State Route 303 Bremerton to Silverdale Transportation Corridor Study

June 2002

Washington State Department of Transportation
Olympic Region

U. S. Department of Transportation
Federal Highway Administration

in partnership with

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May 22, 2002

HFO-WA.1 / SR303

Mr. Douglas B. MacDonald
Secretary of Transportation
Department of Transportation
Olympia, Washington

Attention: Bob Jones, Olympic Region Planning

**Final Bremerton to Silverdale
Transportation Corridor Study**

Dear Mr. MacDonald:

The final study for the State Route (SR) 303 Bremerton to Silverdale Transportation Corridor provided to the Federal Highway Administration (FHWA), dated June 2002, adequately documents the process used to select an alternative for further study under the National Environmental Protection Act (NEPA). However, the document does not contain the level of detail needed for FHWA to determine whether a Findings of No Significant Impact or an Environmental Impact Statement would be appropriate for the proposed action. For example, a 4 (f) evaluation, and Endangered Species Act consultation need to be completed. While a useful NEPA document must be current the alternatives that have been analyzed and rejected under the SR 303 planning process follow the NEPA guidelines and principles, therefore they will not have to be revisited as the study moves to the next phase. This does not exclude the study looking at avoidance measures or new alternatives if an EIS is determined to be appropriate.

Sincerely,

DANIEL M. MATHIS, P.E.
Division Administrator

Steve Saxton

By: Steve Saxton
Area Engineer

cc: Nita Jackson, OR Planning

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ACRONYMS

ADT	Average daily traffic
APE	Area of Potential Effect
AWDT	Average weekday daily traffic
BA	Biological Assessment
BMPs	Best Management Practices
CO	Carbon Monoxide
CAA	Clean Air Act
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dBA	decibels
DS	Determination of Significance
EA	Environmental Assessment
Ecology	Department of Ecology (Washington State)
EPA	Environmental Protection Agency
EPC	Executive Policy Committee
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FONSI	Finding of No Significant Impact
Ft^2	Square Feet
HAC	High accident corridor
HAL	High accident location
HOV	High Occupancy Vehicle
LOS	Level of Service
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
PAL	Pedestrian Accident Location
PGIS	Pollutant Generating Impervious Surface

ACRONYMS (Continued

PHS	Priority Habitat and Species
PM10	Particulate matter (smaller than 10 microns in size)
psi	pounds per square inch
PSCAA	Puget Sound Clean Air Agency
PSRC	Puget Sound Regional Council
SHPO	State Historic Preservation Office
SOV	Single Occupancy Vehicle
SMA	Shoreline Management Act
SR	State Route
TAC	Technical Advisory Committee
TDM	Travel Demand Management
TSM	Transportation System Management
USFWS	United States Fish and Wildlife Service
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
vpd	vehicles per day
vph	vehicles per hour
USDOT	United States Department of Transportation
WDFW	Washington Department of Fish and Wildlife
WSDOT	Washington State Department of Transportation

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EXECUTIVE SUMMARY

INTRODUCTION

The Washington State Department of Transportation (WSDOT) and Federal Highway Administration (FHWA) in partnership with the City of Bremerton, Kitsap County, and Kitsap Transit have undertaken a study of the State Route (SR) 303 corridor to address short and long-term transportation issues and needs in the corridor. The focus of the SR 303 Corridor Study is to identify and evaluate the need for and effects (benefits and impacts) of a wide range of multi-modal strategies to serve corridor demands through the year 2030. The study process will provide decision-makers with a community-based vision to support transportation and land use planning decisions. As part of the public participation process the following objectives have been identified (WSDOT 2001d):

- Improve safety and relieve traffic congestion to accommodate planned growth and future travel demands
- Integrate appropriate multi-modal transportation strategies including transit and non-motorized travel (bicycles and pedestrian) within the corridor
- Provide efficient access to commercial and residential areas to accommodate planned development along the corridor
- Respect and provide for competing needs (natural/built environment) in implementing any improvement; improve and/or maintain the visual aesthetic character of the corridor; and improve, conserve, and protect fish-bearing passages.

STUDY AREA

The SR 303 Corridor Study area is bounded by Dyes Inlet to the west, SR 303 and the community of Silverdale to the north, SR 304 (Burwell Street) and downtown Bremerton to the south, and Port Orchard Bay to the east (Figure E-1). SR 303 is a north and south road alignment that connects downtown Bremerton to the community of Silverdale. The SR 303 corridor starts at Burwell Street (SR 304) at the south end of the study area and extends north to the intersection of Waaga Way (SR3/SR303) at its northern terminus. The current alignment of SR 303 was established in 1992 and spans nine miles. The project study area for the Proposed Action begins at 11th Street in the south and extends north to NE Fairgrounds Road. The length of the project study area (11th Street to NE Fairgrounds Road) is approximately 4 miles, although for purposes of this analysis, the entire 9-mile alignment was evaluated. The project is located in Kitsap County and the City of Bremerton, Washington.

The SR 303 corridor (along with SR 3) serves as one of the major north/south arterials that facilitate the movement of people and goods in central Kitsap County. It also provides a well-used link to the ferry terminal located in the Central Business District (CBD) of downtown Bremerton, which provides transportation accessibility to the Seattle metropolitan area. The Washington State Ferry System operates both auto/passenger and passenger-only ferries from Bremerton to Seattle.

ALTERNATIVES

There are two alternatives considered in this document: the Proposed Action Alternative and the No Action Alternative. The design and project elements of the Proposed Action are conceptual in nature at the present time, therefore, the approach in this document is to examine a range of options for improving the SR 303 corridor in a programmatic way. The environmental information developed in the corridor study will be used to elicit public and agency comment on the proposal and to help define the options for improving SR 303, which will be examined in greater detail during project specific environmental review.

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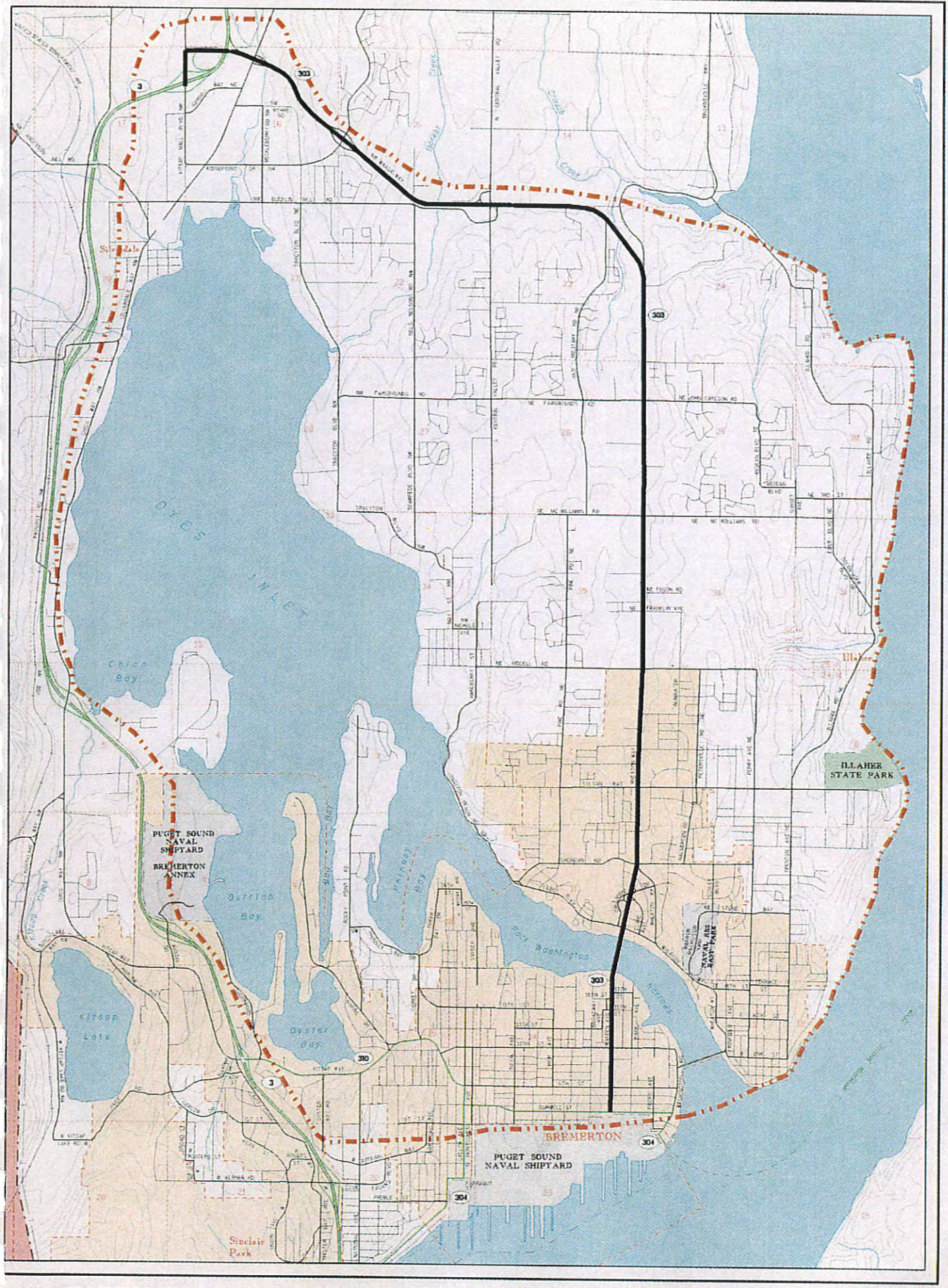

PROJECT LIMITS

Figure E-1
Project Study Area

The Proposed Action Alternative involves adding improvements to increase the operational capacity and efficiency of the SR 303 roadway. Improvements include road widening, high occupancy vehicle (HOV) lane implementation, access control measures, and improvements to signalization, signage, illumination, bicycle and pedestrian facilities, and the road surface. The proposed road widening includes expanding SR 303, currently four lanes with a center two-way turn lane, to six lanes plus additional turn lanes and U-turns at signalized intersections. The added travel lanes would be designated for HOV use during the AM and PM peak periods (anticipated to be between 6-9 AM and 3-6 PM) and open to all traffic during other times of the day. In addition, the Warren Avenue Bridge would be widened from four to six lanes, and include the construction or improvement of six-to-eight foot wide pedestrian and bicycle lanes. The project also includes the consideration of landscaping and streetscape improvements.

The Proposed Action further includes elements of Transportation System Management (TSM) and Transportation Demand Management (TDM). Other TSM elements (not discussed above) may include incident management, ramp metering, and development of park-and-ride lots. TDM measures may include car or vanpool formation assistance, designated carpool or vanpool parking (and other parking restrictions), and transit subsidies.

The No Action Alternative would result in no improvements to the SR 303 Corridor beyond routine maintenance and repair of the existing facilities.

PURPOSE AND NEED

The purpose of the corridor study was to examine a range of multi-modal alternatives within the north-south corridor between Bremerton and Silverdale that would work together to improve safety, accessibility, mobility, the movement of goods in the study area, and support growth that is compatible with the area's aesthetic and natural/built environment characteristics (see Planning Process History section for background on the alternatives screening and analysis process). The Proposed Action is the preferred alternative for meeting these purposes.

The corridor study was initiated to meet the need to manage the increasing demand for transportation movement between Bremerton and Silverdale. The north-south roadways in the study area, particularly SR 303, are experiencing increasing traffic volumes, which have increased congestion and resulted in a higher rate of accidents. Furthermore, there is a need to accommodate future travel demands caused by planned growth, particularly in the unincorporated county near Silverdale. Improvements are also needed to provide facilities to increase alternatives to single-occupancy vehicles, and to improve accessibility. The overall needs are documented in the following data and statistics:

Mobility of the Route: In 1999, the SR 303 average daily traffic (ADT) volumes ranged between 14,500 south of 11th Street to 41,900 on the Warren Avenue Bridge. It is estimated that by 2030 traffic volumes on SR 303 will range from 23,300 south of 11th Street to 67,200 on the Warren Avenue Bridge. In the recent past, traffic volumes within the corridor have steadily increased. Since 1980, traffic volumes on SR 303 at NE Riddell Road increased by 96 percent, at Sheridan Road by 22 percent, and at 11th Street by 36 percent. Some of the highest traffic volumes (41,900) are occurring on the Warren Avenue Bridge, which also experiences the highest number of rear end accidents along the corridor (WSDOT 2001b).

Development and Accessibility Along the Route: Due to the importance of the route for traffic movement between Bremerton and Silverdale and for access to abutting businesses and neighborhoods, access management is becoming more important to the capacity of the corridor. In recent years, commercial development has increased significantly on SR 303 which in turn increases the demand for better transportation and access, especially at the primary access point to a particular business. For

example, the 5-mile segment from Sheridan Road to S. Central Valley Road consists of five lanes with a two-way center turn lane, and has roughly 30 driveways per mile. Similarly, one section along the Sylvan Way-NE Riddell Road segment has 49 commercial driveways per mile, and another segment from Burwell Street to Sheridan Road has 47 driveways per mile. The number and location of access points contributes to the decline of safety and operational characteristics of the existing highway (WSDOT 2001b).

Safety of the Route: There are several sections of the SR 303 route identified as High Accident Locations (HALs). HALs are identified when there is a two-year history of accident rates above the statewide average for similar state highways. One 4-mile segment of SR 303 has a five-year history of higher than average accident rates and is also identified as a High Accident Corridor (HAC). A contributing factor is the high number of closely spaced commercial access points along SR 303 (WSDOT 2001b). WSDOT has an ongoing project to address safety issues along the HAC. Under present conditions, it is reasonable to assume that the number of accidents at these locations will continue to increase with rising traffic volumes.

Non-Motorized Traffic (bicycles and pedestrian): Existing conditions on the SR 303 corridor are not pedestrian or bicycle-friendly. Within the city limits (Burwell Street to NE Riddell Road) there is a continuous sidewalk on both sides of the highway, however, the lack of adequate dedicated facilities for bicycles, and limited separation between pedestrians and vehicles, discourages the use of these forms of non-motorized transportation. In addition, Pedestrian Accident Locations (PALs) have been identified along SR 303. PALs are generally characterized as 1/10th-mile long road segments that have a 5-year history of three or more pedestrian accidents. Generally, SR 303 north of NE Riddell Road lacks a continuous sidewalk and there are no dedicated bicycle facilities. Non-motorized use of the corridor would likely increase if the SR 303 corridor was safer for pedestrians and bicyclists.

Transit Movement: Kitsap Transit currently has eight bus routes operating along the corridor, with two park-and-ride lots and one transfer center. During the public involvement process concerns were raised as to the unfriendly transit environment; the location of bus stops in relation to businesses (business setbacks from the road); the lack of bus pullouts resulting in traffic delays and stoppages; and the service delay reliability for buses due to conflicts with vehicles entering and leaving commercial driveways and traffic congestion. In addition, the park-and-ride lots are currently at maximum capacity (WSDOT 2001b).

PLANNING PROCESS HISTORY

For planning purposes, the SR 303 corridor study was organized into four phases:

- Phase 1 – Public Outreach and Inter-Agency Coordination
- Phase 2 – Existing Conditions and Deficiencies Identification
- Phase 3 – Alternatives Development and Evaluation
- Phase 4 – Environmental Documentation.

Phases 1, 2, and 3 of the planning process have been completed and Phase 4 is currently underway. During Phase 1, study alternatives were developed through several mechanisms including meetings by the Executive Policy Committee (EPC), Technical Advisory Committee (TAC), and Stakeholder Committee (SHC), formed by WSDOT, and through open houses/workshops for the public. The EPC is made up of management and executives from WSDOT and Kitsap Transit, and elected officials from the City of Bremerton and Kitsap County. The TAC is comprised of staff from WSDOT, Kitsap County, the City of Bremerton, Kitsap Transit, and the Puget Sound Regional Council (PSRC). The SHC is comprised of persons from the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service

(USFWS), National Marine Fisheries Service (NMFS), Federal Highway Administration (FHWA), U.S. Coast Guard (USCG), Washington State Department of Ecology (WDOE), Washington Department of Fish and Wildlife (WDFW), Washington State Historic Preservation Office (SHPO), Port of Bremerton, Kitsap Transit, Bremerton City Council, City of Bremerton, Bremerton Chamber of Commerce, Bremerton School District, Central Kitsap County School District, Bremerton Naval Base, Suquamish Tribal Council, Washington Trucking Association, and business owners and citizens.

The committee meetings and public forums initially identified a list of 15 potential transportation alternatives including a no action alternative. These groups also identified goals and concerns that needed to be considered during the alternatives evaluation. The criteria used in the final document are a direct reflection of the goals and concerns expressed by the TAC, SHC, and the public. For example, one of the goals was to improve transportation safety. This goal was represented in three of the safety criteria elements: vehicle, pedestrian, and bicycle accident reduction potential. Similarly, one of the concerns related to the potential impacts to wetlands. This was reflected in the natural environment criterion that evaluated the acres of wetland impact and quality of the impacted wetland.

Phase 2 involved examining the existing conditions along the proposed roadway corridor alternatives to identify any deficiencies in roadway operations. This involved examining the level of service on the roadway and intersections, as well as traffic volumes, travel times, freight access, person throughput, accident levels, and transit and non-motorized facilities.

In Phase 3, a 1st and 2nd level screening process was used to narrow the range of alternatives for consideration in the environmental review process. This involved applying screening criteria to the proposed alternatives to rate each alternative in terms of their potential effects on transportation operations, cost, plan compatibility, and impacts on the built and natural environment (see Appendix B and C). This process provided comparative alternatives analysis and ultimately helped the EPC, TAC, and SHC reach a decision on a preliminary preferred alternative to be forwarded for further environmental review and consideration in Phase 4.

The screening process was conducted in two steps: (1) qualitative evaluation at the 1st level of screening, and (2) more detailed evaluation at the 2nd level of screening. Table E-1 on page E-7 provides a summary of the screening criteria categories and elements that were used in the SR 303 Corridor Study.

Of the original 15 alternatives, 10 were eliminated from further consideration after the 1st level screening analysis. Subsequently some of the alternatives were combined or modified slightly resulting in 7 alternatives subjected to the 2nd level screening analysis. The EPC, TAC, and SHC then discussed and identified a preliminary preferred alternative to forward for more detailed environmental review (see Chapter 1 for discussion of alternatives considered but eliminated from further study).

Phase 4 involves preparation of this Final Corridor Study Plan prepared in accordance with the NEPA guidelines to evaluate the preliminary preferred alternative to determine whether there would be any significant adverse impacts from the project and whether a NEPA EIS will be required. Based on this analysis, a decision will be made that either there would be no significant adverse impact in which case a Finding of No Significant Impact (FONSI) would be issued, or a Determination of Significance (DS) would be made which would result in the need to prepare a project-level NEPA EIS. Either of these decisions would constitute the final action at the programmatic environmental review stage.

Table E-1. Screening Criteria Categories and Elements

Highways and Arterials	TDM/TSM	Safety	Community Impacts	Plan Compatibility	Natural Environment Impacts	Cost
LOS-Corridor/signalized intersections	Travel Demand Reduction/ Mode Shift	Potential Vehicle Accident Reduction	Displacements	Consistency with Statewide Plans	Wetlands and Shorelines	Cost
Vehicle miles traveled (VMT)	Pedestrian and Bicycle Access and Facilities	Potential Pedestrian Accident Reduction	Neighborhood and Livability	Consistency with Regional Plans	Threatened and Endangered Species	Mitigation Cost
Vehicle Hours Traveled (VHT)	Person Throughput	Potential Bicycle Accident Reduction	Cultural Resources and Other Lands	Consistency with Local Plans	Fish and Wildlife Habitat	
Travel time: SOV, HOV, Transit			Business Impacts		Water Resources	
Freight Access			Aesthetic and Visual Quality		Air Quality	
			Prime and Unique Farmland		Noise	
					Hazardous Waste	

Source: WSDOT Olympic Region- SR 303 Corridor Study/Technical Memorandum

AREAS OF PRIMARY IMPORTANCE

The main potential environmental issues and impacts associated with the Proposed Action include the following:

- Displacement of residences and businesses
- Noise impacts to sensitive land uses, particularly residences
- Impact on water resources
- Potential hazardous waste sites
- Impacts to wetlands/shorelines
- Parking and access impacts to businesses that are not displaced.

The environmental matrix (Table E-2) at the end of this chapter summarizes the main environmental impacts and mitigation measures that could occur under the proposed project. The proposed project would have both benefits and impacts. Some of the main beneficial environmental impacts include less congestion in the City of Bremerton and unincorporated Kitsap County, improved access, and increased safety.

Table E-2. Summary of Areas of Primary Importance

Environmental Element	Alternative 1 - Proposed Action	Alternative 2 – No Action
Transportation	Impacts Level of service, travel times, and overall mobility in the SR 303 corridor would be improved. Safety would be improved by eliminating the two-way left turn lane. Mitigation Measures: Accommodating left turn and U-turn movements at all signalized intersections and added side street turn lanes to minimize delay.	Impacts Congestion continues to worsen in the corridor, impeding mobility. Traffic accidents increase. Mitigation Measures None proposed.
Displacements and Relocation	Impacts Potential impacts to businesses through parking/access reductions and partial and full displacement to businesses and residences on SR 303/Wheaton Way. Assuming symmetrical widening, there is the potential for 90 full displacements and 53 partial displacements. The estimated displacements would be refined during project-specific design to minimize potential impacts. Mitigation Measures For commercial relocations, relocation would be the primary mitigation measure for these potential displacements. The acquisition and relocation program would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.	Impacts Potential impacts to businesses due to increased congestion and accidents. Mitigation Measures None proposed.
Environmental Justice	Impacts No disproportionate impacts expected to low-income or minority populations. Mitigation Measures No mitigation proposed at this time.	Impacts None. Mitigation Measures None proposed.
Aesthetics, Neighborhood Livability and Visual Quality	Impacts Impacts include light and glare from nighttime construction lights and views of construction areas and activities. During operation, there would be little change in the overall visual quality of the area, although views facing east toward the Olympic Mountains and Dyes Inlet would be interrupted slightly by the expanded Warren Avenue Bridge. Vegetation would be removed in select locations under the proposed alignment. Mitigation Measures Where practicable, limits on nighttime construction or traffic detours around the worksite would be implemented. Street trees and underground utilities could be implemented where appropriate to enhance aesthetics.	Impacts None. Mitigation Measures None proposed.

Table E-2. Summary of Areas of Primary Importance (Continued)

Environmental Element	Alternative 1 - Proposed Action	Alternative 2 – No Action
Cultural, Historical, and 4(f) Resources	Impacts Low to moderate potential impacts to 4(f) resources near Bremerton Junior High School, Olympic College, Illahee Forest Preserve, and View Ridge Elementary. Low potential impacts to historical, cultural and archaeological resources would be expected under the proposed alignment. Mitigation Measures The proposed alignment would be redirected across the roadway to avoid impacts to potential 4(f) resources. Formal consultations with SHPO, local agencies, and the Suquamish Tribe would take place during the project-specific environmental review of the Proposed Action.	Impacts None. Mitigation Measures None proposed.
Land Use	Impacts Moderate to high potential business impacts (access/parking) to commercial businesses along the existing SR 303 corridor and Wheaton Way. Mitigation Measures To curtail these impacts U-turns would be allowed at controlled intersections. Access management and enhancement measures would be added.	Impacts: None. Mitigation Measures: None.
Earth	Impacts Approximately 29 acres of land clearing activities could occur to accommodate the road widening, resulting in low to moderate potential impacts to vegetation. Approximately 3.14 acres of potential impacts to prime/unique farmland soils. The majority of these soil types have previously been disturbed and impacted from past development activities, therefore the impact would be expected to be low. In addition, the location of these soils lies within the most heavily developed portion of the SR 303 corridor (Wheaton Way), where the zoning consists of commercial and retail uses. The soils are not situated within an area actively used for agricultural purposes. Mitigation Measures BMPs, per the Highway Design Manual and the Ecology Stormwater Manual (2001), would be specifically designed for the project, and would likely include some combination of sediment retention devices such as compost berms, sediment logs, and silt fences. No mitigation would be proposed at this time for prime/unique farmland soils due to the low potential impacts and the degree of disturbance from past development activities.	Impacts None. Mitigation Measures None proposed.

Table E-2. Summary of Areas of Primary Importance (Continued)

Environmental Element	Alternative 1 - Proposed Action	Alternative 2 – No Action
Wetlands/Shorelines/Vegetation	Impacts Approximately 2.3 acres of potential impacts to wetlands and wetland buffers. Direct impacts to Wetlands A and B include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to place the footings for the new structure. Additional impacts include the redeposition of disturbed sediments and incidental filling to the immediately surrounding wetland areas. Mitigation Measures Avoidance of potential wetlands would be the first principle utilized for mitigation.	Impacts None. Mitigation Measures None proposed.
Fish, Wildlife, and Threatened and Endangered Species	Impacts An approximate 30,000-ft^2 increase in the total surface water covered or shaded with the widening improvements to the Warren Avenue Bridge. Approximately 29 acres of land clearing activities to accommodate road widening, resulting in low to moderate impacts to fish and wildlife habitat and vegetation. Potential marine environment impacts include vegetation impacts and turbidity from in-water work, substrate disturbance, and the destruction of aquatic vegetation. Mitigation Measures Strict adherence to the Kitsap County and City of Bremerton CAOs. Adherence to the Department of Ecology 2001 Stormwater Manual to control impacts associated with stormwater runoff. Restricting in-water construction periods to reduce conflicts with priority and threatened/endangered species. Where appropriate, restricting activities during the wintering period for bald eagles. Detailed mitigation would be assessed through the BA process as part of project-specific environmental review.	Impacts None. Mitigation Measures None proposed.
Water Resources	Impacts Approximately 29 acres of PGIS from the proposed road widening improvements. Increasing the number of lanes would result in the potential for more impervious surfaces and increased surface water runoff rate during operations. Increased potential for sediment loads in water runoff during construction phase. Leaks and spills from refueling, maintenance, storage and road construction could impact water quality. Mitigation Measures Implementing stormwater runoff water quality features (such as retention/detention ponds, and/or swales). BMPs, per the Highway Design Manual and the Ecology Stormwater Manual (2001), would be specifically designed for the project, and would likely include some combination of sediment retention devices such as compost berms, sediment logs, and silt fences. Temporary cover practices such as mulching and compost blankets and structural BMPs would be utilized.	Impacts None. Mitigation Measures None proposed.

Table E-2. Summary of Areas of Primary Importance (Continued)

Environmental Element	Alternative 1 - Proposed Action	Alternative 2 – No Action
Air Quality	Impacts Dust from excavation, grading, and blasting would increase the ambient concentrations of suspended particulate matter. Construction activities could delay traffic, resulting in higher vehicle emissions at times. Mitigation Measures Using well-maintained equipment would reduce emissions from construction equipment and trucks. Avoiding prolonged periods of vehicle idling and engine powered equipment would also reduce emissions. Areas of exposed soils, such as storage yards and construction roadways would be sprayed with water or other dust suppressants if necessary. Roads and other areas that might be exposed for prolonged periods could be paved, planted with vegetation ground cover, or covered with gravel. The amount of soils carried out of the construction area by trucks would be reduced by wheel washing and covering dusty truckloads.	Impacts Potential increase in congestion, causing adverse impacts to air quality from traffic delays and increases in queuing. Mitigation Measures None proposed.
Noise	Impacts For those intersections with a slight increase in noise (SR 303 at NE Riddell Road and NE Fairgrounds Road), the increase would not be large enough (2 or 3 decibels) to make a noticeable difference to the existing sound level. However, at the SR 303/Sheridan Road and SR 303/Warren Avenue Bridge intersections, it is predicted that traffic noise levels would potentially increase by 4-5 dBA, which would result in noticeably higher noise levels. Mitigation Measures Mitigation measures may involve constructing some type of noise wall or berm in select locations. However, it should be noted that this measure is only effective where there is limited access, as breaks in the wall or berm effectively eliminate or severely reduce the amount of noise suppression. Also, this measure is only appropriate where it is cost effective. Other project elements may also help to reduce traffic volumes and thus noise levels in the corridor, such as HOV lanes. Detailed mitigation would be considered during project-specific environmental review.	Impacts Under the No Action Alternative, there would generally be a slight increase in traffic noise at all the modeled intersections along the SR 303 corridor (except the SR303/6th Street intersection) due to increased traffic volumes. Mitigation Measures None proposed.
Hazardous Waste	Impacts Spills or exposure of contaminated soils or groundwater could occur during construction. Several properties within the alignment may contain hazardous materials. Mitigation Measures Cleanup efforts during construction include removal of contaminated soil and/or groundwater. Contaminated soil typically would be stockpiled then transported from the construction area for further accumulation, treatment, or disposal. Contaminated groundwater removed as a result of dewatering may be stored in tanks, discharged to the sewer, or transported for treatment.	Impacts None. Mitigation Measures None proposed.

1. PROJECT ALTERNATIVES

1.1 INTRODUCTION

This section describes the two alternatives considered in this corridor study: The Proposed Action Alternative and the No Action Alternative. It also describes the other alternatives that were considered but eliminated from further analysis based on the results of the 1st and 2nd Level screening analysis performed as part of the corridor study.

1.2 PROPOSED ACTION

Roadway Improvements

The Proposed Action Alternative, previously referred to as Alternative 13 under Phase 3 of the corridor study, was the preliminary preferred alternative recommended by the Policy Committee. The Proposed Action Alternative primarily involves improving the capacity to SR 303 by adding high occupancy (HOV) lanes to the corridor. The Proposed Action begins in the south at 11th Street in downtown Bremerton, and extends north to NE Fairgrounds Road (Figure 1-1). The road widening improvements include expanding SR 303, currently four lanes with a center two-way turn lane, to six lanes plus additional turn lanes and U-turns at signalized intersections. The added travel lanes would be designated for HOV use during the AM and PM peak periods (anticipated to be between 6-9 AM and 3-6 PM) and open to all traffic during other times of the day.

The Proposed Action would also include the TDM and TSM elements of Alternative 14. Such elements could include the following measures:

Transportation System Management

- Signage improvements
- Motorist information systems
- Access control
- Channelization improvements
- Signal improvements, including priority treatments for transit and HOVs
- Transit Service Improvements
- Interchange improvements
- Ramp metering
- Incident management

Transportation Demand Management

- Car or vanpool formation assistance
- Development of park-and-ride lots and transit centers
- Transit subsidies
- Worker-driver programs for buses and vanpools
- Designated car or vanpool parking
- Parking restrictions
- Work hour flexibility
- Telecommuting

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SR 303 BREMERTON TO SILVERDALE CORRIDOR STUDY

PRELIMINARY PREFERRED ALTERNATIVE

Alternative 13 (modified)

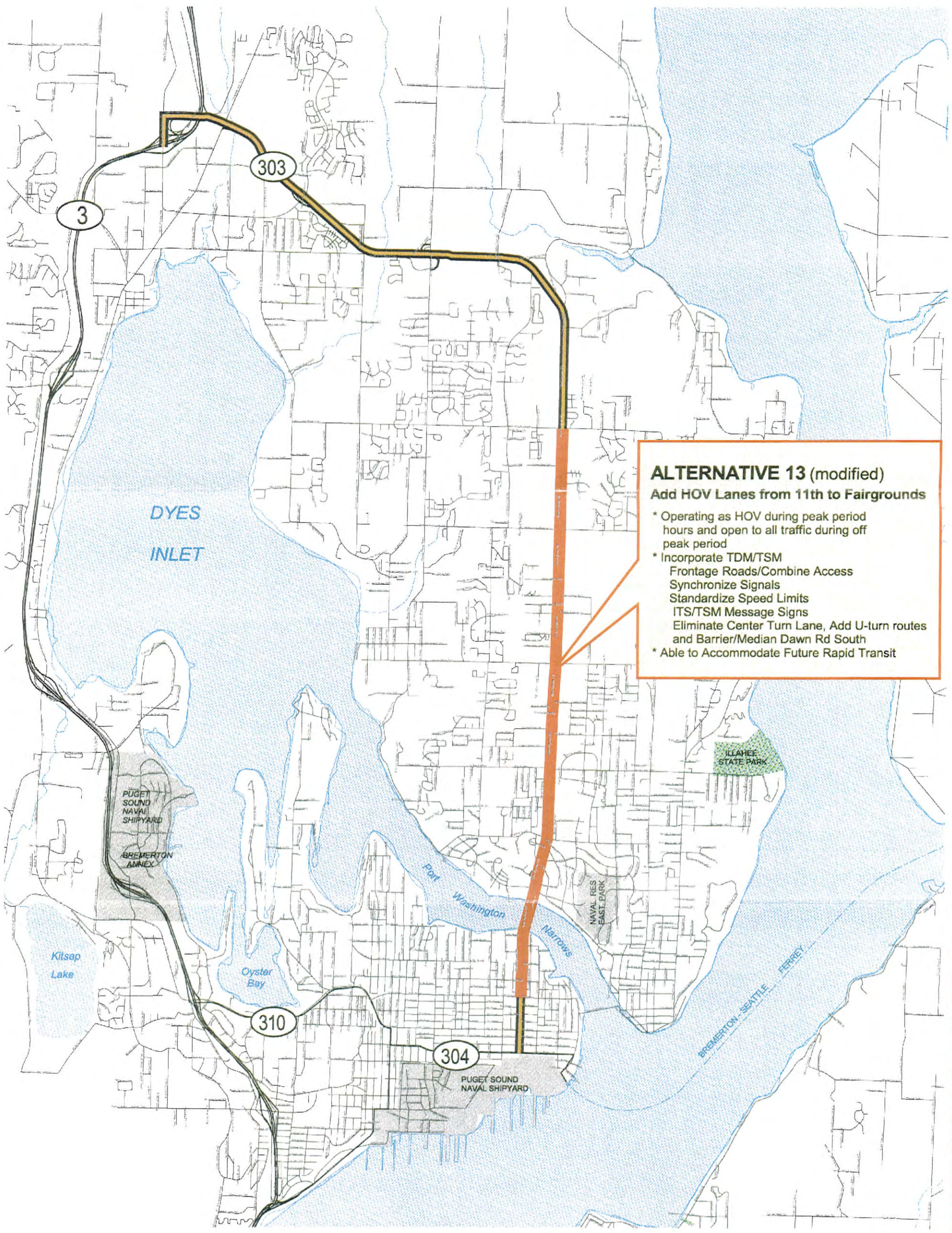

Figure 1-1
Preliminary Preferred Alt.

Non-Motorized Plan Elements

The Proposed Action Alternative would incorporate non-motorized elements by accommodating pedestrian and bicycle movement within the corridor, through the proposed widening improvements to the Warren Avenue Bridge. An eight-foot wide sidewalk/bicycle facility would extend from 16th Street to Sheridan Road on both sides of SR 303 in this section. The non-motorized access improvements would also be designed to support the designated connections listed in non-motorized elements of the City of Bremerton and Kitsap County Comprehensive Plans. North of Sheridan Road, the regional bicycle system designates other north/south roadways in the areas as the preferred routes for bicycle travel.

1.3 NO ACTION ALTERNATIVE

The No Action Alternative was defined as Alternative 15 under Phase 3 of the corridor study (2nd Level Screening). Under this alternative maintenance and repair of the existing facilities would take place, however, no major road widening improvements would occur to the SR 303 transportation system. The No Action Alternative could include implementation of Transportation Demand Management (TDM) and Transportation Systems Management (TSM) strategies to supplement the maintenance and repair of the existing facilities.

1.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS

The original draft list of alternatives evaluated in Phase 3 of the corridor study were grouped into five categories: 1) new crossing and arterial connections, 2) arterial improvements, 3) SR 303 improvements, 4) transportation demand management (TDM) and transportation system management (TSM), and 5) no action. Table 1-1 lists the proposed transportation improvement alternatives considered at the beginning of the study effort. Alternatives 1, 2, 3, 4A, 4B, 5, 5A, and 6 represented potential improvements that would add a new bridge crossing over the Port Washington Narrows and Dyes Inlet and improve arterial connections with SR 303. These alternatives focused on routing traffic to and from the SR 303 corridor. Alternatives 7 through 10 would not involve a new bridge crossing, but would address improvements to the parallel and connecting arterials along SR 303. Alternatives 11 through 13 primarily involved improving the SR 303 capacity by adding both general purpose (Alternatives 11 and 12) and high occupancy (HOV) lanes (Alternative 13). Alternative 14 would use TDM/TSM measures, such as combined access opportunities, standardized speeds, and signage to reduce traffic volumes. Alternative 15, the No Action Alternative, was used for comparison purposes as the baseline for the year 2030 transportation effectiveness evaluation.

Table 1-1. Proposed Transportation Alternatives

Alternative Group	No.	Alternative Description
New Bridge Crossing and Arterial Connections	1	**Newberry Hill Road to NE Fairgrounds Road**
		Widen Fairgrounds Road from the new bridge to SR 303
	2	**Rocky Point Road NW to NE Riddell Road**
		Widen Riddell Road from new bridge to SR 303
		Widen Rocky Point and Marine Drive from new bridge to SR 310
	3	**Wycoff Avenue North to Sylvan Way**
		Widen Sylvan from new bridge to SR 303

Table 1-1. Proposed Transportation Alternatives (Continued)

Alternative Group	No.	Alternative Description
	4A	**S. Central Valley Road to Pine Road NE to Naval Avenue**
		Widen Naval from new bridge to 11th Street
		Widen Pine from new bridge to Riddell
		Widen Riddell from Pine to Central Valley
		Widen Central Valley from Pine to SR 303
	4B	**Snyder Avenue to NE McWilliams Road**
		Widen Sheridan Road from new bridge to Pine
		Widen Pine from Sheridan Road to McWIlliams
		Widen McWilliams to SR 303
		Widen Callow, 15th and Snyder from new bridge to 11th Street
	5	**Pacific Avenue to Wheaton Way**
		Widen 16th from new bridge to Perry
		Widen Perry from 16th to McWilliams
		Widen McWilliams from Perry to SR 303
	5A	**Park Avenue to S. Central Valley Road**
		Widen Park from 11th to new bridge
		Widen Old Wheaton Way to Callahan/Sheridan
		Widen Almira Drive from Sheridan to Riddell
		Widen Riddell to Central Valley to SR 303
	6	**Replace Manette Bridge**
		Widen 11th from widened Manette Bridge to Perry
		Widen Perry from 11th to McWilliams
		Widen McWilliams from Perry to SR 303
Arterial Improvements	7	**Widen S. Central Valley Road/NE Riddell Road/Sheridan Road**
		Connect Central Valley and Sheridan to SR 303
	8	**Widen NE McWilliams Road/Pine Road NE/Sheridan Road**
		Connect Sheridan and McWilliams to SR 303
	9	**Widen Perry Avenue**
		Widen Perry from 11th to McWilliams
		Widen McWilliams from Perry to SR 303
	10	**Widen SR 310 from SR 3 to 11th Street**
		Widen SR 310 to 7 lanes
SR 303 Improvements	11	**Widen SR 303 Couplet from 11th Street to NE Fairgrounds Road**
		Widen SR 303 Couplet to 6 to 7 lanes, including 6 lane Warren Ave Bridge
	12	**One Way Couplet**
		SR 303 northbound/Pine Road southbound
	13	**HOV Lanes from 11th Street to NE Fairgrounds Road**[1]
TDM/TSM	14	**Frontage Roads, signalization, message signs, combined access, U-turn routes**
No-Action	15	**Baseline for comparison of the year 2030 projections with no action taken**

[1] Preliminary Preferred Alternative (a.k.a., Proposed Action Alternative)

The following is a summary by grouping of each alternative and the rationale behind their elimination from further analysis. In general, the primary reasons for not selecting the following alternatives for further analysis relates to their potential built and natural environmental impact rating, their transportation effectiveness rating, and whether they meet the purpose and need of the project. A more detailed description of these alternatives and their ratings (effectiveness/impacts) and reasons for elimination from further consideration is provided in Appendix B and C published as supporting documentation for this corridor study.

Each alternative was subjected to a two-step screening process, with the first step relying primarily on qualitative judgments. This 1st-level screening analysis reduced the 15 original alternatives down to 7 for a more detailed second-level screening evaluation. The alternatives identified for 2nd-level screening analysis are shown in Figure 1-2.

New Crossing and Arterial Connections

The New Crossing and Arterial Connection Alternatives, comprised of Alternatives 1, 2, 3, 5, and 6, were reviewed and analyzed under the 1st level screening phase of the corridor analysis. These alternatives were eliminated for a variety of reasons both in terms of transportation effectiveness and impacts (built and natural environment). For example, Alternative 1 proposed the longest span bridge of all the alternatives resulting in considerable natural environment impacts to shorelines, wetlands, and fish, wildlife, and threatened and endangered species.

Alternatives 4A, 4B, and 5A were evaluated through the 2nd level-screening phase of the corridor analysis. These alternatives were eliminated from further analysis primarily due to the potential environmental impacts, both to the natural and built environment, and considerable costs (see Section 1.4.1, Planning Level Cost Estimates).

Arterial Improvements

Alternatives 7 through 10 included improvements to parallel and connecting arterials associated with SR 303. These alternatives were evaluated under the 1st level-screening phase of the corridor study. They were eliminated in part due to their built environment impacts, particularly for Alternative 9 with regard to displacements. All of these alternatives also exhibited limited effectiveness at minimizing traffic congestion and improving the mobility of the corridor. Portions of Alternatives 7-10 were incorporated into the New Bridge Crossing and Arterial Connections grouping, which included elements of Alternatives 4A, 4B, and 5A.

SR 303 Improvements

Alternatives 11 through 13 made up the SR 303 grouping of improvements. These alternatives would add capacity to SR 303 through widening and/or frontage road improvements. Alternatives 11 and 12 did not include multi-modal transportation elements, or promote the use of high occupancy vehicles (HOV). For these reasons, Alternatives 11 and 12 were not subsequently recommended to go forward.

TDM/TSM

Alternative 14 would utilize TDM/TSM measures, such as combined access opportunities, intersection improvements, standardized speeds, and signage to reduce traffic volumes. By itself, Alternative 14 would not meet the purpose and need of the project, and therefore was not recommended as a stand-alone alternative. In combination with other transportation alternatives, however, TDM/TSM measures may result in improvements to SR 303 operations at a lower cost and with less potential built and natural environment impacts. The essential elements of Alternative 14 have been incorporated into Alternative 13, the preliminary preferred alternative (Proposed Action Alternative).

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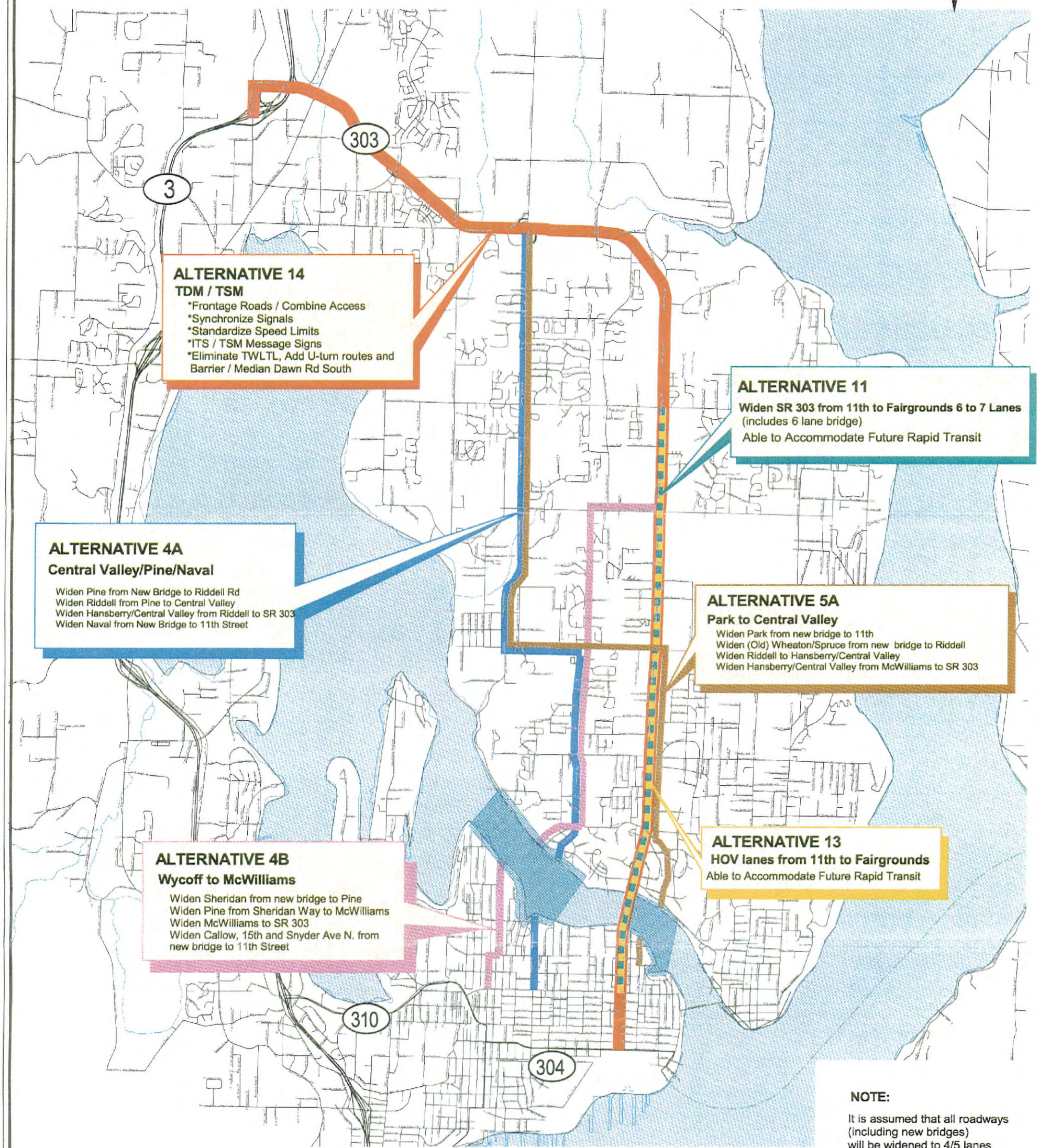
SR 303 BREMERTON TO SILVERDALE CORRIDOR STUDY

DRAFT PROJECT ALTERNATIVES

Policy Committee Recommendations

August 2, 2001



NOTE:

It is assumed that all roadways (including new bridges) will be widened to 4/5 lanes (2 travel lanes in each direction plus left turn channelization at major intersections) unless otherwise specified and the speed limit on bridges will be 35 mph.

Figure 1-2
Draft Project Alternatives

1.4.1 Planning Level Cost Estimates

The information contained in Table 1-2 summarizes the planning level cost estimates by alternative for construction of the proposed roadway improvements. These estimates reflect those alternatives evaluated under 2nd Level Screening. The estimates include the following costs: new roadway section in areas to be widened, overlay of existing pavement, storm drainage, utility adjustments, illumination, landscaping, contingency, design engineering, and construction engineering. The estimates do not include right-of-way acquisition costs at this time. Alternative 13, the Proposed Action Alternative, would have the second lowest cost ($46.6 million) after Alternative 14 ($21 million). Alternative 4A would have the greatest cost at approximately $94.6 million.

Table 1-2. Cost Estimate Summary[1]

Item	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt. 14
Arterial Widening	$25,100,000	15,800,000	$29,400,000	$18,400,00	$18,400,00	$10,700,000
Traffic Signalization	$1,600,000	$1,200,000	$2,200,000	$2,300,000	$2,300,000	$1,300,000
Bridge Widening	$0	$0	$0	$25,900,000	$9,000,000	$900,000
New Bridge Structure	$67,900,000	$48,800,000	$54,200,000	$0	$0	$0
Total Cost	$94,600,000	$65,800,000	$85,800,000	$46,600,000	$46,600,000	$21,000,000
Total Length in feet	39,440	25,140	44,710	27,470	27,470	20,020
Total Cost/Total Length	$2,400	$2,600	$1,900	$1,700	$1,700	$1,000

[1]Note: The planning level cost estimates do not reflect right-of-way costs.

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2. AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

2.1 TRANSPORTATION

2.1.1 Studies and Coordination

A comprehensive evaluation process was conducted to determine the effectiveness of implementing the Proposed Action Alternative compared to maintaining no-build conditions on SR 303 in the year 2030. This process used the transportation criteria developed in Phase 1 to evaluate the Proposed Action's level of effectiveness and to ensure that it met the purpose and need statement identified by WSDOT. The transportation criteria used in this analysis included determining the level of service (LOS) and traffic delay, vehicle miles traveled, vehicle hours traveled, travel time, freight mobility and access, mode shift/travel demand reduction, pedestrian and bicycle access and facilities, person throughput, and potential accident reduction. The following section provides a description of the methods used to evaluate the transportation criteria.

2.1.1.1 Level of Service (LOS) and Traffic Delay

Traffic volumes in combination with the capacity of the roadway at intersections create varying levels of congestion. Level of service is a rating method for identifying the degree of congestion or the quality of traffic operations on the roadway or at intersections. The letters A through F are used for the rating scale. The letter A represents the best (least congested) conditions whereas the letter F represents the worst (most congested) conditions. Thus, LOS ratings are similar to a letter grading scale in the educational system, A being the best grade, F being the worst grade. The LOS ratings and associated ranges of intersection delay are shown in Table 2-1 below.

Table 2-1. LOS ratings and primary performance measures for intersections.

		Ranges of Reported Delay	
LOS	**Conditions**	**Signalized Intersections (sec/veh)**	**Stop Controlled Intersections (sec/veh)**
A	Best	≤10	≤10
B	↓	>10 and ≤20	> 10 and ≤15
C	↓	>20 and ≤35	> 15 and ≤25
D	↓	>35 and ≤55	> 25 and ≤35
E	↓	>55 and ≤80	> 35 and ≤50
F	Worst	>80	>50

Source: HCM 2000.

Congestion begins on road networks primarily at conflict points. A major conflict point in the SR 303 corridor is intersections and for that reason, intersection LOS and delay has been used to evaluate the road network. Intersections often are the constraints in a corridor network; therefore, a review of their conditions is appropriate. The LOS results for the intersections analyzed along the SR 303 corridor were determined by using version 5 of a software program called *Synchro*. The LOS ratings were based on the

performance measure ranges identified in the *Highway Capacity Manual* (HCM 2000) published by the Transportation Research Board.

Estimated 2030 traffic volumes for the Proposed Action and No Action Alternatives were generated using a travel-demand forecasting and simulation model (Ufos-Net). The model used existing 1999 traffic volume data and employed a graduated four-step approach (gravity model) that integrated the proposed transportation improvements with land use assumptions to generate travel demand (PSRC and census data were used). The model results produced future intersection approach volumes that were calibrated with existing turning movement volumes to determine future turning movements for both alternatives. The turning movements were input into *Synchro* to calculate the LOS and traffic delay at each intersection.

2.1.1.2 Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT)

The VMT and VHT analysis measured the difference in vehicle miles and vehicle hours traveled for the two alternatives. A low VMT and VHT were considered "most effective" in reducing the miles and hours vehicles travel per day. The travel demand model (Ufos-Net) was used to determine VMT and VHT for both alternatives throughout the SR 303 corridor.

2.1.1.3 Travel Time – SOV/HOV/Transit

The travel time criteria is a comparison of the time it takes to travel on the SR 303 corridor from 11th Street in downtown Bremerton to NE Fairgrounds Road in Kitsap County for both alternatives. The travel demand model (Ufos-Net) was used to develop the travel times. The directional (northbound and southbound) PM peak hour travel times were calculated for SOV, HOV, and transit. A lower travel time is considered the "most effective" in moving people and goods through the corridor.

2.1.1.4 Freight Mobility and Access

The freight access analysis was a qualitative measure of the impacts to freight mobility under the Proposed Action and No Action alternatives. The analysis used both future traffic volumes and effects of implementing access management measures to determine the impact on freight mobility and access. This data along with professional judgment was used to determine the degree of impact.

2.1.1.5 Mode Shift/Travel Demand Reduction

The percent mode shift and travel demand reduction describe the travel mode and behavior that commuters would be inclined to choose as a result of modifications to SR 303. The analysis was quantified using the modal split results derived from the travel demand forecast model for SOV and HOV/Transit during the PM peak period. The modal split data was used to monitor the change in travel demand since increased HOV/Transit ridership would reduce travel demand (shift in travel mode) on the general-purpose lanes.

2.1.1.6 Pedestrian and Bicycle Access and Facilities

Pedestrian and bicycle access and facility improvements were quantified by determining the total additional lane miles that could be added to the network, since pedestrian and bicycle improvements could be added where road improvements are proposed. A qualitative evaluation was used to determine the benefit the Proposed Action Alternative would have in encouraging non-motorized travel compared to the No Action Alternative.

2.1.1.7 Person Throughput

The person throughput analysis quantified the number of people (rather than the number of vehicles) that would move through the SOV and HOV/Transit lanes. A screenline approach was used to compare the difference in total person throughput for the entire network. The person throughput was gathered at two critical locations:

- North of NE Riddell Road at S. Central Valley Road, Pine Road NE, and SR 303
- At the existing bridge crossings over Port Washington Narrows, which also includes the Warren Avenue Bridge and Manette Bridge.

The screenline traffic volumes were imported into the travel demand model (Ufos-Net) to determine person throughput for the Proposed Action and No Action alternatives.

2.1.1.8 Potential Accident Reduction

The safety evaluation was a qualitative approach that estimated the potential reduction in vehicle, pedestrian, and bicycle accidents associated with roadway, intersection, and access management improvements. The evaluation was based on the impacts the alternatives would have on the corridor operations.

2.1.2 Affected Environment

The affected environment for transportation includes the entire length of SR 303 from Burwell Street in downtown Bremerton to SR 3 in Silverdale, as well as the connecting road network. SR 303 is a main north-south urban principal arterial serving the communities of Bremerton and Silverdale and greater Kitsap County. SR 303 has 4 or 5 lanes (the 5th lane is a left turn lane) with a posted speed limit varying from 30 mph to 55 mph. Along most of SR 303, there are either asphalt shoulders or curb/gutter/sidewalk sections.

The majority of the traffic volume data used for analyzing existing conditions was obtained in the years 1999 and 2001, with some additional data collected in years 1998 and 2000. The average weekday daily traffic (AWDT) and PM peak hour volumes at selected locations in the study area are shown on Figure 2-1. Average weekday traffic volumes range from 14,500 south of 11th Street to 41,900 on the Warren Avenue Bridge. Generally, PM peak hour traffic volumes are greater in the northbound direction than the southbound direction. They range from 1,040 to 1,500 trips in the southbound direction and from 1,200 to 1,990 in the northbound direction. The highest PM peak hour volumes occur on the Warren Avenue Bridge in both directions.

Most of the major intersections along SR 303 are controlled by a signal. Signalization occurs at the following road intersections with SR 303: Brownsville Highway, NE Fairgrounds Road, Bentley Drive, NE McWilliams Road, the Fred Meyer access road, NE Riddell Road, Hollis Street, Sylvan Way, Sheridan Road, 16th Street, 11th Street, 6th Street, and Burwell Street. The existing levels of service for the intersections listed above are shown in Table 2-2. Generally, most of the intersections are operating at acceptable levels (LOS E or better). The intersections for NE Riddell Road and Sheridan Road are operating at LOS E, which is approaching the LOS capacity of both intersections.

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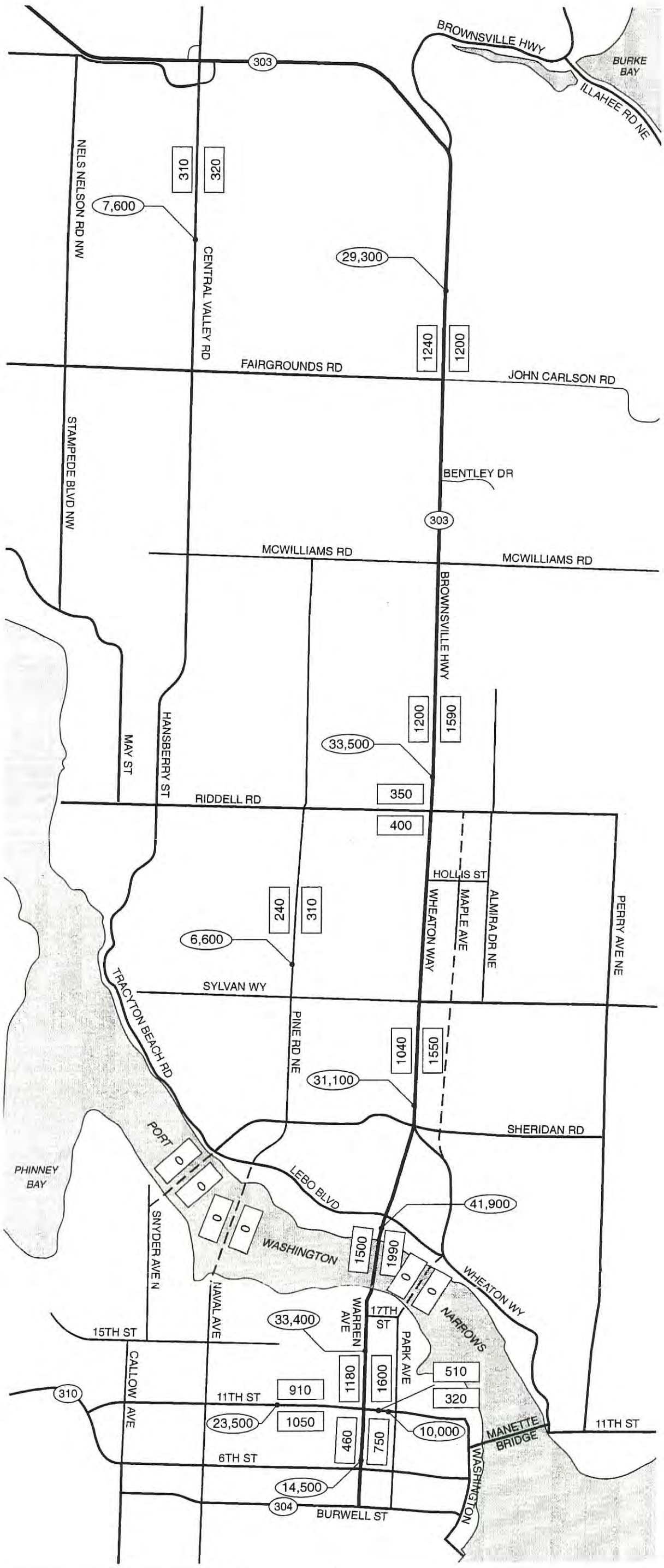


Bremerton-Silverdale Analysis/554-1631-030/03(031) 2/02 (K)

NO SCALE

N

Existing Streets

Potential New Streets

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 2-1
Year 1998-2001 Volumes
Existing Network

Table 2-2. Existing Level of Service at Major Intersection along SR 303.

Study Intersections	Existing LOS	Delay (seconds/vehicle)
SR 303 @ Fairgrounds Road	C	34
SR 303 @ Bentley Drive	B	12
SR 303 @ McWilliams Road	C	27
SR 303 @ Fred Meyer Access	B	17
SR 303 @ Riddell Road	E	58
SR 303 @ Hollis Street	B	16
SR 303 @ Sylvan Way	D	45
SR 303 @ Sheridan Road	E	78
SR 303 @ 16th Street	B	16
SR 303 @ 11th Street	D	41

Source: Parametrix 2001.

The WSDOT Traffic Office provided two years of accident data, from 1999 to 2000, at intersections along SR-303. Additional accident data was provided by the City of Bremerton and Kitsap County to show the same two-year accident rate at mid-block arterial locations. Table 2-3 shows the numbers and rates of accidents for several selected midblock segments of SR 303. Table 2-3 indicates that most accidents occurred in two midblock locations: NE Riddell Road to Sylvan Way (102 accidents) and Sheridan Road to 11th Street (101 accidents). However, the NE Riddell Road to Sylvan Way segment experienced the highest rate of accidents (8.5 accidents per million vehicle miles). During the two-year period, the majority of accidents involved vehicle only damage (276 accidents). There were 120 accidents that involved injuries, but there were no reported fatalities.

Table 2-3. Accident Data Summary on SR 303 for two-year Period 1999-2000.

Segment Midblocks		Mile	Number of	Rate Per Million
From	To	Post	Accidents	Vehicle Miles
Fairgrounds Road	McWilliams Road	3.79-4.47	18	1.6
McWilliams Road	Riddell Road	2.79-3.71	46	2.9
Riddell Road	Sylvan Way	2.02-2.72	102	8.5
Sylvan Way	Sheridan Road	1.49-1.94	29	3.1
Sheridan Road	11th Street	0.3-1.43	101	4.8
	Total Accidents		296	

Source: WSDOT, Kitsap County, and City of Bremerton.

2.1.3 Environmental Consequences

This section evaluates the environmental consequences of implementing the Proposed Action Alternative or the No Action Alternative. Environmental consequences can imply either improved or worsened traffic or roadway operation conditions. The following transportation criteria are analyzed in this section: traffic volumes, level of service (LOS) and traffic delay, vehicle miles traveled, vehicle hours traveled, travel time, freight mobility and access, mode shift/travel demand reduction, pedestrian and bicycle access and facilities, person throughput, and potential accident reduction.

2.1.3.1 Traffic Volumes

Predicted average weekday daily traffic and peak hour traffic volumes for the Proposed Action and No Action alternatives in 2030 are shown on Figures 2-2 and 2-3 respectively. For the Proposed Action Alternative, AWDT volumes are predicted to range from 56,300 to 63,800. Traffic volumes for the No Action Alternative are predicted to range from 45,600 to 67,200. Traffic volumes on those segments of SR 303 north of the Warren Avenue Bridge are estimated to be higher under the Proposed Action as compared to the No Action Alternative in 2030. Predicted peak hour traffic volumes for the Proposed Action Alternative range from 1,840 (southbound) to 3,700 (northbound) depending on the road segment. For the No Action Alternative, estimated peak hour traffic volumes would range from 1,670 (in the southbound) to 3,000 (northbound).

2.1.3.2 LOS and Traffic Delay – Corridor/Signalized Intersections

Based on the modeling results shown in Table 2-4, the Proposed Action Alternative would generally result in improved LOS conditions over the No Action Alternative in the year 2030. As shown in the table, intersection delay under the Proposed Action Alternative would be less than the No Action Alternative for every intersection except Hollis Street (where intersection delay conditions would be equal), and 16th Street, and 11th Street. Under either alternative, intersection delay would increase over existing levels due to the increase in traffic volumes.

TDM/TSM strategies have not been assumed in the LOS calculations for the Proposed Action Alternative. Therefore, actual LOS and average vehicle delays for the Proposed Action would likely be up to 5% better than shown in the table.

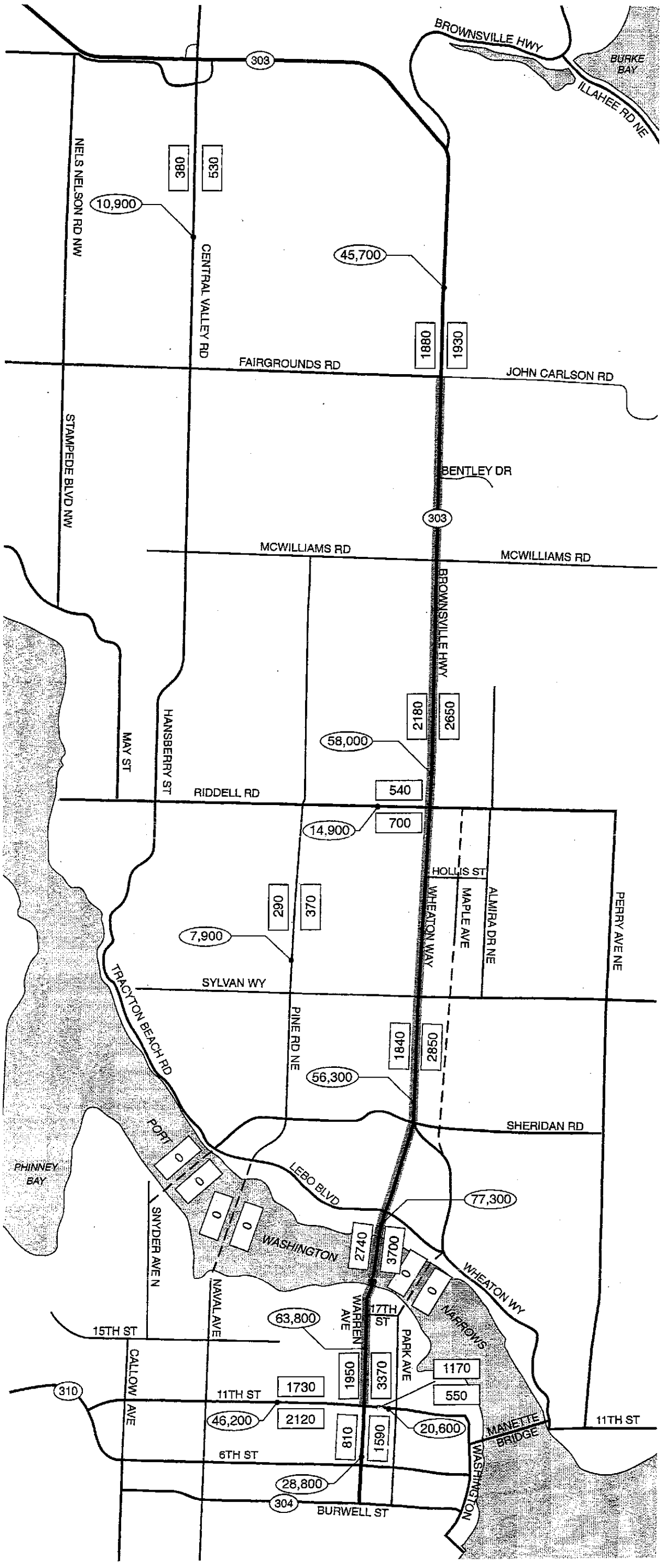
Table 2-4. Estimated Level of Service and Delay at Major Intersections along SR 303.

	Existing Conditions		Proposed Action (2030)		No Action (2030)	
Study Intersections	LOS	Delay	LOS	Delay	LOS	Delay
SR 303 @ Fairgrounds Road	C	34	E	58	E	72
SR 303 @ Bentley Drive	B	12	F	175	F	209
SR 303 @ McWilliams Road	C	27	F	104	F	108
SR 303 @ Fred Meyer Access	B	17	D	48	E	56
SR 303 @ Riddell Road	E	58	E	68	F	119
SR 303 @ Hollis Street	B	16	F	111	F	111
SR 303 @ Sylvan Way	D	45	E	72	E	78
SR 303 @ Sheridan Road	E	78	F	126	F	148
SR 303 @ 16th Street	B	16	B	19	B	18
SR 303 @ 11th Street	D	41	F	195	F	152

Source: Parametrix 2001.

2.1.3.3 Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT)

The model results indicated that VMT would be 170,423 for the Proposed Action Alternative and 171,708 for the No Action Alternative in 2030. Thus, VMT would slightly improve for the Proposed Action Alternative as compared to the No Action Alternative. By implementing the Proposed Action, the number of vehicle miles traveled would decrease by 1,285 miles per day.



Bremerton-Silverdale Analysis/554-1631-030/03(031) 2/02 (K)

NO SCALE

N

Existing Streets

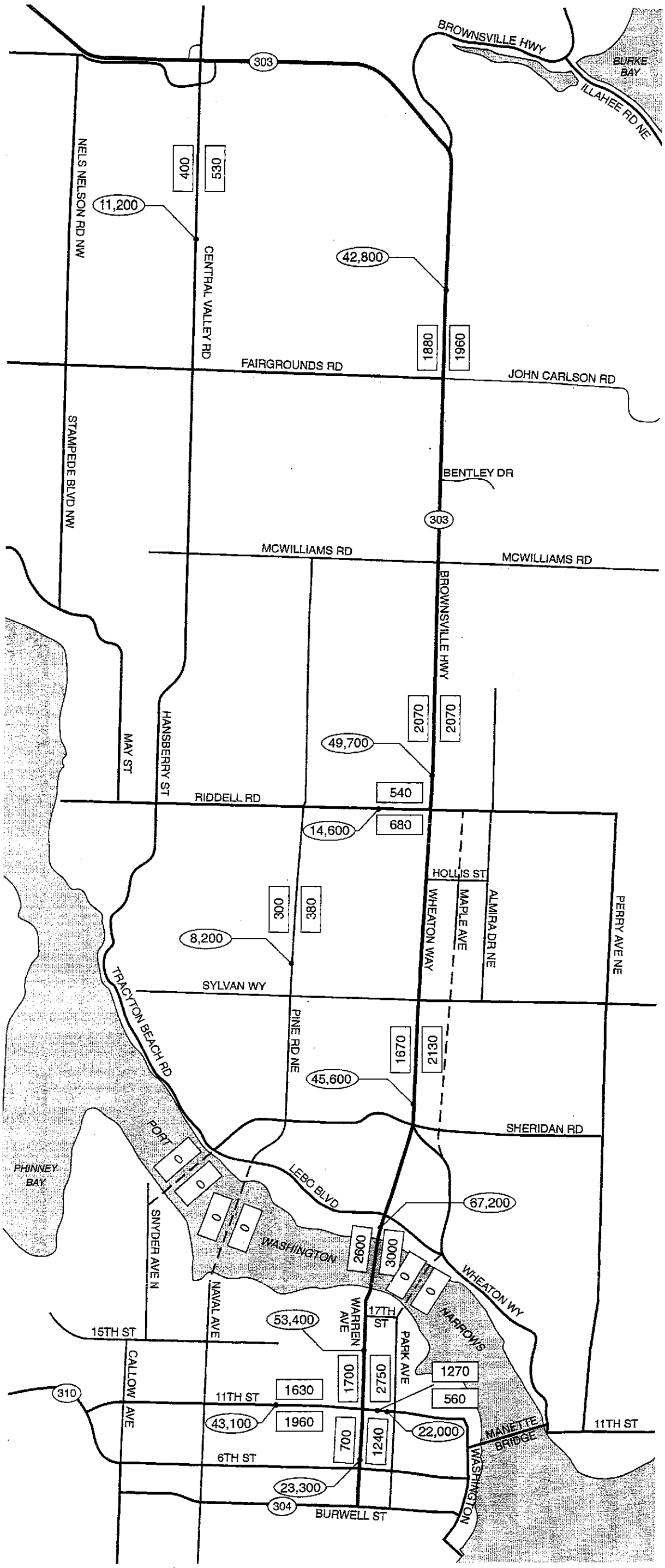
Potential New Streets

Route of Proposed Alternative

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 2-2
Year 2030 Volumes
Proposed Action



Bremerton-Silverdale Analysis/554-1631-030/03(031) 2/02 (K)

NO SCALE

Existing Streets

Potential New Streets

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 2-3
Year 2030 Volumes
No Action Alternative

Similarly, the model results for VHT were 6,245 for the Proposed Action Alternative and 6,542 for the No Action Alternative in 2030. Therefore, the Proposed Action would reduce the total vehicle hours traveled by 327 hours per day as compared to the No Action Alternative.

2.1.3.4 Travel Time

The model results for travel time estimated that average travel time under the Proposed Action Alternative would be 20 minutes for southbound SOVs, 20.4 minutes for northbound SOVs, 12.2 minutes for southbound HOVs, and 11.3 minutes for northbound HOVs in 2030. These results are compared to the No Action Alternative that would experience 20.7 minutes for southbound SOVs, 22.6 minutes for northbound SOVs, 20.7 minutes for southbound HOVs, and 22.6 minutes for northbound HOVs in 2030. The SOV travel time under the Proposed Action would only be slightly less than for the No Action Alternative. However, HOV travel time would be considerably reduced under the Proposed Action as compared to the No Action Alternative.

2.1.3.5 Freight Access

The Proposed Action Alternative would add access management solutions to restrict left turn movements to signal-controlled intersections along SR 303. This would limit the number of access points to businesses and would require some out-of-direction travel for trucks to reach their destination. On the other hand, level of service in the corridor would improve over the No Action Alternative, resulting in shorter average vehicle delays and improved delivery times to businesses on and adjacent to SR 303.

2.1.3.6 Mode Shift/Travel Time Reduction

The mode shift modeling indicated that in the year 2030, under the No Action Alternative, there would be a mode split of 84 percent SOV and 16 percent HOV/transit. Under the Proposed Action Alternative, this mode split is estimated to be 74 percent SOV and 26 percent HOV/transit. Clearly, the Proposed Action Alternative, which would add HOV lanes, would provide a travel time benefit and encourage commuters to carpool and use transit rather than drive alone. Some additional mode shift from SOV to HOV/transit could occur under the No Action Alternative as congestion worsens and some commuters opt to carpool or use transit. However, this would be small in comparison to the benefits of the Proposed Action Alternative.

A transit feasibility study, supported by Kitsap Transit, is currently being conducted to examine the feasibility of adding a Bus Rapid Transit (BRT) system on SR 303. This type of project could further improve transit travel times and transit headway, and would likely increase the percent of commuters using transit and reduce SOV travel demand on SR 303.

2.1.3.7 Pedestrian and Bicycle Access and Facilities

The Proposed Action Alternative would support adding bicycle and pedestrian improvements on SR 303. This includes approximately 0.9 miles of Class 2 bicycle facilities, 3.3 miles of Class 3 bicycle facilities, and 4.3 miles of pedestrian facilities. Under the No Action Alternative, there would be no increase in pedestrian and bicycle facilities.

2.1.3.8 Person Throughput

North of Riddell Road, the SOV person throughput would be approximately the same for both the Proposed Action and No Action alternatives in 2030 (6,581 and 6,454 respectively). However, the added

HOV lanes would increase HOV/Transit person throughput for the Proposed Action versus the No Action Alternative (2,221 to 1,151). This suggests that the Proposed Action Alternative would encourage commuters to use HOV/Transit instead of driving alone.

A person throughput analysis was also performed at the Warren Avenue Bridge crossing. Similar to the area north of NE Riddell Road, person throughput for SOV travel in 2030 would be nearly the same for the Proposed Action (9,795) and No Action (9,652) Alternatives. However, there is a larger difference between the person throughput for HOV/Transit travel in 2030 between the alternatives: 3,418 for the Proposed Action and 2,406 for the No Action Alternative.

2.1.3.9 Potential Accident Reduction

Existing accident rates on SR 303 are relatively high. Portions of the corridor are designated by WSDOT as High Accident Corridors (HACs) or High Accident Locations (HALs). Some future improvements would likely be made on SR 303 under the No Action Alternative, which could result in some reduction in accidents. However, the Proposed Action would include several measures to improve safety on the roadway including adding dedicated pedestrian facilities, bicycle facilities, improvements to sight distances, and access management measures. It is far more likely, that a greater level of potential accident reduction would be realized under the Proposed Action Alternative.

2.1.4 Mitigation Measures

Mitigation measures would be required to minimize the impacts of implementing the Proposed Action and maximize the operational efficiency of the SR 303 alignment. This section describes traffic mitigation measures in four main areas: access management, mainline improvements, parking, and side streets.

2.1.4.1 Access Management

The Proposed Action Alternative would employ several access management measures along SR 303. These would include adding traffic medians to restrict left turn movements and providing U-turns at signal-controlled intersections. The land uses bordering the SR 303 alignment include dense commercial areas that have numerous driveway entrances and exits. These driveways conflict with SR 303 and are responsible for many of the accidents that occur. Restricting left turn movements in the commercial areas would reduce the number of accidents. However, this access restriction would impact access to retail stores along SR 303 for both the customers and freight accessing these businesses. To mitigate for this impact, U-turns would be allowed at all signal-controlled intersections, and potentially at some mid-block median openings.

2.1.4.2 Mainline Improvements

In addition to the corridor widening improvements that would add HOV lanes to SR 303, other intersection improvements may be required to maximize the efficiency of the corridor. These improvements would likely be made at intersections already operating at or above capacity to mitigate congestion and delay at intersections. Improvements may include increasing a single left turn lane to a dual left turn lane, or changing the signal phase to allow non-conflicting right and left turn movements to occur simultaneously. These improvements would help to mitigate for the increased traffic that would be attracted to the improved roadway.

2.1.4.3 Parking Demand

In areas where the SR 303 corridor widening may impact existing parking supply, suitable replacement parking would need to be provided to mitigate the impacts.

2.1.4.4 Side Street Improvements

At some intersections, added side street turn lanes may be warranted to improve intersection operations. These types of intersection improvements would be examined during project-specific environmental review of the Proposed Action.

2.2 DISPLACEMENTS AND RELOCATION

2.2.1 Studies and Coordination

This section summarizes the approach used to analyze displacements and presents a description of the potential acquisitions of commercial, public, and residential properties for the SR 303 Corridor Study.

There are two types of property acquisitions, full and partial. A partial displacement would require acquisition of only a portion of a parcel and would not displace the current use. A full displacement would require full parcel acquisition, displacing the current use.

The estimated list of displacements was based on the current conceptual design, and should not be interpreted as the final determination regarding property displacements. The list will be continually updated during project-specific environmental review of the Proposed Action when the design is further refined and modified.

The following assumptions and methodology were used for this analysis:

- Project staff assumed that if the proposed alternative right-of-way touched a parcel, it could result in at least a "partial displacement." If the required right-of-way crossed a building footprint within a parcel, or was within 20 feet of the building footprint, it was assumed that a full displacement of the existing use would occur.
- Data was obtained from the Kitsap County Assessor (extracts) and overlaid onto aerial maps (1"=100' scale) also depicting the right-of-way required for the proposed transportation improvement alternatives. Zoning and comprehensive plan mapping provided by Kitsap County and the City of Bremerton were used to distinguish property types. This information was verified through a field check.
- Land use categories consisted of "commercial and industrial buildings and/or land," "residential single family homes," "residential multi-family homes (including wherever possible duplexes, triplexes, and apartments)," and "public and institutional buildings and/or land."

Information regarding parcels was obtained from review of information maintained by:

- Kitsap County Department of Assessment
- Kitsap County Comprehensive Plan and Zoning Ordinance
- City of Bremerton Comprehensive Plan and Zoning Ordinance

2.2.2 Affected Environment

Land use categories within the project vicinity consist of commercial and industrial buildings and/or land, residential single-family homes, residential multi-family homes (including wherever possible duplexes, triplexes, and apartments), and public and institutional buildings and/or undeveloped land. Table 2-5 below provides a summary breakdown of the estimated potential displacements (full or partial displacement) based on a parcel analysis.

Table 2-5. Estimated Total Displacements for Build Alternative (2030).

	Full Displacements	Partial Displacements
Land Use Category		
Commercial/Industrial	33	22
Public/Institutional	0	5
Single-Family Residential	55	20
Multi-Family Residential	2 (6 units)	0
Undeveloped	0	6
Total	**90**	**53**

2.2.3 Environmental Consequences

Assuming symmetrical widening with the Proposed Action, the potential exists for displacements to residences and businesses. There would be approximately 33 businesses, 55 residences, and 2 multi-family residences (6 units) displaced. There would also be the potential for 22 businesses, 5 public and institutional uses, 20 residences, and 6 undeveloped properties partially displaced under this alternative. These estimates are conservatively high at this stage, as the engineering details and design are conceptual. During project-specific environmental review, the Proposed Action would be refined to reduce the impacts.

Under the No Action Alternative no property would be acquired and no displacement of businesses or residences would occur. Relocation assistance would not be required under the No Action Alternative.

2.2.4 Mitigation Measures

The Washington State Department of Transportation acts in full compliance with Title 8 RCW, Chapter 8.04, 8.25, and 8.26, when implementing property acquisition and relocation assistance procedures. The relocation and property acquisition program would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources would be made available to all residential and business displaced persons. When acquisitions and/or displacements are confirmed, WSDOT and its contributing partners Kitsap County and the City of Bremerton, would work with area housing authorities, realtors, and other housing service agencies to ensure that all displaced residents are assisted in finding and procuring housing that is equivalent to or better than their current housing.

For commercial acquisitions, relocation would be the primary mitigation measure for these potential displacements. The acquisition and relocation program would be conducted in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

2.3 SOCIAL

2.3.1 Studies and Coordination

Information for this section was derived from several agency sources including the U.S. Bureau of Census, Washington State Office of Financial Management, Washington State Employment Security Department, and the Kitsap County and City of Bremerton Comprehensive Plans.

2.3.2 Affected Environment

The affected environment for the social element includes population, employment, and income in the City of Bremerton, Kitsap County, and the project area.

2.3.2.1 Population

The populations of Kitsap County and the City of Bremerton in 2000 were 231,969 and 37,529, respectively (U.S. Census 2000). Since 1990, the population in Kitsap County increased from 138,676 while population in the City of Bremerton decreased slightly from 38,142. Therefore over the last ten years, population in the county increased by 67 percent and population decreased in the city by 1.6 percent.

To determine the potentially affected population in the project corridor, data at the census tract level was used. Out of the 11 census tracts inventoried for this analysis, six were within the City of Bremerton (tracts 801.01, 801.02, 802.00, 803.00, 805.00, and 806.00) and five were situated within unincorporated Kitsap County (915.00, 916.00, 917.00, 918.00, and 919.00) (Figure 2-4). Population in the census tracts crossed by the SR 303 corridor was aggregated to get a rough idea of population in the project area. Population near the project corridor in 2000 was determined to be 18,310 for Bremerton and 23,876 for Kitsap County (U.S. Census 2000).

Race

The racial and ethnic makeup of Bremerton in 2000 was 27,932 white (75 percent), 2,793 black (7.5 percent), 726 American Indian and Alaska Native (1.9 percent), 2,061 Asian (5.5 percent), 345 Native Hawaiian and Other Pacific Islander (0.9 percent), and 956 (2.6 percent) of other races (U.S. Census 2000). Of these races, 2,457 (6.6 percent) were of Hispanic origin (note: Hispanic peoples can be of any race).

The racial and ethnic makeup of Kitsap County in 2000 was 221,195 white (84.3 percent), 6,648 black (2.9 percent), 3,760 American Indian and Alaska Native (1.6 percent), 10,192 Asian (4.4 percent), 1,805 Native Hawaiian and Other Pacific Islander (0.8 percent), and 3,309 (1.4 percent) of other races (U.S. Census 2000). Of these races, 9,609 (4.1 percent) were of Hispanic origin.

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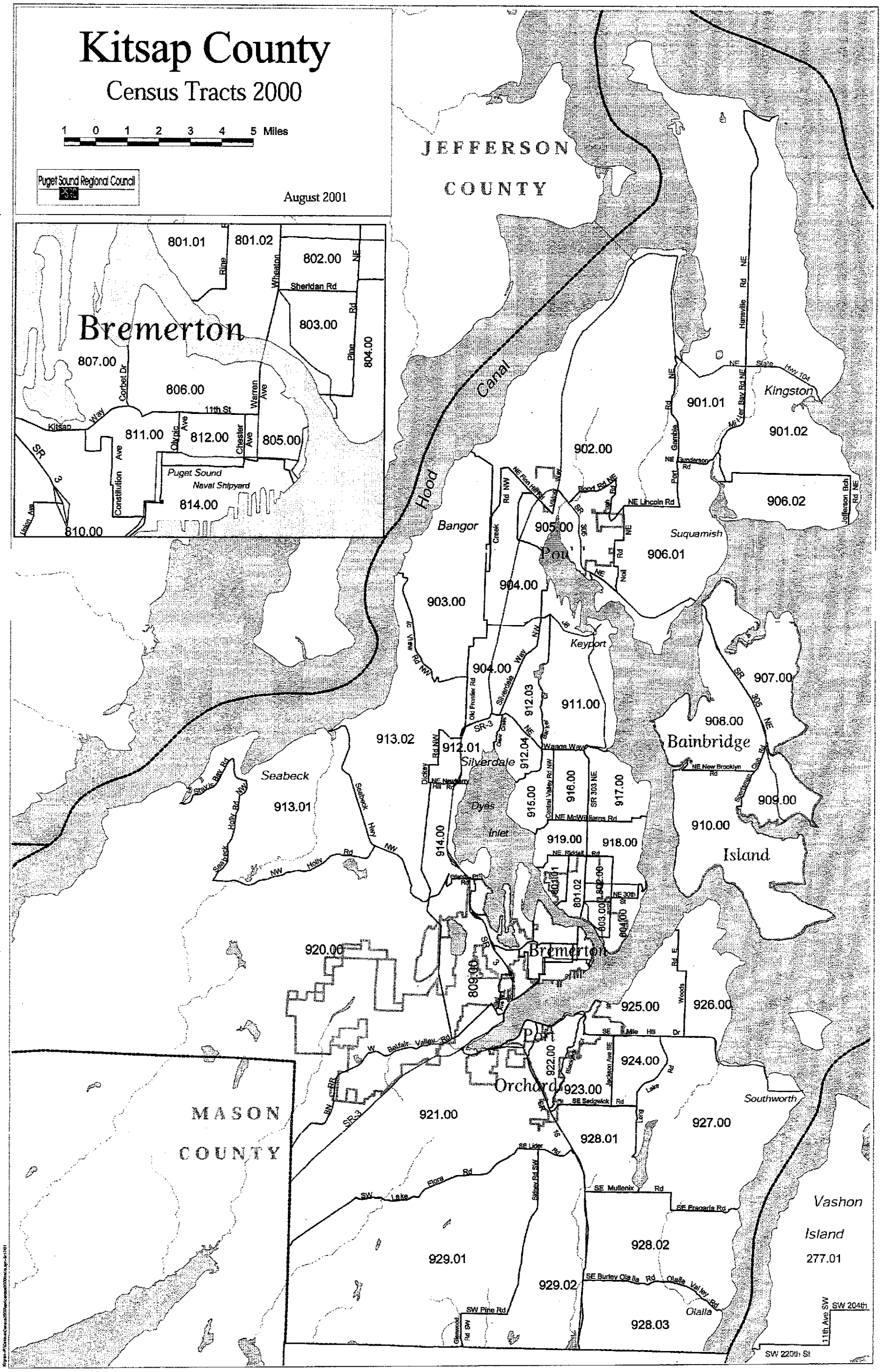


Source: Puget Sound Regional Council

Bremerton-Silverdale Analysis/554-1631-030/03(031) 2/02 (K)

SCALE IN MILES
0 150 300

N

Figure 2-4
Census Map

2.3.2.2 Employment

The most recent employment data indicates that there were approximately 75,000 non-farm workers employed in the Bremerton/Kitsap County Metropolitan Statistical Area in November 2001 (Washington State Employment Security Department 2001). The government sector was the largest employer with 26,500 jobs. This was followed by the services and wholesale and retail trade sectors with 19,800 and 17,000 jobs, respectively. The large number of government employment is heavily influenced by the presence of the U.S. Navy and its facilities including the Bremerton Naval Shipyard. The unemployment rate was 6.3 percent in November of 2001. The unemployment rate was up one percent from the previous year, thus the number of unemployed workers increased from 5,100 in 2000 to 5,700 in 2001.

2.3.2.3 Income

In 2000, the median household income in Bremerton was $30,950 compared to $46,840 for Kitsap County (U.S. Census 2000). In 2000, the number of people below poverty status in the City of Bremerton was 6,653 out of a total of 37,259 (for whom poverty status was determined) or 19.4 percent (U.S. Census 2000). The number of people in 2000 below poverty status in unincorporated Kitsap County was 19,601 out of a total population of 231,969 (for whom poverty status was determined) or 8.8 percent (U.S. Census 2000).

2.3.3 Environmental Consequences

The Proposed Action Alternative is not anticipated to have a considerable direct impact on population. The project would involve displacement of residences, however, it is likely that those people displaced by the project would find replacement housing within Kitsap County and the City of Bremerton.

The Proposed Action may impact employment and income in two ways. First, some businesses would be displaced and may relocate out of the area or go out of business. This may result in loss of employment opportunities and income. Conversely, the Proposed Action supports planned growth of business employment by improving access and reducing congestion. This could increase some employment opportunities and income. Second, the project would result in some short-term benefit by providing construction-related employment and wages.

The No Action Alternative would have no impact on population, employment, or income.

2.3.4 Mitigation Measures

Financial and relocation assistance would be provided to businesses that are acquired for new right-of-way. Since there would be no impacts to population, no mitigation measures are proposed. Some temporary benefits may result from increased construction employment and wages. In addition, there would be some improvements in access and reductions in congestion, which supports planned business growth in the project area.

2.3.5 Environmental Justice

Executive Order 12898 requires all federal agencies to seek to achieve environmental justice by "identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental impacts on minority and low-income populations." The NEPA process is typically used as the primary mechanism to implement the provisions of Executive Order 12898. This section addresses any disproportionate impacts to minority or low-income populations.

Census tract data was used to compare the percentage of minority populations in the project area to the greater area (Bremerton and Kitsap County) to determine if the project area contained substantial populations of minority persons. For the City of Bremerton, the percentages were almost identical between the two areas (Table 2-6). The percentage of Asians was slightly higher and the percentage of Blacks was slightly lower in the project area as compared to the entire city. This means that minority populations are not concentrated in the project area as compared to the city as a whole, but rather the minority populations are spread fairly evenly throughout the city.

Table 2-6. Minority Population Percentages in the Project Area

	Bremerton	Project Area	Kitsap County	Project Area
White	75.0%	75.3%	84.3%	78.9%
Black	7.5%	6.5%	2.9%	3.9%
Indian or Native	1.9%	1.9%	1.6%	1.0%
Asian	5.5%	5.8%	4.4%	8.0%
Pacific Islander	0.9%	1.1%	1.4%	1.5%

Source: U.S. Census 2000.

Similarly, the Kitsap County percentages are also fairly close when compared to the project area, except for the Asian population. The Asian population's percentage was almost twice as high in the project area as in the county. At this time, it is uncertain what portion of the Asian population in the project area would be impacted by the project, because portions of the census tracts studied are not located close to the SR 303 roadway. Since the project involves widening an existing road and not a new alignment, minority populations are not likely to be disproportionately impacted by the road widening.

Based on field surveys, there does not appear to be low-income housing projects located along the roadway or low-income populations in the immediate project area. A more detailed analysis of low-income housing and minority populations would be considered as part of the project-specific environmental review for the Proposed Action Alternative.

The No Action Alternative would have no environmental justice impacts.

2.4 AESTHETICS, VISUAL QUALITY, AND NEIGHBORHOOD/LIVABILITY

2.4.1 Studies and Coordination

Aesthetics and Visual Quality

Because evaluating visual quality is inherently subjective, objective descriptions of visual factors have been developed and implemented for this project. These include vividness, intactness, and unity of composition. Current visual impacts from existing development, as well as impacts that would result from the proposed transportation improvements have been assessed. The assessment is based on field observations of the project area.

Identifying the viewers who will see a project and the aspects of the visual environment to which they are most likely to respond is the key to understanding and predicting viewer response to a project's effects on visual resources. Viewer numbers and viewing conditions are grouped under the title of "viewer exposure." For example, many viewers exposed to a visual resource, such as a prominent hill or a landmark building along a major travel route, will take notice and remember the resource. Stationary or

slow-moving viewers generally enjoy the sharpness of vision. As viewer speed increases, sight tends to be confined along the forward line of travel (USDOT 1981) (see Appendix C).

Psychological receptivity, which varies among viewer groups, is termed "viewer sensitivity" (USDOT 1981). It strongly affects visual perception and the subjective evaluation of that perception. Viewer sensitivity is discussed in the impacts and mitigation section.

The methodology used to determine visual quality impacts by alternative involved dividing the project area by visual assessment units that share similar visual characteristics. For each visual assessment unit, the study assessed current visual quality, impacts, and the sensitivity levels of each alternative (see Appendix C).

Potential impacts were considered for both construction and operation. Construction impacts are normally temporary changes in visual quality that occurs during, or as a direct result of, roadway or support facility construction. These impacts are discussed at the end of the construction impacts section. Operational impacts are those factors that are expected to affect visual quality when the project is completed. These visual sensitivity levels, just noted, include:

- Vividness, the memorability or interest a landscape provides the viewer.
- Intactness, the level of development or encroachment the viewer will perceive within the natural landscape.
- Unity, the harmony of integrated landscape features (USDOT 1981).

Neighborhood Livability

The potential impacts (adverse and beneficial) of the roadway improvement project on neighborhoods have been evaluated, in part, using the following guidance provided by USDOT. Potential impacts include the following set of criteria:

Changes in neighborhood quality- a subjective assessment based on the cumulative effect of residential or business displacements, and change in streets/traffic, parking, noise, vibration, and visual character and accessibility benefits.

Environmental Justice- a discussion, in accordance with Executive Order I22898, on whether the project is likely to cause disproportionately high and adverse impacts on low-income or minority populations, and the distribution of benefits to those populations. This discussion has been provided in Section 2.3.5.

