

SECTION 1 INTRODUCTION

What are the primary features of the Tukwila to Renton Project?

WSDOT is proposing to construct the I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2), referred to as the Tukwila to Renton Project, to relieve congestion. The Tukwila to Renton Project extends approximately four and one half miles along Interstate 405 (I-405), from I-5 to State Route 169 (SR 169), and approximately two miles along SR 167, from I-405 to SW 43rd Street. The project will:

- Add capacity to both I-405 and SR 167.
- Replace bridges over the Green River and Cedar River and add one new bridge over the Green River.
- Improve the SR 181 and SR 169 interchanges.
- Reconstruct the SR 167 interchange consisting of new general-purpose direct-connector ramp from southbound I-405 to southbound SR 167, HOV direct-connector ramps from northbound SR 167 to northbound I-405 and from southbound I-405 to southbound SR 167, and a split-diamond interchange at Lind Avenue and Talbot Road with connecting frontage roads.
- Replace the two local street accesses to Renton Hill.

These improvements represent the second phase of the I-405 Corridor Program for this portion of I-405. The first phase consists of improvements in the Renton Nickel Improvement Project.

What is the purpose of this report?

The purpose of this report is to document project outreach, benefits, and effects on minority and low-income populations within the study area, and determine if the negative effects are disproportionately high and adverse.

What topics are included in environmental justice?

This environmental justice analysis considers environmental disciplines that could affect the community, including:

- Social, Public Services, and Utilities

- Noise and Vibration
- Air Quality
- Economic effects to local businesses
- Property Acquisitions
- Hazardous Materials
- Cultural, Historic, and Archaeological Resources
- Land Use Patterns, Plans, and Policies
- Section 4(f) (parks and other public spaces)
- Transportation
- Visual Quality

Why is environmental justice important to consider?

Environmental justice is important to consider in order to protect minorities and/or low-income populations from experiencing disproportionately high and adverse effects. President Clinton signed Executive Order 12898 requiring federal agencies to identify and avoid “disproportionately high and adverse” effects on minority and/or low-income populations for federal programs that affect human health or the environment. Incorporating environmental justice principles throughout the transportation planning and decision-making processes supports the principles of the National Environmental Policy Act (NEPA). Environmental Justice principles support Title VI of the Civil Rights Act; the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; TEA-21; SAFETEA-LU; and other Department of Transportation (DOT) statutes, relocation regulations, and guidance that affect social, economic, environmental, public health, and public involvement.

Why is public involvement important?

Public involvement is important because it expands the number of people involved in the decision-making process. Information exchanged as part of engaging the public can assist in identifying potential adverse community effects and in reducing these effects. Public involvement includes providing meaningful access to public information concerning the human health, social, or environmental effects of a project

and soliciting input from affected minority and low-income populations. These efforts are reflected in our Public Involvement Plan. The goals of the plan are to support the successful delivery of the project; educate the public about the mobility, economic, and environmental benefits of the project; identify and address through mitigation any disproportionately high and adverse effects on minority and/or low-income populations; provide information on construction; reinforce positive relationships with other agencies, individuals, and groups; and educate the public about the need, vision, and context for the project.

Key stakeholders for the project include area residents; businesses; schools; agencies; elected officials; tribes; organizations; and special populations such as elderly, disabled, minority, and low-income populations.

What studies were completed?

Studies for the environmental disciplines listed in the previous section, titled *What topics are included in environmental justice?*, were completed and used to analyze environmental justice effects.

What are the key messages from this report?

The project is expected to have some adverse construction and operational effects on both the built and natural environments. WSDOT will mitigate these effects in accordance with applicable local, state, and federal regulations. Project effects will not result in disproportionately high or adverse effects on minority or low-income populations. Minority and low-income populations will experience some benefits from the project, primarily due to improvements to HOV facilities. Minority and low-income populations use public transportation proportionately more than non-minority and non-low-income populations, so improvements to transit facilities are especially beneficial to them.

What measures are proposed to avoid or reduce impacts?

Each discipline report lists the measures to minimize long-term or short-term effects for each element of the environment. Because we do not anticipate that the project will cause any long-term, disproportionately high and adverse effects to low-

income or minority populations, activities to avoid or minimize adverse effects specific to environmental justice will not be required. Some suggestions to help inform minority and low-income populations about project construction activities are listed in the section, *What measures will be taken to mitigate effects during construction?*

What will happen if we adopt the No Build Alternative?

Choosing the No Build Alternative will avoid or delay adverse noise, visual, relocation, and construction effects. However, with the No Build Alternative, the flow of traffic will become so constrained that not all drivers wishing to use I-405 or SR 167 will be able to do so. Freeway delays will force drivers to seek alternate routes on local and regional roadways, choose to travel by different means or different times, or forego their desired trips altogether. Higher numbers of drivers seeking alternate routes could lead to more cut-through traffic through neighborhoods, and additional air quality, social, and safety effects associated with increased neighborhood traffic. In addition, the HOV and safety benefits will not be realized under the No Build Alternative. The lost transit travel time savings under the No Build Alternative in particular will negatively affect minority and low-income populations who rely on transit to reach their destinations.

SECTION 2 PROJECT DESCRIPTION

What is the intent of the Tukwila to Renton Project?

WSDOT is proposing to construct the I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2), referred to as the Tukwila to Renton Project, to relieve congestion. Relieving congestion will benefit the public by:

- Lowering the number of accidents thus improving safety.
- Increasing overall speeds through this section of freeway.
- Improving response times for emergency service vehicles using I-405.
- Improving access to and from I-405 and local circulation.

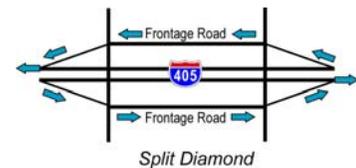
The Tukwila to Renton Project extends approximately four and one half miles along I-405, from I-5 to SR 169, and approximately two miles along SR 167, from I-405 to SW 43rd Street. The project adds capacity to both I-405 and SR 167; improves the SR 181 and SR 169 interchanges; reconstructs the SR 167 interchange consisting of a split-diamond interchange at Lind Avenue and Talbot Road with connecting frontage roads, general-purpose direct-connector ramp from I-405 to SR 167 southbound, and high-occupancy vehicle (HOV) direct-connector ramps from SR 167 northbound to I-405 northbound and from I-405 southbound to SR 167 southbound. These improvements are detailed in the following section.

What are the details of the Tukwila to Renton Project?

The Tukwila to Renton Project improvements are described from west to east (northbound) along the study area on the following pages. These improvements are also illustrated on Exhibits 2-1 through 2-15.

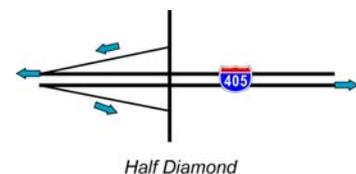
What is a split-diamond interchange?

This interchange type consists of two half-diamond interchanges at arterials. These are connected by two, one-way frontage roads. Traffic enters and exits the freeway at the two arterials, creating an elongated diamond configuration as shown.



What is a half-diamond interchange?

It is an interchange where traffic exits or enters the freeway in one direction. This creates a triangular or half-diamond configuration as shown.



I-405, TUKWILA TO RENTON IMPROVEMENT PROJECT (I-5 TO SR 169 - PHASE 2)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

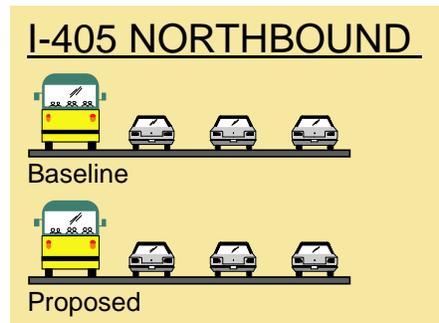
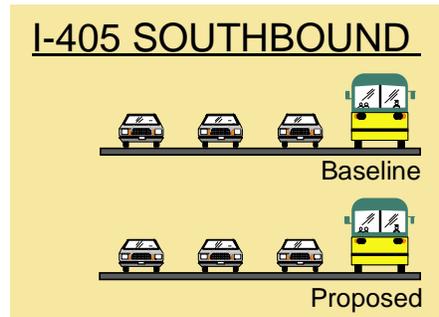
Exhibit 2-1: Project Features, Sheet 1



I-405 from I-5 to East of SR 181

For this portion of the project, WSDOT will:

- Remove the existing northbound I-405 Tukwila Parkway on-ramp. See Exhibits 2-2 and 2-3 for where the project will provide a new on-ramp.
- Realign I-405 mainline slightly to the south beginning just west of the existing northbound I-405 Tukwila Parkway on-ramp to the SR 181 interchange as shown in Exhibits 2-1 and 2-2.



The project will not change capacity along this section

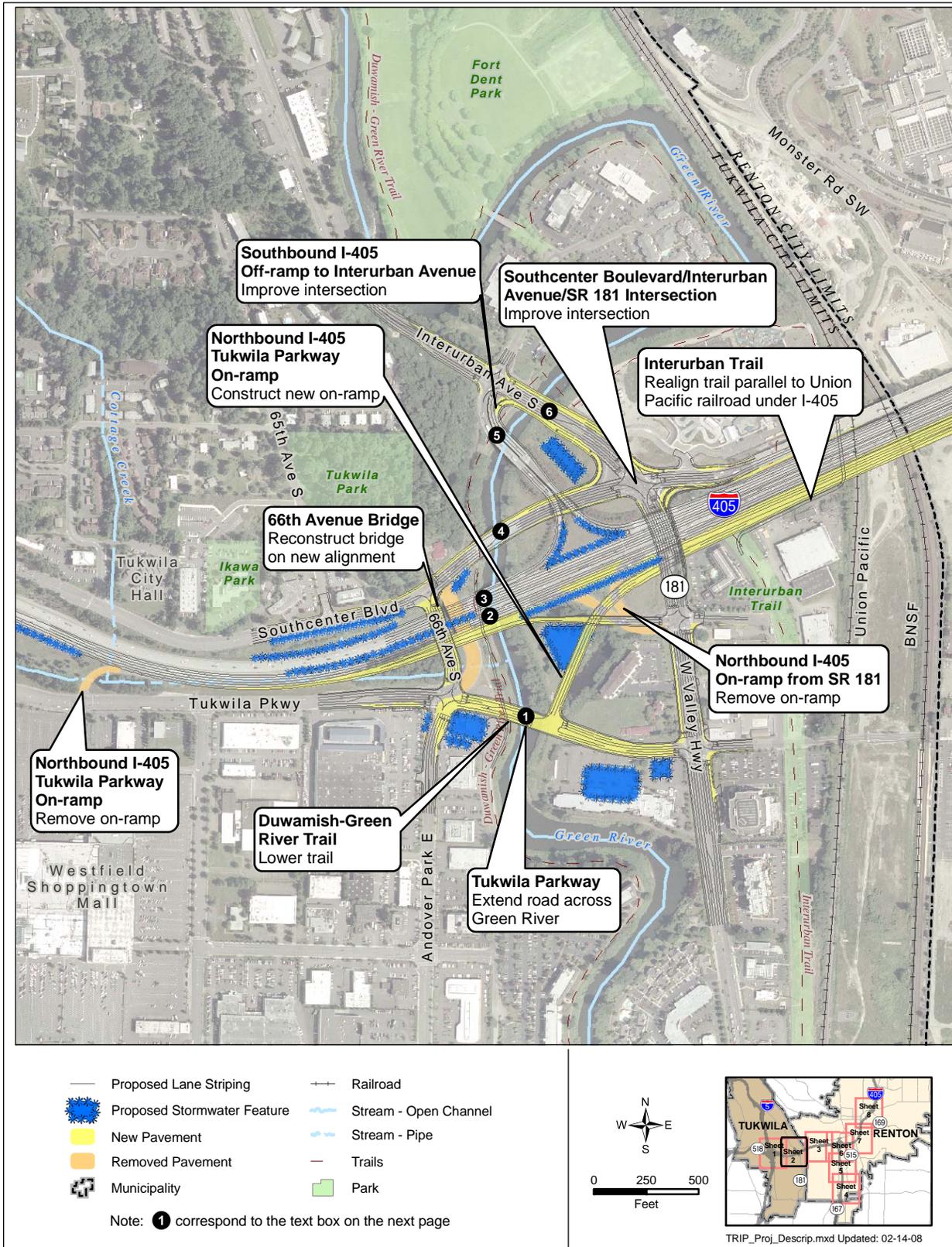
What are baseline conditions for this project?

Baseline conditions describe the site conditions just before construction of the project begins. This can include the build conditions of earlier phased projects that are already approved and funded and expected to be complete before the next project begins. Baseline provides an important point of comparison for understanding the effects of the proposed build alternative.

For the Tukwila to Renton Project, the baseline condition assumes that the Renton Nickel Improvement Project has been completed.

I-405, TUKWILA TO RENTON IMPROVEMENT PROJECT (I-5 TO SR 169 - PHASE 2)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

Exhibit 2-2: Project Features, Sheet 2



I-405 at SR 181 Interchange

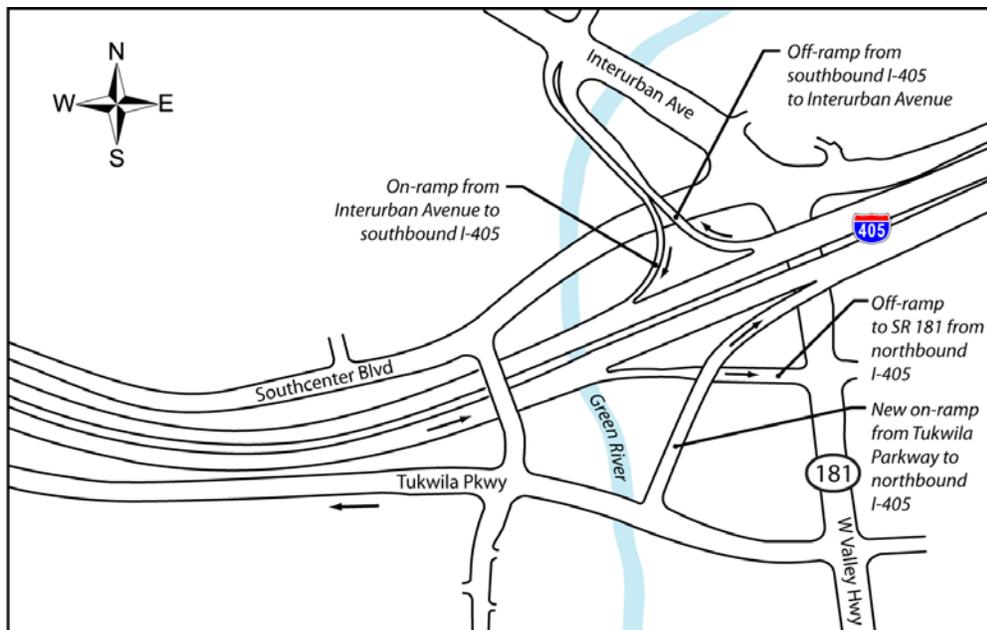
WSDOT designed the improvements in Exhibits 2-2 and 2-3 to improve freeway and local travel in this area. WSDOT will:

- Improve the SR 181 interchange:
 - Remove the existing SR 181 on-ramp to northbound I-405.
 - Extend Tukwila Parkway from the intersection with 66th Avenue east over the Green River to SR 181.
 - Construct new northbound I-405 on-ramp from Tukwila Parkway just east of the new crossing over the Green River (replaces the two existing on-ramps).
 - Reconstruct the 66th Avenue S bridge over I-405 on a new alignment to the west and reconstruct the intersections with Southcenter Boulevard and Tukwila Parkway.
 - Reconstruct the off-ramp from northbound I-405 to SR 181.
 - Improve local arterials within the interchange area such as Southcenter Boulevard and Interurban Avenue.
- Reconstruct five bridges and build one new bridge over the Green River.
- Lower the Duwamish-Green River Trail.
- Reconstruct the I-405 structures over SR 181.
- Realign the Interurban Trail.

What bridge construction will occur over the Green River?

