Council Meeting Date: January 24, 2005 **Agenda Item: 10(a)**

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Review and Comments on the Sound Transit Draft Supplemental Environmental Impact Statement (DSEIS)
DEPARTMENT:	Planning and Development Services
PRESENTED BY:	Tim Stewart, Director of Planning and Development Services

PROBLEM/ISSUE STATEMENT:

Sound Transit has issued a Draft Supplemental Environmental Impact Statement (DSEIS) as part of an update to its Regional Transit Long-Range Plan on December 2, 2004. Comments on the DSEIS are due to Sound Transit by January 31, 2005. The purpose of this staff report is to identify issues of concern to Shoreline and to receive direction from the Council on the position the City should take in its comments.

ALTERNATIVES:

While Council might choose any number of alternative responses to the DSEIS, including opposition to all or some elements of the plan, staff has identified three major alternatives for Council consideration: 1) No change to the historic position of the City; 2) Modification to consider alternative Light Rail corridors in addition to I-5; and/or 3) Modification to consider alternatives technologies to Express Bus on SR 99.

1. No change to the historic position of the City would include support for:
   - Seamless cross-county Express Bus or BRT on SR 99 with good access for Shoreline residents.
   - Better access to I-5 Express Bus or BRT.
   - Support for a new Light Rail system in the I-5 Corridor
   - Consideration of a low-impact Commuter Rail Stop in the Richmond Beach/Pt Wells area.
   - Other local improvements such as those listed in the City's scoping letter.

2. Change of the historic position of the City of Shoreline to request consideration of alternative light rail corridors, (such as Aurora Avenue, the Interurban Trail or 15th NE) in addition to the I-5 corridor.

3. Change of the historic position of the City of Shoreline to request consideration of alternative High Capacity Transit (HCT) technologies in the Aurora corridor (such as monorail or streetcar technology), in addition to Express Bus or BRT technology.

RECOMMENDATION

Staff recommends that Council direct the City Manager to prepare a letter to Sound Transit, consistent with the historic position of the City, or with such other changes as the Council may direct.

Approved By: City Manager RSO City Attorney N/A

INTRODUCTION

Sound Transit has issued a Draft Supplemental Environmental Impact Statement (DSEIS) as part of an update to its Regional Transit Long-Range Plan on December 2, 2004. Comments on the DSEIS are due to Sound Transit by January 31, 2005. The purpose of this staff report is to identify issues of concern to Shoreline and to receive direction from the Council on the position the City should take in its comments.

BACKGROUND

Brief History of Sound Transit's Long Range Plan

The 1996 Regional Transit Long-Range Vision (Attachment A, Figure 1-1) identified the following four transit elements through or in the City of Shoreline:

- Commuter Rail (along Puget Sound)
- Regional Express Bus (on SR 99)
- High Occupancy Vehicle (HOV) and Regional Express Bus (on I-5) and
- Potential Rail Extension (between Northgate and Everett).

The DSEIS identifies the following transit elements in the "No Action Alternative: Assumed Regional Transit Network with Sound Move" (Attachment A, Figure 1-2) through or in the City of Shoreline:

- Sounder Commuter Rail Service (along Puget Sound) with station to be determined (Richmond Beach).
- ST Express Regional Bus Service (on I-5).

The Regional Transit Long-Range Plan Alternative (Attachment A, Figure 1-3) identifies the following elements through Shoreline:

- Commuter Rail (along Puget Sound)
- Regional Express Bus/Bus Rapid Transit (BRT) (on SR 99).
- Regional Express Bus/BRT (on I-5)
- Light-Rail (on I-5)

The DSEIS also includes "Regional Transit Long-Range Plan Alternative Options" (Attachment A, Figure 1-4) which adds a number of new elements to the Long Range Plan. All of these new elements are outside of Shoreline and include Streetcars in Seattle, new Light Rail or Monorail in Snohomish, Pierce and King Counties, additional commuter rail in Pierce County and a new BRT between Redmond and Issaquah.

The impacts of the various plan alternatives are described in the DSEIS and summarized in Attachment A, PP 1-13 to 1-20). Further detailed environmental assessments will be made for each capital project in the future.

Shoreline's Comprehensive Plan Policies

Shoreline's currently adopted Comprehensive Plan and proposed amendments include a number of policies related to Sound Transit, including:

> EN 33 Support the expansion of public mass transit and encourage cycling and walking in the City as an alternative to dependence on individual vehicles (no changed proposed in the Plan update).
>
> T-I Develop a safe and effective multimodal transportation system to address overall mobility and accessibility. Maximize the people carrying capacity of the surface transportation system (slight amendment from 1998 Plan).
>
> T-II Improve mobility options for all Shoreline citizens by supporting increased transit coverage and service that connects local and regional destinations (slight amendment from 1998 plan).
>
> T 19 Work with all transit providers to support "seamless" service into Shoreline, across the county lines and through to major destinations (slight amendment from 1998 plan).
>
> T 20 Work with Sound Transit to study the development of a low impact commuter rail stop in the Richmond Beach/Pt Wells area. The Richmond Beach residents shall be involved in the decision making process as far as location, design, and access to the service. (slight change from 1998 plan).
>
> T16 Maximize access to light rail. Support future efforts to provide light rail service to Shoreline along the I-5 Corridor. (this policy is proposed to be eliminated in the update and replaced with the following policy T13)
>
> T13 Develop a detailed transit plan in cooperation with transit providers to identify level of service targets, facilities and implementation measures to increase Shoreline residents' transit ridership. Review potential public transit service to school (amended policy in proposed plan).

Prior City Council Activities Related to Sound Transit

March 18, 1996: Regional Transit Authority staff met and briefed council on the proposed Sound Move Plan. This Plan included BRT on SR 99, and a Provisional Commuter Rail Station. The plan also included a light rail extension from the University District to Northgate if funding is available.

October 7, 1996: Council discussed a draft resolution in support of the Sound Move Plan.

October 14, 1996: Council approved Resolution #109 supporting and endorsing the Sound Move Plan, and requesting RTA and Metro staff work with City staff and citizens for future service (6-1).

Fall, 1998: Sound Transit staff recommends the elimination of BRT on SR 99 as part of their implementation proposal.

October 12, 1998: Council discussed RTA implementation and agreed to call, attend, and testify in support of Shoreline's needs from Sound Transit.

October 19, 1998: Council sent a letter to Paul Miller, Chair of Sound Transit Board requesting reinstatement of SR 99 BRT line, adding express bus stops on I-5 at N 175th or N 145th, and re-routing the SR 522/Bothell Way BRT up 145th to I-5.

October 21, 1998: Ron Hansen testifies at Sound Transit public hearing in support of October 19 discussion.

July 19. 1999: Council discussed Draft EIS for Commuter Rail. Council supported elimination of Richmond Beach Saltwater Park from consideration, but supported continued consideration for a low-impact commuter rail station at either the Metro Pump Station site, or Point Wells.

In summary, Council's historic positions relative to Sound Transit implementation of Phase I have been:

- The need for seamless cross-county continuous Bus Rapid Transit service on SR 99N.
- The need for access to the I-5 Express Bus system at 145th or 175th.
- Diversion of the SR 522 BRT line up 145th to I-5, then on to Downtown Seattle.
- Support for extension of light rail to Northgate in Phase I.
- Consideration of a low-impact Commuter Rail stop at the Metro Pump Station, or at Point Wells.

SEIS Scoping Comments

In June, 2004, the City staff submitted a set of scoping comments on the SDEIS. The comments noted that City of Shoreline residents contribute approximately $3,000,000 per year toward Sound Transit services and facilities and that a number of improvements are needed in Shoreline, including the following:

- The Park and Ride Lot at I-5 and 145th Street
- The Metro facility at I-5 and 165th
- Additional Express Bus Service on SR 99 with stops in Shoreline
- The intersection at SR 99 and 145th to accommodate Express Bus
- The Park and Ride Lot at 192nd
- The intersection of SR 99 and SR 104 to accommodate Express Bus
- Transit service to the Edmonds Regional Transportation Hub
- Light Rail stops in Shoreline
- Road and pedestrian capacity and safety to and from Sound Transit facilities.

ALTERNATIVES ANALYSIS

While Council might choose any number of alternative responses to the DSEIS, including opposition to all or some elements of the plan, staff has identified three major alternatives: 1) No change to the historic position of the City; 2) Modification to consider alternative Light Rail corridors in addition to I-5; and/or 3) Modification to consider alternatives technologies to Express Bus on SR 99.