2.4.2 Affected Environment

The project study area has three principal visual features: the open shoreline along Dyes Inlet and Port Washington Narrows, the views of the Olympic Mountains and Mount Rainier, and the urban and rural landscape of the City of Bremerton and unincorporated Silverdale and Kitsap County. Dyes Inlet and Port Washington Narrows is a large body of water that provides a view corridor of distant mountains and closer forested hills. The visual landscape of the City of Bremerton and the community of Silverdale is typical of many small to medium-sized communities and includes views of residential and commercial areas as well as a central business district (CBD) with a concentration of stores and institutional buildings. The landscape is more semi-rural with a mixture of moderate density residential, agricultural, and commercial land uses in the unincorporated Kitsap County portions of the project.

Existing overhead facilities include freeway light standards and sign structures, as well as highway bridges, and high voltage transmission lines and structures near the Warren Avenue Bridge in Bremerton.

Existing tree cover includes a combination of street trees, residential landscape plantings, wooded parklands, and somewhat extensive wooded private lands in the unincorporated areas along SR 303.

The visual scale of existing urban development ranges from very large in the industrial area around the Puget Sound Naval Shipyard, to moderately large in the office and commercial areas and small in the outlying residential neighborhoods. Visual resource texture ranges from the very coarse grain of the office/industrial areas to the moderately fine grain of the residential neighborhoods.

Scenic views toward the Olympic Mountains are available from parks and residential areas along the banks and hillsides adjacent to Port Washington Narrows and Dyes Inlet. A scenic view of Mount Rainier also exists from the Warren Avenue Bridge. Other scenic views are closer in range and include views of Dyes Inlet and Port Washington Narrows and the bluffs and parks adjacent to this waterway.

Change in visual quality and aesthetics can be qualitatively measured by the degree of change to the existing streets. The degree of change to existing streets would be defined as the potential impacts resulting from increased traffic, parking, noise, and vibration. These types of impacts can affect viewer sensitivity and exposure. The vast majority of the existing streets in the immediate vicinity of the SR 303 corridor are characterized as minor or principal arterials. The remaining streets on the fringe of the SR 303 corridor would be characterized as collectors, either neighborhood collectors or local collectors. The greatest degree of change from the proposed road improvements would take place to these neighborhood or local collector streets. These areas would typically include the residential neighborhoods in the greater vicinity of the SR 303 corridor. For example, the residential areas north of Port Washington Narrows along Pine Road NE, Elm Street, and Sheridan Road, and the residential areas south of Port Washington Narrows, adjacent to Snyder, Wycoff, and Park Avenues. The parks adjacent to these areas are also considered to have the greatest viewer sensitivity and exposure, which includes Evergreen Park and Lebo Recreation Field.

2.4.3 Environmental Consequences

Aesthetics and Visual Quality

The widening improvements under the Proposed Action would follow the existing roadway grade and alignment from NE Fairgrounds Road, south to 11th Street in downtown Bremerton, providing views of both the adjacent residential areas and the existing commercial uses along the existing SR 303 corridor. The widening of the existing Warren Avenue Bridge would partially interrupt the views from the east and the west along the existing SR 303 corridor. The overall visual character and aesthetics of the existing corridor would not be substantially changed, however, due to the degree of disturbance from past development. Positive impacts to the aesthetic environment could result through the planting of street trees at select locations along the proposed alignment.

Under the No Action Alternative, minimal impacts would occur to visual resources and visual quality.

Changes in Neighborhood/Livability

Neighborhood quality impacts under the Proposed Action would be considered low to moderate based on the level of existing impacts from past development and the predominant land uses consisting of commercial and retail businesses. Potential displacements along SR 303 north of Port Washington Narrows would occur on the fringes of the residential neighborhoods in East Bremerton and would not be expected to substantially impact neighborhood quality. These areas would be defined to include NE Riddell Road and Pine Road NE, Sheridan Road and Pine Road NE, NE McWilliams Road and Pine Road NE, as well as NE Riddell Road and Perry Avenue and Sheridan Road and Perry Avenue. According to preliminary noise estimates, noise impacts could increase under the Proposed Action

Alternative by the year 2030. The potential noise increase would be attributable to the corresponding increase in traffic volumes. This increase, however, would be proportionate to the existing noise levels found in the SR 303 Corridor, and therefore would not be expected to result in considerable impacts over existing conditions.

Neighborhood quality impacts along the SR 303 Corridor south of Port Washington Narrows would be expected to be moderate as there is a dense concentration of residential development between 11th Street and 17th Street that is zoned for medium density (8-18 dwelling units/acre) single-family development. Potential displacements in this area could result in direct impacts to the neighborhood, as well as indirect impacts to adjacent residential areas associated with intersection improvements to 11th Street. According to preliminary noise estimates, noise impacts could increase under the Proposed Action Alternative by the year 2030. The potential noise increase would be attributable to the corresponding increase in traffic volumes. This increase, however, would be proportionate to the existing noise levels found in the SR 303 corridor, and therefore would not be expected to result in considerable impacts over existing conditions.

Under the No Action Alternative, minimal impacts would occur to neighborhood livability and quality.

2.4.4 Mitigation Measures

All new roadway improvements would be designed to be aesthetically compatible with their setting. This would be accomplished by limiting unnecessary grade changes so that the highway stays at grade where possible. Land disturbance would be minimized where possible, and the final design would focus on producing simple, uncluttered features, with continuity in form, line, and color.

Where practicable, areas disturbed along the proposed roadway during construction will be revegetated. Roadside vegetation will incorporate low-maintenance, native or native-like plant species that are in character with existing vegetation. Roadway lighting would be designed to direct light and glare onto the roadway to minimize light and glare interfering with adjacent areas. Noise mitigation will be considered in more detail at the design stage of the project where site-specific noise modeling can be measured to confirm the mitigation requirements.

2.5 LAND USE

The land use section describes the existing land uses and 4(f) resources within the study area, estimates the projected land use changes and potential 4(f) resource impacts resulting from the Proposed Action, and identifies the project's consistency with plans and policies.

2.5.1 Studies and Coordination

The information used in this section was compiled from a number of existing sources including WSDOT aerial photographs, Kitsap County Assessor maps, and the Kitsap County and City of Bremerton Comprehensive Plans. In addition, a drive-by, windshield survey was conducted to update land uses not covered by the existing data sources.

A programmatic 4(f) evaluation has been conducted as part of this corridor study. Coordination with the SHPO has been ongoing since the project's inception and would continue until a final selection of the preferred alternative and any mitigation measures are agreed upon. More detailed analysis of historical resources and properties would be performed in consultation with SHPO as part of project-specific environmental review for the Proposed Action. The project team (Kitsap County, WSDOT, City of Bremerton, Kitsap Transit, and Parametrix) also discussed the various transportation build alternatives and their potential impacts and/or mitigation with the affected school districts, in particular Bremerton School District, to identify approaches to avoid or minimize impacts to these resources.

2.5.2 Affected Environment

The project study area lies within the City of Bremerton and unincorporated Kitsap County. The project alternatives pass through several types of land uses including urban retail, commercial, industrial, residential, and semi-rural. The area south of Port Washington Narrows is highly urbanized and contains the Bremerton central business district (CBD). This area is characterized by a mixture of residential (both single- and multi-family dwellings), retail, and commercial land uses. The southern boundary of the project area just touches industrial uses found in the Puget Sound Naval Shipyard. In this particular location, single-family residentially zoned properties lie north of 15th Street, while there is a gradual transition to retail and commercial uses south of 15th Street. There are some larger single-family residential developments located on Rocky and Erlands Points. Other major land uses in this area include the Puget Sound Naval Shipyard Bremerton Annex located west of Ostrich Bay, Olympic College, and the Harrison Hospital District. Major recreation areas in the vicinity include Lebo Recreation Area, Forest Ridge, and Evergreen Parks in Bremerton.

With the exception of the SR 303 corridor (which is highly developed), the area north of the Port Washington Narrows is predominantly single-family residential development, with some small commercial, retail, and business uses in isolated sections along Perry Avenue NE, Sheridan Road, NE McWilliams Road, and NE Fairgrounds Road. Urban density residential development becomes particularly clustered where the transition occurs from the City of Bremerton to unincorporated Kitsap County. In this area, the land uses become more semi-rural in nature with larger lots and more open space. Other major land uses in this area include the Kitsap County Fairgrounds, Illahee State Park, Illahee Forest Preserve, and Rolling Hills Golf Course. At the northwest corner of the study area is the retail and commercial center of Silverdale. This area is characterized by businesses clustered around the Silverdale Mall, and single- and multi-family development.

Almost a third of the project area consists of open water. The marine waters of Dyes Inlet, Port Washington Narrows, and Ostrich, Oyster, Phinney, and Chico bays generally make up most of the west side of the study area.

2.5.3 Environmental Consequences

The Proposed Action would potentially convert existing commercial, retail, residential, and semi-rural land uses to a transportation-related use. Approximately, 29 acres along the SR 303 corridor would be converted to road surface, sidewalk, or right-of-way. This conversion of land will not considerably alter the types of adjacent land uses located next to the potential acquisition area as the these land uses are generally established. The Proposed Action would also result in displacement and relocation impacts (see Section 2.2). While the Proposed Action would have no impact on the type of development, it could have some effect on the rate of planned development in the project area. By improving access to the area and easing traffic, the Proposed Action supports planned growth in the project area.

The Proposed Action would also produce impacts to adjacent land uses during construction and roadway operations. There would be potential increases in traffic and noise, visual quality impacts, and decreased air quality. These impacts are discussed in other sections of this corridor study (see Sections 3 and 4).

Under the No Action Alternative, there would be no conversion of land to transportation use, thus existing land uses would remain unchanged. Similar to the Proposed Action, the No Action Alternative may also affect the rate of development in the project area. However, under this alternative the rate of development may be inhibited because traffic would worsen on the SR 303 corridor, which may make this area less attractive to new development.

2.5.4 Mitigation Measures

No mitigation measures are proposed for the conversion of existing land use to a transportation use. Mitigation measures for other land use impacts are discussed under Sections 3.1, 3.4, 3.11, 3.12, and 4.

2.5.5 4(f) Resources

Section 4(f) of the Department of Transportation Act of 1966, as amended (23 U.S.C. 138 and 49 U.S.C. 303) states that the Secretary of the U.S. Department of Transportation shall not approve any transportation program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance as determined by the federal, state, or local officials having jurisdiction thereof, or use of any land from an historic site of national, state, or local significance as determined by such officials unless: (1) there is no feasible and prudent alternative to the use of such land; and (2) such action includes all possible planning to minimize harm to such park, recreational area, wildlife and water fowl refuge, or historic site resulting from such use.

Section 106 of the NHPA outlines criteria for determining eligibility of the historic resources and direct and indirect effects a project may have on the historic resource. Those properties determined affected by the project may be subject to Section 4(f) protection. If land from a historic resource is used or the resource's features that qualify it for protection are substantially impaired (e.g., there is constructive use), then Section 4(f) applies.

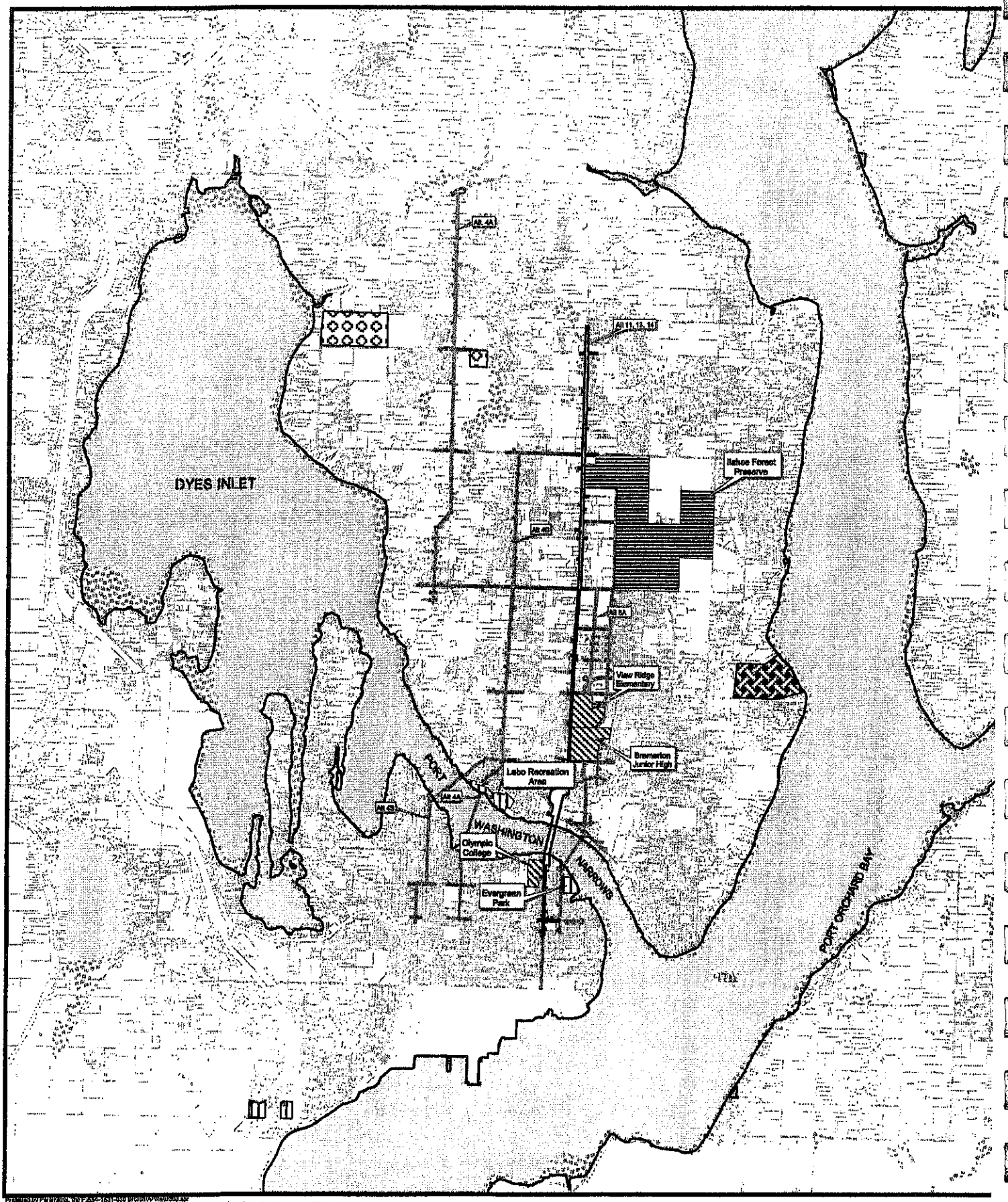
Section 4(f) resources were evaluated at a programmatic level for this analysis based on conceptual design information. A more detailed analysis of impacts would be performed during project-specific environmental review of the Proposed Action.

2.5.6 Environmental Consequences

A Section 4(f) use may result from a physical taking of a Section 4(f) property, such as acquisition for roadway right-of-way. A constructive use of Section 4(f) property may also result from the substantial impairment of the qualities that make the property eligible as a 4(f) resource. Potential 4(f) resources have been identified within the area affected by the Proposed Action Alternative (Figure 2-5). These potential 4(f) resources are summarized in Table 2-7 below:

Table 2-7. Potential 4(f) Resources (Proposed Action)

Parcel Description	Address
View Ridge Elementary	3250 Spruce St, Bremerton WA 98310
Bremerton Junior High School	1300 E 30th, Bremerton WA 98310
Olympic College	1600 Chester Ave, Bremerton WA 98337
Stevens Canyon Park	End of Birch St, Bremerton WA
Roto Vista Park/Roosevelt Field	1800 Warren Ave, Bremerton WA, 98337
Lower Roto Vista Park	End of Elizabeth Ave., Bremerton WA
Warren Ave Playfield	1017 Warren Ave, Bremerton WA, 98337
Evergreen Park	1400 Park Ave, Bremerton WA
Smith Playfield	1205 Park Ave, Bremerton WA, 98337
Illahee Forest Preserve	West of Wheaton Way between McWilliams Rd and Riddell Rd
Kitsap Central Library	1302 Sylvan Way, Bremerton WA, 98310



Prepared by Parametrix, Inc. F:\554-1631-030 BR\303\APRs\ar303.apr
Data Sources: Kitsap County, Washington State Department of Natural Resources, Washington State Department of Fish and Wildlife.
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N

1000 0 1000 Feet

Alternative 4A
Alternative 4B
Alternative 5
Alternative 11
Alternative 13
Alternative 14

Parcels

Neighborhood Park
Regional Park
State Park
Public School
Forest Preserve

Figure 2-5
Potential 4(f) Resour

The Proposed Action Alternative could potentially impact the Illahee Forest Preserve, Bremerton Junior High School, View Ridge Elementary, and Olympic College depending on how the SR 303 roadway is widened. If the Proposed Action Alternative were widened to the east, it would potentially impact the western edge of Illahee Forest Preserve just south of NE McWilliams Road and SR 303. To avoid this impact, the alignment should be redirected to the west side of the roadway. Similarly, the proposed widening improvements under the Proposed Action Alternative could potentially impact the eastern boundary of Olympic College between 16th Street and 18th Street if SR 303 is widened on the west side. To avoid this impact, the alignment should be redirected to the opposite side of the roadway. Finally, the widening improvements could potentially impact the western boundary of Bremerton Junior High School and View Ridge Elementary between SR 303 and 30th Street East. To avoid this impact, the alignment should be redirected to the west side of the roadway.

The Proposed Action Alternative would also produce potential indirect impacts to adjacent 4(f) resources during construction and roadway operations. There would be potential increases in traffic and noise, decreased air quality, and visual impacts. These impacts are discussed in other sections of this document (see Sections 3.1, 3.4, 3.11, 3.12, and 4).

Under the No Action Alternative, there would be no conversion of land to a transportation use, thus existing 4(f) resources would remain unchanged.

2.5.7 Mitigation Measures

Avoidance would be the principle technique applied to mitigate potential impacts to 4(f) resources near the project vicinity. Where feasible, the roadway improvements would be redirected to the opposite side of the roadway to avoid direct impacts. Detailed mitigation would be considered as part of project-specific environmental review of the Proposed Action.

2.5.8 Compatibility with Land Use Plans and Policies

The plans that would be applicable to the project are identified below. The review of these plans as they pertain to the proposal is provided at a general level commensurate with the programmatic nature of this document. The project-specific environmental review of the Proposed Action will examine the relevant plans in more detail. Applicable plans include the following:

- Washington Transportation Plan (WSDOT 2001)
- Vision 2020 Metropolitan Transportation Plan (PSRC)
- Destination 2030 Metropolitan Transportation Plan (PSRC)
- Kitsap County Comprehensive Land Use Plan
- Kitsap County Shoreline Master Program
- City of Bremerton Comprehensive Plan
- City of Bremerton Shoreline Master Program
- Kitsap Transit Long Range Plan/Mission Statement

2.5.8.1 Washington Transportation Plan (2003 - 2022)

The Washington Transportation Plan (WTP) provides direction for identifying and implementing transportation improvements and maintenance of existing facilities for state-owned and state-interest

modes of transportation over a 20-year period. The following WSDOT service objectives relate to the Proposed Action:

State Highways

- Create new roads and/or modify existing highways to relieve congestion and improve operational efficiencies (Mobility Subprogram I1)
- Reduce and prevent; deaths, the frequency and severity of disabling injuries, and the societal costs of accidents (Highway Safety Subprogram I2)
- Support state, regional and local economies (Economic Initiatives Subprogram I3)
- Support tourism through Heritage Corridors, safety rest areas, bicycle touring routes, and traveler support services. (Economic Initiatives Subprogram I3)
- Supporting the creation and retention of jobs and increasing economic vitality, especially in rural communities (Economic Initiatives Subprogram I3)
- Retrofit elements of the existing highway system to meet environmental requirements that have emerged since the highways were built (Environmental Retrofit Subprogram I4)

Public Transportation

- Improve and develop urban public transportation services, facilities, and programs including as options HCT, HOV lanes, and Transportation Demand Management (TDM) to respond to growth, and to meet local and regional economic development, congestion, energy, and clean air objectives (Improvement Policy 12).

Bicycle and Pedestrian Transportation

- Improve bicycle and pedestrian safety
- Increase the use of bicycling and walking for transportation purposes, principally utilitarian and commuting trips and connections to intermodal facilities.

Discussion

The Proposed Action would be compatible with the WTP. The Proposed Action would improve mobility in several ways: (1) by constructing additional travel lanes, (2) by improving signalization, (3) by implementing access control measures, and (4) making interchange improvements (channelization). These methods would decrease congestion on SR 303 and thus improve mobility. These methods would also help to improve freight movement along the highway system. The addition of HOV lanes would help to meet the public transportation and TDM goal. The project meets the goal of reducing existing environmental impacts because plans include retrofitting or replacing culverts to improve or enable fish passage. Finally, the Proposed Action supports continuous pedestrian and bicycle facilities within the corridor with connections to the regional network of pedestrian and bicycle pathways.

2.5.8.2 Vision 2020 and Destination 2030 (PSRC)

The Vision 2020 plan outlines the regional long-term growth management, and economic and transportation strategies for the Puget Sound region including the project area. Destination 2030 is the Metropolitan Transportation Plan for the Puget Sound region and the transportation element of Vision 2020. The following policies relate to the Proposed Action:

- Develop a transportation system that emphasizes accessibility, includes a variety of mobility options, and enables the efficient movement of people, goods and freight, and information (Policy RT-8)
- Support transportation system management activities, such as ramp metering, signalization improvements, and transit priority treatments, to achieve maximum efficiency of the current system without adding major new infrastructure (Policy RT-8.8)
- Support the retrofit of existing roadways and other transportation facilities to control and reduce noise, polluting runoff, and barriers to fish passage (Policy RT-8.10)
- Support transportation system management programs, services, and facility enhancements which improve transit's ability to compete with single-occupant vehicle travel times (Policy RT-8.12)
- Emphasize transportation investments that provide alternatives to single-occupant vehicle travel to and within urban centers and along corridors connecting centers (Policy RT-8.14)
- Support the design and development of components of the regional high-occupancy vehicle system which improve transit access and travel time relative to single-occupant vehicle travel (Policy RT-8.28)
- Develop a regionally coordinated network of facilities for pedestrians and bicycles which provides effective local mobility, accessibility to transit and ferry services and connections to and between centers (Policy RT-8.33)
- Support the development of roadways when they are needed to provide more efficient connections for a comprehensive road network to move people and goods when such roads will not cause the region to exceed air quality standards (Policy RT-8.34).

Discussion

The Proposed Action is generally compatible with the Vision 2020 and Destination 2030 policies. The project is needed to provide more efficient connections with the regional road network, however, the project does not rely solely on transportation system management options (TSM) in lieu of major new infrastructure. TSM options will be included in the Proposed Action, but the project would still require major investments in new infrastructure. The Proposed Action is more compatible with the other goals listed above and includes: (1) retrofitting transportation facilities (culverts) to improve fish passage, (2) providing high occupancy lanes to improve transit travel times and alternatives to single occupant vehicle travel, (3) constructing transportation facilities that would not cause the region to exceed air quality standards (see Section 3.6), and (4) building pedestrian and bicycle facilities that will improve local mobility and improve connections between centers (in this case the City of Bremerton and Silverdale).

2.5.8.3 Kitsap County Land Use Comprehensive Plan and Shoreline Master Program

The Kitsap County Comprehensive Plan is the policy document for directing and managing growth in the county. The Transportation Element of the Kitsap County Comprehensive Land Use Plan provides goals and policies that focus on meeting the transportation demands of future growth in ways that support Kitsap County's long-range vision. The Shoreline Master Program identifies goals and policies for the preservation and use of shorelines. The following goals and policies relate to the Proposed Action:

Kitsap County Comprehensive Plan Transportation Element (1999)

- Provide the public with the opportunity to make choices among modes of travel
- Emphasize moving people rather than vehicles

- Minimize negative environmental impacts by the transportation system
- Maximize transportation system safety for people of all abilities
- Provide a safe, comfortable, and reliable transportation system
- Support mass transit
- Maximize the opportunity for non motorized travel
- Encourage the development of rights-of-way to safely accommodate motorized and non motorized travel
- Manage access to the transportation system
- Design an intermodal transportation system, which supports and enhances neighborhood identities.

Kitsap County Shoreline Master Program

- Protect and enhance water quality in Puget Sound, Hood Canal, and inland lakes while allowing for compatible growth and development
- Create transportation systems, which protect and enhance shoreline features and habitats.

Discussion

The Proposed Action is generally compatible with Kitsap County's land and shoreline plans and policies for the following reasons. The purpose of the project as stated previously is to improve the safety, accessibility, and mobility of people, goods, and services in the project area through improvements to the SR 303 corridor. This would be done through road widening, channelization and signal improvements, managing access, providing HOV lanes and TDM/TSM features, and constructing pedestrian and bicycle improvements. At the same time, the project would minimize environmental impacts by using the existing crossing of the Port Washington Narrows (versus constructing a new crossing), implementing stormwater runoff water quality features (such as retention/detention ponds, swales, etc.), and retrofitting culverts to improve or allow fish passage. It would also help to enhance neighborhoods by providing streetscape improvements, pedestrian and bicycle facilities with connections to the regional network, placing utilities underground, and retaining native vegetation where possible (particularly in the semi-rural areas of the corridor).

2.5.8.4 City of Bremerton Land Use Comprehensive Plan and Shoreline Master Program

The Bremerton Comprehensive Plan is the policy document for directing and managing growth in the city. The Comprehensive Plan's Transportation Element provides strategies for enhancing the efficient movement of people, goods, and services both within and outside the city limits. The city's Shoreline Master Program is an element of the Comprehensive Plan and provides direction for preserving and using the city's shorelines. The following goals and policies relate to the Proposed Action:

Bremerton Comprehensive Plan Transportation Element

- Provide for safe, economical and energy-efficient movement of people and goods while protecting the quality of life

- Provide transportation facilities that will meet present and future needs, conserve energy, and minimize environmental harm
- Provide safe, efficient circulation patterns and roadway design to achieve economic savings of energy and time with a minimum of adverse environmental impacts
- Provide safe, convenient bicycle and pedestrian facilities that can serve as viable alternatives to automobile travel
- Utilize railroads and bridges on the shoreline to a minimum, and where they are necessary, place them in a manner, which will preserve and enhance the visual and physical access to and physical characteristics of the shoreline.

Bremerton Shoreline Master Program

- Provide adequate access (transportation improvements) to planned development while preserving and protecting undeveloped, environmentally sensitive areas, and natural shoreline areas.

Discussion

The Proposed Action would be designed to provide for safe and efficient motorized and non-motorized traffic circulation to meet existing and future travel demands. As stated above, the project would include measures to increase capacity, reduce congestion on the roadway and at intersections, improve traffic flow, reduce access conflicts, increase opportunities for transit and high-occupancy vehicle travel, and improve overall safety. The project would also include measures for minimizing environmental impacts, such as, utilizing the existing Port Washington Narrows crossing, implementing stormwater runoff water quality features, and retrofitting culverts to improve or allow fish passage, as well as making improvements along the roadway to benefit adjacent neighborhoods (such as streetscape improvements to reduce visual impacts). Therefore, the Proposed Action is consistent with the City of Bremerton's land and shoreline plans and policies.

2.5.8.5 Kitsap Transit Long Range Plan and Mission Statement

The Kitsap Transit Long-Range Plan and Mission Statement is the policy document for directing multi-modal transportation improvements and balancing growth within Kitsap County. The plan and mission statement provides strategies for enhancing the efficient movement of people, goods, and services countywide. The following goals and policies relate to the Proposed Action:

- To provide a primary commuter resource that is competitive with the car in key target areas, especially major employers and ferry terminals
- To provide a basic transportation network for those who cannot, or chose not to, use an automobile
- To help local governments manage anticipated Kitsap County growth in a manner that minimizes the negative environmental and social consequences.

Help manage Kitsap County anticipated growth:

- Provide higher service levels at, and to, "centers" within urban growth areas and along major transit corridors (per regional and local land-use plans)
- Integrate transit services into land-use (planning and practice)
- Minimize investments in and expansion of road system

- Maximize open and green spaces
- Minimize air and water pollution

Discussion

The Proposed Action would be designed to provide for safe and efficient motorized and non-motorized traffic circulation to meet existing and future travel demands. The project would include measures to increase capacity, reduce congestion on the roadway and at intersections, improve traffic flow, reduce access conflicts, increase opportunities for transit and high-occupancy vehicle travel, and improve overall safety. The project would also include measures for minimizing environmental impact such as utilizing the existing Port Washington Narrows crossing, implementing stormwater runoff water quality features, and retrofitting culverts to improve or allow fish passage, as well as making improvements along the roadway to benefit adjacent neighborhoods (such as streetscape improvements to reduce visual impacts). Therefore, the Proposed Action is consistent with the Kitsap Transit Long-Range Plan and Mission Statement.

2.6 CULTURAL AND HISTORICAL RESOURCES

2.6.1 Studies and Coordination

To assess historic properties within the project area, coordination with SHPO and the Washington State Office of Archaeology and Historic Preservation (OAHP) has been ongoing since the project's inception. OAHP was consulted to: (1) ascertain the results of any previous survey work in the area; (2) determine the area of potential effect (APE); and (3) identify properties that might be eligible for listing in the NRHP. Coordination with OAHP continued throughout the environmental review process.

The inventory information described in this assessment was collected at the Washington State Office of Archaeology and Historic Preservation and through their Website. Inventory forms for the National Register of Historic Places (NRHP), Washington State Historic Places, Washington Heritage Register, and Washington Archaeological Sites provided detailed information about each site. Additionally, consultations were conducted with the Suquamish Native American Tribe to obtain cultural information and maps identifying their usual and accustomed gathering places within the study area.

2.6.2 Affected Environment

The following is a summary of historical resources in the project area organized by the following categories: National Historic Landmark, National Register of Historic Places, Washington Heritage Register, and Other Historical Places and Tribal/Archaeological Resources.

National Historic Landmark

The Puget Sound Naval Shipyard is the only National Historic Landmark in the study area. The Puget Sound Naval Shipyard is located in Bremerton on the north shore of Sinclair Inlet across from Port Orchard. There are 6 dry-docks and 6 piers. Five of the dry-docks played roles in WWII and Dry-dock 1 dates back to 1896. All of the piers were constructed during WWI and WWII. The oldest structure is the original general's office building, constructed in 1893 and moved from its original site in 1910. The Shipyard is highly restricted to public visitation because of nuclear submarine repair and other high-security activity. The property is located outside of the Area of Potential Effects (APE).

National Register of Historic Places

In addition to the Naval Yard there are eight other NRHP listings in the study area.

- USS Hornet

  The USS Hornet is an Essex-class aircraft carrier located at the Naval Inactive Ships Maintenance Facility in Bremerton. The ship was involved in WWII (1943-1945) and the recovery of Apollo 11 after the first manned landing on the moon (1969).

- Bremerton Main Post Office

  The Main Post Office in located at 602 Pacific Avenue in Bremerton. The Post Office is a one-story brick building constructed in the late 1930s. There is a mural painted in 1938 by Ernest Norling above the doors to the administrative offices. The building is the first and only Federally constructed post office (as of 1989). It is the only building of its design-type in the City.

- Puget Sound Radio Station Historic District

  The Puget Sound Radio Station Historic District is located along the northern boundary of the Shipyard in Bremerton. The buildings are pre-WWII and representative of the function of coordinating and developing radio communications within the Shipyard facility

- Officer's Row Historic District

  The Officer's Row Historic District was constructed between 1896 and 1913 and is representative of the integrated architectural housing on the Puget Sound Naval Shipyard facility. The district is located on the bluff overlooking the industrial area of the shipyard.

- Marine Reservation Historic District

  The Marine Reservation Historic District is located on the northwest section of the Naval Shipyard, west of the Hospital Reservation District. The facilities were built between 1911 and 1914. No other construction apart from the garages, built in the 1930's, has occurred. The buildings symbolize the role that the Marine Corps played in security and training of the Navy at the Shipyard from 1896 until 1977 when the function was moved to Bangor.

- Hospital Reservation District

  The Hospital Reservation District is in the northwest section of the Naval Shipyard, east of the Marine Reservation Historic District and west of the Officer's Row and Radio Station Historic Districts. The facilities were established in 1909, but six buildings no longer remain. The district has been altered due to major alterations to the original hospital building and two post-WWII quarters.

- Bremerton Elks Temple Lodge No. 1181 Building

  The Bremerton Elks Temple Lodge is located on Fifth Street in Bremerton. The four-story hall was built in 1920 in a classical revival style.

None of the properties on the National Register of Historic Places are situated in the Area of Potential Effects (APE).

Washington Heritage Register

All of the resources listed under the National Register of Historic Places except for the Naval Shipyard and the USS Hornet are also listed on the State's Heritage Register. In addition, the following resource is also listed on the Washington Heritage Register:

- Bremerton Trust and Savings Bank

  The Bremerton Trust and Savings Bank is located on Pacific Avenue in Bremerton. Built in 1914, it is a two-story rectangular building that was attached to and surrounded by JC Penny's on the north and east sides in the 1960's. The building was designed for the Bremer Estate by Seattle architect Harlan Thomas and constructed by John Galber.

None of the resources on the Washington Heritage Register were found to be in the Area of Potential Effects (APE). Records at the Washington State Office of Archaeology and Historic Preservation (OAHP) list no historic sites in the project area, within ¼-mile of the alternatives.

Other Historic Places

Two properties in the study area for which Washington State Historic Places Inventory forms have been completed include the following:

- VFW Building, Post 4992

  Located on Central Valley Road, the VFW building was the first school house in Central Valley. Built in 1907, the building is located on its original foundation and is a typical, one-story early style schoolhouse with rows of windows and a mansard roof. The main structure has been relatively unaltered, but a small addition in the back of the building has been made.

- Central Valley Garden Club Meeting Hall

  Located on Central Valley Road, this building was built in 1915 and served as the first meeting hall in Central Valley. The Garden Club now occupies it. The one-story wood frame structure is virtually unaltered and has a typical meeting house style.

These properties are not listed by the state but have value in the community. Neither of these properties are situated in the Area of Potential Effects (APE).

Tribal and Archaeological Resources

The cultural affiliations of resource sites within the study and project area are all believed to be associated with the Suquamish Tribe. The Port Madison Indian Reservation was set aside in 1855 and enlarged in 1864 for the Suquamish Tribe, along with a few other tribes represented by the Point Elliot Treaty. The reservation is located east of Poulsbo along the northwest shoreline of Agate Passage and the north shoreline of Port Madison Bay. The Suquamish people were fishers, gatherers, and hunters in the study area before the Anglo-Europeans arrived. The waters and land surrounding the project area, including Dyes Inlet, Port Washington Narrows, and Port Orchard Bay, are considered usual and accustomed areas for tribal fishing locations, at which members also hunted and gathered plant materials. A map of the usual and accustomed area, along with a history of the Suquamish Tribe, can be found at http://www.suquamish.nsn.us/.

Records at the OAHP list seven cultural sites within the study area, two of which are adjacent to the project area. All of these cultural sites are associated with the Suquamish Tribe. The two sites adjacent

to the project area are identified as 45KP9 and 45KP121. Both sites are hunter-fisher-gatherer shell mounds located along the Port Washington Narrows and Evergreen Park and have been badly disturbed. At one of the sites, several artifacts such as pestles and ax blades were found in the early to mid-1900's. Residents indicated that the Native Americans used to camp in this area and that several kids and Boy Scout troops dug at the site in the 1930's. The other site was also a camping location for the Suquamish Tribe. Food bones and fire-modified rock were found along with the shells at this site. Neither of these properties are situated in the Area of Potential Effects (APE).

2.6.3 Environmental Consequences

Two Washington State Archaeological Sites, defined as 45KP9 and 45KP121, were found to occur in the project area. These sites both contain hunter-fisher-gatherer shell mounds that have been badly disturbed and are associated with the Suquamish Tribe. The alignment under the Proposed Action would not encroach upon either of these archaeological resources, and they are not considered to be within the Area of Potential Effects (APE).

There would be no impacts under the No Action Alternative.

2.6.4 Mitigation Measures

There is little likelihood of any archaeological resources within the alignment for the Proposed Action Alternative. A search of the cultural database from the Washington State Office of Archaeology and Historic Preservation yielded no information of any archaeological resources on or near the project study area for the Proposed Action Alternative. However, if archaeological remains of any kind are encountered during construction, work will be halted in the immediate vicinity until the significance of the resource can be evaluated by a qualified archaeologist. The Washington State Office of Archaeology and Historic Preservation and local tribal officials (Suquamish Tribe) will be consulted to determine an appropriate course of action.

2.7 EARTH

2.7.1 Studies and Coordination

The Kitsap County Comprehensive Plan (1998) and the United States Soils Survey of Kitsap County (1980) were utilized as the primary sources of background information. For prime and unique farmland soils, GIS mapping was utilized to determine approximate estimates of soil types and impacts per alternative.

2.7.2 Affected Environment

2.7.2.1 Regional Geology

The project study area is located in the Puget Sound Lowland, an elongated south topographic depression bounded by the Cascade Mountain Range on the east and the Olympic Mountain Range on the west. Marine waters surround this area on three sides: Hood Canal on the west, Admiralty Inlet on the north, and Puget Sound and Colvos Passage on the east. Rolling uplands separated by low-lying river valleys and marine embayments are prominent in the Puget Sound Lowland and generally trend in a north-south direction.

Much of Kitsap County is characterized by broad glacial drift-plain, with gently rolling hills. The area's topography was formed by a glacier event that traveled along north/south trending terraces, valleys and

troughs. Elevation generally varies between 100 feet to 400 feet, with the exception of the Green Mountain-Gold Mountain area a few miles west of Bremerton, where the highest peak reaches 1,761 feet (Kitsap County Comprehensive Plan 1998).

The saltwater shorelines within the county stretch over 228 miles, extending along bays and inlets. The coastline consists of steep sea cliffs and gently rolling lands with dotted smaller estuaries where streams empty their freshwater (Kitsap County Comprehensive Plan 1998).

In geological terms, the Kitsap Peninsula lies within a structural downfold, between the Olympic and Cascade Mountain ranges. The primary rock formations underlying the county include basalt and sandstone formed millions of years ago, and silt, sand, clay, and gravel deposits left by ice flow and streams during glaciation about 13,000 years ago. Several episodes of orogeny (mountain building) produced the Cascade and Olympic Mountains and the current structural trends exhibited in the bedrock. The structural trends observed in the project area are predominantly northwest-southeast and north-south. Glacial erosion and deposition that occurred in connection with at least four major advances of glaciers, modified the topographic features of the Puget Sound Lowland.

2.7.2.2 Climate

Kitsap County's climate reflects the moderating influence of Puget Sound and the Pacific Ocean. During the county's mild, wet winters, the average temperature is 40-50 degrees Fahrenheit during the day and 30-40 degrees Fahrenheit at night. During the fairly warm summer, the temperature varies between 70-80 degrees Fahrenheit during the day and 50-60 degrees Fahrenheit at night.

Kitsap County receives an annual average of 50 inches of precipitation, 80 percent of which typically falls in October through March. The prevailing winds blow from the south-southwest, and the amount of moisture they carry is affected by the presence of the Olympic Mountains. Because of the "rain-shadow" effect, precipitation volumes fluctuate greatly throughout the county. For example, precipitation in the northern end averages 26 inches annually, while precipitation may total over 70 inches annually in some areas in the south. This disparity in rainfall causes other areas of the county to experience different aquifer recharge rates, stream flows and suitability for forestry and agriculture (Kitsap County Comprehensive Plan 1998).

2.7.2.3 Soils

The soils listed in Table 2-8 below includes the types of soils found in the project vicinity. Overall, a vast majority of these soil types are characterized as being moderately deep and moderately to excessively well-drained. Erosion hazards for these types of soils would be considered slight based in part on the ability of the soils to provide natural infiltration. Land uses found on these soil types include a mixture of urban development, woodland, pastureland, and agricultural activities. The vegetation includes a mixture of coniferous and hardwoods (USDA Soils Survey of Kitsap County 1980).

Table 2-8. Soil Types in the Vicinity of SR 303

Soil Map Unit	Name	Characteristics
1	Alderwood very gravelly sandy loam, 0 to 6 percent slopes	Moderately deep, moderately well drained soil on uplands. Native vegetation is mainly conifers and hardwoods. Primarily used for woodland and crops.
2	Alderwood very gravelly sand loam, 6 to 15 percent slopes	Moderately deep, moderately well drained soil on broad uplands. Native vegetation is mainly conifers and hardwoods. Primarily used for woodland with some suited to urban development.
3	Alderwood very gravelly sandy loam, 15 to 30 percent slopes	Moderately deep, moderately well drained soil on broad uplands. Native vegetation is mainly conifers and hardwoods. Primarily used for woodland and pasture.
18	Indianola loamy sand, 0 to 6 percent slopes	Deep, somewhat excessively drained soil on uplands. Vegetation is conifers. Primarily used for urban development, cropland, and woodland.
20	Indianola loamy sand, 15 to 30 percent slopes	Deep, somewhat excessively drained soil on broad uplands and side slopes of broad uplands. Vegetation is conifers. Primarily used for woodland and urban development.
28	Kitsap silt loam, 2 to 8 percent slopes	Deep and moderately well drained soil on terraces. Vegetation is conifers and hardwoods. Primarily used for cropland and urban development.
29	Kitsap silt loam, 8 to 15 percent slopes	Deep and moderately well drained soil on terraces. Vegetation is conifers and hardwoods. Primarily used for cropland, woodland, and urban development.
30	Kitsap silt loam, 15 to 30 percent slopes	Deep and moderately well drained soil on terraces. Vegetation is conifers and hardwoods. Primarily used for woodland and homesites.
34	Neilton gravelly loam sand, 0 to 3 percent	Deep, excessively drained soil on terraces, benches, and uplands. Vegetation is conifers. Primarily used for woodland and urban development.
36	Neilton gravelly loam sand, 15 to 30 percent slopes	Deep, excessively drained soil on terraces, benches, and uplands. Vegetation is conifers. Primarily used for woodland and some urban development.
37	Norma find sandy loam	Deep, poorly drained soil on long, narrow stream bottoms and on till plain depressions in the uplands. Native vegetation is sedges, grasses, conifers, and hardwoods. Primarily used for woodland, pasture, and wildlife habitat.
63	Urban land alderwood complex, 0 to 8 percent slopes	This complex is on beaches and low terraces on broad uplands. Native vegetation is mainly conifers and hardwoods. Primarily used for urban development.

Source: USDA Soils Survey of Kitsap County (1980)

2.7.2.4 Geologically Critical Areas

Geologically critical areas are places that are highly susceptible to erosion, landslides, earthquakes, or other geologic events. In Kitsap County, geologically hazardous areas are typically steep slopes found along the marine shoreline, stream ravines and the steep slopes of Gold and Green Mountains. The definition of steep slopes is those areas having slopes greater than 30 percent and mapped by the Coastal Zone Atlas or the Quaternary of Geology and Stratigraphy of Kitsap County as Unstable (U), UOS (Unstable Old Slides) or URS (Unstable Recent Slides). It would be accurate to describe these areas as extremely hazardous due to landslide, erosion or seismic activities (Kitsap County Comprehensive Plan 1998).

Within the study area, the majority of the land areas mapped with 30 percent and greater slopes exist along the waterbodies, such as Port Washington Narrows, Port Orchard Bay, Dyes Inlet, and Mosher, Barker, and Illahee creeks. Thus, steeper slopes exist at the Warren Avenue Bridge on Port Washington Narrows.

2.7.2.5 Seismic Hazard

The study area is located within a convergent plate margin known as the Cascadia subduction zone. Historically over the last 150 years, the surrounding region has experienced shallow crustal earthquakes in the North American plate and deep subcrustal events within the Juan de Fuca plate.

Potential earthquake generating structures that have been identified within the North American plate in the project vicinity include a major fault zone that crosses the south Puget Sound Lowland about four kilometers (two and one-half miles) north of the project area (Gower et al. 1985). There is no surface indication that the fault located about four kilometers (two and one-half miles) north of the project area is currently active, as no evidence of displaced Frasier glacial deposits have been found along this structure (Gower et al. 1985).

Although evaluation of the seismic risk at the project area is beyond the scope of this analysis, it is anticipated that the seismic hazard at the project site would be similar to that of other sites within the Puget Sound region, and that seismic events should not have greater magnitude nor occur with greater frequency than in other areas within the Puget Sound region.

2.7.2.6 Prime and Unique Farmland Soils

According to the Kitsap County Comprehensive Plan, the Natural Resources Conservation Service lists seven Kitsap County soils (Table 2-9) as "prime" for agriculture due to their temperature, salinity, erodibility, permeability, texture, ability to hold water and acidity/alkalinity. These characteristics are influenced mostly by parent material, organic content, slope and climate. When combined with an adequate growing season and moisture supply, soils identified as "prime" can economically support sustained yields of crops with minimal treatment.

Table 2-9. Prime Farmland Soils in Kitsap County

Soil	Acres
Belfast Loam	630
Bellingham	880
Kitsap	2,310
Mukilteo	1,320
Norma	7,700
Semiahmoo	1,320
Shalcar	960
TOTAL	**15,020**

Source: Kitsap County Comprehensive Plan 1998

Prime agricultural soils comprise about 15,020 acres of Kitsap County, which is less than 4% of the county's total area (Kitsap County Comprehensive Plan 1998). A majority of these soils are scattered throughout the county, and can be predominantly found in flat areas adjacent to streams and rivers. Of the seven soil types identified as "prime" soils, five are considered hydric, and must be drained to be productive farmland. Not all-prime soils are currently used for agriculture, nor are they all available for agricultural use. For instance, areas in Big Valley and upper Clear Creek are committed to agricultural use and farms dot the landscape. In other places, however, like Wheaton Way and the SR 303 corridor in East Bremerton, the prime soils are covered by commercial or residential development.

As noted in the Kitsap County Comprehensive Plan, prime soils are only one indication of the land's suitability for farming. It is important to note that commercially successful agriculture may also require large tracts of land in which to grow crops or graze animals. Overall, there is relative scarcity of prime soils in large contiguous parcels, therefore the practice of farming under a commercial venue is inhibited. It is important, however, to recognize the areas that have the capacity to efficiently and economically provide a productive agricultural use. When such lands are permanently developed, the opportunity may be lost.

2.7.3 Environmental Consequences

2.7.3.1 Soils

The high permeability of the soil types that exist under SR 303 indicates that there is a slight potential for erosion under the Proposed Action Alternative. However, a majority of these soils are characterized as gravelly or sandy loams, soil types that are generally not considered highly susceptible to erosion because stormwater rapidly infiltrates into the soil.

Under the Proposed Action Alternative there would be approximately 29 acres of land cleared to accommodate the road widening improvements. The conversion of this land for transportation would impact vegetation in areas where it has not been previously removed or disturbed. The potential impacts to vegetation, however, would be minimized to a large extent by following the existing grade and alignment of the roadway.

There would be no impacts to soils and vegetation under the No Action Alternative.

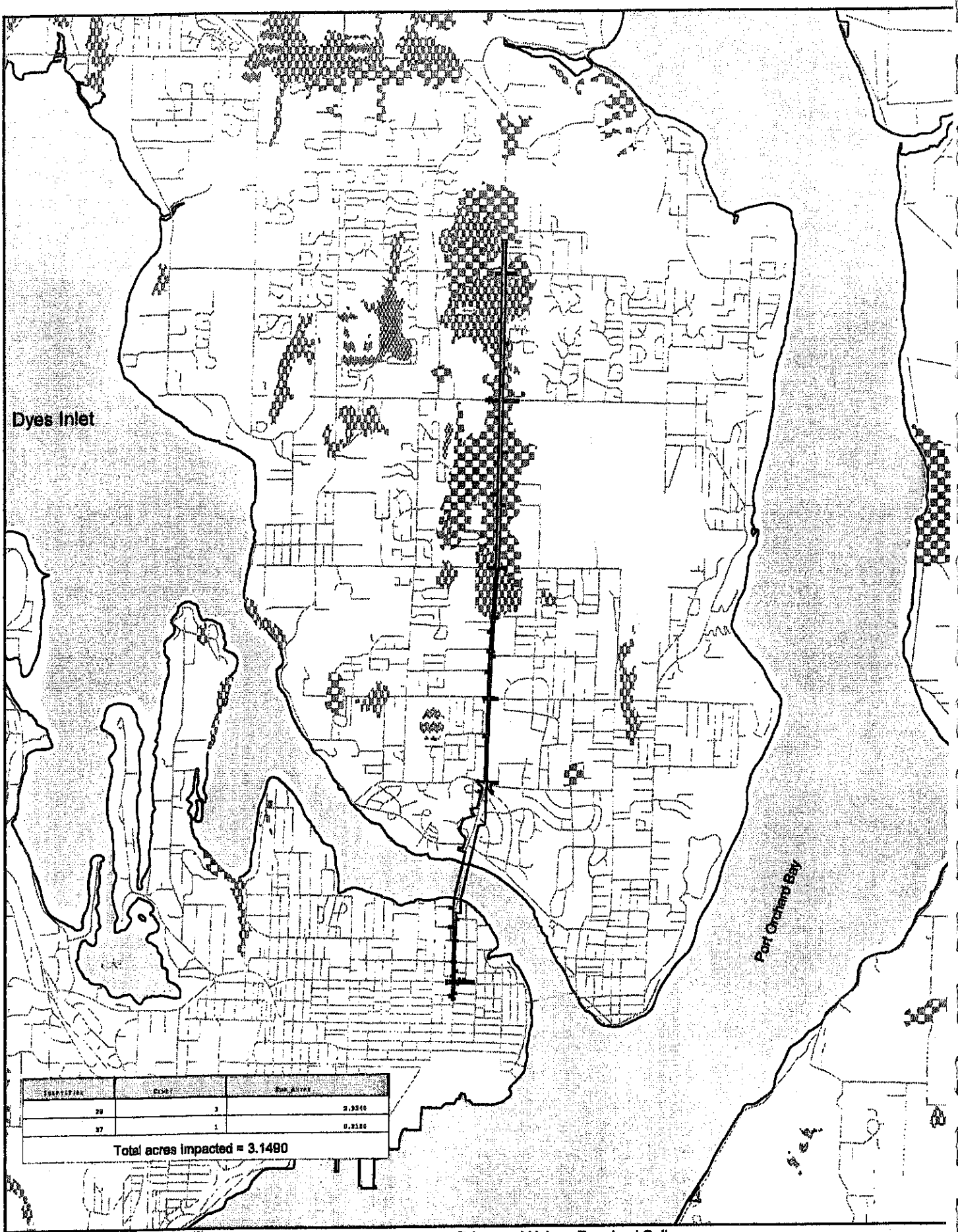
2.7.3.2 Geologically Critical Areas

Under the Proposed Action Alternative, there would be no considerable road widening improvements in the vicinity of geologically critical areas except at the Warren Avenue Bridge crossing. The Warren Avenue Bridge widening improvements under the Proposed Action would take place adjacent to the bluffs of Port Washington Narrows where steep slopes do exist. The proposed widening in this location, however, would closely parallel the existing bridge structure to minimize potential impacts to geologically critical areas. These impacts would be refined during project-specific environmental review.

There would be no impacts to geologically critical areas under the No Action Alternative.

2.7.3.3 Prime and Unique Farmland Soils

The Proposed Action would result in minimal impacts to prime and unique farmland soils from the proposed road widening. Based on preliminary assessments, it is estimated that approximately 3.14 acres of prime and unique farmland soils exist within the alignment of the existing SR 303 corridor (Figure 2-6). This estimate is likely overstated as a majority of the land adjacent to the corridor is committed to urban development and has been previously impacted. Widening under the Proposed Action



Identifier	Count	Sum Acres
28	3	2.9340
37	1	0.2150

Total acres impacted = 3.1490

Prepared by Parametrix, Inc F:\554-1631-030 BR303/APRs/ar303.apr
Data Sources: Kitsap County, Washington State Department of Natural Resources, Washington State Department of Fish and Wildlife.
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N

1000 0 1000 Feet

Shoreline
Streets
Open Water
Alternative 13
Critical Soils Area

Prime and Unique Farmland Soils

Belfast Loam - 5
Bellingham - 6
Kitsap - 28,29,30,31
Mukilteo - 33
Norma - 37
Semiahmoo - 49
Shalcar - 50

Figure 2-6
Prime and Unique Farmland Soils

would follow the same alignment and grade of the existing highway, thereby minimizing impacts to adjacent soils. Potential impacts would be anticipated to include Kitsap (Soil Type 28), and Norma (Soil Type 37) soils.

The No Action Alternative would not create impacts to prime and unique farmland soils.

2.7.4 Mitigation Measures

2.7.4.1 Soils

Best management practices (BMPs) and methods, outlined by the Department of Ecology (Ecology) and the EPA in the WSDOT Highway Runoff Manual, would be used to mitigate impacts to earth. The following summary lists the measures that would be considered to control runoff and limit erosion and sedimentation.

- Removal of vegetation and disturbance of the ground surface would be minimized. Newly cleared areas that would not be quickly developed should be hydroseeded or otherwise provided with a rapidly established, stable vegetated cover.
- Rock checkdams, triangular silt dikes, straw mulch, geoweb, plastic sheeting, hay bales, and siltation fencing are methods and materials for controlling erosion impacts. These should be used on exposed slopes, stockpiled soils, and next to wetland areas and drainage channels.
- Buffer zones would be provided around sensitive areas such as wetlands and streams.
- Surface water runoff would be concentrated, collected, and transported away from steep and disturbed slopes. Methods for controlling runoff include French drains, lined ditches, and detention/retention ponds.

2.7.4.2 Geologically Critical Areas

The Proposed Action Alternative would be designed to avoid geologically critical areas wherever feasible. The roadway and bridge widening improvements would closely parallel the existing grade and alignment of the roadway, minimizing the potential for impacts with geologically critical areas.

There would be no impacts to geologically critical areas under the No Action Alternative.

2.7.4.3 Prime and Unique Farmland Soils

Due to the level of high intensity commercial development along the existing SR 303 corridor, particularly along Wheaton Way, the widening improvements associated with the Proposed Action would not impact prime and unique farmland soils. Development has precluded the use of prime farmland soil along the SR 303 corridor for agriculture. Therefore, no mitigation is proposed.

No impacts would occur to prime and unique farmland soils under the No Action Alternative, therefore no mitigation is planned.

2.8 WETLANDS/SHORELINES/VEGETATION

2.8.1 Studies and Coordination

2.8.1.1 Wetland and Shoreline Identification and Data Sources

Shorelines and potential wetlands in the study area were identified using existing maps and published data, supplemented with field verification. The wetlands were not delineated, therefore, the wetland descriptions provided below (which include information on wetland size, type, function, and rating) are based on available information. More detailed wetland delineation in areas affected by the Proposed Action would be conducted during project-specific environmental review.

2.8.1.2 Existing Data Sources

The following existing data sources were used to identify potential study area wetlands:

- *Soil Survey of Kitsap County Area, Washington* (USDA 1980)
- *National Wetland Inventory, Bremerton East, Washington Quadrangle* (USFWS 1987)
- *National Wetland Inventory, Bremerton West, Washington Quadrangle* (USFWS 1987)
- *National Wetland Inventory, Poulsbo, Washington Quadrangle* (USFWS 1987)
- *National Wetland Inventory, Suquamish, Washington Quadrangle* (USFWS 1987)
- *City of Bremerton, Critical Lands Ordinance* (City of Bremerton 1985)

Kitsap County prepared composite maps in 2001, using the following Arc/Info Geographic Information System (GIS) data:

- Parcel and Right-of-ways Mapping
- National Wetland Inventory Wetlands Mapping
- Stream and Water Bodies Mapping
- Hydric Soils Mapping

2.8.1.3 Field Investigation

Parametrix staff performed field investigations on August 9th, and October 25th, 2001. The primary purpose of these investigations was to identify wetlands not included in existing inventories. These are wetlands that are either too small or too difficult to identify to be included in the National Wetland Inventory (NWI) and local inventories, or have changed since these inventories were prepared.

For properties within the right-of-way, on-site observations were made of the dominant vegetation, and the hydrologic characteristics of the area were assessed. No soil samples were taken.

For properties outside but adjacent to the right-of-way, field reconnaissance was conducted from roads and other areas open to public access. The presence, type, and approximate boundary of wetlands were visually confirmed based on the presence of reliable wetland indicator plants, such as soft rush (*Juncus effusus*), red osier dogwood, and hardhack.

Wetland boundaries were estimated based on these criteria and the resulting approximation was hand drawn onto composite maps. The resulting composites were digitized into Arc/Info GIS. Each wetland has been given a unique alphanumeric designation.

Wetlands were not delineated, and have not been reviewed by any jurisdictional authority, including the US Army Corps of Engineers, Washington State Department of Ecology, Kitsap County, or the City of Bremerton.

2.8.1.4 Regulatory Framework

Improvements to existing transportation corridors and the creation of new corridors could affect wetlands and shorelines that are protected by federal, state, and local laws. A review of federal, state, and local laws and policies was conducted to identify potential permitting and mitigation issues, and to ensure compliance with pertinent environmental regulations. A brief overview of these laws and policies is provided below.

2.8.1.5 Federal Regulations

There are five primary regulations that could apply to wetland and shoreline issues related to the proposed project: the National Environmental Policy Act (NEPA), the Clean Water Act (CWA), the Rivers and Harbors Act, the Endangered Species Act (ESA) 1973, and the Coastal Zone Management Act (CZMA). NEPA establishes the process by which a federal agency (such as the Federal Transit Administration [FTA]) must consider and evaluate the environmental impacts of projects that the agency sponsors. NEPA requires that any project that could have significant adverse impacts must address and disclose the impacts. This analysis is intended to provide a framework for the development of the Final SR 303 Corridor Study Plan.

The CWA, which is administered jointly by the U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (EPA), is intended to protect the biological, physical, and chemical integrity of the nation's waters, including wetlands. There are two sections of the CWA that could pertain to the proposed project: Sections 401 and 404. The Section 401 water quality certification is a federal permit administered by the state (Washington State Department of Ecology [Ecology]). The purpose of Section 401 is to ensure that federally permitted projects are consistent with state water quality standards. Section 404 regulates the placement of dredge or fill material into the waters of the U.S., including wetlands. Activities that constitute the placement of fill include trenching, ditching, draining, and installing piers or pilings. Project proponents intending to undertake such activities must obtain a permit from the Corps prior to beginning site work. Projects that require a Section 404 permit generally must have a state water quality certification.

Section 10 of the Rivers and Harbors Act applies to activities in, over, and affecting navigable waters of the U.S. The purpose of this law is to preserve the navigability of the nation's waters. For the purposes of Section 10, the Corps defines navigability as presently, historically, or potentially navigable, including intertidal waters. The Section 10 review evaluates the effects of a project on navigability and is typically conducted in conjunction with the CWA Section 404 permit process. Other factors taken into consideration in the Section 10 permit process include flood control, fish and wildlife habitat management, and other environmental impacts.

The ESA requires that any action authorized, funded, or carried out by a federal agency does not jeopardize the continued existence of any threatened or endangered (T/E) species, or result in the destruction or adverse modification of habitat critical to the survival of a T/E species (Section 7.(a)(2)). If species or critical habitat is known to occur in the vicinity of the project, consultation with the U.S. Fish

and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) is required under Section 7 of the ESA.

If the project is likely to have adverse impacts on a listed species, preparation of a Biological Assessment (BA) is required. The BA includes an analysis of all "reasonable and prudent" alternatives to the proposed project and describes the nature and potential impacts on the species of concern. After reviewing a BA, NMFS and USFWS issue a Biological Opinion (Opinion) that states whether the project is likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of its critical habitat.

Under the CZMA, federal projects undertaken in Washington that could affect coastal resources must comply with the state's Coastal Zone Management Plan. Ecology is responsible for reviewing federal projects to ensure compliance with the plan, which is intended to protect the state's shoreline and nearshore environments.

2.8.1.6 State and Local Regulations

The primary state and local regulations that could apply to the proposed project include the State Environmental Policy Act (SEPA), Hydraulics Code, local sensitive/critical area ordinances, and the Shoreline Management Act (SMA). SEPA is similar to NEPA, but applies to state-sponsored or approved projects. Because the proposed project is being undertaken as a joint federal-state partnership, the SEPA and NEPA review processes would be handled concurrently.

The state's Hydraulic Code is intended to protect fish, streams, and marine waters from degradation. The code regulates work that uses, diverts, obstructs, or changes the natural flow of a water of the state (which includes wetlands). It is implemented through a permit process known as the Hydraulic Project Approval (HPA). HPAs are obtained through consultation with the Washington Department of Fish and Wildlife (WDFW). The Washington Administrative Code (WAC, Section 220-110-050) also specifies hydraulic projects "shall incorporate mitigation measures as necessary to achieve no-net-loss of productive capacity of fish and shellfish habitat."

Local jurisdictions are required by law to have sensitive/critical area ordinances, which are intended to protect wetlands, streams, and other sensitive or critical lands. Typically, these ordinances provide definitions for wetland and stream rating systems, buffer requirements, and mitigation ratios. The study area for the SR 303 corridor includes areas within Kitsap County and the City of Bremerton, and is subject to the wetland regulations of those jurisdictions.

Within the state of Washington, wetlands are categorized according to the state guidelines described in *Washington State Wetland Rating System for Western Washington* (Ecology 1993). Kitsap County and the City of Bremerton also use these guidelines. Table 2-10 summarizes the rating criteria for each wetland category.

Table 2-10. Criteria for Wetland Rating Categories as Specified by Washington State Department of Ecology

Category	Criteria[1]
Category I	a) Have documented occurrence of federal or state listed endangered or threatened animal, plant, or fish species; or,
	b) Consist of high quality native wetland communities which qualify for inclusion in the State Natural Heritage Information System; or,
	c) Are documented as regionally significant waterfowl or shorebird concentration areas; or,
	d) Have irreplaceable ecological attributes; or,
	e) Are documented wetlands of local significance.
Category II	a) Satisfy no Category I criteria; and,
	b) Have documented occurrence of federal or state listed sensitive animal, plant, or fish species; or,
	c) Contain priority species or habitats recognized by state agencies; or,
	d) Are wetlands with significant functions which may not be adequately replicated through creation or restoration; or,
	e) Are wetlands with significant habitat value of 22 or more points on the Field Data Form; or,
	f) Are documented wetlands of local significance.
Category III	a) Are wetlands with significant habitat value of 21 points or less on the Field Data Form; or,
	b) Are documented wetlands of local significance.
Category IV	a) Are wetlands less than 1 acre and hydrologically isolated, with one vegetated class that is dominated (more than 80 percent areal cover) by one species considered alien and/or invasive; or,
	b) Are wetlands less than 2 acres and hydrologically isolated, with one vegetated class that is dominated by (more than 90 percent areal cover) by any combination of species considered alien or invasive; or,
	c) Are wetlands that are ponds excavated from uplands, and are smaller than 1 acre without surface water connection to streams, lakes, rivers, or other wetlands throughout the year; and that have less than 1/10 acre of vegetation.

[1] Ecology (1993).

The SMA is a state law that is implemented at the local level. The provisions of the SMA require that development of the state's shoreline be accomplished in a manner that protects and enhances public interest and protects against adverse impacts to the land and waters of the state. Under SMA, local governments prepare shoreline master plans that define appropriate uses for shoreline areas. The local jurisdictions, in conjunction with Ecology, review all shoreline development proposals for compliance and issue permits for projects that are consistent with their master plans. Improvements proposed by the SR 303 Corridor Study may need to comply with these plans.

Shorelines regulated under the SMA are divided into two categories. The first category is referred to as shorelines, and the second is referred to as shorelines of statewide significance. Shorelines of statewide significance receive a higher degree of protection under the SMA than other shorelines. Table 2-11 describes the criteria used to define these two categories.

Table 2-11. Criteria Comparison for Shorelines and Shorelines of Statewide Significance

Shorelines	Shorelines of Statewide Significance
Lakes and reservoirs greater than 20 acres	Lakes and reservoirs greater than 1,000 acres
Rivers with a mean annual discharge greater than 20 cubic feet per second	Rivers with a mean annual discharge greater than 1,000 cubic feet per second on the west side of the Cascades or 200 cubic feet per second on the east side
The lands extending shoreward for a distance of 200 feet[1]	Pacific Ocean and Hood Canal, Puget Sound[2]
All saltwater bodies	
Wetlands associated with shorelines	

[1] These areas, referred to as shorelands, may extend to the limits of the floodplain at local discretion.

[2] Puget Sound is regulated as a shoreline of statewide significance within Kitsap County.

2.8.2 Affected Environment

2.8.2.1 Overview of Wetland and Shoreline Resources

Wetlands and shorelines provide economic and ecological benefits through the performance of their physical, chemical, biological, and social functions. For example, the capacity of wetlands to absorb water and remove sediments can reduce downstream flooding and improve overall water quality. The presence of wetland vegetation slows water, reducing the erosion of stream banks and shorelines. Similarly, the presence of diverse vegetation types in wetlands provides food and habitat for wildlife, while providing educational and recreational opportunities for children and adults.

For the purposes of this study, shorelines are defined according to the SMA. The shorelines of Puget Sound, including Dye's Inlet and the Port Washington Narrows, are regulated as shorelines of statewide significance within the study area. Shorelines within the study area include Barker Creek, Clear Creek, Illahee Creek, Mosher Creek, and Steele Creek. These shorelines, adjacent shorelands, and associated wetlands are regulated under SMA.

Wetlands are defined according to the current CWA definition as areas that are saturated or inundated by surface or groundwater at a frequency and duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. There are two general types of wetlands in the study area: those located along Puget Sound (estuarine wetlands) and vegetated freshwater (palustrine) wetlands. These wetlands have specific soil, hydrologic, and vegetation characteristics based on their position in the landscape and land use. These characteristics are described below.

2.8.2.2 Hydric Soil

The SR 303 Project study area is located in the Puget Sound trough. The trough is a broad lowland located between the western Cascades and the Olympic Peninsula that has a history of extensive glaciation. The landforms of the region are typified by a series of north-south trending ridges and valleys. Most of the surface is covered by a thick layer of glacial till, which can be several thousand feet thick in some areas. The glacial till forms the parent material for the soils of the study area, which can be classified as hydric (wetland) or non-hydric (upland) based on criteria defined by the Natural Resources Conservation Service (NRCS).

It is important to note that areas mapped as a particular soil type in soil surveys often include areas of different soil types because of the gross scale of the mapping. Human activities, including the placement

of fill during development, also can affect soil characteristics, providing for the possibility of wetland development in soils mapped as non-hydric.

The hydric soils mapped within the study area include Kapowsin gravelly loam, Norma fine sandy loam, and Shalcar muck (USDA 1980). In addition, Alderwood soil series, classified as non-hydric, is found in the study area.

The Kapowsin gravelly loam is formed in glacial till. A hardpan layer is present at depths of 20 to 32 inches below the surface, which supports a perched water table during the rainy season. Approximately 10 percent of areas mapped as Kapowsin may contain non-hydric Harstine and Poulsbo soils, primarily on steeper slopes.

Norma fine sandy loam is formed in mixed glacial alluvium. These soils are deep, poorly drained, and found in stream bottoms and in depressions on till plains. Approximately 10 percent of soils mapped as Norma are Bellingham, McKenna, and Shalcar soils.

Shalcar muck is formed from decaying organic material over alluvium. This soil is deep, very poorly drained and is found in backwater depressions in valleys and uplands. Shalcar soils are prone to ponding in the winter and have a high water table. The Shalcar muck unit includes approximately 10 percent Semiahmoo soils and 5 percent Norma soils, both of which are hydric.

The Alderwood soil series is formed in glacial till, and is moderately deep and well drained on the uplands. NRCS designates the Alderwood series soils as non-hydric; however, these soils can support the development of wetlands because of a hardpan layer that exists at depths between 20 and 40 inches.

Hydrology

Water is one of the defining characteristics of a wetland. Water creates the anaerobic conditions that dominate the soil-forming processes, and that act as a limiting condition for plant growth. A wetland must have water for a long enough period during the growing season to create anaerobic soil conditions and support plant communities adapted to those conditions.

Wetlands within the study area derive water from several different sources. Some wetlands are situated along the shores of Puget Sound where water is present throughout the year. Other wetlands are located along streams or in depressions. These wetlands receive water when streams overflow their banks, from subsurface flow where the water table is close to the surface, or directly from precipitation.

Vegetation

Puget Sound is located within the western hemlock (*Tsuga heterophylla*) forest zone described in *Natural Vegetation of Oregon and Washington* (Franklin and Dyrness, 1988). Western hemlock (*T. heterophylla*) and western red cedar (*Thuja plicata*) are the climax forest trees in this zone, although Douglas fir (*Pseudotsuga menziesii*) also dominates large areas. Deciduous species occur primarily in disturbed areas and along rivers and streams.

Vegetation in the study area has been influenced by the conversion from the area's initial condition (forested) through agricultural uses to the current residential/suburban uses. Most wetlands in the study area support a mixture of native and introduced species. Red alder (Alnus rubra), black cottonwood (Populus balsamifera), western red cedar, and Oregon ash (Fraxinus latifolia) generally dominate forested wetlands. Dominant species in shrub wetlands include various willows (*Salix* spp.), Himalayan blackberry (*Rubus discolor*), red osier dogwood (*Cornus sericea*), hardhack (*Spiraea douglasii*), and

salmonberry (*Rubus spectabilis*). In wetlands with open water, cattails (*Typha* spp.), rushes (*Juncus* spp.), and horsetails (*Equisetum* spp.) are dominant.

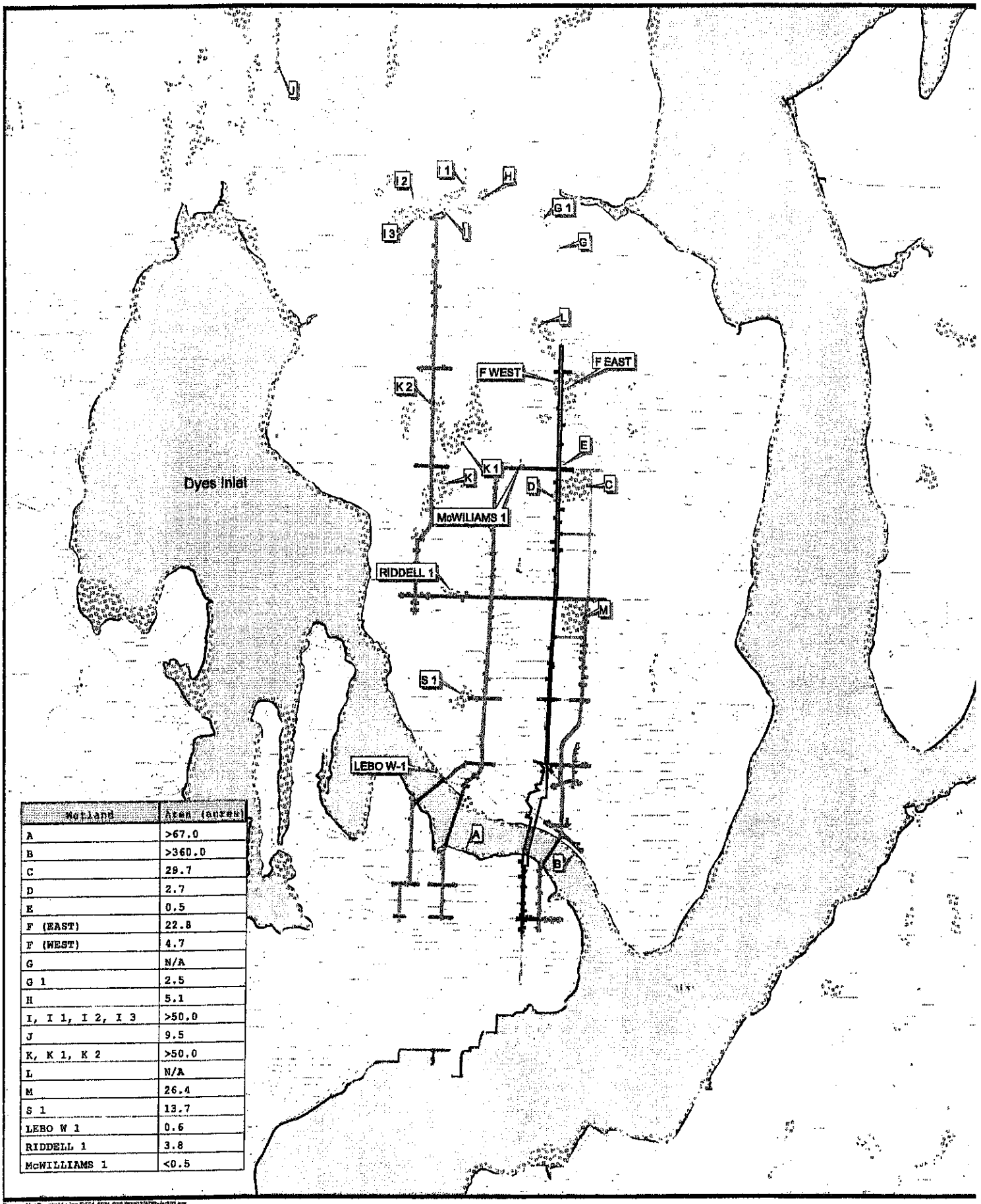
Wetland Description and Classification

This section describes in detail the wetlands found within the SR 303 Project study area. A detailed description is presented for each wetland including wetland name, acreage, Ecology rating, required buffer width (based on Ecology rating and Kitsap Co.), and vegetation classification (Cowardin et al. 1979) (Figure 2-7). This information is summarized in Table 2-12.

Table 2-12. Area, Rating, and Classification for Wetlands in the SR 303 Study Area

Wetland	Area[1] (In Acres)	Ecology Rating[2] (Category)	Buffer[3,4] (Feet)	USFWS Classification[5]
A	>67.0	I	200	Estuarine, Intertidal Aquatic Bed/Flat
B	>360.0	I	200	Estuarine, Intertidal Aquatic Bed/Flat
C	29.7	III	50	Palustrine Forested
D	2.7	III	50	Palustrine Forested
E	0.5	IV	25	Palustrine Open Water
F (east)	22.8	II	100	Palustrine Forested – Scrub/Shrub
F (west)	4.7	II	100	Palustrine Emergent – Scrub/Shrub
G	N/A	N/A	N/A	N/A
G-1	2.5	II	100	Palustrine Forested – Open Water
H	5.1	II	100	Palustrine Forested – Scrub/Shrub
I, I-1, I2, I-3	>50.0	II	100	Palustrine Forested – Emergent
J	9.5	III	50	Palustrine Scrub/Shrub
K, K-1, K-2	>50.0	II	100	Palustrine Forested – Emergent
L	N/A	N/A	N/A	N/A
M	26.4	III	50	Palustrine Forested
S-1	13.7	III	50	Palustrine Forested – Scrub/Shrub
Lebo W-1	0.6	II	100	Estuarine, Intertidal Forested – Palustrine Scrub/Shrub
Riddell 1	3.8	III	50	Palustrine Forested
McWilliams 1	<0.5	IV	25	Palustrine Scrub/Shrub

1 All areas estimated based on NWI mapping and field inventory.
2 Ecology (1993).
3 Kitsap County Critical Areas Ordinance, additional building setbacks apply.
4 City of Bremerton Critical Lands Ordinance.
5 Cowardin et al. (1979).



Wetland	Area (acres)
A	>67.0
B	>360.0
C	29.7
D	2.7
E	0.5
F (EAST)	22.8
F (WEST)	4.7
G	N/A
G 1	2.5
H	5.1
I, I 1, I 2, I 3	>50.0
J	9.5
K, K 1, K 2	>50.0
L	N/A
M	26.4
S 1	13.7
LEBO W 1	0.6
RIDDELL 1	3.8
McWILLIAMS 1	<0.5

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N

2000 0 2000 Feet

Shoreline
Streets
Rivers

Alternative 4A
Alternative 4B
Alternative 5A

Alternative 11
Alternative 13
Alternative 14

Critical Wetland Area

Wetlands

Figure 2-7
Wetland Resources Map

2.8.3 Environmental Consequences

The Proposed Action includes widening improvements on the existing bridge (Warren Avenue) across Port Washington Narrows. The total area of wetland impact is approximately 2.3 acres, with an additional 0.4-acre of wetland buffer impact (Table 2-13). These potential wetland impacts would be split between Category I, Category II, and Category III wetlands as documented in Table 2-13.

Table 2-13. Wetland and Buffer Impacts, Proposed Action

Wetland	Wetland Impact[a] (in acres)	Buffer Impact[a,b] (in acres)	Wetland Category[c]
A	0.1	0.2	I
B	0.1	0.2	I
C	0.5	<0.1	III
D	0.5	<0.1	III
F (east)	0.7	<0.1	II
F (west)	0.4	<0.1	II
Total Impact	2.3	0.4	

a) All areas estimated based on NWI mapping and field inventory assumed 20-foot increase in right of way on each side of road.

b) Kitsap County Critical Areas Ordinance, additional building setbacks apply.

c) Ecology (1993).

Direct impacts to Wetlands A and B include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to place the footings for the new structure. Additional impacts include the redeposition of disturbed sediments and incidental filling to the immediately surrounding wetland areas.

Direct impacts to the Wetlands C, D, and F (east), and F (west) would include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to create the new roadbed.

Shoreline impacts include proposed crossings for the Port Washington Narrows, and one unnamed stream. The unnamed stream carries water from Wetland C to Wetland D through a culvert under SR 303.

2.8.4 Mitigation Measures

Mitigation for potential wetland impacts would include location of the road widening improvements to avoid wetlands and wetland buffers. Where wetlands or wetland buffers can't be avoided mitigation would be provided according to the following approach.

- In areas where these resources cannot be avoided, design and construction practices that minimize these impacts would be considered.
- The identification of compensation for unavoidable loss of resource areas or functions would be developed according to the local guidelines contained in the City of Bremerton and Kitsap County CAOs.
- All measures would be developed in accordance with federal, state and local regulations, and in consultation with the representatives of these agencies.

2.9 FISH, WILDLIFE HABITAT AND THREATENED AND ENDANGERED SPECIES

2.9.1 Studies and Coordination

This section provides an analysis of existing fisheries and wildlife use, and habitat values in the study area proposed for the SR 303 Corridor Study. An additional discussion on vegetation can be found in the wetlands segment of this report in Section 2.8.

This evaluation is based on existing information available for the project study area, including reports and electronic resource mapping from Washington Department of Fish and Wildlife (WDFW), Washington State Department of Natural Resources (WDNR), United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and the Kitsap County Comprehensive Plan. The use of topography maps and color aerial photography was also utilized as part of this analysis.

Coordination with agencies and other groups was formally conducted through the series of public meetings, an agency scoping meeting, and the Stakeholder Committee meetings. Attendees included natural resource representatives from WDFW, Ecology, WSDOT, U.S. EPA, the City of Bremerton and Kitsap County.

2.9.2 Affected Environment

2.9.2.1 Priority Habitat and Species

Fisheries

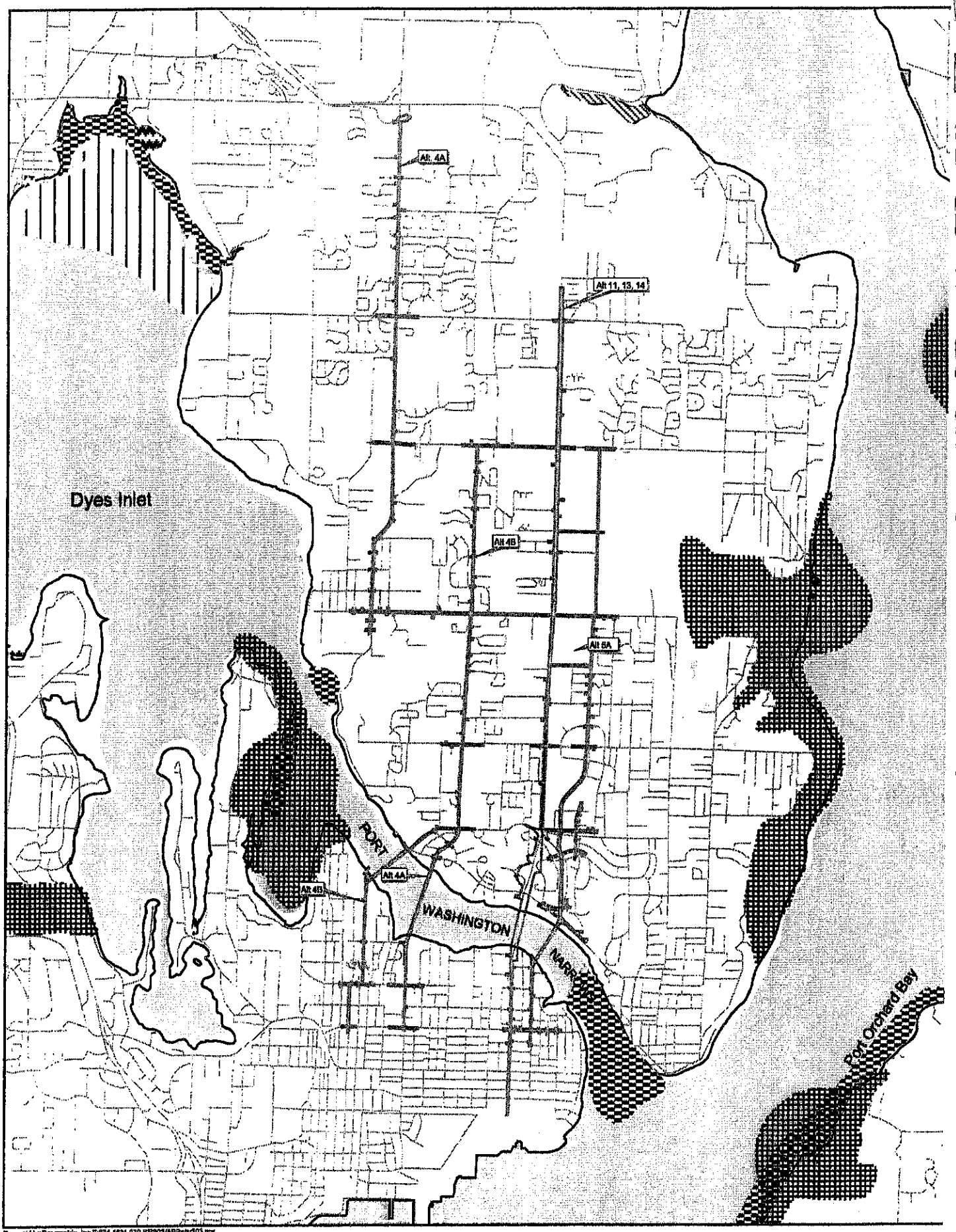
Dyes Inlet, Port Washington Narrows, Barker, Mosher, Illahee, and Steele creeks, as well as other small drainages within the project vicinity provide habitat for a variety of marine organisms including fish. Four species of Pacific salmon, chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), chum (*O. keta*), and pink (*O. gorbuscha*), may utilize these waters, although coho and chum salmon are the predominant species. The largest coho and chum salmon production in the project area is in Steele Creek (WDFW 1994). However, chum and/or coho salmon production has been reported in Illahee Creek and several of the smaller independent drainages (Williams 1975; WDFW 1994). Resident cutthroat trout (*O. clarki*) are present in all of the tributaries to Dyes Inlet and Port Orchard. See Table 2-14 for the presence of fish species in each project area stream.

Table 2-14 Salmonid Fish Species Present in Project Area Streams.

Stream	Chum	Chinook[1]	Coho[2]	Steelhead	Cutthroat
Steele	YES	NO[3]	YES	NO	YES
Clear	YES	YES	YES	YES	YES
Barker	YES	YES	YES	YES	YES
0257	YES	NO	NO	NO	YES
0258	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	YES
Mosher	YES	NO	YES	NO	YES
0260	NO	NO	NO	NO	YES
0262	NO	NO	NO	NO	YES
Illahee	YES	NO	YES	NO	YES

1 Threatened species under ESA.

2 Candidate species under ESA. 3 Hatchery chinook return to this creek.



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N

1000 0 1000 Feet

Shoreline
Streets

SR303 Alternatives
Open Water

Priority Habitats and Species

Bald Eagle
Estuarine Zone
Harbor Seal
Lagoons
Shorebird Concentrations
Urban Natural Open Spaces
Waterfowl Concentrations
Wetlands

Figure 2-8
Priority Habitat and Species

Other fish species of special interest found in the study area include pacific herring, spiny dogfish, Pacific sand lance, and surf smelt. Pacific herring, surf smelt, and Pacific sand lance are classified as bait fishes by the WDFW, and collectively form a very important trophic link between plankton resources and a wide variety of predatory marine organisms, including salmon (WDFW 1999). These species spawn in various locations in and around Dyes Inlet.

Essential Fish Habitat

The determination of the effects of the proposed project on essential fish habitat (EFH) is made pursuant to Section 305(b)(2) of the Magnuson-Stevens Act. Under this act, Federal agencies are required to consult with NMFS regarding any of their actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken that may "adversely affect" EFH. "Adverse effect" means any impact, which reduces the quality and/or quantity of EFH, which can include direct (e.g., water quality or contamination impacts), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

For any Federal action that may adversely affect EFH (except those activities covered by a General Concurrence) Federal agencies must provide NMFS with a written assessment of the effects of that action on EFH. However, Federal agencies may incorporate an EFH assessment into documents prepared for other purposes such as a Section 7 Biological Assessment. The determination of the effects of the proposed project on EFH within the project vicinity will be incorporated into a Biological Assessment for the project, which will be completed as part of project-specific environmental review for the Proposed Action.

Birds

The existing residential landscape areas that occur along the highway corridor attract numerous bird species. The mixed coniferous forest areas on the hillsides of the study area provide some foraging for birds such as the pileated woodpecker and band-tailed pigeon, which are State of Washington priority species (Parametrix 1995; WDFW 2001). See Figure 2-8, Priority Habitat and Species, and Table 2-15 for the presence of priority habitat and species in the project area and countywide.

Table 2-15. Priority Habitats and Species

Species	Kitsap County Habitat	Land Use Threats
Bald Eagle	Coniferous, uneven aged forests near water. Large trees along river, lake, and marine shorelines.	Loss of large shoreline trees, highly sensitive to human activity near perch, roost and nest sites.
Purple Martin	Tree cavities in low-lying forests.	Conversion of forest lands to non-forest uses.
Pileated Woodpecker	Mature 2nd growth coniferous forests with snags and fallen trees.	Conversion of forest lands; clear-cutting and removal of snags and fallen trees.
Great Blue Heron	Undisturbed stands of tall trees near wetlands or water bodies; fresh or saltwater wetlands, streams and shorelines.	Highly sensitive to human activity near nesting sites; loss of wetlands, shoreline development.
Osprey	Tall trees or dead snags near large bodies of water.	Loss of shoreline habitat; highly sensitive to human activity near nest, perch sites.
Columbian Black-Tailed Deer	Forest.	Conversion of forest lands.

Table 2-15. Priority Habitats and Species/Kitsap County (Continued)

Species	Kitsap County Habitat	Land Use Threats
Harlequin Duck	Tree/shrub stream, banks, boulder/gravel shoreline, kelp beds.	Shoreline development; loss of riparian habitat, siltation of kelp beds.
Cavity Nesting Ducks	Tree cavity in trees adjacent to sloughs, lakes, beaver ponds, and shallow open water.	Loss of tree cavities near water, loss of undisturbed wetlands.
Blue Goose	Open foothills with streams, springs or meadows.	Conversion of foothills to farms and houses.
Band-Tailed Pigeon	Coastal forests with diverse tree ages, and farmland, mineral springs, streams with gravel deposits.	Conversion of forests and farmland.
Sea Run Coastal Cutthroat	Wetlands and riparian corridors.	Loss of wetlands and undisturbed riparian corridors.
Steel head	Wetlands and riparian corridors.	Loss of wetlands and undisturbed riparian corridors.
Green backed Heron	Wooded ponds.	Development adjacent to ponds.
Red-Tailed Hawk	Mature 2nd growth, urban open space.	Loss of wood lots and urban open space.
Black Brant	Eelgrass beds.	Shoreline development; siltation of eelgrass beds.
Beaver	Wetlands, streams.	Loss of wetlands and undisturbed riparian habitat.
River Otter	Wooded streams and estuaries.	Loss of undisturbed riparian habitat, shoreline development.
Harbor Seal	Marine waters.	Loss of haulout structures or resting locations.

Source: Kitsap County Comprehensive Plan 1998

The forests and shrubby areas support a large number of other common bird species including Cooper's hawk, great horned owl, downy woodpecker, winter wren, golden-crowned kinglet, black-capped chickadee, bushtit, song sparrow, rufous sided towhee, and dark-eyed junco (Parametrix 1995; WDFW 2001).

Wetland areas likely support great blue herons, and a variety of songbirds in adjacent brushy areas. Open areas within the corridor that include scattered perch trees provide good habitat for red-tailed hawks and American kestrels (Parametrix 1995; WDFW 2001).

The salt water and tidal areas of Port Washington Narrows and Dyes Inlet provide habitat for a variety of migratory and wintering water birds, including western grebe, red-necked grebe, cormorants, American widgeon, bufflehead, scoters, scaup, red-breasted merganser, and hooded merganser (Parametrix 1995; WDFW 2001). As noted in the WDFW PHS data, these waters are mapped as waterfowl concentration areas (WDFW 2001). High concentrations of shorebirds are found in the tidelands, which provide foraging and resting habitat, particularly during the winter migration periods.

Mammals

In the developed urban areas along the SR 303 corridor, the most likely mammals are rats and mice and native voles and shrews, which include introduced pest species. The extent of prior development and the lack of connected densely wooded areas in the SR 303 corridor would act as a limiting factor for suitable habitat for a number of animals. Vegetation in the adjacent residential areas of downtown Bremerton and East Bremerton could provide habitat for eastern gray squirrels, as well as raccoons and opossum. The marine shorelines also provide wildlife habitat for marine mammals and birds. Marine mammals such as harbor seals and otters may use the shoreline areas and marine waters in the study area, although there are no known haulout sites in the project vicinity (Jeffries et al. 2000).

The most productive wildlife habitats are the small-forested areas outlying East Bremerton, for example the Illahee Forest Preserve, and the community of Silverdale. Large mammals likely to be present in this area are the coyote and black-tailed deer, which are reasonably tolerant of human activity. Due to its status as a game animal, the black-tailed deer is considered a priority species for management by WDFW. Smaller predators that could potentially occur in the wooded portions of the project area include red fox, raccoon, striped skunk, and opossum. Other probable small animals include mountain beaver and several species of moles and bats (Parametrix 1995).

Reptiles and Amphibians

Wooded areas and freshwater wetlands would likely provide habitat for several species of salamanders, such as northwestern salamander, western redback salamander, and roughskin newt. Frogs and toads that may be found in this vicinity include western toad, Pacific treefrog, northern red-legged frog, and bullfrog (Parametrix 1995). Due to their intolerance for brackish conditions, no amphibians would be expected in the tidally influenced wetlands adjacent to Dyes Inlet and Port Washington Narrows. The northern alligator lizard is the only lizard likely to occur in this area. The snakes most likely to occur along the corridor would be garter snakes (Parametrix 1995). PHS data by WDFW does not indicate the presence of any priority species of reptiles or amphibians in the project area.

Invertebrate Species

Dyes Inlet and Port Washington Narrows are identified as containing habitat suitable for marine resources, such as the subtidal geoduck and hard-shell clam (WDFW 2001). Common benthic invertebrates potentially occurring in the intertidal zones adjacent to the proposed alignment within Port Washington Narrows include a wide variety of clams and cockles, including native littleneck clam (*Protothaca staminea*), Japanese littleneck clam (*Tapes japonica*), bent-nose clam (*Macoma nasuta*), butter clam (*Saxidomus giganteus*), mud clam (*Macoma inquinata*), and heart cockle (*Clinocardium nuttallii*). Other invertebrate species possibly occurring in the project vicinity include: mud shrimp (Upogebia pugettensis), sea cucumbers (Parastichopus spp.), sea pens (Ptilosarcus gurneyi), and mussels (Mytilus edulis). Possible common invertebrate species found in hard till-like substrate areas near any existing piers would include horse clam (*Tresus capax*) and rough piddocks (*Zirfaea pilsbryi*). Other possible hard surface invertebrates found in the intertidal zone would include sea anemones (*Metridium* sp. and *Anthopleura* sp.), oyster (*Crassostrea gigas*), tunicates (*Corella* spp.), barnacles (*Balanus* spp.), and purple shore crab (*Hemigrapsis nudus*) (Figure 2-9).

Vegetation

Upland portions of the study area include a variety of vegetation cover types and land uses, ranging from stands of predominantly second-growth forest to highly developed urban areas. The forests are a mixture of coniferous and deciduous trees, including Douglas fir, western hemlock, western red cedar, big-leaf maple, and red alder. These forests contain shrubs including ocean-spray, red huckleberry, Indian plum, and blackberries and ground cover plants including sword fern, salal, and Cascade Oregon grape. The

remaining forested stands are likely to provide the best wildlife habitat for terrestrial vertebrates, however, even these areas have limited value for wildlife due to the proximity of existing residential and commercial development.