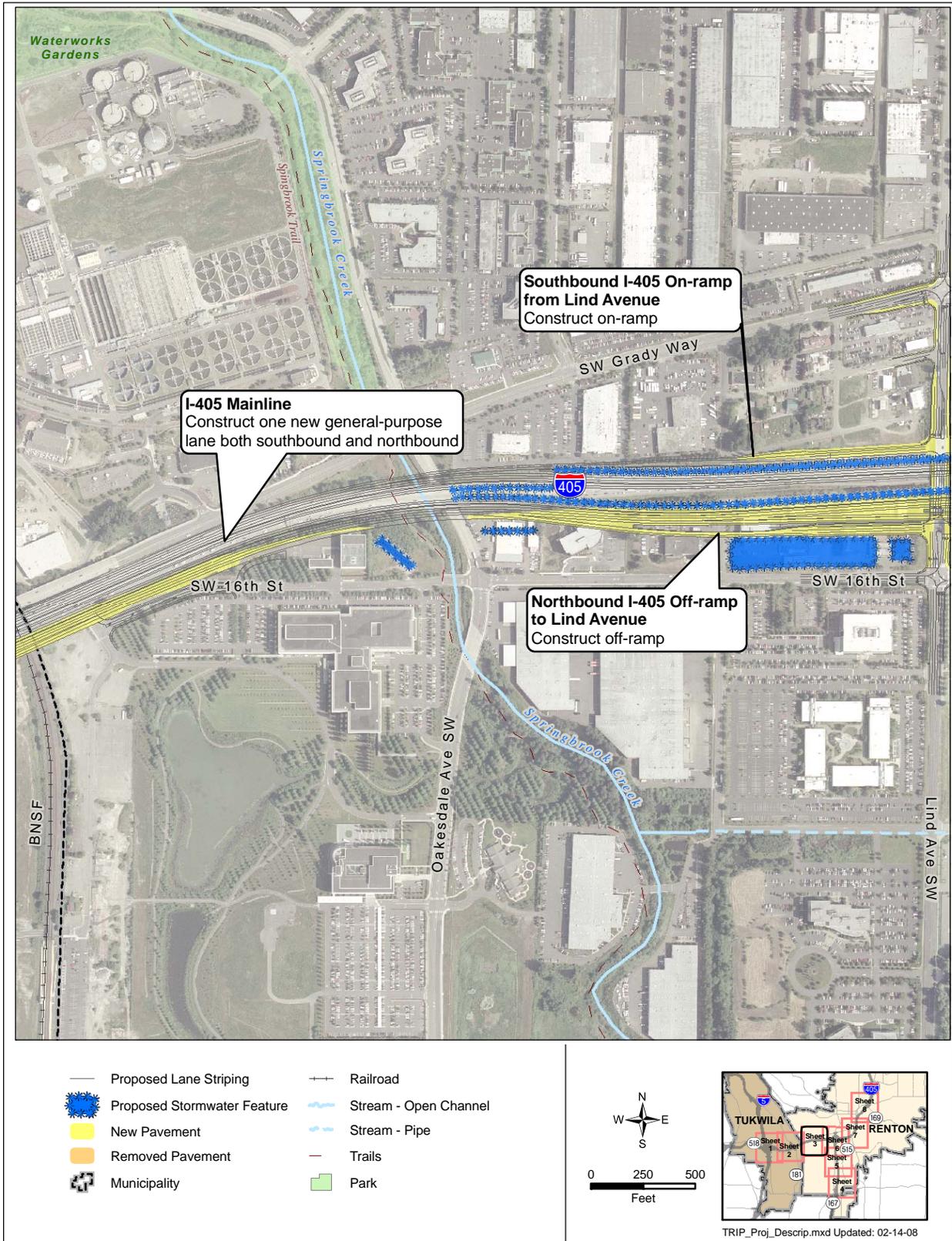
- ① Tukwila Parkway Bridge (new)
 - ② Northbound I-405 Bridge
 - ③ Southbound I-405 Bridge
 - ④ Southcenter Boulevard Bridge
 - ⑤ Off-Ramp Bridge from southbound I-405.
 - ⑥ Interurban Avenue Bridge
- See Exhibit 2-2 for the bridge locations.

Exhibit 2-3: SR 181 Interchange Improvements



I-405, TUKWILA TO RENTON IMPROVEMENT PROJECT (I-5 TO SR 169 - PHASE 2)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

Exhibit 2-4: Project Features, Sheet 3



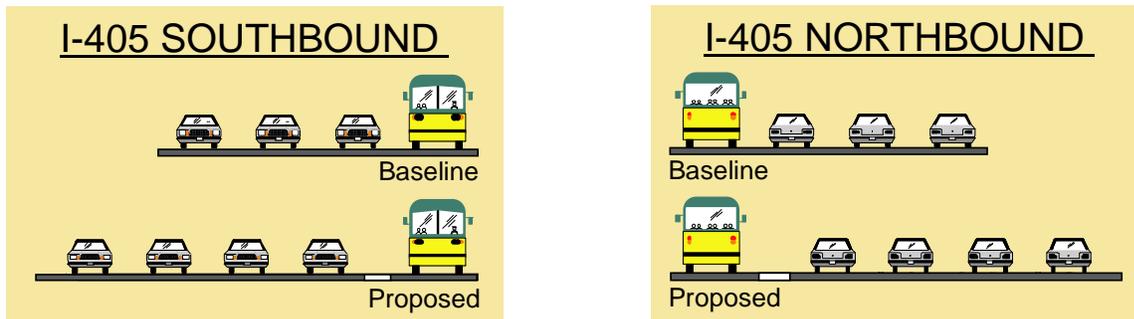
I-405 from East of SR 181 to SR 167 Interchange

From the SR 181 interchange east, WSDOT will realign I-405 to the south. This will:

- Provide a smooth transition onto the new Springbrook Creek/Oakesdale Avenue bridge that was constructed under the Renton Nickel Improvement Project.
- Minimize effects on SW Grady Way and businesses north of I-405.

In addition to realigning I-405, WSDOT will:

- Construct one additional general-purpose lane in both directions on I-405 from SR 181 through SR 167.
- Stripe lanes to provide a buffer between HOV and general-purpose lanes along I-405.

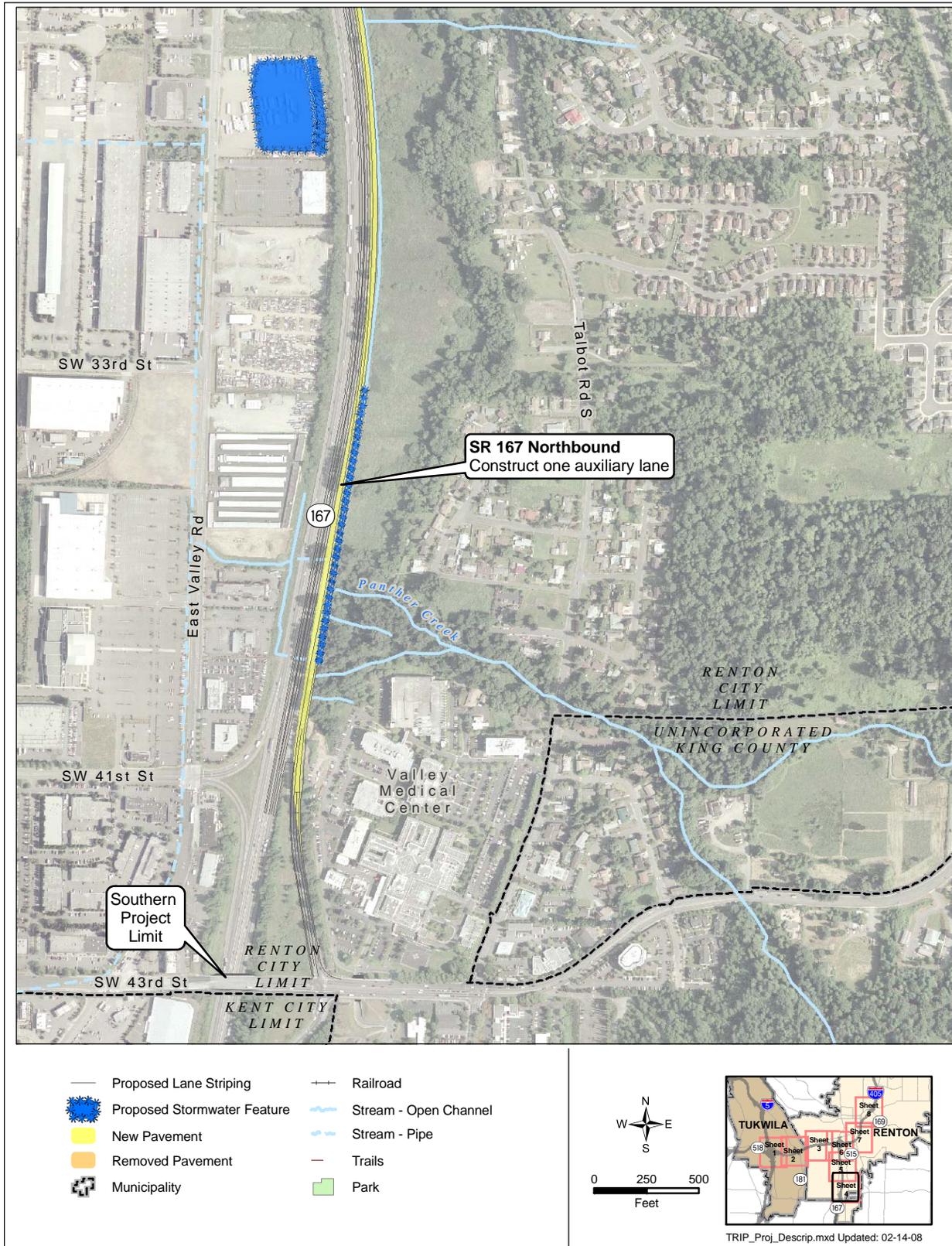


Project improvements will add capacity to I-405 for both southbound and northbound traffic and will provide a buffer between the HOV lane and the general-purpose lanes

- Stripe the bridges over Springbrook Creek/Oakesdale Avenue to provide five lanes in both directions.
- Reconstruct I-405 structures over the Burlington Northern Santa Fe (BNSF) and Union Pacific railroads.
- Construct a half-diamond interchange at Lind Avenue (see sidebar on page 2-1).

I-405, TUKWILA TO RENTON IMPROVEMENT PROJECT (I-5 TO SR 169 - PHASE 2)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

Exhibit 2-5: Project Features, Sheet 4

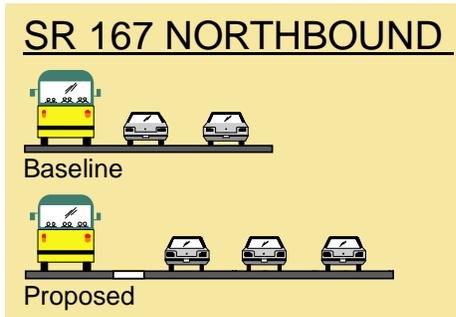


SR 167 from SW 43rd Street On-ramp North to SW 27th Street

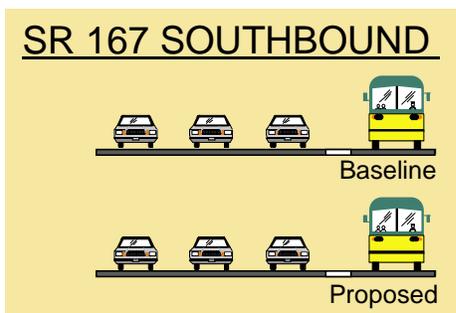
In this area, WSDOT will:

- Construct an auxiliary lane on northbound SR 167 from SW 43rd Street to SW 27th Street.
- Stripe lanes to provide a buffer between HOV and general-purpose lanes along northbound SR 167.

As shown on Exhibit 2-5, the new northbound lane will be added north of the SW 43rd Street on-ramp. This will improve the ability of traffic to merge onto SR 167 and increase capacity along this stretch. To minimize effects on the streams and wetlands along SR 167, WSDOT has used retaining walls instead of fill slopes.



Project improvements will add capacity to northbound SR 167 and will provide a buffer between the HOV lane and the general-purpose lanes



The project will not affect the southbound lanes of SR 167

What is an auxiliary lane?

An auxiliary lane is a lane added between interchanges—from one on-ramp to the next off-ramp. It is dedicated to traffic entering and leaving the freeway and provides motorists with more time and extra room to accelerate or decelerate and merge when getting on and off the freeway.

The signs below show how an auxiliary lane changes how an on-ramp operates.

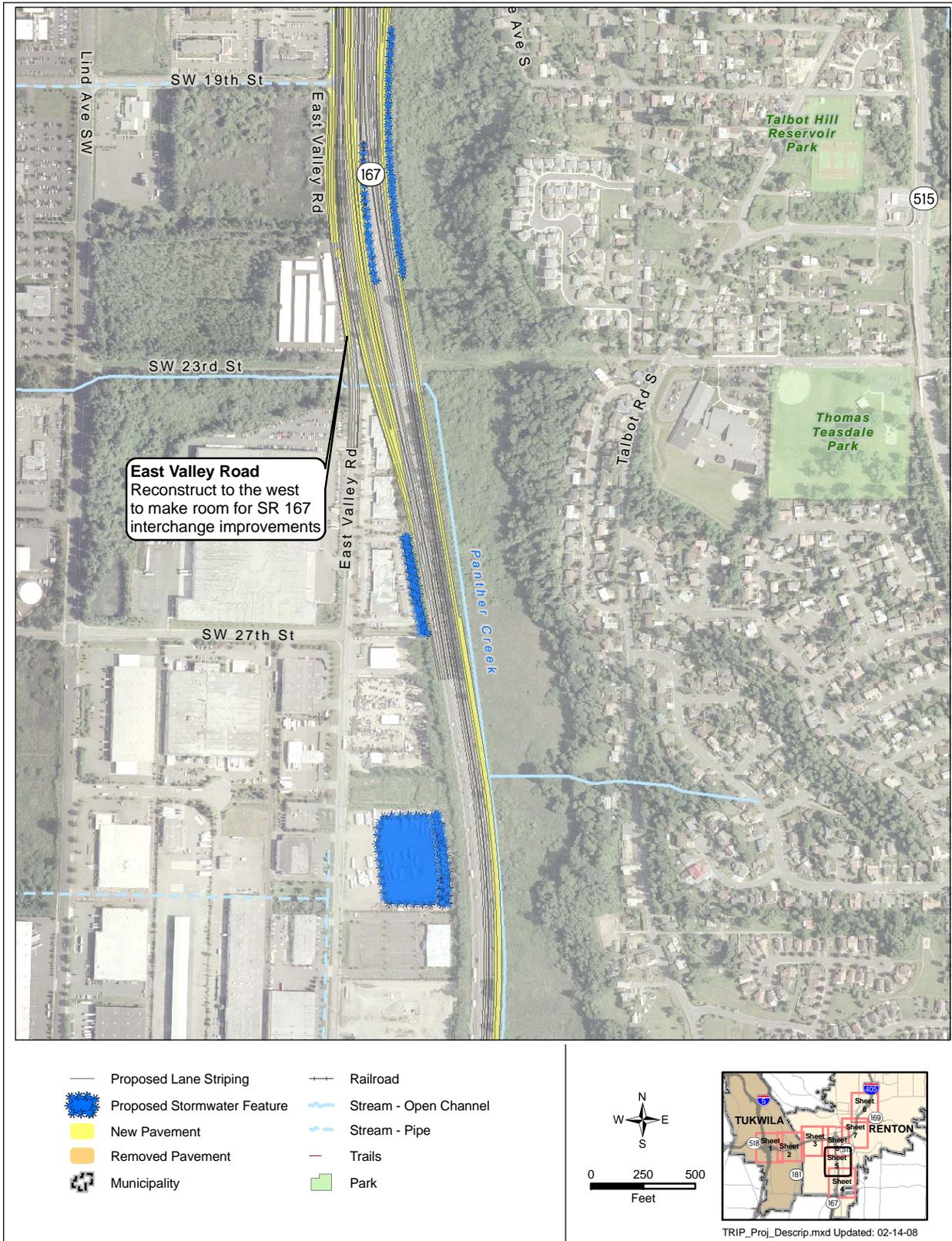


Existing



Proposed

Exhibit 2-6: Project Features, Sheet 5

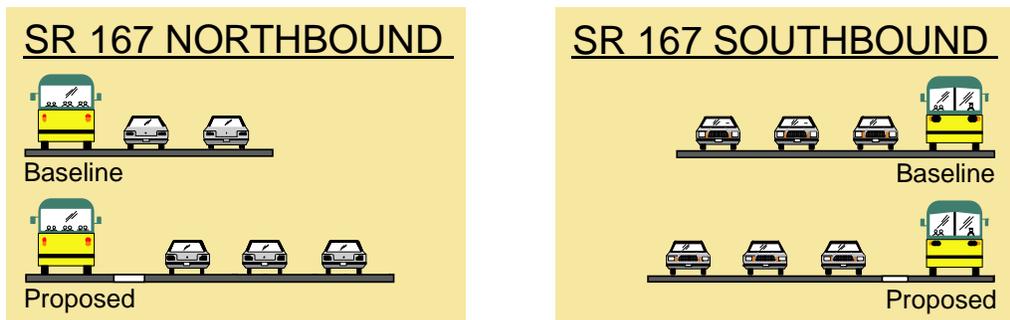


SR 167 from SW 27th Street to I-405

Along this section of SR 167, the project will:

- Reconstruct SR 167 between SW 27th Street and I-405 to accommodate the reconstructed SR 167 interchange as shown on Exhibits 2-7 to 2-9.
- Reconstruct East Valley Road to the west of its current alignment between SW 23rd Street and SW 16th Street to accommodate the reconstructed SR 167 interchange.
- Stripe lanes to provide a buffer between HOV and general-purpose lanes along SR 167.
- Construct an auxiliary lane on northbound SR 167 from SW 27th Street to I-405.

