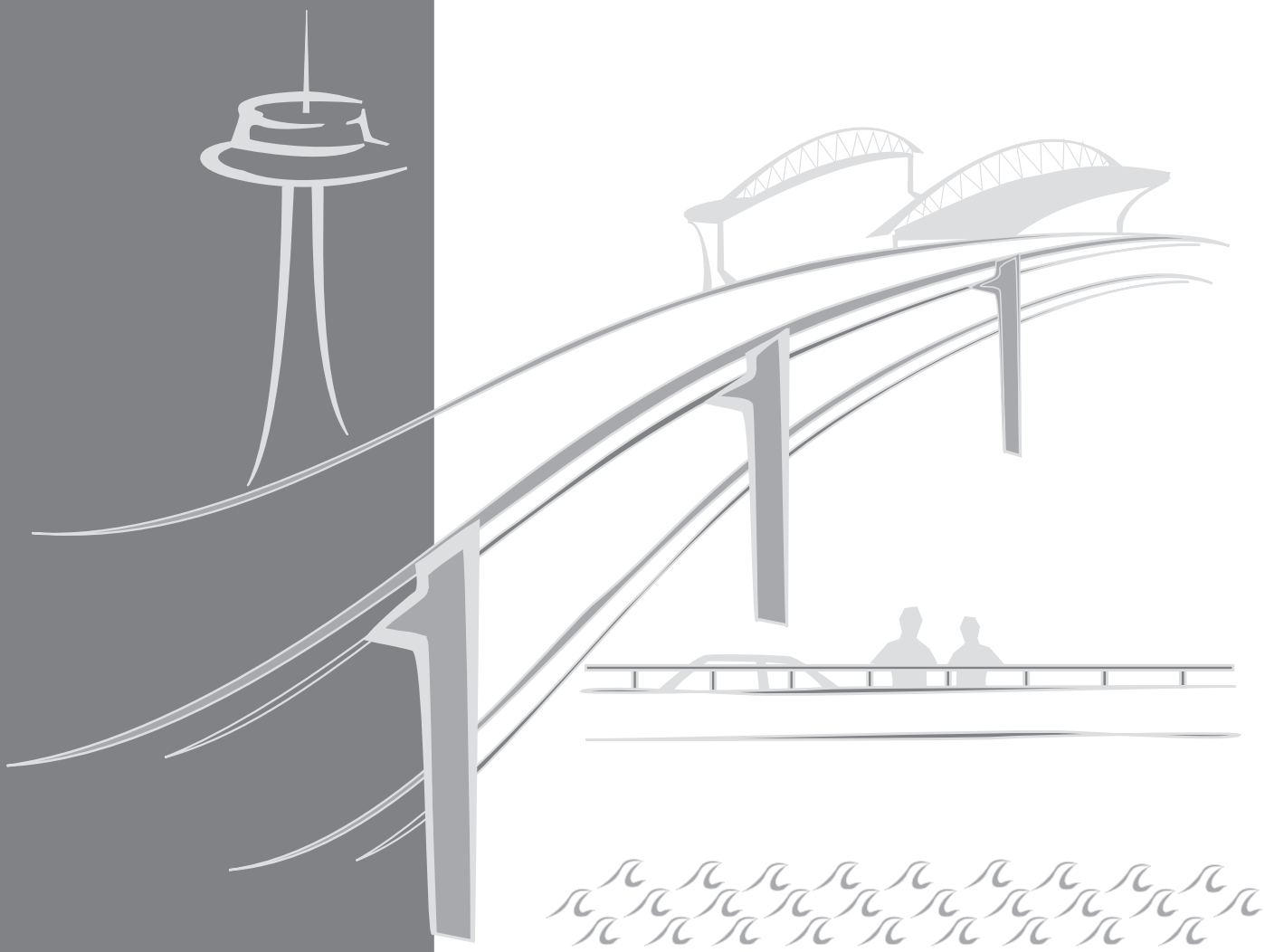
SR 99: ALASKAN WAY VIADUCT & SEAWALL REPLACEMENT PROJECT

Draft Environmental Impact Statement
Appendix D
Visual Quality Technical Memorandum



MARCH 2004

Submitted by:
PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC.

Prepared by:
PARAMETRIX

U.S. Department of Transportation Federal Highway Administration

Washington State Department of Transportation

City of Seattle

This Page Intentionally Left Blank

SR 99: ALASKAN WAY VIADUCT & SEAWALL REPLACEMENT PROJECT

Draft EIS
Visual Quality 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:

Parsons Brinckerhoff Quade & Douglas, Inc.

999 Third Avenue, Suite 2200
Seattle, WA 98104

In association with:

BERGER/ABAM Engineers Inc.
BJT Associates
David Evans and Associates, Inc.
Entech Northwest
EnviroIssues, Inc.
Harvey Parker & Associates, Inc.
Jacobs Civil Inc.
Larson Anthropological Archaeological Services Limited
Mimi Sheridan, AICP
Parametrix
Preston, Gates, Ellis, LLP
ROMA Design Group
RoseWater Engineering, Inc.
Shannon & Wilson, Inc.
Taylor Associates, Inc.
Tom Warne and Associates, LLC
William P. Ott

This Page Intentionally Left Blank

TABLE OF CONTENTS

Chapter 1 Summary 1

Chapter 2 Methodology 5

2.1 Visual Assessment Methodology 5
2.2 Views From the Road 10
2.3 Views Toward the Road 10
2.3.1 Visual Character Units 10
2.3.2 Viewpoints 13
2.3.3 Visual Simulations 13

Chapter 3 Studies and Coordination 17

Chapter 4 Affected Environment 33

4.1 South – S. Spokane Street to S. King Street 33
4.1.1 Duwamish Industrial Area 33
4.1.2 Sports Complex 35
4.2 Central – S. King Street to Battery Street Tunnel 39
4.2.1 Pioneer Square Historic District 39
4.2.2 Commercial Core 45
4.2.3 Central Waterfront 51
4.2.4 Pike Place Market Area 54
4.2.5 Belltown 57
4.3 North Waterfront – Pike Street to Broad Street 58
4.4 North – Battery Street Tunnel to Ward Street 59

Chapter 5 Operational Impacts and Benefits 63

5.1 No Build Alternative 63
5.1.1 Scenario 1 – Continued Operation of the Viaduct and Seawall With Continued Maintenance 63
5.1.2 Scenario 2 – Sudden Unplanned Loss of the Viaduct and/or Seawall Without Major Collapse or Injury 63
5.1.3 Scenario 3 – Catastrophic Failure and Collapse of the Viaduct and/or Seawall 63
5.2 Rebuild Alternative 63
5.2.1 South – S. Spokane Street to S. King Street 64
5.2.2 Central – S. King Street to Battery Street Tunnel 68
5.2.3 North Waterfront – Pike Street to Broad Street 69
5.2.4 North – Battery Street Tunnel to Ward Street 69
5.2.5 Seawall – S. King Street to Myrtle Edwards Park 69
5.3 Aerial Alternative 69
5.3.1 South – S. Spokane Street to S. King Street 70
5.3.2 Central – S. King Street to Battery Street Tunnel 73
5.3.3 North Waterfront – Pike Street to Broad Street 83
5.3.4 North – Battery Street Tunnel to Ward Street 83
5.4 Tunnel Alternative 85
5.4.1 South – S. Spokane Street to S. King Street 85
5.4.2 Central – S. King Street to Battery Street Tunnel 89
5.4.3 North Waterfront – Pike Street to Broad Street 96
5.4.4 North – Battery Street Tunnel to Ward Street 96

5.5 Bypass Tunnel Alternative 97
5.6 Surface Alternative 97
5.6.1 South – S. Spokane Street to S. King Street....97
5.6.2 Central – S. King Street to Battery Street Tunnel....98
5.6.3 North Waterfront – Pike Street to Broad Street....101
5.6.4 North – Battery Street Tunnel to Ward Street....101
5.7 Summary Ratings....102
5.8 Project Benefits....102

Chapter 6 Construction Impacts....111

6.1 Rebuild Alternative 111
6.2 Aerial Alternative 112
6.2.1 South – S. Spokane Street to S. King Street....112
6.2.2 Central – S. King Street to Battery Street Tunnel....112
6.2.3 North Waterfront – Pike Street to Broad Street....113
6.3 Tunnel and Bypass Tunnel Alternatives 114
6.4 Surface Alternative 115

Chapter 7 Secondary and Cumulative Impacts....117

Chapter 8 Operational Mitigation....121

Chapter 9 Construction Mitigation....125

Chapter 10 References 127

LIST OF EXHIBITS

Exhibit 2-1. Visual Assessment Methodology....6

Exhibit 2-2. Landscape Elements in Views....8

Exhibit 2-3. Visual Character Units 12

Exhibit 2-4. Viewpoints....15

Exhibit 3-1. City of Seattle View Corridors....18

Exhibit 3-2. City of Seattle Scenic View Routes....20

Exhibit 3-3. City of Seattle Green Streets 21

Exhibit 3-4. Park, Recreation, and Public Access Facilities....22

Exhibit 3-5. Park, Recreation, and Public Access Facilities Map....28

Exhibit 3-6. Park, Recreation, and Public Access Facilities Map - Central....29

Exhibit 3-7. Park, Recreation, and Public Access Facilities Map - North 30

Exhibit 5-1. Visual Analysis Matrix 103

Note: Exhibits A-1 through A-79 are located in Appendix E Visual Simulations.

ACRONYMS

AWV	Alaskan Way Viaduct
BNSF	Burlington Northern Santa Fe Railway Company
DCLU	Seattle Department of Design, Construction and Land Use
FHWA	Federal Highway Administration
I-5	Interstate 5
I-90	Interstate 90
SMC	Seattle Municipal Code
SR	State Route
WSDOT	Washington State Department of Transportation

This Page Intentionally Left Blank

Chapter 1 SUMMARY

This section describes the character of the existing landscape and visual resources in the Alaskan Way Viaduct and Seawall Replacement Project (AWV) Corridor, the visual change created by project alternatives, and the extent to which the impacts will be experienced by viewer groups within the study area. Potential mitigation measures are described, including ways to avoid or minimize visual quality impacts, as well as ways to restore and enhance visual quality. Visual simulations of the alternatives are provided for viewpoints that are representative of views from a number of locations or of visual impacts of an alternative that are particularly noteworthy.

The Alaskan Way Viaduct and Seawall Replacement Project stretches from S. Spokane Street to north of the Battery Street Tunnel near Ward Street. The central portion of the corridor skirts Elliott Bay to the west and downtown Seattle to the east. For discussion purposes, the project area has been broken into the following sections:

- South – S. Spokane Street to S. King Street
- Central – S. King Street to Battery Street Tunnel
- North Waterfront – Alaskan Way surface street from Pike Street to Broad Street
- North – Battery Street Tunnel to Ward Street
- Seawall – S. King Street to Myrtle Edwards Park

Five Build alternatives are considered for this portion of the State Route (SR) 99 corridor through downtown Seattle (see Appendix B, Alternatives Description and Construction Methods Technical Memorandum):

- The Rebuild Alternative includes an at-grade roadway to replace the existing viaduct from S. Holgate Street to S. King Street, and reconstruction of the existing viaduct from S. King Street to the Battery Street Tunnel.
- The Aerial Alternative includes a new double-level aerial structure from S. Holgate Street to the Battery Street Tunnel. Aurora Avenue N. will remain at-grade with widening of the Mercer Street underpass and closing the Broad Street underpass. This alternative has an option of lowering Aurora Avenue N. with local streets crossing over at-grade.
- The Tunnel Alternative includes an at-grade roadway from S. Holgate Street to south of S. King Street, where it will enter a tunnel with three lanes in each direction. The tunnel will include portals near Pike Street

for an aerial structure to connect with the Battery Street Tunnel and also portals onto Alaskan Way north of Pine Street. Aurora Avenue N. modification will include widening the Mercer Street underpass and closing the Broad Street underpass.

- The Bypass Tunnel Alternative includes an at-grade roadway from S. Holgate Street to south of S. King Street, where it will enter a tunnel with two lanes in each direction. The tunnel will include portals near Pike Street for an aerial structure to connect with the Battery Street Tunnel. There will be no tunnel connection onto Alaskan Way, which will be widened to carry additional traffic. Aurora Avenue N. will be modified by widening the Mercer Street underpass and closing the Broad Street underpass.
- The Surface Alternative includes an at-grade roadway of three lanes in each direction from S. Holgate Street to S. Atlantic Street. From S. Atlantic Street to Yesler Way, the roadway will be four lanes in width in each direction. From Yesler Way to Pike Street, the roadway will be three lanes in each direction with center left-turn lanes. An aerial structure will connect from Pike Street to the Battery Street Tunnel and provide two lanes in each direction. Aurora Avenue N. will be modified by widening the Mercer Street underpass and closing the Broad Street underpass, with the option of retaining the existing Mercer Street underpass and introducing signals at Roy, Republican, and Harrison Streets.

The largest factor in the visual impacts of the alternatives is the presence of an aerial structure at the approximate location of the existing viaduct.

For northbound drivers and passengers, the existing viaduct, the Rebuild Alternative, and the Aerial Alternative will provide panoramic views from the elevated roadway of downtown Seattle and Puget Sound, the intermediate wooded hills of Bainbridge Island and the Kitsap Peninsula, and the Olympic Mountains on clear days. The Rebuild Alternative, however, will remove about half of the length of the elevated structure south of Pike Street where panoramic views are currently available. Views southbound from the roadway are enclosed by the upper deck, interrupted by columns, and provide views that center on the industrial areas south of downtown.

The Rebuild and Aerial Alternatives have the greatest visual impacts on views of the roadway from the surrounding area due to retention of the existing structure or building a new structure about half-again as wide as the existing structure. The rebuilt viaduct and the proposed new structure under the Aerial Alternative will continue to visually dominate near views and form a visual barrier for views to and from the waterfront, downtown Seattle, and

Pioneer Square Historic District. The aerial structures contrast with the building character and character of street corridors, present a visual intrusion, block or screen views of vivid landscape features such as the Olympic Mountains or the downtown skyline, and reduce the visual coherence and compositional harmony of views. The viaduct's visual dominance is reinforced by its noise impacts, which provide a constant background of engine and exhaust noise. The viaduct also creates a change in environment for pedestrians moving between the waterfront and downtown through closing off the open street corridor, creating an area of shadows, and a lack of relieving vegetation or other amenities.

The Tunnel Alternative and the Bypass Tunnel Alternative provide no views from the road within the proposed tunnel. Views on the surface roadway south of S. King Street will be narrowly bounded by structures or rail yards on both sides. The panoramic views enjoyed by vehicle drivers and passengers from the existing viaduct of Puget Sound and the Olympic Mountains will be lost. The Surface Alternative provides views from the surface roadway of downtown Seattle and the Puget Sound, the intermediate wooded hills across the water, and the Olympic Mountains on clear days. These views, however, are not from the elevated panoramic perspective of the elevated structure and are framed to the west by waterfront piers.

For views external to the roadway, the removal of the existing aerial structure will remove the visual barrier that separates downtown and the Pioneer Square Historic District to the east from the central waterfront to the west. The visual integrity of local views of pedestrians, vehicles on surface streets, and building occupants within the waterfront, downtown, and Pioneer Square Historic District will be substantially enhanced.

This Page Intentionally Left Blank

Chapter 2 METHODOLOGY

The analysis evaluates the potential change in visual quality for each proposed alternative. The analysis includes three levels of study:

- The visual environment relating to the design of the roadway alternatives—the experience of users of the facility—views from the road.
- The relationship of the alternatives to specific elements of the project surroundings—the visual experience of persons looking at the project—views looking towards the road.
- The relationship of the alternatives to the overall environmental context—the existing and planned character of the area based on plans and policies for future development.

2.1 Visual Assessment Methodology

Methodology follows the Federal Highway Administration's (FHWA) *Visual Impact Assessment for Highway Projects* (FHWA-HI-88-054) manual. In addition, the City of Seattle's environmental review criteria (which protect the views of specific features), the City's Comprehensive Plan, the City's Land Use Code, and relevant neighborhood plans are referenced to gain an understanding of the City's urban design goals and aesthetic regulations. The Washington State Department of Transportation (WSDOT) Roadside Classification Plan also was referenced for policies regarding the design and management of the roadway.

The assessment of visual quality is concerned with both the character of the visual experience and the impact upon the viewer. For the purposes of this analysis, visual quality and aesthetics are analogous terms. The assessment of visual quality is subjective, from the perspective that the person perceiving the visual environment brings personal and cultural frames of reference to the discernment and evaluation of visual information. There is, however, broad agreement in federal, state, and local regulations as well as from research that establishes general public consensus of what constitutes a desirable visual environment.

The methods used to study visual quality for the project follow FHWA visual impact assessment guidance. Three critical parameters of the aesthetic experience include:

- Visual character
- Visual quality
- Viewer response

The assessment methodology is indicated in schematic format in Exhibit 2-1.

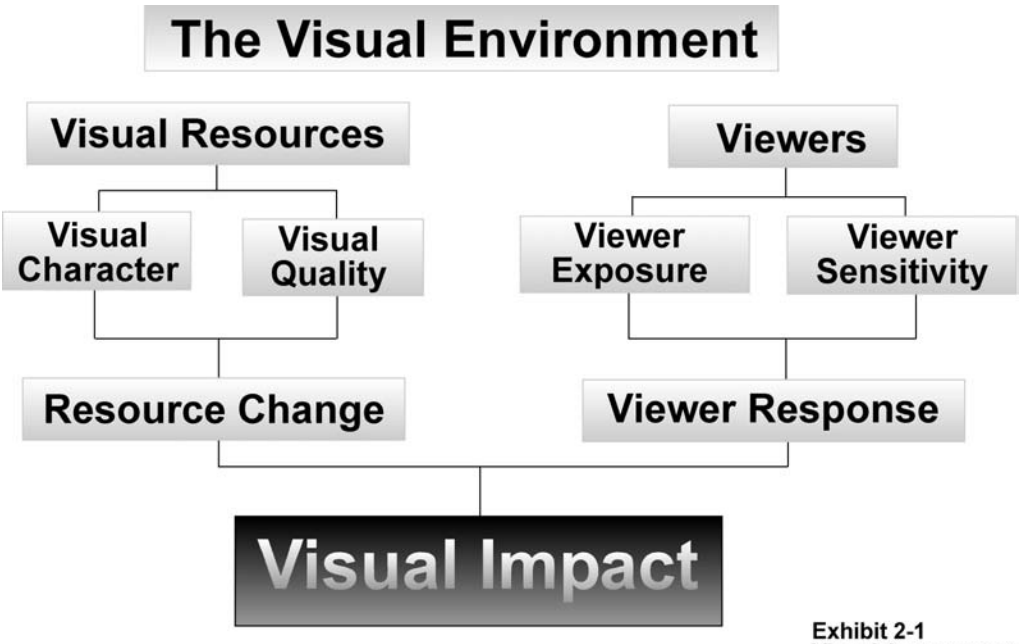


Exhibit 2-1
Visual Assessment Methodology

Visual character refers to identifiable visual information. Visual character may be distinguished both at the level of specific elements and at the level of relationships among elements. The first step in assessing visual impacts is to describe visual attributes and environmental features using objective descriptors (such as form, line, color, and texture).

The City of Seattle environmental code (SMC 25.05.675.P.) identifies specific significant natural and human-made features, views of which are protected from specific viewpoints, parks, scenic routes, and view corridors. These specific features include Mount Rainer, the Olympic and Cascade Mountains, the downtown skyline, and major bodies of water including Puget Sound, Elliott Bay, Lake Washington, Lake Union, and the Ship Canal. These features can be generalized into broader categories of landforms, water bodies, vegetation communities, land use, and development type.

Four key features are used to identify relationships between elements of the visual environment: dominance, scale, diversity, and continuity. *Dominance* refers to the position of an individual element, or its extent or contrast among all the other elements of a view. *Scale* refers to apparent size relationships between an element and the other components of its surroundings. *Diversity* is a function of the number, variety, and intermixing of elements in a view. *Continuity* refers to the maintenance of visual relationships between connected

or related landscape features. The integration of these elements results in a complete description of the character of a view.

Visual quality refers to assessing the value of the visual experience to the public. Studies of the American public and across cultures demonstrate strong agreement about preferred qualities of the visual experience (Jacques 1980; Kaplan 1985; Real 2000). This consensus is exhibited in officially designated landscapes generally agreed to have high value such as national parks, scenic rivers, scenic highway viewpoints, and designations such as the City's designation of significant natural and human-made features.

Visual quality is analyzed by evaluating vividness, intactness, and unity. These characteristics are consistently prominent in landscapes perceived by the general public as having high visual quality. This set of measures is similar to other systems that analyze human perceptions based on factors such as complexity (the variety or diversity in a scene as it relates to human interest) and coherence (the extent to which the scene hangs together through repetition of elements, which facilitates comprehension) and legibility (the features that contribute to the recognition of an environment) (Kaplan 1982).

For this analysis, these three measures are evaluated as described below:

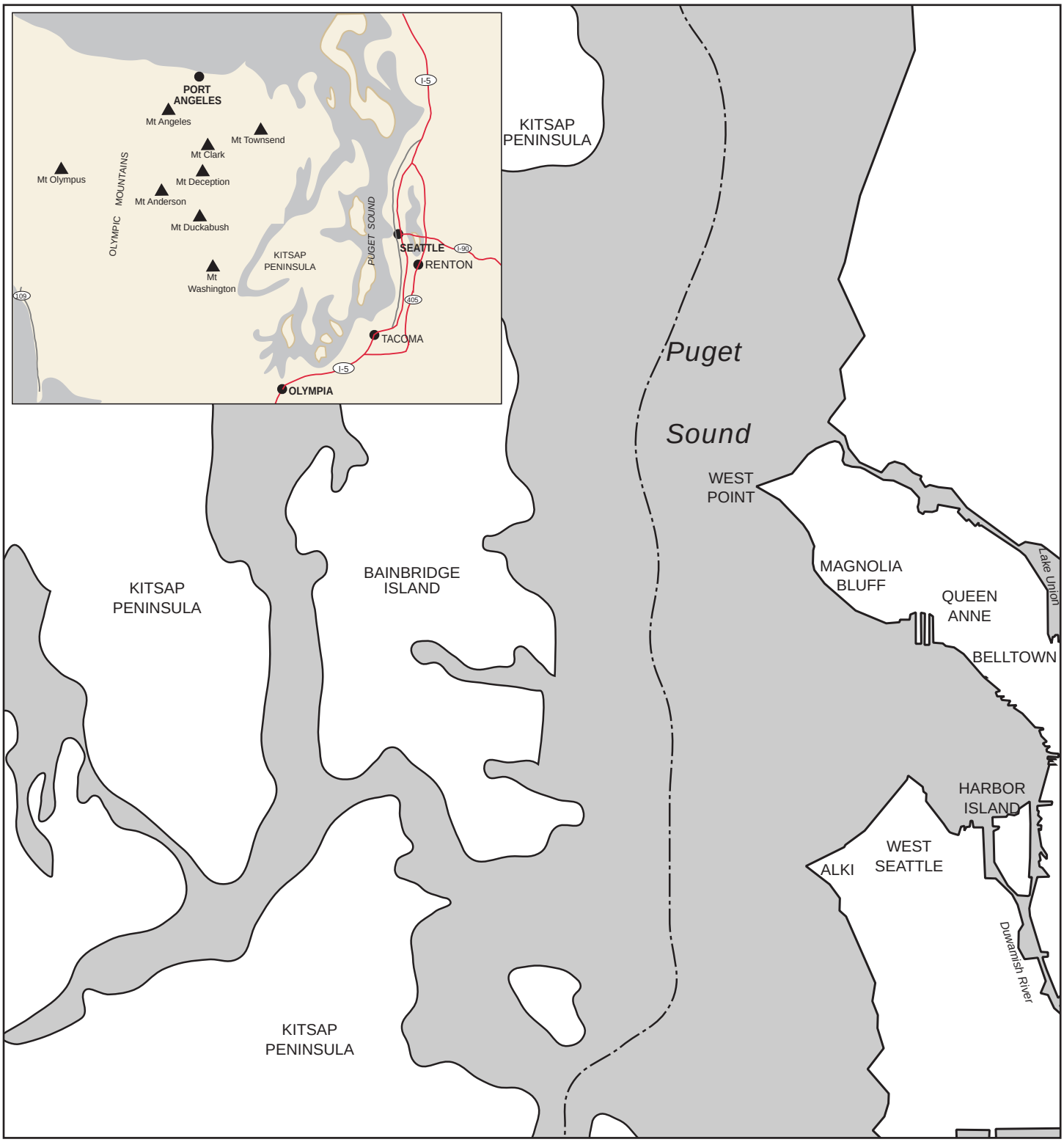
Vividness describes the way landscape components may combine in distinctive and memorable visual patterns. For different landscapes, various elements may contribute to vividness.