Most of the land surface that could be affected by the proposed highway project has already been significantly disturbed. There are several commercial businesses along the existing SR 303 highway, and numerous arterial and collector roads and residences on the adjacent land areas.

The Kitsap County Comprehensive Plan (1998) refers to a number of sensitive and locally unique plant species and their habitat characteristics (Table 2-16) that may potentially be present within the project area. This plan, however, does not indicate the presence of eelgrass or kelp beds along the Port Washington Narrows shoreline (Figure 2-9).

Table 16. State Sensitive and Locally Unique Plants/Kitsap County

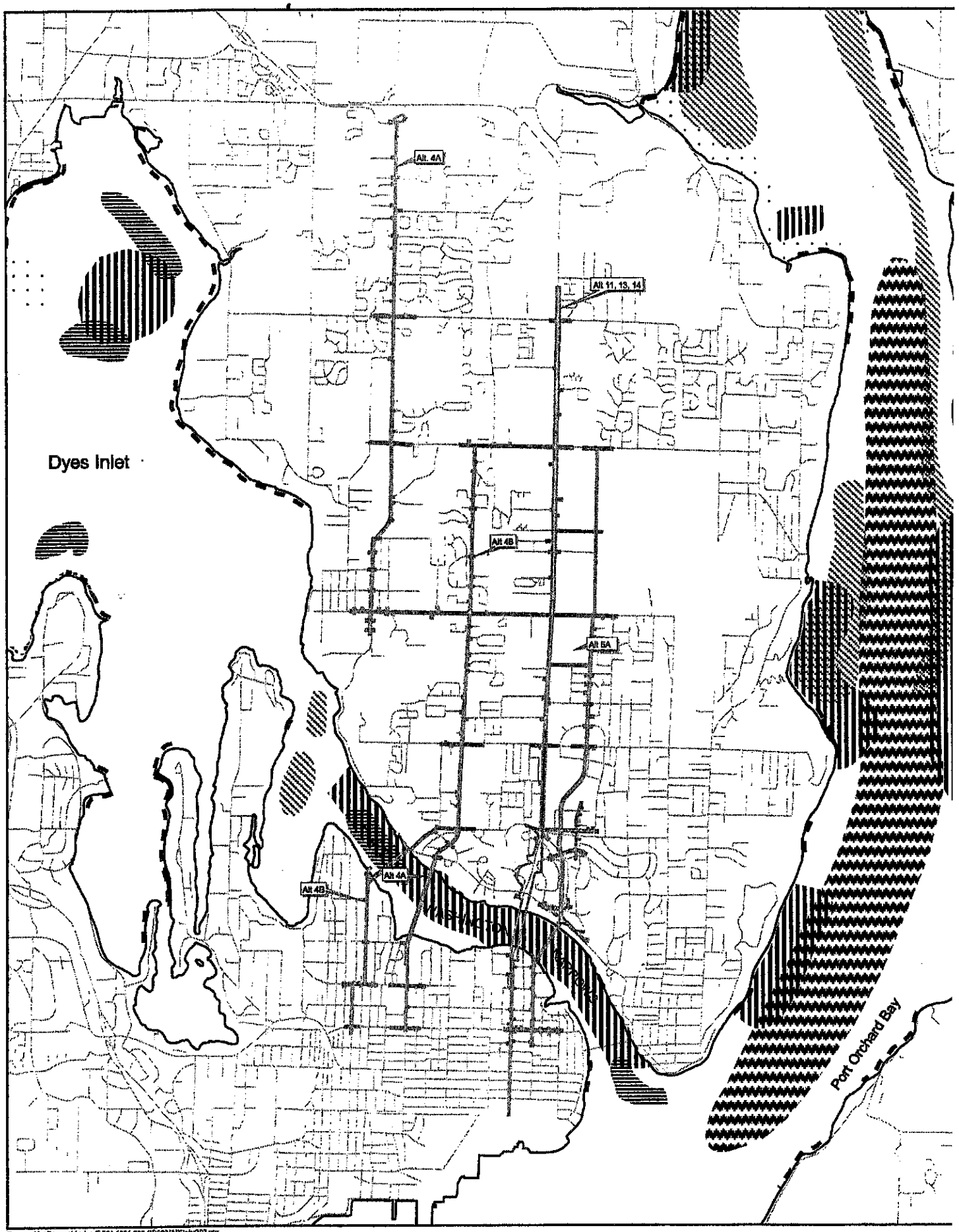
Species	Kitsap County Habitat
Bog clubmoss (sensitive)	Wetlands adjacent to low elevation lakes
Western yellow oxalis (sensitive)	Moist coastal woods, dry open slopes
Alaska alkaligrass (sensitive)	Salt marshes, mudflats, gravelly areas near beaches, rock outcrops in sea spray
Chain-fern (sensitive)	Stream banks, moist "seep" areas, mostly near salt water
Pink sandverbena (sensitive)	Sandy beaches along saltwater
Fringed pinesap (sensitive)	Duff and humus of shaded, low elevation coniferous forest
Bristly sedge	Marshes and wet meadows
Gnome plant	Deep humus in coniferous forest
Water lobelia (lobelia dortmania)	Emergent freshwater wetlands
Chick lupine (lupinus micipcarpus)	Dry to moist soils
White meconella (meconella oregana)	Open ground where wet in spring
Branch montia (montia diffusa)	Moist places, mostly in west Cascades
Great pole monium (pole monium corneum)	Thickets, woodlands and forest openings
Woolgrass (scirpus cyperinus)	Wet, low ground

Source: Kitsap County Comprehensive Plan 1998

The Washington Department of Natural Resources Natural Heritage Program indicates that there are no known threatened or endangered plant species in the project area.

2.9.2.2 Threatened and Endangered Species

There are several species of fish, birds, mammals, and amphibians that may occur in the project area that are listed as threatened or endangered, that are listed as candidate species, that have been petitioned for listing, or are species of concern (Figure 2-10). A more in-depth discussion of threatened and endangered species will be provided in a Biological Assessment (BA), which will be completed as part of project-specific environmental review for the Proposed Action.



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N
1000 0 1000 Feet

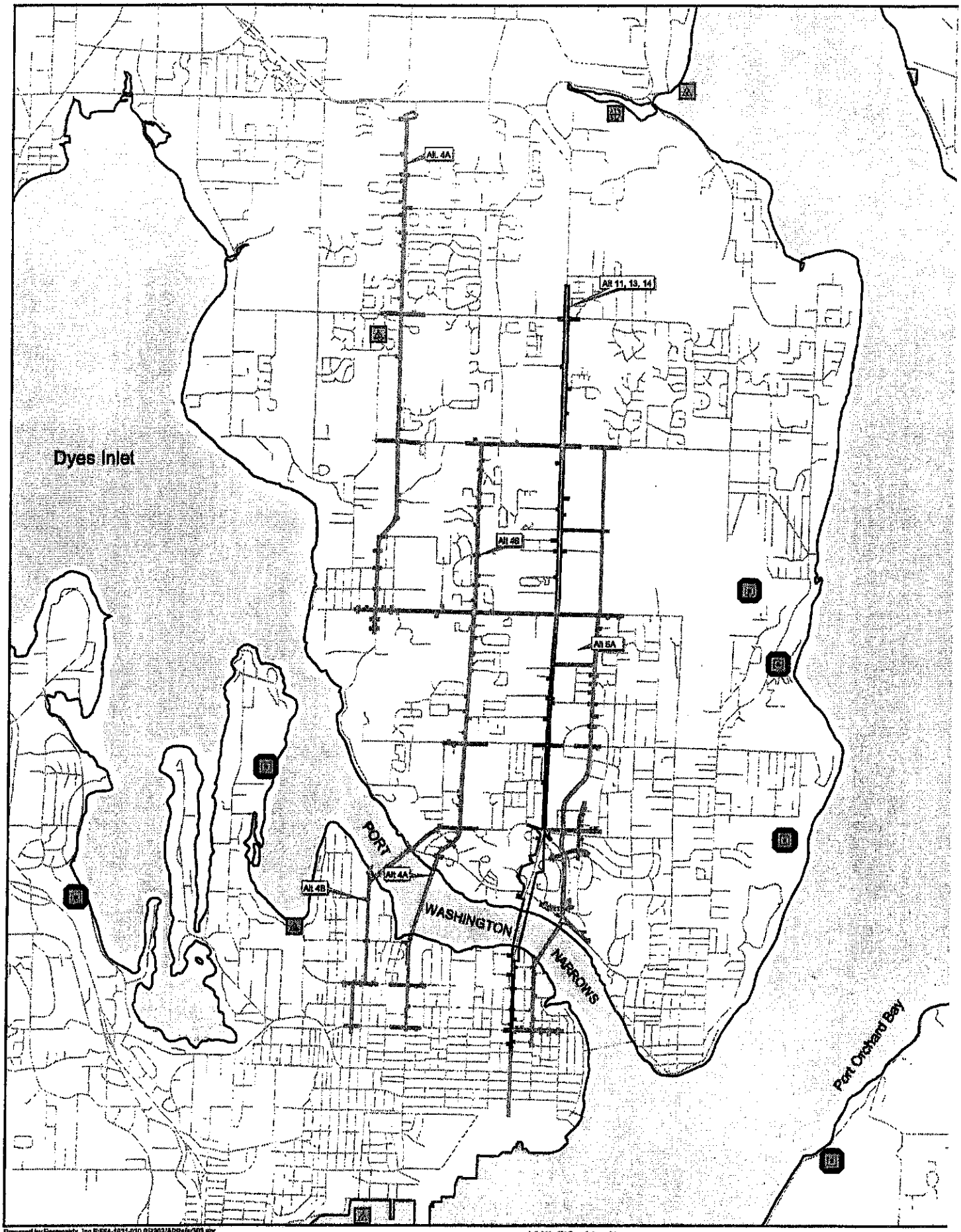
Shoreline
Streets
SR303 Alternatives

Smelt Spawning Beaches
Sandlance Spawning Beaches
Rockcole Spawning Beaches

Subtidal Clam
Intertidal Hardshell Clam
Oyster
Geoduck

Herring Spawing Ground
Pre-spawn Holding Areas for Herrings
Dungeness Crab

Figure 2-9
Priority Marine Habitat and Specie



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N

1000 0 1000 Feet

Shoreline
Streets

SR303 Alternatives
Open Water

Wildlife Heritage

Status
- State Endangered
- State Threatened
- State Candidate
- Stete Monitor

Animal Class
- Game Animal
- Special Animal
- Federal Theatened

Figure 2-10
Threatened and
Endangered Spe

Fish

USFWS (2001) indicated that bull trout, a threatened species, and coho salmon, a candidate species for listing, might occur in the project vicinity. NMFS identified Chinook salmon, a threatened species, as potentially occurring in the project vicinity. These species exhibit complex life history patterns that include both freshwater and saltwater environments. The primary life history components that could be affected by the proposed project would be the saltwater components.

In addition to the species mentioned above, 18 marine fish species have been petitioned for listing under the Endangered Species Act (ESA). Of these 18 species, Pacific whiting, black rockfish, boccaccio, copper rockfish, quillback rockfish, walleye pollock, Pacific herring, and Pacific cod have been reported in the project area (USFWS 2001).

Birds

Two listed bird species may potentially occur in the study area: bald eagles and marbled murrelets. Bald eagles are often found along shoreline areas where they forage for food, perch in snags, and nest. Based on documentation provided by the USFWS (2001), segments of the shoreline area of Dyes Inlet and Port Washington Narrows, and adjacent upland areas, likely provide habitat for bald eagles. Priority Habitats and Species (PHS) data from WDFW do not indicate nesting bald eagles within 1 mile of the proposed alignment, however, shoreline areas of the alignment may be used by wintering bald eagles. Winter use is not expected to be high compared to other areas in the Puget Sound because of high human presence and the general lack of winter fish runs. Nevertheless, some eagle wintering activity is expected at the south end of Port Washington Narrows where winter concentrations of waterfowl are known to occur (see Figure 2-10). The eagle wintering period is from October 31 through March 31.

Marbled murrelets typically nest high in the canopy of old growth forests where there are at least some trees greater than 32 inches diameter at breast height (dbh) and/or 200 years of age, or stands of large trees infected with mistletoe (Ralph and Miller 1995). Most of the forest stands within the vicinity of the project are second growth that does not provide suitable nesting habitat. Additionally, the abundance of murrelets in marine foraging areas may be related to the availability of nesting habitat in the surrounding area (Ralph and Miller 1995). As such, it is unlikely that marbled murrelets occur near or at the proposed project area. Furthermore, since the early 1990's, WDFW personnel have been conducting seabird surveys in the Puget Sound area and while they found very low concentrations in the Dyes/Sinclair Inlet area during the winter, they never reported murrelets in this area during the nesting season. Considering the distance of the Sinclair/Dyes Inlet area from the Olympic and Cascade nesting stands, this is to be expected.

Marine Mammals

Steller sea lions, humpback whales, and leatherback sea turtles are marine mammal species identified by NMFS as possibly occurring in the project vicinity. It is highly unlikely, however, that these species will be present given their rare occurrence in the inland waters of Washington State. Additionally, Steller sea lions are not expected in the project vicinity due to the lack of navigation buoys that serve as haulout structures.

Amphibians

No endangered or threatened species of amphibians are known or expected to occur within the project corridor, although the northern red-legged frog is a candidate for federal listing (Parametrix 1995).

Species of Concern

USFWS has indicated that the following species of concern may occur in the vicinity of the project: long-eared myotis (bats), long-legged myotis, northern goshawk, olive-sided flycatcher, Pacific lamprey, peregrine falcon, river lamprey, and western toad. PHS data from WDFW, however, does not indicate the presence of these species within the project vicinity.

2.9.3 Environmental Consequences

2.9.3.1 Proposed Action

Fish and Marine Environment

In-water and stream bank construction activities (primarily pile driving) would cause short-term impacts to marine fish, invertebrates, and benthic organisms including increased turbidity, re-suspension of sediments, and potential disruption of aquatic habitats and organisms. The currents of Port Washington Narrows are considered to be strong (NOAA 1988). Flushing time for these waterbodies is estimated to be approximately 4 days (Lincoln and Collias 1975). Dyes Inlet and Port Washington Narrows flushes at a rate of approximately 91 times per year. The moderate- to high-energy tidal currents in the Port Washington Narrows area are expected to minimize the effects of increases in turbidity related to nearshore or in-water construction activities, as well as assist the rapid dilution of any inadvertent releases of potential contaminants from substrate disturbances. Construction activities may also temporarily impact invertebrate, benthic organisms, and algae production, but this would be limited primarily to pile driving activities. No dredging activity shore armoring, or filling of intertidal zones are required, thereby minimizing disturbance of the benthic environment.

Under existing conditions, the total water surface covered or shaded by the Warren Avenue Bridge is approximately 62,000 ft^2. The bridge will be widened by approximately 15 feet on both sides, for a total increase in width of approximately 30 feet. The proposed widening of the bridge has the potential to increase the amount of covered or shaded surface area by about 30,000 ft^2. This could result in a total of approximately 92,000 ft^2 of covered or shaded area by the bridge.

The proposed bridge widening improvements over Port Washington Narrows may have potential impacts to the marine environment. The most notable potential impact of the proposed project could be the amount of surface water covered or shaded by the expanded bridge. Shoreline development and over-water structures can affect intertidal and shallow subtidal organisms by altering: (1) the available light entering the water column and reaching the substrate, (2) the substrate composition, and (3) wave action; thereby affecting the key factors in the primary and secondary biological production rates. This in turn can affect the available aquatic food resources in the area, predator prey interactions, and species behavior characteristics. Such potential impacts, however, would be considered proportionate to the existing conditions present at the bridge today as substantial shadowing effects already occur. These potential impacts will be more defined at the project-specific environmental review stage of the Proposed Action.

Light, photosynthesis, and substrate stability characteristics in the aquatic environment support primary and secondary biological productivity. Primary production in the intertidal and subtidal habitats (diatoms, algae and macrophytes) are stimulated in early spring by the increasing solar irradiance and the occurrence of extreme low tides during the daylight hours (Thom and Albright 1990). Benthic diatoms and seaweeds provide the primary source of organic matter in the nearshore environment to supplement the detritus-based food web that provides abundant prey populations for higher order vertebrate and invertebrate species (Simenstad 1994). In addition to providing a food source for these secondary producers, macrophytes increase the substrate surface area to support greater populations of prey

organisms. No eelgrass beds have been identified at or near the Warren Avenue Bridge, so there will be no direct impact to this priority habitat.

Freshwater Environment

Of the streams mentioned above, only Steele Creek may potentially be impacted by the proposed project. There will be no direct impacts as improvements to SR 303 are at least ½ mile away from Steele Creek and any of its tributaries. There will be no modifications to any stream crossings or any impacts to stream buffers as a result of the proposed project. Potential impacts would be limited to water quality impacts; examples include inadequate treatment of stormwater from increased impervious surface or a release of sediment should best management practices fail. However, due to the distance from the proposed project limits, these impacts to Steele Creek are highly unlikely.

Wildlife and Vegetation

Expansion of the SR 303 corridor at the existing grade level would result in low impacts to wildlife habitat as the proposed alignment passes through developed areas where land use is primarily residential and commercial. In general, small, less mobile mammals and reptiles would likely be impacted during project construction, while larger and more mobile animals, such as deer and birds would be displaced to adjacent areas. Likewise, marine mammal species such as otters and seals are highly mobile and would likely avoid the vicinity of the Warren Avenue Bridge during construction activities. The closest known haulout is in Dyes Inlet, more than 4 statue miles to the northwest, where harbor seals rest on floats or rafts.

Noise disturbance, particularly during construction, may slightly affect the foraging and resting behaviors of shorebirds, waterfowl, eagles, marbled murrelets, and marine mammals that may be present in the project vicinity. The proposed project is located in an area of high human presence, where wildlife species diversity is likely to be low. It is expected that wildlife species, such as waterfowl, will avoid the area during construction, and are just as likely to move to other locations throughout the Port Washington Narrows, Dyes Inlet, and Port Orchard Bay areas.

Land clearing activities for Proposed Action would remove approximately 1,250,140 square feet (28.70 acres) of mostly roadside disturbed areas comprised of mixed grass and invasive species, scrub/shrub vegetation, and small 3rd growth forested communities. No priority habitats or species as mapped by WDFW would be impacted by the proposed project. Impacts to wetlands and wetland buffers are described in Section 2.8.

Potential environmental impacts to marine vegetation include increased turbidity from substrate disturbance and potential disturbance or destruction of aquatic vegetation during pile placement. The moderate to high-energy tidal currents in the area are expected to minimize the effects of any potential temporary increases in turbidity related to nearshore or in-water construction. No dredging activities are required and pile placement would only result in minimal disturbance to algae or macrophytes. There would be no impacts to eelgrass.

Threatened and Endangered Species

The Potential effects of the proposed project on these species will be discussed in greater detail in a BA, which would be completed at a later date as part of project-specific environmental review for the Proposed Action. The ESA requires federal agencies to ensure that their actions do not jeopardize the continued existence of an endangered or threatened species or their critical habitats. Analyses of potential impacts are based on a review of plans for the proposed action, an on-site evaluation of existing habitat conditions, the current and historical distributional data available for each species, and personal

communications with local biologists. Based on such a review, a determination of impacts would be made for both the construction and long-term use of the project.

2.9.3.2 No Action

Under the No Action Alternative, the proposed highway improvement project would not be constructed. Under such a scenario, the existing conditions along the route would remain. It is probable that with corresponding increases in traffic and congestion along this route, noise and vehicular emissions will increase regardless of whether the highway is improved, resulting in the potential for indirect impacts to fish and wildlife habitat areas.

2.9.4 Mitigation Measures

Compliance of the Proposed Action for impacts and mitigation will be further evaluated through the BA process completed during project-specific environmental review. In general, the following mitigation conditions and regulations would be utilized to address potential impacts to fish, wildlife, and threatened and endangered species.

Conditions

Prevention and mitigation for fish and wildlife habitat could be provided by compliance with the Kitsap County and the City of Bremerton CAO and Stormwater Ordinance, as amended, that are in effect at the time of a specific development proposal. Compliance with the City of Bremerton and Kitsap County ESA 4(d) plan, as adopted, could also be used to prevent and/or mitigate potential surface water impacts.

Mitigation for potential impacts to marine organisms and fish include restricting in-water construction so it does not take place during juvenile salmon (including bull trout) out-migration, feeding, and rearing windows designated by the state (February 15 – July 14). In-water construction would also not be allowed during the surf smelt spawning period (September 1 – March 31), unless specific surveys were conducted to verify that surf smelt eggs were not present at or near the construction site. Therefore, the construction window for all in-water activities (including pile driving) should occur between July 15 and August 31.

Restricting activities during the wintering period, October 31 through March 31, could further mitigate potential impacts to wintering bald eagles.

Protection and mitigation measures for fish and wildlife habitat could be provided through strict adherence to the applicable local, state, and federal laws and regulations controlling development activities near priority habitat and species. These regulations, in part, would generally include the following:

Critical Areas Regulations

Applicable shoreline and riparian buffers required under the Kitsap County Critical Areas Ordinances (CAO) (Kitsap County Code, Title 19) and the City of Bremerton's Critical Lands Ordinance (City Bremerton Municipal Code 21.22). These regulations are intended to protect surface waters including lakes, wetlands, and stream resources. In addition, the Washington State Department of Ecology has regulations for water quality in marine waters.

Stormwater Management and Regulations

Adequate water quality protection measures would help protect fisheries resources in the Port Washington Narrows and Dye's Inlet. Any treatment of highway runoff would be viewed as an improvement over the historical conditions. Culvert improvements to enhance upstream fish passage could provide mitigation in certain instances.

In addition to stream buffer regulations, stormwater mitigation is required for all new development. Stormwater mitigation for the Proposed Action would be based on a combination of plans, including the Highway Runoff Manual, and the City of Bremerton and Kitsap County stormwater regulations, which are currently based on the 1992 Ecology Stormwater Management Manual for Puget Sound Lowland Streams (Ecology Manual). However, Ecology has issued a new stormwater management manual for Western Washington. The 2001 Ecology Manual has updated technical standards that are thought to be more protective of streams and wetlands than previous standards, and generally require increased water quality and detention facility sizes. State and local jurisdictions will be required to revise their current manual to meet these new standards.

ESA 4(d) Rule

NMFS developed the 4(d) rule to protect listed salmon. This rule makes it a federal violation to harm or kill salmon populations listed as threatened under the ESA without specific written authorization. The 4(d) rule applies to all development activities that may cause streambank erosion, unauthorized diversions of water from streams, and disturbance or removal of gravel from spawning grounds. The 4(d) rule is not limited to projects with federal funding; it applies to all projects. Therefore, in addition to meeting the requirements of the Ecology and the existing City of Bremerton and Kitsap County Stormwater manuals, additional stormwater treatment and detention standards may be necessary to comply with basin plans and/or to ensure compliance with the ESA under the 4(d) rule.

2.10 WATER RESOURCES

2.10.1 Studies and Coordination

Information on water resources contained in this section is based on reports from the Soils Survey of Kitsap County, Washington (USDA); the Dyes Inlet Watershed Master Plan Report (Puget Sound Cooperative River Basin Study Team); FEMA, Flood Insurance Rate Maps for Kitsap County, Washington (FEMA); the Kitsap County Comprehensive Plan (1998); and methods prescribed by Ecology (1992, 2001), and WSDOT (1995).

Evaluation Methods

Direct impacts, water quality impacts, hydrologic impacts, and floodplain impacts from each of the alternatives were evaluated using the following methods:

- Direct impacts were identified at any location where an alternative would cross or lie adjacent to a surface water resource. The potential significance of direct impacts was evaluated based on the existing condition of the resource, the magnitude of the impact, and the effectiveness of mitigation.
- Water quality and hydrologic impacts were assessed qualitatively assuming that alternatives that propose the most pollutant generating impervious surface (PGIS) area in a basin would have the potential for the greatest impacts.

Applicable Regulations

Applicable surface water protection regulations include riparian buffers required under the Kitsap County and the City of Bremerton Critical Areas Ordinances (CAO). These regulations are intended to protect surface waters including lakes, wetlands, and stream resources. In addition, the Washington State Department of Ecology has regulations for water quality in Marine Waters.

NMFS has developed the 4(d) rule to protect listed salmon. This rule makes it a federal violation to harm or kill salmon populations listed as threatened under the ESA without specific written authorization. The 4(d) rule applies to all development activities that may cause streambank erosion, unauthorized diversions of water from streams, and disturbance or removal of gravel from spawning grounds. The 4(d) rule is not limited to projects with federal funding; it applies to all projects. Therefore, in addition to meeting the requirements of the Ecology, and the existing City of Bremerton and Kitsap County Stormwater manuals, additional stormwater treatment and detention standards may be necessary to comply with basin plans and/or to ensure compliance with the ESA under the 4(d) rule.

2.10.2 Affected Environment

The SR 303 Bremerton to Silverdale Study Area is located primarily in the greater Dyes Inlet Watershed. The watershed encompasses approximately 30,300 acres containing 6 considerable streams and numerous unnamed streams. Dyes Inlet and Port Washington Narrows have a surface area of 4,643 acres. The City of Bremerton and unincorporated Silverdale border the south and north sides of the watershed. The major surface water features located in the project study area are summarized in Table 2-17.

Table 2-17. Surface Water Features in SR 303 Study Area

Surface Water Feature	303(d) List	ESA Species Present	Receiving Water
Dyes Inlet	Yes	Yes [1,2]	Yes
Port Washington Narrows	Yes	Yes [1,2]	Yes
Mosher Creek	No	Yes [1,2]	NA
Barker Creek	No	Yes [1,2]	NA
Clear Creek	Yes	Yes [1,2]	NA
Chico Creek	No	Unknown	NA
Steele Creek	No	Yes [2]	NA
Illahee Creek	No	Yes [1,2]	NA

1 Chinook salmon, Threatened species under ESA.

2 Coho salmon, Candidate species under ESA.

Water resources in the study area are made up of marine waters, streams, lakes, wetlands, and ground water. The main water feature is the Dyes Inlet/Port Washington Narrows system. This marine body of water makes up approximately one third of the project area. The surface waters of Dyes Inlet and Port Washington Narrows Inlet are categorized by Ecology as Class A waters (WAC 173-201A). Class A waters are considered excellent and are required to support all uses including water supply (agriculture, domestic, industrial), fish and shellfish, and wildlife and recreation. The surface waters of Dyes Inlet and Port Washington Narrows are also listed on Ecology's 303(d) list of impaired and threatened waterbodies. The specific parameters that threaten these waterbodies include arsenic, antimony, cadmium, fecal coliform, mercury, and silver (Ecology 2001).

There are four main streams in the project area that discharge to Dyes Inlet. Chico Creek is the largest of the streams in the Dyes Inlet drainage area (Williams 1975). Chico Creek has several miles in the lower

reach that runs through a broad valley. The other main streams that empty into Dyes Inlet within the project area are Clear, Barker, and Mosher creeks. Clear Creek flows south through a broad shallow valley and enters Dyes Inlet at its northernmost tip, near Silverdale. Barker Creek flows south from Island Lake and enters Dyes Inlet at its northeastern tip, below Bucklin Hill Road. Mosher Creek flows south and west and enters Dyes Inlet on the eastern side of the inlet near Tracyton. There are also numerous small independent drainages within the project area. Steep slopes, fast flowing water, and deeply incised channels characterize these streams.

There are also two streams that drain northeast from the study area to Port Orchard Bay: Illahee and Steele creeks. Illahee Creek has a moderate gradient, however, it has been impacted by residential development in the headwaters. Illahee Creek flows south and east within the Illahee Forest Preserve near NE McWilliams Road and Perry Avenue NE where it eventually enters Port Orchard Bay. Steele Creek has moderate gradient and excellent gravel throughout much of its length. The South Fork of Steele Creek has also been impacted by development in the headwaters. The north branch and its tributary have excellent cover and provide high quality habitat (Williams 1975). Steele Creek flows south and east toward Port Orchard Bay adjacent to the northern tip of SR 303 near Brownsville.

In addition, there are two lakes in the general study area: Kitsap Lake and Wildcat Lake. Both of the lake systems are located at the west and south sections of the project study area (Figure 2-11). Groundwater and/or aquifer recharge areas have not been assessed at this time, and are not included in this preliminary analysis. These areas would be considered in more detail under the project-specific environmental review of the Proposed Action.

2.10.3 Environmental Consequences

Highways and arterial connections have direct impacts on streams and floodplains by: (1) constructing culverts and bridges, (2) armoring banks for erosion control, (3) relocating stream channels, and (4) filling floodplains. Highways and arterial connections also impact streams by creating a source of pollutants and by increasing the amount of impervious surface and runoff in a basin. According to the conceptual design information, the Proposed Action Alternative would be expected to produce approximately 29 acres of pollutant generating impervious surface (PGIS) stemming from the road widening improvements. The Proposed Action Alternative would have low to moderate-level impacts to water resources due to the potential for erosion and sedimentation impacts. However, if modifications of the existing Warren Avenue Bridge require extensive construction activities, particularly in-water work, the impacts could be proportionately higher.

2.10.4 Mitigation Measures

Stormwater mitigation is required for all new development. Stormwater mitigation for the Proposed Action would be based on a combination of plans, including the Highway Runoff Manual, and the City of Bremerton and Kitsap County stormwater regulations, which are currently based on the 1992 Ecology Stormwater Management Manual for Puget Sound Lowland Streams (Ecology Manual). Ecology has issued a new stormwater management manual for Western Washington. The 2001 Ecology Manual has updated technical standards that may form the basis for the Endangered Species Act (ESA) Section 4(d) rules that provide for threatened and endangered species conservation. The new standards are thought to be more protective of streams and wetlands than previous standards, and generally require increased water quality and detention facility sizes. State and local jurisdictions will be required to revise their current manuals to meet these new standards.

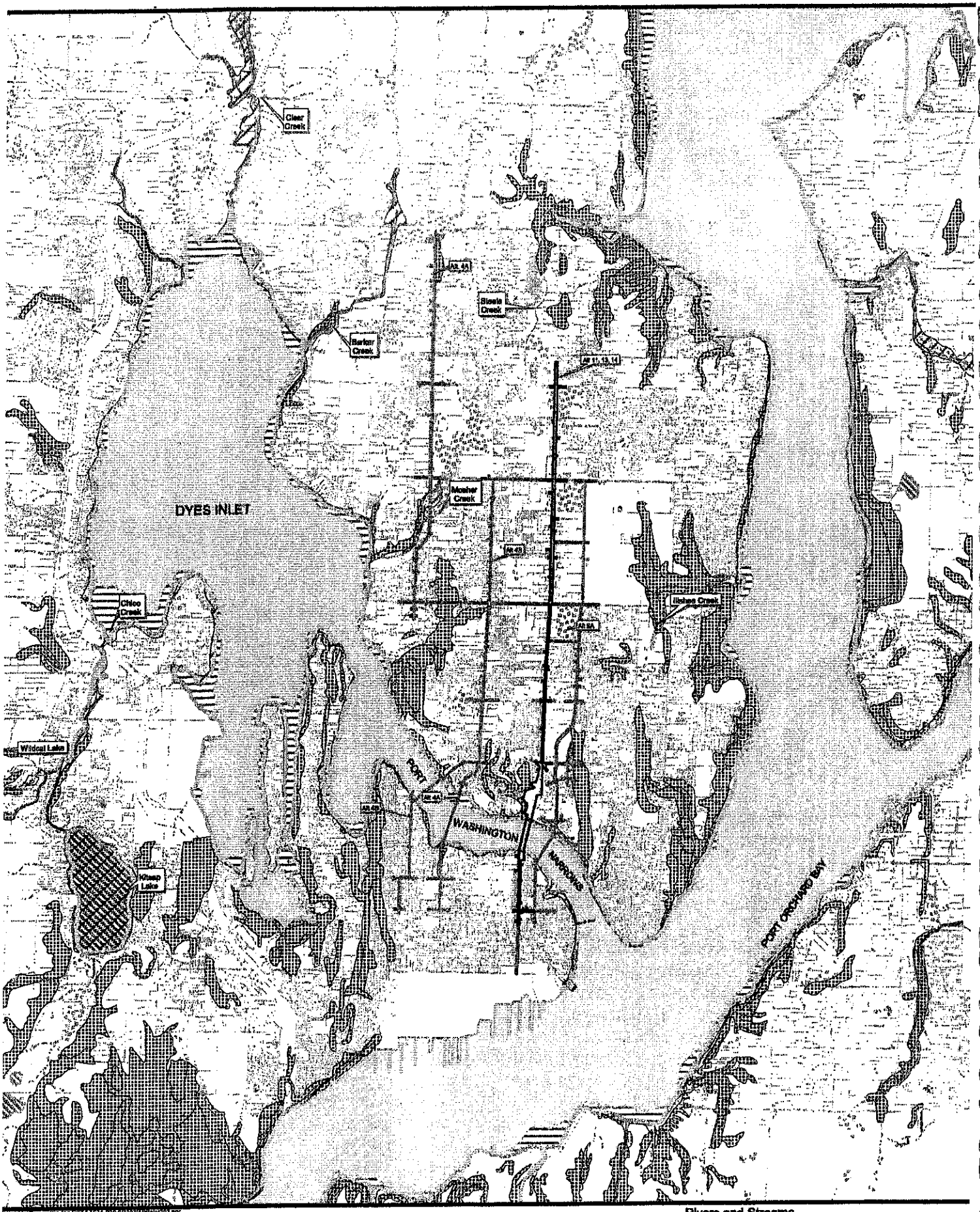

Figure 2-11
Critical Areas M

Stormwater detention ponds, vaults and/or tanks can be used to control stormwater peak flow rates. For closed depressions, retention facilities are used to store runoff while allowing it to infiltrate into native soils. Specific guidance for stormwater analysis and facility design is contained in the City of Bremerton and Kitsap County Stormwater Management Manuals.

Prevention and mitigation for both stormwater and surface water buffer impacts will be provided by compliance with the Kitsap County and the City of Bremerton CAO and Stormwater Ordinance, as amended, that are in effect at the time of a specific development proposal. Compliance with the City of Bremerton and Kitsap County ESA 4(d) plan, as adopted, will also be used to prevent and/or mitigate potential surface water impacts.

2.11 AIR QUALITY

2.11.1 Studies and Coordination

Existing air quality data for the Bremerton greater Kitsap County vicinity were reviewed through information provided by PSCAA, PSRC, and Washington State Department of Ecology. Data from PSRC was reviewed to evaluate project conformity for the design year 2030.

2.11.2 Affected Environment

Air pollution consists of a complex mixture of compounds that are often difficult to quantify. National and state standards have been established for six common pollutants that affect Washington State. These pollutants are characterized as carbon monoxide, particulate matter, ozone, sulfur dioxide, lead, and nitrogen dioxide. The U.S. Environmental Protection Agency designates areas where violations of these standards occur as "nonattainment" areas. Kitsap County is currently outside of such designated areas in the Puget Sound region and is categorized as an "attainment" area (Kitsap County Comprehensive Plan 1998).

Three agencies have jurisdiction over the ambient air quality in the project area: the U.S. EPA, Ecology, and PSCAA. As part of the Clean Air Act (CAA), the U.S. EPA established ambient air quality standards for six criteria pollutants. Two classes of ambient air quality standards were established; primary standards to protect the public health and secondary standards to protect the public welfare and the environment. In terms of overseeing the regulatory environment, the Puget Sound Clear Air Agency enforces federal, state, and local air quality regulations and oversees the monitoring and regulation of air pollution emissions from stationary (point) sources such as business and industry; area wide sources such as wood stoves, fireplaces and outdoor fires; and trains and ships. The Department of Ecology retains primary responsibility for regulating on-road mobile sources such as automobiles and trucks.

Local regulations in Puget Sound address a mixture of pollution generating sources including new construction, outdoor fire regulations, emission standards for opacity, sulfur dioxide, odors and fugitive dust, woodstove regulations, and spray coating operations. Regulations also relate to ozone generating activities and uses such as gasoline stations, petroleum refineries, gasoline terminals, bulk plants, fiberglass/gelcoat, graphic arts, and surface coaters. Additionally, toxic contaminants from dry cleaners, asbestos renovation/demolition and other new or existing sources that exceed the allowable source impact levels for a toxic air contaminant are also regulated. Overall, air pollutants in Kitsap County generally are derived from one of three sources: industry, wood smoke or outdoor burning, and traffic. For purposes of this analysis, traffic will be the primary focus of discussion.

At present, Kitsap County attainment status excludes it from state carbon monoxide and ozone monitoring programs as well as from state vehicle inspection and maintenance programs. In general, to demonstrate

compliance and maintain the air quality conformance, transportation plans, programs and projects, state or federally-funded must not:

- Cause or contribute to any new violation of federal air quality standards,
- Increase the frequency or severity of any existing violation of these standards,
- Delay the timely attainment of the standards.

2.11.3 Environmental Consequences

Minor, short-term air quality impacts would result from demolition, excavation, and construction associated with the Proposed Action Alternative. Exhaust emissions from on-site mobile and stationary equipment, however, would be localized and temporary in nature. Section 176(C) of the federal Clean Air Act (CAA) prohibits any federal agency or any project receiving federal funding from engaging in, supporting, providing financial assistance for licensing, permitting, or approving any activity that does not conform to an applicable State Implementation Plan or Federal Implementation Plan. According to the guidance material on compliance with the Clean Air Act General Conformity Rule, the Proposed Action alternative is in attainment of the NAAQS, therefore it would conform to Section 176(C) of the CAA. The Proposed Action alternative has further been modeled on a programmatic level for conformance with the State Implementation Plan and Federal Implementation Plan through PSRC's Vision 2020 and Destination 2030 Studies, confirming it complies with the NAAQS. Detailed air quality modeling would be conducted subject to the consideration of the Proposed Action during project-specific environmental review.

For the No Action Alternative, increasing congestion is likely, causing potential adverse impacts to air quality from traffic delays and increases in queuing.

2.11.4 Mitigation Measures

Based on the preliminary analysis the proposed project complies with the NAAQS on a programmatic level, therefore, no mitigation is planned in conjunction with this alternative. Air quality impacts from construction, as well as potential mitigation measures are addressed in Chapter 3. Detailed mitigation would be evaluated subject to consideration of the Proposed Action during project-specific environmental review.

2.12 NOISE

2.12.1 Studies and Coordination

A Federal Transit Administration (FTA) traffic noise prediction model was used to estimate existing sound levels resulting from traffic along SR 303 and to predict changes in traffic noise with and without the project in the year 2030 (FTA and HMMH 1995). The modeling spreadsheet calculates sound levels from traffic at specific "receptor" locations. It is important to emphasize that this analysis does not include actual sound measurements and the model is simplistic in terms of inputs, for example it does not include consideration of atmospheric conditions, terrain, or other physical characteristics of the area. Project-specific noise modeling for the Proposed Action would be conducted as part of the more detailed environmental review process.

The noise analysis evaluated six intersections and included identifying the sensitive noise receptors located within approximately 500 feet of the centerline of SR 303 in those areas. Sensitive noise

receptors typically include residences, hospitals, libraries, schools, parks and other recreational areas, and motels/hotels. Most of the sensitive receptors in the vicinity of the modeled intersections were either single- or multi-family residences. Traffic information used to complete the noise analysis included traffic volumes on SR 303, traffic speeds, and vehicle type. The modeling assumed a modal split of 80 percent automobiles and 20 percent heavy vehicles, such as trucks and buses.

2.12.1.1 Noise Descriptors and Criteria

The human ear responds to a wide range of sound intensities. The decibel scale (dB) used to describe sound is a logarithmic rating system, which accounts for the large differences in audible sound intensities. The logarithmic scale means that for a 10-dB increase, humans perceive a doubling of loudness. Therefore, a 70-dB sound level will sound about twice as loud as a 60-dB sound level. People generally cannot detect differences of 1 dB; differences of 2 or 3 dB can be detected by people in ideal laboratory conditions, but such a change probably would not be detectable in an average outdoor environment. A 5-decibel change is usually perceived under normal listening conditions.

Federal agencies use a measure known as the equivalent sound level (L_{eq}) to evaluate noise impacts. The equivalent sound level is the level of a constant sound that over a given period of time has the same total energy as the actual fluctuating sound. All sound levels in this section are reported in L_{eq}.

FHWA has developed guidelines for determining the impact from motor vehicle noise for several types of land uses (Table 2-18). FHWA defines a traffic noise impact to have occurred when a predicted traffic noise level (a 1-hour Leq) approaches or exceeds the noise abatement criteria in Table 2-18, or when the predicted traffic noise level substantially exceeds the existing noise level. FHWA leaves the definition of approaching and substantially exceeding to the states, in this case WSDOT. WSDOT defines "approaching" as sound levels within 1 dBA of the criterion level and "substantially exceeding" as an increase of 10 dBA over existing noise levels if the calculated future sound level is at least 50 dBA. Category B most closely resembles the sensitive noise receptors in the project area, therefore, traffic noise levels that exceed 66 dBA at exterior locations or where noise levels increase by more than 10 dBA, if the overall level is 50 dBA or more, would constitute an impact.

Table 2-18. FHWA Highway Noise Abatement Criteria.

Activity Category	Hourly L_{eq} (dBA)	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels/hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties or activities not listed in Categories A or B above.
D	----	Undeveloped lands.
E	52 (interior)	Residences, motels/hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: USDOT 1982.

2.12.2 Affected Environment

Land uses along the alignment include many receptors such as single- and multi-family residences that are sensitive to noise. In the case of residences, they are particularly sensitive to noise in the evening, night, and early morning hours. Generally, existing noise along the project corridor comes from a variety

of sources such as people's voices, dogs barking, aircraft flying overhead, emergency sirens, and other mechanical equipment, however, a major noise source is traffic from SR 303.

The FTA model was used to predict existing traffic noise levels at six locations and the results are shown in Table 2-19, below. Existing traffic noise levels ranged from 65 dBA at the NE Riddell Road/SR 303 intersection to 75 dBA at the 11th Street/SR303 intersection. Generally, all of the intersections except one (NE Riddell Road/SR 303) are exceeding FHWA's noise criteria. Thus, sensitive receptors near these intersections are already being impacted by traffic noise.

Table 2-19. Estimated Existing (Year 2000) and Year 2030 Traffic Noise Levels.

Traffic Noise Source	Existing Noise Level (dBA)	Proposed Action (dBA)	No Action (dBA)
SR303 at 6th Street	72	70	72
SR303 at 11th Street	75	74	78
SR303 at Warren Ave Bridge	66	70	68
SR303 at Sheridan Rd	69	74	71
SR303 at Riddell Rd	65	68	68
SR303 at Fairgrounds Rd	68	71	70

Source: Parametrix 2001 and FTA 1997

2.12.3 Environmental Consequences

Based on the modeling shown in Table 2-19 above, the Proposed Action would result in both increases and decreases in the existing noise levels depending on location in 2030. However, all of the locations would exceed FHWA's noise criteria. Some of the intersections would experience decreases in noise over time (SR 303 at 6th Street and 11th Street). This is due to the potential acquisition of properties in these areas, which would effectively remove the closest receptors (i.e., residences) to the road. This would increase the distance from the road to the next nearest receptor and reduce the level of noise from the roadway (noise levels diminish with increasing distance from a noise source).

For those intersections with a slight increase in noise (SR 303 at NE Riddell Road and NE Fairgrounds Road), the increase would not be large enough (2 or 3 decibels) to make a noticeable difference to the existing sound level. However, at the SR 303/Sheridan Road and SR 303/Warren Avenue Bridge intersections, it is predicted that traffic noise levels would increase by 4-5 dBA, which would result in noticeably higher noise levels.

Noise would also be generated during construction of the proposed road widening improvements. Noise impacts from construction, as well as potential mitigation measures are addressed in Chapter 3.

Under the No Action Alternative, there would generally be a slight increase in traffic noise at all the modeled intersections along the SR 303 corridor (except the SR 303/6th Street intersection) due to the increased traffic volumes (see Figure 2-2). However, the increase in noise is small, because as congestion worsens over time, noise levels stop increasing (and in some cases may actually decrease) due to reduced travel speeds (slower moving traffic generates less noise). Similar to the Proposed Action, FHWA's noise criteria would be exceeded at all 6 intersections under this alternative. There would be no construction-related noise produced under this alternative.

2.12.4 Mitigation Measures

Mitigation measures may involve constructing some type of noise wall or berm. However, it should be noted that this measure is only effective where there is limited access, as breaks in the wall or berm effectively eliminate or severely reduce the amount of noise suppression. Also, this measure is only appropriate where it is cost effective. Other project elements may also help to reduce traffic volumes and thus noise levels in the corridor. These include construction of HOV lanes, bicycle and pedestrian facilities, and other transit-related measures (such as provision of transit only ramps) that result in a reduction in single-occupant vehicles on the roadway. The project-specific review of the Proposed Action will determine the mitigation measures to be implemented.

2.13 HAZARDOUS WASTE

2.13.1 Studies and Coordination

The objective of the hazardous waste assessment was to identify properties with known or potential chemical contamination that may represent financial or regulatory liabilities to prospective purchasers or to contractors involved in the construction of the corridor alternative. This analysis presents a screening level review of properties and will be used as the basis for further assessments as described in the WSDOT Environmental Procedures Manual M31-11.

Information regarding parcels was obtained from review of environmental databases maintained by:

- **The Environmental Protection Agency:** National Priorities List (NPL), Facility Identification System (FINDS), Toxics Release Inventory (TRIS), Corrective Action Sites (CORRACTS), and the CERCLIS.
- **The Washington State Department of Ecology:** Confirmed and Suspected Contaminated Sites List (CSCS), Underground Storage Tank (UST) Inventory and Leaking Underground Storage Tank (LUST) Inventory.
- **The Bremerton-Kitsap County Health District:** Inventory of Toxics Sites and Abandoned Landfills.

These regulatory databases represent the most comprehensive list of properties and businesses regulated under federal, state, or local hazardous waste rules. This includes sites that are or have been used for the handling, storage or processing of hazardous materials, and sites that have been or are suspected of being impacted by the release of chemicals to the ground, soil, surface water, or groundwater. It is expected that these sites will require more intensive environmental review once the preferred alternative is selected.

The locations provided in the databases were plotted against each alternative using GIS. A field reconnaissance was then performed to verify locations and visually assess conditions that represent potential impacts to right-of-way (ROW) acquisition or corridor construction.

2.13.2 Affected Environment

The assessment outlined in Table 2-20 below identifies properties that are within or adjacent to the alternative alignments and may have conditions that pose a liability to prospective purchasers of the properties or have a direct impact on worker safety and cost of construction.

Table 2-20. Inventory of Sites in Project Vicinity (Proposed Action).

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
PSE Service Center	839 11th Street	Electrical Substation.	Past storage and handling resulting in chemical release to ground.	No confirmed release. No action pending.
AA Cleaning and Environmental	801 11th Street	Hazardous materials storage and handling.	Chemical releases to ground.	No confirmed release. No action pending.
L R Automotive	1112 Pearl Street	Hazardous materials storage and handling.	Chemical releases to ground.	No confirmed release. No action pending.
JC Transmission Inc	1215 Ivy Road	Leaking underground storage tank.	Release of fuel to ground.	Cleanup complete in 1995.
Bremerton Public Works	1548 Warren Avenue	Underground storage tank on property.	Fuel releases to ground.	No confirmed release. No action pending.
Olympic College Auto Tech Center	1600 Warren Avenue	Automotive repair facility.	Chemical releases to ground.	No confirmed release. No action pending.
Bremerton Skateland Inc	1740 NE Fuson Road	Hazardous materials handling.	No impacts anticipated. Small quantity handler. No on-site storage.	No confirmed release. No action pending.
Burns Family Trust	1132 Wheaton Way	Leaking underground storage tank.	Confirmed release of fuel to soil.	Cleanup started in 1995. No current status available.
Cooper Fuels	3236 Wheaton Way	Former gas station, USTs apparently still in place.	Release of fuel to ground.	No confirmed release. No action pending.
Former Ernst	3449 Wheaton Way	Former hazardous materials storage.	Chemical releases to ground.	No longer active. No action pending. No confirmed release.
7-11 Citgo	3500 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Precision Tune	3740 Wheaton Way	Former gas station.	Confirmed release to soil in 1990.	Cleanup started in 1995. No current status available.
Affordable Used Cars	3890 Wheaton Way	Identified during Reconnaissance. Possible former Gas Station.	May have remnant USTs. Fuel contaminated soil or groundwater.	No confirmed release. No action pending.
Former Texaco	3901 Wheaton Way	Former Gas Station.	Confirmed release in 1989.	Cleanup started in 1995. No current status available.

Table 2-20. Inventory of Sites in Project Vicinity (Proposed Action) (Continued)

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
Manskers Tire	3936 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Alternative Autobody Llc	3940 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Firestone Tires	3957 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
CFB Food Mart	4200 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
East Town Cleaners	4207 Wheaton Way, Suite D	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Kmart	4210 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Eagle Hardware & Garden	4220 Wheaton Way NE	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Chevron Jim's Eastside Service Inc	4221 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Confirmed fuel release to soil in 1991.	Reported Cleaned up 1995.
Perfection Cleaners	4244 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
76 Food Mart	4804 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Tune-up Express	4810 Wheaton Way	Automotive repair facility.	Chemical releases to ground.	No confirmed release. No action pending.
Handy Andy Gas Mart	4814 SR 303	Former gas station, USTs apparently removed.	Release of fuel to ground.	No confirmed release. No action pending.
Former Jiffy Lube	5793 SR 303	Former hazardous materials handling. Currently vacant.	Chemical releases to ground.	No confirmed release. No action pending.
Kitsap Applied Technologies	5881 SR303	Former hazardous materials handling. Currently vacant.	Chemical releases to ground.	No confirmed release. No action pending.
Pro Rentals	5970 SR303	Hazardous materials handling. Underground storage tank.	Chemical releases to ground. Fuel releases to ground.	No confirmed release. No action pending.
Eastside Auto Wrecking Inc	6068 SR303	Active auto wrecking yard.	Chemical releases to ground.	No confirmed release. No action pending.
Jiffy Lube	6305 SR303	Fuel – oil storage.	Chemical releases to ground.	No confirmed release. No action pending.
Econolube N Tune	6747 SR303	Fuel – oil storage.	Chemical releases to ground.	No confirmed release. No action pending.
Wal Mart	6797 SR303	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Chevron Station	6835 SR 303	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Arco	7599 SR303	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.

Table 2-20. Inventory of Sites in Project Vicinity (Proposed Action) (Continued)

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
Texaco Station	7600 SR 303	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.

2.13.3 Environmental Consequences

Impacts related to contaminated properties are principally regulatory liabilities associated with owning chemically contaminated property and impacts to construction associated with encountering, remediating, and/or disposing of contaminated environmental media. Should the State purchase contaminated property for ROW to implement SR 303 improvements, regulatory liabilities related to contaminant conditions would be transferred with the deed to the State.

Sites identified during this assessment are categorized as follows:

- **Hazardous Waste Generators:** Facilities that handle or store hazardous materials or generate hazardous waste as part of a process or activity. These sites generally have a low potential for generating environmental conditions that impact purchaser liability or construction. The exceptions are the two dry cleaning facilities. Dry cleaning facilities are typically recognized as sources of solvent contamination to groundwater and soil. However, based on the age of these facilities (apparently less than 15 years), the likelihood of chronic environmental impacts is considered low.
- **UST/LUST Sites:** Facilities that store and dispense petroleum products from underground storage tanks. These sites have a moderate to high potential for environmental conditions that impact purchaser liability or construction. Cleanup actions related to these sites is generally straightforward and of moderate cost ($50,000 to $100,000).
- **Current or Former Industrial Sites**: These facilities have a current or historical industrial use that could result in chemical releases to the environment. These sites have a moderate to high potential for environmental conditions that impact purchaser liability or construction. Cleanup actions at these sites can be complex and require extensive resources to investigate, characterize, and implement.

Other factors influencing the extent of cleanup liability and construction impact are the extent of the acquisition (e.g. whether the parcel is a total or partial take), whether past cleanup actions have been performed, the nature of any chemical releases, and the extent of environmental media impacted by a release.

2.13.4 Mitigation Measures

As the exact construction locations are determined, other steps would be taken to further reduce contamination risk on sites, pending acquisition and leasing. To obtain additional environmental data, a limited program would be developed and implemented on the known contaminated sites that have been identified for potential acquisition and that lie in the specific construction areas. This would be coordinated in conjunction with geotechnical evaluations, if applicable.

Several measures would be undertaken at the planning stage to reduce the impact of encountering unidentified environmental issues during construction. Subsurface testing should be conducted at selected sites within the corridor to determine the magnitude of soil and groundwater contamination.

These data would be used to anticipate and select appropriate remedial responses prior to construction. The Washington State Department of Ecology would be consulted regarding contingency planning to facilitate solutions for environmental issues that may arise during construction.

A health and safety plan would be developed for all construction activities. A qualified health and safety specialist would prepare the plan based on evaluations of the proposed construction activities. The plan would describe safe work practices, personal protective clothing, respiratory protection, emergency response procedures, and safety training for construction workers. The need for construction monitoring for detection of toxic or explosive conditions would also be addressed.

Mitigation measures to minimize risks associated with transportation operations should be implemented through strict adherence to proper hazardous material/waste storage, transportation and disposal procedures, and preparation of detailed spill prevention contingency plans.

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3. CONSTRUCTION ACTIVITY IMPACTS

3.1 TRANSPORTATION

Construction of the Proposed Action Alternative would result in temporary impacts to local and regional automobile and truck traffic. Construction activities include clearing and grading, truck hauling, and staging areas, and road widening activities, and their related effects including;

- Potential lane closures, alignment shifts, areas of construction activity adjacent to travel lanes, or other reductions to street capacity due to construction activities;
- Major construction activities where complete closures and construction of interim detour facilities or identification of available detour routes are desirable to provide the least impact to daily users;
- Temporary access restrictions for businesses, primarily along Wheaton Way;
- Areas that would require considerable construction coordination between WSDOT representatives and local jurisdictions impacted neighborhoods, adjacent businesses, and other affected agencies.

Truck traffic would be greatest at the locations generating the highest amounts of excavated material in retained cut-and-fill construction areas. Considerable construction traffic impacts could occur where construction site access routes require use of streets not typically used by or designated for use by trucks. In such cases, local jurisdiction approval of truck routes would be required.

3.2 SOCIAL

Construction impacts on social elements would consist largely of disruptions to institutions caused by traffic delays and disruptions to infrastructure caused by road alterations. Traffic delays could affect school bus transportation and transport to medical, religious and social institutions.

Road widening improvements could affect water, sewer, storm drain, and electrical lines during construction. Impacts stemming from utility disruptions would be mitigated through scheduling; timing and duration of down times would be kept to a minimum and occur during periods that are least disruptive for residents and businesses.

3.3 AESTHETICS, VISUAL QUALITY, AND NEIGHBORHOOD/LIVABILITY

Aesthetics and Visual Quality

Construction impacts related to visual quality include light and glare from nighttime construction lights and views of construction activities and construction areas. The Proposed Action Alternative could include potential aesthetic and visual impacts, particularly adjacent to 11th Street and SR 303 where existing single-family residential uses are found. Such impacts, however, would be temporary in nature and localized, and could be limited by restricting nighttime construction and detouring traffic around construction areas.

Neighborhood/Livability Quality

Noise, visual, and traffic impacts could temporarily affect neighborhood quality. Noise levels would temporarily increase around construction sites. Physical barriers to isolate construction sites from traffic lanes would likely restrict access across arterials near at-grade sections during construction. Access to construction areas could also require large trucks to use non-arterial streets in certain areas. The presence of construction equipment, materials, signage, and staging areas would temporarily reduce visual quality

in areas near construction sites. Temporary lighting for nighttime construction activities may also impose glare on neighboring properties.

Fire, emergency medical, and police response times could be affected due to blocking problems. Depending on the extent of the area under construction, emergencies may need to be handled by the next closest station or possibly by service providers in other neighboring jurisdictions. The safety of neighborhood residents, visitors, and employees would be a concern near construction sites.

3.4 LAND USE

Construction activities can have temporary nuisance impacts to adjacent land uses. Construction impacts potentially include increased noise and dust, increased traffic, and adverse visual quality. Construction activity would typically last between six and twelve months in front of any one area. Land use could also be impacted by activities that temporarily change the land use, such as construction staging areas. Following construction, these areas would generally revert to their previous land use.

Construction impacts could temporarily affect some businesses that front Wheaton Way. Associated access and congestion impacts could deter customers and/or adversely impact freight movement and result in loss of revenues for some businesses. Most residential uses are far enough removed from the proposed alignment to not be directly affected by construction activities; however, some temporary noise impacts could be noticeable particularly along SR 303 south of Port Washington Narrows at 11th Street. Overall, the low to moderate density uses of the land adjacent to the proposed alignment would help limit the amount of construction impacts.

3.5 CULTURAL AND HISTORICAL RESOURCES

Construction activities relating to the Proposed Action, particularly earth moving, could reveal undocumented archaeological resources.

If archaeological remains of any kind are encountered during construction, work will be halted in the immediate vicinity until the significance of the resource can be evaluated by a qualified archaeologist. The Washington State Office of Archaeology and Historic Preservation and local tribal officials (Suquamish Tribe) will be consulted to determine an appropriate course of action.

3.6 EARTH

Demolition, clearing, grading, and other construction activities would result in exposed soil that would be subject to erosion. Erosion could have the following impacts: loss of topsoil from slopes, sedimentation of storm drain facilities, sedimentation and debris on existing roadways, wind erosion of fine-grained soil during grading operations, and increased turbidity of any seasonal and permanent surface water system.

Construction BMPs would be used to control erosion and minimize impacts to earth. The following lists the BMPs that would be considered to control runoff and limit erosion and sedimentation.

- Removal of vegetation and disturbance of the ground surface would be minimized. Newly cleared areas that would not be quickly developed could be hydroseeded or otherwise provided with a rapidly established, stable vegetative cover.
- Straw mulch, geoweb, rockcheck dams, plastic sheeting, hay bales, and siltation fencing are methods and materials for controlling erosion impacts. These should be used on exposed soils, stockpiled slopes, and next to wetland areas and drainage channels.
- Buffer zones would be provided around sensitive areas such as wetlands and streams.

- Surface water runoff would be concentrated, collected, and transported away from steep or disturbed slopes. Methods for controlling runoff include French drains, lined ditches, and detention/retention ponds.

3.7 WETLANDS/SHORELINES/VEGETATION

Construction activities could impact wetlands under the Proposed Action. Possible impacts to wetlands resulting from construction activities include increased erosion and sediment deposits due to runoff over exposed soils, and increased potential for spills of petroleum products used in construction.

Wetland areas would be protected from erosion and sedimentation by filter fences and/or straw bales. Exposed soils would be covered with mulch or plastic during storm periods to reduce erosion and sediment problems. Construction site fueling and maintenance stations would be located with bermed areas on impervious surfaces, to reduce the possibility of wetlands being contaminated by fuel oil spills.

3.8 FISH, WILDLIFE, AND THREATENED AND ENDANGERED SPECIES

In-water and stream bank construction activities (primarily pile driving) could cause short-term impacts to marine fish, invertebrates, and benthic organisms including increased turbidity, re-suspension of sediments, and potential disruption of aquatic habitats and organisms. The strong currents of Port Washington Narrows and Dyes Inlet produce a flushing time estimated to occur every 4 days (Lincoln and Collias 1975) with an annual rate of approximately 91 times per year. The moderate to high-energy tidal currents in this waterbody are expected to minimize the effects of increases in turbidity related to nearshore or in-water construction activities, as well as assist in the rapid dilution of inadvertent releases.

Expansion of the SR 303 corridor at the existing grade level would likely result in low-level impacts to wildlife habitat as the proposed alignment passes through dense development where land use is primarily residential and commercial. In general, small, less mobile mammals and reptiles would likely be impacted during project construction, while larger and more mobile animals, such as deer and birds would be displaced to adjacent areas. Likewise, marine mammal species such as otters and seals are highly mobile and would likely avoid the vicinity of the Warren Avenue Bridge during construction activities.

3.9 WATER RESOURCES

The dominant change in water quality caused by construction would be increased sediment loads in stormwater runoff. The Proposed Action would involve grading and construction close to waterways, which could create sedimentation impacts. As a result, relatively small sedimentation impacts at each location could produce cumulative impacts to streams, wetlands, Port Washington Narrows, and Dyes Inlet.

Roadway construction would require different types of heavy equipment, therefore the potential exists that minor spills and leaks of fuel and other liquids could occur during construction. The most critical areas of concern would be refueling, storage, and maintenance locations. Fuel spills have the greatest potential for contamination of surface water, because fuel would be on-site in large quantities. Equipment storage and maintenance facilities also have the potential for contamination.

The primary potential impacts that would be mitigated during construction are erosion and sedimentation. As required in the Highway Runoff Manual, Temporary Erosion and Sediment Control (TESC) plans must be prepared for all WSDOT projects that include clearing or earthwork. These plans include designs for procedures and erosion control practices to minimize the amount of sediment leaving the site. Sediment and erosion control BMPs would be specifically designed for the project and would probably

include some combination of sediment retention devices such as hay bales and silt fences, temporary cover practices such as mulching and clear plastic covering, and structural BMPs such as sedimentation ponds.

Refueling and fuel storage areas would be bermed to contain any possible spills. Construction contractors would be required to prepare a Spill Prevention, Control, and Countermeasures Plan, as described by the EPA, to prevent contamination from spills of fuels and other materials on-site.

3.10 AIR QUALITY

During construction, dust from blasting, excavation, and grading would contribute to ambient concentrations of suspended particulate matter. The construction contractor(s) would have to comply with reasonable precautions to avoid dust emissions. This environmental protection may include applying water or dust suppressants during dry weather.

Construction would require the use of heavy trucks and smaller equipment such as generators and compressors. These engines would emit air pollutants that would slightly degrade local air quality, but their emissions and resulting concentrations would be far outweighed by emissions from normal traffic volumes and emissions in and around the project area.

Some phases of construction would cause odors detectable to some people away from the project site. This would be particularly true during paving operations using tar and asphalt. Such odors would be short-term and localized.

Construction equipment, material hauling, and detours for excavation and blasting can affect traffic flow in a project area. If construction delays traffic enough to considerably reduce travel speeds in the area, general traffic-related emissions would increase. Such emissions would be short-term and localized.

The proposed project could require the demolition of some existing buildings, which could contain asbestos. Demolition contractors would be required to comply with EPA and PSCAA regulations concerning the safe removal and disposal of any asbestos-containing materials. This analysis would need to be detailed at the project design stage during subsequent environmental review of the Proposed Action.

Using well-maintained equipment would reduce emissions from construction equipment and trucks. Avoiding prolonged periods of vehicle idling and engine powered equipment would also reduce emissions.

Trucking materials to and from the project area would be scheduled to minimize congestion during peak travel times. This would minimize secondary air quality impacts caused by traffic having to travel at reduced speeds.

Dust produced by construction would be reduced by several techniques. Areas of exposed soils, such as storage yards and construction roadways would be sprayed with water or other dust suppressants if necessary. Roads and other areas that might be exposed for prolonged periods could be paved, planted with vegetation ground cover, or covered with gravel. The amount of soils carried out of the construction area by trucks would be reduced by wheel washing and covering dusty truckloads.

3.11 NOISE

During construction there would be a temporary increase in sound levels along the proposed roadway corridor, due to the use of heavy equipment and the hauling of construction materials. The increase in

noise levels would depend on the type of equipment being used, and the amount of time it would be in use.

Sound levels 50 feet from construction equipment generally exceed the decibel sound levels recommended for residential areas and sensitive receptors. Parts of the proposed project would require construction activities in close proximity (<50 feet) to some existing sensitive receptors, so at times sound levels could very likely exceed the levels shown in Table 2-18. Construction noise could disrupt some activities at View Ridge Elementary School and Bremerton Junior High School.

3.12 HAZARDOUS WASTE

Potential hazardous materials impacts would be largely beneficial because some existing contaminated sites could be cleaned up during project construction. However, adverse impacts can occur if cleanup activities create opportunities for workers or the public to come in contact with contaminated soil and groundwater, and if dewatering during construction causes contamination within groundwater to migrate.

Cleanup efforts during construction include removal of contaminated soil and/or groundwater. Contaminated soil typically would be stockpiled then transported from the construction area for further accumulation, treatment, or disposal. Contaminated groundwater removed as a result of dewatering may be stored in tanks, discharged to the sewer, or transported from the construction site for treatment or disposal.

Sites having documented hazardous material releases to soil or groundwater that are on or close to the route were considered to have the most likely potential construction impact. Sites of highest concern are noted in Section 2.13, which lists those sites on the route where a potential release could occur.

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4. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Action would utilize wetlands and shoreline resources to accommodate widening of the corridor, particularly for widening of the existing Warren Avenue Bridge. Widening of the corridor to accommodate the Proposed Action would result in increases in the potential for pollutant generating impervious surfaces (PGIS). Cumulatively, however, the Proposed Action is not expected to have a considerable impact on irretrievable and irreversible resources. The No Action alternative would not utilize irretrievable resources or commit irreversible resources.

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5. RELATIONSHIP OF SHORT-TERM USES OF ENVIRONMENT AND LONG-TERM PRODUCTIVITY

Completion of the proposed project involves a balance between short-term impacts and losses to environmental resources and long-term gains in transportation, land use, and the economy. Short-term impacts during the construction stage of the project include increased noise and dust from equipment operations, traffic delays, and detours.

Environmental impacts likely consist of disturbance to wetland areas and encroachments into the City of Bremerton and Kitsap County regulated wetland buffer areas. The widened corridor would also have the potential to separate habitat areas in places that could create smaller, disconnected segments that may not be adequate enough in size to support possible populations of some wildlife species. The widened roadway could relocate some residences and a moderate to high number of businesses along the SR 303 (Wheaton Way) Corridor.

Potential gains in transportation include shortened commuting times and improved access between downtown Bremerton, East Bremerton, and Silverdale. The transportation improvements are a necessary part of the Kitsap County and City of Bremerton Comprehensive Plan, and would support planned residential densities and employment generating land uses in the City of Bremerton and unincorporated Kitsap County. Such changes could help promote long-term economic gains.

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6. SECONDARY AND CUMULATIVE IMPACTS

6.1 INTRODUCTION

The Council on Environmental Quality (CEQ) defines secondary impacts as those that are "caused by an action and are later in time or farther removed in distance but still reasonably foreseeable" (40 CFR 1508.8). These impacts usually result from the initial action and include changes in land use, water quality, economic vitality, and population density. The CEQ defines cumulative impacts as those that "result from the incremental consequences of an action when added to other past and reasonably foreseeable future action" (40 CFR 1508.7). Cumulative impacts can eventually lead to a measurable environmental change.

6.2 TRANSPORTATION

The No Action Alternative would provide for only minor improvements in the transportation system. Limited capacity and mounting demand would cause increasingly unacceptable levels of congestion, which would eventually increase traffic volumes on alternative routes.

The Proposed Action Alternative would provide for transportation improvements that would increase capacity and level of service along the project route. Planned improvements such as redesignation and access control would have secondary impacts on connecting roads and streets. The flow of traffic system-wide would be improved, both in terms of safety and efficiency, through the cumulative effect of these changes.

6.3 LAND USE

The proposed project consists of improvements and capacity expansions to existing facilities. The proposed project does not involve the construction of new roads or highways, and would not be expected to open new areas to development. The project would improve access primarily to East Bremerton. In recent history, residential population in the City of Bremerton has not been growing, and it would not be likely that this project would promote a large increase in residential development. It would be more likely that the proposed project would promote the existing land uses, predominantly commercial oriented, along the proposed alignment. This would apply primarily because the proposed project does not provide connections between points in the greater surrounding area, rather it would serve to direct the flow of traffic into the existing commercial areas of Bremerton.

6.4 WETLANDS/SHORELINES/VEGETATION

The Proposed Action Alternative would result in the loss of some wetland and forested areas. In combination with other future development in the project area, this loss could have secondary and cumulative impacts in terms of habitat loss or degradation. However, the habitat areas lost as a result of this project would be mostly adjacent to the existing highway and have limited value as habitat. In addition, wetland mitigation measures may include the development of replacement wetlands within the project area to ensure the "no net loss" of wetlands.

6.5 FISH, WILDLIFE AND THREATENED AND ENDANGERED SPECIES

Discussions with Kitsap County and the City of Bremerton indicated that there are no projects proposed currently or in the foreseeable future that are located in the shoreline areas around Port Washington Narrows or along the SR 303 corridor within the project limits that would result in cumulative impacts. However, it is assumed that residential and commercial development will continue in this area. Growth

will continue to be regulated by the Growth Management Act and Shoreline Management Act, by guidelines established by the Kitsap County Comprehensive Plan, and by local ordinances established by the City of Bremerton.

The proposed bridge widening over Port Washington Narrows could have potential secondary impacts to the marine environment. The most notable potential impact of the proposed project is the amount of surface water covered or shaded by the expanded bridge. Shoreline development and over-water structures may affect intertidal and shallow subtidal organisms by altering: (1) the available light entering the water column and reaching the substrate, (2) the substrate composition, and (3) wave action; thereby affecting the key factors in the primary and secondary biological production rates. This in turn can affect the available aquatic food resources in the area, predator prey interactions, and species behavior characteristics. Such potential impacts, however, would be considered proportionate to the existing conditions present at the bridge today as substantial shadowing effects already occur. These potential impacts will be more defined at the project-specific environmental review stage of the Proposed Action.

6.6 WATER RESOURCES

The Proposed Action would have the potential to increase the percentage of impervious surface area in the Dyes Inlet watershed. The estimated PGIS created by the Proposed Action would result in approximately 29-acres. While this estimated increase could have some effect on water quality, it is not anticipated to add substantially to the existing water quality impacts associated with impervious surfaces. In addition, to mitigate water quality impacts, storm water runoff associated with new surface area would be treated using BMPs.

The No Action Alternative would not likely include retrofitting options to treat stormwater runoff along the existing highway, particularly with regard to the Warren Avenue Bridge. Assuming no retrofitting options to mitigate water quality impacts, this alternative would have the potential to produce negative effects to water quality within the Dyes Inlet watershed.

7. LIST OF PREPARERS

Name/Title/Participation	Education	Professional Discipline	Experience
John Perlic, P.E.	M.S., B.S.	Project Manager	18 years
Carter Danne, P.E.	B.S.	Transportation Engineer	8 years
Pamela Arora	M.S., B.S.	Transportation Planner	2 years
Ron Grina, AICP	B.S.	Natural/Built Environment Lead	8 years
Jill Czamecki	B.S.	Cultural and Historical Resources, Draft 4(f) Evaluation	3 years
Patrick Togher	B.S.	Wetlands Biologist	8 years
Pat McAvoy	B.S.	Design Engineer	15 years
Susan Driver	A.A.	Technical Editor, Planner	8 years
Peter Battuello	B.S.	Hazardous Waste	15 years
Chris Hamilton	B.S.	Hazardous Waste	10 years
Jenna Friebel	M.S., B.S.	Water Resources	7 years
Elaine Maher	B.S.	Fish, Wildlife, and Threatened and Endangered Species	4 years
Rick Rosario	B.S.	GIS Resource Mapping/Analysis	5 years
Angelina Wainhouse	B.S.	GIS Resource Mapping/Analysis	3 years

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8. PUBLIC AND AGENCY OUTREACH PLAN

The following agencies were contacted for information or coordination:

- Kitsap County
- Kitsap Transit
- City of Bremerton
- National Marine Fisheries Service
- Puget Sound Clean Air Agency
- Puget Sound Regional Council
- Suquamish Tribe
- United States Environmental Protection Agency
- United States Fish and Wildlife Service
- Washington State Department of Community and Development, Office of Archaeological and Historical Preservation
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Washington State Department of Natural Resources
- Washington State Natural Heritage Program

Planning for public involvement and agency coordination activities began in June 2000, when the SR 303 Corridor Study was initiated. These efforts included meeting with the Executive Policy Committee (EPC), Technical Advisory Committee (TAC), and Stakeholder Committee (SHC), and through open houses/workshops geared toward residents and business within the study area. The three committees were established by WSDOT. A summary of each of the committees and their roles is provided below:

Executive Policy Committee (EPC)

The EPC included lead players responsible in making sure the project stayed within the goals and objectives of the study area. Members of the committee included officials from the following agencies:

- Management and executives from WSDOT
- Kitsap Transit
- Elected officials from the City of Bremerton and Kitsap County.

The EPC has met quarterly since the project's inception in the year 2000. The last meeting was held on February 28, 2002.

Technical Advisory Committee (TAC)

The TAC was responsible for reviewing technical documentation and determining the technical feasibility of the different build alternatives. These committees were comprised of staff from the following agencies:

- WSDOT
- Kitsap County (Planning and Public Works)
- City of Bremerton (Planning and Public Works)
- Kitsap Transit
- Puget Sound Regional Council (PSRC).

The TAC has met approximately every other month since the project's inception in the year 2000. The last TAC meeting was held in January 2002.

Stakeholder Committee (SHC)

The SHC included all parties directly and indirectly invested in the project area. This group consisted of persons from the following areas:

- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service (USFWS)
- Federal Highway Administration (FHWA)
- U.S. Coast Guard (USCG)
- Washington State Department of Ecology (WDOE)
- Washington Department of Fish and Wildlife (WDFW)
- Washington State Historical Preservation Office (SHPO)
- Port of Bremerton
- Kitsap Transit
- Kitsap County
- City of Bremerton
- Bremerton Chamber of Commerce
- Bremerton School District
- Central Kitsap County School District

- Bremerton Naval Base
- Suquamish Tribal Council
- Audubon Society
- Washington Trucking Association
- Private Citizens (Businesses)

The SHC has met approximately every other month since the project's inception in the year 2000. The last SHC meeting was held in January 2002.

Public Outreach and Agency Coordination

In March of 2000 a study process and organizational structure was established to assure that there would be open and continuous communication and that everyone affected by the SR 303 Bremerton to Silverdale Corridor Study would have a voice in the decision-making. A Technical Advisory Committee was established to provide technical guidance during the alternative development process. The committee is comprised of technical staff from the Washington State Department of Transportation, Puget Sound Regional Council, Kitsap Transit, City of Bremerton, and Kitsap County.

In April and May of 2000, display advertisements were placed in the Bremerton Sun, requesting interested citizens to submit letters of interest if they would like to be on the Stakeholder Committee. The City of Bremerton and Kitsap County also made recommendations for the committee. The role of the Stakeholder Committee was to endorse all major technical assumptions throughout the study and recommend a preliminary preferred alternative to the implementing agencies (Policy Committee) using input from the Public and Technical Committee. The committee was comprised of elected officials from jurisdictions within the corridor, agency representatives from local, regional, state and federal agencies, tribes, and affected and interested citizens of the study area. A total of nine Stakeholder Committee meetings were held within the two-year period.

The Policy Committee reviewed the recommendations brought forward by the Stakeholder Committee and made final decisions on the preliminary preferred alternative. The committee consisted of the Mayor of Bremerton, a Kitsap County Commissioner, the Director of Kitsap Transit, and the WSDOT Olympic Region Administrator.

Public Involvement

The first committee meetings and public forums were used to identify a list of 15 potential transportation alternatives including a No Action Alternative. These meetings were also used to identify goals and concerns, which needed to be considered during the evaluation process. The criteria used in the screening report were a direct reflection of the goals and concerns expressed by the TAC, SHC, and the public. For example, one of the goals was to improve transportation safety. The goal was represented in three of the safety criteria elements: vehicle, pedestrian, and bicycle accident reduction potential. Similarly, one of the concerns related to the potential impacts to wetlands. This was reflected in the natural environment criterion that evaluated the acres of wetland impact and quality of the impacted wetland.

Public Presentations and Open Houses

WSDOT assisted in distributing newsletters and other project information to the public. In addition, they hosted a series of public meetings during the planning process.

The public commented on all aspects of the project through community groups, public meetings, workshops, and individual interaction. There were 5 open houses, workshops, and public meetings in all. Approximately 47,000 newsletters explaining the project and announcing the public meetings and open houses were sent to residents within the corridor area before each open house. In addition display advertising was placed in the Bremerton Sun announcing the meetings.

On September 25th, 2001, WSDOT sponsored the first public meeting. This meeting, held at Bremerton High School, was designed to familiarize the local community with the proposed alternative alignments being evaluated. A second public and agency scoping meeting was held in mid-December at the Kitsap County Fairgrounds, as part of the NEPA environmental documentation process. This meeting allowed citizens to interactively examine the impacts of the alternatives being considered and allowed them to provide feedback about alternatives. The events were announced by distributing flyers to businesses and residents within the study area, and through local media releases.

Newsletters

WSDOT circulated a newsletter to businesses and residents within the study area to announce the beginning of the planning process. It contained a brief description of the project goals and the outcome they wished to achieve from the project. The newsletter provided a description of the proposed alternatives under consideration and allowed the public opportunity to comment. Approximately 47,000 newsletters were sent before each open house to residents within the corridor area announcing the public meetings and open houses, and explaining the project.

Media Relations

The Bremerton Sun, the local daily newspaper, also helped raise awareness of the project by covering stakeholder meetings, public open houses, and workshops; reporting on related events and providing editorials. A total of 17 articles were written about the project.

Agency Specific Coordination

In January 2002, both the TAC and SHC Committees met and made final recommendations on the Preliminary Preferred Alternative (modified Alternative 13) for the SR 303 Corridor Study. Representation on both committees included members from Kitsap County, Kitsap Transit, the City of Bremerton, Washington Department of Fish and Wildlife, the Suquamish Tribe, Bremerton School District, U.S. Environmental Protection Agency, Washington State Department of Ecology, Bremerton Naval Base, Washington State Department of Transportation, and Puget Sound Regional Council.

In February 2002, the EPC comprised of the contributing partners from the City of Bremerton, Kitsap County, Kitsap Transit, and WSDOT approved the Preliminary Preferred Alternative (Alternative 13). Alternative 13 (HOV Lanes) with elements of Alternative 14 (TDM/TSM) was approved as the Preliminary Preferred Build Alternative. The next phase of the planning process is to provide a detailed environmental review under the NEPA guidelines that would compare the future impacts of the preferred alternative to the no-build alternative.

WSDOT will continue to meet with regulatory agencies and interested parties, as needed, to resolve any environmental issues that may occur during the more detailed phase of the planning process.

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9. STUDIES PERFORMED

Several studies were completed during the planning and preliminary design of the project. The following documents are referred to in this Final Corridor Study Plan and have been published as supporting documentation (see Appendix B and C).

Discipline Reports

SR 303 Corridor Study 2nd Level Screening Analysis Transportation Discipline Report, Parametrix, Inc.

The purpose of this quantitative analysis was to evaluate the effectiveness and impacts of the proposed build and no-build alternatives for consistency with the screening criteria developed by the technical, stakeholder, and policy committees. This effort was specific to the transportation discipline and focused on the following criteria:

- Highways and Arterials (LOS Corridor/Signalized Intersections, VMT, VHT, Travel Time, SOV, HOV, Transit Freight Access)
- TDM/TSM (Travel Demand Reduction/Mode Shift, Pedestrian and Bicycle Access and Facilities, Person Throughput)
- Safety (Potential Vehicle Accident Reduction, Potential Pedestrian Accident Reduction, Potential Bicycle Accident Reduction)

SR 303 Corridor Study 2nd Level Screening Analysis Natural/Built Environment Discipline Report, Parametrix, Inc.

The purpose of this quantitative analysis was to evaluate the effectiveness and impacts of the proposed build and no-build alternatives for consistency with the screening criteria developed by the technical, stakeholder, and policy committees. This effort was specific to the environmental discipline and focused on the following criteria:

- Community Impacts (Displacements, Neighborhood/Livability, Cultural Resources, Business Impacts, Aesthetics, and Prime/Unique Farmland)
- Plan Compatibility (Consistency with federal, state, and local plans)
- Natural Environment Impacts (Wetlands/Shorelines, Threatened and Endangered Species, Fish and Wildlife Habitat, Water Resources, Air Quality, Noise, Hazardous Waste)
- Cost (Cost Estimates and Mitigation)

SR 303 Corridor Study 1st Level Screening Analysis, Parametrix, Inc.

The purpose of this qualitative analysis was to evaluate the original fifteen (15) draft list of alternatives for consistency with the screening criteria developed by the technical, stakeholder, and policy committees. This effort was specific to the transportation and natural/built environment discipline and focused on the following criteria:

- Traffic Demand (Reduction on SR 303 north of Fairgrounds and Sheridan, Reduction on Warren Avenue Bridge, and Traffic Volume on New/Improved Facility)

- Community Impacts (Displacement, Neighborhood/Livability, Cultural Resources, Business Impacts, Aesthetics/Visual Quality)

- Natural Environment Impacts (Wetlands/Shorelines, Threatened and Endangered Species, Fish and Wildlife Habitat)

10. REFERENCES

City of Bremerton Department of Community Development. 1985. Bremerton critical lands ordinance. Bremerton, Washington.

City of Bremerton Department of Community Development. 1995. Bremerton zoning atlas and comprehensive plan. Bremerton, Washington.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States Department of the Interior, U.S. Fish and Wildlife Service, Technical Report FWS/OBS-79/31. 103 pp.

Ecology (Washington State Department of Ecology). 2001. Surface water design manual. Olympia, Washington.

FEMA (Federal Emergency Management Agency). 1980. Flood insurance rate maps for Kitsap County and the City of Bremerton. Kitsap County, Washington.

Franklin, J.F. and C.T. Dyrness. 1988. Vegetation of Oregon and Washington. Oregon State University Press. Corvallis, Oregon.

Gower, H.D., J.C. Yount, and R.S. Crosson. 1985. Seismotectonic map of the Puget Sound Region, Washington: Department of the Interior, U.S. Geological Survey.

HMMH (Harris, Miller, Miller, and Hanson, Inc.) for United States Department of Transportation (USDOT) and Federal Transit Administration (FTA). 1995. Traffic noise and vibration impact assessment. Prepared by Harris, Miller, Miller, and Hanson, Inc. for Office of Planning, Federal Transit Administration. Washington D.C.

HMMH (Harris, Miller, Miller, and Hanson, Inc.). 1997. Federal Transit Administration general noise assessment spreadsheet (FTANOISE.WK1). Harris, Miller, Miller, and Hanson, Inc. Burlington, Massachusetts.

Jeffries, S.J., P.J. Gearin, H.R. Huber, D.L. Saulo, and D.A. Pruett. 2000. Atlas of seal and sea lion haul-out sites in Washington. Washington Department of Fish and Wildlife, Wildlife Science Division, 600 Capitol Way North, Olympia, Washington. pp. 150.

Kitsap County Department of Community Development. 1985. Shoreline management master program. Port Orchard, Washington.

Kitsap County Department of Community Development. 1998a. Kitsap County buildable limitations map. Port Orchard, Washington.

Kitsap County Department of Community Development. 1998b. Kitsap County comprehensive plan and map. Port Orchard, Washington.

Lincoln and Collias. 1975. An oceanography study of the Port Orchard system. Final Report M75-012. Submitted to URS Company. Department of Oceanography. University of Washington, Seattle, Washington.

NMFS (National Marine Fisheries Service). 2001. Endangered Species Act status of West Coast Salmon and Steelhead, per information request.

NOAA (National Oceanic & Atmospheric Administration). 1988. United States Coastal Pilot, Pacific Coast: California, Oregon, Washington, and Hawaii. U.S. NOAA, National Ocean Service, Washington, D.C.

NRCS (Natural Resources Conservation Service). 2002. Soils Survey of Kitsap County, Washington. Accessed May 2002. Available at: http://www.statlab.iastate.edu/survey/SQI/sqiinfo.html.

OAHP (Washington State Office of Archaeological and Historical Preservation). 2001. Historic places in Washington State record list, per information request.

OFM (Washington State Office of Financial Management). 2000. Washington State Census 2000. Available at: http://www.ofm.wa.gov/demographics.htm. Site accessed May 2002.

Parametrix, Inc. 1995. Bremerton Ferry Terminal to the vicinity of Gorst, draft environmental impact statement (DEIS). United States Department of Transportation (USDOT), and Washington State Department of Transportation (WSDOT). Bremerton, Washington.

PSCRBT (Puget Sound Cooperative River Basin Study Team). 1989. Dyes Inlet Watershed, Kitsap County, Washington. Prepared for Dyes Inlet Watershed Management Committee. Kitsap County, Washington.

PSRC (Puget Sound Regional Council). 1995. Vision 2020, 1995 Update. Puget Sound Regional Council. Seattle, WA.

PSRC (Puget Sound Regional Council). 2001. Destination 2030 Metropolitan Transportation Plan for the Central Puget Sound Region. Puget Sound Regional Council. Seattle, WA.

Ralph, C.J. and S.L. Miller. 1995 Offshore population estimates of marbled murrelets in California. *In:* Ralph, C.J., Hunt, G.L., Rapheal, M.G., and Piatt, J.F. comps., eds. Ecology and conservation of the marbled murrelet. Gen. Tech. Rep. PSW-GTR-152. California: Pacific Southwest Research Station, Forest Service, USDA. Albany, California.

Simenstad, C.A. 1994. Faunal association and ecological interactions in seagrass communities of the Pacific Northwest coast. *In:* Wyllie-Echeverria, S., A.M. Olson, and M.J. Hershman (eds). Seagrass science and policy in the Pacific Northwest proceedings of a seminar series. (SMA 94-1) EPA 910/R-94-004.

Thom, R.M. and R.G. Albright. 1990. Dynamics of benthic vegetation standing-stock, irradiance, and water properties in central Puget Sound. Fisheries Research Institute, University of Washington, Seattle, Washington. Mar. Biol. 104:129-141.

TRB (Transportation Research Board). 1985. TRB Special Report 209 (Highway Capacity Manual). Transportation Research Board, Washington, D.C.

Ufos-Net. 2002. Transportation Modeling Program. Available at: **www.ufosnet.com**. Site accessed May 2002.

USBOC (United States Bureau of the Census). 1990. Census tract data for population and race.

USBOC (United States Bureau of the Census). 2000. Census tract data for population and race.

USDA (United States Department of Agriculture), Soil Conservation Service. 1980. Soil Survey of Kitsap County Area, Washington. Washington, D.C.

USDOT (United States Department of Transportation), Federal Highway Administration (FHWA). 1981. Visual Impact Assessment for Highway Projects (Visual Resource Management). Washington, D.C.

USDOT (United States Department of Transportation), Federal Transit Administration (FTA), and Harris, Miller, Miller, and Hanson, Inc. (HMMH). 1995. Traffic noise and vibration impact assessment. Prepared by Harris, Miller, Miller, and Hanson, Inc. for Office of Planning, Federal Transit Administration. Washington D.C.

USFWS (Fish and Wildlife Service), DOI (United States Department of the Interior). 1987. National Wetlands Inventory Map(s) (NWI), Bremerton West, East, Poulsbo, and Suquamish Quadrangles. Washington, D.C.

USFWS (Fish and Wildlife Service), DOI (United States Department of the Interior). 2001. Species list for Bremerton West, Bremerton East, Poulsbo, and Suquamish Quadrangles, per information request. Washington, D.C.

Washington State Employment Security Department, Labor Market, and Economic Analysis Branch. 2000. Washington State labor area summaries. Available at: http://www.wa.gov.esd.lmea. Site accessed May 2002.

WDFW (Washington Department of Fish and Wildlife). 1994-2001. Priority habitats and species program (PHS). Bremerton West and East quad, and Poulsbo quad, per information request.

Williams, R.W., R.M. Laramie, and J.J. Ames. 1975. A catalog of Washington streams and salmon utilization. Washington Department of Fisheries. Puget Sound Region, Volume 1, Olympia, Washington.

WSDOT (Washington State Department of Transportation). 1995. Highway Runoff Manual. Olympia, Washington.

WSDOT (Washington State Department of Transportation). 2001. Washington's transportation plan 2003-2022. Olympia, Washington.

WSDOT (Washington State Department of Transportation). 2001a. Environmental procedures manual M31-11. Olympia, Washington.

WSDOT (Washington State Department of Transportation). 2001b. Technical memorandum for built/natural/transportation screening criteria, SR 303 Bremerton to Silverdale Corridor Study. Olympia, Washington.

WSDOT (Washington State Department of Transportation). 2001c. Preliminary engineering drawings, SR 303 Bremerton to Silverdale Corridor Study. Olympia, Washington.

WSDOT (Washington State Department of Transportation). 2001d. Origin destination survey results, SR 303 Bremerton to Silverdale Corridor Study. Olympia, Washington.

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APPENDIX A

Agency Correspondence

Parametrix, Inc. *Consultants in Engineering and Environmental Sciences*

5808 Lake Washington Blvd. N.E. Suite 200 Kirkland, WA 98033-7350
425-822-8880 • Fax: 425-889-8808 • www.parametrix.com

SENT VIA FACSIMILE TRANSMISSION

Ms. Lori Guggenmos
Washington Department of Fish and Wildlife
Priority Habitats and Species
600 Capitol Way N.
Olympia, WA 98501-1091

May 17, 2001
554-1631-027/01/03
(360) 902-2543
FAX (360) 902-2946

PMX REFERENCE: 554-1631-027/01/03 SR 303

Dear Ms. Guggenmos:

The purpose of this letter is to request updated fish and wildlife paper maps for use in a environmental impact statement we are conducting for the Kitsap County Department of Public Works. The map products we would like are: a detailed 8 ½" x 11" fish and wildlife section map; a detailed 1:24,000 scale fish and wildlife map (in USGS 7.5-minute quadrangle overlay); anadromous fish, resident fish, and priority fish species maps. The USGS quadrangles for which this information is requested are Bremerton West, Bremerton East, and Suquamish.

Parametrix has a signed Sensitive Wildlife Information Memorandum of Understanding (MOU) in force with the Washington Department of Fish and Wildlife covering our use of sensitive information on threatened and endangered species (10/27/92).

The invoice can be sent to my attention at the address above. Your prompt attention will be greatly appreciated.

Please contact me at (425) 822-8880 if you have any questions. If you prefer, you may contact me via E-mail at *sharris@parametrix.com*.

Thank you in advance for your assistance.

Sincerely,
PARAMETRIX, INC.

Shanon Harris

Shanon Harris
Project Coordinator

cc: project file

Parametrix, Inc.

Consultants in Engineering and Environmental Sciences

5808 Lake Washington Blvd. N.E. Suite 200 Kirkland, WA 98033-7350
425-822-8880 • Fax: 425-889-8808 • www.parametrix.com

Ken S. Berg, Manager
U.S. Fish and Wildlife Service
510 Desmond Drive SE; Suite 102
Lacey, WA 98503

May 17, 2001
554-1631-027/01

SUBJECT: SPECIES LIST REQUEST FOR T24N, R2E, SECTIONS 6, 7, 18, 30 AND 31, T24N, R1E, SECTIONS 1 THROUGH 5, 9 THROUGH 17, 21 THROUGH 24, 29, 30, 32, AND 33; T25N, R1E, SECTIONS 1, 10, 12 THROUGH 17, 20 THROUGH 29, AND 34 THROUGH 36

Dear Mr. Berg:

Parametrix, Inc. has been contracted by the Kitsap County Department of Public Works to prepare an environmental impact statement associated with the proposed SR 303 transportation improvement project. This project involves a federal permit. As part of the permit process, I would like to request a list of listed and proposed threatened and endangered species, and species of concern that may be present in the vicinity of the project area (referenced above).

Sincerely,

PARAMETRIX, INC.

Shanon Harris

Shanon Harris
Project Coordinator

cc: project file

JK 303
554.1631-0270

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Western Washington Office
510 Desmond Drive SE, Suite 102
Lacey, Washington 98503
Phone: (360) 753-9440 Fax: (360) 534-9331

JUN 15 2001

Dear Species List Requester:

You have requested a list of listed and proposed threatened and endangered species, candidate species and species of concern (Attachment A) that may be present within the area of your proposed project. This response fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (Act). We have also enclosed a copy of the requirements for Federal agency compliance under the Act (Attachment B).

Should the Federal agency determine that a listed species is likely to be affected (adversely or beneficially) by the project, you should request section 7 consultation through this office. If the Federal agency determines that the proposed action is "not likely to adversely affect" a listed species, you should request Service concurrence with that determination through the informal consultation process. Even if there is a "no effect" situation, we would appreciate receiving a copy for our information.

Species of concern are those species whose conservation standing is of concern to the Service, but for which further status information is still needed. Conservation measures for species of concern are voluntary, but recommended. Protection provided to these species now may preclude possible listing in the future.

There may be other federally listed species that may occur in the vicinity of your project which are under the jurisdiction of the National Marine Fisheries Service (NMFS). Please contact NMFS at (360) 753-9530 to request a species list.

In addition, please be advised that federal and state regulations may require permits in areas where wetlands are identified. You should contact the Seattle District of the U.S. Army Corps of Engineers for Federal permit requirements and the Washington State Department of Ecology for State permit requirements.