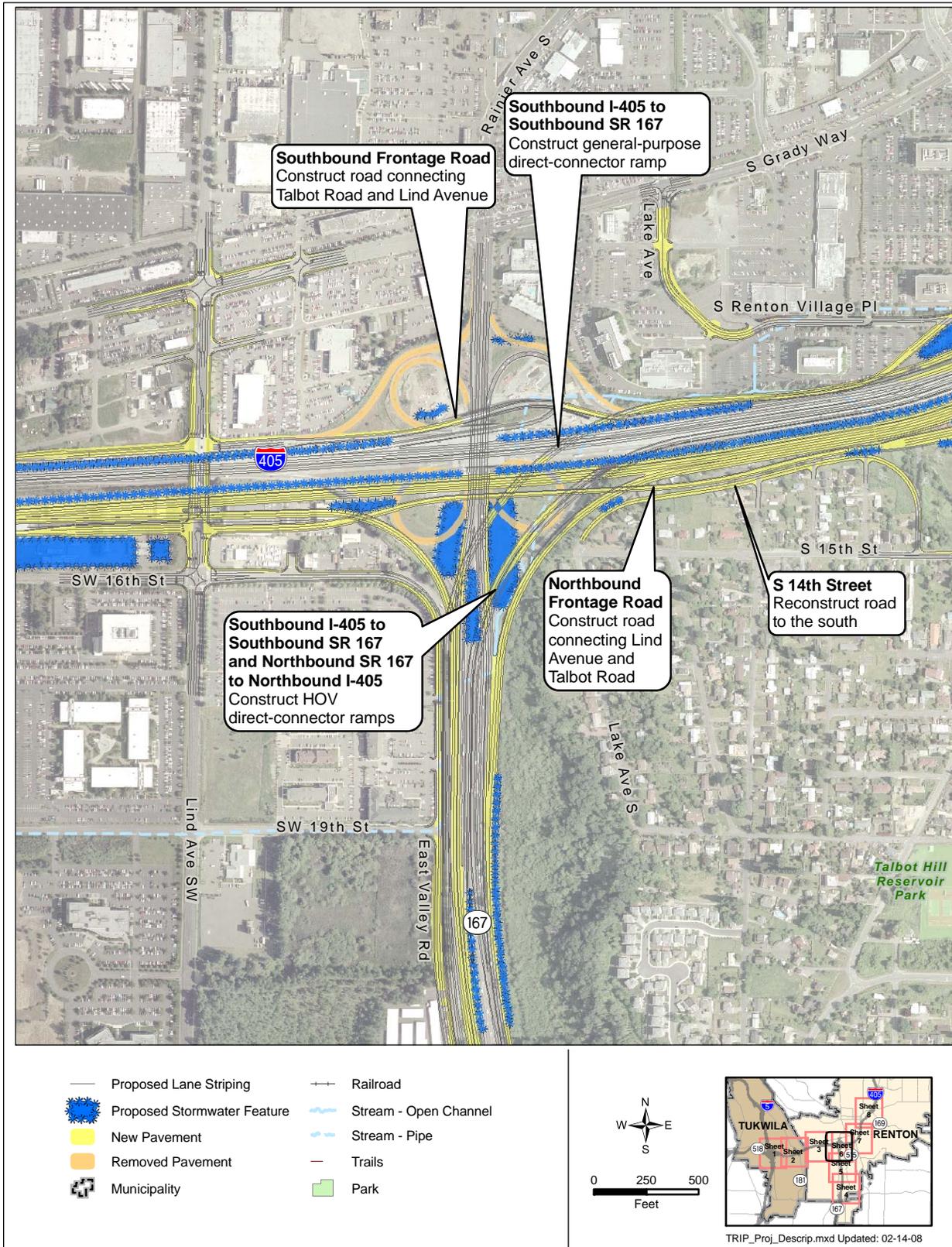
WSDOT has designed the improvements in this area to the west as much as possible to minimize effects on the Panther Creek wetlands while also limiting the effects on businesses west of SR 167. To further minimize the area needed to accommodate the improvements, the new southbound I-405 to southbound SR 167 direct-connector ramp will be built over local street and freeway improvements as shown on Exhibit 2-9. WSDOT also used design features such as retaining walls to minimize the area needed for improvements.



Project improvements will add capacity to northbound SR 167 and will provide a buffer between the HOV lane and the general-purpose lanes in both the northbound and southbound directions of SR 167

I-405, TUKWILA TO RENTON IMPROVEMENT PROJECT (I-5 TO SR 169 - PHASE 2)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

Exhibit 2-7: Project Features, Sheet 6



I-405 Interchange with SR 167

Within the I-405/SR 167 interchange, the project will improve freeway to freeway access and local access.

Freeway to Freeway Access

To improve access, WSDOT will:

- Construct a general-purpose direct-connector ramp from southbound I-405 to southbound SR 167, replacing the existing loop ramp.
- Reconstruct exterior ramps from northbound I-405 to southbound SR 167 and from northbound SR 167 to northbound I-405, replacing the existing ramps. This project will also add a general-purpose lane to both ramps.
- Construct HOV direct-connector ramps from southbound I-405 to southbound SR 167 and from northbound SR 167 to northbound I-405.
- Maintain existing loop ramp from northbound SR 167 to southbound I-405.

Exhibit 2-8 focuses on the freeway to freeway interchange improvements and Exhibit 2-9 presents how these improvements will look.

Exhibit 2-8: Freeway to Freeway Ramps in Reconstructed I-405/SR 167 Interchange

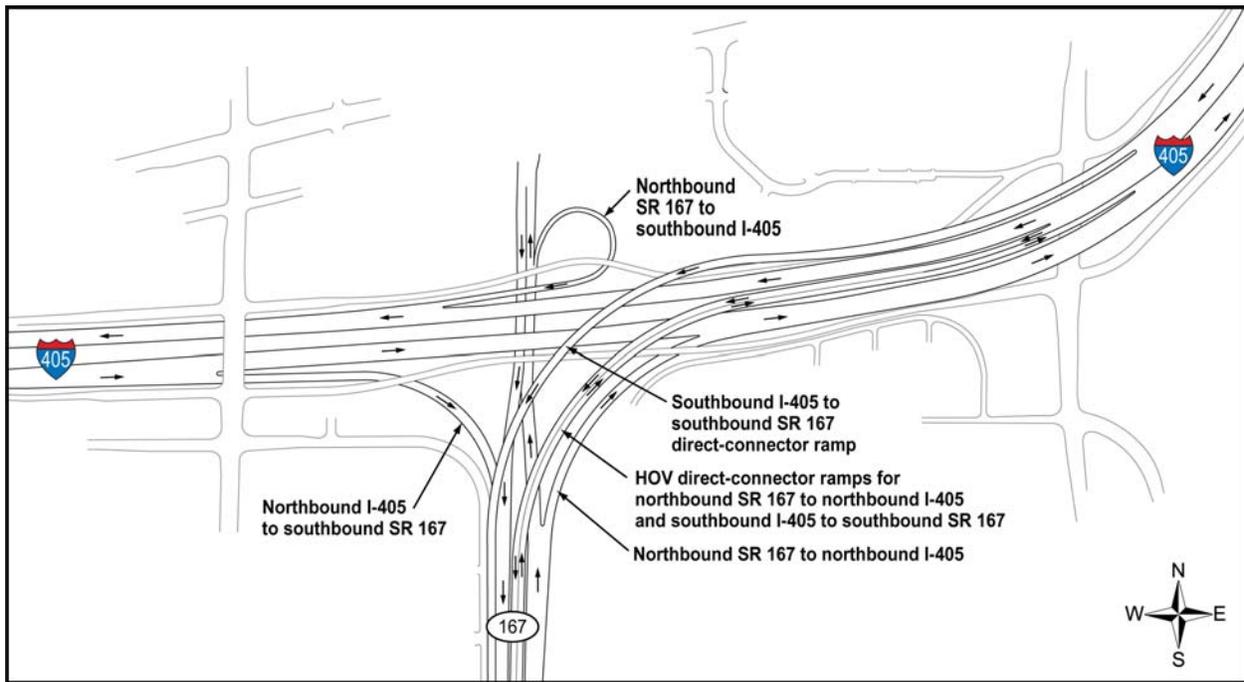


Exhibit 2-9: Rendering of I-405/SR 167 Interchange Improvements

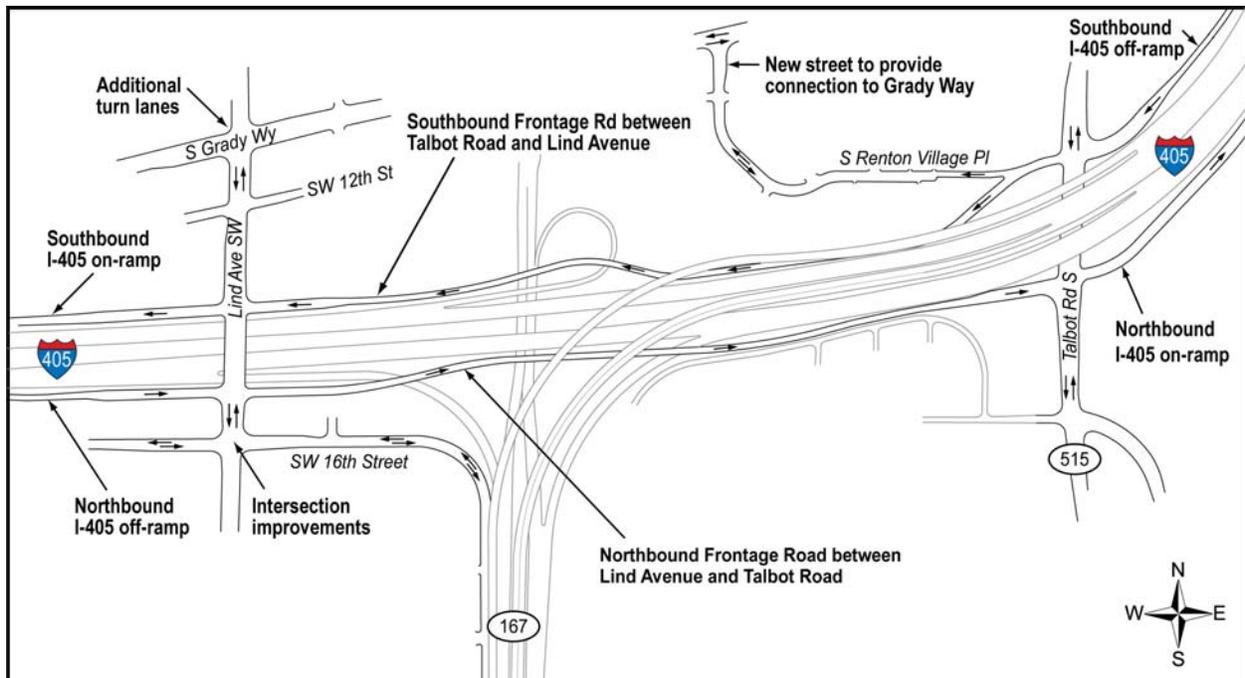


Local Access

WSDOT will improve local access at the SR 167 interchange. The improvements will:

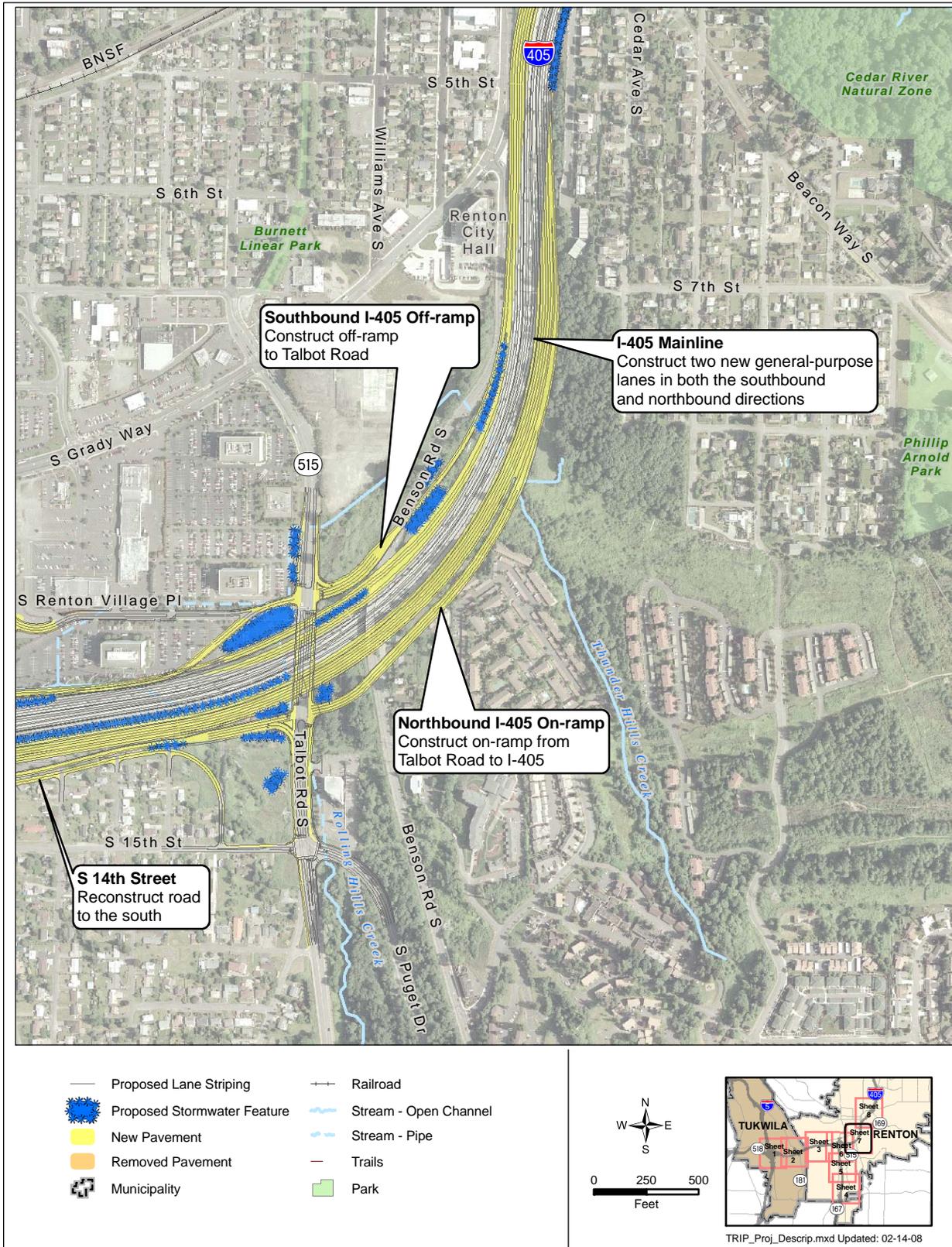
- Construct a split-diamond interchange at Lind Avenue and Talbot Road (SR 515). See Exhibits 2-10 and 2-11.
- Construct southbound and northbound frontage roads connecting Lind Avenue and Talbot Road. The southbound frontage road will reuse the existing I-405 to SR 167 southbound bridge.
- Reconstruct the Lind Avenue bridge over I-405.
- Reconstruct the I-405 structures over Talbot Road.
- Improve local street intersections.
- Provide new connection to Grady Way from S Renton Village Place.

