

# CHAPTER 4

## Environmental Impacts and Mitigation





## **4 ENVIRONMENTAL IMPACTS AND MITIGATION**

### **4.1 Introduction**

This chapter discusses the environmental analysis and impacts associated with the proposed project. It comprises 13 sections, covering topics that include different aspects of the built environment (e.g., land use, noise, and vibration), the natural environment (e.g., ecosystems, water quality), historic and cultural resources, and commitment of resources.

Each section reviews the affected environment, analyzes potential environmental impacts that would result from the No-Build Alternative and the Build alternatives, and proposes mitigation and enhancement strategies to minimize negative environmental impacts. Each section analyzes long-term, short-term (construction), indirect (or secondary), and cumulative impacts.

The analysis of long-term impacts covers the permanent changes caused by the completed project. This includes the ferry terminal facilities and related improvements such as streets, sidewalks, and landscaping, and any mitigation measures developed as part of the project. The ongoing operation of the project is also considered.

The analysis of short-term or construction impacts covers the activities required to build the multimodal project, including all of the heavy construction activities and staging that would occur.

This Final EIS also considers the project's indirect (or secondary) impacts on the environment. As defined under 40 Code of Federal Regulations (CFR) Section 1508.8(b), indirect effects "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."

The analysis of cumulative impacts considers the overall changes to the environment over time, including past, present, or reasonably foreseeable future actions, and evaluates the added impacts of the proposed project.

### **4.2 Land Use and Economics**

This section reviews the potential for impacts on land use and economic activities in the project area. In addition, it identifies the property requirements for each of the alternatives, including the potential acquisition of properties that are not already being used for transportation purposes, and the displacement or relocation of their uses.

#### **4.2.1 Overview of Analysis and Regulatory Context**

The land use analysis discusses whether the proposed alternatives are compatible with local comprehensive plans, shoreline management programs, regional development plans, and the development regulations that implement the plans. It

also reviews long-term operations impacts and short-term construction impacts that could affect existing land uses.

The economic analysis focuses on how the development and operation of the multimodal facility would affect local and regional economic activities, either directly or indirectly.

#### **4.2.2 Affected Environment**

The Mukilteo Multimodal Project area is located on Elliot Point in the northernmost part of the city of Mukilteo, with a small part within the city of Everett.

Major land uses on Elliot Point include several large publicly owned properties as well as private properties to the north of the BNSF tracks and commercial and residential uses to the south (see Figure 1-2 in *Chapter 1 Purpose and Need*). The Mukilteo Lighthouse Park occupies the west end of the point. This 14-acre City of Mukilteo facility includes a boat launch and 6.6 acres of parking, as well as the historic Mukilteo Lighthouse, a volleyball court, and picnic tables. The Mukilteo ferry terminal covers about 2 acres, largely consisting of a vehicle holding area and a small area for employee parking.

A condominium development, a restaurant, and a hotel are located along the shoreline between the lighthouse and Park Avenue and occupy about 2 acres of land. Along Front Street, Ivar's restaurant is located east of SR 525; a commercial parking lot serving the restaurant is located east of the ferry holding area. A glass blowing studio is located on Park Avenue at First Street. These private uses occupy about 1.5 acres.

The Mukilteo Tank Farm is a 20-acre parcel extending about 3,200 feet along the shoreline, beginning on the east of Park Avenue and bounded on the south by the BNSF Railway corridor. The Mukilteo Tank Farm consists largely of partially demolished storage tanks and a variety of support facilities in various stages of deterioration, as well as a 1,300-foot-long pier. NOAA Fisheries currently operates the Mukilteo Research Station east of Park Avenue. The Mount Baker Terminal occupies a 1.5-acre site east of the Mukilteo Tank Farm.

The BNSF Railway owns a right-of-way at the edge of Elliot Point, which generally forms the boundary between flat land to the north and a steep bluff to the south. This rail line serves freight trains, Amtrak train service, and commuter passenger trains operated by Sound Transit. The Sound Transit Mukilteo Station is located on the north side of the BNSF tracks east of Park Avenue.

South of the BNSF tracks, land uses are primarily single-family residential west of SR 525 and east of Park Avenue. A commercial area extends between the BNSF tracks and Third Street, bounded by SR 525 on the west and Park Avenue on the east. The City of Mukilteo Rosehill Community Center is located on a 5-acre site at Third Street and Lincoln Avenue.

Other major land uses in the general area include the 1,300-acre Paine Field Municipal Airport located about 2 miles to the south, and the 1,025-acre Boeing Everett Facility about 2 miles south and a mile to the east. A commercial area extends along SR 525 between about 100th Street and 130th Street, approximately 3 miles to the south.

## State, Regional, and Local Plans and Policies

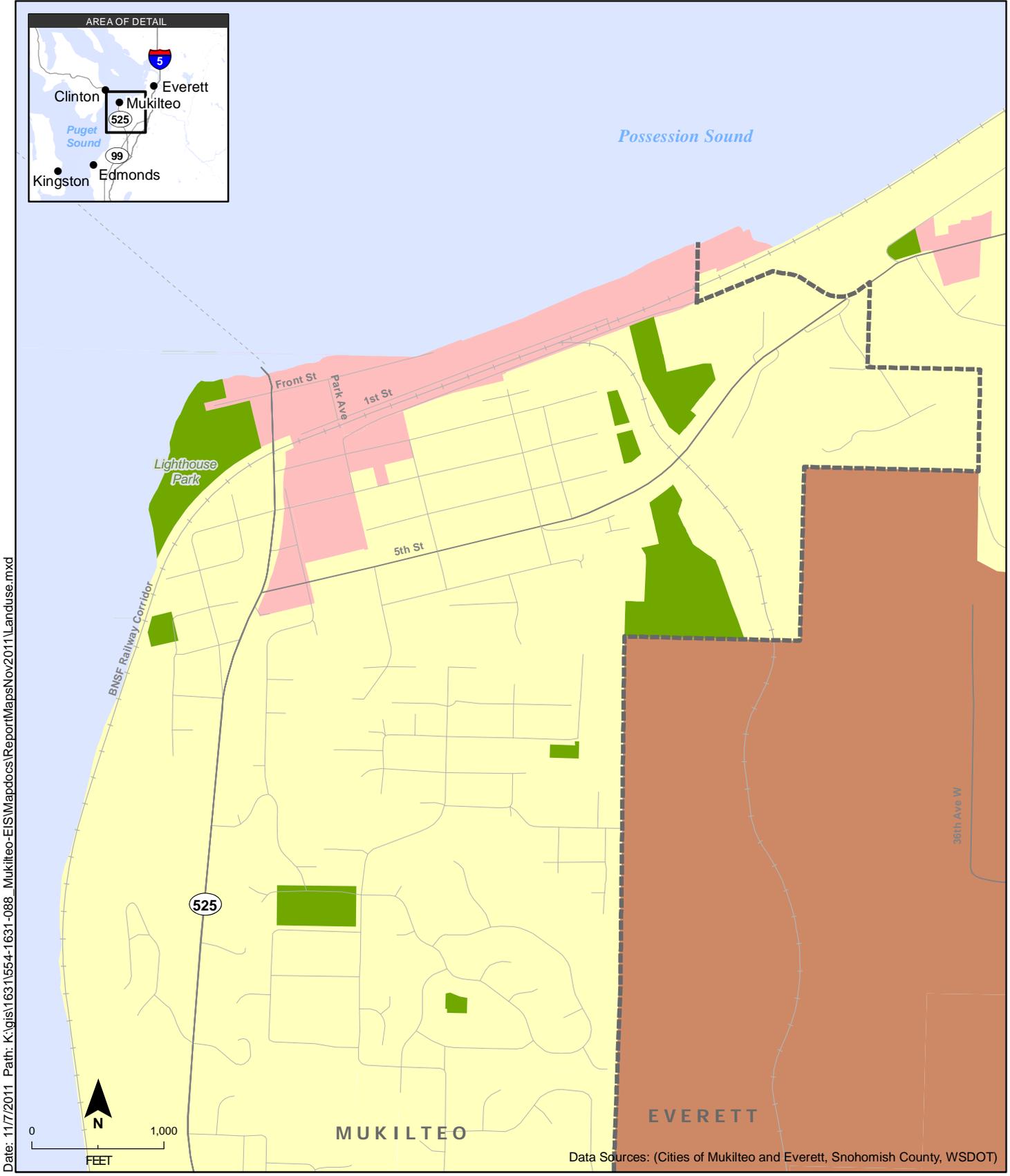
The proposed alternatives are located primarily within the City of Mukilteo's land use planning jurisdiction, with a small portion to the east within the Everett city limits. Land use is regulated and influenced by city plans and policies, as well as several state and regional plans and policies.

**Growth Management Act.** Washington State's Growth Management Act (GMA) (Revised Code of Washington [RCW] 36.70A) of 1990 requires state and local governments to manage statewide growth by identifying urban growth areas (UGAs) and preparing comprehensive plans, capital improvement programs, and development regulations. The GMA requires infrastructure (transportation, water, sewer, and other urban services) to achieve population and employment targets established by the regional and local comprehensive plans. The GMA also specifies that transportation projects be identified and constructed concurrent with future development projects.

"Essential public facilities" (EPFs) are defined in the GMA (RCW 36.70A.200) as including state or regional transportation facilities of statewide significance. Ferry terminals as well as high-capacity transit facilities have statewide significance. Cities and counties are required to include a process for identifying and siting essential public facilities. Local jurisdictions cannot have local comprehensive plan or development regulations that preclude EPFs, but they can impose permitting conditions and require reasonable mitigation of impacts. The City of Mukilteo *Comprehensive Plan*, as discussed below, reflects the intent of the GMA and includes policies related to EPFs.

**City of Mukilteo Comprehensive Plan.** Mukilteo's *Comprehensive Plan* was updated in 2012 and provides goals and policies to guide growth and development in the city (City of Mukilteo 2012). The *Comprehensive Plan* is a 20-year policy plan and, consistent with GMA requirements, includes land use, transportation, housing, capital facilities, utilities, economic development, and environmental elements.

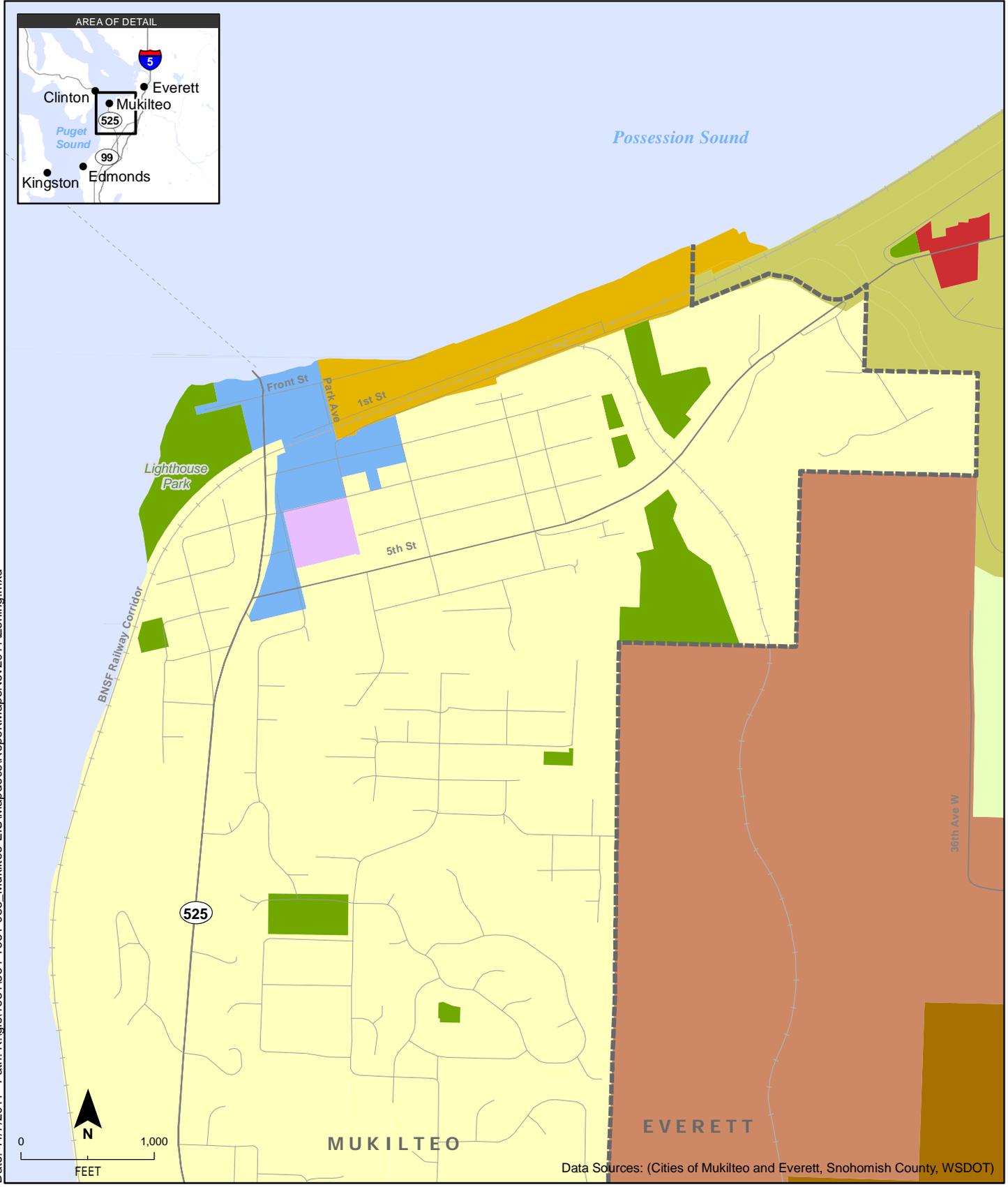
The City's *Comprehensive Plan* envisions the waterfront as a visitor- or tourist-oriented activity center with restaurants, a marina, and recreational opportunities with extensive public access. The Plan designates the existing Mukilteo ferry terminal, the Mukilteo Tank Farm, and surrounding area as COM (Commercial). The zoning of the Mukilteo Tank Farm is WMU (Waterfront Mixed Use), permitting a range of public and commercial uses, with multi-family as a secondary use. The area of the existing ferry terminal, ferry holding area, and nearby commercial and condominium uses is zoned DB (Downtown Business), permitting public and commercial uses, with multi-family as an accessory use. The Mukilteo Lighthouse Park is designated and zoned as OS (Open Space), permitting a variety of recreation and public uses and a limited range of commercial uses. Figures 4.2-1 and 4.2-2 show the *Comprehensive Plan* and zoning designations for the project area. While the ferry terminal is part of the state highway system and is not subject to local zoning, WSDOT designed the project alternatives to support the *Comprehensive Plan* objectives as much as possible, and considered the Plan's underlying zoning designations in the site layouts. The state transportation plan includes the terminal relocation, and the City's *Comprehensive Plan* anticipates the terminal relocation, as described in more detail in the following sections.



- Single-family Residential
- Parks/Public Open Space
- Commercial
- Industrial
- City Boundary

**Figure 4.2-1. Comprehensive Plan Land Use**

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- Single-family Residential
- Other Residential
- Waterfront Mixed Use
- Neighborhood Shopping
- Downtown Business
- Business Park
- Office and Industrial Park
- Heavy Manufacturing
- Park and Open Space
- Public - Semi Public
- City Boundary

Figure 4.2-2. Zoning

The upland areas of Mukilteo south of the project site and along SR 525 are designated SFR-H (Single-Family Residential: 5.8 Dwelling Units/Acre). Smaller areas along SR 525 near 84th Street SW are designated as PSP (Public Semi Public), DB (Downtown Business), COM (Commercial), and OS (Open Space).

The *Comprehensive Plan* has several policies addressing the Mukilteo ferry terminal, derived from the March 1995 *Mukilteo Multimodal/ Intermodal Terminal and Access Study and Programmatic EIS* (City of Mukilteo 1995). These policies include using the Central Waterfront Alternative as the basis for all planning activities related to the proposed Multimodal/Inter-Modal Terminal in downtown Mukilteo (Policy TR2).

The Mukilteo ferry terminal, SR 525, and the Mukilteo Station are identified as existing EPFs in Mukilteo's *Comprehensive Plan* and Section 17.18.010 of the City's Zoning Code. Both the City of Mukilteo and the City of Everett identify Mount Baker Terminal and the BNSF tracks as EPFs.

The City's plans for the waterfront, particularly for the area in the vicinity of the existing ferry terminal, presume that the terminal will be relocated to the Mukilteo Tank Farm, allowing redevelopment of the current terminal site. Mukilteo's *Comprehensive Plan* addresses development of transportation infrastructure on the Mukilteo Tank Farm in Policy TR4:

“Development of the Multimodal/Intermodal terminal and redevelopment of the Tank Farm site, should employ the following urban design techniques: a network of public paths, a waterfront promenade, a chain of waterfront parks, recreational opportunities such as a visitor dock and boat launch, new mixed use/commercial opportunities, public amenities downtown (e.g., benches, street lights, water fountains) and pedestrian oriented streetscapes.”

With the adoption of its 2012 update, the City revised this policy to place more emphasis on the public waterfront and recreational elements. The Waterfront Mixed Use District and Downtown Business District both carry design guidelines.

**Everett Comprehensive Plan.** Everett's *Comprehensive Plan* was last updated in 2011. The area that could be developed by the Mukilteo Multimodal Project is designated Waterfront Commercial (Figure 4.2-1). Policies for this area are contained in the Shoreline Master Program, which are addressed below.

**The Shoreline Management Act (SMA)** is a state-mandated cooperative program of shoreline planning with local government and state responsibilities (RCW 98.58.050).

The SMA provides a framework to maximize public access to shorelines. The SMA regulations also guide other developments that would provide an opportunity for substantial numbers of people to enjoy the shorelines of the state (RCW 90.58.020). Local plans must provide an economic development element for the location and design of industries, transportation facilities, port facilities, tourist facilities, commerce, and other uses that depend on being located on or using shorelines of the state (RCW 90.58.100).

**The Mukilteo Shoreline Master Program (SMP)** was adopted in 1974. A comprehensive update and revision to the SMP was approved by the City of Mukilteo in December 2011, and was also approved by Washington State Department of Ecology

(Ecology) (City of Mukilteo 2011). Figure 4.2-3 shows the City's SMP designations within the project area.

The project area is designated Urban Waterfront (UW), which is designed to provide for development and redevelopment of high-intensity, water-oriented commercial and recreational activities, transportation, and essential public facilities, while protecting existing ecological functions and improving ecological functions in areas that have been previously degraded.

The Mukilteo SMP (City of Mukilteo 2011) states that "Priority shall be given to water dependent uses, including ferry terminals and boat launches, in the Urban Waterfront Environment" (Policy UW1). Other policies also state that:

"With the exception of pedestrian, bicycle, and emergency vehicle access, ferry vehicle staging, shared parking spaces, vehicle circulation and parking systems which are not related to shoreline-dependent uses shall be located as far from the shoreline as possible and should utilize offsite parking options such as park-and-ride facilities" (Policy SH17).

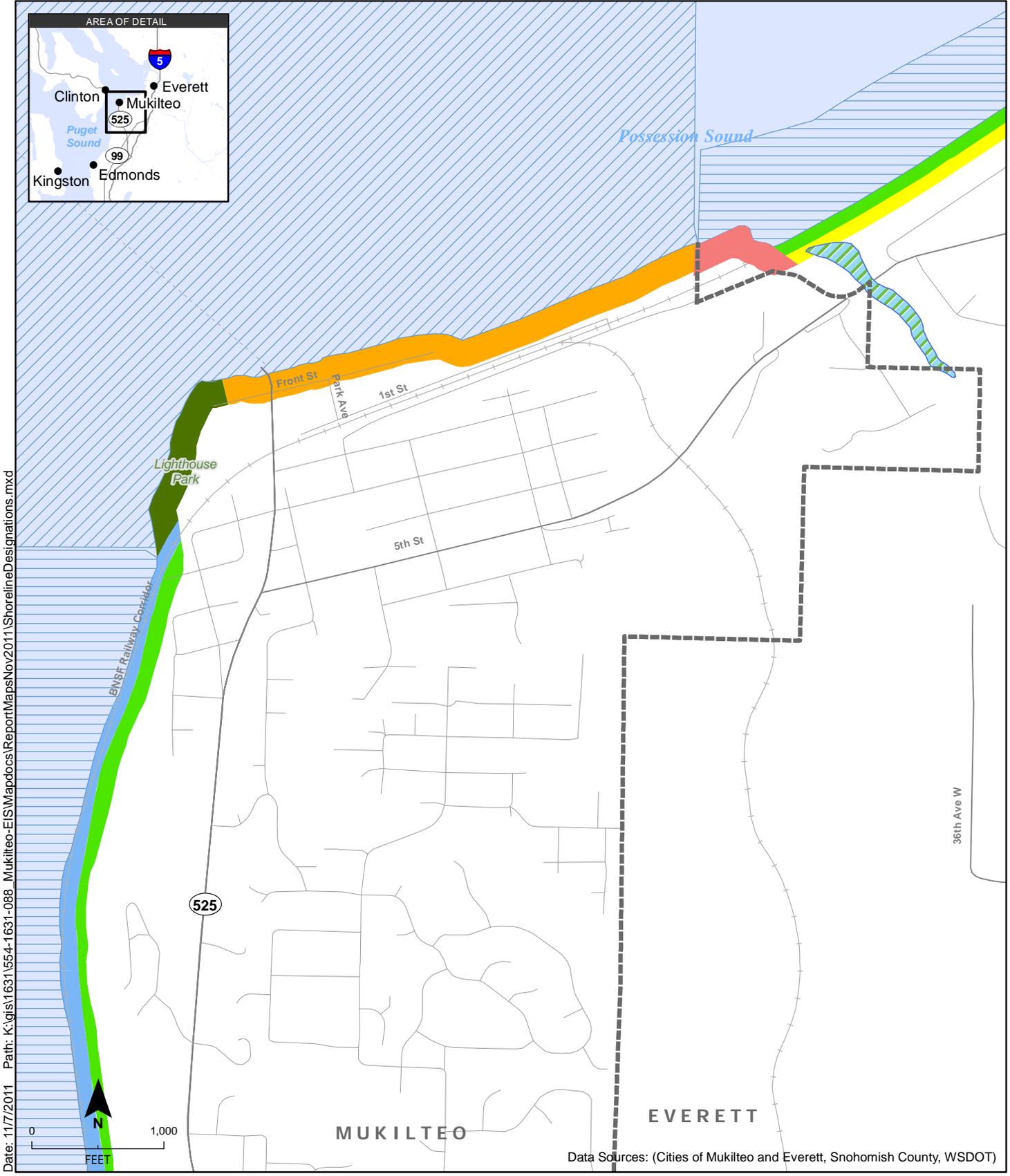
The City's SMP provides for beach and tideland access along the western side of the city adjacent to Possession Sound. This program calls for a waterfront promenade and beach walk from Mukilteo Lighthouse Park to the east side of Mukilteo Tank Farm at the Everett city limits (17B.16.210, 17B.25.110, 17B.25.120 Design Guidelines 24, 17B.58.110).

The marine shoreline is classified as Critical Saltwater Habitat. This designation requires buffers to reduce potential impacts on the shoreline in accordance with best available science and as required by state or federal regulations. Buffer enhancement is required where existing buffer area vegetation provides minimal cover and cannot provide effective water quality or habitat functions.

**Everett's SMP** was last updated in 2011 (City of Everett 2011). The area that could be developed by the project is designated Urban Multi Use. Figure 4.2-3 shows the City's SMP designations within the project area. The purpose of this designation is:

"To ensure optimum use of shorelines within urbanized areas by providing for water oriented public and commercial activities, recreational and residential uses, and public access, and by managing development so that it enhances and maintains shorelines for a multiplicity of urban uses, while protecting and restoring ecological functions." The SMP specifically refers to a potential ferry development:

"This area is currently planned to be developed cooperatively with lands in the City of Mukilteo for a mixed use development to include some combination of recreational use, pedestrian paths and promenades, and commercial uses. The City of Everett shall redevelop its lands cooperatively and consistently with adjacent jurisdictions so that the entire site is an attractive and active waterfront with integrated commercial, transportation, and recreational components. This site shall be planned and developed cooperatively as part of a water-oriented mixed use development per the memorandum of understanding between the City of Everett, City of Mukilteo, Port of Everett, Department of Transportation Ferry System, and Sound Transit."