Your interest in endangered species is appreciated. If you have additional questions regarding your responsibilities under the Act, please contact Yvonne Dettlaff (360) 753-9582.

Sincerely,

Ken S. Berg, Manager
Western Washington Office

Enclosure(s)

cc: FHWA
WDFW R6

ATTACHMENT A **June 14, 2001**

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES, CANDIDATE SPECIES AND SPECIES OF CONCERN WHICH MAY OCCUR WITHIN THE VICINITY OF THE PROPOSED SR303 TRANSPORTATION IMPROVEMENT PROJECT IN KITSAP COUNTY, WASHINGTON

(T24N R02E S06-07,18,30-31; T24N R01E S01-05,09-17,21-24,29-30,32-33; T25N R01E S01,10,12-17,20-29,34-36)

FWS REF: 1-3-01-SP-1637

LISTED

There are eight bald eagle (*Haliaeetus leucocephalus*) nesting territories located in the vicinity of the project at T24N R01E S03,08,12,27,30; T24N R02E S06-07,19. Nesting activities occur from January 1 through August 15.

Wintering bald eagles may occur in the vicinity of the project. Wintering activities occur from October 31 through March 31.

Bull trout (*Salvelinus confluentus*) may occur in ocean waters adjacent to the project.

Foraging marbled murrelets (*Brachyramphus marmoratus*) may occur in the ocean waters adjacent to your project.

Major concerns that should be addressed in your biological assessment of the project impacts to listed species are:

1. Level of use of the project area by listed species.

2. Effect of the project on listed species' primary food stocks, prey species, and foraging areas in all areas influenced by the project.

3. Impacts from project construction (i.e., habitat loss, increased noise levels, increased human activity) which may result in disturbance to listed species and/or their avoidance of the project area.

PROPOSED

None.

CANDIDATE

None.

SPECIES OF CONCERN

The following species of concern may occur in the vicinity of the project:

Long-eared myotis (*Myotis evotis*)
Long-legged myotis (*Myotis volans*)
Northwestern pond turtle (*Clemmys marmorata marmorata*)
Olive-sided flycatcher (*Contopus cooperi*)
Pacific lamprey (*Lampetra tridentata*)
Peregrine falcon (*Falco peregrinus*)
River lamprey (*Lampetra ayresi*)
Western toad (*Bufo boreas*)

ATTACHMENT B

FEDERAL AGENCIES' RESPONSIBILITIES UNDER SECTIONS 7(a) AND 7(c) OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED

SECTION 7(a) - Consultation/Conference

Requires:

1. Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2. Consultation with FWS when a federal action may affect a listed endangered or threatened species to ensure that any action authorized, funded, or carried out by a federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the federal agency after it has determined if its action may affect (adversely or beneficially) a listed species; and

3. Conference with FWS when a federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or an adverse modification of proposed critical habitat.

SECTION 7(c) - Biological Assessment for Construction Projects *

Requires federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify any proposed and/or listed species which is/are likely to be affected by a construction project. The process is initiated by a federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, please verify the accuracy of the list with the Service. No irreversible commitment of resources is to be made during the BA process which would result in violation of the requirements under Section 7(a) of the Act. Planning, design, and administrative actions may be taken; however, no construction may begin.

To complete the BA, your agency or its designee should: (1) conduct an onsite inspection of the area to be affected by the proposal, which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population or potential reintroduction of the species; (2) review literature and scientific data to determine species distribution, habitat needs, and other biological requirements; (3) interview experts including those within the FWS, National Marine Fisheries Service, state conservation department, universities, and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; (5) analyze alternative actions that may provide conservation measures; and (6) prepare a report documenting the results, including a discussion of study methods used, any problems encountered, and other relevant information. Upon completion, the report should be forwarded to our Endangered Species Division, 510 Desmond Drive SE, Suite 102, Lacey, WA 98503-1273.

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* "Construction project" means any major federal action which significantly affects the quality of the human environment (requiring an EIS), designed primarily to result in the building or erection of human-made structures such as dams, buildings, roads, pipelines, channels, and the like. This includes federal action such as permits, grants, licenses, or other forms of federal authorization or approval which may result in construction.

Endangered Species Act Status of West Coast Salmon & Steelhead

Updated: March 29, 2

Species/ESU*	Status (E = Endangered, T = Threatened, mo./yr.)	Next Steps
Pink Salmon	**Listed:** None **Not Warranted:** 1) Even-year ESU (10/95) 2) Odd-year ESU (10/95)	
Coho Salmon	**Listed:** 1) Central CA ESU (T - 10/96) 2) Southern OR/Northern CA Coasts ESU (T - 5/97) 3) OR Coast ESU (T - 8/98) **Candidates:** 1) Puget Sound/Strait of Georgia ESU (7/95) 2) Lower Columbia River/Southwest WA ESU (7/95) **Not Warranted:** 1) Olympic Peninsula ESU (7/95)	> Complete listing assessments for candidate ESUs.
Chinook Salmon	**Listed:** 1) Sacramento River Winter-run ESU (E - 1/94) 2) Snake River Fall-run ESU (T - 4/92) 3) Snake River Spring/Summer-run ESU (T - 4/92) 4) Puget Sound ESU (T - 3/99) 5) Lower Columbia River ESU (T - 3/99) 6) Upper Willamette River ESU (T - 3/99) 7) Upper Columbia River Spring-run ESU (E - 3/99) 8) Central Valley Spring-run ESU (T - 9/99) 9) CA Coastal ESU (T - 9/99) **Candidates:** 1) Central Valley Fall and Late Fall-run ESU (9/99) **Not Warranted:** 1) Upper Klamath-Trinity Rivers ESU (3/98) 2) OR Coast ESU (3/98) 3) WA Coast ESU (3/98) 4) Mid-Columbia River Spring-run ESU (3/98) 5) Upper Columbia River Summer/Fall-run ESU (3/98) 6) Southern OR and Northern CA Coastal ESU (9/99) 7) Deschutes River Summer/Fall-run ESU (9/99)	> Develop 4(d) rules for Central Valley Spring-run & CA Coastal ESUs. > Complete listing assessments for candidate ESU.
Chum Salmon	**Listed:** 1) Hood Canal Summer-run ESU (T - 3/99) 2) Columbia River ESU (T - 3/99) **Not Warranted:** 1) Puget Sound/Strait of Georgia ESU (3/98) 2) Pacific Coast ESU (3/98)	
Sockeye Salmon	**Listed:** 1) Snake River ESU (E - 11/91) 2) Ozette Lake ESU (T - 3/99) **Not Warranted:** 1) Baker River ESU (3/99) 2) Okanogan River ESU (3/98) 3) Lake Wenatchee ESU (3/98) 4) Quinault Lake ESU (3/98) 5) Lake Pleasant ESU (3/98)	
Steelhead	**Listed:** 1) Southern CA ESU (E - 8/97) 2) South-Central CA Coast ESU (T - 8/97) 3) Central CA Coast ESU (T - 8/97) 4) Upper Columbia River ESU (E - 8/97) 5) Snake River Basin ESU (T - 8/97) 6) Lower Columbia River ESU (T - 3/98) 7) CA Central Valley ESU (T - 3/98) 8) Upper Willamette ESU (T - 3/99) 9) Middle Columbia River ESU (T - 3/99) 10) Northern CA ESU (T - 6/00) **Candidates:** 1) OR Coast ESU (3/98) **Not Warranted:** 1) Southwest WA ESU (8/96) 2) Olympic Peninsula ESU (8/96) 3) Puget Sound ESU (8/96) 4) Klamath Mountains Province ESU (4/01)	> Develop 4(d) rule for Northern CA ESU. > Complete listing assessment for candidate ESU.
Coastal Cutthroat Trout	**Proposed Listings:** 1) Southwestern WA/Columbia River ESU (T - 4/99) **Candidates:** 1) Oregon Coast ESU (4/99) **Not Warranted:** 1) Puget Sound ESU (4/99) 2) Olympic Peninsula ESU (4/98) 3) Upper Willamette River ESU (4/99) 4) Southern OR/CA Coasts ESU (4/99)	***NOTE: This species is now under the jurisdiction of the U.S. Fish and Wildlife Service.***

* An Evolutionarily Significant Unit or "ESU" is a distinctive group of Pacific salmon or steelhead.

554-1651-02 +01/03 ON SC

State of Washington

DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: 600 Capitol Way N, Olympia, WA 98501-1091 - (360) 902-2200; TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

Date: MAY 25 2001

Dear Habitats and Species Requester:

Enclosed are the habitats and species products you requested from the Washington Department of Fish and Wildlife (WDFW). This package may also contain documentation to help you understand and use these products.

These products only include information that WDFW maintains in a computer database. They are not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife, nor are they designed to provide you with guidance on interpreting this information and determining how to proceed in consideration of fish and wildlife. These products only document the location of important fish and wildlife resources to the best of our knowledge. It is important to note that habitats or species may occur on the ground in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site-specific surveys are frequently necessary to rule out the presence of priority habitats or species.

Your project may require further field inspection or you may need to contact our field biologists or others in WDFW to assist you in interpreting and applying this information. Generally, for assistance on a specific project, you should contact the WDFW Habitat Program Manager for your county and ask for the area habitat biologist for your project area. Refer to the enclosed directory for those contacts.

Please note that sections potentially impacted by spotted owl management concerns are displayed on the 1:24,000 scale standard map products. If specific details on spotted owl site centers are required they must be requested separately.

These products are designed for users external to the forest practice permit process and as such does not reflect all the information pertinent to forest practice review. The Forest Practice Rules adopted August 22, 1997 by the Forest Practice Board and administered by the Washington Department of Natural Resources require forest practice applications to be screened against marbled murrelet detection areas and detection sections. Marbled murrelet detection locations are included in the standard priority habitats and species products, but the detection areas and detection sections are not included. If your project is affected by Forest Practice Regulations, you should specially request murrelet detection areas.

WDFW updates this information as additional data become available. Because fish and wildlife species are mobile and because habitats and species information changes, project reviews for fish and wildlife should not rest solely on mapped information. Instead, they should also consider new information gathered from current field investigations. Remember, habitats and species information can only show that a species or habitat type is present, they cannot show that a species or habitat type is not present. These products should not be used for future projects. Please obtain updates rather than use outdated information.
Because of the high volume of requests for information that WDFW receives, we need to charge for these products to recover some of our costs. Enclosed is an invoice itemizing the costs for your request and instructions for submitting payment.

554-1651-027/01/03
SR 32

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
REGIONAL HABITAT PROGRAM MANAGER CONTACTS

For assistance with Priority Habitats and Species Information contact a regional habitat program manger and they will direct your questions to a biologist.

County project is in...	Contact...
Asotin, Columbia, Ferry, Garfield Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	Kevin Robinette 8702 North Division Street Spokane, WA 99218-1199 Phone: (509) 456-4082
Adams, Chelan, Douglas, Grant, Okanogan	Tracy Lloyd 1550 Alder Street NW Ephrata, WA 98823-9699 Phone: (509) 754-4624
Benton, Franklin, Kittitas, Yakima	Ted Clausing 1701 24th Avenue Yakima, WA 98902-5720 Phone: (509) 575-2740
Island, King, San Juan, Skagit, Snohomish, Whatcom	Deborah Cornett 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296 Phone: (425) 775-1311
Clark, Cowlitz, Klickitat, Lewis, Skamania, Wahkiakum	Rich Costello 2108 Grand Blvd. Vancouver, WA 98661 Phone: (360) 696-6211
Clallam, Grays Harbor, Jefferson, Kitsap, Mason, Pacific, Pierce, Thurston	Sue Patnude 48 Devonshire Road Montesano, WA 98563-9618 Phone: (360) 249-4628

Washington State Department of Transportation
Sid Morrison
Secretary of Transportation

Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Ms. Loree Randle
WA State Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

Dear Ms. Randle:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

As a stakeholder in the project area, we would like to extend an invitation to you to serve on a Stakeholder Committee that will guide the project. As a committee member, your role would include attending meetings over the course of this study to assess transportation needs and to identify viable improvement options, as well as review and advise on strategies to preserve and enhance the transportation corridor. In addition, as a representative for your community, you are counted upon to inform them, and in turn share their concerns with fellow committee members and WSDOT.

A kick-off meeting is scheduled to be held on Wednesday, May 23, 2000 at the Kitsap County Fairgrounds. Your participation in the process will be very important, so I hope that you or a representative from your staff or organization will be able to attend. Please notify me at (360) 357-2675 or by email at jacksni@wsdot.wa.gov, if you or your agency plans to attend. An agenda and advance packet will be sent out to team members prior to the meeting. If you have any questions, please feel free to contact me for additional information.

Sincerely,

Nita Jackson
Project Manager
WSDOT, Olympic Region
JMJ:gk

Washington State Department of Transportation
Sid Morrison
Secretary of Transportation

Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Ms Sandra Lange
WA State Deptartment of Ecology
3190 160th Ave. SE
Bellevue, WA 98008

Dear Ms Lange:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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Sincerely,

Nita Jackson

Nita Jackson
Project Manager
WSDOT, Olympic Region
JMJ:gk

Washington State Department of Transportation
Sid Morrison
Secretary of Transportation

Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Councilman John Law
Bremerton City Council
239 4th St.
Bremerton, WA 98337

Dear Councilman Law:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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Sincerely,

Nita Jackson

Nita Jackson
Project Manager
WSDOT, Olympic Region
JMJ:gk

Washington State Department of Transportation
Sid Morrison
Secretary of Transportation

Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Councilman Wayne Olsen
Bremerton City Council
239 4th St.
Bremerton, WA 98337

Dear Councilman Olsen:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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Sincerely,

Nita Jackson

Nita Jackson
Project Manager
WSDOT, Olympic Region
JMJ:gk

Washington State Department of Transportation
Sid Morrison
Secretary of Transportation

Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Commissioner Tim Botkin
Kitsap County Commission
614 Division St.
Port Orchard, WA 98366

Dear Commissioner Botkin:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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5720 Capitol Boulevard, Tumwater
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April 26, 2000

Commissioner Chris Endresen
Kitsap County Commission
614 Division St.
Port Orchard, WA 98366

Dear Commissioner Endresen:

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5720 Capitol Boulevard, Tumwater
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(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Mr. Dick Brandenburg
Port of Bremerton
8850 SW State Hwy. 3
Port Orchard, WA 98367

Dear Mr. Brandenburg:

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Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Mr. Dick Hayes
Kitsap Transit
234 South Wycoff
Bremerton, WA 98312

Dear Mr. Hayes:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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(360) 357-2600
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April 26, 2000

Mr. Jim Leonard
FHWA
711 S Capitol Way
Olympia, WA 98501-0943

Dear Mr. Leonard:

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(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Ms Elaine Somers
US EPA Region 10
MS: ECO-088
1200 6th Ave.
Seattle, WA 98101

Dear Ms Somers:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Ms Emily Teachout
US Fish and Wildlife Service
510 Desmond Dr. SE
Suite103
Lacey, WA 98503

Dear Ms Teachout:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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(360) 357-2600
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April 26, 2000

Mr. Thom Hooper
NMFS
510 Desmond Dr. SE
Suite103
Lacey, WA 98503

Dear Mr. Hooper:

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April 26, 2000

Captain Judith Holden
Bremerton Naval Base
C/00
120 S. Dewey St.
Bremerton, WA 98314-5020

Dear Captain Holden:

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Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
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Olympia, WA 98504-7440

(360) 357-2600
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April 26, 2000

Captain Greg Bryant
Puget Sound Shipyard
C/100, Bldg 850-5
120 S. Dewey St.
Bremerton, WA 98314-5000

Dear Captain Bryant:

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April 26, 2000

Mr. Austin Pratt
Coast Guard District (OHN)
915 2nd Ave.
Seattle, WA 98174-1067

Dear Mr. Pratt:

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April 26, 2000

Mr. Leonard Forsman
Suquamish Tribal Council
PO Box 498
Suquamish, WA 98392

Dear Mr. Forsman:

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April 26, 2000

Ms Allyson Brooks
WA State Historic Preservation Office
420 Golf Course Rd. SE, Ste 201
Lacey, WA 98504-8343

Dear Ms Brooks:

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April 26, 2000

Mr. Dave Price
WA State Fish and Wildlife
600 Capitol Way North
Olympia, WA 98501-1091

Dear Mr. Price:

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April 26, 2000

Mr. Walt Draper
Bremerton School District
134 North Marion Ave.
Bremerton, WA 98312

Dear Mr. Draper:

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April 26, 2000

Mr. Dirk Gleysteen
Central Kitsap County School District
9102 Dickey Rd.
Silverdale, WA 98383

Dear Mr. Gleysteen:

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Sincerely,

Nita Jackson
Project Manager
WSDOT, Olympic Region
JMJ:gk

Washington State Department of Transportation
Sid Morrison
Secretary of Transportation

Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

April 26, 2000

Mr. Wayne Junge
Bremerton Chamber of Commerce
PO Box 229
Bremerton, WA 98337

Dear Mr. Junge:

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(360) 357-2600
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April 26, 2000

Ms Carol Atkinson
Main Street Association
245 4th St. Ste 201-B
Bremerton, WA 98337

Dear Ms Atkinson:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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(360) 357-2600
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April 26, 2000

Mr. Andy Prescott
West Sound Cycling Club
PO Box 1579
Silverdale, WA 98383

Dear Mr. Prescott:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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April 26, 2000

Mr. Jim Tutton
Washington Trucking Association
930 S. 336th St. Ste B
Federal Way, WA 98003

Dear Mr. Tutton:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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April 26, 2000

Mr. Richard Anderson
Audubon Society
11850 NE Felicity Lane
Kingston, WA 98364

Dear Mr. Anderson:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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April 26, 2000

Mr. Cleve Pinnix
WA State Parks and Recreation Commission
PO Box 42650
Olympia, WA 98504-2650

Dear Mr. Pinnix:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. In order to make the study successful, we need your participation. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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April 26, 2000

Ms Sandra Lange
WA State Deptartment of Ecology
3190 160th Ave. SE
Bellevue, WA 98008

Dear Ms Lange:

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May 15, 2000

Mr. Bernie Balvin
7065 Engine Lane NE
Bremerton, WA 98311

Dear Mr. Balvin:

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May 15, 2000

Mr. James Leibensperger
PO Box 2671
Bremerton, WA 98310

Dear Mr. Leibensperger:

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(360) 357-2600
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May 15, 2000

Mr. Gregory Contos
7048 Freeport Lane NE
Bremerton, WA 98311-3776

Dear Mr. Contos:

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May 15, 2000

Mr. Joe Michelsen
1930 Wooderest Ct NW
Silverdale, WA 98383

Dear Mr. Michelsen:

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May 15, 2000

Mr. Barry Goodan
7328 Varsity Lane NE
Bremerton, WA 98311

Dear Mr. Goodan:

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May 15, 2000

Mr. James Hochstein
2159 Phinney Bay Dr
Bremerton, WA 98311

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May 15, 2000

Mr. Bill Rumbold
6911 Navajo Trail NE
Bremerton, WA 98311

Dear Mr. Rumbold:

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May 15, 2000

Mr. Jim Robinson
4904 Kitsap Way
Bremerton, WA 98312

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May 15, 2000

Mr. Tim Quigley
1204 Sheridan Road
Bre,erton, WA 98311

Dear Mr. Quigley:

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Sincerely,

Nita Jackson
Project Manager
WSDOT, Olympic Region
JMJ:gk

Washington State Department of Transportation
Sid Morrison
Secretary of Transportation

Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

May 15, 2000

Ms. Pat Yeik
Alder Trail Animal Clinic
5757 State Hwy 303 NE
Bremerton, WA 98311

Dear Ms. Yeik:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. To achieve this goal, we are developing a Stakeholder Committee that will guide the project through the process. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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May 15, 2000

Mr. Ralph Duncan
PO Box 3465
Silverdale, WA 98383

Dear Mr. Duncan:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. To achieve this goal, we are developing a Stakeholder Committee that will guide the project through the process. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

May 15, 2000

Ms. Kris Wheeler
PO Box 3486
Silverdale, WA 98383

Dear Ms. Wheeler:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. To achieve this goal, we are developing a Stakeholder Committee that will guide the project through the process. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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Project Manager
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Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P.O. Box 47440
Olympia, WA 98504-7440

(360) 357-2600
Fax (360) 357-2601

May 15, 2000

Ms. Judith Krigsman
5171 Illahee Road NE
Bremerton, WA 98311

Dear Ms. Krigsman:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. To achieve this goal, we are developing a Stakeholder Committee that will guide the project through the process. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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Olympic Region Headquarters
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P.O. Box 47440
Olympia, WA 98504-7440

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May 15, 2000

Mr. Pat Wright
305 Pacific Avenue
Bremerton, WA 98337

Dear Mr. Wright:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. To achieve this goal, we are developing a Stakeholder Committee that will guide the project through the process. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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May 15, 2000

Mr. Paul Pazooki
3063 Rocky Point Rd
Bremerton, WA 98312

Dear Mr. Pazooki:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. To achieve this goal, we are developing a Stakeholder Committee that will guide the project through the process. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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Olympia, WA 98504-7440

(360) 357-2600
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May 15, 2000

Mr. Michael Hancock
7547 Seabeck Holly Road NW
Seabeck, WA 98380

Dear Mr. Hancock:

The Washington State Department of Transportation's (WSDOT) Olympic Region in partnership with the City of Bremerton, Kitsap County and Kitsap Transit is initiating a study of State Route (SR) 303 between Bremerton and Silverdale. This study is to develop strategies that address the transportation needs along the SR 303 corridor. To achieve this goal, we are developing a Stakeholder Committee that will guide the project through the process. We are asking representatives from local and regional agencies, interested parties, and concerned public to participate as stakeholders throughout the study process.

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JMJ:gk

APPENDIX B

1st Level Screening Analysis

Final Screening Report

SR 303 Bremerton to Silverdale Transportation Corridor Study 1st Level Screening Analysis

Prepared for

Washington State Department of Transportation
Olympic Region Transportation Planning Office
P.O. Box 47440
Olympia, WA. 98599-7440

Prepared by

Parametrix
5808 Lake Washington Blvd. NE, Suite 200
Kirkland, WA. 98033
(425) 822-8880
www.parametrix.com

August 2001
Project No. 554-1631-027

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EXECUTIVE SUMMARY

INTRODUCTION AND BACKGROUND

The SR 303 Bremerton to Silverdale Transportation Corridor Study is being conducted to identify potential transportation alternatives to relieve forecasted traffic congestion levels that could occur by the year 2030 without new road improvements or transportation system and demand management strategies. This corridor study examines proposed transportation improvements that would serve the regional north/south traffic movement in central Kitsap County between the cities of Bremerton and Silverdale, including:

- Improving the SR 303 Highway from Bremerton to Silverdale
- Constructing a new bridge crossing at the Port Washington Narrows
- Improving arterials adjacent to the SR 303 Highway.

The corridor study has been organized into four phases:

- Phase 1 – Public Outreach and Inter-Agency Coordination
- Phase 2 – Existing Conditions and Deficiencies Identification
- Phase 3 – Alternatives Development and Evaluation
- Phase 4 – Environmental Documentation.

Phases 1 and 2 have been completed and Phase 3 is currently underway. Sixteen potential transportation action alternatives have been identified and are considered in this report (including a no action alternative). These alternatives were developed through several mechanisms including meetings of an Executive Policy Committee (EPC), Technical Advisory Committee (TAC), and Stakeholder Committee (SHC) that were formed by the Washington State Department of Transportation (WSDOT), and through open houses/workshops for the public.

The EPC is made up of staff from WSDOT, and elected officials from the City of Bremerton, Kitsap County and Kitsap Transit. The TAC is comprised of staff from WSDOT, Kitsap County, the City of Bremerton, Kitsap Transit, and several consulting firms. The SHC is comprised of persons from the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Federal Highway Administration (FHWA), U.S. Coast Guard, Washington State Department of Ecology (WDOE), Washington Department of Fish and Wildlife (WDFW), Washington State Historic Preservation Office (SHPO), Port of Bremerton, Kitsap Transit, Bremerton City Council, City of Bremerton, Bremerton Chamber of Commerce, Bremerton School District, Central Kitsap County School District, Silverdale Community Council, Bremerton Naval Base, Suquamish Tribal Council, Main Street Association, Audubon Society, West Sound Cycling Club, Washington Trucking Association, and private citizens.

The committee meetings and public forums resulted in the list of 16 potential transportation alternatives identified in this report. These groups also identified goals and concerns that needed to be considered during alternative evaluation. The criteria used in this screening report are a direct reflection of the goals and concerns expressed by the TAC, SHC, and the public. For example, one of the goals was to improve transportation safety. This goal is represented in three of the safety criteria elements: vehicle, pedestrian, and bicycle accident reduction potential. Similarly, one of the concerns related to the potential impacts to wetlands. This is reflected in the natural environment criterion that evaluates the acres of wetland impact and quality of the impacted wetland.

PURPOSE

The purpose of this Phase 3 report is to evaluate those alternatives that would best improve traffic operations and accommodate future travel demands on SR 303 through the year 2030, while avoiding, minimizing, or mitigating impacts to neighborhoods, businesses, and the natural environment in a cost-effective manner. This report is the first step in achieving that purpose which is explained in greater detail in the approach below.

APPROACH

In this phase of the study, a screening process is used to take the proposed alternatives and apply criteria that effectively rate each alternative in terms of their potential effects on transportation operations, cost, plan compatibility, and impacts on the built and natural environment (see Chapter 3). This process allows for a comparison of alternatives and ultimately helps to reach a decision on which alternative or alternatives to be implemented. The screening process will be conducted in two steps: (1) qualitative evaluation at the 1st level of screening, and (2) detailed evaluation at the 2nd level of screening. Those alternatives that rate the best in terms of the 1st level criteria will advance to the 2nd level screening, while those that rate worse will be eliminated. The three or four alternatives that rate the highest after the 2nd level screening will be considered for additional environmental review and analysis to be conducted in Phase 4. This report comprises the first step in the screening process.

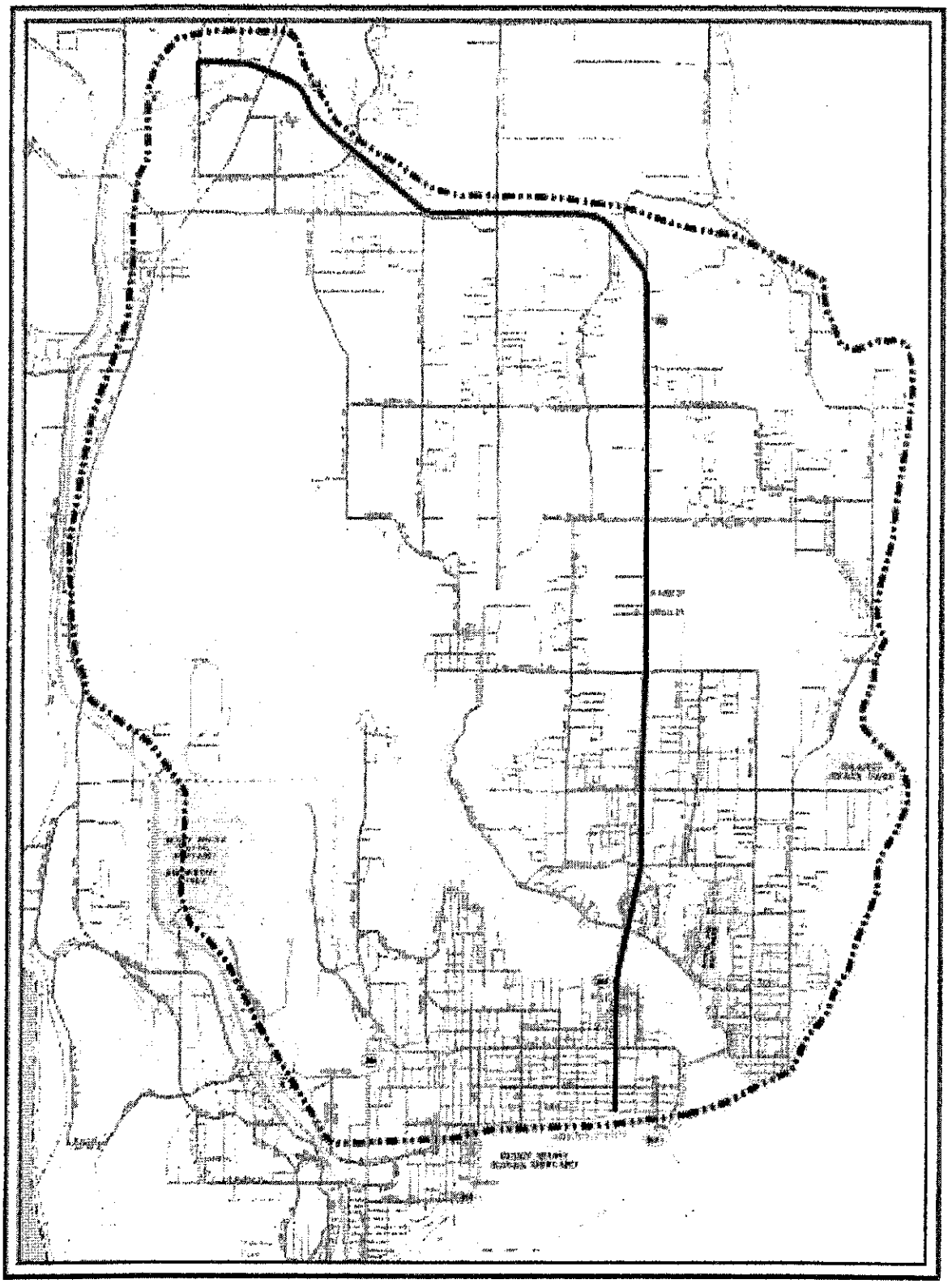
PROJECT STUDY AREA

The project study area is bounded by Dyes Inlet to the west, SR 303 and the City of Silverdale to the north, SR 304 and downtown Bremerton to the south, and Port Orchard Bay to the east (See Figure 1). The boundaries of the SR 303 study area travels in a north and south alignment from downtown Bremerton to the City of Silverdale. SR 303 connects to SR 3 at the north end of the study area near the City of Silverdale, and also connects to SR 304 and SR 310 at the south end of the study area near downtown Bremerton.

ALTERNATIVES

For the purposes of the study, the alternatives have been grouped into five categories: new crossing and arterial connections, arterial improvements, SR 303 improvements, transportation demand management (TDM) and transportation system management (TSM), and no action (See Figure 2 and 3). Alternatives 1, 2, 3, 4A, 4B, 5, 5A, and 6 represent potential improvements that would add a new bridge crossing over the Port Washington Narrows and improve arterial connections with SR 303. These alternatives are focused on routing traffic to and from the SR 303 corridor. Alternatives 7 through 10 do not involve a new bridge crossing, but do address improvements to the arterial connections with SR 303. Alternatives 11 through 13 primarily involve improving the capacity to SR 303 by adding both general purpose and high occupancy (HOV) lanes. Alternative 14 would use TDM/TSM measures, such as combined access opportunities, standardizing speeds, and signage to reduce traffic volumes. Alternative 15 is the no build or no action alternative, which is used for comparison purposes as the baseline for the year 2030 projections. In terms of improvements for each group of alternatives, it was assumed that all roadways, including new bridges, would be widened to four to five lanes. The proposed configuration would include two travel lanes in each direction plus left turn channelization at major intersections. Table 1.A lists the potential alternatives evaluated in this report.

SR 303 BREMERTON TO SILVERDALE TRANSPORTATION CORRIDOR STUDY



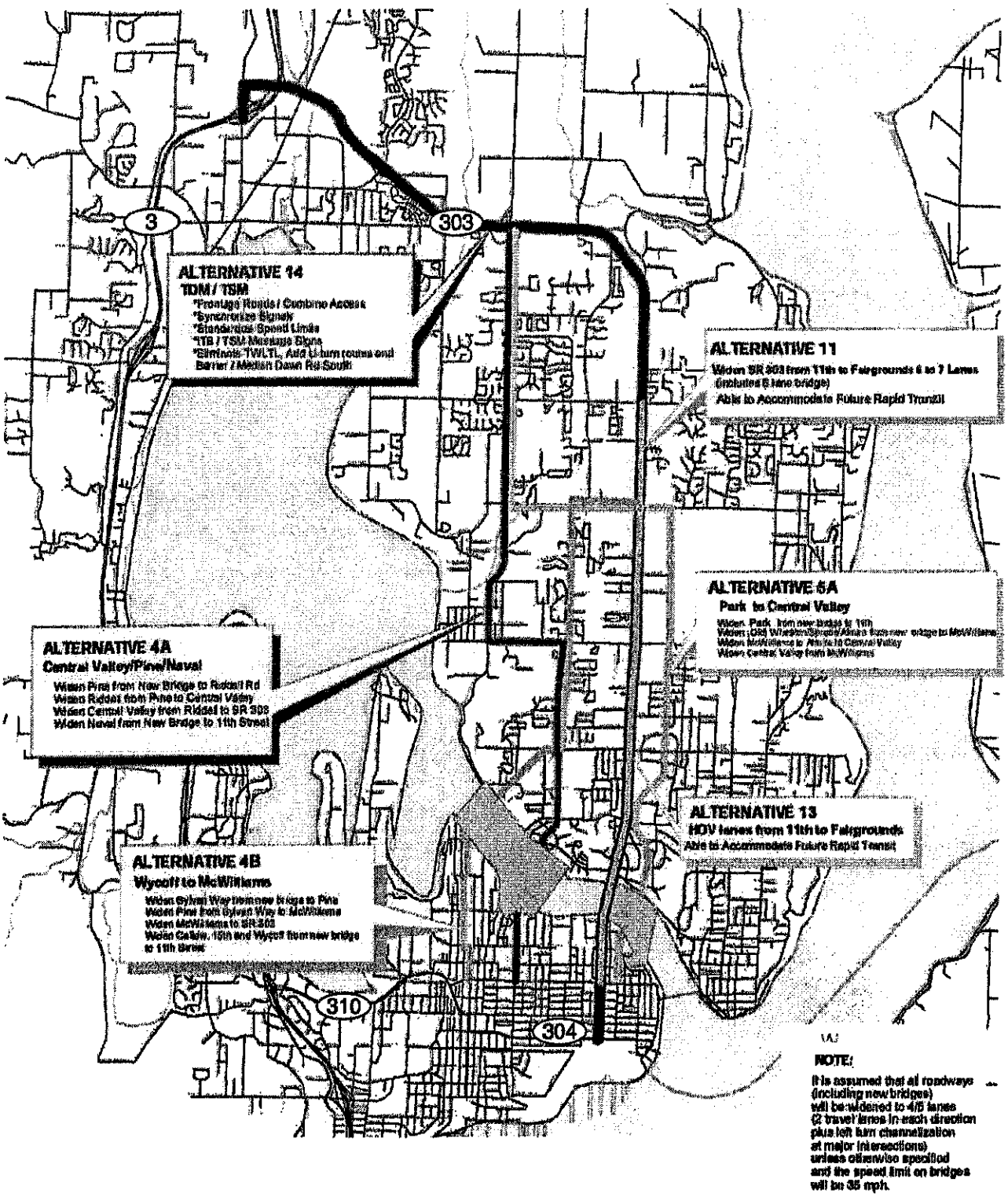
PROJECT LIMITS

Parametrix, Inc. SR303 Corridor Study/554-1631-030/02(23) 8/01 (K)

NOT TO SCALE

Figure 1
Project Study Area

SR 303 BREMERTON TO SILVERDALE CORRIDOR STUDY



Parametrix, Inc. SR303 Corridor Study/554-1631-030/02(23) 8/01 (K)

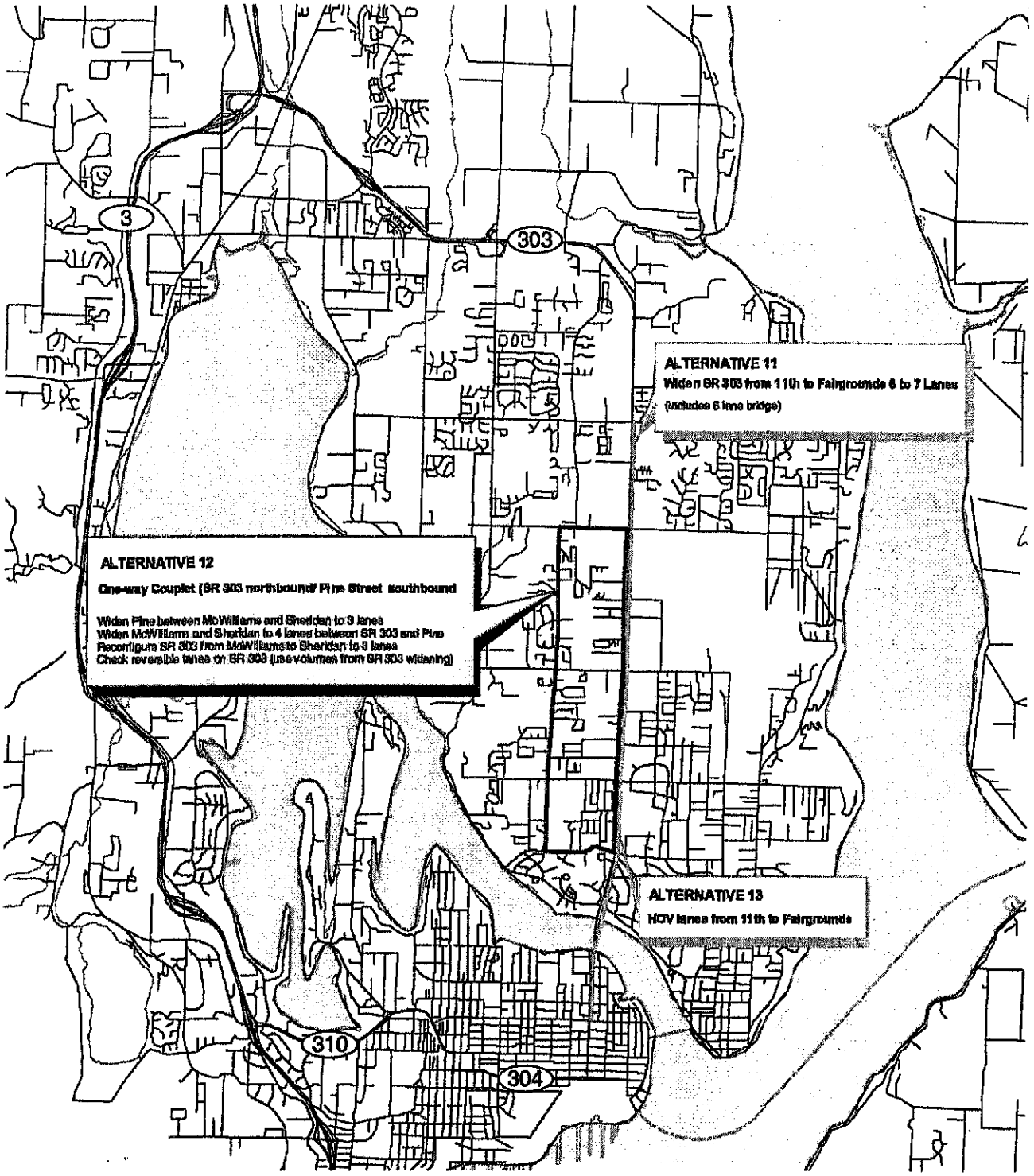
APPROXIMATE SCALE IN FEET

0 5,500

N

Figure 2
Draft Project Alternatives

SR 303 BREMERTON TO SILVERDALE CORRIDOR STUDY



Parametrix, Inc. SR303 Corridor Study/554-1831-030/02(23) 8/01 (K)

APPROXIMATE SCALE IN FEET

0 5,500

N

Figure 3
Project Alternatives
SR 303 Capacity Improvements

Table 1.A. Proposed Transportation Alternatives

Alternative Group	No.	Alternative Description
New Bridge Crossing and Arterial Connections	1	**Newberry Hill Road to NE Fairgrounds Road** • Widen NE Fairgrounds Road from the new bridge to SR 303.
	2	**Rocky Point Road to NE Riddell Road** • Widen NE Riddell Road from new bridge to SR 303. • Widen Rocky Point and Marine Drive from new bridge to SR 310.
	3	**Wycoff Avenue North to Sylvan Way** • Widen Sylvan from new bridge to SR 303.
	4A	**S Central Valley Road to Pine Road NE to Naval Avenue** • Widen Pine from new bridge to NE Riddell • Widen NE Riddell from Pine to S Central Valley • Widen S Central Valley from Pine to SR 303
	4B	**Snyder Avenue to NE McWilliams Road** • Widen Sylvan Way from new bridge to Pine • Widen Pine from Sylvan Way to NE McWilliams • Widen NE McWilliams to SR 303 • Widen Callow, 15th and Snyder from new bridge to 11th Street
	5	**Pacific Avenue to Wheaton Way** • Widen 16th from new bridge to Perry • Widen Perry from 16th to NE McWilliams • Widen NE McWilliams from Perry to SR 303
	5A	**Park Avenue to S Central Valley Road** • Widen Park from 11th to new bridge • Widen Old Wheaton Way to Callahan/Sheridan • Widen Almira Drive from Sheridan to Riddell • Widen NE Riddell to S Central Valley to SR 303
	6	**Replace Manette Bridge** • Widen 11th from widened Manette Bridge to Perry • Widen Perry from 11th to NE McWilliams • Widen NE McWilliams from Perry to SR 303
Arterial Improvements	7	**Widen S Central Valley Road/NE Riddell Road/Sheridan Road** • Connect S Central Valley and Sheridan to SR 303
	8	**Widen NE McWilliams Road/Pine Road/Sheridan Road** • Connect Sheridan and NE McWilliams to SR 303
	9	**Widen Perry Avenue** • Widen Perry from 11th to NE McWilliams • Widen NE McWilliams from Perry to SR 303
	10	**Widen SR 310 from SR 3 to 11th Street** • Widen SR 310 to 7 lanes
SR 303 Improvements	11	**Widen SR 303 Couplet from 11th Street to NE Fairgrounds Road** • Widen SR 303 Couplet to 6 to 7 lanes, including 6 lane Warren Ave Bridge
	12	**One Way Couplet** • SR 303 northbound/Pine Street southbound
	13	**HOV Lanes from 11th Street to NE Fairgrounds Road**
TDM/TSM	14	**Frontage Roads, signalization, message signs, combined access, U-turn routes.**
No-Action	15	**Baseline for comparison of the year 2030 projections with no action taken.**

1ST LEVEL SCREENING RESULTS

Of the 15 potential transportation alternatives in the corridor study, the EPC has recommended seven alternatives for additional analysis (under 2nd level screening) based on the results of the 1st level screening. These include Alternatives 4A, 4B, and 5A (new bridge crossing and arterial connections), Alternatives 11 and 13 (SR 303 improvements), Alternative 14 (TDM/TSM), and Alternative 15 (No Action Alternative).

The selection of the seven alternatives for further analysis was based on review of the effectiveness ratings for the various criteria. For purposes of this preliminary analysis, more emphasis was placed on the traffic demand criterion and its effectiveness rating in comparison to the built and natural environment criteria. Traffic demand reduction at key intersections was evaluated in conjunction with the ability of a new or improved transportation facility to handle future projected traffic volumes. This was balanced against impacts to the natural and built environment. For example, Alternatives 4A, 4B, and 5A received traffic demand effectiveness ratings of medium to high. These improvements were weighed against community impacts (medium to high) and natural environment impacts (low to medium). Alternatives 11 and 13 also received traffic demand ratings of medium to high and had low impact ratings for both community and natural environment impacts.

Although Alternative 14 rated low in traffic demand effectiveness and would result in the least improvement in traffic compared to the other transportation action alternatives, it was forwarded to the next round of screening. Alternative 14 was forwarded because TDM/TSM measures may result in improvements to SR 303 operations at a much lower cost than other alternatives, and the potential impacts to the community and natural environmental were low.

The No Action Alternative (Alternative 15) was advanced for comparison purposes.

The nine alternatives not recommended for further analysis were screened out on the basis of relatively lower traffic demand ratings and higher impact to the community and natural environment. Table 1.B provides a breakdown of the effectiveness ratings for the seven recommended alternatives. Appendix A at the back of this analysis provides effectiveness ratings for all of the alternatives considered in this study.

Table 1-B. Comparative Ratings for EPC Recommended Alternatives [1]

Alternatives	4A	4B	5A	11	13	14	15
Traffic Demand Criteria							
Reduction on SR 303 N/o Fairgrounds	◔	○	○	◕	◔	◔	
Reduction on SR 303 N/o Sheridan	●	●	◑	◑	◑	◔	
Reduction on Warren Avenue Bridge	◕	●	◕	◕	◔	◔	
Traffic Vol. on New/Improved Facility	◕	◕	◕	◕	◑	◔	
Overall Rating	◕	◕	◑	◕	◑	◔	○
Alternatives	4A	4B	5A	11	13	14	15
Community Impacts Criteria							
Displacement	○	○	◔	○	○	◕	
Neighborhood/Livability	○	○	◔	◑	◑	◕	
Cultural Resources	◔	◔	◔	◕	◕	◕	
Business Impacts	◑	◑	◔	○	○	●	
Aesthetics/Visual Quality	◔	◔	◔	◕	◕	◕	
Overall Rating	○	○	◔	◑	◑	◕	◕
Alternatives	4A	4B	5A	11	13	14	15
Natural Environment Impacts							
Wetlands and Shorelines	◔	◔	◔	◑	◑	◕	
T&E[1] Species	◑	◔	◑	◕	◕	◕	
Fish and Wildlife Habitat	◑	◔	◑	◕	◕	◕	
Overall Rating	◑	◔	◑	◕	◕	◕	◕

1 Ratings: ●= Most Effective, Imp. Env. ◕= Inc. Effect. Min. Impact. ◑= Med. Effectiveness, Low Impacts. ◔= Low. Effect. Medium Impacts. ○= Least Effective or Most Impacts. Source: Parametrix, Inc. 2001

1. SCREENING PROCESS AND CRITERIA

This section describes the criteria used to screen the alternatives and explains the evaluation process.

1.1 SCREENING PROCESS

The screening/evaluation process will be conducted in two steps: (1) qualitative evaluation at the 1st level of screening, and (2) detailed evaluation at the 2nd level of screening. Those alternatives that rate the best in terms of the 1st level criteria will advance to the 2nd level screening, while those that rate worse will be eliminated. The three or four alternatives that rate the highest after the 2nd level screening will be considered for additional environmental review and analysis to be conducted in Phase 4.

A set of seven groups of criteria has been developed to screen the alternatives (see Section 1.2). In addition, a comparative ratings scale has been developed and is shown below in Table 1.1. The screening process for transportation criteria involved comparing the alternatives to the selected criterion and evaluating the alternative on effectiveness rating from least effective, to most effective as indicated by a shaded circle. For example, a least effective rating would receive the ○ symbol, while the most effective rating would receive the ● symbol. By comparison, for the community impacts and natural environment criteria, the alternatives were evaluated against the selected criterion on impact ratings from most impacts to minimal impacts and/or improved environment. For example, a most impacts rating would receive a ○ symbol, while minimal impacts or improved environment ratings would receive the ◕ or ● symbol.

In this way, alternatives were compared based on their effectiveness for each criterion (see Appendices A and B), with the best alternatives forwarded to the next level of screening. For example, an alternative that resulted in a large number of potential displacements would be given a rating of ○ (for the displacement criterion). Conversely, an alternative that had few or no displacements would be given a rating symbol of ●. Thus, the alternatives with the highest total ratings would be the best alternatives to advance to the second level of screening. For purposes of this study, the effectiveness ratings are displayed using the symbols identified in Table 1-1.

Table 1-1. Comparative Ratings Scale

Worst	→			Best
○	◔	◑	◕	●
Least Effective or Most Impacts	Lower Effectiveness, Medium Impacts	Medium Effectiveness or Low Impacts	Increased Effectiveness, Minimal Impacts	Most Effective, Improved Environment

Source: WSDOT Olympic Region- SR 303 Corridor Study/Technical Memorandum (2001)

At this first level of screening, a qualitative approach was used to determine the criteria values. This means that actual numbers or amounts such as the number of displacements, reduction in travel time, acres of wetland impact, travel demand reduction, cost, etc. were not absolutely determined. Instead, a combination of general impact assessment, estimates, and professional judgement were used to determine the effectiveness rating.

1.2 CRITERIA

Table 1.2 shows the seven screening categories and their respective criteria elements. The seven criteria categories include highway and arterials, transportation demand management (TDM) and transportation system management (TSM), safety, community impacts, plan compatibility, natural environment impacts, and cost. The shaded criteria elements identified below will be evaluated separately under second level screening and are not included in this preliminary analysis.

Table 1.2. Screening criteria categories and elements.

Highways and Arterials	TDM/TSM	Safety	Community Impacts	Plan Compatibility	Natural Environment Impacts	Cost
LOS-Corridor/signalized intersections	Travel Demand Reduction	Potential Vehicle Accident Reduction	Displacements	Consistency and Statewide Plans	Wetlands and Shorelines	Cost
Vehicle miles traveled (VMT)	Mode shift	Potential Pedestrian Accident Reduction	Neighborhood and Livability	Consistency with Regional Plans	Threatened and Endangered Species	Mitigation Cost
Vehicle Hours Traveled (VHT)	Pedestrian and Bicycle Access and Facilities	Potential Bicycle Accident Reduction	Cultural Resources and Other Lands	Consistency with Local Plans	Fish and Wildlife Habitat	
Travel time SOV HOV Transit	Person Throughput		Business Impacts		Water Resources	
Freight Access			Aesthetic and Visual Quality		Air Quality	
			Prime and Unique Farmland		Noise	
					Hazardous Waste	

Source: WSDOT Olympic Region- SR 303 Corridor Study/Technical Memorandum (2001).

Table 1.3 provides more detail about each of the criteria elements and the evaluation measurements associated with each criterion.

Table 1.3. Evaluation Measures for Screening Criteria Elements

Highway/Arterial Criteria	
Element	**Evaluation Measurement**
LOS- Corridor/Signalized Intersections	LOS will be provided for all roadway segments and signalized intersections.
Vehicle Miles Traveled (VMT)	This will show the daily amount of vehicle travel on the study area road system. VMT are calculated by multiplying the traffic volumes by the length of trip (in miles) and is an output of the travel-forecasting model.

Table 1.3. Evaluation Measures for Screening Criteria Elements (Continued)

Highway/Arterial Criteria	
Element	**Evaluation Measurement**
Vehicle Hours Traveled (VHT)	Show the total daily hours of travel for vehicles traveling on the study area road system. VHT is calculated by multiplying the number of trips by the average duration of each trip and is an output of the travel-forecasting model.
Travel Time	Shows the change in travel time between selected origins and destinations within the study area. The PM peak hour will be used. Travel times will be shown for SOV, HOV, and transit.
Freight Access	This will quantify benefits to freight movement and access in the corridor.
TDM/TSM Criteria	
Element	**Evaluation Measurement**
Travel Demand Reduction	PM peak period and daily travel demand reduction.
Mode Shift	The potential mode shift from SOVs to HOVs and transit will be quantified.
Pedestrian and Bicycle Access and Facilities	The addition of pedestrian and bicycle access and facilities will be quantified. Bicycle facilities will be quantified in lane miles.
Person Throughput	Number of people being moved in SOV and HOV lanes will be quantified.
Safety Criteria	
Element	**Evaluation Measurement**
Vehicle Accident Reduction	Estimate the potential for reduced vehicle accidents associated with the roadway, intersection, or access management improvements.
Pedestrian Accident Reduction	Estimate the potential for reduced pedestrian accidents associated with sidewalks, crosswalks, and other pedestrian facility improvements.
Bicycle Accident Reduction	Estimate the potential for reduced bicycle accidents associated with bicycle facility improvements.
Community Impact Criteria	
Element	**Evaluation Measurement**
Displacement	Number of businesses and residences displaced.
Neighborhood and Livability	Degree of change to existing neighborhood streets.
Cultural Resources and Other Lands	Impacted sites of historical significance, and sites on the national register will be identified. Impacts to publicly owned parks, trails, recreation areas, and wildlife/waterfowl refuges will be identified.
Business Impacts	Access restrictions or loss of parking.
Aesthetics/Visual Quality	Degree of improvement or impact to the aesthetic and visual quality of the corridor.
Prime and Unique Farmland	Acres of impact.
Plan Compatibility Criteria	
Element	**Evaluation Measurement**
Compatibility with Statewide Plans, Goals and Policies	Overall consistency of each alternative with Washington State Growth Management Act and Statewide Transportation Plan.
Compatibility with Regional Plans, Goals and Policies	Overall consistency of each alternative with PSRC's Vision 2020 plan and Metropolitan Transportation Plan.
Compatibility with Local Plans, Goals and Policies	Overall consistency of each alternative with the Kitsap County and City of Bremerton Comprehensive Plans. Evaluation will focus on potential effects on land use, development patterns, potential to influence growth within or outside urban growth boundaries, and compatibility with local transportation plans.

Table 1.3. Evaluation Measures for Screening Criteria Elements (Continued)

Natural Environment Impact Criteria	
Element	**Evaluation Measurement**
Wetlands and Shorelines	Acres of impact and quality of impacted wetlands.
Threatened and Endangered Species	Threatened and Endangered species in the area and number of habitat acres impacted will be identified. Cost of mitigation will be identified, as well as ability to comply with ESA requirements.
Fish and Wildlife Habitat	Impacts to fish and wildlife habitat areas for all species will be identified.
Water Resources	Impacts on floodplains, and surface and groundwater, including State 303D list of waterbodies that do not meet water quality standards will be identified. Amount of additional impervious surface and measures needed to avoid untreated discharges will be identified.
Air Quality (design year)	Pollutant level better or no worse than No Build conditions (pollutant level as per standards of National Ambient Air Quality Standards [NAAQS] for all prescribed elements).
Noise (design year)	Number of homes/businesses impacted (Impact defined by FHWA Noise Abatement Criteria).
Hazardous Waste	Number of sites and cost of clean up will be provided.
Cost Criteria	
Element	**Evaluation Measurement**
Cost	Planning level cost estimates will be prepared using WSDOT unit costs.
Mitigation Costs	Potential mitigation costs will be added to the extent that specific mitigation actions can be identified.

Source: WSDOT Olympic Region- SR 303 Corridor Study/Technical Memorandum (2001).

2. AFFECTED ENVIRONMENT

This section describes the affected natural and built environment for the study area including descriptions of the current transportation capacity, existing land use, cultural resources and other lands, aesthetics/visual quality, wetlands and shorelines, threatened and endangered species, fish and wildlife habitat, and water resources. These descriptions are general in nature and will become more detailed under the second level screening analysis. A more in-depth review and discussion of the traffic volumes and level of service conditions along the SR 303 corridor can be found in the Transportation Existing Conditions Report. The Transportation Existing Conditions Report also includes information on the existing transit service and traffic safety along the SR 303 corridor.

2.1 DATA SOURCES

The following data sources were utilized to describe the affected environment:

- Existing Traffic Volumes and Level of Service: Field reconnaissance, PSRC regional population and employment forecasts (2001), *Synchro* version 5 software program, Kitsap County travel demand forecasting model (2001), and WSDOT (2001).
- Existing Land Use: Field reconnaissance and zoning and comprehensive plan mapping provided by the City of Bremerton and Kitsap County.
- Cultural Resources/Other Lands: On-line database queries from records on the Washington State Office of Archaeological and Historical Properties (OAHP 2001), and zoning and comprehensive plan mapping provided by the City of Bremerton and Kitsap County (2001).
- Aesthetics/Visual Quality: Field reconnaissance and aerial photography.
- Wetlands/Shorelines: National Wetlands Inventory (NWI) maps, WDFW Priority Habitat and Species (PHS) Maps and the Kitsap County Building Limitations Map (2001).
- Threatened/Endangered Species: A species list provided by USFWS for the greater North Kitsap Peninsula vicinity (Parametrix 2001), and supplemental threatened and endangered species (T&E) information provided by WDFW in their Bremerton West Quad for 2001.
- Fish/Wildlife Habitat: Kitsap County Building Limitations Map (2001), documentation provided by the USFWS (2001), and the Kitsap Basin-WRIA 15 for Dyes Inlet and Port Washington Narrows and North Kitsap Peninsula Drainages (1975). WDFW provided supplemental fish and wildlife habitat information in their Bremerton West Quad for 2001.
- Water Resources: Washington State Department of Ecology (DOE), the Kitsap Basin-WRIA 15 for Dyes Inlet and Port Washington Narrows and North Kitsap Peninsula Drainages (1975), and the Kitsap County Building Limitations Map (2001).

2.2 EXISTING TRAFFIC VOLUMES AND LEVEL OF SERVICE

2.2.1 Traffic Volumes

The majority of the traffic volume data used for analyzing existing conditions was obtained in the year 1999, with some additional data collected more recently in year 2001. The average daily traffic (ADT) volumes in the SR 303 corridor are shown on Figure 4. For instance, on SR 303 south of NE Fairgrounds Road/NE John Carlson Road, the ADT volume was 30,900, and, on SR 303 north of 11th Street, the ADT volume was 37,947.

Peak hour traffic volumes are used for evaluating road project's potential improvements to traffic operations. The evening commute is typically used as the peak hour, which usually occurs from 4 PM to 6 PM. However, to account for local variations in the study area, (e.g., such as the naval shipyard), the peak hour selected spans from 3 PM to 6 PM. Intersection turning movement counts during the PM peak period were obtained for evaluating intersection operations.

2.2.2 Level of Service (LOS)

Traffic volumes in combination with the available infrastructure create varying levels of congestion. Level of service rates the degree of congestion or the quality of the traffic operations on transportation facilities. The letters A through F are used for the rating scale. The letter A represents the best (least congested) conditions whereas the letter F represents the worst (most congested) conditions. Thus, LOS ratings are similar to a letter grading scale in the educational system, A being the best grade, F being the worst grade.

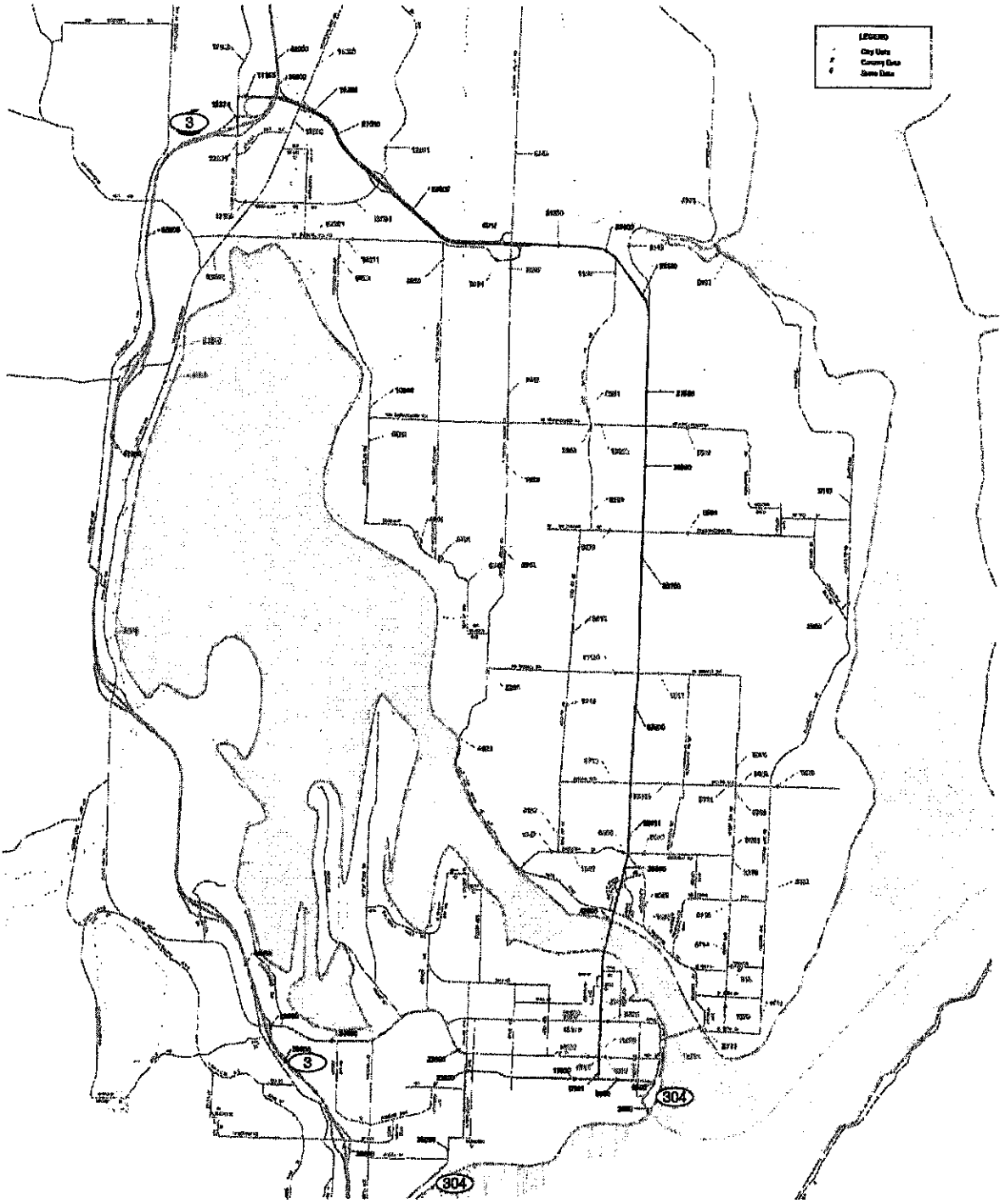
The LOS results for existing conditions in the study area were output from *Synchro* version 5, a software program that performs analysis of signalized intersections. The LOS ratings correlate to the estimated intersection signal delay. The intersection delay is defined in the *Synchro* help file as "...the average control delay for the signalized intersection and it is calculated by taking a volume weighted average of all the delays." The PM peak hour LOS results at most of the signalized intersections along the core section of the SR 303 corridor have been summarized in Table 2.1. None of the selected intersections currently operate worse than LOS D conditions (a typical threshold beyond which improvements ought to be considered). Future year 2030 LOS analysis results for various alternatives will be published in an upcoming report for the 2nd Level Screening Analysis.

Table 2.1. Existing LOS at selected study intersections.

Study Intersections	Count Date	PM Peak Hour	LOS	Delay (sec/veh)
SR 303 @ Fairgrounds RD	Tuesday, 06/15/99	4:15 PM - 5:15 PM	B	16.1
SR 303 @ McWilliams RD NE	Monday, 06/07/99	3:45 PM - 4:45 PM	C	20.8
SR 303 @ Riddell RD	Monday, 05/24/99	3:45 PM - 4:45 PM	C	33.1
SR 303 @ Sylvan Way	Wednesday, 05/19/99	3:45 PM - 4:45 PM	D	36.4
SR 303 @ Sheridan RD	Tuesday, 06/01/99	3:30 PM - 4:30 PM	D	40.3
SR 303 @ 11th ST	Wednesday, 06/18/99	4:15 PM - 5:15 PM	C	31.3

2.3 EXISTING LAND USE

The project study area lies within the City of Bremerton, unincorporated Kitsap County. The project alternatives pass through several types of land uses including urban retail, commercial, industrial, and residential, and semi-rural. The area south of Port Washington Narrows is highly urbanized and contains the Bremerton central business district. This area contains residential (both single- and multi-family dwellings), retail, and commercial land uses. The southern boundary of the project area just touches industrial uses found in the Puget Sound Naval Shipyard. Generally, in this area, single-family residentially zoned properties lie north of 15th Street and there is a gradual transition to retail and commercial uses as one travels south of 15th Street. There are some larger lot residential developments located on Rocky and Erlands Points. Other major land uses in this area include the Puget Sound Naval Shipyard Bremerton Annex located west of Ostrich Bay, and Forest Ridge and Evergreen Parks in Bremerton.



Parametrix, Inc. SR303 Corridor Study/934-1531-030/02(18) 8/01 (K)

APPROXIMATE SCALE IN MILES
0 7.5

N

Figure 4
Average Daily Traffic

With the exception of the SR 303 corridor (which is highly developed), the area north of the Port Washington Narrows is predominantly single-family residential development, with some small commercial, retail, and business uses in isolated sections along Perry Avenue, Sheridan Avenue, McWilliams Road, and Fairgrounds Road. Urban density residential development is clustered north of the SR 303 and SR 304 bridge crossings. However, the further one travels north in this area, the more semi-rural in nature the land use becomes with larger lots and more open spaces. Other major land uses in this area include the Kitsap County Fairgrounds, Illahee State Park, and Rolling Hills Golf Course.

At the northwest corner of the study area is the retail and commercial center of Silverdale. This area is characterized by businesses clustered around the Silverdale Mall, and single- and multi-family development.

Almost a third of the project area consists of open water. The marine waters of Dyes Inlet, Port Washington Narrows, and Ostrich, Oyster, Phinney, and Chico bays generally make up most of the west side of the study area.

2.4 CULTURAL RESOURCES AND OTHER LANDS

The Port Madison (Suquamish) Indian Reservation is located near the study area, and their usual and accustomed fishing places include all the marine waters around the Kitsap Peninsula. These waters and the adjacent shoreline areas have cultural significance to the Suquamish Indian Tribe. There are no known properties or structures within the corridor that are listed on the national register of historic places. However, further review by qualified specialists could identify historic, archaeological, or cultural resources eligible for but not presently listed on the national register.

Publicly owned land, in the form of parks, open space, and recreational areas exists in the study area. Some of these include Roosevelt Field, Forest Ridge Park, Evergreen Park, Lebo Recreation Area, Harrison Memorial Nature Area, Stevens Canyon Park, and Illahee State Park. Additionally, some of these public lands (i.e., Illahee Forest Preserve) and waterbodies (i.e., Dyes Inlet/Port Washington Narrows) are recreation and/or open space areas.

2.5 AESTHETICS/VISUAL QUALITY

Visually, the project study area has three principal visual features: the open shoreline along Dyes Inlet and Port Washington Narrows, the views of the Olympic Mountains to the west, and the urban and rural landscape of the Cities of Bremerton and Silverdale and unincorporated Kitsap County. Dyes Inlet/Port Washington Narrows is a large body of water that provides a view corridor of distant mountains and closer forested hills. The visual landscape of the Cities of Bremerton and Silverdale is typical of many small to medium-sized cities and includes views of residential and commercial areas as well as a central business district (CBD) with a concentration of stores and institutional buildings. The landscape is more semi-rural with residential uses and somewhat limited businesses and commercial uses in the unincorporated Kitsap County portions of the project.

2.6 WETLANDS AND SHORELINES

Wetlands in the proposed study area include palustrine, riverine, and estuarine type systems. The palustrine system generally includes all nontidal wetlands dominated by trees, shrubs, and emergent vegetation. These wetlands are scattered throughout the study area. The riverine system generally consists of all wetlands and deepwater habitats contained within a channel. The riverine system wetlands can be found along the major stream segments within the study area, including Barker, Mosher, Steele,

and Illahee creeks. The estuarine system includes deepwater tidal habitats and adjacent tidal wetlands that are semi-enclosed by lands, but have open connections to the open ocean. Estuarine wetlands are associated with the shorelines of Dyes Inlet and Port Washington Narrows.

Shorelines in the study area include those bordering both fresh and marine waters. Marine shorelines include Port Orchard, Dyes Inlet, Port Washington Narrows, and Ostrich, Oyster, Phinney, and Chico bays. Fresh water shorelines include the main streams, Barker, Mosher, Steele, and Illahee creeks, as well as several small lakes.

2.7 THREATENED AND ENDANGERED SPECIES

There are several species of fish and birds in the project area that are listed as threatened or endangered (T&E), as well as species that have been petitioned for listing or are species of concern. T&E fish species include Bull Trout and Chinook salmon. In addition, Coho salmon are a candidate species for listing. (USFWS 2001). In addition to these species, 18 marine fish species have been petitioned for listing under the Endangered Species Act. Of these 18 fish, Pacific whiting, black rockfish, boccaccio, copper rockfish, quillback rockfish, walleye pollock, Pacific herring, and Pacific cod have been reported in the project area (USFWS 2001).

Two T&E bird species may potentially occur in the study area: bald eagles and marbled murrelets. Bald eagles are often found along the shoreline areas where they forage for food, perch in snags, and nest. This area may also be used by wintering bald eagles from approximately November through March.

Marbled murrelets typically nest high in the canopy of old growth forests where there are at least some trees greater than 32 inches diameter at breast height (dbh) and/or 200 years of age, or stands of large trees infected with mistletoe (Ralph and Miller 1995). The abundance of murrelets in marine foraging areas may be related to the availability of nesting habitat in the surrounding area (Ralph and Miller 1995). As most of the forest stands in the vicinity of the project are second growth that do not provide suitable habitat, it is unlikely that marbled murrelets occur near or at the proposed project area.

Additionally, the USFWS has indicated that the following *Species of Concern* may occur in the vicinity of the project: Long-eared myotis (bats), Long-legged myotis, Northern goshawk, Olive-sided flycatcher, Pacific lamprey, Peregrine falcon, River lamprey, and Western toad.

2.8 FISH AND WILDLIFE HABITAT

Dyes Inlet, Port Washington Narrows, Barker, Mosher, Illahee, and Steele creeks, as well as other small drainages provide habitat for a variety of marine organisms including fish. Four species of Pacific salmon, chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), chum (*O. keta*), and pink (*O. gorbuscha*) may utilize these waters, although coho and chum salmon are the predominant species. The heaviest coho and chum production in the project area is in Steele Creek (WDFW 1994). However, chum and/or coho production has been reported in Illahee Creek and several of the smaller independent drainages (Williams 1975; WDFW 1994). Resident cutthroat (*O. clarki*) are present in all of the tributaries to Dyes Inlet and Port Orchard.

Other fish species of special interest found in the study area include pacific herring, spiny dogfish, Pacific sand lance, and surf smelt. Pacific herring, surf smelt, and Pacific sand lance are classified as bait fishes by the WDFW, and collectively form a very important trophic link between plankton resources and a wide variety of predatory marine organisms, including salmon (WDFW 1999). These species spawn in various locations in and around Dyes Inlet. Dyes Inlet and Port Washington Narrows are also identified

as containing habitat suitable for marine resources, such as the subtidal geoduck and hard-shell clam (WDFW 2001).

The marine shorelines also provide wildlife habitat for marine mammals and birds. Marine mammals such as seals and otters use the shoreline areas and marine waters in the study area. High concentrations of shorebirds are found in the tidelands, which provide foraging and resting habitat, particularly during the winter migration periods. Based on documentation provided by the USFWS, segments of the shoreline area of Dyes Inlet and Port Washington Narrows, and adjacent upland areas, may also provide habitat for bald eagles.

Upland portions of the study area include a variety of vegetation cover types and land uses, ranging from stands of predominantly second-growth forest to highly developed urban areas. The forests are a mixture of coniferous and deciduous trees, including Douglas-fir, western hemlock, western red cedar, big-leaf maple, and red alder. These forests contain shrubs including ocean-spray, red huckleberry, Indian plum, and blackberries and ground cover plants including sword fern, salal, and Cascade Oregon grape (Parametrix 2001). The remaining forested stands are likely to provide the best wildlife habitat for terrestrial vertebrates, however, even these areas have limited value for wildlife due to the proximity of existing residential and commercial development.

2.9 WATER RESOURCES

Water resources in the study area are made up of marine waters, streams, lakes, and ground water. The main water feature is the Dyes Inlet/Port Washington Narrows system. This marine body of water makes up approximately a third of the project area. The surface waters of Dyes Inlet and Port Washington Narrows Inlet are categorized by the DOE as Class A waters (WAC 173-201A). Class A waters are considered excellent and are required to support all uses including water supply (agriculture, domestic, industrial), fish and shellfish, wildlife and recreation. The surface waters of Dyes Inlet and Port Washington Narrows are also listed on the DOE's 303(d) list of impaired and threatened waterbodies. The specific parameters that threaten these waterbodies include arsenic, antimony, cadmium, fecal coliform, mercury, and silver (WDOE 2001).

There are 17 streams entering Dyes Inlet comprising approximately 50 miles of streams. Chico Creek is the largest and most important of the streams in the Dyes Inlet drainage area (Williams 1975). Other drainages on the northwest and southwest side of Dyes Inlet include Lost, Wildcat, and Dickerson creeks. Steep slopes, fast flowing water, and deeply incised channels characterize these streams. Conversely, Chico Creek has several miles in the lower reach that runs through a broader valley.

Other important independent streams that empty into Dyes Inlet are Clear, Barker, and Mosher creeks. Clear Creek flows south through a broad shallow valley and enters Dyes Inlet at its northernmost tip, near Silverdale. Barker Creek flows south from Island Lake and enters Dyes Inlet at its northeastern tip, below Bucklin Hill Road. Mosher Creek flows south and west and enters Dyes Inlet on the eastern side of the inlet near Tracyton. The remaining 10 streams are small independent drainages.

There are also two streams that drain from the study area to Port Orchard: Illahee and Steele creeks. Illahee Creek has a moderate gradient, stable stream flow, and excellent stream bank cover (Williams 1975). Illahee Creek flows south and east within the Illahee Forest Preserve near McWilliams and Perry Avenue where it eventually enters Port Orchard Bay. Steele Creek has moderate gradient and excellent gravel throughout much of its length. The south branch is inaccessible in all but its lower 0.1 mile due to a highway fill and culvert blockage. The north branch and its tributary have excellent cover and provide high quality habitat (Williams 1975). Steele Creek flows south and east toward Port Orchard Bay adjacent to the northern tip of SR 303 near Brownsville.

In addition, there are two lakes in the general study area: Kitsap Lake and Wildcat Lake. Both of the lake systems are located to the north and west of the project study area.

Groundwater and/or aquifer recharge areas have not been assessed at this time, and are not included in this preliminary analysis.

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3. CRITERIA ANALYSIS

3.1 TRAFFIC DEMAND CRITERIA

Projected changes in volumes, as well as volume-to-capacity (v/c) ratios have been used to evaluate the effectiveness of the various alternatives in satisfying the purpose and need, namely reducing traffic demand on SR 303. The following paragraph describes how the various changes relate to effectiveness.

Achieving travel demand reduction goals on SR 303 are consistent with the purpose and need when capacity improvements to SR 303 are not included in the alternative. For alternatives with added capacity on SR 303, a v/c ratio lower than the No Build Alternative is also consistent with the purpose and need. An increase in volume on SR 303 without capacity improvements would not meet the purpose and need.

Traffic volume forecasts in the study area were prepared for the future No Build Alternative and all other alternatives using an updated version of the Kitsap County travel demand-forecasting model. The year 2030 was used as the planning horizon to compare the effectiveness of the study alternatives with the future No Build Alternative. The Kitsap County travel demand forecasting model uses regional population and employment from the Puget Sound Regional Council (PSRC). These population and employment forecasts from PSRC are further refined for input to the Kitsap County model. All future traffic volume forecasts reflect the growth anticipated to occur over the next 30 years.

Traffic volumes and volume-to-capacity ratios have been evaluated for:

- Reduction (in volume) on SR 303 North of Fairgrounds
- Reduction (in volume) on SR 303 North of Sheridan
- Reduction (in volume) on Warren Avenue Bridge.
- Traffic Volumes on New/Improved Facility

New Crossing and Arterial Connections

Generally this set of alternatives would result in the best reductions in traffic demand on SR 303 as compared to the other sets of alternatives. In particular, Alternatives 4A and 4B resulted in the highest percentage of traffic demand reduction. For example, at the Warren Avenue Bridge, Alternative 4B resulted in a reduction in demand of 34 percent and 4A a reduction of 30 percent. Similarly, on SR 303 north of Sheridan Road, Alternatives 4A and 4B reduced demand by 24 and 25 percent, respectively. Thus these alternatives rated best in terms of effectiveness.

The worst alternative at the Warren Avenue and North of Sheridan Road was Alternative 1, which only reduced demand by 2 or 3 percent. However, this alternative resulted in the highest demand reduction (13 percent) on SR 303 north of Fairgrounds Road.

All of the alternatives in this set of alternatives resulted in reduced demand at the first two locations (Warren Avenue and north of Sheridan Road). Alternatives 1, 2, 3 and 4A resulted in some improvement at the third location (north of Fairgrounds Road), although Alternatives 2, 3, and 4A produced minimal results (2, 0, and 1 percent, respectively).

Arterial Improvements

Alternatives 7 through 9 had similar effects on reducing travel demand, although not as significantly as the new crossing and arterial connections alternatives. Alternatives 7, 8, and 9 resulted in at least a 10

percent reduction at one of the modeling locations. At the other locations, results ranged from a 9 percent reduction to a percent increase in demand. Alternative 10 had almost no effect on either reducing or increasing traffic demand.

SR 303 Improvements

Alternatives 11, 12, and 13 generally resulted in an increase in traffic demand. Only Alternative 12 resulted in some reduction (9 percent) at SR 303 north of Fairgrounds Road. The increased traffic demand ranged from 45 percent for Alternative 11 on SR 303 north of Sheridan Road to 9 percent for Alternative 12 at the same location.

TDM/TSM

Alternative 14 would also be somewhat effective in meeting the purpose and need based on operational improvements to the SR 303. It would reduce traffic demand by 5 percent at all three modeling locations.

No Action

Alternative 15 would have a negative impact on traffic demand. There would be no new bridge crossing, SR 303 improvements, TDM/TSM measures, or improvements to arterial connections to SR 303. Thus traffic levels and congestion on SR 303 and adjacent arterials would increase and levels of service would decline

3.2 COMMUNITY IMPACTS CRITERIA

3.2.1 Displacement

New Crossing and Arterial Connections

Under this category, medium to high-level impacts would be generated from Alternatives 2, 3, 4 and 6. The underlying area is highly urbanized with strong single-family residential character and existing neighborhoods. The single-family homes are located primarily on small to medium size lots (i.e., 10,000-15,000 SF in size), with residences and yards directly abutting the existing right-of-way for a majority of this area. High-level impacts would be projected as the additional widening necessary to bring the roadway up to principal arterial standards could require displacement of portions of these areas, including in some cases, existing residences and/or isolated businesses.

Alternatives 4A and 4B would generate medium to high-level impacts. This area is characterized by medium density single-family residential development interspersed with pockets of undeveloped landscapes, such as wooded parcels and pastureland. Medium to high-level impacts would be projected due to the additional widening necessary to bring the roadway up to principal arterial standards. These improvements could require displacement to portions of these areas, including in some cases, existing residences.

Alternative 5A would be expected to generate medium to high-level impacts based on the presence of numerous professional office and business uses along the northern section of this route. This route is situated in close proximity to the hospital, and the additional widening required to bring the roadway up to principal arterial standards could produce displacement impacts, including existing professional and/or business uses. Medium to high-level impacts would also be expected at the south end of the alignment

based on the establishment of older medium to high-density single-family residential development and isolated businesses along this route. The additional widening necessary to bring the roadway up to principal arterial standards could generate displacement to portions of these areas, including potentially existing residences and/or isolated businesses.

Medium-level impacts would be generated under Alternatives 1 and 5. Impacts would stem from the additional widening necessary to bring the roadways up to principal arterial standards, which could potentially require displacement, including in some cases, existing residences and/or businesses.

Arterial Improvements

Under this category, medium to high-level impacts would be generated from improvements under Alternative 9. This area is highly urbanized with strong single-family residential character and existing neighborhoods. Older single-family homes are located primarily on small to medium size lots (i.e., 10,000-15,000 SF in size), with residences and yards in close proximity to the existing right-of-way for a majority of this area. The additional widening necessary to bring the roadway up to principal arterial standards could require displacements under this alignment, including in some cases, existing residences, retail establishments, and businesses at the southern end of the alignment.

Medium to high-level impacts would also be generated from improvements under Alternative 7. This alignment travels through a landscape characterized by a mixture of low and medium density single-family residential development. Impacts may not result in direct displacements, but potential encroachments could impair the use of properties in the underlying area.

Low-level impacts would be generated from improvements under Alternative 10. In this location, the predominant land use type is a combination of commercial and retail establishments with some multi-family uses. Based on the underlying land uses and zoning in the area, it is not anticipated that residences would be significantly impacted. Alternatively, because the predominant use of the area is retail and commercial, there are a number of businesses along this route that could be impacted from the proposed widening improvements. Based on the additional right-of-way that would be necessary to accommodate the proposed widening, medium to high-level impacts for businesses could be generated from improvements under this alternative.

SR 303 Improvements

Alternative 12 would generate medium-level impacts. This area contains large concentrations of single-family residential development, and the roadway is presently considered a minor arterial. Impacts would be medium-level as a result of additional widening to attain the one-way couplet design, which could lead to displacement to residences in some locations. High-level impacts would be generated from improvements under Alternatives 11 and 13. This underlying area is highly urbanized with a diverse mixture of commercial, business, retail, and multi-family residential uses. Impacts would be high-level as a result of the additional widening and HOV improvements that could result in displacement, particularly for businesses, in a number of areas.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. The basis for this rating would be due to the improvements consisting of mostly operational measures to the existing SR 303 corridor. Proportionately greater impacts could result from the proposed frontage road improvements as they could potentially extend outside of the existing footprint for SR 303.

No Action

The No Action Alternative would not result in built environment impacts within the project study area.

3.2.1.1 Neighborhood and Livability

New Crossing and Arterial Connections

High-level impacts would be generated from improvements under Alternatives 2 and 3. These areas are moderately urbanized with strong single-family residential character and existing neighborhoods. Changing the existing roadways to four to five travel lanes in these areas will directly impact the character and livability. High-level impacts would also be generated from improvements under Alternative 6. The southern end of the proposed alignment under this alternative travels through an area containing older high-density single-family residential homes under a roadway that currently fits the designation of a local collector or minor arterial. Upgrades at under this alignment will introduce elements of change to the character and livability of the neighborhood. Such change could be in the form of increased traffic, increased noise, or increased development pressure, etc.

Medium-level impacts would be generated from improvements under Alternative 5, particularly on Pacific from 15th Street toward SR 304. This area consists of a largely developed urban setting near downtown Bremerton, which contains dense multi-family, commercial, institutional and retail uses.

Medium-level impacts would be generated from improvements under Alternatives 1. The underlying area under the proposed alternatives contains predominantly semi-rural to high-density urban single-family residential development. The impacts would primarily stem from the degree of change to the existing neighborhood streets under the proposed improvements. High-level Impacts would be generated from improvements under Alternatives 4A, and 4B. The proposed improvements under these alternatives could change the existing traffic patterns, potentially increasing the vehicle volumes, which would also introduce elements of change to the character and livability of a particular neighborhood. The resulting change could be produce increased traffic, increased noise, and potentially increased development pressure.

Alternative 5A would be expected to generate low to medium-level impacts. The north section of this route would be expected to generate low-level impacts due to the character of the underlying area as a mixture of professional, commercial, institutional, and multi-family residential land uses. The existing road network that serves this area consists of roads designated as both minor and principal arterials. A considerable degree of change would be produced from the proposed road improvements under this alternative, however, the degree of change to the affected area would be minimized somewhat due to existing development, and the existing roadway designations.

Arterial Improvements

Under this category, medium to high-level impacts would be generated from improvements under Alternative 9. This area is highly urbanized with strong single-family residential character, and intact older neighborhoods. The residences under this alignment are located on small to medium size lots (i.e., 10,000-15,000 SF in size), with structures in close proximity to the existing right-of-way, particularly near the southern end of Perry Avenue. Impacts would be medium to high level as a result as the additional widening necessary to bring the roadway up to principal arterial standards. The resulting change in the roadway designation to a principal arterial could alter the character of the neighborhood by increasing noise, traffic, and/or development pressure.

Medium-level impacts would be generated from improvements under Alternatives 7 and 8. These roads travel through a mixture of low and medium density single-family residential developments. The existing roadway designation through a majority of these routes is characterized as minor arterials. The change from the existing designation to a principal arterial designation would produce moderate amounts of change to the character of the neighborhood.

Low-level impacts would be generated from improvements under Alternative 10, as the majority of the proposed alternative travels through a heavily commercialized and developed portion of the City of Bremerton. Because the present route is considered a principal arterial additional widening would not be expected to introduce a significant degree of change.

SR 303 Improvements

Under this category, low-level impacts would be generated from improvements under Alternatives 11 and 13. The alignments under both alternatives contain a mixture of dense commercial, business, retail, and multi-family residential uses. Impacts would be low-level as a result as the additional widening and HOV improvements, based on the extent of existing development and the status of the road designations as principal arterials.

Under this category, medium-level impacts would be generated from improvements under Alternative12. This area contains large concentrations of single-family residential development, and is presently considered a minor arterial. Impacts would be medium-level as a result as the additional improvements to upgrade the minor arterial to attain the one-way couplet design, which could introduce a considerable degree of change to the neighborhood. The upgraded roadway could also alter the character and livability in this area by generating noise impacts stemming from increased traffic.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. Operational improvements to the existing SR 303 corridor, such as signalization, signage, and combined accessways, would not be expected to produce significant impacts to the character and livability of adjacent neighborhoods. Proportionately greater impacts could result from the proposed frontage road improvements as they could potentially extend outside of the existing SR 303 corridor.

No Action

The No Action Alternative would not result in built environment impacts within the project study area.

3.2.1.2 Cultural Resources

New Crossing and Arterial Connections

The new crossing routes and arterial connections, namely Alternatives 1, 2, 3, 4A, 4B, 5, 5A, and 6, would be expected to generate the greatest impacts. The basis for this classification is due to their relationship to the marine environment (i.e., Dyes Inlet/Port Washington Narrows), publicly owned parks, and recreation/conservation areas (i.e., Lion's Field, Evergreen Park, etc.). These alternatives would be expected to generate medium to high-level impacts to cultural resources, particularly potential 4(f) resources.

Overall, Alternatives 1-6 would be expected to generate low, medium, and high-level impacts depending on the level of improvements, and their proximity to cultural resources. Alternative 1 would generate a

medium to high level rating due to its close proximity to the Kitsap County Fairgrounds, and potential 4(f) impacts. Alternative 6 would receive a medium to high level rating due to the proposed alignment's location to the Illahee Forest Preserve, and potential 4(f) impacts. Similarly, Alternative 4A would receive a high level rating as the proposed bridge crossing under this alignment would span Lion's Field on the north shore of Port Washington Narrows, resulting in 4(f) impacts. Alternative 5A would receive medium to high impacts based on the alignment paralleling Evergreen Park to the south, and the extension of the alignment through Bremerton Junior High School and potential 4(f) resources, to the north. The remaining new crossing and arterial connection routes would receive a proportionately lower rating due to the alignments traveling through a densely developed urban environment with somewhat limited impacts to public park, and resource lands.

Arterial Improvements

Alternatives 7-10 would be expected to generate low to medium-level impacts. The alignments under these alternatives maintain travel through predominantly upland locations with limited Public Park, and resource land.

SR 303 Improvements

Alternatives 11-13 would be expected to generate minimal to low-level impacts. The basis for this rating is, in part, due to the extent of existing urban development along the SR 303 Corridor and the status of the road designations as principal arterials. Both of these factors indicate that the landscape has been significantly impacted due to past development, therefore cultural resources may be somewhat limited.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. The operational improvements to the existing SR 303 corridor would not be expected to significantly impact cultural resources. Proportionately greater impacts could result from the implementation of frontage roads under this alternative, as improvements could extend outside of the existing SR 303 corridor.

No Action

The No Action Alternative would not result in built environment impacts within the project study area.

3.2.1.3 Business Impacts

New Crossing and Arterial Connections

The potential new crossing rontes and arterial connections, namely Alternatives 1, 2, 3, 5, and 6 would be expected to generate low to medium-level impacts. The rating would be proportionately higher for the alternatives that parallel the urbanized commercial and business uses near the SR 303 corridor, such as Alternatives 5 and 6. The alignments under these alternatives receive direct access off principal arterials, and the resulting improvements could generate moderate impacts to parking and access.

Based on the limited nature of business uses along Alternatives 4A and 4B, they would be expected to generate low-level impacts. Alternative 5A would be expected to generate medium-level impacts to businesses on the north side of Port Washington Narrows. This rating applies based on the medium to high density commercial, professional office, and institutional development found within the Old Wheaton Way, and Cherry Street area. Alternative 5A would be expected to generate proportionately lower impacts on the south side of Port Washington Narrows, between Park Street and 11th Avenue, due

to the predominantly residential character and somewhat limited concentration of commercial and business uses.

Arterial Improvements

Medium-level impacts would be generated from improvements under Alternative 10 as the majority of the proposed alignment travels through a heavily commercialized and developed portion of the City of Bremerton with direct access provided from the proposed alternative.

Low to medium-level impacts would be generated from improvements under Alternative 9, based on the mixture of small to medium sized commercial, and retail uses interspersed through the potential alternative. Overall, the area tends to contain a combination of older single-family residential neighborhoods, and similarly, somewhat older commercial/retail businesses. As such, these businesses, and residences were developed largely in close proximity to the existing roadway corridor, therefore, direct impacts from roadway improvements could result.

Low-level impacts would be generated from Alternatives 7 and 8 based on the predominant use of these areas as being single-family residential, therefore, a moderate number of businesses could be directly impacted.

SR 303 Improvements

Under this category, high-level impacts would be generated from the additional widening and HOV improvements under Alternatives 11 and 13. The basis for this rating originates from the proposed alternatives traveling through a heavily commercialized and developed portion of the City of Bremerton with direct access provided from SR 303. Improvements under both alternatives would also generate high-level impacts to parking leading to the potential loss of these facilities for some businesses.

Under this category, low-level impacts would be generated from improvements under Alternative 12. The built environment in this area contains large concentrations of medium-density, single-family residential development, and is predominantly served by a principal arterial network of roads. Isolated commercial and retail uses can be found in the outlying vicinity.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. The operational improvements to the existing SR 303 Corridor would not be expected to produce significant impacts. Proportionately greater impacts could result from the implementation of frontage road improvements, which would potentially extend outside of the existing SR 303 corridor.

No Action

The No Action Alternative would not result in built environment impacts within the project study area.

3.2.1.4 Aesthetics/Visual Quality

New Crossing and Arterial Connections

For the new bridge crossing and arterial connections, such as Alternatives 1, 2, 3, 4A, 4B, 5, 5A, and 6, medium to high-level impacts to aesthetics and visual resources would be generated from the improvements (i.e., new bridge crossing). This rating would apply based on the degree of change to the visual environment, particularly when factoring in the considerable scale of the improvements, and the

quality of visual resources (i.e., views of Dyes Inlet and Port Washington Narrows and Olympic Mountains).

Arterial Improvements

Medium-level impacts would be generated from the proposed improvements under Alternatives 7 and 8. This rating would primarily apply based on the degree of improvements in comparison to the existing conditions and moderately good visual quality of this area (i.e., views of Dyes Inlet and Port Washington Narrows and Olympic Mountains). The proposed improvements could influence change to the aesthetic quality of the area by removing existing vegetation and trees in places, which provide a visual buffer. The visual and aesthetic environment under these alternatives is characterized by areas in transition with a semi-rural landscape still in place, and healthy stands of existing vegetation. In some locations, concentrations of mixed coniferous and deciduous forests still exist, and moderately sized undeveloped parcels are not uncommon. The implementation of a street-planting plan associated with the proposed improvements could mitigate the loss of vegetation and trees to some extent.

Medium-level impacts would be generated from the widening improvements under Alternative 9 due to the potential loss and removal of vegetation and trees, and the degree of change to the existing aesthetics of the built environment. These impacts could be mitigated somewhat by the installation of landscaping, including street trees, to replace the potential loss of existing visual buffers.

Low-level impacts to aesthetics and visual quality would be generated from the widening improvements under Alternative 10. Impacts would primarily stem from the potential removal and loss of vegetation, and the somewhat minor degree of change to the existing aesthetics of the built environment. The built environment in this area is heavily developed with a mixture of highly intensive commercial, retail, and business uses along the existing SR 303 corridor.

SR 303 Improvements

Under this category, low-level impacts would be generated from improvements under Alternatives 11 and 13. This rating would primarily apply based on the potential loss and removal of vegetation and trees, the degree of improvements in relation to existing development of the SR 303 corridor, and the somewhat minor degree of change to the existing aesthetics.

Medium-level impacts would be generated from the proposed widening improvements under Alternative 12. The basis for this rating is the overall degree of improvements that could influence change to the aesthetics and moderately good visual quality of this area (i.e., views of Dyes Inlet and Port Washington Narrows and Olympic Mountains). The aesthetic and visual environment in this area is characterized by a semi-rural landscape with healthy stands of vegetation, including concentrations of mixed coniferous and deciduous forestland, and moderately sized undeveloped parcels. Visual buffer impacts could result through the potential removal of existing vegetation and trees.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. The improvements consist of mostly operational measures to serve the existing highway corridor for SR 303. Proportionately greater impacts could result from implementation of possible frontage road improvements as they could extend outside of the existing footprint for SR 303.