Exhibit 2-10: Split-diamond Interchange at Lind Avenue and Talbot Road



I-405, TUKWILA TO RENTON IMPROVEMENT PROJECT (I-5 TO SR 169 - PHASE 2)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

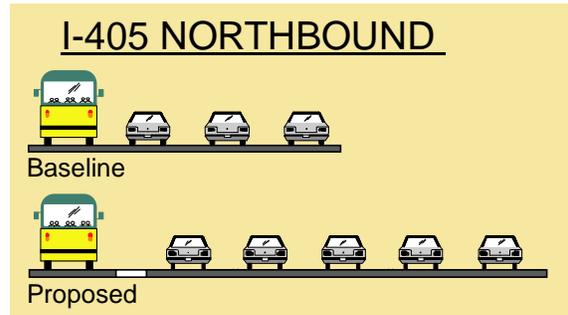
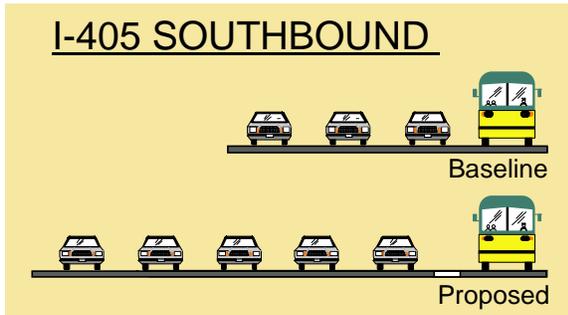
Exhibit 2-11: Project Features, Sheet 7



I-405 from East of SR 167 Interchange to North of S 5th Street

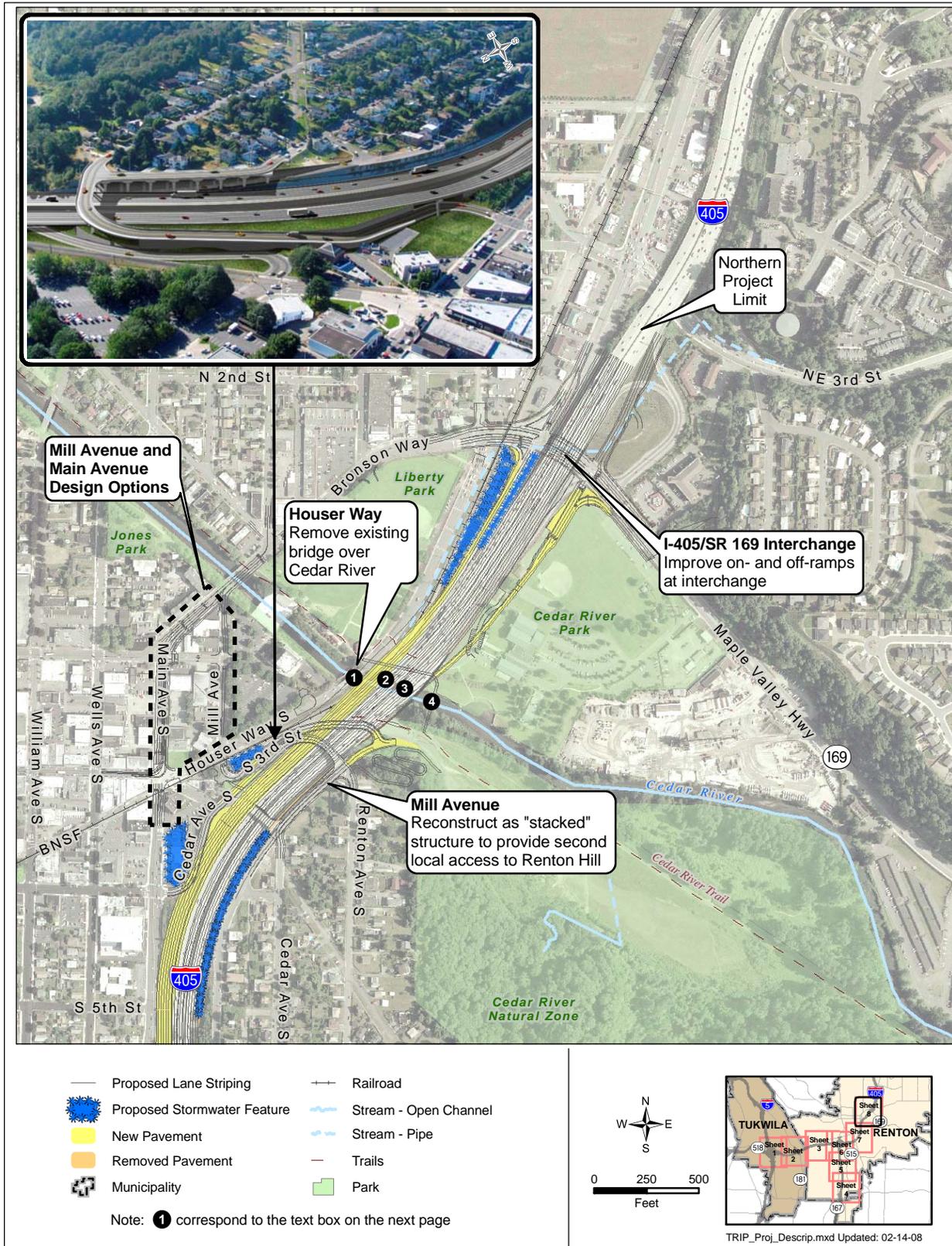
For the section of I-405 that extends from the SR 167 interchange past Renton City Hall as shown on Exhibit 2-11, WSDOT will:

- Construct two additional lanes in both directions on I-405 from SR 167 through SR 169.
- Stripe lanes to provide a buffer between HOV and general-purpose lanes along I-405.
- Construct a new half-diamond interchange at Talbot Road as shown on Exhibit 2-10.
- Reconstruct S 14th Street south of its existing location.



Project improvements will add capacity to I-405 for both southbound and northbound traffic and will provide a buffer between the HOV lane and the general-purpose lanes

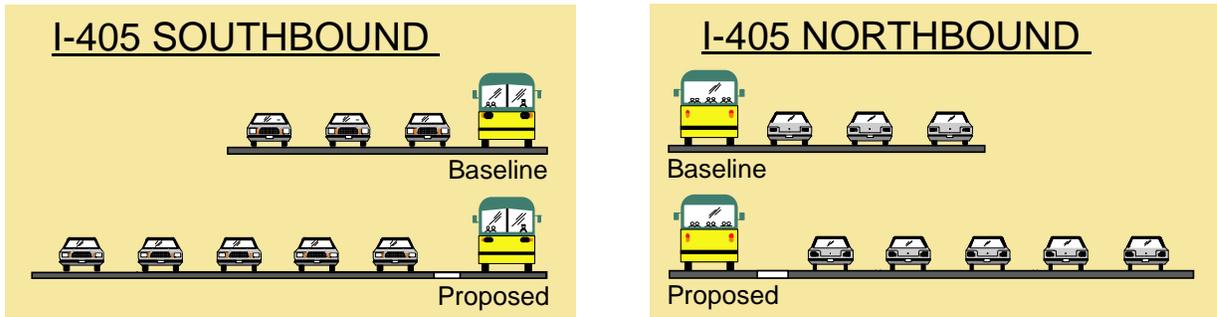
Exhibit 2-12: Project Features, Sheet 8



I-405 from S 5th Street to SR 169

This last portion of the Tukwila to Renton Project crosses the Cedar River to the SR 169 interchange. In this section, WSDOT will:

- Construct two additional lanes in both directions on I-405 from SR 167 through SR 169.
- Stripe lanes to provide a buffer between HOV and general-purpose lanes along I-405.



Project improvements will add capacity to I-405 for both southbound and northbound traffic and will provide a buffer between the HOV lane and the general-purpose lanes

- Cantilever the I-405 structures over Main Avenue.
- Reconstruct three bridges over the Cedar River: southbound I-405, northbound I-405, and a pedestrian bridge.
- Relocate the Burlington Northern Santa Fe railroad bridge.
- Close Houser Way south of the Cedar River north to Bronson Way and remove the bridge over the Cedar River.
- Reroute northbound traffic to Bronson Way, which will be striped to accommodate the new traffic pattern.
- Reconstruct two local street accesses to Renton Hill.

To accommodate the I-405 improvements, the Tukwila to Renton Project also required rerouting traffic from Houser Way and changing access to Renton Hill. These improvements are discussed on the following pages.

What bridge construction will occur over the Cedar River?

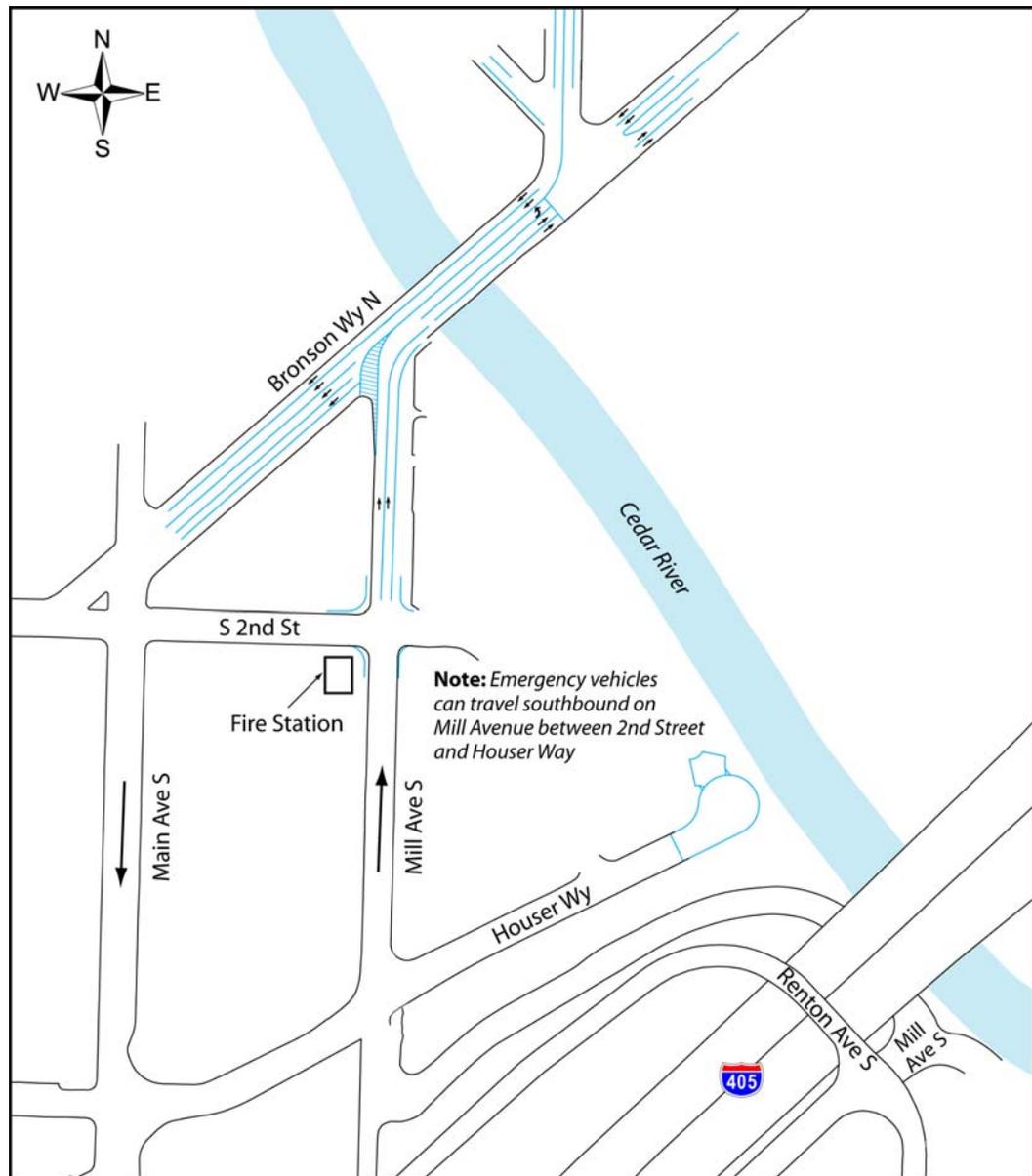
- ❶ Burlington Northern Santa Fe Railroad Bridge
 - ❷ Southbound I-405 Bridge
 - ❸ Northbound I-405 Bridge
 - ❹ Pedestrian Bridge
- See Exhibit 2-12 for the bridge locations.

Mill Avenue and Main Avenue Design Options

To accommodate widening I-405 over the Cedar River, the Houser Way bridge will be closed. WSDOT worked closely with the City of Renton to develop the most acceptable and feasible solution for redirecting traffic coming from south of Houser Way. For northbound traffic within Renton south of the Cedar River, two design options are being considered:

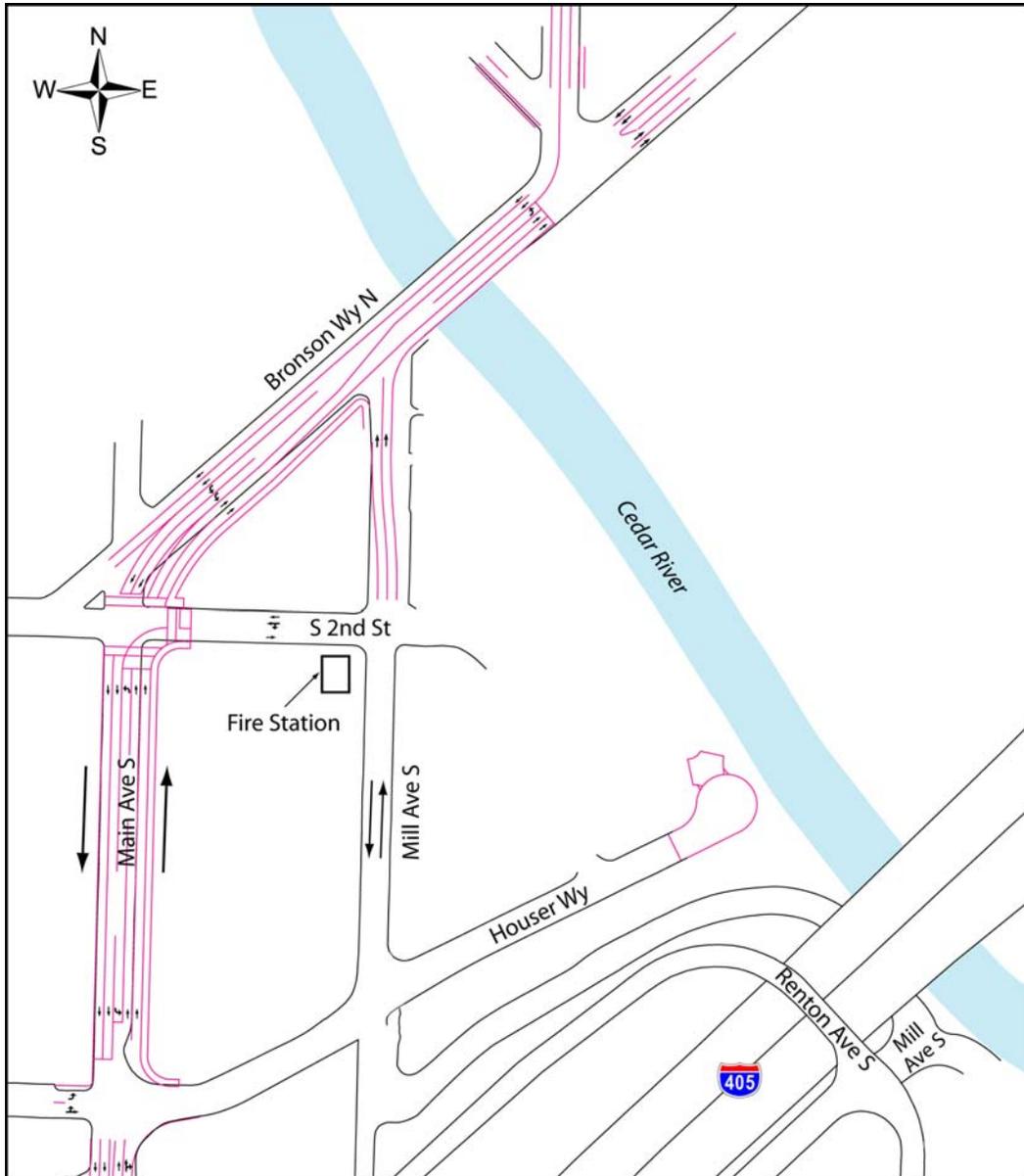
- The first option stripes Mill Avenue as a one-way street to provide two lanes northbound from the intersection of Houser Way and Mill Avenue to Bronson Way (see Exhibit 2-13).

