

SR 519 INTERMODAL ACCESS PROJECT PHASE 2: SOUTH ATLANTIC CORRIDOR

Social and Economic Elements Technical Memorandum

Prepared for



Prepared by

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Acronyms and Abbreviations

	A
ADA	Americans with Disabilities Act
	E
EIS	environmental impact statement
	F
FAZ	forecast analysis zone
FIRES	finance, insurance, real estate, and services
	G
GIS	geographic information system
	M
MANU	manufacturing
	P
PSRC	Puget Sound Regional Council
	N
NEPA	National Environmental Policy Act
	P
PFD	Public Facilities District
PSA	Public Stadium Authority
	S
SEPA	State Environmental Policy Act
SODO	South of Downtown
	T
TMP	Traffic Management Plan
	W
WSDOT	Washington State Department of Transportation
WTCU	wholesale trade, transportation, communication, and utilities

Glossary of Technical Terms

Adverse effects – The totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which might include, but are not limited to bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community’s economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment impacts; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of U.S. Department of Transportation (USDOT) programs, policies, or activities. (USDOT Order 5610.2, Appendix 1(f))

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

Design year – The year for which a roadway facility is designed, taking into consideration projected volumes of traffic.

Displacement – Removal of a business, residence, or public facility from its existing location. In the context of transportation improvements, displacement is generally the

result of (1) property acquisition for right-of-way expansion or (2) elimination of access to a property due to traffic revisions.

Disproportionately high and adverse effect – An adverse effect that:

- (1) is predominately borne by a minority population and/or a low-income population, or
- (2) would be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the non-minority population and/or non-low-income population.

(USDOT Order 5610.2, Appendix 1(g))

Mitigation and project benefits in environmental justice analyses are addressed as follows:

In making determinations regarding disproportionately high and adverse impacts on minority and low-income populations, mitigation and enhancements measures that would be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas. (USDOT Order 5610.2, § 8(b))

Environmental justice – Environmental justice refers to the process of identifying and addressing, as appropriate, disproportionately high and adverse human health and/or environmental effects on minority and/or low-income populations.

Limited-English-proficient – A person who was not born in the United States or whose native language is a language other than English and comes from an environment where a language other than English is dominant; or who is a native resident of the outlying areas and comes from an environment where a language other than English has had a significant effect on such individual's level of English language proficiency and who has sufficient difficulty speaking, reading, writing, or

understanding the English language and whose difficulties may deny such individual the opportunity to meaningfully engage in the transportation decision-making process. (WSDOT 2007)

Low-income – A person whose median household income is at or below the Department of Health and Human Services poverty guidelines for that size of household (USDOT Order 5610.2, Appendix 1(b)).

Low-income population – Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed USDOT program, policy or activity (USDOT Order 5610.2, Appendix 1(d)).

Minority – A person who is:

- 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 the Spanish culture or origin, regardless of race)
- Asian (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 or Alaskan Native (a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition)

(USDOT Order 5610.2, Appendix 1(c))

Minority population – Any readily identifiable group of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed USDOT program, policy or activity (USDOT Order 5610.2, Appendix 1(e)).

Right-of-way – Land purchased prior to the construction of transportation improvements along with land for sound walls, retaining walls, stormwater facilities, and other project features. This land also includes permanent or temporary easements for construction and maintenance. Vacant land may also be set aside for future highway expansion under certain circumstances.

Sector – A grouping of specific industries with common characteristics.

Summary

What is the proposed project and why is it needed?

The Federal Highway Administration (FHWA) and Washington State Department of Transportation (WSDOT) propose to construct improvements to State Route (SR) 519 in Seattle as Phase 2 of the SR 519 Intermodal Access Project.

The project would include three components:

- A proposed new Interstate 90 (I-90) off-ramp to South Atlantic Street (I-90 off-ramp)
- A proposed new South Royal Brougham Way railroad overpass (BNSF Railway overpass)
- Roadway widening along the existing South Atlantic Street east of First Avenue South and improvements to the intersection of First Avenue South and South Atlantic Street

SR 519 is an important thoroughfare for cars, trucks, and pedestrians in Seattle's South of Downtown (SODO) district. In 2004, WSDOT opened Phase 1 of the SR 519 project, consisting of the South Atlantic Street overpass (Edgar Martinez Drive) and a new on-ramp from South Atlantic Street to I-5 and I-90. The Proposed Action (SR 519 Intermodal Access Project - Phase 2: South Atlantic Corridor) would complete the SR 519 project by providing a direct westbound connection from the I-5/I-90 freeway system to the Seattle waterfront and Port of Seattle. Currently, westbound traffic from the freeway exits at Fourth Avenue South and follows a circuitous route to South Atlantic Street to cross safely over the BNSF Railway tracks located just east of Safeco Field and Qwest Field. Vehicular and pedestrian traffic on South Royal

Brougham Way must use an at-grade railroad crossing. New roadway structures are needed to allow vehicles and pedestrians to reach their destinations safely, quickly, and directly.

The Proposed Action would connect the existing westbound off-ramp from I-5 and I-90 to the current South Atlantic Street overpass, and it would construct improvements at the intersection of First Avenue South and South Atlantic Street and widen South Atlantic Street to accommodate traffic along this new route. A grade-separated crossing over the railroad tracks at South Royal Brougham Way would also be built.

This project would increase traffic mobility and safety by improving connections between interstates 5 and 90 and Port of Seattle terminals, the Washington State Ferries terminal at Colman Dock, waterfront commercial interests, and the stadium area. The project would also allow people to walk more safely to and from the stadium area.

What is the affected environment?

The proposed SR 519 Intermodal Access Project - Phase 2 is located in the city of Seattle in King County, Washington, in the SODO neighborhood. The project team used two separate study areas for the social and economic analysis, one for social effects and one for economic effects, because of the format in which the required data for the two elements are available and the area where potential effects are most likely to occur. For the social elements, the project team used a quarter-mile radius around the project limits to determine the study area's demographic characteristics (using Census Tract Block Groups), and to describe existing social elements (social resources, recreation resources, and pedestrian, bicycle, and transit facilities). The social effects analysis also identified environmental justice populations within the social study area.

For the economic elements (population, housing, and employment), the project team used Puget Sound Regional Council (PSRC) Forecast Analysis Zones (FAZs) 5825 and

5826 as the study area. The FAZ boundaries are shown on a map in Chapter 3.

How were the effects of the project on social and economic elements analyzed?

This report analyzes the potential effects of the Proposed Action and No Build Alternative on community cohesion; regional and community growth; social resources; recreation resources; pedestrian, bicyclist, and transit facilities; environmental justice; and economics. Methods used for this analysis included a site visit; review of planning documents; review and analysis of data from various agencies including the U.S. Census Bureau, the Office of Financial Management, and the Puget Sound Regional Council; and review and analysis of the other discipline reports and technical memorandums prepared for this project.

What social and economic effects would occur during construction of the project, and what mitigation is proposed?

Effects during construction are considered short term in duration when compared to the operational life span of the project. The Proposed Action would be built in phases over the course of 3 years (2009 to 2012), and construction-related effects would end when construction was complete. Because there are relatively few residents, social resources, or recreational resources in the study area, the overall effect of construction on these elements would be minimal to non-existent. Individual people could be inconvenienced in ways, and at levels, that cannot be predicted, but the general effect of the proposed 3-year construction program on local residents and social resources would be similar to those commonly experienced during other urban street improvement projects, including construction of the SR 519 Phase 1 improvements.

Effects during construction would include the following:

- Construction activities would increase noise levels and engine exhaust emissions in the surrounding areas.

- Construction activities may result in vehicle drivers, pedestrians, and bicyclists experiencing greater difficulty traveling through the study area since South Royal Brougham Way would be closed during certain periods to allow for the construction of the new overpass.
- Construction effects would affect all populations equally. Construction would not require the displacement of any residences or businesses that provide unique services to minority and/or low-income populations, are owned by minorities, or employ large numbers of minorities.
- Construction would require property acquisitions; however, the size of acquisitions is relatively small when compared to the overall size of the parcels and none of the acquisitions would result in any displacements or relocations of residents, businesses, or employees.
- Congestion and construction-related activities could affect sales at businesses in the study area. However, because most of the businesses in the study area do not rely on impulse purchases, the effects are not expected to be substantial.
- Congestion could increase travel times for freight into and out of the study area.
- A potential benefit during construction is the increase in employment and spending related to construction activities.

Measures to mitigate effects on social and economic elements could include:

- Continue to use the project website and fact sheets or newsletters to communicate with and provide information about the project to residents and businesses, allowing them to identify and address any concerns regarding the Proposed Action. Fact sheets or newsletters would be sent out in the appropriate languages.
- Require construction contractors to keep equipment in good mechanical condition and to equip engines with mufflers to minimize exhaust emissions and noise.

- Work with affected business owners to maintain access during construction.
- If alternative routes are required for pedestrians and bicyclists and/or temporary transit stops, then clearly identify and mark them.
- If there are any alternative routes and/or temporary transit stops, ensure they are clearly identified and accessible for users with disabilities.
- If traffic revisions are needed, post signs to alert travelers of the changes.
- Compensate property owners for the fair market value of property acquired for public right-of-way in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

What social and economic effects would occur during operation of the project, and what mitigation is proposed?

Operational effects on the social and economic elements of the environment would occur after construction has been completed. The analysis of effects during operation concluded the following:

- The Proposed Action would not result in any changes to social patterns or negatively affect community life. Although the area is sparsely populated, the Proposed Action would enhance community cohesion by improving the ability of the neighborhood residents to interact with people in other neighborhoods.
- The addition of a new pedestrian crossing over the BNSF Railway would allow vehicles, bicyclists, and pedestrians to travel through the area more safely and improve connectivity.
- The Proposed Action would not result in any disproportionately high and adverse effects on minority and/or low-income populations; therefore, this project has

met the provisions of Executive Order 12898 as it is supported by Title VI of the Civil Rights Act.

- The Proposed Action would result in improved freight mobility, which could reduce operating costs for commercial haulers as travel times in the study area are reduced.
- The Proposed Action would not negatively affect any businesses in the study area or reduce property tax revenues.

The project would result in primarily beneficial effects on the social elements; therefore, no additional mitigation measures are recommended for those elements during operation. For the economic elements, mitigation to avoid adverse access effects could include working with business owners to reconfigure or provide alternate access, if required.

What cumulative effects would there be on social and economic elements?

The Proposed Action would not result in any cumulative effects on the social and economic elements.

Are any of the identified effects considered substantial?

A substantial effect on social and economic elements would occur under the following scenarios:

- The project resulted in a negative change in population characteristics, or a negative effect on the cohesive nature of the community, such as bisecting or removing portions of neighborhoods.
- The project resulted in the loss of community services and/or recreation resources or removal of access to these resources.
- The project resulted in disproportionately high and adverse effects on minority and/or low-income populations.

- The project resulted in the displacement of a large number of businesses and employees similar to an economic downturn.
- The project resulted in a sizeable reduction in property tax revenues that would impair the City's ability to provide services.

Negative effects would either be minor or non-existent; the Proposed Action would result in primarily beneficial effects. Therefore the Proposed Action would not result in any substantial effects.

What effects on social and economic elements would occur if the Proposed Action is not built?

Under the No Build Alternative, there would be increasing negative effects on pedestrians and bicyclists due to the at-grade crossing of the BNSF Railway tracks at South Royal Brougham Way. Without the new overpass, these users would still have to wait for rail traffic to cross South Royal Brougham Way and there would be no improved connectivity with the surrounding area and transit options. Since there are few households and social resources in close proximity to the project limits, the No Build Alternative would not result in any other negative effects on social elements.

The extent to which congestion could adversely affect overall economic growth is uncertain. There is a point at which congestion can influence companies and workers to locate elsewhere. Several major employers in the region have recently indicated that current congestion levels are becoming a major negative factor when weighing where to establish new facilities to meet projected business growth. However, it is unlikely that overall levels of employment and income in the region would change substantially based on the level of congestion on the regional road network.

Chapter 1 Introduction

1 Why are social and economic elements considered in this report?

The National Environmental Policy Act (NEPA) requires that environmental considerations, including the social and economic effects of the project, are given due weight in the decision-making process. Additionally, under the State Environmental Policy Act (SEPA), it is assumed that “the general welfare, social, economic, and other requirements and essential considerations of state policy will be taken into account in weighing and balancing alternatives and in making final decisions” (WSDOT, 2007a).

As part of the social analysis, the laws and regulations that apply to minority, low-income, limited-English-proficient, disabled, and elderly populations are taken into consideration. These laws and regulations include: Title VI of the Civil Rights Act of 1964, Executive Order 12898 Environmental Justice, Executive Order 13166 Limited English Proficiency, the Americans with Disabilities Act (ADA), and the Age Discrimination Act of 1975.

This technical memorandum provides the information, as identified in Chapter 458 of the WSDOT *Environmental Procedures Manual* (WSDOT, 2007a) to analyze the social and economic effects. Key topics identified include:

- Community cohesion
- Regional and community growth
- Social resources
- Recreational resources and opportunities

What is Title VI?

Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, national origin, and gender in the provision of benefits and services resulting from federally assisted programs and activities.

- Pedestrian, bicycle, and transit facilities
- Effects, both positive and negative, on minority and low-income populations
- Economics effects on the local and regional economy (including potential property tax revenues) and effects on businesses during construction and operation

Public services and utilities effects are described in the *SR 519 Intermodal Access Project - Phase 2 Public Services and Utilities Technical Memorandum*.

2 What are the key points of this report?

The SR 519 Intermodal Access Project - Phase 2 would improve freight mobility and pedestrian and vehicular safety within the study area and results in beneficial effects on the social and economic elements. Beneficial project effects of the Proposed Action would include:

- Providing a new grade-separated crossing over the BNSF Railway for vehicles, pedestrians, and bicyclists, thereby eliminating conflicts and improving safety. The crossing would be ADA-accessible for pedestrians from the street level on South Royal Brougham Way, and it would provide bicycle-only lanes on the overpass.
- Improving overall circulation and freight mobility by creating a more direct westbound connection between interstates 5 and 90, the Port of Seattle terminals, and the central waterfront.

In addition, the Proposed Action would not:

- Bisect any established neighborhoods, would not result in any relocations, and would not negatively affect any social resources or transit operations.
- Result in any disproportionately high and adverse effects on minority or low-income populations.
- Produce adverse effects on the local or regional economy.

3 How has the community been involved in the project and what are their major issues?

WSDOT developed a communications plan to provide information and encourage comments about the Proposed Action. The communications plan was developed to ensure that all the target audiences are identified and their concerns and comments could be heard. The targeted audiences include elected officials, project signatories, local interest groups and agencies, employees, and the residents.

A number of methods are being used to reach the targeted audiences and provide information on the Proposed Action, including specific group meetings (i.e., freight groups, labor groups), public meetings, a project website, postcards, newsletters, and newspapers and other forms of media.

WSDOT held a public scoping meeting on June 6, 2007, and invited agencies and the public to the meeting to ask questions and express any concerns. Comments heard from the meeting generally expressed support for the Proposed Action. WSDOT will conduct a public hearing for the Environmental Assessment early in 2008 as part of the NEPA/SEPA-mandated review process to provide further opportunity for the public and governmental agencies to comment on the Proposed Action.

WSDOT conducted a Truck Turning Demonstration (Truck Road-eo) on July 18, 2007. The demonstration modeled how the Proposed Action would accommodate the movement of trucks when a portion of South Atlantic Street is closed to traffic and a left turn is required onto South Atlantic Street from the proposed new off-ramp. This movement would occur primarily during Seattle Mariner baseball games.

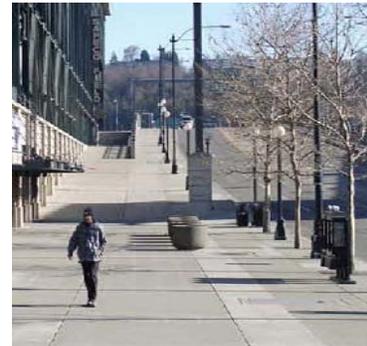
4 What specific public involvement activities have been targeted to reach minority, low-income, and limited-English-proficient populations?

In order to reach minority, low-income, and limited-English-proficient populations, WSDOT has reached out to a variety of local interest groups and agencies that provide services to the

minority and low-income populations, including St. Martin de Porres Shelter, which has a facility in the study area. Outreach included a visit to inform them about the project and identify any potential concerns about the construction and operation of the Proposed Action. WSDOT will inform and engage limited-English-proficient populations by translating materials into other languages commonly used by residents of the social study area, including Spanish, Chinese, Tagalog, and Vietnamese.

Chapter 2 Description of Alternatives

SR 519 is an important thoroughfare for cars, trucks, and pedestrians in Seattle's South Downtown (SODO) district (Exhibit 2-1). In 2004, WSDOT opened Phase 1 of the SR 519 project, consisting of the South Atlantic Street railroad overpass (Edgar Martinez Drive South) and a new eastbound on-ramp from South Atlantic Street to I-5 and I-90. The overpass separates road and railway traffic at Third and Fourth Avenues South and improves access to the freeway system from important waterfront facilities such as the Port of Seattle terminals, railroad freight yards, and the Washington State Ferries terminal at Colman Dock.

