as a result of project operation. Therefore, there would be no disproportionately adverse effect on minority or low-income populations living in the study area. The roadway improvements proposed by this project would have an overall beneficial effect in the region by improving traffic flow and reducing idling time, which would benefit all residents living in the project study area, including minority and low-income residents.



Cultural Resources

The project team anticipates that project operation would have no adverse effects on cultural resources; it follows that there would be no disproportionate effects to low-income or minority populations. Note: no archeological resources were identified during preparation of the Draft EIS. For more information, see the Cultural Resources Technical Memorandum (WSDOT 2009h).

Fish and Aquatic Resources

Project operation has the potential to have an effect on the Muckleshoot Indian Tribe's usual and accustomed fishing area, which is within the study area. However, the project team anticipates that project operation would have positive effects on fish and aquatic resources, an important factor in the ability of tribes to exercise treaty fishing rights. WSDOT is working with the staff of the Muckleshoot Indian Tribe to determine the design elements that would best protect fish and aquatic resources from any adverse effects due to project operation. The project includes improvement of fish passage conditions through culverts; fish would have greater downstream and upstream access to the in-stream and riparian habitats in the lower Yarrow Creek stream system. Long-term riparian conditions in many of the temporarily affected riparian areas would also improve. These improvements would not occur under the No Build Alternative.

The Build Alternative would result in new impervious surfaces, but would also treat for water quality all new and existing pollution-generating impervious surfaces within the SR 520 corridor. No such treatment would occur under the No Build Alternative. Also, runoff from all impervious surfaces draining to streams would undergo detention under the Build Alternative, resulting in an improved flow regime compared with the No Build Alternative.

Land Use and Economics

Minority-owned businesses, like other businesses located in the project corridor, could benefit from improved traffic flow on SR 520 and reduced congestion in the study area. These changes could create small improvements in the economic prospects of businesses along the SR 520 corridor, increase the attractiveness of the area for new development, and increase property values.

Noise

Because the residences that would continue to receive unmitigated noise effects are located in areas with lower percentages of minority and low-income populations, the team concluded that the Build Alternative and the No Build Alternative would not have disproportionately adverse noise effects on minority or low-income populations. While minority and low-income populations would not experience a disproportionately adverse noise effect, it should be noted that the noise reduction benefits that would result from the Build Alternative would be realized in areas with lower percentages of minority and low-income residents.

The properties that would be affected by noise under the Build Alternative and the No Build Alternative (between Evergreen Point Road and Bellevue Way NE) are located in block groups that have 10 percent minority and 1 percent low-income populations. Neighborhoods outside of the noise



study area between Bellevue Way NE and SR 202 have 25 percent minority and 7 percent low-income populations. Exhibit 9 contains summarizes the demographics of the noise study area.

Neighborhoods and Social Resources

The project would benefit social resources. The new physical connections in Medina, Hunts Point, Clyde Hill, and Yarrow Point, brought about by construction of lids over SR 520 at Evergreen Point Way, 84th Avenue NE, and 92nd Avenue NE, would allow for a reconnection of the areas previously bisected when SR 520 was originally constructed in the 1960s. This would benefit low-income and minority populations living and working in those communities. The project would provide travel time benefits for those who use transit, carpools, or vanpools along the SR 520 corridor in the study area.

This would provide a benefit to low-income or minority populations because transit riders in King County are more likely than non-riders to be low-income or minority (King County 2006). The project would also enhance public safety, which would benefit all SR 520 users.

Exhibit 9. Noise Study Area Demographics

Location	# of Residences Where Noise Levels Would Exceed NAC				
	Existing	No Build	Build	Low-Income	Minority
Medina and Hunts Point North – North of SR 520, between Evergreen Point Road and 84th Avenue NE	23	23	4	2%	9%
Medina and Hunts Point South – South of SR 520, between Evergreen Point Road and 84th Avenue NE	23	23	3	1%	7%
Hunts Point, Clyde Hill, Yarrow Point, and Kirkland – North of 520 between 84th Avenue NE and Bellevue Way NE	24	29	0	2%	11%
Hunts Point, Clyde Hill, Yarrow Point, and Bellevue – South of SR 520 between 84th Avenue NE and Bellevue Way NE	58	71	13	1%	11%
Total Within Noise Study Area (Evergreen Point Road to Bellevue Way NE):	128	146	13	1%	10%
Total Outside of Noise Study Area (Bellevue Way NE to SR 202):	---	---	---	7%	25%