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RECOMMENDATION

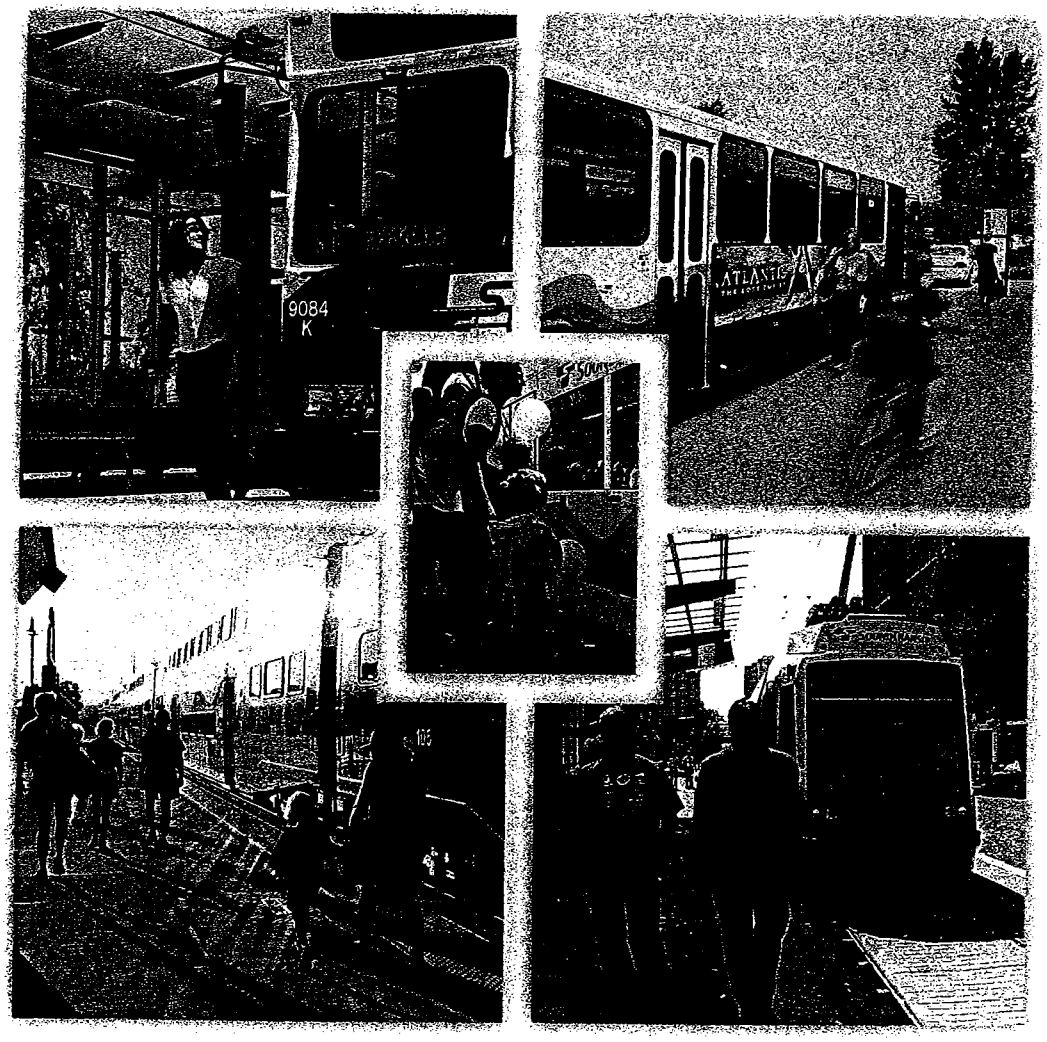
Staff recommends that Council direct the City Manager to prepare a response to Sound Transit consistent with the historic position of the City or with such other changes as Council may direct.

ATTACHMENTS

A. Regional Transit Long-Range Plan DSEIS Executive Summary

REGIONAL TRANSIT LONG-RANGE PLAN

DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT EXECUTIVE SUMMARY



DECEMBER 2004

SOUNDTRANSIT

CENTRAL PUGET SOUND
REGIONAL TRANSIT AUTHORITY

1. Executive Summary – Sound Transit Draft SEIS on Updating the Long-Range Plan

1.1 LONG-RANGE PLAN UPDATE ENVIRONMENTAL REVIEW

The Central Puget Sound Regional Transit Authority (Sound Transit) is updating its 1996 *Regional Transit Long-Range Vision*, which functions as and is referred to in this Draft Supplemental Environmental Impact Statement (SEIS) as the agency's Long-Range Plan. The updated plan will guide the agency's future efforts to provide additional high-capacity transit (HCT) service and transit facilities within the regional transit district of urban Pierce, King, and Snohomish Counties. This SEIS addresses the potential environmental effects of an updated Long-Range Plan and supplements the original Regional Transit System Plan Final EIS, completed in 1993. The updated plan will be consistent with the region's most current overall transportation plan, *Destination 2030* (PSRC 2001). The analysis in this SEIS will also support planning for the second phase (Sound Transit 2) of HCT investments, consistent with the updated Long-Range Plan.

The plan and this environmental review are regional in scope and are designed to consider a range of actions and the environmental effects of an expanded network of regional transit improvements. The plan focuses on the functional elements of the regional network—how regional express bus, commuter rail, light rail, and other transit technologies and facilities will help meet the needs of future growth by better connecting communities in urban Pierce, King, and Snohomish Counties. Individual project decisions such as specific routes, locations, and operating characteristics may not be determined in this analysis and will be addressed, as appropriate, in subsequent project-level environmental review.

This SEIS is part of a phased environmental review. Phased review helps agencies and the public focus on issues that are positioned for fairly short-term decision (such as the Long-Range Plan update and selection of projects for Sound Transit 2 analysis and funding) and exclude issues already decided (such as *Sound Move*) or not yet ready for decision (specific projects to be implemented). Phased review begins with broader plan-level environmental documents that are generally followed by site-specific or project-level documents. The project-level documents usually reference prior plan-level work and decisions and concentrate on issues specific to implementation of each project. In the case of Sound Transit 2 projects, their selection will be informed by the analysis in this plan-level SEIS. If funding is approved for the projects, project-level environmental review will then be conducted, as appropriate.

This SEIS is divided into four chapters and several appendices. Chapter 1 is the Executive Summary. Chapter 2 explains the purpose and need of the updated Long-Range Plan and provides background information on its principles, goals, and objectives. Chapter 3 describes the plan and alternatives and options under consideration. It also discusses other alternatives that have been proposed and explains why they are not being analyzed in detail in this document. Chapter 4 analyzes the environmental impacts of the alternatives at the plan level, by element of the environment. Chapter 4 discusses each element of the environment as it exists today, the potential impact of constructing the alternatives, and measures that could be taken to mitigate adverse impacts. The sections in Chapter 4 also summarize any significant adverse impacts of each alternative that would potentially be difficult or impossible to mitigate. Appendices that provide background and supplemental information, such as the Environmental Justice Study, are also included.

1.2 HISTORICAL CONTEXT FOR UPDATING THE LONG-RANGE PLAN

The extensive planning history for HCT in the Central Puget Sound region, including engineering, environmental analysis, and public outreach efforts conducted up to 1993, is detailed in the 1993 Final EIS. The basic purpose of the 1993 Final EIS was to evaluate a range of HCT system alternatives in order to support decisions on what kind of system would best address the region's mobility needs and support growth management objectives. In the decade since issuance of the 1993 Final EIS, Sound Transit and other transit agencies in the region have implemented many transit projects to increase transit capacity and improve speed, frequency, reliability, and access to transit. These actions and decisions were based on the 1993 Final EIS and other

environmental documents, and they continue to affect the course of future regional transportation decisions and investments. This SEIS builds on the 1993 Final EIS and on other prior environmental reviews and decisions, and it identifies the environmental impacts of alternative future actions.