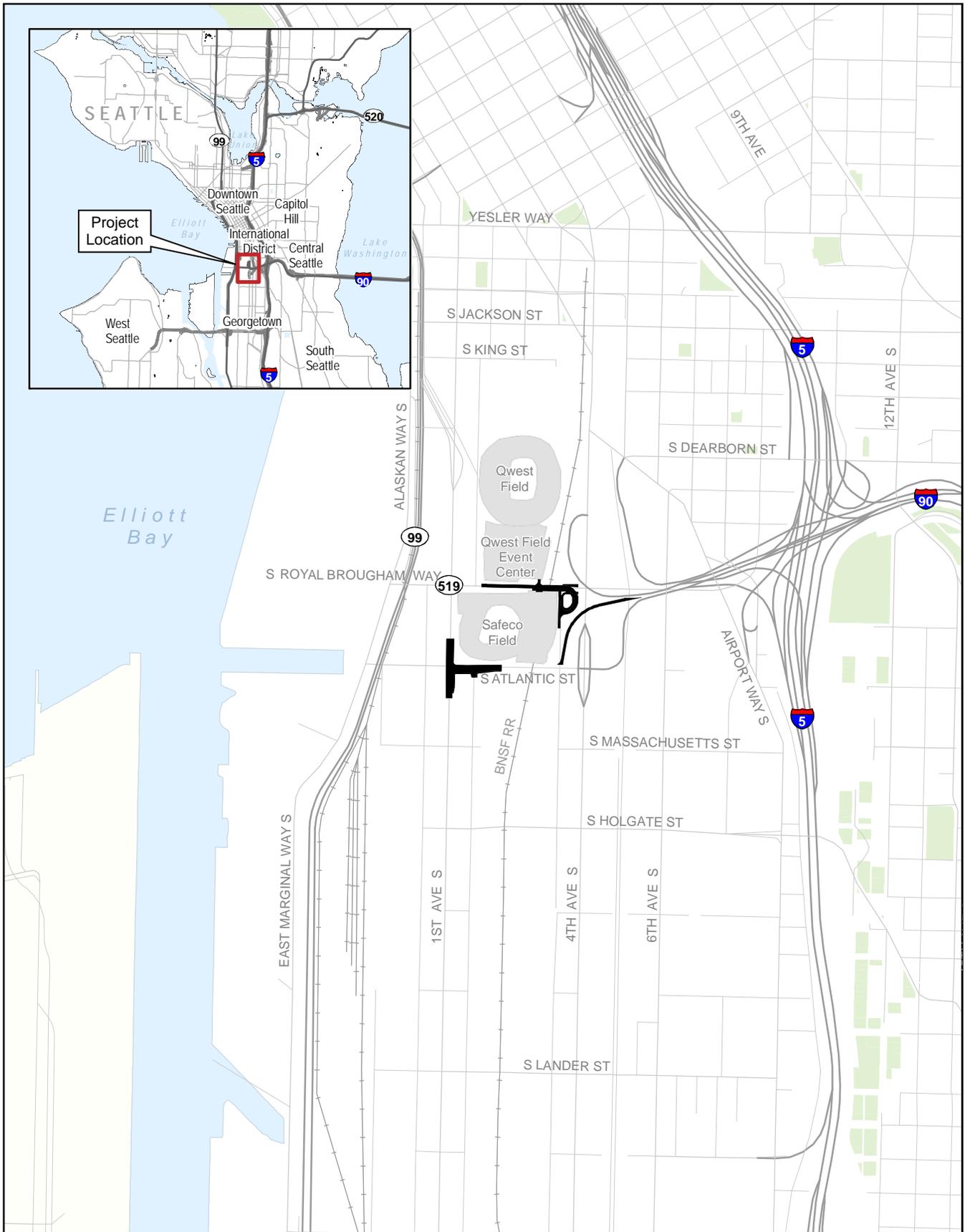


New South Atlantic Street overpass built in SR 519 Phase 1

The Phase 1 project had four main components which:

- Provided the eastbound connection from the waterfront to I-5 and I-90 via South Atlantic Street
- Removed the old eastbound I-90 ramp on Fourth Avenue South
- Made improvements to South Atlantic Street between First Avenue South and the Alaskan Way South/East Marginal Way intersection
- Constructed the South Weller Street Pedestrian Bridge

When Phase 1 opened, eastbound freight, ferry, and event traffic immediately moved more freely, because connections from the Port of Seattle, waterfront, and stadium area to the freeway system were improved.



Source: City of Seattle (2007) and King County (2006)

- Stadiums
- Project



**Exhibit 2-1
Vicinity Map**

1 Why is the Phase 2 project needed?

SR 519 provides a vital roadway system for east-west traffic through Seattle, but it currently does not assist in the efficient westbound movement of cars, trucks, trains, and pedestrians through Seattle's SODO district. The route passes through an area that has changed so much in recent years that the roadway arrangement is not well suited to present conditions. A new design and new roadway structures are needed to allow vehicles and pedestrians to reach their destinations safely, quickly, and more directly.

This project would help to resolve several issues:

- Safety concerns from traffic and people crossing surface-level railroad tracks in the stadium area
- The expected increase in rail traffic and pedestrian crossings at South Royal Brougham Way when Sound Transit Central Link light rail service begins in 2009, resulting in safety concerns and travel delays
- Poor westbound access between I-5/I-90 and the Seattle waterfront, especially the Port of Seattle terminals and the Washington State Ferries terminal at Colman Dock
- Delays in moving products between Port of Seattle terminals and local, regional, and national markets

2 What is the purpose of the project?

This project would improve traffic mobility and safety by improving westbound connections between I-5/I-90 and the Port of Seattle terminals, the Washington State Ferries terminal at Colman Dock, waterfront commercial interests, and the stadium area. The project would allow people to walk more safely to and from the stadium area.

The purpose of the project is to:

- Provide a more direct route between I-5/I-90 and the Seattle waterfront, so that westbound freight, commuters, and local traffic can move more safely and efficiently through the stadium area

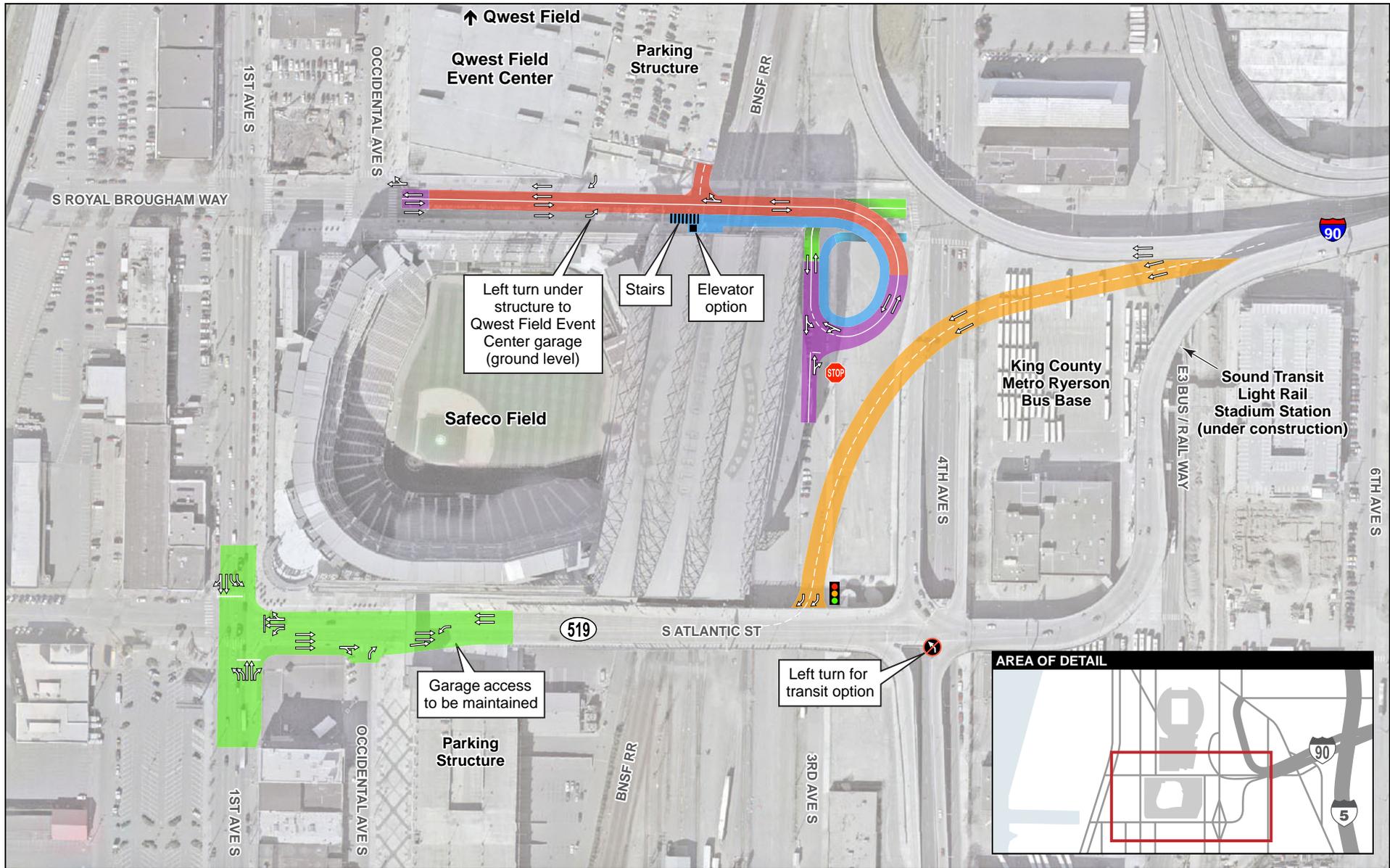
- Improve safety and reduce railroad and vehicle delays at the surface-level rail crossing on South Royal Brougham Way west of Fourth Avenue South
- Improve safety for people walking to events, work, and neighborhood destinations
- Reduce truck and rail traffic conflicts so that freight operators can move products more efficiently between Port of Seattle terminals and markets

3 What are the project alternatives?

Two alternatives were analyzed for this report: the Proposed Action and the No Build Alternative. The Proposed Action, which has been designed to meet current and projected future traffic conditions, was developed following the completion of an earlier NEPA Environmental Assessment and associated Finding of No Significant Impact (FONSI) (USDOT et al., 1997) and builds on the more recent screening and evaluation of 21 preliminary Phase 2 options by WSDOT in a feasibility study (KPFf et al., 2006).

Proposed Action

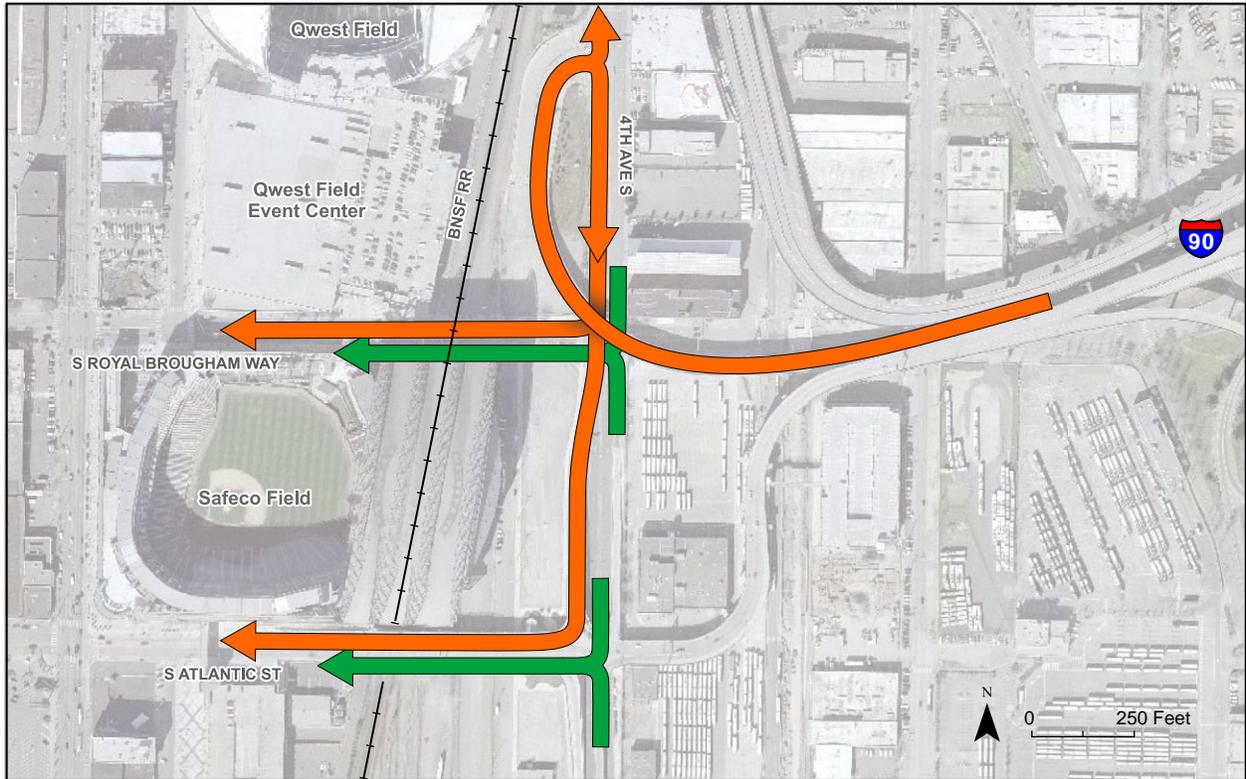
The Proposed Action (SR 519 Intermodal Access Project Phase 2: Atlantic Corridor) would connect the existing westbound off-ramp from I-5 and I-90 to the existing South Atlantic Street overpass. It would also provide improvements at the intersection of First Avenue South and South Atlantic Street to accommodate traffic more efficiently along the route. In addition, it would build a grade-separated crossing over the railroad tracks at South Royal Brougham Way. These proposed improvements are described in more detail below and are illustrated on Exhibit 2-2. Traffic flow with the proposed improvements in place is shown in Exhibit 2-3. All proposed improvements would comply with the Americans with Disabilities Act of 1990 (ADA).



- █ Arterial Bridge
- █ Elevated Ramp
- █ Pedestrian Bridge
- █ Surface Improvements
- █ Fill Embankment

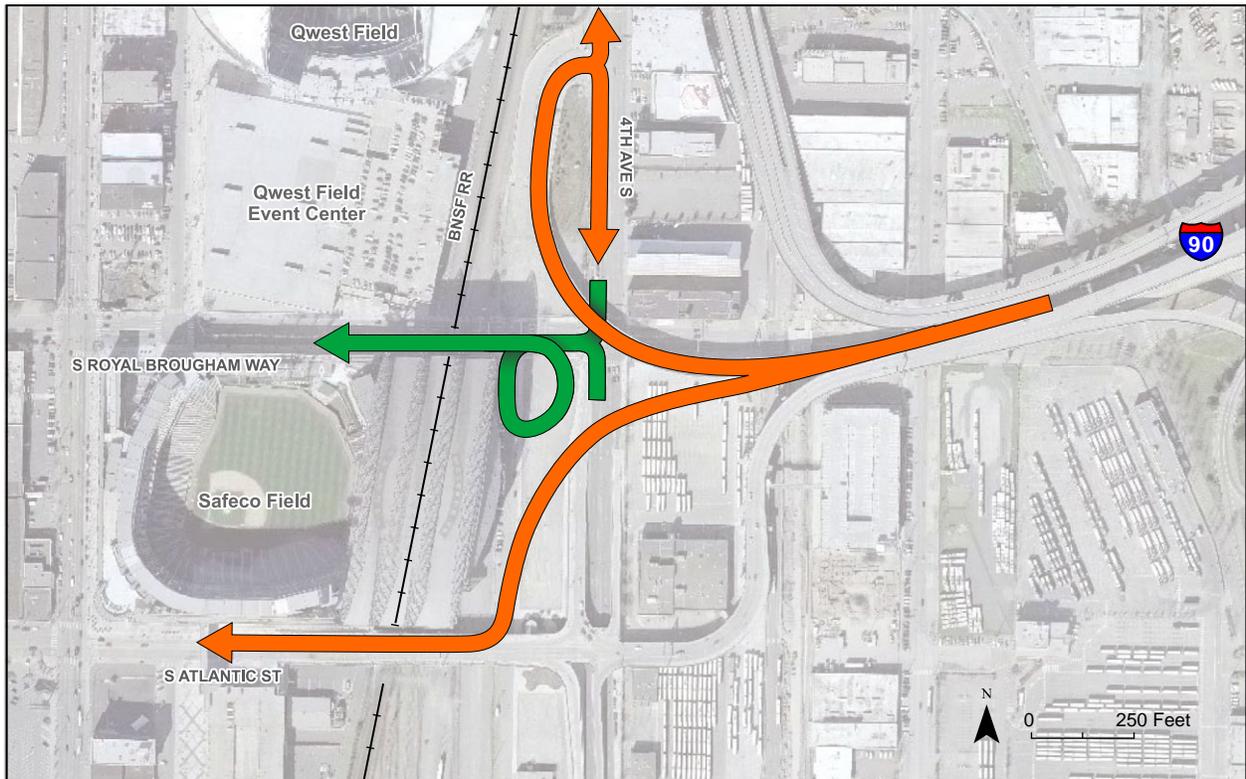


Exhibit 2-2
Project Elements



- Existing Westbound Regional Routes
- Existing Westbound Local Routes

Existing Westbound Travel Routes



- Proposed Westbound Regional Routes
- Proposed Westbound Local Routes

Proposed Westbound Travel Routes

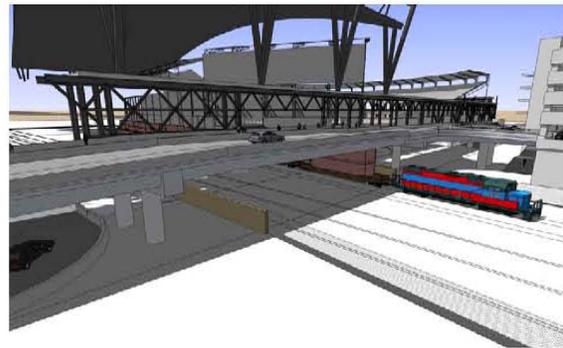
Exhibit 2-3
**Existing and Proposed
 Westbound Travel Routes**

I-90 Off-Ramp to South Atlantic Street. A new two-lane elevated ramp connection would be built from westbound I-90 to terminate at a signalized T-intersection on the South Atlantic Street railroad overpass. The new South Atlantic Street connection would serve westbound freeway traffic exiting I-90 and I-5. The new ramp would be entirely elevated, passing over Fourth Avenue South and Third Avenue South and connecting to the South Atlantic Street overpass southeast of Safeco Field. Exiting northbound I-5 traffic would be routed to South Atlantic Street, while exiting southbound I-5 traffic would have the option of using either the new off-ramp to South Atlantic Street or the existing I-90 off-ramp to Fourth Avenue South.