For the purpose of this analysis, the City of Seattle's designated significant features are integrated into the analysis:

- Landforms - Mount Rainer and the Olympic and Cascade Mountains.
- Water bodies - Puget Sound and Elliott Bay (Lake Washington, Lake Union, and the Ship Canal are not components of views of this project).
- Human-made forms such as the downtown skyline may be vivid in a particular view, as many elements such as vegetation masses and landmarks, including individual buildings.

Landscape elements of views from the vicinity of the project corridor are located in Exhibit 2-2 and include Puget Sound, Elliott Bay, Queen Anne Hill, Magnolia, the wooded hills of Bainbridge Island and the Kitsap Peninsula, and the peaks of the Olympic Mountains.

Intactness describes the integrity of natural and human-built visual patterns and the extent to which the landscape is free from encroaching elements. Encroaching elements may include a single eyesore or may include multiple elements.



Parametrix Alaskan Way Viaduct 554-1585-025/06(0620) 9/03 (K)

N

Exhibit 2-2
Landscape Elements in Views

Unity measures the visual coherence and compositional harmony of the landscape considered as a whole. It refers to the fit between elements of the landscape but does not connote uniformity in design or character.

Viewer response is analyzed in terms of viewer exposure and viewer sensitivity.

Viewer exposure refers to the physical location of viewer groups, the number of people exposed to a view, and the duration of their view. This includes both highway users and persons in the surrounding area.

Viewer sensitivity refers to factors that affect the degree to which a viewer perceives elements of the environment and the extent to which those elements are important to the viewer. Viewer sensitivity is affected by factors such as the activities a viewer is engaged in; the visual context; and the values, expectations, and interests of a group of persons, or of a person involved in a particular activity or context.

Viewer exposure and viewer sensitivity work together for persons viewing the road from the context of other activities.

Generally, persons engaged in elective activities are most sensitive to the visual environment. People who have chosen an activity for enjoyment, such as a tourist or someone engaged in a recreational activity, are often attracted to an area because of its visual features. They have ample time to stop and look at a scene in a leisurely fashion. Other elective activities such as shopping, dining, or attending a cultural or sporting event involve varying degrees of sensitivity to visual elements, depending on location, elements visible, time available, and mode of traveling to the site.

Residents in their homes exhibit a similar attraction to the visual amenities of an area. Residents are often among the most sensitive groups due to a high personal investment in the environment as well as regular exposure. They may, however, become habituated to elements of a view that might be intrusive or objectionable to those not exposed on a regular basis.

Employees at work tend to be less sensitive to the visual environment outside the work place when they are focused on work tasks. However, the surrounding environment is likely to be a factor if they have time to take a visual break and they have window access to the outside environment. The visual environment may be important in their trip to and from work and during times they leave the work environment, such as breaks or lunch. In general, office workers are more likely to be able to include access to the visual environment in their work activities than industrial workers.

Persons involved in travel are likely to be less sensitive to the surrounding visual environment because of the demands of driving and the short duration they are exposed to visual elements. In the case of regular commuters using a familiar route, the daily repetition of a relatively short-duration event may, however, lead to a great deal of familiarity and they may place high value on a scene which is experienced only in a snapshot. They also may become habituated to negative elements and focus more on positive elements.

Ratings of the impacts of the alternatives by the criteria of vividness, intactness, and unity are presented in Exhibit 5-1.

2.2 Views From the Road

The physical character of the road is important both to driver function and satisfaction. The driver uses visual information from the roadside environment to assist in controlling, guiding, and navigating the vehicle. Highway alignment, roadway geometrics, landform configurations, vegetation, and structures all contribute to driver guidance. Excessive visual stimulation and complexity can distract the driver and decrease driver control. Conversely, monotony from lack of visual interest can decrease driver attention and thus diminish control. Difficulties with perception, attention, and distraction are a primary cause in over 40 percent of traffic accidents (WSDOT 2003).

Drivers and passengers also form impressions and memories from what is seen along the roadside, thus roadsides are important in establishing community and state identity. Americans have repeatedly ranked pleasure driving on scenic roads as one of their favorite pastimes. A mandate to provide safe, healthful, productive, and aesthetically pleasing surroundings is provided in both national and state environmental policies.

The parameters of visual character, visual quality, and visual exposure are used to assess views available to drivers and passengers.

2.3 Views Toward the Road

2.3.1 Visual Character Units

For this study, key views were selected to represent the range of views in the project area. The view selection process included field reconnaissance of the corridor and assessment of potential Visual Character Units from which the existing highway and proposed alternatives are visible.

A Visual Character Unit is a geographic area in which views of the subject have a similar context as defined by features of the setting, such as topography, the location of the viewer in relation to the object being viewed,

the character of the landscape (such as vegetation cover) or the character of the urban environment, and the role of the subject viewed in the landscape.

Visual Character Units were evaluated after review of photographs of various viewpoints in various areas and extensive consultation with WSDOT and City of Seattle staff. Technical memoranda were prepared by the consultant and reviewed by the lead agencies in the process of selection of Visual Character Units and views. These memoranda and photos are available in project files.

The Visual Character Units selected are identified below by project area and are shown on Exhibit 2-3:

South – S. Spokane Street to S. King Street

- The Duwamish Industrial Area, generally between S. Spokane Street and S. Atlantic Street.
- The Sports Complex area east of SR 99 between S. Atlantic Street and S. King Street.

Central – S. King Street to Battery Street Tunnel

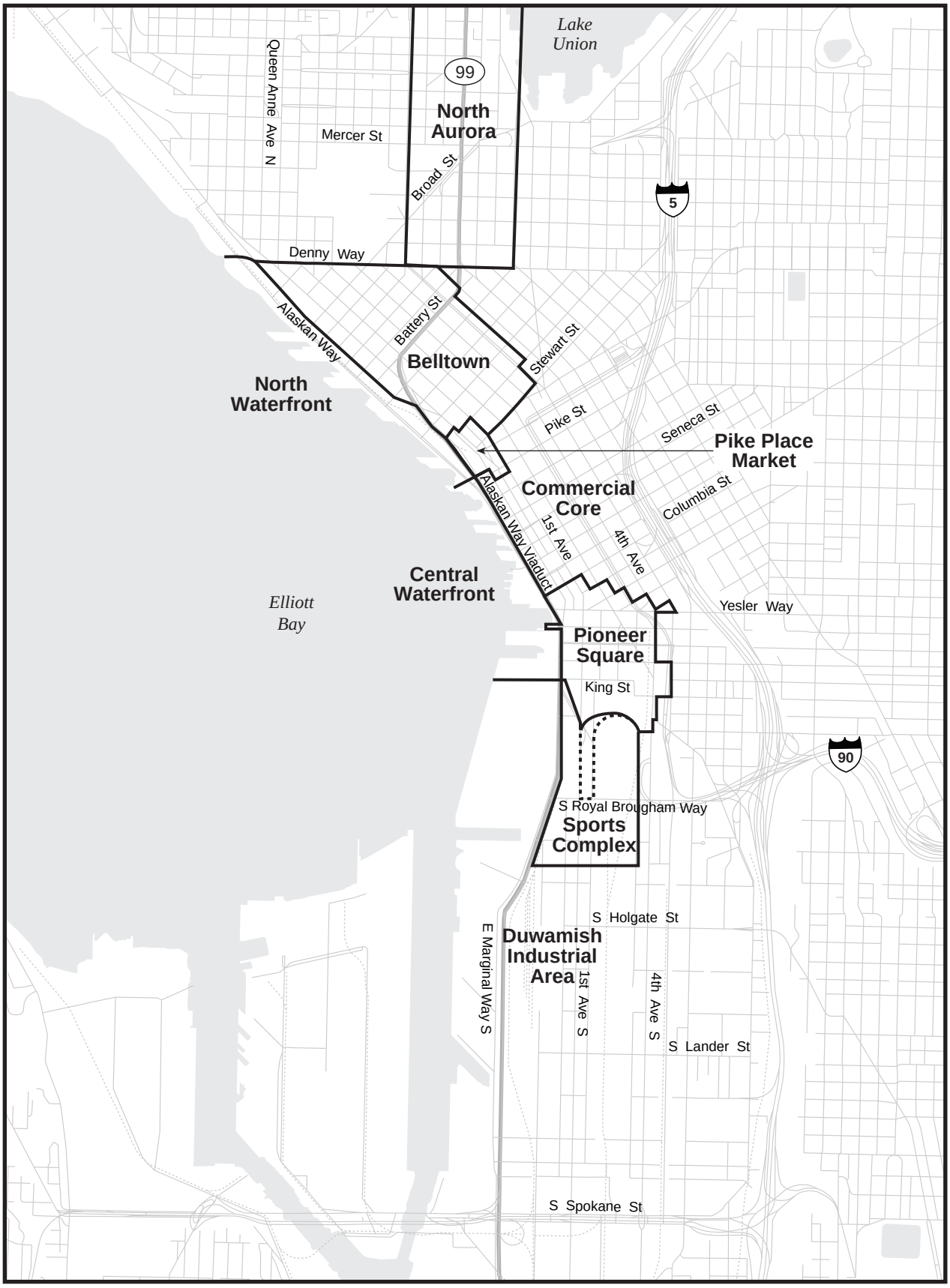
- The Pioneer Square Historic District extending from the west side of Alaskan Way to the east between Railroad Avenue/S. King Street and Columbia Street.
- The Downtown Commercial Core, which is east of SR 99 between Columbia Street and Union Street.
- The portion of the central waterfront between Railroad Avenue/ S. King Street and Pike Street.
- The Pike Place Market area east of SR 99 between Union Street and Lenora Street.
- Belltown, the area bounded by Stewart Street on the south, Fifth Avenue on the east, Denny Way on the north, and the waterfront on the west.

North Waterfront – Pike Street to Broad Street

- Portions of the waterfront north of Pike Street extending to Myrtle Edwards Park north of Broad Street

North – Battery Street Tunnel to Ward Street

- The SR 99/Aurora Avenue corridor extending several blocks on either side of the highway from Denny Way to Ward Street.



0 2,500
SCALE IN FEET

N

Exhibit 2-3
Visual Character Units

The following Visual Character Units were excluded from consideration in the initial screening process because views of the existing viaduct and alternatives under consideration are a negligible element of views from these areas, largely because of distance and relative size compared to other elements of views.

- Beacon Hill, the area generally south of I-90 and east of I-5, including I-5.
- First Hill, the area east of I-5 and generally between I-90 and Union Street.
- Queen Anne Hill, the area generally north of Valley Street and west of SR 99.
- The shoreline from Myrtle Edwards Park (including Elliott Bay Park) north to Terminals 88 through 91 and Magnolia.
- West Seattle, the area across Elliott Bay from downtown Seattle.
- Washington State Ferries.
- Views from the Washington State Ferries were excluded because the view of the existing viaduct from a distance beyond the terminal has little visual prominence compared to the vivid impression of the downtown skyline and the complexity of the waterfront piers in the foreground. Views from the ferries close to the dock are similar to views from the ends of piers, discussed below.

2.3.2 Viewpoints

A series of typical views within each Visual Character Unit were selected to illustrate locations where:

- Significant numbers of viewers are present.
- Representative features of the existing viaduct and proposed alternatives are present.
- The visual quality of the views is high.

Viewpoints selected are indicated in Exhibit 2-4.

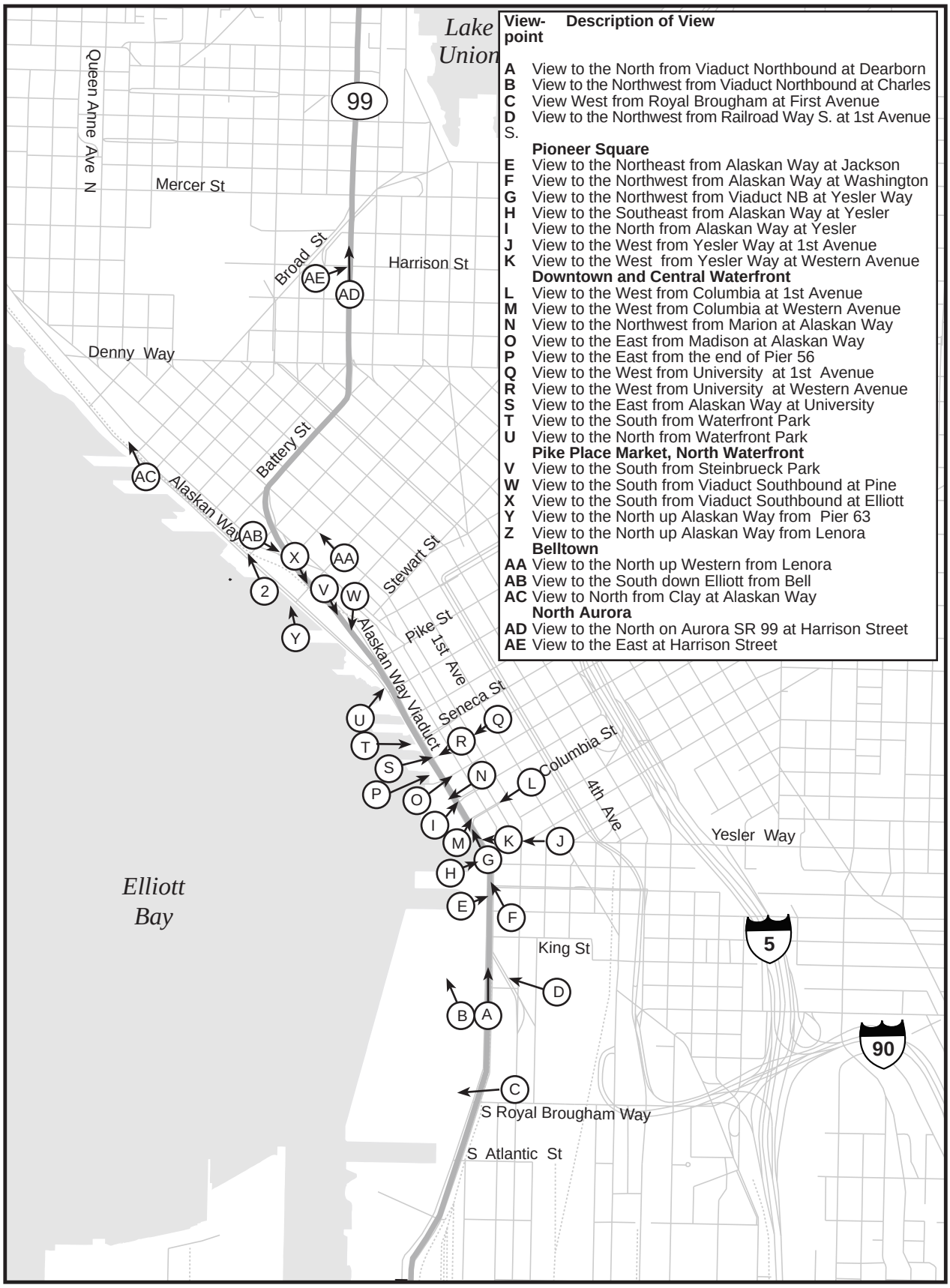
2.3.3 Visual Simulations

Photographs were taken to reproduce the normal static field of view of humans at the scale of a standard sheet size at normal reading distance. This provides an accurate representation of the scale of a structure in relation to other objects seen from the viewpoint. It does not, however, reproduce the entire field of view perceived by a human observer.

Rather than the instantaneous fixed view provided by a camera image, the human process of viewing includes rapid movement of the eyes in a scanning motion. This scanning process establishes the context for a scene, and during repeated rescanning of the most informative parts of an image, certain elements of a scene become the focus of the visual content (Yarbus 1967). In most cases, movement of the head and the body also increase the field of vision. The lens of the human eye also has the capability of changing its optical power and focusing on a much smaller field of vision (Sekuler 1990). The process of scanning for content and the focusing mechanisms of the eye account for the common observation that photographs often do not show scenic features, such as a prominent mountain peak, as prominently as recalled by an observer.

To indicate the probable visual impacts of the proposed alternatives, computer-aided visual simulations were prepared. Visual simulations are used for key views that are broadly representative of views from a number of viewpoints or of visual impacts of an alternative that are particularly noteworthy. These visual simulations remove elements of the existing conditions and add the features of the alternatives. The purpose of the visual simulations is to provide a *comparison* of visual changes. Not all potential views are reproduced or simulated. In many cases, a verbal description of existing and future views is provided. In some cases, existing and future views are represented by a single photograph of an existing scene and probable changes in the view are described rather than shown graphically.

Visual simulations and photos of existing conditions for each alternative are contained in Appendix E, Visual Simulations. The appendix also includes a table indicating the association between each simulation and an alternative.



View-point	Description of View
A	View to the North from Viaduct Northbound at Dearborn
B	View to the Northwest from Viaduct Northbound at Charles
C	View West from Royal Brougham at First Avenue
D	View to the Northwest from Railroad Way S. at 1st Avenue S.
	Pioneer Square
E	View to the Northeast from Alaskan Way at Jackson
F	View to the Northwest from Alaskan Way at Washington
G	View to the Northwest from Viaduct NB at Yesler Way
H	View to the Southeast from Alaskan Way at Yesler
I	View to the North from Alaskan Way at Yesler
J	View to the West from Yesler Way at 1st Avenue
K	View to the West from Yesler Way at Western Avenue
	Downtown and Central Waterfront
L	View to the West from Columbia at 1st Avenue
M	View to the West from Columbia at Western Avenue
N	View to the Northwest from Marion at Alaskan Way
O	View to the East from Madison at Alaskan Way
P	View to the East from the end of Pier 56
Q	View to the West from University at 1st Avenue
R	View to the West from University at Western Avenue
S	View to the East from Alaskan Way at University
T	View to the South from Waterfront Park
U	View to the North from Waterfront Park
	Pike Place Market, North Waterfront
V	View to the South from Steinbrueck Park
W	View to the South from Viaduct Southbound at Pine
X	View to the South from Viaduct Southbound at Elliott
Y	View to the North up Alaskan Way from Pier 63
Z	View to the North up Alaskan Way from Lenora
	Belltown
AA	View to the North up Western from Lenora
AB	View to the South down Elliott from Bell
AC	View to North from Clay at Alaskan Way
	North Aurora
AD	View to the North on Aurora SR 99 at Harrison Street
AE	View to the East at Harrison Street

0 900
SCALE IN FEET

N

Exhibit 2-4
Viewpoints

This Page Intentionally Left Blank

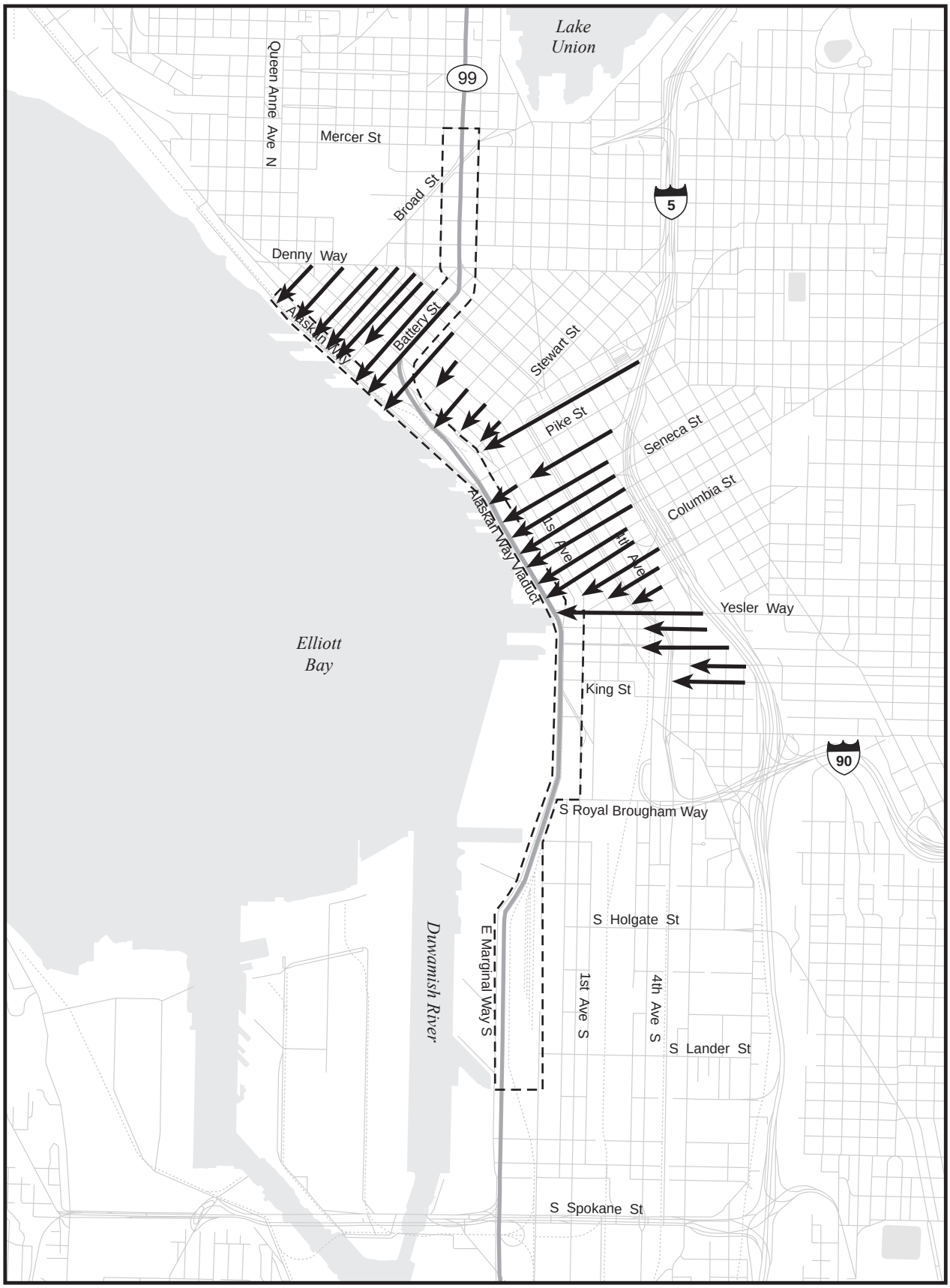
Chapter 3 STUDIES AND COORDINATION

The context for the visual quality analysis was established by consulting a number of existing policy documents and studies that establish the land use policies and intended character of the corridor. Existing studies used in evaluation of visual quality include the following:

- City of Seattle, Comprehensive Plan
- City of Seattle, Downtown Plans
- City of Seattle, Shoreline Master Program and supporting studies
- City of Seattle, Park and Open Space Plan
- City of Seattle, Pedestrian/Bicycle Plans and routes
- City of Seattle, Belltown Neighborhood Plan, May 1999
- City of Seattle, Duwamish Manufacturing and Industrial Center Neighborhood Plan, June 2000
- City of Seattle, Downtown Urban Center Neighborhood Plan, June 1999
- City of Seattle, Pioneer Square Neighborhood Plan, November 1998
- City of Seattle, Queen Anne Neighborhood Plan
- City of Seattle, Land Use Code
- City of Seattle Downtown Design Guidelines
- City of Seattle DCLU Directors Rule 11-93, Design Guidelines/Implementation Process for Green Streets
- WSDOT Roadside Classification Plan
- Washington Highway Beautification Act (RCW 47.40.010)
- Washington Transportation Commission Policy 6.3.6
- Federal Highway Beautification Act of 1965 (23 CFR 750)
- ISTEA Transportation Enhancement Program (23 USC 101(g) 133(b))
- Alaskan Way Viaduct and Seawall Project Urban Design Assessment, Roma Design Group, 2002

Local plans and policies that were important in selecting Visual Character Units and viewpoints include:

- Designation of specific significant natural and human-made features in the City of Seattle environmental code (SMC 25.05.675.P), including Mount Rainer, the Olympic and Cascade Mountains, the downtown skyline, and major bodies of water including Puget Sound, Elliott Bay, Lake Washington, Lake Union, and the Ship Canal.
- City of Seattle View Corridors (indicated in Exhibit 3-1).
- Scenic Routes (indicated in 3-2).
- Green Streets (indicated in Exhibit 3-3).
- Park and recreation facilities (indicated in Exhibits 3-4 through 3-7.)



