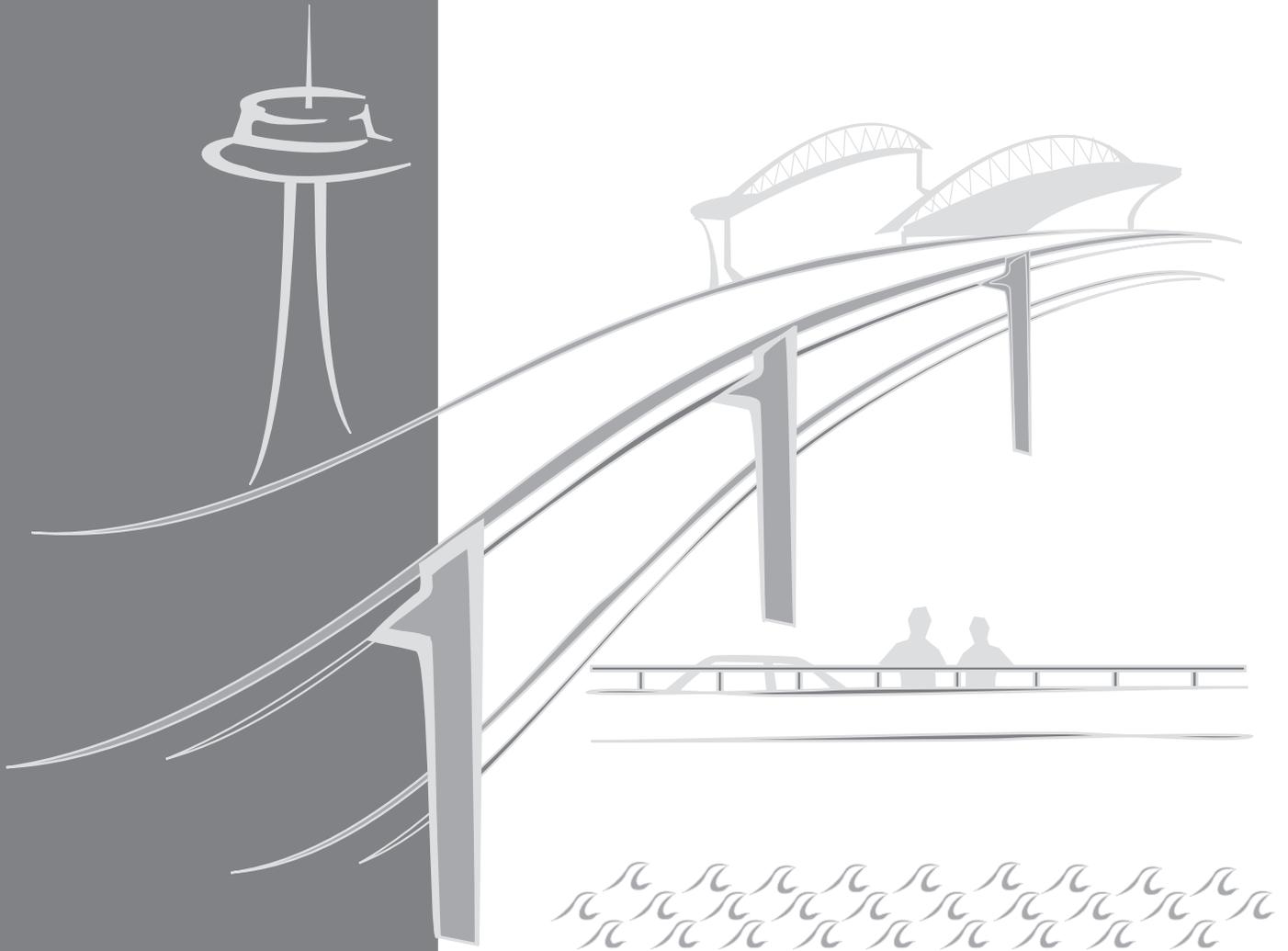


SR 99: ALASKAN WAY VIADUCT &
SEAWALL REPLACEMENT PROJECT

Draft Environmental Impact Statement Appendix M Archaeological Resources and Traditional Cultural Places Technical Memorandum



MARCH 2004

Submitted by:
PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

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SR 99: ALASKAN WAY VIADUCT & SEAWALL REPLACEMENT PROJECT

Draft EIS Archaeological Resources and Traditional Cultural Places Technical Memorandum

AGREEMENT NO. Y-7888

FHWA-WA-EIS-04-01-D

Submitted to:

Washington State Department of Transportation

Alaskan Way Viaduct and Seawall Replacement Project Office

999 Third Avenue, Suite 2424

Seattle, WA 98104

The SR 99: Alaskan Way Viaduct & Seawall Replacement Project is a joint effort between the Washington State Department of Transportation (WSDOT), the City of Seattle, and the Federal Highway Administration (FHWA). To conduct this project, WSDOT contracted with:

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ATTACHMENTS

ATTACHMENT A Agency and Tribal Consultation Letters

ACRONYMS

APE	Area of Potential Effect
AWV	Alaskan Way Viaduct and Seawall Replacement
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
GNRR	Great Northern Railroad
LAAS	Larson Anthropological Archaeological Services Limited
NHPA	National Historic Preservation Act
NPRR	Northern Pacific Railroad
NRHP	National Register of Historic Places
OAHP	Washington State Office of Archaeology and Historic Preservation
SHPO	State Historic Preservation Officer
SODO	South of Downtown
SR	State Route
WHR	Washington Heritage Register
WSDOT	Washington State Department of Transportation

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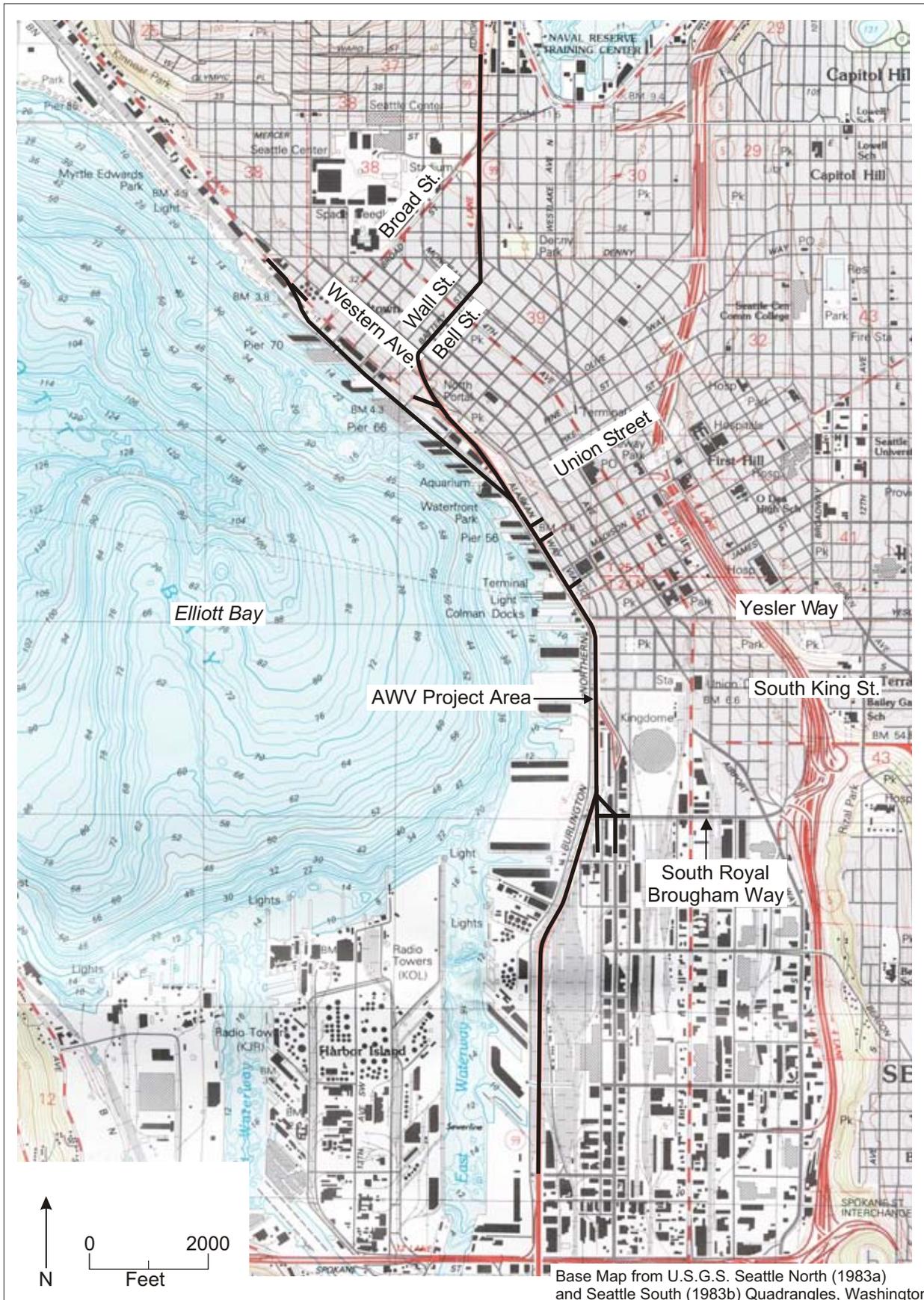
Chapter 1 INTRODUCTION

No significant archaeological resources or traditional cultural places were identified during an archaeological overview of the proposed Alaskan Way Viaduct and Seawall Replacement (AWV) Project. Areas with a high probability for hunter-fisher-gatherer, ethnographic, and historic period archaeological resources were identified. Mitigation measures were recommended, including development of a treatment and monitoring plan, development of a programmatic agreement, and construction excavation monitoring.

The proposed Alaskan Way Viaduct and Seawall Replacement Project is in Township 24 North, Range 4 East, Sections 5, 7, 8, 17, and 18; Township 25 North, Range 3 East, Sections 25 and 36; and Township 25 North, Range 4 East, Sections 30 and 31, Willamette Meridian (Exhibit 1-1). Construction for the proposed alternatives, except the No Build Alternative, may affect unknown hunter-fisher-gatherer, ethnographic period, and historic period archaeological resources on the former tideflats of Elliott Bay, on the former beach of Elliott Bay, on former bluff tops and the base of bluffs on the historic shoreline of Elliott Bay, and at the east end of a ravine that was centered on Bell Street. Traditional cultural places will probably not be affected by any of the alternatives. The proposed AWV Project is a federal undertaking, due to the involvement of the Federal Highway Administration (FHWA), which triggers Section 106 of the National Historic Preservation Act (NHPA). This technical report is one of the requirements for compliance with the NHPA. FHWA is the lead federal agency for the proposed AWV Project.

Larson Anthropological Archaeological Services Limited (LAAS) conducted an archaeological resources and traditional cultural places overview addressing hunter-fisher-gatherer, ethnographic period, and historic period archaeological resources and traditional cultural places through archival and literature review; consultation initiated by Washington State Department of Transportation (WSDOT) with the Suquamish Tribe, the Muckleshoot Indian Tribe, the Tulalip Tribes, the Snoqualmie Tribe, the Yakama Nation, the Duwamish Tribe, the Kikiallus Tribe, and the Washington State Office of Archaeology and Historic Preservation (OAHP); and preparation of this technical report. LAAS conducted no field investigations for the overview, although geotechnical borings were monitored.

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Base Map from U.S.G.S. Seattle North (1983a) and Seattle South (1983b) Quadrangles, Washington

Exhibit 1-1 AWW Project Area

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The FHWA, WSDOT, and the City of Seattle are preparing an Environmental Impact Statement (EIS) to document the environmental consequences and possible mitigation measures for alternative solutions to improve the existing Alaskan Way Viaduct Corridor in downtown Seattle, King County, Washington. This corridor is now partially served by the Alaskan Way Viaduct. The proposed action will involve rebuilding the existing 2-mile viaduct structure or constructing a new facility. The southern terminus of the project will be S. Spokane Street. The northern terminus will be north of the existing Battery Street Tunnel at Ward Street (Exhibit 1-1).

The proposed Alaskan Way Viaduct and Seawall Replacement Project EIS will evaluate Build Alternatives and a No Build Alternative. Build Alternatives include the Rebuild, Aerial, Tunnel, Bypass Tunnel, and Surface Alternatives. The alternatives have been divided into four primary sections based on location:

- South – S. Spokane Street to S. King Street
- Central – S. King Street to Battery Street Tunnel
- North Waterfront – Pike Street to Broad Street
- North – Battery Street Tunnel to Ward Street

The existing seawall on the west side of Alaskan Way will be reconstructed in all four alternatives.

The Area of Potential Effect (APE) for archaeological resources will include subsurface construction excavation for roadbeds, utility trenches and vaults, tunnel foundations, shafts for support columns, shafts for foundation footings, and shafts and trenches for seawall improvements primarily within the existing footprint of the Alaskan Way Viaduct and adjacent portions of the existing seawall, and ancillary areas including, but not limited to, construction staging areas. Subsurface archaeological deposits also may be affected when pilings are driven for trestle and roadbed supports or when jet grouting or deep soil mixing are used to improve the bearing weight of soils for foundations, footings, columns, and areas behind the seawall.

The vertical APE will vary by construction alternative and location within the proposed AWV Corridor. The maximum depth of ground disturbance in the south portion of the corridor will be 100 to 150 feet below surface for 8- to 14-foot-diameter shafts drilled for support columns. In the central portion of the proposed AWV Corridor, 10- to 14-foot-diameter shafts may be drilled to depths between 80 and 120 feet deep. New column supports in the north waterfront area may require 6- to 10-foot-diameter column shafts drilled to depths between 80 and 120 feet deep. Trenching for utility lines and vaults in the north portion of the proposed AWV Corridor may extend to depths between 20 and 40 feet deep. Shafts for seawall improvements may range

from 4 to 12 feet in diameter and could extend between 120 to 140 feet below the surface.

Exhibit 1-2 compares alternatives by effects on possible intact archaeological resources. Comparisons among alternatives were based on estimates of the number and locations of subsurface construction elements that could intersect unknown, intact archaeological deposits. Information regarding landform type, average depths of fill, depths of old beaches and shorelines, and density and location of structures on historic maps was compared to construction plans, to estimate areas where construction excavation and soil improvements might intersect old, buried surfaces that could have unknown, intact archaeological deposits.

Effects on unknown, buried archaeological resources were inferred by reviewing preliminary construction drawings, and by assessing the size of proposed footings, diameters of proposed columns, general locations of footings and columns, and depths of excavations for proposed footings and columns. The size, number, location, and depths of utility trenches and utility vaults and the size and depth of excavations for proposed cut-and-cover tunnels were assessed. The extent of soil improvements, such as jet grouting or deep soil mixing, was estimated and was also taken into account.

Exhibit 1-2. Summary of Effects on Possible Intact Archaeological Resources by Alternative

Alternative	Effects
No Build	No effects on intact archaeological resources.
Rebuild	Fewest number of effects on intact, unknown archaeological deposits. Effects from new pilings, column supports, and soil improvements for seawall and viaduct supports.
Surface	Fourth highest number of effects on intact, unknown archaeological deposits. Effects from new pilings, column supports, grading, and soil improvements for seawall and viaduct supports.
Aerial	Third highest number of effects on intact, unknown archaeological deposits. Effects from excavations for new columns, more new columns than the Rebuild or Surface Alternatives, new pilings, and soil improvements.
Bypass Tunnel	Second highest number of effects on intact, unknown archaeological deposits. Large, deep excavations for tunnel, excavations for new columns, and soil improvements. Many more archaeological resources would be affected, compared to the Rebuild, Surface, or Aerial Alternatives.
Tunnel	Most effects on intact, unknown archaeological deposits.

No secondary or operations impacts on intact archaeological deposits or traditional cultural places will occur with any alternative. The project may

contribute to cumulative effects on intact archaeological resources in downtown Seattle. Potential effects to archaeological sites resulting from construction of the Alaskan Way Viaduct and Seawall Replacement Project will combine with effects of planned projects in areas within downtown Seattle that have a high probability for significant hunter-fisher-gatherer, ethnographic period, or historic period archaeological resources, including the Seattle Monorail Green Line Project, the WSDOT-City of Seattle SR 519 Project, and the WSDOT-Sound Transit King Street Renovation Project.

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Chapter 2 METHODOLOGY

LAAS conducted the archaeological resources and traditional cultural places overview of the proposed AWV Project by reviewing literature and archival data. In addition, LAAS and WSDOT consulted with affected Indian Tribes to obtain information on existing archaeological resources and traditional cultural places within or near the footprint of the project alternatives and to determine the probability for unknown archaeological resources beneath the developed portions of the project area.

LAAS reviewed archaeological site forms and archaeological survey reports on file at the Washington State Office of Archaeology and Historic Preservation (OAHP) and the LAAS library. LAAS also reviewed ethnographic studies, local histories, and historic photographs at the University of Washington Maps Library, University of Washington Special Collections and Manuscripts, Museum of History and Industry, Seattle Public Library, Seattle Municipal Archives Historic Photograph Online Database, and the LAAS library.

LAAS consulted with the Muckleshoot Indian Tribe, the Suquamish Tribe, the Duwamish Tribe, the Tulalip Tribes, the Snoqualmie Tribe, the Yakama Nation, and the Kikiallus Tribe to obtain information on any traditional cultural places within the AWV project area, after WSDOT initiated consultation through a letter to each tribe. WSDOT determined the tribes to be consulted based on each Tribe's mailing address in relation to the location of the proposed AWV Project. The APE parallels the horizontal and vertical boundaries of subsurface disturbance that will be associated with all subsurface disturbance for all elements of the proposed project. The APE for archaeological resources was defined by WSDOT and the OAHP consistent with the Section 106 process (Exhibit A-1).

LAAS used information developed during archival review and tribal consultation to establish the affected environment for archaeological resources and traditional cultural places. LAAS analyzed the data collected for previous cultural resources studies, environment, ethnography, history, and through tribal consultation, to determine the probability for unknown hunter-fisher-gatherer, ethnographic, and historic period archaeological resources in the proposed AWV Project. LAAS also monitored geotechnical borings and reviewed boring logs from previously excavated geotechnical borings to identify areas that may have hunter-fisher-gatherer, ethnographic period, or historic period archaeological deposits.

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Chapter 3 STUDIES AND COORDINATION

3.1 Agency Consultation

LAAS consulted with WSDOT regarding methods of acceptable consultation with Indian Tribes (Attachment Exhibits A-1 and A-2). WSDOT formally consulted with the OAHP regarding concurrence with the APE, which was assumed to include the horizontal and vertical boundaries of any proposed subsurface activities (Attachment Exhibit A-1). LAAS also consulted with Dr. Allyson Brooks, State Historic Preservation Officer (SHPO) to clarify the level of documentation necessary for Section 106 compliance and to discuss the process for establishing the APE (Attachment Exhibit A-2).

3.2 Tribal Consultation

WSDOT was delegated the authority from FHWA to initiate consultation for the proposed AWV Project with the Suquamish Tribe, the Muckleshoot Indian Tribe, the Tulalip Tribes, the Snoqualmie Tribe, the Duwamish Tribe, the Yakama Nation, and the Kikiallus Tribe. WSDOT is conducting tribal consultation consistent with Section 106 pursuant to 36 CFR 800.2 (c) (4), to ensure that FHWA takes into account the effects of the proposed undertaking on properties listed in or eligible for listing in the National Register of Historic Places (NRHP). WSDOT identified the tribes to be consulted based on each tribe's mailing address in relation to the proposed AWV Project. WSDOT sent letters addressed to the chairperson and designated cultural representative for each tribal government (Attachment Exhibit A-3), then called each of the Indian Tribes to solicit comments on the proposed project. WSDOT received no comments from the Kikiallus Tribe or the Tulalip Tribes. The summary of WSDOT's calls is in the attached table compiled by WSDOT (Attachment Exhibit A-4).

Subsequent to WSDOT's government-to-government consultation, LAAS placed follow-up phone calls to the Tribes to collect information regarding traditional cultural use or historic Indian land use in the proposed AWV Project (Attachment Exhibit A-2). The results of WSDOT's and LAAS' consultation efforts are described below.

3.2.1 Muckleshoot Indian Tribe

A WSDOT representative spoke by telephone with Donna Hogerhuis, Cultural Specialist, Muckleshoot Indian Tribe, who stated that she would like to receive project updates by e-mail and telephone and would like to review draft documents relating to cultural and archaeological issues (Attachment

Exhibit A-4). Ms. Hogerhuis requested that she be informed of any proposed archaeological fieldwork for the project so she could arrange for a tribal monitor to be present. The Muckleshoot Indian Tribe also sent a letter to WSDOT asking to review the Draft EIS when the document becomes available (Attachment Exhibit A-5). LAAS telephoned Ms. Hogerhuis to discuss any additional comments on the proposed AWV Project. Ms. Hogerhuis (2002 personal communication) had no further comments beyond those given to WSDOT.

3.2.2 Suquamish Tribe

A WSDOT representative spoke by telephone to Rich Brooks, Environmental Program Supervisor, Suquamish Tribe, who stated that the Tribe was interested in being involved in Section 106 consultation and asked that WSDOT contact Charles Sigo, Tribal Curator, Suquamish Tribe, for comments (Attachment Exhibit A-4). LAAS contacted Mr. Sigo (2002 personal communication), who stated that the downtown Seattle area was culturally sensitive to the Tribe and that they “would not like to hear of the disturbance of human remains as has happened in the past on construction projects.” Mr. Sigo (2002 personal communication) asked that an archaeologist monitor excavation, especially in the downtown and Belltown areas.

3.2.3 Tulalip Tribes

A WSDOT representative left a message for Hank Gobin, Cultural Resources Manager, Tulalip Tribes, and received no return phone call (Attachment Exhibit A-4). Mr. Gobin has prepared a policy statement for tribal consultation in the aboriginal territory of the Tulalip Tribes. Mr. Gobin provided LAAS with the memorandum that outlines standard operating procedures (S.O.P.) for projects in King and Snohomish Counties (Attachment Exhibit A-5). The procedures require project proponents to conduct cultural resource assessments prior to project construction, to not adversely affect plant and faunal resources, and to protect water and fisheries resources. Mr. Gobin (2002 personal communication) asked that LAAS use the letter as consultation for projects in King and Snohomish Counties. Mr. Gobin asked that LAAS continue to request comments from him by e-mail to allow him an opportunity to respond to individual projects if he chooses. LAAS did not receive a reply to an e-mail request for further comment.

3.2.4 Snoqualmie Tribe

Matthew Mattson, Tribal Administrator, Snoqualmie Tribe, returned WSDOT’s phone call to request a government-to-government meeting to discuss the proposed AWV Project (Attachment Exhibit A-4). Representatives

of WSDOT, FHWA, the Snoqualmie Tribe, City of Seattle, Parsons Brinckerhoff, Parametrix, and LAAS met on December 7, 2001. David Mattern, Parametrix, presented the project and conceptual alternatives to the Snoqualmie Tribe's Chairman, Joe Mullen, and Tribal Administrator, Matthew Mattson. Tribal issues for the Snoqualmie included habitat issues and ground-disturbing activities that may disturb archaeological resources. LAAS contacted Ray Mullen (2002 personal communication), Cultural Specialist, Snoqualmie Tribe, who commented that he believed there was a "strong potential for human remains" in the downtown Seattle area.