South Royal Brougham Way Railroad Overpass. The South Royal Brougham Way at-grade railroad crossing would be closed, but it could possibly be opened to public services in the event of a major emergency in the vicinity. A new two-lane elevated structure would be built, connecting Occidental Avenue South to Third Avenue South. The new overpass would transport vehicular, pedestrian, and bicycle traffic over the railroad tracks and provide a new connection and entrance from South Royal Brougham Way to the second level of the Qwest Field Event Center parking garage. The new ramp would accommodate local two-way traffic and provide ADA-compliant access.



Proposed ramp at east end of South Royal Brougham Way railroad overpass



South Royal Brougham Way existing at-grade railroad crossing (left) and proposed overpass (right)

Improvements to the Intersection of First Avenue South and South Atlantic Street. The project would widen the intersection by adding additional turn lanes to each approach.

Existing parking lanes along First Avenue South would be converted into travel lanes, with a new eastbound lane added to South Atlantic Street. Sidewalks along the southern edge of South Atlantic Street east of First Avenue South would be relocated to the south to accommodate the added eastbound lane.

Construction Components

Construction of the SR 519 Phase 2 project could take about 3 years, and WSDOT is exploring ways to accelerate this schedule. Construction would involve three project components:

- Improvements to the intersection of First Avenue South and South Atlantic Street could begin first, with construction starting in 2009 and lasting 6 to 9 months.
- Construction of the new I-90 ramp connection to the South Atlantic Street overpass could last 15 to 18 months and could begin as improvements to the intersection of First Avenue South and South Atlantic Street are underway.
- Construction of the new South Royal Brougham Way railroad overpass, most likely beginning in 2010, could overlap with construction of the new I-90 off-ramp and last 18 to 21 months.



Proposed Construction Schedule

Access for emergency service vehicles would be maintained at all times. A construction management plan (CMP) would be developed to optimize the sequencing of the SR 519 Phase 2 project elements. The CMP would identify approaches that best coordinate with and minimize unwanted effects on the following:

- Stadiums and Event Center activities
- Port of Seattle container operations
- Washington State Ferries
- BNSF Railway mainline and yard operations, AMTRAK mainline operations, and Sound Transit commuter rail operations
- Sound Transit Link light rail operations, Sounder commuter rail service, and Regional Express bus operations
- King County Metro Ryerson Bus Base operations and Metro bus service throughout the affected area, including through-routes operating within the area, and access to the bases and downtown Seattle transit tunnel
- Greater Duwamish Manufacturing and Industrial Center freight operations

Temporary construction staging areas would be required to store equipment and materials during construction. A gravel lot owned by WSDOT, bounded by South Atlantic Street and South Royal Brougham Way, and Third Avenue South and Fourth Avenue South, would serve as the primary construction staging area for the SR 519 Phase 2 project. This lot is vacant, and no adverse environmental effects are expected from staging at this location. Other temporary staging areas would be determined through consultation with King County and the City of Seattle during project design.

No Build Alternative

Under the No Build Alternative, the three proposed Phase 2 components discussed above would not be built. Westbound traffic exiting from I-5 and I-90 would continue to flow as shown in Exhibit 2-3.

4 What permits would be required to build the project?

The SR 519 Phase 2 project would be built under close regulatory scrutiny. WSDOT would apply to the State of Washington, King County, and the City of Seattle for a number of permits and approvals. They would most likely include, but not necessarily be limited to:

- National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit (Washington State Department of Ecology)
- Wastewater Discharge Approval (King County)
- Street Use Permit (City of Seattle)
- Side Sewer Permit (City of Seattle)
- Noise Variance (City of Seattle)

WSDOT will confirm the requirement for these and other permits as engineering design and construction planning proceed in coordination with the permitting authorities.

Chapter 3 Affected Environment

This section discusses the existing conditions of the social and economic study areas. Social elements include community cohesion; population characteristics (including limited-English-proficient populations); regional and community growth; community resources; recreational resources; pedestrian, bicyclist, and transit resources; and environmental justice populations (minority and low-income populations). Economic elements include population trends, housing, employment, and tax base.

1 What are the study areas for social and economic elements and how were they selected?

The project team used two separate study areas for the social and economic analysis, one for social effects and one for economic effects (Exhibits 3-1 and 3-2, respectively).

For the social elements, the project team used a quarter-mile radius around the project limits to determine the study area's demographic characteristics, including limited-English-proficient populations, and to identify the social elements, community resources, recreation resources, and pedestrian, bicycle, and transit resources, as illustrated in Exhibit 3-1. This area was selected because the majority of the construction and operation effects would most likely occur within this radius. To characterize population characteristics relevant to environmental justice, the project team identified Census Tract Block Groups within the quarter-mile radius. Census data for these Block Groups were collected for minority and low-income populations.

What is a Census Tract Block Group?

A subdivision of a Census Tract, a Block Group consists of all the blocks within a Census Tract with the same beginning number. In urban areas, a Block Group typically encompasses two to four city blocks.

For the economic elements, the project team used PSRC forecast analysis zones (FAZs), which are an aggregation of several census tracts (e.g., population and employment forecasts). The particular FAZs selected capture the elements that would most likely be affected by the Proposed Action.

The economic study area (Exhibit 3-2) is comprised of FAZs 5825 and 5826. The Proposed Action is physically located in FAZ 5825. FAZ 5826 was included in the economic analysis to incorporate data for Harbor Island, which is part of the SODO Business District (SODO Business Association, 2006).

2 What are the physical characteristics of the project neighborhood?

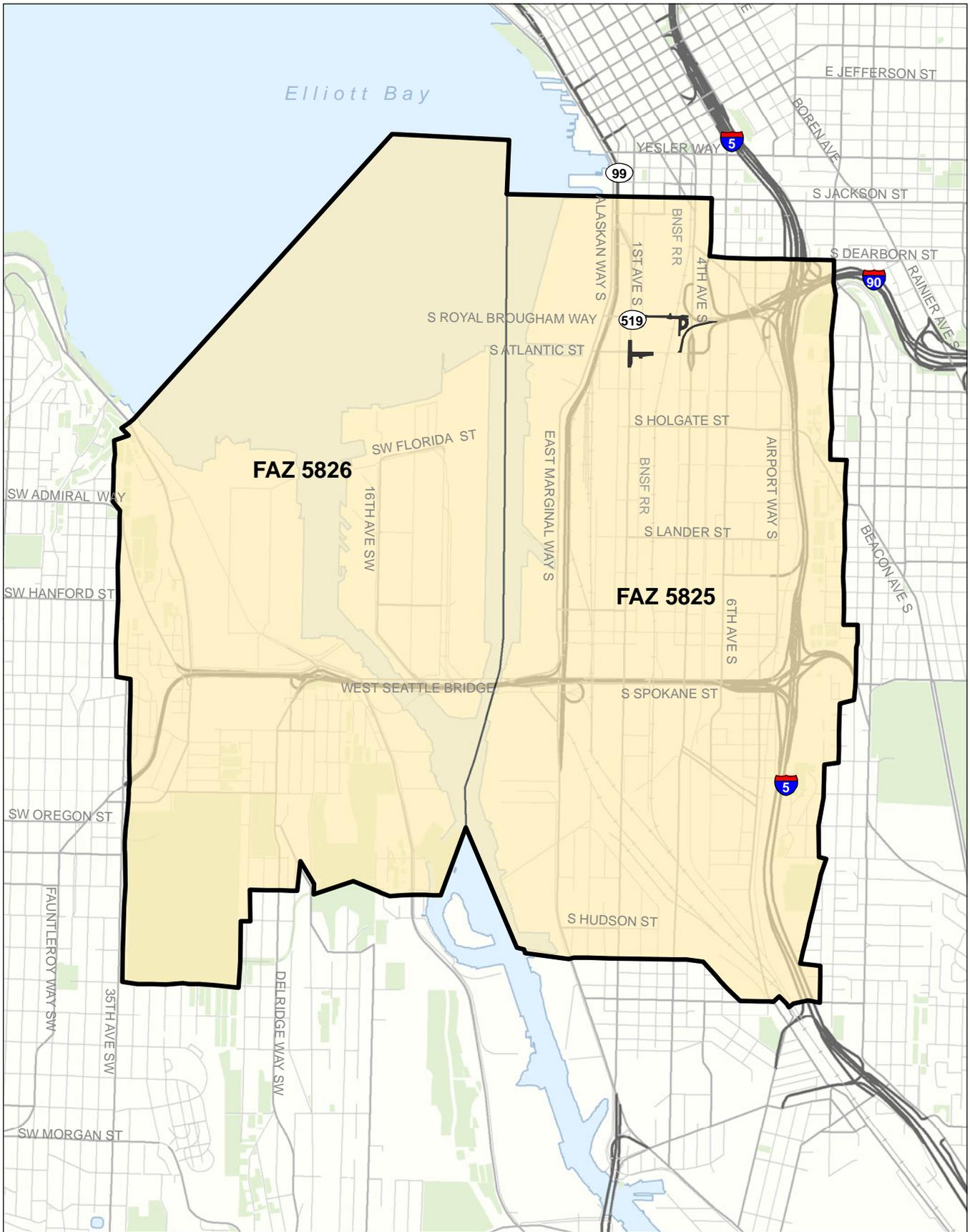
The project neighborhood has historically been associated with industrial land uses, but it has increasingly included commercial uses since the construction of the Kingdome in 1976. Known as the South of the Dome neighborhood until the demolition of the Kingdome, the acronym for the project neighborhood (SODO) is the same, but now stands for South of Downtown. Approximate neighborhood boundaries are South Royal Brougham Way to the north, South Spokane Street to the south, Elliott Bay to the west, and I-5 to the east.

SODO is not a typical Seattle neighborhood; instead, it is predominantly a mixture of industrial and commercial land uses with a large number of employees and relatively few residential units. The neighborhood association is comprised of the businesses in the area rather than the residents. SODO is part of the Greater Duwamish Manufacturing and Industrial Center (refer to the *SR 519 Intermodal Access Project - Phase 2 Land Use Discipline Report* for additional information). Safeco Field, Qwest Field, Qwest Field Event Center, Port of Seattle Terminal 46, and King County Metro Transit's bus maintenance facilities are located within SODO (Exhibit 3-1) and comprise a large portion of the study area. Safeco Field, Qwest Field, and Qwest Field Event Center are regional destinations for sporting events and exhibitions, including Seattle Mariners baseball games, Seattle Seahawks football games, and boat shows, home shows, and concerts.



Source: City of Seattle (2007) and King County (2006)

Exhibit 3-1
Social Elements



Source: Puget Sound Regional Council (2006) and City of Seattle (2007)

- PSRC Forecast Analysis Zone (FAZ)
- Economic Study Area
- Project
- Park

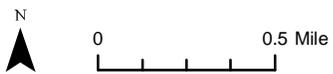


Exhibit 3-2
Economic Study Area

The linkages are not typical, either; instead of linkages to social resources (churches, schools, etc.), the linkages are major transportation routes (interstates 5 and 90, state routes 519 and 99, and the BNSF Railway) which provide access to the Port of Seattle terminals, Washington State Ferries, the central waterfront, and businesses located in SODO. While these linkages allow for the movement of freight and people into and out of the area, they also act as barriers to interaction for people who reside in or travel to the area and result in the neighborhood having relatively low community cohesion.

In addition to SODO, there are small portions of two other neighborhoods located in the study area. Pioneer Square to the north, with historical ties to Seattle's earliest days, and the International District to the northeast, which is the original home of Seattle's Chinese residents and is now the heart of the Asian community, offering unique retail stores, restaurants, and groceries. While these neighborhoods are located in the study area, there are barriers which limit their interaction with the SODO neighborhood, including the north parking lot for Qwest Field and Qwest Field Event Center, the BNSF Railway tracks, and I-90, Fourth Avenue South, and Airport Way South.

3 What are the population characteristics of the social study area and how is it projected to grow?

To identify population characteristics in the social study area, the project team used two Census Block Groups (Census Tract 93, Block Groups 1 and 2) and compared them to the larger geographic areas of Seattle and King County (Exhibit 3-3).

Together, the two Census Block Groups are approximately 857 acres and have a population density of 1.86 residents per acre, considerably lower than Seattle's average density of 6.18 residents per acre. This is likely due to current land use patterns and the City of Seattle zoning code, which does not permit many residential units in the study area because of its industrial character.

EXHIBIT 3-3. POPULATION CHARACTERISTICS			
	Study Area	Seattle	King County
Population ^a	1,590	563,374	1,737,034
Median Age	43.6	35.4	35.7
People over 65 Years of Age	137 (8.6%)	67,807 (12.0%)	181,772 (10.5%)
Owner-Occupied Housing	37.5%	48.4%	59.8%
Renter-Occupied Housing	62.5%	51.6%	40.2%
Median Household Income	\$53,854	\$45,736	\$53,157
Households at or below Poverty Level	69 (13.9%)	27,693 (10.7%)	55,739 (7.8%)
Individuals at or below Poverty Level	567 (37.2%)	64,068 (11.8%)	142,564 (8.4%)
Average Household Size	1.67	2.08	2.39
Households with No Vehicle	99 (18%)	42,180 (16.3%)	66,244 (9.3%)
Persons with Disability (population 5 years and over)	505 (34.2%)	90,999 (16.2%)	462,393 (26.6%)
Limited-English-Proficient Populations	38 (2.2%)	108,433 (20.2%)	299,620 (18.4%)
Source: U.S. Census Bureau, 2000.			
^a Population data do not include the transient population that resides in the study area.			

When compared with larger geographic areas, the study area has a higher median age, yet the percentage of population over 65 is lower and there is a lower average household size, suggesting that the population is closer to the median age and that most households do not have children. The study area has a higher percentage of households and individuals at or below the poverty level; however, the household median income is higher than that of Seattle and King County together, which likely indicates a larger gap between those above and below the poverty level in the study area. Additionally, the larger percentage of persons with a disability may indicate a larger percentage of the population living with assistance and below the poverty level. There is also a higher percentage of households with no vehicle, which could be attributed to the close proximity to large employment centers, the easy access to transit, or the higher percentage of individuals at or below the poverty level.

As illustrated in Exhibit 3-4, the study area contains a smaller percentage of white population when compared to Seattle and King County. The largest difference is the African American

population, which accounts for more than 17 percent of the population in the study area—double the percentage for Seattle and over three times larger than King County. The Hispanic population is the same percentage for all three geographic areas.

EXHIBIT 3-4. MINORITY CHARACTERISTICS								
Area	White	Black or African American	American Indian & Alaska Native	Asian	Native Hawaiian & Pacific Islander	Some Other Race	Two or More Races	Hispanic or Latino*
Study Area	926 (58.2%)	278 (17.5%)	54 (3.4%)	197 (12.4%)	0 (0%)	89 (5.6%)	46 (2.9%)	85 (5.3%)
Seattle	394,889 (70.1%)	47,541 (8.4%)	5,659 (1.0%)	73,910 (13.1%)	2,804 (0.5%)	13,423 (2.4%)	25,148 (4.5%)	29,719 (5.3%)
King County	1,313,830 (75.6%)	91,538 (5.3%)	15,728 ^b (0.9%)	187,788 (10.8%)	8,270 (0.5%)	44,239 (2.6%)	76,641 (4.4%)	95,242 (5.5%)

Source: U.S. Census Bureau 2000.

As indicated in Exhibit 3-5, the study area population is expected to increase at an average annual growth rate the same as King County and slightly faster than Seattle. However, it should be noted that this comparison uses FAZ data to project growth, and the FAZ boundaries (see Exhibit 3-2) include areas outside of the social element study area where current land uses and zoning requirements permit residential growth to occur.

EXHIBIT 3-5. POPULATION FORECAST			
Area	2000 Census	2030 Forecast	Estimated Average Annual Growth Rate
Study Area ^a	6,940	8,920	0.8%
Seattle	563,374	672,441	0.6%
King County	1,737,034	2,234,775	0.8%

Sources: U.S. Census Bureau, 2000; PSRC, 2006.
^aStudy Area comprised of FAZs 5825 and 5826 (see Exhibit 3-2).

4 What are the minority, low-income, and limited-English-proficient population characteristics of the study area?

The project team reviewed Census data to identify minority, low-income, and limited-English-proficient populations, including mapping the Census Block Group data using

geographic information system (GIS) software to identify the three population concentrations. The two Census Block Groups contain minority population concentrations of 26.0 and 58.5 percent and low-income population concentrations of 29.2 and 49.0 percent. The project team used data from Census Table P-19 of Summary File 3 (Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over) to determine if limited English proficiency (LEP) exceeds 5 percent or over 1,000 residents in the Census Block Groups. Both of the Census Block Groups are below 5 percent and do not have populations numbering more than 1,000. Exhibits A-1 to A-3 in Appendix A illustrate the location and population concentration of the Census Block Groups and Exhibit A-4 summarizes the data.