Major decisions made since the 1993 Final EIS include Sound Transit's 1996 adoption of the Regional Transit Long-Range Plan (see Figure 1-1) and the *Regional Transit System Plan* (known as *Sound Move*). Through these planning efforts and documents, Sound Transit selected an HCT system for the region. The system is a combined rail and regional express bus network that includes a mix of light rail, commuter rail, high-occupancy vehicle (HOV) expressway investments (transit centers, access ramps, park-and-ride lots), and regional express bus service. In 1996, Sound Transit committed to a system that included electric light rail lines linking the four major regional centers—Everett, Seattle, Tacoma, and Bellevue. The HCT system selected was based largely on the Rail/Transportation Systems Management (TSM) alternative analyzed in the 1993 Final EIS.

1.3 PURPOSE AND NEED FOR THE PLAN UPDATE

An updated Long-Range Plan is needed to develop and implement future regional transit improvements, consistent with the region's adopted comprehensive plans. HCT, as part of an integrated transportation system, supports a long-standing strategy to focus growth in urban areas connected by high-quality transportation. VISION 2020 defined this strategy in 1990 (PSRC 1995), linking long-range land use and transportation plans throughout the urban Puget Sound region. VISION 2020 was updated in 1995 (PSRC 1995) to meet State Growth Management Act requirements. Since that time, the region has repeatedly affirmed this strategy in its adopted regional, county, and city comprehensive plans. The latest metropolitan transportation plan, *Destination 2030* (PSRC 2001), calls for the region's HCT system to continue to develop and expand, together with all forms of transportation—local transit, HOV lanes, ferries, airports, automobiles, freight traffic, bicycles, and pedestrians.

Sound Move, Sound Transit's initial phase of regional HCT investments, is addressing many regional mobility needs. The investments of *Sound Move* will continue to provide benefits in the years to come. However, *Sound Move* was not intended to be the final phase of regional transit investment; it was meant to be the first. The transportation problem facing the region still exists, and there is a continued need to address HCT planning and investment.

Many of the transportation problems described in the 1993 Final EIS still exist, although *Sound Move* and the land use strategies now in place are helping the region better manage its population and employment growth. In 1993, congestion, slower and less predictable travel, and a lack of alternatives to driving alone were the key concerns. Today, *Sound Move* and the region's other investments in transportation are helping provide more competitive alternatives to driving alone. However, our mobility problems persist and, as the number of people and jobs grows in the coming decades, there will be greater demands for travel.

From 1990 to 2000, population in the region grew by nearly 20 percent, while the amount of travel in the region grew almost twice as fast. Between now and 2030, population growth is expected to be nearly 40 percent, with a projected 45 percent growth in employment and vehicle miles traveled. While this will be a more moderate rate of travel growth in comparison to population growth than in the past, in part because of the land use and transportation decisions of the last decade, transportation conditions will worsen. Many of the region's roads and freeways are already at capacity for many hours during the day. With more vehicles on the road, congestion and delay will be more severe. Trips will be slower and more unpredictable for people driving on the region's roads and freeways. Because of this, an expanded HCT system will be needed to provide an effective and reliable alternative to driving and an efficient way for people to move throughout the region.

Finally, increased regional transit is necessary to protect the environment and improve the quality of life. The benefits of transit to the environment and for quality of life are central themes in the integrated growth management and transportation strategies of VISION 2020, *Destination 2030,* and Sound Transit's adopted Long-Range Plan for regional transit. In all of these plans, preserving the environment and quality of life are reasons for making transit an effective alternative to driving alone.

More information on the Long-Range Plan's purpose and need, guiding principles, goals, and objectives is provided in Chapter 2.

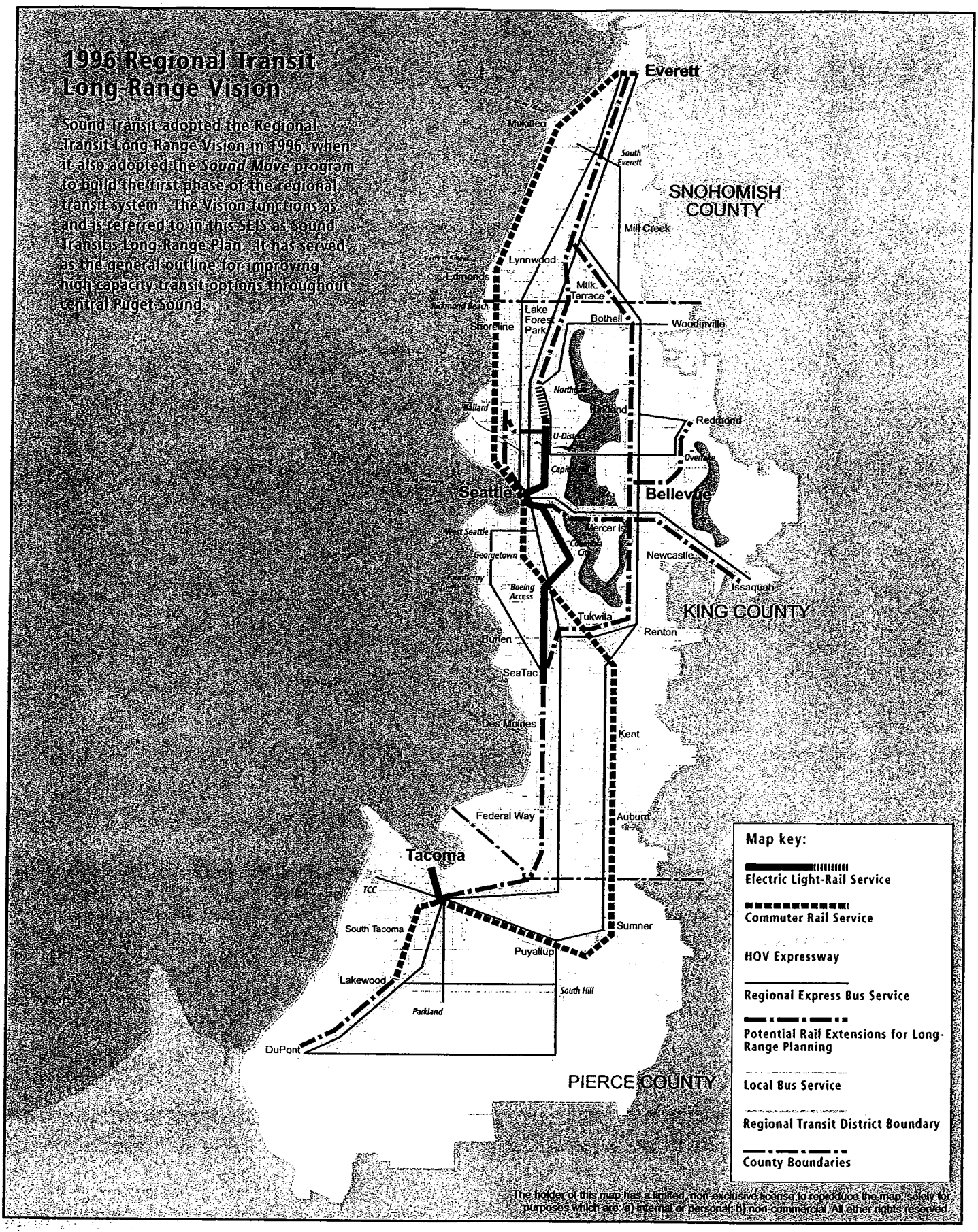


Figure 1-1
1996 Regional Transit Long-Range Vision

1.4 ALTERNATIVES CONSIDERED IN THE SEIS

The updated Long-Range Plan will define regional transit improvements that Sound Transit and the region will consider making through the next several decades. For the SEIS, Sound Transit has evaluated two main alternatives that encompass the probable range of actions for the plan update. These include a No Action Alternative that will serve as the environmental baseline for the SEIS, and a Regional Transit Long-Range Plan Alternative (Plan Alternative) that includes actions to continue implementing the HCT system begun with *Sound Move*. The Plan Alternative is based primarily on the existing Long-Range Plan, adopted in 1996, and includes actions to expand regional transit facilities and services beyond the current commitments of *Sound Move*. The SEIS also evaluates a set of technology and corridor options that represent a "menu" of other actions that could be implemented, individually or in combination, as part of the Plan Alternative. The Options do not stand alone as an alternative, but rather potentially modify or add to the Plan Alternative. More detailed information on the project alternatives and options is provided in Chapter 3.

1.4.1 No Action Alternative

The No Action Alternative assumes the completion of *Sound Move*, but no further extensions of the regional transit network. The *Sound Move* program for light rail, commuter rail, regional express bus, and transit facilities is shown in Figure 1-2. The major elements of *Sound Move* are:

- Central Link Light Rail
- Tacoma Link Light Rail
- Sounder Commuter Rail
- Regional Express Bus/HOV Access

The No Action Alternative also includes other approved and fully funded transportation projects sponsored by other agencies.