0 2,500
SCALE IN FEET

N

Extent of View Corridor
Direction of View
Project Area

Exhibit 3-1
City of Seattle
View Corridors

Coordination with the City of Seattle and WSDOT initially focused on Visual Character Unit and viewpoint designation. A three-phase process was used for the evaluation of potential Visual Character Units and viewpoints.

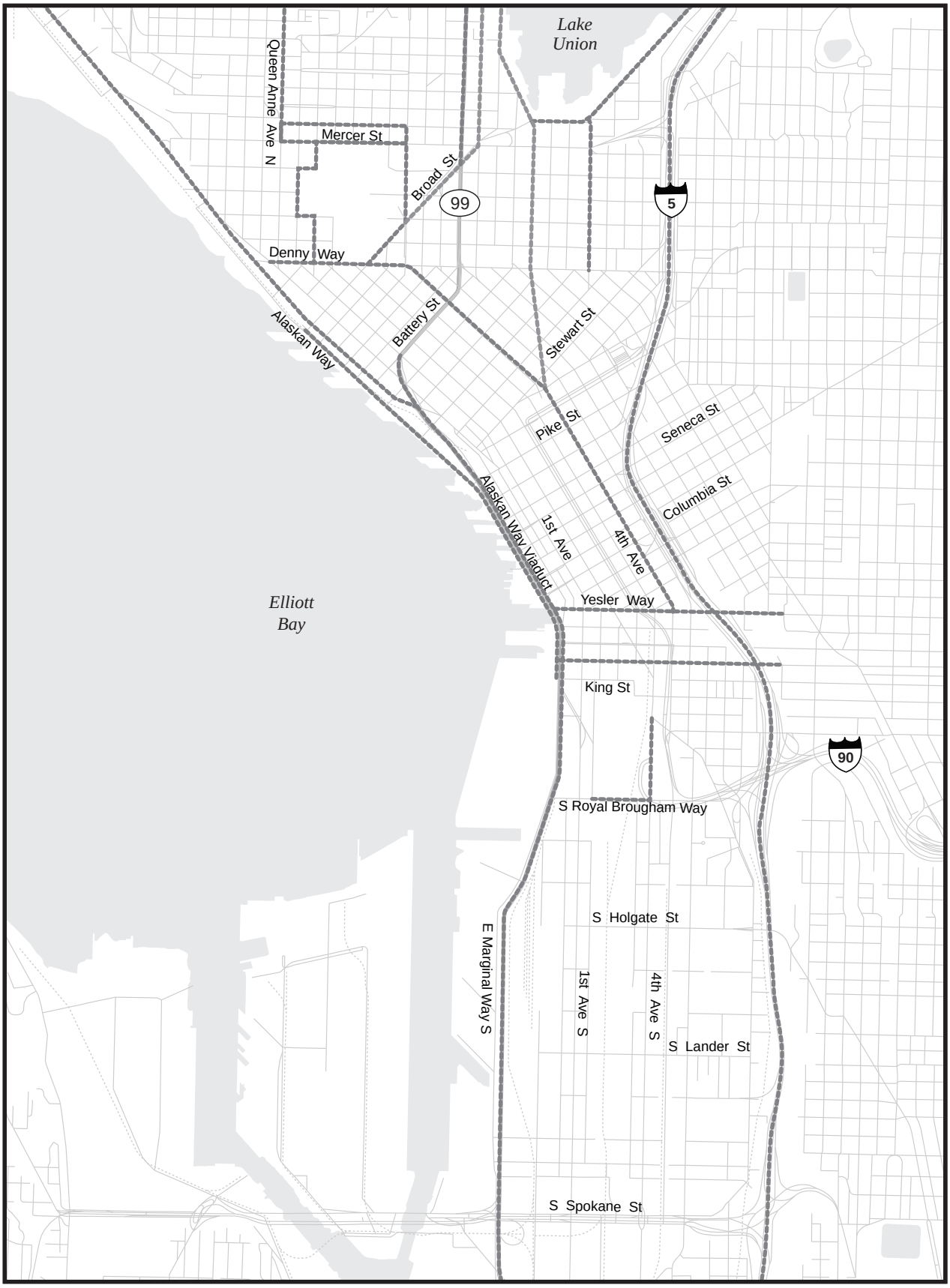
Phase I consisted of identifying and evaluating potential Visual Character Units and viewpoints. Identification and evaluation of Visual Character Units was based on the following criteria:

- Distance to the existing viaduct, and whether the facilities in the alternatives can be readily distinguished as an element of the visual context.
- Relative prominence of the viaduct given the context and the presence of other elements that provide the focus for the view.
- Whether the viaduct can be viewed from a public street, sidewalk, park, viewpoint, or private open space specifically designated for public access, such as a building plaza or a public walkway within a semi-public building (i.e., the Pike Place Market).

Identification and evaluation of viewpoints was based on the following criteria:

- Whether the view is representative of a typical feature of the alternatives.
- If not a typical feature, whether it is a feature with high potential visual impacts.
- Whether a specified viewpoint, park, scenic route, or view corridor from which public views are protected by the Seattle environmental policies in SMC 25.05.675.
- Whether the elements of the view are representative of views generally available.
- If not representative, whether this is a designated viewpoint or a location of high visual quality.
- The size of the viewer population.
- Whether the viewer population is sensitive to the visual context because of elective activities.
- Where there are similar viewpoints, of which one might better illustrate the context for impacts on other elements of the environment, such as cumulative impacts on urban design or land use.

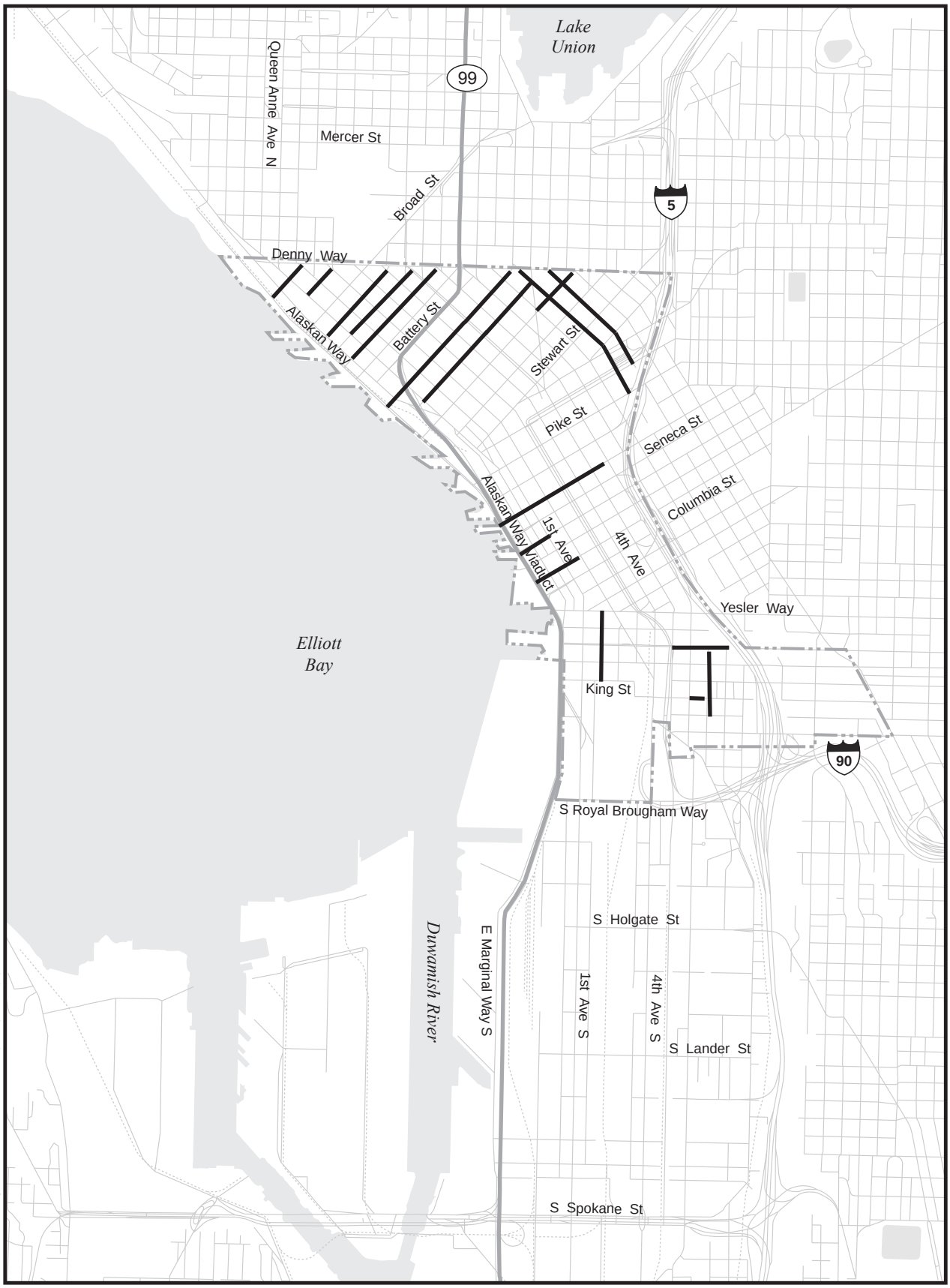
City of Seattle designated view corridors are shown in Exhibit 3-1; Scenic Routes are indicated in Exhibit 3-2; Green Streets are delineated in Exhibit 3-3. Park, Recreation, and Public Access facilities are listed in Exhibit 3-4 with Seattle designated viewpoints indicated.



0 2,500
SCALE IN FEET

N

Exhibit 3-2
City of Seattle
Scenic View Routes



PC: Alaskan Way Viaduct 554-1585-025/06(0620) 3/04 (K)

Downtown Boundary

Green Streets

0 2,500
SCALE IN FEET

N

Exhibit 3-3
City of Seattle
Green Streets

Exhibit 3-4. Park, Recreation, and Public Access Facilities

Facility Name	Location	Owner	Primary Facilities	Primary Uses
Publicly Owned Park and Recreation Facilities, Including Shoreline Public Access				
South				
1. Jack Perry Memorial Viewpoint	Terminal 30 Massachusetts Street at E. Marginal Way	Port of Seattle	Hard Surfaces Soft Surfaces Seating Picnic Tables/Shelters Restrooms Parking	Waterfront View Enjoyment
2. Safeco Field	First Avenue and S. Atlantic Street	State of Washington Development Authority	Professional Sport Facility	Professional Baseball
3. Seahawks Stadium	Occidental Avenue and S. King Street	State of Washington Development Authority	Professional Sport Facility	Professional Football and Soccer
4. Waterfront Trail	Alaskan Way from S. Royal Brougham Way to Bay Street	City of Seattle	Trail	View Enjoyment Walking Jogging Bicycling Skating
5. Mountains to Sound Greenway Trail	S. Atlantic Street at Alaskan Way	City of Seattle	Trail	View Enjoyment Walking Jogging Bicycling Skating Waterfront Views Urban Views

Exhibit 3-4. Park, Recreation, and Public Access Facilities (continued)

Facility Name	Location	Owner	Primary Facilities	Primary Uses
Central				
6. Pier 48: Periscope Viewpoint	Pier 48 S. Main Street at Alaskan Way	Port of Seattle	View Periscopes Hard Surfaces Seating	View Enjoyment Relaxation
7. Pier 48: Alaska Square	Pier 48 S. Washington Street at Alaskan Way	Port of Seattle	Totem poles Hard Surfaces Seating	View Enjoyment Relaxation Picnicking People Watching Fishing
8. S. Washington Street Public Dock and Pergola	S. Washington Street at Alaskan Way	City of Seattle	Hard Surfaces Seating	View Enjoyment Relaxation Fishing
9. Klondike Gold Rush National Historic Park – Seattle Unit	117 S. Main Street	National Park Service	Historic Exhibits	Historic Interpretation
10. Occidental Park	Occidental Avenue between S. Washington and S. Main Streets	City of Seattle	Hard Surfaces Seating Picnic Tables/Shelters	Relaxation Picnicking People Watching
11. Pioneer Square	Yesler Way and First Avenue	City of Seattle	Totem pole Hard Surfaces Seating	Relaxation Picnicking People Watching
12. Public Access at Colman Dock Ferry Terminal	Piers 50 and 52 Alaskan Way between Yesler Way and Madison Street	Washington State Department of Transportation	Public Viewing Areas Hard Surfaces Seating Water Feature	View Enjoyment Relaxation
13. Access to Blake Island/Tillicum Village	Pier 55 Alaskan Way and Seneca Street	Private	NA	Provides boat access to Blake Island State Park

Exhibit 3-4. Park, Recreation, and Public Access Facilities (continued)

Facility Name	Location	Owner	Primary Facilities	Primary Uses
14. Waterfront Park	Alaskan Way between University and Pike Streets	City of Seattle	Hard Surfaces Seating Picnic Tables Restrooms	View Enjoyment City of Seattle Viewpoint Relaxation Picnicking People Watching Fishing
15. Seattle Aquarium	Piers 59 and 60 Alaskan Way at Pike Street	City of Seattle	Interpretive Displays Research Facilities	Interpretive Displays Education Research
North Waterfront				
16. Pier 62/63 Park	Alaskan Way at Pine Street	City of Seattle	Hard Surfaces Performance Facilities	View Enjoyment
17. Victor Steinbrueck Park	Western Avenue at Virginia Street	City of Seattle	Hard Surfaces Soft Surfaces Seating Picnic Tables	View Enjoyment City of Seattle Viewpoint Relaxation Picnicking People Watching
18. Lenora Street Bridge	Lenora Street between the Alaskan Way Viaduct and Alaskan Way	Port of Seattle	Hard Surfaces Seating	View Enjoyment Relaxation
19. Pier 66, the Bell Street Terminal, Public Access	Alaskan Way at Bell Street	Port of Seattle	Hard Surfaces Seating Restrooms	View Enjoyment Relaxation People Watching
20. Pier 69, Public Access	Alaskan Way at Bell Street	Port of Seattle	Hard Surfaces Seating	View Enjoyment Relaxation Picnicking Fishing
21. Belltown Cottage Park		City of Seattle	Hard Surfaces Soft Surfaces Seating Picnic Tables	View Enjoyment Relaxation Picnicking People Watching

Exhibit 3-4. Park, Recreation, and Public Access Facilities (continued)

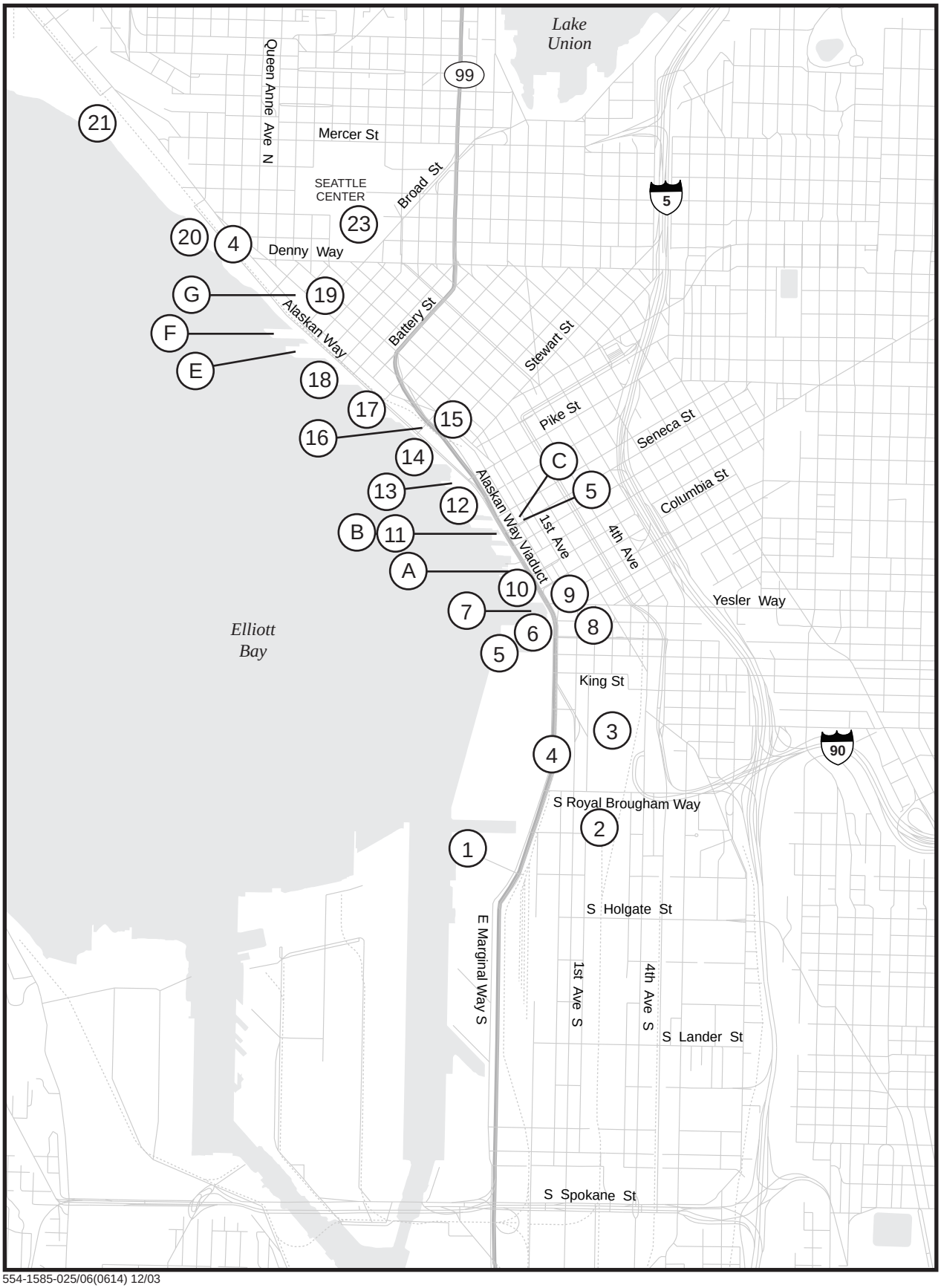
Facility Name	Location	Owner	Primary Facilities	Primary Uses
22. Myrtle Edwards Park	Alaskan Way at Bay Street	City of Seattle	Parking Hard Surfaces Soft Surfaces Active Use Facilities Seating Picnic Tables/Shelters Children's Play Area Restrooms Trail	View Enjoyment City of Seattle Viewpoint Relaxation Picnicking People Watching Walking Jogging Bicycling Skating Fishing Informal Sports
23. Elliott Bay Park	Pier 86 Waterfront Between Harrison Street and 16th Avenue West	Port of Seattle	Parking Hard Surfaces Soft Surfaces Active Use Facilities Seating Picnic Tables/Shelters Children's Play Area Restrooms Trail	View Enjoyment Relaxation Picnicking People Watching Walking Jogging Bicycling Skating Fishing Informal Sports
24. Potlatch Trail	Between Lake Union and the Waterfront at Broad Street	City of Seattle	Trail	View Enjoyment People Watching Walking Jogging Bicycling Skating

Exhibit 3-4. Park, Recreation, and Public Access Facilities (continued)

Facility Name	Location	Owner	Primary Facilities	Primary Uses
North				
25. Seattle Center	Between Broad Street and Mercer Street and First Avenue N. and Fifth Avenue N.	City of Seattle	Hard Surfaces Soft Surfaces Seating Picnic Tables or Shelters Children's Play Area Art Display Active Use Facilities Passive Use Facilities Performance Facilities Sport Arenas Museums Restaurants Restrooms Parking School	View Enjoyment Relaxation Picnicking People Watching Walking Jogging Bicycling Skating Fishing Informal Sports Professional Sports Cultural Activities
Semi-Public or Private Land with Public Rights of Access or Easements				
Central				
A. Pier 54	Alaskan Way at Madison Street	Private	Hard Surfaces Seating	View Enjoyment Relaxation
B. Piers 55 and 56	Alaskan Way at Seneca Street	Private	Hard Surfaces Seating Picnic Tables	View Enjoyment Relaxation Picnicking People Watching
C. Harbor Steps	University Street between First and Western Avenues	Private	Hard Surfaces Seating Picnic Tables	View Enjoyment Relaxation Picnicking People Watching

Exhibit 3-4. Park, Recreation, and Public Access Facilities (continued)

Facility Name	Location	Owner	Primary Facilities	Primary Uses
D. Seattle Art Museum University Street Plaza		Non-Profit Corporation Municipal Development Authority	Hard Surfaces Seating Picnic Tables	View Enjoyment Relaxation Picnicking People Watching
E. Benaroya Hall, University Street Plaza		Non-Profit Corporation Municipal Development Authority	Hard Surfaces Seating	View Enjoyment Relaxation Picnicking People Watching
North Waterfront				
F. Edgewater Hotel, Pier 67	Alaskan Way at Wall Street	Private	Hard Surfaces Seating	View Enjoyment Relaxation People Watching
G. Pier 70	Alaskan Way at Broad Street	Private	Hard Surfaces Seating	View Enjoyment Relaxation People Watching
H. Olympic Sculpture Park	Between Western Avenue and Alaskan Way at Broad Street	Non-Profit Corporation Municipal Development Authority	Hard Surfaces Soft Surfaces Seating Picnic Tables Art Display Restrooms Parking	View Enjoyment Relaxation Picnicking People Watching Cultural Activities