Since the U.S. Census data are more than 7 years old, population characteristics may have changed. One way to look for changes is by reviewing recent public elementary school data for the City of Seattle. (Middle and high school students are assigned schools based on a student assignment plan; therefore their numbers may not reflect those living within the neighboring area and are not used.) There are two City of Seattle elementary schools with reference areas overlapping the study area. Based on school year 2004-2005 information, 757 students attended the two schools. Of these 757 students, approximately 95 percent are minority and approximately 75 percent participated in the free/reduced-price lunch programs, which may indicate low-income households. In addition, of the 757 students, approximately 47 percent are Asian and 18 percent are Hispanic, illustrating a need to translate project materials into appropriate languages. Data represent students who may live anywhere within the school's reference area; however the information is more current than 2000 Census data and may indicate changing population characteristics. Exhibit A-5 in Appendix A summarizes the demographic data for these schools.

As discussed in Chapter 1 in the section *4 What specific public involvement activities have been geared to reach minority, low-income, and limited-English-proficient populations?*, the public

involvement team is performing a number of targeted community briefings to traditionally underrepresented populations. Although the Census data showed no LEP populations comprising more than 5 percent or at least 1,000, the school data showed a potential need for compliance with Executive Order 13166. Informational materials are planned to be translated into Spanish, Chinese, Tagalog, and Vietnamese.

5 What social resources are located in the study area?

There are only a few social resources located in the social study area, and they are dedicated primarily to helping people with low incomes. The relative lack of social resources in the study area is probably due to current land use patterns and zoning. There are no religious resources, cemeteries, or medical service resources in the study area.

Education Resources

The Seattle School District provides public education in the study area and there are two public schools with reference areas overlapping the study area: Gatzert Elementary located at 1301 East Yesler Way (shown on Exhibit 3-1) and Maple Elementary located at 4925 Corson Avenue South (not shown in Exhibit 3-1 as it is outside of the exhibit boundaries).

The Pacific Maritime Institute, located just west of the study area at 1729 Alaskan Way South (Exhibit 3-1), provides a number of vocational training programs geared to the maritime industry.

Social Resources

There are three social service resources in the study area that provide assistance to those in need (see Exhibit 3-1). The St. Martin de Porres Shelter, located at 1561 Alaskan Way South, provides shelter to men over the age of 50. There are 212 beds located at the shelter and it currently operates at capacity every evening. The Salvation Army Adult Rehabilitation Center and thrift store, located at 1000 Fourth Avenue South, includes a thrift store open to the public, drop-off location for donated goods, clean and sober housing, and vocational training. The

Salvation Army also operates The William Booth Center located at 811 Maynard Avenue South, which offers clean and sober housing, job search assistance and counseling, and medical respite for homeless men.

Government Resources

The only government institution located in the study area is the Seattle office of the U.S. Coast Guard Integrated Support Command, with its associated Coast Guard Museum Northwest, at Pier 36, 1519 Alaskan Way South (Exhibit 3-1).

6 What public services and utilities are located in the study area?

The City of Seattle provides fire, emergency medical, and police protection to the social study area. Utilities are provided by a number of public and private companies, including Seattle Public Utilities and Seattle City Light, and there are a number of underground and overhead utilities located within the study area. Public services and utilities are discussed in detail in the *SR 519 Intermodal Access Project - Phase 2 Public Services and Technical Memorandum*.

7 What recreational resources are located in the study area?

The only public recreation facility in the social study area is the Mountains to Sound Greenway Trail (see Exhibit 3-1), administered by the Mountains to Sound Greenway Trust. The trail stretches approximately 100 miles from central Washington, across the Cascade Mountains, to the Seattle waterfront, paralleling Interstate 90. The eastern portion of the trail ends with the termination of the I-90 bicycle path near the intersection of I-90 and Rainier Avenue South. In the study area, the trail resumes at the intersection of South Royal Brougham Way and Fourth Avenue South, extends one block southward to South Atlantic Street, and follows the sidewalk on the north side of South Atlantic Street to the waterfront.

There are two publicly owned recreation resources located in the study area. Safeco Field, home of the Seattle Mariners professional baseball team, is owned and operated by the

Public Facilities District (PFD). Qwest Field, home of the Seattle Seahawks professional football team, and the adjacent Qwest Field Event Center are owned and operated by the Public Stadium Authority (PSA) (see Exhibit 3-1). Although these facilities are controlled by publicly operated entities, the teams and events are managed by private entities, and a paid admission is required to attend most events at the facilities. Therefore, the stadiums and event center are not considered public recreation facilities.

The trail does not involve a Section 4(f) use, because construction of the proposed project components along South Atlantic Street would not substantially impair the function of the trail in connection to the surrounding area and the waterfront. Other connections can be maintained through connections on First Avenue South or other corridors. As a result, Section 4(f) does not apply to recreational resources associated with the Proposed Action.

8 What pedestrian, bicyclist, and transit resources are in the study area?

There a number of pedestrian, bicyclist, and transit resources located within the social study area.

Pedestrian and Bicyclist Resources

All of the city streets in the study area have sidewalks on both sides of the roadway except for a portion of Fourth Avenue South north of South Royal Brougham Way. There are wide sidewalks adjacent to the stadiums to accommodate the large numbers of people who attend the events at the stadiums and many of the sidewalks include planting strips to separate pedestrians from vehicular traffic.

The only dedicated bicycle lane in the study area is located along East Marginal Way South on the northbound side of the roadway. On all other roadways, bicyclists either use the sidewalk or ride on the road with other traffic. As discussed above under 7 *What recreation resources are located in the study area?*, a

Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 (49 USC Section 303) prohibits the Federal Highway Administration (FHWA) from approving a project or program that uses land from a significant public park, recreation area, wildlife refuge, or historic site unless:

1. There is no feasible and prudent alternative to the use of the land.
 2. The project includes all possible planning to minimize harm to the property.
-



A portion of the Mountains to Sound Greenway Trail along South Atlantic Street

portion of the Mountains to Sound Greenway Trail is located in the study area.

Other non-motorized resources in or near the study area include the Waterfront Bicycle/Pedestrian facility, part of the Seattle Urban Trails System that starts near the intersection of South Atlantic Street and Alaskan Way South and travels northbound adjacent to SR 99, and the multi-use trail adjacent to the E-3 Bus/Rail Way traveling south from South Royal Brougham Way.

Transit

King County Metro and Sound Transit both provide bus service in the study area. Most buses run north-south along First Avenue South, Fourth Avenue South, and the E3 Bus/Rail Way, a dedicated buses-only roadway traveling north-south from South Royal Brougham Way to South Spokane Street. During home baseball and football games, Metro Transit provides special bus services between the stadiums and park-and-ride facilities in the Puget Sound region.

There are two major transit facilities located near the study area. The King Street Station, located within the International/Chinatown District, is a multimodal transit hub served by Sound Transit Sounder rail, Amtrak rail, and King County Metro and Sound Transit buses. The Washington State Ferries terminal at Colman Dock, northwest of the study area (see Exhibit 3-1), operates the Seattle-Bremerton and Seattle-Bainbridge Island routes from this terminal, and vehicular traffic travels through the study area to access the terminal.

There are several transit-related maintenance facilities located in the study area, including the King County Metro Ryerson, Central, and Atlantic bus bases and the Sound Transit Sounder and Amtrak Cascade rail maintenance facilities.

The Sound Transit Link light rail line is currently under construction and is expected to be operational in 2009, providing a new transit option in the study area. The light rail line includes Stadium Station, located east of the Proposed Action near the intersection of South Royal Brougham Way and the E3 Bus/Rail Way. Stadium Station will provide light

rail service to Safeco Field, Qwest Field, Qwest Field Event Center, and other locations near the Proposed Action.

For additional information regarding the pedestrian, bicyclist and transit facilities in the study area refer to the *SR 519 Intermodal Access Project - Phase 2 Transportation Discipline Report*.

9 What pedestrian, bicyclist, and transit plans are in the study area?

Exhibit 3-6 describes the type and approximate location of the various non-motorized facilities that are in the planning stages in the social study area. The Seattle Department of Transportation is currently in the process of adopting the Seattle Bicycle Master Plan. The purpose of the plan is to identify and incorporate bicycling facilities throughout the city to encourage more people to ride bicycles. The plan identifies South Royal Brougham Way as a street to improve bicycle access by adding bicycle lanes.

EXHIBIT 3-6. POTENTIAL NON-MOTORIZED PROJECTS	
Project/Description	Approximate Location
New Pathway	Fourth Avenue South from Jackson Street to South Royal Brougham Way
Alaskan Way Shared Use Bike Path	South Spokane Street to South Atlantic Street
Chief Sealth Trail/Shared Use Bike Path	I-90/I-5 junction south to the King County/Seattle line
Mountains to Sound Greenway Trail/ Shared Use Bike Path	Extend existing trail from the western terminus of existing I-90 Trail at Twelfth Avenue South to East Marginal Way
Source: PSRC, 2001.	

10 What are the general economic conditions of the study area?

To determine the general economic conditions in the economic study area, the project team used PSRC forecast analysis zone data from FAZs 5825 and 5826 (see Exhibit 3-2).

Population and Housing

Exhibit 3-7 presents historical and forecast population data for the economic study area, the city of Seattle, King County, and central Puget Sound.

EXHIBIT 3-7. FORECAST POPULATION			
Area	2000 Population	2030 Population	Average Annual Growth Rate 2000-2030
Study Area	6,940	8,920	0.8%
City of Seattle	563,313	672,441	0.6%
King County	1,737,034	2,234,775	0.8%
Central Puget Sound	3,275,809	4,544,179	1.1%
Source: PSRC, 2006. Note: Study Area includes FAZs 5825 & 5826.			

Between 2000 and 2030, the Puget Sound Regional Council (PSRC) estimates that the study area, city, and county population will grow at average annual rates of 0.8, 0.6, and 0.8 percent, respectively. In comparison, the central Puget Sound region is forecasted to grow at an average annual rate of 1.1 percent.

Exhibit 3-8 presents historical and forecast housing data for the economic study area, city, county, and central Puget Sound. Between 2000 and 2030, the PSRC expects a higher average annual growth rate of household formation in each of these areas than the annual rate of population growth. This means that the number of persons per household will decline. This is relevant because travel demand typically correlates more closely to household formation than to population.

EXHIBIT 3-8. HOUSING FORECAST			
Area	2000 Households	2030 Households	Average Annual Growth Rate 2000-2030
Study Area	3,104	4,199	1.0%
City of Seattle	258,481	340,697	0.9%
King County	710,916	997,326	1.1%
Central Puget Sound	1,282,966	1,934,623	1.4%
Source: PSRC, 2006. Note: Study Area includes FAZs 5825 and 5826.			

The U.S. Bureau of the Census estimated that the median housing value in the city was \$384,900 in 2005. This is higher than the county median housing value of \$345,300 and the state median housing value of \$227,700.

Local Economic Trends

The economy of the study area is influenced by activities in the SODO Business District and the Greater Duwamish Manufacturing and Industrial Center, the region's largest industrial and manufacturing district. The City's comprehensive plan (City of Seattle, 2005a) and the *Greater Duwamish Manufacturing and Industrial Center Plan* (Greater Duwamish Planning Committee, 1999) consistently emphasize industrial activities as the dominant land use in the industrial area. The City's policies prioritize manufacturing, warehousing, marine uses, transportation, utility, construction, and similar uses within the area.

Businesses directly involved in trade or providing supporting services to trade are located throughout the area. The Port of Seattle operates world-class container and cruise ship facilities in the area. BNSF Railway operates the Seattle International Gateway container loading facility. The SODO district is also home to Starbucks Corporation, Costco's Seattle warehouse, UPS, Tully's Coffee Corporation, and Todd Shipyards. Finally, Safeco Field, Qwest Field, and Qwest Field Event Center are located in the study area, and thousands of people gather there to enjoy sporting events, entertainment, and conferences.

The Seattle waterfront is a critical component of the state, regional, and national economy. Because it is the closest seaport to Asia, Seattle is considered the gateway to the East and is home to one of the West Coast's largest and most efficient cargo load centers. More than 2.0 million containers cross the Port's facilities per year and nearly 20.0 million metric tons of imports and exports crossed the docks in 2005. It has been estimated that one in three jobs in the local economy is related to international trade (enterpriseSeattle, 2007).

An additional influence in the study area is the growth of commercial businesses in the SODO District and the



Container Trucks at Pier 46

conversion of industrial property to commercial and other uses (City of Seattle, 1999). The conversion of higher valued commercial property in the largely industrial area is increasing the price of land and lease rates (City of Seattle, 1999).

All of the businesses and organizations located in the study area rely on an efficient transportation network to cost-effectively move freight and people to and from the region.

Employment

Exhibits 3-9 and 3-10 present historical and forecast employment by sector, in total, and on a percentage basis, for the economic study area, Seattle, and King County in 2000 and 2030. As shown, the PSRC estimates that total jobs in the study area will increase from 49,320 jobs in 2000 to 63,949 jobs in 2030.

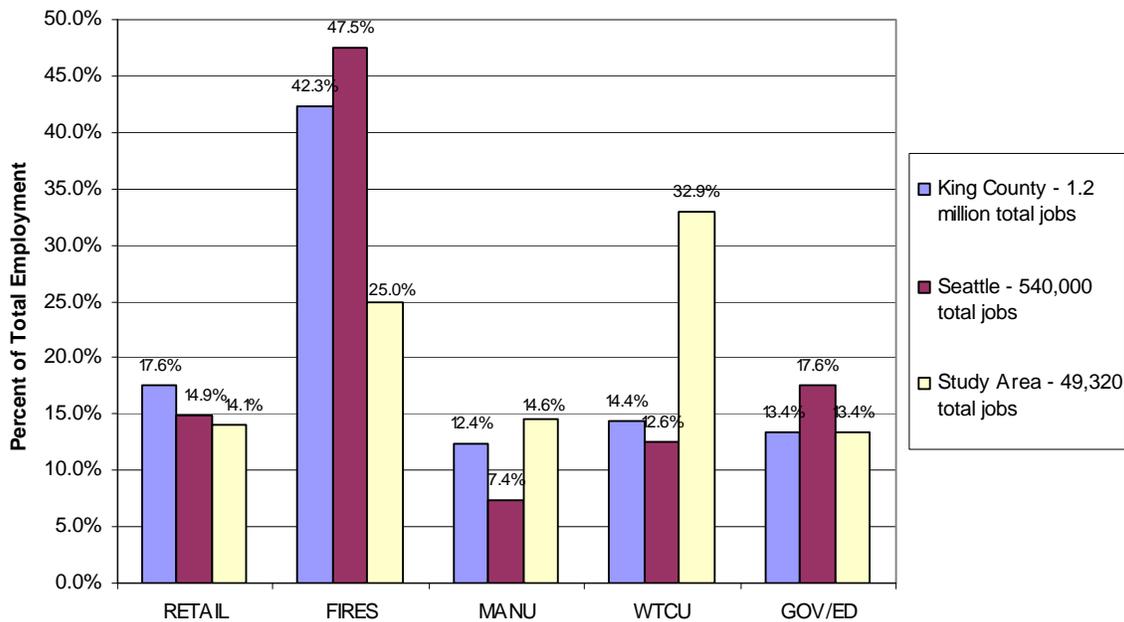


EXHIBIT 3-9. PERCENT OF TOTAL EMPLOYMENT BY INDUSTRY—2000

Source: PSRC, 2006.

Notes: RETAIL = Retail Trade; FIRES = Finance, insurance, real estate, and services; MANU = Manufacturing; WTCU = Wholesale trade, transportation services, communication, and utilities; GOV/ED = Government/Education

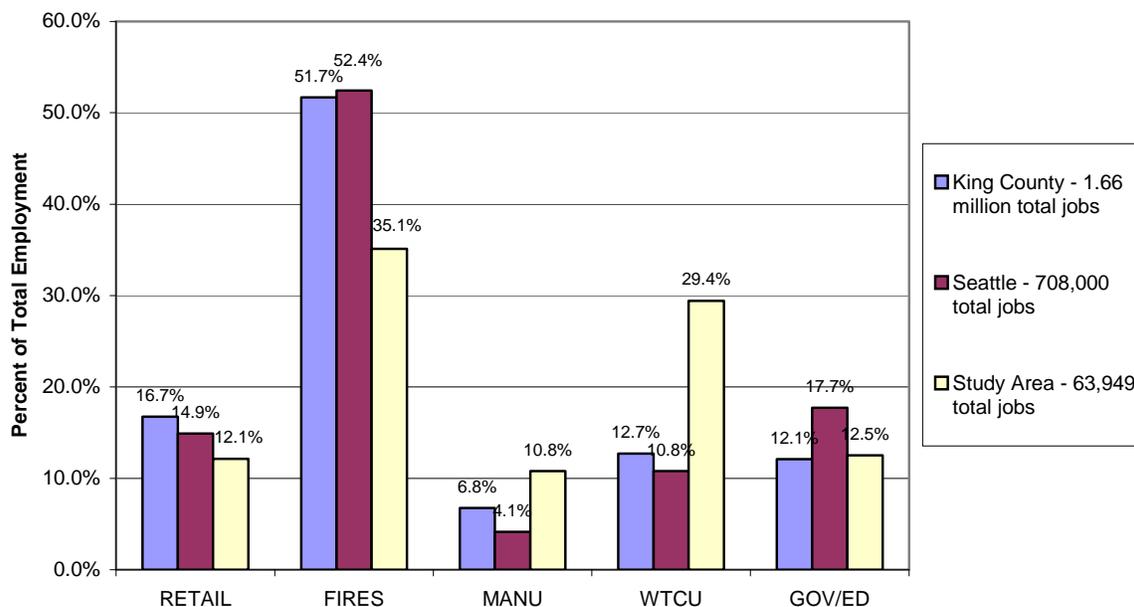


EXHIBIT 3-10. PERCENT OF TOTAL EMPLOYMENT BY INDUSTRY, 2030

Source: PSRC, 2006.