No Action

The No Action Alternative would not result in built environment impacts within the project study area.

3.3 NATURAL ENVIRONMENT IMPACTS CRITERIA

3.3.1.1 Wetlands and Shorelines

New Crossing and Arterial Connections

For the new bridge crossing and arterial connections, namely, Alternatives 1, 2, 3, 4A, 4B, 5, and 5A, medium to high-level impacts would be generated based on impacts primarily to the shoreline, and adjacent estuarine wetland environment. As referenced in Kitsap County's Building Limitation's Map, these potential routes cross-land areas on or adjacent to Type 1 waterbodies (i.e., Dyes Inlet and Port Washington Narrows) which also contain hydric soils. The basis for the above rating classification is, in part, the potential for stream crossings in addition to the bridge crossings over Dyes Inlet and Port Washington Narrows, impacts to shoreline and floodplain areas, and/or the presence of severe geologic hazard soils (Soils 30% and greater). In terms of rating the potential impacts for each crossing route, Alternative 1 would receive a high-level impact rating, while the remaining alternatives, with the exception of Alternatives 5 and 6, would receive a medium-level impact rating.

Alternatives 5 and 6 would generate low-level impacts from the proposed improvements. The basis for this rating is the somewhat limited nature of hydric soils, and the extent of urban development adjacent to the shoreline environment at the southern end of these alignments. Proportionately greater low to medium-level impacts would be generated from Alternative 6 at the northern end of the alignment near Sunset Avenue. The basis for this rating is the presence of geologic hazard soils (Soils 30% and greater) at the north end of the proposed alignment and similarly the potential for stream encroachments and/or crossings near Illahee Creek.

Arterial Improvements

For Alternatives 7 and 9 medium-level impacts would be generated based on impacts primarily to adjacent palustrine wetland areas. As referenced in Kitsap County's Building Limitation's Map, these potential routes cross-terrain on or adjacent to soils that are noted to contain hydric soils. The basis for this classification is the potential for impacts to terrain identified as also containing severe geologic hazard soils (Soils 30% and greater). For the remaining alternatives, low impacts would be generated from Alternatives 8 and 10. The basis for this rating is the limited nature of hydric soils along the proposed routes, and the overall separation from the shoreline environments of Dyes Inlet and Port Washington Narrows, and/or tributary streams.

SR 303 Improvements

Low-level impacts would be generated from improvements under Alternatives 11-13. The basis for this rating is the somewhat limited nature of hydric soils and shoreline terrain in the proposed alignments, and the predominantly developed nature of affected environment, particularly along SR 303.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. The operational improvements to the existing SR 303 corridor would not be expected to produce significant impacts to wetlands and

shorelines under this alternative. Proportionately greater impacts could result from possible frontage road improvements that could extend beyond the existing SR 303 corridor.

No Action

The No Action Alternative would not result in natural environment impacts within the project study area.

3.3.1.2 Threatened and Endangered Species

New Crossing and Arterial Connections

The new bridge crossings and arterial connections, namely Alternatives 1, 2, 3, 4A, and 4B, would generate the greatest impacts. This classification would apply based on the considerable scale of the improvements, which could produce direct impacts to the marine and freshwater environment, and secondary in-direct impacts (i.e., loss of vegetation, shading, noise) to the adjacent shoreline and forest environments. These alternatives would be expected to generate medium to high-level impacts to threatened and endangered species, primarily fisheries (i.e., Bull trout and Chinook salmon) and avian species (i.e., bald eagle). They would also be expected to produce medium-level impacts for potential mitigation measures, and proportionately higher ratings for the ability to comply with ESA related requirements.

The remainder of the proposed alternatives, namely 5, 5A, and 6 would generate minimal to low-level impacts based on the degree of improvements and the limited availability of suitable habitat near the particular alignment to support threatened and endangered species. Alternative 6 would generate minimal to low-level impacts. The basis for this rating stems from the fact that replacement and/or widening under this alternative takes place within an existing transportation corridor presently impacted by development, and the overall limited nature of suitable habitat in the immediate area for threatened and endangered species. Proportionately greater low to medium-level impacts would be generated from Alternative 6 at the northern end of the alignment near Sunset Avenue. The basis for this rating is the potential for stream encroachments and/or crossings in this area that may contain threatened and endangered salmon habitat.

Arterial Improvements

For Alternatives 7, 8, 9, and 10, low-level impacts would be generated. The basis for this classification would be the level of existing impacts to the natural environment due to development activities, which limits the availability of suitable habitat for threatened and endangered species.

SR 303 Improvements

Minimal impacts would be generated from improvements under Alternatives 11 and 13. The basis for this rating is the limited nature of suitable habitat found in the proposed alignments for threatened and endangered species, and the predominantly developed nature of the natural environment, particularly along SR 303. Similarly, low-level impacts would also be expected for Alternative 12. The impacts for Alternative 12 would be proportionately higher based on the presence of less dense urban development and the potential availability of suitable habitat that could potentially support threatened and endangered species.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. The operational improvements to the existing SR 303 corridor would not be expected to produce significant impacts to threatened and

endangered species. Proportionately greater impacts could result from the proposed frontage road improvements as they could extend outside of the existing footprint for the SR 303 corridor.

No Action

The No Action Alternative would not result in natural environment impacts within the project study area.

3.3.1.3 Fish and Wildlife Habitat

New Crossing and Arterial Connections

The new bridge crossings and arterial connections, namely Alternatives 1, 2, 3, 4A, 4B, 5, and 5A would generate the greatest impacts due to the scale of the improvements affecting both the upland and marine environments. In particular, the potential in-water work required to construct the bridge crossings could lead to direct impacts to water bodies, and the adjacent shoreline environment (i.e., Dyes Inlet and Port Washington Narrows). These alternatives would be expected to generate low to medium-level impacts to fish and wildlife habitat depending on the degree of improvements.

Minimal to low-level impacts would be generated from the remainder of the proposed routes, namely Alternatives 6. The basis for this rating stems from the fact that bridge replacement and/or widening under this alternative takes place within an existing transportation corridor presently impacted by development, which limits the availability of suitable fish and wildlife habitat in the underlying area. Proportionately greater low to medium-level impacts would be generated from Alternative 6 at the northern end of the alignment near Sunset Avenue. The basis for this rating is the potential for impacts to the Illahee Forest Preserve and Illahee Creek, both of which are reported to contain considerable fish and wildlife resources.

Arterial Improvements

For Alternatives 7-10, low-level impacts would be generated based on minor to moderate encroachments to adjacent streams and wetland buffer areas, that could support suitable fish and wildlife habitat.

SR 303 Improvements

Minimal to low-level impacts would be generated from improvements under Alternatives 11-13. The basis for this rating is the limited nature of suitable habitat found in the proposed alignments due to the developed nature of the natural environment, particularly along SR 303.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. The operational improvements to the existing SR 303 corridor would not be expected to produce significant impacts to fish and wildlife habitat. Proportionately greater impacts could result from the implementation of proposed frontage roads, as these improvements could extend beyond the limits of the existing SR 303 corridor.

No Action

The No Action Alternative would not result in natural environment impacts within the project study area.

3.3.1.4 Water Resources

New Crossing and Arterial Connections

The new bridge crossing and arterial connections, namely Alternatives 1, 2, 3, 4A, 4B, 5, 5A, and 6, would generate the greatest impacts due to the considerable scale of the improvements which could introduce additional impervious surface areas to the surrounding surface waters. The introduction of additional impervious surface areas to the existing water resources, particularly Dyes Inlet and Port Washington Narrows, could lead to direct impacts. These routes would be expected to generate medium to high-level impacts to water resources. The arterial connection routes without the crossings would be expected to generate low-level impacts to water resources based on the diminished scale of the improvements, the lack of water crossings, and overall in-direct impacts to water resources.

Arterial Improvements

For Alternatives 7-9, low-level impacts would be generated. The basis for this rating is the lower degree of improvements resulting in the creation of less impervious surface areas, and the lack of water crossings, which would minimize direct impacts to water resources.

SR 303 Improvements

Low to medium-level impacts would be generated from Alternatives 11 and 13. The basis for this rating is the somewhat limited nature of water crossings and/or waterbodies under the proposed alignments and the predominantly developed nature of the natural environment, particularly along SR 303. Low-level impacts would also be generated from Alternative 12 based on the less dense urban development patterns for the area, which retains greater pervious surface areas. In this case, potentially higher pervious surface areas could offset somewhat the additional impervious surfaces created from proposed roadway improvements.

TDM/TSM

Minimal to low-level impacts would be generated from Alternative 14. The operational improvements to the existing SR 303 corridor would not result in significant impacts to water resources. Proportionately greater impacts could result from the proposed frontage road improvements as they could extend outside of the existing limits of the SR 303 corridor.

No Action

The No Action Alternative would not result in natural environment impacts within the project study area.

4. REFERENCES

City of Bremerton Department of Community Development. 1998. Bremerton Zoning Atlas. Bremerton, Washington.

Kitsap County Department of Community Development. 1999. Kitsap County Buildable Limitations Map. Port Orchard, Washington.

Kitsap County Department of Community Development. 1999. Kitsap County Comprehensive Plan Map. Port Orchard, Washington.

National Marine Fisheries Service (NMFS). 2001. Endangered Species Act Status of West Coast Salmon and Steelhead, per information request.

Soil Conservation Service. 1980. Soil Survey of Kitsap County Area, Washington. United States Department of Agriculture. Washington, D.C.

Washington Department of Fish and Wildlife (WDFW). 1994-2001. Priority Habitats and Species Program (PHS). Bremerton West and East quad, and Poulsbo quad, per information request.

Washington State Department of Transportation (WSDOT). 2001. Origin - Destination Survey Results, SR 303 Bremerton to Silverdale Corridor Study.

Washington State Office of Archaeological and Historical Preservation (OAHP). 2001. Historic Places in Washington State Record List, per information request.

Williams, R.W., R.M. Laramie, and J.J. Ames. 1975. A catalog of Washington streams and salmon utilization. Washington Department of Fisheries. Puget Sound Region, Volume 1, Olympia, Washington.

United States Department of the Interior (DOI), Fish and Wildlife Service. 2001. Species list for Bremerton West, Bremerton East and Poulsbo Quadrangles, per information request.

United States Department of the Interior (DOI), Fish and Wildlife Service. National Wetlands Inventory Map (NWI), Bremerton West, East and Poulsbo Quadrangles. 1987.

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SR 303 CORRIDOR STUDY
CRITERIA RATINGS MATRIX

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COMPARATIVE RATING SCALE				
WORST →				BEST
○	◔	◑	◕	●
Least Effective or Most Impacts	Lower Effect., Med. Impacts	Medium Effect. or Low Impacts	Increased Eff., Minimal Impact	Most Effective, Imp. Env.

	Comparative Rating: SR 303 Bremerton to Silverdale Transportation Study: New Crossing and Arterial Connections								
Traffic Demand	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 4A	Alt. 4B	Alt. 5	Alt. 5A	Alt. 6
Reduction on SR 303 N/o Fairgrounds	◑	◔	○	○	◔	○	○	○	○
Reduction on SR 303 N/o Sheridan	◔	◕	◕	●	●	●	◑	◑	◑
Reduct. on Warren Avenue Bridge	◔	◑	◕	●	◕	●	◕	◕	◑
Traffic Vol. on New/Improved Facility	◔	◑	◕	◕	◕	◕	◕	◕	◑
Overall Rating	◔	◑	◑	◕	◕	◕	◑	◑	◔
Community Impacts	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 4A	Alt. 4B	Alt. 5	Alt. 5A	Alt. 6
Displacement	◔	○	○	○	○	○	◔	◔	○
Neighborhood/Livability	◔	○	○	○	○	○	◔	◔	◔
Cultural Resources	◔	◔	◔	◔	◔	◔	◑	◔	◑
Business Impacts	◑	◑	◑	◑	◑	◑	◔	◔	◔
Aesthetics/Visual Quality	◔	◔	◔	◔	◔	◔	◑	◔	◔
Overall Rating	◔	○	○	○	○	○	◔	◔	◔
Natural Environment Impacts	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 4A	Alt. 4B	Alt. 5	Alt. 5A	Alt. 6
Wetlands and Shorelines	○	◔	◔	◔	◔	◔	◑	◔	◑
T&E[1] Species	◔	○	◔	◑	◑	◔	◑	◑	◕
Fish and Wildlife Habitat	◔	◑	◔	◑	◑	◔	◑	◑	◕
Overall Rating	○	◔	◔	◑	◑	◔	◑	◑	◕

Notes:

Alt. 1= Newberry Hill to Fairgrounds (= Policy Committee Recommendation)
Alt. 2= Rocky Point to Riddell
Alt. 3= Wycoff to Sylvan
Alt. 4= Pine to Naval
Alt. 4A= Central Valley/Pine/Naval (Combined Alt.)
Alt. 4B= Snyder to McWilliams (Combined Alt.)
Alt. 5= Pacific to Wheaton
Alt. 5A= Park to Central Valley (Combined Alt.)
Alt. 6= Replace Manette Bridge

T&E[1]= Threatened and Endangered Species

COMPARATIVE RATING SCALE

WORST →				BEST
○	◔	◑	◕	●
Least Effective, or Most Impacts	Lower Effect., Medium Impacts	Medium Effect. Or Low Impacts	Increased Eff., Minimal Impact	Most Effective, Imp. Env.

	Comparative Rating			
	SR 303 Bremerton to Silverdale Transportation Study Arterial Improvements			
Traffic Demand	Alt. 7	Alt. 8	Alt. 9	Alt. 10
Reduction on SR 303 N/o Fairgrounds	◑	◑	○	◔
Reduction on SR 303 N/o Sheridan	◑	◑	◑	◔
Reduction on Warren Avenue Bridge	○	○	◔	○
Overall Rating	◔	◔	◔	○
Community Impacts	Alt. 7	Alt. 8	Alt. 9	Alt. 10
Displacement	◔	◔	○	◔
Neighborhood/Livability	○	○	◔	◑
Cultural Resources	◑	◑	◑	◑
Business Impacts	◑	◑	◔	○
Aesthetics/Visual Quality	◔	◔	◔	◑
Overall Rating	◔	◔	◔	◑
Natural Environment Impacts	Alt. 7	Alt. 8	Alt. 9	Alt. 10
Wetlands and Shorelines	◔	◑	◔	◑
T&E[1] Species	◑	◑	◑	◑
Fish and Wildlife Habitat	◑	◑	◑	◑
Overall Rating	◑	◑	◑	◑

Notes:

Alt. 7= Widen Central Valley/Riddell/Pine/Sheridan
Alt. 8= Widen McWilliams/Pine/Sheridan
Alt. 9= Widen Perry from 11th to McWilliams. Widen McWilliams from Perry to SR 303
Alt. 10= Widen SR 310 from SR 3 to 11th

T&E[1]= Threatened and Endangered Species

COMPARATIVE RATING SCALE

WORST →				BEST
○	◔	◑	◕	●
Least Effective, or Most Impacts	Lower Effect., Medium Impacts	Medium Effect. Or Low Impacts	Increased Eff., Minimal Impact	Most Effective, Imp. Env.

Comparative Rating

SR 303 Bremerton to Silverdale Transportation Study
SR 303 Capacity Improvements
and TDM/TSM Improvements

Traffic Demand	Alt. 11	Alt. 12	Alt. 13	Alt. 14
Production on Pine Road	◕	○	◕	◕
Production on Central Valley Road	○	○	◕	◕
Production on Perry Avenue	◕	○	◕	◕
Traffic Volumes on SR 303	◕	●	◕	◕
Overall Ranking	◕	○	◕	◕
Community Impacts	**Alt. 11**	**Alt. 12**	**Alt. 13**	**Alt. 14**
Displacement	○	○	○	◕
Neighborhood Cohesiveness	◕	○	◕	◕
Cultural Resources	◕	○	◕	◕
Business Impacts	○	○	○	●
Aesthetics/Visual Quality	◕	○	◕	◕
Overall Ranking	◕	○	◕	◕
Natural Environment Impacts	**Alt. 11**	**Alt. 12**	**Alt. 13**	**Alt. 14**
Wetlands and Streams	◕	○	◕	◕
T&E[1] Species	◕	○	◕	◕
Plant and Wildlife Habitat	◕	○	◕	◕
Overall Ranking	◕	○	◕	◕

Notes: (=Policy Committee Recommendation)

Alt. 11= Widen SR 303 from 11th to Fairgrounds 6 to 7 lanes.

Alt. 12= One way couplet (SR 303 Northbound/Pine St. Southbound). Widen Pine between McWilliams and Sheridan to 3 lanes.

Alt. 13= HOV lanes from 11th to Fairgrounds. Check reversible lanes on SR 303

Alt. 14= TDM/TSM

T&E[1]= Threatened and Endangered Species

COMPARATIVE RATING SCALE				
WORST →				BEST
○	◔	◑	◕	●
Least Effective, or Most Impacts	Lower Effect., Medium Impacts	Medium Effect. Or Low Impacts	Increased Eff., Minimal Impact	Most Effective, Imp. Env.

Comparative Rating
SR 303 Bremerton to Silverdale Transportation Study
New Crossing & Arterial Connections, SR 303 Improvements, TDM/TSM, No Build-
Policy Committee Recommendations

Traffic Demand	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt. 14	Alt. 15
Reduction on SR 303 N/o Fairgrounds	◔	○	○	◕	◔	◔	○
Reduction on SR 303 N/o Sheridan	●	●	◑	◑	◑	◔	○
Reduction on Warren Avenue Bridge	◕	●	◕	◕	◔	◔	○
Traffic Vol. on New/Improved Facility	◕	◕	◕	◕	◑	◔	○
Overall Rating	◕	◕	◑	◕	◑	◔	○
Community Impacts	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt. 14	Alt. 15
Displacement	○	○	◔	○	○	◕	◕
Neighborhood/Livability	○	○	◔	◑	◑	◕	◕
Cultural Resources	◔	◔	◔	◕	◕	◕	◕
Business Impacts	◑	◑	◔	○	○	●	◕
Aesthetics/Visual Quality	◔	◔	◔	◕	◕	◕	◕
Overall Rating	○	○	◔	◑	◑	◕	◕
Natural Environment Impacts	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt. 14	Alt. 15
Wetlands and Shorelines	◔	◔	◔	◑	◑	◕	◕
T&E[1] Species	◑	◔	◑	◕	◕	◕	◕
Fish and Wildlife Habitat	◑	◔	◑	◕	◕	◕	◕
Overall Rating	◑	◔	◑	◕	◕	◕	◕

Notes:

Combined Alt.s: 4A, 4B
Alt. 4A= Central Valley/Pine/Naval
Alt. 4B= Snyder to McWilliams
Alt. 5A= Park to Central Valley
Original Alt.s: 6,11, 13, 14, 15
Alt. 11= Widen SR 303 from 11th to Fairgrounds 6 to 7 lanes
Alt. 13= HOV lanes from 11th to Fairgrounds (peak period only- includes 6 lane bridge)
Alt. 14= TDM/TSM
Alt. 15= No Build Alternative

T&E[1]= Threatened and Endangered Species

APPENDIX C

Discipline Reports- 2nd Level Screening Analysis

This document is for comparative purposes only and is subject to change pending more detailed analysis

SCREENING CRITERIA AND RATING SUMMARY MATRIX [1,2]

SR 303 Corridor Study									
			2030						
	Purpose	Need	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt. 14
Highway & Arterials									
LOS – Corridor/ Signalized Intersections	M – P,G	C	○	●	◕	◕	◑	◔	◔
VMT (Vehicle Miles Traveled) & VHT (Vehicle Hours Traveled)	M – P,G	C	○	●	◕	●	◑	◔	◕
Travel Time SOV/HOV/Transit	M – P	C, R, MM	◔	◑	◑	◑	◑	◕	◑
Freight Access	M – G	B	○	◕	◕	◕	◑	◑	◔
TDM/TSM									
Mode Shift/Travel Demand Reduction	M – P	MM, TD	◔	◔	◔	◑	◑	●	◕
Pedestrian and Bicycle Access and Facilities	M – P	MM, CP	○	◕	◕	◕	◑	◑	◔
Person Throughput	M – P	C, CE	◔	◕	◕	◑	◕	◕	◑
Safety									
Potential Accident Reduction	S - P	S	◔	◔	◔	◔	◕	◑	◕
Community Impacts									
Displacements		B, E, N	NA	○	○	○	◔	◔	◑
Neighborhood and Livability		N	NA	○	○	◔	◑	◑	◕
Cultural/Historical/Tribal Resources		E	NA	◕	◕	◑	◑	◑	◑
4(f) Resources		E	NA	◔	◕	○	◑	◑	◑
Business Impacts		B	NA	◕	◔	○	○	○	◔
Aesthetic and Visual Quality		E, N	NA	○	○	◔	◑	◑	◑
Prime and Unique Farmland Soils		E	NA	◕	◕	◕	◑	◑	◑
Plan Compatibility									
Consistency with Statewide Plans		CP	NA	◔	◔	◔	◕	◕	●
Consistency with Regional Plans		CP	NA	◔	◔	◔	◕	●	●
Consistency with Local Plans		CP	NA	○	○	○	◕	◕	●
Natural Environmental Impacts									
Wetlands and Shorelines		E	NA	○	◕	◔	◑	◑	◑
Threatened and Endangered Species		E	NA	◑	◔	◑	◕	◕	◕
Fish and Wildlife Habitat		E	NA	◔	◔	◔	◑	◑	◕
Water Resources		E	NA	◔	◔	◔	◑	◑	◕
Air Quality		E	NA	◕	◑	◔	○	◔	●
Noise		E	NA	○	○	○	◔	◔	◑
Hazardous Waste		E	NA	◕	◑	◔	○	○	◔
Cost									
Project Cost		CE	●	○	◔	○	◑	◑	◕
Mitigation Cost		CE	●	○	○	◔	◔	◔	◕

[1]Ratings:
●= Most Effective, Improved Environment. ◕= Increased Effectiveness, Minimal Impact. ◑= Medium Effectiveness, Low Impacts. ◔= Lower Effectiveness, Medium Impacts. ○= Least Effective or Most Impacts. Revision Date: January 17, 2002

MAJOR SCREENING CRITERIA AND RATING SUMMARY MATRIX [1,2]

SR 303 Corridor Study									
			2030						
Major Elements	**Purpose**	**Need**	**No-Build**	**Alt. 4A**	**Alt. 4B**	**Alt. 5A**	**Alt. 11**	**Alt. 13**	**Alt. 14**
LOS – Corridor/ Signalized Intersections	M – P,G	C	○	●	◕	◕	◑	◔	◔
Person Throughput	M – P	C, CE	◔	◕	◕	◑	◕	◕	◑
Potential Accident Reduction	S - P	S	◔	◔	◔	◔	◕	◑	◕
Displacements		B, E, N	NA	○	○	○	◔	◔	◑
Neighborhood and Livability		N	NA	○	○	◔	◑	◑	◕
Business Impacts		B	NA	◕	◔	○	○	○	◔
Wetlands and Shorelines		E	NA	○	◕	◔	◑	◑	◑
Project Cost		CE	●	○	◔	○	◑	◑	◕

[1]Ratings:
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[2] ***Legend***

Purpose:
- **G** = Goods
- **M** = Mobility
- **P** = People
- **S** = Safety

Need:
- **B** = Minimizing Impacts to Businesses
- **C** = Manage Congestion
- **CE** = Cost Effective
- **CP** = Consistency with Statewide, Regional and Local Plans
- **E** = Minimizing Impacts to Environment
- **MM** = Improve Multi-modal Travel
- **N** = Minimizing Impacts to Neighborhoods
- **S** = Improve Safety
- **TD** = Accommodate Travel Demand

[1]Ratings:
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LOS - CORRIDOR/SIGNALIZED INTERSECTIONS

Traffic congestion was measured using Level of Service (LOS) analysis for study roadway segments and signalized intersections. Intersection LOS conditions were evaluated for general purpose (GP) traffic throughout the network and compared to no-build conditions. Intersections often are the constraints in a corridor network, therefore, a review of their conditions is appropriate in the alternative screening analysis.

The first table below summarizes the number of intersections ranked at various LOS ratings. Intersection LOS ratings begin at LOS A (the best conditions) and go alphabetically through LOS F (the worst conditions). The tables also summarizes the number of existing study intersections with delays less than (<) no-build for each build alternative.

All build alternatives show a reduction in intersection delay at numerous intersections. Sometimes the reduction in delay was not enough to change the LOS rating at an intersection, therefore, although conditions may improve, the LOS rating does not improve the situation in all cases. Alt. 4A, 4B, and 5A have the most number of study intersections with improved LOS. Alt. 11 has a moderate number of study intersections with improved LOS and reduced delays. Alt. 13 and 14 are similar to no-build, but intersection delays would be decreased at most intersections.

LOS Summary	2030						
Number of Intersections	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
LOS A-D	10	14	13	16	12	10	10
LOS E	3	5	4	4	3	5	3
LOS F	14	7	9	10	11	11	13
With Delay < No-Build		18	17	14	17	13	23

LOS Conditions	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Rating	○	●	◕	◕	◑	◔	◔

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VEHICLE MILES TRAVELED (VMT) & VEHICLE HOURS TRAVELED (VHT)

VMT- The VMT shows the daily amount of vehicle travel on the road system. This was calculated by multiplying the traffic volumes by the length of the trip (in miles) and was an output of the travel-forecasting model. The evaluation was conducted for the entire study area.

VHT- The VHT shows the total daily hour of travel for vehicles in the road network. VHT was calculated by multiplying the total number of trips by the average duration of each trip and was an output of the travel-forecasting model. The evaluation was conducted for the entire study area.

Total VMT/VHT	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
VMT	171,708	165,994	167,409	164,548	168,936	170,423	163,123
VHT	6,542	5,542	5,766	5,532	6,064	6,245	6,215

VMT/VHT	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
VMT	○	◕	◑	◕	◑	◔	●
VHT	○	●	◕	●	◑	◔	◔
Overall Rating	○	●	◕	●	◑	◔	◕

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TRAVEL TIME

The travel times show the change in the travel time between the origins and destinations in the study area. For this evaluation the PM peak hour was used to determine the travel time for SOV, and a combination of HOV and transit in the northbound and southbound directions. The evaluation was restricted to SR 303, from Burwell Street in Downtown Bremerton to SR 3 in Silverdale.

Travel Time (minutes)	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Northbound – SOV	22.6	16.9	16.6	17.9	17.0	20.4	21.5
Northbound – HOV	22.6	16.9	16.6	17.9	17.0	11.3	16.9
Southbound – SOV	20.7	16.6	16.1	16.7	16.4	20.0	20.4
Southbound – HOV	20.7	16.6	16.1	16.7	16.4	12.2	16.5

Travel Time	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Northbound – SOV	○	◑	◑	◑	◑	◔	◔
Northbound – HOV	○	◑	◑	◑	◑	●	◑
Southbound – SOV	◔	◑	◑	◑	◑	◔	◔
Southbound – HOV	◔	◑	◑	◑	◑	●	◑
Overall Rating	◔	◑	◑	◑	◑	◕	◑

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FREIGHT ACCESS

A qualitative evaluation was used to compare the impacts of each alternative on freight movement and access in the corridor.

Presently freight uses SR 303 to deliver goods to major businesses along the corridor in Silverdale and Bremerton. Traffic volumes are anticipated to increase by the year 2030 causing increased travel delays during peak hours. This would have a significant impact on future freight movement in the corridor. Therefore, the no-build alternative was given a "least effective" rating.

Alternatives 4A, 4B, and 5A were all given an "increased effectiveness" rating because LOS on SR 303 improves over the No-Build alternative. Access restrictions on SR 303 are not part of these alternatives.

Alternatives 11, and 13 would add access management solutions that would restrict left turn movements to controlled intersections along SR 303. This would limit the number of access points to businesses. On the other hand, level of service in the corridor would improve over the No-Build alternative, resulting in shorter average vehicle delays.
Because of the trade-off between improved LOS and increased access restrictions, alternatives 11 and 13 were given a "medium effectiveness" ranking.

Alternative 14 would restrict access for freight, similar to alternatives 11 and 13, but would improve LOS due to an overall reduction in single-occupant vehicle use in the corridor. *The SOV improvements would be slightly less than alternatives 11, and 13*; therefore, this alternative was given a "lower effectiveness" rating.

Freight Access	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Rating	○	◕	◕	◕	◑	◑	◔

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MODE SHIFT/TRAVEL DEMAND REDUCTION

The mode shift/travel demand reduction was quantified using the modal split results derived from the travel demand forecast model for SOV, HOV and transit during the PM peak period. The evaluation was restricted to SR 303, from Burwell Street in Downtown Bremerton to SR 3 in Silverdale. The PM peak period and daily travel demand reduction was quantified.

Percent Modal Split[1]	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
SOV	.84	.85	.85	.83	.83	.74	.79
HOV/Transit	.16	.15	.15	.17	.17	.26	.21

[1] Percent mode split is the percent of SOV and HOV/Transit riders.

Modal Split/Travel Demand Reduction	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Overall Rating	◔	◔	◔	◑	◑	●	◕

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PEDESTRIAN AND BICYCLE ACCESS AND FACILITIES

Pedestrian and bicycle access and facility improvements were quantified by determining the total additional lane miles that would be added to the network. Each alternative would add a sidewalk on both sides of the road, and either Class 2 or Class 3 bicycle facility improvements. The alternatives were ranked according to the length of improvements made.

Stakeholders determined the length and proposed alignment for each alternative. They proposed to add or retrofit existing sidewalks throughout the proposed alignment. In addition, each alternative would include bicycle improvements. The total length of arterial improvements proposed per alternative determined the length of the pedestrian and bicycle facilities.

Two bicycle facility classifications were proposed along the arterial or state route. A Class 2 bicycle lane is a striped 5 foot lane designated to bicyclists only. This classification is the highest bicycle classification. A Class 3 bicycle facility is a signed bicycle route with 14-foot wide outside travel lanes that accommodate experienced bicyclists.

Non-Motorized Access and Facilities	2030						
	No Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Bicycle Facility (miles)							
Class 2	0	3	3	1	1	1	1
Class 3	0	4	2	5	3	3	2
Pedestrian Facility (miles)	0	6	4	7	4	4	3

Non-Motorized Access and Facilities							
	No Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Bicycle Facility	○	●	●	◕	◔	◔	◔
Pedestrian Facility	○	◕	◑	●	◑	◑	◔
Overall Rating	○	◕	◕	◕	◑	◑	◔

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PERSON THROUGHPUT

The person throughput criteria quantifies the number of people (rather than the number of vehicles) being moved through the SOV and HOV/Transit lanes. A screenline approach was used to compare the difference in total person throughput for the entire network. The person throughput was gathered at two critical locations in the network:

- North of Riddell Road at Central Valley Road, Pine Road, and SR 303
- At the existing and proposed bridge crossings of the Port Washington Narrows which include the existing Warren Avenue Bridge and Manette Bridge, and the proposed new bridge crossings for alternatives 4a, 4b, and 5a.

This approach was used to compare the change in person throughput resulting from each alternative. The following table summarizes the person throughput for the two locations considered. The results were aggregated by mode type (e.g. SOV and HOV/transit).

Alternatives 4A and 4B serve the most people in the study area at both screenline locations. Most of these new people served use the SOV travel mode. Alternative 13 also serves significantly more people than no-build, and most of the new people served use the HOV/transit travel mode.

Total Person Throughput	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
North of Riddell Road							
SOV	6,454	7,386	7,369	7,063	7,246	6,581	6,454
HOV/Transit	1,151	1,770	1,788	1,604	1,649	2,221	2,110
Total	7,605	9,156	9,157	8,667	8,895	8,802	8,564
Crossing the Narrows							
SOV	9,654	10,726	10,664	10,518	10,443	9,795	9,654
HOV/Transit	2,406	3,060	3,052	2,962	2,881	3,418	3,247
Total	12,060	13,786	13,716	13,480	13,324	13,213	12,901

Person Throughput	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
*Overall Rating	◔	◕	◕	◑	◕	◕	◑

* The overall rating reflects the total person throughput. This includes SOV and HOV/Transit.

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SAFETY

This evaluation estimated the potential vehicle, pedestrian and bicycle accident reduction associated with roadway, intersection, and access management improvements. The current accident data does not provide enough information to forecast future accident rates for each of the alternatives. Therefore, the rankings are a qualitative measure of the future safety benefits that would occur.

Alternatives 11, and 14 would add access management measures on SR 303 to restrict the uncontrolled left turn movements. As a result, the improvements would likely reduce the accident rate in the corridor and were rated as having "increased effectiveness".

Alternative 13 also adds access management measures on SR 303, but was ranked as having "medium effectiveness," which is slightly lower than alternatives 11 and 14. This reduced rating is caused by additional maneuvering required by SOV traffic in and out of the HOV lanes.

Existing accident rates on SR 303 are relatively high. Portions of the corridor are designated by WSDOT as High Accident Corridors (HACs) or High Accident Locations (HALs). Future improvements would be made on the existing alignment under the No-Build alternative so the corridor would operate at slightly improved safety levels than it presently does. Therefore, the No-Build alternative was rated as having "lower effectiveness" than alternatives 11, 13, and 14.

Alternative 4A, 4B, and 5A would not change the existing configuration of SR 303. Therefore, these alternatives would be less effective in reducing the accident rates on the corridor. Additionally, these alternatives would likely result in increased accident rates on the improved arterial roads, such as Central Valley Road, Pine Road, and Old Wheaton Way. Overall, these alternatives were ranked as having "lower effectiveness" than alternatives 11, 13 and 14.

Safety	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Overall Rating	◔	◔	◔	◔	◕	◑	◕

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DISPLACEMENTS

Element: **Displacements**
Criteria: Number of businesses and residences displaced.

Estimated Total Displacements Based on Parcel Analysis.

Displacements	Existing	Estimated Displacements for Build Alternatives (2030)					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt.14[1]
Full Displacement							
Commercial/Industrial			4	4	2	33	10
Public/Institutional			0	0	3	0	0
Single-Family Residential			145	124	85	55	17
Multi-Family Residential			8 (121 units)	5 (25 units)	5 (166 units)	2 (6 units)	1
Undeveloped			0	1	0	0	0
Total			157	133	95	90	28
Partial Displacement							
Commercial/Industrial			0	3	29	22	7
Public/Institutional			3	1	7	5	2
Single-Family Residential			173	312	110	20	6
Multi-Family Residential			--	--	--	--	--
Undeveloped			58	21	63	6	2
Total			234	337	209	53	17
Grand Total			391	470	304	143	45

Rating - Displacements	Existing	Estimated Displacements for Build Alternatives (2030)					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-	-	○	○	○	◔	◑

Notes:

[1] The projected rating for Alternative 14 is based on widening at major intersections approximated to be 30 percent of the total displacements given for Alternatives 11 and 13.

[1]Ratings:
●= Most Effective, Improved Environment. ◕= Increased Effectiveness, Minimal Impact. ◑= Medium Effectiveness, Low Impacts. ◔= Lower Effectiveness, Medium Impacts. ○= Least Effective or Most Impacts. Revision Date: January 17, 2002

NEIGHBORHOOD AND LIVABILITY

Element: Neighborhood and Livability
Criteria: Degree of change to existing neighborhood streets.

Neighborhood/Livability	Existing Roadway Designations Per Alternative						
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Neighborhood Collector	-	-	X	X		-	-
Minor Arterial	-	-	X	X	X	-	-
Principal Arterial	-	-	X	X	-	X	X

Neighborhood/Livability	Proposed Roadway Designations for Build Alternatives (2030)						
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Neighborhood Collector	-	-	-	-	-	-	-
Minor Arterial	-	-	-	-	-	-	-
Principal Arterial	-	-	X	X	X	X	X

Neighborhood/Livability	Estimated Degree of Change to Streets for Build Alternatives (2030)						
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Degree of change from existing street designation	-	-	High	High	Moderate to High	Low	Minimal
Degree of disconnect to neighborhoods from upgraded street designation	-	-	High	High	Moderate to High	Low	Minimal

Rating – Neighborhood/Livability	Existing	Neighborhood Livability Impact Assessment for Build Alternatives (2030)					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-	-	○	○	◔	◑	◕

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CULTURAL RESOURCES AND OTHER LANDS

Element: Cultural Resources and Other Lands

Criteria: Impacted sites of historical significance, sites on the national historic register, and will be identified. Impacts to tribal resources, publicly owned parks, trails, and recreation areas, and wildlife/waterfowl refuges will be identified.

Cultural/Historical Resources	Existing	Resource Inventory and Sum of Impact Rankings for Build Alternatives (2030)					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Cultural/Historical Resources	-	-	0	0	2	1	1
Sum of Impact Rankings	-	-	0	0	2	1	1
4(f) Resources							
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
4(f) Resources	-	-	9	5	14	11	11
Sum of Impact Rankings			9	5	26	11	11
Native American Resources							
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Native American Resources	-	-	0	0	2	1	1
Sum of Impact Rankings			0	0	2	1	1
Grand Total of Impact Rankings			9	5	30	13	13

The number of properties of cultural and historical value are quantified based on the following relative importance (multiplying) factors:

Cultural	Historical
Effect to Property = 5.0	Adverse effect to property eligible for NHRP = 5.0
No effect to property = 1.0	No adverse effect to property eligible for NHRP = 2.0
	No effect to property eligible for NHRP = 1.0

Rating – Cultural Resources/Other Lands	Existing	Cultural Resources/Other Lands Impact Assessment for Build Alternatives (2030)					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Cultural/Historical			◕	◕	◑	◑	◑
4(f)			◔	◕	○	◑	◑
Tribal Resources			◕	◕	◑	◑	◑
Overall Rating	-		◔	◕	○	◑	◑

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BUSINESS IMPACTS

Element: Business Impacts
Criteria: Access restrictions or loss of parking.

Business Impacts	Existing	2030					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14[1]
Access/Parking Reduction	N/A	-	0	8	17	20	6

Notes: 0-5 reductions = minimal/low impacts, 6-10 reductions = medium impacts, 11-15+ reductions = high impacts

[1] Alternative 14 impacts estimated to be approximately 30 percent of the impacts identified for Alternatives 11 and 13 based on widening at major intersections only.

Rating – Business Impacts	Existing	2030					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-		◕	◔	○	○	◔

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AESTHETICS AND VISUAL QUALITY

Element: Aesthetics/Visual Quality

Criteria: Degree of improvement or impact to the aesthetic and visual quality of the corridor.

Aesthetic/Visual Quality	Existing Roadway Designations Per Alternative						
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Neighborhood Collector	-	-	X	X		-	-
Minor Arterial	-	-	X	X	X	-	-
Principal Arterial	-	-	-	X	X	X	X

Aesthetic/Visual Quality	Proposed Roadway Designations for Build Alternatives (2030)						
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Neighborhood Collector	-	-	-	-	-	-	-
Minor Arterial	-	-	-	-	-	-	-
Principal Arterial	-	-	X	X	X	X	X

Aesthetic/Visual Quality	Degree of Change to Street Designations for Build Alternatives (2030)						
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Degree of change from existing street designation	-	-	High	High	Moderate to High	Low	Minimal

Aesthetic/Visual Quality	Aesthetic/Visual Quality Comparison						
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Aesthetic/Visual Quality (existing)	-	-	Moderate to Good	Moderate to Good	Moderate to Good	Moderate	Moderate
Viewer Sensitivity	-	-	High	High	Moderate to High	Low to Moderate	Low to Moderate
Viewer Exposure	-	-	Moderate to High	Moderate to High	Moderate	Low to Moderate	Low to Moderate

Rating – Aesthetic/Visual Quality	Existing	2030					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-		○	○	◔	◑	◑

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PRIME AND UNIQUE FARMLAND SOILS

Element: Prime and Unique Farmland Soils
Criteria: Acres of Impact to Prime and Unique Farmland Soils.

Prime and Unique Farmland Soils	Prime Farmland Soils in Kitsap County
Soil	**Acres**
Belfast Loam	530
Bellingham	880
Kitsap	2,310
Mukilteo	1,320
Norma	7,700
Semiahmoo	1,320
Shalcar	960
TOTAL	15,020

Prime and Unique Farmland Soils	Existing	Estimated Impacts Per Soil Types with Build Alternatives (2030)					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Belfast Loam	-	-					
Bellingham	-	-					
Kitsap	-	-	X	X	X	X	X
Mukilteo	-	-					
Norma	-	-	X		X	X	X
Semiahmoo	-	-					
Shalcar	-	-	X		X		

Prime and Unique Farmland Soils	Estimated Impacts Per Soil Types with Build Alternatives (2030)
Alternative	**Number of Acres[1]**
4A	1.49
4B	1.59
5A	1.68
11	3.14
13	3.14
14	2.57

[1] Less existing right-of-way (approximate)

Rating – Prime/Unique Soils	Existing	Prime/Unique Farmland Soils for Build Alternatives (2030)					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-		◕	◕	◕	◑	◑

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PLAN COMPATIBILITY

Element: Plan Compatibility
Criteria: Compatibility with statewide, regional, and local plans, goals and policies.

Federal Policies

- National Environmental Policy Act of 1969 (NEPA) (P.L. 91-190)
- Federal Water Pollution Control Act as Amended by the Clean Water Act of 1977 (the Clean Water Act)
- Safe Drinking Water Act of 1974
- Clean Air Act, Section 309
- Endangered Species Act

State Plans and Policies

- State Environmental Policy Act of 1971 (SEPA) (RCW 43.21), as amended
- Shoreline Management Act of 1971 (RCW 90.58), as amended
- The Growth Management Act (GMA) (SHB 2929) (RCW 36.70A)
- Re-Engrossed Substitute House Bill 1025 (Growth Management Act II) (GMA II)
- Transportation Policy Plan for Washington State

Regional and Subregional Plans

- Vision 2020 (Puget Sound Regional Council)
- Year 2001 Metropolitan Transportation Plan (Puget Sound Regional Council)

Local Plans and Policies

- Kitsap County Comprehensive Plan
- City of Bremerton Comprehensive Plan
- Kitsap County Development Regulations: Zoning, Critical Areas, and Wetlands Management.
- City of Bremerton Zoning and Critical Areas
- Kitsap Transit Long Range Plan

Rating – Plan Compatibility	Existing	Plan Compatibility Assessment for Build Alternatives (2030)						
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt. 14
Statewide Plans	-	-	◔	◔	◔	◕	◕	●
Regional Plans	-	-	◔	◔	◔	◕	●	●
Local Plans	-	-	○	○	○	◕	◕	●
Overall Rating	-	-	◔	◔	◔	◕	◕	●

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WETLANDS AND SHORELINES

Element: Wetlands and Shorelines
Criteria: Acres of impact and quality of impacted wetlands.

Wetlands/Shorelines			Estimated Wetland and Buffer Impacts by Category (Acreage)[1]									
			Alt. 4a		Alt. 4b		Alt. 5a		Alt. 11/13		Alt. 14	
Wetland	Type[2, 3]	Classification (Cowardin)	Wetland Impact	Buffer Impact	Wetland Impact	Buffer Impact	Wetland Impact	Buffer Impact	Wetland Impact	Buffer Impact	Wetland Impact	Buffer Impact
A	I	Estuarine, Intertidal Aquatic Bed/Flat	0.6	0.5	0.1	0.5	0.5	0.5	0.1	0.2	0.1	0.2
B	I	Estuarine, Intertidal Aquatic Bed/Flat	1.3	0.5	0.2	0.5	0.3	0.5	0.1	0.2	0.1	0.2
C	III	Palustrine Forested							0.5	<0.1	0.5	<0.1
D	III	Palustrine Forested							0.5	<0.1	0.5	<0.1
E	IV	Palustrine Open Water										
F (east)	II	Palustrine Forested - Scrub/Shrub							0.7	<0.1	0.7	<0.1
F (west)	II	Palustrine Emergent - Scrub/Shrub							0.4	<0.1	0.4	<0.1
G	NA	Palustrine Emergent										
G-1	II	Palustrine Forested-Open Water										
H	II	Palustrine Forested - Scrub/Shrub										
I, I-1, I-2, I-3	II	Palustrine Forested - Emergent	0.1	<0.1			0.1	<0.1				
J	III	Palustrine Scrub/shrub										
K, K-1, K-2	II	Palustrine Forested - Emergent	0.9	1.1			0.9	1.1				
L	NA	NA										
M	III	Palustrine Forested										
S-1	III	Palustrine Forested-Scrub/Shrub	0.1	0.1								
Lebo W-1	II	Estuarine, Intertidal Forested- Palustrine Scrub/Shrub										
Riddell 1	III	Palustrine Forested	0.3	<0.1			0.3	<0.1				
McWilliams 1	IV	Palustrine Scrub/Shrub										
Total Impact (Acreage)			**3.3**	**2.2**	**0.3**	**1.0**	**2.1**	**2.1**	**2.3**	**0.4**	**2.3**	**0.4**

Notes: [1] All areas estimated based on NWI mapping and Field Inventory; assumed 20-foot increase in right-of-way on each side of road. [2] Washington Department of Ecology (1993). [3] Type 1 Wetland = 200' buffer, Type II Wetland = 100' buffer, Type III Wetland = 50' buffer, Type IV Wetland = 25' buffer per Kitsap County Critical Areas Ordinance and City of Bremerton Critical Lands Ordinance.

Rating – Wetlands/Shorelines	Existing	2030 Estimated Wetland and Buffer Impacts (Acreage)					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-	-	○	◕	◔	◑	◑

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FISH AND WILDLIFE HABITAT & THREATENED AND ENDANGERED SPECIES

Element: Fish and Wildlife Habitat & Threatened and Endangered Species
Criteria: Impacts to fish and wildlife habitat areas for all species will be identified. Threatened and endangered species in the area and number of habitat acres will be identified.

Fish/Wildlife, and Threatened or Endangered Species/Potential Impact	Potential Impacts to Fish/Wildlife and Threatened & Endangered Species

	Alternative						
Action/Potential Impact	15	4a	4b	5a	11	13	14
New Bridge/Direct or buffer impacts to estuarine wetlands of Port Washington Narrows		x	x	x			
New Bridge/Direct impacts to Subtidal Clam Habitat (Priority Marine Habitat Species)			x				
New Bridge/Direct impacts to Intertidal Hardshell Clam Habitat (Priority Marine Habitat Species)		x	x	x			
New Bridge/Direct impacts to ESA listed and threatened Marine Fisheries (e.g., chinook salmon, coho salmon)		x	x	x			
New Bridge/Indirect impacts to ESA listed upland species (e.g., Bald Eagle)			x				
New Bridge/Indirect impacts to waterfowl concentrations (Priority Habitat Species)				x			
Widen Central Valley Road/Direct or buffer impacts to Mosher Creek and ESA listed and threatened freshwater fisheries (e.g., chinook salmon, coho salmon, bull trout)		x		x			
New roadway improvements and widening/Direct or buffer impacts to wetland habitat		x	x	x	x	x	X

Rating – Fish/Wildlife + T/E Species	Existing	Estimated Habitat Resources/Species with Build Alternatives (2030)					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
ESA Species	-	-	◑	◔	◑	◕	◕
Fish/Wildlife Habitat	-	-	◔	◔	◔	◑	◕

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WATER RESOURCES

Element: Water Resources
Criteria: Impacts on floodplains, and surface and groundwater, including State 303(d) list of waterbodies that do not meet water quality standards will be identified. Amount of additional impervious surface and measures needed to avoid untreated discharges will be identified.

Water Resources 303(d) List

Surface Water Feature	303(d) List	ESA Species Present	Receiving Water
Dyes Inlet	Yes	Yes [1,2]	Yes
Port Washington Narrows	Yes	Yes [1,2]	Yes
Clear Creek	Yes	Yes [1,2]	NA

[1] Chinook salmon, Threatened species under ESA. [2] Coho salmon, Candidate species under ESA.

Water Resources Impervious Area — Study Area Alternatives TIA/PGIS Comparison

Alternative	TIA (ac)	PGIS (ac)	Applicable BMP Menus[1]
15 (No Action)	NA	NA	Assume No Retrofit
4a	41	41	Detention and Basic & High Use
4b	26	26	Detention and Basic & High Use
5a	45	45	Detention and Basic & High Use
11	29	29	Detention and Basic & High Use
13	29	29	Detention and Basic & High Use
14	13	13	Detention and Basic & High Use
Light Rail	54	0	Detention

[1] Based on the 2001 Ecology Storm Water Management Manual for Western Washington.

Water Resources Action/Potential Impact — Potential Direct Impacts to Water Resources[1]

Action/Potential Impact	Alternative 15	4a	4b	5a	11	13	14
New Bridge/Direct or buffer impacts to estuarine wetlands of Port Washington Narrows		x	x	x			
Widen Central Valley Road/Direct or buffer impacts to Mosher Creek		x		x			
Widen SR 303 near Brownsville/Direct or buffer impacts to South Fork Steele Creek							
Widen 303 near Bucklin Court NW/Direct or buffer impacts to Barker Creek							

Rating – Water Resources	Existing	Water Resources Assessment for Build Alternatives (2030)					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-	-	◔	◔	◔	◑	◕

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AIR QUALITY

Element: Air (design year)
Criteria: Pollutant level better or no worse than No Build conditions (pollutant level as per standards of National Ambient Air Quality Standards [NAAQS] for all prescribed elements).

Air (design year 2030)	Estimated Emissions Per Alternative (kg)						
	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt. 14
CO	240	240	250	264	280	260	216
NOx	47	47	49	51	54	51	42
VOC	56	56	58	61	65	60	50
Overall Emissions Total	343	343	357	376	399	371	308

Rating – Air Quality	Air Impact Assessment for Build Alternatives (2030)						
	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt. 14
Overall Rating	-	◕	◑	◔	○	◔	●

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NOISE

Element: Noise (design year)
Criteria: Number of homes/businesses impacted (impact defined by FHWA Noise Abatement Criteria)

Noise (Existing)	Noise Assessment for Existing noise levels in the project vicinity (L_{dn}).	
Alternative	**Noise Source**	**Total Noise (average)** [1]
4A	Automobiles/buses	65.8
4B	Automobiles/buses	64.3
5A	Automobiles/buses	64.7
11	Automobiles/buses	72.1
13	Automobiles/buses	72.1
14	Automobiles/buses	69.2
15 (No Action)	Automobiles/buses	NA

Noise (Predicted- design year 2030)	Noise Assessment for Predicted noise levels in the project vicinity (L_{dn}).	
Alternative	**Noise Source**	**Total Noise (average)** [1]
4A	Automobiles/buses	74.7
4B	Automobiles/buses	75.1
5A	Automobiles/buses	73.6
11	Automobiles/buses	77.7
13	Automobiles/buses	77.7
14	Automobiles/buses	72.1
15 (No Action)	Automobiles/buses	71.7

[1] Note: no noise measurements were taken and therefore it is likely that there may be some variation between the predicted noise levels and actual ambient levels.

Activity Category	Noise Level	FHWA Noise Abatement Criteria Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels/hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties or activities not listed in Categories A or B above.
D	----	Undeveloped lands.
E	52 (interior)	Residences, motels/hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: USDOT 1982.

Rating -- Noise	Existing	Noise Assessment for Build Alternatives (2030)					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-	-	○	○	○	◔	◑

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HAZARDOUS WASTE

Element: Hazardous Waste
Criteria: Number of sites and cost of clean up will be provided.

Hazardous Waste	Existing	Hazardous Waste Assessment for Build Alternatives (2030)					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Number of Sites	-	-	1	2	10	36	8
Sum of Impact Ratings	-	-	2	7	25	94	24
Potential Cost Impact	-	-	$10,000	$110,000	$243,000	$914,000	$264,000

Rating – Hazardous Waste	Existing	Hazardous Waste Assessment for Build Alternatives (2030)					
		NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt. 14
Overall Rating	-	-	◕	◑	◔	○	◔

Notes:

IMPACT ASSESSMENT

Impacts to the Project related to known or suspected hazardous waste sites are quantified using a relative ranking system that considers the potential impact factors and the processes described in WSDOT Manual M31-11 for assessing, characterizing, and remediating contaminated or potentially contaminated sites. Based on reconnaissance and experience with similar ROW acquisition projects each site was designated as to the extent of take (i.e., no take, partial take, or total take). Then the potential impact associated with each site was qualitatively ranked from one to five using the following assumptions:

Ranking 1: Site requires only Initial Site Assessment (ISA). No impacts to acquisition or construction. Cost per site: $2,000.

Ranking 2: Site requires ISA and Preliminary Site Investigation (PSI). No cleanup actions are required. Cost per site: $10,000.

Ranking 3: Site requires ISA, PSI, and limited cleanup. Cost per site: $25,000.

Ranking 4: Site requires ISA, PSI, and removal of storage tanks and limited cleanup. Cost per site: $50,000.

Ranking 5: Site requires ISA, PSI and extensive cleanup. Cost per site: $100,000.

POTENTIAL IMPACTS

Impacts related to contaminated properties are principally regulatory liabilities associated with owning chemically contaminated property and impacts to construction associated with encountering, remediating, and/or disposing of contaminated environmental media.

Sites identified during this assessment are categorized as follows:

Hazardous Waste Generators: Facilities that handle or store hazardous materials or generate hazardous waste as part of a process or activity. These sites generally have a low potential for generating environmental conditions that impact purchaser liability or construction. The exceptions are the two dry cleaning facilities. Dry cleaning facilities are typically recognized as sources of solvent contamination to groundwater and soil. However, based on the age of these facilities (apparently less than 15 years), the likelihood of chronic environmental impacts is considered low.

UST/LUST Sites: Facilities that store and dispense petroleum products from underground storage tanks. These sites have a moderate to high potential for environmental conditions that impact purchaser liability or construction. Cleanup actions related to these sites is generally straightforward and of moderate cost ($50,000 to $100,000).

Current or former Industrial Sites: These facilities have a current or historical industrial use that could result in chemical releases to the environment. These sites have a moderate to high potential for environmental conditions that impact purchaser liability or construction. Cleanup actions at these sites can be complex and require extensive resources to investigate, characterize, and implement.

Other factors influencing the extent of cleanup liability and construction impact are the extent of the acquisition (e.g. whether the parcel is a total or partial take), whether past cleanup actions have been performed, the nature of any chemical releases, and the extent of environmental media impacted by a release.

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SR 303 Bremerton to Silverdale Transportation Corridor Study

Prepared for

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EXECUTIVE SUMMARY

WSDOT, the City of Bremerton, Kitsap County, and Kitsap Transit (project partners) identified the need to make improvements on or around the SR 303 corridor, from Bremerton to Silverdale, to promote future mobility of people and goods. They established a study area from the Waaga Way portion of SR 303 to the north and SR 304 to the south. The study area extended east to S Central Valley Road and west to Illahee Road NE/Trenton Ave NE. The project partners developed fifteen potential alternative alignments to achieve their mobility goal, of which, six were evaluated for this second level screening. This technical report is a summary of the methodology used to compare and evaluate the transportation impacts of each alternative. The year 2030 was selected as the future horizon year for the study.

A comprehensive evaluation process was conducted to determine the affects of the six build alternatives. The evaluation considered impacts to the transportation network and effected environment (both community and natural), as well as measuring consistency with state and local plans, and the cost impacts of each alternative. Together these criteria would be used to determine the "most effective" alternative for further review. The transportation criteria covered a range of *issues*, which would be used to evaluate the effectiveness of the six proposed alternatives compared to a future 2030 no-build alternative. These transportation criteria included:

- LOS – Corridor/Signalized Intersections
- VMT (Vehicle Miles Traveled) and VHT (Vehicle Hours Traveled)
- Travel Time – SOV/HOV/Transit
- Freight Access
- Mode Shift/Travel Demand Reduction
- Pedestrian and Bicycle Access and Facilities
- Person Throughput
- Potential Accident Reduction

Once the preferred alternative is determined an Environmental Assessment (EA) report will be required by Washington State Department of Transportation to document the affect the proposed alternative would have on each of these criterion. This report is a summary of the transportation criteria evaluated, and is used as a supporting document for the Corridor Study.

The criteria selection process followed a public evaluation of the alternatives. Technical, Stakeholder, and Policy committees were created to evaluate each of the criteria against the alternatives. The three committees worked together to come up with a preferred alternative. The Technical committee was responsible for reviewing technical documentation and determining the technical feasibility of the preferred alternative. The Stakeholder committee included all parties directly and indirectly invested in the project area, including representatives from Kitsap Transit Agency, and US Fish and Wildlife Service. The Policy committee was the governing body that selected the preferred alternative according to the technical feasibility and environmental impacts presented by the Technical and Stakeholder committees. The policy committee included the Mayor of Bremerton, two Commissioners from Kitsap County,

executives from WSDOT, and staff from Kitsap Transit. The policy committee recently endorsed Alternative 13 as the preliminary preferred alternative for further evaluation.

Following is a summary of the criteria evaluations for each alternative. The travel demand forecast model UfosNet was used to gather the data necessary to evaluate each of the criteria. UfosNet is a GIS-based travel demand forecasting and simulation model that uses a traditional four-step approach: trip generation, distribution, mode choice, and assignment. (The model was unable to forecast the affects of applying TDM/TSM measures; therefore, qualitative and quantitative assumptions were made to predict the affect of Alternative 14 on the criteria.)

Summary of Criteria Evaluation

A criteria rating scale was established to compare each of the alternatives. A "most effective" rating was given to the alternative that would have the most improved environment compared to the no-build alternative. This alternative would meet the specific evaluation measurement defined by WSDOT. Conversely, a "least effective" rating was given to the alternative with the most impacts to the study area relative to no-build alternative. This alternative would not meet the specific evaluation measurement defined by WSDOT. The following table is the rating scale used to evaluate the criteria.

Rating Scale				
Worst	→			Best
○	◔	◑	◕	●
Least Effective or Most Impacts or Cannot Meet Purpose and Need	Lower Effectiveness, Medium Impacts	Medium Effectiveness or Low Impacts	Increased Effectiveness, No Impacts	Most Effectiveness, Improved Environment

LOS – Corridor/Signalized Intersections

The build alternatives show a reduction in intersection delay compared to no-build at many of the intersections. At some of the locations the change in intersection delay was not significant enough to improve the LOS from no-build. Alternatives 4a, 4b, and 5a alignments were ranked "most effective" in improving intersection delay. Alternative 11 would improve intersection delay with "medium effectiveness." Alternatives 13 and 14 would have similar LOS results as no-build but there would be improvements in intersection delay. These two alternatives received a "least effective" ranking. The table below summarizes the information described in the preceding text.

LOS Conditions	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Rating	○	●	◕	◕	◑	◔	◔

Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT)

The build alternatives show an improvement in the both VMT and VHT compared to no-build. Alternatives 4a, 4b, and 5a would be rated "most effective" overall. This is because these alternatives would provide an additional bridge access east or west of the existing bridge location. The improved VMT/VHT suggests a demand to access the Port Washington Narrows east or west of the Warren Avenue Bridge. Alternative 14 also received an "increased effectiveness" rating because the TDM/TSM strategies would effectively reduce, shorten, or eliminate some trips in the corridor.

VMT/VHT	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Overall Rating	○	●	◕	●	◑	◔	◑

Travel Time

Northbound and southbound travel times were evaluated for HOV and SOV traffic separately. The overall ratings show Alternative 13 would have an "improved" travel time. Alternative 13 proposes to add HOV lanes on SR 303. This improvement would promote HOV verses SOV travel along SR 303, thus improving the overall travel time performance along the corridor.

Travel Time	2030						
	No-Build	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt.14
Overall Rating	◔	◑	◑	◑	◑	◕	◑

Freight Access

A qualitative approach was used to compare the impacts of freight movement on the corridor. Freight movement is restricted by travel delays (poor LOS) during peak hours and access management measures that limit freight access into businesses. Alternatives 4a, 4b, and 5a were ranked "increased effectiveness" in improving freight access on SR 303 because LOS on SR 303 would improve over no-build, and access management would not be part of these alternatives.

Freight Access	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Rating	○	◕	◕	◕	◑	◑	◔

Mode Shift/Travel Demand Reduction

The mode shift/travel demand reduction showed the mode shift during the PM peak hour. Alternative 13 was given the "most effective" rating due to a reduction in SOV travel and increase in HOV/Transit ridership. Alternative 13 proposes to add HOV lanes along SR 303. This addition would encourage a mode shift from SOV to HOV/Transit use.

Modal Shift/Travel Demand Reduction	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Overall Rating	◔	◔	◔	◑	◑	●	◕

Pedestrian and Bicycle Access and Facilities

Pedestrian and bicycle access and facility improvements were quantified by determining the total additional lane miles that would be added to the network. An overall rating was used to evaluate the effectiveness of the non-motorized facility improvements for each of the alternatives. Alternatives 4a, 4b, and 5a were ranked "increased effectiveness" in improving the non-motorized facility throughout the study area. Alternatives 4a and 4b would provide the "most effective" improvements to the bicycle facility and Alternative 5a would provide the "most effective" improvements to the pedestrian facility.

Non-Motorized Access and Facilities							
	No-build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Overall Rating	○	◕	◕	◕	◑	◑	◔

Person Throughput

The person throughput shows the number of people being moved through the SOV and HOV/Transit lanes. An overall rating system was used to determine the total person throughput. Alternatives 4a, 4b, 11, and 13 were ranked "increased effectiveness." Alternatives 4a and 4b would serve the most people in the study area. Most of these new trips would occur in SOV's. Alternatives 11 and 13 would also serve more people than no-build but most of the additional trips would use HOV/Transit.

Person Throughput	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
*Overall Rating	◔	◕	◕	◑	◕	◕	◑

Safety

The safety evaluation was a qualitative approach to estimate the potential reduction in vehicle, pedestrian, and bicycle accidents associated with roadway, intersection, and access management improvements. The evaluation was based on the impacts the proposed alignments would have on the corridor operations. Alternatives 11 and 14 were ranked "increased effectiveness" since these alternatives would add access management measures on SR 303 to restrict uncontrolled left turn movements. The improvements would likely reduce the accident rate in the corridor.

Safety	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Overall Rating	◔	◔	◔	◔	◕	◑	◕

1. INTRODUCTION – EVALUATION OF TRANSPORTATION EFFECTIVENESS

1.1 BACKGROUND DISCUSSION

SR 303 has been identified as a high priority project within both the City of Bremerton Comprehensive Plan and WSDOT's Long Range System Plan. There are many factors that led to this decision. Historically portions of SR 303 and the surrounding streets were considered a high accident corridor (HAC) and high accident locations (HALs). Along with this, the physical characteristics of the community (sprawled land-use patterns, lack of access management, and poor visual quality on SR 303) gave commuters a perception of intersection delays and congestion along the corridor. In the City of Bremerton's 1997 Comprehensive Plan, it was suggested that either improvements were needed on the Warren Avenue Bridge or a new bridge needed to be built across Port Washington Narrows. There was also a concern the existing network lacked adequate non-motorized facilities and public transit routes for commuters to consider alternatives to single occupant vehicles.

Because the focus of the project would be along the SR 303 corridor, WSDOT is leading the project. The project partners developed a project scope that entailed identifying actions to improve the safety and mobility of people and goods along the SR 303 Bremerton/Silverdale corridor. They proposed to develop ways to manage congestion and improve safety by providing multi-modal travel opportunities in a reliable and cost-effective manner. Additionally, they wanted to accommodate future travel demands while avoiding, minimizing, or mitigating impacts to neighborhoods, businesses, and the environment, and maintaining consistency with regional and local comprehensive plans.

1.1.1 Coordination with other groups or agencies

The project partners have collaborated their efforts to come up with six feasible alternative alignments. Puget Sound Regional Council (PSRC) also played a role to ensure the future improvements would comply with their county and regional goals.

1.1.2 Initial Alternatives Evaluated

15 alternatives were evaluated as potential preferred alternatives in the initial screening evaluation. Alternatives 1 through 6 proposed to add a new bridge crossing and widening arterial streets adjacent to SR-303. Alternatives 7 through 10 would widen arterial roads adjacent to SR-303. Alternatives 11 through 13 would make improvements on SR-303. Alternative 14 would add travel demand management and traffic supply management measures. This alternative would be an addition to the other alternatives.

Table 1. Proposed Transportation Alternatives

Alternative Group	Alt. No.	Alternative Description
New Bridge Crossing and Arterial Connections	1	**Newberry Hill Road to NE Fairgrounds Road** • Widen NE Fairgrounds Road from the new bridge to SR 303.
	2	**Rocky Point Road NW to NE Riddell Road** • Widen NE Riddell Road from new bridge to SR 303. • Widen Rocky Point and Marine Drive from new bridge to SR 310.

Table 1. Proposed Transportation Alternatives (continued)

Alternative Group	Alt. No.	Alternative Description
	3	**Wycoff Avenue North to Sylvan Way** • Widen Sylvan from new bridge to SR 303.
	*4A	**S Central Valley Road to Pine Road NE to Naval Avenue** • Widen Pine from new bridge to NE Riddell • Widen NE Riddell from Pine to S Central Valley • Widen S Central Valley from Pine to SR 303
	*4B	**Snyder Avenue to NE McWilliams Road** • Widen Sylvan Way from new bridge to Pine • Widen Pine from Sylvan Way to NE McWilliams • Widen NE McWilliams to SR 303 • Widen Callow, 15th and Snyder from new bridge to 11th Street
	5	**Pacific Avenue to Wheaton Way** • Widen 16th from new bridge to Perry • Widen Perry from 16th to NE McWilliams • Widen NE McWilliams from Perry to SR 303
	*5A	**Park Avenue to S Central Valley Road** • Widen Park from 11th to new bridge • Widen Old Wheaton Way to Callahan/Sheridan • Widen Almira Drive from Sheridan to NE Riddell • Widen NE Riddell to S Central Valley to SR 303
	6	**Replace Manette Bridge** • Widen 11th from widened Manette Bridge to Perry • Widen Perry from 11th to NE McWilliams • Widen NE McWilliams from Perry to SR 303
Arterial Improvements	7	**Widen S Central Valley Road/NE Riddell Road/Sheridan Road** • Connect S Central Valley and Sheridan to SR 303
	6	**Widen NE McWilliams Road/Pine Road/Sheridan Road** • Connect Sheridan and NE McWilliams to SR 303
	9	**Widen Perry Avenue** • Widen Perry from 11th to NE McWilliams • Widen NE McWilliams from Perry to SR 303
	10	**Widen SR 310 from SR 3 to 11th Street** • Widen SR 310 to 7 lanes
SR 303 Improvements	*11	**Widen SR 303 Couplet from 11th Street to NE Fairgrounds Road** • Widen SR 303 Couplet to 6 to 7 lanes, including 6 lane Warren Ave Bridge
	12	**One Way Couplet** • SR 303 northbound/Pine Street southbound
	*13	**HOV Lanes from 11th Street to NE Fairgrounds Road**[†]
TDM/TSM	*14	**Frontage Roads, signalization, message signs, combined access, U-turn routes.**
No-Action	*15	**Baseline for comparison of the yeer 2030 projections with no action taken.**

* These alternatives were selected for the second-level screening analysis. The routes may have changed from the initial alignments. The final alignments are discussed in the Affected Environment Section.

1.1.3 Affected Environment

The study area extends north from the Waaga Way portion of SR 303 south to SR 304 between S Central Valley Road to the west and Illahee Road NE/Trenton Ave NE to the east. The major streets and state route being evaluated for each alternative include:

Alternative 4a-

- S Central Valley Road from SR 303 to NE Riddell Road
- NE Riddell Road from S Central Valley to Pine Road
- Pine Road from NE Riddell Road to Port Washington Narrows
- Navel Ave from Port Washington Narrows to 11th Street

Alternative 4b-

- NE McWilliams Road from SR 303 to Pine Road
- Pine Road from NE McWilliams to Sheridan Road
- Sheridan Road southwest to Port Washington Narrows
- Wycoff Ave from Port Washington Narrows to 15th Street
- 15th Street from Snyder to Callow Ave
- Callow from 15th to 11th St

Alternative 5a-

- S Central Valley Road from NE Fairgrounds to NE Riddell Road
- NE Riddell from S Central Valley to Almira/Spruce/Old Wheaton Way and Port Washington Narrows
- Park Ave from Port Washington Narrows to 11th Street

Alternative 11-

- SR 303 from NE Fairgrounds to 11th Street

Alternative 13-

- SR 303 from NE Fairgrounds to 11th Street

Alternative 14-

- SR 303 from SR 303 to SR 304

For this second level screening, six alternative road alignments were considered as possibilities to improve the study area. A set of transportation criteria was established to target three "most effective" alternatives for further review. This was done by creating a criteria matrix that rated the impacts of each alternative as the least- to most-effective in achieving its specific goal. The following is a list of the criteria evaluated:

- LOS – Corridor/Signalized Intersections
- VMT (Vehicle Miles Traveled) and VHT (Vehicle Hours Traveled)
- Travel Time – SOV/HOV/Transit
- Freight Access
- Mode Shift/Travel Demand Reduction
- Pedestrian and Bicycle Access and Facilities
- Person Throughput
- Potential Accident Reduction

1.1.4 Methodology

The current study forecasts future impacts of each of the six alternatives over a thirty-year period. The forecasted traffic data was developed from a GIS-based travel demand forecasting and simulation model called Urban Form Optimization System (UfosNet). The travel behavior was forecasted using a four-step gravity approach that integrates the proposed transportation improvements (proposed alternatives) with land-use (census data, and PSRC Destination 2030, and zone structure) assumptions. For this project the PSRC zones were disaggregated to provide a more refined analysis. The analysis was done for collector arterial level and above.

The model was able to forecast the impacts for each of the alternatives with the exception of Alternative 14, which assumes TDM/TSM improvements would be made along SR 303. Assumptions were made to predict the future impacts of Alternative 14. The specific assumptions are discussed in each of the sections.

1.2 LEVEL OF SERVICE (LOS)

Traffic volumes in combination with the available roadway and intersection capacity create varying levels of congestion. **Level of service** is a rating of the degree of congestion or the quality of the traffic operations on transportation facilities. The letters A through F are used for the rating scale. The letter A represents the best (least congested) conditions whereas the letter F represents the worst (most congested) conditions. LOS conditions were evaluated for traffic in general purpose (GP) lanes throughout the network.

1.2.1 Methodology

Road congestion typically begins at conflict points. Intersections are major conflict points in this study area, therefore a review of intersection conditions is appropriate in the alternative screening analysis. The LOS results for the intersections analyzed in the study area were output from *Synchro* version 5, a software program that performs analysis of signalized intersections. The LOS ratings were based on the performance measure ranges identified in the *Highway Capacity Manual* (HCM 2000) published in year 2000 by the Transportation Research Board. The reported LOS ratings correlated to the estimated vehicle delay and are documented in Table 2.

Table 2. LOS ratings and primary performance measures for intersections.

		Ranges of Reported Delay	
LOS	**Conditions**	**Signalized Intersections (sec/veh)**	**Stop Controlled Intersections (sec/veh)**
A	Best	≤10	≤10
B	↓	>10 and ≤20	> 10 and ≤15
C	↓	>20 and ≤35	> 15 and ≤25
D	↓	>35 and ≤55	> 25 and ≤35
E	↓	>55 and ≤80	> 35 and ≤50
F	Worst	>80	>50

Source: HCM 2000.

The Synchro model defines the signalized intersection delay as "...the average control delay for the signalized intersection as it is calculated by taking a volume weighted average of all the delays." For intersections controlled by stop signs only on minor approaches, the control delay has been reported for the worst approach; for all-way stop controlled intersections, the control delay has been reported in terms of the average for the entire intersection.

Intersection LOS calculations require the use of vehicle turning movement volumes. Peak hour turning movements were counted at most of the study intersections. At locations where there were no turning movement counts, volumes and turning movement splits were estimated from nearby intersections. To account for sub-hourly variations in traffic and to identify the vehicle peak hour, volumes were recorded in 15-minute intervals. Peak hour traffic volumes are used for evaluating a road project's potential traffic

operation improvements. Counts were taken during the late afternoon/evening commute on weekdays. The evening commute is typically used as the peak period on average weekdays; usually the commute occurs between 4 PM and 6 PM. However, to account for local variations in the study area (such as the Puget Sound Naval Shipyard), the peak period counted spans from 3 PM to 6 PM at various locations. The peak hour of this late afternoon/evening commute period will be referred to as the "PM peak hour" throughout this technical report. Available count data was obtained from WSDOT, the City of Bremerton, and Kitsap County. This information was supplemented with recent counts conducted by Traffic Count Consultants and Trafficount.

Future year 2030 traffic volumes were estimated for the various alternatives using PSRC regional population and employment forecasts and the Kitsap County travel demand forecasting model (2001). The difference in trips between the existing 1999 calibrated model volumes and 2030 model volume was calculated at the study intersections. This difference was added to the existing approach volumes to create future 2030 approach volumes. This methodology adjusts the 2030 volumes to eliminate calibration error in the model. If appropriate with the year 2030 build alternative under consideration, turning movement percentages at the intersection were adjusted to reflect the changed environment/road network. Future turning movement volumes at each intersection were obtained by multiplying the year 2030 approach volumes by the turning movement percentages. Alternative 14 intersection turning movement volumes were estimated to be 95% of the no-build alternative volumes because of transportation demand management (TDM)/transportation systems management (TSM) measures.

The 30th highest hour of traffic volume in a year is often used to design road facilities. To adjust the peak hour data to the 30th highest hour used for design, a 7% increase was applied to the volumes in *Synchro*. This increase was based on empirical data supplied by WSDOT for permanent traffic counter R050, which is on SR 3 in the vicinity of the City of Bremerton.

The road network in *Synchro* was developed from an existing *Synchro* network provided by WSDOT. Modifications were made to that network based upon field reconnaissance, roadway data in the *State Highway Log*, and photos on SR Web (an online log maintained by WSDOT at srview.wsdot.wa.gov).

To evaluate the general-purpose lane LOS for Alternative 13, which provides high-occupancy vehicle (HOV) lanes, the traffic using the HOV lanes was coded into the analysis as right-turning traffic. Estimates of the HOV traffic volumes at various segments were obtained by applying modal split data, which is discussed later in this technical memorandum. Then, right-turns on red (RTOR) were not allowed at most locations along the length of the corridor. The exceptions to the no RTOR restriction are at intersections marking the end points of the corridor (at NE Fairgrounds Road and at 11th Street) where the HOV lane would change to a right-turn lane and at 16th Street. At these intersections, the general purpose traffic making a southbound right-turn is sufficiently high to justify the allowance of RTOR in our estimate. Also at the SR 303/16th Street intersection, in the northbound direction, only traffic in the general purpose lanes were coded because a northbound right-turn movement cannot be made. A portion of the southbound HOV traffic would likely merge into the general purpose lanes approaching this intersection to avoid the heavy southbound right-turn movement as well as to avoid being forced to turn right at 11th Street.

Figures have been prepared to illustrate traffic volumes at various locations in the study area for the existing network and the future year 2030 alternatives. On all figures, the daily volumes have been estimated to be 12 times the two-way PM peak hour volume based on a review of count data in the study area (k-factor=0.083). Estimated volumes have been shown for existing conditions to provide a relative comparison between existing and future build conditions. The daily volumes shown are two-way

volumes and have been rounded to the nearest 100 vehicles. The PM peak hour volumes shown are directional volumes (northbound, southbound, eastbound, westbound) taken from the leg of a nearby intersection and have been rounded to the nearest 10 vehicles. The daily and peak hour volumes shown on the figures have not been adjusted with the 7% increase for the 30th highest hour, that adjustment was done only for the *Synchro* LOS analysis.

1.2.2 Affected Environment (Existing Conditions)

The study area for existing conditions included the analysis of twenty-seven intersections. Table 3 summarizes the existing study intersection control. The majority of these intersections are controlled by traffic signals. SR 303 is a 4/5-lane Urban Principal Arterial aligned through rolling terrain with a posted speed limit varying from 30 mph to 55 mph. Alongside most of the traveled way, there are roadside improvements such as asphalt shoulders or curb/gutter/sidewalk sections. A tabular summary of the various SR 303 roadway characteristics as well as the characteristics of other travel routes studied as alternative improvement routes, are shown in Table 4.

The majority of the traffic volume data used for analyzing existing conditions was obtained in the years 1999 and 2001, with some additional data collected in years 1998 and 2000. The average weekday daily traffic (AWDT) and PM peak hour volumes at selected locations in the study area are shown on Figure 1. Table 5 summarizes the intersection LOS and delays for existing conditions. None of the studied intersections currently operate worse than LOS E conditions.

1.2.3 Impact Assessment

Year 2030 volumes for the various alternatives being considered are shown on Figure 2 through Figure 8. Table 5 summarizes the intersection LOS and delays for the various alternatives; it also summarizes the number of existing study intersections with delays less than no-build and the number of intersections with conditions rated LOS A through D, LOS E, and LOS F.

The no-build alternative clearly demonstrates a need for future LOS improvements in the study area. Of the studied intersections, 14 out of 27 would operate at LOS F, compared to no intersections operating at LOS F with the existing volumes.

The build alternatives propose to improve LOS conditions in the study area through various means. Alternatives 4A, 4B, and 5A would each provide a new location for traffic to cross the Port Washington Narrows, and improve arterials, diverting a portion of the traffic from SR 303 to improve LOS conditions on SR 303. Alternatives 11, 13, and 14 would focus on improvements to SR 303 to serve the estimated future demand, and improve LOS conditions on SR 303.

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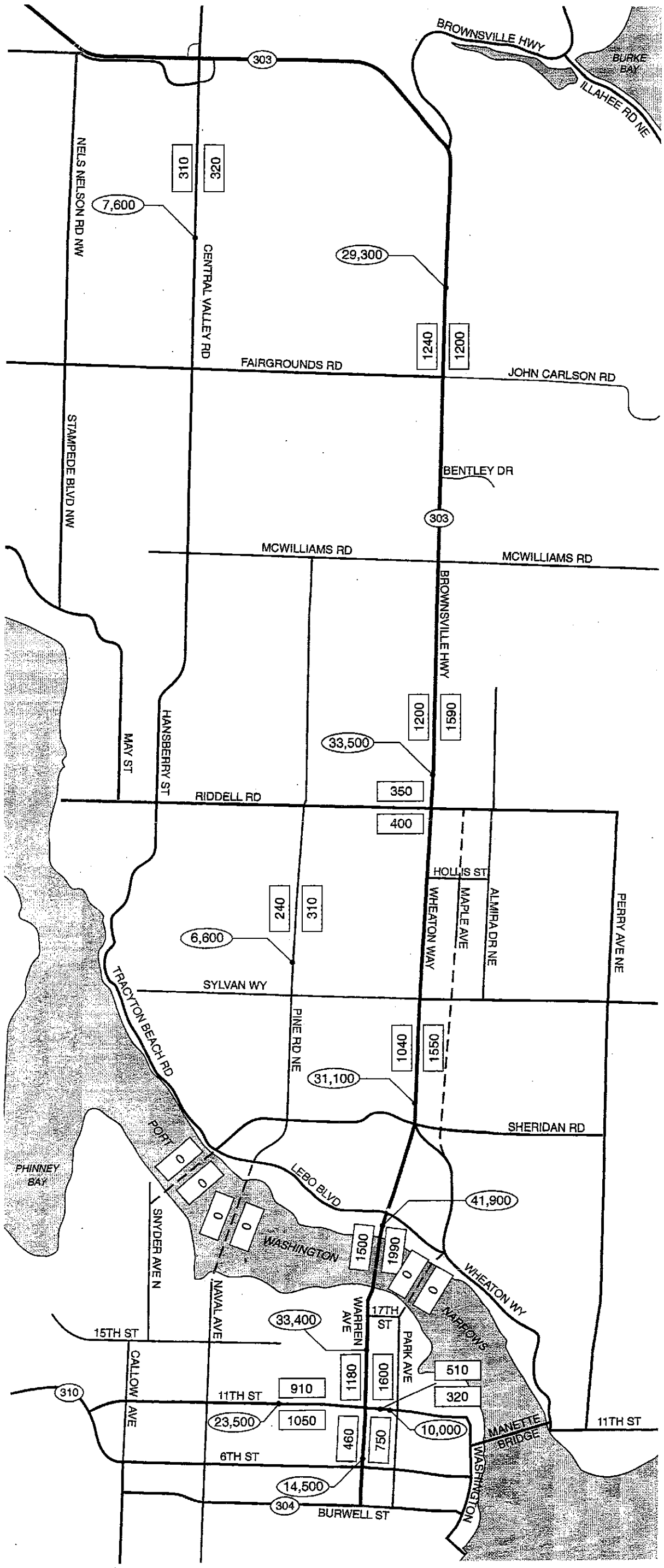


Parametrix, Inc. Bremerton-Silverdale Analysis/554-1631-030/03(034) 1/02 (K)

NO SCALE

N

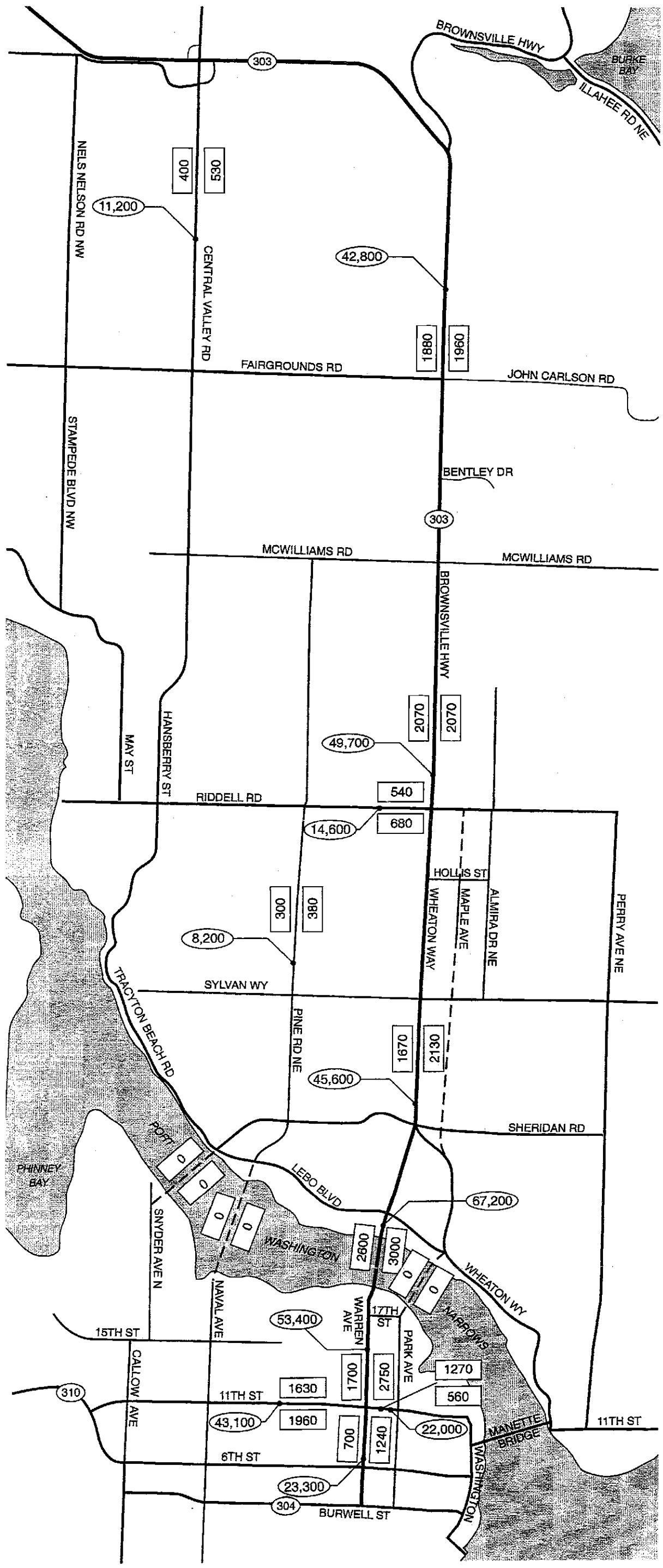
Existing Streets

Potential New Streets

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 1
Year 1998-2001 Volumes
Existing Network



Parametrix, Inc. Bremerton-Silverdale Analysis/554-1631-030/03(034) 1/02 (K)

NO SCALE

N

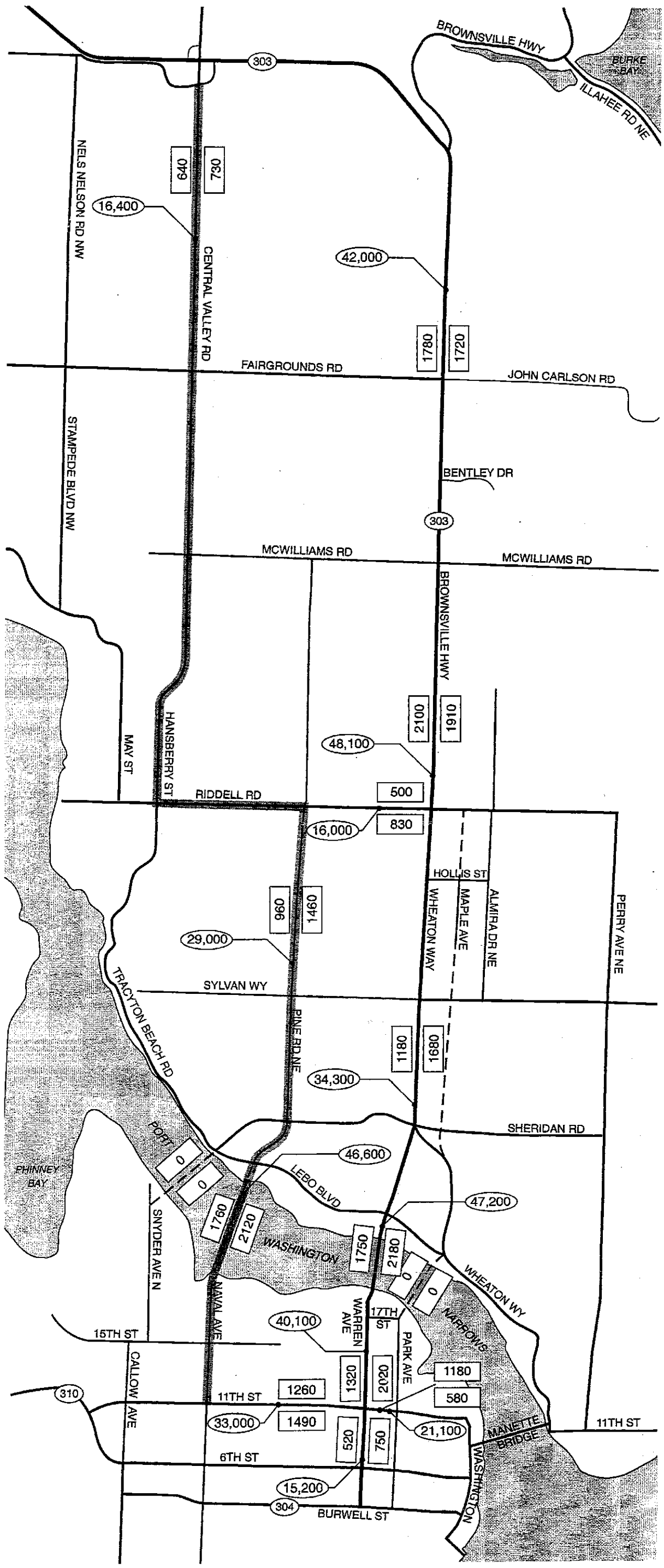
Existing Streets

Potential New Streets

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 2
Year 2030 Volumes
No Build Alternative



Parametrix, Inc. Bremerton-Silverdale Analysis/554-1631-030/03(034) 1/02 (K)

NO SCALE

N

Existing Streets

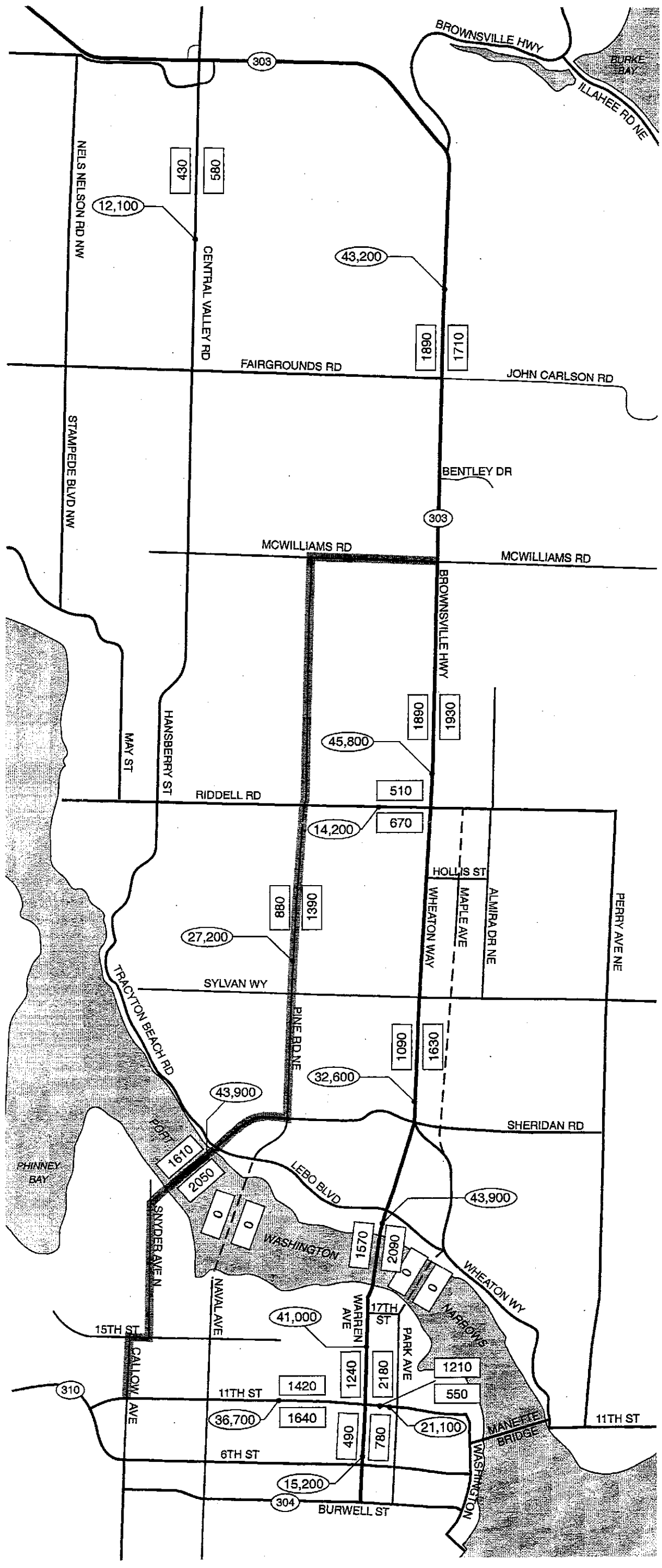
Potential New Streets

Route of Proposed Alternative

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 3
Year 2030 Volumes
Alternative 4A



Parametrix, Inc. Bremerton-Silverdale Analysis/554-1631-030/03(034) 1/02 (K)

NO SCALE

N

Existing Streets

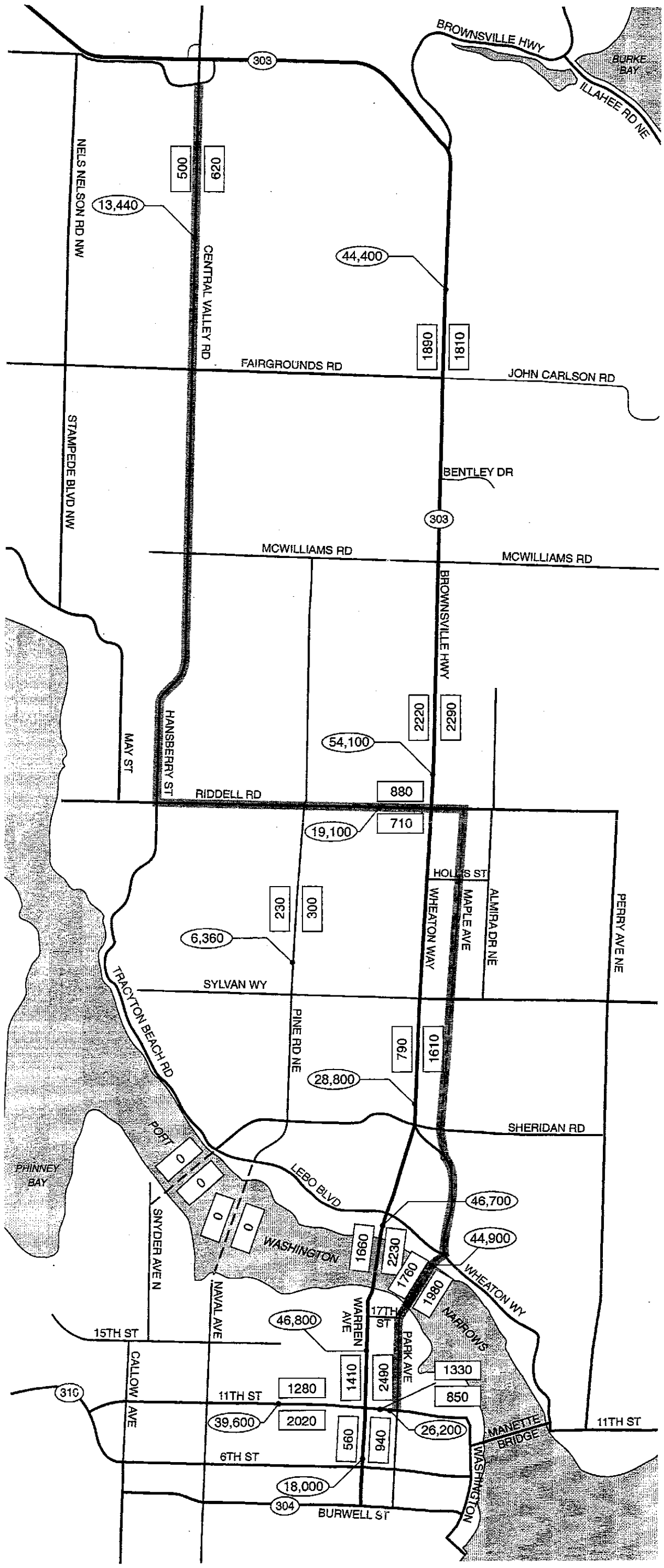
Potential New Streets

Route of Proposed Alternative

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 4
Year 2030 Volumes
Alternative 4B