1.4.2 Regional Transit Long-Range Plan Alternative (Plan Alternative)

The Plan Alternative is based on the existing Long-Range Plan, selected in 1996, and includes improvements and expansions beyond the No Action Alternative commitments. It is shown in Figure 1-3. The Plan Alternative includes all the elements of *Sound Move,* plus:

- Light Rail (Northgate to Everett, Seattle to Issaquah, Seattle to Bellevue to Redmond, SeaTac to Bellevue to Totem Lake to Lynnwood, SeaTac to Tacoma, University District to Ballard, Ballard to Downtown Seattle)
- Commuter Rail (additional service, service extensions from Lakewood to DuPont, additional commuter stations, additional station facilities)
- Regional Express Bus/Bus Rapid Transit (BRT) (expanded regional express bus services, HOV direct access facilities, transit priority treatments, transit centers and park-and-ride lots, grade or barrier separation)

1.4.3 Adding Options to the Plan Alternative – A "Menu"

This SEIS also analyzes the environmental impacts of potential options that have been suggested to expand or modify the system. The Plan Alternative Options are shown in Figure 1-4. Options include adding to or modifying the elements of the Plan Alternative as follows:

- Light Rail (new corridors/connections: Northgate to Bothell, Lynnwood to Everett via Paine Field, Redmond to University District, Downtown Seattle to North Downtown, SeaTac to Burien, Burien to Renton, Downtown Tacoma to West Tacoma, Downtown Tacoma to East Tacoma)

- Streetcar (Westlake Station to University District via South Lake Union, International District to Central Area, Seattle Waterfront to Prospect Street)
- Monorail (in all corridors being evaluated as light rail in the Plan Alternative and Options)
- Commuter Rail (additional commuter rail stations on existing segments, additional station facilities at existing stations, Tacoma to Frederickson, Sumner to Orting)
- BRT (additional speed, reliability, frequency, passenger facilities/amenities on routes in the Long-Range Plan, e.g., Seattle to Everett on SR 99, plus potential new corridors, e.g., Issaquah to Redmond via Sammamish)

1.4.4 Environmental Impacts and Potential Mitigation Measures

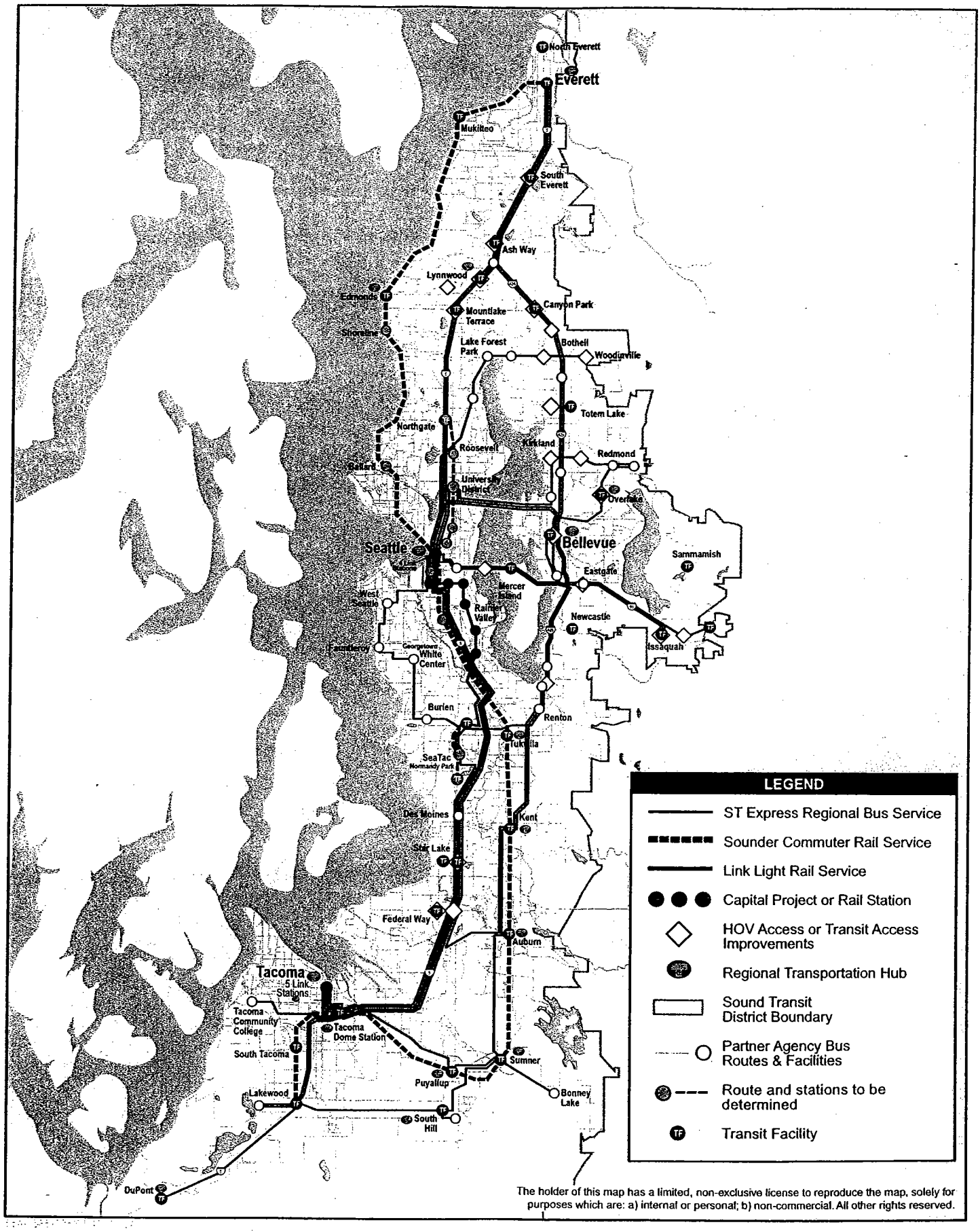
The purpose of this SEIS is to analyze environmental impacts from implementation of an updated Long-Range Plan. For the analysis, the study area was defined as within the boundaries of the Sound Transit District, which roughly includes the urbanized areas of Pierce, King, and Snohomish Counties. This is the area that receives Sound Transit services and pays Sound Transit taxes, and the area within which potential impacts of the updated plan were evaluated at the broad plan level. Future project-level environmental review of those projects that are identified to move forward in Sound Transit 2 will provide more detailed environmental impact assessment and mitigation plans.

Table 1-1 summarizes the operational and construction impacts from implementing an updated Long-Range Plan and associated potential mitigation measures, which are detailed in Chapter 4. Generally, the construction of the infrastructure projects contained in the Plan Alternative would result in higher levels of direct impacts—some of which may be significant—as compared with taking no further action. Balancing those impacts, however, would be direct and quantifiable benefits in transportation availability, air quality, energy use, and other potential areas of benefit resulting from augmenting the regional HCT system and the public's choice of transportation modes with the Plan Alternative. It is also possible that the No Action Alternative could result in negative indirect effects, such as increased urban sprawl and pressure to increase highway construction to attempt to alleviate traffic congestion, all of which would increase adverse impacts to the natural and built environment.

1.5 RELATIONSHIP OF THE SEIS TO THE 1993 FINAL EIS

The 1993 Final EIS examined a wide range of alternatives to improve regional transportation in the Sound Transit District. It was the primary environmental analysis supporting Sound Transit's adoption of the existing Long-Range Plan and *Sound Move*. This SEIS, together with the 1993 Final EIS it supplements, fully discloses the environmental effects of an updated Long-Range Plan and related decisions, such as selection of Sound Transit 2 projects for which funding will be sought. It addresses changes in policy and environmental conditions since 1993. To make review easier, applicable information from the 1993 Final EIS has been directly incorporated into this SEIS. In cases where alternatives examined in the 1993 Final EIS were not part of the system adopted in the 1996 Long-Range Plan, those alternatives are not reevaluated in this SEIS.

General format, elements of the environment, and approach of analysis between this SEIS and the 1993 Final EIS remain similar. Additional areas of study and appendices presented in this SEIS, but not in the 1993 Final EIS, address a broader spectrum of factors that could affect the project. These additional areas of study and appendices are outlined in Section 3.3.3 (Table 3-2).