Notes: RETAIL = Retail Trade; FIRES = Finance, insurance, real estate, and services; MANU = Manufacturing; WTCU = Wholesale trade, transportation services, communication, and utilities; GOV/ED = Government/Education

The sector with the largest share of total employees is wholesale trade, transportation services, communication, and utilities (WTCU).

This sector is dominated by activities at the Port of Seattle and other businesses that support international trade. As shown in Exhibit 3-9, the WTCU sector accounted for approximately 32.9 percent of all jobs in the study area in 2000, compared to 14.6 percent in King County and 12.6 percent in all of Seattle.

PSRC forecasts that each sector, with the exception of finance, insurance, real estate, and services (FIRES), will decrease its share of total jobs within the study area by 2030. The most notable decrease is forecasted to occur in the manufacturing sector with a decrease of 3.8 percent of total jobs. The FIRES sector is forecasted to increase its share of total jobs in the study area by 10.1 percentage points by 2030.

As shown in Exhibits 3-9 and 3-10, the trend toward a relative increase in FIRES employment also occurs elsewhere in the

city and county. This is relevant for this study because this change affects travel demand. In general, retail and service businesses generate more trips per employee than manufacturing facilities.

Unemployment

Exhibit 3-11 presents unemployment rate trends for Seattle, King County, Washington State, and the United States. From 1997 to 1998, the city’s unemployment rate was slightly lower than that of the state and nation and similar to the county; however, between 1999 and 2004, it was slightly higher than the county and nation but lower than the state. Since 2005, the city’s unemployment rate has again trended lower than the state and nation.

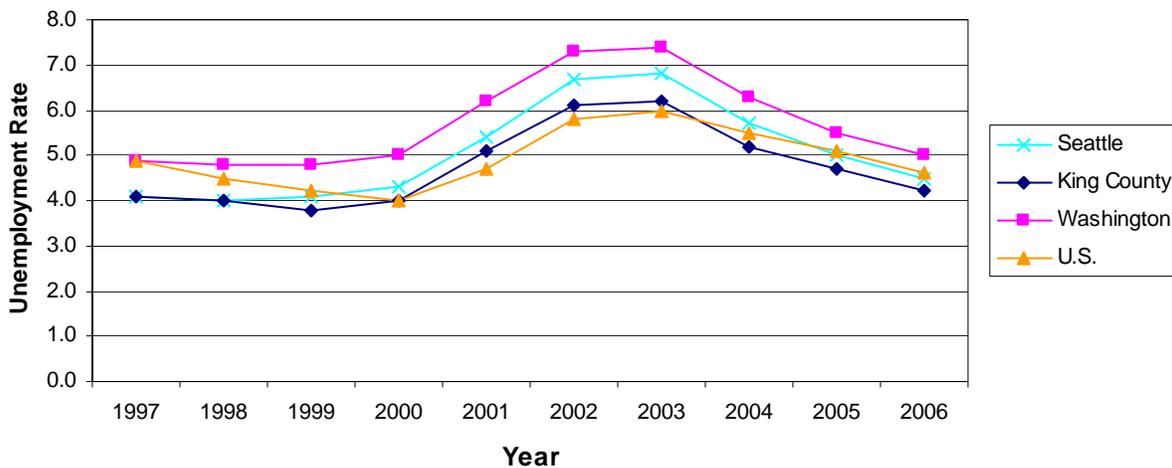


EXHIBIT 3-11. UNEMPLOYMENT RATES, 1997-2006

Source: U.S. Bureau of Labor Statistics, 2006

Household Income

Median household income in Seattle is lower than the county but higher than the state median. According to the U.S. Bureau of the Census, median household income for the city was approximately \$58,311 in 2006. Median household income was \$63,489 in King County and \$52,583 state-wide in 2006. Income levels in the city, county, and state have increased by 99, 75, and 69 percent, respectively, when compared to levels reported in the 1990 Census.

Revenue Sources

Exhibit 3-12 presents the City of Seattle's General Fund revenues adopted for 2007 and endorsed for 2008. As shown, property and sales taxes combined account for the majority of all revenue collected for the endorsed 2008 General Fund. The City's 2008 budget forecast indicates that 44 percent of the approximately \$806 million in tax revenue would come from property and retail sales taxes. Other taxes, which account for 42 percent of the 2006 proposed budget, include business and occupation tax, utility business tax, admission tax, and other small taxes. Non-tax revenue sources account for the remaining 14 percent of total revenue.

EXHIBIT 3-12. CITY OF SEATTLE GENERAL FUND TAX REVENUES			
Taxes	Adopted 2007 (\$ thousands)	Endorsed 2008 (\$ thousands)	2008 % of Total
Property Tax	194,918	199,452	24.7%
Retail Sales Tax	147,805	154,558	19.2%
Other Taxes	326,701	338,613	42.0%
Licenses and Permits	12,684	12,400	1.5%
Parking Meters/Meter Hoods	18,288	19,596	2.4%
Court Fines	16,981	16,261	2.0%
Interest Income	4,598	4,051	0.5%
Revenue from Other Public Entities	9,728	9,512	1.2%
Service Charges & Reimbursements	45,915	46,182	5.7%
Interfund Transfers	6,483	4,555	0.6%
All Else	1,168	1,253	0.2%
Total Revenues	785,269	806,433	100.0%
Source: City of Seattle, 2007a.			

Chapter 4 Environmental Consequences and Mitigation Measures

1 How were the effects on social and economic elements analyzed?

The project team used the following methods to analyze the potential effects, both positive and negative:

- Visiting the study area to observe the current neighborhood environment.
- Reviewing and analyzing existing planning documents and reports relevant to social and economic conditions in the study area, including data from the U.S. Census Bureau, U.S. Department of Education Common Core of Data, Puget Sound Regional Council, Washington State Office of Financial Management (OFM), King County, and the City of Seattle.
- Contacting various agencies including the PSRC, Washington State Employment Security Department, Washington State Department of Revenue, U.S. Bureau of Labor Statistics, Bureau of Economic Analysis, King County Department of Assessments, the Port of Seattle, the City of Seattle, and the SODO Business Association.
- Using GIS maps to identify recreation and community facilities.
- Reviewing and analyzing other discipline reports prepared for the project to determine any effects related to social and economic elements, including environmental justice.
- Reviewing the project public involvement plan to identify the outreach strategies used to inform the surrounding

community about the project, including specific comments heard from the public.

- Reviewing potential project effects, including beneficial effects, and analyzing their locations in relation to minority and low-income populations.
- Performing qualitative assessments using data from published information and similar projects regarding temporary increases in employment and income as a result of construction activities.
- Estimating fiscal effects associated with loss of taxable property using parcel and tax information.
- Evaluating likely project effects on local and regional businesses using project design drawings, forecasted changes in regional mobility, and information from published studies.

2 How would project construction temporarily affect social and economic elements in the study area?

Effects during construction are considered short term in comparison to the lifespan of the completed project and would end when construction is complete. Construction of the project is expected to be completed in approximately 3 years (2009 to 2012) and would be completed in three components (see Chapter 2) so that no single area would be under construction for the entire construction period.

Proposed Action

Direct Effects

Direct effects during construction are those that are caused by the project and occur at the same time and place. Examples of typical construction effects include increases in noise and dust levels, negative visual quality effects, and changes to or disruptions of access. These effects can negatively affect area residents and businesses as well as other users of nearby social and recreational resources.

The contractor selected would be required to prepare a Traffic Management Plan (TMP) to be approved by the City of Seattle to minimize effects on local roadways. The TMP would specify

that sidewalks be maintained on city streets unless construction activities make this an unsafe situation.

Social Elements

Community Cohesion

The Proposed Action would require property acquisitions for new right-of-way; however the amount of property required is small and would not result in any relocation of housing or businesses or cause any disruptions to the existing neighborhood. Exhibit 4-1 provides information on the property acquisitions that may be required to construct the Proposed Action.

EXHIBIT 4-1. PROPERTY ACQUISITIONS			
Owner	Current Property Use	Property Size	Approximate Area Acquired
Baseball Club of Seattle	Vacant (used during events)	27,900 SF	3,330 SF (12%)
Washington State Baseball Stadium	Parking	145,527 SF	1,725 SF (1.2%)
King County	Metro base	36,833 SF	240 SF (0.6%)
Public Stadium Authority	Parking garage	1,341,856 SF	120 SF (<0.01%)
BNSF Railway	Railroad	NA	TBD
Sound Transit	Busway	TBD	TBD
Notes: SF = square feet NA = not available TBD = to be determined			

There are relatively few residences in the area and those that are located in the study area are far enough away that effects related to construction noise and dust are not anticipated. Refer to the *SR 519 Intermodal Access Project - Phase 2 Noise Discipline Report* for more information on noise effects during construction. Refer to the *SR 519 Intermodal Access Project - Phase 2 Air Quality Discipline Report* for more information on air quality effects during construction.

South Royal Brougham Way would be reduced to one-lane traffic in both directions during most of the construction, and would need to close during certain construction activities. However, this is not anticipated to negatively affect cohesion

due to the lack of residents in the area and the availability of other east-west connections located in the study area.

Regional and Community Growth

Construction of the Proposed Action would not result in any effects on regional and community growth.

Social Resources

Since the social resources within the study area are located beyond the limits of construction, there are no anticipated direct effects from construction. Refer to the *SR 519 Intermodal Access Project - Phase 2 Public Services and Utilities Technical Memorandum* for information on construction-related effects on public services and utilities.

Recreational Resources

Construction activities along South Atlantic Street would temporarily affect the Mountains to Sound Greenway Trail. It is anticipated that construction would be scheduled during the evening hours to connect the I-90 ramp to South Atlantic Street to avoid traffic. Since construction would occur during the evening it is likely no one would be using the trail. There are other connections in the area, and therefore no negative effects are anticipated on trail users.

Pedestrian, Bicyclist, and Transit Resources

Construction would limit access along South Royal Brougham Way for pedestrians and bicyclists. Construction activities may require the relocation of transit stops along First Avenue South. If any construction occurred during events at the stadiums or event center, special bus routes that load passengers on streets within or adjacent to the project may need to be relocated.

Construction would negatively affect the King County Metro Ryerson Bus Base during construction of the South Atlantic Street ramp. A support column needed to construct the ramp would be required in the northwest corner of the facility, and construction activities to build the column would interfere with the storing and moving of the buses.

Environmental Justice

Construction effects would affect all populations equally and would not require the displacement of any residences or businesses that provide unique services to minority and/or low-income populations. Therefore, construction effects would not result in any effects on minority and low-income populations that would be appreciably more severe or greater in magnitude than those experienced by non-minority and non-low-income populations.

As discussed in Chapter 1, WSDOT has been communicating with the public about the Proposed Action through newsletters, the project website, and an open house. WSDOT would continue to inform the public about the project throughout construction.

Economic Elements

Construction activities could result in lost revenues for area businesses due to traffic congestion, changes in access routes, reduced visibility from the roadway (i.e., detours that require customers to take more circuitous or unknown routes, eliminating left-hand turns, or eliminating “street appeal” from a business that relies on impulse sales), and the elimination of on-street parking. If these effects are severe and/or the construction period is lengthy, sales losses can be substantial enough to result in business closures. The types of businesses most likely to be affected are retail sales and personal services that depend on good access and an aesthetically pleasing experience for customers. By contrast, local businesses located close to the construction area could experience increased sales from construction workers. However, it is not likely that many businesses in the study area would experience a substantial loss or increase of sales related to construction, because most of the businesses do not rely on impulse purchases. Therefore, sales tax revenue would not be greatly affected.

Construction-related congestion at the intersection of First Avenue South and South Atlantic Street could increase travel times for freight traveling to and from the Port of Seattle. While it is anticipated that construction would not take place

What is environmental justice?

Environmental Justice refers to the process of identifying and addressing, as appropriate, disproportionately high and adverse human health and/or environmental effects on minority and/or low-income populations.

during events, construction of the Proposed Action could deter some patrons from attending sporting events, exhibitions, and other events held at Safeco Field, Qwest Field, and Qwest Field Event Center. However, other factors not related to construction of the Proposed Action, such as the overall condition of the regional economy and the performance of the teams, could also affect attendance at sporting and other events.

The Proposed Action is estimated to cost \$74.4 million. Funding sources for the Proposed Action are presented on Exhibit 4-2. Funding sources defined as Local Anticipated Funding are expected to come from project partners and other local sources, such as the Port of Seattle and BNSF Railway (WSDOT, 2007b).

Construction of transportation projects usually results in increased employment and spending in the project vicinity during construction. The extent of these effects depends on the sources of project funding and the make-up of work crews used during project construction. Funds from local or regional sources are transfers that could be spent by residents and businesses on other economic activities. Typically, only federal or “new money” to a region has a measurable economic effect on employment and income gains resulting from project construction. To the extent that this represents funds that would not otherwise be spent in the study area, construction of the Proposed Action is expected to result in income and job benefits to the study area.

Indirect Effects

Indirect effects are those caused by the Proposed Action that are later in time or farther removed in distance, but are still reasonably foreseeable. During construction there are no indirect effects anticipated on the social elements. For the economic elements, direct effects from construction spending would lead to indirect effects as the output of firms in other industries increases to supply the demand for inputs to the construction industry. Construction spending would result in

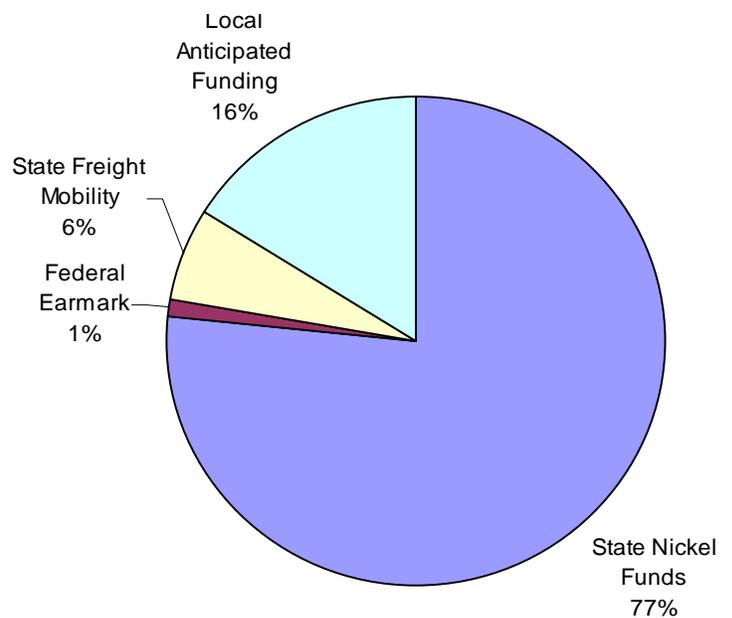


EXHIBIT 4-2 PROJECT FUNDING SOURCES

indirect and induced employment and income in the regional economy and the study area.

No Build Alternative

Under the No Build Alternative, there would be no construction-related effects on the social elements. For the economic elements, the area would not gain the economic benefits related to construction spending.

3 How would the project permanently affect social and economic elements in the study area?

Proposed Action

Direct Effects

Permanent effects are those that would occur after construction has been completed. Overall, the Proposed Action would result in primarily positive effects on the social and economic elements. A discussion of long-term environmental justice effects is presented below in *4 Would the project result in any adverse disproportionate effects on environmental justice populations?*.

Social Elements

Community Cohesion

The Proposed Action would not result in any changes in social patterns or negative effects on community life, persons, or groups; it would not divide any communities, require any residential relocations, or result in the loss of population. The Proposed Action would enhance community cohesion by improving the ability of neighborhood residents to interact with people in other neighborhoods through the addition of the BNSF Railway overpass and the reduction of traffic congestion in the study area.

The Proposed Action would reduce congestion by removing conflicts with rail traffic and improve safety for vehicles, pedestrians, and bicyclists. Connectivity between the study area and the region would improve with the new I-90 westbound off-ramp to South Atlantic Street, which would provide an improved connection between the Port of Seattle terminals and the central waterfront area, including the

Washington State Ferries Seattle Ferry Terminal and Interstates 90 and 5. Connectivity would also improve for the study area with the new overpass at South Royal Brougham Way, which would allow unimpeded travel over the BNSF Railway tracks.

The Proposed Action would result in the closure of the left-hand turn lane from the northbound Fourth Avenue South on-ramp onto South Atlantic Street, but this is not expected to result in any negative effects since vehicles would instead use either the new overpass at South Royal Brougham Way or the other east-west connectors south on Fourth Avenue South.

Regional and Community Growth

The primary purpose of the Proposed Action is to improve freight mobility and enhance safety. It would not induce any unwanted growth and would not result in any changes to population.

Social Resources

Since there are relatively few social resources in the social study area and most are located near the outer boundary, no negative effects of the Proposed Action are anticipated. Refer to the *SR 519 Intermodal Access Project - Phase 2 Public Services and Utilities Technical Memorandum* for information on operational effects on public services and utilities.