- Environment Designations**
- Aquatic Urban
  - Aquatic Urban Conservancy
  - Urban Conservancy
  - Urban Railroad
  - Urban Waterfront
  - Urban Waterfront Park
  - Urban Multi-Use
  - Shoreline Residential
  - Conservancy Wetland
  - City Boundary

**Figure 4.2-3. Shoreline Management Program Environmental Designations**

**Coastal Zone Management (CZM) Program**, together with the Coastal Zone Management Act of 1972, requires activities of federal agencies that affect coastal zone land uses, water uses, or natural resources to be consistent with the state's CZM program. Compliance with the local SMP constitutes CZM compliance.

**Aquatic Lands Act**, formerly the Washington State Aquatic Lands Act of 1984, provides for the protection and management of state aquatic lands. These lands include the tidelands in the project area. The Aquatic Lands Act is administered through DNR, which carries out the legislative direction to foster water-dependent uses, ensure environmental protection, encourage direct public use and access, and achieve similar goals.

**PSRC Transportation 2040** identifies regionally important components of the area's metropolitan transportation system. It includes a complete list of projects and transportation system improvements as well as the Mukilteo ferry terminal relocation (PSRC 2010).

**Mukilteo Lighthouse Park Master Plan** guides the continued development of the park. The plan proposes relocating the existing boat launch to the Mukilteo Tank Farm, but the relocation is not an element of any of the Mukilteo Multimodal Project alternatives.

**Other Plans.** There are no federal land use plans specifically applicable to the project area.

The *Washington Transportation Plan 2007-2026* incorporates the Washington State Ferries Long-Range Plan by reference (WSTC and WSDOT 2006). It also refers to capital facility planning strategies for facilities including the Mukilteo terminal, but does not provide project-specific direction. *Chapter 1 Purpose and Need* provides more discussion of the ferry system's long-range strategic plan.

Washington's *State Comprehensive Outdoor Recreation Planning* document provides general guidelines and policies for state agency lands and facilities. These policies emphasize the importance of public access to state resources, including shorelines, and provide for the sustainable management of those resources.

## **Economic Base**

Mukilteo is primarily a residential community. It has a limited supply of commercial land, and residents rely primarily on retail centers in adjacent larger communities. Although Mukilteo residents have relatively high income levels and strong retail spending power, local businesses capture only a quarter of overall local spending. Even in convenience categories such as grocery, miscellaneous retail, and eating/drinking places, the businesses in the city are estimated to capture approximately half of the potential business from the city's residential market. The primary locations where residents do most of their shopping are Alderwood Mall in Lynnwood and Everett Mall. These competitors limit the retail opportunities in the city of Mukilteo.

In addition, there is a limit to available commercial zoned land in the city. The residential and commercial lands are approaching buildout. The city contains about 4 million square feet of commercial land. Commercial vacant and underdeveloped lands are constrained, with a limited supply existing in the southern end of the city.

Industrial market opportunities are similarly constrained by the lack of developable land in the city.

The median household income in Mukilteo is considerably higher than both the Snohomish County and Washington State median incomes, as indicated in Table 4.2-1. Travel time information confirms that most of the working population is employed outside of the city limits.

**Table 4.2-1. Mukilteo Population and Economic Characteristics**

|  | Mukilteo |         | Snohomish County |         | Washington State |         |
|--|----------|---------|------------------|---------|------------------|---------|
|  |          | Percent |                  | Percent |                  | Percent |
| Population (2010)                              | 20,254   | --      | 713,335          | --      | 6,724,540        | --      |
| Population 16 or older in labor force (2000)   | 11,812   | 72.8    | 368,828          | 70.4    | 3,374,721        | 66.2    |
| Mean travel time to work (minute)              | 25.5     | n/a     | 29.8             | n/a     | 25.4             | n/a     |
| Median household income (in 2010)              | \$91,683 | n/a     | \$66,300         | n/a     | \$57,244         | n/a     |
| Per capita income (in 2010) <sup>1</sup>       | \$40,649 | n/a     | \$30,635         | n/a     | \$29,733         | n/a     |
| Share of population below poverty level (2010) | n/a      | 5.7     | n/a              | 8.4     | n/a              | 12.1    |

n/a = not applicable

Source: U.S. Census (2010), American Community Survey (ACS) 2006-2010

<sup>1</sup> ACS B19301

Fairly low levels of growth are projected for Mukilteo as a whole and for the study area. The population within the existing boundaries of the city is expected to grow from about 20,250 in 2010 to 22,000 by 2025, and the majority of this growth would occur away from the study area. According to the *City of Mukilteo Comprehensive Plan* (City of Mukilteo 2012), there are approximately 190 undeveloped single-family residential lots in the city, about 250 underdeveloped lots, 250 lots in recent subdivisions, and capacity for approximately 229 multi-family units. Overall, there is the potential for about 990 additional dwelling units.

Within the study area, except for the Mukilteo Tank Farm, there are no undeveloped multi-family parcels, and very few single-family lots. Additional housing opportunities would likely come from mixed use development, especially in the downtown area and in the waterfront sub-area. The downtown area zoning allows for up to 999 square feet of accessory dwelling unit for each 1,000 square feet of commercial space constructed, with height limits that vary from 25 to 40 feet in the waterfront sub-area and 35 feet in the downtown business district.

### 4.2.3 Long-Term Environmental Impacts

The following sections address the anticipated long-term effects due to property acquisitions, changes in land use, or alteration of economic conditions as a result of the alternatives. While the EIS discussion evaluates the alternatives for their consistency with local comprehensive plans, the ferry terminal, as part of the state highway system, is considered an EPF and cannot be precluded by local plans or their permitting requirements. The ferry terminal itself is not subject to typical local

zoning requirements because it is part of the state highway system. The state transportation plan includes the terminal relocation, and the City of Mukilteo has anticipated the planned improvement for the terminal in its *Comprehensive Plan*, including the Plan's land use and transportation elements. WSDOT also developed the alternatives in collaboration with the City, and considered the City's *Comprehensive Plan* objectives in its designs as much as possible.

## **No-Build Alternative**

### **Acquisition/Displacement**

WSDOT would maintain its interests in the currently leased portion of the holding area.

### **Land Use Impacts**

This alternative would not directly alter existing land uses because the configuration of the terminal and the existing land uses in the vicinity would remain the same, including the vehicle holding area.

The over-water facilities for the ferry terminal would be consistent with the goals of the SMA and the Aquatic Lands Act administered by DNR because they are water-dependent uses. The No-Build Alternative would not fully provide improvements needed to meet other goals of both acts, such as environmental protection and direct public use and access.

The holding area is set back approximately 160 feet from the shoreline's ordinary high water mark (OHWM). This distance generally meets the criteria of accommodating the ferry terminal as a water-dependent use while locating ferry, vehicle staging, shared parking spaces, vehicle circulation, and parking systems as far from the shoreline as possible.

The continued presence of the terminal in the downtown area would not be consistent with the City's adoption of the Central Waterfront Alternative of the 1995 *Mukilteo Multimodal/ Intermodal Terminal and Access Study*. The study's Central Waterfront Alternative presumed the terminal would be relocated to the Mukilteo Tank Farm. Moreover, it would not be consistent with the City's desire to redevelop the existing ferry terminal area to provide a pedestrian-oriented waterfront along Front Street with mixed use on the south side of Front Street and a waterfront promenade extending from Mukilteo Lighthouse Park to the Mount Baker Terminal. This scenario is also reflected in the *City of Mukilteo Comprehensive Plan* Policies TR2 and TR3.

### **Economic Impacts**

WSDOT would spend an estimated \$60 to \$65 million (2015 dollars) through 2030 for facility maintenance and structure replacements at the ferry terminal as they become necessary. This expenditure would provide short-term economic activity through job creation, purchase of materials, and sales tax revenue to the state. The alternative would generate approximately 230 short-term construction jobs, which is estimated by using a standard multiplier for the type of construction. Indirectly, these jobs would generate about 150 additional jobs in the region because these workers would spend some of their income on local goods and services. Direct sales tax revenues from the project are

estimated at about \$2.8 million. The City of Mukilteo, however, is likely to receive only a small portion of this tax revenue because suppliers of materials are not likely to be located in Mukilteo.

The No-Build Alternative would maintain current land uses and economic activities on the site and in the immediate vicinity. The traffic congestion associated with the terminal, particularly on Front Street, would continue to constrain access to businesses; some businesses perceive this constraint as reducing their economic viability. However, some ferry patrons would buy convenience items or other products or services from businesses in the immediate vicinity.

Impacts on the range of economic activities that could develop along the Mukilteo waterfront are discussed under indirect and cumulative impacts (*Sections 4.2.5 and 4.2.6*).

## **Preferred Alternative**

### ***Acquisition/Displacement***

This alternative would affect the following properties:

- The Mongrain Building, which houses glass blowing studios and other businesses at Park Avenue and First Street, would be acquired for the First Street extension, and the uses would be displaced. At this time, a specific site for relocating the associated businesses has not been identified, but compensation and relocation assistance would be provided in compliance with applicable regulations. The requirements of the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 United States Code [USC] 4601) are discussed below in *Section 4.2.7*.
- WSDOT would buy a portion of a parcel it currently leases for the existing terminal.
- Approximately 9 acres of the Mukilteo Tank Farm would be developed.
- The existing Port of Everett fishing pier and seasonal day moorage on Port of Everett property would be removed.

### ***Land Use Impacts***

The over-water facilities for the ferry terminal would be consistent with the SMA goals and the Aquatic Lands Act because they are water-dependent uses.

The location of the alternative within the Mukilteo Tank Farm would be consistent with the *City of Mukilteo Comprehensive Plan*.

Parts of the vehicle holding area and transit facilities have a narrower shoreline setback than the SMP defines for non-water-dependent uses. The SMP criterion also requires other non-water dependent features, such as parking, to be as far back from the water as possible.

The Preferred Alternative generally conforms with the City of Mukilteo SMP policies, although some design elements do not fully meet the program's exact

specifications. Further coordination with the City of Mukilteo will take place during final design and permitting.

A continuous shoreline promenade would be provided and pass through the passenger terminal. If possible, the terminal design would incorporate public viewpoints along this part of the promenade.

The promenade would contribute to the 20 percent of open space and public access required by City of Mukilteo SMP policies for development on the Mukilteo Tank Farm. While the promenade would not alone satisfy the requirement, it would not preclude the development of open space on other parts of the ferry terminal or other portions of the tank farm.

The design for the Preferred Alternative creates an additional parking area at SR 525 to address changes in on-street parking spaces along Park Avenue and First Street. The design also avoids parking impacts at Mukilteo Station. On-street and off-street parking supply for the waterfront area would increase slightly.

### **Economic Impacts**

WSDOT would spend about \$125 to \$135 million (2015 dollars) to construct the Preferred Alternative, including the pier removal. This would provide short-term economic activity through job creation, purchase of materials, and sales tax revenue to the state. Based on a standard multiplier for the type of construction, the project would generate approximately 380 short-term construction jobs. Indirectly, these jobs would generate about 250 additional jobs in the region because these workers would spend some of their income on local goods and services. The City of Mukilteo is likely to receive only a small portion of direct tax revenue from the purchase of materials because suppliers of materials are not likely to be located in Mukilteo.

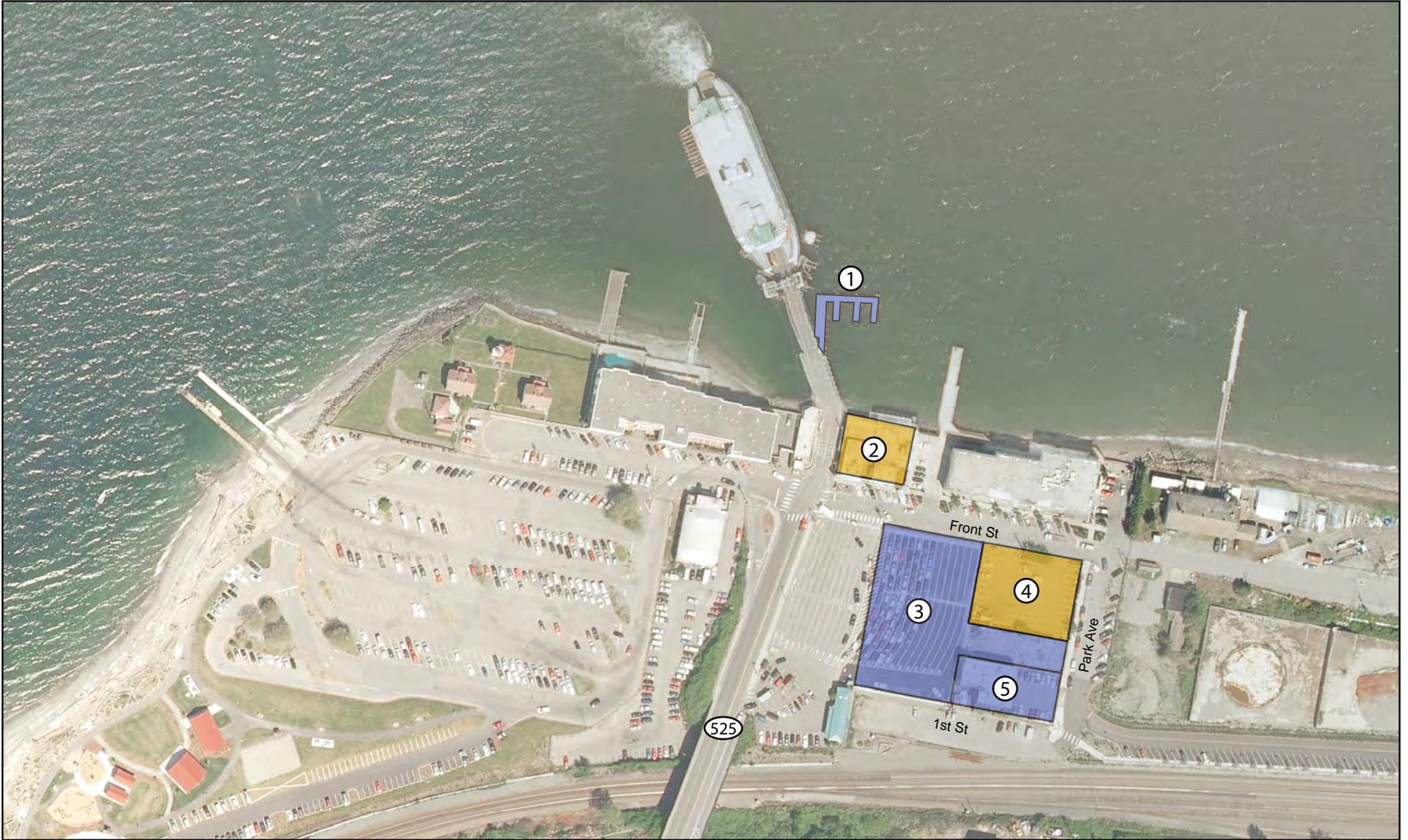
The acquisition of an existing building and the displacement of its associated uses would not have a substantial impact on the overall economic base of Mukilteo given the 4 million square feet of commercial use in the city, but it would affect the businesses using the building. This acquisition is unlikely to affect the viability of the local commercial area, especially if the existing terminal site is made available for redevelopment. The potential redevelopment is discussed under indirect and cumulative impacts (*Sections 4.2.5 and 4.2.6*).

### **Existing Site Improvements Alternative**

#### **Acquisition/Displacement**

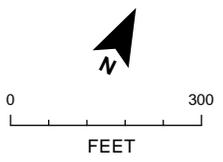
As shown in Figure 4.2-4, this alternative would require the following acquisitions:

- The existing Port of Everett fishing pier and seasonal day moorage would be removed.
- The existing Ivar's restaurant on the shoreline would be acquired for a new passenger building. The parking lot south of Front Street would be acquired for employee parking and the transit center. There is little potential for relocating the restaurant in the vicinity.
- The property currently leased for the ferry holding area would be acquired for the reconfigured vehicle holding area and the transit center.



- ① Port of Everett Fishing Dock/Moorage
- ② Ivar's Restaurant
- ③ Lot owned by A&J Enterprises (currently leased by WSF)
- ④ Parking Lot for Ivar's Restaurant
- ⑤ Mongrain Building

- All Alternatives
- Existing Site Improvements Alternative Only



**Figure 4.2-4. Properties Affected by the Alternatives**

- The Mongrain Building, which houses glass blowing studios and other businesses at Park Avenue and First Street, would be acquired, and its uses would be displaced.

### **Land Use Impacts**

This alternative would have few direct impacts on existing land uses because the configuration of existing land uses in the vicinity would change little. The expanded terminal would eliminate a sizable restaurant, which is one of the few businesses on the waterfront that attracts a substantial number of people. The displacement of this business would conflict with the City's goal of providing a pedestrian-oriented waterfront along Front Street.

The vehicle holding areas would be expanded. This area is set back approximately 160 feet from the edge of the water, and generally meets the criteria of accommodating the ferry terminal as a water-dependent use while locating ferry vehicle staging, shared parking spaces, vehicle circulation, and parking systems as far from the shoreline as possible.

Plans for the new passenger terminal facility remain conceptual; it is unknown at this time whether the terminal would allow public enjoyment of the water. This alternative does not advance the SMP provisions that call for continuous access along a waterfront promenade extending from Mukilteo Lighthouse Park to the Mount Baker Terminal. At-grade pedestrian crossings of the ferry loading area would still be provided via sidewalks, which is similar to today with crossings limited during loading and unloading.

Some public parking spaces on Front Street and Park Avenue that are typically used by local business patrons and persons accessing the shoreline would be eliminated. Demand for parking may not be adequately accommodated by the remaining spaces.

The displacement of the Port of Everett fishing pier would represent a net loss of shoreline public access facilities if it were not replaced.

Accommodation of the over-water facilities for the ferry terminal would be consistent with the SMA goals and the Aquatic Lands Act.

The continued presence of the terminal in the downtown area would not be consistent with the City's *Comprehensive Plan*, which envisions creating a transit-oriented destination on the Mukilteo Tank Farm and supporting the redevelopment of the existing terminal site.

### **Economic Impacts**

WSDOT would spend about \$130 to \$140 million (2015 dollars) to construct this alternative. This would provide short-term economic activity through job creation, purchase of materials, and sales tax revenue to the state. Based on a standard multiplier for the type of construction, the alternative would generate approximately 490 short-term construction jobs. Indirectly, these jobs would generate about 325 additional jobs in the region because these workers would spend their income on local goods and services. Sales tax revenues are estimated at about \$6.2 million. The City of Mukilteo is likely to receive only a portion of direct tax revenue from the purchase of construction materials because all suppliers are not likely to be located in Mukilteo.

Traffic congestion associated with the terminal would continue, particularly on Front Street. Congestion affects access to businesses and is perceived by some to reduce their economic viability.

The displacement of two properties with approximately seven existing businesses would not have a substantial impact on the overall economic base of Mukilteo given that there are 4 million square feet of existing commercial space throughout the city. The City of Mukilteo estimates a potential loss of \$50,000 annually in sales tax revenue from the businesses. An estimated 30 to 40 employees would be affected by the business displacements. Removal of Ivar's restaurant would eliminate the only business along the shoreline that provides opportunities for a close view of the water. There is little potential for relocating the restaurant in the immediate vicinity because of the lack of privately owned sites. There may be potential for relocation in the future to portions of the Mukilteo Tank Farm, but this would depend on several other factors, including the availability of the land, and when the Port or others would be able to prepare the site for development.

Impacts due to other potential developments along the Mukilteo waterfront are discussed under indirect and cumulative impacts (*Sections 4.2.5 and 4.2.6*).

## **Elliot Point 1 Alternative**

### ***Acquisition/Displacement***

This alternative would affect the following properties:

- The Mongrain Building, which houses glass blowing studios and other businesses, at Park Avenue and First Street would be acquired, and its uses would be displaced.
- Approximately 11 acres of the Mukilteo Tank Farm would be developed.
- The Mount Baker Terminal public shoreline access area's layout would be altered to accommodate vehicle access to the terminal. See *Chapter 5 Section 4(f)* for further discussion of impacts and mitigation for parks and recreation resources.

### ***Land Use Impacts***

This alternative would have a variety of impacts in relation to the applicable land use plans.

City of Mukilteo policies call for 20 percent of the development within the Mukilteo Tank Farm to be provided as open space or public access. The shoreline promenade and the daylighting of Japanese Creek would help meet this requirement.

Accommodation of the over-water facilities for the ferry terminal would be consistent with the goals of the SMA and the Aquatic Lands Act.

This ferry terminal location would be consistent with the *City of Mukilteo Comprehensive Plan*.

The vehicle holding area, transit facilities, and parking area would have minimal setback from the water and would not generally meet the SMP criterion for locating non-water-dependent uses as far from the shoreline as possible.

This alternative would respond to the SMP provisions that call for continuous access along the waterfront promenade extending from Mukilteo Lighthouse Park to the Mount Baker Terminal. It only partially achieves the objective by providing walkways along much of the shoreline and bicycle and pedestrian facilities set back from and parallel to the shoreline. Continuous pedestrian movement along the shoreline is interrupted by the ferry loading area. To access the shoreline promenade east of the ferry terminal, a pedestrian would have to walk to First Street and travel about 1,500 feet to get back to the promenade immediately east of the ferry loading area.

The location of the passenger terminal and maintenance facility on an over-water structure might conflict with SMP Policy UW 13, which limits new over-water structures to the minimum necessary to support the structure's intended use, and also requires shared pedestrian access.

The alternative would maintain parking spaces and public access to the shoreline access area at the Mount Baker Terminal, but would alter the site's current layout. Public access is required under a permit condition for the Mount Baker Terminal. The Everett Shoreline Substantial Development Permit requires a permanent public access road, although implementation was delayed pending the Mukilteo Tank Farm transfer to the Port.

### **Economic Impacts**

WSDOT would spend about \$150 to \$165 million (2015 dollars) to construct this alternative and remove the Tank Farm Pier. This would provide short-term economic activity through job creation, purchase of materials, and sales tax revenue to the state. Based on a standard multiplier for the type of construction, the project would generate approximately 475 short-term construction jobs. Indirectly, these jobs would generate about 315 additional jobs in the region and some workers would spend their income on local goods and services. Sales tax revenues are estimated at about \$6 million, a portion of which may go to the City of Mukilteo.

The acquisition of an existing building and the displacement of its associated uses would not have a substantial impact on the overall economic base of Mukilteo given the 4 million square feet of commercial use in the city, but it would affect the businesses using the building. It is unlikely to affect the viability of the local commercial area, especially if the existing terminal is made available for redevelopment.

Potential development on the existing ferry terminal site and the Mukilteo Tank Farm site is discussed under indirect and cumulative impacts (*Sections 4.2.5 and 4.2.6*).

## **4.2.4 Construction Impacts**

### **No-Build Alternative**

Construction would take place only as facilities require replacement, and would occur on lands already dedicated to transportation uses. Construction would have temporary effects on adjacent uses from noise, and possibly temporary disruption of traffic

circulation. Construction would occur only as specific facilities warrant major repair or replacement and would take place on limited facilities at any one time. The ferry terminal would be closed temporarily for work on in-water facilities.

Construction would temporarily disrupt access to local businesses, but is not expected to be severe enough to change land use during construction. Economic impacts during construction could result from avoidance of the area by retail and restaurant customers due to disruption of traffic circulation and noise impacts. Such impacts, however, are expected to be managed by WSDOT to ensure they do not adversely affect the economic viability of any businesses.

### **Preferred Alternative**

Construction would take place on a separate site, and the existing terminal would operate until construction is complete and new facilities are opened. Noise or traffic from the construction of new facilities and demolition of existing facilities may affect adjacent uses, including a hotel and the NOAA facility. However, construction impacts are unlikely to result in a change in land use or adversely affect the economic viability of adjacent land uses because noise-sensitive receptors are farther away. There is also the potential for temporary construction access routes to adversely affect the redevelopment of nearby properties, such as the NOAA laboratory, if the projects occurred concurrently.