3.2.5 Duwamish Tribe

Cecile Hansen returned WSDOT's phone call and said that she would reread her AWV project file and call later to discuss the project (Attachment Exhibit A-4). Ms. Hansen did not call back. LAAS contacted James Rasmussen (2002 personal communication), Tribal Council Member, Duwamish Tribe, who said that he felt that the proposed project may disturb human remains and hoped that WSDOT could avoid events like those that occurred during the World Trade Center project, where human remains were identified in auger cast pilings. Mr. Rasmussen (2002 personal communication) stated that human remains could be buried along the former shorelines in the downtown Seattle area and that WSDOT should take measures to avoid disturbance of possible burials.

3.2.6 Yakama Nation

WSDOT did not make telephone contact with the Yakama Nation. LAAS contacted Johnson Meninick, Cultural Resources Program Manager, Yakama Nation, for comments. Mr. Meninick (2003 personal communication) stated that construction excavation conducted during the project should be monitored to protect burials and archaeological sites. Mr. Meninick (2003 personal communication) asked that if burials or archaeological resources are identified during construction excavation, work in the area of discovery should be stopped and proper treatment be extended to the identified resources. Mr. Meninick (2003 personal communication) asked that a qualified archaeologist accompanied by a tribal cultural specialist monitor construction excavation.

3.2.7 Kikiallus Tribe

WSDOT was unsuccessful in their attempts to contact Paul Lavan, Chief, Kikiallus Tribe (Attachment Exhibit A-4). LAAS contacted Mr. Lavan (2002 personal communication), who said that the Kikiallus Tribe signed the 1855 Treaty of Point Elliott and members of the Kikiallus Tribe were present in the

Elliott Bay area before and after 1855. Mr. Lavan (2002 personal communication) stated that he preferred alternatives that included an underground tunnel with a new seawall serving as the seaward tunnel wall. Mr. Lavan (2002 personal communication) also requested a copy of the final archaeological resources overview.

3.3 Studies

LAAS combined information from agency and Tribal consultation with ethnographic data from more than 10 studies or local histories, 24 previous archaeology studies, and more than 20 histories and archival documents to provide a detailed summary and analysis of archaeological resources that may occur in the project area. Detailed information from key studies is presented in Chapter 4, Affected Environment.

Chapter 4 AFFECTED ENVIRONMENT

The proposed AWW project corridor traverses five geomorphological zones in downtown Seattle (Exhibits 1-1 and 4-1). From south to north, the corridor extends across former Elliott Bay tideflats at the historic period mouth of the Duwamish River, is directly west of a tidal marsh and lagoon on the former east shoreline of Elliott Bay between S. King Street and Yesler Way, crosses the early historic period shoreline of Elliott Bay at the base of bluffs, extends across bluffs and bluff tops above the former shoreline of Elliott Bay, and traverses inland landforms between Elliott Bay and South Lake Union (Exhibit 4-1). Data regarding the geomorphology of the proposed AWW Project Corridor provide a background to estimate the kinds of archaeological sites and materials that may occur and the probable ages of the materials.

The south portion of the proposed project, extending from S. Spokane Street to S. King Street, will cross tideflats that date within the past 1,000 years (Exhibit 4-1) and that formed from sediment deposited by the Duwamish River. In 1840, the mouth of the Duwamish River was at Spokane Street (Bortelson et al. 1980).

The central portion of the corridor, from S. King Street north to the Battery Street Tunnel, will follow the early historic period shoreline of the east side of Elliott Bay (Exhibit 4-1). The shoreline and beaches were west of steep bluffs that had been eroded by waves. The area between S. King Street and Yesler Way included portions of a marshy tidal lagoon and the east shoreline of Elliott Bay in the early historic period. This area is now covered with 20 to 30 feet of fill (Weaver 1997:2) (Exhibit 4-1). Denny Island, a small natural isthmus between the tidal lagoon and Elliott Bay, extended west from Second Avenue S. to the Alaskan Way Viaduct, and was centered on S. Jackson Street. Landforms north of S. King Street subsided during an earthquake on the Seattle Fault Zone approximately 1,100 years ago, and beach surfaces and bluff tops lowered in elevation at least 3 feet (Lewarch et al. 1999). Beaches on the Elliott Bay shoreline were inundated by Puget Sound, but the beaches at the base of the bluffs reestablished above the surface elevation of Elliott Bay within a few hundred years (Lewarch et al. 1999). More recent beach sediments cover the pre-1100 BP (Before Present) beach surfaces.

The north end of the central portion of the corridor, from Pike Street to the Battery Street Tunnel, will cross old beach deposits, portions of the historic period shoreline of Elliott Bay at the base of bluffs, sides and tops of bluffs, and portions of glacial outwash drift plains east of the Elliott Bay shoreline.

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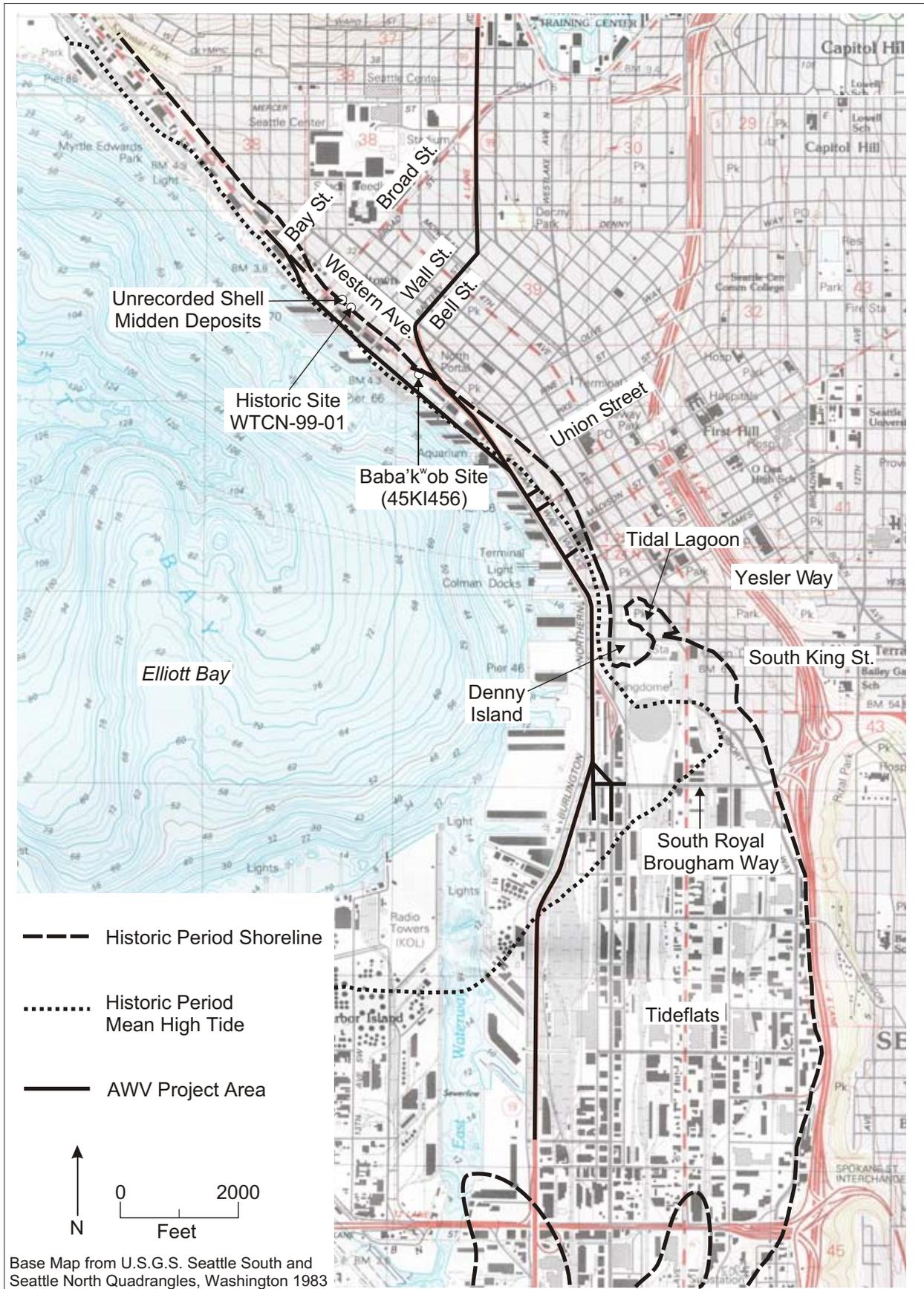


Exhibit 4-1 AWW Project Area Showing the Early Historic Period Shoreline and Mean High Tide Line

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The north waterfront portion of the proposed corridor will extend from Pike Street along the waterfront to Myrtle Edwards Park, and will follow the early historic shoreline of Elliott Bay. The section has old, inundated beach surfaces as well as more recent beach sediments.

The north portion of the proposed corridor from Battery Street Tunnel to Ward Street will cross an inland landform between Elliott Bay and Lake Union. Much of the landscape in the Belltown and lower Queen Anne neighborhoods was modified between 1897 and the 1930s during regrading operations (Exhibit 4-1).

4.1 Previous Archaeological Studies

Archaeological resources in downtown Seattle, Elliott Bay, and Shilshole Bay are summarized in 23 cultural resources reports prepared for a variety of projects through early 2003 (Exhibit 4-2). Eight reports are overviews or programmatic assessments of cultural resources in various areas in the Pioneer Square District, Belltown, and South Lake Union. Five reports describe archaeological test excavations or archaeological data recovery excavations. Four reports summarize archaeological construction monitoring at construction job sites in the Pioneer Square area and the Belltown neighborhood. One report describes archaeological monitoring of geotechnical borings that were drilled in and adjacent to the AWV Corridor on Alaskan Way and in the Pioneer Square area and presents an analysis of previously drilled boring logs throughout the AWV Corridor (Roedel et al. 2003). Four archaeological overviews provide a framework to estimate the probability for hunter-fisher-gatherer and historic period archaeological deposits in downtown Seattle (Earth Technology Corporation 1984; Forsman et al. 1997; Hart-Crowser and Associates 1986a,b) (Exhibit 4-2).

Exhibit 4-2. Previous Archaeological Investigations in the Vicinity of the Proposed AWV Project

Author	Year	Report Title	Location	Project Information
Campbell	1981	<i>The Duwamish No. 1 Site: A Lower Puget Sound Shell Midden</i>	Terminal 107, east of W. Marginal Way S.W., between S.W. Alaska Street and S.W. Hudson Street, West Seattle	Archaeological test excavations at the Duwamish No. 1 Site (45KI23)
Earth Technology Corporation	1984	<i>Archaeological Resources Assessment for the Downtown Seattle Transit Tunnel Project</i>	Third Avenue, Union Station vicinity, downtown Seattle, Pioneer Square area	Cultural resources overview, assessment of probability for archaeological resources, review of data from geotechnical borings

Exhibit 4-2. Previous Archaeological Investigations in the Vicinity of the Proposed AWV Project (continued)

Author	Year	Report Title	Location	Project Information
Kennedy	1985	<i>The METRO Renton Effluent Transfer System Findings-to-Date, West Marginal Place SW, ETS-8b/9</i>	West side of W. Marginal Way S.W., between W. Marginal Place S.W. and S.W. Idaho Street, West Seattle	Hunter-fisher-gatherer archaeological site 45KI52 identified in geotechnical borings
Hart-Crowser and Associates	1986a	<i>Identification of Archaeological Research Topics and Questions for the Downtown Seattle Transit Project</i>	Third Avenue, Union Station vicinity, downtown Seattle, Pioneer Square area	Review of historic period archaeological research topics and research questions
Hart-Crowser and Associates	1986b	<i>Research Design for Archaeological Test Excavations, Downtown Seattle Transit Project</i>	Union Station vicinity, Pioneer Square area	Outline of research questions, field techniques, and data categories for historic period archaeological deposits in the Union Station vicinity
URS Corporation and BOAS, Incorporated	1987	<i>The Duwamish No. 1 Site: 1986 Data Recovery</i>	Terminal 107, east of W. Marginal Way S.W., between S.W. Alaska Street and S.W. Hudson Street, West Seattle	Archaeological data recovery excavations at the Duwamish No. 1 Site (45KI23)
Solimano et al.	1993	<i>Cultural Resource Testing 45KI432, Alki Transfer/CSO Project, West Seattle Pump Station, King County Washington</i>	Harbor Avenue S.W. at S.W. Hanford Street, West Seattle	Archaeological test excavations at 45KI432; deposits identified in geotechnical test pits
Tobin and Hart-Crowser	1994	<i>Draft Environmental Impact Statement for the Seattle Commons/South Lake Union Plan: Technical Appendix 15: Historic and Cultural Resources Study</i>	South Lake Union vicinity south to Olive Way and Fifth Avenue, west to Broad Street and Aurora Avenue	Cultural resources overview and assessment of probability for archaeological resources
Robbins and Larson	1995	<i>South Spokane Street Viaduct Widening Project Cultural Resource Assessment Seattle, Washington</i>	Spokane Street Viaduct, Alaskan Way Viaduct east to Sixth Avenue S., south of downtown Seattle	Cultural resources overview, estimate of probability for archaeological resources

Exhibit 4-2. Previous Archaeological Investigations in the Vicinity of the Proposed AWW Project (continued)

Author	Year	Report Title	Location	Project Information
Larson and Lewarch	1995	<i>The Archaeology of West Point, Seattle, Washington: 4,000 years of Hunter-Fisher-Gatherer Land Use in Southern Puget Sound</i>	West Point, Discovery Park, Shilshole Bay	Archaeological data recovery excavations at the West Point Site Complex (45KI428 and 45KI429)
Shong and Larson	1997	<i>Terminal 18 Shoreline Public Access and Landscape Project, Port of Seattle, Seattle, Washington Cultural Resource Assessment</i>	Terminal 108, south end of Harbor Island, adjacent to the Spokane Street Viaduct, south of downtown Seattle	Cultural resources overview, assessment of probability for archaeological resources, and field reconnaissance
Forsman et al.	1997	<i>Denny Way/Lake Union Combined Sewer Overflow Project Seattle, King County Cultural Resources Assessment</i>	Downtown Seattle, Elliott Bay, South Lake Union, Queen Anne/Seattle Center	Cultural resources assessment; monitoring geotechnical borings
Weaver	1997	<i>Seattle Football Stadium EIS Cultural Resources</i>	Seahawks Stadium vicinity, Pioneer Square area	Geological cross sections for the Seahawks Stadium vicinity, probability for archaeological resources
Hart Crowser, Incorporated	1998	<i>Football/Soccer Stadium and Exhibition Center Project, Appendix K: Cultural and Archaeological Resources Technical Report</i>	Seahawks Stadium vicinity, Pioneer Square area	Overview and estimates of probability for archaeological resources; useful historic period maps
Miss	1998	<i>King Street Center Archaeological Assessment and Monitoring</i>	Block between S. King Street and S. Jackson Street, and between Second Avenue S. and Third Avenue S., Pioneer Square area	Construction monitoring at the King Street Center; foundation features and historic artifacts dating between the 1870s and 1910s
Lewarch and Larson	1998	<i>Update on Archaeological Test Excavations and Construction Excavation Monitoring of 45KI456, the Baba'kwob Site, at the World Trade Center Construction Site as of March 20, 1998</i>	Block between Bell Street and Blanchard Street, and between Elliott Avenue and Alaskan Way, Belltown	Archaeological test excavation and construction monitoring; Baba'kwob Site (45KI456)

Exhibit 4-2. Previous Archaeological Investigations in the Vicinity of the Proposed AWW Project (continued)

Author	Year	Report Title	Location	Project Information
Nelson	1998	<i>Investigation of Recent Excavation for Seismic Retrofitting at the King County Administration Building</i>	King County Administration Building, Fourth Avenue and Jefferson Street, downtown Seattle	Fill deposits with a mixture of historic artifacts and recent debris
Liddle	1999	<i>Results of Cultural Resource Monitoring for the World Trade Center North</i>	Block between Elliott Avenue and Alaskan Way and between Wall Street and Battery Street, Belltown	Historic refuse deposits and decomposing hay stratum with a range of historic period artifacts; historic archaeological site WTCN-99-01, pilings, refuse, and artifacts from warehouses dating between 1893 and 1903
Lewarch et al.	1999	<i>Denny/Lake Union Combined Sewer Overflow Control Project Seattle, King County Archaeological Resources Treatment and Monitoring Plans</i>	Belltown, South Lake Union vicinity	Archaeological treatment and monitoring plans
Hart-Crowser	1999	<i>Draft Cultural Resource Research Design Waterfront South Master Plan and Programmatic EIS Programs, Seattle, Washington</i>	Alaskan Way and Seattle waterfront, between Madison Street and S. Royal Brougham Way, Pioneer Square area	Assessment of historic period land use, estimate of probability for archaeological resources, review of techniques to obtain subsurface samples of archaeological deposits
Dugas and Robbins	2001	<i>Cultural Resource Monitoring for the Bellora Condominium Project, Seattle, King County, Washington</i>	Adjacent to the corner of Clay Street and Elliott Avenue, Belltown	Construction monitoring at the Bellora Condominium Project; historic period refuse; unrecorded hunter-fisher-gatherer midden site adjacent to project
Lewarch et al.	2002	<i>Archaeological Evaluation and Construction Excavation Monitoring at the World Trade Center, Baba'kwob Site (45KI456), Seattle, King County, Washington</i>	Block between Bell Street and Blanchard Street, and between Elliott Avenue and Alaskan Way, Belltown	Archaeological test excavation, evaluation, and construction monitoring; Baba'kwob Site (45KI456)

Exhibit 4-2. Previous Archaeological Investigations in the Vicinity of the Proposed AWV Project (continued)

Author	Year	Report Title	Location	Project Information
Roedel et al.	2003	<i>SR 99: Alaskan Way Viaduct & Seawall Replacement Project, Final Archaeological Resources Monitoring and Review of Geotechnical Borings</i>	Downtown Seattle, waterfront between Denny Way and Spokane Street	Archaeological monitoring of geotechnical borings; review of geotechnical boring logs; historic period fill; historic artifacts; old beach deposits with possible hunter-fisher-gatherer archaeological deposits; historic period archaeological deposits

Hunter-fisher-gatherer archaeological sites have been recorded on the Elliott Bay shoreline (Solimano et al. 1993) and in areas near Elliott Bay and Shilshole Bay in the Greater Seattle vicinity (Campbell 1981; Kennedy 1985; Larson and Lewarch 1995; URS Corporation and BOAS, Incorporated 1987), in spite of the extensive land modification in downtown Seattle over the past 150 years. Archaeologists identified probable hunter-fisher-gatherer midden deposits within the AWV Corridor by reviewing previously excavated geotechnical boring logs and noting areas with concentrations of shell and organic material on old beach landforms (Roedel et al. 2003).

Boring log data also had evidence of possible historic period archaeological deposits beneath fill in the AWV Corridor (Roedel et al. 2003). Native soil surfaces have been protected through the placement of fill and refuse on building lots, in old building foundations, in ravines, and on the beaches and tidal marshes of the Elliott Bay shoreline. Archaeologists have also identified historic period refuse and artifacts beneath fill deposits in the Pioneer Square vicinity (Hart-Crowser and Associates 1986a,b; Miss 1998; Nelson 1998) and in Belltown, near the World Trade Center Project (Dugas and Robbins 2001; Lewarch et al. 2002; Liddle 1999).

No archaeological sites with only hunter-fisher-gather deposits are recorded within the AWV Corridor. Archaeologists noted beach sediments and shell midden deposits on an adjacent property, outside of the Bellora Condominium Project, at the corner of Elliott Avenue and Clay Street, one block north of the project corridor (Exhibit 4-1) (Dugas and Robbins 2001:7), although Dugas and Robbins did not complete an archaeological site form to record the midden deposits with the Washington State Office of Archaeology and Historic Preservation.

Archaeologists identified possible hunter-fisher-gatherer archaeological deposits along the downtown Seattle waterfront based on data in geotechnical

boring logs. Roedel et al. (2003:11) reviewed geotechnical boring logs and identified six areas along the downtown Seattle waterfront with high densities of shell and presence of organic materials. Shell and organic deposits were below historic fill and were associated with old beach deposits and estuary or tidal marsh sediments. Roedel et al. (2003:11) interpreted the shell and organic materials as probable hunter-fisher-gatherer archaeological deposits.

One archaeological site with historic Indian artifacts has been recorded in the AWV Corridor. The World Trade Center, Baba'kwob Site (45KI456) had trade beads dating from the middle 1800s, but intact archaeological deposits most likely were removed during construction excavation conducted prior to archaeological investigations (Exhibit 4-1) (Lewarch et al. 2002). The World Trade Center, Baba'kwob Site (45KI456) also had historic period fill, refuse, and artifacts dating between the 1880s and early 1900s that were amalgamated with deposits from later construction and railroad maintenance activities.

Historic period artifacts and archaeological deposits were recorded in five areas within the AWV Corridor, in the World Trade Center project vicinity, between Battery Street, Wall Street, Elliott Avenue, and the Alaskan Way surface street. The World Trade Center, Baba'kwob Site (45KI456), mentioned previously, had artifact distributions that generally correlated with the position of cabins that appeared on historic maps and photographs dating between 1888 and 1910 (Exhibit 4-1) (Lewarch et al. 2002). Archaeological deposits included remnants of historic period ground surfaces dating between 1888 and 1903, refuse deposits, refuse mixed with fill and deposits from post-1903 railroad maintenance and industrial activities, and historic period deposits mixed with modern debris (Lewarch et al. 2002).

Archaeologists from Northwest Archaeological Associates, Incorporated, noted layers of decomposing hay and historic period refuse dropped from warehouse platforms above sloping natural ground surfaces in a construction site one block north of the World Trade Center, Baba'kwob Site (45KI456) (Exhibit 4-1). The archaeological site was designated as WTCN-99-01 and had historic period artifacts such as ceramics, bottles, nails, horseshoes, and artifacts associated with horse tack (Liddle 1999: Exhibit 4-2). The age range of temporally diagnostic historic period artifacts was between the late 1880s and the early 1900s and generally corresponded with structures that appeared on early historic period maps (Liddle 1999:5).

Roedel et al. (2003:11) identified four areas within the AWV project area that may have historic period archaeological deposits, based on high densities of historic debris noted in geotechnical boring logs and observed in backdirt from geotechnical borings. Brick fragments, cinders, wood, and historic refuse indicated the probable presence of historic period archaeological

deposits, including materials that may be associated with the Great Seattle Fire of 1889.

Recorded hunter-fisher-gatherer archaeological sites on the Elliott Bay shoreline, near the early historic period mouth of the Duwamish River, and at West Point in Magnolia provide information on the kinds of archaeological sites that might occur in shoreline and bluff environmental zones of Elliott Bay. In order to estimate the probability for hunter-fisher-gatherer archaeological deposits in downtown Seattle, we draw on extensive excavation data sets from the West Point Site Complex (45KI428, 45KI429) on the northwest tip of Discovery Park (Larson and Lewarch 1995), and the Duwamish No. 1 Site (45KI23) near the mouth of the Duwamish River (Campbell 1981; URS Corporation and BOAS, Incorporated 1987).

Data from the West Point Site Complex demonstrate long-term hunter-fisher-gatherer occupation of the marine littoral in the Greater Seattle area, dating back 4,500 years. The archaeological record at West Point documents changing land use patterns over the past 4,500 years, due to a combination of rising sea level elevation, changes in the configuration of the West Point landform, regional changes in hunter-fisher-gatherer subsistence-settlement pattern organization, and effects of an earthquake on the Seattle Fault Zone, approximately 1,100 years ago.

The physical setting of the West Point Site Complex (45KI428, 45KI429) shares many elements of the geomorphology of the shoreline and bluff landforms in the central and northern portions of the AWV Corridor. West Point included bluffs of Lawton Clay that backed a marine beach. An intermittent stream carved a ravine in the bluffs, and, with springs, provided hunter-fisher-gatherers with fresh water. West Point dropped 3 feet relative to the surface elevation of Puget Sound approximately 1,100 years ago, during an earthquake on the Seattle Fault Zone. Hunter-fisher-gatherers reoccupied the West Point landform and used the area for short-term seasonal camps.