Recreational Resources

The only recreational facility in the social study area is the Mountains to Sound Greenway Trail. The Proposed Action would have no negative effects on the trail, which would maintain its existing connections. There would be a new crosswalk located at the proposed connection of the new I-90 off-ramp to South Atlantic Street. This might cause minor delays traffic, but it would also make the trail easier to use. The Proposed Action would provide other benefits to pedestrians and bicyclists, as discussed in the next section.

Pedestrian, Bicyclist, and Transit

The Proposed Action would result in positive effects on pedestrians and bicyclists by providing unimpeded access over

the BNSF Railway tracks and removing existing conflicts with rail traffic. The pedestrian overpass would be ADA-compliant and would include an elevator to the ground level on the western side. The overpass would also include bicycle lanes in both directions on the overpass structure to improve bicycle connectivity in the area. The improvements would create improved access to the stadiums and better connections to the surrounding transit options, such as the new Sound Transit Link light rail Stadium Station a few blocks east of the BNSF tracks.

There are no anticipated effects on transit routes, including Mariners bus service, associated with the Proposed Action since no changes would be required to the existing transit routes located along First Avenue South and Fourth Avenue South.

Economic Elements

The Proposed Action would improve access to the Seattle waterfront, which would result in increased efficiency of moving goods to and from the Port of Seattle and BNSF Railway facilities. According to the *SR 519 Intermodal Access Project - Phase 2 Transportation Discipline Report* (The Transpo Group, 2007), trucks traveling westbound between the Mt. Baker tunnel and Pier 46 would experience a reduction in travel times from 14.4 minutes to 4.4 minutes during the AM peak hour under the Proposed Action in 2030. Trucks traveling the same route in the PM peak hour would experience a reduction in travel times from 7.4 minutes to 5.3 minutes. Businesses involved in moving freight to and from the Port of Seattle would benefit from reduced operating costs with the reduction of travel times.

Some businesses in the economic study area might experience a modest increase in retail sales activity because of the improvements. Any increase in sales activity would also benefit the City's revenues in the form of increased sales tax revenues; however, the overall effect on the City's tax revenues would likely be small. Other businesses could be affected by left-turn restrictions currently planned for northbound traffic on

the Fourth Avenue South on-ramp to South Atlantic Street. Some businesses located on the east side of First Avenue South between South Atlantic Street and South Holgate could experience minor inconveniences as employees, suppliers, and potential customers are forced to travel the new loop ramp on South Royal Brougham Way. While there may be short-term effects related to the new route, it is anticipated that customers, employees and other vehicles visiting this area would adapt to the surface street changes.

Roadway improvements have the potential to contribute to an increase in property values within the corridor, which would increase property tax revenues. Overall, market forces, driven by supply and demand, would determine property values. Other factors that affect property values include local zoning and land use regulations, local development trends, and other social and economic factors. The roadway improvements would improve access to some businesses in the area, which could make properties more attractive for businesses and new development.

Property Tax Revenues

WSDOT would acquire the additional right-of-way needed to construct the project from property owned by several private and public organizations. Any taxable property removed from the City of Seattle's tax rolls could potentially decrease property tax revenues. As shown on Exhibit 4-1, six parcels would be affected by the project. According to the King County Department of Assessments database, all six property owners are tax-exempt organizations and do not pay property taxes. Therefore, the additional right-of-way purchases would not affect the City's overall property tax revenues. The Proposed Action would not result in any relocation of businesses or employees.

Access and Parking

See discussion above under Economics for information regarding access for businesses.

The Proposed Action is expected to reduce on-street parking along Third Avenue South by approximately 50 spaces (The Transpo Group, 2007). The loss of parking would occur

because of the placement of the new I-90 off-ramp to South Atlantic Street. Because other on-street parking and off-street parking are available in the study area, the loss of parking along Third Avenue South is not considered to be substantial. The effect of reduced parking along Third Avenue South will also be minimized when Central Link light rail service starts in 2009.

Preliminary design indicates that the King County Metro Ryerson Bus Base would lose an estimated four bus parking spaces from placement of a support column for the proposed I-90 off-ramp. The loss of these four spaces and the position of the column are not expected to affect bus base operations in a negative way. WSDOT would continue to coordinate closely with King County Metro during detailed design and construction of the Proposed Action.

Indirect Effects

The operation of the Proposed Action would have no long-term indirect effects that would harm social or economic aspects of the study area. The addition of the new pedestrian overpass and bicycle lanes would encourage non-motorized transportation and provide improved connectivity and better access to public transit.

No Build Alternative

Under the No Build Alternative, the unsafe conditions for pedestrians and bicyclists associated with conflicts and congestion of the at-grade crossing of the BNSF Railway tracks at South Royal Brougham Way would continue and could result in an increase in the number of accidents. Also, there would be no improved connectivity with the surrounding area and transit options. Since there are few households and social resources in close proximity to the project limits, the No Build Alternative would not result in any other negative effects on social elements.

The No Build Alternative would result in negative effects related to increase in traffic congestion which increases the time to move freight to and from the surrounding area, including the Port of Seattle. The extent to which congestion

could adversely affect overall economic growth is uncertain. There is a point at which congestion can influence companies and workers to locate elsewhere. Several major employers in the region have recently indicated that current congestion levels are becoming a major negative factor when weighing where to establish new facilities to meet projected business growth. However, it is unlikely that overall levels of employment and income in the region would change substantially based on the level of congestion on the regional road network.

4 Would the project result in any adverse disproportionate effects on environmental justice populations?

The project team reviewed the other discipline reports and technical memorandums prepared for the project to determine if the Proposed Action would result in adverse effects that could disproportionately affect minority or low-income populations.

Exhibit 4-3 summarizes the effects identified in the discipline reports, including the social and economic effects described in this technical memorandum.

The project team reviewed the discipline reports and technical memoranda prepared for this EA and concluded that the Proposed Action would not result in any adverse effects on minority and low-income populations. In addition, the Proposed Action would also not result in any adverse effects that would be experienced by the minority and/or low-income populations that would be greater in scale than the adverse effects experienced by non-minority and non-low-income populations.

In addition, the Proposed Action would not affect any resources (i.e., social, religious, or cultural functions) that are especially important to a minority and/or low-income population. In fact, the Proposed Action would benefit all populations by improving cohesion in the study area, improving safety, and providing unimpeded access across the BNSF Railway tracks with ADA ramps and an elevator.

EXHIBIT 4-3. SUMMARY OF EFFECTS

Element of the Environment	Effects	Mitigation Summary	Adverse Effects
<p>Construction (Short-Term) Effects of the Proposed Action</p>	<p>Short-term effects of the Proposed Action would include:</p> <ul style="list-style-type: none"> • Temporary increases in particulate matter and other air pollutant emissions • Temporary increases in construction-related noise • Potential releases of contaminants to the environment due to ground-disturbing activities • Temporary increases in traffic congestion • Temporary visual effects due to construction activities and debris 	<p>Mitigation measures that could be implemented to minimize effects during construction include:</p> <ul style="list-style-type: none"> • Preparing and implementing a Stormwater Pollution Prevention Plan and a Spill Prevention Control and Countermeasures Plan to minimize or avoid effects on soil and groundwater. • Implementing air quality control measures to reduce temporary particulate matter, CO, and nitrogen oxide emissions. These measures would include covering all trucks transporting materials; spraying exposed soils with water; using wheel washers to remove particulate matter; covering dirt, gravel, and debris piles as needed; and routing and scheduling work tasks to minimize disruption of the existing vehicle traffic on streets. • Reducing construction noise by installing mufflers on engines, operating heavy equipment and other noisy procedures during non-sleeping hours, locating equipment far from sensitive noise receptors where practical, and minimizing idling of power equipment. • Compliance with local noise regulations. • Preparing and implementing a Traffic Management Plan and coordinating with individual property owners when temporary access restrictions or detours are required. • Minimizing temporary road closures and ensuring that detour routes are well signed. • Providing residents and businesses advance notification of the project schedule, potential detours, and changes in any of the pedestrian, bicyclist, or transit routes. • Providing public information about construction 	<p>The anticipated construction effects are minor, would be temporary, and would not result in any adverse effects. In addition, mitigation measures would be implemented to further reduce construction effects and therefore no closer examination of these effects is needed.</p>

EXHIBIT 4-3. SUMMARY OF EFFECTS

Element of the Environment	Effects	Mitigation Summary	Adverse Effects
		activities.	
Hazardous Materials (Operational Effects)	<p>The Proposed Action would result in improved traffic flow, which would likely reduce the likelihood for vehicle collisions and hazardous material spills. Contaminated soils encountered during construction or known areas of contaminated soils would need to be cleaned up.</p> <p>The No Build Alternative would not result in any clean-up of contaminated soils which would continue to leach into groundwater. In addition, traffic congestion would increase, which would increase the potential for accidents and the release of hazardous materials from vehicles.</p>	No mitigation is proposed.	No adverse effects (direct or indirect) related to hazardous materials are anticipated.
Geology and Soils (Operational Effects)	<p>The Proposed Action could result in the long-term settlement of soils due to the compression of soils supporting the roadway and structures associated with the Proposed Action. However, these effects are expected to be mitigated by ensure current design methods are implemented during construction.</p> <p>The No Build Alternative would not result in any effects on geology and soils.</p>	No mitigation is proposed.	No adverse effects (direct or indirect) related to geology and soils are anticipated.
Water Resources (Operational Effects)	<p>The Proposed Action would increase the amount of impervious surface by 0.93 acre and would also convert 0.82 acre of non-pollutant-generating impervious surface to pollutant-generating impervious surface. Basic water quality treatment would be provided for the stormwater runoff from the project, which would result in a reduction in the quantity of pollutants discharged to Elliott Bay and the West Point Treatment Plant below existing levels. In addition, no effects to groundwater recharge are anticipated due to the conversion of impervious surface.</p> <p>The No Build Alternative would not result in reductions in stormwater pollutants being discharged.</p>	No mitigation is proposed.	No adverse effects (direct or indirect) related to water resources are anticipated.

EXHIBIT 4-3. SUMMARY OF EFFECTS

Element of the Environment	Effects	Mitigation Summary	Adverse Effects
Air Quality (Operational Effects)	<p>The Proposed Action would not result in any adverse effects on air quality. The project team evaluated localized concentrations of carbon monoxide (CO) in the vicinity of intersections. All of the scenarios analyzed indicated that concentrations are well below applicable ambient air quality standards. Because the project is not anticipated to create any new violations, nor increase the frequency of an existing violation of the CO standard, it is determined to conform with the purpose of the current State Implementation Plan (SIP) and the requirements of the federal Clean Air Act and the Washington Clean Air Act.</p> <p>The No Build Alternative would not cause CO concentrations to exceed any standards. CO concentrations are estimated to be very similar with the Proposed Action. If the project is not constructed, projected increases in traffic volumes on local streets would increase delays and lower travel speeds of motor vehicles, both of which would mean higher emissions from vehicle exhaust.</p>	No mitigation is proposed.	No adverse effects (direct or indirect) related to air quality are anticipated, and the project would conform to the current SIP and the requirements of the federal Clean Air Act and the Washington Clean Air Act.
Transportation (Operational Effects)	<p>The Proposed Action would result in beneficial effects on transportation. The project would reduce conflicts between rail and other traffic, improve pedestrian and bicycle access along South Royal Brougham Way, provide a more direct route between I-90 and terminal facilities and central waterfront area, and improve access to the Safeco Field and Qwest Field Event Center parking garages from I-5 and I-90. The Proposed Action would result in a reduction of on-street parking along First Avenue South and Third Avenue South and in bus parking at the King County Metro Ryerson Bus base; however, these effects are expected to be minor and could be further reduced through mitigation measures. Furthermore, the Proposed Action would not negatively affect any of the transit routes in the study area and would improve the connection with the Sound Transit Link light rail station that is scheduled to be operational in 2009.</p> <p>The No Build Alternative would result in increased traffic congestion and constraint due to the more circuitous routing via Fourth Avenue South. There would also be increases in safety issues related to conflicts with rail traffic.</p>	No mitigation is proposed.	No adverse effects (direct or indirect) related to transportation are anticipated. The Proposed Action would result in the loss of on-street parking and parking at the bus base. The improvement in transit connections would result in beneficial effects for all populations, especially low-income which tend to use public transit more than other populations.

EXHIBIT 4-3. SUMMARY OF EFFECTS

Element of the Environment	Effects	Mitigation Summary	Adverse Effects
<p>Social and Economics (Operational Effects)</p>	<p>The Proposed Action improves connectivity and safety due to the overpass along South Royal Brougham Way which includes an ADA-accessible pedestrian facility and bicycle lanes. The Proposed Action does not result in the disruption of cohesion, community life, or social patterns and does not result in the displacement of any businesses, employees, or residents. The Proposed Action would improve freight mobility and would not negatively affect any businesses.</p> <p>The No Build Alternative would not realize the improvements in connectivity and safety due to the overpass structure on South Royal Brougham Way and the anticipated increased in traffic congestion in the area could result in negative effects on businesses.</p>	<p>No mitigation related to social elements is proposed. Operational mitigation could include the placement of signs in the area to alert travelers of traffic revisions.</p>	<p>No adverse effects (direct or indirect) related to social and economic elements are anticipated.</p>
<p>Public Services and Utilities (Operational Effects)</p>	<p>The Proposed Action would improve conditions for public service vehicles by removing congestion caused by the at-grade railway crossing over South Royal Brougham Way, allowing vehicles to proceed unimpeded. The Proposed Action would not result in any negative affects associated with utilities.</p> <p>Under the No Build Alternative, there would be no improvements and response and travel times would either remain at the current levels or increase due to the anticipated increases in traffic congestion. No effects to utilities are anticipated.</p>	<p>No mitigation is proposed.</p>	<p>No adverse effects (direct or indirect) related to public services and utilities are anticipated.</p>
<p>Visual Quality (Operational Effects)</p>	<p>The Proposed Action would result in changes to views within the study area, which would be most noticeable along South Royal Brougham Way. Changes would be a result of the construction of the new railway overpass; however the severity of change is minor and would result in a small decrease in the visual quality rating. In addition, context-sensitive design considerations would be incorporated into the project design and the elements of the project are consistent with the existing industrial and sports-stadium/entertainment character of the study area.</p> <p>Under the No Build Alternative, visual quality would remain the same although increases in traffic and congestion near South Royal Brougham Way would cause the visual</p>	<p>No mitigation is proposed.</p>	<p>No adverse effects, (direct or indirect) related to visual quality, are anticipated.</p>

EXHIBIT 4-3. SUMMARY OF EFFECTS

Element of the Environment	Effects	Mitigation Summary	Adverse Effects
	environment to deteriorate and have a negative influence on the area.		
Noise (Operational Effects)	<p>Noise modeling indicates that noise levels would approach or exceed the FHWA Noise Abatement Criteria (NAC) at two locations out of six modeled sites under the Proposed Action. However, these locations currently approach or exceed the FHWA NAC.</p> <p>Noise levels would increase between 1 and 2 dBA over existing conditions at the two of the six modeled sites. A 3-dBA change is considered just perceivable and a change in level of at least 5 dBA is required before any noticeable change in community perception would be expected. In addition, noise levels would decrease by 1 dBA at three of the modeled sites over existing conditions.</p> <p>Under the No Build Alternative, noise levels would increase between 1 and 2 dBA over existing conditions at three of the six modeled sites and would approach or exceed the NAC at four sites.</p>	Noise mitigation measures were determined to be not feasible or reasonable at two locations where noise levels would exceed the NAC. Consequently, no noise mitigation is proposed as part of the project.	The noise analysis indicates that the project would result in noise levels exceeding the FHWA NAC at two locations. The 1- to 2-dBA increase in noise levels, due to the Proposed Action, would result in minor adverse effects. However as described under Effects, the increase would not be perceptible to most humans, and therefore no further action is warranted.
Land Use (Operational Effects)	<p>New right-of-way for the Proposed Action would require approximately 5,415 square feet of land which would change the existing land use to transportation related. However, the change in land use would not be large enough to cause any land inducing effects or change the existing land uses in the area. In addition, the Proposed Action complies with the goal and objectives of the land use plans and policies that relate to the Proposed Action.</p> <p>The No Build Alternative would not result in any changes to land use and the surrounding land uses could be negatively affected by the anticipated increase in traffic congestion.</p>	No mitigation is proposed.	No adverse effects related to land use are anticipated.

EXHIBIT 4-3. SUMMARY OF EFFECTS

Element of the Environment	Effects	Mitigation Summary	Adverse Effects
Cultural Resources (Operational Effects)	<p>The fieldwork and records research demonstrated that none of the buildings in the Area of Potential Effect are eligible for the National Register and none are likely to meet Seattle's Landmark criteria. There are potentially three archaeological resources located in the study area and any effects on these resources are contingent on completing the identification phase of the Section 106 process as well as the type and range of ground-disturbing activities.</p> <p>Under the No Build Alternative, there would be no disturbance to any of the historic or archaeological resources located in the study area.</p>	No mitigation is proposed.	The proposed project would not result in any adverse effects (direct or indirect) related to cultural resources.

The unimpeded access would also improve transit connections with Central Link light rail, scheduled to begin operation in 2009. The improved transit connection would result in beneficial effects for all populations, especially those with low incomes. National transportation surveys have consistently demonstrated that individuals with low incomes tend to use public transit more frequently than persons with higher incomes.