### **Existing Site Improvements Alternative**

Construction is likely to have temporary noise impacts on adjacent uses, such as a condominium building and the Silver Cloud Inn, and possibly temporary disruption of traffic circulation. The loss of ferry service for an anticipated 1- to 2-month period may have economic impacts on businesses due to retail and restaurant customers avoiding the area because of disruption in traffic circulation and noise impacts. Businesses that depend on ferry traffic for patronage would experience a decrease in business during ferry closures.

### **Elliot Point 1 Alternative**

Construction impacts would be similar to the Preferred Alternative.

## **4.2.5 Indirect and Secondary Impacts**

### **No-Build Alternative**

The indirect impacts from retaining the existing site would include increased traffic-related problems; the City of Mukilteo has stated that these issues would constrain the development of its downtown waterfront area. Ferry operations would be similar to present conditions. Traffic congestion on local roadways at peak periods would continue to worsen as current problems remain unsolved. However, traffic congestion would likely not affect existing land use or have economic effects different from those described as direct impacts.

## Preferred Alternative

The relocation of the ferry terminal to the Mukilteo Tank Farm would result in more efficient ferry operations. At peak periods, operational delays would be less frequent. Traffic congestion on local roadways at peak periods would be less because of the greater capacity of the holding area. The development of an access road to the Mukilteo Tank Farm would also allow the Port of Everett to complete the public access route needed to open its shoreline area, as planned for the Mount Baker Terminal.

Plans to revitalize the waterfront would be supported by the expansion of the active waterfront area and the development of the access road and shoreline promenade. Unused areas of the tank farm site as well as areas vacated by WSDOT could provide increased opportunities to develop public open spaces or other uses consistent with the adopted land use plans of the Cities of Mukilteo and Everett. Design elements and interpretive features that reflect the site's rich cultural history and marine setting could also make the area more attractive to visitors.

## Existing Site Improvements Alternative

Potential traffic-related indirect impacts would be similar to the No-Build Alternative discussed above, although perhaps to a lesser extent due to the reconfiguration of facilities and a new intersection at First Street.

The displacement of parking for oversized vehicles, Ivar's restaurant, and another local business could reduce non-ferry patronage to the area as well as decrease patronage for other commercial uses. This might slow or constrain the City's ability to develop the area consistent with its plans. Design features or interpretive elements reflecting the area's historic significance could make the area more attractive to visitors and patrons.

## Elliot Point 1 Alternative

Potential indirect impacts would be similar to the Preferred Alternative discussed above; however, this alternative could potentially improve SR 525 congestion even more during peak travel times because the access roadway can hold more vehicles. As with the Preferred Alternative, the opportunity to integrate context-sensitive designs and open spaces reflecting the site's history and marine setting would help support revitalization of the area.

### 4.2.6 Cumulative Impacts

Land use trends were established within a short period after the Puget Sound region was settled by non-indigenous people in the 19th century. While development began in Mukilteo around the same time, it accelerated in the 1950s and 1960s with the construction of the Mukilteo ferry terminal and I-5. The land uses at the waterfront area have changed over time following development of the railroad and subsequent development of lumber, industrial, and shipping uses. This was followed by the military uses on what is now the Mukilteo Tank Farm. Other changes have included the development of the ferry terminal, the steady development of the surrounding neighborhoods in Mukilteo, and the transition to the existing uses in the area today.

For the future, the City of Mukilteo's land use planning for the waterfront reflects an increasing emphasis on the shoreline as a valuable public and environmental resource.

The City and Sound Transit are considering other longer term plans for adding parking for the Mukilteo Station, and are considering various sites along the waterfront. Depending on the ultimate site, the addition of parking could help support the City's waterfront vision.

These plans and projects could encourage future developments and changes to existing land uses, particularly in the area north of the BNSF tracks. Future developments would be subject to the conditions established by the City of Mukilteo's adopted land use plans, so these developments would be consistent with the City's land use goals and policies.

### **No-Build Alternative**

This alternative would not directly affect the Mukilteo Tank Farm. With the transfer of the Mukilteo Tank Farm to the Port of Everett, the parcel would be available for redevelopment under Mukilteo and Everett land use regulations. The City of Mukilteo has proposed to relocate the boat launch ramp currently located at the Mukilteo Lighthouse Park; it could be accommodated at the Mukilteo Tank Farm.

If the redevelopment of the Mukilteo Tank Farm relies on the existing road network, traffic congestion at SR 525 and Front Street could constrain access, which could limit redevelopment of the Mukilteo Tank Farm.

NOAA's plans for the Mukilteo Research Station within its portion of the Mukilteo Tank Farm include:

- Upgrading laboratories for the study of ocean toxicology, restoration of marine species and ecosystems, and ocean acidification
- Developing a new outreach and education center on the waterfront
- Rebuilding the existing pier, replacing or improving the clean seawater supply system used for laboratory research
- Improving support facilities for a fleet of small boats, field gear, and supplies

These changes would be subject to the City of Mukilteo's development regulations and are not likely to affect land uses in the vicinity or change redevelopment options for other portions of the Mukilteo Tank Farm.

The discussion of direct effects for this alternative noted that it would not support the City of Mukilteo's land use policies focusing on redeveloping the existing terminal and nearby lands. In the long term, the presence of the terminal and associated traffic congestion, particularly on Front Street, may affect the economic viability of businesses that depend on convenient access for their customers, especially non-ferry customers. It is possible, however, that the continuing presence of the ferry terminal would provide a customer base that would support existing establishments, and could lead to other businesses oriented to persons waiting to board ferries.

As indicated above, traffic congestion at SR 525 and Front Street could impede redevelopment of the Mukilteo Tank Farm and curtail economic activity.

### **Preferred Alternative**

Relocation of the ferry terminal would allow WSDOT to release its interests in the existing vehicle holding area as well as at the existing terminal building. This could result in approximately 1 acre of land (not including First Street) available for other uses, subject to the City of Mukilteo mixed use zoning requirements. Under City codes, this area could accommodate about 66,000 to 160,000 square feet of first-floor retail space, depending on whether surface or structured parking were used. It would also accommodate between 80 and 160 upper-story residential units, depending on available parking and number of floors. NOAA's planned redevelopment of its facility could contribute to a more integrated district. Otherwise, the impacts of NOAA facilities considered for development in the area would be the same as described under the No-Build Alternative.

Areas on the Mukilteo Tank Farm that are not needed for the Preferred Alternative could be available for other uses, including future redevelopment. This could result in the waterfront area having diverse land uses and economic functions rather than functioning as a single district. The City's policies require 20 percent of the Mukilteo Tank Farm site be reserved for public use or open space. The Preferred Alternative includes a promenade, which would contribute to meeting this requirement. Development plans for other parts of the Mukilteo Tank Farm would also be required to contribute to the 20 percent public use or open space requirement.

The anticipated relocation of the City of Mukilteo boat launch ramp currently at Mukilteo Lighthouse Park could be accommodated at the Mukilteo Tank Farm. The ramp would have to be located east of the ferry terminal and would require additional access and site development. This could potentially be combined with the completion of public access serving the Port of Everett's shoreline access area at the Mount Baker Terminal.

Also, the City of Mukilteo is working with Sound Transit to explore concepts for developing additional parking facilities for the waterfront, including potentially a parking garage. These plans are in early stages and the size, location, timing, and configuration of the facilities are not yet known. Increased parking could address problems associated with limited parking for the Mukilteo Lighthouse Park and could help make the waterfront area more accessible to more visitors and business patrons.

### **Existing Site Improvements Alternative**

If the terminal remains at its current location, NOAA facilities could still be improved and the City could still relocate its boat launch on the Mukilteo Tank Farm, and other areas of the tank farm could be available for redevelopment by others, which would generate economic activity. However, traffic congestion at SR 525 and Front Street could impede redevelopment, although to a lesser extent than with the No-Build Alternative because the extension of First Street to a new signalized intersection at SR 525 would improve traffic operations in the area.

## Elliot Point 1 Alternative

As with the Preferred Alternative, relocation of the ferry would likely result in WSDOT releasing its interests in the existing vehicle holding area, which would allow redevelopment of the area.

For development of the Mukilteo Tank Farm, the City's policies require 20 percent of the site be reserved for public use or open space. The Elliot Point 1 Alternative includes a promenade and daylighting of Japanese Creek, which would partially meet this requirement. However, development plans for other parts of the Mukilteo Tank Farm would be required to help satisfy the requirement.

If the existing holding area can be developed, along with other remaining developable areas on the Mukilteo Tank Farm, the entire area would have more potential to function as a single business district as compared to the Preferred Alternative. The configuration of the parcel reserved for NOAA could contribute to a more integrated district. Otherwise, the impacts of NOAA facilities considered for development in the area would be the same as described under the No-Build Alternative.

The City of Mukilteo boat launch ramp could be relocated from the Mukilteo Lighthouse Park to be part of the Elliot Point 1 Alternative development on the Mukilteo Tank Farm, but details of its access and siting would require further planning.

### 4.2.7 Mitigation Measures

Acquisition of private property would occur under all Build alternatives. WSDOT would provide compensation at fair market value for property and property rights acquired; relocation assistance for displacement would be provided in accordance with applicable federal and state regulations.

If the project uses federal funding, then it must comply with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 USC 4601). The act establishes a uniform policy on relocation assistance and on real property acquisition practices for programs or projects undertaken by a federal agency or with federal financial assistance. The primary purpose of this policy is to minimize the hardship of displacement on people and ensure that they do not suffer disproportionate injuries. As defined by this federal act, a displaced person is any person (family, partnership, corporation, or association) who moves from or moves their personal property from the real property affected (49 CFR Part 24.2).

The Washington State Real Property Acquisition Policy Act (RCW 8.26) is similar, except it establishes policy for the public works programs and acquisition practices of state and local governments. Implementing regulations for WSDOT are found in Washington Administrative Code (WAC) 468-100; all activities related to acquisitions, displacements, and relocations will comply with the requirements of this regulation. According to the state's property acquisition act, a displaced person who is required to move can include any individual, family, partnership, corporation, or association who moves or moves their personal property from the real property affected (RCW 8.26.020(4)).

For the Preferred Alternative, mitigation measures include:

- WSDOT would work with the City of Mukilteo during final design to resolve areas where the project does not fully meet Shoreline Management Plan criteria. WSDOT may modify the project's design, or it may ask the City for an exemption or provide other compensatory features such as additional open space as mitigation. Potential final design modifications could include increasing the setback for non-water-dependent elements; reducing storage lane capacity where the current design exceeds the capacity required under WSDOT's design criteria; modifying the location of the employee parking area; or increasing the setback for the transit area. However, potential final design modifications will need to consider WSDOT's design criteria for ferry terminals, impacts on potential archaeological resources, other environmental impacts, tradeoffs in transportation benefits and safe and secure facility operations, and other factors.

For the Existing Site Improvements Alternative potential mitigation measures include:

- Provision of public access facilities specified in the SMP could be accommodated by providing a pedestrian walkway on the water side of the proposed passenger terminal separated from ticketed ferry passengers. An example of such a facility is at the adjacent Silver Cloud Inn; however, this walkway would create additional over-water coverage.
- A pedestrian overpass over the ferry loading area would accommodate public access along the shoreline without pedestrian and vehicle conflicts.

For the Elliot Point 1 Alternative potential mitigation measures include:

- Changes in the site plan that could help the alternative meet the SMP criteria of locating vehicle-related elements (e.g., parking) farther from the shoreline. However, feasible options must meet the project's purpose and need while contending with the site's many physical and environmental constraints. For instance, one approach that would move vehicle-related elements away from the shoreline may cause additional impacts on cultural resources, may hinder opportunities to daylight Japanese Creek (or require bridging the creek), and may degrade the efficiency of ferry operations. Options must be evaluated in terms of tradeoffs in transportation benefits and safe and secure facility operations. If the site plan cannot be adjusted to meet the SMP criteria without unacceptably compromising the project's purpose and need or creating unacceptable impacts on environmental or cultural resources, a mitigation strategy would provide compensatory open space areas along the shoreline in areas west of the terminal.
- Locating the passenger terminal and maintenance facilities on land rather than on an over-water structure would respond to SMP policies limiting over-water facilities to the minimum needed. However, this would involve assessing the tradeoffs among public open space, public access, distances traveled by pedestrians to access ferries, operational needs, and other environmental effects.

- The displacement of a portion of the upland recreation area provided as part of the shoreline access area at the Mount Baker Terminal could be compensated by providing similar recreation areas elsewhere on the ferry terminal site or the larger Mukilteo Tank Farm site (see *Chapter 5 Section 4(f)* for more detail).
- Policies for a continuous pedestrian promenade along the shoreline, combined with an open space corridor, would need to be addressed by WSDOT and the City of Mukilteo at the time of final design and permitting. WSDOT and the City of Mukilteo would need to determine whether there are options to the current proposal that provide a continuous corridor along the water and also recognize the security needs of the terminal.

To reduce construction impacts on existing businesses and public land uses for all alternatives, the following measures would be taken:

- Through final design, permitting, and outreach to the affected properties, WSDOT will confirm the specific measures to minimize impacts on adjacent land uses, in coordination with the City of Mukilteo as part of required permitting.
- Construction timing of key elements that disrupt business access would be planned for seasons or times of day when business peak operations would be less disrupted.
- Detour routes would be clearly marked to provide clear routes to access businesses and existing public access areas, and temporary parking would be provided on parcels acquired before construction, as practicable. The location of any temporary access routes would be designed in coordination with nearby property owners to minimize potential conflicts to the extent practicable; construction activities would be conducted as defined in construction permits required by the City of Mukilteo.
- A program of public information and business outreach would assist businesses in planning deliveries and other essential support activities around construction times.
- A public information campaign to inform the public that businesses are open would encourage patronage at these businesses during construction.

### 4.3 Noise and Vibration

Sound and vibration are around us all the time but may become a nuisance or create an adverse effect when they are too loud, too frequent, or disruptive to normal activity. Sound is any change in air pressure that the human ear can detect, from barely perceptible sounds to sound levels that cause hearing damage; the greater the change in air pressure, the louder the sound. When sounds are unpleasant or disturbingly loud, they are generally considered “noise.” Although human response to noise varies from person to person, identifying and mitigating project-related noise can reduce noise impacts on the population at large.

This section analyzes potential land-based sound and vibration impacts that would result from both the roadway improvements and the multimodal transit facilities. Potential aquatic noise impacts are discussed in *Section 4.12 Ecosystems*. The information in this section is based on the findings of the *Noise and Vibration Discipline Report*, which is an appendix to this EIS.

### **4.3.1 Overview of Analysis and Regulatory Context**

#### **Regulatory Context**

State and local laws regulate noise from operational activities of land uses but do not regulate noise from traffic on public roadways. Construction noise is addressed by Washington Administrative Code, Chapter 173-60 (WAC 173-60), and local governments typically apply noise control measures for construction through their land use codes.

In accordance with the FTA's *Transit Noise and Vibration Impact Assessment* guidance manual, an inventory of the potentially affected properties was identified in a screening process. There are no noise- or vibration-sensitive locations within the screening distance of the No-Build and Elliot Point 1 alternatives; six noise-sensitive locations were identified with the Existing Site Improvements Alternative. Two noise-sensitive locations were within the screening distance of the Elliot Point 2 Alternative (as presented in the Draft EIS); however, the design refinements for the Preferred Alternative (Elliot Point 2 Alternative) relocated the parking facility so that there are no noise-sensitive receptors within the screening distance for this alternative.

The analysis of potential noise impacts uses FTA's methods to evaluate noise and vibration levels caused by transit- and ferry-related elements of the project alternatives, along with Federal Highway Administration (FHWA) methods for assessing noise impacts associated with roadways. Further detail is available in the *Noise and Vibration Discipline Report*.

#### **Background Information About Noise Levels**

Various descriptors are used for sound and noise levels, including the A-weighted decibel scale (dBA), sound level equivalents (Leq), day-night average sound levels (Ldn), and percentile levels. The most common measurement of sound and environmental noise is the dBA. This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. The threshold of human hearing is about 0 dBA; less than 30 dBA is very quiet; 30 to 60 dBA is quiet; 60 to 90 dBA is moderately loud; 90 to 110 dBA is very loud; and 110 to 130 is uncomfortably loud. Figure 4.3-1 shows typical noise levels from various sources.

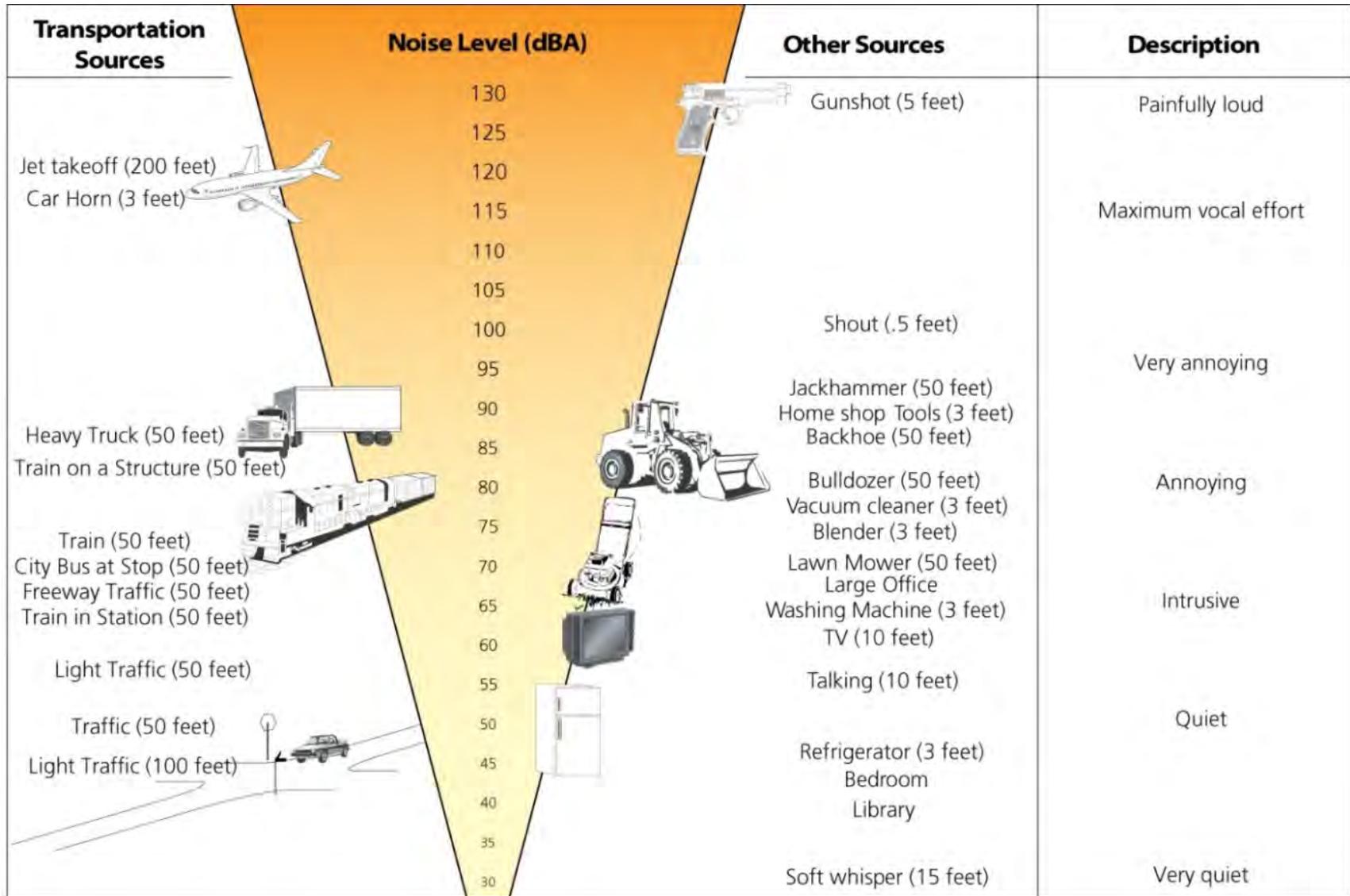


Figure 4.3-1. Expected Decibel Levels from Various Noise Sources

Human conversation generally ranges between 44 and 65 dBA when people are about 3 to 6 feet apart. The smallest change in noise level that the human ear can perceive is usually a 3 dBA increase in noise. An increase of 5 or 6 dBA is readily noticeable, and sound that increases by 10 dBA appears to be twice as loud to most listeners. A doubling of the number of noise sources, such as the number of cars operating on a roadway, increases noise levels by 3 dBA (FHWA and WSDOT 2006). A tenfold increase in the number of noise sources will usually add 10 dBA to the background noise levels. As a result, a noise source emitting a noise level of 60 dBA combined with another noise source of 60 dBA yields a combined noise level of 63 dBA, not 120 dBA.

Noise levels decrease with distance from the noise source. For a linear source such as a roadway, noise levels decrease 3 dBA over hard ground (concrete or pavement) or 4.5 dBA over soft ground (grass) for every doubling of distance between the source and the receptor. For a point source such as a construction activity, noise levels decrease between 6 and 7.5 dBA for every doubling of distance from the source.

Noise levels from traffic sources depend on volume, speed, and the type and condition of vehicles. Generally, an increase in volume, speed, or vehicle size increases traffic noise levels. Vehicle noise is a combination of noises from the engine, exhaust, and tires. Malfunctioning vehicle parts (such as mufflers) can increase traffic noise. Noise travels in a straight line-of-sight path between the source and a receiver. Terrain, along with shielding by barriers and buildings, can greatly affect the propagation of noise.

## Overview of Analysis

The potential for long-term noise impacts from the operation of the project alternatives was evaluated using models designed to predict transportation-related noise.

Potential construction noise and vibration effects were evaluated qualitatively because of the temporary nature of construction and the variability of the construction activities. However, given the typical types of equipment used, the location of the Build alternatives, and the overall schedule for construction, a qualitative assessment still allows impacts and mitigation to be identified.

### 4.3.2 Affected Environment

Noise sources in the project area include air traffic to and from Paine Field airport, freight and passenger trains on the BNSF railroad, barge and rail traffic at Mount Baker Terminal, automotive traffic on SR 525 and local streets, and ferry arrivals and departures at the Mukilteo ferry terminal. South of the railroad tracks, the railroad dominates the noise levels, and residents experience comparatively minor levels of noise from the existing ferry terminal, airport, transfer facility, and roadway traffic. North of the railroad tracks, rail vehicles and ferry traffic along SR 525 add to the ambient sound level for residential land uses nearest the waterfront.

Table 4.3-1 lists noise monitoring locations and their measured sound levels. Measurements at seven receivers represent the existing ambient (or background) sound levels in the project vicinity along the waterfront. The variations show how

sound levels at some locations can be affected by passing trains or by traffic. The project also includes a site (MMM-1) representing typical sound levels near the ferry terminal as experienced by people at the Losvar Condominiums and Silver Cloud Inn. The dominant sound levels at MMM-2 came from the docking ferry and people on the beach.