Data from the Duwamish No. 1 Site (45KI23) document occupations on a stream terrace at the margin of Elliott Bay over the past 2,000 years (Campbell 1981; URS Corporation and BOAS, Incorporated 1987). The terrace was uplifted approximately 20 feet during an earthquake on the Seattle Fault Zone 1,100 years ago. The prograding delta of the Duwamish River reached the vicinity of the Duwamish No. 1 Site (45KI23) between 500 and 1,000 years ago, and the local habitat changed from a marine littoral setting to a river delta and riverbank riparian environment. The Duwamish No. 1 Site (45KI23) shared a marine littoral setting with areas throughout the AWV Corridor.

Estimates of historic archaeological resources in the AWV Corridor draw upon a detailed archival record. Contracts, engineering records, letters, and newspaper articles provide a rich written record that documents the construction techniques and physical changes in the downtown Seattle topography (Earth Technology Corporation 1984; Hart-Crowser and Associates 1986a,b). During the extensive land modification, fill and refuse was placed on building lots, in old building foundations, in ravines, and on the beaches and tidal marshes of the Elliott Bay shoreline. Archaeologists have identified historic period refuse and artifacts beneath fill deposits in the Pioneer Square vicinity, directly east of the AWV Corridor (Hart-Crowser and Associates 1986a,b; Miss 1998; Nelson 1998). Historic archaeological materials were recorded near the north end of the AWV Corridor in Belltown.

Compliance Archaeology L.L.C. monitored construction excavation at the Bellora Condominium Project, near the north end of the AWV Corridor, and noted a complex pattern of historic period fill material and demolition debris (Dugas and Robbins 2001). The bottle fragments had age ranges between the 1880s and the 1930s. Sediments in the foundation included historic period fill from demolition of an office building and other structures on the property and fill placed during various stages of the Denny Regrade Project.

Concentrations of historic period artifacts occur throughout the AWV Corridor, which most likely indicates the presence of historic period archaeological deposits associated with historic fill (Roedel et al. 2003:12).

4.2 Ethnography/Ethnohistory

The proposed AWV Project is within the aboriginal territory of the Duwamish, a Puget Salish or Lushootseed speaking group that lived in winter villages on the shores of Elliott Bay, Lake Washington, Lake Union, and Salmon Bay and on the banks of the Duwamish, Black, and Cedar Rivers (Petite 1954; United States Court of Claims 1927; Waterman ca. 1920, 1922). The number of cedar plank winter houses within Duwamish villages ranged from a single building to house clusters with up to 10 houses. The Duwamish also established temporary camps at fishing and plant gathering areas throughout their aboriginal territory.

Much of the proposed AWV Project is in the area of former tideflats of Elliott Bay, at the mouth of the Duwamish River, which provided habitat for a variety of marine food resources for the Duwamish and neighboring groups (Exhibits 4-2 and 4-3). The Green and White River people, now known as

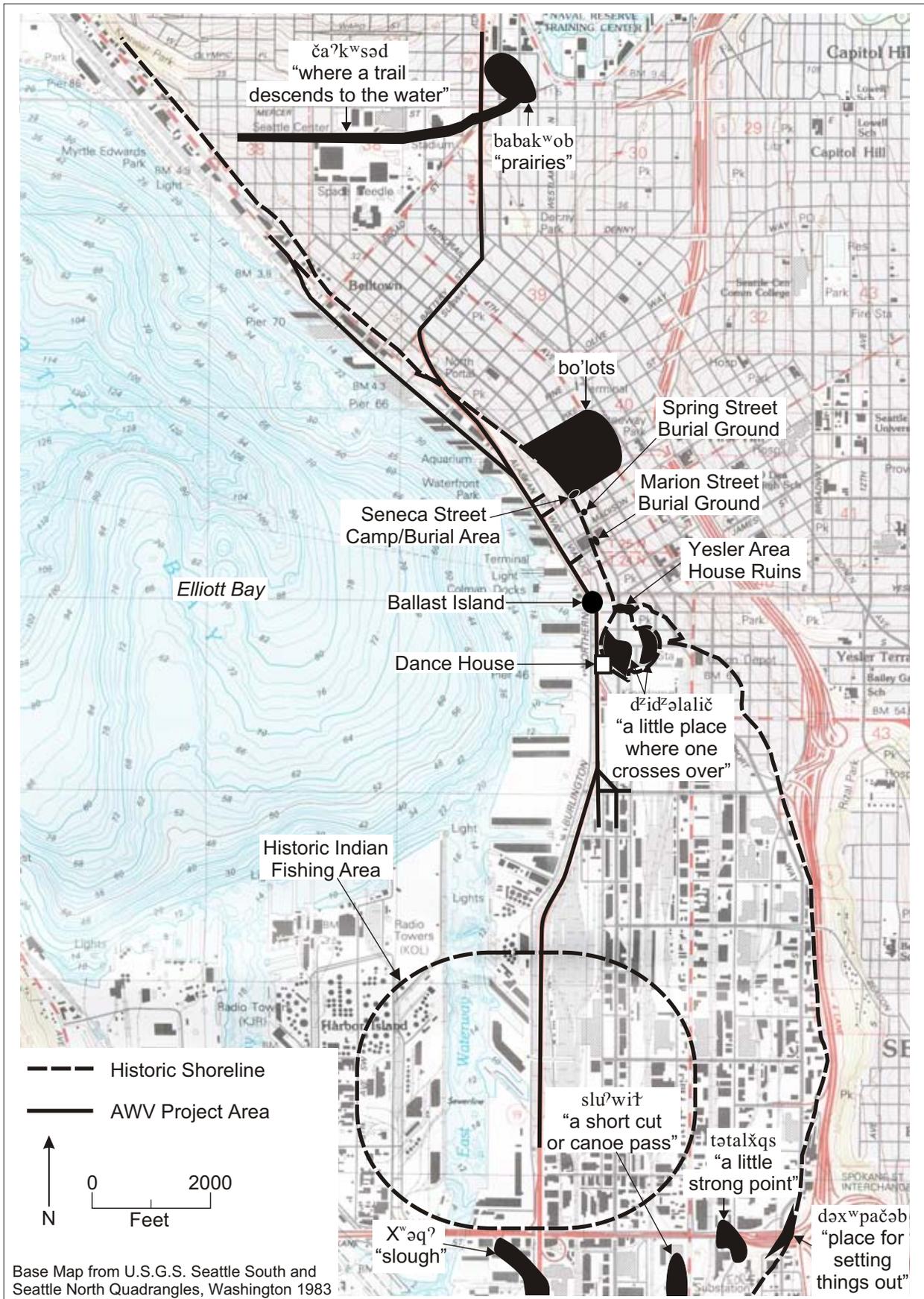


Exhibit 4-3 Ethnographic Place Names in the AWW Project Vicinity

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Muckleshoot, and the Suquamish were neighbors of the Duwamish (Lane 1987:3). The Duwamish, Muckleshoot, and Suquamish probably camped together at fishing grounds on Elliott Bay and the Duwamish River (Lane 1987:3). Duwamish and neighboring groups also continued to visit fishing camps in the historic period to acquire fish for their own use and for sale to local fish markets.

The Duwamish left their winter houses at various times in the spring, summer, and early fall to fish for salmon, to gather clams and oysters, to pick berries, to hunt land game, and to collect plant resources. Hunting, fishing, and food collecting trips coincided with locations with a maximum seasonal productivity and the highest quality of multiple food resources. Groups traveled to berry grounds when edible berries ripened and went to salmon streams during seasons when salmon returned to spawn. Winter houses were nearly deserted during peak resource gathering times in the warm months.

Salmon was the main food source for the Duwamish and their Puget Sound neighbors. Several salmon fishing stations were on Elliott Bay, including historically documented fishing places at the mouth of the Duwamish River, at Smith Cove, and at Duwamish Head on Alki (Bagley 1929:654–656; Lane 1987:4–9). The Duwamish dried and smoked salmon over small fires to prepare the fish for long-term storage in winter houses. The smoked salmon supported the Duwamish during their extended winter residency, which was punctuated by a variety of ceremonial activities. Clams and berries also were dried for winter consumption. Dried clams were a valuable trade item, particularly with the Yakama and other Indian groups who lived east of the Cascade Mountains. All foods were eaten fresh during the gathering season at the seasonal encampments. Some of the dried foods, especially clams, were consumed by canoers while traveling between resource acquisition areas.

The Duwamish villages in the project vicinity were on Elliott Bay, at the mouth of the Duwamish River, in what is now Belltown, on the shoreline of Lake Union, at Smith Cove, and at Shilshole Bay (Lane 1987:13; Petite 1954; Waterman 1922:179, 188, 192). *dʷidʷəlalič* was a village of eight winter houses on a point that formerly extended south from the Elliott Bay shoreline, in the contemporary Pioneer Square District (Exhibit 4-3). *dʷidʷəlalič* provided the geographic place name for the shoreline, peninsula, tidal lagoon, and inland areas in what is now the Pioneer Square District (Hilbert et al. 2001:64; United States Court of Claims 1927; Waterman 1922:179, 188). The *dʷidʷəlalič* village was approximately 100 feet east of the AWW project area (Exhibit 4-3). Watt (1931:65) described the ruins of an Indian hut south of a stream that is now filled by the right-of-way of Yesler Way (Exhibit 4-3). The Indian house may have been associated with the *dʷidʷəlalič* village. Crow (1926) described a

dance house near First Avenue S. and S. King Street at the former location of the DiDelaliV village in the early 1860s. The dance house also appears to have been associated with the DiDelaliV village. The Duwamish conducted ceremonial activities in the dance house (Crow 1926).

A second recorded village in the project vicinity was Baba'kwob (Exhibit 4-3). The exact location of the village is not clearly documented in the ethnographic and historic literature or on early historic period maps. Ethnographers and historians have variously described Baba'kwob as a winter village with two houses (Bass 1937:90; Petite 1954; United States Court of Claims 1927:Exhibit W-2) and as a historic Indian settlement with cabins of milled lumber (Costello 1974 [1895]:x-xi). Petite (1954) placed the Baba'kwob winter houses at a clearing in the forest in what is now the Belltown neighborhood. Waterman (1922:188) suggested the Baba'kwob place name referred to an "open space, or series of spaces, in the forest north of what is now the business district of Seattle." Waterman (1922:179) mapped Baba'kwob east of the contemporary Seattle Center complex (Exhibit 4-3). The prairie, which appears to have also encompassed the present Seattle Center grounds, was reportedly used by the Duwamish people for ceremonial gatherings (Dorpat 1984:60). The Baba'kwob village described by Petite (1954) and Bass (1937:90) may have been within the space or forest opening mapped by Waterman (1922:179, 188) (Exhibit 4-3) or within one of the series of openings described by Waterman (1922:188).

The mapped space near the Seattle Center is 100 feet northeast of the northernmost segment of the project area (Exhibit 4-3). Pre-contact and treaty era (1855) villages and/or seasonal camps were probably within the early historic prairie or prairies mapped near the Seattle Center. Historic references to a historic period Duwamish settlement near the beach below Belltown (Costello 1974 [1895]:x) suggest that the "series of spaces" described by Waterman (1922:178) probably extended west toward the shoreline of Elliott Bay. Harrington (ca. 1909: Frame 0340, 0406) described the area from the waterfront "way back" between Pike and University Street as "bo'lots," probably a reference to springs in the area.

The Puget Sound Indians disposed of their dead through interment in the ground, on raised platforms, or in raised canoes (Haeberlin and Gunther 1930:53). Burial was accomplished by placing a body on the edge of a hill or bluff and caving dirt from the bluff edge on top of the body (Smith 1989). The Duwamish appear to have buried their dead in a similar fashion on the bluff tops in what is now downtown Seattle, where non-native Seattle settlers recalled seeing burials on the edge of bluffs above the beach (Watt 1931:58-59) (Exhibit 4-3). One of the burials was at the west end of Seneca Street at First

Avenue, prior to filling and regrading (Watt 1931:58–59) (Exhibit 4-3). Other Indian burials were near what is now the intersection of First Avenue and Marion Street (Costello 1974 [1895]:122) and near the contemporary intersection of First Avenue and Spring Street (Denny 1909:140–141) (Exhibit 4-3).

An Indian trail, known as čaʔkʷsəd, connected Lake Union, the Babaʔkwob prairie, and Elliott Bay near the north end of the project area (United States Surveyor General 1856; Waterman 1922:192) (Exhibit 4-3). A wagon road, which was probably a former Indian trail, linked the dʔzidʔəlalič village to Babaʔkwob prairie, and appears on the United States Surveyor General (1856) map (Exhibit 4-3).

The Duwamish and adjacent groups camped on the shoreline of Elliott Bay during fishing and clamming expeditions (Lane 1987:3; Larson 1993:43). Early Euroamerican settlers reported an Indian camp in the vicinity of the west end of Seneca Street, near the Elliott Bay shoreline (Denny 1909:392) (Exhibit 4-3). The Duwamish and their neighbors fished for salmon in the south end of Elliott Bay, especially near the mouth of the Duwamish River (Bagley 1929:654–656; Lane 1987:9–12) (Exhibit 4-3). Neighboring native groups, which included the Suquamish from the west and the White River and Green River people (now members of the Muckleshoot Indian Tribe) from the south, seasonally harvested salmon and shellfish in Elliott Bay together with the resident Duwamish (Lane 1974:12, 1987:1–3). Neighboring Puget Sound groups, Alaska Natives, and Canadian Indians established seasonal camps in the Seattle area during the late 1800s and early 1900s as they traveled to pick hops in the White River Valley (Bagley 1929:134; Barsh 1996:88; Dorpat 1984:44). Some of the Duwamish, who chose not to reside on reservations created by the Point Elliott Treaty, built permanent homes at Belltown, Lake Union, and Salmon Bay (*Ballard News Tribune* 1988:15; Costello 1974[1895]:x-xi; Denny 1909:137). During the historic period, Indian people seasonally occupied the beach stretching south of Bell Street as shown in 1888-era photographs (Dorpat 1989:182–183).

The Duwamish had place names for the channels and points at the mouth of the Duwamish River, including the three distributary channels at the mouth of the river (Exhibit 4-3). Two channels were on the east edge of the river delta and were on either side of a delta marsh island, known as Island No. 1, in 1895 (Board of Appraisers King County 1894–1895). The channel on the west side of Island No. 1 was called ʔwəqʔ meaning “slough” and the channel on the east side of Island No. 1 was called sluʔwiʔ meaning “a short cut or a perforation for a canoe” (Hilbert et al. 2001:65; Waterman 1922:188) (Exhibit 4-3).

The “perforation” referred to the narrow distributary channels that cut through the river delta to form the marsh islands at the mouth of the river (Waterman 1922:188). Travelers pushed canoes through the channels to travel between the Duwamish River delta and Elliott Bay. The Suquamish traveled to the mouth of the Duwamish River to gather cattails in the marshes and considered the Duwamish River delta to have the best cattails in the region (Miller 1999:115).

A smaller marsh island was east of Island No. 1, near the historic east shoreline of Elliott Bay, and was identified as Phinney Island in 1895 (Board of Appraisers, King County 1894–1895). The Duwamish used the north end of Phinney Island as a lookout (Waterman 1922:188), perhaps to spot approaching enemies who intended to raid upriver villages. The Duwamish fortified the lookout on the north end of Phinney Island with a stockade, which is expressed in the name of the lookout, *tətəlχqs*, which means “little strong point” (Exhibit 4-3). A beach on the shoreline east of *tətəlχqs* was known as *dəx^wpačəb* (Waterman 1922:188), which Hilbert et al. (2001:64) translate as “a place for setting things out” (Exhibit 4-3).

The Duwamish, Muckleshoot, and Suquamish were signatories to the 1855 Treaty of Point Elliott, which established the Port Madison Indian Reservation at Suquamish for the Suquamish, Duwamish, and Muckleshoot. Some of the Duwamish moved to the Port Madison Indian Reservation, but many people attempted to stay within their traditional lands within the greater Seattle area (Lane 1983:5). The Muckleshoot refused to go to the Port Madison Indian Reservation and many Muckleshoot fought in the Indian Wars of 1855–1856 to protest the Treaty terms. One of the major Indian battles was fought in and near the Pioneer Square District of downtown Seattle (Phelps 1970:27–29).

Historic period Indian encampments were established between 1860 and 1900 on Ballast Island, an accumulation of ship’s ballast at the foot of Washington and Main Streets (Sanborn-Perris Map Company 1893; Watt 1931:174–175). Indian visitors from British Columbia joined Puget Sound Indians on Ballast Island and other beaches along the Elliott Bay shoreline to camp. Alaskan Way now covers Ballast Island, which was formed from rock, soil, and refuse taken from ports such as San Francisco by lumber ships inbound to Seattle (Watt 1931:174–175). The ships emptied their ballast in Elliott Bay, creating Ballast Island. Then, the ships’ hulls were reloaded with coal and lumber. The Indians eventually moved their camps from Ballast Island to the tideflats at Utah Avenue and S. Massachusetts Street after Railroad Avenue (now Alaskan Way) was built over Ballast Island (Dorpat 1984:44).

The U.S. Government established the Muckleshoot Indian Reservation near Auburn at the end of the Indian Wars to accommodate Muckleshoot people

who had remained in their aboriginal territory. Some of the Duwamish also moved to the Muckleshoot Indian Reservation. Many Duwamish descendants are currently members of the Suquamish Tribe or the Muckleshoot Indian Tribe (Lane 1983). Other Duwamish descendants are members of the Duwamish Tribe, which was granted federal recognition by the Clinton administration in January 2001. The Bush administration has since denied federal recognition.

4.3 History

The non-native history of Seattle began in 1851 when the first Euroamerican settlers, a group of Oregon Trail emigrants later known as the Denny Party, established residence on Alki Point in Seattle (Denny 1888:11–13). Some of the members of the Denny Party, including Carson Boren, Arthur Denny, and David Denny, established Donation Land Claims in what is now downtown Seattle, the Belltown District, and the Seattle Center vicinity of the lower Queen Anne neighborhood (United States Surveyor General 1856; Watt 1931:41). Doc Maynard joined the Denny Party claimants when he claimed what is now the Pioneer Square Historic District (United States Surveyor General 1863a, 1863b; Watt 1931:66–67). Henry Yesler, who was seeking a place to build a sawmill, joined the group in 1852, and claimed land offered by Boren and Maynard (United States Surveyor General 1863a, 1863b; Watt 1931:73–74). The AWW Corridor traverses the donation land claims of Boren, the Dennys, Maynard, and Yesler. Yesler built his first sawmill in 1853 at the foot of Mill Street, now known as Yesler Way (Dorpat 1989:26–29) (Exhibit 4-4).

Early Euroamerican settlers built cabins and began clearing land claims in the 1850s. The claimants traded logs taken from their forested lands for pork, sugar, and other commodities brought in by lumber schooners (Denny 1909:61; Watt 1931:70–71). The commodities supplemented the diet of early Euroamerican settlers, which consisted mostly of salmon and clams acquired from the Indians. Euroamerican settlers later sold their logs to Henry Yesler, who processed the logs into milled lumber at his sawmill.

Settlers excavated a roadbed from Yesler's mill to the land claim of Thomas Mercer, on the southwest shoreline of Lake Union. The road provided a transportation corridor to haul lumber from Yesler's mill to Mercer and other settlers who wanted to move out of log cabins and to build modern houses with milled lumber. The early road alignment generally followed the right-of-way of Front Street, now known as First Avenue, north to the contemporary alignment of Broad Street, where the road turned east toward Lake Union (United States Surveyor General 1856).

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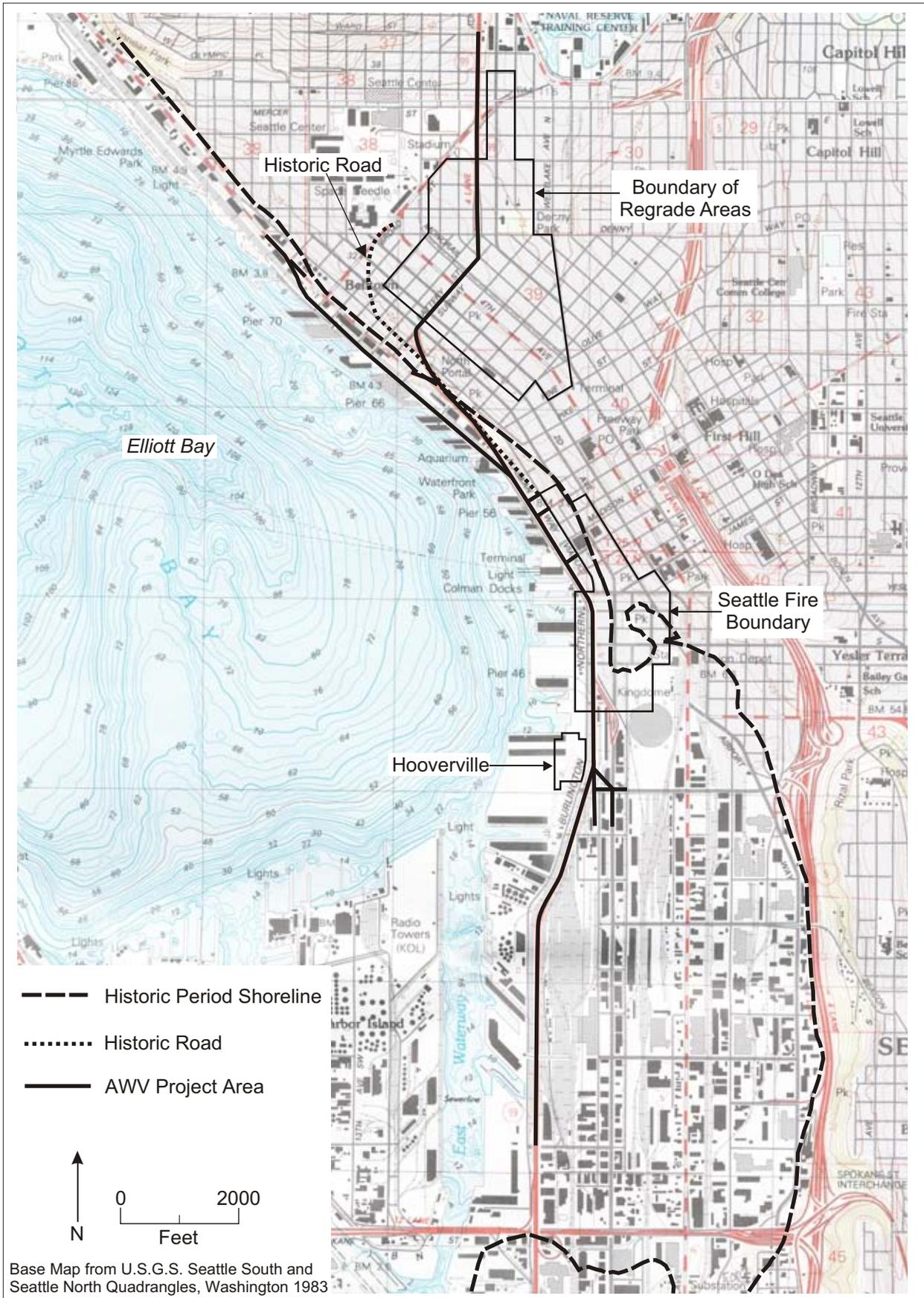


Exhibit 4-4 Historic Period Land Use in the Proposed AWV Project Vicinity

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The Indian Wars of 1855–1856 delayed the growth of Seattle. The Indians fought the military and the volunteers in one of the major battles of the Indian Wars in what is now the Pioneer Square District (Phelps 1970). Indian forces burned many houses and cabins during and after the skirmish, but spared the houses of Thomas Mercer and David Denny, who had been friendly to Indians (Watt 1931:252).