Source: U.S. Census 2000; Noise Technical Memorandum (WSDOT 2009e)

Transportation

The Build Alternative would improve transit and carpool travel time and reliability, which would benefit all users, including low-income or minority populations. Improvements such as separating merge movements between buses and other vehicles at the 108th Avenue NE and the 84th Avenue NE interchanges, eliminating weaves caused by general-purpose traffic entering or exiting via outside HOV lanes, and widening shoulders to current design standards would result in safer and more efficient operation of SR 520 on the Eastside.



Visual Quality

The adverse visual effects identified in the Visual Quality and Aesthetics Technical Memorandum (WSDOT 2009f) would not occur in areas with low percentages of minority or low-income residents. These effects – the loss of vegetation and mature trees, the visibility of widened roadway through the corridor, and the visual effects of noise walls – can be mitigated through best management practices in the final design phase.

No Build Alternative

Under the No Build Alternative, none of the improvements discussed under “What is the project?” would be constructed. Transit and HOV travel times would not improve; improved infrastructure would not be in place to support planned service improvements, which means that the morning and evening commutes would become slower for even longer portions of the day; and transit reliability would continue to diminish.

This continued degradation in transit reliability could disproportionately affect low-income or minority populations, because data show that transit riders in King County are more likely than non-riders to be low-income or minority (King County 2006). According to the 2006 King County Metro Rider Survey, which collects data on transit use in King County, regular riders are more likely to be minorities than infrequent and non-riders. Of the regular riders who participated in the survey, 25 percent have household incomes below \$35,000, compared with only 12 percent of non-riders. This survey does not collect information about whether respondents have incomes at or below the poverty level.

Other project benefits that would not be realized include removing fish passage barriers, enhancing streams, improving trails, constructing noise walls, and providing lids at key locations to connect the communities separated by SR 520 when the highway was constructed in the 1960s. In addition, untreated stormwater would continue to be discharged into streams, which would continue to decrease aquatic habitat.

5. Mitigation

How will the project avoid or minimize adverse effects on low-income or minority populations during construction?

The only construction-related effect on low-income or minority populations that analysts identified was potential effects to tribal fishing areas. To avoid or minimize these effects, WSDOT will continue to coordinate with interested tribes to ensure that construction methods and design plans do not adversely affect tribal fishing rights. Mitigation measures are outlined in the Ecosystems Discipline Report (WSDOT 2009a).

As described in the Potential Effects of the Project section, construction will affect SR 520 users and residents and businesses in neighborhoods surrounding the construction area. WSDOT might implement the following measures to avoid or minimize effects on all people and businesses within the study area, including low-income or minority populations:



- Work with business owners to reconfigure or provide for alternative access during construction and make special efforts to ensure that the access needs of minority and low-income businesses are met.
- Continue to provide adequate public notice of construction activities, land closures, alternate routes, and detour routes and proactively work to reach low-income or minority populations through the use of print and electronic publications that serve low-income or minority people.
- Continue to conduct briefings on project construction to social service agencies that work with low-income or minority people in neighborhoods along the corridor to ensure that information is reaching all residents and roadway users.

How will the project avoid or minimize adverse effects on low-income or minority populations during operation?

The only operation-related effect on low-income or minority populations that analysts identified was the potential effects to tribal fishing areas. To avoid or minimize these effects, WSDOT will continue to coordinate with interested tribes to ensure that design plans do not adversely affect tribal fishing rights. Mitigation measures are outlined in the Ecosystems Discipline Report (WSDOT 2009a).

6. Conclusion

This project would not have any disproportionately high and adverse effects on low-income and/or minority populations.

The study area is within the “usual and accustomed” fishing areas of the Muckleshoot Indian Tribe. Continued coordination with the Muckleshoot Tribe is necessary to ensure that appropriate mitigation measures are taken to ensure that this environmental justice population is not adversely affected by project construction or operation.