**Table 4.3-1. Project Noise Monitoring Locations and Findings (dBA)**

| Project Site No. | Address                        | Day/Night Measurement Range | Time Period | 15- to 30-Minute Noise Levels | Calculated 24-Hour Levels |
|------------------|--------------------------------|-----------------------------|-------------|-------------------------------|---------------------------|
| RBTF-1           | 1146 Second Street             | 39.5 to 76                  | 68 hr.      | n/a                           | 76.7                      |
| RBTF-2           | 1513 Mukilteo Lane             | 38.1 to 58.7                | 68 hr.      | n/a                           | 57.7                      |
| TM-1             | 615 Third Street               | 49.7 to 64                  | 24 hr.      | n/a                           | 66.2                      |
| TM-2             | 822 Second Street              | 42.4 to 71.9                | 24 hr.      | n/a                           | 70.4                      |
| AA-1             | 103 Cornelia Avenue            | n/a                         | 30 min.     | 71.6                          | 69.6                      |
| MMM-1            | 612 Third Street               | n/a                         | 15 min.     | 70.4                          | 68.4                      |
| MMM-2            | NOAA Mukilteo Research Station | 41 to 55.3                  | 13 hr.      | n/a                           | 52.1                      |

n/a = not applicable  
 RBTF = Port of Everett Satellite Rail/Barge Transfer Facility Noise Analysis, May 2004  
 TM = Noise Monitoring Tech Memo, October 2004  
 AA = Adolfson Associates, March 2005  
 MMM = Mukilteo Multimodal Measurements, March 2011

### 4.3.3 Long-Term Environmental Impacts

This section describes how noise and vibration could affect noise- and vibration-sensitive locations. Table 4.3-2 provides an inventory of properties identified in the screening process. Only sites identified in this inventory require additional assessment of potential noise or vibration effects. The *Noise and Vibration Discipline Report* contains additional information about the analysis, and it also shows monitoring locations and noise- or vibration-sensitive properties.

**Table 4.3-2. Noise and Vibration Sensitive Receptors Inventory**

| Noise- and Vibration-Sensitive Receptors | Project Elements                                      |                  |                         |                                     |
|--|---|------------------|-------------------------|-------------------------------------|
|  | Ferry Vessel Terminal Dock                            | Parking Facility | SR 525 and Access Roads | Transit Center and Mukilteo Station |
| <b>No-Build Alternative</b>              |   |                  |                         |                                     |
| None                                     | No Noise- or Vibration-Sensitive Receptors            |                  |                         |                                     |
| <b>Preferred Alternative</b>             |   |                  |                         |                                     |
| None                                     | No Noise- or Vibration-Sensitive Receptors            |                  |                         |                                     |
| <b>Existing Site Improvements</b>        |   |                  |                         |                                     |
| Losvar Condominiums                      | Noise   | Noise            | --                      | --                                  |
| Silver Cloud Inn                         | Noise   | Noise            | Noise                   | Noise                               |
| 111 Park Avenue                          | --  | --               | --                      | Noise                               |
| 724 Second Street                        | --  | --               | --                      | Noise                               |
| 726 Second Street                        | --  | --               | --                      | Noise                               |
| 728 Second Street                        | --  | --               | --                      | Noise                               |
| <b>Elliot Point 1 Alternative</b>        |   |                  |                         |                                     |
| None                                     | No Noise- or Vibration-Sensitive Locations Identified |                  |                         |                                     |

### **No-Build Alternative**

The No-Build Alternative would not change noise-generating activities and therefore would not cause additional impacts compared to existing conditions.

### **Preferred Alternative**

Under the Preferred Alternative, all project elements are far enough from the noise-sensitive land uses to avoid potential impacts.

### **Existing Site Improvements Alternative**

The Existing Site Improvements Alternative is near the greatest number of noise-sensitive receivers. These include the Silver Cloud Inn, Losvar Condominiums, and four residential properties along Mukilteo Lane, Second Street, and Park Avenue.

The Silver Cloud Inn is the only receiver that is within a potential area of impact due to changes to roadways. Front Street would change to a one-way street in front of the property, but the extension of First Street would be beyond the potential area of impact for the hotel or any other noise-sensitive property. Model results indicate that during peak traffic periods, noise levels would reach 56 dBA, which is well below the 66 dBA threshold where impacts to noise-sensitive properties would occur. Similarly, the sound levels at the hotel, condominiums, and residential properties near the transit center or other new noise sources were anticipated to reach 55, 52, and 51 dBA, respectively, all below the noise impact threshold.

### **Elliot Point 1 Alternative**

Under the Elliot Point 1 Alternative, all project elements are far enough from the noise-sensitive land uses to avoid potential impacts.

## **4.3.4 Construction Impacts**

### **No-Build Alternative**

Even under the No-Build Alternative, the activities to maintain existing operations at the site would include construction of a replacement slip and terminal buildings and ongoing maintenance activities for the existing ferry terminal. Temporary, short-term impacts from construction noise, such as pile driving and demolition associated with the replacement of the terminal buildings and slip, would result from these activities. Pedestrians passing by and individuals working near the construction activity would be most affected.

No existing nearby structures would be damaged by construction of the No-Build Alternative and construction vibration would not exceed the federal impact criteria established by FTA. A general assessment of construction vibration effects on the NOAA Mukilteo Research Station indicates that the facility would experience vibration levels below the lowest FTA damage criteria for structures. FTA guidance suggests that facilities with laboratory equipment, such as optical microscopes and microbalances, can be evaluated by conducting a general assessment for the effects of vibration on these types of facilities. WSDOT conducted a general assessment for the NOAA facility and found the potential for some construction activity vibrations

to exceed the Category 1 (65) VdB threshold, which would apply to activities using microscopes or other specialized equipment.

### **Construction Impacts Common to All Build Alternatives**

WSDOT anticipates that all of the Build alternatives would require approximately 2 years to construct. Major construction elements include demolition, earth moving, hauling, grading, paving, pile driving, pier construction, building construction, and road construction. General construction noise and vibration impacts could be expected during all of these construction elements, but would be most pronounced during demolition, pile driving, and road construction.

### **Preferred Alternative**

As with the No-Build Alternative, no existing nearby structures would be damaged and noise or vibration levels would not exceed the federal annoyance criteria. Although additional demolition and construction activities would occur on the Mukilteo Tank Farm, the closest noise- and vibration-sensitive receivers are located near the existing terminal. Construction noise could be annoying for passersby and individuals working near the construction, but it would not disrupt normal activities.

With the Preferred Alternative, the potential for impacts on the NOAA Mukilteo Research Station would be less than the Existing Site Improvements Alternatives because construction of the ferry terminal, access road, and holding area would be located farther away from the NOAA facility; it would also be less than No-Build's construction impacts. However, demolition activities would still occur at the existing terminal site, and there would be the potential for some construction activity vibrations to exceed the Category 1 (65) VdB threshold, with the potential to affect sensitive equipment at NOAA.

### **Existing Site Improvements Alternative**

Under the Existing Site Improvements Alternative, the Losvar Condominium and Silver Cloud Inn residents and guests would likely experience greater noise and vibration annoyance than other area residents due to their proximity to the project site. As with the No-Build Alternative, no existing nearby structures would be damaged nor would noise or vibration levels exceed the federal impact criteria. More construction activity would occur near the NOAA research facility compared to the No-Build Alternative; therefore, there would be a greater potential for construction vibration to affect laboratory experiments conducted at the NOAA Mukilteo Research Station.

### **Elliot Point 1 Alternative**

The Elliot Point 1 Alternative would have impacts similar to those described above for the Preferred Alternative.

### **4.3.5 Indirect and Secondary Impacts**

Indirect or secondary impacts are caused by the proposed action that occur later in time or farther removed in distance but are still reasonably foreseeable. Indirect

impacts may include growth-inducing impacts and other impacts related to induced changes in the pattern of land use, population density, or population growth rate. Because this project would not substantially increase the capacity of any of the current facilities, no indirect impacts are reasonably foreseeable for the currently proposed alternatives.

### **4.3.6 Cumulative Impacts**

The Mukilteo downtown and waterfront areas were settled and developed before the advent of the automobile and other noise sources such as the BNSF railroad corridor, Paine Field, and the Mukilteo ferry terminal. After World War II, population growth in the central Puget Sound region accelerated, leading to increased commercial development and roadway traffic. In 1952, the Mukilteo Ferry terminal began operation. In the 1960s, I-5 was built, leading to increased traffic on SR 525. This combination of increased population, development, and roadway traffic have contributed to greater sources of noise in the Mukilteo downtown and waterfront areas than existed historically.

The noise modeling and analysis considers the long-term cumulative impacts of noise from existing noise sources, including freight and passenger rail, and all traffic forecasted within the study area. This includes traffic growth from the Mukilteo Station, the Mount Baker Terminal, and potential residential and commercial development on remaining portions of the Mukilteo Tank Farm and in the downtown core. The baseline also includes growth in rail traffic along the BNSF railroad corridor.

Transportation is one of the primary noise sources in the project area; therefore, the likely cumulative change to noise levels is already considered. While future development could introduce new noise-sensitive uses as well as other noise sources, no specific projects have been permitted at this time. NOAA's planned expansion would be a source of noise, but would not affect sensitive properties. Given the lack of significant impacts on existing noise-sensitive properties, long-term noise levels at new properties would likely be similar to baseline conditions. Construction of other projects, including NOAA's planned redevelopment, could introduce additional construction noise. If the projects occur concurrently, this additional noise could result in a temporary cumulative noise impact.

### **4.3.7 Mitigation Measures**

Noise abatement and minimization measures have been designed into all alternatives. The abatement and minimization measures for long-term impacts, construction impacts, indirect impacts, and cumulative impacts are described in the following subsections.

#### **Mitigation for Long-Term Impacts**

Noise and vibration effects of the four alternatives were analyzed, as discussed in *Section 4.3.3*. None of the project alternatives anticipate noise or vibration effects that would cause impacts that require abatement.

## **Mitigation for Construction Impacts**

For all alternatives, including the Preferred Alternative, activities that generate high noise levels, such as demolition activities and pile driving, would follow a pre-approved schedule as defined by construction permits required by the City of Mukilteo to limit the noise effects of the construction activity on the nearby residential community on the bluff south of the project site. For example, the contractor would be required by the Washington Administrative Code and Mukilteo Municipal Code to restrict noise-generating construction activities to daylight hours or obtain a variance from the City of Mukilteo.

To minimize the duration of high noise levels, construction activities would be staged to occur simultaneously, if possible. The total noise level of the activities together would not be substantially greater, or more noticeable, than the largest of the noise levels generated by each of the single noise events.

Construction noise could be minimized by several means, including the use of effective vehicle mufflers, engine intake silencers, and engine enclosures; shutting off equipment when not in use; locating activities away from noise-sensitive receivers when possible; placing portable noise barriers around stationary equipment, such as a concrete crushing plant; and reducing the use of specific equipment, such as jack hammers, by using hydraulic tools instead.

The impacts of construction vibration at the NOAA Mukilteo Research Station would be minimized by means of preconstruction coordination and notification, as would be defined in construction permits required by the City of Mukilteo, and as defined through pre-construction coordination plans to be developed with NOAA. This would include:

- Using static rollers instead of vibratory rollers, when feasible
- Coordinating and scheduling any vibratory rolling or impact pile-driving activities with the NOAA facility to minimize interruption
- Monitoring the foundation vibration at the NOAA facility during vibratory rolling or impact driving within 500 feet to avoid exceeding the Institute of Environmental Science (IES) criteria for laboratory equipment
- As final design and construction plans are completed, coordinating with NOAA to identify any other potential vibration-sensitive activities or research that could occur during the construction period, and identifying measures to address disruption or interference with research activities

## **Mitigation for Indirect and Secondary Impacts**

Because no indirect or secondary noise and vibration impacts are reasonably foreseeable, no mitigation of indirect noise and vibration impacts would be necessary.

## **Mitigation for Cumulative Impacts**

Coordination of concurrent construction activities, such as NOAA's planned redevelopment or other City of Mukilteo or Sound Transit projects that occur within the same timeframe, would reduce potential cumulative noise impacts.

## **4.4 Visual Quality, Aesthetics, and Light and Glare**

Visual perception and experience is an important component of environmental quality. Because of the public nature and visual importance of the Mukilteo Multimodal Project, changes to the visual environment are being addressed during project development as part of the EIS.

### **4.4.1 Overview of Analysis**

This section examines the potential effects of the project alternatives on visual resources in the project area, as required under NEPA and SEPA.

The proposed alternatives are located primarily within the City of Mukilteo's land use planning jurisdiction, with a small portion to the east within the Everett city limits. Both jurisdictions have policies related to visual and aesthetic quality in their comprehensive plans, SMP, and permit review criteria.

### **Methods for the Visual Quality Assessment**

The assessment of visual quality, or aesthetics, is concerned with both the character of the visual experience and the effect upon the viewer. (For the purposes of this analysis, visual quality and aesthetics are analogous terms.) It is subjective in that the person perceiving the visual environment brings personal and cultural frames of reference to the discernment and evaluation of visual information. Still, regulations and research establish a general public consensus of what constitutes a desirable visual environment.

For this analysis, the visual or aesthetic experience includes three critical parameters:

- Visual character
- Visual quality
- Viewer response

Visual character refers to identifiable visual information. It may be distinguished both at the level of specific elements and at the level of the relationships among elements.

Visual quality refers to the value of the visual experience to the public. Vividness refers to the way landscape components combine in distinctive and memorable visual patterns.

Intactness refers to the integrity of natural and human-built visual patterns, and the extent to which the scene "hangs together." It also includes the extent to which the landscape is free from encroaching elements.

Viewer response is analyzed in terms of exposure and sensitivity. Viewer exposure refers to the physical location of viewer groups, the number of people exposed to a view, and the duration of their view. Viewer sensitivity refers to the degree in which a viewer perceives elements of the environment and the extent to which those elements are important to the viewer. This perception is affected by factors such as the activities a viewer is engaged in; the visual context; and the values, expectations, and interests of a group of persons or a person involved in a particular activity or context.

Viewpoints for this analysis were selected on the basis of:

- A substantial number of viewers
- Features that are representative of the existing conditions
- Views with high visual quality

Photographs were taken from viewpoints and reproduced at a scale that shows the static field of view an observer would see standing at the site. These photographs provide an accurate representation of the scale of elements of the view in relation to other objects. They do not, however, reproduce the entire field of view perceived by a human observer.

#### **4.4.2 Affected Environment**

The Mukilteo Multimodal Project area is located in the northernmost part of the city of Mukilteo adjacent to the city of Everett. The area of the alternatives is an east-west-oriented portion of the Possession Sound shoreline. In Everett, the shoreline continues generally northward.

Major land uses along the shoreline include the Mukilteo Lighthouse Park at the west end of the point, which includes a boat launch and 6.6 acres of parking, as well as the lighthouse, a volleyball court, and picnic tables. A condominium development, a restaurant, and a hotel are between the lighthouse and Park Avenue. To the west of SR 525, the ferry holding area covers most of the street frontage to Park Avenue. NOAA Fisheries operates the Mukilteo Research Station on 1.1 acres east of Park Avenue. The Mukilteo Tank Farm extends about 3,200 feet along the shoreline east of Park Avenue. It consists largely of partially demolished storage tanks, a variety of support facilities in various stages of deterioration, and a 1,300-foot-long unused pier. The Mount Baker Terminal occupies a 1.5-acre site east of the Mukilteo Tank Farm.

The BNSF railroad generally forms the boundary between flat land to the north and a steep bluff to the south. Sound Transit's Mukilteo Station, east of Park Avenue, includes platforms and parking.

South of the BNSF railroad, land uses are primarily single-family residential areas west of SR 525 and east of Park Avenue. A commercial area extends between the BNSF tracks and Third Street bounded by SR 525 on the west and Park Avenue on the east.

The areas described below were identified to best represent and analyze the affected environment. Viewpoints were selected from these areas (Figure 4.4-1):

- The Puget Sound/Possession Sound shoreline. This area generally accommodates views parallel to the shoreline. Four viewpoints were chosen from this area.
- The flat upland area between the shoreline and the BNSF right-of-way. Only one viewpoint was selected from this area because the topography and buildings along the shoreline do not offer views of significant features of the alternatives.
- The bluff immediately south of the BNSF tracks. Four viewpoints were chosen from this area.

Selected viewpoints are as follows, and are shown in *Section 4.4.8*.

**Viewpoint 1, View East from Mukilteo Lighthouse.** This shoreline viewpoint (Figure 4.4-2) is located just north of the lighthouse and outside of the concrete seawall at the end of a pedestrian walkway. This viewpoint faces east and includes the existing ferry terminal as a major foreground element. In the distance, the peaks of the Glacier Peak Wilderness Area in the North Cascades are the most vivid feature on clear days. The terminal facilities partly obscure views of the city of Everett and Port Gardner. The activity of ferries landing, loading, and departing, however, provide visual interest in themselves.

The ferry terminal is the major source of light in this area. There is also some exterior lighting on the condominium building and buildings east of the terminal.

The viewing population from this area consists of park users and beach users. This population is larger in the summer, but continues year-round. Viewers can be considered sensitive to the visual context; however, they have a wide range of potential views to choose from. They can look away from the ferry terminal to enjoy natural views or they can look toward the terminal.

**Viewpoint 2, View West from Silver Cloud Inn Shoreline Public Access.** This viewpoint (Figure 4.4-3) is located just east of the existing ferry terminal from a public access walkway between Ivar's restaurant and the Silver Cloud Inn. The view is to the west along the orientation of the shoreline, and includes the existing ferry terminal as a major foreground element framed by Ivar's restaurant to the south. In the distance, above the terminal, the Olympic Mountains are the most vivid feature on clear days but are substantially obscured by the terminal facilities, particularly when a ferry is docked. The man-made features of the ferry terminal are the dominant elements of the view, and the natural features of mountains and water are minor elements. The terminal is an encroaching element in distant view, but also provides a near-view focus of maritime activity. The ferries, with the landing, loading, and departing activities, provide visual interest.

The ferry terminal is a major source of light at night, and there is some exterior lighting on buildings. Viewers are mostly persons enjoying the public access area that parallels the shoreline.



- Project Area
- - - Shoreline
- · - Upland
- Bluff

Figure 4.4-1. Viewpoints

**Viewpoint 3, View East from Silver Cloud Inn Shoreline Public Access.** This viewpoint (Figure 4.4-4) is from the public access pier between Ivar's restaurant and the Silver Cloud Inn. The view faces east along the shoreline, and is about 100 feet north of Viewpoint 2. The distant views are dominated by the peaks of the Glacier Peak Wilderness Area in the North Cascades on clear days. The extensive water areas of Possession Sound and Port Gardner Bay provide an additional area of visual interest visible in all weather conditions. The dominant features in the near and middle distance are the NOAA pier and Tank Farm Pier at the Mukilteo Tank Farm. The two piers do not obscure distant views of the mountains because those structures are well below the line of sight. They do, however, obscure distant shoreline features of the city of Everett and Port Gardner. The pier and the Mukilteo Tank Farm are encroaching elements that reduce the integrity and unity of near to middle-distance views.

There is relatively little exterior lighting in the immediate vicinity. The Silver Cloud Inn and NOAA Mukilteo Research Station have exterior security lights, but there are no urban street lights visible. There is little lighting on the Mukilteo Tank Farm. Mount Baker Terminal is a more distant source of light at night.

Viewers are mostly persons enjoying the public access area that parallels the shoreline.

**Viewpoint 4, View West from Mount Baker Terminal Shoreline Access Area.**

This viewpoint (Figure 4.4-5) is located just west of the Mount Baker Terminal within a shoreline access area that includes a beach to the east and picnic areas. The view is from the beach area, to the west along the shoreline. It is dominated by the Olympic Mountains on clear days. On days when vision is obscured, the most extensive horizon feature is the wooded ridgeline of Whidbey Island. The extensive water areas of Possession Sound provide an area of interest both as a natural feature and as the context for a variety of human activities on the water ranging from commercial shipping to recreational boating. Distant views of the mountains are not obscured by the Tank Farm Pier in the middle distance because it is well below the line of sight. The pier does, however, substantially obscure views of the existing ferry terminal. The shoreline features of the Mukilteo Tank Farm at a middle distance are a disorganized assemblage of partially demolished facilities that reduce the integrity and unity of this portion of the view.

There is relatively little urban street lighting in the immediate vicinity. Lights of the downtown area west of Park Avenue and from the ferry terminal are visible in the distance. There is little lighting on the Mukilteo Tank Farm.

The viewing population from this area is relatively small because the site does not currently have vehicular access or local public access, but access is intended for future public use. The future viewing population will be sensitive to the visual context, but they have a wide range of potential views to choose from.

**Viewpoint 5, North View from Ferry Terminal Vehicle Holding Area.** This viewpoint (Figure 4.4-6) is located in the southerly portion of the ferry holding area. The view is oriented to the north. A slope to the north provides views of buildings along Front Street above the vehicles. Views of the ferry at the dock are limited by the angle of the dock and the existing towers. There are partial views of the water and the

wooded ridge of Whidbey Island between buildings. The dominant features of the view are buildings along Front Street. The view has no vivid dominating features. It has some unity in the character of building fronts. The vehicles parked in the ferry holding area may be viewed as an encroaching element that reduces visual unity.

There is currently a wide variety of urban street lighting and building lights in the area, with the lighting at the ferry holding area a major source of nighttime light.

Most viewers are occupants of vehicles waiting for the ferry. For them, the vehicles parked in front of them will obscure much of the view. This viewing population is less likely to be sensitive to the view while waiting in their vehicles. Viewers that exit vehicles are likely to have a range of sensitivity to the view depending on their activities.

**Viewpoint 6, North View from SR 525.** This viewpoint (Figure 4.4-7) is located on the east side of SR 525 at the mid-point of the overpass crossing the BNSF tracks. Oriented to the north, it includes the entry to the existing holding area; it is typical of views from locations east along Second Street. This is also the view experienced by occupants of vehicles accessing the ferry or vehicles queued along the shoulder of the highway. The termination of the view includes the waters of Possession Sound and the wooded ridgeline of Whidbey Island, which can be viewed in corridors between buildings and over shorter buildings along Front Street. The view lacks vivid elements and has a moderate level of visual quality. The existing ferry terminal is largely out of the field of view because of the angle of the dock at the end of the roadway and the blockage by the Losvar Condominium building.

There is a wide variety of urban street lighting in the area, with the lighting at the ferry holding area a major source of nighttime light.

The viewing population from this area is largely occupants of vehicles waiting for the ferry, pedestrians along the highway, and pedestrians along Second Street. This viewing population is likely to have a range of sensitivity to the view depending on activities.

**Viewpoint 7, Northwest View from Second Street and Park Avenue.** This viewpoint (Figure 4.4-8) is located on Second Street east of Park Avenue and is south of the BNSF tracks. The existing ferry holding area is in the middle of the view but north of the BNSF tracks, and is largely obscured by an existing two-story building at First Street and Park Avenue. Elements in the view range from parked cars to buildings to overhead utility lines. Views of the waters of Possession Sound and the wooded ridgeline of Whidbey Island are largely obscured by intervening buildings. The view lacks vivid elements, and has a number of elements with little compositional unity; therefore, it has a low to moderate level of visual quality.

There is a wide variety of urban street lighting in the area; the lighting at the ferry holding area is a major source of nighttime light. Because this viewpoint is above the elevation of light standards in the holding area, it experiences limited direct glare.

The viewing population from this area is largely occupants of vehicles, pedestrians along city streets, and residences located above the BNSF tracks. This viewing population is likely to have a range of sensitivity to the view depending on activities, with residents likely to be the most sensitive.

**Viewpoint 8, North View from Second Street and Prospect Avenue.** This viewpoint (Figure 4.4-9) is located on a private lane north of Second Street and is typical of views from residences and some public street corridors on the bluff south of the BNSF tracks. The view has two components: the highly integrated and unified distant view of Possession Sound, and the highly disorganized middle to near view of the partially demolished Mukilteo Tank Farm. The major element in the distant view is the water area of Possession Sound centered on the wooded ridgeline of Hat Island with Camano Island in the background. The overall distant views are an integrated scene of water and islands with native vegetation predominating over man-made structures.

In the middle and near view, the Mukilteo Tank Farm is a prominent element, at variance with the character of the natural water and land views. The partially disassembled structures also contribute to the lack of integration and visual unity. It is likely that most residents are habituated to the dissonant elements of the view and concentrate on the high visual quality of distant views.

There is currently little or no exterior lighting visible from this viewpoint within the Mukilteo Tank Farm or in the distance.

The viewing population from this area is largely residents and includes some pedestrians along city streets who can access views between buildings or down street corridors at Prospect and Cornelia Streets and down Brewery Creek. The predominantly residential viewing population is likely to be very sensitive to visual quality.