Exhibit 2-13: Mill Avenue Design Option for Local Access to Bronson Way



- The second option leaves Mill Avenue as a two-way street up to the intersection with 2nd Street where it will be striped for one-way traffic northbound and reconfigures Main Avenue, a one-way street southbound, to provide two-way traffic. Main Avenue would be widened and striped for two-way traffic to provide access from the south to Bronson Way (see Exhibit 2-14).

Exhibit 2-14: Main Avenue Design Option for Local Access to Bronson Way

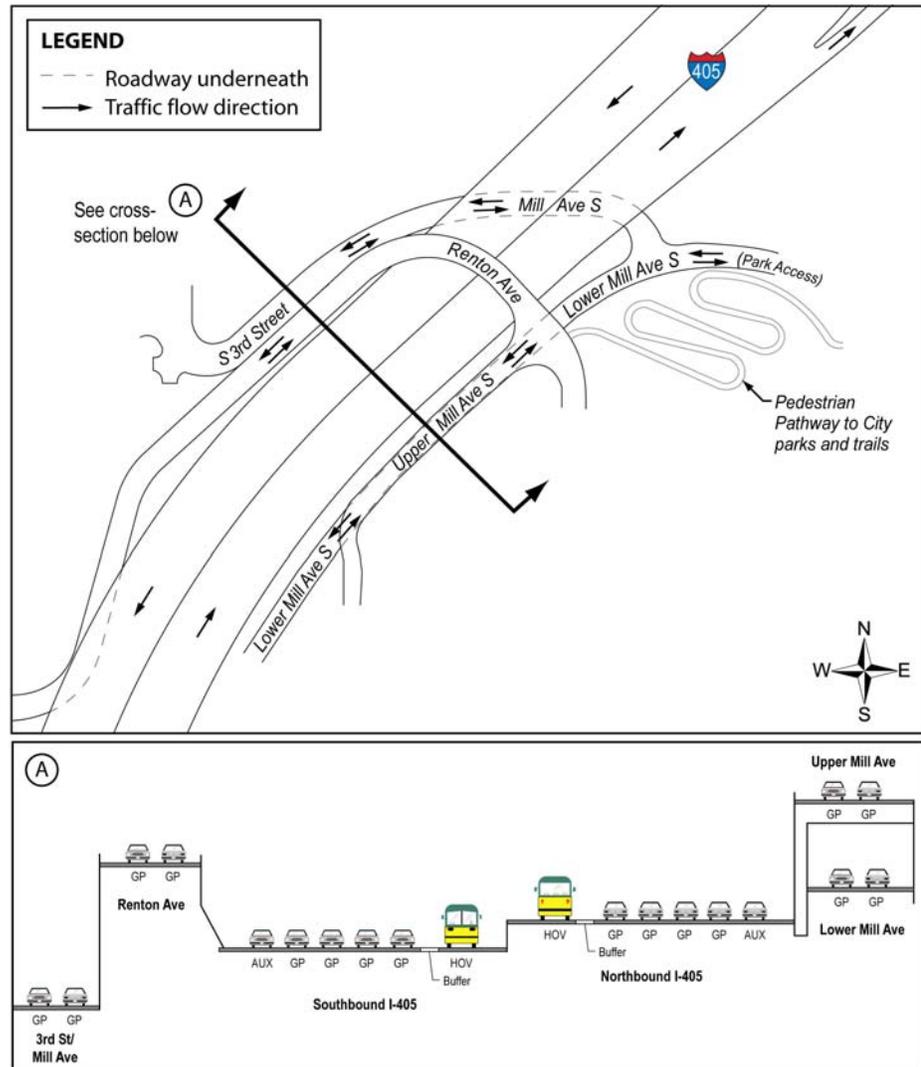


Changes to Renton Hill Access

As shown in the inset on Exhibit 2-12, the Renton Hill Access will be changed to accommodate the widening of I-405. These changes are detailed in Exhibit 2-15 below. WSDOT will:

- Reconstruct the Renton Avenue bridge over I-405 and realign the north end to intersect with Main Avenue rather than Houser Way as it currently does.
- Reconstruct Mill Avenue as a stacked structure that also provides access to Renton Hill as shown in Exhibit 2-15.
- Remove the existing Cedar Avenue bridge.
- Construct a pedestrian pathway connecting residents on Renton Hill to the City’s parks and trails.

Exhibit 2-15: New Local Access for Renton Hill



What are the construction methods and schedule for implementation?

Construction Methods

The Tukwila to Renton Project will use different methods to construct the various project elements. The main approaches to construction for this project are described below.

At-grade Construction

At-grade construction, which occurs on the same elevation as the existing lanes, will be staged to minimize traffic delays and detours. One method would shift lanes toward the median. WSDOT then would place a concrete barrier to provide a work zone outside of the roadway. A second method would build the entire new section, then shift traffic to the new portion and reconstruct the existing section. Staging allows construction to occur safely without closing lanes for the duration of construction.

Bridge Construction

Bridge construction will generally occur in multiple stages to minimize traffic delays and detours. The following describes a typical staging approach for bridge construction on I-405 that will be used where practicable. As the first step, traffic is shifted toward the I-405 median, and the existing lanes and shoulders are narrowed slightly. This approach allows widening of the existing structure or construction of the new bridge, depending on the design, to occur on the outside of the roadway. Next, traffic is shifted onto the new bridge area. If the bridge is being replaced rather than simply widened, the old structure is demolished after traffic is shifted to the new bridge.

Road Closures

Some road closures will be necessary to construct various improvements. WSDOT will notify local agencies, public services, utilities, and the general public prior to any temporary road closures and will clearly mark detour routes. As much as possible, closures will be scheduled during times that will have the least impact on the traveling public.

Traffic Control

WSDOT will work with local agencies to develop detours as needed during construction. Prior to starting construction, WSDOT will develop a traffic control plan. The plan's primary objectives will be to provide a safe facility, to streamline the construction schedule, and to minimize reductions to existing traffic capacity. To lessen effects on traffic, the duration of activities will be minimized and reductions in capacity will be limited and will be targeted to a period when they will have the least effect.

Schedule

Because the I-405 Corridor Program master plan configuration is very expensive, WSDOT will implement the improvements in phases as funding becomes available. The Tukwila to Renton Project represents Phase 2 for this section of I-405. This discipline report assumes a baseline condition where the Phase 1 improvements, Renton Nickel Improvement Project, have been completed prior to the start of Phase 2.

Construction of the entire Tukwila to Renton Project is expected to be spread over several years as funding becomes available. For this reason, construction activity will not be constant throughout the entire study area and the duration will vary depending on the improvement being constructed.

The first element of the Tukwila to Renton Project that is proposed for construction is the SR 515 Interchange Project. This portion is funded through the 2005 Transportation Partnership Account (TPA). This Tukwila to Renton project element will construct a half-diamond interchange on I-405 at Talbot Road (SR 515). Construction of this element is scheduled to begin in autumn of 2008. The remaining elements of the Tukwila to Renton Project are unfunded at this time.

To complete the master plan for I-405 from I-5 to SR 169, additional work will need to be accomplished in this area.

Does this project relate to any other improvements on I-405 or connecting highways?

The Tukwila to Renton Project is part of a comprehensive program to address the congestion problems in the I-405 corridor. WSDOT worked with the Federal Highway

Administration (FHWA), Federal Transit Administration, Central Puget Sound Regional Transit Authority, King County, and local governments to develop strategies to reduce traffic congestion and improve mobility along the I-405 corridor. The I-405 Corridor Program Environmental Impact Statement (EIS) and Record of Decision (ROD), published in 2002, document these strategies. The selected alternative has become known as the master plan.

WSDOT is constructing the master plan as funding becomes available. For the southern end of I-405 extending from I-5 to SR 169, the Renton Nickel Improvement Project was Phase 1. This phase was largely funded by the statewide transportation-funding plan called the “nickel package,” which was approved by the Washington State Legislature in 2003. In 2005, the legislature passed a second funding package, TPA. It also provided funding for the Renton Nickel Improvement Project. Construction of the Renton Nickel Improvement Project began in 2007 and will be completed by 2011.

The other I-405 projects that relate to the Tukwila to Renton Project address the sections north of SR 169 to the end of I-405 at I-5 in Lynnwood. Of these projects, the first stage for the Kirkland area of I-405 is currently under construction. The first stage for Bellevue, SE 112th Street to SE 8th Street, began construction in 2007. As each successive project becomes operational, the public will benefit from the improved traffic movement, safety, and capacity along the I-405 corridor.

Another related project is the HOT Lanes Pilot Project on SR 167. This project will convert the existing HOV lanes to High-Occupancy Toll (HOT) lanes between Auburn and Renton. HOT lanes will better manage the SR 167 corridor traffic demand through tolling. The Tukwila to Renton Project will tie into the HOT lanes project.

In addition, some local agencies are working on projects that will tie into the work on I-405. For example, the City of Renton is proposing to reconstruct Rainier Avenue S, in particular, improving local access and circulation to the interchange with I-405 and SR 167.

As well as the road projects discussed above, WSDOT and the City of Renton are constructing the Springbrook Creek Wetland and Habitat Mitigation Bank. This project will create

a large wetland complex that will provide mitigation credits to multiple projects including the Tukwila to Renton Project.

What is the No Build Alternative?

The No Build Alternative assumes that the improvements associated with the Renton Nickel Improvement Project are constructed as does the baseline condition. Only routine activities such as road maintenance, repair, and safety improvements would be expected to take place between 2014 and 2030. This alternative does not include improvements that would increase roadway capacity or reduce congestion beyond baseline conditions. For these reasons, it does not satisfy the project's purpose to reduce congestion on I-405 between I-5 in Tukwila and SR 169 in Renton.

The No Build Alternative has been evaluated in this discipline report as a comparison for the effects associated with the Build Alternative.

SECTION 3 STUDY APPROACH

What is the study area and how was it determined?

We set the study area limits to include the area where the project could affect community/neighborhood resources. We anticipate that most project effects will not extend farther than about one-half mile from project activities along I-405 and SR 167. Because the census block groups used to characterize the community resources near the project tend to extend beyond one-half mile, the study area boundary varies depending on the boundaries of the census areas. The study area consists of the following block groups:

- Census tract 253 block group 3
- Census tract 253 block group 4
- Census tract 256 block group 2
- Census tract 257.01 block group 1
- Census tract 257.01 block group 2
- Census tract 257.01 block group 6
- Census tract 258.01 block group 2
- Census tract 258.01 block group 3
- Census tract 262 block group 1
- Census tract 262 block group 3
- Census tract 262 block group 4

What policies or regulations are related to effects on environmental justice?

President Clinton signed Executive Order 12898 requiring federal agencies to identify and avoid “disproportionately high and adverse” effects on minority and/or low-income populations for federal programs that affect human health or the environment. Incorporating environmental justice principles throughout the transportation planning and decision-making processes supports the principles of NEPA. Environmental Justice principles support Title VI of the Civil Rights Act; the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; TEA-21, SAFETEA-

LU; and other DOT statutes, relocation regulations, and guidance that affect social, economic, environmental, public health, and public involvement.

How did we collect information on environmental justice populations for this report?

We collected information from a variety of sources. We obtained 2000 census statistics on race, ethnicity, and poverty status from the U.S. Census Bureau website. We obtained demographic information on schools in the study area for the 2004–2005 school year, the most current information available, from the National Center for Education Statistics website.

This demographic information was shared with the public involvement team to help them develop outreach strategies appropriate for the demographics in the study area.

The I-405 Team developed the public involvement plan to ensure inclusiveness of minority and low-income populations, including populations with limited ability to understand English. We met with organizations that provide services to minority and low-income populations (service providers). In these meetings, we shared information about the project, learned about the organization’s clients, and discussed the organization’s view of the project’s potential effects. Section 5, Project Effects, and Appendix A contain more information on the service provider interviews.

The *Social Elements, Public Services, and Utilities Technical Memorandum; Transportation Discipline Report; and Cultural, Historic, and Archaeological Technical Memorandum* prepared for this project provided information on social conditions, tribes in the area, public transportation, and schools in the area.

What public involvement activities have occurred since the I-405 Corridor Program Final EIS?

Public involvement related to the project has been ongoing since 1999, when we conducted scoping for the I-405 Corridor Program Environmental Impact Statement. Public involvement has been an essential element of the environmental analysis, documentation, and review process. For the Renton Nickel Improvement Project, the public

How do we define minority?

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

How do we define low-income?

A household income that is at or below the federally designated poverty level for a given household size.

involvement team conducted environmental justice outreach in several ways. WSDOT interviewed social service providers; widely advertised the public scoping meeting; distributed an email newsletter to service providers and interested citizens; and translated fact sheets into Chinese, Russian, Spanish, and Vietnamese.

WSDOT has continued to hold public meetings as the I-405 Program moves forward. We held an agency and public scoping meeting for the Tukwila to Renton Project (Phase 2) on May 23, 2006. Approximately 36 people attended the public scoping meeting. To inform the public of the scoping meeting, we sent a flyer to more than 1,240 recipients, including:

- Property owners and residents within approximately 750 feet of I-405
- Section 8 housing assistance recipients living along the I-405 corridor
- All interested residents as included on the corridor-wide mailing list

In addition, we sent an email alert to the project email lists, major employers, and advocacy groups, and we placed ads in the following publications:

- Chinese Post
- El Mundo
- King County Journal
- Phuong Dong Times
- Renton Reporter
- Russian World
- The Skanner

On October 4, 2007, we held a public open house that focused on findings of the discipline reports prepared to support the Tukwila to Renton Project EA. This open house included information on the findings of this environmental justice discipline report. Approximately 40 people attended the open house, and no one provided comments on environmental justice information provided. We informed people of the meeting by sending out postcards to our project mailing list of 4,337. Our mailing list includes property residents and

What is scoping?

The process implemented early in project development by the lead agency to involve the public, agencies, local jurisdictions, tribes, and other concerned groups in identifying the range of proposed actions, alternatives, environmental issues, impacts, and mitigation measures to be evaluated in an environmental document. For specific projects where an Environmental Assessment is being prepared, scoping may focus on environmental issues, effects, and mitigation.

owners within 750 feet of the project; local, state, and federal agencies with interest in the project; tribal governments; local neighborhood associations, and Renton and Tukwila residents in our database. We also published ads in the following publications:

- Chinese Post
- El Mundo
- Highline Times/Des Moines News
- Kent Reporter
- Phuong Dong Times
- Renton Reporter
- Russian World
- The Facts

We determined where to focus environmental justice outreach by starting with demographic data (based on the 2000 census) as a base. We verified census information by cross-referencing it with City of Renton demographic information. The information helped us identify block groups with minority and low-income populations. This provided the basis for focused outreach to specific housing facilities and neighborhoods.



Public Meeting

We translated the fact sheet on I-405 corridor projects into Chinese, Russian, Spanish, and Vietnamese for the scoping meeting and other outreach efforts. We identified multilingual I-405 team members so that if interpreters were needed, they could be called upon to help. We chose a scoping meeting location that was accessible by public transit and to people with disabilities and offered telephone assistance in finding bus routes.

On March 20, 2007, we held a hearing on access issues relating to the proposed SR 515 half-diamond interchange. The hearing was for owners abutting SR 515 where the access rights are proposed to change. Notices went out to all individuals affected by the funded SR 515 Interchange Project and was also published in the Seattle Times and Seattle Post-Intelligencer.