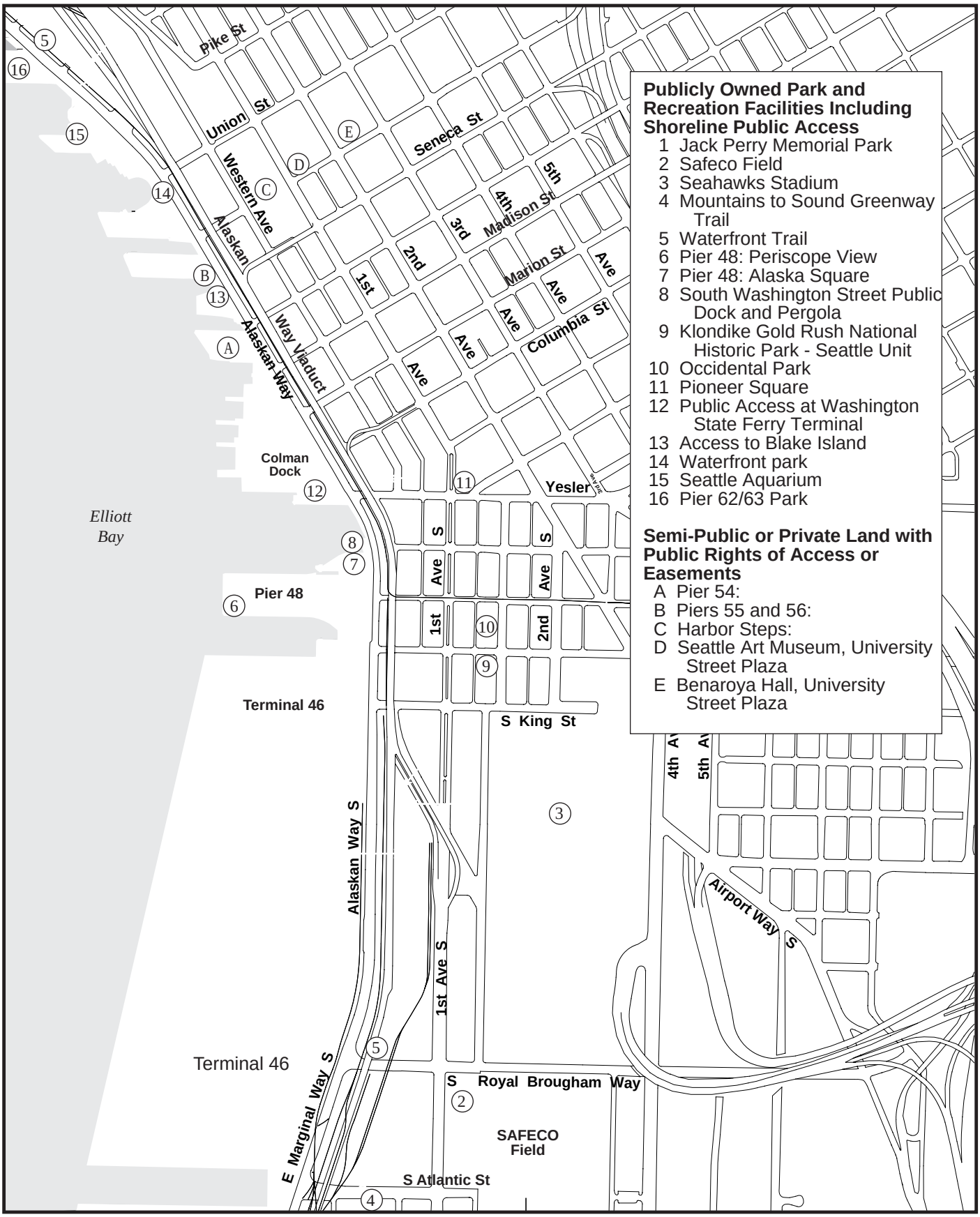


554-1585-025/06(0614) 12/03

0 2,500
SCALE IN FEET

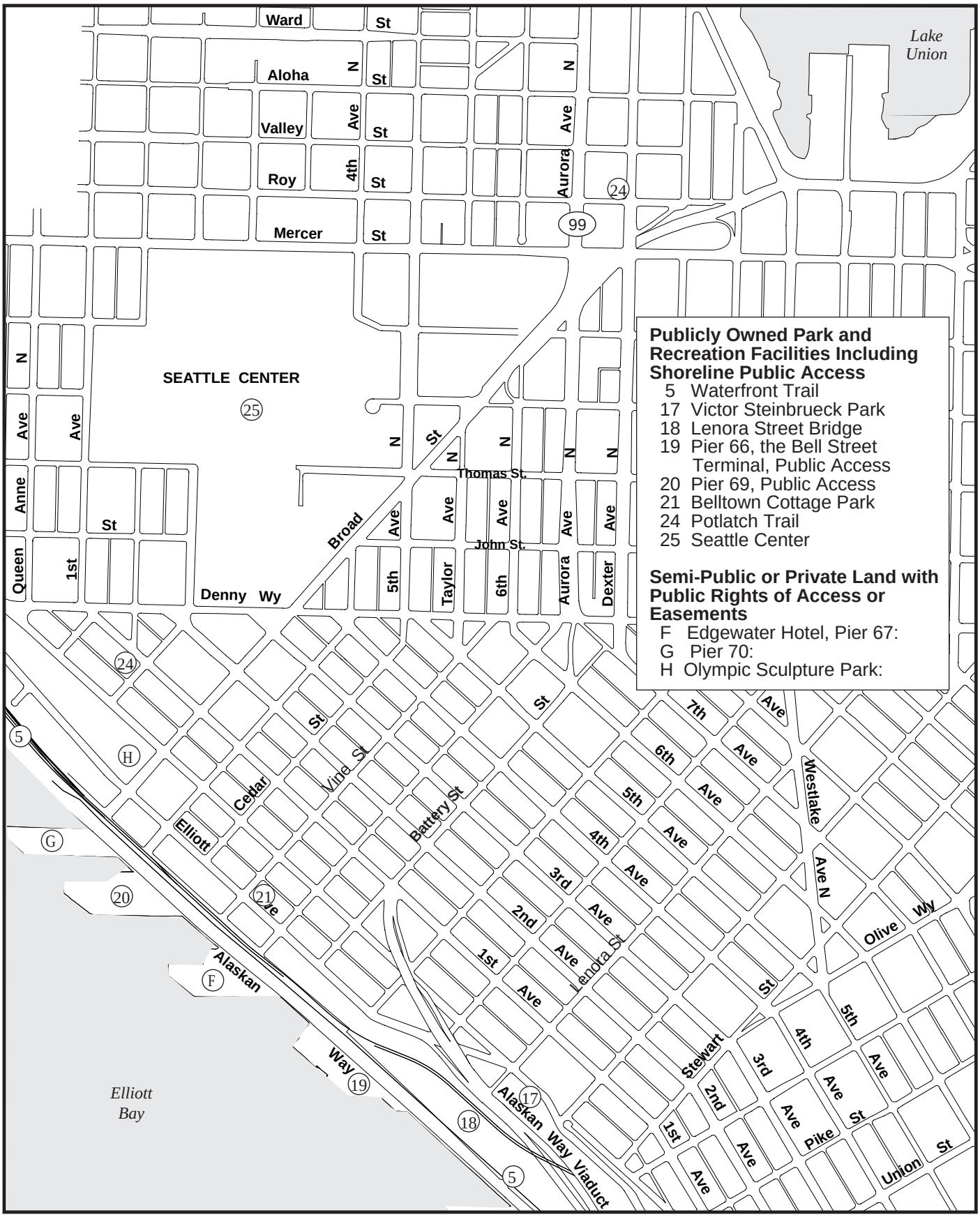
N

Exhibit 3-5
Parks, Recreation, and Public Access Facilities Map



Parametrix Alaska Way Viaduct/554-1585-025/06(0614) 11/03 (K)

Exhibit 3-6
Parks, Recreation and Public Access Facilities Map - Central



Parametrix Alaska Way Viaduct/554-1585-025/06(0614) 11/03 (K)

0 800
SCALE IN FEET

N

Exhibit 3-7
Parks, Recreation and Public Access Facilities - North

Phase II included balancing a number of similar viewpoints with similar characteristics to determine the most representative viewpoints based on the following criteria:

- The criteria listed for Phase I.
- Sites that include views of significant local landmarks, particularly City of Seattle designated landmarks.
- Views typical of views from private property. To the extent possible, private views were represented by views from public places that have a similar character. Private views were selected based on viewpoints typical of a substantial number of viewers.

Phase III included review by the technical personnel preparing visual simulations to determine which, among similar views, present the fewest technical issues and most effective use of resources in preparing the simulations.

Meetings and correspondence with representatives of WSDOT and the City of Seattle took place throughout the three phases of selection of viewpoints to ensure that the interests and expertise of all participants were available in this critical decision-making process.

This Page Intentionally Left Blank

Chapter 4 AFFECTED ENVIRONMENT

SR 99 through the entire corridor under consideration is classified Urban in the WSDOT Roadside Classification Plan (WSDOT 1996). A roadside classified as Urban is characterized by elements that mirror the character of adjacent land use. The urban landscape is a predominantly built environment. Vegetation is mostly non-native (ornamental) trees, shrubs, and groundcover, with remnants of native vegetation. There is a consistent, refined appearance throughout all management zones. Policies for design and management of these roadways include:

- Design structures to provide visual continuity and enhance the urban environment; gives special attention to architectural detail.
- Structural screens or fences may be used to screen views where right-of-way is limited.
- Consider scenic views when locating signs.
- Use vegetation to enhance architectural elements.

Opportunities to apply these elements to the existing viaduct are limited because of the character of the existing structure built in the early 1950s. The SR 99 corridor is also designated a City of Seattle Scenic Route, as is the adjacent surface street from S. King Street to Broad Street as indicated in Exhibit 3-2.

The following analysis of visual quality proceeds up the corridor from south to north and is organized by the Visual Character Units identified above and in Exhibit 2-3.

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

4.1.1 Duwamish Industrial Area

The general visual character of this area is of large industrial buildings used for warehousing or manufacturing, as well as transportation facilities including the Burlington Northern Santa Fe Railway Company (BNSF) railroad and major arterials. The tallest building in the area is the Starbucks Center building at S. Lander Street and First Avenue S., which is approximately 200 feet high and the visually dominant landmark in the area. Most buildings are the equivalent of two to three stories in height. Even single-story warehouse and manufacturing buildings tend to be a minimum of 30 to 45 feet in height to accommodate stacked pallet storage or manufacturing processes. Buildings in the area represent a wide range of age, style, and maintenance. There is a variety of visual clutter from signs,

overhead electrical distribution and communication lines, and several high-voltage electric transmission lines serving major electrical substations in the area.

Views From the Road

The view from the existing at-grade SR 99 between S. Spokane Street and S. Holgate Street is largely bounded by rail yards on either side. When rail cars are not parked to the west, Port of Seattle container terminals are visible.

View Toward the Road

The major viewing populations in the area are employees and persons passing through the area on north–south streets. For the most part, persons on SR 99 include employees commuting to work and commercial and private drivers passing through the area.

The sensitivity of both groups to the visual character of highway features is likely to be low. For the most part, views would be available from public streets for employees who are commuting to work or commercial and private drivers passing through the area.

The through streets closest to SR 99 are First Avenue S. and E. Marginal Way. The view from First Avenue S. is almost entirely a corridor of industrial buildings. The exception is a commercial center at S. Lander Street, where the Starbucks Center building dominates. Views down east–west streets generally terminate at rail yards. Cranes from the Port of Seattle container terminals on the Duwamish Waterway dominate the skyline with the wooded West Seattle hilltop as background. E. Marginal Way is designated by the City of Seattle as a Scenic View Route. It is developed with sidewalks and street trees on the west side where it is framed by Port of Seattle terminals, characterized by stacked shipping containers, warehouse buildings, and large cranes. Rail lines are located directly east of the roadway. These lines generally are occupied by several rows of parked rail cars.

SR 99 transitions from an above-grade structure at S. Spokane Street to a surface highway that continues to S. Holgate Street, where it transitions to the aerial Alaskan Way Viaduct structure. The views from the at-grade portion of the roadway are of parked rail cars or rail yards on both sides of the highway.

All views from the Duwamish Industrial Area tend to lack a vivid visual focus, have low intactness due to the widely disparate range of building styles and condition, and low visual unity, with many elements of visual clutter. The SR 99 corridor in both its elevated and at-grade sections represents little departure from the visual quality of the surroundings.

No photographic visual depictions of the existing highway or alternatives is provided for this area because the SR 99 facilities are generally not visible from surrounding public areas or are not a substantial element of the view.

Light and Glare

The existing SR 99 is lighted with standard street light fixtures in this area. The light from the highway is a minor source of light and glare compared to the higher intensity and higher mounting height of lighting for the rail yard to the east and the Port of Seattle terminals to the west.

4.1.2 Sports Complex

The beginning of the existing Alaskan Way Viaduct aerial structure is south of the location of Safeco Field, the Seattle Mariners baseball park, which extends between S. Atlantic Street and S. Royal Brougham Way from First Avenue S. to rail lines west of Fourth Avenue S. North of S. Royal Brougham Way and extending to about S. King Street is the Seahawks Stadium and the Stadium Exhibition Center. These structures visually dominate the area.

Views From the Road

Occupants of vehicles northbound on the existing viaduct are likely to primarily experience views of the downtown skyline. The orientation of the roadway south of S. Royal Brougham Way places the Bank of America Building in the center of the field of vision. Between S. Royal Brougham Way and Yesler Way, the viaduct is on a north–south orientation and the Washington Mutual building is centered in the view as shown in Exhibit A-1. Views to the northwest and west across the container terminals are centered on the West Point/Magnolia area and include Elliott Bay in the middleground, as indicated in Exhibit A-2. The peaks of the northern Olympic Mountains are visible on clear days in the background (Mt. Angeles and Mt. Townsend are oriented about 30 degrees to the north of west; Mt. Anderson and Mt. Olympus are almost due west). Glimpses of these views require looking away from the orientation of the roadway.

These views are readily available to passengers during the entire drive over the viaduct. Most vehicles using the viaduct, however, are occupied only by the driver. Drivers are less likely to turn their attention from the orientation of the roadway, except for brief glimpses. This portion of the roadway, however, presents few driving challenges from maneuvering traffic and is likely to allow most drivers an opportunity to divert attention to the views to the west for brief periods. When container ships are loading at Terminal 46, they substantially block middleground views of Elliott Bay to the west and northwest.

The visual quality of the downtown skyline view is high, as indicated in Exhibit A-1. The tallest buildings provide a vivid focus; other buildings are similar in visual character and provide a balanced and coherent composition. The Smith Tower, a City of Seattle landmark, is visible along the eastern margin of the view to the north. The Space Needle is also visible in the distance to the northeast. These two designated landmarks, however, are moderate in scale as compared to downtown high-rise towers that dominate the view to the north. Other designated landmarks, such as the Exchange Building, are visible, but are nestled among taller buildings and form part of the general background of downtown buildings.

Views to the northwest can have a vivid focus when the Olympic Mountains are visible. Without the distant view of the mountains, the view still encompasses the water areas of Elliott Bay and the Puget Sound to the left and the downtown skyline to the right, which have great compositional coherence. The significance of the water and mountain view for persons who regularly trace the route may be related to how the view is imprinted upon the memory as a landmark. It likely takes very little time or distraction from driving to glance at the view and derive aesthetic pleasure from its elements. As the vehicle moves to the north, additional elements unfold, which likely adds to the positive aesthetic experience. The entire process of driving the elevated structure from S. Holgate Street to the Battery Street Tunnel takes about 2½ to 3 minutes at 50 miles per hour. There are numerous opportunities to look at various orientations of the view during that period.

The views from the southbound lower-level traffic lanes are more oriented to the roadway or the view to the southwest. The southwest views in this area include port and industrial facilities at Terminals 37 and 46 as well as Terminal 18 on Harbor Island, across the Duwamish East Waterway. The Port of Seattle cranes are the most vivid element of these views. Views to the side require orientation away from the direction of movement and are interrupted by vertical support elements. The vertical range of views is constricted by the upper deck and the height of railings on the lower deck. The view to the southeast includes industrial and loft buildings along First Avenue and the sport complexes to the east.

Views Toward the Road

The viewing population of the exterior of the viaduct is largely composed of attendees at sporting events and persons passing through the area on First Avenue S. and S. Royal Brougham Way, which each have daily volumes of about 13,000 average daily trips. The existing viaduct is generally blocked from line of sight from First Avenue S. by buildings between the viaduct and First Avenue S. Where it is visible, it is an extended horizontal element above

a long, low warehouse building. It is visible where S. Atlantic Street and S. Royal Brougham Way cross under the viaduct. S. Royal Brougham Way terminates at a Port of Seattle terminal where multi-colored stacks of shipping containers are visible under the viaduct and bright red Port of Seattle cranes tower above. This view is indicated in Exhibit A-3. S. Atlantic Street terminates at the US Coast Guard facility, at Pier 36, specifically at a neutral gray three-story building with considerable rooftop visual clutter from antennas. There are no backdrop views behind these features.

The existing viaduct is a minor element of views to the west down S. Royal Brougham Way between Fourth and Occidental Avenues, where it is designated a City of Seattle Scenic View Route. This street section is dominated by the bulk of Safeco Field and the Stadium Exhibition Center that towers over the street from each side. The existing viaduct is a visible but minor element of the view to the west, because of the lack of a memorable visual focus and the lack of unity in the view of stacked shipping containers.

The views of the existing viaduct from the vicinity of Safeco Field are most significant from the corners of First Avenue S. with S. Royal Brougham Way and S. Atlantic Street, where entrances to the ballpark are located. The visual character of the view to the west is dominated by the cranes in the background and the low-rise buildings in the foreground facing the ballpark across First Avenue S. These buildings contain a restaurant with exterior seating and a retail store. Neither of these elements provides a vivid focus.

The street frontage down both S. Royal Brougham Way and S. Atlantic Street alternates between buildings and parking lots. There are street trees on S. Royal Brougham Way, but the short block does not provide the sense of a unified corridor due to the number of disparate elements, including uncoordinated signs, a variety of overhead utility lines, and an unremarkable asphalt roadway section. The distance from First Avenue S. to the viaduct is longer on S. Atlantic Street by approximately one block, but lacks elements that would provide unity, such as continuous street trees or consistent building frontages. The view with higher visual quality for pedestrians along First Avenue S. outside of Safeco Field is to the north and features the downtown skyline, which provides a vivid focus.

The existing viaduct in this area is a minor middleground feature of views to the west. It differs little in scale, form, and color, but disrupts the continuity of views through the distraction of vehicles traveling on the two elevated levels. These visual impacts are reinforced by the associated noise of vehicles, especially the thump as they cross expansion joints. In the context of the low visual unity of the surroundings, however, the net effect is relatively minor.

Photos and visual simulations were not prepared for street-level views from this area because of the low vividness, intactness, and unity of views.

The Seahawks Stadium complex consists of two parts: the Stadium Exhibition Center, which fronts on S. Royal Brougham Way, and the Seahawks Stadium about a block to the north. The Stadium Exhibition Center and Seahawks Stadium front to the west on Occidental Avenue, which is a block west of First Avenue S. Views of the existing viaduct are blocked by a row of loft buildings that front First Avenue S. and are part of the Pioneer Square Historic District. Most of these buildings have service entrances on Occidental Avenue facing Seahawks Stadium.

The main entrance to the Seahawks Stadium is oriented to the north, but a secondary northwest entrance is aligned with Railroad Way, a diagonal street extending from Occidental Avenue to the Alaskan Way surface street. First Avenue S. contains the on- and off-ramps from the existing viaduct. These ramps are the dominant feature of the view to the northwest from the stadium entry and tend to obscure or visually overpower the surrounding buildings. The view from First Avenue S. down Railroad Way is depicted in Exhibit A-4. The Flatiron Building at the northwest corner of First Avenue and Railroad Way is visible, but obscured by the ramps. This building is a City of Seattle landmark[1] and is listed on the National Register of Historic Places (US National Park Service 2003).

The viewing population in the area is likely to be primarily composed of attendees of sports events and persons driving local streets. Pedestrian volumes are unknown, but the seating capacity of Safeco Field is 47,000. The majority of Safeco Field attendees can be expected to enter and exit along First Avenue S. at the S. Royal Brougham Way and S. Atlantic Street entrances (Washington State Major League Ballpark Public Facilities District 1997). The new Seahawks Stadium is designed to seat 67,000 to 73,500 people, depending upon the type of event (Seattle Seahawks Webpage 2002). Both pedestrians and vehicle occupants are likely to be sensitive to the surrounding visual environment because they are involved in elective activities and have chosen the destination because of specific amenities they plan to enjoy. Some persons in sport complex seats enjoy views of downtown, Elliott Bay, and the Olympic Mountains. The existing viaduct, however, is well below the view from the seats.

---

[1] Seattle Ordinance 106141

Light and Glare

The lighting for the existing viaduct upper level is similar to normal arterial street lighting but elevated. For most viewers in this area, light and glare are blocked by adjacent buildings. The elevated light source is an additional intrusive source of glare for upper windows of buildings that would not be directly affected by lighting for surface streets.

4.2 Central – S. King Street to Battery Street Tunnel

4.2.1 Pioneer Square Historic District

This area consists largely of turn-of-the century brick buildings built in a consistent style. Views of the viaduct are available from east–west streets that are perpendicular to the viaduct and from adjacent to the viaduct, where a number of buildings directly access the surface street and parking beneath the aerial structure. Topography is generally flat, although there is a gentle rise to the east along Yesler Way starting at Third Avenue.

The Pioneer Square area consisted largely of storage and warehouse uses adjacent to Alaskan Way when the viaduct was constructed in the early 1950s. The area had been in economic decline for several decades as new development in downtown moved further north. Through the 1950s and early 1960s, many buildings in the area deteriorated, upper floors were largely vacant, and the exodus of businesses continued. Businesses along Alaskan Way used the street for access to loading docks for both truck and rail traffic. Pioneer Square became a honky-tonk district of taverns, entertainment houses, and bawdy hotels. This relatively seedy atmosphere characterized Pioneer Square up until the 1970s. Faced with virtually no pressure for redevelopment, the district's remarkable stand of turn-of-the-century buildings remained. In 1970, through the efforts of a solid grass-roots movement, Pioneer Square was designated a national historic district and Seattle's first preservation district. A special review board, the Pioneer Square Preservation Board, was created and guidelines were developed to preserve the area's architectural and historic character and to ensure sensitive restoration of buildings for economically viable purposes.

The visual context of the area has changed substantially since the existing viaduct was constructed. Alaskan Way itself has transitioned from a roadway shared largely by railroad tracks and truck traffic related to the port and light industrial use to a corridor that carries pedestrians along the waterfront, with sidewalks, street trees, and a multi-purpose trail. The Pioneer Square area has transitioned to a balanced mix of tourist, office, and residential uses and is one of the liveliest pedestrian-oriented neighborhoods in the city. The Pioneer Square Neighborhood Plan includes policies to weave the east–west streets to

the waterfront into the fabric of the community by improving pedestrian connections, to emphasize view connections to the waterfront and restore the Washington Street Boat landing as the centerpiece of the south waterfront.

View From the Road

Views for vehicle occupants traveling northbound on the existing viaduct are similar to those discussed for the sports complex above for the segment south of Yesler Way. Northbound near views from S. King Street to the left of the roadway are no longer dominated by the modern container port in the foreground, but include the more traditional transit shed building of Pier 48 and the ferry loading headworks of the Washington State Ferries Colman Dock Ferry Terminal. Also to the northwest are views of Puget Sound with the Olympic Mountains in the distance. Near views of the waterfront are available from the far left lane. The plane of the roadway cuts off most of the near view of the waterfront from the right lanes, with only a few visible elements, such as the peaks of the roofs of transit sheds. In this area, on-ramps from First Avenue S. merge at S. King Street and require more driver attention than the section of roadway to the south.

Views to the east include the buildings within the Historic District, most of which are characterized by brick construction. The view, however, includes only the upper floors of the buildings. This truncated view provides little opportunity to view the unity of the historic buildings as a whole or the milieu of the district as a whole.

The context of the view northbound from the existing viaduct changes at Yesler Way, where the roadway curves to the west about 30 degrees. The roadway orientation places views to the west more within the visual field. The view at about 30 degrees to the left is illustrated in Exhibit A-16. The view includes both the urban skyline of Seattle and the natural water and landforms of the region. The docking area of the Colman Dock Ferry Terminal is visible in the foreground; Elliott Bay and Puget Sound are in the middleground, with distant views to the west of the wooded hills of Bainbridge Island, the Kitsap Peninsula, and the peaks of the Olympic Range. The urban skyline of the Belltown area provides a distinctive view of human-made features. Overall, the scene has very high visual quality as a coherent view of the city in its natural setting.