The team does not anticipate that other construction-related effects would disproportionately affect low-income or minority populations. Project construction would temporarily increase congestion and noise, and change access for the businesses and residents in the area. However, the block groups within the construction limit have lower percentages of minority and low-income populations than the block groups in the restriping limit.

The team does not anticipate effects on low-income or minority populations living in neighborhoods adjacent to the restriping limit from I-405 to SR 202, because improvements in this area would be limited to restriping of existing lanes and placing new signs.



7. References

King County Metro. 2006. *2006 Metro Rider / Non-Rider Survey Final Report*. Prepared by Northwest Research Group.

WSDOT. 2006. *SR 520 Bridge Replacement and HOV Project Draft Environmental Impact Statement (Draft EIS)*. FHWA-WA-EIS-06-02-D. Submitted by FHWA, WSDOT, and Sound Transit. August 18, 2006. Washington State Department of Transportation.

WSDOT. 2009a. *Ecosystems Discipline Report; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009b. *Indirect and Cumulative Effects Technical Memorandum; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009c. *Land Use, Economics, and Relocations Technical Memorandum; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009d. *Social Elements Technical Memorandum; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009e. *Noise Technical Memorandum; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009f. *Visual Quality and Aesthetics Technical Memorandum; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009g. *Agency Coordination and Public Involvement Discipline Report; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.

WSDOT. 2009h. *Cultural Resources Technical Memorandum; SR 520, Medina to SR 202: Eastside Transit and HOV Project*. November 2009.



Attachment 1

2000 U.S. Census Demographic Data for the Study Area



County	Census Tract	Block Group	Percent Minority	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Other	Two or More Races	Hispanic or Latino
King	226.06	4	23.1%	76.9%	1.6%	0.2%	14.7%	0.0%	0.3%	2.9%	3.37%
King	227.01	2	14.6%	85.4%	1.5%	0.1%	8.0%	0.2%	0.2%	3.1%	1.51%
King	227.02	2	13.8%	86.2%	2.8%	1.2%	4.3%	0.1%	0.3%	2.8%	2.50%
King	227.02	3	9.1%	90.9%	0.5%	0.3%	4.6%	0.0%	0.2%	1.9%	1.67%
King	228.01	1	35.5%	64.5%	3.0%	0.2%	22.0%	0.2%	0.0%	2.5%	7.62%
King	228.01	2	50.2%	49.8%	2.7%	0.4%	27.9%	0.2%	0.4%	5.2%	13.43%
King	228.01	3	15.0%	85.0%	1.5%	0.4%	7.5%	0.3%	0.6%	2.1%	2.63%
King	228.01	4	20.4%	79.6%	1.1%	0.3%	13.4%	0.0%	1.9%	3.5%	0.27%
King	228.02	1	30.3%	69.7%	2.3%	0.2%	20.5%	0.4%	0.1%	2.8%	3.88%
King	228.02	2	23.4%	76.6%	1.3%	0.6%	14.6%	0.1%	1.3%	2.4%	3.12%
King	228.02	3	21.3%	78.7%	1.5%	0.1%	16.2%	0.1%	0.1%	1.2%	2.15%
King	228.03	1	45.8%	54.2%	1.0%	1.0%	36.1%	0.0%	0.7%	2.9%	3.97%
King	228.03	2	34.7%	65.3%	1.2%	0.7%	24.3%	0.1%	0.5%	3.0%	4.93%
King	228.03	3	18.4%	81.6%	2.1%	0.5%	11.1%	0.3%	0.3%	1.4%	2.56%
King	229.01	2	25.8%	74.2%	1.8%	0.5%	17.8%	0.3%	0.0%	3.0%	2.38%
King	229.02	4	17.1%	82.9%	1.1%	0.5%	8.2%	0.2%	0.9%	3.2%	2.95%
King	230	3	28.4%	71.6%	1.7%	0.2%	16.4%	0.4%	0.2%	2.8%	6.67%
King	232.01	2	41.8%	58.2%	1.9%	0.4%	25.3%	0.3%	0.2%	3.0%	10.77%
King	236.01	1	27.8%	72.2%	2.1%	0.3%	12.2%	0.4%	0.0%	2.7%	10.13%
King	236.03	1	24.4%	75.6%	1.2%	0.3%	15.3%	0.2%	0.2%	3.0%	4.20%
King	237	1	21.0%	79.0%	2.6%	0.2%	13.2%	0.0%	0.8%	3.0%	1.23%
King	237	2	17.2%	82.8%	1.0%	0.4%	11.5%	0.1%	0.7%	1.2%	2.28%
King	237	3	18.6%	81.4%	3.1%	0.6%	9.2%	0.1%	0.1%	2.3%	3.28%
King	240	1	25.6%	74.4%	2.9%	0.2%	12.3%	0.4%	0.0%	2.7%	7.09%
King	240	2	14.7%	85.3%	0.4%	0.1%	10.6%	0.6%	0.1%	1.6%	1.26%
King	240	5	15.0%	85.0%	0.9%	0.0%	8.2%	0.0%	0.3%	4.2%	1.52%
King	241	1	7.4%	92.6%	0.6%	0.0%	3.2%	0.0%	0.3%	1.1%	2.07%
King	241	2	11.7%	88.3%	0.1%	0.0%	8.6%	0.0%	0.1%	1.8%	0.97%
King	241	3	6.9%	93.1%	0.5%	0.0%	4.0%	0.0%	0.7%	0.7%	0.88%
King	241	4	13.2%	86.8%	0.9%	0.4%	7.8%	0.0%	0.0%	1.7%	2.46%
King	241	5	9.3%	90.7%	0.8%	0.0%	5.2%	0.0%	0.0%	1.9%	1.50%