Promoters of a regional railroad system in the early 1880s developed plans to build a link from Seattle to the transcontinental railroad line at Walla Walla. The proposed line was called the Seattle and Walla Walla Railroad. The Seattle and Walla Walla did not extend beyond Western Washington, but did establish a direct rail link between the coal mines in Renton and east of Lake Washington and coal bunkers on the Seattle waterfront south of Yesler Way. The Seattle and Walla Walla Railroad trestle on the tideflats of Elliott Bay was the most conspicuous built feature on the Seattle waterfront in the 1880s. The railroad complex included an elevated, loop-shaped railroad trestle built on pilings driven into the Elliott Bay tideflats (Morgan et al. 1982:38–39; Sanborn Map Company 1888, 1905, 1916, 1949; Sanborn Map and Publishing Company 1884; Sanborn-Perris Map Company 1893).

The economic development of the Seattle Waterfront is chronicled in a series of fire insurance maps produced by the Sanborn Map Company (Exhibit 4-5) (Sanborn Map Company 1888, 1905, 1916, 1949; Sanborn Map and Publishing Company 1884; Sanborn-Perris Map Company 1893). The maps provide information regarding commercial buildings, industrial enterprises, dwellings, shacks, railroad alignments, and wharves (Exhibit 4-5) (Sanborn Map Company 1888, 1905, 1916, 1949; Sanborn Map and Publishing Company 1884; Sanborn-Perris Map Company 1893). Other useful information on the maps includes the changing position of the historic period shoreline of Elliott Bay through time, as tideflats were filled and new wharves and trestles were constructed on the waterfront. Estimates of the kinds of historic period archaeological deposits that may occur in the AWV Corridor are derived from analysis of former building locations on the Sanborn maps (Exhibit 4-5).

Three events framed the post-1883 history of Seattle: the 1889 Great Seattle Fire, the arrival of the Great Northern Railroad transcontinental link in 1893, and the 1897 Klondike Gold Rush (Berner 1991:8–9). Economic development associated with the three events combined to modernize Seattle's commercial and industrial image and led the City to invest in major civic projects, such as the Denny Regrade, the Cedar River water supply system, and the Skagit River Dams. The early investment in infrastructure provided the basis for future industrial, commercial, and residential growth in Seattle.

Exhibit 4-5. Sanborn Table (1884–1949)

Historic Features Within Alaskan Way Viaduct Rebuild Alternative, South to North from Sanborn Fire Insurance Maps (1884–1944)

Alternative	Area	Corridor	Location	Historic Feature	Source
Rebuild	South	Weller Street and S. King Street	Cuts across waterfront west of Commercial Street (now First Avenue S.)	Docks, sawmills, and lumber product manufacturing, Stetson Post Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Rebuild	South	Runs through block	Block south of Norman Street between Alaskan Way (Railroad Avenue) and First Street	Tenements and Dwellings	Sanborn-Perris Map Company (1893)
Rebuild	South	Runs through block	Block between Charles Street and Plummer Street west of Commercial Street and east of Alaskan Way	P.V. Dwyer Foundry	Sanborn-Perris Map Company (1893)
Rebuild	South	Runs through block	Block between Lane Street and Weller Street west of Commercial Street and east of Alaskan Way	Lumber yards and sheds	Sanborn-Perris Map Company (1893)
Rebuild	South	Runs north across east to west trestle	In storage and rail yards west of Alaskan Way	Oregon Improvement coal bunker on trestle	Sanborn-Perris Map Company (1893)
Rebuild	South	Crosses waterfront between Union Street and Pike Street	Waterfront area between Union Street and Pike Street	Warehouse, fish store	Sanborn-Perris Map Company (1893)
Rebuild	South	Crosses waterfront area	Runs between S. Massachusetts and S. Atlantic Streets on Alaskan Way (Railroad Avenue)	Railcar builder's platforms, storage, stone quarry	Sanborn Map Co. (1905)
Rebuild	South	Crosses waterfront area	Waterfront area between S. Royal Brougham Way and S. King Street	Moran Bros. Co. Shipyards Foundry lumber and coke storage, railway on trestles over tideflats, miscellaneous small storage sheds	Sanborn Map Co. (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Rebuild Alternative, South to North from Sanborn Fire Insurance Maps (1884–1944) (continued)

Alternative	Area	Corridor	Location	Historic Feature	Source
Rebuild	South	Columbia Street and Yesler Way	Waterfront area between Columbia Street and Yesler Way	Colman Dock	Sanborn Map Company (1905)
Rebuild	South	Yesler Way and Union Street	Generally follows the line of Railroad Avenue (now Alaskan Way)	Great Northern Railroad Mainline	Sanborn Map Company (1905)
Rebuild	South	Union Street and Pike Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Pipe warehouse, fish packing plant, hide processing	Sanborn Map Company (1905)
Rebuild	South	S. Jackson Street and S. Main Street	Block between S. Jackson and S. Main Streets, east of Railroad Avenue (now Alaskan Way)	Storage, welding, restaurants	Sanborn Map Company (1916)
Rebuild	Central	S. Jackson Street and S. Washington Street	Generally follows alignment of West Street (now Western Avenue)	Railroad depot, east end of future Ballast Island	Sanborn Map Company (1888)
Rebuild	Central	S. Washington Street and Mill Street (now Yesler Way)	Cuts across waterfront area between S. Washington and Mill Streets	Seattle Boiler Works, Mechanics Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Rebuild	Central	Union Street and Pike Street	Cuts across waterfront area west of West Street (now Western Avenue)	Planked wharf, Columbia Canning Co. Dock	Sanborn Map Company (1888)
Rebuild	Central	Runs north across industrial yards	West of Alaskan Way between S. Main and S. Jackson Streets	Sidney Sewer Pipe and Terra Cotta Works Yard	Sanborn-Perris Map Company (1893)
Rebuild	Central	Runs across block	Block between Yesler Way and Columbia Street east of Alaskan Way (formerly Railroad Avenue)	Puget Sound Machinery Depot	Sanborn-Perris Map Company (1893)
Rebuild	Central	Turns east down Columbia Street	South third of the block between Alaskan Way (formerly Railroad Avenue) and Western Avenue	Yesler Lumber Company lumber yards and sheds, Puget Sound Saw Works	Sanborn-Perris Map Company (1893)
Rebuild	Central	Runs through block	Between Columbia and Marion Streets west of Alaskan Way (formerly Railroad Avenue)	Hay, grain, and feed storage, Colman Dock Warehouse, West Seattle Ferry Dock	Sanborn-Perris Map Company (1893)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Rebuild Alternative, South to North from Sanborn Fire Insurance Maps (1884–1944) (continued)

Alternative	Area	Corridor	Location	Historic Feature	Source
Rebuild	Central	Runs through waterfront area	Wharf/industrial area between Marion Street and Madison Street west of Alaskan Way (formerly Railroad Avenue)	G. J. Wiley Cement, Lime, Plaster Wholesalers; Great Northern Railroad	Sanborn-Perris Map Company (1893)
Rebuild	Central	Runs through block	Madison Street and Spring Street between Front Street and West Street	Towle and Peters Boat House, Coal bunkers, trestles	Sanborn-Perris Map Company (1893)
Rebuild	Central	Crosses waterfront area	Waterfront area between Seneca Street and University Street west of Alaskan Way (formerly Railroad Avenue)	Fish, feed, and hay wholesalers, dock and storage and machine shop	Sanborn-Perris Map Company (1893)
Rebuild	Central	Pike Street and Pine Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Plumbing and tin shop, San Juan Fish Co.; Carpenter shop, west edge of structures labeled “Cheap Cabins”	Sanborn Map Company (1905)
Rebuild	Central	Stewart Street and Virginia Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Concrete mixing plant, line of Great Northern Railroad Tunnel	Sanborn Map Company (1905)
Rebuild	Central	S. Main Street and S. Washington Street	Block between S. Main Street and S. Washington Street, east of Railroad Avenue (now Alaskan Way)	O.K. Hotel	Sanborn Map Company (1916)
Rebuild	Central	S. Washington Street and Yesler Way	Block between S. Main Street and Yesler Way, east of Railroad Avenue (now Alaskan Way)	Warehouse, Engine Works, Loman and Hanford Furniture Store, and Hotel Yesler	Sanborn Map Company (1916)
Rebuild	Central	Union Street and Pike Street	Block between Union Street and Pike Street west of Alaskan Way	General store	Sanborn Map Company (1949)
Rebuild	Central	Elliott Bay (now Alaskan Way)	Between Seneca Street and Spring Street east of Alaskan Way	Tideflats and wharf	Sanborn Map and Publishing Co. (1884)
Rebuild	Central	Elliott Bay (now Alaskan Way)	Between Spring Street and Madison Street east of Alaskan Way	Lumber wharf and tideflats	Sanborn Map and Publishing Co. (1884)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Rebuild Alternative, South to North from Sanborn Fire Insurance Maps (1884–1944) (continued)

Alternative	Area	Corridor	Location	Historic Feature	Source
Rebuild	Central	Elliott Bay (now Alaskan Way)	Between Columbia Street and Mill Street (now Yesler Way)	Yesler’s Wharf, saloons, Harrington and Smith’s Wharf, blacksmith, shops	Sanborn Map and Publishing Co. (1884)
Rebuild	Central	Bell Street and Blanchard Street	Cuts through block between Bell and Blanchard Streets	Bell Street Ravine, beach cabins	Sanborn Map and Publishing Co. (1884)
Rebuild	Central	Bell Street and Battery Street	Cuts through block between Bell Street and Battery Street	Dwelling	Sanborn Map and Publishing Co. (1884)
Rebuild	Central	Pike Street and Virginia Street	Cuts across bank of Elliott Bay	Steep uneven ground covered with squatters’ shanties	Sanborn Map Company (1888)
Rebuild	Central	Virginia Street and Lenora Street	Cuts across bank of Elliott Bay	Squatters’ shanties	Sanborn Map Company (1888)
Rebuild	Central	Blanchard Street and Bell Street	Cuts across ravine between Bell and Blanchard Streets	Cabins, shed, Bell Street Ravine	Sanborn Map Company (1888)
Rebuild	Central	Crosses waterfront/ industrial area	Between Spring Street and Seneca Street west of Alaskan Way (former Railroad Avenue)	Harbor Master, Merchant Dock Wholesalers	Sanborn-Perris Map Company (1893)
Rebuild	Central	Blanchard Street and Bell Street	West third of block between Blanchard and Bell Streets	Bell Street Ravine dwellings	Sanborn Map Company (1905)
Rebuild	Central	Bell Street to Battery Street Tunnel	Block between Bell Street and Battery Street	Dwellings, flats, lodgings	Sanborn Map Company (1905)
Rebuild	Central	Pike Street and Stewart Street	Block between Pike Street and Stewart Street west of Alaskan Way	Auto repair, produce warehouse	Sanborn Map Company (1949)
Rebuild	Central	Stewart Street, Virginia Street, and Elliott Avenue	Block between Stewart Street and Virginia Street on Elliott Avenue	Warehouses, Great Northern Railway Tunnel	Sanborn Map Company (1949)
Rebuild	Central	Bell Street, Battery Street, and Elliott Avenue	Block between Bell and Battery Streets on Elliott Avenue	Apartments, furniture makers	Sanborn Map Company (1949)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Aerial Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949)

Alternative	Area	Alignment	Location	Historic Feature	Source
Aerial	South	Weller Street and S. King Street	Cuts across waterfront west of Commercial Street (now First Avenue S.)	Docks, sawmills, and lumber product manufacturing, Stetson Post Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Aerial	South	Norman Street and Railroad Avenue (now Alaskan Way)	Block south of Norman Street between Railroad Avenue (now Alaskan Way) and First Avenue S.	Tenements and dwellings	Sanborn-Perris Map Company (1893)
Aerial	South	Charles Street and Plummer Street	Block between Charles Street and Plummer Street west of Commercial Street and east of Alaskan Way	P.V. Dwyer Foundry	Sanborn-Perris Map Company (1893)
Aerial	South	Lane Street and Weller Street	Block between Lane Street and Weller Street west of Commercial Street and east of Alaskan Way	Lumber yards and sheds	Sanborn-Perris Map Company (1893)
Aerial	South	Runs north across east to west trestle	In storage and rail yards west of Alaskan Way	Oregon Improvement coal bunker on trestle	Sanborn-Perris Map Company (1893)
Aerial	South	Crosses waterfront between Union Street and Pike Street	Waterfront area between Union Street and Pike Street	Warehouse, fish store	Sanborn-Perris Map Company (1893)
Aerial	South	Crosses waterfront area	Runs between S. Massachusetts and S. Atlantic Streets on Alaskan Way (Railroad Avenue)	Railcar builder's platforms, storage, stone quarry	Sanborn Map Co. (1905)
Aerial	South	Crosses waterfront area	Waterfront area between S. Royal Brougham Way and S. King Street	Eastern edge of Moran Bros. Co. Shipyard's Foundry, lumber and coke storage, railway on trestles over tideflats, miscellaneous small storage sheds	Sanborn Map Co. (1905)
Aerial	South	Columbia Street and Yesler Way	Waterfront area between Columbia Street and Yesler Way	Colman Dock	Sanborn Map Company (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Aerial Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Aerial	South	Yesler Way and Union Street	Generally follows the line of Railroad Avenue (now Alaskan Way)	Great Northern Railroad Mainline	Sanborn Map Company (1905)
Aerial	South	Union Street and Pike Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Pipe warehouse, fish packing plant, hide processing	Sanborn Map Company (1905)
Aerial	South	S. Jackson Street and S. Main Street	Block between S. Jackson and S. Main Streets, east of Railroad Avenue (now Alaskan Way)	Storage, welding, restaurants	Sanborn Map Company (1916)
Aerial	Central	S. Jackson Street and S. Washington Street	Generally follows alignment of West Street (now Western Avenue)	Railroad depot, east end of future Ballast Island	Sanborn Map Company (1888)
Aerial	Central	S. Washington Street and Mill Street (now Yesler Way)	Cuts across waterfront area between S. Washington and Mill Streets	Seattle Boiler Works, Mechanics Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Aerial	Central	Union Street and Pike Street	Cuts across waterfront area west of West Street (now Western Avenue)	Planked wharf, Columbia Canning Co. Dock	Sanborn Map Company (1888)
Aerial	Central	Runs through waterfront area	Wharf/industrial area between Marion Street and Madison Street west of Alaskan Way (formerly Railroad Avenue)	G. J. Wiley Cement, Lime, Plaster Wholesalers; Great Northern Railroad	Sanborn-Perris Map Company (1893)
Aerial	Central	Runs through block	Madison Street and Spring Street between Front Street and West Street	Towle and Peters Boat House, coal bunkers, trestles	Sanborn-Perris Map Company (1893)
Aerial	Central	Crosses waterfront area	Waterfront area between Seneca Street and University Street west of Alaskan Way (formerly Railroad Avenue)	Fish, feed, and hay wholesalers, dock and storage and machine shop	Sanborn-Perris Map Company (1893)
Aerial	Central	Runs through block	Between Columbia and Marion Streets west of Alaskan Way (formerly Railroad Avenue)	Hay, grain and feed storage, Colman Dock Warehouse, West Seattle Ferry Dock	Sanborn Map Company (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Aerial Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Aerial	Central	Pike Street and Pine Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Plumbing and tin shop, San Juan Fish Co., carpenter shop, west edge of structures labeled “Cheap Cabins”	Sanborn Map Company (1905)
Aerial	Central	Stewart Street and Virginia Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Concrete mixing plant, line of Great Northern Railroad	Sanborn Map Company (1905)
Aerial	Central	S. Main Street and S. Washington Street	Block between S. Main Street and S. Washington Street, east of Railroad Avenue (now Alaskan Way)	O.K. Hotel	Sanborn Map Company (1916)
Aerial	Central	S. Washington Street and Yesler Way	Block between S. Main Street and Yesler Way, east of Railroad Avenue (now Alaskan Way)	Warehouse, Engine Works, Loman and Hanford Furniture Store, and Hotel Yesler	Sanborn Map Company (1916)
Aerial	Central	Union Street and Pike Street	Block between Union Street and Pike Street west of Alaskan Way	General store	Sanborn Map Company (1949)
Aerial	Central	Elliott Bay (now Alaskan Way)	Between Seneca Street and Spring Street east of Alaskan Way	Tideflats and wharf	Sanborn Map and Publishing Co. (1884)
Aerial	Central	Elliott Bay (now Alaskan Way)	Between Spring Street and Madison Street east of Alaskan Way	Lumber wharf and tideflats	Sanborn Map and Publishing Co. (1884)
Aerial	Central	Elliott Bay (now Alaskan Way)	Between Columbia Street and Mill Street (now Yesler Way)	Yesler’s Wharf, saloons, Harrington and Smith’s Wharf, blacksmith, shops	Sanborn Map and Publishing Co. (1884)
Aerial	Central	Bell Street and Blanchard Street	Cuts through block between Bell and Blanchard Streets	Bell Street Ravine, beach cabins	Sanborn Map and Publishing Co. (1884)
Aerial	Central	Bell Street and Battery Street	Cuts through block between Bell Street and Battery Street	Dwelling	Sanborn Map and Publishing Co. (1884)
Aerial	Central	Pike Street and Virginia Street	Cuts across bank of Elliott Bay	Steep uneven ground covered with squatters’ shanties	Sanborn Map Company (1888)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Aerial Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Aerial	Central	Virginia Street and Lenora Street	Cuts across bank of Elliott Bay	Squatters' shanties	Sanborn Map Company (1888)
Aerial	Central	Blanchard Street and Bell Street	Cuts across ravine between Bell and Blanchard Streets	Cabins, shed, Bell Street Ravine	Sanborn Map Company (1888)
Aerial	Central	Crosses waterfront/ industrial area	Between Spring Street and Seneca Street west of Railroad Avenue (now Alaskan Way)	Harbor Master, Merchant Dock Wholesalers	Sanborn-Perris Map Company (1893)
Aerial	Central	Blanchard Street and Bell Street	West third of block between Blanchard and Bell Streets	Bell Street Ravine dwellings	Sanborn Map Company (1905)
Aerial	Central	Bell Street to Battery Street	Block between Bell Street and Battery Street	Dwellings, flats, lodgings	Sanborn Map Company (1905)
Aerial	Central	Pike Street and Stewart Street	Block between Pike Street and Stewart Street west of Alaskan Way	Auto repair, produce warehouse	Sanborn Map Company (1949)
Aerial	Central	Stewart Street, Virginia Street, and Elliott Avenue	Block between Stewart Street and Virginia Street on Elliott Avenue	Warehouses, Great Northern Railway Tunnel	Sanborn Map Company (1949)
Aerial	Central	Bell Street, Battery Street, and Elliott Avenue	Block between Bell and Battery Streets on Elliott Avenue	Apartments, furniture makers	Sanborn Map Company (1949)
Aerial	Waterfront	Broad Street and Eagle Street	Block between Broad Street and Eagle Street, east side of Railroad Avenue (now Alaskan Way)	Wharves, warehouses	Sanborn Map Company (1949)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Tunnel Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949)

Alternative	Area	Alignment	Location	Historic Feature	Source
Tunnel	South	Weller Street and S. King Street	Cuts across waterfront west of Commercial Street (now First Avenue S.)	Docks, sawmills and lumber product manufacturing, Stetson Post Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Tunnel	South	Norman Street and Railyard Avenue (now Alaskan Way)	Block south of Norman Street between Railroad Avenue (now Alaskan Way) and First Avenue S.	Tenements and dwellings	Sanborn-Perris Map Company (1893)
Tunnel	South	Charles Street and Plummer Street	Block between Charles Street and Plummer Street west of Commercial Street and east of Alaskan Way	P.V. Dwyer Foundry	Sanborn-Perris Map Company (1893)
Tunnel	South	Lane Street and Weller Street	Block between Lane Street and Weller Street west of Commercial Street and east of Alaskan Way	Lumber yards and sheds	Sanborn-Perris Map Company (1893)
Tunnel	South	Runs north across east to west trestle	In storage and rail yards west of Alaskan Way	Oregon Improvement coal bunker on trestle	Sanborn-Perris Map Company (1893)
Tunnel	Central	Crosses waterfront between Union Street and Pike Street	Waterfront area between Union Street and Pike Street	Warehouse, fish store	Sanborn-Perris Map Company (1893)
Tunnel	South	Crosses waterfront area	Runs between S. Massachusetts and S. Atlantic Streets on Alaskan Way (Railroad Avenue)	Railcar builder's platforms, storage, stone quarry	Sanborn Map Co. (1905)
Tunnel	South	Crosses waterfront area	Waterfront area between S. Royal Brougham Way and S. King Street	Eastern edge of Moran Bros. Co. Shipyard's Foundry, lumber and coke storage, railway on trestles over tideflats, miscellaneous small storage sheds	Sanborn Map Co. (1905)
Tunnel	Central	Columbia Street and Yesler Way	Waterfront area between Columbia Street and Yesler Way	Colman Dock	Sanborn Map Company (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Tunnel Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Tunnel	South	Yesler Way and Union Street	Generally follows the line of Railroad Avenue (now Alaskan Way)	Great Northern Railroad Mainline	Sanborn Map Company (1905)
Tunnel	Central	Union Street and Pike Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Pipe warehouse, fish packing plant, hide processing	Sanborn Map Company (1905)
Tunnel	Central	S. Jackson Street and S. Main Street	Block between S. Jackson Street and S. Main Street, east of Railroad Avenue (now Alaskan Way)	Storage, welding, restaurants	Sanborn Map Company (1916)
Tunnel	Central	S. Jackson Street and S. Washington Street	Generally follows alignment of West Street (now Western Avenue)	Railroad depot, east end of future Ballast Island	Sanborn Map Company (1888)
Tunnel	Central	S. Washington Street and Mill Street (now Yesler Way)	Cuts across waterfront area between S. Washington and Mill Streets	Seattle Boiler Works, Mechanics Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Tunnel	Central	Union Street and Pike Street	Cuts across waterfront area west of West Street (now Western Avenue)	Planked wharf, Columbia Canning Co. Dock	Sanborn Map Company (1888)
Tunnel	Central	Runs through waterfront area	Wharf/industrial area between Marion Street and Madison Street west of Alaskan Way (formerly Railroad Avenue)	G. J. Wiley Cement, Lime, Plaster Wholesalers; Great Northern Railroad	Sanborn-Perris Map Company (1893)
Tunnel	Central	Runs through block	Madison Street and Spring Street between Front Street and West Street	Towle and Peters Boat House, coal bunkers, trestles	Sanborn-Perris Map Company (1893)
Tunnel	Central	Crosses waterfront area	Waterfront area between Seneca Street and University Street west of Alaskan Way (formerly Railroad Avenue)	Fish, feed, and hay wholesalers, dock and storage and machine shop	Sanborn-Perris Map Company (1893)
Tunnel	Central	Runs through block	Between Columbia and Marion Streets west of Alaskan Way (formerly Railroad Avenue)	Hay, grain, and feed storage, Colman Dock Warehouse, West Seattle Ferry Dock	Sanborn Map Company (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Tunnel Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Tunnel	Central	Pike Street and Pine Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Plumbing and tin shop, San Juan Fish Co., carpenter shop, west edge of structures labeled “Cheap Cabins”	Sanborn Map Company (1905)
Tunnel	Central	Stewart Street and Virginia Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Concrete mixing plant, line of Great Northern Railroad Tunnel	Sanborn Map Company (1905)
Tunnel	Central	S. Main Street and S. Washington Street	Block between S. Main Street and S. Washington Street, east of Railroad Avenue (now Alaskan Way)	O.K. Hotel	Sanborn Map Company (1916)
Tunnel	Central	S. Washington Street and Yesler Way	Block between S. Main Street and Yesler Way, east of Railroad Avenue (now Alaskan Way)	Warehouse, Engine Works, Loman and Hanford Furniture Store, and Hotel Yesler	Sanborn Map Company (1916)
Tunnel	Central	Union Street and Pike Street	Block between Union Street and Pike Street west of Alaskan Way	General store	Sanborn Map Company (1949)
Tunnel	Central	Elliott Bay (now Alaskan Way)	Between Seneca Street and Spring Street east of Alaskan Way	Tideflats and wharf	Sanborn Map and Publishing Co. (1884)
Tunnel	Central	Elliott Bay (now Alaskan Way)	Between Spring Street and Madison Street east of Alaskan Way	Lumber wharf and tideflats	Sanborn Map and Publishing Co. (1884)
Tunnel	Central	Elliott Bay (now Alaskan Way)	Between Columbia Street and Mill Street (now Yesler Way)	Yesler’s Wharf, saloons, Harrington and Smith’s Wharf, blacksmith, shops	Sanborn Map and Publishing Co. (1884)
Tunnel	Central	Bell Street and Blanchard Street	Cuts through block between Bell and Blanchard Streets	Bell Street Ravine, beach cabins	Sanborn Map and Publishing Co. (1884)
Tunnel	Central	Bell Street and Battery Street	Cuts through block between Bell Street and Battery Street	Dwelling	Sanborn Map and Publishing Co. (1884)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Tunnel Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Tunnel	Central	Pike Street and Virginia Street	Cuts across bank of Elliott Bay	Steep uneven ground covered with squatters' shanties	Sanborn Map Company (1888)
Tunnel	Central	Virginia Street and Lenora Street	Cuts across bank of Elliott Bay	Squatters' shanties	Sanborn Map Company (1888)
Tunnel	Central	Blanchard Street and Bell Street	Cuts across ravine between Bell and Blanchard Streets	Cabins, shed, Bell Street Ravine	Sanborn Map Company (1888)
Tunnel	Central	Crosses waterfront/ industrial area	Between Spring Street and Seneca Street west of Railroad Avenue (now Alaskan Way)	Harbor Master, Merchant Dock Wholesalers	Sanborn-Perris Map Company (1893)
Tunnel	Central	Blanchard Street and Bell Street	West third of block between Blanchard and Bell Streets	Bell Street Ravine dwellings	Sanborn Map Company (1905)
Tunnel	Central	Bell Street to Battery Street Tunnel	Block between Bell Street and Battery Street	Dwellings, flats, lodgings	Sanborn Map Company (1905)
Tunnel	Central	Pike Street and Stewart Street	Block between Pike Street and Stewart Street west of Alaskan Way	Auto repair, produce warehouse	Sanborn Map Company (1949)
Tunnel	Central	Stewart Street, Virginia Street, and Elliott Avenue	Block between Stewart Street and Virginia Street on Elliott Avenue	Warehouses, Great Northern Railway Tunnel	Sanborn Map Company (1949)
Tunnel	Central	Bell Street, Battery Street, and Elliott Avenue	Block between Bell and Battery Streets on Elliott Avenue	Apartments, furniture makers	Sanborn Map Company (1949)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Bypass Tunnel Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949)