SOUNDTRANSIT

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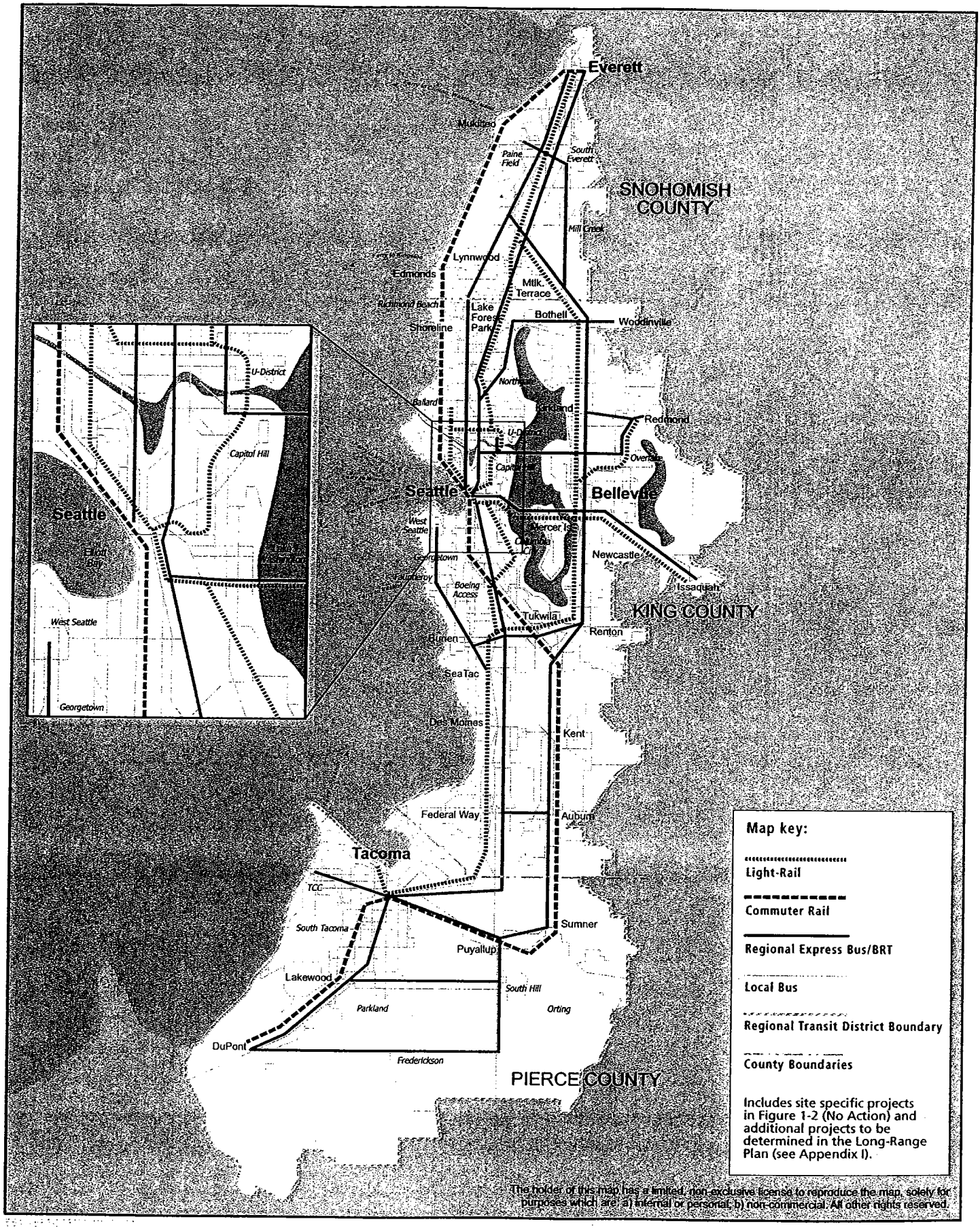
SCALE IN MILES

Figure 1-2
No Action Alternative: Assumed Regional Transit Network with Sound Move