A view similar to this continues for about 1,200 feet (or about half a minute of driving time at 50 miles per hour) until about Pike Street, where the alignment veers to the northeast and begins to climb toward the Battery Street Tunnel, which removes line-of-sight views to the west.

The views from the southbound lower-level traffic lanes are constricted by the upper deck and the height of railings on the lower deck and interrupted by columns. The southwest views in this area include stacked containers and docked ships at Terminal 46 and Pier 48. The Port of Seattle cranes are the most vivid element in the middle distance of these views, with some views of the West Seattle ridge in the background.

Views Toward the Road

The existing viaduct is the most prominent feature in street-level views of the Pioneer Square Historic District from the Alaskan Way surface street to the east as indicated in Exhibits A-7 and A-17. The viaduct dominates near views and obstructs views of historic structures. From viewpoints to the south, there are some distant views of downtown high-rise buildings further to the north; however, they are minor elements compared to the scale of the viaduct. The visual dominance of the structure is reinforced by the visual distraction of vehicles flashing by and the associated noise of vehicles, especially the thump as they cross expansion joints.

Views of the existing viaduct from the Pioneer Square Historic District are most significant from the five perpendicular streets stretching from S. King Street to Yesler Way. The visual context of the streets is similar. All are tightly framed by three- to eight-story brick buildings. The complexity of the framing tends to increase on the northerly streets because the building scale tends to be smaller and more complex. All the streets have buildings at the sidewalk line, street trees, and no overhead utilities. The streets provide a unified and consistent corridor of urban development of a historic character.

The unity of architectural style, the inherent interest of the buildings, the unity of composition, and complementary elements such as street trees provide high visual quality throughout the historic district. The main focus of activity in the historic district is at Pioneer Square and along First Avenue to the south, which has a landscaped median and the largest concentration of shops and restaurants. The northern portions of the corridor have generally higher visual quality because of the greater diversity due to the smaller scale of the buildings and the more complex interactions between the buildings and the streetscape. Buildings to the south are generally larger, have fewer storefronts, and result in a less diverse streetscape. The views to the south are less visually buffered from the viaduct by intervening buildings.

Yesler Way and Jackson Street are both designated City of Seattle Scenic View Routes (see Exhibit 3-2). Both streets are oriented east–west. From higher elevation east of the Pioneer Square area, they enjoy panoramic views to the west. The views west down Jackson Street east of Fifth Avenue are framed

somewhat more closely by buildings than the Yesler Way views. Both streets have a moderate slope down to about Third Avenue, where the topography is almost flat. The existing Alaskan Way Viaduct is visible in distant views to the west down both streets as a horizontal band that contrasts with the water of Elliott Bay. The viaduct also provides a contrast to the linear nature of the street corridor. It is not a dominant element of distant views because of the vivid focus provided by water and mountain views. In the vicinity of Third or Fourth Avenues, the position of the viaduct relative to an observer moves above the line of sight and is silhouetted against the sky. As one moves closer, it increases in relative scale and blocks elements of the distant views.

Exhibits A-24 and A-27 provide views to the west of existing conditions on Yesler Way at First Avenue and Western Avenue, respectively. These views are generally representative of the views from the five streets perpendicular to Alaskan Way. The distance to the existing viaduct from First Avenue is somewhat greater at Yesler Way because the waterfront bends to the west and the viaduct is about half a block further away. Exhibit A-24 provides a view from Yesler Way and Western Avenue, which is typical of the scale of the viaduct from mid-block of the other perpendicular streets.

The existing viaduct contrasts in line, materials, scale, and character with the context of this historic area. The horizontal character of the viaduct contrasts with the generally vertical character of historic brick buildings composed of pierced vertical windows with narrow piers between. The concrete structure contrasts in materials and color with the red brick that is the predominant building material in the Pioneer Square area. The horizontal levels of the viaduct bear no relation to the scale of the horizontal divisions of buildings in the area into regular floors at about 12- to 16-foot increments. The greatest contrast in character is the presence of automobiles above grade level in an environment in which all activities are geared to the street level. Traffic on the viaduct is both a visual and noise intrusion. To people on the street, vehicles appear and disappear as a stream of irregular flashes. Noise from the viaduct reinforces the visual impacts with an irregular pulse as tires cross expansion joints.

The visual impact of the existing viaduct differs somewhat among the perpendicular streets according to the view at the end of the street. At S. King Street, the view includes stacked shipping containers and a portion of an office building. At Jackson Street, the ivy-covered wall of a building presents a softer view of the same terminal. The presence of a continuous row of street trees along the Alaskan Way surface street also softens the view in the summer when the leaves in the tree canopy screen the container facility. Main Street terminates with the Pier 48 transit shed in the background. Although

the building is newer than the turn-of the-century transit sheds of Piers 54 through 59 to the north, the building form is similar in character to the urban character of the historic district.

S. Washington Street terminates with the historic pergola of the Washington Street Boat Landing centered in the view. This is the view in which the existing viaduct most contrasts with the historic character of the area. Views of Elliott Bay, Puget Sound, and the Olympic Mountains are also available through and above the pergola. Yesler Way terminates at the Colman Dock Ferry Terminal. View blockage on Yesler Way is extensive because of the viaduct vertical supports near the centerline of the street right-of-way and the viaduct's horizontal concrete decks. Between the vertical and horizontal structures are fragmented views of the entrance to the passenger ferry walkway, periodic views of car ferries pulling into the dock, the wooded ridges of the Kitsap Peninsula hills, and the Olympic Mountains in the distance.

The impacts of the existing viaduct become greater as one moves closer. The visual impacts are of an increasingly dominating scale that contrasts with the linear rhythm of the street corridor. The street corridor with its framing elements of building fronts, sidewalks, street trees, and the roadway itself are cut-across by the viaduct. The impacts of traffic noise also contribute to the sense of domination by the viaduct structure. The visual barrier of the viaduct is reduced somewhat as one moves closer to the viaduct by the ability to see more clearly under the viaduct to the scene beyond. The scene looking toward the waterfront is, however, truncated horizontally by the traffic levels and interrupted by vertical supports. The less imposing visual impacts are countered somewhat by the greater intrusiveness of noise impacts.

Close to and underneath the viaduct, the change in character becomes even more pronounced. The viaduct is as close as 10 feet to some buildings. The open sky above the street is cut off, the influence of weather and sun is absent, street trees and other vegetation are absent, and the temperature in the shadows under the viaduct is often lower. The visual impact of the viaduct is reinforced by the change in character of the traffic noise that is not only at higher decibel levels, but comes from above and reverberates in the space beneath. The character of the sound includes the irregular thuds of tires passing over expansion joints, which is notably different in character from the traffic noise on surface streets. The visual elements of this experience are illustrated in Exhibit A-11, which is a view from S. Washington Street adjacent to and under the viaduct. Seventeen buildings within the historic district have frontage on Alaskan Way. Five of these buildings have their sole frontage adjacent to the viaduct.

The visual impacts and the reinforcing noise impacts of the viaduct decrease at a distance. It is greatest for the block between the Alaskan Way surface street and First Avenue. By Fourth Avenue, the relative size of the viaduct in relation to other elements of the streets and the attenuation of noise impacts render the existing viaduct only marginally intrusive, although it remains clearly visible.

The population of viewers in the Pioneer Square Historic District is high and is likely to be among the most sensitive to visual quality. The area has among the greatest concentrations of small shops, restaurants, and entertainment in the downtown area. The visual qualities of the historic area are also one of the prime attractions. The Pioneer Square area is estimated to receive about 2.5 million tourist visitors a year. The area also attracts shoppers and restaurant patrons. A high proportion of viewers are likely to be involved in elective activities, which makes them highly sensitive to the features of the environment.

Current pedestrian volumes at Pioneer Square are 2,500 during weekday lunch hours, with weekday totals of around 6,500 pedestrians. Volumes near Occidental Avenue and Main Street are about 1,800 pedestrians for the lunch hour and about 4,300 pedestrians daily. The viewing population is typically highest at Pioneer Square, which is the focus of activity in the area. Pedestrian volumes drop off to the south, except on days when events are scheduled in the sports complexes to the south. There is also a large component of commuter traffic from the passenger ferry at the foot of Yesler Way that walks up Yesler to First Avenue on their way to places of employment.

Views from private property include employees and residents in buildings that face the viaduct, and from buildings along perpendicular street corridors. Buildings east of First Avenue are unlikely to have views of the viaduct, except down street corridors. Some buildings fronting the west side of First Avenue have views of the viaduct from rear windows facing west, where intervening buildings facing the Alaskan Way surface street are lower than the viaduct. Impacts from buildings that are not adjacent are likely to be similar to street corridor impacts depicted in Exhibits A-24 and A-27, except that second- to fourth-floor offices and residences are likely to look directly at the traffic decks of the viaduct and experience greater blockage of views.

For buildings adjacent to the viaduct, ground floor views are likely to be similar to the street level pedestrian views shown in Exhibit A-11. The second to fourth floors adjacent to the viaduct are likely to look out upon traffic decks. The view blockage is likely to be significant. In addition, the presence of high-speed traffic flashing past windows can be quite visually intrusive.

There are several buildings adjacent to the viaduct with floors above the viaduct level. In these cases, there are views of the waterfront, Elliott Bay, Puget Sound, West Seattle, and the Olympic Mountains that are not blocked or intruded upon by the viaduct.

Light and Glare

The lighting for the existing viaduct upper level is similar to normal arterial street lighting. The presence of a lighted structure above grade emphasizes the extent to which the structure cuts across the orientation of surface streets for nighttime views and the degree to which the viaduct is an intrusive element in this historic district. The elevated light source is an additional intrusive source of glare for upper windows of buildings that would not be directly affected by lighting of surface streets.

4.2.2 Commercial Core

Views From the Road

The view northbound from the existing viaduct from Yesler Way to Pike Street includes a panorama with the urban skyline of Seattle on the right (east) and the natural water and landforms of the region in the distant left (west) viewed over the rooflines of the transit sheds on Piers 54 through 59. Views of buildings immediately adjacent to the viaduct to the east tend to be of the roof or a few upper floors. This truncated view lacks compositional harmony and often includes distracting elements such as unscreened mechanical equipment. Overall, however, the scene has a vivid focus to the west and moderate compositional harmony that includes a contrast between elements of the built and natural environments.

The views from the southbound lower-level traffic lanes are constricted by the upper deck, and the height of railings on the lower deck is interrupted by columns. The southwest near views in this area include the ferry dock parking and terminal building, ferry loading headworks, and a truncated view of the upper and roof levels of the transit sheds on Piers 54 through 59. In the middleground, views include the stacked containers and Port of Seattle cranes on Harbor Island as the most vivid element. Some views of the West Seattle ridge in the background are present.

Views Toward the Road

Views of the existing viaduct from the commercial core are influenced by distance to the viaduct, topography, character of existing development, and the features of the existing viaduct. The topography of the downtown core is often steep along east–west oriented streets. Streets oriented north–south generally slope upwards gently to the north. The area north of Union Street is

fairly flat between First Avenue and I-5. From Union Street north, there are no views of the viaduct east of First Avenue because the line of sight is above the aerial structure.

The area between Western Avenue and the waterfront is generally flat. Between Columbia Street and Spring Street, the slope between Western and First Avenues is gentle enough to allow through vehicular traffic. North of Spring Street, there is no vehicular surface connection to Alaskan Way. The grade change between First Avenue and the waterfront varies from about three stories at Seneca Street to over eight stories at Pike Street.

All perpendicular streets that intersect with Alaskan Way in the Commercial Core are designated view corridors in the Seattle Comprehensive Plan (DT-UDP 8, 9, BP-19, LG 92, 93), Land Use Regulations (SMC 23.49.024), and street vacation policies (Resolution 30297) as indicated in Exhibit 3-1. View corridors are designed to preserve views to the west of the waterfront and natural amenities such as Elliott Bay and landforms to the west. Upper level setbacks are required on Marion, Madison, Spring, and Seneca streets west of Third Avenue to limit the encroachment of buildings on the view corridors.[2] The City's shoreline policies are intended to provide visual access to shorelines and preserve and enhance views from upland areas.[3]

Streets designated Green Streets include Marion Street from Second Avenue to Alaskan Way, Spring Street from First Avenue to the Alaskan Way surface street, and University Street from First Avenue to the Alaskan Way surface street as indicated in Exhibit 3-3. Green Streets are rights-of-way that are designated for a variety of treatments, such as sidewalk widening, landscaping, traffic calming, and pedestrian-oriented features to enhance pedestrian circulation and open space use.[4] Green Street development has been implemented on University Street with Harbor steps and on Spring Street with sidewalk widening and landscaping.

The visual context of the Alaskan Way Viaduct and adjacent private development is similar in the block between the Alaskan Way surface street and Western Avenue. Most buildings are four- to eight-story brick buildings constructed prior to 1930 in a loft style consistent with the area's earlier status as a manufacturing and warehousing district. Most of these buildings have been reconditioned as office buildings since the 1960s. The exception to this is a 12-story building built in the 1980s that occupies the block between Marion

---

[2] Seattle Municipal Code 23.49.024

[3] City of Seattle, Comprehensive Plan, Policies LG 92 and 93

[4] Seattle Municipal Code 23.12.110

and Spring Streets. In addition, parking lots are located at the north face of Columbia Street, between Spring and Seneca Streets, and at the north face of University Street.

Views down Marion, Madison, and Seneca Streets include a variety of buildings designated landmarks by the City of Seattle. Marion Street includes the Colman Building at First Avenue and the Commuter Building at Western Avenue. Spring Street features the Hotel Cecil at First Avenue and the National Building between Post Alley and Western Avenue. On Seneca Street, the Grand Pacific Hotel at First Avenue and the Olympic Cold Storage Building are obscured by the overhead ramp to Alaskan Way. The other buildings along these streets are generally consistent in scale and streetscape with the historic character of these buildings. The viaduct generally does not fit into the compositional coherence of the streetscapes, as discussed below in reference to specific views.

The scale and character of the existing viaduct from all the perpendicular streets west of Western Avenue is similar to that shown in Exhibit A-47, which is the view to the west on University Street at Western Avenue. The existing buildings on Marion and Madison Streets are similar in character to this example, except that University Street does not have building street walls fronting the north side of the block. Because these streets are more closely framed, they have a slightly less extensive view of the viaduct. Spring Street is similar on the south face of the block, but the entire north side of the block is currently a parking lot. This changes the visual context somewhat, and provides a more extensive view of the viaduct.

In the case of Columbia and Seneca Streets, the presence of a connecting ramp to the existing viaduct adds support structures within the right-of-way, which further obstructs views. This is illustrated in the photo of the view from Columbia Street and Western Avenue in Exhibit A-34. The support structures at Seneca Street are of a somewhat different design, and the connection is to the upper deck of the viaduct, resulting in a ramp at a higher elevation.

For all of these street corridors, the existing viaduct is a visual barrier between downtown and the waterfront. It blocks or obstructs views because of the horizontal levels and vertical supports. In all cases, views down the streets contain elements of waterfront piers and other structures, the ridge line of West Seattle across Elliott Bay (which includes both housing and wooded greenbelts), and Duwamish Head projecting into Puget Sound. For the most part, the water areas of Elliott Bay are not visible because the angle of the view in this area of flat topography is above the water. Distant views of the Olympic Mountains are not available from any of the Commercial Core streets

perpendicular to the Alaskan Way surface street because of their orientation to the southwest.

The view from Columbia Street is to the Colman Dock Ferry Terminal and is partially obstructed by the tollbooths serving that facility. The view from Marion Street includes the Colman Dock structure, ferries loading at the terminal, and West Seattle. The view from Madison Street includes Fire Station No. 5 centered in the view, with West Seattle in the distance. From Spring Street, the view down the right-of-way includes part of the Pier 54 transit shed. From Seneca Street, the view includes the tour boat dock between Piers 55 and 56 and West Seattle behind. At University Street, as shown in Exhibits A-44 and A-47, parts of the Pier 56 transit shed and part of the front of Pier 57 are visible beneath the traffic decks of the viaduct.

Regardless of differences between views along various streets under and through the viaduct, the viaduct structure is visually dominant and displaces potential visual connections to waterfront piers and other elements of the urban fabric and the natural setting. It cuts across the linear orientation of the street and significantly reduces the visual coherence and visual harmony of the street corridors. It introduces a substantial area of shadowed parking lots lacking in the visual relief provided by vegetation buffers or other visual amenities. The encroachment on the fabric of the street corridor is even greater where ramps are present at Columbia and Seneca Streets. At these locations, the roofing over the corridor, the interruption of the sense of framing by adjacent buildings, and the displacement of street trees are more apparent, and the noise from traffic on the ramps encroaches further into the street corridor.

As discussed above, the visual impacts of the existing viaduct become greater as one moves closer. The visual impacts are reinforced by traffic noise. For pedestrians moving beneath the viaduct and ground floor occupants of buildings facing the viaduct, the environment is a substantial visual contrast because of the absence of street trees, landscaping, streetscape amenities, the shadows of the viaduct, the character of the parking lot beneath the viaduct, and the high noise levels. The visual elements of this experience are illustrated in Exhibit A-36, which is the northwest view from Marion Street and the Alaskan Way surface street. The existing viaduct is set back from the eastern edge of the right-of-way about 20 feet. This area is currently used for loading and parking. There is no continuous sidewalk along the eastern side of the Alaskan Way surface street, except between Marion and Spring Streets.

Views of the viaduct from First Avenue are significant. Views from the corridor change in character as one moves north from Columbia Street due to the rising topography. The difference elevation makes in the view is apparent

at University Street, as indicated in Exhibit A-44, where the top of the viaduct is at about 16 feet below the elevation of First Avenue. This allows views over the viaduct to West Seattle and allows framed views of Elliott Bay between the traffic levels. The linear nature of the University Street corridor is still interrupted by the viaduct, which remains the dominant feature cutting across the view corridor. Visibility of the waterfront piers is limited because the two traffic levels block more of the view to the west, reducing visual coherence and vividness.

The view from Columbia Street and First Avenue depicted in Exhibit A-31 illustrates the additional visual impact of the connecting ramps when observed from above. They almost completely obscure views of elements of the waterfront, Elliott Bay, and the ridgeline of West Seattle. The viaduct becomes the focus of view. The ramps and viaduct substantially reduce the integrity and unity of the street corridor.

The visual impact of the viaduct decreases for an observer further to the east as the viaduct becomes a relatively smaller component of views. In addition to the effects of distance on scale, the topography is higher and views over the viaduct become available. The impacts of noise also are attenuated. In the vicinity of Third to Fourth Avenues, the viaduct is still visible; it continues to block the views of waterfront structures, but relative to views of water and distant hills, it ceases to be a dominant element.

Viewer populations in the Commercial Core are high due to its status as an employment center. The number of pedestrians at University Street and First Avenue was about 2,500 during the noon hour and about 7,700 daily, in counts taken in September 2001. These pedestrian volumes are similar to the Pioneer Square area and the center of the shopping and hotel district in the vicinity of Westlake Park at Pine Street and Fourth Avenue.

The sensitivity of viewers is likely to be high for downtown employees engaged in elective activities when using open spaces and is likely to be similar to tourists or shoppers. The less homogenous and distinct visual quality of buildings in the area, as well as their greater scale, is likely to reduce sensitivity to the existing viaduct compared to the smaller building scale in the Pioneer Square area.

Sensitivity is likely to be higher on designated Green Streets, which include Marion Street from Third Avenue to the Alaskan Way surface street and Spring and University Streets from First Avenue to the Alaskan Way surface street. Green Streets are designed to serve as gathering places or corridors

connecting activity areas and open spaces in an attractive urban setting.[5] Elements of Green Street design include enhancing the separation of pedestrian and vehicular areas through street trees, landscaping, street furniture, bollards, and parking; providing weather protection for pedestrians; maximizing light and air reaching public spaces; and providing arcades, landscaping, and outdoor cafes to provide a harmonious relationship and graceful transition between private and public spaces.

The highest pedestrian populations are likely along Marion Street, where a grade-separated pedestrian connection to the Colman Dock Ferry Terminal is located. Washington State Ferries reports an average of 10,000 walk-on passengers per day, with the majority on car ferries at the Colman Dock (WSDOT 2002). High pedestrian levels are also likely on University Street, where the Seattle Art Museum and Benaroya Hall attract tourists and the regional community and are adjacent to the Harbor Steps pedestrian connection between First and Western Avenues. This corridor is likely to carry significant pedestrian volumes between the downtown core and the waterfront. The sensitivity of viewers is likely to be highest for persons attracted to the cultural resources of the museum and the pedestrian and open spaces along University Street.

Views from private property include employees and residents in buildings that face the viaduct and from buildings along perpendicular street corridors. There are many high-rise buildings, generally east of First Avenue, that look down upon the viaduct through gaps between buildings. The viaduct becomes an increasingly smaller element of the visual environment from higher floors. The character of the viaduct from above is not much different from other streets.

Buildings east of Western Avenue generally have views of the viaduct blocked by intervening buildings, except down street corridors or where intervening buildings are absent and parking lots are located. In these cases, ground floor impacts are likely to be similar to the street-level pedestrian views, second to fourth floors (at the level of the decks of the viaduct) likely experience blockage of views down the street corridor, and upper floors enjoy views down street corridors that look over the viaduct and allow unobstructed distant views. Most of the buildings directly adjacent to the viaduct are close to the height of the viaduct, with ground floor impacts similar to Exhibit A-36 and upper floor impacts that include view blockage and the intrusion of cars flashing past at close proximity.

---

[5] DCLU Directors Rule 11-93

Light and Glare

The lighting for the existing viaduct upper level is similar to normal arterial street lighting. The presence of a lighted structure above grade emphasizes the extent to which the structure cuts across the orientation of surface streets for nighttime views and the degree to which the viaduct is an intrusive element. The elevated light source is an additional intrusive source of glare for upper windows of adjacent buildings that would not be directly affected by lighting for surface streets.

4.2.3 Central Waterfront

Views From the Road

Views from the roadway are discussed under the Commercial Core (Section 4.2.2) above.

Views Toward the Road

The central waterfront stretches from Yesler Way to Myrtle Edwards Park (north of Broad Street). The existing viaduct is an element of the visual context of the waterfront from Yesler Way to about Pike Street, where the viaduct continues to the east on a separate right-of-way to the Battery Street Tunnel.

The existing character of the waterfront is defined to a great extent by the existing viaduct, which delineates its easterly boundary. Street trees, ivy growing on the viaduct structure, a multi-purpose trail, and the waterfront trolley adjacent to the viaduct add some softening and complexity to the structure, but do not change its overall visual dominance.

The waterfront side of the Alaskan Way surface street is characterized by water-oriented structures. The Colman Dock Ferry Terminal between Yesler Way and Madison Street contains a modern passenger terminal in a pier-like configuration surrounded by large deck areas for car and truck queuing. From Marion to Pike Streets, Piers 54, 55, 56, 57, and 59 evoke the maritime legacy when this area was the working waterfront of Seattle, pre-dating current container shipping technology. These piers contain long, low transit sheds with waterways between providing berths for ships. The transit sheds presently are occupied primarily by retail and restaurant uses. The waterways between piers generally provide relatively unobstructed view corridors to the west of Elliott Bay and Puget Sound, the wooded ridges of the Kitsap Peninsula, and the Olympic Mountains in the distance.

The Seattle Aquarium is located at the foot of Pike Street, on Piers 59 and 60, with the Seattle Parks Department Pier 62/63 immediately to the north. Further to the north, the Bell Street Terminal is a recently developed marina,

cruise ship terminal, restaurant complex, conference center, and maritime museum. An over-water hotel at Pier 68, the Port of Seattle offices at Pier 67, and the privately owned commercial Pier 70 continue the orientation to the water and its amenities.