Alternative	Area	Alignment	Location	Historic Feature	Source
Bypass Tunnel	South	Weller Street and S. King Street	Cuts across waterfront west of Commercial Street (now First Avenue S.)	Docks, sawmills and lumber product manufacturing, Stetson Post Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Bypass Tunnel	South	Norman Street and Railyard Avenue (now Alaskan Way)	Block south of Norman Street between Railroad Avenue (now Alaskan Way) and First Avenue S.	Tenements and dwellings	Sanborn-Perris Map Company (1893)
Bypass Tunnel	South	Charles Street and Plummer Street	Block between Charles Street and Plummer Street west of Commercial Street and east of Alaskan Way	P.V. Dwyer Foundry	Sanborn-Perris Map Company (1893)
Bypass Tunnel	South	Lane Street and Weller Street	Block between Lane Street and Weller Street west of Commercial Street and east of Alaskan Way	Lumber yards and sheds	Sanborn-Perris Map Company (1893)
Bypass Tunnel	South	Runs north across east to west trestle	In storage and rail yards west of Alaskan Way	Oregon Improvement coal bunker on trestle	Sanborn-Perris Map Company (1893)
Bypass Tunnel	South	Crosses waterfront between Union Street and Pike Street	Waterfront area between Union Street and Pike Street	Warehouse, fish store	Sanborn-Perris Map Company (1893)
Bypass Tunnel	South	Crosses waterfront area	Runs between S. Massachusetts and S. Atlantic Streets on Alaskan Way (Railroad Avenue)	Railcar builder's platforms, storage, stone quarry	Sanborn Map Co. (1905)
Bypass Tunnel	South	Crosses waterfront area	Waterfront area between S. Royal Brougham Way and S. King Street	Eastern edge of Moran Bros. Co. Shipyard's Foundry, lumber and coke storage, railway on trestles over tideflats, miscellaneous small storage sheds	Sanborn Map Co. (1905)
Bypass Tunnel	Central	Columbia Street and Yesler Way	Waterfront area between Columbia Street and Yesler Way	Colman Dock	Sanborn Map Company (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Bypass Tunnel Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Bypass Tunnel	South	Yesler Way and Union Street	Generally follows the line of Railroad Avenue (now Alaskan Way)	Great Northern Railroad Mainline	Sanborn Map Company (1905)
Bypass Tunnel	Central	Union Street and Pike Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Pipe warehouse, fish packing plant, hide processing	Sanborn Map Company (1905)
Bypass Tunnel	Central	S. Jackson Street and S. Main Street	Block between S. Jackson Street and S. Main Street, east of Railroad Avenue (now Alaskan Way)	Storage, welding, restaurants	Sanborn Map Company (1916)
Bypass Tunnel	Central	S. Jackson Street and S. Washington Street	Generally follows alignment of West Street (now Western Avenue)	Railroad depot, east end of future Ballast Island	Sanborn Map Company (1888)
Bypass Tunnel	Central	S. Washington Street and Mill Street (now Yesler Way)	Cuts across waterfront area between S. Washington and Mill Streets	Seattle Boiler Works, Mechanics Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Bypass Tunnel	Central	Union Street and Pike Street	Cuts across waterfront area west of West Street (now Western Avenue)	Planked wharf, Columbia Canning Co. Dock	Sanborn Map Company (1888)
Bypass Tunnel	Central	Runs through waterfront area	Wharf/industrial area between Marion Street and Madison Street west of Alaskan Way (formerly Railroad Avenue)	G. J. Wiley Cement, Lime, Plaster Wholesalers; Great Northern Railroad	Sanborn-Perris Map Company (1893)
Bypass Tunnel	Central	Runs through block	Madison Street and Spring Street between Front Street and West Street	Towle and Peters Boat House, coal bunkers, trestles	Sanborn-Perris Map Company (1893)
Bypass Tunnel	Central	Crosses waterfront area	Waterfront area between Seneca Street and University Street west of Alaskan Way (formerly Railroad Avenue)	Fish, feed, and hay wholesalers, dock and storage and machine shop	Sanborn-Perris Map Company (1893)
Bypass Tunnel	Central	Runs through block	Between Columbia and Marion Streets west of Alaskan Way (formerly Railroad Avenue)	Hay, grain, and feed storage, Colman Dock Warehouse, West Seattle Ferry Dock	Sanborn Map Company (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Bypass Tunnel Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Bypass Tunnel	Central	Pike Street and Pine Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Plumbing and tin shop, San Juan Fish Co., carpenter shop, west edge of structures labeled “Cheap Cabins”	Sanborn Map Company (1905)
Bypass Tunnel	Central	Stewart Street and Virginia Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Concrete mixing plant, line of Great Northern Railroad	Sanborn Map Company (1905)
Bypass Tunnel	Central	S. Main Street and S. Washington Street	Block between S. Main Street and S. Washington Street, east of Railroad Avenue (now Alaskan Way)	O.K. Hotel	Sanborn Map Company (1916)
Bypass Tunnel	Central	S. Washington Street and Yesler Way	Block between S. Main Street and Yesler Way, east of Railroad Avenue (now Alaskan Way)	Warehouse, Engine Works, Loman and Hanford Furniture Store, and Hotel Yesler	Sanborn Map Company (1916)
Bypass Tunnel	Central	Union Street and Pike Street	Block between Union Street and Pike Street west of Alaskan Way	General store	Sanborn Map Company (1949)
Bypass Tunnel	Central	Elliott Bay (now Alaskan Way)	Between Seneca Street and Spring Street east of Alaskan Way	Tideflats and wharf	Sanborn Map and Publishing Co. (1884)
Bypass Tunnel	Central	Elliott Bay (now Alaskan Way)	Between Spring Street and Madison Street east of Alaskan Way	Lumber wharf and tideflats	Sanborn Map and Publishing Co. (1884)
Bypass Tunnel	Central	Elliott Bay (now Alaskan Way)	Between Columbia Street and Mill Street (now Yesler Way)	Yesler’s Wharf, saloons, Harrington and Smith’s Wharf, blacksmith, shops	Sanborn Map and Publishing Co. (1884)
Bypass Tunnel	Central	Bell Street and Blanchard Street	Cuts through block between Bell and Blanchard Streets	Bell Street Ravine, beach cabins	Sanborn Map and Publishing Co. (1884)
Bypass Tunnel	Central	Bell Street and Battery Street	Cuts through block between Bell Street and Battery Street	Dwelling	Sanborn Map and Publishing Co. (1884)
Bypass Tunnel	Central	Pike Street and Virginia Street	Cuts across bank of Elliott Bay	Steep uneven ground covered with squatters’ shanties	Sanborn Map Company (1888)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Bypass Tunnel Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Bypass Tunnel	Central	Virginia Street and Lenora Street	Cuts across bank of Elliott Bay	Squatters' shanties	Sanborn Map Company (1888)
Bypass Tunnel	Central	Blanchard Street and Bell Street	Cuts across ravine between Bell and Blanchard Streets	Cabins, shed, Bell Street Ravine	Sanborn Map Company (1888)
Bypass Tunnel	Central	Crosses waterfront/ industrial area	Between Spring Street and Seneca Street west of Railroad Avenue (now Alaskan Way)	Harbor Master, Merchant Dock Wholesalers	Sanborn-Perris Map Company (1893)
Bypass Tunnel	Central	Blanchard Street and Bell Street	West third of block between Blanchard and Bell Streets	Bell Street Ravine dwellings	Sanborn Map Company (1905)
Bypass Tunnel	Central	Bell Street to Battery Street Tunnel	Block between Bell Street and Battery Street Tunnel	Dwellings, flats, lodgings	Sanborn Map Company (1905)
Bypass Tunnel	Central	Pike Street and Stewart Street	Block between Pike Street and Stewart Street west of Alaskan Way	Auto repair, produce warehouse	Sanborn Map Company (1949)
Bypass Tunnel	Central	Stewart Street, Virginia Street, and Elliott Avenue	Block between Stewart Street and Virginia Street on Elliott Avenue	Warehouses, Great Northern Railway Tunnel	Sanborn Map Company (1949)
Bypass Tunnel	Central	Bell Street, Battery Street, and Elliott Avenue	Block between Bell and Battery Streets on Elliott Avenue	Apartments, furniture makers	Sanborn Map Company (1949)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Surface Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949)

Alternative	Area	Alignment	Location	Historic Feature	Source
Surface	South	Weller Street and S. King Street	Cuts across waterfront west of Commercial Street (now First Avenue S.)	Docks, sawmills and lumber product manufacturing, Stetson Post Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Surface	South	Norman Street and Railroad Avenue (now Alaskan Way)	Block south of Norman Street between Railroad Avenue (now Alaskan Way) and First Avenue S.	Tenements and dwellings	Sanborn-Perris Map Company (1893)
Surface	South	Charles Street and Plummer Street	Block between Charles Street and Plummer Street west of Commercial Street and east of Alaskan Way	P.V. Dwyer Foundry	Sanborn-Perris Map Company (1893)
Surface	South	Lane Street and Weller Street	Block between Lane Street and Weller Street west of Commercial Street and east of Alaskan Way	Lumber yards and sheds	Sanborn-Perris Map Company (1893)
Surface	South	Runs north across east to west trestle	In storage and rail yards west of Alaskan Way	Oregon Improvement coal bunker on trestle	Sanborn-Perris Map Company (1893)
Surface	South	Crosses waterfront between Union Street and Pike Street	Waterfront area between Union Street and Pike Street	Warehouse, fish store	Sanborn-Perris Map Company (1893)
Surface	South	Crosses waterfront area	Runs between S. Massachusetts and S. Atlantic Streets on Alaskan Way (Railroad Avenue)	Railcar builder's platforms, storage, stone quarry	Sanborn Map Co. (1905)
Surface	South	Crosses waterfront area	Waterfront area between S. Royal Brougham Way and S. King Street	Eastern edge of Moran Bros. Co. Shipyard's Foundry, lumber and coke storage, railway on trestles over tideflats, miscellaneous small storage sheds	Sanborn Map Co. (1905)
Surface	Central	Columbia Street and Yesler Way	Waterfront area between Columbia Street and Yesler Way	Colman Dock	Sanborn Map Company (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Surface Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Surface	Central	Yesler Way and Union Street	Generally follows the line of Railroad Avenue (now Alaskan Way)	Great Northern Railroad Mainline	Sanborn Map Company (1905)
Surface	Central	Union Street and Pike Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Pipe warehouse, fish packing plant, hide processing	Sanborn Map Company (1905)
Surface	Central	S. Jackson Street and S. Main Street	Block between S. Jackson Street and S. Main Street, east of Railroad Avenue (now Alaskan Way)	Storage, welding, restaurants	Sanborn Map Company (1916)
Surface	Central	S. Jackson Street and S. Washington Street	Generally follows alignment of West Street (now Western Avenue)	Railroad depot, east end of future Ballast Island	Sanborn Map Company (1888)
Surface	Central	S. Washington Street and Mill Street (now Yesler Way)	Cuts across waterfront area between S. Washington and Mill Streets	Seattle Boiler Works, Mechanics Mill; resources burned in 1889 Great Seattle Fire	Sanborn Map Company (1888)
Surface	Central	Union Street and Pike Street	Cuts across waterfront area west of West Street (now Western Avenue)	Planked wharf, Columbia Canning Co. Dock	Sanborn Map Company (1888)
Surface	Central	Runs through waterfront area	Wharf/industrial area between Marion Street and Madison Street west of Alaskan Way (formerly Railroad Avenue)	G. J. Wiley Cement, Lime, Plaster Wholesalers; Great Northern Railroad	Sanborn-Perris Map Company (1893)
Surface	Central	Runs through block	Madison Street and Spring Street between Front Street and West Street	Towle and Peters Boat House, coal bunkers, trestles	Sanborn-Perris Map Company (1893)
Surface	Central	Crosses waterfront area	Waterfront area between Seneca Street and University Street west of Alaskan Way (formerly Railroad Avenue)	Fish, feed, and hay wholesalers, dock and storage and machine shop	Sanborn-Perris Map Company (1893)
Surface	Central	Runs through block	Between Columbia and Marion Streets west of Alaskan Way (formerly Railroad Avenue)	Hay, grain, and feed storage, Colman Dock Warehouse, West Seattle Ferry Dock	Sanborn Map Company (1905)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Surface Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Surface	Central	Pike Street and Pine Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Plumbing and tin shop, San Juan Fish Co., carpenter shop, west edge of structures labeled “Cheap Cabins”	Sanborn Map Company (1905)
Surface	Central	Stewart Street and Virginia Street	Industrial area east of Railroad Avenue (now Alaskan Way) along Elliott Avenue and west of Western Avenue	Concrete mixing plant, line of Great Northern Railroad	Sanborn Map Company (1905)
Surface	Central	S. Main Street and S. Washington Street	Block between S. Main Street and S. Washington Street, east of Railroad Avenue (now Alaskan Way)	O.K. Hotel	Sanborn Map Company (1916)
Surface	Central	S. Washington Street and Yesler Way	Block between S. Main Street and Yesler Way, east of Railroad Avenue (now Alaskan Way)	Warehouse, Engine Works, Loman and Hanford Furniture Store, and Hotel Yesler	Sanborn Map Company (1916)
Surface	Central	Union Street and Pike Street	Block between Union Street and Pike Street west of Alaskan Way	General store	Sanborn Map Company (1949)
Surface	Central	Elliott Bay (now Alaskan Way)	Between Seneca Street and Spring Street east of Alaskan Way	Tideflats and wharf	Sanborn Map and Publishing Co. (1884)
Surface	Central	Elliott Bay (now Alaskan Way)	Between Spring Street and Madison Street east of Alaskan Way	Lumber wharf and tideflats	Sanborn Map and Publishing Co. (1884)
Surface	Central	Elliott Bay (now Alaskan Way)	Between Columbia Street and Mill Street (now Yesler Way)	Yesler’s Wharf, saloons, Harrington and Smith’s Wharf, blacksmith, shops	Sanborn Map and Publishing Co. (1884)
Surface	Central	Bell Street and Blanchard Street	Cuts through block between Bell and Blanchard Streets	Bell Street Ravine, beach cabins	Sanborn Map and Publishing Co. (1884)
Surface	Central	Bell Street and Battery Street	Cuts through block between Bell Street and Battery Street	Dwelling	Sanborn Map and Publishing Co. (1884)
Surface	Central	Pike Street and Virginia Street	Cuts across bank of Elliott Bay	Steep uneven ground covered with squatters’ shanties	Sanborn Map Company (1888)

Exhibit 4-5. (continued)

Historic Features Within Alaskan Way Viaduct Surface Alternative, South to North from Sanborn Fire Insurance Maps (1884–1949) (continued)

Alternative	Area	Alignment	Location	Historic Feature	Source
Surface	Central	Virginia Street and Lenora Street	Cuts across bank of Elliott Bay	Squatters' shanties	Sanborn Map Company (1888)
Surface	Central	Blanchard Street and Bell Street	Cuts across ravine between Bell and Blanchard Streets	Cabins, shed, Bell Street Ravine	Sanborn Map Company (1888)
Surface	Central	Crosses waterfront/ industrial area	Between Spring Street and Seneca Street west of Railroad Avenue (now Alaskan Way)	Harbor Master, Merchant Dock Wholesalers	Sanborn-Perris Map Company (1893)
Surface	Central	Blanchard Street and Bell Street	West third of block between Blanchard and Bell Streets	Bell Street Ravine dwellings	Sanborn Map Company (1905)
Surface	Central	Bell Street to Battery Street Tunnel	Block between Bell Street and Battery Street Tunnel	Dwellings, flats, lodgings	Sanborn Map Company (1905)
Surface	Central	Pike Street and Stewart Street	Block between Pike Street and Stewart Street west of Alaskan Way	Auto repair, produce warehouse	Sanborn Map Company (1949)
Surface	Central	Stewart Street, Virginia Street, and Elliott Avenue	Block between Stewart Street and Virginia Street on Elliott Avenue	Warehouses, Great Northern Railway Tunnel	Sanborn Map Company (1949)
Surface	Central	Bell Street, Battery Street, and Elliott Avenue	Block between Bell and Battery Streets on Elliott Avenue	Apartments, furniture makers	Sanborn Map Company (1949)

The Great Seattle Fire started in a cabinetmaker's shop at First Avenue and Madison Street (Exhibit 4-4), on June 6, 1889, and destroyed 58 city blocks of commercial buildings, wharves, railroad tracks, and shipping facilities in downtown Seattle (Austin and Scott 1983:41; Warren 1989:50) (Exhibit 4-4). Business owners immediately began rebuilding facilities, mostly using brick instead of more flammable wood, which inspired Seattle's transformation into a modern city. Some burned debris was pushed off the west ends of streets south of University Street to fill portions of the Elliott Bay tideflats (Dorpat 2002 personal communication). Wharf owners recapped many of the scorched piles beneath burned docks and warehouses and reused the piles to support new construction (Dorpat and McCoy 1998:158).

Four years after the Great Seattle Fire of 1889, the Great Northern Railroad provided Seattle with a viable transcontinental railroad connection. The Great Northern Railroad (GNRR) and rival Northern Pacific Railroad (NPRR) controlled rail lines along the Seattle waterfront. The two national railroad lines also controlled port shipping facilities by owning and limiting access to the waterfront piers. GNRR owner James J. Hill negotiated concessions from the Seattle City Council by threatening to move the terminus of the GNRR to other cities, such as Everett. Hill acquired several franchised access rights through such economic threats. Hill and his lawyers dominated the waterfront through ownership of Railroad Avenue, a planked roadway on pilings that ran along most of the early shoreline of Seattle (the present day location of the Alaskan Way surface street) (Exhibit 4-5). Hill acquired a 60-foot-wide right-of-way along the "Ram's Horn," the nickname for the railroad alignments that followed the meander of Seattle's original shoreline. Hill was able to deny competing railroads access to waterfront shipping facilities through ownership of the railroad right-of-way (Berner 1991:14).

However, the City of Seattle facilitated even greater power than Hill over waterfront economic development by expanding the Railroad Avenue right-of-way to a width of 180 feet. Hill's response was to build GNRR tracks over water and the tideflats of Elliott Bay west of the rights-of-way at the base of the bluffs on the downtown Seattle waterfront (Phelps 1978:72). GNRR and NPRR tracks and switching yards proliferated south of downtown Seattle proper, on filled tideflats between S. Dearborn Street and S. Spokane Street (Exhibit 4-5). Long lines of freight cars often stalled at the south end of the waterfront onto Railroad Avenue, which is now the Alaskan Way surface street, creating dangerous obstructions for pedestrian and vehicle traffic (Berner 1991:13). Historic photographs show a chaotic scene of horse and buggies, pedestrians, rail cars, and multiple railroad tracks, which were a safety hazard and an obstacle to waterfront commerce (Dorpat 1982:26).

Hill wanted free access to the waterfront and asked the Seattle City Council to grant him permission to run his trains freely on Railroad Avenue, then known as Alaskan Way. The City refused and informally suggested that Hill build a tunnel, which Hill completed in 1905 (Dorpat 1984:47; Sale 1976:67). The tunnel runs from S. King Street at Fourth Avenue S. to Virginia Street, and significantly reduced train traffic volume on Railroad Avenue (Alaskan Way).

Even though the volume of train traffic on Railroad Avenue decreased after 1905, the planked roadway had continuing problems with structural integrity (Dorpat and McCoy 1998:160). Portions of the trestle sagged because piles were driven into soft tideland substrates, waves pounded the pilings and caused damage, and heavy railroad freight cars pounded the structure when they moved on the trestle. The southern portion of the waterfront between S. Washington Street and Madison Street was shored with a concrete seawall between 1911 and 1916, providing stability to a portion of Railroad Avenue (Dorpat and McCoy 1998:160). By 1936, the remainder of the waterfront seawall was installed between Madison Street and Bay Street. The seawall from S. Washington Street to Bay Street is the present day Alaskan Way Seawall.

The 1897 Klondike Gold Discovery played a major role in Seattle's economic growth after the Great Seattle Fire. The Seattle Chamber of Commerce promoted Seattle as the jumping off point for those afflicted with "Klondike Fever" and willing to travel to the Yukon gold fields seeking their fortune (Dorpat 1984:25). Thousands came to Seattle by train and paid for passage on ships bound for Alaska and bought supplies from local outfitters. The influx of miners provided a boost to Seattle's growing economy.