SOUNDTRANSIT

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SCALE IN MILES

Figure 1-3
Regional Transit
Long-Range Plan Alternative

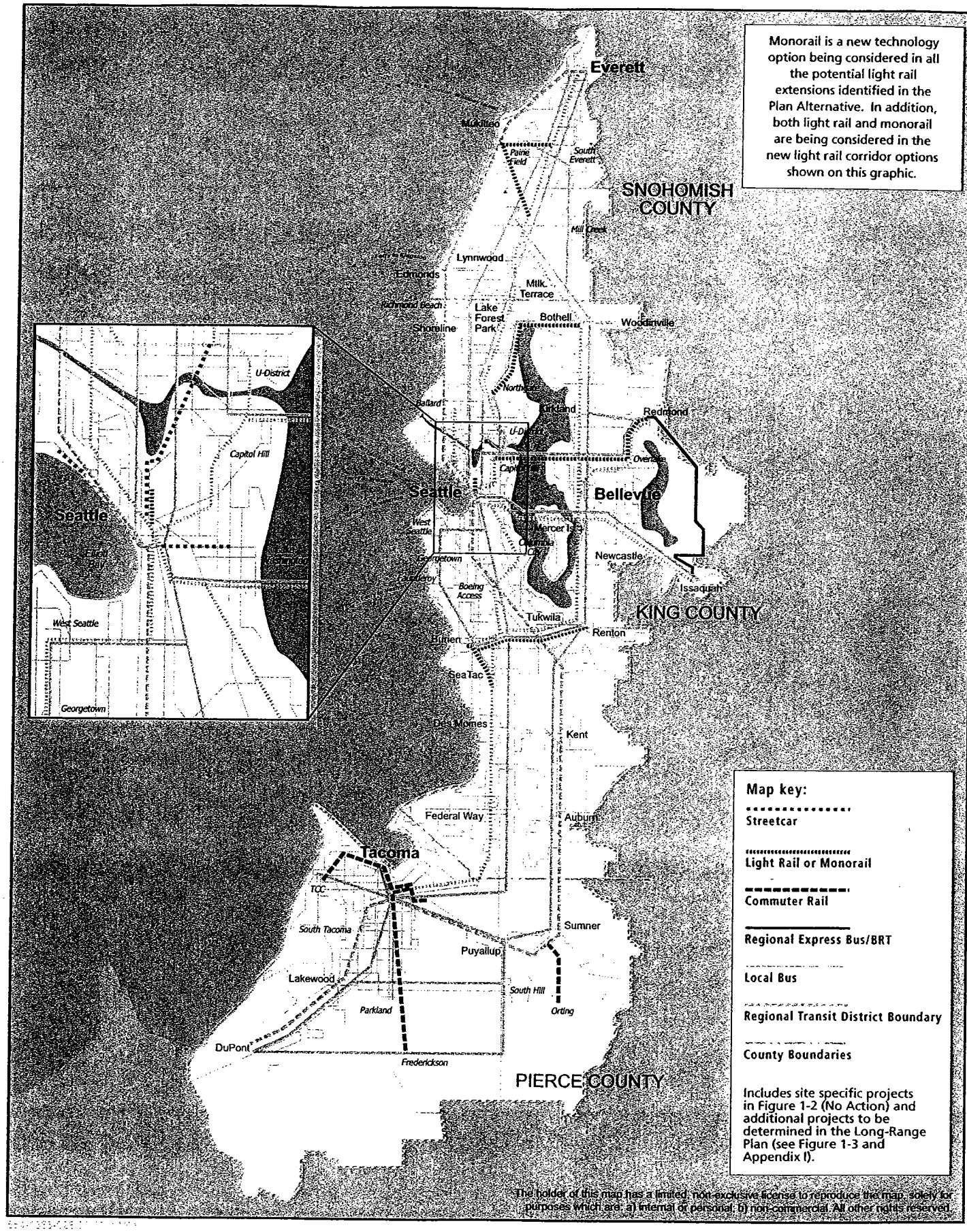

Figure 1-4
Regional Transit Long-Range Plan Alternative Options

Table 1-1
Summary of Environmental Impacts and Potential Mitigation Measures

	Plan Alternative and *Options*	Potential Mitigation Measures	No Action Alternative
4.1 Earth	• Projects are in a seismically active area. • Projects may pass through areas with steep slopes with the potential for landslides. • Construction impacts include potential settlement from vibration or dewatering. • Potential for erosion from construction activities exists throughout the project area. • Subsurface construction work would have the greatest potential for geologic impact. • *The Options would have similar impacts to Plan Alternative projects. Monorail, light rail, and BRT options in new corridors not included in the Plan Alternative would increase overall impacts.*	• Ground modification and structural modification could be implemented to avoid long-term impacts. • Site selection, minimization of clearing and grading, drainage improvements, prompt revegetation, and ground movement monitoring could be used to minimize potential for landslides. • Pre-drilling, auger-drilled piles, underpinning, and pre-condition surveys could minimize vibration impacts. • Detailed impact/site analyses, construction planning and sequencing, standard construction best management practices (BMPs), and installation of recharge wells could be used to mitigate potential dewatering and erosion impacts.	• Fewer projects would be developed, reducing direct geologic long-term and construction impacts. The types of impacts would be similar to those for the Plan Alternative.
4.2 Air Quality	• Regional motor vehicle emissions would be reduced approximately 1 to 5 percent by 2030 due to a reduction in vehicle use and vehicle delay. • Nitrogen oxide and particulate matter emissions (from diesel-powered commuter rail) would increase, but would be more than offset by reductions in automobile use. • Localized emissions would increase around park-and-ride lots and stations in the long term. • Localized emissions would increase near construction areas due to stalled traffic and construction equipment. • *The Options would have similar effects, with new corridors having the potential to further reduce vehicle emissions. Localized impacts may occur in different areas.*	• Multiple measures could be used to control particulate matter less than 10 micrometers in size (PM_{10}) during construction. • A detailed assessment and mitigation plan could be developed during project-level environmental review. Where needed, localized emissions could be reduced by reducing vehicle delays or volumes at major intersections.	• The No Action Alternative regional air quality conditions would be worse than under the Plan Alternative because automobile use would be higher.

Table 1-1
Summary of Environmental Impacts and Potential Mitigation Measures (continued)

	Plan Alternative and *Options*	Potential Mitigation Measures	No Action Alternative
4.3 Noise and Vibration	• Light rail can create noise impacts for residences and other sensitive land uses within 50 to 100 feet of tracks. Elevated tracks are likely to have greater noise impacts than at-grade tracks. • Commuter rail can create noise impacts for land uses within 25 to 50 feet of the rail line. • Transit centers and park-and-ride lots can create noise impacts for land uses within 50 to 150 feet. • Individual projects would generate some temporary noise disturbances near construction activities and may require nighttime noise variances. • Vibration impacts may occur to sensitive land uses within 60 feet of light rail tracks with frequent service, and within 80 feet of commuter rail lines used during peak periods. • *Noise and vibration impacts under the Options would be similar to those discussed under the Plan Alternative. The location of impacts would depend on the options selected. Monorail impacts would be similar to light rail impacts, and BRT impacts would likely be less unless new rights of way are required.*	• Potential measures could include acquisition of land for buffer zones, realignment, track and wheel design for rail systems, maintenance, sound insulation, and construction of noise wall or other barriers. • Mitigation for construction impacts could include noise barriers, time restrictions, noise-reducing devices on equipment, positioning stationary equipment away from receptors, selection of quiet equipment, and frequent equipment maintenance.	• Several transportation improvement projects would be implemented as a result of *Sound Move* under the No Action Alternative. Existing and currently planned transit services and facilities would create vibration and noise levels similar to, but slightly less than, those discussed under the Plan Alternative. Fewer locations would be affected by the construction and operation of transit facilities.
4.4 Water Quality	• Transit facilities could involve long-term impacts such as additional impervious surfaces; new pollution-generating impervious surface; wetland, stream, or floodplain fill; and culvert extensions. Guideways exclusively for light rail would not generate pollutants. Park-and-ride lots, transit stations, BRT, and commuter rail facilities would involve the impacts listed above. • Runoff could affect waterbodies downstream in the long term and during construction. • *The Options would have general impacts similar to those discussed under the Plan Alternative. Monorail guideways would not add pollutants. The Options can affect different watersheds, and the addition of options would increase overall impacts.*	• BMPs related to erosion and sedimentation, staging, culvert extensions or replacement in perennial streams, and dewatering could be implemented to reduce and minimize construction and long-term impacts.	• Direct water quality and hydrologic impacts would be similar to but less than impacts under the Plan Alternative.

Table 1-1
Summary of Environmental Impacts and Potential Mitigation Measures (continued)

	Plan Alternative and *Options*	Potential Mitigation Measures	No Action Alternative
4.5 Ecosystems	• Potential long-term and short-term impacts could include noise and visual disturbance to wildlife; pollution; and habitat fragmentation, degradation, and loss. • Projects that require new rights of way and facilities, such as light rail and park-and-ride lots and commuter rail track, are most likely to have ecosystem impacts. • *Ecosystem impacts for the Options would be similar to those discussed under the Plan Alternative. The location and extent of impacts may vary, and the addition of options would increase overall impacts.*	Potential mitigation measures could include the following: • Incorporate erosion and construction-related BMPs. • Minimize the size of construction staging areas and promptly replant with native vegetation. • Avoid or minimize construction activities and facility placement near wetlands, streams, and other high-quality habitats. • Enhance existing habitats in selected priority areas and consider additional land acquisition for restoration or enhancement.	• Direct long-term and construction ecosystem impacts would be less than under the Plan Alternative.
4.6 Energy	• Regional energy consumption would decrease, based on lower levels of automobile use compared to the No Action Alternative. The Plan Alternative would save 36,680 gallons of gasoline daily over the No Action Alternative. • Energy demand would increase during construction. • *The Options would likely have greater benefits by decreasing energy consumption from automobile use.*	• None required.	• Regional, long-term energy use would be higher than under the Plan Alternative. • Transit project-related construction energy consumption would be lower than under the Plan Alternative.
4.7 Environmental Health	• Fluids from fuel or maintenance could leak during operation. • Persons living or working near construction sites may inhale, ingest, or have skin contact with soil particles, dust, vapors, or aqueous solutions. • During construction, previously contaminated sites may be encountered. The cleanup of contaminated sites would improve environmental conditions and possibly other pollutants. • *The Options would be similar to those discussed under the Plan Alternative. Different sites may be affected, and more previously contaminated sites may be improved during construction.*	Potential mitigation measures could include the following: • Meet health, safety, and hazardous waste regulations. • Segregate hazardous wastes. • Protect employee health through ventilation, fire protection, and other measures. • Treat contaminated runoff with oil/water separator and stormwater detention facilities. • Use nontoxic substances. • Use property investigation and remediation and environmental site assessments (phase I, II, or III) to identify opportunities to remediate contaminated property, or avoid contamination by rerouting the alignment. • Handle all hazardous materials encountered during construction according to applicable law.	• Direct environmental health impacts would be similar to but less than under the Plan Alternative. Beneficial effects due to the clean up of contaminated sites would be less.

Table 1-1
Summary of Environmental Impacts and Potential Mitigation Measures (continued)

	Plan Alternative and *Options*	Potential Mitigation Measures	No Action Alternative
4.8 Visual Quality and Aesthetic Resources	• Projects may alter or add features to the landscape, including stations, park-and-ride lots, and overhead power sources. • Light rail may require elevated guideways, which would be more visible than at-grade rail. When near residential areas, the localized impacts can be substantial. • Light and glare could increase around park-and-ride lots and along new HCT corridors. • Views may be impacted. • Projects may also improve aesthetic conditions by improving streets, sidewalks, and landscaping. • Temporary visual impacts could occur from construction equipment, materials, signage, etc. • Temporary lighting may be required for nighttime construction. • *The Options would have similar effects to those discussed under the Plan Alternative. Variations, such as substitution of light rail with monorail or more extensive use of light rail, may increase impacts because more elevated guideways may occur, and new corridors would be affected.*	Potential mitigation measures could include the following: • Select and modify routes to avoid or minimize the need to acquire and clear new right of way. • Modify structure designs to integrate scale and character with surroundings. • Replant vegetation. • Shield light sources. • Screen views of construction areas.	• Direct visual impacts would be similar to but less than under the Plan Alternative.
4.9 Transportation	• The transit system would provide important choices for travel in the region, providing reliable, fast, and frequent service to and from major urban centers. • Transit services, access, and ridership would increase because the Plan Alternative would substantially increase transit frequency, geographic coverage, parking, access, speed, and reliability. • Regional traffic volumes for single-occupancy vehicles would be lower than under the No Action Alternative, including noticeable reductions in peak-hour traffic to and from major urban centers. • Transportation opportunities would increase for the elderly and people with disabilities.	Potential mitigation measures could include the following: • Use signage and/or flaggers to guide traffic through detours. • Send out advanced construction notifications and implement a construction location hotline. • Phase construction activities. • Prepare a detailed traffic impact mitigation plan. • Close lanes during off-peak times. • Provide special transit services through some construction areas. • Implement residential parking zones and develop parking management plans. • Increase the number of feeder buses. • Improve pedestrian and bicycle facilities. • Provide additional parking at selected stations.	• Transit services, access, and ridership would be less than under the Plan Alternative. • Regional traffic volumes would be greater than under the Plan Alternative. • Construction impacts would be similar to but less than under the Plan Alternative.