**Viewpoint 9, Northwest View from Mukilteo Lane East of Japanese Gulch.** This viewpoint (Figure 4.4-10) is located on Mukilteo Lane just before it turns south away from the shoreline. The view has two components: the highly integrated and unified distant view of Puget Sound, Possession Sound, and the Olympic Mountains; and the highly disorganized middle to near view of the partially demolished Mukilteo Tank Farm. As with Viewpoint 8, it is likely that most residents are habituated to the dissonant elements of the view and concentrate on the high visual quality of distant views. The Mukilteo Tank Farm, however, is much more visible as a long linear feature in this view. The combination of the two elements results in a high level of visual interest and a moderate level of visual integrity and unity.

There is currently little or no exterior lighting visible from this viewpoint within the Mukilteo Tank Farm. Exterior lighting at the existing ferry terminal is visible in the distance.

The viewing population from this area includes vehicle occupants and pedestrians along Mukilteo Lane and residents of homes on the bluff. The residential viewing population is likely to be very sensitive to visual quality.

### **4.4.3 Long-Term Environmental Impacts**

#### ***No-Build Alternative***

The No-Build Alternative includes what would be needed to maintain the existing ferry terminal at a functional level. It assumes that maintenance and structure

replacements would occur in accordance with legislative direction to maintain and preserve ferry facilities. There would be no investments to improve the operation, safety, security, or capacity at the terminal.

Therefore, no visual impacts or benefits would be expected for the No-Build Alternative.

**Preferred Alternative**

This alternative would relocate the ferry terminal from its current location to the western portion of the Mukilteo Tank Farm, just east of the NOAA Mukilteo Research Station.

WSDOT refined the design of the Elliot Point 2 Alternative to create the Preferred Alternative. The design refinements were generally neutral or beneficial to the alternative’s aesthetic impacts. Visual changes due to this alternative were simulated for several viewpoints. Table 4.4-1 summarizes the effects.

**Table 4.4-1. Preferred Alternative Visual Impacts**

| <b>Viewpoint</b>  | <b>Impact</b>  |
|---|--|
| 1. View East from the Mukilteo Lighthouse (see Figure 4.4-2)                  | <p>Removing the existing terminal, ferry berth and fishing pier/day moorage would provide greater integration and unity of the distant peaks of the Glacier Peak Wilderness Area and also would open up the middle distance shoreline views of Port Gardner. The NOAA pier, however, would continue to partially obscure these features. The new over-water terminal facilities to the east would be visible, but would be at a substantially greater distance and would be partially obscured by the NOAA pier. The viewing population would likely consider the view as being more integrated with the views to the west and north in which the natural features predominate.</p> <p>The elimination of the ferry terminal as the major source of light in this area would change the nighttime visual character somewhat, but substantial urban light would continue to be present from existing shoreline development.</p> |
| 2. View West from Silver Cloud Inn Shoreline Public Access (see Figure 4.4-3) | <p>Removing the existing ferry terminal and the fishing pier/day moorage facility would allow a more open and integrated view of natural features, including the waters of Possession Sound and Puget Sound with the peaks of the Olympic Mountains. The view would increase significantly in integrity and unity. Viewers would perceive the view as one in which natural elements predominate.</p>   |
| 3. View East from Silver Cloud Inn Shoreline Public Access (see Figure 4.4-4) | <p>Removing the Tank Farm Pier would tie together the distant views dominated by mountains and the near and middle distance views of water areas of Possession Sound and Port Gardner Bay. Views of the ferry berth would be partially obscured by the NOAA pier; however, the overhead facilities including towers housing the hydraulic transfer span lifting mechanisms, the overhead walkways, and the two-story passenger building would be higher than the existing Tank Farm Pier and would be relatively prominent.</p> <p>Lighting for ferry facilities, parking, and transit centers would increase substantially. This source of light, however, is at a moderate distance from the viewpoint and therefore it is likely to be perceived as a generalized area of bright lighting rather than a source of glare.</p>  |

**Table 4.4-1. Preferred Alternative Visual Impacts**

| <b>Viewpoint</b>  | <b>Impact</b>  |
|---|--|
| 4. View West from Mount Baker Terminal Shoreline Access Area (see Figure 4.4-5) | <p>The ferry facility towers for the transfer span, the overhead walkways, and the two-story passenger building would be higher than the existing Tank Farm Pier, but would not be high enough to encroach on the most vivid feature in the view, which are the peaks of the Olympic Mountains, particularly when a ferry vessel is docked. The ferry holding area would have greater visual unity than the remains of the Mukilteo Tank Farm.</p> <p>The over-water structure would be a prominent visual focus at night that would be more visually arresting than other features in the vicinity. A fishing pier would be partially visible in the foreground but less prominent than the overwater structures.</p>   |
| 5. North View from Ferry Terminal Vehicle Holding Area (see Figure 4.4-6)       | Removing the ferry terminal would clear the corridor between the condominium and Ivar's restaurant. It would also remove a source of nighttime lighting.   |
| 6. North View from SR 525 (see Figure 4.4-7)                                    | <p>The ferry terminal would be removed and an unobstructed view down the highway corridor would be available of Possession Sound and Whidbey Island. The viewing population is likely to perceive the view as more integrated.</p> <p>The lighting would be less intense than the current lighting in the ferry holding area.</p>  |
| 7. Northwest View from Second Street and Park Avenue (see Figure 4.4-8)         | <p>The integrity and unity of distant views of Possession Sound and Whidbey Island would be increased by removal of a building currently blocking these views.</p> <p>The lighting would be less intense than the current lighting in the ferry holding area.</p>  |
| 8. North View from Second Street and Prospect Avenue (see Figure 4.4-9)         | <p>The terminal building facilities would have no impact on distant views of Possession Sound and the islands in the distance. In the middle to near distance, terminal facilities, particularly towers for the transfer span, the overhead walkways, and the two-story passenger building would be higher than the existing pier and more prominent. The terminal would be at a much smaller scale than the Tank Farm Pier and perpendicular to the view rather than cutting across the view. These features would result in a greater visual integrity and unity than the assemblage of existing Mukilteo Tank Farm elements, including remnants of the large storage tanks. Holding and parking areas for vehicles, however, would lack visual interest. Overall, the lack of impact on high-quality distant views and the increased visual unity of near views, despite low visual interest, would moderately increase the level of visual integrity, unity, and overall visual quality.</p> <p>There would be more lighting than currently exists on the Mukilteo Tank Farm; at night, viewers from the bluff above the site would have a brightly lit area in the foreground views, which would also reduce visibility for longer range night views.</p> |
| 9. Northwest View from Mukilteo Lane East of Japanese Gulch (see Figure 4.4-10) | <p>The terminal facilities would have no impact on the most vivid feature in daytime distant views, which are the peaks of the Olympic Mountains, because terminal facilities are well below these features. Overall, the terminal would have greater visual integrity and unity than the existing Mukilteo Tank Farm elements, which includes a degraded landscape with remnant tanks, structures, and buildings in various states of repair. However, near views of the Mukilteo Tank Farm would not be altered.</p> <p>The lighting for ferry facilities would increase ambient light levels, as discussed for Viewpoint 8 above, but the lighting is at a greater distance and would be less of an intrusion.</p>  |

### **Existing Site Improvements Alternative**

This alternative would reconstruct the terminal and its related facilities at the current site, which would be expanded and realigned, as well as increasing the height of structures on the waterfront. To indicate the visual impacts of this alternative, visual simulations were prepared for several views; impacts are summarized in Table 4.4-2.

**Table 4.4-2. Existing Site Improvements Alternative Visual Impacts**

| <b>Viewpoint</b>  | <b>Impact</b>   |
|---|---|
| 1. View East from the Mukilteo Lighthouse (see Figure 4.4-2)                        | The terminal's configuration is similar to the existing one, with the addition of the overhead loading structure. This would increase the view blockage directly east toward Everett, the waterfront, and the distant vivid peaks of the Glacier Peak Wilderness Area. Residents would also have increased view blockage.   |
| 2. View West from Silver Cloud Inn Shoreline Public Access (see Figure 4.4-3)       | The terminal's configuration is similar to the existing one, but with the addition of the overhead loading structure. The middle distance views of Possession Sound and Puget Sound, including the distant vivid peaks of the Olympic Mountains, and views for the public on the shoreline access pier would be further encroached upon. Silver Cloud Inn patrons would also have increased view blockage.  |
| 3. View East from the Silver Cloud Inn Shoreline Public Access (see Figure 4.4-4)   | There would be no change in visual character or visual quality; the viewpoint faces away from the existing ferry terminal or the replacement terminal.  |
| 4. View West from the Mount Baker Terminal Shoreline Access Area (see Figure 4.4-5) | Little change in visual character or visual quality because the changes would be in the distance.   |
| 5. North View from Ferry Terminal Vehicle Holding Area (see Figure 4.4-6)           | Replacing Ivar's restaurant with a two-story passenger terminal and the overhead loading ramp would further obstruct parts of the view.   |
| 6. North View from SR 525 (see Figure 4.4-7)  | Replacing Ivar's restaurant with a two-story passenger terminal and the overhead loading ramp would further obstruct parts of the view. The ferry, while at dock, would be more visible because the new facilities would be aligned with SR 525.  |
| 7. Northwest View from Second Street and Park Avenue (see Figure 4.4-8)             | The ferry holding area and the bus transit center would become somewhat more visible because of the removal of an existing building that currently blocks views; this would result in a reduction in visual quality.<br>The lighted holding area and the bus transit center would likely become the dominant feature of views at night because other water and landscape elements have lower-intensity lighting.<br>For the viewing population, the expansion of the parking area as the center of attention may be regarded as a negative distraction and a reduction in visual quality. Condominium residents are likely to perceive the additional nighttime lighting as an impact because of its proximity. |
| 8. North View from Second Street and Prospect Avenue (see Figure 4.4-9)             | No change in visual character or visual quality; viewpoint faces away from the existing ferry terminal.   |
| 9. Northwest View from Mukilteo Lane East of Japanese Gulch (see Figure 4.4-10)     | Little change in visual character or visual quality is expected; most changes occur within distance views with features not readily distinguished.  |

### **Elliot Point 1 Alternative**

This alternative would relocate the ferry terminal from its current location to the eastern portion of the Mukilteo Tank Farm, thereby removing the current facility's visual elements, and introducing new visual elements to another location on the waterfront. To indicate the visual impacts of this alternative, visual simulations were prepared for several views; impacts are summarized in Table 4.4-3.

**Table 4.4-3. Elliot Point 1 Alternative Visual Impacts**

| <b>Viewpoint</b>  | <b>Impact</b>   |
|---|---|
| 1. View East from the Mukilteo Lighthouse (see Figure 4.4-2)                    | Impacts would be similar and slightly less than those discussed above for the Preferred Alternative because the facility would be a more distant element of the view. Impacts would be positive because of the elimination of the existing terminal.  |
| 2. View West from Silver Cloud Inn Shoreline Public Access (see Figure 4.4-3)   | Visual conditions would be similar to those discussed above for the Preferred Alternative. The changes would be positive because of the elimination of the existing terminal and the existing fishing pier/day moorage.   |
| 3. View East from Silver Cloud Inn Shoreline Public Access (see Figure 4.4-4)   | Impacts would be similar and slightly less than those discussed above for the Preferred Alternative because the facility would be a more distant element of the view.   |
| 4. View West from Mount Baker Terminal Shoreline Access Area (see Figure 4.4-5) | Impacts would be similar and slightly more prominent than those discussed above for the Preferred Alternative because the facility would be nearer to the viewpoint. The clutter represented by the eastern portion of the Mukilteo Tank Farm would be removed, which would improve visual integrity and unity. |
| 5. North View from Ferry Terminal Vehicle Holding Area (see Figure 4.4-6)       | Impacts would be similar to those discussed above for the Preferred Alternative.  |
| 6. North View from SR 525 (see Figure 4.4-7)                                    | Impacts would be similar to those discussed above for the Preferred Alternative.  |
| 7. Northwest View from Second Street and Park Avenue (see Figure 4.4-8)         | Impacts would be similar to those discussed above for the Preferred Alternative.  |
| 8. North View from Second Street and Prospect Avenue (see Figure 4.4-9)         | Impacts would be similar to those discussed above for the Preferred Alternative, except that the clutter in the western portion of the Mukilteo Tank Farm that would not be redeveloped and would remain partially in the view.   |
| 9. Northwest View from Mukilteo Lane East of Japanese Gulch (see Figure 4.4-10) | Impacts would be similar to those discussed above for the Preferred Alternative, except that the clutter in the eastern portion of the Mukilteo Tank Farm would be replaced by vehicle holding lanes closer to the viewpoint, which would improve visual integrity and unity.                                   |

#### 4.4.4 Construction Impacts

The construction impacts on visual quality would be temporary for all alternatives and at all viewpoints. Impacts would result from activities related to staging areas, lighting, fencing, closed roadway sections, detours, heavy equipment, scaffolding, cranes, and temporary storage of materials, including demolition debris. The visual impacts of construction would generally not change the overall views available, but would alter existing localized views. The most prominent elements that would alter views would likely be cranes and other tall equipment. However, distant views of water features and mountains would remain visible if partially obstructed.

#### 4.4.5 Indirect and Secondary Impacts

Visual changes could occur due to changes in development and landscaping for other projects. For example, the development of part of the tank farm could allow other developments to occur on unused portions of the site. The visual impacts of potential

other developments likely would be a positive change from the current views of remnant tanks on the Mukilteo Tank Farm site. A shift from the existing terminal location to the tank farm property would also make the lands that are currently used for the terminal available for other developments. Any other developments would be subject to separate development review processes, but they could involve more visually prominent structures or features than exist today. For example, the City of Mukilteo is considering a parking facility in the waterfront area to help serve commuter rail and other parking needs, and some of the potential site options are on the Mukilteo Tank Farm site.

#### **4.4.6 Cumulative Impacts**

The visual character of the landscape has been dramatically transforming ever since the first Europeans settled in the area. The area was logged and cleared for farming and development; shoreline areas were filled; rivers were channelized; and other activities such as shoreline development and road building all contributed to changes in the landscape. The urban character of the project area has also changed over time as the architecture of the city has evolved and land uses have changed. Even though development has blocked some views of the landscape, Mukilteo benefits from many natural features such as the Olympic and Cascade Mountains, which are so dominant that they can still be seen from many viewpoints.

Foreseeable future actions include redevelopment of the Mukilteo Tank Farm, as discussed in *Section 4.2 Land Use and Economics*.

#### ***No-Build Alternative***

This alternative would not affect the Mukilteo Tank Farm, so the entire parcel would be available for redevelopment under Mukilteo and Everett land use regulations. Cumulative visual quality changes could occur in the area if redevelopment were to occur as the City of Mukilteo anticipates. The City's goal for redevelopment is to create a prime Snohomish County attraction and provide recreational opportunities for residents and visitors; specifically, these would include a walking promenade along the shoreline, access to the waterfront, and linkages to parks and open spaces. In general, the visual effects of such redevelopment would be positive because it would replace the partially demolished remains of the Mukilteo Tank Farm with low-rise urban development, which would have a more unified and integrated visual character. Lighting would consist of normal building and street lighting. This lighting would be a change in the nighttime environment from viewpoints where the site can be seen, but would be substantially less than the lighting required for the Mukilteo ferry terminal.

NOAA plans to expand its laboratory on the west end of the Mukilteo Tank Farm. If this expansion occurs, the scale of buildings is likely to be similar to private-sector, mixed-use development in terms of height and bulk, as well as lighting.

The anticipated relocation of the City of Mukilteo boat launch ramp currently at Lighthouse Park could be accommodated at a variety of sites on the Mukilteo Tank Farm. This would involve a ramp and pier that would likely be visible only from a close range. The parking for the launch ramp could cover several acres and be similar in character to the ferry holding area and other parking. If the parking area were

lighted, the intensity of lighting likely would be less than the ferry holding area because the operational needs are different.

Sound Transit and the City of Mukilteo are studying options for expanding parking, but a specific site has not yet been confirmed. A multi-story structure would have additional visual quality impacts that would be apparent primarily from Viewpoint 9 and from single-family residences on the bluff behind the BNSF tracks between Viewpoints 7 and 9. Visual impacts of this project will be assessed separately in the future.

### ***Preferred Alternative***

Under this alternative, the eastern portion of the Mukilteo Tank Farm parcel could be available for redevelopment. The visual impacts of such redevelopment would be positive with a greater integrity and unity of design compared to the lack of visual integrity and unity from the partially disassembled structures of the Mukilteo Tank Farm.

Under this alternative, the existing ferry terminal would be removed and the site could be available for redevelopment. The scale of development and the associated impacts would be similar to the description above for the portions of the Mukilteo Tank Farm not used for the ferry terminal.

Lighting would consist of normal building and street lighting that would be substantially less than the lighting required for the ferry terminal.

The relocation of the boat launch at Lighthouse Park, expansion of the NOAA Mukilteo Research Station and possible replacement of its pier, and expansion of Mukilteo Station by Sound Transit, would have visual impacts similar to those discussed under the No-Build Alternative.

### ***Existing Site Improvements Alternative***

Cumulative impacts of mixed-use development on the Mukilteo Tank Farm, potentially in combination with relocation of the boat launch at Lighthouse Park, NOAA Mukilteo Research Station expansion, and Mukilteo Station expansion, would be similar to those discussed under the No-Build Alternative.

### ***Elliot Point 1 Alternative***

The impacts of mixed-use redevelopment and potential relocation of the boat launch ramp on the Mukilteo Tank Farm would be similar to those discussed above under the Preferred Alternative. The area of the Mukilteo Tank Farm potentially available for redevelopment is to the west and more easily integrated with the redevelopment area of the existing terminal site. The relocation of the boat launch at Lighthouse Park, expansion of the NOAA Mukilteo Research Station, and expansion of Mukilteo Station would have visual impacts similar to those discussed under the No-Build Alternative.

## 4.4.7 Mitigation Measures

### Mitigation for Long-Term Impacts

For the Preferred Alternative, mitigation measures would be applied to reduce potential visual impacts, including light and glare:

- Applying a context-sensitive design approach to soften view impacts of large expanses of paved area. To be reduce visual impacts from the south, landscaping would include native vegetation, such as trees with substantial canopy size, and landscaping would be considered for areas between ferry loading lanes and pedestrian-oriented areas, where feasible.
- Applying context-sensitive design treatments reflecting the site’s cultural and historic significance; this could include historic and natural resource interpretive or design features.
- Using shorter supports for light standards to reduce glare impacts.
- Shielding luminaries on all lights to limit horizontal and vertical diffusion of glare.
- Continuing a culturally-sensitive design approach defined in the project’s Section 106 Memorandum of Agreement to unite the site visually and with other public facilities. Cultural design elements could include traditional motifs and objects; narrative content; building and facility design, such as landscaping, materials, and form; commemorative signs, drawings, and photography; and public educational displays. Under the MOA, tribal representatives and WSDOT would collaboratively develop the design criteria for cultural elements.
- During final design, coordinating with the City of Mukilteo, Sound Transit, and others on design themes such as:
  - A common specification for terminal lighting that could be coordinated with other public projects and street lighting. The hue of the lighting also could be coordinated as appropriate for the surrounding streets.
  - Surface elements, such as sidewalks and crosswalk treatments, on the site and surrounding areas that provide visual unity. These also could be designed to reinforce way-finding by clearly demarcating pedestrian routes to the transit center, Mukilteo Station, and other destinations.

Other alternatives would apply similar measures as described for the Preferred Alternative, including similar programs for context-sensitive and culturally-sensitive designs.

### 4.4.8 Visual Simulations

Figures 4.4-2 to 4.4-10 show the current view and the simulated view for each of the project alternatives at the selected viewpoints.



Viewpoint 1

**Figure 4.4-2 (Existing)**  
**View East from the Mukilteo Lighthouse**



Viewpoint 1 - Preferred Alternative



Viewpoint 1 - Existing Site Improvements Alternative

**Figure 4.4-2 (Simulations)**  
**View East from the Mukilteo Lighthouse**



Viewpoint 2

**Figure 4.4-3 (Existing)  
View West from the Silver Cloud Inn  
Shoreline Public Access**



Viewpoint 2 - Preferred Alternative and Elliot Point 1 Alternative



Viewpoint 2 - Existing Site Improvements

**Figure 4.4-3 (Simulations)  
View West from the Silver Cloud Inn  
Shoreline Public Access**



Viewpoint 3

**Figure 4.4-4 (Existing)  
View East from the Silver Cloud Inn  
Shoreline Public Access**



Viewpoint 3 - Preferred Alternative



Viewpoint 3 - Elliot Point 1 Alternative

**Figure 4.4-4 (Simulations)  
View East from the Silver Cloud Inn  
Shoreline Public Access**



Viewpoint 4

**Figure 4.4-5 (Existing)**  
**View West from the Mount Baker Terminal**  
**Shoreline Access Area**



Viewpoint 4 - Preferred Alternative



Viewpoint 4 - Elliot Point 1 Alternative

**Figure 4.4-5 (Simulations)  
View West from the Mount Baker Terminal  
Shoreline Access Area**



Viewpoint 5

Figure 4.4-6 (Existing)  
North View from the Ferry Terminal  
Vehicle Holding Area



Viewpoint 5 - Preferred Alternative and Elliot Point 1 Alternative



Viewpoint 5 - Existing Site Improvements Alternative

**Figure 4.4-6 (Simulations)**  
**North View from the Ferry Terminal**  
**Vehicle Holding Area**



Viewpoint 6

Figure 4.4-7 (Existing)  
North View from SR 525



Viewpoint 6 - Preferred Alternative and Elliot Point 1 Alternative



Viewpoint 6 - Existing Site Improvements Alternative

**Figure 4.4-7 (Simulations)**  
**North View from SR 525**



Viewpoint 7

**Figure 4.4-8 (Existing)**  
**Northwest View from Second Street and Park Avenue**



Viewpoint 7 - Preferred Alternative and Elliot Point Alternative



Viewpoint 7 - Existing Site Improvements Alternative

**Figure 4.4-8 (Simulation)**  
**Northwest View from Second Street and Park Avenue**



Viewpoint 8

**Figure 4.4-9 (Existing)**  
**North View from Second Street and Prospect Avenue**



Viewpoint 8 - Preferred Alternative



Viewpoint 8 - Elliot Point 1 Alternative

**Figure 4.4-9 (Simulations)**  
**North View from Second Street and Prospect Avenue**



Viewpoint 9 - Existing View



Viewpoint 9 - Preferred Alternative

**Figure 4.4-10 (Existing and Simulation)  
Northwest View from Mukilteo Lane East of Japanese Gulch**



Viewpoint 9 - Existing Site Improvements Alternative



Viewpoint 9 - Elliot Point 1 Alternative

**Figure 4.4-10 (Simulations)**  
**Northwest View from Mukilteo Lane East of Japanese Gulch**

## 4.5 Social Environment and Environmental Justice

This section evaluates the project's potential for adverse impacts on and benefits to parks, recreation, social services, neighborhoods, community resources, and community cohesion. It also assesses the potential for disproportionately high and adverse impacts on low-income and minority communities.

### 4.5.1 Overview of Analysis and Regulatory Context

NEPA established a national environmental policy and goals for the protection, maintenance, and enhancement of the environment, which includes communities as well as parks and recreation areas. FTA's regulations for implementing NEPA provide guidance for considering impacts on the social environment. SEPA regulations suggest that general welfare, social, and economic factors be taken into account in an environmental review, but does not apply the term "socioeconomic" or define other requirements for the analysis of impacts on certain populations.

Pursuant to Title VI of the Civil Rights Act and the Civil Rights Restoration Act, recipients of federal financial assistance must ensure non-discrimination on the basis of race, color, or national origin in all of their programs and activities. Similarly, Executive Order 12898 (1994) requires federal agencies to analyze their actions and environmental impacts on minority and low-income populations.

Following Executive Order 12898, USDOT issued Order 5610.2, which describes how USDOT administrations must analyze environmental justice and incorporate environmental justice principles into the transportation decision-making process.

The analysis of parks and recreational impacts is required under both SEPA and NEPA; in addition, there are state and federal regulations regarding the potential conversion of park land for other purposes. Much like the other aspects of the social impact analysis, coordination and consultation with local agencies, non-profit service providers, and the public are critical to the analysis process.