The viaduct contrasts in uniformity of line and color with the variety and complexity of uses and human activities on the waterfront to the west. The view to the north from Yesler Way (as shown in Exhibit A-21) and the view south from the Waterfront Park (as shown in Exhibit A-53) are characterized primarily by the viaduct's two horizontal traffic decks, which continue into the distance where they curve and disappear among the rooflines of buildings. The viaduct structure bears little relationship to the buildings in downtown to the east of the structure. The basic unit in downtown is defined by streets that break it into blocks. Streets have no particular signature among the uniform rhythm of horizontal elements and vertical supports of the viaduct. Streets are marked only by the presence of traffic signals and queued cars.

The greatest visual impacts of the viaduct are to pedestrians on the waterfront promenade on the west side of the Alaskan Way surface street. The viaduct functions as a semi-permeable visual barrier between the waterfront and downtown. The shadows cast by the viaduct and the overlap of vertical supports obscure the view under the viaduct of the ground floors of buildings directly behind it. From a distance near the ends of piers, and from ferries and other vessels in Elliott Bay, the towers of downtown loom above the homogenous horizontal base of the viaduct, as indicated in Exhibit A-43 (taken from near the west end of Pier 56). Views from the water and the end of the piers do not emphasize the viaduct as a prominent feature; it is a neutral base in the foreground. The office towers are the largest-scale and most vivid features of the view from the water and the end of the piers.

For closer views, especially views from the Alaskan Way surface street, the viaduct is the prominent feature and interrupts the continuity of views up streets into downtown and blocks views of the lower portions of buildings fronting Alaskan Way. In many cases, as indicated by the views to the east up Madison and University Streets in Exhibits A-39 and A-50, the height of the viaduct is enough to block the line of sight of pedestrians to the top of buildings behind. The view at closer distance becomes that of the viaduct itself and the parking areas beneath. The encroachment of the viaduct structure for views from the west is softened somewhat by the line of street trees and the visual interest provided by the waterfront streetcar, which is located just west of the viaduct.

The viaduct's visual dominance is reinforced by its noise impacts, which provide a constant background of engine and exhaust noise, with the irregular thumps of tires crossing expansion joints and the occasional noise peaks of heavy trucks moving at high speeds. A pedestrian moving between the waterfront and downtown along any of the perpendicular streets is presented at the viaduct with a radical change in the visual environment, which is reinforced by the intrusive noise levels. The viaduct shadows areas under the structure and lacks relieving vegetation or other amenities. It's the longest view of parked cars in the city. The visual environment opens suddenly when one passes under the viaduct; the space above is open, and street trees frame one side of the sidewalk and buildings the other. The intrusion of traffic noise recedes gradually.

Starting at about Union Street, the lower, southbound level of the existing viaduct begins a transition to a side-by-side configuration. At that point, it begins to move off the Alaskan Way surface street right-of-way to a separate alignment to the east, which climbs the hill to the Battery Street Tunnel. Where the transition to a side-by-side configuration occurs, vertical and horizontal supports are not in the same plane, but jut out from the roadway levels. This more complex design is illustrated in Exhibit A-58, the view north from Waterfront Park (a Seattle designated viewpoint). The location further to the east reduces the scale somewhat for pedestrians on the promenade along the waterfront. The transition to a side-by side configuration increases the width of the viaduct at the Pike Street Hillclimb pedestrian corridor. The movement to a separate corridor reduces noise intrusion north of Pine Street. Visual impacts from the waterfront are largely blocked by existing development north of Pine Street.

Viewer populations in the waterfront vary considerably. The waterfront is listed by the Seattle-King County Convention and Visitors Bureau as the second most visited attraction in the Seattle area, with approximately 4.2 million visits in 1999 (Seattle-King County Convention and Visitors Bureau 1999). In the vicinity of Yesler Way, Columbia, and Marion Streets, there is a large component of pedestrian viewers who are likely to be ferry commuters. There is likely to be a component of tourists as well as other individuals walking between the waterfront and Pioneer Square.

The area between Piers 54 and 63 is likely to have the highest pedestrian volumes of elective and tourist viewers along the waterfront. These piers contain retail stores and restaurants; Waterfront Park; the Seattle Aquarium; and views, activities, and other amenities. They are also connected with the Pike Place Market via the Pike Street Hillclimb and with the Seattle Art Museum and Benaroya Hall along University Street and Harbor Steps.

The pedestrian volumes are highest during the summer. Pedestrian counts at Pier 56 in late May 1997 were about 5,000 people in a 4-hour midday period (Seattle DCLU 1999). September 2001 lunch hour volumes were about 1,580 people, with daily volumes of about 3,750 people (SDOT 2001). Estimated pedestrian volumes accessing the Aquarium are about 4,000 for a peak summer day (Seattle 1995). Pedestrian volumes fall off to the north of Pier 59 due to the lower level of pedestrian attractions. Pier 66 incorporates a pedestrian bridge connection to Elliott Avenue, but average daily pedestrian volumes in the areas are believed to be relatively low. Pier 66 experiences very high pedestrian levels when cruise ships dock; however, the distribution of cruise ship patrons from the site is unknown.

Viewer sensitivity is likely to be lower among commuters accessing the Colman Dock Ferry Terminal and highest among tourists and others at Piers 54 through 59 and the Aquarium.

Light and Glare

The lighting for the existing viaduct upper level is similar to normal arterial street lighting. The presence of a lighted structure above grade emphasizes the extent to which the structure cuts across the orientation of surface streets for nighttime views and the degree to which the viaduct is an intrusive element. The elevated light source is an additional intrusive source of glare for upper windows of buildings that would not be directly affected by lighting for surface streets.

4.2.4 Pike Place Market Area

This area is defined for the purpose of this analysis as stretching from Union Street to Lenora Street on the east side of the existing AWV Corridor. The area of the Pike Place Market Historical District and the Pike Place Development Authority is somewhat smaller. The larger area was selected for this analysis to include related development of a similar character, including the privately owned south arcade that connects to the Pike Place Market and the retail and restaurant uses north of the Pike Place Market on Western Avenue, which add to the retail character of the area.

The existing viaduct leaves the alignment of Alaskan Way near Pike Street and continues on a separate alignment that climbs the hill west of the Pike Place Public Market and connects to the Battery Street Tunnel. The viaduct transitions from a stacked configuration to a side-by-side configuration in this area. The northbound and southbound lanes are at the same level from about Pine Street.

Views From the Road

Views for occupants of northbound vehicles on the viaduct include the parking structure beneath Victor Steinbrueck Park in the center of the view, with the park above and office buildings and residential towers as the skyline. Views to the east include the top of several residential buildings. Views to the west include the waterfront, Elliott Bay, and the Olympic Mountains.

The alignment of the viaduct shifts slightly at Steinbrueck Park and the grade increases slightly, such that views to the west are largely obscured except for the tops of buildings. Where the viaduct levels again near Elliott Avenue, views include a mix of buildings in the foreground, including the Empire Laundry (the corner of which abuts the viaduct) and the Hull Building that is briefly centered in the view as the viaduct curves to enter the Battery Street Tunnel. These buildings are City of Seattle designated landmarks. These views of buildings are present for a short period of time as the vehicle moves through the area. They lack the vividness of the views of water and mountains to the west in views further to the south. This view of buildings also lacks a high degree of unity of composition.

Views for occupants of southbound vehicles on the viaduct are shown in Exhibits A-67 and A-69 at Pine Street and Elliott Avenue, respectively. These views down the corridor are similar to the views from Steinbrueck Park. The view at Elliott Avenue is primarily of the downtown skyline. The existing viaduct is largely below the vertical horizon of the roadway at this location. From further to the south at Pine Street, the scene down the alignment of the roadway features the arch trusses of the sports complex to the south, with Mount Rainier visible behind them on clear days. The views of Elliott Bay to the southeast from both viewpoints include the port facilities and cranes of Harbor Island with ferry and boat activity in the water. As the southbound lanes transition to the lower level of the viaduct, a brief view down the Alaskan Way surface street opens up and features the waterfront piers. Views southwest on the lower level of the viaduct largely feature the rooflines of the transit sheds on piers.

Views Toward the Road

The Pike Place Public Market is a substantial center for shopping, restaurants, and other uses. Due to its being on the top of the hill above the existing viaduct, the road is visible only from west-facing windows of buildings, public streets such as the Pike Street Hillclimb, and open space such as Victor Steinbrueck Park at Western Avenue and Virginia Street. The viaduct is below the grade of Steinbrueck Park, but is visible as a long corridor to the south as seen in Exhibit A-63.

Persons looking west at the edge of the park railing also can look down on the viaduct roadway and across the roofs of buildings to the west to views of Puget Sound, West Seattle, and the Olympic Mountains. The view to the south is centered upon distant views of Mount Rainier, with visual interest provided by the arched trusses of Safeco Field and the Seahawks Stadium. The view to the south is framed on one side by the downtown skyline, which contrasts with the natural water feature of Puget Sound and the Olympic Mountains on the other side. The complex of waterfront piers and activities is clearly visible.

The existing viaduct as seen from above is a linear feature aligned with the shoreline. The viaduct in the foreground presents the viewer with fast-moving vehicles and noise that emphasize its character as a high-speed traffic arterial. The character of the viaduct in middle and distant views is as a linear feature that becomes smaller in scale but obscures cross streets and the bottoms of adjacent buildings and generally reduces the compositional unity of the urban fabric.

Buildings in the area are largely above the viaduct and look down on views, similar to Exhibit A-63. Such views are available from portions of the north arcade of the market, especially the Joe Desimone Bridge over Western Avenue, where window access is not blocked by vendor stalls. Existing buildings fronting Western Avenue block views of the viaduct from most of the Main Arcade windows. Views down the Pike Street Hillclimb perpendicular to the viaduct are very limited (except from the terrace areas below Western Avenue) because of the elevation above the waterfront, the blockage of views by the pedestrian overpass over Western Avenue with its stairway structure on the east side of Western Avenue, and the screening provided by buildings and trees. From the terrace areas below Western Avenue, the viaduct dominates views to the west, not only because of its proximity, but also because the terraces are at elevations that place the viaduct traffic levels closer to the line of sight toward the waterfront.

The Pike Place Public Market is rated as the most popular tourist destination in Seattle, with about 5.6 million visitors in 1999 (Seattle-King County Convention and Visitors Bureau 1999). The Pike Place Market Public Development Authority estimates 9 million visitors per year, including local residents (Pike Place Market Public Development Authority 2002). This represents a very large potential viewing population. It is likely that Steinbrueck Park (a Seattle designated viewpoint) is the primary viewing location because of its accessibility and the attractiveness of the panoramic views of Elliott Bay and the downtown skyline. The Pike Street Hillclimb carries high pedestrian volumes. At both locations, viewer sensitivity is likely

to be high, with impacts relatively higher on the Pike Street Hillclimb because of the location of the viaduct as a barrier to views and the necessity to walk under the structure.

Light and Glare

Lighting for the elevated structure between Pike Street and Elliott Avenue is generally below the street level of Western Avenue and the buildings to the east. North of Elliott Avenue, the elevated light source is an additional intrusive element that emphasizes the presence of the structure cutting across the street grid and is a source of direct glare for upper windows of buildings that would not be directly affected by lighting for surface streets.

4.2.5 Belltown

This area is generally bounded by Stewart Street on the south, Fifth Avenue on the east, Denny Way on the north, and the waterfront on the west. For the purposes of this analysis, the boundaries of this area end at the east side of the Alaskan Way surface street; views from the waterfront to the east are included in the north waterfront area.

Views from the road are discussed in the Pike Place Public Market subsection above.

Views Toward the Road

The existing viaduct is visible in this area where the structure transitions from an over-under to a side-by-side structure. It climbs the hill west of the Pike Place Public Market and curves to the north to cross Elliott and Western Avenues and enters the portal of the Battery Street Tunnel at First Avenue.

Views to the west along Lenora, Blanchard, and Bell Streets from Western Avenue feature the viaduct as a single horizontal level silhouetted against the water of Elliott Bay, with the West Seattle ridgeline in the background. The waterfront is not visible because of the line of sight over the hillside.

As the viaduct curves, it is a prominent feature from north–south streets such as Elliott and Western Avenues. Elliott and Western Avenues both slope slightly to the north. The single level of the structure and vertical supports at both sides of the street and in the center substantially block views along both streets. Views to the north along Western Avenue from north of the viaduct at Lenora Street are shown in Exhibit A-74. Western Avenue is a one-way street northbound and provides northerly views to both occupants of vehicles and pedestrians. Views along Western Avenue to the north are obscured by the viaduct. The orientation of Western Avenue results in the view

terminating in the silhouette of the Magnolia area, a neutral to positive natural feature as the distant horizon, but not a vivid or dominant feature.

A similar view is available along Elliott Avenue (a Seattle designated scenic view route), but it's slightly different orientation between Bell and Lenora Streets results in views of the peaks of the Olympic Mountains in the distance. Elliott Avenue is a one-way street southbound. The existing view to the south from Bell Street is shown in Exhibit A-75. For a vehicle occupant or pedestrian, the viaduct is a substantial feature cutting across the view. The downtown skyline is visible over the viaduct and is the dominant feature of the view to the south.

The existing viaduct structure acts as a barrier to the visual continuity between the neighborhoods on either side and likely impedes pedestrian movement along these streets. Because the lanes are side-by-side and at a diagonal to the streets, the width of the undercrossing is much greater. This results in a longer area subject to the change in visual character, shadows, and noise in the corridor than is present elsewhere.

Pedestrian volumes are not documented for this portion of the Belltown area. Pedestrian counts in September 2001 at Second Avenue and Lenora Street, several blocks away, were about 1,000 people during the lunch hour and about 2,800 people for the weekday total (SDOT 2001). The Belltown area is one of the fastest growing neighborhoods in Seattle, with substantial multi-family residential development in the past decade. Retail and restaurant uses are concentrated along First and Second Avenues. Elliott and Western Avenues have relatively few destinations for pedestrians. Residences in the area north of the existing viaduct are likely to be the most sensitive viewer population, and most are likely affected by the barrier effect of the present viaduct. Residents and others to the east can avoid crossing the viaduct by circulating on First Avenue and streets to the east.

Light and Glare

North of Elliott Avenue, the elevated light source is an additional intrusive element that emphasizes the presence of the elevated structure cutting across the street grid and is a source of direct glare for upper windows of buildings that would not be directly affected by lighting for surface streets.

4.3 North Waterfront – Pike Street to Broad Street

The north waterfront area from Pike Street to Myrtle Edwards Park is characterized by a substantial change in grade in the southerly portion of the site between the waterfront and Belltown to the east. The change in grade becomes less abrupt north of Wall Street, allowing vehicular street

connections. The waterfront in this area is oriented to the northwest. A waterfront promenade approximately 12 to 16 feet wide provides a linear walkway along the entire waterfront. North of Pier 59, the historic piers on the waterfront have been removed or substantially remodeled. Piers 62 and 63 were reconstructed in the 1990s when they were purchased by the City of Seattle. The piers provide a single deck area without buildings that is used for passive viewing and special events such as a summer concert series. Pier 66 was rebuilt into a cruise ship terminal, a marina, shops, restaurants, and retail uses in the late 1990s and includes a pedestrian bridge connection to Elliott Avenue to the east, which is about four stories higher in elevation at this location than Alaskan Way. Pier 68 was replaced by the Edgewater Inn Hotel in the early 1960s and has been remodeled several times since. Pier 69 was remodeled into offices for the Port of Seattle in the 1990s. Pier 70, at Broad Street, has been remodeled several times. It retains the turn-of-the-century heavy-timber internal structure but has been sided with modern materials. It contains offices, parking, and several restaurants. The waterfront north of Broad Street currently includes the waterfront promenade and a trolley maintenance building within the Alaskan Way right-of way. The Olympic Sculpture Park is proposed to be constructed between Broad Street and Myrtle Edwards Park and includes a pedestrian overpass over the BNSF railroad and Elliott Avenue. The Alaskan Way right-of-way north of Broad Street would be substantially replaced by retaining walls and fill slopes to accommodate the proposed sculpture park.

The east side of Alaskan Way includes the BNSF railroad between Bell and Broad Streets on a franchise within the right-of-way. Between Pine and Bell Streets, development on the east side of Alaskan Way includes condominiums, a hotel, and an office building constructed by the Port of Seattle in the 1990s.

The surface roadway is generally four lanes wide in this part of the corridor with parking on both sides. Views available to occupants of vehicles traveling northbound on the surface street include port facilities such as grain elevators and office buildings along the street alignment. Views to the northeast between waterfront piers include Elliott Bay, Puget Sound, and the peaks of the Olympic Mountains.

The Alaskan Way Viaduct is not visible from this area.

4.4 North – Battery Street Tunnel to Ward Street

SR 99 continues north along the alignment of Aurora Avenue after it exits the Battery Street Tunnel. The two traffic lanes in each direction from the tunnel are joined by two-lane on- and off-ramps at Denny Way. These merge into

three mainline lanes to the north. This section of semi-limited-access highway has right-turn-only access from adjacent surface streets with a barrier in the center. Standard sidewalks and street trees bound the roadway. Development along this corridor includes a variety of motels and other buildings from one to five stories in height, largely built to the sidewalk line.

Views From the Road

Views from the roadway for drivers and pedestrians are of a six-lane urban arterial with a center barrier framed by three- to four-story buildings on both sides. Existing views are shown in Exhibit A-78. Views are generally contained within the roadway corridor by the buildings that frame each side of the corridor. Mature street trees are located adjacent to the sidewalk and provide a consistent tree canopy along this portion of the corridor. The canopy also softens the appearance of the adjacent buildings, which are largely built to the sidewalk. Visual character is diverse; there is variety in the size, design, and scale of buildings, but the visual quality is relatively unified by the consistent linear features (such as street trees), as well as the linear nature of the roadway. There are, however, few vivid features. There are brief views of Lake Union available to the northeast as the roadway crosses over the Broad Street and Mercer Street underpasses. The viewing window as traffic moves past this area is very short. This feature is unlikely to be noticed or retained by most viewers in vehicles.

Views Toward the Road

Views from perpendicular streets are of a grade-level urban roadway, but with large volumes of fast-moving traffic. The view to the east from Harrison Street is indicated in Exhibit A-79. Pedestrian volumes and viewer sensitivity along SR 99/Aurora Avenue N. are very low. There are no pedestrian-oriented retail or other establishments along the corridor to attract pedestrians. The pedestrian environment on sidewalks adjacent to Aurora Avenue N. is very uninviting due to the proximity of high-speed traffic with no intervening buffer. It is likely that pedestrians would choose parallel streets with lower traffic volumes whenever possible.

Pedestrian volumes along perpendicular streets are also low due to the mix of largely light-industrial and wholesale uses that continue to characterize this neighborhood in transition. The lack of pedestrian crossings, except at Denny Way and the Broad Street and Mercer Street underpasses, also limits pedestrian volumes. The west side of Aurora Avenue has more retail development and likely has generally higher pedestrian volumes because of the lodging and other uses oriented to Seattle Center to the west.

Views from private property in this area are likely to be from buildings adjacent to the roadway or from taller buildings a block or two from the highway where intervening buildings are shorter. Views are of a moderately wide urban arterial with high traffic volumes and speeds. In most cases, viewers would tend to look away from the street view to other buildings or notable viewpoints in the distance where possible.

Light and Glare

Lighting in this area is typical of urban arterials. The SR 99 corridor is little different from other downtown arterials in light and glare impacts to the surroundings.

This Page Intentionally Left Blank

Chapter 5 OPERATIONAL IMPACTS AND BENEFITS

This section describes the visual change created by project alternatives and the extent to which the impacts will be experienced as adverse or beneficial by viewer groups using the facility and viewing the facility within the study area. Potential mitigation measures are described in Chapters 8 and 9. Visual simulations of the alternatives are provided for viewpoints that are representative of typical views from a number of locations or of visual impacts of an alternative that are particularly noteworthy.

5.1 No Build Alternative

5.1.1 Scenario 1 – Continued Operation of the Viaduct and Seawall With Continued Maintenance

Under this scenario, the visual resources of the existing conditions will continue.

5.1.2 Scenario 2 – Sudden Unplanned Loss of the Viaduct and/or Seawall Without Major Collapse or Injury

Under this scenario, the existing viaduct will remain standing for an indefinite period, with visual impacts similar to existing conditions. At some point in the future, the viaduct and/or seawall will be out of service for an unknown period of time, but will be repairable. The structure is presumed to be closed to traffic and will not have the visual impacts of moving vehicles and the associated noise. The structure presumably will be repaired or rebuilt, and the visual context will remain similar to the existing viaduct. If the structure is removed and replaced, the options and impacts will be similar to the alternatives discussed below.

5.1.3 Scenario 3 – Catastrophic Failure and Collapse of the Viaduct and/or Seawall

Under this scenario, the existing viaduct is presumed to be out of service for an extended or indefinite period of time. Eventual replacement would be likely to be included in the range of alternatives discussed below.

5.2 Rebuild Alternative

The Rebuild Alternative includes rebuilding the viaduct in place with dimensions substantially the same as the existing structure. The seawall along the west side of Alaskan Way will be reconstructed largely with a drilled secant retaining wall and jet grouting.

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

The SR 99 roadway between S. Holgate Street and S. King Street, which is currently elevated, will become a surface roadway to just south of S. King Street under this alternative. An interchange will be constructed at S. Atlantic Street and S. Royal Brougham Way to provide a connection to those local streets and to SR 519, which connects to I-90 and I-5. The surface roadway for SR 99 will consist of three 12-foot travel lanes with 10-foot shoulders. The width occupied by the roadway and on- and off-ramps between S. Atlantic Street and S. Royal Brougham Way will be about 250 feet and will extend from about 35 feet east of to about 175 feet west of the existing viaduct.

The interchange will consist of elevated overcrossing structures for S. Atlantic Street and S. Royal Brougham Way that will cross over the SR 99 at-grade roadway. A northbound off-ramp will rise from the east side of the SR 99 at-grade roadway to intersect with the elevated structure at S. Atlantic Street and continue as an elevated structure to S. Royal Brougham Way. Both right and left turn movements onto S. Atlantic Street and S. Royal Brougham Way will be provided from the ramp. A northbound on-ramp will descend to intersect with the at-grade roadway north of S. Royal Brougham Way. A southbound off-ramp will rise from the west side of the surface roadway north of S. Royal Brougham Way and, in a similar configuration to the northbound off- and on-ramp, it will continue as an elevated structure between S. Royal Brougham Way and S. Atlantic Street. The southbound on-ramp back to the surface SR 99 also will provide a southbound and northbound connection to E. Marginal Way south of the interchange. The single northbound lane for E. Marginal Way will terminate at the S. Atlantic Street intersection.

The Alaskan Way surface street will be replaced with one-way frontage roads on both sides of SR 99 between S. Atlantic Street and S. King Street.

Duwamish Industrial Area

The general visual character of this area is not expected to change substantially. It will continue to be visually dominated by large industrial buildings used for warehousing or manufacturing, rail yards, utility facilities and similar uses.

The major viewing populations in the area are expected to remain employees and persons passing through the area on north–south streets. The sensitivity of both groups to the visual character of highway features is likely to be low, as indicated in Section 4.1.1, Affected Environment.

Views From the Road

Under the Rebuild Alternative, SR 99 will remain at-grade until just south of S. King Street but will be relocated to the west. The views from the at-grade portion of the roadway will remain parked rail cars or rail yards on the east side, with views of the Port of Seattle terminals on the west side.