Table 1-1
Summary of Environmental Impacts and Potential Mitigation Measures (continued)

	Plan Alternative and *Options*	Potential Mitigation Measures	No Action Alternative
	• Parking demand by transit users may increase near station areas, reducing supply for other nearby uses. However, transit-specific commuter parking often serves other nearby land uses, especially those whose peak parking demand occurs on evenings or weekends. • Streets and intersections near stations may have increased traffic and delays. • Projects along existing streets and highways may reduce capacity or change local access or circulation. These effects would likely be higher for light rail and exclusive transitways for bus than for commuter rail and regional express bus projects on existing facilities. • Construction of the Plan Alternative elements could take place in all three counties in the region at the same time and regional traffic congestion and speeds could be negatively affected. Specific impacts would be determined in conjunction with future project-level planning and environmental review. • *The Options may result in higher ridership levels regionally. Monorail and streetcars may require alterations of existing roadways, with general impacts as described above for light rail. Construction of the options could have similar effects as the Long-Range Plan, but different areas may be affected.*		
4.10 Land Use	• The Plan Alternative would be consistent with land use plans, policies, and legislation, including VISION 2020 and *Destination 2030*. • The Plan Alternative would promote development that is supportive of plans and policies for higher-density multi-use areas. • Land acquisition could result in displacement of residences, businesses, and public facilities. • Plan Alternative projects would decrease dependence on automobile travel and increase transit- and pedestrian-friendly development. • New development, redevelopment or infill, and land use intensification surrounding transit stations could replace some dispersed automobile-oriented land uses.	• Individual projects could be designed to minimize displacements and encroachment on surrounding land uses. • When acquiring real property and relocating people and businesses, Sound Transit would provide relocation advisory services and monetary compensation in accordance with state and federal laws and Sound Transit policy. • Mitigation for site-specific land use impacts would be identified during future project-level planning and environmental review.	• The No Action Alternative would be consistent in part with land use plans, policies, and legislation. Under the No Action Alternative, *Sound Move* would be completed; however, the HCT system would not support the region's adopted growth and land use strategy. • Implementation of projects under the No Action Alternative as a result of *Sound Move* would result in similar direct land use impacts relative to the Plan Alternative, but to a lesser extent.

Table 1-1
Summary of Environmental Impacts and Potential Mitigation Measures (continued)

	Plan Alternative and *Options*	Potential Mitigation Measures	No Action Alternative
	• Construction may temporarily disrupt local traffic patterns and access to residences and businesses. • Some businesses may close or relocate due to construction activities. • *Impacts to land use under the Options would be similar to those discussed under the Plan Alternative. Variations in impacts would occur depending on the number of projects and specific options selected for implementation*		• The No Action Alternative could result in increased pressure for suburban sprawl and growth outside urban growth areas. In addition, there could be increased pressure to build highway improvements.
4.11 Public Services and Utilities	• The increased transit opportunities would generally increase access to public services such as libraries, health care centers, and community centers in the long term. • Some emergency services may be impeded by new rights of way in the long term and by construction activities (traffic congestion and detours) during construction. • Additional emergency response services and training could be necessary. • Access to some public services may be reduced due to traffic restrictions in the long term and during construction. • Relocations of utilities during construction could cause temporary disruption of service. • *Public service and utility impacts for the Options would be similar to those discussed under the Plan Alternative. Monorail impacts would be similar to those for elevated light rail. The areas affected would vary.*	Potential mitigation measures could include the following: • Review of traffic restrictions by local jurisdictions to ensure adequate service levels. • Minimize waste generation and promote recycling, including recycling of construction waste and materials. • Meet design criteria to minimize impacts on emergency services and minimize need for additional security. • Install an emergency communication system. • Follow applicable codes, criteria, and policies for construction activities. • Closely coordinate construction with affected utilities and services.	• For regional transit projects currently committed to under *Sound Move*, the direct long-term and construction impacts would be similar to but less than impacts of the Plan Alternative.
4.12 Parks and Recreation	• Some projects may require the use of parks and recreational lands. • Projects near parks and recreational resources may impact access, noise, air quality, traffic, aesthetics, or use of the resource. Views of parks could be obstructed. • Construction activities may decrease park access, public safety, and usability. • Projects that would add bicycle lanes or trails would increase recreational opportunities.	Potential mitigation measures could include the following: • Design HCT projects to avoid or minimize potential adverse effects where possible. • Use design that is sensitive to neighborhood context, character, architectural styles, scale, and views to reduce the level of impacts. • Restore facilities to pre-project conditions and provide comparable replacement facilities if acquisition of parks and recreation facilities is necessary.	• The No Action Alternative could result in increased pressure to develop open space on the urban fringe. • Direct long- and short-term impacts to parks would be similar to but less than under the Plan Alternative.

Table 1-1
Summary of Environmental Impacts and Potential Mitigation Measures (continued)

	Plan Alternative and *Options*	Potential Mitigation Measures	No Action Alternative
	• *The Options would have similar impacts to those of the Plan Alternative. Different locations may be affected, and if more rights of way are required, impacts may increase.*	• Maintain access during temporary road and trail closures, and screen views of construction sites during construction. • Provide signage explaining the nature and duration of construction. • Use noise and light barriers or shields during construction and for system operation.	
4.13 Historic and Cultural Resources	• Vibration, noise, visual, setting, and access impacts to historic properties could occur in the long term and during construction. • The acquisition of property may alter or destroy existing historic or cultural properties. • Tunneling options would have the greatest potential for impacts to archaeological sites during construction, particularly in areas near lakes, rivers, and shorelines. • Construction may involve vibration impacts that have the potential to damage fragile buildings. • *Impacts to historic and cultural resources for the Options would be similar to those discussed under the Plan Alternative. Variations in impacts could occur depending on the options selected.*	Potential mitigation measures could include the following: • Consult with agencies, tribes, and local governments. • Perform archaeological testing and monitoring in high-probability areas prior to and during construction. • Design and locate facilities to be compatible with historically sensitive areas. • Provide landscaping elements to lessen long-term visual and noise impacts. • Modify construction methods to avoid or limit construction-related impacts (dust, noise, access, vibration, emissions, visual). • Fully document historic properties and relocate or remove them if necessary.	• Direct impacts under the No Action Alternative would be similar to but less than under the Plan Alternative.
4.14 Cumulative Impacts	Other transportation projects and the continued growth and development of the urban area may increase the direct impacts to the elements of the environment listed above, although the types of impacts are expected to be similar. Many elements of the environment (air quality, land use, transportation) already consider the effects of future growth and other major project developments. When the Plan Alternative and *Options*, and other projects are in close proximity to each other, localized impacts may increase. However, the combined benefits of the Plan Alternative with other transportation projects, such as the development of the Green Line monorail, Washington State Department of Transportation (WSDOT) HOV lanes, and other improvements to local and regional transportation, could also provide greater cumulative benefits.	See each element of the environment for potential mitigation measures. Sound Transit could also work with other project proponents to identify and address cumulative impacts through coordinated mitigation measures.	• With fewer regional transit projects being implemented, the No Action Alternative would have fewer direct impacts to the environment, but benefits due to reduced automobile use and improved mobility also would not accrue. Transportation conditions would worsen, and if increased roadway capacity is needed, overall environmental conditions would worsen.