Before the 1889 Great Seattle Fire, the commercial district was enclosed by wharves on the west along Front Street (now First Avenue) and Water Street (now Elliott Avenue) and by docks south of Mill Street (now known as Yesler Way) (Warren 1989:13) (Exhibit 4-5). Most of the wharves south of Mill Street were built on pilings above sawdust and other materials that had been dumped to fill the tideflats (Bagley 1916:355; Bass 1937:18-19). Most of the area west of Airport Way and South I-5 and north of Spokane Street to Dearborn Street was once tideland inundated by the waters of Elliott Bay. The most conspicuous feature on the tideflats in the 1880s was the elevated, loop-shaped railroad trestle of the Seattle and Walla Walla Railroad (Morgan et al. 1982:38-39).

After the 1889 Great Seattle Fire and economic growth in the 1890s, construction activities expanded from the downtown core north to the Belltown neighborhood and south to the tideflats of Elliott Bay. Expansion north of downtown Seattle was facilitated by construction excavation that

lowered the grades of First Avenue and Second Avenue. Access to the Belltown neighborhood was improved by better transportation on the upgraded street rights-of-way. The regrade of Denny Hill provided relatively level ground north of downtown Seattle for homes, apartments, and businesses (Exhibit 4-4). Construction spoils obtained by expanding the Dearborn Street ravine between Elliott Bay and the Rainier Valley and from lowering street grades throughout the downtown core were used to fill the Elliott Bay tidelands south of downtown Seattle.

Post-Great Seattle Fire reconstruction activities were not limited to the downtown core of Seattle. Prior to the Denny Regrade, immigrant workers and their families lived in cabins, homes, and apartments in the Queen Anne area north of Denny Way (Exhibit 4-5). What is now the Seattle Center complex had a marsh that was used to pasture horses for the U.S. Army during the Spanish-American War (Dorpat 1989:16-17). Traveling circuses also pastured animals in the area during performances in Seattle. Property owners constructed several commercial buildings in the Belltown neighborhood to attract businesses north of the downtown core. By 1900, civic leaders authorized massive regrading construction, which allowed the Belltown neighborhood and the downtown Seattle core to expand and provided street grades suitable for horse drawn streetcars (Morse 1989:691). Denny Hill and other smaller elevations, including hills on First Avenue and Second Avenue between Pike Street and Cedar Avenues, were removed (Tarbill 1930:483-484).

The first Regrade began in 1904, and 27 city blocks had been leveled by 1911, from First Avenue on the west to Fifth Avenue on the east, and from Pike Street on the south to Cedar Street on the north (Exhibit 4-4). The second Denny Regrade began in 1928 and topographic high points were removed between Fifth Avenue, Westlake Avenue, Fifth Avenue N., Ninth Avenue N., and portions of Mercer Street and Dexter Avenue (Nyberg and Steinbrueck 1975) (Exhibit 4-4). Construction crews dumped excavation spoils into Elliott Bay using several techniques. Early regrading excavation employed large flumes on trestles to transport excavation spoils that had been removed using large jets of pressurized water. Heavy equipment placed excavation spoils on large conveyor systems during later regrading operations, and the spoils were dumped into Elliott Bay.

Elliott Bay tidelands south of S. Main Street were filled as part of the first large-scale attempt to excavate a waterway connecting Lake Washington with Puget Sound (Berner 1991:17). A company owned by Eugene Semple, former Washington Territorial Governor, used high-pressure water jets to remove sediment from the north end of Beacon Hill, in what is now the Dearborn

Street right-of-way. The plan was to excavate a canal that was wide enough to allow ships to pass between Elliott Bay and Lake Washington. Semple's company widened a natural ravine at Dearborn Street and sluiced the "mud, sand and gravel" off the hillside, transporting the excavation spoils onto the tidelands with an elaborate flume (Dorpat 1986:202-203). Semple's company filled over 1,400 acres of tidelands and sold the land to private businessmen seeking waterfront land for warehouses, shipyards, flour mills, and other shipping and manufacturing facilities (Bagley 1916:358). Semple also oversaw dredging operations to excavate shipping waterways in the delta of the Duwamish River, which provided additional fill to reclaim the tidelands (Berner 1991:19). More than 2,000 acres of useable land on the former tidelands of Elliott Bay were created with fill from sluicing and dredging operations.

The south Seattle tidelands provided cheap land to develop shipyards, flour mills, warehouses, and railroad facilities (Exhibit 4-5). The Moran Brothers shipyard on the waterfront, west of Alaskan Way at S. Royal Brougham Way and S. Dearborn Street, now Pier 37, was one of many industrial sites on the filled tideflats of Elliott Bay (Anderson Map Company 1904). The Moran Brothers built the battleship Nebraska in 1904 at the shipyard (Dorpat 1984:57). A decade later, the Skinner and Eddy shipyard constructed battleships for World War I at the same location as the Moran Brothers facility.

After the beginning of the Great Depression, many unemployed and homeless men established small communities consisting of shacks. The communities were called "Hooverilles," after President Herbert Hoover, who many believed was responsible for the desperate economic conditions (Morgan et al. 1982:192-193). Seattle's largest Hooverville was constructed at the former Skinner and Eddy shipyard (Exhibit 4-4), which came into public ownership in 1924 (Berner 1992:313-314). Other Hooverilles were distributed across the tidelands, including one on Harbor Island known as "Louisville" (Dorpat 1989:104).

The Skinner and Eddy Hooverville consisted of approximately 500 shanties that were occupied by over 600 people, nearly all of whom were single men (Roy 1935:19). The Hooverville community at the Skinner and Eddy shipyard extended west from the contemporary alignment of Alaskan Way to Elliott Bay, and south between S. Dearborn Street and S. Royal Brougham Way, west of the contemporary Seahawks Stadium (Dorpat 1984:104; Morgan et al. 1982:192-193; Roy 1935:v). Hooverville residents constructed shacks from whatever materials could be collected on docks, in railroad yards, and from

trash heaps, and built their homes among pilings, concrete blocks, and other industrial remnants of the former Skinner and Eddy shipyard operation.

4.3.1 Summary of Historic Period Land Use in South – S. Spokane Street to S. King Street

Alternatives in the south portion of the AWW Corridor will cross the tideflats of Elliott Bay that were filled between 1850 and the 1930s. Sawdust from Yesler’s sawmill was dumped onto the Elliott Bay shoreline in the 1850s, which was the first intentional fill of the tideflats (Dorpat and McCoy 1998:171). A few wharves with coal bunkers and mills were built on the tideflats directly south of the point owned by Henry Yesler (Sanborn Map Company 1888), but the wharves burned during the 1889 Great Seattle Fire. In 1895, massive fill activities were initiated south of the Seattle downtown core, as sediment from Beacon Hill, S. Jackson Street, and other regrade projects was dumped onto the tideflats. Railroad lines and switching yards were constructed on the areas that were filled first, and industrial and commercial facilities were built in areas that were filled later. Most Elliott Bay tideflats were filled by the 1930s (Exhibit 4-5).

4.3.2 Summary of Historic Period Land Use in Central – S. King Street to Battery Street Tunnel

The central portion of the proposed AWW Corridor will be in the former shoreline of Elliott Bay, at the foot of the former bluff line west of the Alaskan Way surface street and First Avenue and bluffs that fronted Elliott Bay, and ravines at the shoreline. Early historic period development on the shoreline consisted of lumber wharves, sawmills, coal bunkers, and railroad trestles (Sanborn Map and Publishing Company 1884; Sanborn Map Company 1888) (Exhibit 4-5). Some facilities burned during the 1889 Great Seattle Fire, but were quickly rebuilt.

The Alaskan Way surface street, formerly known as Railroad Avenue, was the platform for waterfront railroad development in Seattle. Beginning as an offshore train trestle, the Alaskan Way surface street eventually became a planked road covered with a combination of streets, railroad tracks, and wharves. Fill from regrading was placed along the waterfront, including the hulk of a derelict ship that was filled with soil. The planked roadway deteriorated due to tidal action, shipworms, and a lack of regular maintenance, which prompted City officials to build a concrete seawall between S. Washington Street and Madison Street in 1911. The seawall was an improvement over previous efforts to place fill consisting of dirt, wood scraps, and refuse under Railroad Avenue (Bauroth 1997:40). The concrete seawall was extended north to Broad Street in 1936, after Seattle voters

approved a levy to fund construction (Bauroth 1997:40; Dorpat and McCoy 1998:160).

Early historic period land use focused on the shoreline, as railroad companies (such as the Seattle, Lakeshore, and Eastern Railroad) built elevated trestles on the tidelands west of the bluff line. Immigrants, Indians, and laborers built shacks, cabins, and shanties along the shoreline fronted by the trestles, including clusters of structures forming small settlements at the foot of Bell Street, at Virginia Street, and at Stewart Street (Sanborn Map Company 1888) (Exhibit 4-5). Railroad trestles were precursors to the development of Railroad Avenue, the planked roadway that later became the Alaskan Way surface street.

4.3.3 Summary of Historic Period Land Use in North Waterfront – Pike Street to Broad Street

The waterfront north of Pike Street consisted of tideflats, beaches, and bluffs. The proposed AWW Corridor will be in former tideflats and beaches on the east side of Elliott Bay. Railroads were constructed on trestles west of bluffs. Shanties and cabins were dispersed along the shoreline at the base of bluffs. Small commercial enterprises operated on wharves that were constructed between railroad trestles and the base of bluffs (Exhibit 4-5).

4.3.4 Summary of Historic Period Land Use in North – Battery Street Tunnel to Ward Street

The area north of the Battery Street Tunnel included inland hills and flats, open grasslands near what is now the Seattle Center, and marshes at the southwest corner of Lake Union. Land development in the Belltown neighborhood consisted mostly of housing for immigrant workers and their families. The working class laborers were employed at waterfront businesses such as shipping warehouses and factories. Small stores, bakeries, and saloons provided services to the local population of working-class families and bachelor laborers (Sanborn Map Company 1888, 1905). Belltown landowners tried to encourage businesses to move north of the burned-out downtown commercial district by building new hotels and small offices in the early 1890s.

During the period of commercial growth in the 1890s, City leaders began plans to regrade First Avenue and Second Avenue to eliminate peaks and valleys and steep inclines of the natural topography. Early regrading led to a large-scale modification of the topography between downtown and Queen Anne Hill that flattened nearly all of the topography of the Belltown and lower Queen Anne neighborhoods by the early 1930s (Exhibit 4-4). As the hills were flattened through use of hydraulic mining techniques and

excavation with heavy construction equipment, many historic buildings and topographic features were removed, such as the Denny Public School. Construction crews used spoils from the early regrade projects to fill the tideflat and shoreline rights-of-way of Western Avenue and Railroad Avenue, now the Alaskan Way surface street, between Pine Street and Denny Way (Phelps 1978:18). City contractors completed the Denny Regrade by the early 1930s; however, the depression and World War II delayed commercial growth in the area until after the war ended (Bauroth 1997:38).

4.4 Implications for Land Use and Probability for Hunter-Fisher-Gatherer, Ethnographic Period, and Historic Period Archaeological Resources

4.4.1 Hunter-Fisher-Gatherer Archaeological Resources

Hunter-fisher-gatherer archaeological resources may include archaeological deposits associated with camps and villages, artifacts and features from resource gathering and processing sites, and burials.

South – S. Spokane Street to S. King Street

The south portion of the proposed AWV Corridor will cross the former tideflats of Elliott Bay that could have wood stakes, matting, basketry, or rock alignments associated with fish weirs. Concentrations of shell and/or rock from shellfish gathering and processing may occur on tideflats. The archaeological materials would date within the past 1,000 to 500 years, based on the geomorphic history of the landform. The vicinity of S. King Street may have evidence of village or camp deposits that date within the past 2,000 years. Archaeological deposits may be west of the narrow peninsula that was extant in the early historic period (Exhibit 4-1).

Old tideflats and beaches probably subsided, or lowered in elevation, at least 3 feet during an earthquake on the Seattle Fault Zone approximately 1,100 years ago. The Seattle Fault Zone extends east–west across the south end of Elliott Bay. Land north of the north edge of the fault zone dropped in elevation. At West Point, approximately 5 miles north of the fault zone, beaches subsided approximately 3 feet (Larson and Lewarch 1995; Lewarch et al. 1999). Beaches and tideflats closer to the fault probably lowered more than 3 feet. Geologists have not estimated subsidence on the shoreline of Elliott Bay, which may have been caused by earthquakes on the Seattle Fault Zone that occurred prior to 1,100 years ago. The landforms may have features such as hearths and rock pavements used to dry and smoke meat, clams, and plant foods; midden deposits with food refuse; debris from tool manufacturing; and stone tools and bone tools. Archaeological materials on the old, subsided beaches and tideflats would probably date between 2,000 and 1,100 years ago,

based on regional patterns in the distribution of hunter-fisher-gatherer archaeological sites and the geomorphic history of the area.

Central – S. King Street to Battery Street Tunnel

Landforms in the central portion of the proposed AWW Corridor, from S. King Street north to Pike Street, include tideflats and beaches that subsided during an earthquake on the Seattle Fault Zone approximately 1,100 years ago. Beaches and tideflats probably dropped at least 3 feet in elevation, based on interpolation of subsidence measured at West Point, 5 miles north of the fault. The inundated landforms may have rock features and refuse deposits from shellfish and fish processing localities and midden deposits from seasonal camps, with food refuse, features, stone tools, bone tools, and debris from tool manufacturing. Archaeological materials would most likely date between 2,000 and 1,100 years ago.

The AWW Corridor north of Pike Street includes tideflats, beaches, bluffs, and inland areas. Tideflats and beaches subsided during an earthquake on the Seattle Fault Zone approximately 1,100 years ago and may have rock features and refuse deposits from shellfish and fish processing localities and midden deposits from seasonal camps. Archaeological materials could include food refuse, rock features, stone tools, bone tools, and debris from tool manufacturing, dating between 2,000 and 1,100 years ago. Alignments that cross the base and top of early historic bluffs that fronted Elliott Bay could intersect archaeological deposits associated with seasonal camps, villages, or processing localities that date within the past 1,100 years. Archaeological deposits may occur in areas that have not been completely disturbed by construction excavation. Hunter-fisher-gatherer archaeological materials could include shell midden deposits, organic midden deposits, various types of features, stone tools, bone tools, and debris from tool manufacturing.

North Waterfront – Pike Street to Broad Street

The AWW Corridor along the waterfront north of Pike Street will include tideflats and beaches that subsided during an earthquake on the Seattle Fault Zone approximately 1,100 years ago. The landform may have rock features and refuse deposits from shellfish and fish processing localities and midden deposits from seasonal camps. Archaeological materials could include food refuse, rock features, stone tools, bone tools, and debris from tool manufacturing, dating between 2,000 and 1,100 years ago.

North – Battery Street Tunnel to Ward Street

The north portion of the AWW Corridor may intersect archaeological deposits associated with camps, villages, and resource procurement localities, such as hunting sites and plant collecting and processing areas. Archaeological

materials could include shell midden deposits, evidence of structures in the form of postmolds, organic midden without shell, features such as hearths and rock pavements, debris from tool manufacturing, and formed stone and bone tools. The archaeological deposits would be associated with level areas on glacial outwash drift plains and the southwest edge of Lake Union. Portions of the corridor within the boundary of the Denny Regrade have a low probability for intact hunter-fisher-gatherer archaeological deposits because of the extent of hydraulic sluicing and excavating to lower the local topography.

Human remains may occur in any hunter-fisher-gatherer archaeological site with shell midden deposits, based on patterns in southern Puget Sound.

4.4.2 Ethnographic Archaeological Resources

Ethnographic artifacts and features may occur throughout the proposed AWW Corridor. The south portion of the corridor may have evidence of fish weirs that date between approximately 1790 and 1860, such as wood stakes, basketry, matting, or rock alignments from fish weirs, or shell and/or rock from shellfish gathering and processing. Beach landforms in south, central, and north waterfront portions of the proposed AWW Corridor may have evidence of villages, camps, and resource extraction and processing localities that date from the 1790s to the 1860s. The north portion of the project corridor also could have archaeological deposits from villages such as the ethnographic period village of Baba'kwob, and plant procurement localities in clearings and marshes between Elliott Bay and Lake Union (Exhibit 4-3).

Archaeological midden deposits in villages and camps could include human remains. Burials may occur near bluff edges, on the tops of bluffs that once fronted Elliott Bay, and near the base of bluffs and ravines in the central and north waterfront areas where landslides may have transported material from blufftops.

4.4.3 Historic Archaeological Resources

Historic period archaeological deposits dating between 1860 and the early 1900s may occur throughout the proposed AWW Corridor and would include remnants of piers and wharves, roadbeds, historic domestic refuse, industrial refuse, historic fill, and ballast from sailing ships. Historic Indian archaeological deposits may also be extant along former shoreline areas, on and below former bluffs, and near the bases of former ravines. Historic Indian archaeological deposits associated with short-term historic period Indian encampments on the beaches along the downtown Seattle and Belltown waterfront or from permanent residences, such as those built in the

Belltown area in the late nineteenth century, may be in the central and north waterfront portions of the project corridor.

Weaver (Hart Crowser 1999: Exhibit 4-2) identified kinds of historic period archaeological deposits that might occur along the Seattle waterfront, with a focus on the position of artifacts relative to historic docks, wharves, and transportation corridors. All historic period archaeological deposits would be covered by fill; however, the fill material could be as early as the 1850s or as recent as the 1990s. Significant historic period resources would include intact archaeological deposits with artifacts and/or features associated with economic activities, ethnic groups, transportation activities, and domestic households and that were associated with major historic events, such as the Great Seattle Fire of 1889, or periods in the development of Seattle defined by historic archaeologists. Fill associated with early historic period economic development of Seattle, the Great Seattle Fire of 1889, and the Denny Regrade could be significant if information can be obtained regarding the technology used to place fill and if fill can be linked to specific areas and time periods.

Weaver (Hart Crowser 1999) lists research questions and attributes of historic period archaeological deposits to evaluate significance of deposits on a case by case basis using factors such as integrity of deposits, uniqueness of the deposits, and importance of the locality in the development of Seattle.

Weaver (Hart Crowser 1999; Hart-Crowser and Associates 1986a) identifies attributes of fill that may contribute to research potential of fill deposits, such as intact refuse deposits that could be used to date fill episodes, attributes of stratigraphy and grain size that could differentiate between mechanical and hydraulic fill placement, spoils from the Great Seattle Fire of 1889 that have artifacts from commercial enterprises, and use of industrial waste as land reclamation material.

South – S. Spokane Street to S. King Street

The AWW Corridor from S. Spokane Street to S. King Street may have evidence of industrial activities associated with wharves, trestles, and filled ground surfaces dating from the 1860s through the 1930s. Refuse from industrial activities, such as shipbuilding and coal shipping, may include remnants of piers, wharves, trestles, and industrial refuse and manufacturing features. Debris from the Great Seattle Fire of 1889 may be mixed with fill near S. King Street. Refuse from occupations and architectural debris of shanties associated with Seattle's largest Hooverville also may occur beneath fill in the vicinity of S. Royal Brougham Way.

Central – S. King Street to Battery Street Tunnel

The AWW Corridor north of S. King Street could have evidence of early refuse and filling associated with Yesler's Mill, debris and fill from the Great Seattle Fire of 1889, and artifacts and features associated with industrial, transportation, and shipping enterprises that were constructed on piers, wharves, and trestles on the Elliott Bay tideflats and shoreline. The corridor near Pike Street may have evidence of cabins, shanties, and outbuildings from squatters who utilized the shoreline north of the Downtown Seattle core, between the 1880s and early 1900s.

The AWW Corridor north of Pike Street could intersect domestic refuse from cabin communities on the early historic period shoreline of Elliott Bay and in a ravine near Bell Street. The cabin communities were often inhabited with immigrants of varying ethnic backgrounds; associated archaeological resources, if extant, may reflect their domestic habits and may contribute to our understanding of immigrant adaptations. A 1905 Chinese laundry at First Avenue and Battery Street, which was probably also used as a residence, is an example of an ethnic activity that could be archaeologically represented in the AWW project area. Archaeological deposits could include architectural material from razing cabins and outbuildings, domestic refuse, refuse from industrial activities, and materials from railroad construction and maintenance activities.

North Waterfront – Pike Street to Broad Street

The AWW Corridor along the former shoreline of Elliott Bay could intersect pilings, concentrations of wood planks and milled lumber, and artifacts associated with activities conducted on wharves, associated with railroad lines, associated with roadways, and from commercial and industrial enterprises on piers and wharves.

North – Battery Street Tunnel to Ward Street

Areas inland from the Elliott Bay shoreline could have refuse from early historic period houses, boarding houses, commercial enterprises, and industrial enterprises. Archaeological materials could include remnants of foundations, refuse and architectural debris deposited in foundations of demolished buildings, and segments of early utility systems, such as sewer lines. Areas in and adjacent to the Denny Regrade may have features associated with conveying regrading spoils to Elliott Bay, such as timbers and footings of conveyor systems.

Chapter 5 OPERATIONAL IMPACTS AND BENEFITS

Direct effects to subsurface archaeological deposits would occur during construction excavation for project facilities. Operation of the project will not affect intact archaeological resources.

5.1 No Build Alternative

The No Build Alternative will not affect intact archaeological resources.

5.2 Rebuild Alternative

Operation of the Rebuild Alternative will not affect intact archaeological resources.

5.3 Aerial Alternative

Operation of the Aerial Alternative will not affect intact archaeological resources.

5.4 Tunnel Alternative

Operation of the Tunnel Alternative will not affect intact archaeological resources.

5.5 Bypass Tunnel Alternative

Operation of the Tunnel Alternative will not affect intact archaeological resources.

5.6 Surface Alternative

Operation of the Surface Alternative will not affect intact archaeological resources.

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Chapter 6 CONSTRUCTION IMPACTS

6.1 Rebuild Alternative

6.1.1 South – S. Spokane Street to S. King Street

Hunter-Fisher-Gatherer Archaeological Resources

Construction excavation for utility trenches and vaults, additional support columns north of S. Dearborn Street, and columns for the SR 519 connection may affect unknown, significant hunter-fisher-gatherer archaeological deposits on the former tideflats of Elliott Bay and west of a former lagoon and peninsula in the S. King Street vicinity. The former tideflats of Elliott Bay could have wood stakes, matting, basketry, or rock alignments associated with fish weirs. Concentrations of shell and/or rock from shellfish gathering and processing may occur on tideflats. Archaeological materials in the tideflats would date within the past 1,000 to 500 years. The vicinity of S. King Street may have evidence of village or camp deposits that date within the past 2,000 years.

Ethnographic Period Archaeological Resources

Construction excavation for utility trenches and vaults, additional support columns north of S. Dearborn Street, and columns for the SR 519 connection may affect unknown, significant ethnographic period archaeological deposits on the former tideflats of Elliott Bay and west of an ethnographic village on a former peninsula in the S. King Street vicinity. Evidence of fish weirs could occur, dating between approximately 1790 AD and 1860 AD, such as wood stakes, basketry, matting, or rock alignments. Shell and/or rock concentrations from shellfish gathering and processing could be present on old beaches and tideflats.

Historic Period Archaeological Resources

Construction excavation for utility trenches and vaults, additional support columns north of S. Dearborn Street, and columns for the SR 519 connection may affect significant historic archaeological resources associated with industrial, commercial, and residential development of the Elliott Bay tideflats in the 1890s. Archaeological resources that may be extant would be associated with a lumberyard between S. King Street and S. Weller Street, coal bunker wharves at the foot of S. King Street, and tenement housing in the block north of S. Royal Brougham Way. Intact archaeological resources associated with tenement dwellings north of the intersection of S. Royal Brougham Way may

occur. These resources may provide information about the development of multi-family housing in the late nineteenth century on the Elliott Bay tideflats.