County	Census Tract	Block Group	Percent Minority	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Other	Two or More Races	Hispanic or Latino
King	242	2	10.4%	89.6%	0.4%	0.1%	6.9%	0.1%	0.0%	1.2%	1.68%
King	242	3	7.5%	92.5%	0.0%	0.7%	4.2%	0.1%	0.4%	1.4%	0.58%
King	242	4	8.2%	91.8%	0.3%	0.3%	4.1%	0.0%	0.0%	1.9%	1.66%
King	323.09	1	11.7%	88.3%	3.6%	0.0%	5.3%	0.6%	0.2%	0.9%	1.14%
King	323.09	2	21.1%	78.9%	2.3%	0.4%	11.3%	0.0%	0.3%	3.0%	3.82%
King	323.13	2	35.3%	64.7%	2.0%	0.9%	14.1%	0.7%	0.4%	3.3%	13.95%
King	323.13	3	23.3%	76.7%	0.7%	0.2%	4.1%	0.0%	0.4%	1.8%	16.19%
King	323.24	2	23.1%	76.9%	1.5%	0.6%	6.8%	0.0%	0.3%	4.3%	9.54%
King	323.25	2	26.0%	74.0%	1.8%	0.6%	12.1%	0.1%	0.3%	3.1%	7.96%



Attachment 2

2006-2007 National Center for Education Statistics Demographic Data for the Study Area