Parametrix, Inc. Bremerton-Silverdale Analysis/554-1631-030/03(034) 1/02 (K)

NO SCALE

N

Existing Streets

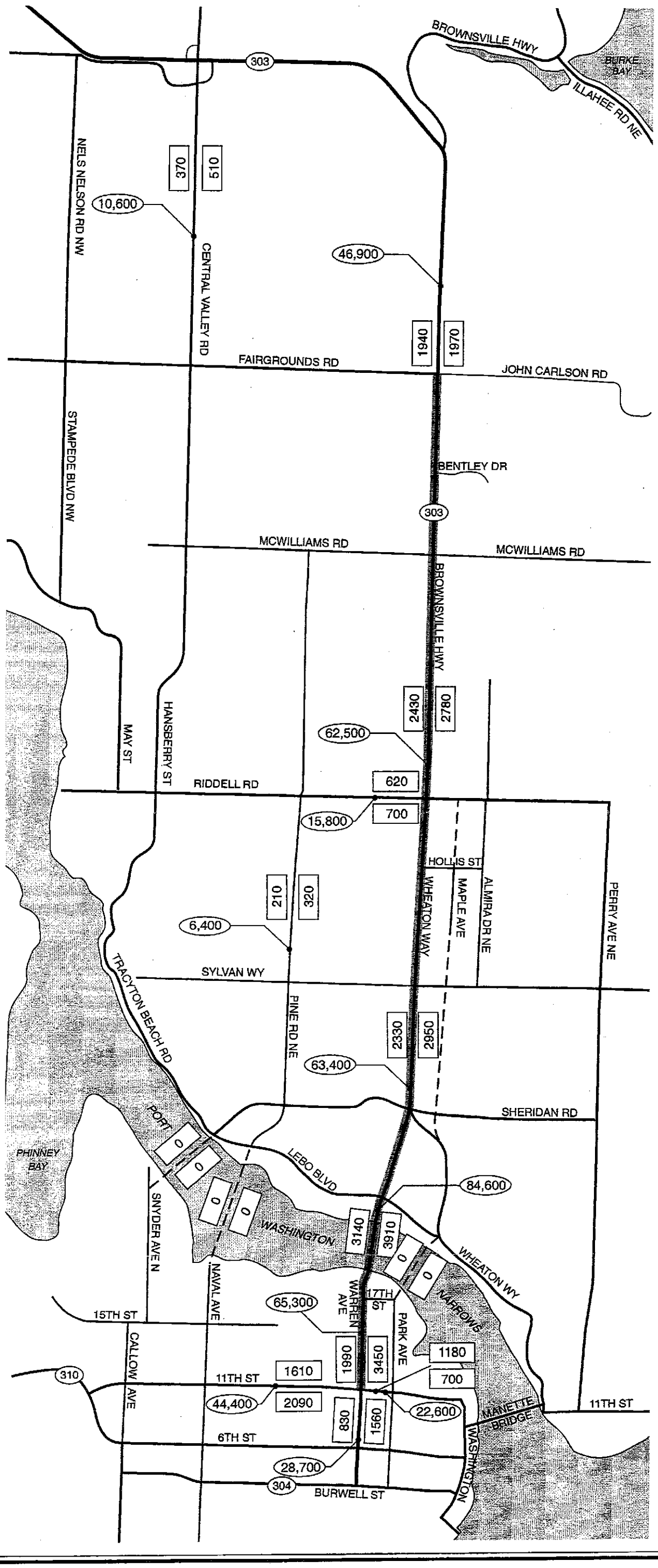
Potential New Streets

Route of Proposed Alternative

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 5
Year 2030 Volumes
Alternative 5A



Parametrix, Inc. Bremerton-Silverdale Analysis/554-1631-030/03(034) 1/02 (K)

NO SCALE

N

Existing Streets

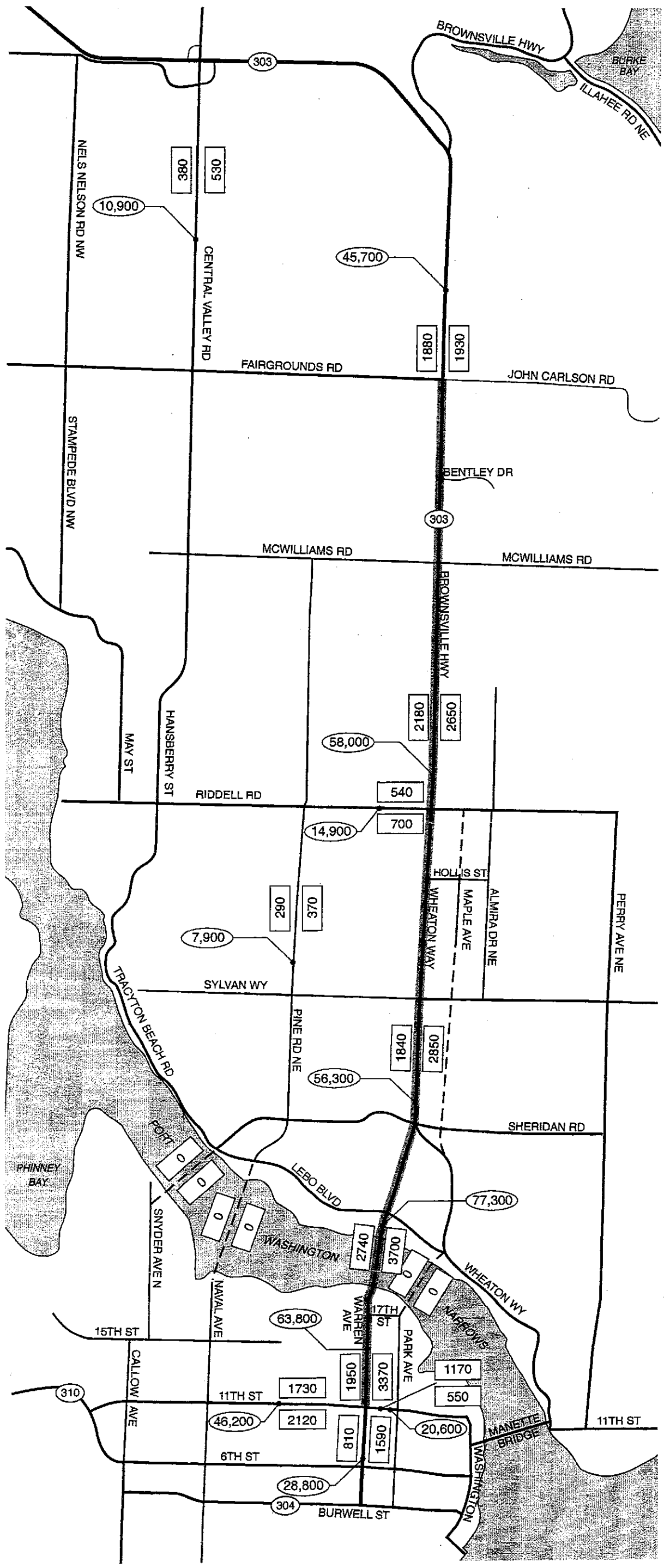
Potential New Streets

Route of Proposed Alternative

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 6
Year 2030 Volumes
Alternative 11



Parametrix, Inc. Bremerton-Silverdale Analysis/554-1631-030/03(034) 1/02 (K)

NO SCALE

N

Existing Streets

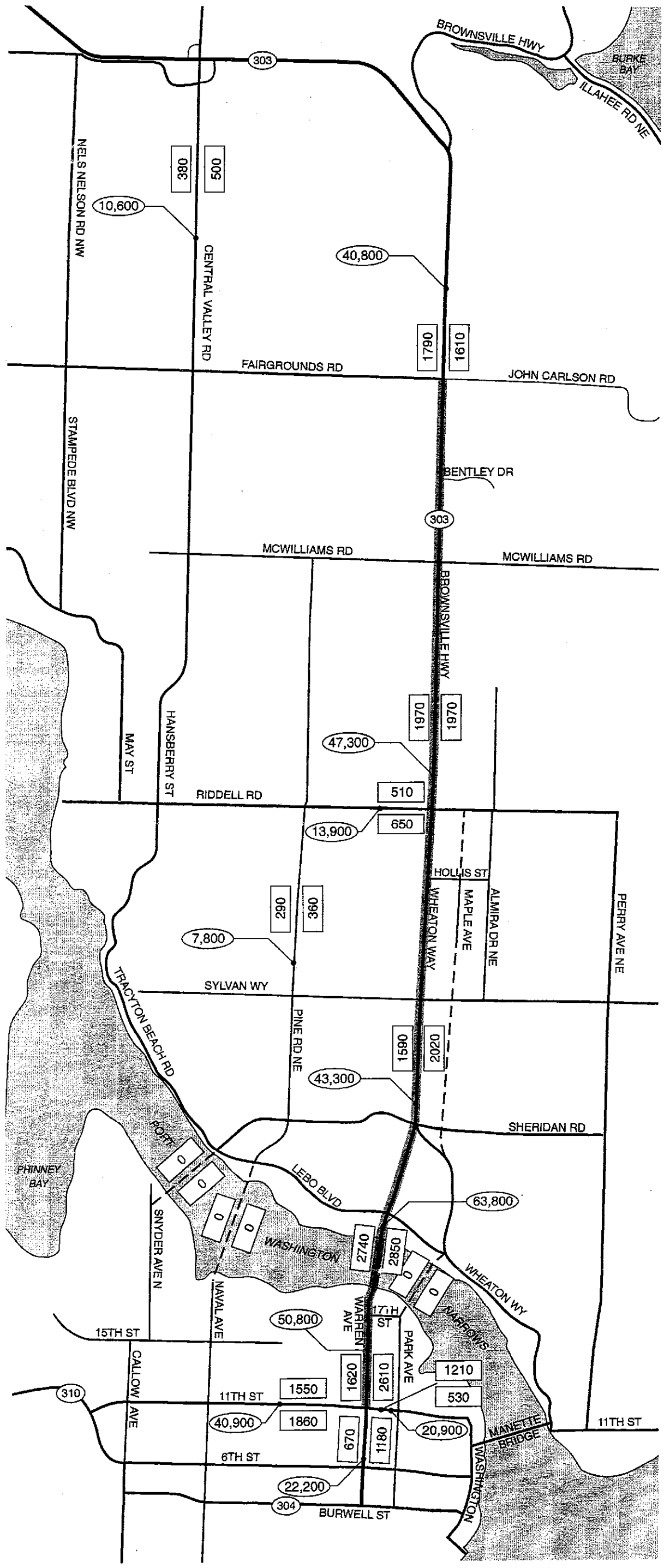
Potential New Streets

Route of Proposed Alternative

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 7
Year 2030 Volumes
Alternative 13



Parametrix, Inc. Bremerton-Silverdale Analysis/554-1631-030/03(034) 12/01 (K)

NO SCALE

N

Existing Streets

Potential New Streets

Route of Proposed Alternative

0000 Average Weekday, PM Peak Hour, Directional Volume (Vehicles)

0,000 Estimated Average Weekday Daily Traffic (AWDT), Two-Way Volume (Vehicles)

Figure 8
Year 2030 Volumes
Alternative 14

Table 3. Existing Intersection Traffic Control

	Study Intersections	Legs	Traffic Control
1	SR 303 @ Brownsville Highway	3	Signalized
2	SR 303 @ NE Fairgrounds RD	4	Signalized
3	SR 303 @ Bentley DR	4	Signalized
4	SR 303 @ NE McWilliams RD	4	Signalized
5	SR 303 @ Fred Meyer Access	4	Signalized
6	SR 303 @ NE Riddell RD	4	Signalized
7	SR 303 @ Hollis ST	4	Signalized, but not the west leg
8	SR 303 @ Sylvan Way	4	Signalized
9	SR 303 @ Sheridan RD	4	Signalized
10	SR 303 @ 16th ST	3	Signalized
11	SR 303 @ 11th ST	4	Signalized
12	SR 303 @ 6th ST	4	Signalized
13	SR 303 @ SR 304 (Burwell ST)	4	Signalized
14	S Central Valley RD @ SR 303 NB Ramps	3	Unsignalized, SR 303 Off-Ramp Approach Stopped
15	S Central Valley RD @ SR 303 SB Ramps	4	Signalized
16	S Central Valley RD @ NE Fairgrounds RD	4	Signalized
17	S Central Valley RD @ NE Riddell RD	4	Unsignalized, All-Way Stop Control
18	NE McWilliams RD @ Pine RD	3	Unsignalized, Pine Road Approach Stopped
19	Pine RD NE @ NE Riddell RD	4	Signalized
20	Pine RD NE @ Sylvan Way	4	Unsignalized, All-Way Stop Control
21	15th @ Snyder AVE	3	Unsignalized, Snyder Avenue Approach Stopped
22	15th @ Callow AVE	3	Unsignalized, Callow Avenue Approach Stopped
23	11th ST @ Callow AVE	4	Signalized
24	Naval AVE @ 15th ST	4	Signalized
25	Naval AVE @ 11th ST	4	Signalized
26	Park AVE @ 11th ST	4	Signalized
27	Old Wheaton Way @ Lebo Blvd.	4	Signalized

Table 4. Existing Roadway Characteristics

Road	Segment	Classification	Through Lanes	Posted Speed Limit	Typical Roadside Improvements
SR 303	SR 3 to SR 304	Urban Principal Arterial	4	30 mph - 55 mph	Mix of asphalt shoulder and curb/gutter/sidewalk
S Central Valley Road	SR 303 to NE Riddell Road	Urban Minor Arterial	2	30 mph - 40 mph	Asphalt shoulders in places
NE Riddell Road	S Central Valley to Almira Drive	Kitsap County Classifications: Urban Minor Arterial (S Central Valley Road to SR 303) Urban Principal Arterial (SR 303 to Almira Drive) City of Bremerton Classification: Minor Arterial (Pine Road to SR 303)	2	35 mph	Paved or gravel shoulders
NE McWilliams Road	Pine Road to SR 303	Urban Minor Arterial	2	25 mph	Mix of asphalt shoulder and curb/gutter/sidewalk
Pine Road	NE McWilliams to Elm Street	Urban Collector (NE McWilliams Road to Sylvan Road) Minor Arterial (Sylvan Road to Sheridan Road)	2	25 mph - 35 mph	Asphalt shoulders, some curb
Elm Street	Pine Road to south terminus	Local Road	2	25 mph	No shoulder or sidewalk
Sheridan Road	Pine Road to Lebo Blvd.	Minor Arterial	2	25 mph	No shoulder or sidewalk
15th Street	Callow Avenue to Snyder Avenue	Collector	2	25 mph	Sidewalk (both sides)
Snyder Avenue	north terminus to 15th Street	Collector	2	25 mph	Paved or gravel shoulders
Callow Avenue	15th Street to 11th Street	Collector	2	25 mph	Sidewalk (both sides)
Naval Avenue	north terminus to 11th Street	Local Road (north terminus to 15th) Collector Arterial (15th Street to 11th Street)	2	25 mph	Sidewalk (both sides)
Park Avenue	north terminus to 11th Street	Collector	2	25 mph	Sidewalk (both sides)
Old Wheaton Way	Sheridan Road to Lebo Blvd.	Principal Arterial	2	30 mph	Sidewalk (both sides)

Table 5. Estimated Highway Capacity Manual (HCM) Level of Service (LOS) using Synchro version 5

				Future 2030 Alternatives													
						Build											
		Existing		No-Build Baseline		4A		4B		5A		11		13		14	
	Study Intersections	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
1	SR 303 @ Brownsville Highway	A	6	B	18	B	15	C	22	C	22	C	26	C	24	B	11
2	SR 303 @ NE Fairgrounds RD	C	34	E	72	D	50	F	93	E	75	E	62	E	58	E	61
3	SR 303 @ Bentley DR	B	12	F	209	F	211	F	217	F	214	F	159	F	175	F	172
4	SR 303 @ NE McWilliams RD	C	27	F	108	F	110	F	132	D	54	F	82	F	104	F	95
5	SR 303 @ Fred Meyer Access	B	17	E	56	E	59	D	48	E	75	D	45	D	48	D	43
6	SR 303 @ NE Riddell RD	E	58	F	119	F	88	F	101	F	97	F	89	E	68	F	120
7	SR 303 @ Hollis ST	B	16	F	111	E	56	D	50	C	21	F	111	F	111	F	99
8	SR 303 @ Sylvan Way	D	45	E	78	D	49	E	64	E	65	E	80	E	72	E	76
9	SR 303 @ Sheridan RD	E	78	F	148	E	69	F	99	F	103	F	141	F	126	F	135
10	SR 303 @ 16th ST	B	16	B	18	A	9	A	9	B	19	B	19	B	19	C	24
11	SR 303 @ 11th ST	C	27	F	152	E	63	E	74	F	134	F	198	F	195	F	228
12	SR 303 @ 6th ST	C	20	D	51	C	29	C	30	D	40	D	46	E	62	D	41
13	SR 303 @ SR 304 (Burwell ST)	C	23	F	90	D	36	E	72	F	93	D	44	E	60	E	76
14	S Central Valley RD @ SR 303 NB Ramps	C	19	F	772	C	21	B	14	C	27	C	25	A	10	F	573
15	S Central Valley RD @ SR 303 SB Ramps	C	35	F	161	F	134	F	172	F	180	F	149	F	135	F	142
16	S Central Valley RD @ NE Fairgrounds RD	E	71	F	236	F	80	F	284	F	122	F	219	F	251	F	205
17	S Central Valley RD @ NE Riddell RD	B	12	F	75	B	17	C	24	F	147	E	48	F	59	F	56
18	NE McWilliams RD @ Pine RD	D	27	F	333	F	283	D	54	E	48	F	308	F	280	F	252
19	Pine RD NE @ NE Riddell RD	C	20	C	30	C	32	F	85	C	27	C	29	C	28	C	28
20	Pine RD NE @ Sylvan Way	B	11	B	14	C	34	F	102	B	11	B	12	B	14	B	13

Table 5. Estimated Highway Capacity Manual (HCM) Level of Service (LOS) using Synchro version 5 (Continued)

				Future 2030 Alternatives													
						Build											
		Existing		No-Build Baseline		4A		4B		5A		11		13		14	
	Study Intersections	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
21	15th @ Snyder AVE	B	12	C	23	D	29	C	29	C	23	C	25	C	23	C	20
22	15th @ Callow AVE	B	14	F	106	E	36	D	48	F	93	F	208	F	116	F	73
23	11th ST @ Callow AVE	B	15	F	144	D	53	E	66	F	129	F	191	F	147	F	111
24	Naval AVE @ 15th ST	A	8	A	9	D	49	A	6	B	10	B	12	B	13	A	8
25	Naval AVE @ 11th ST	B	12	C	31	F	81	B	15	D	38	C	29	D	36	C	27
26	Park AVE @ 11th ST	A	9	B	17	B	13	B	15	D	49	C	32	C	23	B	15
27	Old Wheaton Way @ Lebo Blvd.	C	26	C	27					D	41						
28	Sheridan RD @ New 5A Alignment									C	34						
29	Sylvan RD @ New 5A Alignment									D	48						
30	NE Riddell RD @ New 5A Alignment									B	19						
	Total Analyzed Intersections:	27		27		26		26		30		26		26		26	
	LOS Subtotals by:	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
	LOS A-D	24	89%	10	37%	14	54%	13	50%	16	53%	12	46%	10	38%	10	38%
	LOS E	3	11%	3	11%	5	19%	4	15%	4	13%	3	12%	5	19%	3	12%
	LOS F	0	0%	14	52%	7	27%	9	35%	10	33%	11	42%	11	42%	13	50%
	Study Intersections with reduced delay (compared to No-Build)					18		17		14		17		13		23	

Notes:

% not adjusted for rounding.

If the S Central Valley Road @ NE Riddell Road intersection were signalized with Alternative 5A, the LOS at that intersection would be in the LOS A-D range rather than LOS F, the above results would change accordingly.

1.2.4 Conclusions (Effectiveness of Build Alternatives)

The build alternatives show a reduction in delay at numerous intersections. This demonstrates improvements to traffic operations and satisfies the intended purpose. At some intersections the LOS does not improve; however, the vehicle delay may improve. Alternatives 4A, 4B, and 5A have the greatest number of study intersections with improved LOS and reduced delays. Alternative 11 has a moderate number of study intersections with improved LOS and reduced delays. Alternatives 13 and 14 are similar to no-build for LOS, but intersection delays would decrease at most intersections.

1.3 VEHICLE MILES TRAVELED (VMT) AND VEHICLE HOURS TRAVELED (VHT)

The VMT and VHT criteria measures the difference in vehicle miles and vehicle hours traveled for each alternative. The alternatives with the least VMT and VHT were considered the "most effective" in reducing the miles and hours vehicles travel per day. The VMT and VHT analysis included the entire study corridor.

The VMT and VHT data was an output of the travel demand-forecasting model. The VMT criteria show the daily amount of vehicle travel on the study corridor. VMT was calculated by multiplying the total daily traffic volume by the trip length (in miles). The VHT criteria show the total daily hour of travel for vehicles in the road network. VHT was calculated by multiplying the number of daily trips by the average trip duration (in hours). The results were used to compare the total travel distance and travel time for each alternative.

Alternative 14 assumes TDM (e.g. improved transit service) and TSM (e.g. signal priority) measures would reduce SOV travel and improve the flow of traffic on SR 303 from no-build. A 5% reduction in VMT/VHT was assumed from no-build conditions. Alternative 14 is not intended to be a stand-alone alternative. In fact Alternative 14 improvements were also assumed to be included as part of all the other alternatives.

1.3.1 Impact Assessment

The following table is a summary of the VMT and VHT results for the no-build and six build alternatives.

Table 6. Vehicle Miles Traveled and Vehicle Hour Traveled

Total VMT/VHT	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
VMT	171,708	165,994	167,409	164,548	168,936	170,423	163,123
VHT	6,542	5,542	5,766	5,532	6,064	6,245	6,215

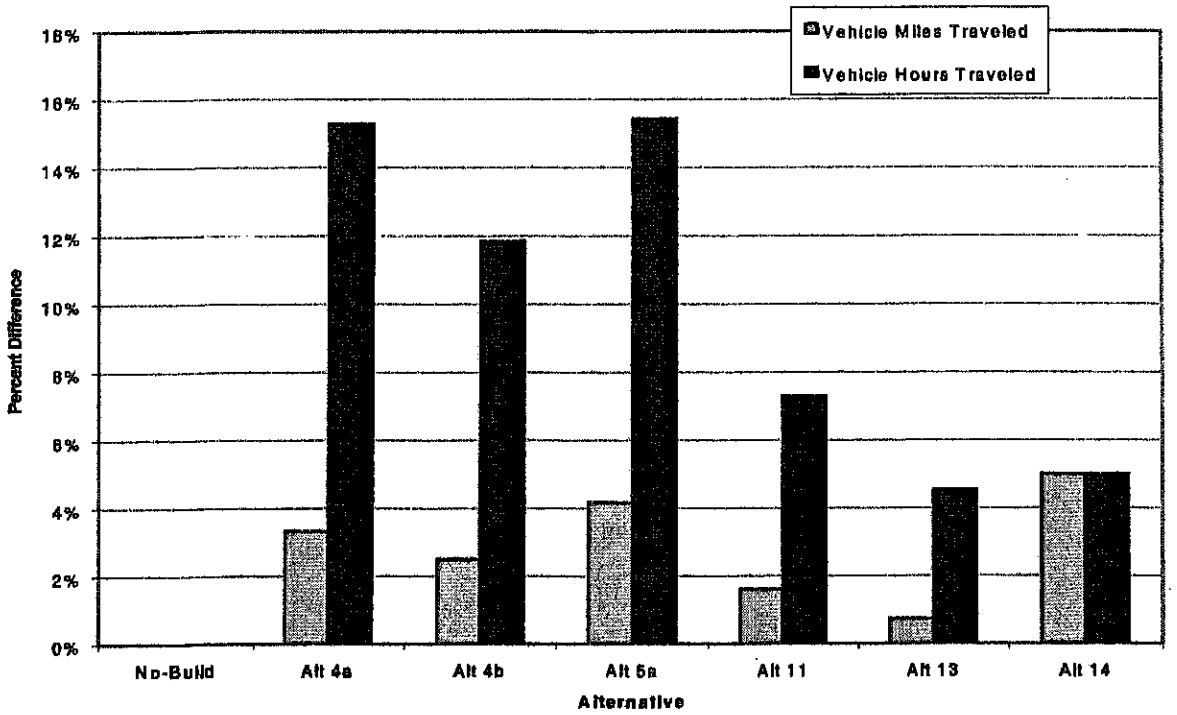


Figure 9. Percent Difference Between Year 2030 Build and No-Build

The graph shows the change in VMT and VHT between the year 2030 build and no-build alternatives. A greater difference would indicate an improvement in VMT or VHT for the build alternatives compared to no-build.

According to the graph, no-build would have the least benefits to the total VMT. However, no-build would improve VMT slightly from present conditions since SR 303 would become more congested, causing some people to shift their commute time or eliminate their trip all together. Alternatives 11 and 13 would have slightly improved VMT from no-build. There would be an increased reduction in the VMT for Alternatives 4a, 4b, and 5a because of additional north/south access across Port Washington Narrows, east or west of the existing Warren Avenue Bridge. The greatest VMT improvement would occur for Alternative 14, which would reduce VMT by 5%. The reason for the reduction is twofold. First TDM/TSM measures are designed to reduce the number of trips made and the vehicle miles traveled by shifting people from single-occupant vehicles (SOV) to high-occupancy vehicles (HOV), transit, and bicycles. Second, Alternative 14 would keep the same alignment as no-build. All TDM/TSM improvements would be geared toward improving HOV and transit facilities throughout the corridor. This would increase congestion on the general-purpose lanes and encourage commuters to switch to alternative travel modes.

There would be a decline in VHT of 5% for Alternatives 13 and 14. Alternative 13 would add lane barriers along SR 303 as an access management measure. This would cause commuters to travel greater distances to make left turns. Alternative 14 would not improve the alignment along SR 303 from the no-build condition, which would cause a reduction in VHT, compared to no-build. Alternative 11 would improve the VHT slightly from Alternative 13 and 14. Alternative 4a, 4b, and 5a would improve VHT by

the greatest amount due to the additional access across the Port Washington Narrows, east or west of the Warren Avenue Bridge. This new bridge would minimize the amount of out-of-direction travel compared to the other alternatives.

1.3.2 Conclusions

Table 7: VMT and VHT criteria matrix summarizes the results of the travel-forecast model using a rating system. The matrix ranks the criteria according to the impacts each of the alternatives would have compared to no-build.

Table 7. VMT and VHT Ratings

VMT/VHT	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
VMT	○	◕	◑	◕	◑	◔	●
VHT	○	●	◕	●	◑	◔	◔
Overall Rating	○	●	◕	●	◑	◔	◑

From the rating matrix it can be concluded that adding an additional bridge to the Warren Avenue Bridge would provide motorists with origins east or west of the Port Washington Narrows an alternative, shorter distance travel route. Alternative 4b is ranked slightly lower than Alternatives 4a and 5a since the proposed improvements would not begin until NE McWilliams road. North of this, commuters would continue to travel on SR 303, causing a reduction in the total VMT and VHT through the study corridor.

1.4 TRAVEL TIME

The travel time criterion is a comparison of the time it takes to travel the SR 303 corridor from Burwell Street (SR 304) in Downtown Bremerton to SR3 at Silverdale, for each of the alternatives. The PM peak hour travel time was calculated for SOV, and a combination of HOV and transit in the northbound and southbound directions. The alternative with the lowest travel time would be the "most effective" in moving people and goods through the corridor.

The data was an output of the travel demand forecast model. The model provided the total travel time on SR 303 from SR 304 to SR 3 in minutes. The travel time for Alternative 14 was calculated as the average travel time between no-build and Alternative 13. This method of evaluating Alternative 14 was chosen since Alternative 14 would have the same alignment as no-build but TDM/TSM would encourage commuters to shift from single-occupant trips to alternatives such as HOV and transit.

1.4.1 Impact Assessment

Table 8 and Figure 10 is a summary of the travel time output from the travel demand forecasting model:

Table 8. Northbound and Southbound Travel Time for HOV and SOV

Travel Time (minutes)	2030						
	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt.14
Northbound – SOV	22.6	16.9	16.6	17.9	17.0	20.4	21.5
Northbound – HOV	22.6	16.9	16.6	17.9	17.0	11.3	16.9
Southbound – SOV	20.7	16.6	16.1	16.7	16.4	20.0	20.4
Southbound – HOV	20.7	16.6	16.1	16.7	16.4	12.2	16.5

The table and figure shows that no-build would be the "least effective" improvement to travel times for NB SOV, NB HOV, SB SOV, and SB HOV. Travel times would be slightly lower in the southbound direction because the southbound PM peak hour demand would be lower than in the northbound direction. Alternatives 4a, 4b, 5a, and 11 would have slightly improved travel times due to proposed transit service improvements and a reduction in traffic congestion along the SR 303 corridor. Alternative 13 would improve travel times in the HOV/Transit lanes compared to the general-purpose lanes. However, there would be a small travel time improvement on the general-purpose lanes since the HOV/Transit improvements would shift a portion of commuters to HOV lanes (carpooling or transit). Alternative 14 would have similar trends as Alternative 13. However, the travel time would be greater for both general-purpose and HOV lanes since this alternative would not add HOV incentives.

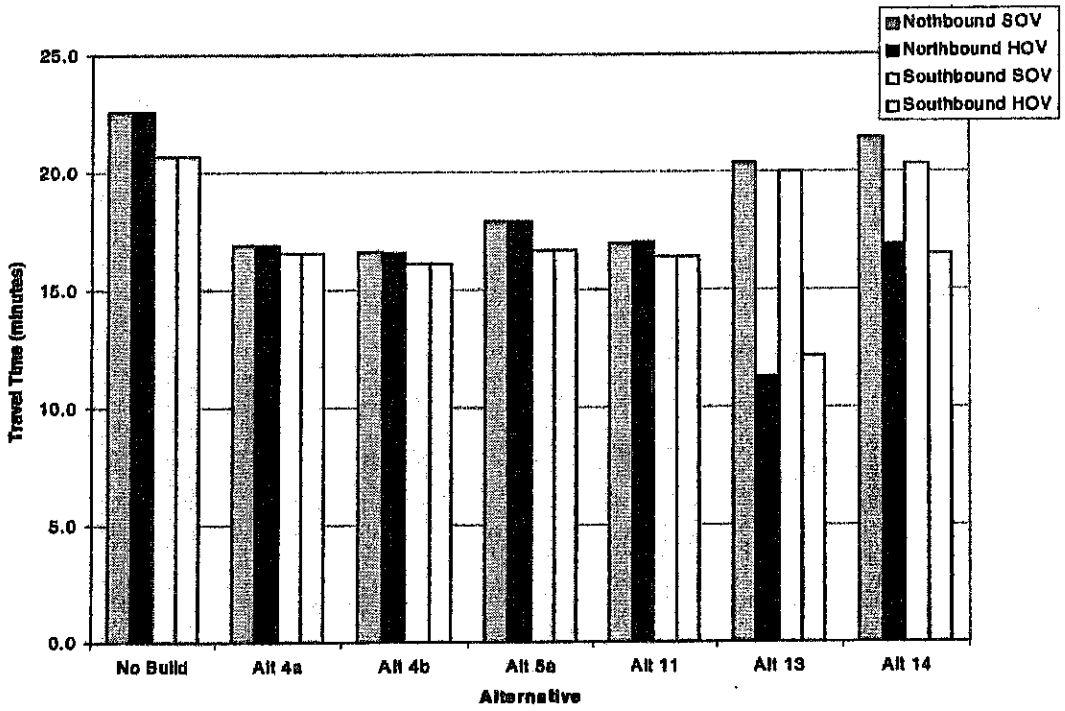


Figure 10. Year 2030 PM Peak Hour Travel Time on SR-303

1.4.2 Conclusions

The results of this analysis are summarized in Table 9: Travel Time matrix.

Table 9. Northbound and Southbound Travel Time Ratings for HOV and SOV

Travel Time	2030						
	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt.14
Northbound - SOV	○	◑	◑	◑	◑	◔	◔
Northbound - HOV	○	◑	◑	◑	◑	●	◑
Southbound - SOV	◔	◑	◑	◑	◑	◔	◔
Southbound - HOV	◔	◑	◑	◑	◑	●	◑
Overall Rating	◔	◑	◑	◑	◑	◕	◑

Alternative 4a, 4b, 5a, and 11 would improve travel times in the GP and HOV lanes with "medium effectiveness." Alternatives 4a, 4b, and 5a would shift traffic from SR 303 to the respective routes, easing congestion on SR 303 corridor. Alternative 11 would create similar improvement by widening SR 303. The SOV travel time for Alternative 13 would be ranked as "lower effectiveness." However, the reduced travel time in the SOV lanes would be off-set by an improvement in HOV/Transit travel times. Consequently, the overall travel time improvements for Alternative 13 would have "increased effectiveness" over the other alternatives. In other words the HOV lanes would give an incentive for commuters to shift from single-occupant to high occupant trips.

1.5 FREIGHT ACCESS

Freight access measures the potential impacts of the proposed alternatives to freight mobility along the SR 303 corridor. The impacts to freight access are dependent on the change in traffic volumes and access management measures employed by the alternative. These measures were used to qualitatively evaluate the impacts to freight access and mobility for each of the alternatives.

1.5.1 Impact Assessment

Presently, freight trucks use SR 303 to deliver goods to major businesses along the corridor in Silverdale and Bremerton. Traffic volumes are anticipated to increase by the year 2030 causing increased travel delays during peak hours. This would have a significant impact on future freight movement in the corridor.

Alternatives 11 and 13 would add access management solutions to restrict left turn movements to controlled intersections along SR 303. This would limit the number of access points to businesses. On the other hand, level of service in the corridor would improve over the no-build alternative, resulting in shorter average vehicle delays.

Alternative 14 would restrict access to freight, similar to Alternatives 11 and 13, but would improve LOS due to an overall reduction in single-occupant vehicle use in the corridor. The SOV improvements would be slightly less than Alternatives 11 and 13.

1.5.2 Conclusions

The results of this analysis are summarized in Table 10: Freight Access

Table 10. Freight Access Ratings

Freight Access	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Rating	○	◕	◕	◕	◑	◑	◔

From the rating matrix, Alternatives 4a, 4b, and 5a would provide "increased effectiveness" to freight mobility along the SR 303 corridor since these alternatives would reduce traffic volumes and maintain the existing access points to businesses on SR 303. In addition, these alternatives would limit freight mobility to the state route, which would benefit neighborhoods and businesses. This would reduce the number of trucks on local streets, preserving neighborhood livability. The travel speed on the state route would be greater so it would allow freight trucks to deliver their goods to businesses faster and more efficiently. Alternatives 11 and 13 would be ranked "medium effectiveness" in freight mobility. The improved LOS compared to no-build is offset by the impacts of access management related to restricting left-turn movements in the corridor.

1.6 MODE SHIFT/TRAVEL DEMAND REDUCTION

The percent mode shift and travel demand reduction describe the change in travel mode and behavior due to the proposed alternatives. The analysis was quantified using the modal split results derived from the travel demand forecast model for SOV and HOV/Transit, which includes non-motorized trips during the PM peak period. The modal split data was used to evaluate the change in travel demand since increased HOV/Transit ridership would reduce travel demand (shift in travel mode) on the general-purpose lanes. Both of these evaluations looked at the impacts on SR 303, from Burwell Street in Downtown Bremerton to SR 3 in Silverdale.

The percent mode shift and travel demand reduction for Alternative 14 was calculated by taking the average of the no-build and Alternative 13 percent mode shifts. This was done since Alternative 14 would maintain the same alignment as no-build but the TDM/TSM measures would increase the number of transit and non-motorized users on the street, like HOV lanes would do for Alternative 13.

1.6.1 Impact Assessment

Table 11 and Figure 11 summarize the final mode split data for the travel demand forecast model.

Table 11. Percent Modal Shift and Travel Demand Reduction for SOV and HOV/Transit

Modal Shift/Travel Demand Reduction	2030						
	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt.14
SOV	0.84	0.85	0.85	0.83	0.83	0.74	0.79
HOV/Transit	0.16	0.15	0.15	0.17	0.17	0.26	0.21

Traffic volumes on SR 303 are expected to worsen by the year 2030. For no-build this would increase congestion levels on the SR 303 corridor, causing either a mode shift to transit or for commuters to completely forego a trip. Alternatives 4a and 4b would increase the number of single-occupant (reduce HOV/Transit patronage) volumes on SR 303 marginally from no-build since these alternatives would not provide an incentive (e.g. travel time reduction or congestion) for commuters to consider HOV/Transit options. Alternatives 5a and 11 would slightly improve the percent HOV/Transit ridership on SR 303. Alternative 13 would be the "most effective" option for reducing SOV traffic along SR 303. The added HOV lanes would provide a travel time advantage that would encourage commuters to carpool and use transit rather than drive alone.

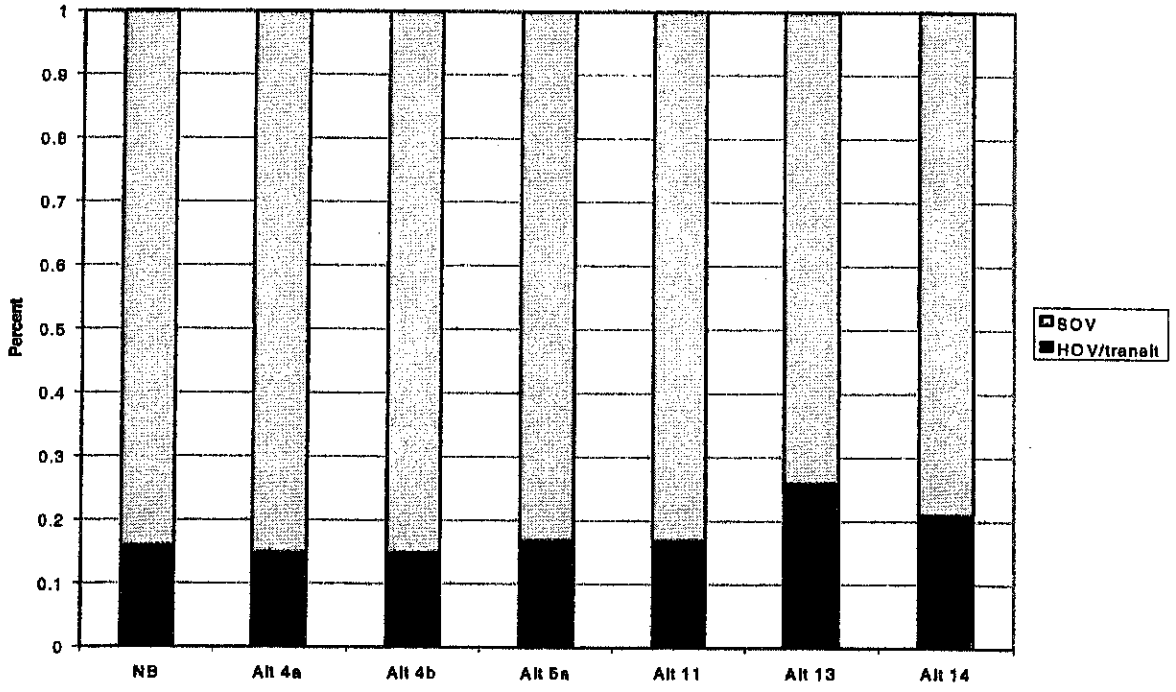


Figure 11. Percent SOV and HOV/Transit Ridership

1.6.2 Conclusion

Table 12 summarizes this information in a matrix format.

Table 12. Modal Shift and Travel Demand Reduction for SOV and HOV/Transit Ratings

Modal Shift/Travel Demand Reduction	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Overall Rating	◔	◔	◔	◑	◑	●	◕

The criteria matrix shows Alternative 13 to be the "most effective" approach in reducing SOV trips and consequently, reducing traffic congestion on SR 303. In other words, by adding HOV lanes and improving the non-motorized network, SOV drivers would be more inclined to consider alternative travel modes to driving alone.

1.7 PEDESTRIAN AND BICYCLE ACCESS AND FACILITIES

Pedestrian and bicycle access and facility improvements were quantified by determining the total additional lane miles that would be added to the network. In addition, a qualitative evaluation was used to predict the benefit each of the alignments would have to encourage non-motorized travel. Each alternative proposes an added sidewalk on both sides of the improved roadways, and either Class 2 or Class 3 bicycle facility improvements. The total length of proposed arterial improvements would determine the length of the pedestrian and bicycle miles added to the network.

Two bicycle facility classifications were proposed along the arterial or state route. A Class 2-bicycle lane is a striped 5-foot lane designated for bicyclists only. This classification is the higher of the two-bicycle classifications considered. A Class 3 bicycle facility is a signed bicycle route with 14-foot wide outside travel lanes that can accommodate experienced bicyclists.

Bremerton would be an ideal place to develop a complete bicycle facility network since there are pockets of dense urban neighborhoods. Some neighborhoods currently lack a bicycle network that links these areas to the Central Business District (CBD). Developing a bicycle route would encourage commuters to integrate bicycle travel in their daily commute trips. This would encourage commuters to shift from conventional SOV trips to non-motorized trips.

1.7.1 Impact Assessment

Table 13 and Figure 12: Non-motorized Access and Facilities summarize the total miles of bicycle and pedestrian improvements that would be added for each alternative.

Table 13. Miles Non-motorized Access and Facilities by Classification

Non-Motorized Access and Facilities	2030						
	No-build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Bicycle Facility (miles)							
Class 2	0	2.6	2.6	1.4	0.9	0.9	0.9
Class 3	0	3.6	1.8	5.4	3.3	3.3	2.3
Pedestrian Facility (miles)	0	6.2	4.3	6.8	4.3	4.3	3.2

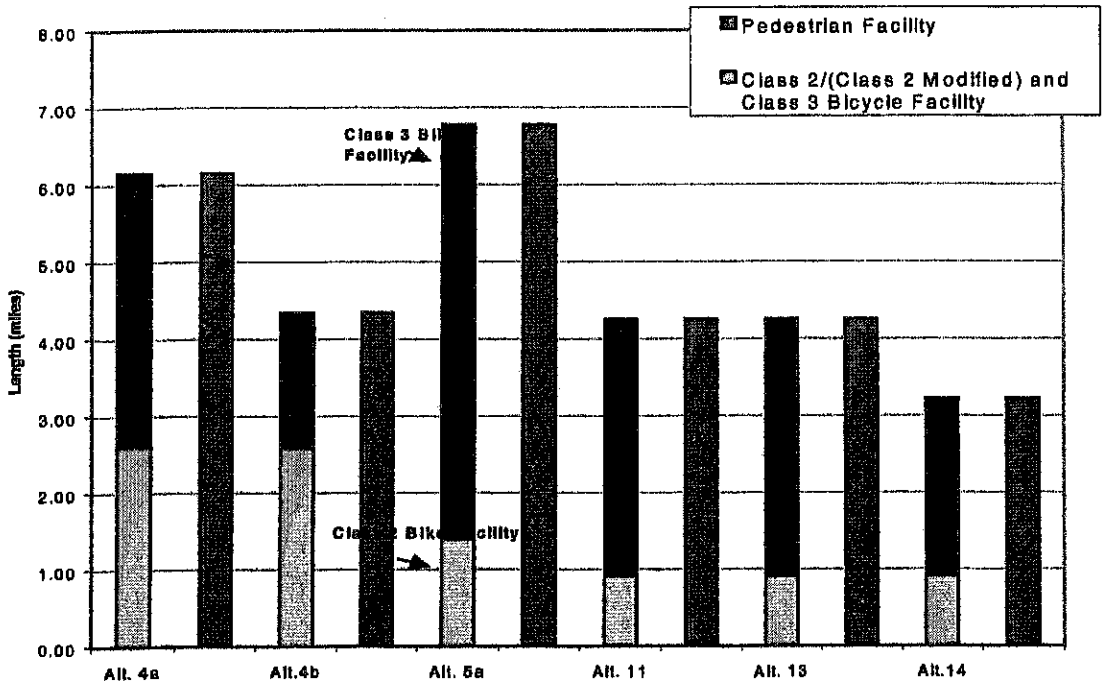


Figure 12. Length of Pedestrian and Bicycle Facilities for Each Alternative

These alternatives were evaluated by comparing the miles of bicycle and pedestrian facilities that would be added to the network. Class 2 bicycle lanes received a higher "level of effectiveness" since this facility would provide a greater benefit to bicyclists. Pedestrian facilities level of effectiveness was evaluated by the longest additional miles of sidewalks added to the network.

Alternative 5a would have the greatest additional bicycle length added to the network, however, only 20% of this improvement would be a Class 2 bicycle facility. Alternatives 4a and 4b propose to add the longest additional length of Class 2 bicycle lanes. Therefore, these alternatives would be considered the most beneficial to bicyclists. No improvements would be made to no-build, which was therefore ranked "least effective."

Alternative 5A would add the most additional miles of sidewalk to the study area. Conversely, the no-build alternative assumes the road network would remain unchanged and would have the least benefit for pedestrians.

1.7.2 Conclusion

Table 14: Non-motorized access and facilities matrix shows how each of the alternatives ranked.

Table 14. Miles Non-motorized Access and Facilities by Classification Ratings

Non-Motorized Access and Facilities							
	No-build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Bicycle Facility	○	●	●	◕	◔	◔	◔
Pedestrian Facility	○	◕	◑	●	◑	◑	◔
Overall Rating	○	◕	◕	◕	◑	◑	◔

The matrix is a summary of the individual benefits from bicycle and pedestrian facilities. The overall rating is a combination of the bicycle and pedestrian facility improvements.

Alternative 4a and 4b would add the greatest additional miles of class 2 bicycle lanes to the network. In addition, these alternatives would add bicycle lanes through densely populated neighborhood streets. However, Alternatives 4a and 4b would add fewer miles of sidewalk improvements than Alternative 5a. Alternative 5a proposes to add pedestrian improvements in close proximity to the commercial area, which would encourage pedestrians to walk, instead of drive, to the commercial area. (Alternative 5a would have the most miles of arterial improvements as well.)

The overall ratings show Alternatives 4a, 4b, and 5a would have "increased effectiveness" in developing the non-motorized network. This means Alternative 5a would compensate for fewer miles of a class 2-bicycle network by adding more miles of sidewalk. Alternatives 11, 13, and 14 would only add bicycle and pedestrian improvements along SR 303. These alternatives received a ranking of "medium effectiveness" and "lower effectiveness."

1.8 PERSON THROUGHPUT

The person throughput criteria quantifies the number of people (rather than the number of vehicles) being moved through the SOV and HOV/Transit lanes. A screenline approach was used to compare the difference in total person throughput for the entire network. The person throughput was gathered at two critical locations in the network:

- North of NE Riddell Road at S Central Valley Road, Pine Road, and SR 303
- At the existing and proposed bridge crossings of the Port Washington Narrows, which include the existing Warren Avenue Bridge and Manette Bridge, and the proposed new crossings for Alternatives 4a, 4b, and 5a.

The PM peak hour person throughput was gathered from the travel demand forecast model. The person throughput is the total number of people, utilizing all travel modes (e.g. SOV, HOV and Transit). The "most effective" alternative would improve both SOV and HOV/Transit person throughput. The model results were aggregated by mode type (SOV and HOV/Transit). The total person throughput was used to compare and rank overall person throughput of each alternative.

For Alternative 14, different methods were used for determining SOV and HOV/Transit person throughput. Alternative 14 alignment would remain the same as no-build, which means the SOV person throughput would resemble no-build person throughput. Conversely, TDM/TSM measures would improve HOV/Transit patronage from no-build conditions. The benefits of TDM/TSM along the study corridor would have similar benefits as adding HOV lanes (Alternative 13). Therefore, a 5% reduction in Alternative 13 HOV/Transit volumes was assumed for Alternative 14.

1.8.1 Impact Assessment

Table 14 and Figures 13 and 14 summarize the person throughput for the two-screenline locations. The results were aggregated by mode type (SOV and HOV/Transit).

Table 15. Person Throughput by Screenline for SOV and HOV/Transit

Person-Throughput	2030						
	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt.14
North of NE Riddell Road							
SOV	6454	7386	7369	7063	7246	6581	6454
HOV/Transit	1151	1770	1788	1604	1649	2221	2110
Total	7605	9156	9157	8667	8895	8802	8564
Crossing the Narrows							
SOV	9654	10726	10664	10518	10443	9795	9654
HOV/Transit	2406	3060	3052	2962	2881	3418	3247
Total	12060	13786	13716	13480	13324	13213	12901

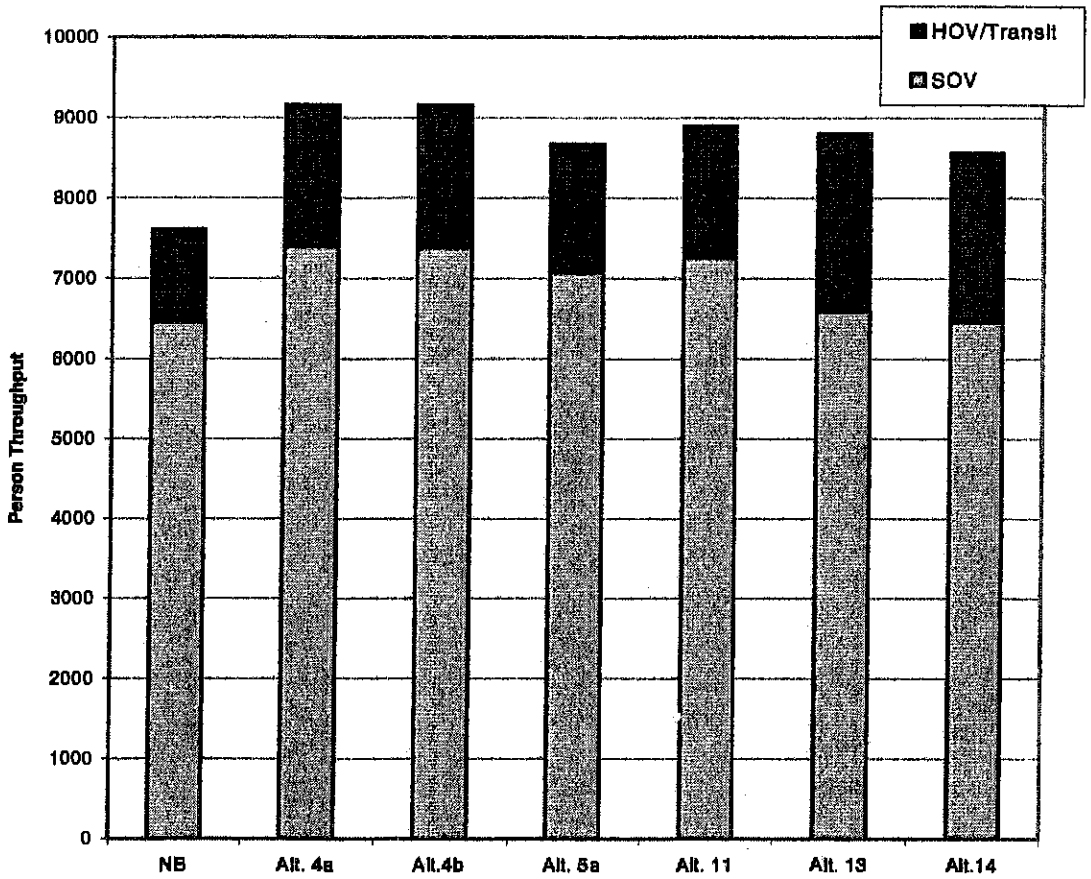


Figure 13. Person Throughput North of NE Riddell

No-build would have the lowest SOV and HOV/Transit person throughput since the alignment for no-build would remain unchanged from existing conditions. Alternatives 4a, 4b, and 11 would increase the SOV and HOV/Transit person throughput compared to no-build. Alternative 5a has a lower total person throughput but the increase in SOV person throughput would be competitive with Alternatives 4a, 4b, and 11.

The SOV person throughput for Alternatives 13 and 14 would be approximately the same as no-build. The person throughput for Alternative 13 would be slightly greater than the person throughput for Alternative 14. The added HOV lanes and TDM/TSM incentives would improve HOV/Transit person throughput compared to the other alternatives. For Alternative 13, the increased HOV/Transit ridership suggests that by improving road capacity North of NE Riddell Road, commuters would use HOV/Transit verses driving alone. For Alternative 14 the improved HOV/Transit ridership suggests TDM/TSM incentives would shift some trips from SOV to HOV/Transit. In other words, implementing HOV lanes and TDM/TSM would increase carpooling and transit ridership.

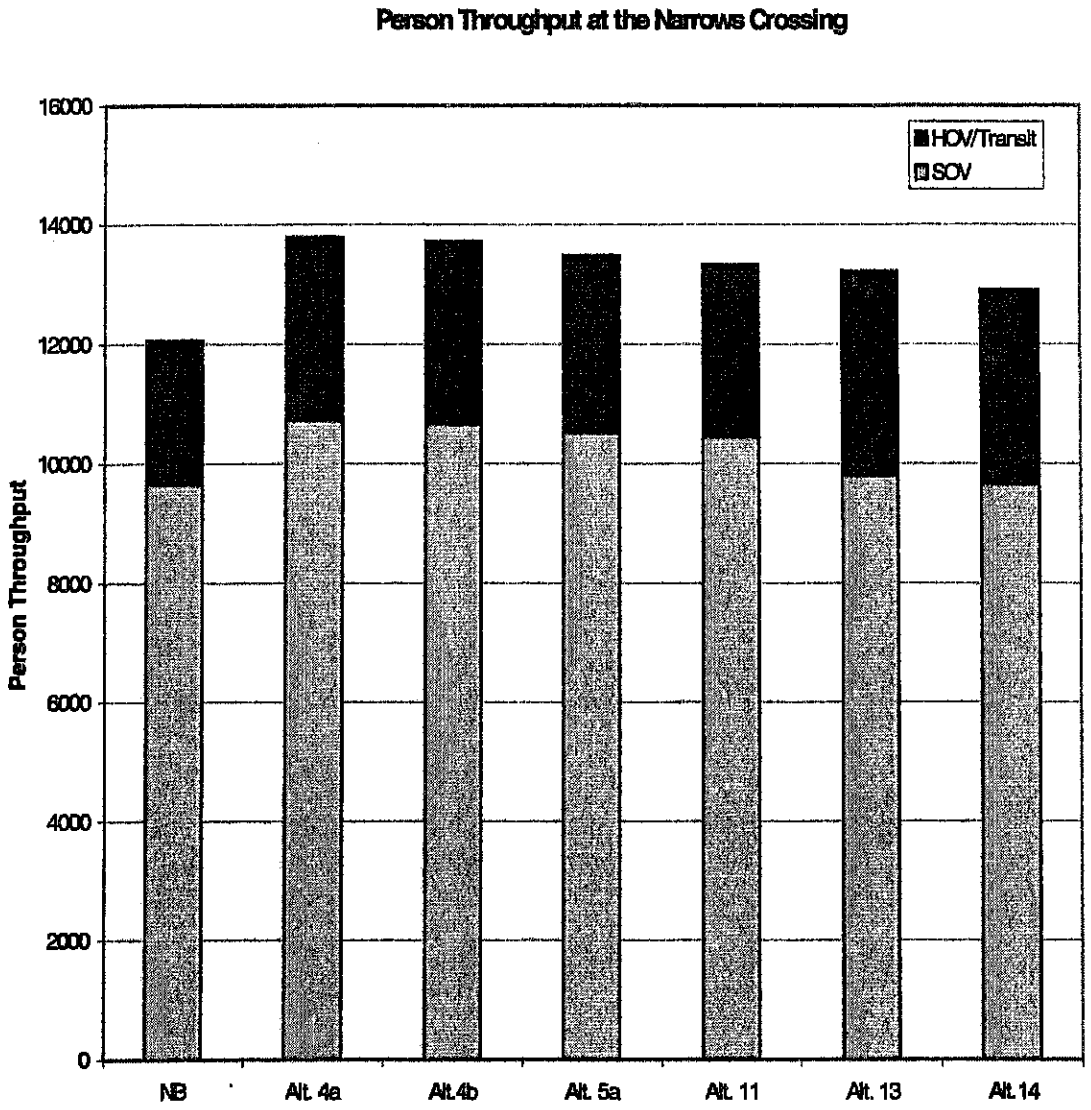


Figure 14. Person Throughput at the Narrows Crossing

The person throughput at the Port Washington Narrows crossing exceeds the person throughput north of NE Riddell Road. This indicates there is an increased person demand to travel on the bridge crossing. The person throughput growth trends at the Port Washington Narrows crossing are expected to be similar to the person throughput north of NE Riddell Road.

1.8.2 Conclusion

The following table compares the person throughput for each alternative:

Table 16. Person Throughput by Screenline for SOV and HOV/Transit

Overall Rating

Person Throughput	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
*Overall Rating	◔	◕	◕	◑	◕	◕	◑

The matrix only reflects the overall person throughput. This approach was used for two reasons. First the change in person throughput for each of the alternatives would be similar North of NE Riddell and at the Port Washington Narrows Crossing. Second, the total person throughput benefits would be achieved by improving the combined SOV and HOV/Transit person throughput in the corridor.

The total SOV and HOV/Transit person throughput indicates that Alternatives 4a, 4b, 11, and 13 would move more people through the corridor. Alternatives 4a, 4b, and 11 would have the highest number of SOV trips and Alternative 13 would have the highest number of HOV/Transit trips.

1.9 SAFETY

1.9.1 Potential Accident Reduction

This evaluation estimated the potential vehicle, pedestrian, and bicycle accident reduction associated with roadway, intersection, and access management improvements. WSDOT provided two-year accident data, from 1999 to 2000 at intersections along SR-303. Additional accident data was provided by the City of Bremerton and Kitsap County, to show the same two-year accident rates at mid-block arterial locations in the study area. A few arterial mid-block segments were combined to provide an accurate illustration of the road network. Tables 17 and 18 are a summary of the accident data.

Table 17. 1999-2000 Accident Data Summary at Mid-Block Locations within Study Area

Two-Year Accident Summary at Study Intersections [1]													
		Type				Severity				Exposure		Rate	
Intersection	MP	Vehicle Only	Pedestrian Involved	Cyclist Involved	Other	PDO	Injury	Fatal	TOTAL	Time (years)	Est.[2] Daily Volume (veh)	per Year	per Million Entering Vehicles
SR 303 @ Brownsville Highway	5.38-5.43	5	1	1	0	3	4	0	**7**	2	26880	3.5	0.4
SR 303 @ NE Fairgrounds RD	4.50	24	1	1	0	14	12	0	**26**	2	32330	13.0	1.1
SR 303 @ Bentley DR	4.10	13	0	0	1	7	7	0	**14**	2	31560	7.0	0.6
SR 303 @ NE McWilliams RD	3.75	30	0	0	0	17	13	0	**30**	2	34410	15.0	1.2
SR 303 @ Fred Meyer Access	2.98	14	0	1	0	11	4	0	**15**	2	36560	7.5	0.6
SR 303 @ NE Riddell RD	2.75	37	0	0	1	11	27	0	**38**	2	34530	19.0	1.5
SR 303 @ Hollis ST	2.45	17	0	0	0	13	4	0	**17**	2	34670	8.5	0.7
SR 303 @ Sylvan Way	1.97	23	0	2	1	17	9	0	**26**	2	33360	13.0	1.1
SR 303 @ Sheridan RD	1.46	28	0	1	1	23	7	0	**30**	2	34100	15.0	1.2
SR 303 @ 16th ST	0.58	13	0	0	0	7	6	0	**13**	2	33830	6.5	0.5
SR 303 @ 11th ST	0.26	36	0	0	1	28	9	0	**37**	2	33840	18.5	1.5
SR 303 @ 6th ST	0.00	13	0	0	0	11	2	0	**13**	2	19790	6.5	0.9
SR 303 @ SR 304 (Burwell ST)	0.00B	12	1	0	0	6	7	0	**13**	2	16300	6.5	1.1

Table 18. 1999-2000 Accident Data Summary on SR-303

Two-Year Accident Summary at Road Segments 1																
Segments (Midblocks)			Type				Severity				Exposure			Rate	
from	to	Mile Post	Vehicle Only	Pedestrian Involved	Cyclist Involved	Other	PDO	Injury	Fatal	TOTAL	Time (years)	Est.2 Daily Volume (veh)	Segment Length (miles)	per Year (acc/yr)	per Million Vehicle-Miles (acc/mvm)
Brownsville Highway	NE Fairgrounds RD	4.52-5.34	10	0	0	3	9	4	0	13	2	25210	0.82	6.5	0.9
NE Fairgrounds RD	NE McWilliams RD	3.79-4.47	18	0	0	0	8	10	0	18	2	26800	0.58	9.0	1.6
NE McWilliams RD	NE Riddell RD	2.79-3.71	42	1	0	3	25	21	0	46	2	30090	0.72	23.0	2.9
NE Riddell RD	Sylvan Way	2.02-2.72	99	2	1	0	61	41	0	102	2	26190	0.63	51.0	8.5
Sylvan Way	Sheridan RD	1.49-1.94	29	0	0	0	14	15	0	29	2	28650	0.45	14.5	3.1
Sheridan RD	11th ST	.3-1.43	88	1	0	12	68	33	0	101	2	27300	1.06	50.5	4.8
11th ST	SR 304 (Burwell ST)	(.05-.11)-.04-.21	22	1	0	0	15	8	0	23	2	10310	0.23	11.5	13.3

The current accident data does not provide enough information to forecast future accident rates for each of the alternatives. Therefore, the rankings are a qualitative measure of the future safety benefits that would likely occur for each alternative.

1.9.2 Impact Assessment/Conclusion

Table 19. Overall Safety Ratings

Safety	2030						
	No-Build	Alt. 4A	Alt. 4B	Alt. 5A	Alt. 11	Alt. 13	Alt.14
Overall Rating	◔	◔	◔	◔	◕	◑	◕

Alternatives 11 and 14 would add access management measures on SR 303 to restrict the uncontrolled left turn movements. As a result, the improvements would likely reduce the accident rate in the corridor. These alternatives were rated as having "increased effectiveness."

Alternative 13 also adds access management measures on SR 303, but was ranked as having "medium effectiveness," slightly lower than Alternatives 11 and 14. This reduced rating is caused by additional maneuvering required by SOV traffic in and out of the HOV lanes.

Existing accident rates on SR 303 are relatively high. Portions of the corridor are designated by WSDOT as High Accident Corridors (HACs) or High Accident Locations (HALs). Future improvements would be made on the existing alignment under the no-build alternative to create slightly improved safety levels along the corridor. However, the no-build alternative was rated as having "lower effectiveness" than Alternatives 11, 13, and 14.

Alternative 4A, 4B, and 5A would not change the existing configuration of SR 303. Therefore, these alternatives would be less effective in reducing the accident rates on the corridor. Additionally, by increasing traffic demand on the proposed streets, these alternatives would likely result in increased accident rates on the improved arterial roads, such as S Central Valley Road, Pine Road, and Old Wheaton Way. Overall, these alternatives were ranked as having "lower effectiveness" than Alternatives 11, 13, and 14.

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SR 303 Bremerton to Silverdale Transportation Corridor Study

Prepared for

Washington State Department of Transportation
Olympic Region Transportation Planning Office
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February 2002
Project No. 554-1631-030

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TECHNICAL MEMORANDUM

Date:	February 2002
To:	WSDOT (Olympic Region Transportation Planning Office)
Subject:	Displacement and Business Impacts Analysis for 2nd Level Screening
Project Number:	554-1631-030 (02/023)
Project Name:	SR 303 Bremerton Silverdale Corridor Study

SUMMARY

This 2nd level screening document identifies known or potential displacements and business impacts within or adjacent to the SR303 corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No-Build Alternative).

BACKGROUND

This section summarizes the approach used to analyze displacements and presents a description of the potential acquisitions of commercial, public, and residential properties for the SR 303 Corridor Study.

There are two types of property acquisitions, full and partial. A partial displacement would require acquisition of only a portion of a parcel and would not displace the current use. A full acquisition would require full parcel acquisition, displacing the current use. Table 1-1 summarizes the acquisitions and displacements associated with the transportation alternatives.

It is important to emphasize that this list of displacements is based on the current conceptual design, and should not be interpreted as the final determination regarding property displacements. The list has been continually updated as more details are obtained, and the design is further refined and modified.

STUDY METHODOLOGY

The following assumptions and methodology were used for this analysis:

- Project staff assumed that if the proposed alternative right-of-way touched a parcel, it could result in at least a "partial displacement." If the required right-of-way crossed a building footprint within a parcel, or was within 20 feet of the building footprint, it was assumed that a full displacement of the existing use would occur.

- Data were obtained from the Kitsap County Assessor 'extracts' and overlaid onto color aerial maps (1"=100' scale) provided by WSDOT also depicting existing right-of-way, proposed transportation alternatives. Zoning and comprehensive plan mapping provided by Kitsap County and the City of Bremerton were used to distinguish property types. This information was verified through a field check.

- Land use categories consisted of "commercial and industrial buildings and/or land," "residential single family homes," "residential multi-family homes (including wherever possible duplexes, triplexes, and apartments)," and "public and institutional buildings and/or land."

Information regarding parcels was obtained from review of information maintained by:

- Kitsap County Department of Assessment (2001)
- Kitsap County Comprehensive Plan and Zoning Ordinance (1998)
- City of Bremerton Comprehensive Plan and Zoning Ordinance (1985)
- Washington State Department of Transportation (WSDOT 2001)

AFFECTED ENVIRONMENT

Potential impacts associated with displacements are discussed below:

Element: ***Displacements***
Criteria: Number of businesses and residences displaced.

Table 1-1 Estimated Total Displacements Based on Parcel Analysis.

Displacements	Existing	Estimated Displacements for Build Alternatives (2030)					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt.1[illegible]
Full Displacement							
Commercial/industrial			4	4	2	33	10
Public/Institutional			0	0	3	0	0
Single-Family Residential			145	124	85	55	17
Multi-Family Residential			8 (121 units)	5 (25 units)	5 (166 units)	2 (6 units)	1
Undeveloped			0	1	0	0	0
Total			157	133	95	90	28
Partial Displacement							
Commercial/industrial			0	3	29	22	7
Public/Institutional			3	1	7	5	2
Single-Family Residential			173	312	110	20	6
Multi-Family Residential			--	--	--	--	--
Undeveloped			58	21	63	6	2
Total			234	337	209	53	17
Grand Total			391	470	304	143	45

Notes:
[1] The projected rating for Alternative 14 is based on widening at major intersections approximated at 30 percent of the total displacements given for Alternatives 11 and 13.

Table 1-2 Business Impacts Based on Parcel Analysis.

Displacements	Existing	Estimated Displacements for Build Alternatives (2030)					
	-	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11/13	Alt.14[1]
Access/Parking Reduction	NA	NA	0	8	17	20	6

SCREENING CRITERIA

The screening criteria are being used for comparative purposes to estimate the overall environmental impacts between each of the proposed transportation alternatives. The environmental impacts of the preferred alternative will be thoroughly and independently evaluated, per WSDOT's Environmental Procedures Manual and NEPA requirements, as part of project-specific environmental review.

IMPACT ASSESSMENT

The potential displacement and business impacts for each alternative are summarized below:

Summary of the Impacts Assessment

Alternative	Total Number of Displacements & Business Impacts	Potential Cost Impact	Sum of Impact Rankings
4A	391	High	○
4B	478	High	○
5A	321	High	○
11	163	Moderate/High	◔
13	163	Moderate/High	◔
14	45	Low/Moderate	◑
15 (No Build)	NA	NA	–

○=Most Impacts, ◔=Medium Impacts, ◑= Low Impacts, ◕=Minimal Impacts, ●= Improved Environment

CONCLUSION

This qualitative analysis suggests that of the Build Alternatives, Alternative 4B has the greatest potential impacts from displacements and Alternative 14 has the least potential impacts from displacements. Alternative 4A has the greatest potential displacement impacts to single-family residential properties, while Alternative 5A has the greatest potential impacts to multi-family residential properties. For displacement impacts to businesses and parking and reduction impacts, Alternatives 11 and 13 would have the greatest potential impacts.

LIMITATIONS

The assessment is strictly qualitative and is not intended to establish expectations for detailed acquisition requirements and associated costs. This assessment was strictly limited to the review of information provided by others and a brief visual inspection of each of the described alternatives. The information contained in data sources used in developing this assessment is recognized to be incomplete and subject to change over time. Any use or interpretation of the information contained in this assessment should consider the subjective nature of the work and the limited accuracy of regulatory sources.

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TECHNICAL MEMORANDUM

Date: February 2002

To: WSDOT (Olympic Region Transportation Planning Office)

Subject: Visual Resources/Aesthetics and Neighborhood Livability for 2nd Level Screening

Project Number: 554-1631-030(02/023)

Project Name: SR 303 Bremerton to Silverdale Corridor Study

Summary

This 2nd level screening document evaluates the visual resources, aesthetics, and neighborhood livability characteristics of the SR 303 Corridor Study alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No Build). The information used in this section was compiled from a number of existing sources and, where necessary, additional information was collected to conduct a general inventory of these resources.

Background

The information presented in this report is intended to provide a framework for decision making regarding the extent of visual resource impacts to known areas, as well as state or locally identified viewsheds. Impacts are evaluated for the various SR 303 Corridor Study alternatives. This evaluation is based on site visits in the fall of 2001 after review of aerial photographs. The following information sources were utilized to characterize these resources:

- Washington State Department of Transportation (WSDOT) provided aerial photographs;
- Kitsap County Assessor's parcel maps and buildable limitations map;
- City of Bremerton and Kitsap County zoning and comprehensive plan maps;
- Windshield survey verified existing land uses, general visual resources/aesthetics, and vegetation not covered in detail by existing mapping.

Potential Impacts Related to Shadows
Proposed new bridges would cast shadows along alternatives **4a**, **4b**, and **5a**. Shadows would primarily impact the Port Washington Narrows, with medium-level impacts to mixed-residential areas at either end of the proposed bridges.

Minor additional shadows along proposed alternatives **11**, **13**, and **14** would occur as a result of the expansion of the existing Warren Avenue Bridge. This impact would likely be negligible, as substantial shadowing is currently occurring in that portion of the proposed project area.

Light and Glare Impact
Street lighting, as required for new arterials along alternatives **4a**, **4b**, and **5a**, would spill into neighborhoods, altering the existing visual landscape in these proposed project areas. Although light shielding could help to mitigate, impacts would still be moderate to high.

No additional impact is expected in the area along proposed alternatives **11**, **13**, and **14**, as this area of the project is currently a well-lighted, principal arterial.

Compatibility with Current Visual Character
Proposed alternatives **4a**, **4b**, and **5a** are in primarily single-family residential areas, with intermittent multi-family residential and commercial/industrial uses. Proposed road widening could result in loss of property for many individual homeowners. Character would change from neighborhood streets to busy arterials with broader streets and brighter lights encroaching on private homes, schools, parks, and churches.

Alternatives **11**, **13**, and **14** traverse an existing principal arterial and bridge, through a large-scale commercial district. The character of this area is generally compatible with proposed improvements.

Viewer Sensitivity to Potential Change
Residents, along proposed alternatives **4a**, **4b**, and **5a** have expressed concerns over property de-valuation due to changing character of the roadway and neighborhood. Other concerns expressed related to loss of personal property; feelings of discomfort with encroaching arterial and traffic; and disruption of views of Port Washington Narrows, Mt. Rainier, and the Olympic Mountains.

Limitations

This assessment was prepared based on readily available information. The assessment is strictly qualitative and is not intended to establish expectations for impacts to visual resources in the project area. This assessment was limited to the review of information provided by others and is subject to change over time pending a more detailed analysis as part of the project-specific environmental review.

Impact Assessment

Level of Change to Visual Quality/Aesthetics. Table 1-1 depicts expected level of change/impact for each alternative.

Table 1-1 SR 303 Visual Quality and Aesthetics Impacts

Alternative	(Visual Analysis Units) Type of Improvement/ SR 303 Corridor Location	Scope of Project Impacts	Viewer Exposure & Sensitivity		Visual Impact	Rating
			Exposure	Sensitivity		
4a	New Crossing/Pt. Washington Narrows and Lebo Recreation Area	Moderate/High	Moderate/High	High	High	○
4b	New Crossing/Pt. Washington Narrows	Moderate/High	Moderate/High	High	High	○
5a	New Crossing/Pt. Washington Narrows and Evergreen Park	Moderate/High	Moderate	Moderate/High	Moderate/High	◔
11	Widen SR 303 @ Warren Avenue Bridge	Moderate	Low/Moderate	Moderate	Moderate	◑
13[1]	Widen SR 303 @ Warren Avenue Bridge	Moderate	Low/Moderate	Moderate	Moderate	◑
14	TDM/TSM Operational Improvements/SR 303 Corridor	Low	Low/Moderate	Moderate	Low/Moderate	◕
15	No-build	NA	NA	NA	NA	NA

1 Preferred Alternative

[1]Ratings:

●= Most Effective, Improved Environment. ◕= Increased Effectiveness, Minimal Impact. ◑= Medium Effectiveness, Low Impacts. ◔= Lower Effectiveness, Medium Impacts. ○= Least Effective or Most Impacts.

Level of Change to Neighborhood/Livability. Table 1-2 depicts expected level of change/impact for each alternative.

Table 1-2 SR 303 Neighborhood/Livability Impacts

Alternative	(Visual Analysis Units) Type of Improvement/ SR 303 Corridor Location	Degree of Change to Streets	Potential Displacement Impacts Residential	Commercial	Noise Impact (estimated)	Rating
4a	New Crossing/Pt. Washington Narrows and Lebo Recreation Area	Moderate/High	High	High	High	○
4b	New Crossing/Pt. Washington Narrows	Moderate/High	High	High	High	○
5a	New Crossing/Pt. Washington Narrows and Evergreen Park	Moderate/High	Moderate/High	Moderate/High	Moderate/High	◔
11	Widen SR 303 @ Warren Avenue Bridge	Moderate	Low/Moderate	Moderate/High	Moderate	◑
13[1]	Widen SR 303 @ Warren Avenue Bridge	Moderate	Low/Moderate	Moderate/High	Moderate	◑
14	TDM/TSM Operational Improvements/SR 303 Corridor	Low/Moderate	Low/Moderate	Low/Moderate	Low/Moderate	◕
15	No-build	NA	NA	NA	NA	NA

1 Preferred Alternative

[1]Ratings:

●= Most Effective, Improved Environment. ◕= Increased Effectiveness, Minimal Impact. ◑= Medium Effectiveness, Low Impacts. ◔= Lower Effectiveness, Medium Impacts. ○= Least Effective or Most Impacts.

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TECHNICAL MEMORANDUM

Date:	February 2002
To:	WSDOT (Olympic Region Planning Office)
Subject:	4(f) Resource Assessment for 2nd Level Screening
Project Number:	554-1631-030(02/023)
Project Name:	SR303 Bremerton to Silverdale Corridor Study

SUMMARY

This 2nd level screening document identifies known or potential 4(f) resource sites within or adjacent to the SR 303 corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No-Build). These resources include parks, schools, libraries, and hospitals.

BACKGROUND

Section 4(f) of the Department of Transportation Act of 1966, as amended (23 U.S.C. 138 and 49 U.S.C. 303) states that the Secretary of the U.S. Department of Transportation shall not approve any transportation program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance as determined by the federal, state, or local officials having jurisdiction thereof, or use of any land from an historic site of national, state, or local significance as determined by such officials unless: (1) there is no feasible and prudent alternative to the use of such land; and (2) such action includes all possible planning to minimize harm to such park, recreational area, wildlife and water fowl refuge, or historic site resulting from such use.

The objective of this assessment is to identify properties that have the potential to be affected by the project. This Technical Memorandum presents a screening level review of properties and will be used as the basis for further assessments.

Information regarding local resources was obtained from:

- City of Bremerton website: http://www.ci.bremerton.wa.us/maintenance/parks/parksandfacilitiesguide.shtml
- Bremerton School District website: http://www.bremertonschools.org
- Central Kitsap School District website: http://www.cksd.webnet.edu
- Kitsap Links website: http://www.unitedwayinfo.org/kitsaplinks/health.html
- Rand McNally, Kitsap County Washington City Map, 1999 edition.

STUDY AREA RESOURCES

Resources outside of the Project Area but within the Study Area

Parcel Description	Address
Cottonwood Elementary	330 NE Foster Rd, Bremerton, 98311
Fairview Junior High	8107 Central Valley Road, Bremerton, 98310
Alta Vista School	245 4th St, Bremerton WA, 98337
Crownhill Elementary	1500 Rocky Point Rd, Bremerton WA 98312
Olympic View Elementary	2442 Perry Ave, Bremerton WA 98310
Mountain View Middle School	2400 Perry Ave, Bremerton WA 98310
Bremerton High School	1500 13th St, Bremerton WA 98337
Renaissance Middle & High School	3400 1st St, Bremerton WA 98312
West Sound Technical Skills Center	101 National Ave N, Bremerton WA 98312
Brownsville Elementary	8795 Illahee Rd NE, Bremerton, 98311
Esquire Hills Elementary	2650 NE John Carlson Rd, Bremerton, 98311
Jackson Park Elementary	2900 Austin Drive, Bremerton, 98312
Central Kitsap High School	3700 Anderson Hill Rd, Silverdale, 98383
Olympic High School	7070 Stampede Blvd, Bremerton, 98311
Central Kitsap Junior High	10130 Frontier Place NW, Silverdale, 98383
New Frontiers Secondary	10150 Frontier Place NW, Silverdale, 98383
Silver Ridge Elementary	10622 Hillsboro Dr NE, Silverdale WA 98383
Ridgetop Junior High	10600 Hillsboro Dr NE, Silverdale WA, 98383
Bremerton Branch - Library	612 5th St, Bremerton WA, 98310
Harrison Hospital	1800 NW Myhre Road, Silverdale WA, 98383
Naval Hospital Bremerton & Fleet Hospital FIVE	Shore Rd, Jackson Park Navel Reserve
Illahee State Park	East of Illahee Rd NE between Sylvan Way and Steinman Ln
Kitsap County Fairgrounds	1195 NW Fairgrounds Rd, Bremerton WA, 98311
Anne Smith Children's Park	Tracyton Blvd, west end of Fairgrounds Rd
Bremerton Boardwalk	2nd St and Washington Ave, Bremerton WA, 98337
Bachmann Park	206 Shore Dr, Bremerton WA, 98310
Bataan Park	Sylvan Way and Olympus Dr NE, Bremerton WA, 98310
Blueberry Park	721 Sylvan Way, Bremerton WA, 98310
City Hall Park	4th St and Washington Ave, Bremerton WA, 98337
Forest Ridge Park	110 S. Summit Ave, Bremerton WA, 98312
Gordon Park	Tracyton Blvd and Fairgrounds Rd
Haddon Park	N. Layfayette Ave and 15th St, Bremerton WA, 98312
Kiwanis Park	1701 5th St, Bremerton WA, 98337
Lent Landing Park	Lebo Blvd and Reid Ave, Bremerton WA, 98310
Manette Playfield	1125 Vandalia Ave, Bremerton WA, 98310
McKenzie Basketball Court	Juniper St, Bremerton WA
9th Street Mini Park	9th and Shore, Bremerton WA
Pat Carey Vista	Tracyton Beach Rd NW, Bremerton WA, 98310
Wycott Memorial Park	1st St and Pacific Ave, Bremerton WA, 98337
Rolling Hills Golf Course	2485 NE McWilliams Rd, Bremerton WA 98311

POTENTIAL PROJECT AREA IMPACTS

The following tables summarize the potential 4(f) impacts in the project area for each alternative.

Alternative 4A

Parcel Description	Address
Woodlands Elementary	7420 Central Valley Rd NE, Bremerton WA, 98311
Tracyton Elementary	5550 Tracyton Blvd NW, Bremerton, WA 98311
Armin Jahr Elementary	800 Dibb Street, Bremerton WA, 98310
Naval Avenue Elementary	900 Olympic Ave, Bremerton WA, 98312
Alliance Academy	900 Olympic Ave, Bremerton WA 98312
Blueberry Park	721 Sylvan Way, Bremerton WA, 98310
Stevens Canyon Park	End of Birch St, Bremerton WA
Lions Field	408 Lebo, Bremerton WA
Arvon Park	1512 Arvon Ave, Bremerton WA, 98312

Alternative 4B

Parcel Description	Address
Armin Jahr Elementary	800 Dibb Street, Bremerton WA 98310
PineCrest Elementary	5530 NE Pine Rd, Bremerton, 98311
Stevens Canyon Park	End of Birch St, Bremerton WA
Lions Field	408 Lebo, Bremerton WA
Illahee Forest Preserve	West of Wheaton Wy between McWilliams Rd and Riddell Rd

Alternative 5A

Parcel Description	Address
Woodlands Elementary	7420 Central Valley Rd NE, Bremerton, WA 98311
Tracyton Elementary	5550 Tracyton Blvd NW, Bremerton, WA 98311
View Ridge Elementary	3250 Spruce St, Bremerton WA 98310
Bremerton Junior High School	1300 E 30th, Bremerton WA 98310
East Park Nature Area	Wheaton Wy and Ash Pl, Bremerton WA
Sheridan Park	680 Lebo Blvd, Bremerton WA, 98310
Roto Vista Park/Roosevelt Field	1800 Warren Ave, Bremerton WA, 98337
Lower Roto Vista Park	End of Elizabeth Ave., Bremerton WA
Warren Ave Playfield	1017 Warren Ave, Bremerton WA, 98337
Evergreen Park	1400 Park Ave, Bremerton WA
Smith Playfield	1205 Park Ave, Bremerton WA, 98337
Illahee Forest Preserve	West of Wheaton Wy between McWilliams Rd and Riddell Rd
Kitsap Central Library	1302 Sylvan Way, Bremerton WA, 98310
Harrison Memorial Hospital	2520 Cherry Avenue, Bremerton WA, 98310

Alternative 11, 13, and 14

Parcel Description	Address
View Ridge Elementary	3250 Spruce St, Bremerton WA 98310
Bremerton Junior High School	1300 E 30th, Bremerton WA 98310
Olympic College	1600 Chester Ave, Bremerton WA 98337
Stevens Canyon Park	End of Birch St, Bremerton WA
Roto Vista Park/Roosevelt Field	1800 Warren Ave, Bremerton WA, 98337
Lower Roto Vista Park	End of Elizabeth Ave., Bremerton WA
Warren Ave Playfield	1017 Warren Ave, Bremerton WA, 98337
Evergreen Park	1400 Park Ave, Bremerton WA
Smith Playfield	1205 Park Ave, Bremerton WA, 98337
Illahee Forest Preserve	West of Wheaton Wy between McWilliams Rd and Riddell Rd
Kitsap Central Library	1302 Sylvan Way, Bremerton WA, 98310

SCREENING CRITERIA

The screening criteria are being used for comparative purposes to estimate the overall environmental impacts between each of the proposed transportation alternatives. The environmental impacts of the preferred alternative will be thoroughly and independently evaluated, per WSDOT's Environmental Procedures Manual and NEPA requirements, as part of project-specific environmental review.

Criteria Measurement

The number of properties with 4(f) resources are quantified based on the following relative importance (multiplying) factor:

Adverse effect to 4(f) property = 5.0
No effect to 4(f) property = 1.0

IMPACT ASSESSMENT

Summary of the Impacts Assessment

Alternative	Number of Sites	Sum of Impact Rankings
4A	9	13
4B	5	5
5A	14	26
11	11	11
13	11	11
14	11	11

This qualitative analysis suggests that of the "Build Alternatives," Alternative 4B has the lowest ranking and Alternative 5A has the highest ranking for impact on 4(f) resources. Under Alternative 5A, four properties could be adversely impacted: Evergreen Park, View Ridge Elementary, Bremerton Junior High, and Kitsap Central Library. These three properties were given a multiplying factor of 5 according to the criteria measurement. Alternative 4A would adversely impact Lions Field (Lebo Recreation Area). All of the other 4(f) sites listed in the tables above would not be adversely effected by the alternatives and were given a multiplying factor of 1 according to the criteria measurement.

LIMITATIONS

This assessment was prepared based on readily available information. The assessment is strictly qualitative and is not intended to establish expectations for impacts to 4(f) resources in the project area. This assessment was limited to the review of information provided by others and is subject to change over time pending a more detailed analysis as part of the project-specific environmental review.

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TECHNICAL MEMORANDUM

Date:	February 2002
To:	WSDOT (Olympic Region Transportation Planning Office)
Subject:	Cultural and Historic Resource Assessment for 2nd Level Screening
Project Number:	554-1631-030(02/023)
Project Name:	SR 303 Bremerton to Silverdale Corridor Study

SUMMARY

This 2nd level screening document identifies known cultural or historic resource sites within or adjacent to the SR 303 corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No-Build).

BACKGROUND

The objective of this assessment is to identify properties with known or potential resources that represent the cultural heritage or history of the area and are protected under federal, state, or local regulations. This Technical Memorandum presents a screening level review of properties and will be used as the basis for further assessments.

Information regarding local resources was obtained from the Office of Archaeology and Historic Preservation (OAHP) archives and website:

- http://www.oahp.wa.gov/register
- Inventory Forms - Washington State Inventory of Historic Places
- Washington Archaeological Site Inventory Forms
- National Register of Historic Places (http://www.nr.nps.gov).

AFFECTED ENVIRONMENT

Study Area Resources

Seven archaeological site inventory forms at the OAHP contained information in the study area. Only two of the sites are within the project area.

None of the resources on the National Historic Register, the Washington Heritage Register, or other Washington State Historic Places were found to be in the project area. The following descriptions are for the resources within the study area.

National Register of Historic Places

USS Hornet (CVS-12)

The USS Hornet is an Essex-class aircraft carrier located at the Naval Inactive Ships Maintenance Facility in Bremerton. The ship was decommissioned in 1970. The ship was involved in WWII (1943-1945) and the recovery of Apollo 11 after the first manned landing on the moon (1969).

USS Missouri

The USS Missouri, the "Mighty Mo", is an old battleship that came to Bremerton in 1955 and has been moored in the west end of the Puget Sound Naval Shipyard since 1967. The ship was built in 1944 and participated in WWII activity in the Pacific. The USS Missouri was the scene of the signing of the formal instrument of Japan's surrender in Tokyo Bay on Sept. 2, 1945.

Puget Sound Naval Shipyard (also an historic landmark)

The Puget Sound Naval Shipyard is located in Bremerton on the north shore of Sinclair Inlet across from Port Orchard. There are 6 dry-docks and 6 piers. Five of the dry-docks played roles in WWII and Dry-dock 1 dates back to 1896. All of the piers were constructed during WWI and WWII. There are numerous shop buildings, storehouses, and other structures. The oldest structure is the original general's office building, constructed in 1893 and moved from its original site in 1910. The Shipyard is highly restricted to public visitation because of the Nuclear submarine repair.

Bremerton Main Post Office

The Main Post Office in located at 602 Pacific Avenue in Bremerton. The Post Office is a one-story brick building with some embellishments around the pediment and the columns. The building was constructed in the late 1930s after much disagreement over the location. There is a mural painted in 1938 by Ernest Norling above the doors to the administrative offices. The building is the first and only Federally constructed post office (as of 1989). It is the only building of its design-type in the City.

Puget Sound Radio Station Historic District

The Puget Sound Radio Station Historic District is located along the northern boundary of the Shipyard in Bremerton. The facilities were established in 1906, originally to protect the water supply for the Shipyard. The water tanks constructed in 1896 were moved in 1918 to install larger tanks, which are still in use. The area contains 15 properties, the majority of which are vernacular cottage styled structures. The historic Radio and Sound Shop (No. 466) is a 3-story brick building with Streamline style influences, and is the largest building in the district. All of the buildings are directly or indirectly related to the radio station (radio operations, receiving). The buildings are pre-WWII and representative of the function of coordinating and developing radio communications within the Shipyard facility

Officer's Row Historic District

The Officer's Row Historic District was constructed between 1896 and 1913 and is representative of the integrated architectural housing on the Puget Sound Naval Shipyard facility. The district is located on the bluff overlooking the industrial area of the shipyard. Seattle firm Chamberlin and Siebrand designed the offices' quarters (A-E) in 1896. The two-story wood structures have a Neo-Classical style.

Marine Reservation Historic District

The Marine Reservation Historic District is located on the northwest section of the Naval Shipyard, west of the Hospital Reservation District. The facilities were built between 1911 and 1914. No other construction apart from the garages, built in 1930's, has occurred. A brick barracks building, similar to the remaining officers' quarters, has been demolished. The district includes four 2-story brick buildings with Colonial Revival influences. Washington D.C. architect J.H. DeDibour designed buildings M-1, M-2, and M-3 in 1910. The buildings symbolize the role that the Marine Corps played in security and training of the Navy at the Shipyard from 1896 until 1977 when the function was moved to Bangor.

Hospital Reservation District

The Hospital Reservation District in the northwest section of the Naval Shipyard, east of Marine Reservation Historic District and west of the Officer's Row and Radio Station Historic Districts. The facilities were established in 1909, six buildings no longer remain. The district's buildings are constructed of brick, with Colonial Revival influences, except for Quarters W, which is a Neo-classical wood building. The district has been altered due to major alterations to the original hospital building and two post-WWII quarters.

Bremerton Elks Temple Lodge No. 1181 Building

The Bremerton Elks Temple Lodge is located at 285 Fifth Street in Bremerton. The four-story hall was built in 1920 in a classical revival style. Williams-Davis & Associates enlarged the building in 1947-1948 in a Modern style. Single-story shops were added and protrude out from the original face of the building. The building extends below grade to the east under a parking lot. The building has a wood frame and brick veneer. On the interior, the second and third floors remain much as originally designed with a formal meeting area, balcony, and wooden doors. The first floor has been altered but a stag bar and the Fifth Street reception area date back to the 1947 remodel. The ground floor includes a combination of the original décor and 1947 remodel including a circular stairwell, and cocktail verneer finishes, curvilinear partitions and modeling, recessed ceiling, and a Modern-style service bar.

Washington Heritage Register

Bremerton Trust and Savings Bank

The Bremerton Trust and Savings Bank is located at 202 Pacific Avenue in Bremerton. Built in 1914, it is a two-story rectangular building that was attached to an area surrounded by JC Penny's on the north and east sides in the 1960's. The building was designed for Bremer Estate by Seattle architect Harlan Thomas and constructed by John Galber. The building has an Italian Renaissance style, with clean classical lines. Buff terra cotta and a small amount of black marble were used to decorate the exterior. Two bays separated by single pilasters form the west façade, this includes the main entry to the bank on the right side. Doric columns are on either side of the doorway on the south façade. In 1951, the first floor exterior was completely altered and many of the original décor destroyed. In 1977, Seattle architects Moller-Christensen remodeled the first floor to recreate an interior and exterior façade to match the second story.

Kitsap Cabin and Mountaineer's Forest Theater

The Kitsap Cabin and Mountaineer's Forest Theater is located directly west of the Puget Sound Naval Shipyard (Bremerton Annex) at 3000 Seabeck Highway. The property includes approximately 20 wooded acres, and several buildings (e.g. Dormitory) used for Mountaineer activities that are not on the Heritage Register. The Kitsap Cabin is on the northern portion of this property and was built in 1918, largely by women. The cabin is a single-story, wood framed building with a large multi-purpose room and a kitchen.