Views Toward the Road

All views from the Duwamish Industrial Area will remain low in visual quality due to the lack of a vivid visual focus within the area; views will also have low visual unity due to the widely disparate range of building styles and condition and visual clutter. The SR 99 at-grade roadway will generally not be visible from the east. Views from the east will continue to be dominated by the cranes in the Port of Seattle container terminals on the Duwamish Waterway, which will continue to be the most prominent skyline feature.

Views to the west from E. Marginal Way will continue to be framed on the west side by Port of Seattle terminals and on the east by the relocated SR 99.

Light and Glare

The proposed SR 99 in this area is expected to be lighted with standard street light fixtures. The light from the highway will be a minor source of light and glare compared to the higher intensity and higher mounting height of lighting for the rail yard to the east and the Port of Seattle terminals to the west.

Sports Complex

The character of the area between S. Atlantic Street on the south and extending to about S. King Street will continue to be dominated by Safeco Field, .the Seahawks Stadium, and the Stadium Exhibition Center. The area will continue to be bounded to the east by the BNSF mainline north–south rail line through Seattle and the adjacent Fourth Avenue S., which is elevated parallel to the railroad.

Views From the Road

Occupants of vehicles northbound on SR 99 will remain at-grade and pass under the cross streets at S. Atlantic Street and S. Royal Brougham Way. The roadway will make the transition to the existing double-level aerial structure near the north end of the Seahawks Stadium beginning at about the alignment of S. Dearborn Street and rising to full elevation near Yesler Way. Views from the upper level of the rebuilt aerial structure from that point north will be almost identical to views from the existing viaduct in Exhibits A-1 and A-2.

Northbound views from both the surface roadway north of S. Royal Brougham Way and the elevated structure will be similar to the existing view

in Exhibit A-1 of the downtown skyline, with the tallest buildings providing a vivid focus and other buildings providing a balanced and coherent composition. Views to the northwest from the surface street will be blocked south of S. King Street by terminals to the west and will not allow views of Puget Sound or the Olympic Mountains over a distance equivalent to the southerly half of the existing viaduct.

The views from the southbound traffic lanes will be the surface views of the port and industrial facilities on either side of the roadway. The Port of Seattle cranes will remain the most vivid element of these views.

Views Toward the Road

Attendees at sporting events and persons passing through the area on First Avenue S. and S. Royal Brougham Way will no longer see the north–south elevated structure. Instead, the shorter east–west elevated structure to carry the local arterials and elevated frontage roads will rise to about the elevation of the existing viaduct lower level. The overall visual context of persons looking west from First Avenue and S. Atlantic Street or S. Royal Brougham Way will change little. Views will continue to terminate at a Port of Seattle terminal, which features multi-colored stacks of shipping containers with Port of Seattle cranes above. The overcrossings will extend to a point between the second and third floors of the four-story buildings that frame S. Atlantic Street.

The visual experience of drivers, passengers, and pedestrians westbound on S. Royal Brougham Way between Fourth and Occidental Avenues (where it is designated a City of Seattle Scenic View Route) will likely continue to be dominated by the bulk of Safeco Field and the Stadium Exhibition Center that tower over the street from each side. The roadway will rise to the west of First Avenue and provide some views over the container terminal to Elliott Bay and the Olympic Mountains, where it crosses the at-grade SR 99. The low visual quality of the view will continue to lack a memorable visual focus in the termination of the view at the Port of Seattle Terminal 46 with its varied composition of multi-colored stacked shipping containers.

At the entrances to Safeco Field on First Avenue S. at S. Royal Brougham Way and S. Atlantic Street, views to the west down both streets will feature the rise in the two arterials as they cross over the at-grade SR 99. With the elimination of the existing viaduct, the single skyline feature of the view will be the Port of Seattle cranes in the background. Shipping containers may be visible under the overcrossing structure and will provide a somewhat disorganized ground-level view in the middle distance. The cars and trucks on the at-grade SR-99 will interrupt any views at the ground level. The elements that frame the

view will be the low-rise buildings across First Avenue S. adjacent to and north of Safeco Field. The view with visually dominant features for pedestrians along First Avenue S. will remain to the north, where the downtown skyline provides a vivid focus.

The visual context for the Seahawks Stadium will change primarily because of the elimination of the existing on- and off-ramps from the viaduct to First Avenue. This will change the view from the northwest entrance, which is aligned with Railroad Way. Removal of the current ramps will remove a structure that dominates the surrounding buildings. In its absence will be several blocks of a surface street bounded by industrial and commercial buildings, including the designated landmark, the Flatiron Building at First Avenue. This historic building will enjoy a context similar to that which existed when it was constructed near the turn of the twentieth century, without the dominant visual encroachment of the existing on-ramp.

Depending on the details of design of the surface street and the extent to which street trees, widened sidewalks, and landscaping are installed, this corridor could become an inviting boulevard-style entry to the stadium. The terminus of the view will continue to be the reconstructed aerial structure and the low-rise buildings and stacked shipping containers at Terminal 46. The view will be similar to that of the Aerial Alternative indicated in Exhibit A-5; however, vertical supports for the Rebuild Alternative will be more closely spaced, as on the existing viaduct as shown in Exhibit A-4.

The changes in visual context are not likely to substantially change the experience of the viewing population in the area, which is composed primarily of attendees of sports events and persons driving local streets. Attendees at sporting events and vehicles traveling through the area are not likely to be much affected either by the aerial structure or the new interchange. The existing light-industrial and commercial environment will continue to set the overall visual context. The removal of the eyesore of the existing ramps as viewed from the Seahawks Stadium northwest entrance will be replaced by a more intact and unified landscape.

Light and Glare

The proposed at-grade SR 99 in this area is expected to be lighted with standard street light fixtures in this area. The light from the highway will be a minor source of light and glare compared to the higher intensity and higher mounting height of lighting for the Port of Seattle terminals to the west and is likely to be typical of urban street lighting levels.

5.2.2 Central – S. King Street to Battery Street Tunnel

Views From the Road

Views for vehicle occupants traveling northbound on the rebuilt viaduct will be virtually unchanged from existing conditions. Northbound views will continue to be dominated by the downtown skyline. Views to the northwest and west will continue to include in the foreground the traditional transit sheds of the older piers and the parking area, terminal building, and ramp headwalls of the Colman Dock Ferry Terminal, sometimes with ferries at dock. Distant views will remain of Puget Sound with the Olympic Mountains in the distance. Near views of the waterfront are available from the far left lane. A solid railing will obscure more of the view of the waterfront. Views from the elevated roadway to the south will continue to be framed and constructed by the horizontal level above and the vertical support columns and will include the waterfront and Elliott Bay and be centered on the roadway and Port of Seattle terminals on the Duwamish Waterway and Harbor Island.

Views Toward the Road

Views of the rebuilt viaduct from the perpendicular streets in the historic district will remain about the same as indicated in Exhibits A-28. The horizontal character of the rebuilt viaduct will continue to contrast with the generally vertical character of historic brick buildings and bear little relation to the scale of the horizontal divisions of buildings into regular floors. The viaduct will continue to cut across the east–west street corridors and interrupt the rhythm of the streetscape framed by building fronts, sidewalks, street trees, and the roadway itself. The concrete structure will continue to contrast in materials and color with the predominant red brick of the historic buildings. The presence of automobiles above grade will continue to be at variance with a historic environment in which all activities are geared to the street level. As indicated in Exhibit A-12, the rebuilt viaduct will continue to be a visual barrier between the historic district and the waterfront. Traffic on the rebuilt viaduct will continue to be both a visual and noise intrusion. The impacts of the rebuilt viaduct will continue to be greater at the westerly edge of the historic district and decline at greater distances.

The visual impacts of the rebuilt viaduct, reinforced by noise and other impacts, are likely to continue the focus of the Pioneer Square Historic District on First Avenue and other streets and minimize connections to the waterfront. The response to the low visual quality of the elevated structure is likely to continue to be avoidance of the areas immediately adjacent to the viaduct,

with tourists, shoppers, and restaurant patrons congregating in the areas away from the western edge of the district.

Impacts on the central waterfront are likely to be almost identical to the existing viaduct as indicated in Exhibits A-54 and A-59. The additional vertical and horizontal supports provided in the vicinity of Pike Street where the viaduct makes the transition from stacked to side-by-side lanes will add visual complexity and tend to be a slightly greater visual barrier, as indicated on Exhibit A-59.

The Rebuild Alternative will provide limited opportunities to support policies to connect downtown with the waterfront by improving pedestrian connections and emphasizing view connections to the waterfront.

Light and Glare

The proposed lighting for the reconstructed viaduct is expected to be similar to the existing structure. Lighting will continue to emphasize the extent to which the structure cuts across the orientation of surface streets for nighttime views.

5.2.3 North Waterfront – Pike Street to Broad Street

The visual context along the waterfront north of Pike street is likely to be virtually identical to existing conditions, after completion of seawall reconstruction. The existing viaduct will remain on its existing corridor to the east of Alaskan Way north of Pike Street.

5.2.4 North – Battery Street Tunnel to Ward Street

North of the existing Battery Street Tunnel portal, no changes are proposed to SR 99/Aurora Avenue N., and visual impacts will be virtually identical to existing conditions.

5.2.5 Seawall – S. King Street to Myrtle Edwards Park

After completion of seawall reconstruction, the physical configuration of the waterfront and the relationship to the rebuilt viaduct will be virtually the same as described for existing conditions.

5.3 Aerial Alternative

This alternative incorporates an aerial structure that is generally about half-again as wide as the existing viaduct, with two roadway decks, one above the other, as in the existing viaduct. Spacing between vertical columns, however, is at about twice the distance as the existing viaduct. The route of the Aerial Alternative is similar to the existing viaduct except for the alignment south of

S. King Street, where the aerial structure is generally located west of the existing viaduct.

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

This alternative includes a double-level aerial structure with ramps from both levels extending to both S. Atlantic Street and S. Royal Brougham Way.

An option also under consideration is SR 99 at-grade with overcrossings for S. Atlantic Street and S. Royal Brougham Way, as discussed under the Rebuild Alternative (see Section 5.2.1) above. The impacts of this option are discussed under the Rebuild Alternative above.

Duwamish Industrial Area

Views From the Road

Views from the roadway will be similar to existing views from the at-grade roadway, which are framed by industrial buildings or rail yards on both sides.

Views Toward the Road

The impacts of the proposal will be similar to the existing viaduct. The Aerial Alternative will transition from an at-grade roadway to an elevated structure a little further to the south. The visual impacts of the additional aerial structure will be negligible. The area to the east of the SR 99 alignment is largely industrial. Views down east–west streets currently terminate in rail yards. The extended viaduct will be a minor element of middleground views from the east. The cranes from the Port of Seattle container terminals on the Duwamish Waterway will continue to dominate the skyline, with the wooded West Seattle ridge as background.

Views from E. Marginal Way to the west will be separated from the aerial structure by railroad lines with parked rail cars. The skyline behind the aerial structure is dominated by the 200-foot-high Starbucks Center building with Beacon Hill behind it. The addition of several hundred feet of aerial structure is not likely to be a noticeable change in the visual context.

Light and Glare

The proposed at-grade SR 99 in this area is expected to be lighted with standard street light fixtures. The light from the highway will be a minor source of light and glare compared to the higher intensity and higher mounting height of lighting for the Port of Seattle terminals to the west and is likely to be typical of urban street lighting levels.

Sports Complex

The new aerial structure will be about 7 feet higher and 20 feet wider than the existing viaduct, except where ramps enter and leave the roadway. It is located to the west of the existing viaduct in the vicinity of S. Royal Brougham Way.

Views From the Road

Occupants of vehicles northbound on the new aerial structure are likely to have essentially the same views as from the existing viaduct, as indicated in Exhibits A-1 and A-2. The downtown skyline will continue to dominate views along the alignment of the roadway to the north. Views to the northwest and west across the container terminals include Elliott Bay in the middleground and the peaks of the northern Olympic Mountains in the distance on clear days. Drivers traversing the new interchange are likely to be required to pay more attention due to entering and exiting traffic and are less likely to divert attention to the side in that area. Views to the west will always be available to passengers. The greater width of the roadway and the likelihood of solid barriers at roadside rather than the current rails are likely to block near views of the container terminal to some extent.

The views from the southbound lower-level traffic lanes will be similar to existing views, with more orientation to the roadway due to the less vivid southwest views of port and industrial facilities, the restriction of the vertical range of views by the upper deck, and vertical columns. Column spacing, however, will be at about twice the distance of the existing viaduct, resulting in less blockage of the view for passengers to the west, but with similar overlap for views closer to the alignment of the road. The sides of the roadway will likely be enclosed by a solid barrier, rather than rails, resulting in more constriction within the horizontal range of the view.

Views Toward the Road

The majority of the viewing population will be composed of attendees at sporting events and persons passing through the area on roadways. They are not likely to perceive a substantial change in the visual environment. The aerial structure, like the existing viaduct, will be generally blocked from line of sight from First Avenue S. by intervening buildings. It will be seen as an extended horizontal element above S. Atlantic Street and S. Royal Brougham Way where they cross under the viaduct. New ramp structures will be partially obscured by buildings from most viewpoints east of First Avenue.

A vehicle or pedestrian traveling to the west down S. Royal Brougham Way, a designated City of Seattle Scenic View Route, is likely to be most conscious of the bulk of Safeco Field and the Stadium Exhibition Center that frame and

dominate the street. The views to the west down S. Atlantic Street and S. Royal Brougham Way will continue to terminate in an area of visual disorganization at a Port of Seattle terminal where multi-colored shipping containers are stacked. The horizontal lines across the view produced by the aerial structure will not block or disrupt views of compositional harmony.

For baseball fans congregating on First Avenue, the new ramps are likely to be noticed but a minor part of the visual environment. The aerial structure will neither be vivid, nor particularly an encroachment, given the low unity of street level views to the west. The vehicles moving over it and the associated noise will tend to reinforce notice, but not as a central focus. The more attractive view available for pedestrians along First Avenue will remain to the north, where the downtown skyline provides a vivid focus with the Seahawks Stadium framing the east side of the view.

For viewers at the Seahawks Stadium complex to the north, most views of the aerial structure will be blocked by a row of loft buildings that front First Avenue S. The major view is down the diagonal Railroad Way that is aligned with the northwest entrance to the stadium indicated in Exhibit A-5. The on- and off-ramps from the existing viaduct will be eliminated in the Aerial Alternative. The absence of the ramps, which currently dominate the streetscape, will leave a surface street partially framed by two- and three-story industrial and commercial buildings. This corridor could, however, become an inviting entry to the stadium. Incorporation of street trees, widened sidewalks, and landscaping could create a boulevard-style entry to the stadium. The terminus of the view will continue to be the horizontal lines of the aerial structure and the low-rise buildings and stacked shipping containers at Terminal 46.

The viewing population of attendees of sports events and persons driving local streets are likely to be moderately sensitive to the visual context, but the distance to the SR 99 corridor of one to several blocks, the blockage by intervening buildings in many areas, and the lack of visual focus provided by the shipping terminals west of the SR 99 corridor renders the Aerial Alternative a minor intrusion. For seats in either sport facility with views of Puget Sound or the Olympic Mountains in the distance, the aerial structure will be well below the line of sight.

Light and Glare

Lighting in this portion of the corridor is expected to be similar to existing conditions, with no change in glare impacts to the surroundings.

5.3.2 Central – S. King Street to Battery Street Tunnel

In this section of the alignment, the Aerial Alternative includes two levels in a configuration similar to the existing viaduct but wider. In the area between S. King Street and Yesler Way, it is substantially further to the west and closer to the waterfront. An off-ramp from the upper, northbound lanes is proposed at Seneca Street in a configuration similar to the existing off-ramp at that location. An on-ramp is proposed at Columbia Street in a similar configuration to the existing on-ramp. In both cases, the radius of the curve where the ramp diverges or merges with the mainline is somewhat greater and the off-ramp is separated from the mainline further to the south, which results in a substantially wider aerial structure. A surface street for northbound traffic will be located at-grade beneath the aerial structure.

Views From the Road

Views from the road are discussed below for the entire segment from S. King Street to the Battery Street Tunnel.

Views for vehicle occupants traveling northbound on the new aerial structure will be virtually unchanged from existing conditions. The downtown skyline will continue to dominate northbound views. Views to the northwest and west as indicated for the existing viaduct in Exhibit A-16 will continue to include elements of the waterfront in the foreground, including the Colman Dock Ferry Terminal. Distant views will include Puget Sound with the Olympic Mountains in the distance. The additional width of the aerial structure and a solid barrier rather than the existing railing will cut off some of the near view of the waterfront.

In the central area, northbound views will be similar to views from the existing viaduct, centered upon buildings in the Belltown area with western views of Elliott Bay and the Olympic Mountains until obscured by adjacent development and the vertical alignment. Where the aerial structure levels near Elliott Avenue, views include a mix of buildings prior to entering the tunnel.

Southbound views from the new aerial structure will be similar to views from the existing viaduct shown in Exhibit A-68 and views from Steinbrueck Park shown in Exhibit A-64. The vertical and horizontal supports for the upper level, however, differ somewhat from the existing configuration, as indicated in comparing Exhibit A-67 to A-68. These additional structural elements will obscure somewhat the arch trusses of the sports complex and views of Mount Rainier to the south. The views of Elliott Bay to the southwest are also obscured; however, the views have less of a vivid focus, featuring port facilities and cranes of Harbor Island with some views of Elliott Bay and boat

activity in the water. As the southbound lanes transition to the lower level of the viaduct, views southwest on the lower level of the viaduct largely feature the truncated rooflines of the transit sheds on Piers 54 to 59. The wider spacing of columns allows additional opportunities for perpendicular views to the side by passengers. For views along the alignment of the views, the columns overlap and substantially obstruct views, notwithstanding the spacing.

Views Toward the Road

Pioneer Square Historic District

The new aerial structure will be a prominent feature in street-level views from the Alaskan Way surface street to the east toward the historic district, as indicated in Exhibits A-8 and A-18. The aerial structure will be substantially wider than the existing viaduct and will be substantially closer to the west side of Alaskan Way. The west side of the new aerial structure will be about 60 feet west of the existing viaduct at S. Jackson and S. Washington Streets and about 40 feet further west at Yesler Way. The structure is also about 7 feet higher, with a solid barrier at the edge rather than the existing rail.

The new aerial structure will continue to dominate near views from the west and obstruct views of historic buildings. It will be a substantial encroachment on the visual environment from the existing Washington Street Boat Landing (proposed to be relocated to the west). Some views of downtown high-rise buildings further to the north will be visible over the aerial structure; however, the nearby historic district will be substantially obscured. The visual dominance of the new aerial structure will be reinforced by the distraction of vehicles flashing by, which will add to the perception of a visual barrier. The vertical columns of the aerial structure will be spaced further apart than the existing viaduct. This will reduce the number of elements that block views, but will not change the overall impact of the wider structure as a visual barrier.

Views of the aerial structure looking west from the perpendicular streets within the historic district will be similar to views of the existing viaduct as indicated in Exhibits A-25 and A-29 from Yesler Way at First and Western Avenues. The horizontal levels of the new aerial structure will be similar in character to the existing viaduct, although the structure will be wider. The number of vertical supports will be less and the spacing will be further apart. This is reflected in the views down Yesler Way (a Seattle scenic view route), where the columns are set back from the east–west street corridor, rather than closely framing and sometimes interrupting the street as with the existing viaduct.

Even with the more open appearance, the aerial structure will continue to be a visual barrier between the historic district and the waterfront. The aerial structure will cut across the east–west street corridors and interrupt the rhythm of the streetscape and the unity of architectural style, the inherent interest of the buildings, the unity of composition, and complementary elements of the streetscape. The horizontal character of the aerial structure will contrast with the generally vertical character of historic brick buildings and bear no relation to the scale of the horizontal divisions of buildings. The concrete structure will continue to contrast in materials and color with the predominant red brick of the historic buildings. The almost instantaneous appearance and disappearance of vehicles as they cross the street corridor will continue to be a visual distraction. The above-grade traffic will continue to be at variance with a historic environment in which vehicular activities are geared to the street level. Traffic on the aerial structure will continue to be both a visual and noise intrusion.

Close to and underneath the viaduct, the greater spacing between vertical elements will provide some reduction in the density of the barrier produced by the aerial structure, as illustrated in Exhibit A-13. The greater width of the new structure, however, increases the area subject to change from a street open to the sky to a shadowed, enclosed space in which street trees and other vegetation are absent, reinforced by noise from above that reverberates in the space beneath. The corridor containing the aerial structure will continue to be observed as a substantial change in most features that characterize the street network in the balance of the historic district.

The population of viewers in the Pioneer Square Historic District is likely to continue to be high and include persons engaged in activities that make them sensitive to the visual context. The visual impacts of the aerial structure, reinforced by noise and other impacts, will continue to be greater at the westerly edge of the historic district than in the easterly portions. The response to the low visual quality of environment close to the aerial structure is likely to continue to be avoidance of the areas immediately adjacent to the aerial structure. This is likely to continue the focus of activities oriented to tourists, shoppers, and restaurant patrons on First Avenue and other streets to the east.

Views from private property will be similar to views of the existing viaduct. Most views from buildings will be down streets perpendicular to the SR 99 corridor. As with all visual impacts of the viaduct, they will be more severe closer to the new aerial structure. Some buildings fronting the west side of First Avenue will have views of the new aerial structure from rear, west-facing windows where intervening buildings facing Alaskan Way are lower

than the viaduct. Impacts from buildings that are not adjacent are likely to be similar to street-level impacts depicted in Exhibits A-25 and A-29, with second- to fourth-floor offices and residences having a direct view of vehicles. Upper floors of buildings higher than six floors will tend to look over the aerial structure to more distant views.

Buildings adjacent to the viaduct are likely to have ground floor views similar to the street level pedestrian views shown in Exhibit A-13. The distance between the new aerial structure and adjacent buildings will be somewhat greater between S. King and S. Washington Streets, and about the same or closer to the north of S. Washington Street where the on-ramp to Columbia Street becomes a separate parallel structure. Views from second to fourth floors will look directly onto traffic similar to the existing viaduct. Upper floors of buildings higher than six floors will tend to look over the aerial structure, which generally will not be within the line of sight to the west and will not distract from more distant views of Puget Sound and the Olympic Mountains.

The Aerial Alternative will provide limited support to policies in the Pioneer Square Neighborhood Plan to weave the east–west streets to the waterfront by improving pedestrian connections, to emphasize view connections to the waterfront, or to restore the Washington Street Boat Landing as the centerpiece of the south waterfront. The widening of the structure and the placement closer to the water will tend to work against enhancing the relationship to the waterfront.

Commercial Core

The new aerial structure, like the existing viaduct, will be more prominent in views from a closer distance and from topography that places the viewer more in line with the horizontal levels. The east–west streets between Alaskan Way and Western Avenue are nearly level. Streets east of Western Avenue slope, with the streets further to the north sloping more steeply. The grade change between First Avenue and the waterfront varies from about three stories at Seneca Street to over eight stories at Pike Street.

The scale and character of the proposed aerial structure are illustrated in Exhibits A-45 and A-48, which show the views west from University Street at First Avenue and Western Avenue. These views are typical of the visual impacts of the aerial structure from most east–west streets at these distances. Impacts of the new aerial structure will be similar to the existing viaduct, as shown in Exhibits A-44 and A-47. The major difference between the new aerial structure and the existing viaduct is the greater separation of vertical

supports. The greater separation between columns results in less constriction and interruption of the views down the street corridor.

The new aerial structure will continue to interrupt the street corridor with horizontal elements that serve as a contrast to the visual quality of the street, which is open above and framed on each side. The horizontal levels will block elements of the views beyond. Some of the features of the pier structures on the waterfront will be obscured. The water features of Puget Sound and hills and mountains in the distance will be blocked and obscured. Even with the views under and past the aerial structure, the roadway structure will remain the dominant feature of the landscape. Other features along the waterfront and the distant features of the landscape such as the water, hills, and mountains will remain minor elements. In addition to the static features of the aerial structure, the movement of vehicles across the field of view will further reinforce the extent to which the aerial structure will draw attention away from the other elements of the landscape. Ramps at Seneca Street will continue to obstruct views of the Olympic Warehouse building, a Seattle designated landmark.