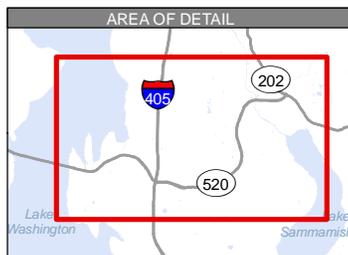
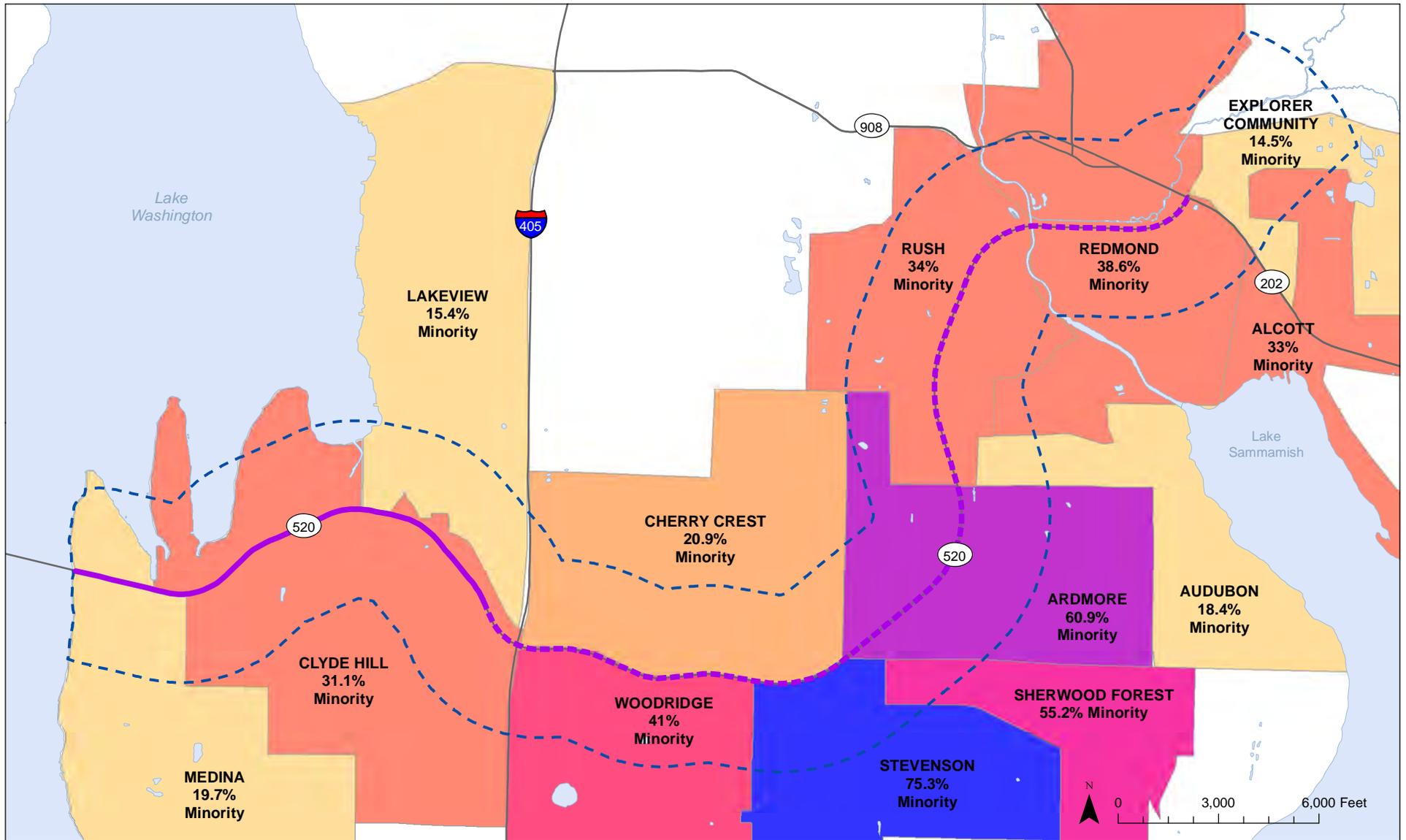


Student Race/Ethnicity

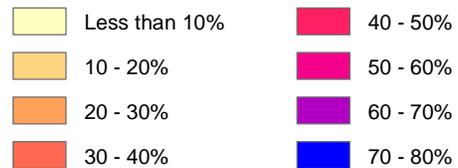
School	Total Students (Per School)	American Indian/Alaskan Native		Asian/Pacific Islander		Black, Non-Hispanic		Hispanic		TOTAL: White, Non-Hispanic		TOTAL: Minority	
		#	%	#	%	#	%	#	%	#	%	#	%
Alcott Elementary	612	3	0.5%	174	28.4%	4	0.7%	21	3.4%	410	67.0%	202	33.0%
Ardmore Elementary	261	0	0.0%	62	23.8%	16	6.1%	81	31.0%	102	39.1%	159	60.9%
Audubon Elementary	490	36	7.3%	13	2.7%	15	3.1%	26	5.3%	400	81.6%	90	18.4%
Cherry Crest Elementary	339	0	0.0%	61	18.0%	2	0.6%	8	2.4%	268	79.1%	71	20.9%
Clyde Hill Elementary	405	1	0.2%	106	26.2%	2	0.5%	17	4.2%	279	68.9%	126	31.1%
Community School	69	0	0.0%	9	13.0%	0	0.0%	1	1.4%	59	85.5%	10	14.5%
Lakeview Elementary	410	4	1.0%	31	7.6%	10	2.4%	18	4.4%	347	84.6%	63	15.4%
Medina Elementary	488	2	0.4%	86	17.6%	2	0.4%	6	1.2%	392	80.3%	96	19.7%
Redmond Elementary	363	3	0.8%	43	11.8%	23	6.3%	71	19.6%	223	61.4%	140	38.6%
Benjamin Rush Elementary	394	0	0.0%	99	25.1%	7	1.8%	28	7.1%	260	66.0%	134	34.0%
Sherwood Forest Elementary	337	1	0.3%	89	26.4%	14	4.2%	82	24.3%	151	44.8%	186	55.2%
Stevenson Elementary	531	1	0.2%	238	44.8%	39	7.3%	122	23.0%	131	24.7%	400	75.3%
Woodridge Elementary	383	3	0.8%	113	29.5%	12	3.1%	29	7.6%	226	59.0%	157	41.0%
TOTAL (all schools):	5082	54	1.1%	1124	22.1%	146	2.9%	510	10.0%	3248	63.9%	1834	36.1%