Other Washington State Historic Places

VFW Building, Post 4992

The VFW building was the first school house in Central Valley. Built in 1907, the building is located on its original foundation and is a typical, one-story early style schoolhouse with rows of windows and a mansard roof. The main structure has been relatively unaltered, but a small addition in the back of the building has been made.

Central Valley Garden Club Meeting Hall

This building, built in 1915, served as the first meeting hall in Central Valley. The Garden Club now occupies it. The one-story wood frame structure is virtually unaltered and has a typical meeting house style.

POTENTIAL PROJECT AREA IMPACTS

The Washington State Archaeological Sites that occur in the study area were found in the OAHP archives. The following descriptions are for resources within the study area.

Washington Archaeological Site Inventory Form

45KP9 Shell Mound

Located just north of the Manette bridge, on the east side of the Port Washington Narrows, is archaeological site 45KP9. Residents reported in 1952 that Indians used to camp at this location, there used to be clams, and had an earth breastwork that may have been used as a fort. Additionally, area residents indicated that there used to be a burial ground here and canoe burials in the trees in this area. This area has been badly disturbed. The disturbances include the installation of sewer pipes. Mrs. Schwer, a resident, indicated that her son and Boy Scout troops have dug here in the 1930's. The collection of artifacts that the Schwer's found include skulls, pestles, ax blades, bone points, wedges, and sandstone grinders.

45KP121 Evergreen Park Site (shell midden)

The Evergreen Park site (45KP121) is located on the west side of the Port Washington Narrows 5.5 to 5.8 meters (10 to 19 feet) above the shoreline, and to the northeast of downtown Bremerton. This site is a hunter-fisher-gatherer shell midden. The deposits are just below the sod and tree roots and includes charcoal, shells, food bones, and fire modified rock. Cultural deposits have been found in a 37-meter (120 ft) by 37-meter area and may extend 400 ft south along the former shoreline. The site likely dates within the last 2,000 years based on local geology and stratigraphy.

The following tables summarize the potential cultural resource impacts for each alternative. No impacts to historic resources are expected to occur in the project area.

Alternative 5A

Parcel Description	Location
45KP9	North of the Manette bridge, on the east side of the Port Washington Narrows
45KP121	Evergreen Park

Alternative 11, 13, and 14

Parcel Description	Location
45KP121	Evergreen Park

SCREENING CRITERIA

The screening criteria are being used for comparative purposes to estimate the overall environmental impacts between each of the proposed transportation alternatives. The environmental impacts of the preferred alternative will be thoroughly and independently evaluated, per WSDOT's Environmental Procedures Manual and NEPA requirements, as part of project-specific environmental review.

Criteria Measurement

The number of properties of historic value are quantified based on the following relative importance (multiplying) factor:

Adverse effect to property eligible for National Register of Historic Places = 5.0
No adverse effect to property eligible for National Register of Historic Places = 2.0
No effect to property eligible for National Register of Historic Places = 1.0

The number of properties of cultural value are quantified based on the following relative importance (multiplying) factor:

Effect to property = 5.0
No effect to property = 1.0

IMPACT ASSESSMENT

Summary of the Impacts Assessment

Alternative	Number of Sites	Sum of Impact Rankings
4A	0	0
4B	0	0
5A	2	2
11	1	1
13	1	1
14	1	1

CONCLUSION

Alternative 5A has the highest potential for cultural and historic resource impacts. However, this assessment suggests that none all of the alternatives would have significant adverse impacts on cultural and historic resources.

LIMITATIONS

This assessment was prepared based on readily available information at the Office of Archaeology and Historic Preservation but is not an exhaustive search of all the information in their files. The assessment is strictly qualitative and is not intended to establish expectations for impacts to the resources in the area. This assessment was strictly limited to the review of information provided by others. The information contained the Washington State inventory forms and National Register may not be complete and is subject to change over time.

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TECHNICAL MEMORANDUM

Date:	February 2002
To:	WSDOT (Olympic Region Transportation Planning Office)
Subject:	Plan Compatibility Analysis for 2nd Level Screening
Project Number:	554-1631-030(02/023)
Project Name:	SR 303 Bremerton to Silverdale Corridor Study

SUMMARY

This 2nd level screening document evaluates the land use plan compatibility of the SR 303 transportation corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No Build).

BACKGROUND

This assessment will primarily focus on compatibility with federal, state, and local transportation plans and policies. The built and natural environment plans and policies have previously been evaluated through the various built and natural environment resource categories outlined under the 1st and 2nd level screening analysis process. A windshield survey verified existing land uses not covered in detail by existing mapping. The information used in this section was compiled from a number of existing sources and, where necessary, additional information was collected to meet the three major objectives of the plan compatibility section, which are:

- To conduct a general inventory of existing land uses in the study area
- To describe projected land use changes under the various SR 303 Corridor Study alternatives
- To identify consistency with land use policies and regulations that apply to the project.

Sources:

- Washington State Department of Transportation (WSDOT 2001)
- Kitsap County Comprehensive Plan and Zoning Ordinance (1998)
- The City of Bremerton Comprehensive Plan and Zoning Ordinance
- Kitsap County Transit Agency
- Puget Sound Regional Council (PSRC 2001)
- Revised Code of Washington State (RCW)
- Washington State Administrative Code (WAC)

- United States Code of Federal Regulations (CFR)

AFFECTED ENVIRONMENT

Land Use

The project study area lies within the City of Bremerton and unincorporated Kitsap County. The project alternatives pass through several types of land uses including urban retail, commercial, industrial, residential, and semi-rural. The area south of Port Washington Narrows is highly urbanized and contains the Bremerton central business district. This area contains residential (both single- and multi-family dwellings), retail, and commercial land uses. The southern boundary of the project area just touches industrial uses found in the Puget Sound Naval Shipyard. Generally, in this area, single-family residentially zoned properties lie north of 15th Street and there is a gradual transition to retail and commercial uses as one travels south of 15th Street. There are larger lot residential developments located on Rocky and Erlands Points. Other major land uses in this area include the Puget Sound Naval Shipyard Bremerton Annex located west of Ostrich Bay, and Forest Ridge and Evergreen Parks in Bremerton.

With the exception of the SR 303 corridor (which is highly developed), the area north of the Port Washington Narrows is predominantly single-family residential development, with some small commercial, retail, and business uses in isolated sections along Perry Avenue, Sheridan Avenue, McWilliams Road, and Fairgrounds Road. Urban density residential development is clustered north of the SR 303 and SR 304 bridge crossings. However, the further one travels north in this area, the more semi-rural in nature the land use becomes with larger lots and more open spaces. Other major land uses in this area include the Kitsap County Fairgrounds, Illahee State Park, and Rolling Hills Golf Course. At the northwest corner of the study area is the retail and commercial center of Silverdale. This area is characterized by businesses clustered around the Silverdale Mall, and single- and multi-family development.

Almost a third of the project area consists of open water. The marine waters of Dyes Inlet, Port Washington Narrows, and Ostrich, Oyster, Phinney, and Chico Bays generally make up most of the west side of the study area.

Information regarding plan compatibility within the study area was obtained from the following planning and policy documents:

Federal Policies

- National Environmental Policy Act of 1969 (NEPA) (P.L. 91-190)
- Federal Water Pollution Control Act as Amended by the Clean Water Act of 1977 (the Clean Water Act)
- Intermodal Surface Transportation Efficiency Act (ISTEA)
- Safe Drinking Water Act of 1974
- Clean Air Act, Section 309
- Endangered Species Act (ESA)

State Plans and Policies

- *Washington's Transportation Plan* (WTP)
- Washington State Commute Trip Reduction Law
- State Environmental Policy Act of 1971 (SEPA) (RCW 43.21), as amended
- Shoreline Management Act of 1971 (RCW 90.58), as amended
- The Growth Management Act (GMA) (SHB 2929) (RCW 36.70A)
- Re-Engrossed Substitute House Bill 1025 (Growth Management Act II) (GMA II)

Regional and Subregional Plans

- *Vision 2020* Metropolitan Transportation Plan (MTP) (Puget Sound Regional Council)
- *Destination 2030* Metropolitan Transportation Plan (Puget Sound Regional Council)

Local Plans and Policies

- Kitsap County Comprehensive Plan
- City of Bremerton Comprehensive Plan
- Kitsap County Development Regulations: Zoning, Critical Areas, and Wetlands Management
- City of Bremerton Zoning and Critical Areas
- Kitsap Transit Long Range Plan

Consistency with Federal and State Policies

The transportation corridor study has been prepared in accordance with the NEPA guidelines for a programmatic environmental analysis. Consistent with NEPA, which recognizes the importance of restoring and maintaining environmental quality, a preferred alternative or corridor would be selected as part of the screening process developed for the corridor study. The next step in the environmental process would involve project-specific environmental review to assess more detailed and project specific development activities from the selected alternatives. Such a review would be coordinated and reviewed by federal agencies not limited to the Federal Highway Administration and the Environmental Protection Agency. The project-specific environmental review of the preferred alternative would further include consideration of a biological assessment (BA) to demonstrate project-level compliance with the Endangered Species Act (ESA).

A Section 404 permit (Clean Water Act) will be required from the U.S. Army Corps of Engineers (the Corps). A Section 401 water quality certification would also be required in particular for the proposed new bridge crossings (e.g., 4A, 4B, and 5A). Fill or dredge work in wetland areas will require application to the Corps for a Nationwide Permit. Nationwide Permits that could apply to this project include Nationwide 14 (e.g., road crossings up to 1/10 acre of fill). For fill between 0.40 and 0.80 hectares (e.g., 1 and 2 acres) an individual 401 Water Quality Certification is required. On federal property the EPA issues 401 certification, while on non-federal land it is issued by the Department of Ecology. The Corps will review permit applications for consistency with federal law and policy before issuing the appropriate permits.

The federal Clean Air Act of 1990 (CAA) requires that local governments meet requirements for ensuring that federally funded, non-exempt transportation projects in non-attainment areas, as well as projects in attainment areas that affect non-attainment areas, conform to the existing SIP provisions. The SR 303

Corridor Study is located in an attainment area, and the project complies with the provisions of the current SIP and the requirements of the CAA.

Consistency with Regional and Subregional Plans

In 1990, the PSRC adopted the Vision 2020 Growth Strategy and Transportation Plan for the Central Puget Sound Region. In 2001, the PSRC adopted the Vision 2030 Growth Strategy and Transportation Plan for the Central Puget Sound Region. The plans call for growth containment, limiting urban sprawl from extending into surrounding farmlands, and preserving open space. The Vision 2020 and 2030 strategies concentrate new employment into major activity centers that are connected by a regional multi-modal transportation system. Within Kitsap County, major growth is directed to urban centers in Bremerton, Silverdale, Port Orchard and Poulsbo, and large employment centers. The Kitsap County Comprehensive Plan identifies several (e.g., Port Orchard, Poulsbo, Silverdale, Bremerton) employment centers, two of which would be served by the proposed SR 303 Corridor Plan. The City of Bremerton is also identified as a "metropolitan center."

At the regional level, the proposed SR 303 Corridor Study is listed as a proposed facility improvement to enhance an existing transportation system and provide additional capacity in PSRC's MTP.

Consistency with Local Plans and Policies

The Comprehensive Plan for Kitsap County and the City of Bremerton were adopted in 1998 and 1995 respectively. The comprehensive plan for both jurisdictions encompasses the project study area. The plans further comply with the Growth Management Act. Both plans include the following elements required by the GMA under RCW 36.70A.070:

- Land use assumptions used in estimating travel
- An inventory of air, water, and land transportation facilities and services, including transit alignments, to define existing capital facilities and travel levels as a basis for future planning
- Level of Service standards for all arterials and transit routes to gauge performance of system
- Specific actions and requirements for bringing into compliance any facilities or services that are below established LOS standards
- Forecasts of traffic for at least 10 years based on the adopted land use plan
- Identification of system expansion needs and transportation system management needs to meet current and future demands
- Analysis of funding capability to judge against probable funding resources
- A multi-year financing plan based on needs in comprehensive plan
- Discussion of how additional funds will be raised
- Intergovernmental coordination efforts
- Demand management strategies

The Kitsap County Transportation Plan, a component of the Comprehensive Plan, is consistent with PSRC Vision 2020 goals. Travel forecasts used in plan development were based on land use concepts described in Vision 2020 and the Kitsap County Comprehensive land use plan. The transportation element of the County's Comprehensive Plan includes policies and principles that focus on:

- Mobility
- Transportation Safety
- Land Use/Transportation Planning
- Mass Transit/Service and Commute Trip Reduction
- Marine Transportation Service
- Nonmotorized Travel
- Transportation System Planning and Implementation
- Level of Service
- Roadway Access
- Roadway Aesthetics
- Aviation Transportation

The SR 303 Corridor Study is identified in the Kitsap County Transportation Plan. The project is also listed in the MTP. The SR 303 Corridor Study is also consistent with the non-motorized facility element of the Non-Motorized Transportation Plan.

The City of Bremerton Transportation Plan, a component of the Comprehensive Plan, is consistent with PSRC Vision 2020 goals. Travel forecasts used in plan development were based on land use concepts described in Vision 2020 and the City of Bremerton Comprehensive land use plan. The transportation element of the City's Comprehensive Plan includes policies and principles that focus on:

- Encouraging efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans
- Strategically investing in transportation facilities to support the regional system of central places
- Providing for safe, economical and energy-efficient movement of people and goods while protecting the quality of life
- Providing transportation facilities that will meet present and future needs, conserve energy, and minimize environmental harm
- Providing safe, efficient circulation patterns and roadway design to achieve economy of energy and time with a minimum of adverse environmental impacts

- Providing safe, convenient bicycle and pedestrian facilities that can serve as viable alternatives to automobile travel
- Providing regionally coordinated mass transportation systems that relieve traffic congestion, promote energy conservation, and serve the majority of the people
- Providing an efficient circulation system for the shoreline areas that is adequate for marine and land traffic without detracting from shoreline amenities
- Utilizing railroads and bridges on the shoreline to a minimum and where they are necessary, place them in a manner that will preserve and enhance the visual and physical access to the physical characteristics of the shoreline.

The proposal is consistent with the City of Bremerton and Kitsap County zoning ordinances, which contain no special regulations relating to street improvements. The proponent would be responsible for ensuring that the project meets all engineering standards and codes for road preparation. Compliance for such measures would be evaluated at a later date subject to project-specific environmental review.

IMPACT ASSESSMENT

The potential compatibility impacts for each alternative as defined by this assessment are summarized as follows:

Alternative	Federal	State/Regional	Local	Compatibility Rankings
4A	◔	◔	○	◔
4B	◔	◔	○	◔
5A	◔	◔	○	◔
11	◕	◕	◕	◕
13	◕	◕	◕	◕
14	●	●	●	●

○= Least compatible, ◔= Lower compatibility, ◑= Medium Compatibility, ◕= Increased compatibility, ●= Most compatible

CONCLUSION

The New Bridge Crossing Alternatives, namely 4A, 4B, and 5A, would be the least compatible with federal, state/regional, and local plans and policies. The basis for this rating applies because of their potential significant built environment impacts resulting from displacements to residences, as well as moderate impacts to the natural environment regarding wetlands/shorelines, water quality, and fish and wildlife habitat. Alternative 14 would be the most compatible when combined with Alternative 13 and to a lesser extent Alternative 11. Alternative 13 when factoring in the TDM/TSM elements of Alternative 14 would be considered the most compatible alternative for federal, state, regional, and local plans and policies. This primarily applies due to the added capacity for multi-modal measures through the high occupancy vehicles (HOV) lanes proposed with this alternative.

LIMITATIONS

This assessment was prepared based on readily available information. The assessment is strictly qualitative and is not intended to establish expectations for consistency with local, state, and federal plans and policies. This assessment was limited to the review of information provided by others and is subject to change over time pending a more detailed analysis as part of the project-specific environmental review.

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TECHNICAL MEMORANDUM

Date:	February 2002
To:	WSDOT (Olympic Region Transportation Planning Office)
Subject:	Prime and Unique Farmland Soil Analysis for 2nd Level Screening
cc:	Project File
Project Number:	554-1631-030(02/023)
Project Name:	SR 303 Bremerton to Silverdale Corridor Study

SUMMARY

This 2nd level screening document identifies known prime and unique farmland soils within or adjacent to the SR 303 corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14 and 15 (No-Build).

BACKGROUND

The objective of this assessment is to identify prime and unique farmland soils within the study area. This Technical Memorandum presents a screening level review of properties and will be used as the basis for further assessments.

STUDY METHODOLOGY

Information regarding prime and unique farmland resources was obtained from the following information sources:

- Washington State Department of Transportation (WSDOT) provided aerial photographs;
- Kitsap County Assessor's parcel maps and buildable limitations map;
- City of Bremerton and Kitsap County zoning and comprehensive plan maps;
- United States Soils Survey of Kitsap County

AFFECTED ENVIRONMENT

Overview of Prime and Unique Farmland Soils

According to the Kitsap County Comprehensive Plan, the Natural Resources Conservation Service lists seven Kitsap County soils (See Table 1-1) as "prime" for agriculture due to their temperature, salinity, erodibility, permeability, texture, ability to hold water, and acidity/alkalinity. These characteristics are influenced mostly by parent material, organic content, slope, and climate. When combined with an adequate growing season and moisture supply, soils identified as "prime" can economically support sustained yields of crops with minimal treatment.

Prime agricultural soils comprise about 15,020 acres in Kitsap County, which is less than 4% of the County's total area. A majority of these soils are scattered throughout the County, and are predominantly found in flat areas adjacent to streams and rivers. Of the seven soil types identified as "prime" soils, five are considered hydric, and must be drained to be productive farmland. Not all prime soils are currently used for agriculture, nor are they all available for agricultural use. For instance, areas in Big Valley and upper Clear Creek are committed to agricultural use, and farms dot the landscape. In other places, however, like Wheaton Way and the SR 303 Corridor in East Bremerton, the prime farmland soils are covered by commercial or residential development.

Development Implications

As noted in the Kitsap County Comprehensive Plan, prime agricultural soils are only one indication of the land's suitability for farming. It is important to note that commercially successful agriculture may also require large tracts of land in which to grow crops or graze animals. Overall, there is relative scarcity of prime agricultural soils in large contiguous parcels, therefore the practice of farming under a commercial venue is inhibited. It is important, however, to recognize the areas that have the capacity to efficiently and economically provide a productive agricultural use. When such lands are permanently developed, the opportunity may be lost.

Table 1-1. Prime Farmland Soils in Kitsap County

Soil	Acres
Belfast Loam	530
Bellingham	880
Kitsap	2,310
Mukilteo	1,320
Norma	7,700
Semiahmoo	1,320
Shalcar	960
TOTAL	15,020

Source: Kitsap County Comprehensive Plan

PRIME FARMLAND SOILS IN SR 303 STUDY AREA

Alternative 4A

Location	Soil Type	Acreage
Pine/Sheridan, Central Valley, SR 303/Central Valley	Kitsap (Soil Type 28), Norma (Soil Type 37), Shalcar (Soil Type 50)	1.49

Alternative 4B

Location	Soil Type	Acreage
McWilliams/SR 303	Kitsap (Soil Type 29), Kitsap (Soil Type 30)	1.59

Alternative 5A

Location	Soil Type	Acreage
Riddell/SR 303, Riddell/Pine, Central Valley, Central Valley/SR 303	Kitsap (Soil Type 28), Kitsap (Soil Type 29), Norma (Soil Type 37), Shalcar (Soil Type 50)	1.68

Alternative 11/13

Location	Soil Type	Acreage
SR 303/Fairgrounds, SR 303 North of Fairgrounds	Kitsap (Soil Type 28), Norma (Soil Type 37)	3.14

Alternative 14

Location	Soil Type	Acreage
SR 303/Fairgrounds	Kitsap (Soil Type 28), Norma (Soil Type 37)	2.57

IMPACT ASSESSMENT

Summary of the Impacts Assessment

Alternative	Number of Acres
4A	1.49
4B	1.59
5A	1.68
11	3.14
13	3.14
14	2.57

CONCLUSION

This qualitative analysis suggests that of the Build Alternatives, 4A and 4B have the lowest impact on prime and unique farmland soils, while 11 and 13 have proportionately the greatest potential impact. These estimates would be overstated, however, with regard to Alternatives 11 and 13 due to the developed nature of the SR 303 corridor along Wheaton Way. At present, the underlying land use at this location includes a mixture of dense and highly urbanized retail, commercial, and light industrial uses, therefore, the land base in this location is not committed to nor zoned for active agricultural practices.

LIMITATIONS

This assessment was prepared based on readily available information identified in the Kitsap County Buildable Limitations Map and the Kitsap County Comprehensive Plan. The assessment is strictly qualitative and is not intended to establish expectations for impacts to prime and unique farmland soils in the project area. This assessment was limited to the review of information provided by others and is subject to change over time pending more detailed analysis as part of the project-specific environmental review.

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TECHNICAL MEMORANDUM

Date: February 2002

To: WSDOT (Olympic Region Transportation Planning Office)

Subject: Wetlands Analysis for 2nd Level Screening

Project Number: 554-1631-030(03/034)

Project Name: SR 303 Bremerton to Silverdale Corridor Study

Summary

This 2nd level screening document identifies the wetland resources for Dyes Inlet Watershed and potential impacts within or adjacent to the SR 303 transportation corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No-Build). Specifically, this appendix describes the affected environment and impacts for the transportation alternatives. A summary comparison of corridor alternatives is included at the end of the memo that compares the transportation alternatives.

Regulatory Framework

Improvements to existing transportation corridors and the creation of new corridors could affect wetlands and shorelines that are protected by federal, state, and local laws. A review of federal, state, and local laws and policies was conducted to identify potential permitting and mitigation issues, and to ensure compliance with pertinent environmental regulations. A brief overview of these laws and policies is provided below.

Background

Federal Regulations

There are five primary regulations that could apply to wetland and shoreline issues related to the proposed project: the National Environmental Policy Act (NEPA), the Clean Water Act (CWA), the Rivers and Harbors Act, The Endangered Species Act (ESA) 1973, and the Coastal Zone Management Act (CZMA). NEPA establishes the process by which a federal agency (such as the Federal Transit Administration [FTA]) must consider and evaluate the environmental impacts of projects that the agency sponsors. NEPA requires that any project that could have significant adverse impacts must address and disclose the impacts in an EIS. This report is intended to provide a framework for the development of an EIS for the SR 303 Project.

The CWA, which is administered jointly by the U.S. Army Corps of Engineers (Corps) and U.S. Environmental Protection Agency (EPA), is intended to protect the biological, physical, and chemical integrity of the nation's waters, including wetlands. There are two sections of the CWA that could pertain to the proposed project: Sections 401 and 404. The Section 401 water quality certification is a federal permit administered by the state (Washington State Department of Ecology [Ecology]). The purpose of Section 401 is to ensure that federally permitted projects are consistent with state water quality standards. Section 404 regulates the placement of dredge or fill material into the waters of the U.S., including wetlands. Activities that constitute the placement of fill include trenching, ditching, draining, and installing piers or pilings. Project proponents intending to undertake such activities must obtain a permit from the Corps prior to beginning site work. Projects that require a Section 404 permit generally must have a state water quality certification.

Section 10 of the Rivers and Harbors Act applies to activities in, over, and affecting navigable waters of the U.S. The purpose of this law is to preserve the navigability of the nation's waters. For the purposes of Section 10, the Corps defines navigability as presently, historically, or potentially navigable, including intertidal waters. The Section 10 review evaluates the effects of a project on navigability and is typically conducted in conjunction with the CWA Section 404 permit process. Other factors taken into consideration in the Section 10 permit process include flood control, fish and wildlife habitat management, and other environmental impacts.

The ESA requires that any action authorized, funded, or carried out by a federal agency does not jeopardize the continued existence of any threatened or endangered (T/E) species, or result in the destruction or adverse modification of habitat critical to the survival of a T/E species (Section 7.(a)(2)). If species or critical habitat are known to occur in the vicinity of the project, consultation with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) is required under Section 7 of the ESA.

If the project is likely to have adverse impacts on a listed species, preparation of a Biological Assessment (BA) is required. The BA includes an analysis of all "reasonable and prudent" alternatives to the proposed project and describes the nature and potential impacts on the species of concern. After reviewing a BA, NMFS and USFWS issue a Biological Opinion (Opinion) that states whether the project is likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of its critical habitat.

Under the CZMA, federal projects undertaken in Washington that could affect coastal resources must comply with the state's Coastal Zone Management Plan. Ecology is responsible for reviewing federal projects to ensure compliance with the plan, which is intended to protect the state's shoreline and nearshore environments.

State and Local Regulations

The primary state and local regulations that could apply to the proposed project include the State Environmental Policy Act (SEPA), Hydraulics Code, local sensitive/critical areas ordinances, and the Shoreline Management Act (SMA). SEPA is similar to NEPA, but applies to state-sponsored or approved projects. Because the proposed project is being undertaken as a joint federal-state partnership, the SEPA and NEPA review processes will be handled concurrently and the project EIS will satisfy both laws.

The state's Hydraulic Code is intended to protect fish, streams, and marine waters from degradation. The code regulates work that uses, diverts, obstructs, or changes the natural flow of a water of the state (which includes wetlands). It is implemented through a permit process known

as the Hydraulic Project Approval (HPA). HPAs are obtained through consultation with the Washington Department of Fish and Wildlife (WDFW). The Washington Administrative Code (WAC, Section 220-110-050) also specifies that hydraulic projects "shall incorporate mitigation measures as necessary to achieve no-net-loss of productive capacity of fish and shellfish habitat."

Local jurisdictions are required by law to have sensitive/critical area ordinances, which are intended to protect wetlands, streams, and other sensitive or critical lands. Typically, these ordinances provide definitions for wetland and stream rating systems, buffer requirements, and mitigation ratios. The study area for the SR 303 Bremerton to Silverdale Transportation Corridor includes areas of Kitsap County and the City of Bremerton, and is subject to the wetland regulations of those jurisdictions.

Within the state of Washington, wetlands are categorized according to the state guidelines described in *Washington State Wetland Rating System for Western Washington* (Ecology 1993). Kitsap County and the City of Bremerton also use these guidelines. Table 1-1 summarizes the rating criteria for each wetland category.

Table 1-1. Criteria for Wetland Rating Categories as Specified by Washington State Department of Ecology

Category	Criteria[a]
Category I	a) Have documented occurrence of federal or state listed endangered or threatened animal, plant, or fish species; or,
	b) Consist of high quality native wetland communities which qualify for inclusion in the State Natural Heritage Information System; or,
	c) Are documented as regionally significant waterfowl or shorebird concentration areas; or,
	d) Have irreplaceable ecological attributes; or,
	e) Are documented wetlands of local significance.
Category II	a) Satisfy no Category I criteria; and,
	b) Have documented occurrence of federal or state listed sensitive animal, plant, or fish species; or,
	c) Contain priority species or habitats recognized by state agencies; or,
	d) Are wetlands with significant functions which may not be adequately replicated through creation or restoration; or,
	e) Are wetlands with significant habitat value of 22 or more points on the Field Data Form; or,
	f) Are documented wetlands of local significance.
Category III	a) Are wetlands with significant habitat value of 21 points or less on the Field Data Form; or,
	b) Are documented wetlands of local significance.
Category IV	a) Are wetlands less than 1 acre and hydrologically isolated, with one vegetated class that is dominated (more than 80 percent aerial cover) by one species considered alien and/or invasive; or,
	b) Are wetlands less than 2 acres and hydrologically isolated, with one vegetated class that is dominated by (more than 90 percent aerial cover) by any combination of species considered alien or invasive; or,
	c) Are wetlands that are ponds excavated from uplands, and are smaller than 1 acre without surface water connection to streams, lakes, rivers, or other wetlands throughout the year; and that have less than 1/10 acre of vegetation.

[a] Ecology (1993).

The SMA is a state law that is implemented at the local level. The provisions of the SMA require that development of the state's shoreline be accomplished in a manner that protects and enhances public interest and protects against adverse impacts to the land and waters of the state. Under

SMA, local governments prepare shoreline master plans that define appropriate uses for shoreline areas. The local jurisdictions, in conjunction with Ecology, review all shoreline development proposals for compliance and issue permits for projects that are consistent with their master plans. Improvements proposed by the SR 303 Project may need to comply with these plans.

Shorelines regulated under the SMA are divided into two categories. The first category is referred to as shorelines, and the second is referred to as shorelines of statewide significance. Shorelines of statewide significance receive a higher degree of protection under the SMA than other shorelines. Table 1-2 describes the criteria used to define these two categories.

Table 1-2. Criteria Comparison for Shorelines and Shorelines of Statewide Significance

Shorelines	Shorelines of Statewide Significance
Lakes and reservoirs greater than 20 acres	Lakes and reservoirs greater than 1,000 acres
Rivers with a mean annual discharge greater than 20 cubic feet per second	Rivers with a mean annual discharge greater than 1,000 cubic feet per second on the west side of the Cascades or 200 cubic feet per second on the east side
The lands extending shoreward for a distance of 200 feet[a]	Pacific Ocean and Hood Canal, Puget Sound[b]
All saltwater bodies	
Wetlands associated with shorelines	

[a] These areas, referred to as shorelands, may extend to the limits of the floodplain at local discretion.

[b] Puget Sound is regulated as a shoreline of Statewide Significance within Kitsap County.

Overview of Wetland and Shoreline Resources

Wetlands and shorelines provide economic and ecological benefits through the performance of their physical, chemical, biological, and social functions. For example, the capacity of wetlands to absorb water and remove sediments can reduce downstream flooding and improve overall water quality. The presence of wetland vegetation slows water, reducing the erosion of stream banks and shorelines. Similarly, the presence of diverse vegetation types in wetlands provides food and habitat for wildlife, while providing educational and recreational opportunities for children and adults.

For the purposes of this study, shorelines are defined according to the SMA. The shorelines of Puget Sound, including Dye's Inlet and the Port Washington Narrows, are regulated as shorelines of statewide significance within the study area. Shorelines within the study area include Barker Creek, Clear Creek, Illahee Creek, Mosher Creek, and Steele Creek. These shorelines, adjacent shorelands, and associated wetlands are regulated under SMA.

Wetlands are defined according to the current CWA definition as "areas that are saturated or inundated by surface or groundwater at a frequency and duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions" (Environmental Laboratory 1987). There are two general types of wetlands in the study area: those located along Puget Sound (estuarine wetlands) and vegetated freshwater (palustrine) wetlands. These wetlands have specific soil, hydrologic, and vegetation characteristics based on their position in the landscape and land use. These characteristics are described below.

Geology and Soil

The SR 303 Project study area is located in the Puget Sound trough. The trough is a broad lowland located between the western Cascades and the Olympic Peninsula that has a history of extensive glaciation. The landforms of the region are typified by a series of north-south trending ridges and valleys. Most of the surface is covered by a thick layer of glacial till, which can be several thousand feet thick in some areas (Alt and Hyndman 1984). The glacial till forms the parent material for the soils of the study area, which can be classified as hydric (wetland) or nonhydric (upland) based on criteria defined by the Natural Resources Conservation Service (NRCS).

It is important to note that areas mapped as a particular soil type in soil surveys often include areas of different soil types because of the gross scale of the mapping. Human activities, including the placement of fill during development, also can affect soil characteristics, providing for the possibility of wetland development in soils mapped as non-hydric.

The hydric soils mapped within the study area include Kapowsin gravelly loam, Norma fine sandy loam, and Shalcar muck (McMurphy et. al. 1973). In addition, Alderwood soil series, classified as non-hydric, is found in the study area.

The Kapowsin gravelly loam is formed in glacial till. A hardpan layer is present at depths of 20 to 32 inches below the surface, which supports a perched water table during the rainy season. Approximately 10 percent of areas mapped as Kapowsin may contain non-hydric Harstine and Poulsbo soils, primarily on steeper slopes.

Norma fine sandy loam is formed in mixed glacial alluvium. These soils are deep, poorly drained, and found in stream bottoms and in depressions on till plains. Approximately 10 percent of soils mapped as Norma are Bellingham, McKenna, and Shalcar soils.

Shalcar muck is formed from decaying organic material over alluvium. This soil is deep, very poorly drained and is found in backwater depressions in valleys and uplands. Shalcar soils are prone to ponding in the winter and have a high water table. The Shalcar muck unit includes approximately 10 percent Semiahmoo soils and 5 percent Norma soils, both of which are hydric.

The Alderwood soil series is formed in glacial till, and is moderately deep and well drained on the uplands. NRCS designates the Alderwood series soils as non-hydric; however, these soils can support the development of wetlands because of a hardpan layer that exists at depths between 20 and 40 inches.

Hydrology

Water is one of the defining characteristics of a wetland. Water creates the anaerobic conditions that dominate the soil-forming processes, and that act as a limiting condition for plant growth. A wetland must have water for a long enough period during the growing season to create anaerobic soil conditions and support plant communities adapted to those conditions.

Wetlands within the study area derive water from several different sources. Some wetlands are situated along the shores of Puget Sound where water is present throughout the year. Other wetlands are located along streams or in depressions. These wetlands receive water when streams overflow their banks, from subsurface flow where the water table is close to the surface, or directly from precipitation.

Vegetation

Puget Sound is located within the western hemlock (*Tsuga heterophylla*) forest zone described in *Natural Vegetation of Oregon and Washington* (Franklin and Dryness, 1988). Western hemlock (*T. heterophylla*) and western red cedar (*Thuja plicata*) are the climax forest trees in this zone, although Douglas fir (*Pseudotsuga menziesii*) also dominates large areas. Deciduous species occur primarily in disturbed areas and along rivers and streams.

Vegetation in the study area has been influenced by the conversion from the area's initial condition (forested) through agricultural uses to the current residential/suburban uses. Most wetlands in the study area support a mixture of native and introduced species. Red alder (Alnus rubra), black cottonwood (Populus balsamifera), western red cedar, and Oregon ash (Fraxinus latifolia) generally dominate forested wetlands. Dominant species in shrub wetlands include various willows (*Salix* spp.), Himalayan blackberry (*Rubus discolor*), red osier dogwood (*Cornus sericea)*, hardhack (*Spiraea douglasii*), and salmonberry (*Rubus spectabilis*). In wetlands with open water, cattails (*Typha* spp.), rushes (*Juncus* spp.), and horsetails (*Equisetum* spp.) are dominant.

Wetland and Shoreline Identification and Data Sources

Shorelines and potential wetlands in the study area were identified using existing maps and published data, supplemented with field verification. The wetlands were not delineated, therefore the wetland descriptions provided below (which include information on wetland size, type, function, and rating) are preliminary.

Existing Data Sources

The following existing data sources were used to identify potential study area wetlands:

- *Soil Survey of Kitsap County Area, Washington* (McMurphy et al. 1973)
- *National Wetland Inventory, Bremerton East, Washington Quadrangle* (USFWS 1987)
- *National Wetland Inventory, Bremerton West, Washington Quadrangle* (USFWS 1987)
- *National Wetland Inventory, Poulsbo, Washington Quadrangle* (USFWS 1987)
- *National Wetland Inventory, Suquamish, Washington Quadrangle* (USFWS 1987)
- *City of Bremerton, Critical Lands Ordinance* (City of Bremerton 19XX)

Composite maps were prepared using the Arc/Info Geographic Information System (GIS). Digital data used to create these maps included:

- Parcel and Right-of-ways Mapping (Kitsap County 2001)
- National Wetland Inventory Wetlands Mapping (Kitsap County 2001)
- Stream and Water Bodies Mapping (Kitsap County 2001)
- Hydric Soils Mapping (Kitsap County 2001)

Field Investigation

Parametrix staff performed field investigations on August 9th, and October 25th, 2001. The primary purpose of these investigations was to identify wetlands not included in existing inventories. These are wetlands that are either too small or too difficult to identify to be included in the National Wetland Inventory (NWI) and local inventories, or have changed since these inventories were prepared.

For properties within the right-of-way, on-site observations were made of the dominant vegetation, and the hydrologic characteristics of the area were assessed. No soil samples were taken.

For properties outside but adjacent to the right-of-way, field reconnaissance was conducted from roads and other areas open to public access. The presence, type, and approximate boundary of wetlands were visually confirmed based on the presence of reliable wetland indicator plants, such as soft rush (*Juncus effusus*), red osier dogwood, and hardhack.

Wetland boundaries were estimated based on these criteria and the resulting approximation was hand drawn onto composite maps. The resulting composites were digitized into the Arc/Info GIS. Each wetland has been given a unique alphanumeric designation.

Wetlands were not delineated, and have not been reviewed by any jurisdictional authority, including the Corps, Ecology, and county or municipal governments.

Affected Environment

Wetland Description and Classification

This section describes in detail the wetlands found within the SR 303 Project study area. A detailed description is presented for each wetland including wetland name, acreage, Ecology rating, required buffer width (based on Ecology rating and Kitsap Co.), and vegetation classification (Cowardin et al. 1979). This information is summarized in Table 1-3.

Table 1-3. Area, Rating, and Classification for Wetlands in the SR 303 Study Area

Wetland	Area[a] (in Acres)	Ecology Rating[b] (Category)	Buffer[c,d] (Feet)	USFWS Classification[e]
A	>67.0	I	200	Estuarine, Intertidal Aquatic Bed/Flat
B	>360.0	I	200	Estuarine, Intertidal Aquatic Bed/Flat
C	29.7	III	50	Palustrine Forested
D	2.7	III	50	Palustrine Forested
E	0.5	IV	25	Palustrine Open Water
F (east)	22.6	II	100	Palustrine Forested – Scrub/Shrub
F (west)	4.7	II	100	Palustrine Emergent – Scrub/Shrub
G	N/A	N/A	N/A	N/A
G-1	2.5	II	100	Palustrine Forested – Open Water
H	5.1	II	100	Palustrine Forested – Scrub/Shrub
I, I-1, I2, I-3	>50.0	II	100	Palustrine Forested – Emergent
J	9.5	III	50	Palustrine Scrub/Shrub
K, K-1, K-2	>50.0	II	100	Palustrine Forested – Emergent
L	N/A	N/A	N/A	N/A
M	26.4	III	50	Palustrine Forested
S-1	13.7	III	50	Palustrine Forested – Scrub/Shrub
Lebo W-1	0.6	II	100	Estuarine, Intertidal Forested – Palustrine Scrub/Shrub
Riddell 1	3.8	III	50	Palustrine Forested
McWilliams 1	<0.5	IV	25	Palustrine Scrub/Shrub

[a] All areas estimated based on NWI mapping and field inventory.
[b] Ecology (1993).
[c] Kitsap County Critical Areas Ordinance, additional building setbacks apply.
[d] City of Bremerton Critical Lands Ordinance.
[e] Cowardin et al. (1979).

Wetland: A
Area: >67.0 acres
Ecology Rating: Category I
USFWS Classification: Estuarine, Intertidal Aquatic Bed/Flat
Watershed: Port Washington Narrows

Wetland A is part of an extensive system of estuarine intertidal aquatic bed wetlands located in a narrow band along the banks of the Port Washington Narrows and Dye's Inlet. On the southern side of the narrows, this system is referred to as Wetland A.

Wetland A is an estuarine intertidal wetland, and the primary source of wetland hydrologic input is the Port Washington Narrows. Several small streams drain into the system, but these are unlikely to have a significant impact on the wetland hydrology. No vegetation was noted in this

area. The substrate in this area appears to be a cobble matrix with sandy areas along the low tide margins of the wetland.

This area provides potential habitat for salmonid rearing as well as marine shellfish. Shorebirds may also use this area for foraging habitat.

Wetland A is classified as a Category I wetland using the Ecology rating system because of its estuarine location and large size. Kitsap County and the City of Bremerton require a 200-foot buffer on Category I wetlands.

Wetland: B
Area: >360.0 acres
Ecology Rating: Category I
USFWS Classification: Estuarine, Intertidal Aquatic Bed/Flat
Watershed: Port Washington Narrows

Wetland B is part of an extensive system of estuarine intertidal aquatic bed wetlands located in a narrow band along the banks of the Port Washington Narrows and Dye's Inlet. On the southern side of the narrows, this system is referred to as Wetland B.

Wetland B is an estuarine intertidal wetland and the primary water source is the Port Washington Narrows. Several small streams drain into the system, but these are unlikely to have a significant impact on the wetland hydrology. No vegetation was noted in this area. The substrate in this area appears to be a cobble matrix with sandy areas along the low tide margins of the wetland.

This area provides potential habitat for salmonid rearing as well as marine shellfish. Shorebirds may also use this area for foraging habitat.

Wetland B is classified as a Category I wetland using the Ecology rating system, because of its estuarine location and large size. Kitsap County and the City of Bremerton require a 200-foot buffer on Category I wetlands.

Wetland: C
Area: 29.7 acres
Ecology Rating: Category III
USFWS Classification: Palustrine Forested
Watershed: Mosher Creek

Wetland C is located along the east side of the existing SR 303 right-of-way, south of McWilliams Road NE. A park and ride lot occupies the northwest corner of the site. Wetland C is a forested palustrine wetland.

Vegetation in Wetland C is dominated by western red cedar in the canopy, with salmonberry, Hooker's willow (*Salix hookeriana*), Pacific willow (*S. lucida*), and Scouler willow (*S. scouleriana*) in the shrub layer. Skunk cabbage (*Lysichiton americanum*) and lady fern (*Athyrium filix-femina*) dominate the emergent layer.

The primary source of wetland hydrology is groundwater expression, and water appears to drain from south to north. A culvert passing under SR 303 provides some hydrologic connectivity with Wetland D on the west side of SR 303. Soils in Wetland C have been mapped as Kitsap silt loam, which has a seasonally perched water table.

Wetland C may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals or waterfowl.

Wetland C is classified as a Category III wetland using the Ecology rating system, because of its size and structural diversity. Kitsap County and the City of Bremerton require a 50-foot buffer on Category III wetlands.

Wetland: D
Area: 2.7 acres
Ecology Rating: Category III
USFWS Classification: Palustrine Forested
Watershed: Mosher Creek

Wetland D is located along the west side of the existing SR 303 right-of-way, south of McWilliams Road NE, and is associated with Wetland C. A high berm separates the wetland from SR 303 along most of its length, with the exception of a narrow strip near the culvert connecting Wetland C and Wetland D.

Wetland D is classified as a palustrine forested wetland according to Cowardin et al. (1979). Vegetation in Wetland D consists of an overstory of red alder and western red cedar, with an understory of salmonberry, creeping buttercup (*Ranunculus repens*), and Himalayan blackberry. Himalayan blackberry and creeping buttercup were located primarily along the eastern margins of the wetland.

The primary source of wetland hydrology is groundwater expression, and water appears to drain from south to north. A culvert passing under SR 303 provides some hydrologic connectivity with Wetland C on the east side of SR 303. Soils in Wetland D have been mapped as Kitsap silt loam, which has a seasonally perched water table.

Wetland D may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals or waterfowl.

Wetland D is classified as a Category III wetland using the Ecology rating system, because of its limited number of plant species and developed buffers. Kitsap County and the City of Bremerton require a 50-foot buffer on Category III wetlands.

Wetland: E
Area: 0.5 acre
Ecology Rating: Category III
USFWS Classification: Palustrine Open Water
Watershed: Unknown, possibly isolated

Wetland E is located along the east side of the existing SR 303 right-of-way, north of McWilliams Road NE. It is a detention pond surrounded by commercial and residential development. Slopes of the pond are vegetated with mowed grasses. The Cowardin classification for wetland E is palustrine open water.

Culverts and piped water sources supply hydrology. Soils in Wetland E are mapped as Kitsap silt loam, which has a seasonally perched water table.

Wetland E may provide limited resting habitat for waterfowl, but the absence of vegetation suitable for nesting and food limits its usefulness to these species.

Wetland E is classified as a Category IV wetland using the Ecology rating system, because of its small size, isolation from other water bodies, and single vegetation category. Kitsap County and the City of Bremerton require a 25-foot buffer on Category IV wetlands.

Wetland: F (east)
Area: 22.8 acres
Ecology Rating: Category II
USFWS Classification: Palustrine Forested/Scrub-Shrub
Watershed: Unidentified

Wetland F (east) is located along the east side of the existing SR 303 right-of-way, south of Fairgrounds/John Carlson Road NE. Wetland F (east) is classified as a palustrine forested/scrub-shrub wetland.

Vegetation in Wetland F (east) has two components. The forested component is primarily located along John Carlson Road NE, and is dominated by western red cedar and red alder. The shrub component is located along SR 303 and is dominated by Pacific willow, salmonberry, and hardhack.

Wetland hydrology is supplied by groundwater expression, and runoff from adjacent upland areas may contribute water to the system. Soils in Wetland F (east) have been mapped as Kitsap silt loam and Norma fine sandy loam. Kitsap silt loam has a seasonally perched water table, and Norma fine sandy loam is classified as poorly drained.

Wetland F (east) may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals or waterfowl.

Wetland F (east) is classified as a Category II wetland using the Ecology rating system, because of its size, structural diversity, and significant habitat value. Kitsap County and the City of Bremerton require a 100-foot buffer on Category II wetlands.

Wetland: F (west)
Area: 4.7 acres
Ecology Rating: Category II
USFWS Classification: Palustrine Emergent/Scrub-Shrub
Watershed: Unidentified

Wetland F (west) is located along the west side of the existing SR 303 right-of-way, south of Fairgrounds/John Carlson Road NE. Wetland F (west) appears to be a wetland mitigation area, and is classified as a palustrine emergent/scrub-shrub wetland according to Cowardin et al. (1979).

Vegetation in Wetland F (west) is divided into two components. The emergent component is dominated by cattails interspersed with areas of open water. The scrub-shrub component is dominated by Sitka willow and hardhack.

Hydrology is supplied by groundwater expression, and may be supplemented by runoff from adjacent upland areas. Soils in Wetland F (west) have been mapped as Kitsap silt loam and

Norma fine sandy loam. Kitsap silt loam has a seasonally perched water table, and Norma fine sandy loam is classified as poorly drained.

Wetland F (west) may provide habitat for passerine birds and small mammals. The open water and adjacent emergent vegetation provide potential habitat for water dependant mammals such as muskrat and beaver, as well as potential foraging, resting, and nesting habitat for waterfowl.

Wetland F (west) is classified as a Category II wetland using the Ecology rating system, because of its status as a wetland mitigation area, structural diversity, and significant habitat value. Kitsap County and the City of Bremerton require a 100-foot buffer on Category II wetlands.

Wetland: G
Area: n/a
Ecology Rating: N/A
USFWS Classification: N/A
Watershed: Steele Creek

Wetland G as located along the west side of the old SR 303 right-of-way, south of Sipes Lane NE. The existing SR 303 right-of-way passes through the former location of Wetland G. No remnants of Wetland G remain.

Wetland: G-1
Area: 2.5 acres
Ecology Rating: Category II
USFWS Classification: Palustrine Forested/Open Water
Watershed: Steele Creek

Wetland G-1 is located along the north side of the SR 303 right-of-way, between the existing road and Brownsville Highway NE. The wetland is classified as a palustrine forested/open water wetland according to Cowardin et al. (1979).

Red alder dominates the vegetation in the forested areas. Two small open water areas are present in the wetland. Hydrology is supplied by a tributary of Steele Creek, which flows under SR 303 from the south and exits to the north under NE Glud's Pond Street.

Soils in Wetland G-1 have been mapped as Indianola-Kitsap complex, which includes approximately 50 percent Indianola loamy sand and 35 percent Kitsap silt loam. Indianola loamy sand is well drained, but Kitsap silt loam forms a seasonally perched water table.

The forested component of Wetland G-1 may provide habitat for passerine birds and small mammals. The open water provides potential resting and loafing habitat for waterfowl.

Wetland G-1 is classified as a Category II wetland using the Ecology rating system, because of its structural diversity, connection to streams, and potential habitat value. Kitsap County and the City of Bremerton require a 100-foot buffer on Category II wetlands.

Wetland: H
Area: 5.1 acres
Ecology Rating: Category II
USFWS Classification: Palustrine Forested/Scrub-Shrub
Watershed: Steele Creek

Wetland H is located on the north side of Bucklin Hill Road NW, approximately 1800 feet east of Central Valley Road. Wetland H is classified as a palustrine forested/scrub-shrub wetland.

Pacific willow, Scouler willow, and red alder dominate vegetation on the site. Hydrology is supplied by groundwater expression and supplemented by a tributary to Steele Creek, which passes under SR 303 and flows northward. Soils in Wetland H have been mapped as Norma fine sandy loam, which is classified as poorly drained.

Wetland H may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals or waterfowl.

Wetland H is classified as a Category II wetland using the Ecology rating system, because of its structural diversity, connection to streams, and potential habitat value. Kitsap County and the City of Bremerton require a 100-foot buffer on Category II wetlands.

Wetland: I, I-1, I-2, and I-3
Area: >50.0 acres
Ecology Rating: Category II
USFWS Classification: Palustrine Forested/Emergent
Watershed: Barker Creek

Wetlands I through I-3 are located around SR 303 at the intersection with Central Valley Road NE. The wetlands are numbered beginning southeast of the intersection, with Wetland I. Wetland I-1 is located northeast of the intersection, I-2 is located northwest on the intersection, and I-3 is located in the southwest quadrant of the intersection. The Wetland I complex is classified as a palustrine forested wetland, though areas of emergent vegetation are common in both I and I-1.

Vegetation in the Wetland I complex is dominated by various willow species. Within the wetland complex, particularly with Wetland I and I-1, there are emergent areas that have been used for agriculture and are dominated by domestic grasses and soft rush.

The primary source of wetland hydrology in this wetland complex is provided by a number of tributaries to Barker Creek. These tributaries merge together south of the SR 303 right-of-way in I-3. Runoff from adjacent agricultural and residential areas may contribute to the hydrology of this wetland complex.

Soils in the area of the Wetland I complex are mapped as Norma fine sandy loam and Shalcar muck. Norma fine sandy loam is classified as poorly drained, and Shalcar muck is classified as very poorly drained.

Wetland I may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals, but the emergent vegetation may provide some seasonal waterfowl habitat.

The Wetland I complex is classified as a Category II wetland using the Ecology rating system because of its large size and multiple vegetation categories. Kitsap County and the City of Bremerton require a 100-foot buffer on Category II wetlands.

Wetland: J
Area: 9.5 acres
Ecology Rating: Category III
USFWS Classification: Palustrine Scrub-Shrub
Watershed: Clear Creek

Wetland J is located along the existing SR 303 right-of-way, east of the Silverdale Way NE entrance and exit ramps. Wetland J is classified as a palustrine scrub-shrub wetland.

Various willow species and hardhack dominate the vegetation in Wetland J. Wetland hydrology is supplied by Clear Creek, which flows under SR 303 to the east of Silverdale Way. Soils in Wetland J have been mapped as Norma fine sandy loam, which is classified as poorly drained. Wetland J provides some limited habitat for passerine birds and small mammals.

Wetland J is classified as a Category III wetland using the Ecology rating system, because of low structural diversity and the absence of habitat features or stream connections. Kitsap County and the City of Bremerton require a 50-foot buffer on Category III wetlands.

Wetland: K, K-1 and K-2
Area: >50.0 acres
Ecology Rating: Category II
USFWS Classification: Palustrine Forested/Emergent
Watershed: Mosher Creek

The Wetland K complex parallels Central Valley Road and extends from north of Fairgrounds Road NE to McWilliams Court NE. This wetland complex is primarily palustrine forested, though several small areas (K-2) of emergent vegetation are present on the west side of Central Valley Road.

The canopy of the Wetland K complex is dominated by western red cedar and red alder. The understory is composed of Pacific willow, salmonberry, and hardhack, with Sitka willow present in the more southerly portions of the wetland. Himalayan blackberry is present in the margins of the wetland.

Tributaries of Mosher Creek and an unnamed stream north of Mosher Creek provide water to the system. Groundwater expression and runoff from adjacent residential and agricultural areas may contribute to wetland hydrology as well.

Soils in Wetland K have been mapped as a mixture of Alderwood, Dystric Xerothrents, Indianola, Norma, and Shalcar soils. Of these soils, the Alderwood very gravelly sandy loam has a hardpan layer that may support wetlands. Norma fine sandy loam and Shalcar muck are classified as poorly drained and very poorly drained.

The Wetland K complex may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals, but the emergent vegetation may provide some seasonal waterfowl habitat.

Wetland K is classified as a Category II wetland using the Ecology rating system because of size, number of plant species, structural diversity, and connection to streams. Kitsap County and the City of Bremerton require a 100-foot buffer on Category II wetlands.

Wetland: L
Area: N/A
Ecology Rating: N/A
USFWS Classification: N/A

Wetland L is located outside of the proposed SR 303 right-of-way and was not field inventoried.

Wetland: M
Area: 26.4 acres
Ecology Rating: Category III
USFWS Classification: Palustrine Forested
Watershed: Unidentified

Wetland M is located between SR 303 and Almira Drive, and extends from Riddell Road on the north to approximately Hollis Street on the south. The wetland occupies a broad, low area that drops off rapidly from the Almira Drive road prism. Wetland M is classified as a palustrine forested wetland.

Red alder in the canopy dominates vegetation in Wetland M. The understory is dominated by Pacific willow, Himalayan blackberry and stinging nettle (*Urtica dioica*) in the south, with salmonberry and English ivy (*Hedera helix*) present in substantial amounts to the north. These vegetation samples were along Almira Drive and may not reflect the species composition of western portions of the wetland.

The primary source of wetland hydrology appears to be groundwater expression. Runoff from adjacent residential areas may also contribute water to the system.

Soils in Wetland M have been mapped as Kitsap silt loam and Norma fine sandy loam. Kitsap silt loam supports a seasonal perched water table, and Norma fine sandy loam is classified as poorly drained.

Wetland M may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals or waterfowl.

Wetland M is classified as a Category III wetland using the Ecology rating system because of the number of plant species on the site and the structural interspersion of the vegetation. Kitsap County and the City of Bremerton require a 50-foot buffer on Category III wetlands.

Wetland: S-1
Area: 13.7 acres
Ecology Rating: Category III
USFWS Classification: Palustrine Forested/Scrub-Shrub
Watershed: Unidentified, possibly isolated

Wetland S-1 is located on the north and south sides of Sylvan Way near Garland Avenue. The wetland extends to Rickey Road on the north, and approximately 150-feet east of Rickey Road on

the south. Residential development abuts the wetland to the east and west. Wetland S-1 is an open forested community to the south of Sylvan Way and a scrub/shrub community dominates the wetland to the north.

Vegetation on the south side of Sylvan Way is dominated by alder and Himalayan blackberry, with common horsetail (*Equisetum hyemale*) along the roadside. Further to the east, the community is less disturbed. Upland margins of the wetland are dominated by alder, big leaf maple (*Acer macrophyllum*), and Indian plum (*Oemleria cerasaformis*), with sword fern (*Polystichum munitum*) in the understory. The wetland areas are western red cedar with an understory of salmonberry, thimbleberry (*Rubus parviflorus*), and lady fern.

The scrub/shrub community of the north side of Sylvan Way is composed of densely grown red alder and Sitka willow. The understory near the margins is primarily Japanese knotweed (*Polygonum cuspidatum*) and common horsetail.

Elevated groundwater table is the major source of wetland hydrology for Westland S-1. Direct precipitation and runoff from adjacent residential areas and roads may also contribute water to the system. Soils in Wetland S-1 have been mapped as Norma fine sandy loam, which is classified as poorly drained.

Wetland S-1 may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals or waterfowl.

Wetland S-1 is classified as a Category III wetland using the Ecology rating system, because of its size, structural diversity, and number of plant species. Kitsap County and the City of Bremerton require a 50-foot buffer on Category III wetlands.

Wetland: Lebo W-1
Area: 0.6 acre
Ecology Rating: Category II
USFWS Classification: Estuarine, Intertidal Forested/Palustrine Forested/Scrub-Shrub
Watershed: Lebo 1/Port Washington Narrows

Wetland Lebo W-1 is a tidally influenced wetland on the east side of Lebo Boulevard, just north of Sheridan Road. This area appears to be partially natural and partially maintained landscape. Residential parcels adjoin the north side of the wetland, and the parcel immediately to the south is undeveloped.

Vegetation in this wetland has several communities. Along the margins and upstream reaches, Sitka willow predominates, however, saline tolerant grasses appear to be the dominant vegetation in the lowest areas near the culvert.

A culvert connects Lebo W-1 to the Port Washington Narrows and provides the primary source of hydrology. Direct precipitation and runoff from adjacent residential areas and roads may also contribute water to the system. Two drainages (Lebo 1 and Sheridan 1) appear to drain into Wetland Lebo W-1.

Soils in Lebo W-1 have been mapped as Schneider very gravelly loam. The mapping for this soil may include areas of Shelton soil, which contains a strongly cemented pan that supports a seasonally perched water table.

Wetland Lebo W-1 is classified as a Category II wetland using the Ecology rating system, because of its estuarine nature. Kitsap County and the City of Bremerton require a 100-foot buffer on Category II wetlands.

Wetland: Riddell 1
Area: 3.8 acres
Ecology Rating: Category III
USFWS Classification: Palustrine Forested
Watershed: Unnamed Stream

Wetland Riddell 1 is a small, forested riparian wetland located on the north side of Riddell Road NW, west of Sandra Lane NE. The wetland occupies the banks of a steep walled drainage. Riddell 1 is classified as a palustrine forested wetland according to Cowardin et al. (1979).

Western red cedar, Himalayan blackberry, and stinging nettle are the predominant species in Wetland Riddell 1. Sword fern is present on the hummocks. The primary source of hydrology appears to be downstream flow in the ravine. Seepage from the adjacent upland areas may contribute the wetland hydrology.

Soils in Wetland Riddell 1 are mapped as Alderwood and Indianola-Kitsap complex. The Indianola-Kitsap complex includes approximately 50 percent Indianola loamy sand and 35 percent Kitsap silt loam. Indianola loamy sand is well drained, but Kitsap silt loam forms a seasonally perched water table. The Norma fine sandy loam mapped on the site is classified as poorly drained.

Riddell 1 may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals or waterfowl.

Wetland Riddell 1 is classified as a Category III wetland using the Ecology rating system because of its low number of plant species and lack of connection with other habitats. Kitsap County and the City of Bremerton require a 50-foot buffer on Category III wetlands.

Wetland: McWilliams 1
Area: >0.5 acre
Ecology Rating: Category IV
USFWS Classification: Palustrine Scrub-Shrub
Watershed: Mosher Creek

Wetland McWilliams 1 is a palustrine scrub-shrub riparian wetland located on the north side of McWilliams Road NE, east of Old Military Road. The wetland occupies the banks of a small, culverted drainage, and is classified as a palustrine scrub/shrub wetland according to Cowardin et al. (1979).

Salmonberry and Himalayan blackberry dominate the shrub layer, though traces of hardhack are also present. Creeping buttercup is abundant in the herbaceous layer.

The primary source of hydrology appears to be downstream flow along the drainage. Runoff from adjacent residential areas may contribute to the wetland hydrology. Soils in Wetland McWilliams 1 are mapped as Kitsap silt loam, which supports a seasonal perched water table.

Wetland McWilliams 1 may provide habitat for passerine birds and small mammals. There is no open water to support water dependant mammals or waterfowl.

Wetland McWilliams 1 is classified as a Category IV wetland using the Ecology rating system, because of its small size, low number of plant species, and lack of connection with other habitats. Kitsap County and the City of Bremerton require a 25-foot buffer on Category IV wetlands.

Impact Analysis

The impact analysis segment of this report will discuss the impacts for each of the six proposed alternatives for the improvements to SR 303. Impacts for each of the alternatives will be listed in acres, and categorized by wetland classification. Since final roadway design has not yet been developed, we will assume a 40-foot increase in roadway width (20 feet on each side of the right-of-way) to determine the area of impacts for wetlands and buffers.

Alternatives 4A, 4B, and 5A represent potential improvements that would add a new bridge crossing over the Port Washington Narrows and improve arterial connections with SR 303. These alternatives are focused on routing traffic to and from the SR 303 corridor. Alternatives 11 through 13 primarily involve improving the capacity to SR 303 by adding both general purpose and high occupancy (HOV) lanes. Alternative 14 would use multi-modal measures, such as combined access opportunities, standardizing speeds, and signage to reduce traffic volumes.

For Alternatives 4A, 4B, and 5A, it was assumed that all roadways, including new bridges, would be widened from four to five lanes. The proposed configuration would include two travel lanes in each direction plus left turn channelization at major intersections. Alternatives 11 and 13 involve widening the SR 303 Corridor to 7 lanes.

Alternative 4A

Alternative 4A impacts a total of 3.3 acres of wetland and 2.2 acres of buffer (Table 1-4). The majority of these impacts (1.9 acres) are the result of the placement of the new bridge across the Port Washington Narrows, which will pass through Wetlands A and B. Wetlands A and B are classified as Category I, so these impacts would be significant. It should be noted that the majority of the buffer area for Wetlands A and B has been developed and contains residences.

Table 1-4. Wetland and Buffer Impacts, Alternative 4A

Wetland	Wetland Impact[a] (in acres)	Buffer Impact[a,b] (in acres)	Wetland Category[c]
A	0.6	0.5	I
B	1.3	0.5	I
I, I-1, I2, I-3	0.1	<0.1	II
K, K-1, K-2	0.9	1.1	II
S-1	0.1	0.1	III
Riddell 1	0.3	<0.1	III
Total Impact	3.3	2.2	

a All areas estimated based on NWI mapping and field inventory assumed 20-foot increase in right-of-way on each side of road.

b Kitsap County Critical Areas Ordinance, additional building setbacks apply.

c Ecology (1993).

Direct impacts to Wetlands A and B would include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to place the footings for the new structure. Additional impacts include the redeposition of disturbed sediments and incidental filling to the immediately surrounding wetland areas.

Impacts (1.1 acres) also occur in the Wetland K complex. This wetland is classified as Category II. Approximately 1/3 of these impacts occurs to the smaller lobes of Wetland K, located north of McWilliams Road NE. A complete delineation would determine whether these wetlands are truly part of Wetland K or are isolated wetlands. If these wetlands are isolated, their classification would change to Category IV.

Direct impacts to the Wetland I and K complexes, and Wetlands S-1 and Riddell 1 would include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to create the new road bed.

In addition to the wetland impacts, there are shoreline impacts from the crossings of Port Washington Narrows and Mosher Creek. Port Washington Narrows is classified as a water of statewide significance, as well as being a navigable waterway. Mosher Creek has documented presence of ESA listed salmonids.

Excavation and grading in wetlands required for this alternative would require a wetland permit under Section 404 (CWA), which would trigger a Section 401 permit requirement. The bridge construction required for this alternative would require a Section 10 permit (Rivers and Harbors Act), and a Substantial Shoreline Development permit. The 404 and Section 10 permits (if granted) would qualify as federal authorization. As a result, compliance with ESA and the preparation of a BA would be required. Additional state and local permits may be required.

Alternative 4B

Alternative 4B has a total wetland impact of 0.3 acre, and total buffer Impact of 1.0 acre (Table 1-5). All of the impact to wetlands and buffers occurs within Wetlands A and B, which are classified as Category I. As noted above, the majority of the buffers for Wetlands A and B have been developed as residences.

Table 1-5. Wetland and Buffer Impacts, Alternative 4B

Wetland	Wetland Impact[a] (in acres)	Buffer Impact[a,b] (in acres)	Wetland Category[c]
A	0.1	0.5	I
B	0.2	0.5	I
Total Impact	0.3	1.0	

[a] All areas estimated based on NWI mapping and field inventory assumed 20-foot increase in right-of-way on each side of road.

[b] Kitsap County Critical Areas Ordinance, additional building setbacks apply.

[c] Ecology (1993).

Direct impacts to Wetlands A and B are similar to those discussed for Alternative 4A, but the area affected is smaller. These include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to place the footings for the new structure. Additional impacts

include the redeposition of disturbed sediments and incidental filling to the immediately surrounding wetland areas.

In addition to the wetland impacts, there are shoreline impacts from the crossings of Port Washington Narrows and one unnamed stream. Port Washington Narrows is classified as a water of statewide significance, as well as being a navigable waterway.

Permits required for this Alternative 4B would be similar to those required for Alternative 4A, but less extensive since less wetland will be involved. Additional state and local permits may be required.

Alternative 5A

Alternative 5A has a total wetland impact of 2.1 acres, and total buffer impact of 2.1 acres (Table 1-6). 0.8 acre of the wetland impact and 1.0 acre of the buffer impact are to Wetlands A and B, which are classified as Category I wetlands. Of the remaining impacts, 1.0 acre of the wetland impacts and 1.1 acres of the buffer impacts occur in Wetlands I and K, which are classified as Category II wetlands. The final portion of the wetland and buffer impacts occur in Wetland Riddell 1, which is classified as a Category III wetland.

Table 1-6. Wetland and Buffer Impacts, Alternative 5A

Wetland	Wetland Impact[a] (in acres)	Buffer Impact[a,b] (in acres)	Wetland Category[c]
A	0.5	0.5	I
B	0.3	0.5	I
I, I-1, I2, I-3	0.1	<0.1	II
K, K-1, K-2	0.9	1.1	II
Riddell 1	0.3	<0.1	III
Total Impact	2.1	2.1	

[a] All areas estimated based on NWI mapping and field inventory assumed 20-foot increase in right-of-way on each side of road.

[b] Kitsap County Critical Areas Ordinance, additional building setbacks apply.

[c] Ecology (1993).

Direct impacts to Wetlands A and B are similar to those discussed for Alternative 4A, but the area affected is smaller. These include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to place the footings for the new structure. Additional impacts include the redeposition of disturbed sediments and incidental filling to the immediately surrounding wetland areas. The impacts to Wetlands I, K and Riddell 1 are identical to those discussed under Alternative 4A.

Shoreline impacts are similar to those discussed under Alternative 4A. These impacts include proposed crossings for the Port Washington Narrows and Mosher Creek. Permit requirements would be similar to those for Alternative 4A.

Alternative 11

Alternative 11 includes the widening of the existing bridge across Port Washington Narrows. The total area of wetland impact is 2.3 acres, with an additional 0.4 acre of wetland buffer impact (Table 1-7). The Category I impacts are limited to 0.2 acre in Wetlands A and B, with less than 0.1 acre of buffer impact.

Table 1-7. Wetland and Buffer Impacts, Alternative 11

Wetland	Wetland Impact[a] (in acres)	Buffer Impact[a,b] (in acres)	Wetland Category[c]
A	0.1	0.2	I
B	0.1	0.2	I
C	0.5	<0.1	III
D	0.5	<0.1	III
F (east)	0.7	<0.1	II
F (west)	0.4	<0.1	II
Total Impact	2.3	0.4	

a All areas estimated based on NWI mapping and field inventory assumed 20-foot increase in right-of-way on each side of road.

b Kitsap County Critical Areas Ordinance, additional building setbacks apply.

c Ecology (1993).

Direct impacts to Wetlands A and B are similar to those discussed for Alternative 4A, but smaller. These include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to place the footings for the new structure. Additional impacts include the redeposition of disturbed sediments and incidental filling to the immediately surrounding wetland areas.

Direct impacts to the Wetlands C, D, and F (east), and F (west) would include the removal of wetland vegetation, excavation of wetland soil, and subsequent filling of the area to create the new road bed.

Shoreline impacts are similar to those discussed under Alternative 4A, but smaller. These impacts include proposed crossings for the Port Washington Narrows, and one unnamed stream. The unnamed stream carries water from Wetland C to Wetland D through a culvert under SR 303. Permit requirements would be similar to those for Alternative 4A.

Alternative 13

Wetland and buffer impacts for Alternative 13 are identical to those for Alternative 11 (Table 1-8). Direct impacts and shoreline impacts for Alternative 13 are identical to those discussed for Alternative 11. Permit requirements would be similar to those discussed for Alternative 11.

Table 1-8. Wetland and Buffer Impacts, Alternative 13

Wetland	Wetland Impact[a] (in acres)	Buffer Impact[a,b] (in acres)	Wetland Category[c]
A	0.1	0.2	I
B	0.1	0.2	I
C	0.5	<0.1	III
D	0.5	<0.1	III
F (east)	0.7	<0.1	II
F (west)	0.4	<0.1	II
Total Impact	2.3	0.4	

[a] All areas estimated based on NWI mapping and field inventory assumed 20-foot increase in right-of-way on each side of road.

[b] Kitsap County Critical Areas Ordinance, additional building setbacks apply.

[c] Ecology (1993).

Alternative 14

Wetland and buffer impacts for Alternative 14 are identical to those for Alternative 11 (Table 1-9). Direct impacts and shoreline impacts for Alternative 14 are identical to those discussed for Alternative 11. Permit requirements would be similar to those described for Alternative 11.

Table 1-9. Wetland and Buffer Impacts, Alternative 14

Wetland	Wetland Impact[a] (in acres)	Buffer Impact[a,b] (in acres)	Wetland Category[c]
A	0.1	0.2	I
B	0.1	0.2	I
C	0.5	<0.1	III
D	0.5	<0.1	III
F (east)	0.7	<0.1	II
F (west)	0.4	<0.1	II
Total Impact	2.3	0.4	

[a] All areas estimated based on NWI mapping and field inventory assumed 20-foot increase in right-of-way on each side of road.

[b] Kitsap County Critical Areas Ordinance, additional building setbacks apply.

[c] Ecology (1993).

Comparison and Conclusions

Wetland impacts for the various alternatives range from a low of 0.3 acre of wetland impact (Alternative 4B) to a high of 3.3 acres of wetland impact (Alternative 4A). The remaining alternatives fall in the middle of this range (Table 1-10).

Table 1-10. Wetland Impacts in Acres, by Alternative and Category

Alternative	Category I[a] Impact	Category II[a] Impact	Category III[a] Impact	Category IV[a] Impact	Total Impacts
4A	1.9	1.0	0.4	-	3.3
4B	0.3	-	-	-	0.3
5A	0.8	1.0	0.3	-	2.1
11	0.2	1.1	1.0	-	2.3
13	0.2	1.1	1.0	-	2.3
14	0.2	1.1	1.0	-	2.3

[a] Ecology (1993).

Alternative 4B has the least overall impact and the least impact to Category I wetlands. This is largely the result of the optimal placement of the new bridge structure and absence of wetlands along Pine Road NE.

Alternatives 11, 13, and 14 are identical in wetland and buffer impact. This is primarily the result of these alternatives widening the existing bridge structure instead of constructing a new bridge.

Alternative 5A is slightly better than Alternatives 11, 13, and 14 in terms of overall wetland impact (2.1 acres), but significantly worse in terms of impact to Category I wetlands (0.8 acre). In widening the existing bridge is not possible, Alternative 5A would be the second best alternative (instead of Alternatives 11, 13, and 14).

Alternative 4A has the most overall wetland impact (3.3 acres) as well as the most impact to Category I wetlands (1.9 acres). This is primarily the result of the construction of a new bridge structure.

LIMITATIONS

This assessment was prepared based on readily available information. The assessment is strictly qualitative and is not intended to establish expectations for impacts to wetland resources in the project area. This assessment was limited to the review of information provided by others and is subject to change over time pending a more detailed analysis as part of the project-specific environmental review.

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TECHNICAL MEMORANDUM

Date:	February 2002
To:	WSDOT (Olympic Region Transportation Planning Office)
Subject:	Air Quality Impact Assessment for 2nd Level Screening
Project Number:	554-1631-030 (02/023)
Project Name:	SR 303 Bremerton Silverdale Corridor Study

SUMMARY

This 2nd level screening document identifies known or potential air quality impacts within or adjacent to the SR 303 corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, 15 (No Build Alternative).

BACKGROUND

Study Methodology

This section summarizes the approach used to evaluate air quality and presents a description of the potential impacts based on total emissions generated from nitrous oxide (Nox), carbon monoxide (CO), and volatile organic compounds (VOC) for the SR 303 Bremerton to Silverdale Transportation Corridor Study.

It is important to emphasize that the air quality assessment is based on the current conceptual design used for comparative purposes and should not be interpreted as the final determination. The assessment will be continually updated as more detailed data is obtained and the design is further refined and modified. The following assumptions and methodology were used for this analysis:

Information regarding the regulatory environment for air quality was obtained from review of information maintained by:

- Kitsap County Comprehensive Plan and Zoning Ordinance (1998)
- City of Bremerton Comprehensive Plan and Zoning Ordinance (1995, 1998)
- Puget Sound Clean Air Agency (PSCAA 2001)
- Puget Sound Regional Council (PSRC 2001)

AFFECTED ENVIRONMENT

Air pollution consists of a complex mixture of compounds that are often difficult to quantify. National and state standards have been established for six common pollutants that affect Washington State. These pollutants are characterized as carbon monoxide, particulate matter, ozone, sulfur dioxide, lead and nitrogen dioxide. The U.S. Environmental Protection Agency designates areas where violations of these standards occur as "nonattainment" areas. Kitsap County is currently outside of such designated areas in the Puget Sound region.

Three agencies have jurisdiction over the ambient air quality in the project area: the U.S. EPA, Washington State Department of Ecology, and the Puget Sound Clean Air Agency (PSCAA). As part of the Clean Air Act (CAA), the U.S. EPA established ambient air quality standards for six criteria pollutants. Two classes of ambient air quality standards were established: Primary standards to protect the public health and secondary standards to protect the public welfare and the environment. In terms of overseeing the regulatory environment, the PSCAA enforces federal, state, and local air quality regulations and oversees the monitoring and regulation of air pollution emissions from stationary (point) sources such as business and industry; area wide sources such as wood stoves, fireplaces, and outdoor fires; and trains and ships. The Department of Ecology retains primary responsibility for regulating on-road mobile sources like automobiles and trucks.

According to the Kitsap County Comprehensive Plan, Kitsap County has one permanent station at Fairgrounds Road to monitor air quality. This station monitors particulate matter. The PSCAA oversees station maintenance and regularly collects data.

Local regulations in Puget Sound address a mixture of pollution generating sources including new construction, outdoor fire regulations, emission standards for opacity, sulfur dioxide, odors and fugitive dust, woodstove regulations, and spray coating operations. Regulations also relate to ozone generating activities and uses such as gasoline stations, petroleum refineries, gasoline terminals, bulk plants, fiberglass/gelcoat, graphic arts, and surface coaters. Additionally, toxic contaminants from dry cleaners, asbestos renovation/demolition and other new or existing sources that exceed the allowable source impact levels for a toxic air contaminant are also regulated. Overall, air pollutants in Kitsap County are generally derived from one of three sources: industry, outdoor burning (wood smoke), and traffic. For purposes of this analysis, traffic will be the primary focus of discussion.

At present, Kitsap County attainment status excludes it from state carbon monoxide and ozone monitoring programs as well as from state vehicle inspection and maintenance programs. In general, to demonstrate compliance and maintain air quality conformance, transportation plans, programs and projects, state or federally funded must not:

- Cause or contribute to any new violation of federal air quality standards,
- Increase the frequency or severity of any existing violation of these standards,
- Delay the timely attainment of the standards.

PREDICTED IMPACTS OF EMISSIONS (KG) BY ALTERNATIVE

Element: Air (design year)
Criteria: Pollutant level better or no worse than No-Build conditions (pollutant level as per standards of National Ambient Air Quality Standards [NAAQS] for all prescribed elements).

Air (design year 2030)	Estimated Emissions Per Alternative (kg)						
	NB	Alt. 4a	Alt.4b	Alt. 5a	Alt. 11	Alt. 13	Alt. 14
CO	240	240	250	264	280	260	216
NOx	47	47	49	51	54	51	42
VOC	56	56	58	61	65	60	50
Overall Emissions Total	343	343	357	376	399	371	308

IMPACT ASSESSMENT

The potential air quality impacts for each alternative are summarized below:

Alternative	Total Emissions (Kg)	Sum of Impact Rankings
4A	343	◕
4B	357	◑
5A	376	◔
11	399	○
13	371	◔
14	308	●
15 (No Build)	343	NA

○=Most Impacts, ◔=Medium Impacts, ◑= Low Impacts, ◕=Minimal Impacts, ●= Improved Environment

CONCLUSION

The SR 303 Bremerton to Silverdale Corridor Study has been evaluated in the Puget Sound Regional Council's Destination 2030 Plan, and found to be in conformance with the National Ambient Air Quality Standards for a "non-project action." Project level modeling and assessments will need to be performed during the project-specific environmental review of the preferred alternative to determine localized effects and project specific conformance with the NAAQS.

In terms of total emissions generated in comparison to the No-Build alternative, this analysis suggests that of the Build Alternatives, Alternative 11 has the greatest potential impact to air quality and Alternative 14 has the least potential impacts. Alternative 13 and 5a would have proportionately lower potential impacts than Alternative 11, resulting in a medium potential impacts rating.

LIMITATIONS

This assessment was prepared based on readily available information. The assessment is strictly qualitative and is not intended to establish expectations for impacts to air quality in the project area. This assessment was limited to the review of information provided by others and is subject to change over time pending a more detailed analysis as part of the project-specific environmental review.

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TECHNICAL MEMORANDUM

Date:	February 2002
To:	WSDOT (Olympic Region Transportation Planning Office)
Subject:	Noise Analysis for 2nd Level Screening
Project Number:	554-1631-030(02/023)
Project Name:	SR 303 Bremerton to Silverdale Corridor Study

SUMMARY

This 2nd level screening document evaluates the potential noise impacts of the SR 303 corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No Build).

BACKGROUND

The information used in this section was compiled from a number of existing sources and, where necessary, additional information was collected to meet the major objective of the noise analysis section, which is:

- To conduct a general inventory of existing noise levels and projected noise levels with the Build Alternatives and the No Build Alternative.

STUDY METHODOLOGY

For purposes of this analysis, each alternative was evaluated for existing and future build noise levels. A Federal Transit Administration noise modeling spreadsheet program (HMMH 1995) was used to estimate the potential noise levels for the SR 303 corridor alternatives. This program relies on standardized inputs for traffic noise from automobiles and larger vehicles such as buses. It also considers data such as distance to a receptor, the type of receptor, and the number and speed of the vehicles.

Two noise sources were considered in the FTA noise model for existing sound levels: automobiles and buses. The noise levels were determined using existing PM peak hour traffic volumes for the worst case sound level. This also included an estimate of the peak bus volumes that would occur. The use of the peak hour volumes gives a more conservative estimate of the existing noise level. The surrounding land use type used in the model was predominantly a Category 2, which represents sensitive receptors such as residences, hospitals, and hotels. In addition, the distances to the nearest receptor (i.e., residential unit) to the project was estimated and input into the model. The output from the model is a 24-hour sound level or L_{dn}. It is a measure that accounts for moment-to-moment fluctuations in the decibel level due to all

sound sources during 24 hours combined. This is the standard noise metric used by FTA and FHWA to assess noise impact to the Category 2 land use.

Sources:

- FTA and HMMH, Inc. Transit Noise Model
- Kitsap County Comprehensive Plan and Zoning Ordinance
- City of Bremerton Comprehensive Plan and Zoning Ordinance

AFFECTED ENVIRONMENT

Table 1-1 shows the existing traffic noise levels in the project vicinity based on the noise model. (Note: no noise measurements were taken and therefore it is likely that there may be some variation between the noise levels in Table 4 and actual ambient levels.)

Existing noise levels in the study area of the project were qualitatively measured in the fall of 2001. The results of these qualitative measurements are summarized in Table 1-1.

Table 1-1. Existing noise levels in the project vicinity (L_{dn}):

Alternative	Noise Source	Total Noise (average)
4A	Automobiles/buses	65.8
4B	Automobiles/buses	64.3
5A	Automobiles/buses	64.7
11	Automobiles/buses	72.1
13	Automobiles/buses	72.1
14	Automobiles/buses	69.2
15 (No Action)	Automobiles/buses	N/A

Existing noise levels

Noise receptors in the study area consist of numerous multi-family and single family dwellings scattered throughout the City of Bremerton and unincorporated Kitsap County; several small, medium, and large businesses predominantly situated along the SR 303 corridor between 11th Street and Fairgrounds Road NE; public and institutional uses; and recreation areas.

Existing predicted noise levels in the study area are varied. Traffic noise from SR 303 and local roadways is the primary source of noise in the community. Other noise sources include sounds such as dogs barking, voices, sirens, aircraft, watercraft, and children playing.

In the residential communities within the City of Bremerton and unincorporated Kitsap County, local roadways, and SR 303 are the primary sources of noise. Other noise sources include sounds such as dogs barking, voices, house maintenance activity, and birds.

Table 1-2. Predicted noise levels in the project vicinity (L_{dn}).

Alternative	Noise Source	Total Noise (average)
4A	Automobiles/buses	74.7
4B	Automobiles/buses	75.1
5A	Automobiles/buses	73.6
11	Automobiles/buses	77.7
13	Automobiles/buses	77.7
14	Automobiles/buses	71.6
15 (No Action)	Automobiles/buses	71.7

PREDICTION OF IMPACTS

Table 1-3. FHWA Highway Noise Abatement Criteria.

Activity Category	Noise Level	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels/hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties or activities not listed in Categories A or B above.
D	----	Undeveloped lands.
E	52 (interior)	Residences, motels/hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: USDOT 1982.

The Federal Highway Administration (FHWA) has developed guidelines for determining the impact from motor vehicle noise for several types of land uses. Table 1-3 summarizes the FHWA noise criteria. The SR 303 Corridor Study would fit into each of the categories, however Category A, Category B, and Category C resemble the major uses found in the area.

Comparing the results in Table 1-1 with Table 1-2 indicates that under FHWA criteria, the Build Alternatives, namely the New Bridge Crossing Alternatives 4A, 4B, and 5A, would cause the greatest noise impacts for the closest sensitive receptors (i.e., residences, churches, parks, schools) to the particular alignment with the 2030 design year. Alternatives 11 and13 would rate proportionately less than these alternatives due to the developed nature of the proposed alignment under these alternatives and the level of existing impacts. In terms of general impacts, the EPA has concluded that it takes a minimum increase of 5 decibels before causing a negative community reaction (an increase of 3 decibels is typically necessary to perceive a change in noise levels). Similarly, the noise level under the transportation build alternatives would be above the noise standard set by the Department of Housing and

Urban Development (HUD). The HUD standard defines an L_{dn} of 65 dBA as the onset of a normally unacceptable noise zone. These results serve primarily to provide comparative ratings between alternatives for screening purposes. Localized impacts would be more refined during project-specific environmental review of the preferred alternative.

IMPACT ASSESSMENT

The potential compatibility impacts for each alternative as defined by this assessment are summarized as follows:

Alternative	Decibel Level (Ldn) (average)	Impact Rankings
4A	74.7	○
4B	75.1	○
5A	73.6	○
11	77.7	◔
13	77.7	◔
14	71.6	◑
15	71.7	◑

○= Most Impacts, ◔ Medium Impacts, ◑= Low Impacts, ◕=Minimal Impacts, ●= Improved Environment

CONCLUSION

This qualitative analysis suggests Alternatives 4a, 4b, and 5a would have the greatest potential impacts to sensitive receptors. Alternatives 11 and 13 would have proportionately lower impacts than 4a, 4b, and 5a. Alternatives 14 and the No Action Alternative would have the least potential impacts to sensitive noise receptors (e.g., schools, residences, churches, etc.).

LIMITATIONS

This assessment was strictly limited to the review of existing traffic volume information and an assessment of noise impacts for the existing and future build years as input into the model. Any use or interpretation of the information contained in this assessment should consider the subjective nature of the work and the limited accuracy of such an analysis without localized and project-specific modeling.

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TECHNICAL MEMORANDUM

Date: February 2002

To: WSDOT (Olympic Region Transportation Planning Office)

Subject: Water Resources Analysis for 2nd Level Screening

Project Number: 554-1631-030(02/023)

Project Name: SR 303 Bremerton to Silverdale Corridor Study

Summary

This 2nd level screening document identifies the water resources for Dyes Inlet Watershed and potential impacts within or adjacent to the SR 303 transportation corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No Build Alternative). Specifically, this appendix describes the affected environment, environmental consequences, and potential avoidance, minimization, and/or mitigation measures available for the transportation alternatives.

Background

Applicable Regulations and Mitigation

Applicable surface water protection regulations include riparian buffers required under the Kitsap County and the City of Bremerton Critical Areas Ordinances (CAO). These regulations are intended to protect surface waters including lakes, wetlands, and stream resources. In addition, the Washington State Department of Ecology has regulations for water quality in Marine Waters.

In addition to stream buffer regulations, stormwater mitigation is required for all new development. Stormwater mitigation would be based on the City of Bremerton and Kitsap County stormwater regulations, which are currently based on the 1992 Ecology Stormwater Management Manual for Puget Sound Lowland Streams (Ecology Manual). However, Ecology has issued a new stormwater management manual for Western Washington. The 2001 Ecology Manual has updated technical standards that may form the basis for the Endangered Species Act (ESA) Section 4(d) rules that provide for threatened and endangered species conservation. The new standards are thought to be more protective of streams and wetlands than previous standards, and generally require increased water quality and detention facility sizes. Local jurisdictions will be required to revise their current manual to meet these new standards.

Stormwater detention ponds, vaults, and/or tanks can be used to control stormwater peak flow rates. For closed depressions, retention facilities are used to store runoff while allowing it to infiltrate into native soils. Specific guidance for stormwater analysis and facility design is contained in the City of Bremerton and Kitsap County Stormwater Management Ordinances.

NMFS has recently developed the 4(d) rule to protect listed salmon. This rule makes it a federal violation to harm or kill salmon populations listed as threatened under the ESA without specific written authorization. The 4(d) rule applies to all development activities that may cause streambank erosion, unauthorized diversions of water from streams, and disturbance or removal of gravel from spawning grounds. The 4(d) rule is not limited to projects with federal funding; it applies to all projects. Therefore, in addition to meeting the existing Stormwater Management Manual requirements of Ecology, the City of Bremerton, and Kitsap County, further stormwater treatment and detention standards may be necessary to comply with basin plans and/or to ensure compliance with the ESA under the 4(d) rule.

Prevention and mitigation for both stormwater and surface water buffer impacts will be provided by compliance with the Kitsap County and the City of Bremerton CAO and Stormwater Ordinance, as amended, that are in effect at the time of a specific development proposal. Compliance with the Kitsap County ESA 4(d) plan, as adopted, will also be used to prevent and/or mitigate potential surface water impacts.

Stormwater Management Manuals Applicable to the SR 303 Study Corridor

Agency	Adopted Stormwater Manual[1]
Bremerton	City of Bremerton Stormwater Manual
Silverdale	Kitsap County Stormwater Manual
Kitsap County	Kitsap County Stormwater Manual
Washington Department of Transportation	Highway Runoff Manual M31-16

[1]It is likely that these manuals will be updated to comply with the 2001 Ecology Manual

In addition to meeting the requirements of these manuals, further stormwater treatment and detention standards may be applied to this project to comply with Basin Plans and/or demonstrate compliance with the Endangered Species Act (ESA) under the 4(d) rule.

Study Methodology

Evaluation Methods

Direct impacts, water quality impacts, hydrologic impacts, and floodplain impacts from each of the alternatives were evaluated using the following methods:

Direct impacts were identified at any location where an alternative would cross or lie adjacent to surface water resource. The potential significance of direct impacts was evaluated based on the existing condition of the resource, the magnitude of the impact, and the effectiveness of mitigation.

Water quality and hydrologic impacts were assessed qualitatively assuming that alternatives that propose the most pollutant generating impervious surface (PGIS) area in a basin would have the potential for the greatest impacts.

Sources:

Williams, R. W., R. M. Laramie, J. J. Ames.1975. A Catalog of Washington Streams and Salmon Utilization. Volume 1: Puget Sound Region. Washington State Department of Fisheries.

Ecology 1998. Washington State Department of Ecology 303(d) List of Threatened and Impaired Water Bodies. Olympia Washington. 132pp.

Booth, D. B. 1989. Runoff and Stream-Channel Changes Following Urbanization in King County Washington. Engineering Geology in Washington, Vol. II, Washington Division of Geology and Earth Resources Bulletin 78.

Booth, D. B. and C. R. Jackson 1997. Urbanization of aquatic systems: degradation thresholds, stormwater detection, and the limits of mitigation. Journal of the American Water Resources Association. 32:1077-1090.

Affected environment

Water Resources

The SR 303 Bremerton to Silverdale Study Area is located primarily in the greater Dyes Inlet Watershed. The watershed encompasses approximately 30,300 acres and contains 6 notable streams and numerous unnamed streams. Dyes Inlet and Port Washington Narrows have a surface area of 4,643 acres. The City of Bremerton and unincorporated Silverdale border the south and north sides of the watershed.

The major surface water features located in the project study area are summarized in Table 1.1.

Table 1.1 Surface Water Features In SR 303 Study Area

Surface Water Feature	303(d) List	ESA Species Present	Receiving Water
Dyes Inlet	Yes	Yes [1,2]	Yes
Port Washington Narrows	Yes	Yes [1,2]	Yes
Mosher Creek	No	Yes [1,2]	NA
Barker Creek	No	Yes [1,2]	NA
Clear Creek	Yes	Yes [1,2]	NA
Chico Creek	No	Unknown	NA
Steele Creek	No	Yes [2]	NA
Illahee Creek	No	Yes [1,2]	NA

[1] Chinook salmon, Threatened species under ESA.

[2] Coho salmon, Candidate species under ESA.

Water resources in the study area are made up of marine waters, streams, lakes, wetlands, and ground water. The main water feature is the Dyes Inlet/Port Washington Narrows system. This marine body of water makes up approximately one third of the project area. The surface waters of Dyes Inlet and Port Washington Narrows Inlet are categorized by Ecology as Class A waters (WAC 173-201A). Class A waters are considered excellent and are required to support all uses including water supply (agriculture, domestic, industrial), fish and shellfish, and wildlife and recreation. The surface waters of Dyes Inlet and Port Washington Narrows are also listed on Ecology's 303(d) list of impaired and threatened waterbodies.

The specific parameters that threaten these waterbodies include arsenic, antimony, cadmium, fecal coliform, mercury, and silver (Ecology 2001).

There are four main streams in the project area that discharge to Dyes Inlet. Chico Creek is the largest of the streams in the Dyes Inlet drainage area (Williams 1975). Chico Creek has several miles in the lower reach that runs through a broad valley.

The other main streams that empty into Dyes Inlet within the project area are Clear, Barker, and Mosher Creeks. Clear Creek flows south through a broad shallow valley and enters Dyes Inlet at its northernmost tip, near Silverdale. Barker Creek flows south from Island Lake and enters Dyes Inlet at its northeastern tip, below Bucklin Hill Road. Mosher Creek flows south and west and enters Dyes Inlet on the eastern side of the inlet near Tracyton. There are also numerous small independent drainages within the project area. Steep slopes, fast flowing water, and deeply incised channels characterize these streams.

There are also two streams that drain northeast from the study area to Port Orchard: Illahee and Steele Creeks. Illahee Creek has a moderate gradient, however, it has been impacted by residential development in the headwaters. Illahee Creek flows south and east within the Illahee Forest Preserve near McWilliams and Perry Avenue where it eventually enters Port Orchard Bay. Steele Creek has moderate gradient and excellent gravel throughout much of its length. The South Fork of Steele Creek has also been impacted by development in the headwaters. The north branch and its tributary have excellent cover and provide high quality habitat (Williams 1975). Steele Creek flows south and east toward Port Orchard Bay adjacent to the northern tip of SR 303 near Brownsville.

In addition, there are two lakes in the general study area: Kitsap Lake and Wildcat Lake. Both of the lake systems are located to the south and west of the project study area. Groundwater and/or aquifer recharge areas have not been assessed at this time, and are not included in this preliminary analysis.

Water Quantity

Conversion of natural soils and pervious surfaces to impervious surfaces alters the hydrologic cycle of a watershed. Several studies have documented a relationship between watershed imperviousness and stream condition. Several comprehensive studies conducted on Puget Sound lowland streams indicate that physical, chemical, and biological measures of stream condition show degradation at low levels of impervious surface and significant degradation at 10 percent basin imperviousness and continue to degrade as basin imperviousness increases (Booth and Jackson, 1997; Booth, 1989). Although the trend is well documented, there is variability in the actual data due to variation in factors such as development patterns, types of development, geologic conditions, and percentage of intact wetlands and buffers.

Hydrology

The currents of Dyes Inlet are considered to be relatively weak, with those of Port Washington Narrows considered to be strong (NOAA 1988). Flushing time for these waterbodies is estimated to be approximately every 4 days (Lincoln and Collias 1975). Dyes Inlet and Port Washington Narrows flush at a rate of approximately 91 times per year.

All of the watersheds within the study area have been developed with urban land uses and are likely to be greater than 10 percent total impervious area (TIA). Development is concentrated along the project corridor, rather than the undisturbed watershed, which is generally located in the headwaters of the streams.

Floodplains

Floodplains within the study area are located where creek systems such as Barker Creek, Chico Creek, Mosher Creek, Clear Creek, and Steele Creek discharge into Dyes Inlet. There are no FEMA floodplains in the proposed project corridor.