### Analyzing Social Impacts

The social impacts section of this EIS examines how the project could alter the ways in which people live, work, play, and function together as members of society. This includes changes to the larger environment or physical setting for a community, which could affect the cohesion and functions of individual neighborhoods or community members, including people in minority or low-income groups. It also includes a review of the public park, recreation, and social services available to the community.

The community impact analysis flows out of the EIS's overall findings of other kinds of environmental impacts. It examines the findings for those and other environmental conditions to assess the potential for significant impacts on communities. The social impacts assessment considers:

- Displacements of homes, businesses, or community resources  
(see *Section 4.2 Land Use and Economics*)
- Separation of a neighborhood from its community resources  
(see *Chapter 3 Transportation*)

- Economic changes resulting from displacements, or other changes affecting local or regional economic activities (see *Section 4.2 Land Use and Economics*)
- Changes in the transportation system, parking, or traffic circulation patterns that affect the connectivity within a community or between communities, and altered connections between residential areas and the arterial and transit networks (see *Chapter 3 Transportation*)
- Permanent or temporary impacts that adversely affect the community, such as visual, noise and vibration, air quality, parks and recreational resources, and impacts on the local utilities, public services, or facilities (see *Sections 4.2 Land Use and Economics; 4.3 Noise and Vibration; 4.4 Visual Quality, Aesthetics, and Light and Glare; 4.7 Air Quality; and 4.13 Public Services and Utilities*)
- Health and resource impacts related to hazardous materials (see *Section 4.8 Hazardous Materials*)

### Analyzing Environmental Justice Impacts

The analysis identifies the percentages of low-income and minority populations in the study area that could experience impacts from the project. These percentages are compared to the average percentage of low-income and minority populations at city and county levels. The study area extends 0.5 mile from the footprint of the alternatives, and is based on an assessment of potential project impacts from all alternatives in other environmental impact topics. The analysis also takes into consideration the potential for environmental justice impacts based on all impacts identified in the EIS, not just the impacts in the environmental justice study area.

As described in *Section 4.5.2 Affected Environment*, this Final EIS has applied data from the 2010 U.S. Census and from the 2006-2010 American Community Survey; the Draft EIS used 2000 Census data. Consistent with the Draft EIS, the Final EIS data are reported for the census tracts that overlap with the study area boundaries. The 2010 U.S. Census revised boundaries for one of the two study area census tracts. As a result, the Final EIS analyzes the demographics of a smaller total population than shown in the Draft EIS.

The analysis also considers information collected from other sources, including Section 8 Housing Assistance data from the U.S. Department of Housing and Urban Development (HUD), as well as free and subsidized lunch program data from the Mukilteo School District.

USDOT guidance defines “low-income households” using the U.S. Department of Health and Human Services poverty guidelines. The U.S. Census Bureau defines “minority” to include the following racial categories:

- **Black or African American.** A person having origins in any of the Black racial groups of Africa
- **Asian American.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent

- **American Indian or Alaska Native.** A person having origins in any of the original peoples of North and South America and who maintains tribal affiliation or community attachment
- **Native Hawaiian or Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands

The U.S. Census Bureau definition of “minority” also includes the following ethnic category:

- **Hispanic or Latino.** A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race

Since FTA and WSDOT began the NEPA environmental review process for the Mukilteo Multimodal Project in October 2004, they have provided frequent opportunities for the public, including minority and low-income populations, to share concerns and discuss specific project details with project staff. Public involvement activities to date have included public meetings, agency and tribal meetings, online meetings, and stakeholder briefings. For more details on this outreach, see *Chapter 7 Agency, Tribal, and Public Involvement*. WSDOT continued discussions with the public, agencies, and tribes while preparing technical reports.

### **Determining Disproportionately High and Adverse Impacts**

To identify the potential for disproportionately high and adverse impacts on minority or low-income populations, this analysis considers five primary questions:

**Question 1:** Does the project affect a resource that is especially important to a minority or low-income population? For instance, does the project affect a resource that serves an especially important social, religious, or cultural function for a minority or low-income population?

**Question 2:** Would the project result in high and adverse impacts to a minority or low-income population?

**Question 3:** Would the project result in disproportionately high and adverse impacts that would be suffered by a minority or low-income population compared to the impacts that would be suffered by the general population?

**Question 4:** Does the project propose mitigation and/or enhancement measures?

**Question 5:** Are there project benefits that would accrue to minority or low-income populations at similar or different levels than the general population?

The answers to these five questions help show whether the project alternatives would be likely to result in disproportionately high and adverse impacts on minority or low-income populations.

## **4.5.2 Affected Environment**

This section describes the key characteristics of the social environment, including community resources, housing demographics, parks, low-income and minority populations, and other factors that contribute to community cohesion and quality of life. The study area is the same as the one used for the environmental justice analysis.

## Community Resources

Except for parks and community centers (discussed separately below), the only municipal facility located in the study area is a fire station. Several small offices in the downtown area provide a variety of limited health care services.

The Mukilteo School District serves about 14,000 students living in Mukilteo and south Everett. The study area falls entirely within the attendance boundaries of Mukilteo Elementary School, Olympic View Middle School, and Kamiak High School, although the schools are outside of the study area. Two churches are located on Third Street, near the existing ferry terminal. Two community centers, the Boys and Girls Club and the Rosehill Community Center, are in the study area, as are several parks and recreational facilities. These resources are shown on Figure 4.5-1.

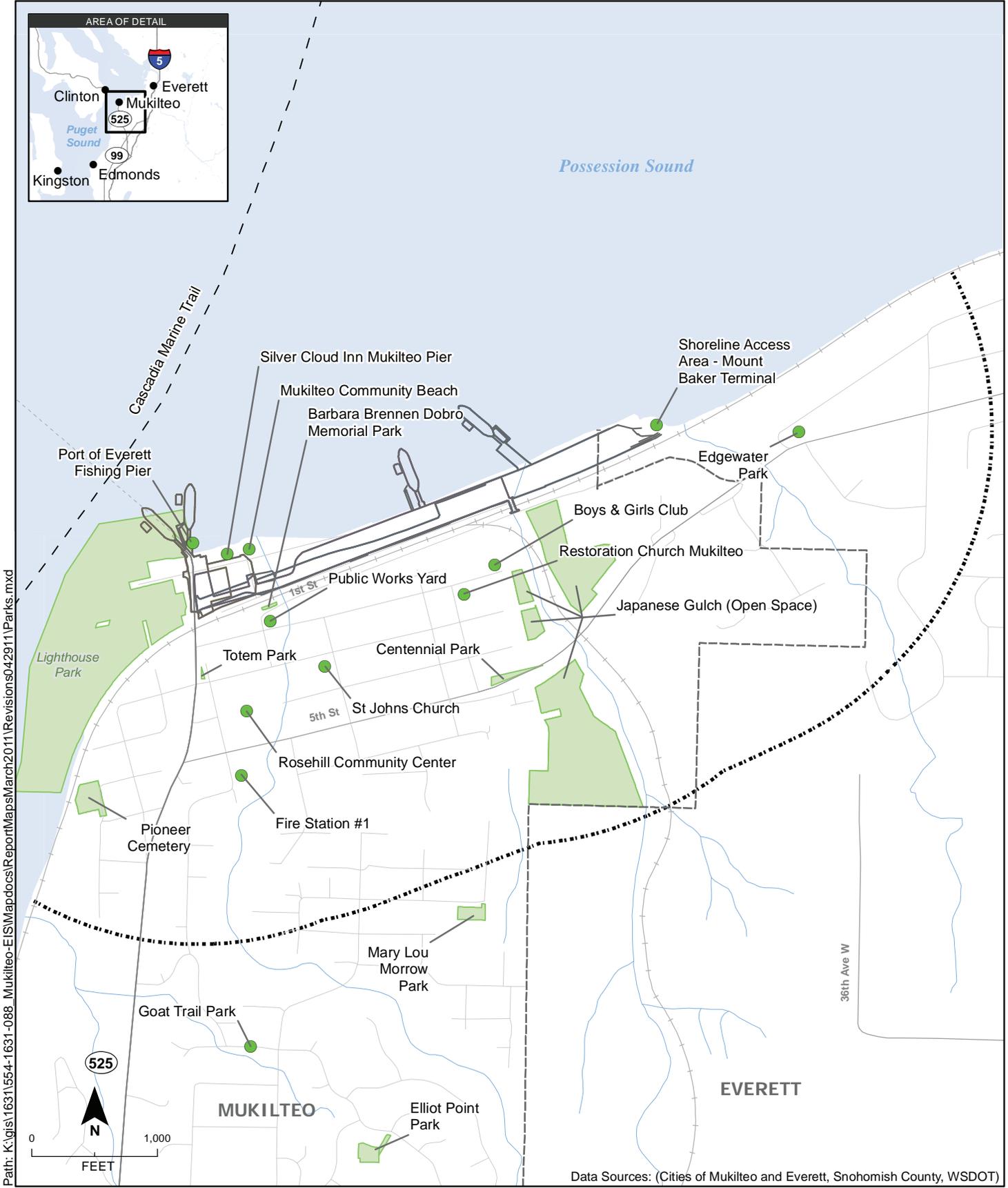
Housing exists on both sides of SR 525 from Second Street to Ninth Street, but south of Ninth Street a steep bluff limits development west of SR 525. Two other neighborhoods are located west of SR 525 in the study area: one at Horizon Heights Drive (approximately 19th Street), and the other between 80th Street SW and 84th Street SW.

Commercial development in the study area is concentrated in the old downtown area and along SR 525. The old downtown area is located east of SR 525, approximately from Sixth Street to the waterfront. As with residential development, nearly all of the commercial development has occurred east of SR 525 (see Figure 4.2-2 in *Section 4.2 Land Use and Economics*). Exceptions are the waterfront sub-area and the intersection of SR 525 and 84th Street SW, each of which has a small number of businesses west of SR 525. The waterfront sub-area currently has only one hotel, three restaurants, a small store, a building with a number of office and art-related uses, the NOAA facility, and several commercial parking lots. Most housing within the 0.5-mile study area consists of owner-occupied single-family homes. There are few homes owned by HUD or using rental assistance programs, such as those offered by the Housing Authority of Snohomish County (HASCO).

## Parks and Recreational Resources

The study area contains a number of parks and recreational facilities that provide a variety of outdoor and indoor activities (Figure 4.5-1). Some of these resources also qualify for protection under a USDOT regulation known as Section 4(f), as discussed in *Chapter 5 Section 4(f)* and *Appendix I*:

- Pioneer Cemetery is a 0.5-acre historic town cemetery, located approximately five blocks southwest of the ferry terminal, with expansive views of Puget Sound.
- The Rosehill Community Center provides a variety of indoor and outdoor athletic facilities.
- Totem Park is a 0.1-acre park adjacent to SR 525, three blocks south of the existing ferry terminal.



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- Recreational Opportunities  
Parks and Recreational Facilities
- 1/2 Mile Study Area
- City Boundary

**Figure 4.5-1. Recreational and Community Resources**

- Mukilteo Lighthouse Park is on the shoreline to the west and south of the existing ferry terminal. The 14.4-acre site encompasses the former Mukilteo State Park, the former U.S. Coast Guard Light Station property, and the portion of Front Street along the park. The City's approved master plan for the park features a central lawn with open views of the lighthouse and the Sound; a pedestrian loop path system that connects with a planned pedestrian promenade along the waterfront to the east; shoreline restoration; viewpoints; a pedestrian pier; streetscape improvements; new picnic, play, and restroom facilities; and improved vehicular circulation and parking that avoids intrusions on a more pedestrian-oriented shoreline. A boat launch is currently located at the park.
- The Port of Everett fishing pier and seasonal day moorage is located just east of the Mukilteo ferry terminal.
- The Mukilteo Community Beach is a 0.3-acre parcel along the shoreline at the end of Park Street, adjacent to the west entrance of the Mukilteo Tank Farm. It offers shoreline access, community programs, and a limited amount of parking. It is also a popular site for SCUBA divers to access the offshore area.
- The Barbara Brennen Dobro Memorial Park is a 0.1-acre site in old downtown Mukilteo. The Fowler Pear Tree was planted here during the U.S. Civil War, and is a registered state historic landmark.
- Japanese Gulch is a 20-acre public open space in a ravine that carries Japanese Creek and runs from approximately the north end of Paine Field to the shoreline at the east end of the Mukilteo Tank Farm. It features hiking trails and views of Possession Sound.
- Centennial Park is a 0.25-acre park located in the northeastern part of the city. This small park includes space for picnics and features the Japanese Gulch Memorial.
- A public shoreline access area for Edgewater Beach is to the east of the Mukilteo Tank Farm in the city of Everett. Associated with the Port of Everett's Mount Baker Terminal, the access area is a City of Everett permitting condition for the terminal, with enhancements including parking, benches, and a shoreline walkway. The area is not yet officially open.
- Edgewater Park is located in the city of Everett, slightly east and upland of the project area. The 1.5-acre site includes picnic tables, tennis and basketball courts, and a playground.
- The Cascadia Marine Trail is one of 16 non-motorized water trails designated as National Millennium Trails by the White House Millennium Council. The trail crosses to the west of Point Elliot and extends through Puget Sound from Olympia to Point Roberts on the U.S.-Canada border.

## Recreational Fishing

The Port of Everett fishing pier and seasonal day moorage, as well as the public pier near the Silver Cloud Inn, provide access for recreational fishing, which is popular in and near the study area. Salmon, crab, and shrimp are typically harvested by boat, while shellfish are harvested from shore. The Washington Department of Fish and Wildlife (WDFW) divides Washington State waters into Fishing Management Areas. One of the most popular fishing areas is the bar at the south end of Whidbey Island, just offshore from Scatchet Head and Possession Point. The easiest and quickest way to reach this bar from the mainland is to launch at the Mukilteo Lighthouse Park; however, this ramp can be difficult to use in high winds. The Port of Everett boat launch in Everett is farther from the south end of Whidbey Island but is larger and more protected from wave action.

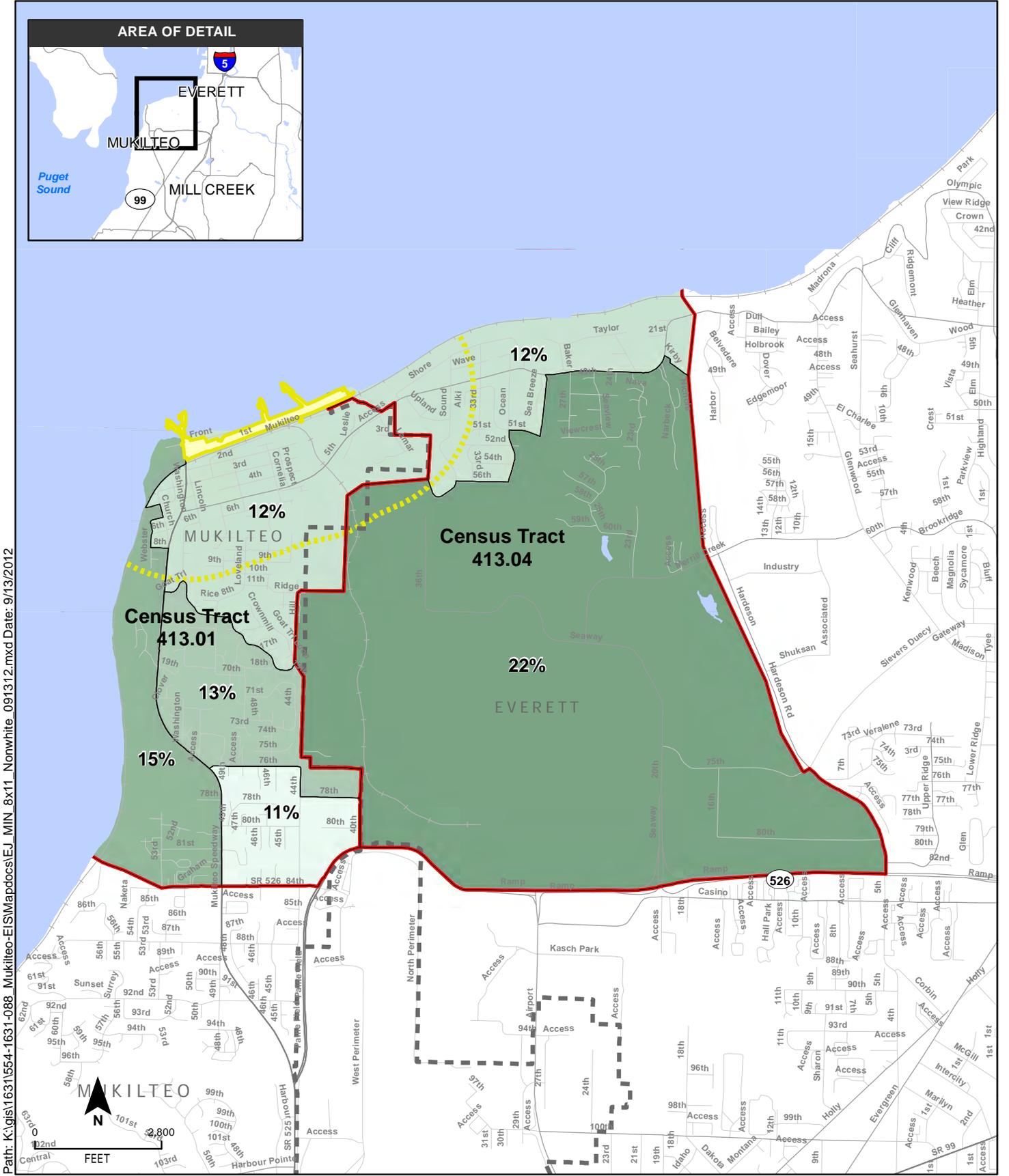
## Demographics

Racial characteristics for the study area population as of the 2010 Census are shown in Table 4.5-1. The percentage of non-white population for each census block group in and near the study area is shown in Figure 4.5-2. In the census tracts that intersect the study area, approximately 14.7 percent of the population was non-white, less than the rates found within Snohomish County (21.6 percent) and the city of Mukilteo (25.1 percent). The analysis also assesses ethnicity in terms of the non-white and white Hispanic and Latino populations that may be present. In the census tracts that intersect with the study area, approximately 4.1 percent of the population was Hispanic and/or Latino in 2010, which is less than half the rate of Snohomish County (9.0 percent) and similar to the rate within the city of Mukilteo (4.4 percent). Although the Everett city limits fall within the study area, its population is concentrated east of the study area; therefore, this population segment was not included as a comparison factor in Table 4.5-1.

**Table 4.5-1. Racial and Ethnic Composition of Residents in Snohomish County, City of Mukilteo, and Census Tracts within the Study Area**

|  | Snohomish<br>County | City of<br>Mukilteo | Census<br>Tract 413.01 | Census<br>Tract 413.04 |
|--|---------------------|---------------------|------------------------|------------------------|
| Total  | 713,335             | 20,254              | 5,117                  | 2,870                  |
| White alone                                      | 559,011             | 15,172              | 4,456                  | 2,359                  |
| Black or African American alone                  | 18,168              | 346                 | 53                     | 46                     |
| American Indian and Alaska Native alone          | 9,793               | 115                 | 34                     | 20                     |
| Asian alone                                      | 63,385              | 3,457               | 342                    | 265                    |
| Native Hawaiian and Other Pacific Islander alone | 3,135               | 34                  | 9                      | 7                      |
| Some other race alone                            | 27,121              | 227                 | 50                     | 47                     |
| Two or more races                                | 32,722              | 903                 | 173                    | 126                    |
| Percent non-white                                | 21.6                | 25.1                | 12.9                   | 17.8                   |
| Hispanic or Latino                               | 64,249              | 882                 | 198                    | 133                    |

Source: U.S. Census 2010, QT-P4



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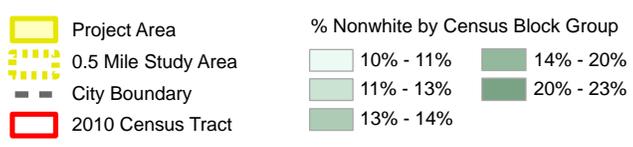


Figure 4.5-2. Percent Nonwhite

Data Sources: Cities of Mukilteo and Everett, Snohomish County, WSDOT, and U.S. Census Bureau, 2010 census data

Mukilteo Multimodal Project

The Draft EIS reported income characteristics from the 2000 U.S. Census because that was the most current demographic data available at that time at the level of geography necessary for detailed analysis. As of 2010, the U.S. Census no longer includes income questions; therefore, the Final EIS reports income characteristics based on the 2006-2010 American Community Survey estimate. The 2006-2010 estimate is the most recent American Community Survey data release available, and reports income characteristics based on data collected from January 1, 2006, to December 31, 2010. Income characteristics for the study area census tracts are shown in Table 4.5-2. The combined poverty rate for the study area census tracts was 6.0 percent, which is lower than that found in Snohomish County (8.4 percent) and similar to the city of Mukilteo (5.7 percent). The percentage of households below the federal poverty threshold for block groups in and near the study area is shown in Figure 4.5-3.

**Table 4.5-2. Income Level of Residents in Snohomish County, City of Mukilteo, and Census Tracts within the Study Area**

| Housing Type                                | Snohomish County | City of Mukilteo | Census Tract 413.01 | Census Tract 413.04 |
|---|------------------|------------------|---------------------|---------------------|
| Median household income                     | \$66,300         | \$91,683         | \$90,060            | \$100,829           |
| Share of population below poverty level (%) | 8.4              | 5.7              | 7.0                 | 4.4                 |

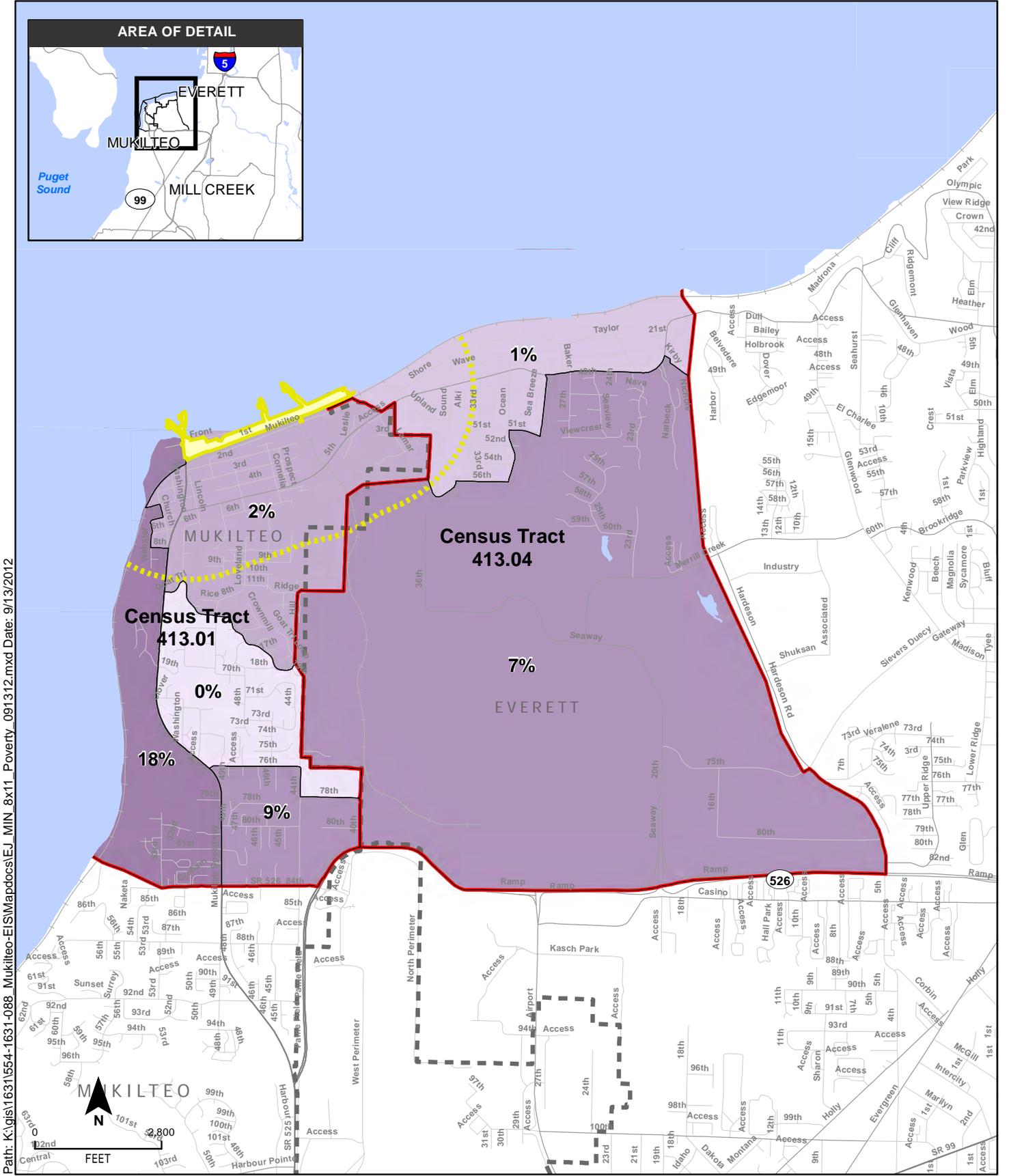
Source: American Community Survey 2006-2010, B19013 and S1701/B17021

## Tribal Communities

There are no tribal reservations in the project area. Several tribes trace their ancestry to the native inhabitants of the Puget Sound region, and their members continue to live, work, fish, hunt, and participate in traditional cultural activities in locations throughout the region. These tribes include the federally recognized Lummi Nation, Muckleshoot Indian Tribe, Samish Indian Nation, Sauk-Suiattle Indian Tribe, Snoqualmie Tribe, Stillaguamish Tribe of Indians, Suquamish Tribe, Swinomish Indian Tribal Community, Tulalip Tribes, and Upper Skagit Tribe, as well as the non-federally recognized Duwamish Tribe and Snohomish Tribe.