Source: National Center for Education Statistics, 2006-2007 School Year





Percent Minority Students



- Study Area
- Construction Extent
- Restriping Extent

Source: King County (2007) GIS Data (Waterbody), WSDOT (2004) GIS Data (State Route), City of Bellevue (1996) GIS Data (School District), Lake Washington School District (2009) GIS Data (School District), and US Census (2000) Demographic Data. Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 2-1. Percent Minority Students by School

Medina to SR 202: Eastside Transit and HOV Project

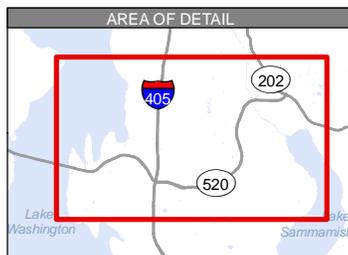
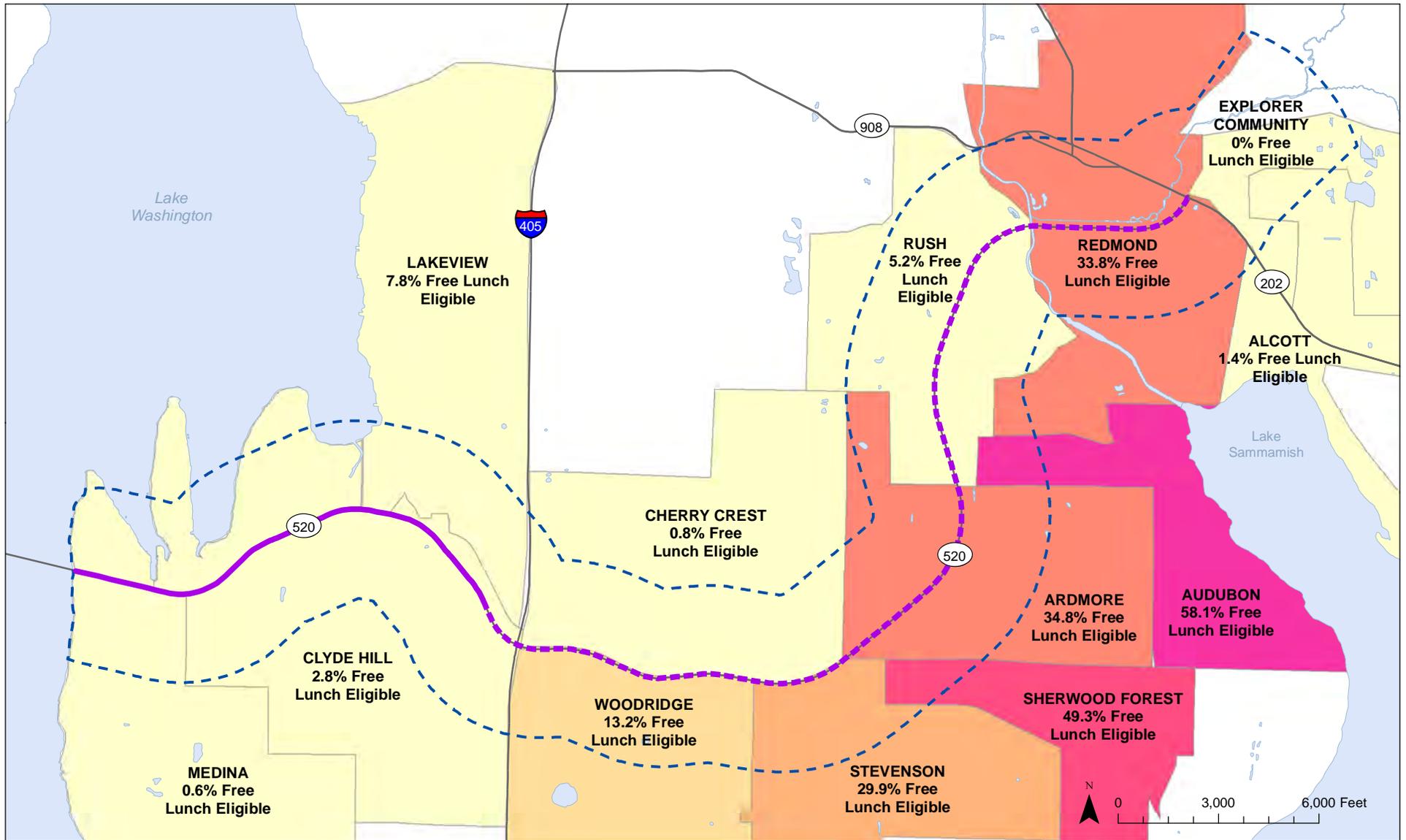
Free Lunch Eligible