Table 1-1
Summary of Environmental Impacts and Potential Mitigation Measures (continued)

	Plan Alternative and *Options*	Potential Mitigation Measures	No Action Alternative
Appendix B Environmental Justice	• The Plan Alternative and *Options* would provide substantial benefits to low income and minority populations, such as greater access to transit and employment as well as improved travel times (see Appendix B). • The Plan Alternative and *Options* would not have disproportionately high and adverse impacts on low-income or minority populations.	• None required.	• The No Action Alternative would not have disproportionately high and adverse impacts on low-income or minority populations; however, it would provide fewer benefits than the Plan Alternative.

1.6 AREAS OF CONTROVERSY AND UNCERTAINTY

As it considers updates to the Long-Range Plan and identifies projects for the next phase of improvements (Sound Transit 2), the Sound Transit Board will balance many issues. Understanding the need for the projects, achieving equity among the various service areas of the region, and obtaining funding to make the plans reality, are all issues the Board will face. Other unresolved regional issues that may affect the implementation of the projects likely to be considered for implementation based on the updated Long-Range Plan are discussed below. The areas of controversy and uncertainty identified below are preliminary and not intended to be exclusive. Additional areas of controversy and uncertainty will likely be identified during the Draft SEIS public comment period and will be included in the Final SEIS.

As part of the Long-Range Plan update, Sound Transit will review the previously designated HCT corridors and consider additional designations. Sound Transit will also consider whether new technologies should be considered for the existing HCT corridors and/or the potential new corridors.

Sound Transit may determine which technology options are best for corridors that are designated as HCT corridors in the updated Long-Range Plan. Options evaluated in this SEIS include light rail, monorail, streetcar, commuter rail, and BRT. Each of the technology options has distinct advantages and disadvantages. In some corridors, the technology decision could include two or more possibilities. For example, a corridor may be identified as an HCT corridor and designated a potential future rail extension in the Long-Range Plan, but Sound Transit may later decide that BRT is the most appropriate technology for the next phase of investments.

In the 1996 Long-Range Plan, the I-90 corridor was designated as a potential future rail extension and regional express bus improvements were implemented as part of the first phase (*Sound Move*). In a corridor analysis conducted for Sound Transit by the Puget Sound Regional Council (PSRC) in 2004, this corridor was identified as being most ready for higher-capacity transit investments, beyond those being implemented as part of *Sound Move*. Expanded BRT, light rail, and monorail technologies are currently being evaluated in the corridor between Seattle and Bellevue, along with possible extensions to Overlake, Redmond, Totem Lake, and Issaquah. Sound Transit is conducting additional technical analyses of light rail, BRT, and monorail options in the East King County area, focusing on comparative differences in system development, performance, and cost. A copy of the HCT planning reports describing future HCT development and the approach to assessing system-level alternatives is included in this SEIS as Appendices N and O. Relevant results of this analysis may be included in the Final SEIS. It is likely that Sound Transit will select a technology for project-level review for the I-90 corridor as part of the updated Long-Range Plan.

In the 1996 Long-Range Plan, the I-405 corridor was designated as a potential future rail extension. Regional express bus improvements were implemented as part of *Sound Move*. In 2002, the Washington State Department of Transportation (WSDOT) and Sound Transit completed a 3-year plan-level EIS for multimodal redevelopment of I-405. The I-405 Corridor Program EIS describes a Master Plan for the corridor. WSDOT and Sound Transit adopted the I-405 Master Plan following the release of the Final EIS, and the EIS received a Record of Decision from the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) in October

2002. The participants of the I-405 Corridor Program EIS concluded that BRT was the most appropriate transit investment for this corridor through 2020. The I-405 plan would construct a BRT line with stations, HOV direct access ramps, park-and-ride lots, and bus service. Funding is not yet available for the BRT portion of the implementation plan, but could become available if funded as part of Sound Transit's next phase of investments (Sound Transit 2). This SEIS considers the potential for rail on I-405, in addition to BRT, recognizing that the long-range needs of the corridor may require high levels of transit service.

The SR 520 Evergreen Point Bridge is nearing the end of its useful life according to WSDOT and must be replaced within the next several years. In the Trans-Lake Washington Project, WSDOT and Sound Transit led a regional study effort to identify replacement alternatives. The project's Executive Committee concluded that bus/HOV was an appropriate near-term solution but that the replacement of the bridge should be designed to accommodate construction of HCT in the future. With the conclusion of that study, WSDOT is now preparing an EIS for that project. The project's Executive Committee has chosen to analyze a bridge pontoon design that would support HCT in the future. During scoping for this SEIS, some suggested that Sound Transit consider constructing light rail on SR 520, specifically a University District to Redmond extension. Others suggested that BRT or monorail is a more appropriate technology for this corridor. This SEIS evaluates the environmental impacts of all three potential technologies for the SR 520 corridor.

Another area of potential controversy and uncertainty is whether streetcar systems or local transit services should be included in the list of possible projects in the updated Long-Range Plan. While these are not considered HCT, Sound Transit will consider whether such supporting services or facilities are critical to the effectiveness of the regional HCT system.

1.6.1 Consequences of Delaying a Long-Range Plan Update

If implementation of projects under an updated Long-Range Plan were delayed substantially, the primary potential benefit would be to delay adverse construction and operating impacts of the project. However, there are substantial disadvantages of delaying implementation. Delay could create transportation and land use concerns due to failure to realize the projects' benefits and implement a major component of the region's long-range vision for managing growth and transportation. There are also potential funding implications associated with delaying plan implementation.

More information on the consequences of delaying action is provided in Chapter 3.

1.7 NEXT STEPS IN THE SEIS PROCESS AND LONG-RANGE PLAN UPDATE

1.7.1 Draft SEIS Review and Comment

This Draft SEIS provides a plan-level analysis of alternatives for updating the Long-Range Plan, supplementing the Regional Transit System Plan Final EIS analysis prepared in 1993. Sound Transit welcomes broad public review of the document and will circulate this Draft SEIS to affected local jurisdictions and agencies, state and federal agencies, tribes, community organizations, environmental and other interest groups, and interested individuals and will make the document available to the public. The document will be available at Sound Transit, public libraries, and community centers in the Sound Transit District. A formal public comment period and public hearings on the Draft SEIS will follow its publication.

Public hearings on the Draft SEIS will be held on the following dates at the following locations Additional information on public hearings can be found at www.soundtransit.org.

Monday, January 10 **Seattle** Sound Transit Headquarters (Board Room) 401 Jackson Street	**Wednesday, January 12** **Bellevue** Bellevue First Congregational Church 700 - 108th Avenue NE
Thursday, January 13 **Shoreline** Shoreline Conference Center (Shoreline Room) 18560 1st Avenue NE	**Tuesday, January 18** **Everett** Everett Station (Weyerhauser Room) 3201 Smith Avenue
Wednesday, January 19 **Tacoma** Washington State History Museum (Mezzanine) 1911 Pacific Avenue	**Thursday, January 20** **Lakewood** Lakewood City Hall (Council Chambers) 6000 Main Street SW
Monday, January 24 **Federal Way** Federal Way Regional Library 34200 1st Way S	**Tuesday, January 25** **Lynnwood** Lynnwood High School (Cafeteria) 3001 184th Street SW
Wednesday, January 26 **Issaquah** King County Libraries Service Center 960 Newport Way NW	**Thursday, January 27** **Auburn** Auburn City Hall (Council Chambers) 25 West Main

1.7.2 Final SEIS

After public and agency review of the Draft SEIS and full consideration of comments received, Sound Transit will prepare the Final SEIS. The Final SEIS will document and address comments received on the Draft SEIS. Issuance of the Final SEIS is planned for spring or early summer of 2005.

1.7.3 Plan Adoption and Implementation

The Sound Transit Board will make a decision on the updated Long-Range Plan to be adopted, after consideration of the SEIS information, public and agency comments on the Draft SEIS, and other relevant information. The Sound Transit Board will also make decisions on preferred technologies for certain corridors, to be carried forward into project-level review.

Sound Transit's updated Long-Range Plan will then provide the basis for defining the next phase of improvements for implementing the plan (Sound Transit 2 projects). As occurred with funding for *Sound Move* in 1996, voters will have the opportunity to approve funding for Sound Transit 2 projects. After funding is approved, project-level planning and environmental review will be prepared, as appropriate.

Throughout the planning, decision-making, and implementation process, Sound Transit will continue its public outreach to involve the region's citizens in developing a regional HCT system. Sound Transit will continue to respond to public concerns and engage in open dialogue about the future of regional transportation.