As described in *Section 4.12 Ecosystems*, the project area supports several species of salmon, crab, shellfish, and other marine species that have always been central to tribal cultures of Western Washington. Tribal harvests focus on salmon, Dungeness crab, and shellfish. Fishing opportunities for salmon, Dungeness crab, and other shellfish are shared among federally recognized tribes of Western Washington and they have access to seasons and areas not open to the general public. The tribes also have resource management roles that they conduct in coordination with WDFW.

The primary mode of harvesting salmon is with anchored or drifting gill nets. Typically, Chinook salmon are fished from July to September, pink salmon in July, coho from early September to October, and chum salmon from mid-October through November. Tribal harvesting of Dungeness crab is accomplished mostly with pot gear, during summer low tides. Tribal clam harvesting occurs most of the year. Ghost shrimp for use as bait are harvested year-round from the sandy areas near the Port of Everett's Mount Baker Terminal.



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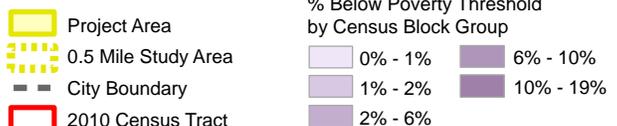


Figure 4.5-3. Percent Below Poverty Threshold

Data Sources: Cities of Mukilteo and Everett, Snohomish County, WSDOT, and U.S. Census Bureau, 2006-2010 American Community Survey data

Tribal fishers have used the Tank Farm Pier as shelter during periods of strong south winds. The Tank Farm Pier also provides habitat and refuge for crabs. The area off the upland portion of the Mukilteo Tank Farm is not typically fished with drift gear because of the proximity to the Tank Farm Pier. Fishing is precluded in the immediate area around the existing ferry terminal due to ferry traffic.

### **4.5.3 Long-Term Environmental Impacts**

Long-term social impacts from transportation projects may result from the acquisition of properties, removal of buildings and other physical features, displacement of businesses or residents, separation of neighborhoods from their community resources, impacts on traffic circulation patterns, impacts on parks, or impacts on neighborhood cohesion. Separation of a neighborhood from its community resources may be caused by operational changes such as rerouting traffic, pedestrian or transit service, as well as by introducing new physical barriers such as roadways or other transportation facilities.

#### **No-Build Alternative**

##### ***Social Impacts***

The No-Build Alternative would not alter the overall ferry terminal layout.

The surrounding community is routinely affected by the deficiencies of the current facilities. Long queues block driveways and side streets, and waterfront access is both limited and impeded by conflicts between vehicles and pedestrians.

The No-Build Alternative conditions hinder access to the waterfront, the small businesses, and the Mukilteo Lighthouse Park. In the future, increasing ferry traffic volumes would make vehicular access to the waterfront businesses more difficult.

Currently, only a small portion of ferry traffic uses residential streets to avoid traffic signals on SR 525 and SR 526, although this could worsen as ferry traffic increases in the future. An increase could undermine neighborhood cohesion.

##### ***Impacts on Parks and Recreational Resources***

Because of congestion and overall increase in traffic, ferry queues, parking constraints, and ferry loading and unloading, the No-Build Alternative would continue to hinder access to Mukilteo Lighthouse Park and Community Beach Park.

##### ***Environmental Justice Considerations***

No resources or services specific to low-income and minority populations exist in the area. There would be no impacts on low-income housing sites, social service providers, or other environmental justice resources. The Port of Everett existing fishing pier would remain, although it might be modified if it is used temporarily to provide passenger-only ferry service during replacement of the existing ferry docking facilities.

The maintenance and structure replacements associated with this alternative would not adversely affect the occurrence or abundance of aquatic species, including species harvested by tribal fishers.

## **Preferred Alternative**

### ***Social Impacts***

The Preferred Alternative would convert a portion of the Mukilteo Tank Farm to a multimodal transportation use with a public waterfront promenade, and it would remove the existing ferry terminal facilities. This alternative would improve access and safety for the central waterfront, and it would move ferry traffic and operations out of the central waterfront. An improved network of pedestrian facilities extending east would also help unify the waterfront area.

As described in *Chapter 3 Transportation*, this alternative would provide the shortest walk between the multimodal connections.

The Preferred Alternative also would extend First Street and provide a new signalized intersection at SR 525 and First Street. The First Street extension would displace the Mongrain Building, which houses a glass blowing art studio and other businesses. Compensation and relocation assistance would be provided in compliance with applicable regulations. First Street would feature sidewalks and bicycle lanes. By improving bus circulation, this alternative would improve bus service between the waterfront and nearby social resources. By improving bus and rail connections, this alternative would benefit rail users in the community.

The Preferred Alternative would increase areas available to queue vehicles waiting to reach the terminal and would provide adjacent bus facilities. As discussed in *Chapter 3 Transportation*, the queue length for the Preferred Alternative would still extend to SR 525, but the additional capacity would reduce traffic congestion, cut-through traffic, blocked driveways, and other impacts in the adjacent neighborhoods compared to the No-Build or Existing Site Improvements alternatives.

### ***Impacts on Parks and Recreational Resources***

The Preferred Alternative would include a pedestrian walkway from First Street to a waterfront promenade. The passenger building would provide part of the continuous pedestrian walkway. The Port of Everett fishing pier and day moorage would be relocated to the Mukilteo Tank Farm site.

The demolition of the Tank Farm Pier would remove a known dive site, and the operation of the ferry in the area would restrict other fishing or diving activities in the immediate vicinity. However, the removal of the existing ferry terminal would allow for more opportunities for public shoreline access in the central waterfront area.

The transit center would include layover facilities for transit, which would reduce the need for buses to use Mukilteo Lighthouse Park for layover parking. Similarly, the removal of the existing ferry terminal and its related traffic on Front Street would improve access, safety, and parking availability for the park.

## Environmental Justice Considerations

Minority or low-income populations would not bear disproportionately high and adverse impacts from the Preferred Alternative. No services specific to low-income or minority populations exist in this area. There would be no impacts on low-income housing sites, social service providers, or other environmental justice resources.

Treaty rights preserve the right for certain Native American tribes to harvest fish in their usual and accustomed areas. The project is located within areas designated as usual and accustomed by the Treaty of Point Elliott.

The Port of Everett fishing pier and day moorage provides a location for public fishing and is available to people with low incomes, including people who may rely upon fishing as a primary source for food. The Preferred Alternative would reconstruct the existing fishing pier. To avoid longer term disruption to fishing as well as to provide a more open waterfront near the existing terminal, the Preferred Alternative would relocate the fishing pier and day moorage to the east of the new terminal. With the new fishing pier in place before the existing fishing pier is demolished, there would be no impacts on public fishing activities relying on the pier.

While the Preferred Alternative would not adversely affect any specific facility serving low-income or minority populations, the EIS analysis considered other impacts to fishing as a potential environmental justice issue. As discussed in *Section 4.12 Ecosystems*, the Preferred Alternative would not adversely affect the occurrence or abundance of aquatic species, including species that are harvested by tribal fishers, or other recreational or commercial fishermen.

The crab populations that live under or just west of the Tank Farm Pier may relocate when the pier is removed, but this is not expected to alter the abundance of crabs that are available to fishers in the area.

Removal of the existing ferry terminal and the Tank Farm Pier would open up additional waters for tribal, public, and commercial fishing. Fishing activities, including fishing by tribal members, would be affected by the physical presence of the proposed new ferry terminal as well as by the removal of the Tank Farm Pier, which currently can provide shelter during storms and high winds.

Current clamming areas and ghost shrimp harvest areas would remain accessible to tribal fishers. Upon completion of the new ferry terminal, portions of the Mukilteo Tank Farm shoreline, waters around the Tank Farm Pier, and some currently fenced or restricted areas would become more publicly accessible, although ferry navigation and terminal security would still restrict certain areas. FTA, in coordination with WSDOT, is conducting government-to-government consultations with affected tribes to resolve potential issues associated with treaty rights.

Potentially beneficial permanent impacts on area fish and shellfish include improvements to water quality and sediment over the long term resulting from the

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### Usual and Accustomed Fishing Areas

The Treaty of Point Elliott reserved to signatory tribes their right to hunt, fish, and gather at their usual and accustomed places.

In the project area, four tribes have usual and accustomed fishing rights: Lummi Nation, Suquamish Tribe, Swinomish Indian Tribal Community, and Tulalip Tribes.

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removal of creosote-treated timber at the existing ferry terminal and the Tank Farm Pier (see *Section 4.11 Water Resources*).

Considering all of the above, and assuming agreements addressing treaty rights are executed, there would not be high or adverse impacts to public and tribal fishing activities, and consequently no associated environmental justice impacts.

The construction of this alternative has the potential to encounter archaeological resources, including a site of significance to Native Americans. The alternative is designed to avoid encountering this resource, as described in *Section 4.6 Cultural Resources*. The project's Section 106 Memorandum of Agreement includes measures developed with tribal representatives and others to resolve adverse effects to the resources.

## **Existing Site Improvements Alternative**

### **Social Impacts**

The Existing Site Improvements Alternative would make limited improvements at the existing site, replacing and realigning existing ferry facilities such as the ferry slip and trestle. Congestion and vehicle/pedestrian conflicts at the Front Street-SR 525 intersection would continue to impair the integration of the Mukilteo waterfront with the surrounding community.

This alternative would remove the existing Port of Everett fishing pier and seasonal day moorage and displace Ivar's restaurant and art-related businesses at Park Avenue and First Street, but compensation and relocation assistance would be provided. However, the displacement of these resources would further reduce the limited commercial activities that help draw people to the waterfront area for reasons other than the ferry. The fishing pier is used extensively by the local community and is one of a limited number of shoreline recreational fishing opportunities open to the public in the area. A potential replacement location has been identified; see Figure 2-3 in *Chapter 2 Alternatives*.

This alternative would slightly increase the walk from the ferry to buses relative to the No-Build Alternative, but the improved bus transit center would offer more amenities (shelter, route information, benches) for passengers, and it is closer to the commuter rail Mukilteo Station. Because of the extension of First Street and the new intersection at First Street and SR 525, bus service would improve between the Mukilteo waterfront and nearby social resources. The proximity of the new transit center and the commuter rail station would improve bus-rail connections for rail users in the community.

This alternative, with overhead loading included, would also help reduce delays in the ferry system operations, benefiting all populations, but queue lengths would still extend back onto SR 525. The Draft EIS public comments have shown queues are a concern to surrounding neighborhoods.

## **Impacts on Parks and Recreational Resources**

The Existing Site Improvements Alternative would remove the Port of Everett public fishing pier and seasonal day moorage, which is a recreational resource used by the community and the public. If not replaced prior to its removal, the loss of the pier would be an impact on a recreational resource for the community because it is one of a limited set of shoreline recreational fishing opportunities available to the public in the area.

As discussed for the No-Build Alternative, congestion on the waterfront would continue to impair access to Mukilteo Lighthouse Park and Mukilteo Community Beach.

## **Environmental Justice Considerations**

There are few impacts that would potentially affect minority or low-income populations disproportionately. Some displaced employees from Ivar's restaurant may be from low-income or minority groups. These employees could be retained if Ivar's were relocated to an area suitable for its business and if the restaurant's operations can transition without a long period of disruption. Otherwise, these individuals could lose their jobs permanently.

The existing fishing pier and day moorage would be removed. Low-income or minority people who rely on fishing as a food source would be affected if no replacement facility is provided before removal. A user survey conducted by WSDOT in October 2011 found that minority and low-income people use the pier, although the number of users fluctuates throughout the year. To avoid affecting people who might rely on fishing from the pier for subsistence, the project would need to provide a temporary or replacement site for public fishing access. Additional outreach to pier users prior to construction would also help avoid impacts.

As discussed in *Section 4.12 Ecosystems*, the Existing Site Improvements Alternative would not adversely affect the occurrence or abundance of aquatic species, including species that are harvested by tribal fishers.

As discussed in *Section 4.6 Cultural Resources*, the project's construction could affect archaeological resources, many of which are important to Native Americans.

To implement this alternative, FTA and WSDOT would need to continue coordination and government-to-government consultations with affected tribes to resolve any issues associated with treaty rights. FTA would also continue Section 106 consultations to address adverse effects on cultural resources of significance to the tribes. With these issues resolved, no adverse effects on environmental justice populations are expected.

## **Elliot Point 1 Alternative**

### **Social Impacts**

This alternative would convert a portion of the Mukilteo Tank Farm to a multimodal transportation use with public shoreline access features, and it would remove the existing ferry terminal facilities. This alternative would improve access to the central

waterfront and the waterfront near the Mount Baker Terminal and would integrate the Mukilteo downtown area with the waterfront.

The distance between the ferry and local bus service at the new transit center is a short walk (about 540 feet or 0.11 mile). The distance from Mukilteo Station to the ferry terminal would be about the same as it is today (about 1,970 feet or 0.37 mile).

This alternative would extend First Street to the Mount Baker Terminal and provide a new signalized intersection at SR 525 and First Street. First Street would feature sidewalks and bicycle lanes. As with the Existing Site Improvements Alternative, by improving bus circulation, this alternative would improve bus service between the waterfront and nearby social resources. By improving bus-rail connections, this alternative would benefit rail users in the community.

This alternative would increase areas available to queue vehicles waiting to reach the terminal and would provide adjacent bus facilities. As discussed in *Chapter 3 Transportation*, the queue would not reach SR 525. The additional capacity would reduce traffic congestion, cut-through traffic, blocked driveways, and other impacts in the adjacent neighborhoods compared to the No-Build Alternative. As discussed below, the public shoreline area near the Mount Baker Terminal would be modified but maintained. Community access to Mukilteo Station would remain generally the same as it is today.

### **Impacts on Parks and Recreational Resources**

The Elliot Point 1 Alternative would modify some of the dedicated public access area at the Mount Baker Terminal, but would still provide the access and parking required by permit for the shoreline area. The alternative would also extend the shoreline areas available to the public and open a larger section of the shoreline to public access than is currently available by providing a shoreline promenade to the west and east of the new ferry terminal.

The demolition of the Tank Farm Pier would remove a known dive site, and the operation of the ferry in the area would restrict other fishing or diving activities in the immediate vicinity. However, the removal of the existing ferry terminal would allow for more opportunities for public shoreline access in the central waterfront area.

The transit center would include layover facilities for transit, which would reduce the need for buses to use Mukilteo Lighthouse Park for layover parking. Similarly, the removal of the existing ferry terminal and its related traffic on Front Street would improve access, safety, and parking availability for the park.

### **Environmental Justice Considerations**

No services specific to low-income or minority populations exist in this area. There would be no impacts on low-income housing sites, social service providers, or other environmental justice resources.

The existing Port of Everett fishing pier and day moorage provides a location for public fishing and is available to people with low incomes, including people who may rely upon fishing as a primary source for food. The Elliot Point 1 Alternative would relocate the fishing pier and day moorage.

As with the Preferred Alternative, removal of the Tank Farm Pier and establishment of a new ferry terminal could alter existing tribal fishing practices, but could open new areas by removing the existing ferry terminal. FTA is conducting government-to-government consultations with affected tribes and coordinating with WSDOT to resolve potential issues associated with treaty rights.

As discussed in *Section 4.6 Cultural Resources*, the project's construction could affect prehistoric archaeological resources important to Native Americans and historic archaeological resources important to Japanese-Americans. This alternative has the least overlap with the prehistoric site and has the lowest potential for impacts. FTA would continue to conduct Section 106 consultations to address adverse effects.

#### **4.5.4 Construction Impacts**

This section addresses the temporary impacts that may result from the construction of new facilities, hauling of materials, and the staging of major construction activities.

Both standard practices and context-specific measures will be incorporated into the project to reduce noise, light and glare, and air quality impacts during construction, including truck traffic impacts on the community, as discussed in more detail in *Chapter 3 Transportation* and *Sections 4.3 Noise and Vibration; 4.4 Visual Quality, Aesthetics, and Light and Glare; and 4.7 Air Quality*. Construction activities are not expected to have disproportionately high and adverse impacts on low-income and minority populations.

#### **No-Build Alternative**

Construction would take place only as facilities require replacement. Construction would have temporary impacts on adjacent uses from noise and temporary disruption of traffic circulation. As described in *Chapter 3 Transportation*, this would temporarily alter access and increase delays to businesses and other uses along the waterfront, but access is expected to be maintained.

The construction would fully close the facility for a 4- to 9-month period. Full closure would have the greatest transportation impact on ferry users primarily because the ferry route would be redirected to Edmonds. Waterfront traffic circulation would improve without ferry operation but patronage at some businesses could decline because area activity levels would decrease. Construction activities conducted while the terminal is in operation would result in some disruptions to ferry operations and traffic patterns. Nearby residents would be subject to increased dust, dirt, traffic, visual impacts, and other inconveniences during the construction period. As detailed in *Section 4.3 Noise and Vibration*, higher noise levels would occur during construction, but mitigation measures are identified to avoid adverse impacts on sensitive receptors such as the hotel and residences near the existing terminal.

The No-Build Alternative could result in a temporary closure of the Port of Everett fishing pier. A nearby public pier beside the Silver Cloud Inn could be used instead. Users of Mukilteo Lighthouse Park would also experience higher noise levels during construction.

*Section 4.12 Ecosystems* contains a more detailed discussion of potential impacts on fishing. Whenever in-water work is conducted, fish distribution or abundance may be temporarily affected, which may disrupt typical tribal and non-tribal fishing activities. Fishing may be affected by noise, vibration, construction activities, and turbidity. The presence of barges and other construction vessels and equipment could also interfere with the use of private boats in the vicinity for fishing or other activities.

### **Preferred Alternative**

Because construction of the Preferred Alternative would take place on the Mukilteo Tank Farm, operation of the existing ferry terminal would continue until construction is complete. Impacts due to the removal of the existing ferry terminal facilities, such as noise, dust, disruption from demolition, or from trucks hauling debris away from this location, would occur for 1 to 2 months after the new ferry terminal is in place and operating.

For most other construction activities, only minor noise, vibration, and visual impacts would be expected because the Mukilteo Tank Farm would not be open to the public during construction and it is not near homes or businesses.

Construction traffic would temporarily affect the downtown street system and cause delays on local streets and SR 525.

Construction impacts to recreational facilities would be largely limited to proximity impacts. The Port of Everett fishing pier and seasonal day moorage would be replaced prior to demolition, which avoids impacts to these types of recreational uses. Impacts would be limited as well at the Mukilteo Lighthouse Park, because aside from demolition of the existing terminal, most of the construction would be away from the park site. Demolition of the existing terminal could create short-term proximity impacts such as noise or visual impacts for park users, primarily in the areas of the park closest to the terminal.

Potential impacts on recreational fishing and crabbing from offshore areas may result from in-water work; the Preferred Alternative requires more in-water work than the No-Build Alternative or the Existing Site Improvements Alternative and is similar to the Elliot Point 1 Alternative. In-water work may temporarily affect fish distribution or abundance, which would in turn disrupt typical tribal and non-tribal fishing activities. A large population of crabs is present in the Tank Farm Pier area. Individual crabs could be injured or killed during pile removal or placement, but overall impacts on crab populations would not be substantial (see *Section 4.12 Ecosystems*). Impacts to recreational fishing opportunities are not expected but may occur if there is a period of time between demolition and replacement of the Port of Everett fishing pier.

### **Existing Site Improvements Alternative**

Construction and demolition activities would be staged to minimize disruptions to existing ferry operations and traffic patterns. The construction of a replacement facility on and adjacent to the existing ferry terminal site would complicate access to waterfront area properties, as well as public waterfront areas nearby. As described in *Chapter 2 Alternatives*, construction would close the terminal facility for 1 to 2 months,

which is longer than other Build alternatives but shorter than with the No-Build Alternative.

Nearby residents would be subjected to noise, dust, dirt, traffic, visual impacts, and other disruptions during the construction period at levels that are greater than those described for the No-Build Alternative. The construction period would not extend for as long a period as that of the No-Build Alternative.

The closure and demolition of the public fishing pier and seasonal day moorage during construction of the Existing Site Improvements Alternative would remove one of a limited number of shoreline recreational fishing locations open to the public in the area. If construction occurs during the offseason, day moorage would not be affected. In the Draft EIS, WSDOT identified two options for replacing the facility, but both have limitations. If a replacement can be constructed before the current facility is removed, impacts on recreational use would be reduced. This would also help avoid impacts on low-income or minority individuals who rely on fishing as a food source. Other recreational properties would remain open to the public during construction and demolition. Construction could affect access to and from Mukilteo Lighthouse Park and the public pier beside the Silver Cloud Inn. The access changes would include detours, delays, and alternative pathways for pedestrians and bicyclists.

Similar to the No-Build Alternative, potential impacts on fishing may result from in-water work.

### **Elliot Point 1 Alternative**

Construction impacts on community cohesion and social resources or interactions would be low and primarily related to construction traffic, similar to those for the Preferred Alternative. Only minor noise, vibration, and visual impacts would be expected because the Mukilteo Tank Farm would not be open to the public and it is not near homes or businesses.

Construction impacts on parks and recreation would be similar to those for the Preferred Alternative, assuming the fishing pier and seasonal day moorage would be relocated to be part of the new multimodal facility.

The public shoreline access area developed as part of the Mount Baker Terminal is not yet open to the public because its permanent access requires tank farm property that would not be available until after the transfer of the property from the U.S. Air Force. The opening of the shoreline access area would be coordinated with the construction of the Mukilteo Multimodal Project because the extension of First Street would be needed as part of the access route; therefore, construction impacts are not anticipated.

### **4.5.5 Indirect and Secondary Impacts**

Major transportation projects can have community impacts that are removed in time or space from the project area, such as job creation, gentrification, and redevelopment.

### **No-Build Alternative**

No indirect impacts are anticipated.

### **Preferred Alternative**

This alternative would indirectly benefit community cohesion by providing the opportunity for redeveloping the waterfront area, and helping the City of Mukilteo achieve its planned vision for the downtown area and Mukilteo Lighthouse Park. This alternative would remove the existing ferry terminal features and operations that are in the center of the downtown waterfront area and adjacent to the Mukilteo Lighthouse Park. A portion of the current holding lanes that are on property leased by WSDOT would be available for other development.

### **Existing Site Improvements Alternative**

No indirect impacts are anticipated.