6.1.2 Central – S. King Street to Battery Street Tunnel

Hunter-Fisher-Gatherer Archaeological Resources

Construction excavation for additional support columns, additional pilings, and utility trenches and vaults may affect unknown, significant hunter-fisher-gatherer archaeological deposits on the former beach of Elliott Bay, at the base of bluffs above the former beach of Elliott Bay, on former bluff tops above Elliott Bay, and in the east end of a former ravine or gulch that centered on Bell Street.

Tideflats and beaches may have rock features and refuse deposits from shellfish and fish processing localities and midden deposits from seasonal camps. Archaeological materials could include food refuse, rock features, stone tools, bone tools, and debris from tool manufacturing, dating between 2,000 and 1,100 years ago. Areas at the base and top of early historic bluffs that fronted Elliott Bay could intersect archaeological deposits associated with seasonal camps, villages, or processing localities and that date within the past 1,100 years.

Ethnographic Period Archaeological Resources

Construction excavation for additional support columns, additional pilings, and utility trenches and vaults may affect unknown, significant ethnographic period archaeological deposits on the former beach of Elliott Bay, at the base of bluffs above the former beach of Elliott Bay, on former bluff tops above Elliott Bay, and at the east end of a former gulch or ravine that was centered on Bell Street. Evidence of villages, camps, and resource extraction and processing localities that date from the AD 1790s to the 1860s could occur.

Historic Period Archaeological Resources

Construction excavation for additional support columns, additional pilings, and utility trenches and vaults may affect significant historic period archaeological resources associated with industrial and commercial development along the Seattle waterfront before and after the 1889 Seattle Fire, late nineteenth century and early twentieth century semi-permanent housing and early twentieth century laborer's dwellings and rooming houses, and early twentieth century commercial development. Archaeological resources that may be extant would be associated with the Sidney Sewer Pipe and Terra Cotta Works at the foot of Main and Jackson Streets, the Yesler Lumber Company at the foot of Yesler Way and Columbia Street, the West Seattle Ferry Dock at the foot of Marion Street, and a variety of warehouses,

coal bunkers, mills, and offices primarily related to maritime commerce on Elliott Bay. The Sidney Sewer Pipe and Terra Cotta Works produced paving bricks for the early Seattle streets.

Historic period archaeological resources may be associated with squatter's shanties and cabins between Virginia and Lenora Streets and between Bell and Blanchard Streets, rooming houses and small dwellings between Bell and Battery Streets, and carpenter shops and seafood processing facilities between Pike and Pine Streets. Historic period archaeological deposits from a cluster of squatters' shanties on a steep bank along the former Elliott Bay shoreline could occur between Pike and Virginia Streets. Intact archaeological resources associated with a beach cabin community in the former Bell Street ravine between Bell and Blanchard Streets may occur. These late nineteenth century communities may provide information on the history of multi-ethnic, working-class individuals and families on the early Seattle waterfront.

6.1.3 North Waterfront – Pike Street to Broad Street

Hunter-Fisher-Gatherer Archaeological Resources

Excavation for utility trenches and vaults may affect unknown, significant hunter-fisher-gatherer archaeological deposits at the base of former bluffs on the east shoreline of Elliott Bay and on the former beach of Elliott Bay. Wood stakes, matting, basketry, or rock alignments associated with fish weirs and concentrations of shell and/or rock from shellfish gathering and processing may occur. Archaeological deposits could date within the past 2,000 years.

Ethnographic Period Archaeological Resources

Excavation for utility trenches and vaults may affect unknown, significant ethnographic period archaeological deposits at the base of former bluffs on the east shoreline of Elliott Bay and on the former beach of Elliott Bay. Archaeological evidence of camps and resource extraction and processing localities may occur, dating from the AD 1790s to the 1860s.

Historic Period Archaeological Resources

Excavation for utility trenches and vaults may affect unknown, significant historic period archaeological deposits associated with wharves, warehouses, and railroad tracks on trestles in Elliott Bay.

6.1.4 North – Battery Street Tunnel to Ward Street

Construction excavation will occur in areas that were previously disturbed during excavations for the Denny Regrade and during road construction activities and will not affect unknown, significant hunter-fisher-gatherer, ethnographic period, or historic archaeological resources.

6.1.5 Seawall – S. King Street to Myrtle Edwards Park

Hunter-Fisher-Gatherer Archaeological Resources

Soil improvements for the seawall, like jet grouting or deep soil mixing, may affect unknown, significant hunter-fisher-gatherer archaeological deposits at the base of former bluffs on the east shoreline of Elliott Bay and on the former beach of Elliott Bay. Wood stakes, matting, basketry, or rock alignments associated with fish weirs and concentrations of shell and/or rock from shellfish gathering and processing may occur. Archaeological deposits could date within the past 2,000 years.

Ethnographic Period Archaeological Resources

Soil improvements for the seawall, such as jet grouting or deep soil mixing, may affect unknown, significant ethnographic period archaeological deposits at the base of former bluffs on the east shoreline of Elliott Bay and on the former beach of Elliott Bay. Archaeological evidence of camps and resource extraction and processing localities may occur, dating from the AD 1790s to the 1860s.

Historic Period Archaeological Resources

Soil improvements for the seawall, like jet grouting or deep soil mixing, may affect unknown, significant historic period archaeological deposits associated with wharves, warehouses, and railroad tracks on trestles in Elliott Bay.

6.2 Aerial Alternative

6.2.1 South – S. Spokane Street to S. King Street

Hunter-Fisher-Gatherer Archaeological Resources

Construction excavation for support columns, placement of new pilings, and excavation of utility trenches and vaults may affect unknown, significant hunter-fisher-gatherer archaeological deposits on the former tideflats of Elliott Bay south of S. Dearborn Street and west of a former lagoon and peninsula in the S. King Street vicinity.

Ethnographic Period Archaeological Resources

Construction excavation for support columns, placement of new pilings, and excavation of utility trenches and vaults may affect unknown, significant ethnographic period archaeological deposits on the former tideflats of Elliott Bay south of S. Dearborn Street and west of an ethnographic village on a former peninsula in the S. King Street vicinity.

Historic Period Archaeological Resources

Construction excavation for support columns, placement of new pilings, and excavation of utility trenches and vaults may affect unknown, significant historic archaeological resources associated with industrial, commercial, and residential development of the Elliott Bay tideflats in the 1890s.

Archaeological resources that may be extant would be associated with a foundry at S. Alaskan Way and S. Charles Street, a lumberyard between S. King Street and S. Weller Street, coal bunker wharves at the foot of S. King Street, and tenement housing in the block north of S. Royal Brougham Way.

6.2.2 Central – S. King Street to Battery Street Tunnel

Hunter-Fisher-Gatherer and Ethnographic Period Archaeological Resources

Construction excavation for support columns, excavation for a tieback wall near the contemporary railroad tracks, and excavation of utility trenches and vaults may affect the same unknown, significant hunter-fisher-gatherer and ethnographic period archaeological resources described for the Rebuild Alternative.

Historic Period Archaeological Resources

Construction excavation for support columns, construction excavation for a tieback wall adjacent to the contemporary railroad tracks, and excavation of utility trenches and vaults may affect the same unknown, significant historic period archaeological resources described under the Rebuild Alternative.

6.2.3 North Waterfront – Pike Street to Broad Street

Hunter-Fisher-Gatherer Archaeological Resources

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect unknown, significant hunter-fisher-gatherer archaeological deposits at the base of former bluffs on the east shoreline of Elliott Bay and on the former beach of Elliott Bay. Wood stakes, matting, basketry, or rock alignments associated with fish weirs and concentrations of shell and/or rock from shellfish gathering and processing may occur. Archaeological deposits could date within the past 2,000 years.

Ethnographic Period Archaeological Resources

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect unknown, significant ethnographic period archaeological deposits at the base of former bluffs on the east shoreline of Elliott Bay and on the former beach of Elliott

Bay. Archaeological evidence of camps and resource extraction and processing localities may occur, dating from the AD 1790s to the 1860s.

Historic Period Archaeological Resources

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect unknown, significant historic period archaeological deposits associated with wharves, warehouses, and railroad tracks on trestles in Elliott Bay.

Broad Street Detour

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect unknown, significant hunter-fisher-gatherer, ethnographic period, or historic period archaeological deposits.

Option: Battery Street Flyover Detour

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits.

6.2.4 North – Battery Street Tunnel to Ward Street

Impacts will be the same as described for the Rebuild Alternative. Construction excavation will occur in areas that were previously disturbed during excavations for the Denny Regrade and during road construction activities and will not affect unknown, significant hunter-fisher-gatherer, ethnographic period, or historic archaeological resources.

6.2.5 Seawall – S. King Street to Myrtle Edwards Park

Construction excavation may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological resources described for the Rebuild Alternative.

6.3 Tunnel Alternative

6.3.1 South – S. Spokane Street to S. King Street

Construction excavation for support columns and pilings in the SR 519 vicinity and a cut-and-cover tunnel north of S. Dearborn Street may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Rebuild Alternative.

6.3.2 Central – S. King Street to Battery Street Tunnel

Construction excavation for a cut-and-cover tunnel and support columns may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Rebuild Alternative.

6.3.3 North Waterfront – Pike Street to Broad Street

Construction excavation for utilities, utility vaults, and supports for temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

Broad Street Detour

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

Option: Battery Street Flyover Detour

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

6.3.4 North – Battery Street Tunnel to Ward Street

Impacts will be the same as described for the Rebuild Alternative. Construction excavation will occur in areas that were previously disturbed during excavations for the Denny Regrade and during road construction activities and will not affect unknown, significant archaeological resources.

6.3.5 Seawall – S. King Street to Myrtle Edwards Park

Construction excavation may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological resources described for the Rebuild Alternative.

6.4 Bypass Tunnel Alternative

6.4.1 South – S. Spokane Street to S. King Street

Construction excavation for support columns and pilings in the SR 519 vicinity and a cut-and-cover tunnel north of S. Dearborn Street may affect the

same unknown, significant hunter-fisher-gatherer ethnographic period, and historic archaeological deposits described for the Rebuild Alternative.

6.4.2 Central – S. King Street to Battery Street Tunnel

Construction excavation for a cut-and-cover tunnel may affect the same unknown, significant hunter-fisher-gatherer ethnographic period, and historic archaeological deposits described for the Rebuild Alternative.

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described in Sec. 6.1.2 for the Rebuild Alternative.

6.4.3 North Waterfront – Pike Street to Broad Street

Construction excavation for utilities, utility vaults, and supports for temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

Broad Street Detour

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

Option: Battery Street Flyover Detour

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

6.4.4 North – Battery Street Tunnel to Ward Street

Impacts will be the same as described for the Rebuild Alternative. Construction excavation will occur in areas that were previously disturbed during excavations for the Denny Regrade and during road construction activities and will not affect unknown, significant archaeological resources.

6.4.5 Seawall – S. King Street to Myrtle Edwards Park

Construction excavation may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological resources described for the Rebuild Alternative.

6.5 Surface Alternative

6.5.1 South – S. Spokane Street to S. King Street

Hunter-Fisher-Gatherer Archaeological Resources

Construction excavation for support columns, trenches excavated for utilities and utility vaults, and soil improvement such as jet grouting or soil mixing may affect unknown, significant hunter-fisher-gatherer archaeological deposits on the former tideflats of Elliott Bay and west of a former lagoon.

Ethnographic Period Archaeological Resources

Construction excavation for support columns, trenches excavated for utilities and utility vaults, and soil improvement such as jet grouting or soil mixing may affect unknown, significant ethnographic period archaeological deposits on the former tideflats of Elliott Bay and west of an ethnographic village.

Historic Period Archaeological Resources

Construction excavation for support columns, trenches excavated for utilities and utility vaults, and soil improvement such as jet grouting or soil mixing may affect unknown, significant historic period archaeological resources associated with tenement housing near S. Royal Brougham Way. These resources may provide information about the development of multi-family housing in the late nineteenth century on the Elliott Bay tideflats.

6.5.2 Central – S. King Street to Battery Street Tunnel

Construction excavation for support columns and trenches excavated for utilities and utility vaults may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Rebuild Alternative.

6.5.3 North Waterfront – Pike Street to Broad Street

Construction excavation for utilities, utility vaults, and supports for temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

Broad Street Detour

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

Option: Battery Street Flyover Detour

Excavation for utility trenches and vaults and construction excavation of shafts for support columns of temporary trestles may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological deposits described for the Aerial Alternative.

6.5.4 North – Battery Street Tunnel to Ward Street

Impacts will be the same as described for the Rebuild Alternative. Construction excavation will occur in areas that were previously disturbed during excavations for the Denny Regrade and during road construction activities and will not affect unknown, significant archaeological resources.

6.5.5 Seawall – S. King Street to Myrtle Edwards Park

Construction excavation may affect the same unknown, significant hunter-fisher-gatherer, ethnographic period, and historic archaeological resources described for the Rebuild Alternative.

Chapter 7 SECONDARY AND CUMULATIVE IMPACTS

7.1 Secondary Impacts

No secondary impacts on significant archaeological deposits will occur.

7.2 Cumulative Impacts

Potential effects to archaeological sites from construction of the Alaskan Way Viaduct and Seawall Replacement Project would combine with effects of planned projects in areas within the City of Seattle that have a high probability for significant hunter-fisher-gatherer, ethnographic period, or historic period archaeological resources. Areas with a high probability for archaeological resources in Seattle include marine shorelines, such as the former margins of Salmon Bay and Smith Cove in Ballard and Interbay, and the early historic period shoreline and tideflats of Elliott Bay in Interbay, downtown Seattle, SODO (South of Downtown), and West Seattle.

Construction excavation for the Seattle Monorail Green Line Project may affect significant archaeological resources in the Smith Cove vicinity, downtown Seattle, Pioneer Square, SODO, and West Seattle. The City of Seattle Magnolia Bridge Replacement Project may include construction excavation or other subsurface ground disturbance in areas with a high probability for archaeological resources in the Interbay vicinity. Construction excavation for the City of Seattle South Lake Union Improvements Project may affect archaeological resources on and adjacent to the early historic period shoreline of Lake Union, in the Seattle Center vicinity. The WSDOT-City of Seattle SR 519 Project may affect significant archaeological resources on the downtown Seattle waterfront. Archaeological resources in the southern portion of downtown Seattle or in the northern portion of SODO may be affected by construction for the WSDOT-Sound Transit King Street Renovation and Weller Street Bridge Project or the WSDOT-City of Seattle SR 519 Project. Other projects in the SODO area that may affect archaeological resources include the City of Seattle S. Lander Street Grade Separation Project, the Port of Seattle E. Marginal Way Grade Separation Project, and the City of Seattle Spokane Street Widening Project.

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Chapter 8 OPERATIONAL MITIGATION

No mitigation will be required for operation. Operation of the project will not affect subsurface archaeological deposits.

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Chapter 9 CONSTRUCTION MITIGATION

Mitigation of adverse project effects would occur only if the effects to significant archaeological resources could not be avoided. Avoidance could include redesigning portions of the project to avoid construction in archaeological deposits.

The proposed AWW Project is a federal undertaking under Section 106 of the NHPA. The lead federal agency is required to consider the adverse effects of an action on an NRHP-eligible property. Archaeological resources that are not eligible for listing in the NRHP will not require additional consideration.

If construction effects on significant archaeological resources cannot be avoided, then measures to mitigate adverse effects to significant archaeological resources will be implemented. Some project construction activities may affect unknown intact archaeological deposits using construction techniques that do not allow visual inspection and evaluation of the deposits. Driving pilings through intact archaeological deposits or improving soil characteristics by injecting grout into liquefiable soils may affect unknown archaeological deposits. Archaeologists would not be able to detect the deposits or record construction effects. At present, archaeologists do not have techniques to identify and evaluate archaeological deposits deeply buried beneath fill.

Mitigation measures will be outlined in a Programmatic Agreement among the City of Seattle, WSDOT, OAHP, and FHWA. The Programmatic Agreement will be prepared when the final project alternative is selected and prior to preparation of final construction designs. The FHWA official shall ensure that the undertaking is carried out in accordance with the agreement. The agreement shall include provisions to address the inadvertent discovery or identification of unknown archaeological resources affected by the undertaking. The Programmatic Agreement will identify the responsible parties for complying with elements of the agreement, will outline the mitigation measures that will be applied, and will bind the signatories of the agreement to comply with the mitigation measures. The Programmatic Agreement will clearly set forward mitigation measures and allow comment and review by the signatories and Tribes prior to implementation.

Mitigation measures will include preparation of an Archaeological Monitoring Plan, preparation of an Archaeological Treatment Plan, and preparation of Supplemental Treatment Plans as necessary, and assessment of areas of the APE not included in this assessment, such as construction staging areas. The Archaeological Treatment Plan and Monitoring Plan will be

referenced and attached to the Programmatic Agreement. Mitigation measures will also include provisions for archaeological monitoring of subsurface excavations and/or borings conducted for geotechnical studies prior to selection of a final project alternative.

9.1 Archaeological Treatment Plan

An Archaeological Treatment Plan will be developed to minimize construction delays and to expedite agency and tribal review in the event of an inadvertent archaeological discovery. An Archaeological Treatment Plan will be prepared when a final alternative is selected. An Archaeological Treatment Plan will include:

- Summary of the environmental and cultural setting of the project, including probable kinds of archaeological resources.
- Archaeological research design with specific research problems for archaeological resources that may be present.
- Field and laboratory methodologies, including field techniques, data analysis, and data management procedures, for archaeological materials that may occur.
- Reporting requirements and an outline of main subject headings in reports.
- Project schedules and the role of Supplemental Treatment Plans.
- Curation procedures, identification of permanent curation facilities, and discussion of consultation procedures with affected Tribes.
- Procedures for treating human remains and for consulting with the King County Medical Examiner, the OAHP, and affected Tribes.
- Proposed activities to foster public participation in the project and to disseminate results of investigations to the general public.
- Schedule for progress reports.

9.2 Archaeological Construction Monitoring Plan

An Archaeological Construction Monitoring Plan will be developed for locations with a high probability for archaeological resources, and will include:

- A review of construction techniques.
- Monitoring procedures, techniques, and protocols.
- Reporting requirements.

9.3 Supplemental Treatment Plan

Supplemental Treatment Plans will be developed upon identification of an archaeological resource that may be significant. Supplemental Treatment

Plans allow a rapid response for specific archaeological resources inadvertently discovered in areas with subsurface construction excavation. A Supplemental Treatment Plan will be developed within 24 hours of resource discovery. Turnaround times for review by FHWA, WSDOT, OAHF, and the affected Tribes will be developed for the Programmatic Agreement. Supplemental Treatment Plans will be developed for archaeological resources prior to conducting archaeological test excavations of resources identified during archaeological construction monitoring or that are determined probably eligible for listing in the NRHP. Specific research questions and field methods will be developed for affected archaeological resources, based on the research design in the Archaeological Treatment Plan.

9.4 Assessment of Areas in the APE Not Included in This Assessment

Certain construction activities, such as construction staging areas, will be identified at a later date. If these areas were not included in this assessment, they will require assessment.

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ATTACHMENT A

Agency and Tribal Consultation Letters

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**Exhibit A-1 Consultation Letter Regarding Areas of
Potential Effect**

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**Washington State
Department of Transportation**

Douglas B. MacDonald
Secretary of Transportation

Transportation Building

310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300

360-705-7000

TTY: 1-800-833-6388
www.wsdot.wa.gov

August 8, 2003

Allyson Brooks, Ph.D.
Office of Archaeology and Historic Preservation
PO Box 48343
Olympia, WA 98504-8343

Dear Dr. Brooks:

Please review the enclosed Areas of Potential Effect (APE) map prepared for the Alaskan Way Viaduct and Seawall Replacement Project. We have also attached a detailed description to address the vertical extent of the APE for each construction segment. A PDF file of the map is also being electronically transmitted to you.

We request your comments by September 12, 2003. If you wish to meet with us to discuss these documents, or if you have questions, please contact me at 360-570-6639, email at holstinec@wsdot.wa.gov.

Thank you for your assistance.

Sincerely,

Craig Holstine
Cultural Resources Specialist
Alaskan Way Viaduct and Seawall Replacement Project

Enclosure

C: Kimberly Farley, WSDOT
Paul Krueger, WSDOT
Lynn Larson, LAAS

Vertical Extent of the APE for Alaskan Way Viaduct and Seawall Replacement Project.

The description of the Vertical Extent of the Areas of Potential Effect is provided as follows:

Segment 1 - *South*—extends from S. Spokane St. to S. King St., crossing tideflats formed from sediment deposited by the Duwamish River. The creation of the tideflats date within the past 1,000 years. The depths of **fill materials placed in the last century range from 5-50 feet** along E. Marginal Way and **from 10-40 feet at the Port of Seattle facilities along the waterfront**. Much of the shallow soil along the southern segment comes from soils and sediments dredged from the Duwamish Waterway.

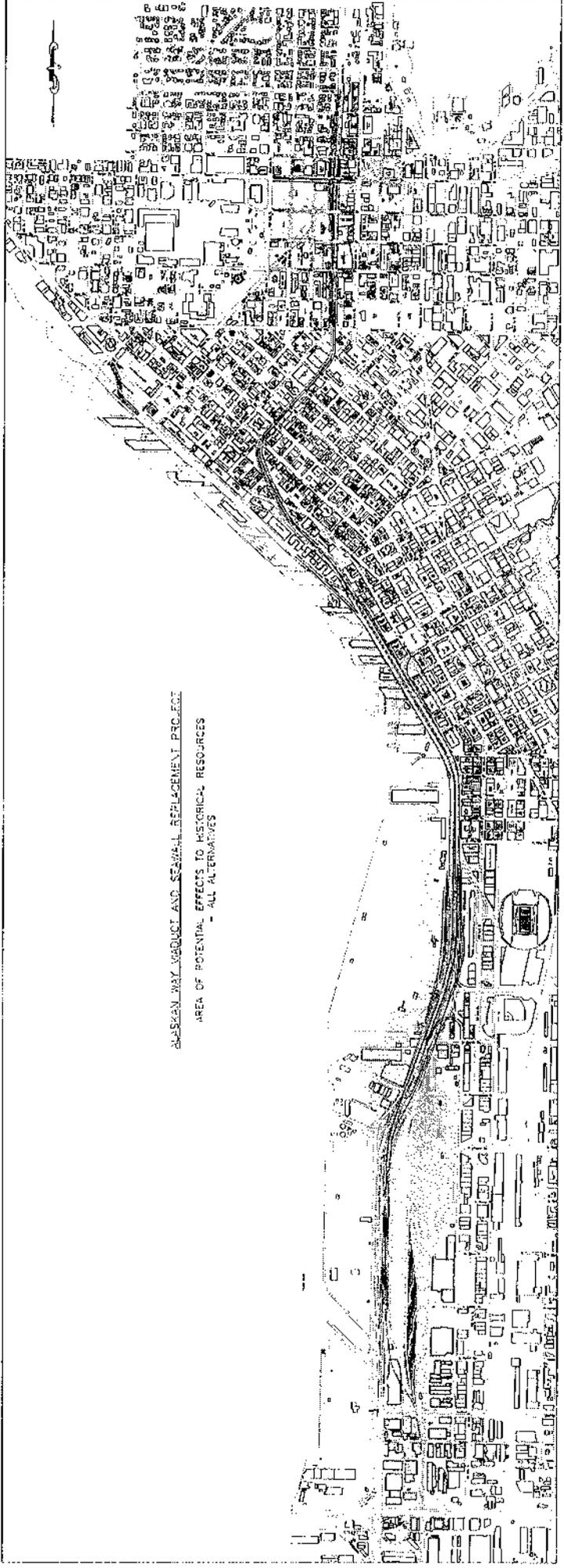
Segment 2 - *Central*—extends from S. King Street to the north end of the Battery Street Tunnel. The area between S. King and Yesler Way included a tidal lagoon that is **now covered with 20 to 30 feet of fill**. This segment crosses over old beach deposits, and portions of the historic period shoreline of the east side of Elliott Bay.