Prediction of Impacts

Highways and arterial connections have direct impacts on streams and floodplains by: (1) constructing culverts and bridges, (2) armoring banks for erosion control, (3) relocating stream channels, and (4) filling floodplains. Highways and arterial connections also impact streams by creating a source of pollutants and by increasing the amount of impervious surface and runoff in a basin. The following is a summary of potential impacts by alternative.

Alternative 15 – No-Action

The No Action Alternatives would not have any new impacts to water resources within the project study area.

Alternatives 4A, 4B, 5A (New Crossings and Arterial Connections)

The new bridge crossing and arterial connections, namely Alternatives 4A, 4B, and 5A, would have the greatest potential impacts to water resources due to the scale of the improvements, which could introduce additional PGIS to the Dyes Inlet Watershed. As discussed above, creation of PGIS generally results in impacts to the hydrology of a basin and water quality of receiving waters. Alternative 5a would create the most PGIS.

These alternatives propose a new bridge crossing of Dyes Inlet. Construction of the bridge is likely to have temporary water quality impacts. Long-term operation could directly impact nearshore wetlands and could indirectly impact water quality if stormwater runoff from the bridge is not treated.

In addition, Alternatives 4a and 5a would widen Central Valley Road, which is also likely to impact Mosher Creek and an unnamed stream. However, these impacts could be minimized or prevented with proper design and implementation of culverts or bridges. These routes would be expected to generate medium level impacts to water resources.

Alternatives 11, 13, 14 (SR 303 Improvements)

Alternatives 11, 13, and 14 would have low to moderate-level impacts. These alternatives would modify the existing SR 303 corridor, but would not require a new bridge across Dyes Inlet or any modifications to stream crossings. However, if modifications of the existing Warren Avenue Bridge required extensive construction impacts, the rating could be similar to Alternatives 4a, 4b, and 5a. Overall, these alternatives would create slightly less PGIS than Alternatives 4a and 5a.

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TECHNICAL MEMORANDUM

Date:	February 2002
To:	WSDOT (Olympic Region Transportation Planning Office)
Subject:	Hazardous Waste Assessment for 2nd Level Screening
Project Number:	554-1631-030 (02/023)
Project Name:	SR 303 Bremerton Silverdale Analysis

SUMMARY

This 2nd level screening document identifies known or potential hazardous waste sites within or adjacent to the SR 303 corridor alternatives identified as 4a, 4b, 5a, 11, 13, 14, and 15 (No Build Alternative).

BACKGROUND

The objective of this hazardous waste assessment is to identify properties with known or potential chemical contamination that may represent financial or regulatory liabilities to prospective purchasers or to contractors involved in the construction of the corridor alternative. This Technical Memorandum presents a screening level review of properties and will be used as the basis for further assessments as described in the WSDOT Environmental Procedures Manual M31-11.

Information regarding parcels was obtained from review of environmental databases maintained by:

- **The Environmental Protection Agency:** National Priorities List (NPL), Facility Identification System (FINDS), Toxics Release Inventory (TRIS), Corrective Action Sites (CORRACTS), and the CERCLIS.
- **The Washington State Department of Ecology:** Confirmed and Suspected Contaminated Sites List (CSCS), Underground Storage Tank (UST) Inventory, and Leaking Underground Storage Tank (LUST) Inventory.
- **The Bremerton-Kitsap County Health District:** Inventory of Toxics Sites and Abandoned Landfills.

These regulatory databases represent the most comprehensive list of properties and businesses regulated under federal, state, or local hazardous waste rules. This includes sites that are or have been used for the handling, storage or processing of hazardous materials, and sites that have been or are suspected of being impacted by the release of chemicals to the ground, soil, surface water, or groundwater. It is expected that these sites will require more intensive environmental review once the preferred alternative is selected.

The locations provided in the databases were plotted against each alternative using GIS. A field reconnaissance was then performed to verify locations and visually assess conditions that represent potential impacts to right-of-way (ROW) acquisition or corridor construction. This assessment identified 41 properties that are within or adjacent to the alternative alignments and may have conditions that pose a liability to prospective purchasers of the properties or have a direct impact on worker safety and cost of construction. Specific sites and potential impacts are discussed below:

Alternative 4A

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
Sheridan Store	518 Sheridan Road	Identified during Reconnaissance. Possible former gas station.	Remnant USTs. Fuel contaminated soil or groundwater.	No confirmed release. No action pending.

Alternative 4B

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
Pederson Oil Site	2100 19th Street	Former bulk fuel storage and handling.	Confirmed impacts to soil, groundwater, surface water, and sediments. Contaminants include fuels, metals, and solvents.	Awaiting Remedial Action.
Sheridan Store	518 Sheridan Road	Identified during Reconnaissance. Possible former gas station.	Mave have remnant USTs. Fuel contaminated soil or groundwater.	No confirmed release. No action pending.

Alternative 5A

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
PSE Service Center	839 11th Street	Electrical Substation, USTs.	Past storage and handling resulting in chemical release to ground.	No confirmed release. No action pending.
Harrison Hospital	2520 Cherry Street	UST, hazwaste storage and handling.	Chemical releases to ground.	No confirmed release. No action pending.
Eagle Hardware & Garden	4220 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Chevron Jim's Eastside Service Inc	4221 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Confirmed fuel release to soil in 1991.	Reported Cleaned up 1995.
Perfection Cleaners	4244 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
78 Food Mart	4804 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Tune-up Express	4810 Wheaton Way	Automotive repair facility.	Chemical releases to ground.	No confirmed release. No action pending.
Handy Andy Gas Mart	4814 SR 303	Former gas station, USTs apparently removed.	Release of fuel to ground.	No confirmed release. No action pending.
Evergreen Park	1500 Park Avenue	Former waste burial area.	Confirmed impacts to soil from petroleum products. Suspected impacts to sediments and groundwater.	Remedial Action Complete.
AA Cleaning and Environmental	801 11th Street	Hazardous materials storage and handling.	Chemical releases to ground.	No confirmed release. No action pending.

Alternative 14

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
Former Ernst	3449 Wheaton Way	Former hazardous materials storage.	Chemical releases to ground.	No longer active. No action pending. No confirmed release.
7-11 Citgo	3500 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Eagle Hardware & Garden	4220 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Chevron Jim's Eastside Service Inc	4221 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Confirmed fuel release to soil in 1991.	Reported Cleaned up 1995.
Perfection Cleaners	4244 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
76 Food Mart	4804 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Tuneup Express	4810 Wheaton Way	Automotive repair facility.	Chemical releases to ground.	No confirmed release. No action pending.
Handy Andy Gas Mart	4814 SR 303	Former gas station, USTs apparently removed.	Release of fuel to ground.	No confirmed release. No action pending.

Alternatives 11 and 13

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
PSE Service Center	839 11th Street	Electrical Substation.	Past storage and handling resulting in chemical release to ground.	No confirmed release. No action pending.
AA Cleaning and Environmental	801 11th Street	Hazardous materials storage and handling.	Chemical releases to ground.	No confirmed release. No action pending.
L R Automotive	1112 Pearl Street	Hazardous materials storage and handling.	Chemical releases to ground.	No confirmed release. No action pending.
JC Transmission Inc	1215 Ivy Road	Leaking underground storage tank.	Release of fuel to ground.	Cleanup complete in 1995.
Bremerton Public Works	1548 Warren Avenue	Underground storage tank on property.	Fuel releases to ground.	No confirmed release. No action pending.
Olympic College Auto Tech Center	1600 Warren Avenue	Automotive repair facility.	Chemical releases to ground.	No confirmed release. No action pending.
Bremerton Skateland Inc	1740 NE Fuson Road	Hazardous materials handling.	No impacts anticipated. Small quantity handler. No on-site storage.	No confirmed release. No action pending.
Burns Family Trust	1132 Wheaton Way	Leaking underground storage tank.	Confirmed release of fuel to soil.	Cleanup started in 1995. No current status available.
Cooper Fuels	3236 Wheaton Way	Former gas station, USTs apparently still in place.	Release of fuel to ground.	No confirmed release. No action pending.
Former Ernst	3449 Wheaton Way	Former hazardous materials storage.	Chemical releases to ground.	No longer active. No action pending. No confirmed release.
7-11 Citgo	3500 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Precision Tune	3740 Wheaton Way	Former gas station.	Confirmed release to soil in 1990.	Cleanup started in 1995. No current status available.
Affordable Used Cars	3890 Wheaton Way	Identified during Reconnaissance. Possible former Gas Station.	Mave have remnant USTs. Fuel contaminated soil or groundwater.	No confirmed release. No action pending.
Former Texaco	3901 Wheaton Way	Former Gas Station.	Confirmed release in 1989.	Cleanup started in 1995. No current status available.
Manskers Tire	3936 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Alternative Autobody Llc	3940 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Firestone Tires	3957 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.

Alternatives 11 and 13

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
CFB Food Mart	4200 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
East Town Cleaners	4207 Wheaton Way, Suite D	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Kmart	4210 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Eagle Hardware & Garden	4220 Wheaton Way NE	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Chevron Jim's Eastside Service Inc	4221 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Confirmed fuel release to soil in 1991.	Reported Cleaned up 1995.
Perfection Cleaners	4244 Wheaton Way	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
76 Food Mart	4804 Wheaton Way	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Tune-up Express	4810 Wheaton Way	Automotive repair facility.	Chemical releases to ground.	No confirmed release. No action pending.
Handy Andy Gas Mart	4814 SR 303	Former gas station, USTs apparently removed.	Release of fuel to ground.	No confirmed release. No action pending.
Former Jiffy Lube	5793 SR 303	Former hazardous materials handling. Currently vacant.	Chemical releases to ground.	No confirmed release. No action pending.
Kitsap Applied Technologies	5881 SR303	Former hazardous materials handling. Currently vacant.	Chemical releases to ground.	No confirmed release. No action pending.
Pro Rentals	5970 SR303	Hazardous materials handling. Underground storage tank.	Chemical releases to ground. Fuel releases to ground.	No confirmed release. No action pending.
Eastside Auto Wrecking Inc	6068 SR303	Active auto wrecking yard.	Chemical releases to ground.	No confirmed release. No action pending.
Jiffy Lube	6305 SR303	Fuel – oil storage.	Chemical releases to ground.	No confirmed release. No action pending.
Econolube N Tune	6747 SR303	Fuel – oil storage.	Chemical releases to ground.	No confirmed release. No action pending.
Wal Mart	6797 SR303	Hazardous materials handling.	Chemical releases to ground.	No confirmed release. No action pending.
Chevron Station	6835 SR 303	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.
Arco	7599 SR303	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.

Alternatives 11 and 13

Parcel Description	Address	Condition of Concern	Potential Impacts	Status
Texaco Station	7600 SR 303	Active gas station. USTs w/in 50 feet of ROW.	Fuel releases to ground.	No confirmed release. No action pending.

Alternative 15, the No Build Alternative, has no potential hazardous waste sites, or known or potential chemical contamination sites within this alternative.

POTENTIAL IMPACTS

Impacts related to contaminated properties are principally regulatory liabilities associated with owning chemically contaminated property and impacts to construction associated with encountering, remediating, and/or disposing of contaminated environmental media. Should WSDOT purchase contaminated property for ROW for SR 303 improvements, regulatory liabilities related to contaminant conditions would be transferred with the deed to WSDOT.

Sites identified during this assessment are categorized as follows:

- **Hazardous Waste Generators:** Facilities that handle or store hazardous materials or generate hazardous waste as part of a process or activity. These sites generally have a low potential for generating environmental conditions that impact purchaser liability or construction. The exceptions are the two dry cleaning facilities. Dry cleaning facilities are typically recognized as sources of solvent contamination to groundwater and soil. However, based on the age of these facilities (apparently less than 15 years), the likelihood of chronic environmental impacts is considered low.

- **UST/LUST Sites:** Facilities that store and dispense petroleum products from underground storage tanks. These sites have a moderate to high potential for environmental conditions that impact purchaser liability or construction. Cleanup actions related to these sites is generally straightforward and of moderate cost ($50,000 to $100,000).

- **Current or Former Industrial Sites:** These facilities have a current or historical industrial use that could result in chemical releases to the environment. These sites have a moderate to high potential for environmental conditions that impact purchaser liability or construction. Cleanup actions at these sites can be complex and require extensive resources to investigate, characterize, and implement.

Other factors influencing the extent of cleanup liability and construction impact are the extent of the acquisition (e.g. whether the parcel is a total or partial take), whether past cleanup actions have been performed, the nature of any chemical releases, and the extent of environmental media impacted by a release.

IMPACT ASSESSMENT

Impacts to the Project related to known or suspected hazardous waste sites are quantified using a relative ranking system that considers the potential impact factors and the processes described in WSDOT Manual M31-11 for assessing, characterizing, and remediating contaminated or potentially contaminated sites. Based on reconnaissance and experience with similar ROW acquisition projects each site was designated as to the extent of take (i.e., no take, partial take, or total take). Then the potential impact associated with each site was qualitatively ranked from one to five using the following assumptions:

- **Ranking 1:** Site requires only Initial Site Assessment (ISA). No impacts to acquisition or construction. Cost per site: $2,000.
- **Ranking 2:** Site requires ISA and Preliminary Site Investigation (PSI). No cleanup actions are required. Cost per site: $10,000.
- **Ranking 3:** Site requires ISA, PSI, and limited cleanup. Cost per site: $25,000.
- **Ranking 4:** Site requires ISA, PSI, and removal of storage tanks and limited cleanup. Cost per site: $50,000.
- **Ranking 5:** Site requires ISA, PSI and extensive cleanup. Cost per site: $100,000.

The potential impact assessment per alternative can be summarized as follows:

Summary of the Impacts Assessment

Alternative	Number of Sites	Sum of Impact Rankings	Potential Cost Impact
4A	1	2	$10,000
4B	2	7	$110,000
5A	10	25	$243,000
11	36	94	$914,000
13	36	94	$914,000
14	8	24	$264,000
15 (No Build)	0	0	$0

This qualitative analysis suggests that of the Build Alternatives, Alternative 4A has the lowest impact from hazardous waste and Alternatives 11 and 13 have the highest potential cost impact.

LIMITATIONS

This assessment was prepared based on readily available information contained in regulatory databases and professional judgement regarding site conditions and environmental cleanup processes. The assessment is strictly qualitative and is not intended to establish expectations for actual cleanup requirements and associated costs. This assessment was strictly limited to the review of information provided by others and a brief visual inspection of each of the described alternatives. The information contained in data sources used in developing this assessment is recognized to be incomplete and subject to change over time. Any use or interpretation of the information contained in this assessment should consider the subjective nature of the work and the limited accuracy of regulatory sources.

List of Figures for Natural Environment Discipline Report

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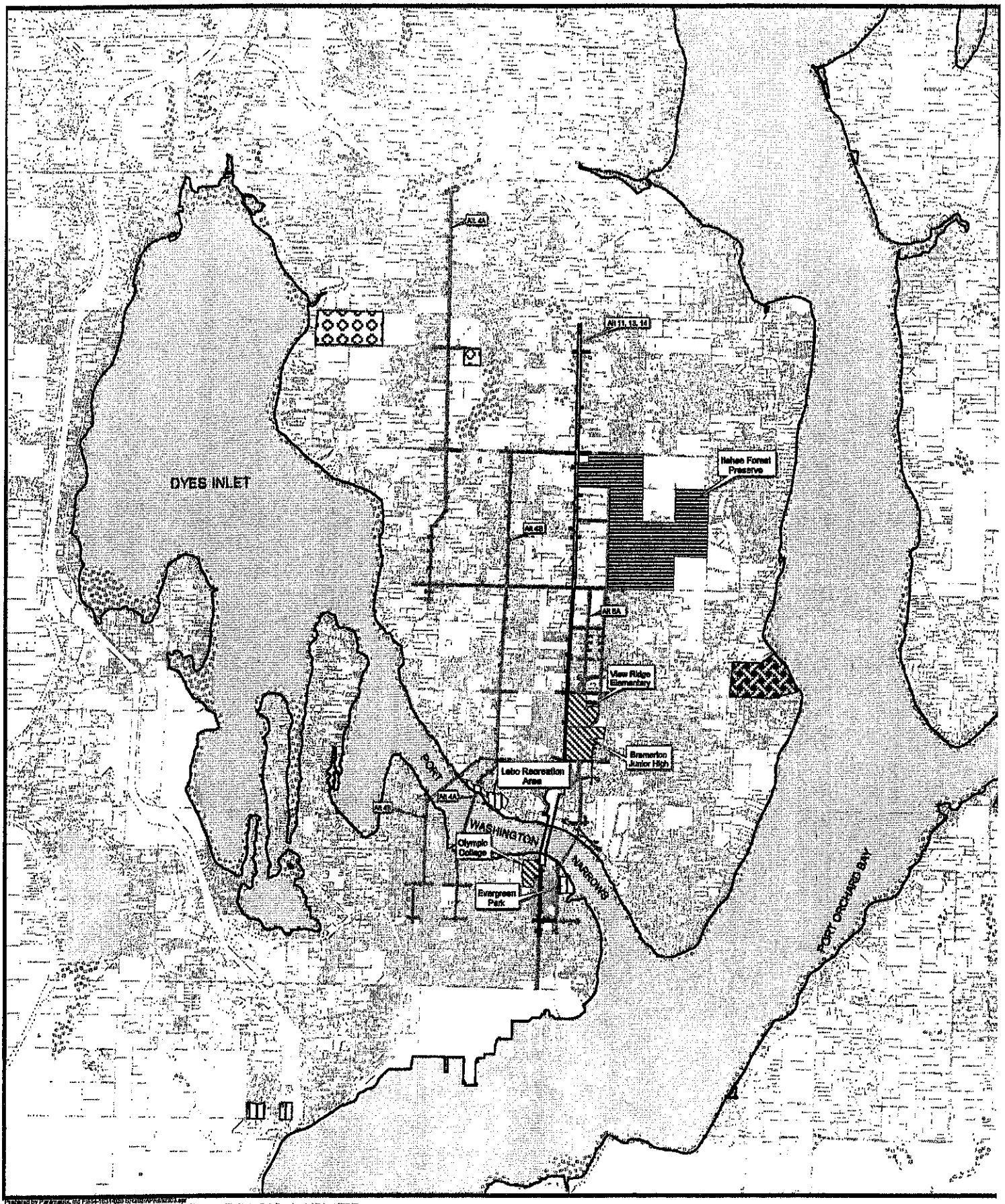

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N

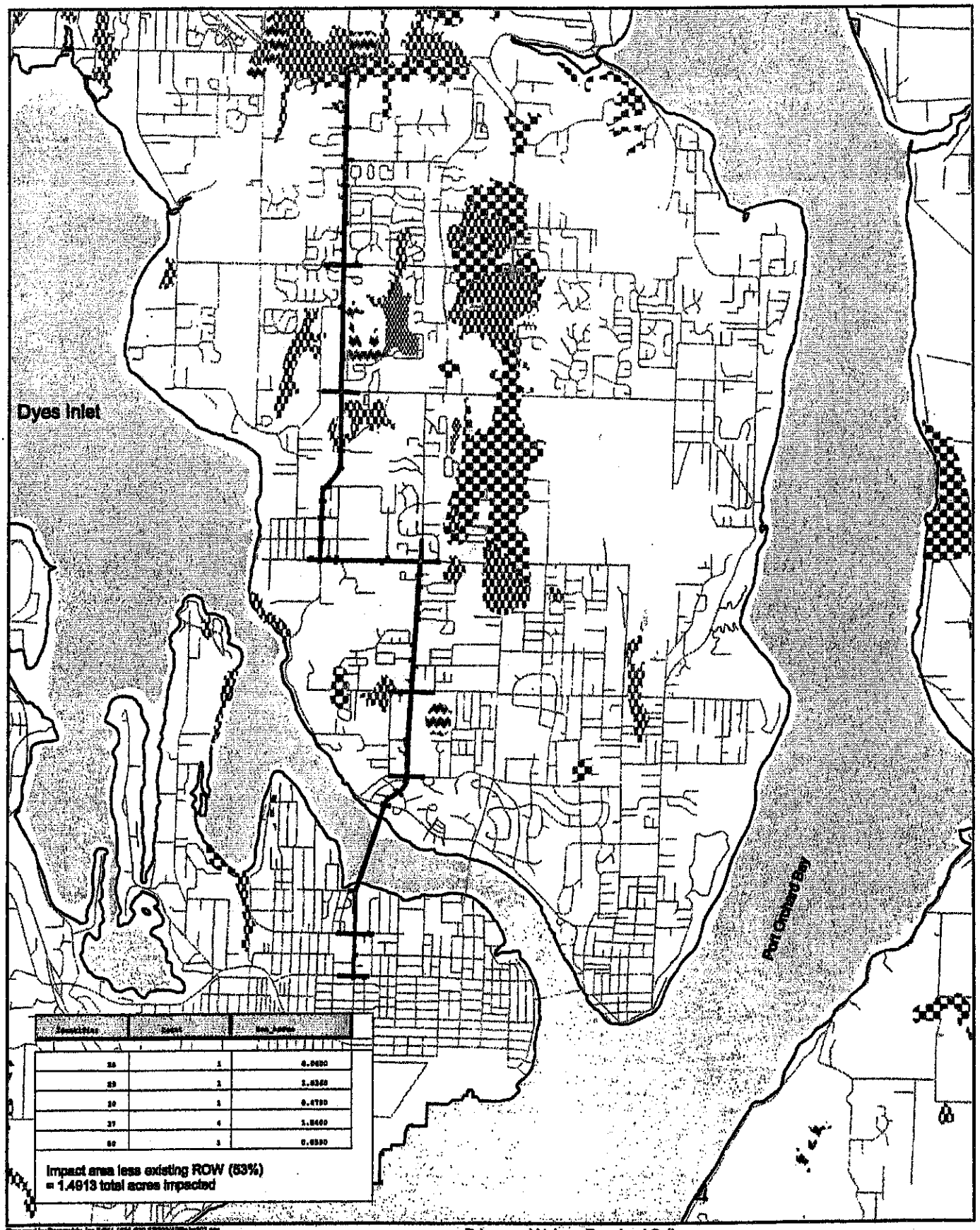
1000 0 1000 Feet

Alternative 4A
Alternative 4B
Alternative 5
Alternative 11
Alternative 13
Alternative 14

Parcels

Neighborhood Park
Regional Park
State Park
Public School
Forest Preserve

Potential 4(f) Resourc



Identifier	Count	Sum_Acres
28	1	0.0400
29	1	1.0360
30	1	0.4700
37	4	1.8400
50	3	0.0500

Impact area less existing ROW (53%)
= 1.4913 total acres impacted

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N

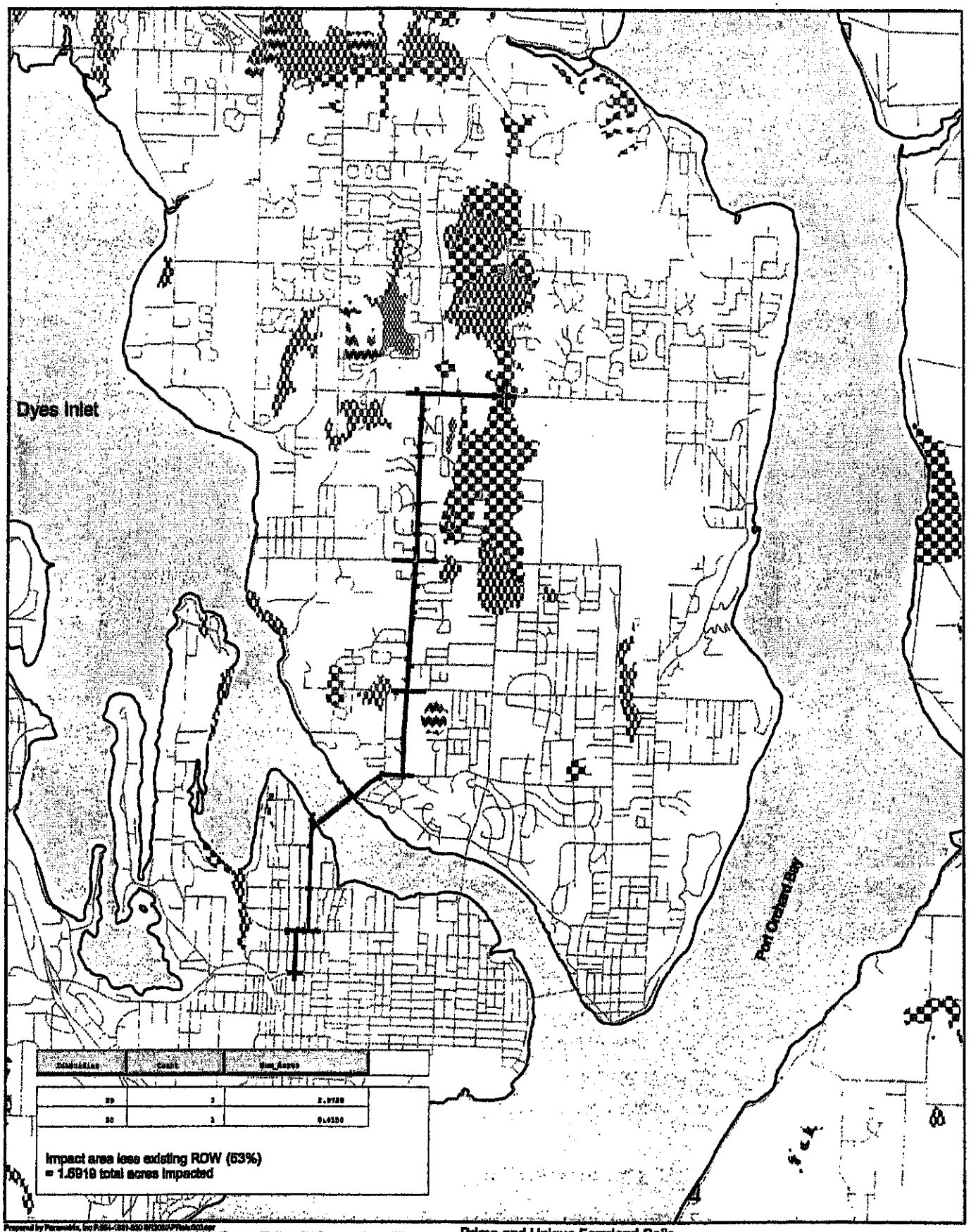
1000 0 1000 Feet

Shoreline
Streets
Open Water
Alternative 4a
Critical Soils Area

Prime and Unique Farmland Soils

Belfast Loam - 5
Bellingham - 6
Kitsap - 28,29,30,31
Mukilteo - 33
Norma - 37
Semiahmoo - 49
Shalcar - 50

Prime and Unique Farmland Soils



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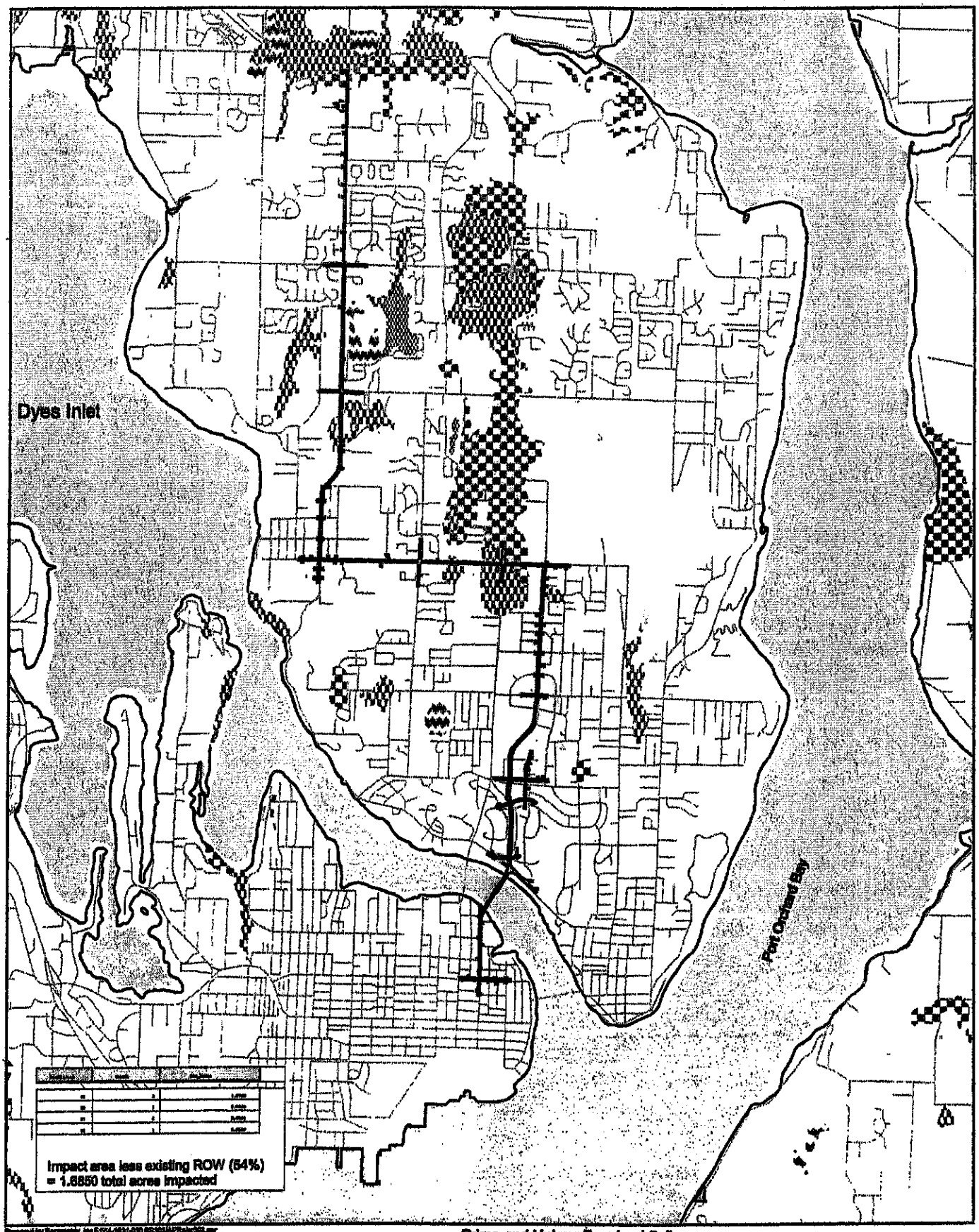
1000 0 1000 Feet

Shoreline
Streets
Open Water
Alternative 4b
Critical Soils Area

Prime and Unique Farmland Soils

Belfast Loam - 5
Bellingham - 6
Kitsap - 28,29,30,31
Mukilteo - 33
Norma - 37
Semiahmoo - 49
Shalcar - 50

Prime and Unique Farmland Soils



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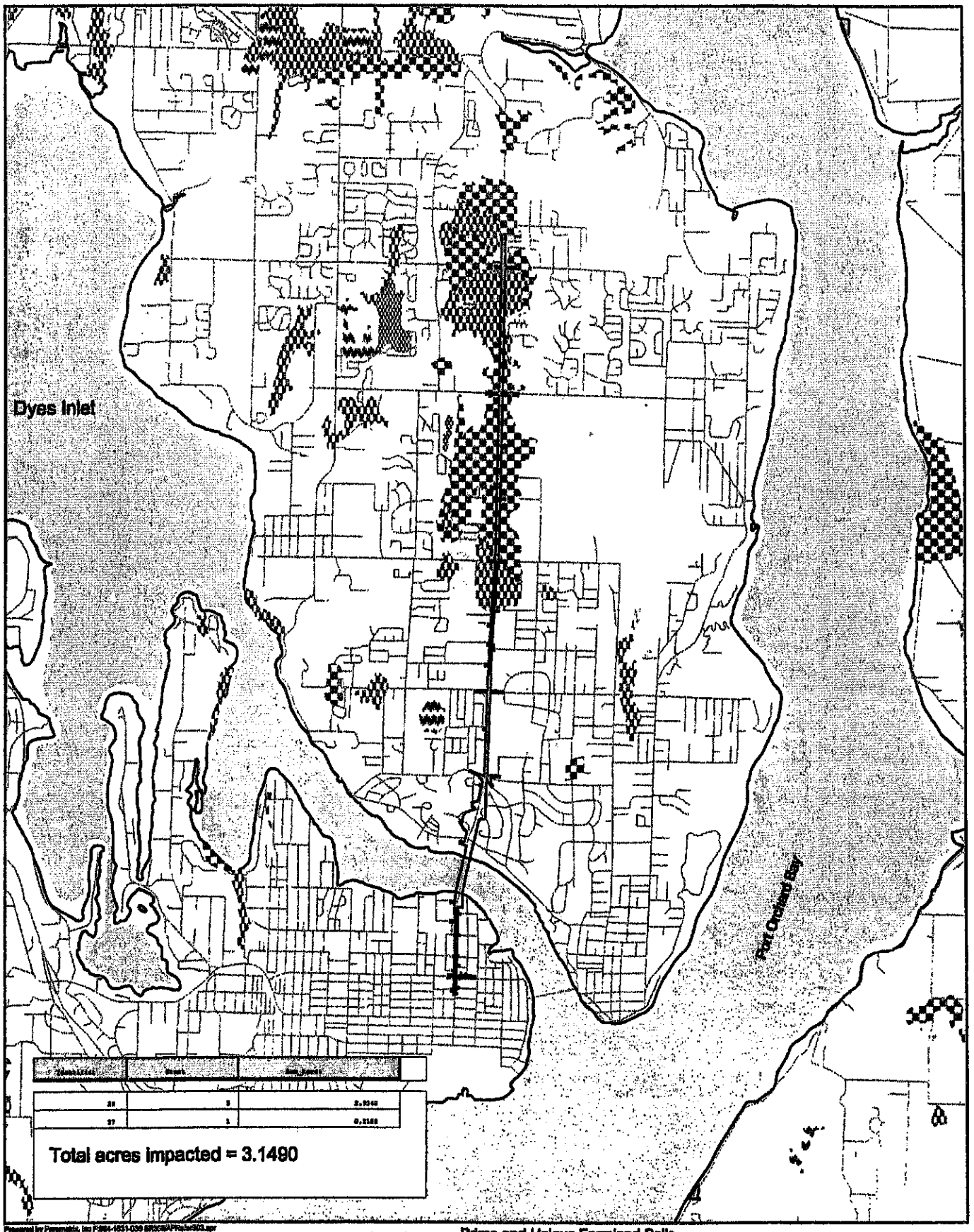
Shoreline
Streets
Open Water
Alternative 5a
Critical Soils Area

Prime and Unique Farmland Soils

Belfast Loam - 5
Bellingham - 6
Kitsap - 28,29,30,31
Mukilteo - 33
Norma - 37
Semiahmoo - 49
Shalcar - 50

Prime and Unique Farmland Soils



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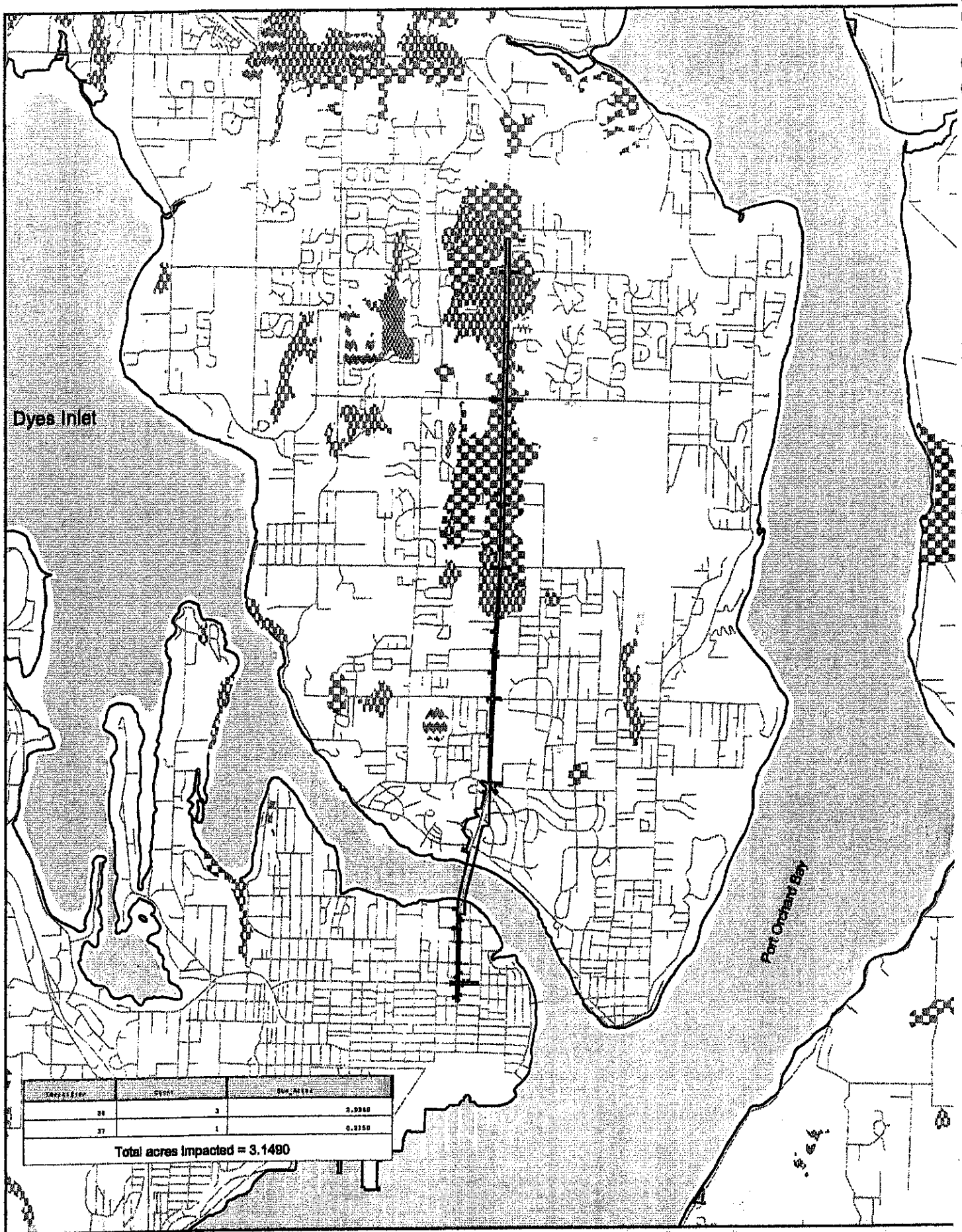
1000 0 1000 Feet

Shoreline
Streets
Open Water
Alternative 11
Critical Soils Area

Prime and Unique Farmland Soils

Belfast Loam - 5
Bellingham - 6
Kitsap - 28,29,30,31
Mukilteo - 33
Norma - 37
Semiahmoo - 49
Shalcar - 50

Prime and Unique Farmland Soils



[illegible]	[illegible]	[illegible]
28	3	2.9360
37	1	0.3150

Total acres impacted = 3.1490

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N

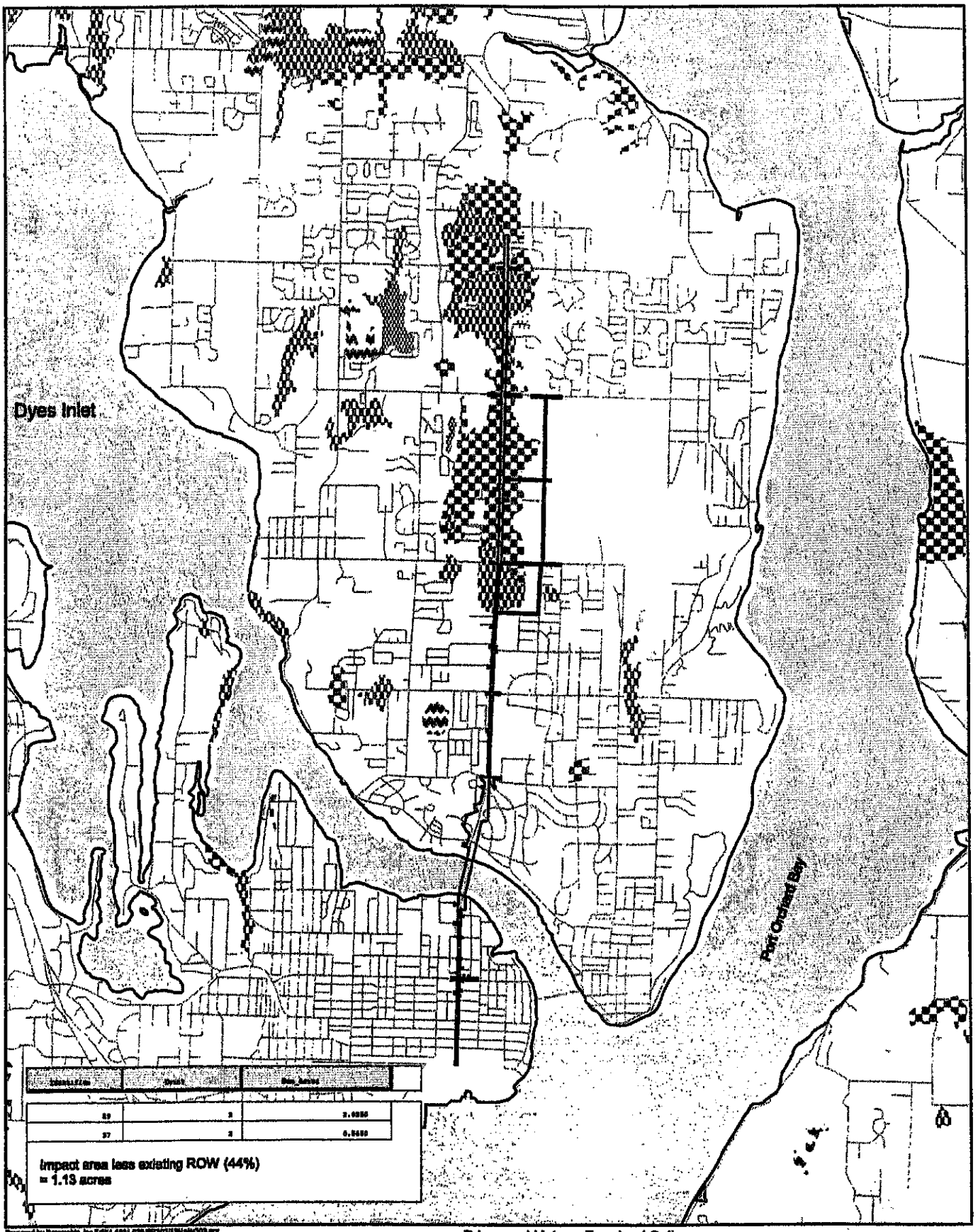
1000 0 1000 Feet

Shoreline
Streets
Open Water
Alternative 13
Critical Soils Area

Prime and Unique Farmland Soils

Belfast Loam - 5
Bellingham - 6
Kitsap - 28,29,30,31
Mukilteo - 33
Norma - 37
Semiahmoo - 49
Shalcar - 50

Prime and Unique Farmland Soils



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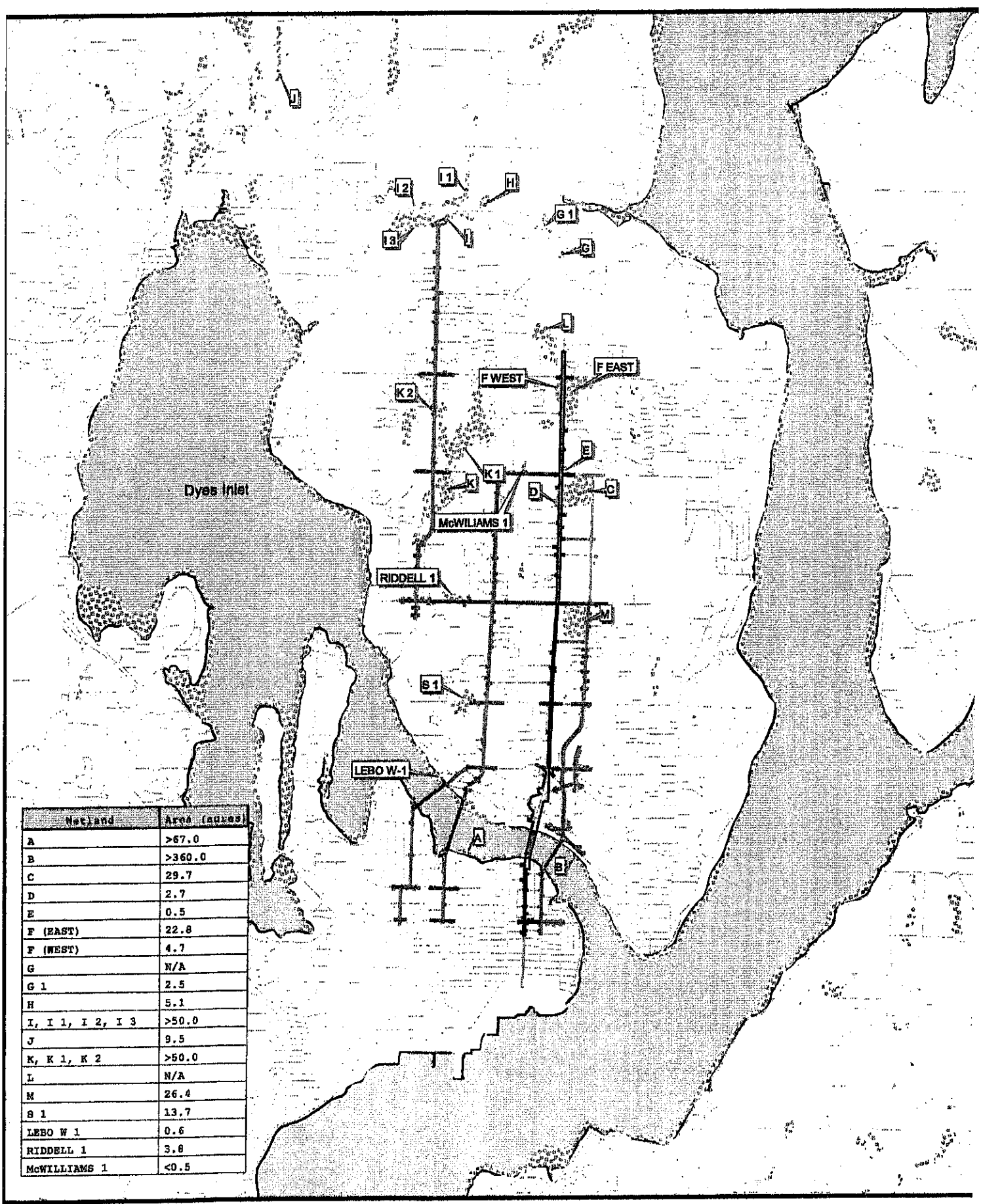
1000 0 1000 Feet

Shoreline
Streets
Open Water
Alternative 14
Critical Soils Area

Prime and Unique Farmland Soils

Belfast Loam - 5
Bellingham - 6
Kitsap - 28,29,30,31
Mukilteo - 33
Norma - 37
Semiahmoo - 49
Shalcar - 50

Prime and Unique Farmland Soils



Wetland	Area (acres)
A	>67.0
B	>360.0
C	29.7
D	2.7
E	0.5
F (EAST)	22.8
F (WEST)	4.7
G	N/A
G 1	2.5
H	5.1
I, I 1, I 2, I 3	>50.0
J	9.5
K, K 1, K 2	>50.0
L	N/A
M	26.4
S 1	13.7
LEBO W 1	0.6
RIDDELL 1	3.8
McWILLIAMS 1	<0.5

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N

2000 0 2000 Feet

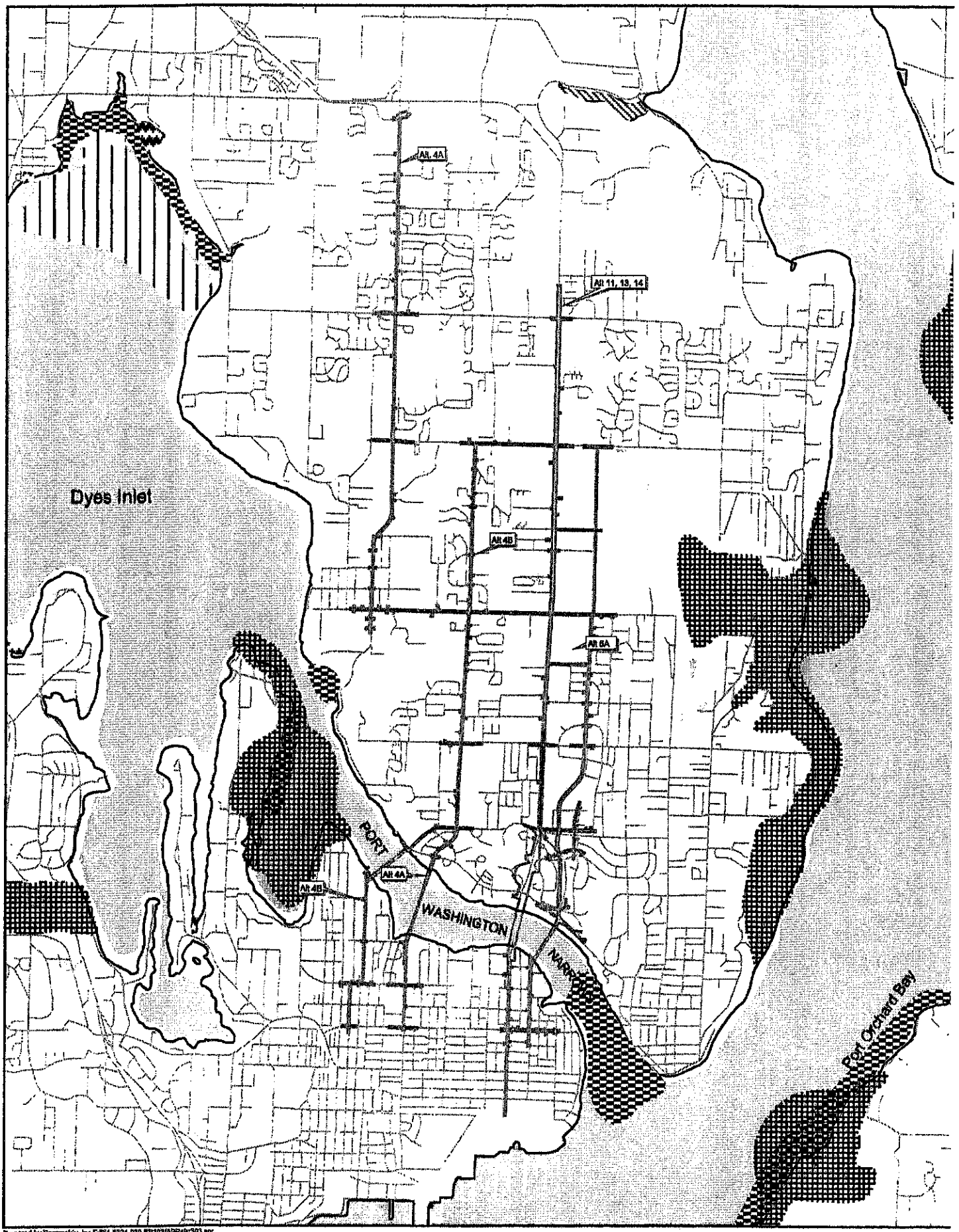
Shoreline
Streets
Rivers

Alternative 4A
Alternative 4B
Alternative 5A

Alternative 11
Alternative 13
Alternative 14

Critical Wetland Area
Wetlands

Wetland Resources Map



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N

1000 0 1000 Feet

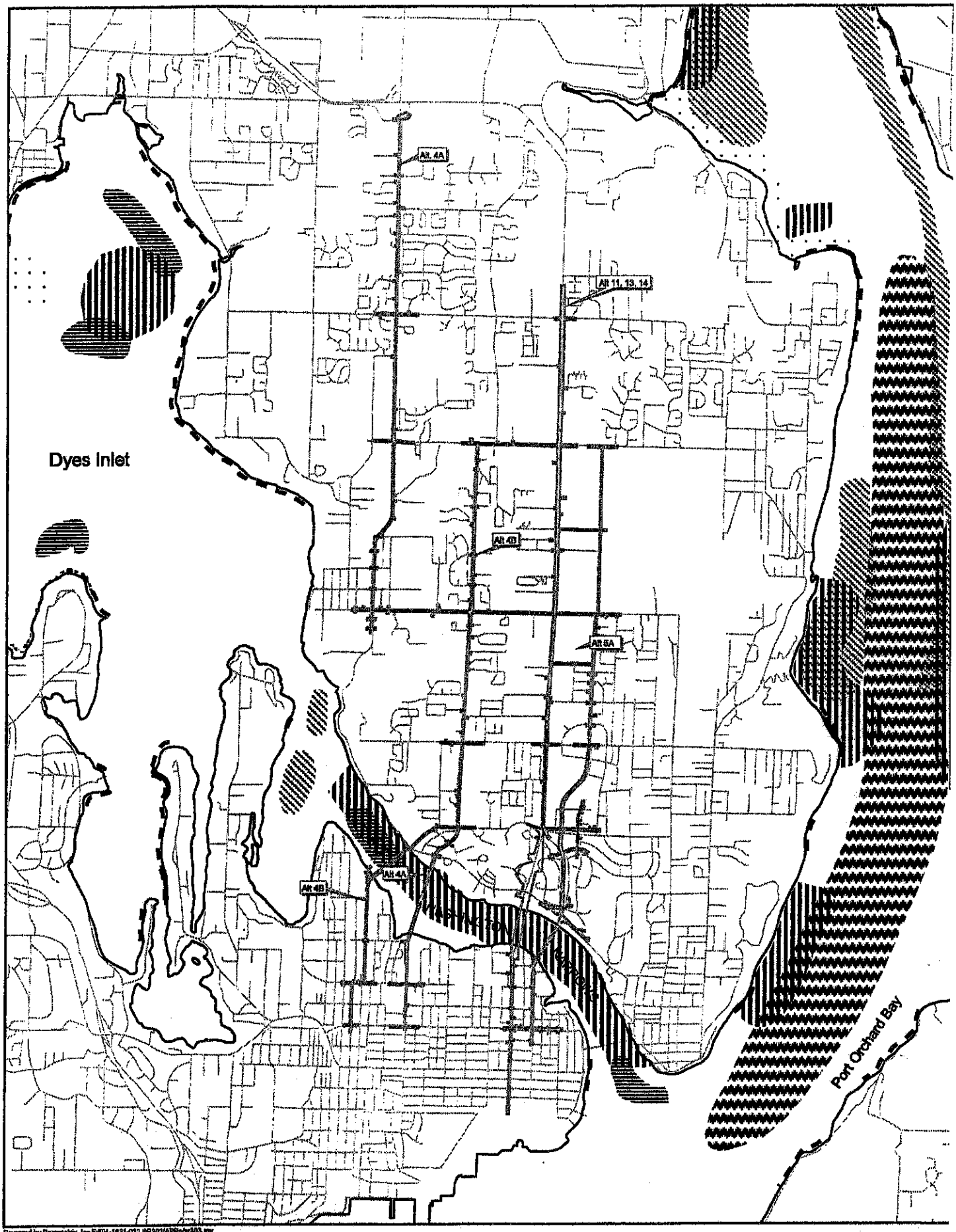
Shoreline
Streets

SR303 Alternatives
Open Water

Priority Habitats and Species

Bald Eagle
Estuarine Zone
Harbor Seal
Lagoons
Shorebird Concentrations
Urban Natural Open Spaces
Waterfowl Concentrations
Wetlands

Priority Habitat and Species



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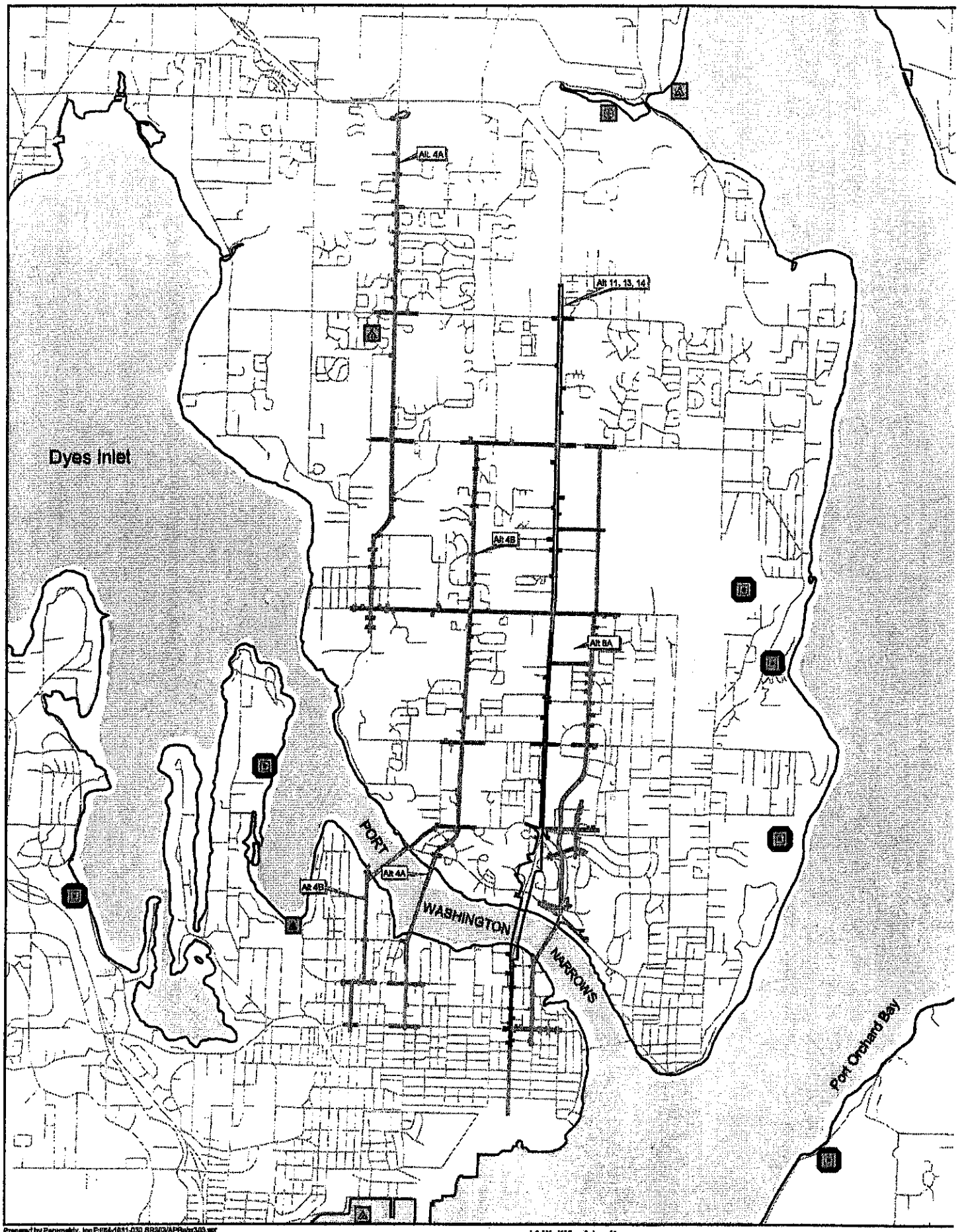
Shoreline
Streets
SR303 Alternatives

Smelt Spawning Beaches
Sandlance Spawning Beaches
Rockcole Spawning Beaches

Subtidal Clam
Intertidal Hardshell Clam
Oyster
Geoduck

Herring Spawing Ground
Pre-spawn Holding Areas for Herrings
Dungeness Crab

Priority Marine Habitat and Speci



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1000 0 1000 Feet

Shoreline
Streets

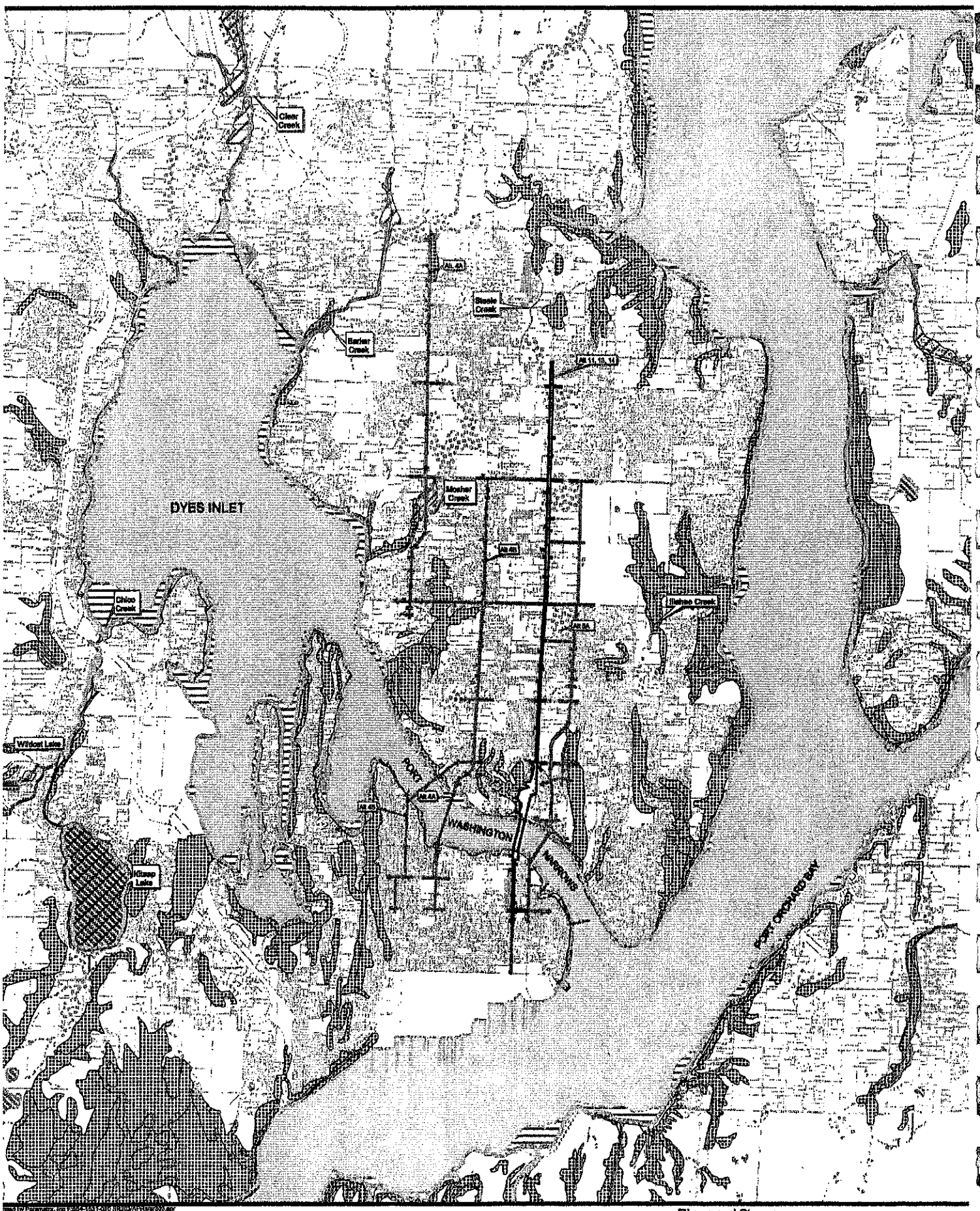
SR303 Alternatives
Open Water

Wildlife Heritage

Status
- State Endangered
- State Threatened
- State Candidate
- State Monitor

Animal Class
- Game Animal
- Special Animal
- Federal Theatened

Threatened and Endangered Spec



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1000 0 1000 Feet

- Alternative 4A
- Alternative 4B
- Alternative 5
- Alternative 11
- Alternative 13
- Alternative 14

WSDNR Water Types
- Wetlands
- Open Salt Water
- Tidelands
- Open Fresh Water

- Flood Zones
- Geological Hazards
- WDFW Wetlands
- Parcels

Rivers and Streams
- Water Type 1
- Water Type 2
- Water Type 3
- Water Type 4
- Water Type 5
- Unclassified Water

Critical Areas Ma

Planning Level Cost Estimates

SR 303 CORRIDOR STUDY

Planning Level Cost Estimate Summary

Date: 14-Nov-01

By: K Nelson

Item	Alt 4A	Alt 4B	Alt 5A	Alt 11	Alt 13	Alt 14	Light Rail
Arterial Widening - New Arterial	$ 25,100,000	$ 15,800,000	$ 29,400,000	$ 18,400,000	$ 18,400,000	$ 10,700,000	$ 171,200,000
Traffic Signalization	$ 1,600,000	$ 1,200,000	$ 2,200,000	$ 2,300,000	$ 2,300,000	$ 1,300,000	$ -
Bridge Widening				$ 25,900,000	$ 25,900,000	$ 9,000,000	
New Bridge Structure	$ 67,900,000	$ 48,800,000	$ 54,200,000				
TOTAL Cost	**$ 94,600,000**	**$ 65,800,000**	**$ 85,800,000**	**$ 46,600,000**	**$ 46,600,000**	**$ 21,000,000**	**$ 171,200,000**
Total Length in feet	39,440	25,140	44,710	27,470	27,470	20,020	42,970
Total Cost/Total Length	$ 2,400	$ 2,600	$ 1,900	$ 1,700	$ 1,700	$ 1,000	$ 4,000

Notes:

The items above
include:
- New roadway section in areas to be widened
- Overlay of existing pavement
- Storm drainage
- Utility adjustments
- Illumination
- Minor Landscaping
- Contingency
- Design Engineering
- Construction Engineering

do not include:
- Right of Way acquisition cost

The Light Rail Alternative
is based on at-grade light rail and includes
- double tracks, traction power, command and communications sytem

does NOT include
- items like major utility relocations, stations and platforms,
- light rail vehicles, maintenance base, etc.

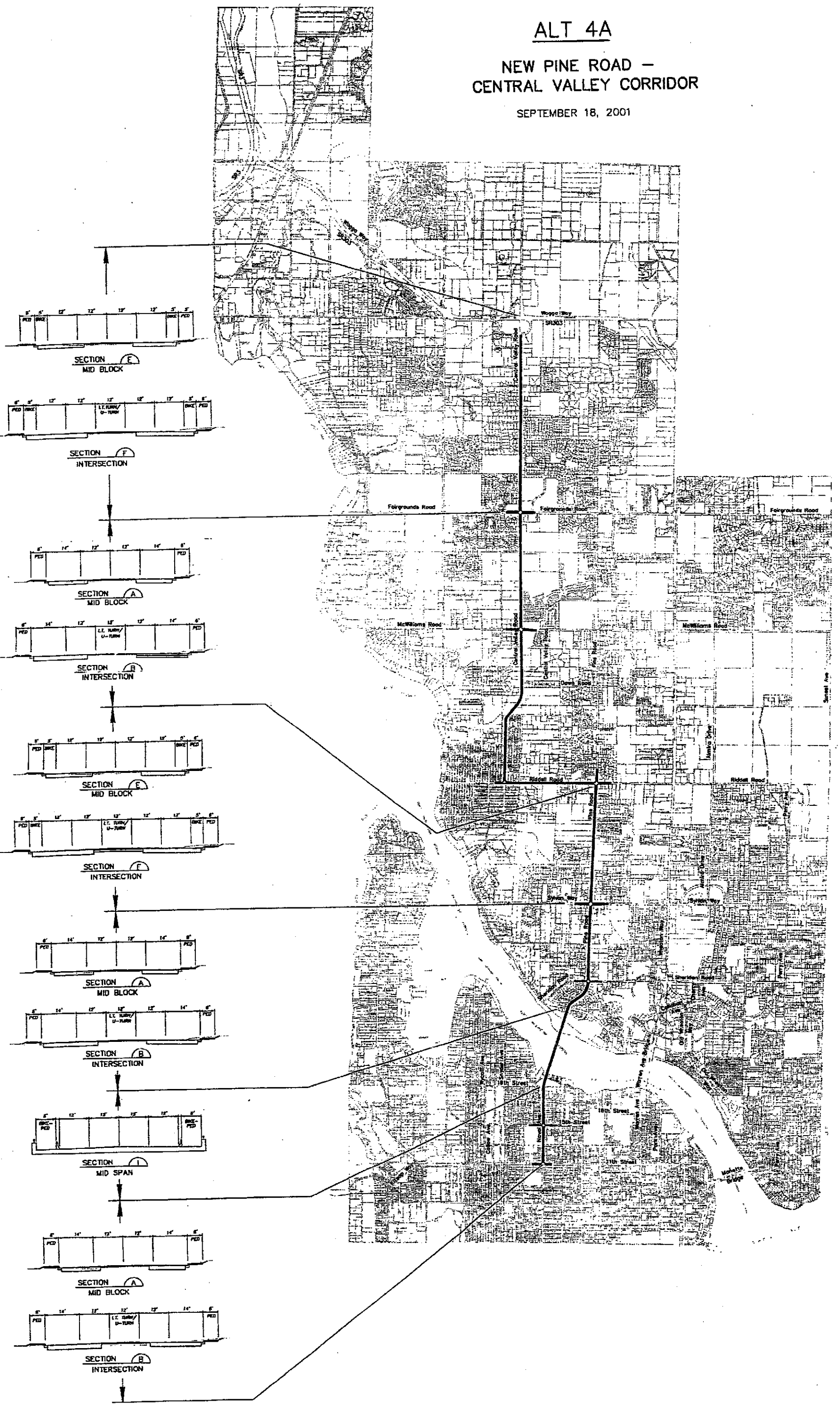
APPENDIX D

SR 303 Preliminary Design Plans

ALT 4A

NEW PINE ROAD – CENTRAL VALLEY CORRIDOR

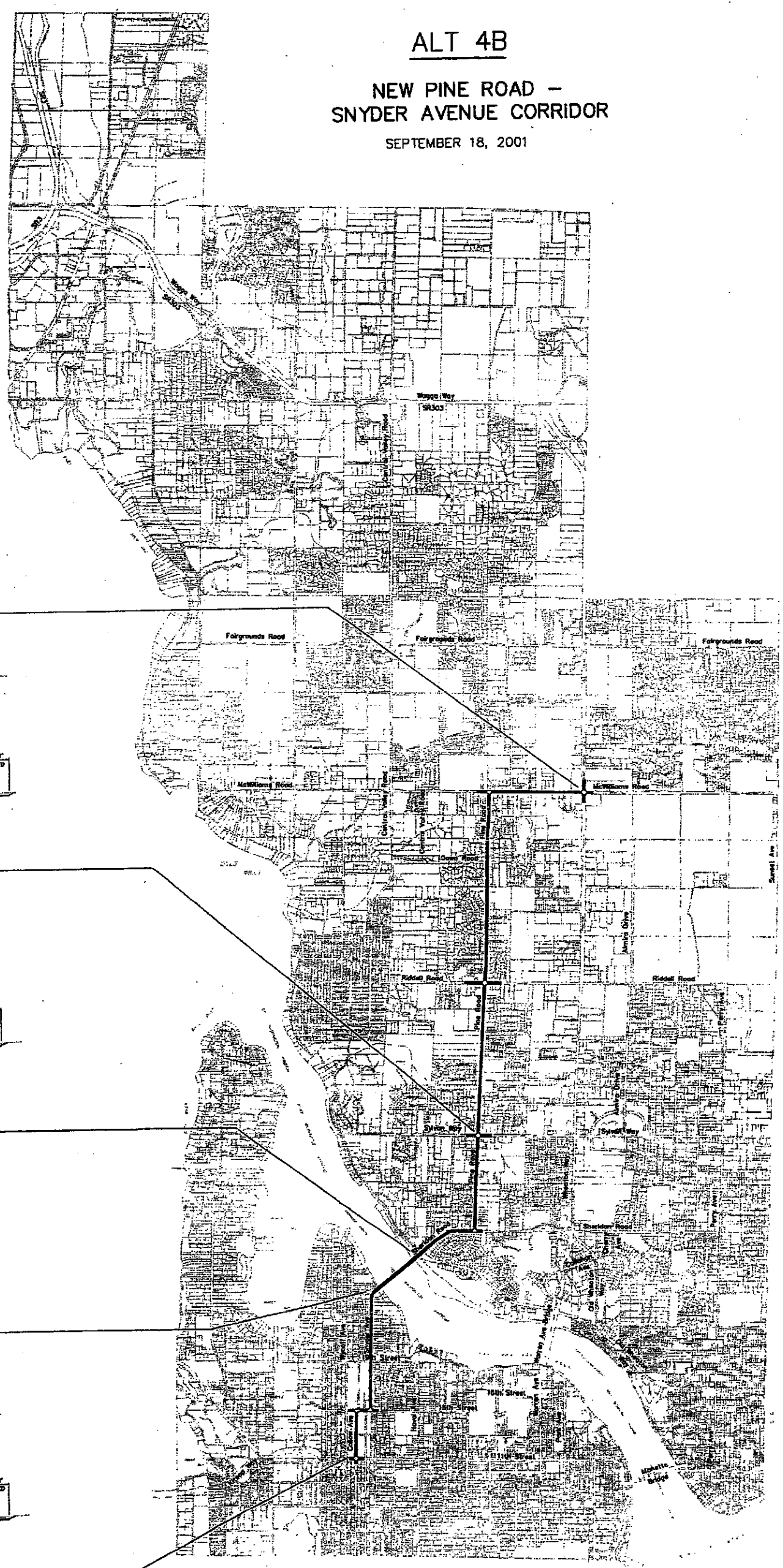
SEPTEMBER 18, 2001

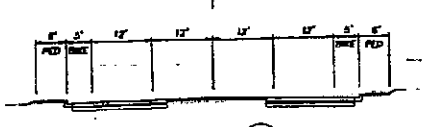


ALT 4B

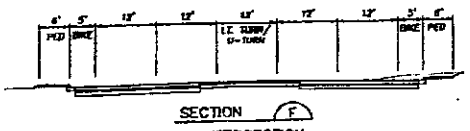
NEW PINE ROAD – SNYDER AVENUE CORRIDOR

SEPTEMBER 18, 2001

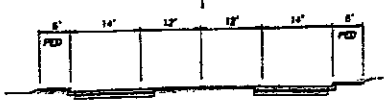




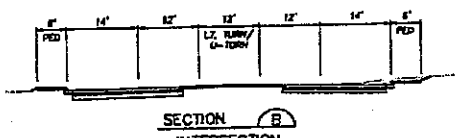
SECTION E
MID BLOCK



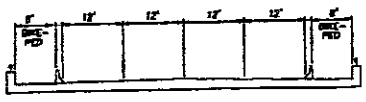
SECTION F
INTERSECTION



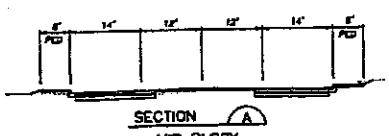
SECTION A
MID BLOCK



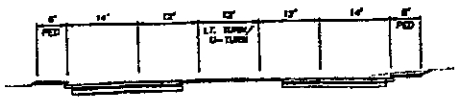
SECTION B
INTERSECTION



SECTION I
MID SPAN



SECTION A
MID BLOCK

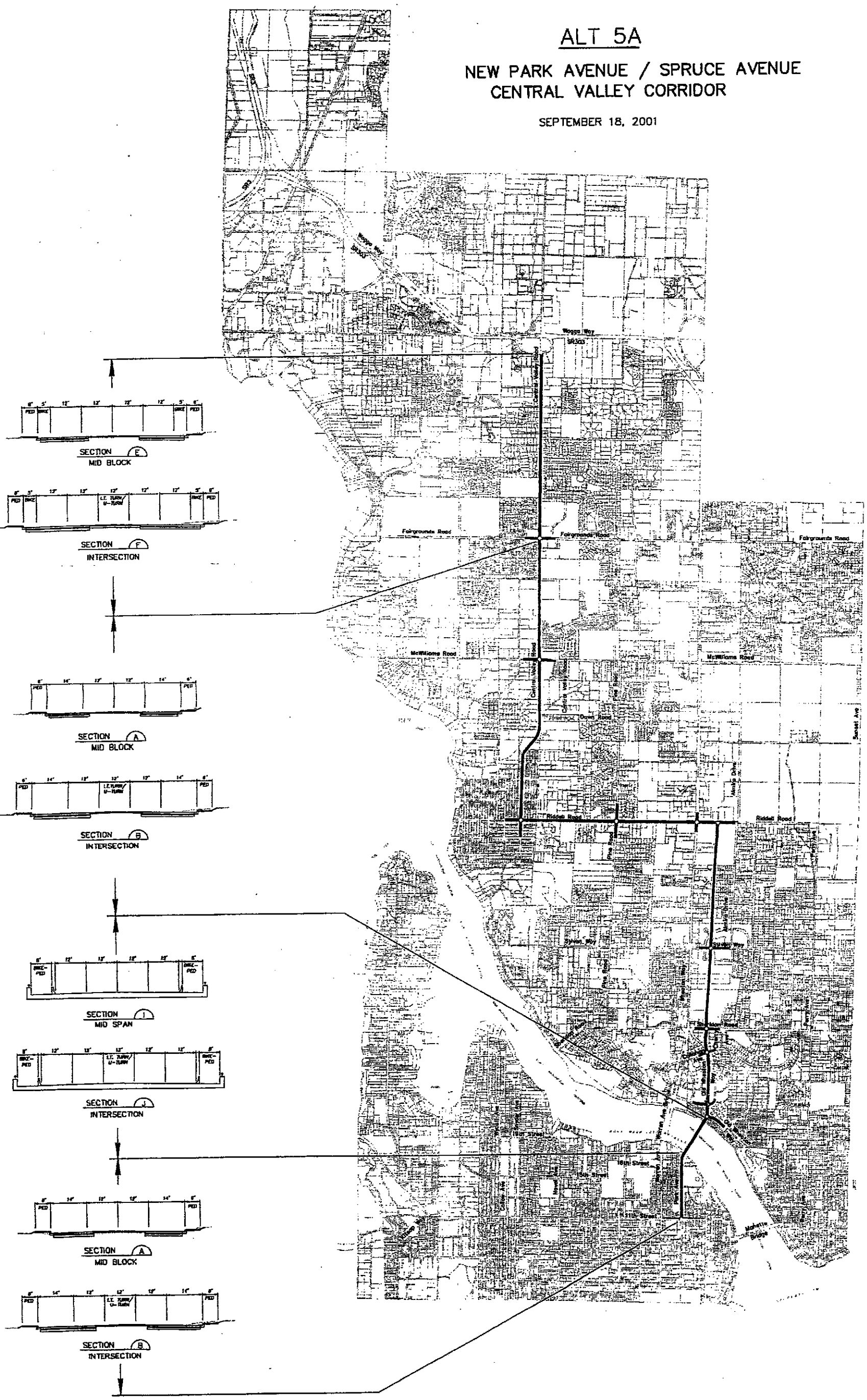


SECTION B
INTERSECTION

ALT 5A

NEW PARK AVENUE / SPRUCE AVENUE
CENTRAL VALLEY CORRIDOR

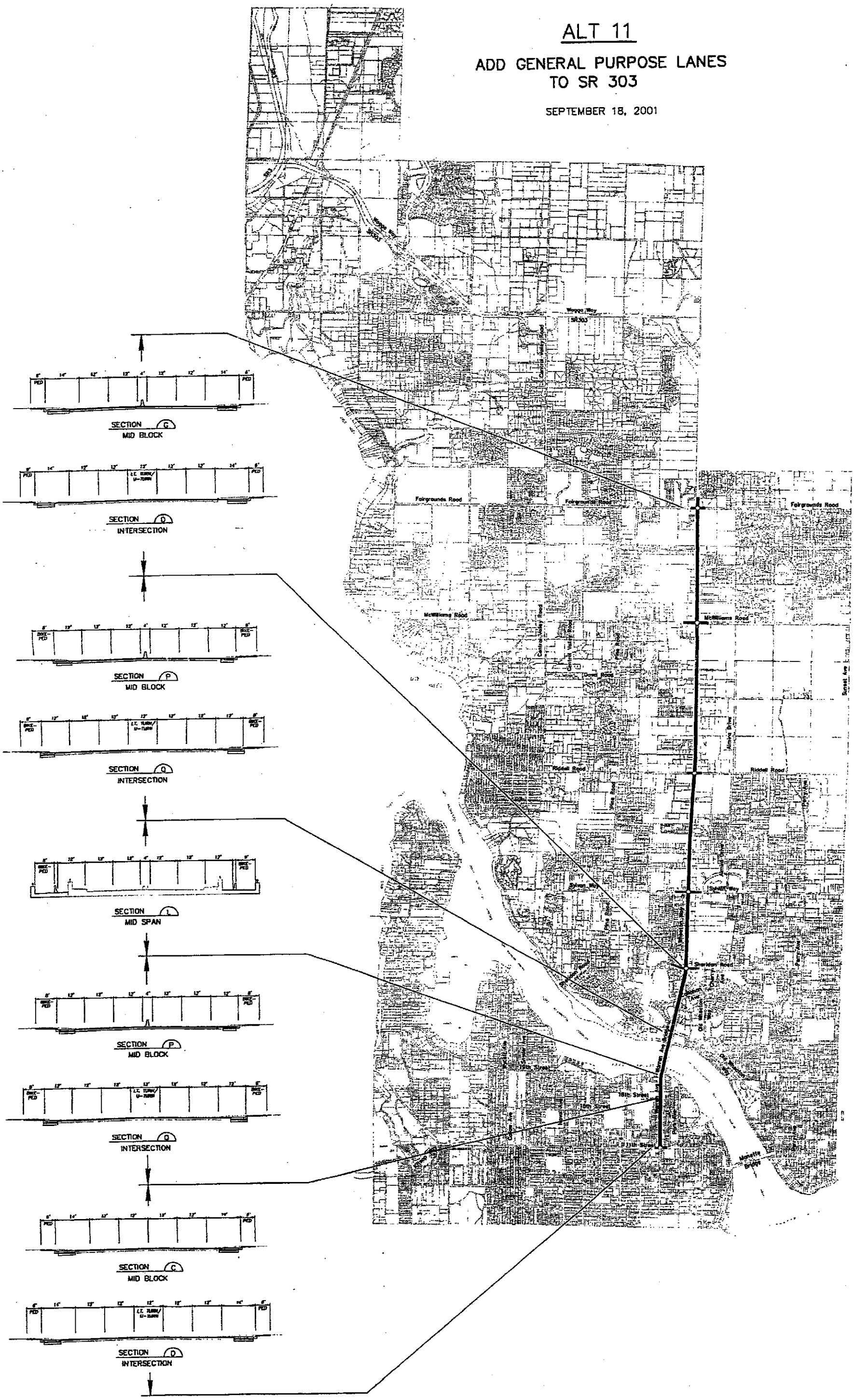
SEPTEMBER 18, 2001



ALT 11

ADD GENERAL PURPOSE LANES TO SR 303

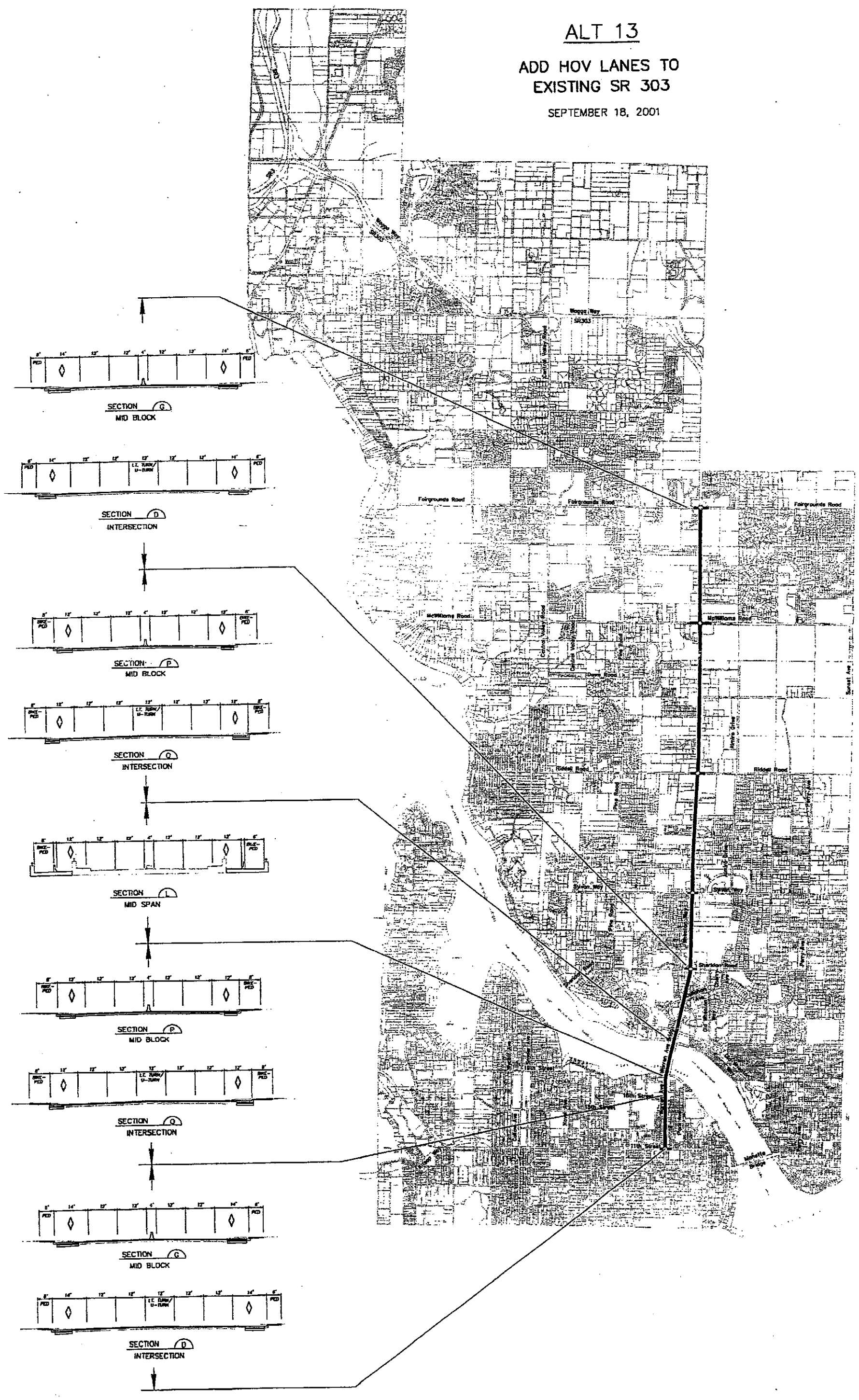
SEPTEMBER 18, 2001



ALT 13

ADD HOV LANES TO EXISTING SR 303

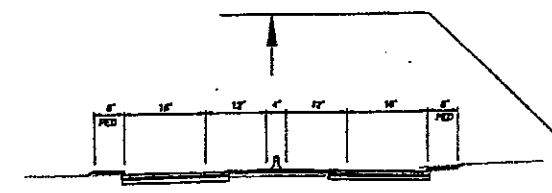
SEPTEMBER 18, 2001



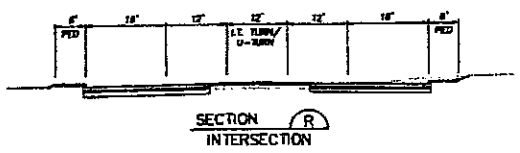
ALT 14

TDM / TSM

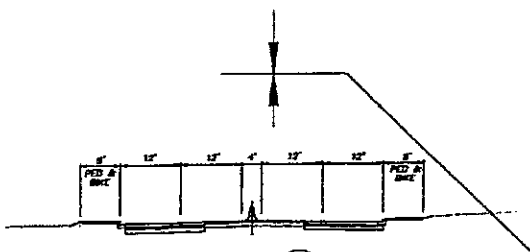
SEPTEMBER 19, 2001



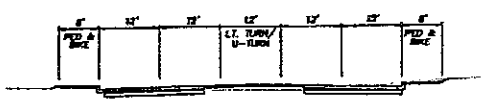
SECTION H
MID BLOCK



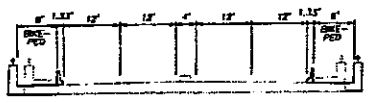
SECTION R
INTERSECTION



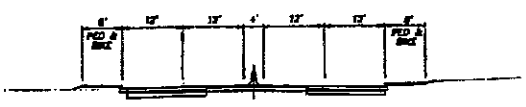
SECTION T
MID BLOCK



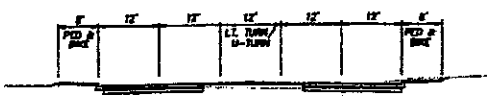
SECTION U
INTERSECTION



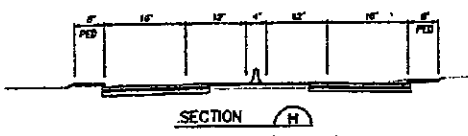
SECTION S
MID SPAN



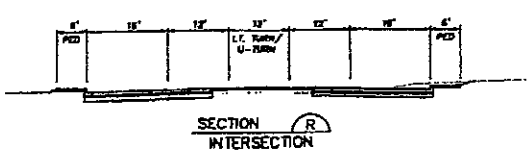
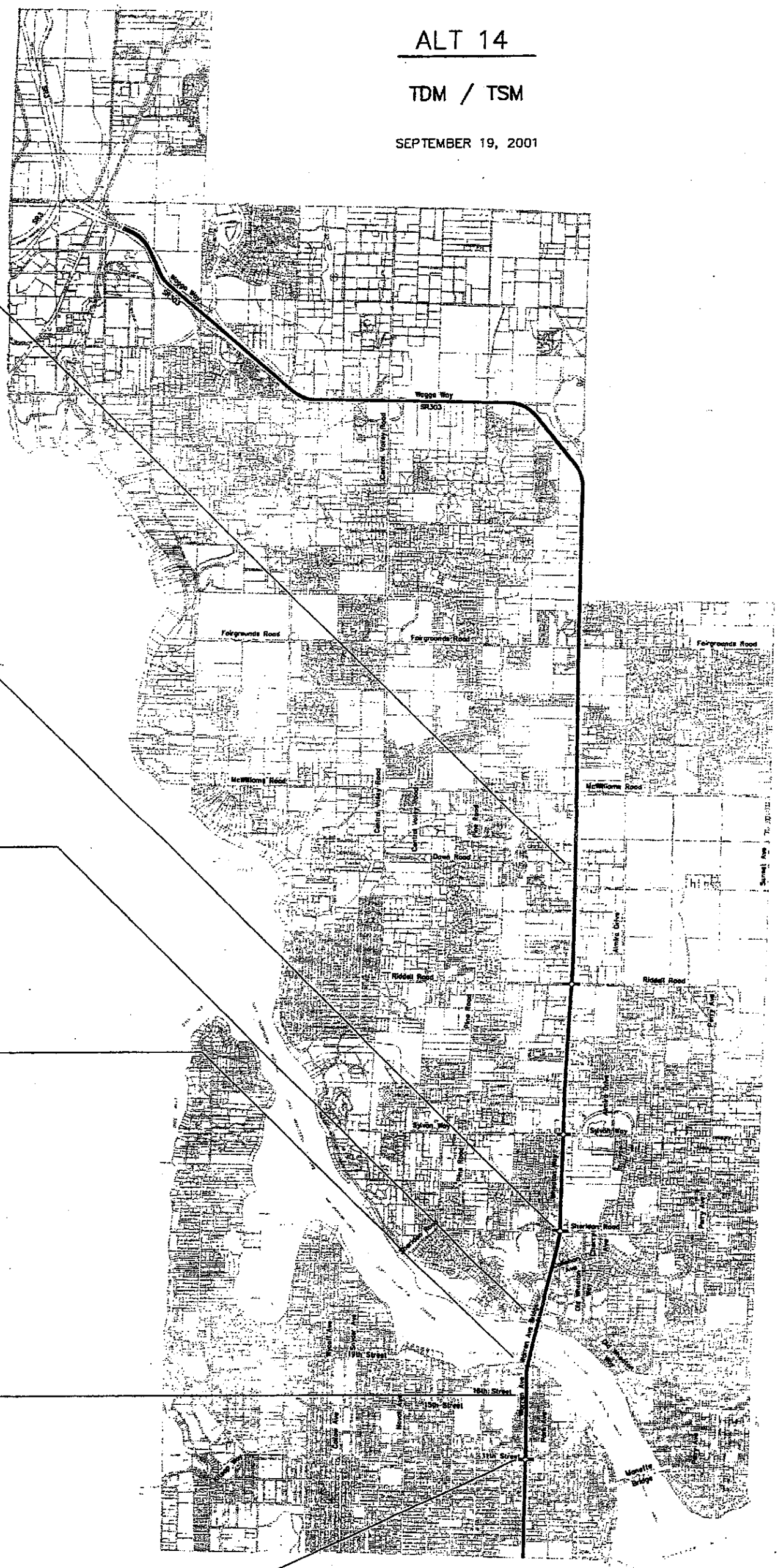
SECTION T
MID BLOCK



SECTION U
INTERSECTION



SECTION H
MID BLOCK



SECTION R
INTERSECTION