School	District	Total Students (Per School)	Free Lunch Eligible	
			#	%
Alcott Elementary	Lake Washington School District	625	9	1.4%
Ardmore Elementary	Bellevue School District #405	282	98	34.8%
Audubon Elementary	Lake Washington School District	528	307	58.1%
Cherry Crest Elementary	Bellevue School District #405	377	3	0.8%
Clyde Hill Elementary	Bellevue School District #405	461	13	2.8%
Community School	Lake Washington School District	69	0	0.0%
Lakeview Elementary	Lake Washington School District	424	33	7.8%
Medina Elementary	Bellevue School District #405	545	3	0.6%
Redmond Elementary	Lake Washington School District	382	129	33.8%
Benjamin Rush Elementary	Lake Washington School District	402	21	5.2%
Sherwood Forest Elementary	Bellevue School District #405	359	177	49.3%
Stevenson Elementary	Bellevue School District #405	582	174	29.9%
Woodridge Elementary	Bellevue School District #405	431	57	13.2%
TOTAL (all schools):		5467	1024	18.7%

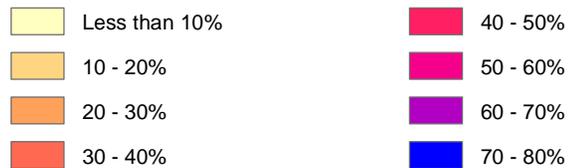
Limited-English Proficient (by District)

District	Total Students	LEP Students	
		#	%
Bellevue School District	16,722	1,735	10%
Lake Washington School District	23,799	1,109	5%
TOTAL:	40,521	2,844	7%