Segment 3 - *North Waterfront*—extends from Pike Street north to Broad Street. This segment crosses over old beach deposits, and portions of the historic period shoreline of the east side of Elliott Bay.

Segment 4 - *North*—extends from north of the Battery Street Tunnel to Ward Street. It includes the area east of Western Avenue, extending across Belltown and the lower Queen Anne neighborhoods.

There is no preferred alternative at this time, however, some of the alternatives may require excavations of approximately 60 feet along the Central Waterfront.

Please see the attached engineer's detailed description of the approximate limits for the maximum depths of underground soils disturbance with regard to determining impacts.



RUSKAN WAY BRIDGE AND SEAWALL REPLACEMENT PROJECT

AREA OF POTENTIAL EFFECTS TO HISTORICAL RESOURCES
- ALL ALTERNATIVES

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STATE OF WASH

OFFICE OF COMMUNITY DEVELOPMENT
OFFICE OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501

(Mailing Address) PO Box 48343 • Olympia, Washington 98504-8343

Phone (360) 586-3065 FAX (360) 586-3067 Web Site: www.nahp.wa.gov

October 17, 2003

RECEIVED

OCT 21 2003

ENVIRONMENTAL AFFAIRS POINT PLAZA

Mr. Craig Holstine
Cultural Resources Specialist
Washington State Department of Transportation
6639 Capitol Blvd. S
Tumwater, WA 98501
Post Office Box 47300
Olympia, WA 98504-7332

In future correspondence please refer to:
Log: 091103-01-WSDOT
Property: Alaskan Way Viaduct Area of Potential Effect
Re: Concurrence to APE

Dear Mr. Holstine:

We have reviewed the materials forwarded to our office for the above referenced project. Thank you for your description of the area of potential effect for the project. We concur with the definition of the APE. We look forward to the results of your cultural resources survey efforts, your consultation with the concerned tribes, and receiving the survey report. We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available.

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised.

Sincerely,

Russell Holter
Preservation Design Reviewer
(360) 586-3533
russellh@cted.wa.gov

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Exhibit A-2 Individuals and Agencies Contacted

Brooks, Allyson, SHPO, State Office of Archaeology and Historic Preservation, telephone, February 20, 2002 and March 18, 2002.

Dorpat, Paul, Historian, telephone, April 18, 2002.

Hogerhuis, Donna, Cultural Specialist, Muckleshoot Indian Tribe, telephone, April 23, 2002.

Lavan, Paul, Chief, Kikiallus Tribe, telephone, May 13, 2002.

Meninick, Johnson, Cultural Resources Program Manager, Yakama Nation, telephone, May 7, 2003.

Mullen, Ray, Cultural Specialist, Snoqualmie Tribe, telephone, April 10, 2002.

Rasmussen, James, Tribal Council Member, Duwamish Tribe, telephone, April 23, 2002.

Sigo, Charles, Tribal Curator, Suquamish Tribe, meeting, April 18, 2002.

Gobin, Hank, Cultural Resources Manager, Tulalip Tribes, telephone, April 10, 2002.

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Exhibit A-3 Tribal Correspondence

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**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable Bennie J. Armstrong, Chair
Suquamish Tribe
P.O. Box 498
Suquamish, WA 98292

Dear Chairperson Armstrong:

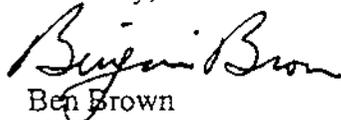
The Federal Highway Administration (FHWA), Washington State Department of Transportation (WSDOT), and the City of Seattle are preparing an Environmental Impact Statement (EIS) to document the environmental consequences and possible mitigation measures for alternative solutions to improve the existing State Route (SR) 99 corridor located in downtown Seattle, King County, Washington. This corridor is now partially served by the Alaskan Way Viaduct. The proposed action would involve improvements to the existing 2-mile viaduct structure or construction of a new facility. The southern terminus of the project would be the First Avenue South Bridge. The north terminus would be north of the existing Battery Street Tunnel and will be determined after project scoping to (1) not prevent a possible connection to the south Lake Union vicinity (the Mercer Street Corridor connection to Interstate 5), (2) not prevent a possible realignment of the SR 99 corridor, and (3) not prevent using the existing Battery Street Tunnel and existing Alaskan Way Viaduct facilities. Proposed alternatives are being considered both east and west of the existing facility.

To ensure that we take into account the effects of this undertaking on properties listed in or eligible for listing in the National Register of Historic Places, the WSDOT is initiating formal Section 106 consultation pursuant to 36 CFR 800.2(c)(4). Recognizing the government-to-government relationship that the Federal Highway Administration has with the tribe, they will continue to play a key role in this undertaking as the responsible Federal agency. However, since the WSDOT has been delegated the authority from FHWA to initiate consultation and we will be directly managing the cultural resources studies and carrying out this undertaking, you may contact us for assistance with the process and/or the undertaking.

Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party and identifying key tribal contacts, would be greatly appreciated. Please provide a response by September 11, 2001 so that we may have your key input and discuss this undertaking and the area of potential effects. Should you have any questions about this project, you may contact Carol Hunter, WSDOT Office of Urban Mobility, at 206-464-6231 or 401 2nd Avenue South, Seattle, WA, 98104.

If you have any general questions about the Section 106 process, you may contact Steve Shipe by phone at (206) 440-4531 or by E-mail at shipest@wsdot.wa.gov .

Sincerely,

A handwritten signature in black ink that reads "Ben Brown". The signature is written in a cursive style with a large, prominent "B".

Ben Brown

Assistant Environmental Program Manager

Enclosures

cc: SHPO
FHWA
Project File
Day File



**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable Bennie J. Armstrong, Chair
Suquamish Tribe
P.O. Box 498
Suquamish, WA 98292

Attn: Charlie Sigo, Cultural Resources Director

Dear Chairperson Armstrong:

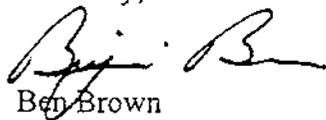
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If you have any general questions about the Section 106 process, you may contact Steve Shipe by phone at (206) 440-4531 or by E-mail at shipest@wsdot.wa.gov .

Sincerely,

A handwritten signature in black ink, appearing to read "Ben Brown". The signature is fluid and cursive, with a large initial "B" and "B".

Ben Brown
Assistant Environmental Program Manager

Enclosures

cc: SHPO
FHWA
Project File
Day File



**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable Bennie J. Armstrong, Chair
Suquamish Tribe
P.O. Box 498
Suquamish, WA 98292

Attn: Rob Purser, Fisheries Program Director

Dear Chairperson Armstrong:

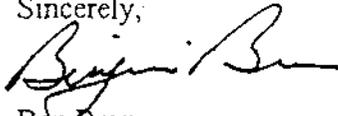
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Sincerely,

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Ben Brown

Assistant Environmental Program Manager

Enclosures

cc: SHPO
FHWA
Project File
Day File



**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable John Daniels, Jr., Chair
Muckleshoot Tribe
39015 172nd Avenue S.E.
Auburn, WA 98092

Dear Chairperson Daniels:

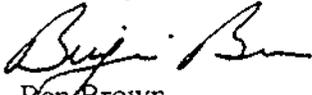
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Assistant Environmental Program Manager

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**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable John Daniels, Jr., Chair
Muckleshoot Tribe
39015 172nd Avenue S.E.
Auburn, WA 98092

Attn: JoAnn Batiste, General Manager

Dear Chairperson Daniels:

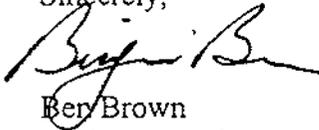
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Assistant Environmental Program Manager

Enclosures

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**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable Bennie J. Armstrong, Chair
Suquamish Tribe
P.O. Box 498
Suquamish, WA 98292

Attn: Alexis Barry, Executive Director

Dear Chairperson Armstrong:

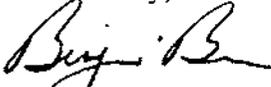
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Ben Brown
Assistant Environmental Program Manager

Enclosures

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**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable John Daniels, Jr., Chair
Muckleshoot Tribe
39015 172nd Avenue S.E.
Auburn, WA 98092

Attn: Melissa Calvert, Wildlife and Cultural Resources Director

Dear Chairperson Daniels:

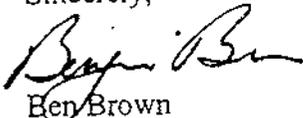
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Sincerely,



Ben Brown

Assistant Environmental Program Manager

Enclosures

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**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable John Daniels, Jr., Chair
Muckleshoot Tribe
39015 172nd Avenue S.E.
Auburn, WA 98092

Attn: Isabel Tinoco, Natural Resources Director

Dear Chairperson Daniels:

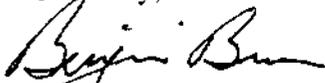
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Ben Brown

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**Washington State
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Northwest Region

August 6, 2001

The Honorable Joseph O. Mullen, Chair
Snoqualmie Tribe
P.O. Box 670
Fall City, WA 98024

Dear Chairperson Mullen:

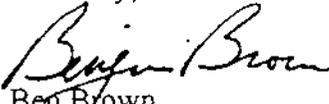
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Ben Brown

Assistant Environmental Program Manager

Enclosures

cc: SHPO

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**Washington State
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Sid Morrison
Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable Joseph O. Mullen, Chair
Snoqualmie Tribe
P.O. Box 670
Fall City, WA 98024

Attn: Ray Mullen, Cultural Resources Director

Dear Chairperson Mullen:

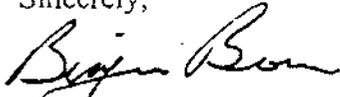
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Northwest Region

August 6, 2001

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Snoqualmie Tribe
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Attn: John Halliday, Executive Director

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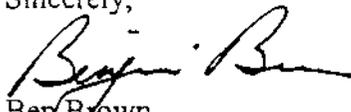
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Northwest Region

August 6, 2001

The Honorable Joseph O. Mullen, Chair
Snoqualmie Tribe
P.O. Box 670
Fall City, WA 98024

Attn: Matthew Mattson, Environmental Programs Director

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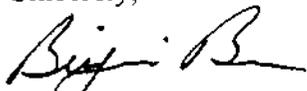
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**Washington State
Department of Transportation**

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Northwest Region

August 6, 2001

The Honorable Douglas Paul Lavan, Chief
Kikiallus Indian Nation
3933 Bagley Avenue N.
Seattle, WA 98103

Dear Chief Lavan:

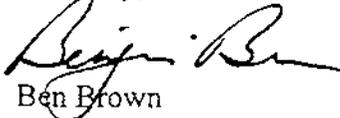
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**Washington State
Department of Transportation**

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Secretary of Transportation

Northwest Region

August 6, 2001

The Honorable Cecile Hansen, Chair
Duwamish Tribe
14235 Ambaum Blvd. S.W.
Burien, WA 98166-1464

Dear Chairperson Hansen:

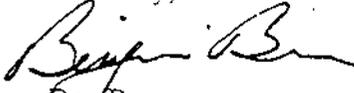
The Federal Highway Administration (FHWA), Washington State Department of Transportation (WSDOT), and the City of Seattle are preparing an Environmental Impact Statement (EIS) to document the environmental consequences and possible mitigation measures for alternative solutions to improve the existing State Route (SR) 99 corridor located in downtown Seattle, King County, Washington. This corridor is now partially served by the Alaskan Way Viaduct. The proposed action would involve improvements to the existing 2-mile viaduct structure or construction of a new facility. The southern terminus of the project would be the First Avenue South Bridge. The north terminus would be north of the existing Battery Street Tunnel and will be determined after project scoping to (1) not prevent a possible connection to the south Lake Union vicinity (the Mercer Street Corridor connection to Interstate 5), (2) not prevent a possible realignment of the SR 99 corridor, and (3) not prevent using the existing Battery Street Tunnel and existing Alaskan Way Viaduct facilities. Proposed alternatives are being considered both east and west of the existing facility.

To ensure that we take into account the effects of this undertaking on properties listed in or eligible for listing in the National Register of Historic Places, the WSDOT is initiating formal Section 106 consultation pursuant to 36 CFR 800.2(c)(4). Recognizing the government-to-government relationship that the Federal Highway Administration has with the tribe, they will continue to play a key role in this undertaking as the responsible Federal agency. However, since the WSDOT has been delegated the authority from FHWA to initiate consultation and we will be directly managing the cultural resources studies and carrying out this undertaking, you may contact us for assistance with the process and/or the undertaking.

Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party and identifying key tribal contacts, would be greatly appreciated. Please provide a response by September 11, 2001 so that we may have your key input and discuss this undertaking and the area of potential effects. Should you have any questions about this project, you may contact Carol Hunter, WSDOT Office of Urban Mobility, at 206-464-6231 or 401 2nd Avenue South, Seattle, WA, 98104.

If you have any general questions about the Section 106 process, you may contact Steve Shipe by phone at (206) 440-4531 or by E-mail at shipest@wsdot.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Ben Brown". The signature is fluid and cursive, with the first name "Ben" being more prominent than the last name "Brown".

Ben Brown

Assistant Environmental Program Manager

Enclosures

cc: SHPO

FHWA

Project File

Day File



**Washington State
Department of Transportation**
Douglas B. MacDonald
Secretary of Transportation

Northwest Washington Division
Planning & Policy Office
401 2nd Avenue South, Suite 300
Seattle, WA 98104-2887
206-464-5878 / Fax 206-464-6084
TTY: 1-800-833-6388
www.wsdot.wa.gov

December 11, 2001

Herman Williams, Jr., Chairperson
Tulalip Tribes
6700 Totem Beach Road
Marysville, Washington 98271

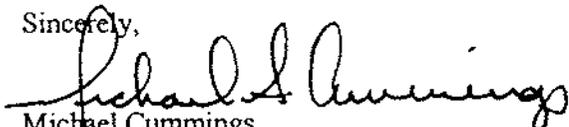
Dear Chairperson Williams:

The Federal Highway Administration (FHWA), Washington State Department of Transportation (WSDOT), and the City of Seattle are preparing an Environmental Impact Statement (EIS) to document the environmental consequences and possible mitigation measures for alternative solutions to improve the existing State Route (SR) 99 corridor located in downtown Seattle, King County, Washington. This corridor is now partially served by the Alaskan Way Viaduct. The proposed action would involve improvements to the existing 2-mile viaduct structure or construction of a new facility. The southern terminus of the project would be the First Avenue South Bridge. The north terminus would be north of the existing Battery Street Tunnel and will be determined after project scoping to (1) not prevent a possible connection to the south Lake Union vicinity (the Mercer Street Corridor connection to Interstate 5), (2) not prevent a possible realignment of the SR 99 corridor, and (3) not prevent using the existing Battery Street Tunnel and existing Alaskan Way Viaduct facilities. Proposed alternatives are being considered both east and west of the existing facility.

To ensure that we take into account the effects of this undertaking on properties listed in or eligible for listing in the National Register of Historic Places, the WSDOT is initiating formal Section 106 consultation pursuant to 36 CFR 800.2(c)(4). Recognizing the government-to-government relationship that the Federal Highway Administration has with the tribe, they will continue to play a key role in this undertaking as the responsible Federal agency. However, since the WSDOT has been delegated the authority from FHWA to initiate consultation and we will be directly managing the cultural resources studies and carrying out this undertaking, you may contact us for assistance with the process and/or the undertaking.

Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party and identifying key tribal contacts, would be greatly appreciated. Please provide a response by **January 18, 2002** so that we may have your key input and discuss this undertaking and the area of potential effects. Should you have any questions about this project or the Section 106 process, you may contact Kimberly Farley, WSDOT Urban Corridors Office, by phone at 206-464-6084, by e-mail at farleyk@wsdot.wa.gov, or by mail at 401 2nd Avenue South, Seattle, WA, 98104.

Sincerely,


Michael Cummings
Environmental and Systems Services Director

Enclosures

cc: Hank Gobin, Cultural Resources Director, Tulalip Tribes
SHPO
FHWA
Project File
Day File

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Exhibit A-4 WSDOT Tribal Consultation Tracking Sheet

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Cultural Resources Tribal Contact & TAD Tracking Sheet

JOB TITLE: SR 99 Alaskan Way Viaduct EIS

L-Number:

Resource Potential:

Contact Person: Paul Krueger, Kimberly Farley

	Tribe Kikiallus	Tribe Duwamish	Tribe Muckleshoot	Tribe Snoqualmie	Tribe Suquamish	Tribe Tulalip
Letters Addressed	Chief Lavan	Cecile Hansen, Chair	John Daniels Melissa Calvert Isabel Tinoco JoAnn Batiste	Joseph Mullen Ray Mullen Matthew Mattson John Halliday	Bennie Armstrong Alexis Barry Charlie Sigo Rob Purser	Herman Williams Jr.
Contact Person:	Chief Lavan	Cecile Hansen, Chair	a) Melissa Calvert or Donna Hogerhuis b) Isabel Tinoco c) JoAnn Batiste	a) Ray Mullen b) Matthew Mattson c) John Halliday	a) Rich Brooks b) Wayne George c) Rob Purser	Hank Gobin
Phone No.		206 431-1582	a) 360 802-2202 ext 103 b) 253 939-3311 ext 109 c) 253 939-3311 ext 140	a) 425 222-6900 b) 425 222-6900 c) 425 222-6900	a) 360 394-5250 b) 360 394-5221 c) 360 394-5244	(360) 651-3300
Section 106 letter to Tribes:	August 6, 2001	August 6, 2001	August 6, 2001	August 6, 2001	August 6, 2001	December 11, 2001
Comment Due	Sept. 11, 2001	Sept. 11, 2001	Sept. 11, 2001	Sept. 11, 2001	Sept. 11, 2001	January 18, 2002
Response Rec'd			August 29, 2001			January 8, 2002
Phone Contact Date:	No Call	Sept. 7, 2001		Sept. 7, 2001	Sept. 7, 2001	
Comment:		Left a message for Chairman Hansen. Chairman	Left a message with Donna & Melissa. Spoke with Paul Hayes who will pass on the message to	Matthew Mattson called. They request a Gov-Gov meeting in which we present	Left a message with Rich & with Rob.	

Hansen called 9/21/01 – will reread the file & call me back.	isabel.	the project and CRS ideas. Am working on it.	
		Rich called 9/10 and requests to be kept in the loop. He will also ask Charlie Sigo for his opinion.	
Revised Section 106 letter to Tribes:	1/30/02	1/30/02	1/30/02
Comment Due:	2/15/02	2/15/02	2/15/02
Phone Contact Date:	2/15/02	2/15/02	2/15/02
Comment:	No Call		
	Talked with Donna Hogerhuis. The Tribe is interested in receiving project updates. They do not have the resources to be heavily involved in meetings, but would like to receive email updates and phone calls. Donna would like to review draft documents related to cultural and archeological issues. She would also like to know when the cultural survey will be conducted in case they want to send a	Left a message for Matthew on 2/15/02.	Left a message for Rich on 2/15/02, he returned the call. On 2/26/02 I contacted Rich and he said that the Suquamish Tribe is interested in being involved in Section 106 and Fisheries issues. He would like a schedule of activities and then would like to set up a meeting to discuss Section 106 issues. His direct number is (360) 394-5250 and his email is
	Left a message for Donna Hogerhuis. The Tribe is interested in receiving project updates. They do not have the resources to be heavily involved in meetings, but would like to receive email updates and phone calls. Donna would like to review draft documents related to cultural and archeological issues. She would also like to know when the cultural survey will be conducted in case they want to send a	Left a message for Matthew on 2/15/02.	Left a message for Hank on 2/15/02.

Revised Section 106 letter to Tribes:

Comment Due: 2/15/02
Phone Contact Date: 2/15/02

Comment: No Call

	tribal monitor. Donna's email is dhogerhuis@mitwil dlifeculture.org. Also, please contact Isabel Tinaco related to fisheries issues.	rbrooks@suquamish.sn.us. Charlie Sigo is the lead for Section 106 issues.	
Phone Contact:	March 14, 2002 Contacted Isabel to discuss project and obtain email so I can send a RALF calendar.	March 14, 2002 Tried to email RALF schedule as requested, but email address wouldn't work. I contacted Ron and left a message requesting his email address so I can try to resend.	
Phone Contact:	March 25, 2002 Glen St. Amant called and said that he would be the contact for fisheries issues instead of Isabel. He also said that he would attend the afternoon session of RALF on 3/27/02		
TAD Req. Sent:			
Last Signature:			
(Date):			
Notes:			

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Exhibit A-5 Tribal Consultation Response Letters

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**MUCKLESHOOT
CULTURAL RESOURCES PROGRAM**

39015 172nd Avenue S.E. • Auburn, Washington 98092-9763

Phone: (360) 802-2202 • FAX: (360) 802-2242

RECEIVED
SEP 11 2001



August 29, 2001

WSDOT
Carol Hunter
401 2nd Ave South
Seattle WA 98104

Re: Improvements on SR 99 Alaskan Way Viaduct EIS

Dear Ms. Hunter:

Thank you for contacting the Muckleshoot Cultural Resources Program. Donna Hogerhuis the cultural specialist would like to review the draft EIS when it is available. We would like two copies if possible.

The Wildlife and Culture Programs are different departments under the Muckleshoot Indian Tribe. Notice and consultation with these departments should not be presumed to represent tribal policy as sufficient notice or consultation.

The Muckleshoot Cultural Resources Program appreciated the information sent and will look forward to reviewing the drafts requested.

Thank you,

April Brown
Cultural Secretary

Cc: Melissa Calvert Cultural Program Director
Donna Hogerhuis, Cultural Specialist

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THE TULALIP TRIBES

Cultural Resources Department x̄alal?tx^w

6410 - 23rd Avenue N.E.
Marysville, WA 98271
(360) 651-3300
FAX (360) 651-3312

The Tulalip Tribes are the successors in
interest to the Snohomish,
Snoqualmie, and Skykomish tribes
and other tribes and band signatory
to the Treaty of Point Elliott.

April 10, 2002

Mr. Leonard Forsman
7700 Pioneer Way, Suite 101
Gig Harbor, WA 98335

Dear Leonard:

The position and concerns of the Tulalip Tribes are outlined in these three
S.O.P.'s.

1. We would ask that before any major construction be done at the
project site:

That you do a cultural and archaeological assessment before any
work begins no matter how big or small the project.

Regardless of what the State Office of Historical Preservation say in
their boiler plate cover letter, " There are no known cultural site's
documented in that area." Because they don't know of any
known sites in the purposed project site. That does not mean that
there are not any.

2. Whatever is being proposed that it does not adversely effect the
natural resources in that area such as: timber, floral, fauna, i.e.,
clear cutting without leaving at least a 200-foot buffer zone
adjacent to rivers and streams.
3. To protect our water resources and fisheries.

These three states SOP's should serve as our three basic concerns when it comes
to building and development projects in Snohomish and King County.

Sincerely yours,



Hank Gobin,
Cultural Resources Manager

P.S. This is follow-up to our conversation
-T 2:30 today.

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