### **Elliot Point 1 Alternative**

The indirect impacts of the Elliot Point 1 Alternative would be similar to those for the Preferred Alternative.

## **4.5.6 Cumulative Impacts**

### **No-Build Alternative**

This alternative would not affect the Mukilteo Tank Farm. The entire 18.85-acre parcel proposed for transfer to the Port of Everett would be available for development. The City of Mukilteo anticipates the land would be redeveloped as a recreational resource. The redevelopment of the Mukilteo Tank Farm would likely have some positive impacts on the city of Mukilteo and the immediate surrounding neighborhood. This redevelopment would improve local recreation options such as more opportunities for shoreline access, as well as a potential City proposal to relocate a boat launch currently at Mukilteo Lighthouse Park. However, because the No-Build Alternative would not improve the transportation infrastructure in the vicinity of the ferry terminal, lack of access and continued traffic congestion would hinder or limit redevelopment of the Mukilteo Tank Farm.

Pending a land transfer from the U.S. Air Force, the NOAA Mukilteo Research Station is expected to be redeveloped and expanded to include additional public education and research facilities. Plans are still in early stages, but these activities could help enhance the vitality of the waterfront area.

WSDOT has indicated that it does not have plans to fund or build any improvements to SR 525 that would increase its capacity before 2030. However, due to the forecasted increase in traffic volumes on SR 525 from ferry service demand, increased ridership at the Mukilteo Station, development of the remaining Mukilteo Tank Farm, and increases in general traffic, the combined contributions from these traffic generators may accelerate the need for several road improvements that could ease congestion and improve safety. If they occur, these improvements would

enhance the public's ability to access the area's parks and recreational resources, as well as social resources, businesses, and residences.

### **Preferred Alternative**

Relocation of the ferry terminal would result in WSDOT vacating the existing ferry terminal site, potentially allowing a consolidated area of about 1 acre for redevelopment. On the Mukilteo Tank Farm, approximately 5 acres would remain available for development, and could include community facilities, depending on proposals to be developed by the Port of Everett or others. This potential development would be subject to a separate permitting and environmental approval process. The City of Mukilteo has expressed an interest in relocating the boat launch ramp currently at Mukilteo Lighthouse Park to the Mukilteo Tank Farm. Removing the boat launch from Mukilteo Lighthouse Park would help improve the pedestrian and shoreline access functions called for in the park's master plan, and reduce areas needed for parking and boat loading and unloading. This alternative would construct roadways that would improve local circulation. The roadway improvements also extend towards, but not to, the public shoreline area near the Mount Baker Terminal, which would support the proposed boat launch relocation.

The alternative's roadway improvements could support plans for the NOAA Mukilteo Research Station redevelopment, which may be expanded to include additional public education and research facilities that would be open to the community and could help support revitalization of the central waterfront.

### **Existing Site Improvements Alternative**

The cumulative impacts of the Existing Site Improvements Alternative and the related redevelopment of the Mukilteo Tank Farm would be similar to those reported for the No-Build Alternative above.

### **Elliot Point 1 Alternative**

Similar to the Preferred Alternative, the Elliot Point 1 Alternative would provide opportunities for redevelopment to occur at the site of the existing ferry terminal (about 1 acre) and on portions of the Mukilteo Tank Farm not needed for transportation purposes (about 6 acres). Elliot Point 1 would provide additional support for relocating the existing boat launch ramp currently at Mukilteo Lighthouse Park because this alternative would extend First Avenue to the Mount Baker Terminal and shoreline access area. Similar to the Preferred Alternative, this alternative's improvements to local circulation and access could also support plans for the NOAA Mukilteo Research Station to be expanded to include additional public education and research facilities.

### **4.5.7 Mitigation Measures**

The Mukilteo Multimodal Project is expected to have relatively minor long-term social impacts. Consequently, little mitigation would be required for impacts on social resources, nearby residents, or environmental justice populations.

## **Mitigation for Long-Term Impacts**

As described in *Section 4.2 Land Use and Economics*, property owners of parcels to be acquired would be compensated, and residents and business owners who would be displaced as a result of the proposed property acquisitions would receive relocation assistance in accordance with state and federal law.

## **Mitigation for Impacts on Parks and Recreational Resources**

For the Preferred Alternative and Elliot Point 1, WSDOT would replace the Port of Everett fishing pier and seasonal day moorage at the new multimodal center prior to the removal of the existing fishing pier and moorage. The Existing Site Improvements Alternative would need to identify a relocation site within the existing waterfront area of the city of Mukilteo, but these options are limited. Additional coordination with the City and Port, as well as pier users, would be needed to mitigate the pier removal and avoid an impact.

Although the public shoreline access area at the Mount Baker Terminal would be modified as part of the Elliot Point 1 Alternative, the alternative would maintain parking and access and provide a promenade that would connect to the site.

## **Environmental Justice Considerations**

Interference with access to tribal fisheries, if not mitigated, would be the only foreseeable environmental justice impact. FTA is pursuing government-to-government consultations with affected tribes and coordinating with WSDOT to resolve potential issues associated with treaty rights. As with other legal requirements that must be satisfied as a condition of federal funding, the potential treaty issues must be resolved for the project to advance.

As described in *Section 4.6 Cultural Resources* and in the *Cultural Resources Discipline Report*, mitigation measures for potential adverse impacts to archaeological resources were developed in consultation with interested tribes and parties, and the State Historic Preservation Officer.

## **Mitigation for Construction Impacts**

For the Preferred Alternative and all other alternatives, a project communication and public awareness program would describe the changes occurring on the Mukilteo waterfront and inform the public that businesses there are open and accessible during construction. WSDOT, the Port of Everett, Sound Transit, and the City of Mukilteo would coordinate construction activities if multiple projects in the waterfront area are implemented concurrently.

During construction, reduced parking along Front Street would negatively affect businesses on the waterfront by impeding customer and employee access. Potential mitigation measures to address construction impacts on businesses, and closure of the terminal, are identified in *Section 4.2 Land Use and Economics*.

Public notification of proposed construction activities, including timing of construction, would be provided to all local service providers and schools within the immediate vicinity of the project site.

Recycling of demolition debris on site has been incorporated into construction practices to reduce the amount of material hauled off site to regional facilities and decrease truck traffic on roadways. A construction traffic control plan would be developed prior to construction to minimize disruptions to traffic patterns during construction, as described in *Chapter 3 Transportation*.

Mitigation measures for traffic, noise, and visual impacts are discussed in *Chapter 3 Transportation, Section 4.3 Noise and Vibration*, and *Section 4.4 Visual Quality, Aesthetics, and Light and Glare*, respectively.

For the No-Build Alternative and the Existing Site Improvements Alternative, the Port of Everett fishing pier would be closed during construction. The closure of the pier could be partially mitigated by encouraging the use of the nearby public pier adjacent to the Silver Cloud Inn and by public information and signage identifying other available locations for fishing.

#### **4.5.8 Environmental Justice Final Determination**

The preceding sections evaluated the potential for direct or indirect social impacts in general. As described in these sections, and summarized below, the Preferred Alternative would not result in disproportionately high and adverse impacts on minority or low-income populations.

**Question 1:** Does the Preferred Alternative affect a resource that is especially important to a minority or low-income population?

The Preferred Alternative will not displace housing, social service providers, unique ethnic establishments, or other resources that are particularly important to low-income and minority populations. The Preferred Alternative will displace and relocate a fishing pier and day moorage. It will also remove the Tank Farm Pier. Adverse effects on natural resources are not anticipated and the Preferred Alternative is not likely to change the availability or abundance of marine species. Several key elements, such as the removal of the Tank Farm Pier, are expected to provide environmental benefits due to the removal of over-water structures and potential sources of contamination. While tribal members will continue to use the Mukilteo shoreline to harvest salmon, shrimp and crabs, the Preferred Alternative will interfere with or prohibit fishing access at certain places. The tribal fishing rights issue is being addressed through government-to-government consultations with tribes. Impacts to archaeological resources, including a midden, are addressed through the project's Section 106 Memorandum of Agreement, as discussed below for Question 4.

**Question 2:** Will the Preferred Alternative result in high and adverse impacts to a minority or low-income population?

No high and adverse impacts to minority or low-income populations are anticipated.

**Question 3:** Will the Preferred Alternative result in disproportionately high and adverse impacts that will be suffered by a minority or low-income population compared to the impacts to the non-minority and/or non-low-income population?

No disproportionately high and adverse impacts to minority or low-income populations have been identified.

**Question 4:** Does the Preferred Alternative propose mitigation and/or enhancement measures?

Yes. Through the Section 106 process and EIS development, WSDOT, FTA, cooperating and participating agencies, and tribal governments worked closely to develop mitigation measures and agreements with consulting tribes on ecosystems and natural resources, archaeological resources, and other issues of interest to Native Americans. Design refinements and mitigation measures were developed through consultations with the consulting tribes and others to address impacts on resources important to Native Americans. Impacts on tribal treaty rights are being addressed through government-to-government agreements. With mitigation and other anticipated agreements, there would not be high or adverse impacts remaining in any area of the environment.

The project's improvements and its mitigation measures will benefit minority and low-income populations as well as the general population. The benefits include: environmental cleanup, improved public transportation, improved access to the shoreline, improved economic development conditions, and improved safety and security.

**Question 5:** Are there Preferred Alternative benefits that will accrue to minority or low-income populations at similar or greater levels than the general population?

As described above, the Preferred Alternative will benefit enhanced public shoreline access and the aquatic environment through the removal of the Tank Farm Pier over-water structures and piles that are potential sources of contamination. These benefits will occur for environmental justice populations at similar or higher levels than the general population.

Also, the jobs created to construct the new terminal facilities will be available for low-income and minority populations; moreover, targeted outreach can increase the potential for low-income or minority individuals to obtain these jobs. The Preferred Alternative provides increased transit capacity and reliability, as well as improved safety conditions for motorists, bicyclists, and pedestrians accessing the ferry and the waterfront. The improvements in transit and non-motorized access will benefit low-income individuals at the same or higher levels as the general population because these modes are lower in cost than vehicular use.

## 4.6 Cultural Resources

This section discusses the project's effects on cultural resources. This analysis was conducted in compliance with the National Historic Preservation Act (NHPA) and its implementing regulations with FTA as the lead federal agency.

### 4.6.1 Overview of Analysis and Regulatory Context

The NHPA requires federal agencies, in this case FTA, to identify and assess the effects of federally assisted undertakings on historic properties and to consult with others to find acceptable ways to avoid or mitigate adverse effects. Properties protected under Section 106 of the NHPA are those that are listed in or are eligible for listing in the National Register of Historic Places (NRHP). Eligible properties generally must be at least 50 years old, possess integrity, and meet at least one of four criteria of significance. Historic properties may include archaeological sites, buildings, structures, districts, or objects.

In consultation with the State Historic Preservation Officer (SHPO), at the Washington State Department of Archaeology and Historic Preservation (DAHP), FTA determined the project Area of Potential Effects (APE) for archaeological resources and historic buildings and structures. The APE encompasses an area beginning west of SR 525 at Elliot Point (current name for the geographic area where the Point Elliott Treaty was signed) and extending 0.75 mile east along the shoreline, well beyond the end of the Mukilteo Tank Farm (Figure 4.6-1). The BNSF railroad tracks generally mark the southern boundary of the APE. Although the project's direct, physical impacts would be limited to a smaller area, the APE was drawn large enough to accommodate potential indirect impacts, such as visual and auditory changes, and vibration on cultural resources.

According to the NHPA implementing regulations, certain people or groups are automatically entitled to *consulting party* status, including federally recognized and potentially affected Native American tribes (36 CFR 800.2). WSDOT and FTA are consulting with the federally recognized Tulalip Tribes, Suquamish Tribe, Swinomish Indian Tribal Community, Muckleshoot Indian Tribe, Samish Indian Nation, Sauk-Suiattle Indian Tribe, Snoqualmie Tribe, Stillaguamish Tribe of Indians, Upper Skagit Tribe, and the Lummi Nation. FTA and WSDOT have also consulted with the non-federally recognized Duwamish Tribe and Snohomish Tribe. In addition to DAHP and the tribes, consulting parties on this project include the U.S. Army Corps of Engineers, U.S. Air Force, Advisory Council on Historic Preservation (ACHP), Mukilteo Historical Society, Historic Everett, City of Mukilteo, Snohomish County Historic Preservation Commission, and the Japanese Cultural and Community Center.

### 4.6.2 Affected Environment

The project has identified five resources in the APE that are listed in or eligible for listing in the NRHP.

- Mukilteo Shoreline Site, a NRHP-eligible archaeological site with stratified pre-contact shell midden deposits

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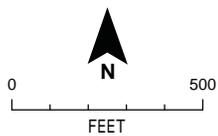
#### Key Terms

**shell midden** – A shell midden or shell mound is an archaeological feature consisting mainly of mollusk shells where aquatic resources were prepared directly after harvest and prior to use or storage. Shell middens often reveal what food was eaten or prepared and include many fragments of stone tools and household goods.

**stratification** (building of layers) – The Mukilteo Shoreline Site includes bedded layers of crushed shell, charcoal, charcoal-stained sediments, and fire-modified rock deposited on top of the clean sand and gravel of the beach berm.

**Circular definition: lifeway** – A custom, practice, or art reflecting the traditional lifeways of a tribal society.

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— Area of Potential Effects

Figure 4.6-1. Historic and Cultural Resources Area of Potential Effects

- Point Elliott Treaty Site, a NRHP-eligible site where the 1855 treaty between the U.S. government and Puget Sound Native American tribes was signed
- Old Mukilteo Townsite, a NRHP-eligible archaeological site with buried remnants of the early Mukilteo business district
- Japanese Gulch Site, a NRHP-eligible site with buried deposits associated with early 20th century Japanese mill workers
- Mukilteo Light Station, a NRHP-listed early 20th century lighthouse complex

The following pages describe these resources, which are also included in *Appendix I Section 4(f) Evaluation*, and summarized in *Chapter 5 Section 4(f)* of this Final EIS.

FTA determined, with concurrence from DAHP, that nine other properties are not eligible for NRHP listing, including the buildings and structures on the property now owned by the U.S. Air Force, as well as the Ivar's restaurant building, and the existing Mukilteo ferry terminal. Resources found not to be eligible for the NRHP are not subject to the NHPA and are not discussed in this section. The *Cultural Resources Discipline Report* includes details on those resources.

### **4.6.3 Historic Background**

The Mukilteo vicinity, with a Salish name meaning “a good place to camp” or “goose neck,” was well known historically as a gathering place for local Native American people. The importance of the area to Native American groups is reflected in its selection as the site for the signing of the Point Elliott Treaty in 1855. Euroamerican settlement of the site vicinity began soon after signing of the treaty, with J.D. Fowler and Morris Frost filing the first land claims. By 1858, Fowler and Frost had established a post for trading with local Native American residents; a store, saloon, hotel, and a post office soon followed (Figure 4.6-2).

In 1903, the Mukilteo Lumber Company established a mill on the Mukilteo waterfront, which was acquired in 1909 by the Crown Lumber Company. This mill, which employed both Euroamerican and Japanese workers, operated until 1930. The last of its buildings was destroyed by fire in 1938. The mill site was subsequently acquired by the U.S. Army and an ammunition shipping facility was built in the early 1940s. Ownership of this facility was transferred to the U.S. Air Force in 1951 for construction of a fuel supply depot and tank farm.



Figure 4.6-2. **Photo Showing Indians, Canoes, Early Settlers, and J.D. Fowler with his Oxen at Mukilteo**

The five cultural resources discussed below have been determined eligible for, or are listed in, the NRHP because they meet one or more of four National Park Service criteria of significance:

- A. The property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. The property is associated with the lives of persons significant in our past.
- C. The property embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. The property has yielded, or is likely to yield, information important in prehistory or history.

### **Mukilteo Shoreline Site**

The Mukilteo Shoreline Site (designated 45SN393 by DAHP) was identified in 2005 during initial cultural resource studies for the Mukilteo Ferry Terminal Project. The site's original landforms have been obscured by pavement and buildings or buried beneath fill. The north-facing shoreline of Elliot Point has been at least occasionally occupied by Native Americans for approximately 1,000 years. The Mukilteo Shoreline Site contains the remnants of this occupation, including a thick, horizontally extensive shell midden over 1,500 feet (0.3 mile) in length. The midden is characterized by intact, bedded layers of crushed shell, charcoal, charcoal-stained sediments, and fire-modified rock. The alkaline depositional environment of the shell midden has created ideal preservation conditions for bone, in the form of both unmodified animal

remains and fragments of mammal bone and beaver teeth modified into tools. Within the shell midden layers are the remains of animals that were hunted, fished, and gathered by the Native occupants of the site; the plants that they ate; and the wood that they used for fuel and implements. Stone tools and tool-making debris reflect the kinds of stone implements they used, how they used them, and the various ways in which the tools were made.

The archaeological investigation established preliminary boundaries and content for the Mukilteo Shoreline Site. Geoarchaeological tests helped investigators deduce the physical framework of the site, establish the depositional context for the shell midden, and construct a preliminary landform history.

Testing suggests that the Mukilteo Shoreline Site was an important year-round occupation that played a prominent role in the settlement systems of Native American communities. Elliot Point would have been a valuable place not only for the year-round availability of certain subsistence resources, but also as a strategic landform near the intersection of south Puget Sound, the protected tidewaters east of Whidbey Island, the entrance to Hood Canal, and the exit to the Strait of Juan de Fuca through Admiralty Inlet. The site is also near the mouth of the Snohomish River, which provides a transportation route east to the foothills, the Cascade crest, and beyond. The U.S. Air Force determined the site is eligible under NRHP Criterion D, for its potential to provide information important in understanding history or prehistory.

### **Point Elliott Treaty Site**

The Point Elliott Treaty Site (designated 45SN108 by DAHP) is the location where the 1855 treaty between the U.S. government and the Native American tribes of northern Puget Sound was signed. The treaty caused extreme changes for Native American people by divesting them of their lands and establishing the reservation system. At the same time, the treaty is a legal document that establishes the sovereignty of independent tribal governments, and it is a symbol of survival. Work associated with the Point Elliott Treaty Site included archival research, coordination with the tribes, and oral history interviews with tribal members. Although exact locations where 1855 Point Elliott Treaty events occurred remain uncertain, the size of the treaty gathering, nature of the landform, and other factors suggest that the site boundary should encompass the entire original geography for the point, which ended east of where the Tank Farm Pier is today or just past Japanese Gulch.

FTA has determined the Point Elliott Treaty Site is eligible for listing as a historic site in the NRHP under Criterion A for its association with the history of Indian/white relations, and under Criterion B for its association with prominent political leaders of the day, Governor Isaac Stevens, and a number of Indian leaders including Seattle, Patkanim, Goliath, and Chowitshoot. The site is also eligible as an archaeological site under Criterion D for its potential to provide information important in understanding history and prehistory.

### **Old Mukilteo Townsite**

Archaeological investigations associated with the Mount Baker Terminal in 2006 provided physical evidence of the community's history in the form of buried historical

archaeological sites. The Old Mukilteo Townsite (designated 45SN404 by DAHP) studies offer unique insights into the town's early community structure, commercial systems, demographics, and lifeways, while recovery of a few clay tobacco pipe fragments, a bead, and a stone pendant may be evidence of Mukilteo's trading post period. Observed historical materials also included deteriorated lumber, burned brick, and historical artifacts, as well as remains identified through historical research as the Crown Lumber Company store and butcher shop. This site has previously been determined eligible by the U.S. Air Force under Criterion D for the property's potential to provide information important in understanding history, and under Criterion A for its association with Mukilteo's early development.

### **Japanese Gulch Site**

The Japanese Gulch Site (designated as 45SN398 by DAHP) was also identified in 2006. It is evidence of early 20th century Japanese mill workers who resided in the racially segregated Mukilteo Japanese Gulch settlement.

The early city directories did not include the Japanese workers, who were evidently employed by the Mukilteo Lumber Company from the beginning of its operation. Newspaper accounts indicate that the mill had hired at least 30 laborers of Japanese ancestry to work in the yard by February of 1904, and reported that other Japanese crews were planned. Caucasian workers initially threatened to leave the company if the Japanese workers were not dismissed, but their protest had little effect. The numbers of Japanese employed at Mukilteo Lumber Company continued to rise and later historical accounts suggest that the number had increased to 150 by 1905.

This site has previously been determined eligible by the U.S. Air Force under Criterion D for the property's potential to provide information important in understanding history, and under Criterion A for its association with the introduction of Japanese immigrant labor to the Puget Sound area.

### **Mukilteo Light Station**

This lighthouse complex, consisting of 11 buildings and structures, is listed in the NRHP. The lighthouse, two keepers' residences, and a coal storage building were constructed in 1906. A two-bay garage, concrete fence posts, sidewalks, a seawall, ladder storage, water basin, and triangle alarm were added before 1935 and are contributing elements.

The Mukilteo Light Station is listed as being historically significant under Criterion A for its association with the maritime history of Puget Sound. It is also significant under Criterion C as a well-preserved complex of buildings and structures typical of those produced by the federal Light House Board in the Pacific Northwest during the late 19th and early 20th centuries.

#### **4.6.4 Adverse Effects**

For historic properties, adverse effects occur when an undertaking may alter, directly or indirectly, any of the characteristics that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Examples of adverse

effects include physical destruction or damage; restoration, rehabilitation, repair, or other alteration inconsistent with the Secretary’s *Standards for the Treatment of Historic Properties*; relocation of a property from its historic location; change in the character of a property’s use or physical features of the setting; introduction of visual, atmospheric, or audible elements that diminish the property’s integrity; neglect that causes deterioration; and transfer, lease, or sale of property out of federal ownership or control without adequate preservation controls.

For archaeological sites, adverse effects due to construction are considered permanent because they can damage artifacts and damage the integrity of association among artifacts and cultural and natural sediments. Disruption of these relationships severely limits the ability of archaeologists to interpret a property in a meaningful manner. Because the archaeological sites identified in the APE lie beneath soils used as fill in more recent times, a disruption is most likely to occur when excavation is deep enough to penetrate the protective fill layer.

Archaeological investigations suggest limited potential for encountering other buried archaeological material, aside from the sites that are already recorded. In general, much of modern Elliot Point consists of a filled lagoon or wetland—landforms that would not have been conducive to pre-Euroamerican contact or Native American residential activities. The presence of lagoon or wetland deposits is a good indicator that concentrated pre-contact cultural material, like a shell midden, would not occur. The limited excavations at the Japanese Gulch Site, located on delta deposits, did not identify any pre-contact cultural material or deposits. The original shoreline was at the base of the slopes of Japanese Gulch until the railroad was constructed.

Table 4.6-1 provides a summary of adverse effects.

**Table 4.6-1. Adverse Effects by Alternative**

| Alternative                       | Project Elements  | Site Affected                   |
|-----------------------------------|---|---------------------------------|
| <b>No-Build</b>                   | Buildings and utilities                                     | 45SN393 Mukilteo Shoreline Site |
| <b>Preferred Alternative</b>      | No features within midden but construction above            | 45SN393 Mukilteo Shoreline Site |
|                                   | Stormwater and utilities                                    | 45SN404 Old Mukilteo Townsite   |
|                                   | First Street/SR 525 relocation and retaining walls          | 45SN404 Old Mukilteo Townsite   |
| <b>Existing Site Improvements</b> | Buildings   | 45SN393 Mukilteo Shoreline Site |
|                                   | Utilities   | 45SN393 Mukilteo Shoreline Site |
|                                   | Stormwater and utilities                                    | 45SN404 Old Mukilteo Townsite   |
|                                   | First Street/SR 525 relocation and retaining walls          | 45SN404 Old Mukilteo Townsite   |
| <b>Elliot Point 1</b>             | No features within midden but construction above            | 45SN393 Mukilteo Shoreline Site |
|                                   | Stormwater and utilities                                    | 45SN404 Old Mukilteo Townsite   |
|                                   | First Street/SR 525 relocation and retaining walls          | 45SN404 Old Mukilteo Townsite   |
|                                   | Japanese Creek daylighting and nearby construction elements | 45SN398 Japanese Gulch Site     |