Based on the results of the demographic analysis, the feedback on the Proposed Action received from the public involvement, and the other discipline reports prepared for this project, no minority or low-income populations would be disproportionately adversely affected by the project as determined above. Therefore, the Proposed Action has met the provisions of the Executive Order 12898, as it is supported by Title VI of the Civil Rights Act.

5 What has been done to avoid or minimize adverse effects of the Proposed Action on social and economic elements?

Construction Mitigation

The Proposed Action would include a number of measures to avoid or minimize the negative effects of construction on the surrounding area. The following mitigation measures could be included.

Social Elements

Community Cohesion

Continue the public involvement program, using the project website, fact sheets, or newsletters to communicate information about the project and to allow residents and businesses to identify concerns regarding the Proposed Action. Fact sheets or newsletters will be sent out in the appropriate languages, as demand for translated materials continues.

If any temporary road closures are required, WSDOT would minimize the amount of time the road is closed and ensure that detour routes have proper signage.

WSDOT would require construction contractors to keep equipment in good mechanical condition and to equip engines with mufflers to minimize exhaust emissions and noise.

Regional and Community Growth

The construction phase of the project would not affect regional and community growth, and therefore no mitigation measures are proposed.

Social Resources

There are no social resources that would be negatively affected by construction and therefore no mitigation is proposed. Refer to *SR 519 Intermodal Access Project - Phase 2 Public Services and Technical Memorandum* for mitigation measures related to Public Services and Utilities.

Recreational Resources

If construction were required during stadium events or event center exhibitions, WSDOT would coordinate with the facilities involved and the Seattle Police Department to develop appropriate mitigation measures. However, construction is not expected to occur during any scheduled events at Safeco Field, Qwest Field, or the Qwest Field Event Center, and therefore no additional mitigation measures are proposed for these facilities.

Pedestrian, Bicyclist, and Transit Resources

If alternative routes are required for pedestrians and bicyclists WSDOT would clearly identify and mark them.

If temporary transit stops are required, WSDOT would clearly mark the stops and provide additional signage indicating location.

If there are any alternative routes and/or temporary transit stops, WSDOT would ensure that stops are accessible for those with disabilities.

In addition to the general TMP, specific measures would be identified and agreed upon between the contractor, the project owner, and individual agencies to ensure that services and activities provided in the study area are protected during construction. These agreements would cover how and when contractors can work and measures implemented to minimize

adverse effects. Such agreements would be developed at a minimum with the following agencies: Sound Transit, King County Metro, Port of Seattle, BNSF, Amtrak, Public Stadium Authority, Public Facilities District, and Baseball Club of Seattle.

Environmental Justice

The Proposed Action would not result in any disproportionately high and adverse effects during construction on minority and/or low-income populations during construction. Therefore, no specific mitigation measures are required for these populations. The mitigation measures described in this section are applicable to all populations.

Economics

Owners of property to be acquired for right-of-way would be compensated for the fair market value of property acquired, in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

If alternative access to businesses is required, WSDOT would coordinate with business owners to reconfigure or provide alternate access during construction.

If construction is required during events at the stadiums, WSDOT would coordinate with the facilities' managers to minimize construction-related conflicts with stadium events and event center exhibitions.

If traffic revisions are needed, WSDOT would post signs to alert travelers of the changes.

Additional mitigation measures to reduce traffic congestion, noise, dust, and visual effects during construction which could negatively affect the social and economic elements are identified in the Transportation, Noise, Air Quality, and Visual Quality discipline reports.

Operational Mitigation

The project would result in beneficial effects on all populations, and, therefore, no mitigation measures are proposed for any of the social elements during operation. For the economic elements, mitigation to avoid adverse access

effects could include working with business owners to reconfigure or provide alternate access, if required..

6 Are any of the identified effects considered substantial?

A substantial effect on social and economic elements would occur under the following scenarios:

- If the project resulted in a negative change in population characteristics, or a negative effect on the cohesive nature of the community, such as bisecting or removing portions of neighborhoods.
- If the project resulted in the loss of community services and/or recreation facilities or removal of access to these facilities.
- If the project resulted in disproportionately high and adverse effects on minority and/or low-income populations.
- If the project resulted in the displacement of a large number of businesses and employees similar to an economic downturn.
- If the project resulted in a sizeable reduction in property tax revenues that would affect the City's ability to provide services.

None of the effects of the Proposed Action are considered substantial.

Chapter 5 Cumulative Effects

1 What are cumulative effects, and why are they important?

Cumulative effects are important because they help us to understand the project in terms of a “bigger picture”—how the project might interact with other projects that are planned but have not been built yet. In this way, they can reveal possible unintended consequences of the project that might not be apparent when we look at the project by itself (CEQ, 1997).

2 How did the project team identify expected cumulative effects on social and economic elements?

The project team identified expected cumulative effects of the Proposed Action and No Build Alternative by following a process recommended by the President’s Council on Environmental Quality (CEQ, 1997) and as identified in Chapter 412 of the WSDOT *Environmental Procedures Manual* (WSDOT, 2007a). First, the team considered how past and present actions have already affected the study area. Next, they considered the expected direct and indirect effects of the Proposed Action or No Build Alternative on social and economic elements, discussed in Chapter 4. Finally, the project team considered the probable effects of other reasonably foreseeable future actions that are planned but not yet built. The project team combined past and present actions and RFFAs with the expected direct and indirect effects of each of the two alternatives to produce a cumulative picture of how socioeconomic elements might be affected, with and without the Proposed Action, in the future.

What are cumulative effects?

Cumulative effects are impacts on the environment that result “from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Defined by FHWA and Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7)” (WSDOT, 2006)

Past and Present Actions

The project team used year 1976 as the environmental reference point for past and present development, because this was the year the Kingdome was constructed and land uses in the SR 519 study area gradually started to change from industrial to commercial, producing an ongoing cumulative effect. After the Kingdome was built, the area saw the development of retail businesses that support event goers.

The SR 519 study area is located within the SODO neighborhood, which is part of the larger Greater Duwamish Manufacturing and Industrial Center (City of Seattle, 2006b). *Toward a Sustainable Seattle*, the City's comprehensive plan as amended through 2005 (City of Seattle, 2005a), and the *Greater Duwamish Manufacturing and Industrial Center Plan* (Greater Duwamish Planning Committee, 1999) consistently emphasize industrial activities as the preferred and dominant land use within the area. Their policies prioritize manufacturing, warehousing, marine uses, transportation, utility, construction, and similar uses.

SR 519 is the essential transportation route for moving freight between the Seattle waterfront and Interstate Highways 5 and 90. The Port of Seattle terminals have expanded over the years and the increase in freight entering and leaving the terminals has increased the amount of freight traffic in the study area. A major purpose of the Proposed Action is to ensure that freight moves efficiently through the study area in the future.

At the same time, Safeco Field, Qwest Field, and Qwest Field Event Center are regional magnets for major public gatherings and support a growing commercial base in the study area. Especially during home games and major exhibitions, event-related traffic, pedestrians, railway operations, and commuter traffic can combine during the evening peak hours and cumulatively produce highly congested conditions (City of Seattle, 2006a). Transportation conflicts and the proliferation of non-industrial developments in industrial areas are two of the critical issues identified in the *Seattle's Industrial Lands: Background Report* (City of Seattle, 2007b). The Proposed

Action would improve these conditions by providing a direct connection from interstate highways 5 and 90 to the SR 519 Phase 1 ramp over South Atlantic Street, diverting freight and commuter traffic that currently mixes with event traffic, pedestrians, and rail traffic directly from the freeway system to the Seattle waterfront.

Completion of Phase 1 of the SR 519 Intermodal Access Project resulted in positive effects on social and economic elements by improving mobility in the study area for east-west traffic and providing a new crossing over the BNSF Railway tracks at South Atlantic Street. The Port of Seattle terminals, Qwest Field, and Safeco Field have substantial volumes of traffic, and the stadiums and event center bring many pedestrians into the study area during sporting and other events.

Direct and Indirect Effects of the Proposed Action

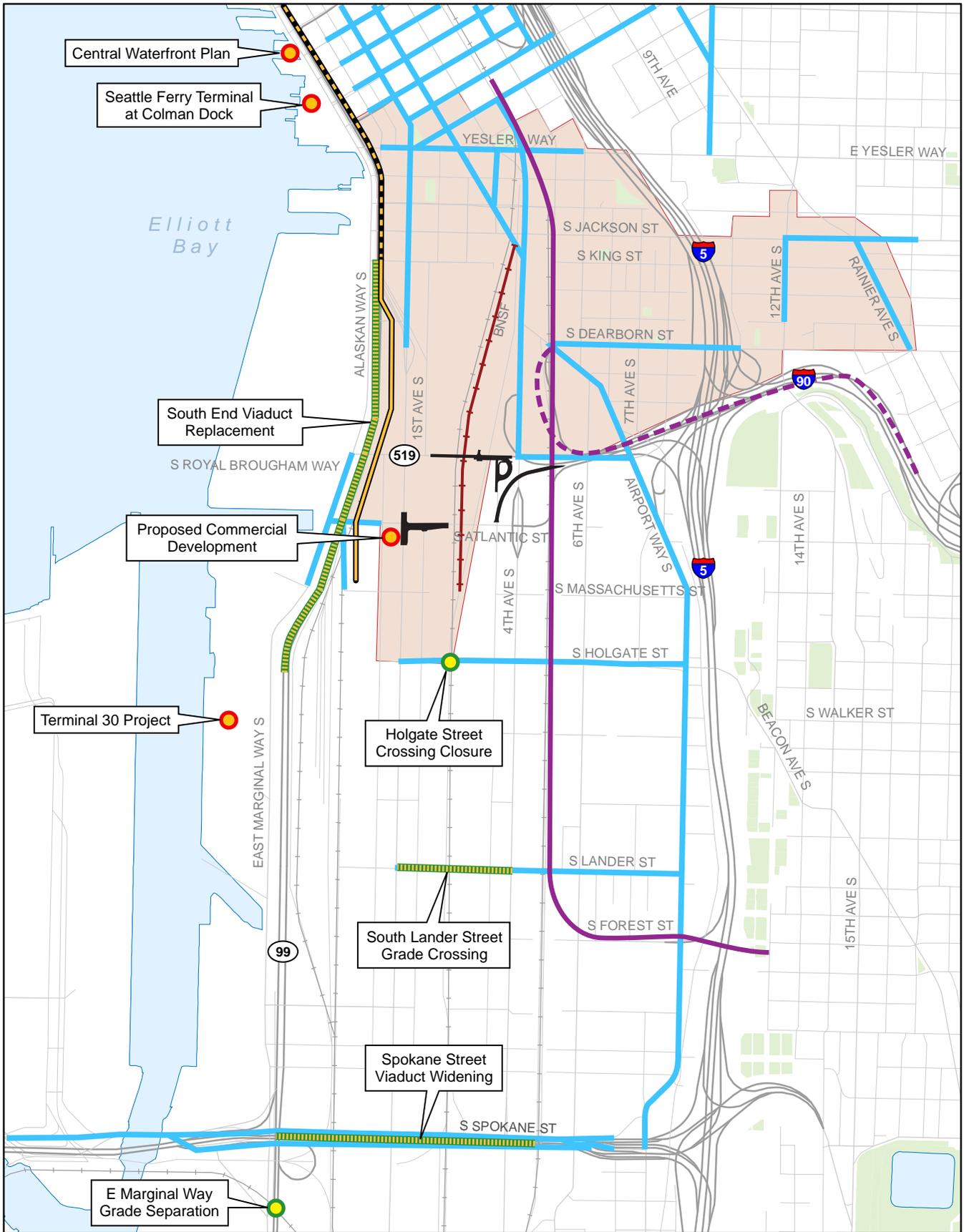
As discussed in Chapter 4, the Proposed Action would result in temporary negative effects on the social and economic elements as a result of construction. Chapter 4 also includes information on mitigation measures that could be included as part of the Proposed Action to avoid or minimize the negative effects. During operation, there would be beneficial effects on the social and economic elements from improvements to safety, freight mobility, and connectivity in the study area.

Direct and Indirect Effects of the No Build Alternative

As discussed in Chapter 4, the No Build Alternative would perpetuate negative effects related to traffic congestion which increases the time to move freight to and from the surrounding area, including the Port of Seattle, and issues with safety are still present due to the potential conflicts between vehicles, pedestrians, and bicyclists with rail traffic.

Reasonably Foreseeable Future Actions

Exhibit 5-1 shows approximate locations of some of the reasonably foreseeable future actions (RFFAs) that could add to, or interact with, the Proposed Action to contribute to cumulative effects on social and economic elements.



Source: City of Seattle (2007) and King County (2006)

- | | |
|--|----------------------------------|
| Project | Sound Transit Central Link |
| Livable South Downtown Study Area (Approx.) | Proposed Sound Transit East Link |
| BNSF Railway Completion | Bridging the Gap Paving Project |
| Electrical Line Relocation Phase 1 and Phase 2 | Road Project |
| | Development Project |

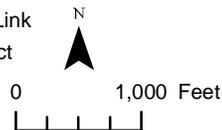


Exhibit 5-1
Reasonably Foreseeable
Future Actions

The project team used year 2030, the project design year, as the future boundary for the cumulative effects assessment.

Exhibit 5-2 briefly summarizes information about the identified RFFAs. They include, but are not limited to:

- The South Holgate Street to South King Street Viaduct Replacement Project, and the two-phase Electrical Line Relocation Project, which are Moving Forward projects within the Alaskan Way Viaduct and Seawall Replacement Program
- The South Spokane Street Viaduct project
- Completion of BNSF Railway track improvements
- Sound Transit light rail projects
- Closure of the South Holgate Street rail crossing
- Conversion of the Port of Seattle's Terminal 30 to a container terminal
- The East Marginal Way Grade Separation Project
- The City of Seattle's Central Waterfront Plan
- The City of Seattle's Bridging the Gap paving projects
- Washington State Ferries Terminal Improvements at Colman Dock

Urban development is increasing in portions of the South Downtown area immediately north of the study area. This area, which includes Seattle's International District/Chinatown/Little Saigon neighborhood, is currently the subject of Livable South Downtown, a major planning effort by the City of Seattle's Department of Planning and Development. In November 2007, the City of Seattle released the *Draft EIS for Livable South Downtown Planning* (City of Seattle, 2007c), a SEPA programmatic EIS which evaluates options for a comprehensive neighborhood plan for the South Downtown area.

EXHIBIT 5-2. REASONABLY FORESEEABLE FUTURE ACTIONS IN OR NEAR THE STUDY AREA

Project ^a	Location	Purpose	Proponent	Expected Construction Time Frame ^b
South Holgate Street to South King Street Viaduct Replacement Project	SR 99 from South Holgate Street to South King Street	Build new SR 99 between South Holgate Street and South King Street. Includes South Atlantic Street and South Royal Brougham Way grade separation, detour routes, and temporary connections	Washington State Department of Transportation	2009-2012
Electrical Line Relocation	Phase 1: South Massachusetts Street to South King Street Phase 2: South King Street to Union Street	Remove network distribution lines and transmission lines that are located under the existing Viaduct before it is demolished	Washington State Department of Transportation	Phase 1: Construction scheduled for 2008-2009. Phase 2: To be determined.
Completion of BNSF Railway Improvements	King Street Station to South Royal Brougham Way	Reduce rail transportation conflicts along the BNSF right-of-way; increase safety at the BNSF crossing of South Royal Brougham Way	BNSF Railway	Improvements at South Royal Brougham Way have been completed; with additional improvements along the BNSF right-of-way currently in progress.
Central Link Light Rail	Downtown Seattle to Sea-Tac Airport	Provide light rail service between downtown Seattle and Sea-Tac Airport	Sound Transit	2008-2009
East Link Light Rail	Downtown Seattle to Redmond	Provide light rail service between downtown Seattle, Mercer Island, Bellevue, and Redmond	Sound Transit	Construction not scheduled. Environmental impact statement scheduled for release in fall 2009.
Proposed Commercial Development	South side of South Atlantic Street between First Avenue South and Utah Avenue South	Provide office and retail uses	Gull Industries	2010-2012
Livable South Downtown Planning Study	The study examines growth and planning issues specific to Pioneer Square, the Chinatown/International District (including the Little Saigon area east of I-5), and the northernmost edges of the Greater Duwamish Manufacturing and Industrial Center.	Stimulate housing and related development consistent with the Mayor's Center City Seattle strategy	City of Seattle, Department of Planning and Development	Environmental impact statement and legislative proposals in 2008

EXHIBIT 5-2. REASONABLY FORESEEABLE FUTURE ACTIONS IN OR NEAR THE STUDY AREA				
Project ^a	Location	Purpose	Proponent	Expected Construction Time Frame ^b
Closure of South Holgate Street at BNSF Railway Crossing	South Holgate Street at the BNSF Railway crossing	Eliminate conflicts between rail and vehicle traffic.	City of Seattle, Department of Transportation	Construction not scheduled
South Lander Street Grade Separation	South Lander Street between First Avenue South and Fourth Avenue South	Improve safety and traffic flow by constructing a roadway bridge for vehicles, bicycles, and pedestrians over the BNSF Railway tracks.	City of Seattle, Department of Transportation	2009-2011
South Spokane Street Viaduct Widening	South Spokane Street from Sixth Avenue South to West Seattle Bridge	Improve traffic safety and upgrade the structural and seismic performance of the viaduct that connects I-5 to the West Seattle High Level Bridge. Construct a new eastbound loop ramp to Fourth Avenue South, to the south of South Spokane Street.	City of Seattle, Department of Transportation	Seismic retrofit, median barrier installation, and street-level utility relocations have been completed. Viaduct widening and ramp construction is scheduled to start in 2008 and would be constructed in phases as funds become available, so exact construction range not known.
Bridging the Gap Paving Projects	Seattle arterial streets	As part of a larger program, the paving projects will resurface, restore, or replace approximately 300 lane-miles of arterial streets; rehabilitate or replace 3-5 bridges and seismically retrofit 5 additional bridges; repair or restore approximately 144 blocks of existing sidewalks; build approximately 117 blocks of new sidewalks; rehabilitate approximately 50 stairways; and restripe about 5,000 crosswalks.	City of Seattle, Department of Transportation	2006-2013
Central Waterfront Plan	South Atlantic Street to West Thomas Street along the shoreline edge of the Center City	Following replacement of the existing Alaskan Way Viaduct, construct new parks and open spaces, shoreline and habitat improvements, improved linkages to the downtown core, <i>and</i> transit connections, <i>and implement</i> land use and regulatory changes.	City of Seattle	Presently in planning process. Construction will begin with the removal of the viaduct and will be ongoing for several years.