We learned more about the area's minority and low-income populations and their transportation needs through meetings

with social service providers. During these interviews, we explained the project to the service providers and received feedback on how the project could benefit or adversely affect their clients, staff, and volunteers. In the section, Project Effects, we list service providers interviewed for the project, their concerns about the project, and potential measures to address their concerns. In addition to the interviews, we spoke with the clients of some of these services by locating a table and display board in the lobbies of WorkSource Renton and Salvation Army for several hours. The clients learned more about the project and shared their thoughts on the project and other transportation issues. Although not all service providers interviewed are located in the study area, they do provide services to people living in the study area. Most service providers wanted to be included on the project's email list and offered to post or distribute information to their clients.

In addition to the activities described above, we are conducting the following outreach throughout the duration of the project:

- We distribute a corridor-wide monthly newsletter via email.
- At project meetings, we distribute a project brochure (or "folio") that tells the I-405 story, while fact sheets on specific I-405 projects target areas of interest.
- We are briefing affected property owners throughout the project through one-on-one meetings, citizen group meetings, or neighborhood coffee hours. We offer to provide interpreters at these meetings.
- We are keeping the media informed through press releases, media releases, press kits, meetings with reporters, and editorial board briefings.
- A website on the Tukwila to Renton Project provides information on public involvement opportunities, finances, project benefits, timeline, etc.
- We regularly brief City of Renton and Tukwila staff on the project. We discuss any communication issues and recommendations, including environmental justice outreach.

- A Speakers Bureau made up of the I-405 Team meets with civic organizations in the area to brief their members on project progress and to answer questions.

WSDOT will continue to meet with neighborhood associations in Renton to update residents on the project, planned improvements, and potential effects. These neighborhood briefings are as inclusive as possible and include minority and low-income populations. Tukwila city staff did not see any need for WSDOT to meet with Tukwila neighborhood groups as the project only affects Tukwila commercial areas. We have met with the following neighborhoods within the study area:

- Renton Hill
- Talbot Hill
- Highlands
- Victoria Park
- Valley Vue
- Monterey Terrace

These neighborhood meetings were held in English. Before each meeting, I-405 staff investigated whether there was need for an interpreter. To date, an interpreter has not been needed.

How did we evaluate effects on environmental justice populations?

We identified potential effects of the project by interviewing authors or reviewing project reports on the following disciplines:

- Air Quality
- Economics
- Cultural, Historic, and Archaeological Resources
- Land Use Patterns, Plans, and Policies
- Noise and Vibration
- Social Elements, Public Services, and Utilities
- Section 4(f) of the DOT Act of 1966
- Transportation
- Visual Quality
- Hazardous Materials

After identifying adverse effects, we assessed whether the project would affect populations differently. For example, noise tends to affect the people living near the noise source more than others. When identified, this type of effect is looked at in more detail.

The next step in assessing an adverse project effect that could affect populations differently (such as noise) was to look at who is affected. Using a Geographic Information System (GIS), we mapped the adverse effects over the census block groups. This allowed us to compare the race/ethnicity and poverty status of those affected. Other sources, such as service provider interviews and other information learned through outreach and windshield surveys were used to confirm GIS map findings.

We used the following criteria to determine whether the effect fell disproportionately on environmental justice populations.

1. A minority and/or low-income population will predominately bear the effects; or
2. The minority and/or low-income population will suffer the effects and the effects will be appreciably more severe or greater in magnitude than the adverse effects suffered by the non-minority and/or low-income population.

In addition, we analyzed the project's potential benefits and the proposed mitigation for any adverse effects.

What is a Geographic Information System (GIS)?

A digital computer mapping system that can overlay a wide variety of data such as land use, utilities, and vegetative cover, and provide a spatial analysis.

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SECTION 4 BASELINE CONDITIONS

Does the study area have populations that are protected under environmental justice?

Executive Order 12898 requires federal agencies to identify and avoid disproportionately high and adverse effects on minority and/or low-income populations for federal programs that affect human health and the environment. We identified minority and low-income populations in the study area using 2000 census data on race/ethnicity (including Hispanic/Latino) and poverty status (populations living at and below the poverty level). Individuals who have limited ability to understand English were also identified using census data. Although environmental justice does not specifically include individuals with limited ability to understand English unless they are minorities or low-income, we want to include those who do not understand English well in the decision-making process.

Within the study area, the low-income population comprises 10 percent of the residents. This percentage for low-income residents matches the city of Renton's percentage (10 percent) and is lower than the city of Tukwila's percentage (13 percent) according to the U.S. Census (U.S. Census 2000).

Race and ethnicity information is depicted in Exhibits 4-1 and 4-2. Within the study area, the minority population comprises 39 percent of the residents. This percentage for minority residents is higher than the city of Renton's percentage (34 percent minority), and lower than the city of Tukwila's percentage (46 percent minority) (U.S. Census Bureau 2000). African American, Asian, and Hispanic populations are represented in substantial numbers throughout the study area. Census tract 257.01 block group 6, census tract 258.01 block group 3, census tract 262 block group 3, and census tract 262 block group 4 have the highest overall percentages of minority populations, with over 40 percent minority populations each.

I-405, TUKWILA TO RENTON IMPROVEMENT PROJECT (I-5 TO SR 169 - PHASE 2)
 ENVIRONMENTAL JUSTICE DISCIPLINE REPORT

Exhibit 4-1: Minority and Low-income Populations in the Study Area (North)

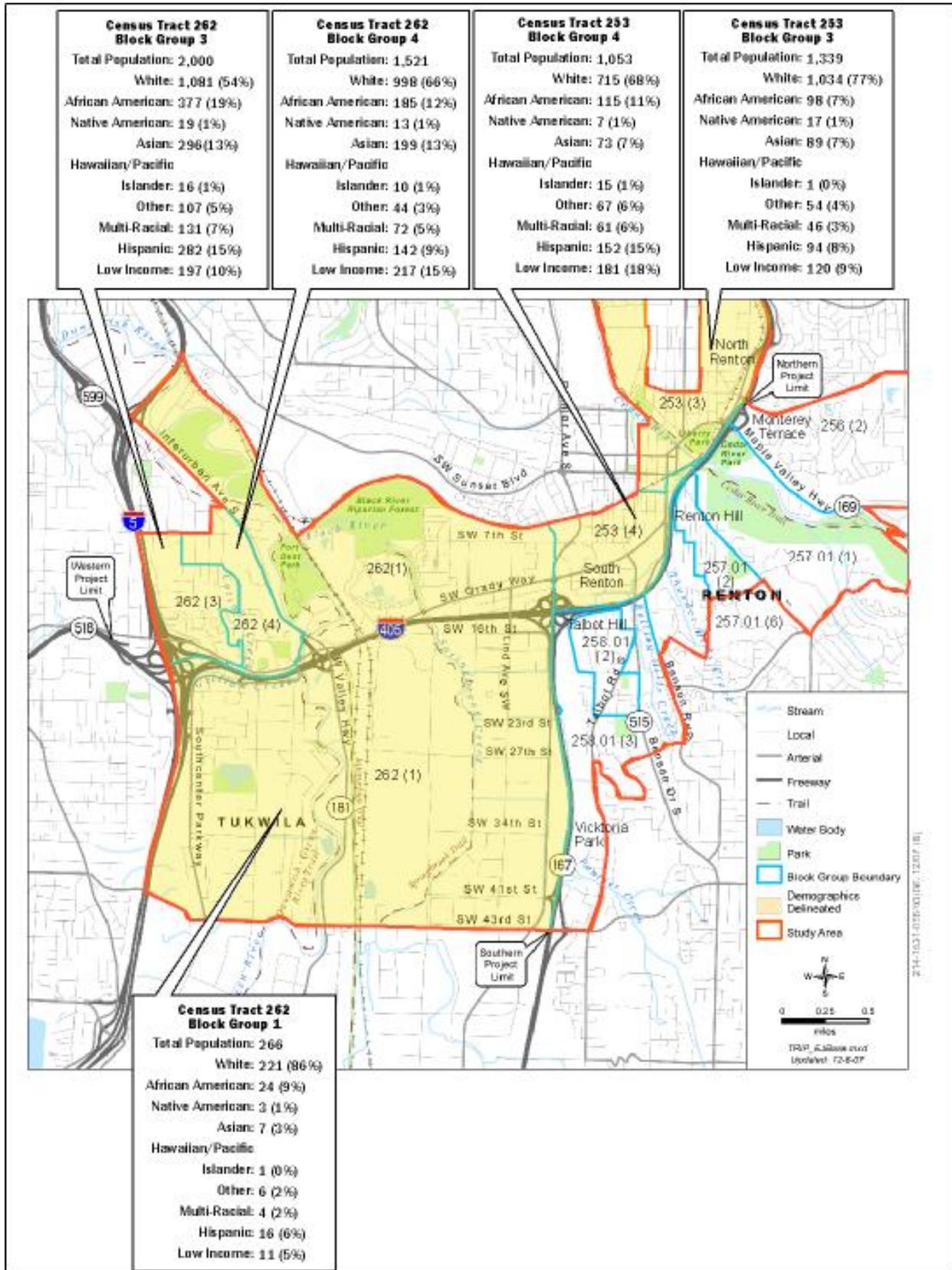
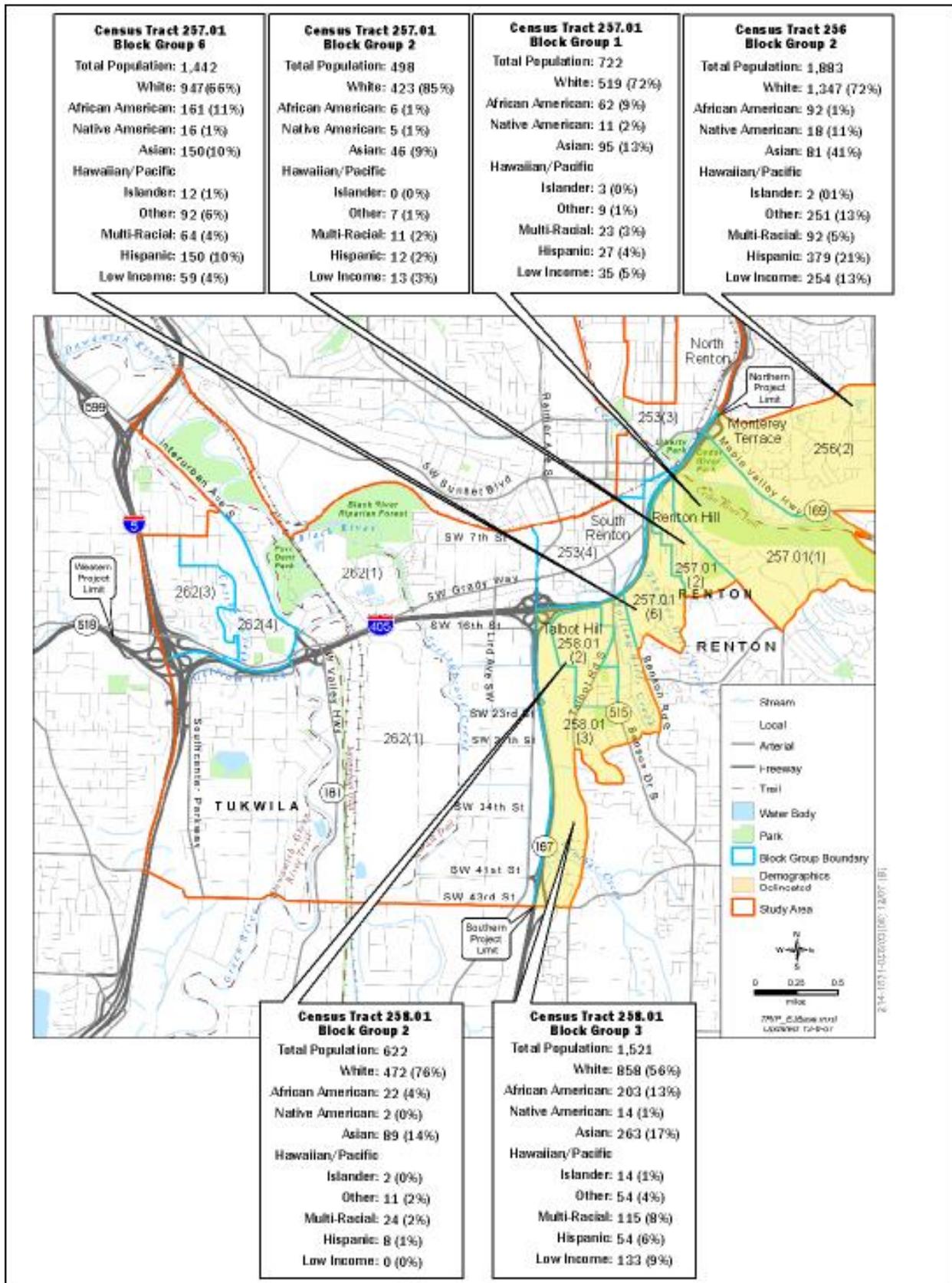


Exhibit 4-2: Minority and Low-income Populations in the Study Area (South)



We further confirmed the presence of minority and low-income populations in the study area by obtaining school data from the 2004–2005 school year. Demographic data for the four public schools in the study area are depicted in Appendix B. The school data reflect higher levels of low-income populations (represented by students eligible for the free or reduced-price lunch program) and minority populations as compared to the census data. This is likely due to increasing numbers of minority and low-income populations moving to the area. A comparison of 2005 American Community Survey estimates and 2000 census data by race, ethnicity, and poverty status for King County indicates that minority and low-income populations have increased since the 2000 census was taken. One of the social service providers remarked that Russian, Hispanic, and Asian populations have increased in the study area.

Does the study area have populations with a limited ability to understand English?

Information on race/ethnicity is useful in identifying populations with a limited ability to understand English and allows us to identify the need for translation services to communicate project information. The U.S. Department of Justice recommends that agencies consider providing language translation services if an ethnic group with a primary language other than English composes 5 percent or more of an area. For example, if 5 percent or more of an area's population is Hispanic, there is a strong possibility that individuals may be limited in their ability to understand English, thereby limiting their ability to participate in the project decision-making process. When this high percentage has been identified, we should consider translation and interpreter services. Exhibits 4-1 and 4-2 indicate that block groups in the study area have Hispanic and Asian populations that constitute 5 percent or more of the population.

Information on ability to speak English, language spoken at home, and place of birth is also helpful in identifying populations with limited ability to understand English. Based on this information, the study area has substantial numbers of people who speak Spanish, Vietnamese, Chinese, and Tagalog. Service provider interviews indicated the need for materials to be translated into Spanish, Chinese, Vietnamese, and Russian.

Tagalog was not identified by service providers as a language that needed translation services. To help people with limited English language abilities use project materials to participate in the decision-making process, we provide translation and interpreter services in Chinese, Russian, Spanish, and Vietnamese. The decision to provide these services was based on census data and information learned from service provider interviews.

Why is it important to involve tribal governments in the project?

American Indians are included in environmental justice analyses because they are minorities and are protected under Civil Rights laws. WSDOT consults with Indian tribes that could be affected by a project. WSDOT sent letters providing information on the project to the Confederated Tribes and Bands of the Yakama Nation, Duwamish Tribe, Muckleshoot Indian Tribe, Snoqualmie Tribe, and Tulalip Tribe, and will continue to coordinate with the tribes. These tribes have crucial information on natural, cultural, and archaeological resources in the study area that WSDOT can incorporate into the environmental and design processes. Tribal coordination efforts are further enforced by a WSDOT Executive Order signed in 2003 that directs WSDOT employees to enter consultation with tribes who have ancestral homelands in affected areas.

Are there gathering places, businesses, or services that are important to environmental justice populations?

Knowledge of gathering places, businesses, and services for minority and low-income populations in the study area can help identify adverse effects and places where it is especially important for the project to avoid or minimize effects from an environmental justice perspective. This knowledge can also help identify avenues for reaching out to minority and low-income populations. A windshield survey and service provider interviews helped identify some of these places for minority and low-income populations that are in or near the study area. We list examples of such places as follows:

- Service providers such as City of Tukwila Human Services, King County Work Training Program, Renton Clothing

Bank, Seattle/King County Public Health, City of Renton Housing and Human Services, WorkSource Renton, City of Kent Housing and Human Services, Kent DSHS Community Service Office, Renton Area Youth and Family Services, Renton Housing Authority, Hopelink, King County Housing Authority, The Salvation Army/Renton Rotary Food Bank and Service Center, Renton Community Health Center, Group Health Cooperative Services, Valley Medical Clinics, and Renton Senior Center are important services for minority and low-income populations. Most of these services are not in the study area, but low-income and minority residents who live in the study area travel to these services.