Percent Free Lunch Eligible Students

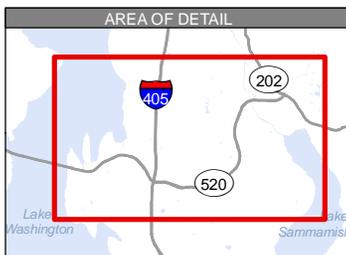
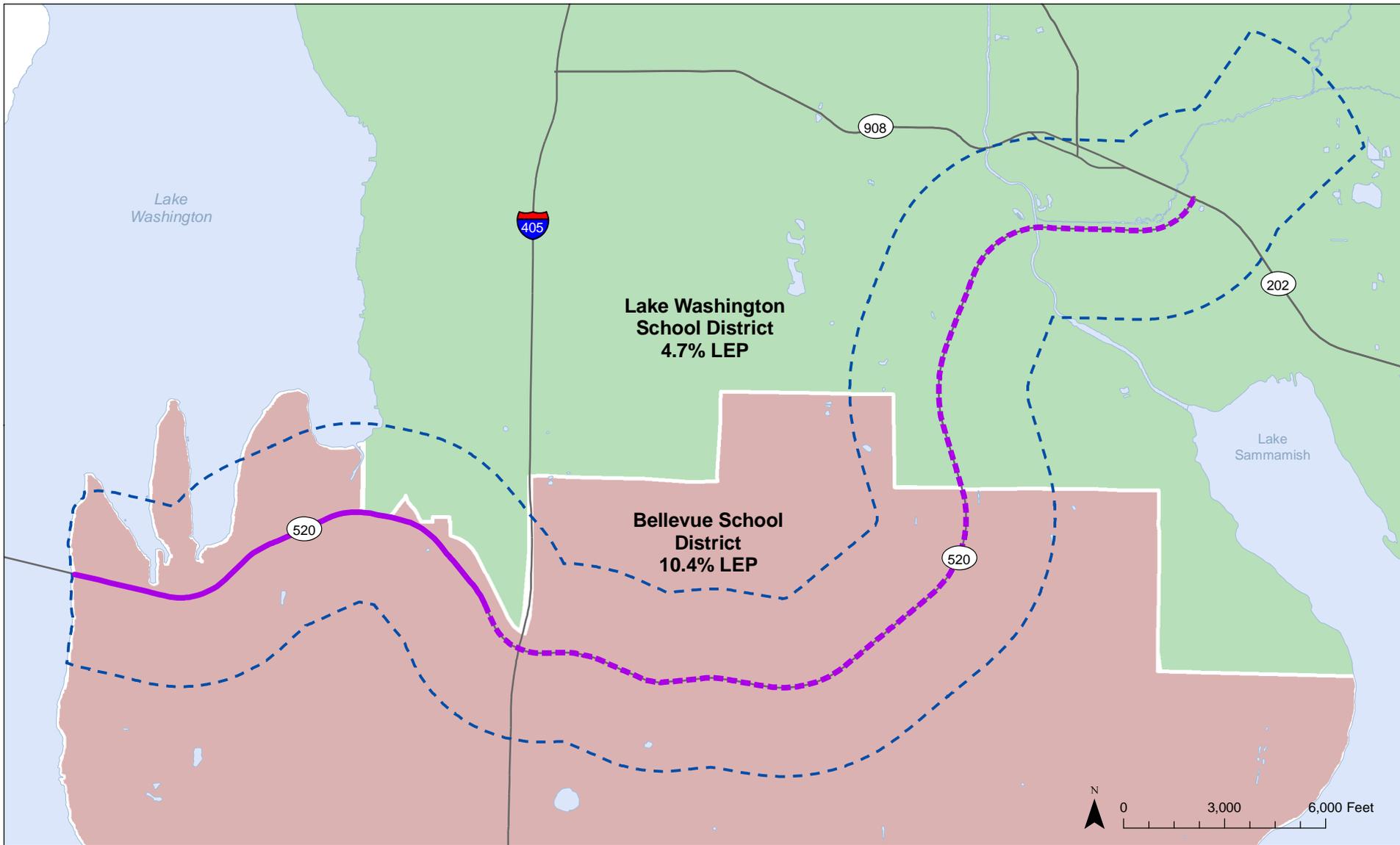


- Study Area
- Construction Extent
- Restriping Extent

Source: King County (2007) GIS Data (Waterbody), WSDOT (2004) GIS Data (State Route), City of Bellevue (1996) GIS Data (School District), Lake Washington School District (2009) GIS Data (School District), and US Census (2000) Demographic Data. Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 2-2. Percent Free Lunch Eligible Students by School

Medina to SR 202: Eastside Transit and HOV Project



- | | |
|------------------------|---------------------|
| School District | Study Area |
| Bellevue | Construction Extent |
| Lake Washington | Restriping Extent |

Source: King County (2007) GIS Data (Waterbody), WSDOT (2004) GIS Data (State Route), City of Bellevue (1996) GIS Data (School District), Lake Washington School District (2009) GIS Data (School District), and US Census (2000) Demographic Data. Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 2-3. Limited English Proficient Students by School District

Medina to SR 202: Eastside Transit and HOV Project