EXHIBIT 5-2. REASONABLY FORESEEABLE FUTURE ACTIONS IN OR NEAR THE STUDY AREA				
Project ^a	Location	Purpose	Proponent	Expected Construction Time Frame ^b
Terminal 30 Conversion	East Marginal Way South between approximately South Holgate Street and South Lander Street	Terminal 30 had been used for cruise operations but will be converted back to its original use as a container terminal. This and the adjacent Terminal 25 will provide 70 acres for container use.	Port of Seattle	2007-2009
East Marginal Way Grade Separation Project	East Marginal Way South just south of South Spokane Street	Provide a north- and southbound grade separation on Duwamish Avenue South, relocating East Marginal Way through this corridor to improve access among Port of Seattle terminals, rail yards, and industrial warehouses.	Port of Seattle	2006-2008
Washington State Ferries Terminal Improvements at Colman Dock	Pier 54 at Seattle Waterfront on Alaskan Way South	Upgrade structures and facilities and increase capacity.	Washington State Department of Transportation	Construction not scheduled. For 2008-2009, focus will be on system-wide planning and coordination with nearby projects, including the proposed SR 519 Phase 2.
^a Only major planned projects are listed. Many other projects that could be implemented in the reasonably foreseeable future are not shown. ^b Dates are approximate. Sources: General information from the WSDOT, City of Seattle, Port of Seattle, and Sound Transit websites.				

The study examines growth and planning issues specific to Pioneer Square, the Chinatown/International District (including the Little Saigon area east of I-5), and the northernmost edges of the Greater Duwamish Manufacturing and Industrial Center. Preliminary recommendations were released by the City's Department of Planning and Development in March 2006. Land use and zoning changes considered as part of this process will require conducting an environmental review prior to legislative decision-making.

The project most likely to interact with the Proposed Action in the near future is the South Holgate Street to South King Street Viaduct Replacement Project, which will replace the south end of the Viaduct (Exhibit 5-1). That project, a Moving Forward project within the Alaskan Way Viaduct and Seawall Replacement Program, is scheduled for construction from 2009 to 2012, the same time frame as the Proposed Action, and it will be located immediately west of the proposed SR 519 improvements.

3 Would the Proposed Action contribute to cumulative effects on social and economic elements?

Construction-related effects from the South End Alaskan Way Viaduct Replacement Project, possibly the Electrical Line Relocation Project, and Bridging the Gap repaving projects would add to short-term construction effects of the Proposed Action because the projects would be under construction within the same time frame, resulting in a construction-related cumulative effect on social and economic elements between 2009 and 2012. The Electric Line Relocation project is scheduled to be completed in 2009, so it might not overlap with the Proposed Action. Construction activities could increase congestion in the study area, which could reduce freight mobility, impede access to businesses, and require pedestrians and bicyclists to use other routes due to sidewalk closures or detours. Additional noise, light, and glare associated with construction equipment would also temporarily affect any

residents, businesses, or users of the Mountains to Sound Greenway Trail.

Over the long term, the Proposed Action would make a beneficial contribution to economic elements from improvements in freight mobility and connectivity, and social elements would benefit from the new pedestrian crossing and bicycle-only lanes, which would improve safety as well as allowing interaction with other neighborhoods and improve connections to future transit improvements in the study area. The study area has been associated with industrial activities since Seattle was incorporated, and although certain developments have introduced recreational and commercial components to the area, as described in Chapter 3, the study area has few residents or social resources. Apart from improving safety, therefore, the Proposed Action would not contribute much to cumulative effects on social elements.

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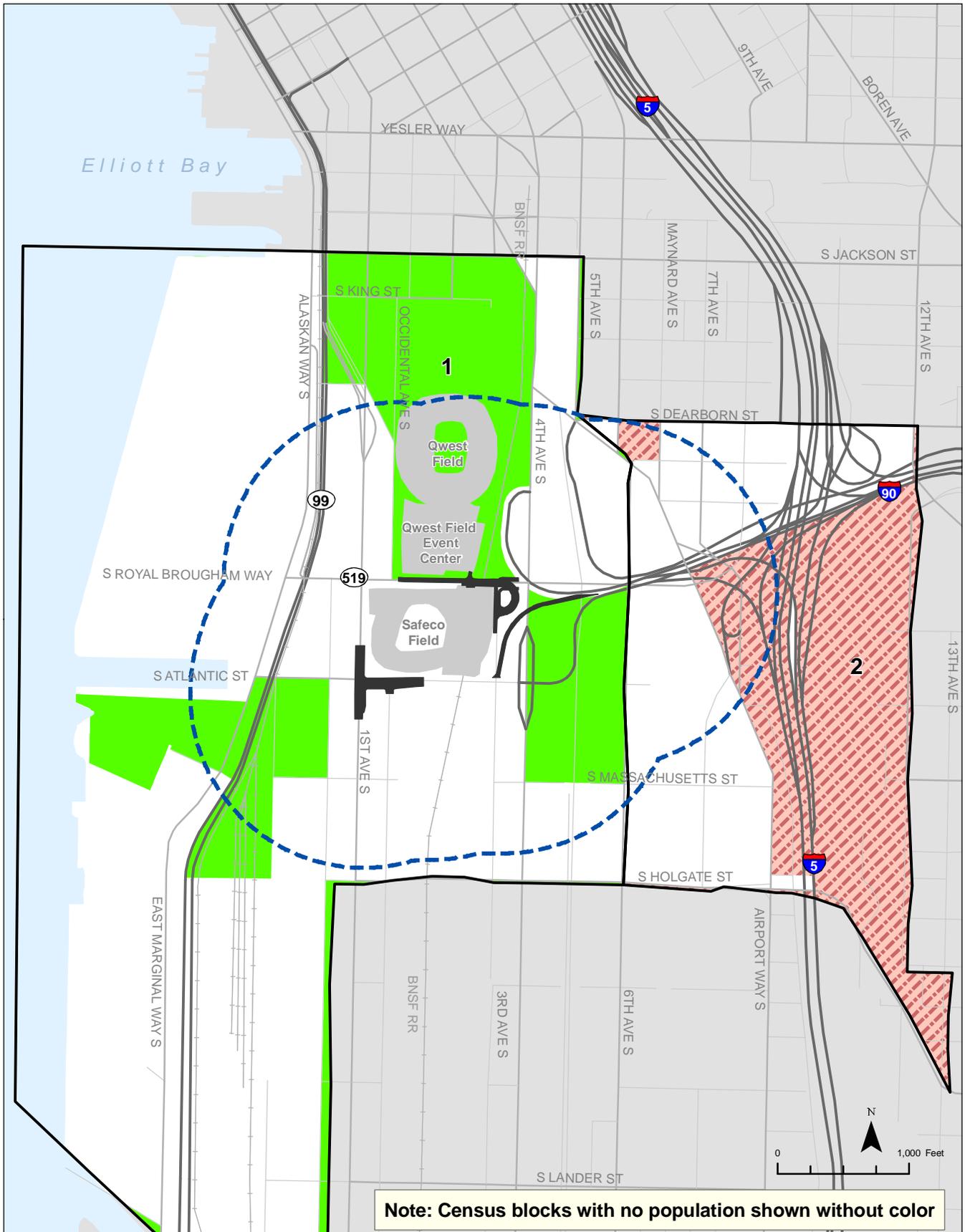
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Appendix A

Demographic Data

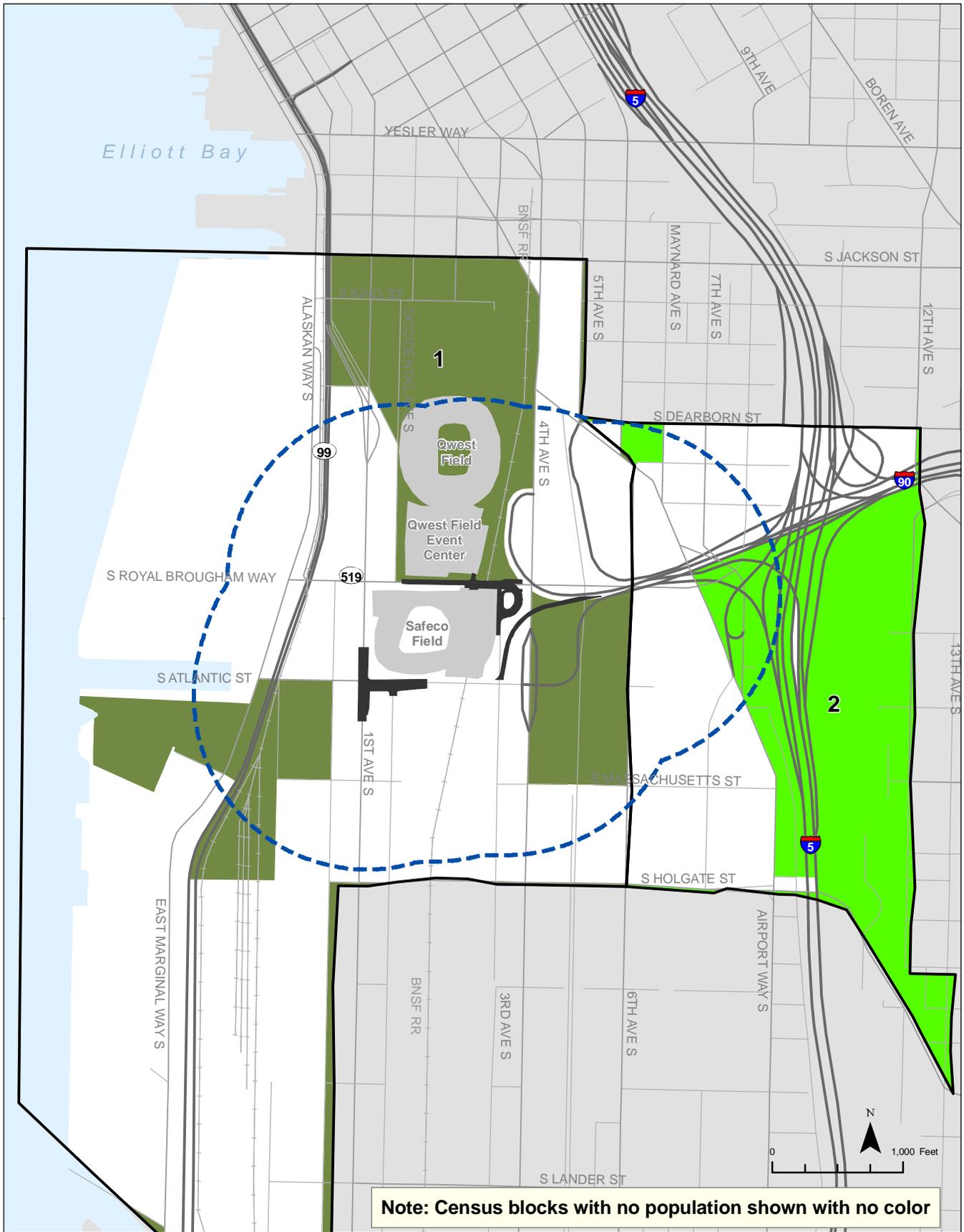


Source: US Census (2000), City of Seattle (2006), and King County (2005)

Percent of minority population within Census block group



**Exhibit A-1
Minority Population**



Source: US Census (2000), City of Seattle (2006), and King County (2005)

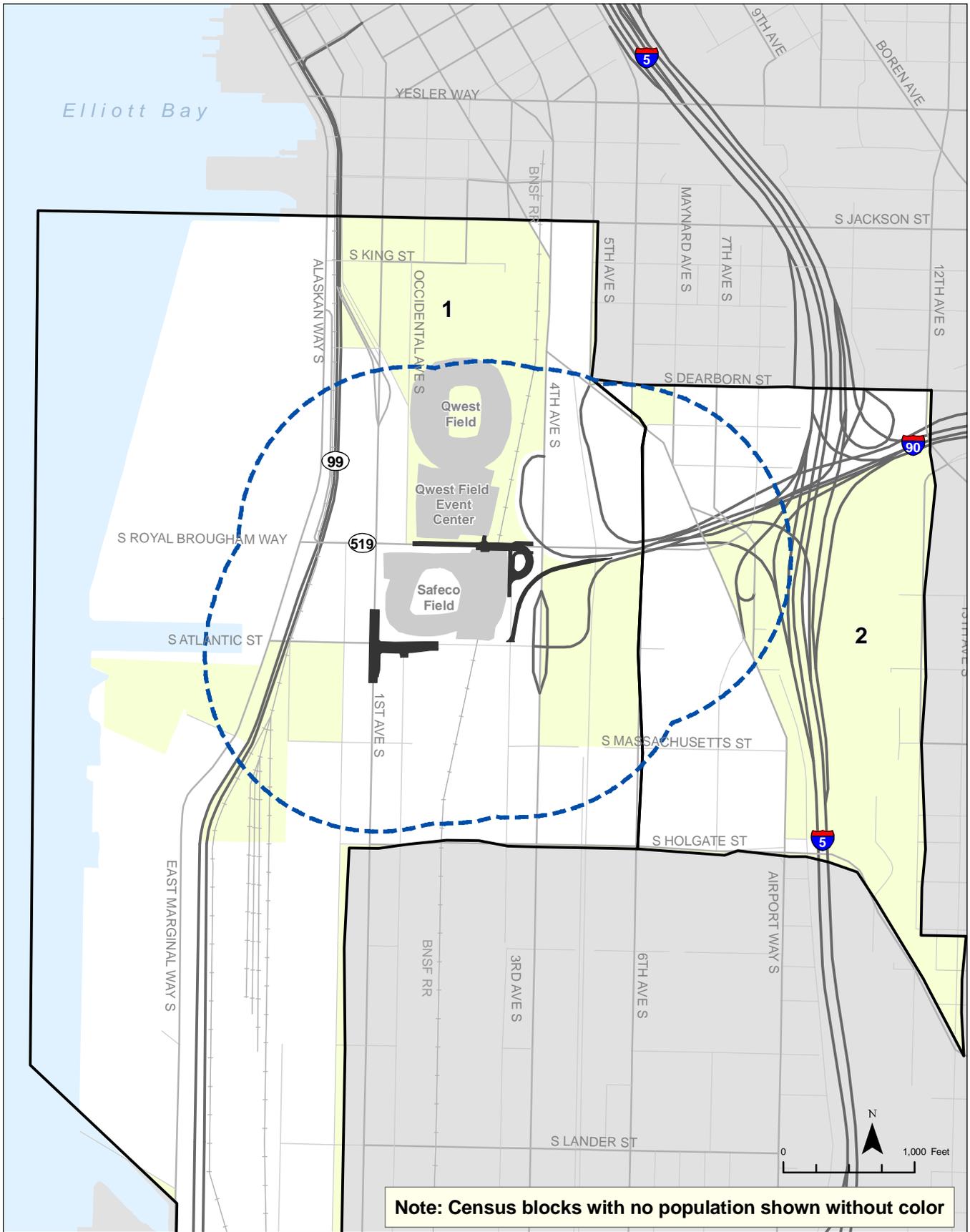
Percent of low-income population within Census block groups



1/4-Mile Radius

Project

Exhibit A-2
Low-Income Population



Source: US Census (2000), City of Seattle (2006), and King County (2005)

Percent of limited-English-proficient population within Census block groups

- 0% - 5%
- 5% - 10%
- 10% - 100%
- Block Group Boundary
- 1/4-Mile Radius
- Project

Exhibit A-3
**Limited English
 Proficient Population**

EXHIBIT A-4. 2000 U.S. CENSUS DEMOGRAPHIC DATA

ID	Total Population	Minority	Percent Minority	Population Poverty Determined	Income Below Poverty Level	Percent Low Income	English Proficiency	Limited English Proficiency	Percent with Limited English Proficiency	English	Spanish	European	Asian	Other
1	662	172	26.0	623	305	49.0	653	0	0.0	613	0	40	0	0
2	928	543	58.5	898	262	29.2	822	38	4.4	586	42	31	136	65
	1,590	715	42.2	1,521	567	39.1	1,475	38	2.2	1,199	42	71	136	65

EXHIBIT A-5. PUBLIC SCHOOL DATA FOR SEATTLE 2004/2005

School	Students	American Indian / Alaskan	Asian	African American	Hispanic ¹	White	Free/Reduced-Price Lunch Eligible
Gatzert Elementary School	342	9	80	161	74	18	315
Maple Elementary School	415	10	275	41	64	25	248
Total	757	19	355	202	138	43	563
Percent		2.5%	46.9%	26.9%	18.2%	5.7%	74.7%

¹School data include Hispanic population as a race, unlike Census data which count Hispanic population as an ethnicity and not as a race.
Source: Common Core of Data, 2007.