- Parks often provide gathering places for environmental justice populations. Some of the parks in the study area include Lower Talbot Hill Park, Lake Street Open Space, Talbot Hill Reservoir Park, Thomas Teasdale Park, Philip Arnold Park, Crystal Springs Park, Tukwila Park, Ikawa Park, Fort Dent Park, Christensen Greenbelt-Duwamish/Green River Trail/Christensen Greenbelt, Interurban Trail, Springbrook Trail, Narco Community Park, Freeway Park, Cedar River Trail - South Loop, Cedar River Park, Liberty Park, Veterans Memorial Park, Burnett Linear Park, Tonkins Park, Jones Park, Piazza Park, and Gateway Park. The Renton Community Center is another gathering place in the study area.
- Schools are important resources within the communities. Not only do the attending students interact in schools, but the schools contain play equipment, ball fields, and other community facilities. Schools in or near the study area include: Renton Senior High School, Sartori Education Center, Talbot Hill Elementary School, and Tukwila Elementary.
- Churches are important gathering places for some cultures. The following are Hispanic, Chinese, Vietnamese, Russian, or Ukrainian churches located in Renton: Evangelical Chinese Church of South King County, Mei-Hua Chinese United, Trinity Taiwanese Mennonite Church, Asamblea de Dios de Renton (Renton Assembly of God), Seattle Spanish Assembly, National Hispanic Org Church, Siglo Veintiuno, Life for Jesus, First Ukrainian Pentecostal, Ukrainian Christian Church, Hong



Hispanic Church

An Vietnamese Baptist Church, Vietnamese Bible Fellowship, and Vietnamese Grace Baptist.

- Westfield Shoppingtown is a commercial area that is also a gathering place.
- Many environmental justice populations are reliant on transit services. King County Metro and Sound Transit provide service in the study area with 26 bus routes. Eleven routes have weekday, Saturday, and Sunday service; two routes have weekday and Saturday service; and the remaining 13 routes have weekday-only service. The Renton Transit Center is a transit hub for the area.

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SECTION 5 PROJECT EFFECTS

What did service providers say about potential impacts of the project?

In Exhibit 5-1, we list the service providers who we interviewed for the project, their concerns about the project, and potential measures they suggested to address their concerns. Most service providers were concerned about construction delays and requested information on construction activities in order to plan for delays or alternate routes. The outreach to WorkSource Renton and Salvation Army clients revealed concerns about the reliability of transit rather than effects specific to this project.



Salvation Army

Exhibit 5-1: Service Provider Interview Findings

Name	Concerns	Mitigation Suggested by Organization
City of Tukwila Human Services September 27, 2006	Construction effects such as traffic and access to buses and their offices.	Don't start construction at the end of the year; October to January is the busiest time of the year.
King County Work Training Program September 28, 2006	Construction effects on traffic and bus service, especially along Grady Way.	Provide shuttle service during special events like training classes and job fairs. Provide funds to expand the program's Flexcar Program during construction. Send email alerts in advance of construction activities.
Renton Clothing Bank October 2, 2006	No concerns as long as buses are running.	No mitigation measures recommended.
Seattle/King County Public Health October 4, 2006	Construction and development effects on open spaces, bike/pedestrian trails, transit, and traffic. Residential displacements could have a negative effect on housing affordability and availability. Relocating families could disrupt community cohesion. Widening I-405 could degrade air quality and increase asthma problems.	Maintain access to bike/pedestrian trails. Avoid effects on transit. Relocate displaced families to places that maintain community cohesion.
City of Renton Housing and Human Services October 4, 2006	Effects on non-profits on Grady Way (Washington State University Cooperative Extension, WorkSource Renton, Workfirst) and transit due to congestion from construction.	Coordinate construction activities with transit agencies. Locate affordable housing units closer to services. Provide resources (info and fares) to people coming from the courthouse and jail. Provide funds for a Flexbike Program and program that helps people overcome transportation barriers to employment.

Exhibit 5-1: Service Provider Interview Findings (continued)

Name	Concerns	Mitigation Suggested by Organization
WorkSource Renton October 5, 2006	Temporary displacement of parking spaces in lot during construction. Pedestrian safety in parking lot during construction. Construction vibration effects on Youth Learning Center. Effects on transit due to changes to transit and congestion from construction.	Stage most disruptive construction activities during summer when Youth Learning Center is less busy. Prevent construction-related power outages and secure computer network. Limit construction noise and vibration effects on services. Provide advance notice of construction activities and closures. Encourage staff to find alternatives to driving alone. Provide an online commute survey and free ride tickets. Upgrade Metro kiosk. Develop one-stop services to reduce client trips. Improve safety at Park-and-Rides (prevent break-ins). Expand Metro services. Coordinate van program to get job seekers to interviews.
City of Kent, Housing and Human Services October 5, 2006	Access and transit reliability effects from traffic congestion during construction, especially to Veteran's Hospital. Requests for resources and information may increase due to congestion.	Carpool or vanpool programs. Provide information about construction activities.
City of Kent, DSHS, Community Services Office October 5, 2006	Pedestrian access under and around I-405. Access to their offices, other services, jobs, and day care. Longer commute times from construction activities.	Provide direct access to medical facilities in Renton and Seattle. Improve transit safety, security, timing, and frequency.
Renton Area Youth and Family Services October 18, 2006	Access to office, parking, noise, and utility disruption during construction.	Improve transit (internal circulation) around Renton. Advance notification of construction activities. Prevent utility and access disruptions. Do not use parking lot behind Renton Area Youth and Family Services for construction staging.
Renton Housing Authority October 18, 2006	Access to the office for staff. Loss of affordable housing due to property acquisition.	Contract with Renton Housing Authority to provide relocation services. Improve transit (internal circulation) around Renton.
Hopelink October 25, 2006	Construction effects on services that Hopelink brokers (DART, taxis) and transit reliability.	No mitigation recommended.
King County Housing Authority November 1, 2006	Effects on transit during construction.	No mitigation recommended.
Salvation Army, Renton Rotary Food Bank and Service Center November 15, 2006 and December 22, 2006	Congestion effects during construction on clients, staff, and delivery trucks.	Provide advance notification of construction activities. Provide alternatives to driving.

How will project construction affect minority and low-income populations?

The project will widen the roadway, widen or replace I-405 bridges, relocate or protect utilities, and install storm drainage facilities. These activities will have minor short-term effects such as increased noise, increased dust, decreased visual aesthetics, and increased traffic congestion that could affect people living and working in and traveling through the study area. The temporary reroutes of the Duwamish-Green River and Interurban Trails will affect bicyclists and pedestrians. Parts of Cedar River Park, Liberty Park, Cedar River Trail, and NARCO Property will be redeveloped and will be temporarily unavailable for use. Because these construction effects are localized and temporary, they will have only a minor negative effect on the cohesiveness of neighborhoods or the social interactions of residents within the neighborhoods. Our analysis showed that environmental justice populations will not disproportionately bear any of these adverse effects. Relocations and displacements are discussed under operational effects.

What is an effect?

Something brought about by a cause or agent; a result. This may include ecological, aesthetic, historic, cultural, economic, social, health, or other effects, whether direct, indirect, or cumulative. Actions may have both beneficial and detrimental effects.

How will project operation affect minority and low-income populations?

We analyzed potential effects of the project as listed below.

- WSDOT will acquire and relocate 25 residential structures and 16 commercial properties for the project (WSDOT 2007a). This includes the acquisition of two buildings (44 units) in the Berkshire Apartments complex. Effects of acquisitions will be mitigated by relocating residents and businesses within the general area under the terms of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. Further analysis on relocation effects is documented later in this section.
- We determined the project will cause air quality to be about the same in the long term (WSDOT 2007b).
- We have not identified any long-term effects to historic, cultural, archaeological, and Section 106 resources (WSDOT 2007c). See the *Cultural, Historic, and*

Archaeological Resources Technical Memorandum for more information.

- We do not expect substantial adverse ecosystem effects. The project has been designed to avoid effects to the ecosystem to the greatest extent practicable. During construction, WSDOT will require that appropriate best management practices and conservation measures are implemented to reduce potential ecosystem effects. Mitigation activities to offset project effects will be performed in accordance with applicable local, state, and federal regulations.
- We do not expect any substantial adverse effects from hazardous materials because the project will comply with all applicable environmental rules and regulations, the I-405 Programmatic Commitments, and the Record of Decision commitments (WSDOT 2007d).
- We determined the project is supportive of local land use plans and policies, and that the project will not change land use patterns (WSDOT 2007e). See the *Land Use Discipline Report* for more information.
- One hundred and ninety residences will be affected by noise (noise levels will exceed the FHWA noise abatement criteria) in 2030 (WSDOT 2007f). Approximately half of these noise effects (98 residences) will happen even if the project is not built. Further analysis on noise effects is documented later in this section.
- We have not identified any long-term, adverse effects on public services or utilities (WSDOT 2007a). Travel times will improve along I-405, a potential benefit to public services such as emergency response services and police. See the *Social Elements, Public Services, and Utilities Technical Memorandum* for more information.
- Although there will be some noise impacts to parks and Section 4(f) resources from the Build Alternative, effects will not be substantial (WSDOT 2007g). The project will acquire some property from the Duwamish-Green River Trail Trailhead and Cedar River Park, but these acquisitions should not substantially affect use of the facilities. Also, Liberty Park will lose its existing access. The project will fully acquire Freeway Park; however, this is not considered a significant park for Renton residents

What are the noise abatement criteria?

The FHWA noise abatement criteria specify exterior and interior noise levels for various land activity categories such as residential and commercial. WSDOT considers a noise impact to occur if predicted equivalent hourly noise levels (Leq (h)) approach within 1 A-weighted decibel (dBA) of the noise abatement criteria.



Renton Transit Center

because it is already very close to the freeway. See the *Section 4(f) Evaluation* for more information.

- The Build Alternative will improve freeway travel speeds for most locations in the study area compared to the No Build Alternative (WSDOT 2007h). The project will improve safety by reducing congestion, and in turn, congestion related accidents. The project will also improve the roadway configuration in locations where a high number of crashes are occurring. Congestion at most intersections will decrease with the Build Alternative compared to the No Build Alternative. The HOV lanes will have higher travel speeds with the Build Alternative because the HOV lane drivers will not slow down as much due to the fear that someone will suddenly move into the HOV lane from the congested general-purpose lanes. The Build Alternative will add select HOV lane direct-connector ramps at the I-405/SR 167 interchange. The new ramps will save transit and HOVs time as they will no longer have to weave across the general-purpose lanes to move between freeways. See the *Transportation Discipline Report* for a more detailed description of transportation effects.
- The project will permanently change visual quality for both freeway users (views from the road) and freeway neighbors (views toward the road) (WSDOT 2007i). The project will potentially reduce visual quality for some viewers; however, overall, these changes are minor when compared to baseline visual quality. Viewers in an apartment building in downtown Renton on Main Avenue will experience adverse visual effects due to the addition of a retaining wall and widening (cantilever over Main Avenue) of the freeway. For some Talbot Hill residents, the new elevated structure will encroach on the vista and block territorial views. WSDOT has incorporated guidelines into the project design to provide unity and cohesiveness for the project to help mitigate the project's effects to views. It's difficult to determine whether any single residence affected by view impacts are minority and/low-income residents; however, based on census data from the affected areas, disproportionate effects to minority and/or low-income populations are not expected.

**What do we mean by
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.

- Besides the displacement and noise effects described above, operation of the project is not expected to adversely affect the community (WSDOT 2007a). The business relocations will not affect community cohesion because they do not provide local community services or support (like a grocery store). While it is estimated that most of the displaced businesses have very few full-time or part-time employees, the two hotels and industrial park are likely to have a higher number of employees. None of the displaced businesses are minority-owned, fill a cultural niche, or employ large numbers of minorities; therefore disproportionate effects to minority or low-income populations are not expected. The residential displacements will not separate or isolate neighborhoods, but parts of neighborhoods will be affected due to the relocation of the displaced residents. A discussion of relocation effects to minority and low-income populations is provided in the section below. Although there are some permanent effects to parks, the park effects will not be substantial or affect their use in an adverse way.

As discussed above, the project requires relocation of residents and businesses (see Exhibit 5-2), including 44 units (two apartment buildings) in the Berkshire Apartments complex.

Exhibit 5-2: Project Relocations

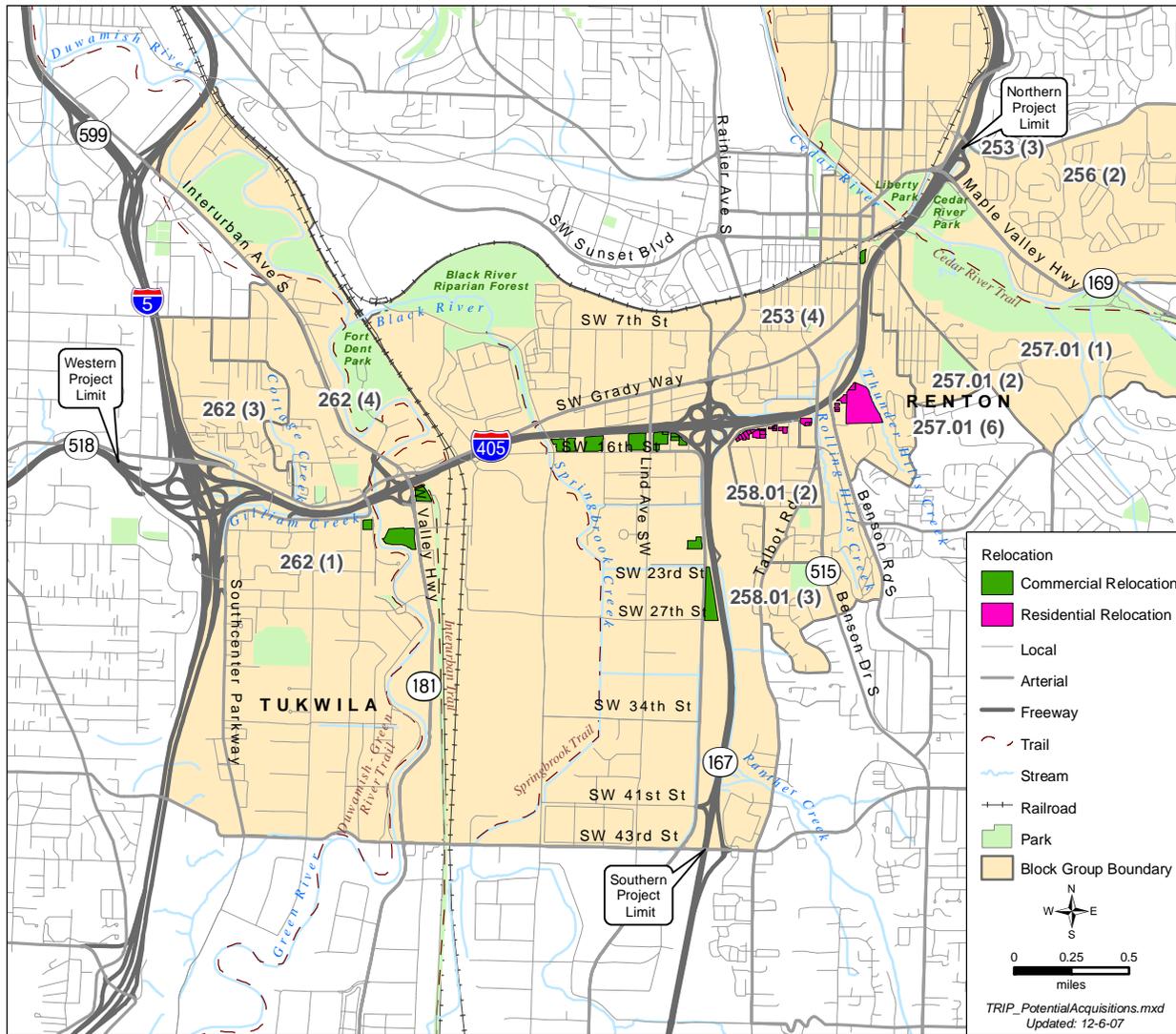


Exhibit 5-3 shows the number of relocations required by block group, and percentage of the block group that are minority or low-income populations.

Exhibit 5-3: Project Relocations by Block Group

Census Block Group	Relocation	% Minority	% Low Income
253 (4)	1 Commercial	39%	18%
257.01 (6)	6 Residential (including 44 apartment units)	43%	4%
258.01 (2)	16 Residential	20%	0%
258.01 (3)	3 Residential	43%	9%
262 (1)	15 Commercial	13%	5%

It is difficult to determine at this point in the project whether any single residence affected by relocation is minority and/or low-income; however, the percentages in Exhibit 5-3 give a good indication of the minority and low-income population within the affected area. Most of the residential displacements will occur in census tract 257.01 block group 6 and census tract 258.01 block group 2. Both block groups have relatively low percentages of low-income populations. The percentages of minority populations are 43 percent and 20 percent, respectively. At a 43 percent minority population, census tract 257.01 block group 6 has a relatively high number of minority populations. However, two other block groups have higher percentages of minority populations. The project will not displace any residences in these high-minority block groups, indicating that the displacements will not have a disproportionately high or adverse effect on minority populations. None of the displaced businesses are minority-owned, fill a cultural niche, or employ large numbers of minorities.

WSDOT, through its Relocation Assistance Program, will make replacement housing available to displaced tenants and provide assistance with moving expenses and replacement housing payments, if necessary. For residential tenants, replacement housing payments are based on the difference between rent and utilities at the displacement site versus rent and utilities at the best, available comparable housing. No displaced person will be required to move without being given a written Notice of Relocation Eligibility, Entitlements & 90-Day Assurance at least 90 days prior to the date by which they will be required to move. Relocating some of the apartment tenants to nearby apartments may be challenging because of the local trend towards turning apartments into condominiums. WSDOT will be required to pay more to relocate tenants if decreased supply increases the costs of comparable housing.

Due to the determination of project noise effects in the Noise Discipline Report, we also needed to analyze the effects further for environmental justice. After WSDOT implements mitigation measures (constructs noise barriers), 121 residences will experience noise effects compared to 98 residences with the No Build Alternative. These 121 residences will experience noise levels that meet or exceed FHWA noise

abatement criteria. Approximately 48 of the 121 residences that meet or exceed the noise abatement criteria will experience an increase in noise levels that will be perceptible. Most of these noise effects are located in the Renton Hill and Talbot Hill neighborhoods. These neighborhoods have some minority populations (39 percent and 20 percent minority) and a relatively low number of low-income populations (4 percent and less than 1 percent low-income). Fourteen noise barriers were examined for various noise effect locations. Two were found to be reasonable and feasible; most were either not reasonable because they cost more than WSDOT's mitigation allowance or not feasible because they do not achieve the required noise reduction. The project will also relocate a noise barrier built under the Renton Nickel Improvement Project. See the *Noise Discipline Report* for more detailed information.

Residential noise effects (where the noise effects will be higher with the project than under the No Build Alternative) are depicted in Exhibit 5-4 and listed by block group in Exhibit 5-5. Each block group listed in Exhibit 5-5 has some minority or low-income populations.

It is difficult to determine at this point in the project whether any single residence affected by noise is minority and/or low-income; however, the percentages in Exhibit 5-5 give a good indication of the minority and low-income population within the affected area. Most of the noise effects occur in census tract 257.01 block groups 2 and 6 and census tract 258.01 block groups 2 and 3. All block groups have relatively low percentages of low-income populations. The percentages of minority populations are 22 percent, 43 percent, 20 percent, and 43 percent, respectively. At 43 percent minority population, census tract 257.01 block group 6 and census tract 258.01 block groups 3 have relatively high numbers of minority populations. However, only about 40 percent of the noise effects occur in these two block groups. In addition, two other block groups in the study area have higher percentages of minority populations. The project will not have any noise effects in these other two high-minority block groups, further indicating that noise effects will not have a disproportionately high or adverse effect on minority populations.

Exhibit 5-4: Project Noise Effects

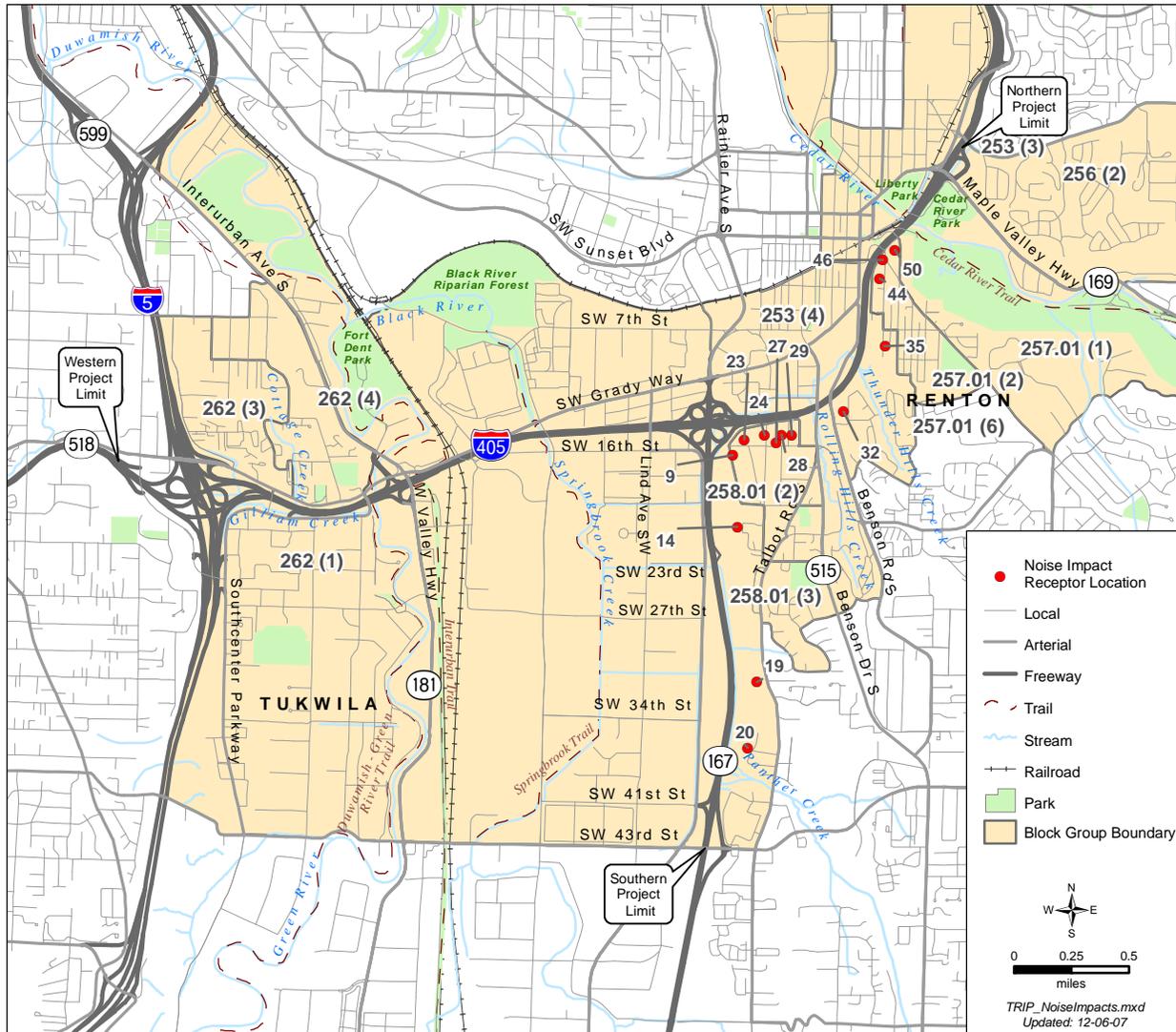


Exhibit 5-5: Project Noise Effects by Block Group

Census Block Group	Receptors Affected (with Mitigation)	Residences Affected	dBa increase	% Minority	% Low-Income
257.01 (2)	50B	3	4	22%	3%
257.01 (6)	32B, 35B	6	2-4	43%	4%
258.01 (2)	9, 23, 24, 27, 28, 29	35	3-9	20%	0%
258.01 (3)	14, 19, 20	21	1-2	43%	9%

Does the project have other effects that may be delayed or distant from the project area?

Indirect traffic effects could occur during construction when drivers seek alternate routes on city streets during closures of I-405 and/or SR 167. Some communities in the surrounding area may have more traffic than normal, but these effects are not expected to continue after construction.

Will the Main Avenue design option affect minority and low-income populations differently than the Mill Avenue design option?

With the removal of the Houser Way bridge, local traffic will be shifted to Main Avenue rather than Mill Avenue under the Main Avenue design option. Under this design option, Main Avenue will be widened to four lanes and striped for two-way traffic. To accommodate this, the design option would need to acquire 10 more commercial properties, resulting in seven additional displacements. This results in greater impacts to community resources and Section 4(f) resources. One of the acquisitions is the Young Women’s Christian Association, an important resource for the community. The Mill Avenue design option does not require any additional property acquisitions. Businesses affected by the Main Avenue design option include Uptown Glassworks, a service garage, a loan service, and retail stores/offices. Like the rest of the relocations, these services and businesses will need to be relocated. These relocations are not expected to have substantial adverse effects on minority or low-income populations because none of the displaced businesses are minority-owned, fill a cultural niche, or employ large numbers of minorities. Although the Main Avenue design option will affect traffic patterns in the area from 2nd Street to Bronson Way, the level of congestion would not change compared to the Mill Avenue design option. The Main Avenue design option would have greater effects on minority and low-income populations than the Mill Avenue design option.

What are indirect effects?

An effect that occurs later in time or is removed in distance from the proposed action, but is still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems.

What are cumulative effects?

The effect on the environment that results from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions. Cumulative effects can result from individually minor but collectively noticeable actions taking place over a period of time.

Were potential cumulative effects for minority and low-income populations considered?

The team did not evaluate cumulative effects for this discipline report. A report of cumulative effects is not needed for every discipline studied for NEPA and SEPA documentation. The disciplines that were studied for cumulative effects are Air Quality, Surface Water and Water Quality, Aquatic Resources, and Wetlands. The cumulative effects for these disciplines are presented in the Cumulative Effects Analysis Technical Memorandum.

How will the project benefit minority and low-income populations?

The Tukwila to Renton Project will benefit minority and low-income populations in the following ways:

- As described previously, the HOV lanes will have higher travel speeds with the Build Alternative. The new HOV lane direct-connector ramps will save transit and HOVs time because HOVs will no longer have to weave across the general-purpose lanes to move between the I-405 and SR 167 freeways. These traffic and safety improvements will benefit all people in the area, but could be particularly beneficial to low-income populations because they are more likely to carpool, walk, or use transit than non-low-income commuters (Rice 2004). Specifically, this 2004 study found that about 17 percent of low-income workers carpooled compared to 12 percent of other workers; and 12 percent of low-income workers take the bus to work compared to 5 percent of other workers (Rice 2004).
- The Build Alternative will improve safety in the study area by reducing weaving and stop-and-go traffic compared to the No Build Alternative.
- The Build Alternative will improve freeway travel speeds and decrease congestion at most intersections in the study area.
- Another benefit of the Build Alternative is improved response times for emergency services.

How would the No Build Alternative affect minority and low-income populations?

The No Build Alternative would have similar effects on minority and low-income populations as on non-minority and non-low-income populations. Choosing the No Build Alternative would avoid or delay the noise, visual, relocation, and construction effects listed previously. However, with the No Build Alternative, the flow of traffic becomes so constrained that not all drivers wishing to use I-405 or SR 167 would be able to do so. Freeway delays may force drivers to seek alternate routes on local and regional roadways, choose to travel by different means or different times, or forego their desired trips altogether. Higher numbers of drivers seeking alternate routes could lead to more cut-through traffic through neighborhoods, and additional air quality, social, and safety effects associated with increased neighborhood traffic. In addition, the HOV and safety benefits would not be realized under the No Build Alternative. Transit travel times for all people who take transit would not be improved with the No Build Alternative.

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SECTION 6 MEASURES TO AVOID OR MINIMIZE EFFECTS

What measures will be taken to mitigate effects during construction?

Each discipline report and technical memorandum lists the measures to avoid and/or minimize construction effects for each element of the environment. Construction traffic effects were the most common concerns expressed during the service provider interviews. We will minimize traffic effects by limiting closures to nights and weekends when possible. Not all of the mitigation recommendations from the service provider interviews will be implemented because many do not mitigate a specific project effect (see Exhibit 5-1 for service provider recommendations). However, service providers identified communication as a key way to minimize construction effects on minority and low-income populations. With that in mind, we plan to use the following communication techniques during project construction:

- Inform local agencies, the public, school districts, emergency service providers, and transit agencies of traffic changes ahead of time.
- Send information to service provider contacts so that they can include the information in newsletters and relay the information face to face.
- Send flyers and handouts to service providers for posting and distributing in key locations at their facilities when this service is specifically requested.
- Post flyers at key locations, such as community centers and churches when this service is specifically requested.
- Set up a project table and talk with people at locations such as food banks.
- Translate written materials when requested.
- Ensure understanding by writing public materials in a concise manner so that they are readable by the public.

What measures will be taken to mitigate effects of project operation?

Each discipline report lists the measures to minimize long-term or short-term effects for each element of the environment.

Because we do not anticipate that the project will cause any long-term, disproportionately high and adverse effects to low-income or minority populations, activities to avoid or minimize adverse effects specific to environmental justice will not be required.

SECTION 7 UNAVOIDABLE ADVERSE EFFECTS/ENVIRONMENTAL JUSTICE DETERMINATION

Does the project have disproportionately high and adverse effects on minority and low-income populations?

Based on these findings, the Tukwila to Renton Project will not result in disproportionately high or adverse effects on minority or low-income populations. Minority and low-income populations will experience some benefits from the project, primarily due to improvements to HOV facilities.

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SECTION 8 REFERENCES

GIS data sources

All GIS exhibits contain one or more of the following as base layers:

Geographic Data Technology, Inc. (GDT).

2005 GDT – Dynamap Transportation. April 2005.

King County Standard GIS Data Disk, extract June 2006:

2004 Cities with annexations.

2005 Open Water.

2006 Parks in King County. Data updated by I-405 staff to match data from cities of Renton and Tukwila.

2005 Streams and Rivers. Data updated by I-405 staff to match fieldwork, 2002 LiDAR, and orthorectified aerial photography.

2005 Trails in King County. Data updated by I-405 staff to match fieldwork, 2002 LiDAR and orthorectified aerial photography.

United States Geological Survey (USGS).

2002 Color Aerial Photography. June 2002.

<http://edc.usgs.gov/products/aerial/hiresortho.html>

Washington State Department of Transportation (WSDOT).

2001 Aerial photography program. March 2001.

1997 Spatial Data Catalog, Railroads.

Text references and verbal communications

National Center for Education Statistics.

2006 Common core of data: information on public schools for the 2004-2005 school year. Available at: <http://nces.ed.gov/ccd/schoolsearch>. Accessed on September 11, 2006.

Rice, Lorien.

2004 Transportation Spending by Low-Income California Households: Lessons for the San Francisco Bay Area. Public Policy Institute of California. July, 2004.

U.S. Census Bureau.

2002 Census 2000 Summary File 3, Washington State Census of Population and Housing.

Washington State Department of Transportation (WSDOT).

- 2007a I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Social Elements, Public Services, and Utilities Technical Memorandum. Prepared by David Evans and Associates.
- 2007b I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Air Quality Discipline Report. Prepared by Parsons Brinkerhoff.
- 2007c I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Cultural Resources Survey Report. Prepared by Landau.
- 2007d I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Hazardous Materials Technical Memorandum. Prepared by.
- 2007e I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Land Use Discipline Report. Prepared by Jones & Stokes.
- 2007f I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Noise Discipline Report. Prepared by Parsons Brinkerhoff.
- 2007g I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Section 4(f) Evaluation. Prepared by Osborn Pacific Group, Inc.
- 2007h I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Transportation Discipline Report. Prepared by Mirai Associates.
- 2007i I-405, Tukwila to Renton Improvement Project (I-5 to SR 169 – Phase 2) Visual Quality Technical Memorandum. Prepared by David Evans and Associates.
- 2006 Environmental Procedures Manual. Available at: <http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/EPM/458.pdf>. Accessed on September 1, 2006.
- 2005 I-405 Renton Nickel Improvement Project, I-5 to SR 169. Prepared by I-405 Staff and Parametrix, Inc. Environmental Justice.