Features on the surface will reinforce the visual dominance of the aerial structure. Shadows will mark a change in visual texture on the surface street. The area under the aerial structure will not support street trees or other landscaping. In addition to visual changes, noise will reinforces the contrast and add an additional dimension of dissonance.

An additional perspective from adjacent to the aerial structure is provided in Exhibit A-37, illustrating the view under and along the viaduct. This view to the northwest from Marion Street illustrates the additional width of the structure and the additional width from longer ramp transitions as ramps separated from the main structure. This view also shows the wider spacing of vertical columns, as compared to the existing viaduct in Exhibit A-36. The new structure will continue to dominate the landscape. The environment under the structure will continue to lack distinctive or interesting visual features such as street trees, landscaping, or lively adjacent uses. In the middle and distant views, visual elements of the waterfront, the water, and the mountains will be visible between columns. These elements will be minor in scale compared to the overwhelming visual dominance of the aerial structure.

Views at a somewhat greater distance will illustrate the same reduction in the relative size of the aerial structure in relation to other elements of the landscape as observed for the existing viaduct. This is shown in Exhibit A-45, the view from First Avenue at University Street. At this location, the aerial structure will assume a less dominant role among the features of the

landscape given the greater availability of views over the structure of Elliott Bay and West Seattle in the distance. It will continue to cut across and contrast with the orientation of the view down University Street. It will obscure many of the features of the waterfront, including the piers and the water. As such, it will interrupt the visual unity that otherwise might exist and will tend to remain the dominant feature of middle and distant views and an encroaching feature.

The visual impacts of the aerial structure will decrease for an observer further to the east, as it becomes a relatively smaller component of views. In addition to the effects of distance on relative scale, views over the viaduct structure become more prominent. As the topography generally increases to the east, the aerial structure, although still visible, will not block the views of distant elements of the landscape. At the distance of Fourth or Fifth Avenue, the aerial structure will not interrupt the unity of views or function as a dissonant feature.

Viewer populations in the Commercial Core are likely to remain high but vary in viewer sensitivity according to activities. The highest pedestrian populations are likely to continue to occur along Marion Street, where a grade-separated pedestrian connection to the Colman Dock Ferry Terminal is located. The most sensitive viewers are likely to be associated with leisure and cultural activities. The greatest concentration of such uses near the corridor is on University Street, where Harbor Steps provides pedestrian-oriented open space and connects to the Seattle Art Museum and Benaroya Hall. The open space at these locations attracts tourists as well as office workers seeking sun and an outdoor space at midday. University Street is also within walking distance of the Pike Place Market (discussed below).

Views from private property include employees and residents in buildings that face the viaduct and from buildings along perpendicular street corridors. Buildings east of Western Avenue generally will not have views of the aerial structure because intervening buildings block the line of sight. The exception is views down street corridors. In these cases, ground-floor impacts are likely to be similar to the street-level pedestrian views in Exhibit A-48. Midfloor views down street corridors will be similar to Exhibit A-45. Second to fourth floors at the level of the decks of the viaduct will experience view blockage, and upper floors will look over the viaduct and enjoy unobstructed distant views. Most of the buildings directly adjacent to the viaduct are close to the height of the viaduct; ground floor impacts will be similar to Exhibit A-37 and upper floor impacts will include view blockage and the intrusion of cars flashing past at close proximity. The aerial structure will become an increasingly smaller element of the visual environment from higher floors.

The character of the viaduct from above will not be much different from the view of other streets.

The Aerial Alternative will provide limited support for the Downtown Urban Center Neighborhood Plan policies for public development to make a positive contribution to the downtown physical environment by enhancing the relationship of downtown to its spectacular setting of water, hills, and mountains; preserving important public views; ensuring light and air at street level; and establishing a high-quality, pedestrian-oriented street environment.

Central Waterfront

The discussion of the central waterfront in this section focuses on the segment between Yesler Way and Pike Street.

The greatest visual impacts of the aerial structure will be on pedestrians on the waterfront promenade on the west side of the Alaskan Way surface street. The aerial structure, like the existing viaduct, will frame the eastern boundary of the waterfront. Exhibit A-55 provides a typical view down the length of the waterfront, with water-related piers on one side and the aerial structure on the other. The new aerial structure will be wider and closer to the waterfront than the existing viaduct. It will screen and block views of downtown to the east. Because it comes closer to the pedestrian promenade, it will tend to block more of the downtown high-rise towers rising above it. The continuous structure will screen and obscure the basic fabric of downtown. The wider spacing of vertical columns will reduce the number of elements that block ground level views to the east; however, for linear views along Alaskan Way, the overlap of columns will still remain an effective visual barrier. There will be little visual connection to the lower level of buildings to the east, especially when looking north or south where columns overlap. The shadows will obscure the ground floors of buildings and the upper levels will obscure middle and upper floors. Visual impacts of the structure will be reinforced by the dynamic elements of moving vehicles and the accompanying noise.

The uniform horizontal elements and vertical supports of the aerial structure allow little opportunity for recognition of the basic structure of the city it traverses. Streets that break the city into blocks form the basic structure of downtown. Streets are framed by buildings and a variety of other elements such as shop windows, street trees, and in some cases, landscaping and congregating areas. With the aerial structure in place, there is little sign of cross streets. They are marked by the presence of traffic signals and queued cars, not by the frame of buildings and the continuity of sidewalks and other elements.

For closer views from the Alaskan Way surface street up perpendicular streets, the new aerial structure, like the viaduct, will be high enough to block the line of sight of pedestrians to the top of buildings behind. The new aerial structure will therefore remain the dominant feature of views instead of downtown buildings. This is illustrated in views up Madison and University Streets toward downtown in Exhibits A-40 and A-51. The wider spacing of vertical columns will reduce the number of elements that block ground-level views to the east and west, but the wider levels will increase the line-of sight view blockage of the tops of many buildings to the east. Shadows and columns will continue to obscure lower floors. The horizontal levels will continue to block views of the middle levels of buildings. The horizontal and vertical lines of the structure will also be at variance with the rhythm of floors and windows characteristic of downtown buildings. The view of downtown to the east will be truncated into disassociated bands, rather than views of entire buildings from bottom to top. Waterfront views of the aerial structure will be somewhat softened in the future by street trees, which are likely to obscure supports and portions of the lower level, but not affect the upper level and the overall dominance of the structure.

The greater width and complexity of the new aerial structure, as compared to the existing viaduct, will add substantially to its visual dominance. In many cases, the presence of on- and off-ramps will result in different widths of the top and bottom levels, resulting in vertical and horizontal supports that jut out from the horizontal levels, increasing complexity and reducing the unity and cohesion of the design. This is especially apparent in the vicinity of the Pike Street Hillclimb, as indicated in Exhibit A-60, where the greater width and the arrangement of the transition between stacked and side-by-side levels will result in the continuation of outrigger supports both further to the north and substantially closer to the waterfront promenade.

The aerial structure, like the existing viaduct, will be much less visually dominant at greater distances. From the middle or ends of the waterfront piers, which is the equivalent distance of one to two city blocks, the height of the aerial structure will no longer dominate views. The downtown high-rises will be clearly visible and the most vivid element of the views. The aerial structure will block full views of the base of the first tier of buildings in downtown and produce an odd visual juxtaposition of a few building upper floors with no relation to the base. At a greater distance, such as from ferries or other vessels in Elliott Bay, the aerial structure, like the existing viaduct, can be expected to recede relative to other buildings to the appearance of a homogenous, neutral horizontal base for the downtown office towers behind it. It will continue to obscure the basic structure of streets and blocks.

Viewer populations, after completion of construction, can be presumed to recover to near current levels. The waterfront currently is rated as the second most visited tourist attraction in Seattle. The area between the Pike Street Hillclimb and Madison Street is likely to have the highest pedestrian volumes. This is due to the connection to the Pike Place Public Market, the Aquarium, the Waterfront Park, and Piers 54 to 59, which provide a variety of restaurants, retail, and waterfront tour activities.

Viewer sensitivity is likely to be highest among tourists attracted by the variety of activities and the scenic environment. Downtown workers accessing the waterfront at midday for a change in pace also are quite sensitive when engaging in those elective activities. Viewer sensitivity is likely to be lower for commuters accessing the Colman Dock Ferry Terminal, but those users also can be expected to appreciate the scenic amenities of their daily travel routine.

The Aerial Alternative will provide little support for the Downtown Urban Center Neighborhood Plan policies for public development to make a positive contribution to the downtown physical environment by enhancing the relationship of downtown to its spectacular setting of water, hills, and mountains, preserving important public views; ensuring light and air at street level; and establishing a high-quality pedestrian-oriented street environment.

Pike Place Market Area

The corridor for the Aerial Alternative, like the existing viaduct, leaves Alaskan Way and is on a separate right-of-way north of Pike Street. Visibility from the Pike Place Public Market will be limited. The aerial structure will be generally visible only from west-facing windows of buildings, from public streets such as the Pike Street Hillclimb, and from open space such as Victor Steinbrueck Park at Western Avenue and Virginia Street.

The proposed aerial structure will be below the grade of Steinbrueck Park, at a similar elevation as the existing aerial structure. The visual impact will be primarily of a long roadway corridor extending to the horizon in the south. A visual simulation of the view is provided in Exhibit A-64.

The difference from the view of the existing viaduct is primarily in the vertical and horizontal supports for the transition from side-to-side to overhead stacked lanes. The proposed design introduces more horizontal structure members and adds somewhat to foreground visual clutter. Views of historic piers along the waterfront are slightly more obscured. The highest-quality distant views are not obscured. These distant views include Mount Rainier to the south and Puget Sound and the Olympic Mountains to the west and northwest. The overall composition of the view includes both a built

landscape and elements of the natural environment. The slight difference in the composition of elements of the proposed aerial structure will not substantially change the relationship of elements and therefore has a negligible visual impact.

Views from other buildings in the vicinity are likely to be similar to the views from Steinbrueck Park but with less visual impact because of greater distance and less visual prominence of the design changes to the aerial structure.

Views down the Pike Street Hillclimb perpendicular to the aerial structure are currently limited because of a combination of the elevation above the waterfront, the blockage of views by the pedestrian overpass and stairway at Western Avenue, and screening provided by buildings and trees. Views to the west are most affected on the terrace areas below Western Avenue. From these areas, the Aerial Alternative, like the existing viaduct, will dominate views to the west, not only because it is in proximity but also because the elevation of the terraces places the horizontal traffic levels closer to the line of sight toward the waterfront. On the Hillclimb, the encroachment of the aerial structure will reduce the visual coherence of the corridor substantially.

Viewers at Steinbrueck Park, the Pike Place Market, and the Pike Street Hillclimb are likely to be very sensitive to surroundings because of the elective nature of their activities. Views from Steinbrueck Park, the likely primary viewing location, will be minimally affected by the proposed aerial structure. The quality of views from the Pike Street Hillclimb is likely to be similar to the quality of views of the existing viaduct.

Belltown

The proposed aerial structure will be primarily visible in this area where it crosses Elliott and Western Avenues on the diagonal and enters the Battery Street Tunnel. The configuration of the new aerial structure in this area will be similar to the existing viaduct and will have similar visual impacts.

Views northbound along Western and Elliott Avenues will be dominated by the new aerial structure.

The design of the new structure features a greater separation between vertical columns and will lead to a somewhat less cluttered near visual environment than the existing viaduct. Because the aerial structure crosses the local streets at a diagonal, however, the columns will still tend to overlap and substantially block views down the street corridors. This visual impact is reinforced by noise and shadow impacts. The aerial structure is likely to remain a substantial impediment to pedestrian movement between the two sides of the corridor.

All east–west streets in the area are designated view corridors extending to Western Avenue, Elliott Avenue, or Alaskan Way, depending upon where the right-of-way terminates. Views down Blanchard and Bell Streets to the west are obstructed by the aerial structures.

Residents in the area north of the existing viaduct are likely to be a sensitive viewer population, as well as non-residents moving between the Pike Place Market and the pedestrian bridge connection to Pier 66. General circulation within Belltown is not greatly affected by the SR 99 corridor because most of it is below grade in the Battery Street Tunnel. Residents and others can avoid crossing the corridor by circulating on First Avenue and streets to the east. The Aerial Alternative will provide limited opportunities for enhancement of Bell Street as a Green Street connection to the waterfront via the bridge connection to Pier 66.

Light and Glare

Highway lighting in this portion of the corridor is expected to be similar to existing conditions, with no change in glare impacts to the surroundings.

5.3.3 North Waterfront – Pike Street to Broad Street

No facilities will be constructed on this portion of the waterfront. Neither views from the road nor views toward the road will change.

Light and Glare

Arterial lighting in this portion of the corridor is expected to be similar to existing conditions, with no change in glare impacts to the surroundings.

5.3.4 North – Battery Street Tunnel to Ward Street

The continuation of SR 99 to the north as Aurora Avenue N. is proposed to continue the at-grade roadway with widening of the Mercer Street underpass and closing the Broad Street underpass.

Views From the Road

Widening the Mercer Street underpass will have little effect on the visual quality of the SR 99 corridor. The highway will continue to be semi-limited access with a barrier in the center. The standard sidewalks and street trees will remain.

Views Toward the Road

The area will likely continue to have very low levels of pedestrian activity because of the noise and sense of exposure from adjacent traffic. Views from perpendicular streets will continue to be of a grade-level urban roadway, but

with large volumes of fast-moving traffic. The widening of Mercer Street is unlikely to be perceived as a substantial change in the visual environment. Most viewers on either side look over the top of the undercrossing to the surface environment in the vicinity. There are few buildings framing the existing undercrossing. Their absence, if displacement is required, is not likely to be noticed. Vehicle occupants and pedestrians using the undercrossing will note a wider street bounded by vertical retaining walls, similar to the existing undercrossing.

Under this scenario, pedestrian volumes and viewer sensitivity along SR 99/ Aurora Avenue N. will remain very low. There will likely be few pedestrian-oriented retail or other establishments along the corridor to attract pedestrians. It is likely that pedestrians will choose routes on parallel streets with lower traffic volumes whenever possible. The lack of pedestrian crossings, except at Denny Way and the Mercer Street underpass, will also limit pedestrian volumes. The pedestrian environment of the undercrossing with sidewalks adjacent to the travel lanes will be subject to noise and passing cars in close proximity. It is likely to be perceived as exposed and potentially hazardous to pedestrians, similar to the sidewalks on the existing undercrossing.

Views from private property in this area are not likely to change.

Option: Lowered Aurora/SR 99

The option of a below-grade SR 99 with at-grade crossings of Mercer Street and other east–west streets at-grade would reconnect and transform the fabric of the local community.

Views From the Road

Views for occupants of vehicles on SR 99 would be of a depressed roadway framed by retaining walls on either side. This would be a substantial change from the existing frontage of street trees and buildings, but would not be substantially different from expectations of a high-speed corridor through an urban setting.

Views Toward the Road

The surface environment above the lowered SR 99 corridor would generally feature views that look over and across the highway corridor. The major change in the visual environment would be the continuation of streets across the existing physical barrier of the existing highway. The overpass structures themselves would continue the street corridor, but without framing development. The experience of crossing SR 99 is likely to be of a sidewalk bounded on one side by traffic on the surface street and on the other by high-

speed traffic on the highway below, unless widened sidewalks are provided with landscaping provided on either or both sides to provide a buffer from the local street and/or SR 99.

Streets in the vicinity may develop pedestrian-oriented uses and other features (such as street trees and landscaping) and establish patterns of movement with the neighborhood to the east, as discussed in Chapter 7, Secondary and Cumulative Impacts.

Light and Glare

Highway lighting in this lowered portion of the corridor is expected to reduce glare impacts on adjacent buildings.

5.4 Tunnel Alternative

The Tunnel Alternative for replacement of the Alaskan Way Viaduct and Seawall shares many impacts and benefits with the Bypass Tunnel Alternative and the Surface Alternative discussed below. All of these alternatives remove the existing aerial structure. Many of the impacts described for the Tunnel Alternative will be common to the Bypass Tunnel and Surface Alternatives. Impact discussion for the latter alternatives will largely focus on differences in impacts as compared to the Tunnel Alternative.

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

The Tunnel Alternative includes an at-grade SR 99 with a full-access elevated Interchange. This design is the same as described above for the Rebuild Alternative and consists of SR 99 on a north–south orientation as an at-grade roadway, with S. Atlantic Street and S. Royal Brougham Way crossing over the highway on elevated structures in an east–west orientation. Ramps parallel to SR 99 will connect to the east–west streets and continue parallel to SR 99 as elevated ramps connecting between the streets. Impacts will be similar to the Rebuild Alternative above, except for the area of transition to the tunnel.

An option under consideration is a side-by-side SR 99 aerial structure over S. Atlantic Street and S. Royal Brougham Way at-grade. This design option would retain a side-by-side six-lane configuration on the SR 99 mainline on an elevated structure that would pass over S. Atlantic Street and S. Royal Brougham Way. The aerial structure would return to grade to the north and transition to a tunnel section. A northbound off-ramp would curve to the east to access S. Atlantic Street eastbound and would include a separate northbound crossing over S. Atlantic Street to intersect with S. Royal Brougham Way at-grade. A second northbound ramp would leave the

mainline north of S. Atlantic Street, pass over S. Royal Brougham Way, and continue parallel to the SR 99 mainline to connect with the Alaskan Way surface street at S. King Street. A southbound off-ramp would leave the SR 99 mainline north of S. Royal Brougham Way and continue at-grade to intersect with S. Royal Brougham Way and S. Atlantic Street. South of S. Atlantic Street, it would provide for a southbound on-ramp back to the surface SR 99 and also would provide a southbound connection to E. Marginal Way west of the SR 99 roadway. This roadway on the west side of SR 99 also would accommodate a single northbound lane for E. Marginal Way.

Duwamish Industrial Area

Views from the at-grade SR 99 with overcrossings at S. Atlantic Street and S. Royal Brougham Way would be the same as discussed above for the Aerial Alternative.

Option: Side-by-Side Aerial

Views From the Road

Drivers on SR 99 will stay in their existing lane orientations, will be somewhat elevated in the vicinity of Safeco Field, and will have similar views to the north of the downtown skyline. Stacked shipping containers or vessels loading may locally block views to the west of Puget Sound and the Olympic Mountains.

Views Toward the Road

The visual impacts of the SR 99 overhead structure would generally be less than the existing viaduct or the Aerial Alternative because of its lower elevation. The visual impacts of the additional aerial structure width would be negligible given the existing visual context.

The new overpass structure would be west of existing buildings primarily on the viaduct and E. Marginal Way right-of-way. It would be at about the level of the lower level of the existing viaduct.

Views down east–west streets generally would not feature the overpass because they would be blocked by rail cars in railroad yards. The cranes from the Port of Seattle container terminals on the Duwamish Waterway would continue to dominate the skyline in views from the east with the wooded West Seattle hilltop as background.

Views from E. Marginal Way toward the east would be separated from the aerial structure by railroad lines with parked rail cars. The skyline behind the aerial structure would continue to be dominated by the 200-foot-high SODO building with Beacon Hill behind it. The aerial structure is not likely to be a noticeable change in the visual context.

Sports Complex

Views Toward the Road

Views from the at-grade SR 99 with overcrossings at S. Atlantic Street and S. Royal Brougham Way would be the same as discussed above for the Aerial Alternative.

The major change in views from the vicinity of the stadium of the Tunnel Alternative will be down the diagonal Railroad Way, which is aligned with the northwest entrance to the stadium. This view currently is dominated by the on- and off-ramps from the existing viaduct. Under the Tunnel Alternative, this street corridor will be unobstructed by any aerial structure, as shown in Exhibit A-6 (this simulation is for the Surface Alternative, which shows the impacts of removal of the aerial structure and would be similar to the Tunnel Alternative). Removal of the aerial structure will also restore the integrity of context of the Flatiron Building at First Avenue and Railroad Way, a designated Seattle landmark which is on the National Register of Historic Places.

The local streets, in the absence of the on- and off-ramps, will be restored to an urban streetscape with some unity of design provided by a frame of building fronts, sidewalks, street trees, and the roadway itself. The street is likely to draw movement from the waterfront to the stadium. The west side of the stadium, rather than the viaduct structures and ramps, will become the focus of views to the east up Railroad Way. The street corridor could become an inviting entry to the stadium with incorporation of street trees, widened sidewalks, and landscaping. This could create a boulevard style entry to the stadium. The terminus of the view will continue to be at an office building at Terminal 46 with stacked shipping containers above; however, distant views of the Olympic Mountains will be available on clear days.

The viewing population of attendees of sports events and persons driving local streets are likely to be moderately sensitive to the visual context. The restored streetscape in the absence of the existing aerial structure likely will simply become part of the general context of the Pioneer Square Historic District adjacent to the stadium.

Light and Glare

The proposed at-grade SR 99 in this area is expected to be lighted with standard street light fixtures. The light from the highway will be a minor source of light and glare compared to the higher intensity and higher mounting height of lighting for the Port of Seattle terminals to the west and is likely to be typical of urban street lighting levels.

Option: Side-by-Side Aerial

The optional aerial structure would be about the same height as the lower level of the existing viaduct but wider and located to the west in the vicinity of S. Royal Brougham Way.

Views From the Road

Occupants of vehicles northbound on the optional aerial structure are likely to have essentially the same views as from the existing viaduct as indicated in Exhibits A-1 and A-2. The downtown skyline would continue to dominate views along the roadway alignment to the north. Views to the northwest and west across the container terminals would include Elliott Bay in the middleground and the peaks of the northern Olympic Mountains in the distance on clear days. The lower elevation of the overcrossing would result in less panoramic views to the west and northwest. Views would be more frequently blocked or obscured by stacked shipping containers or loading vessels. The greater width of the roadway and the likelihood of solid barriers at roadside rather than the current rails are likely to block near views to some extent.

The views from the southbound lanes of the optional structure would no longer be blocked by columns, although views to the southwest of port and industrial facilities are of relatively low visual coherence.

Views Toward the Road

The viewing population in the vicinity is not likely to perceive a substantial change in the visual environment. The lower optional aerial structure would be generally blocked from line of sight from First Avenue S. by intervening buildings. It would be seen as an extended horizontal element above S. Atlantic Street and S. Royal Brougham Way where they cross under the SR 99 corridor. The visual context for the occupant of a vehicle or pedestrian traveling to the west down S. Royal Brougham Way is likely to be dominated by the bulk of Safeco Field and the Stadium Exhibition Center that frame the street. The views to the west down S. Atlantic Street and S. Royal Brougham Way would continue to terminate in an area where shipping containers are stacked at a Port of Seattle terminal.

For baseball fans congregating on First Avenue, the optional overpass structure is likely to be a minor part of the visual environment. The overpass would not be visible except down the east–west streets. It would likely not attract much attention. The large red cranes in the terminal would continue to dominate views to the west. The more interesting view available for pedestrians along First Avenue is to the north, where the downtown skyline

provides a vivid focus with Seahawks Stadium as the easterly frame of the view.

For viewers at the Seahawks Stadium complex to the north, most views of the optional overpass structure at S. Royal Brougham Way would be blocked by a row of loft buildings that front First Avenue S. The SR 99 roadway transition to the tunnel portal south of S. King Street also would be blocked from view by intervening buildings.

Light and Glare

The option of an above-grade structure would have lighting similar to the existing viaduct.

5.4.2 Central – S. King Street to Battery Street Tunnel

Views From the Road

Views for vehicle occupants traveling northbound in the new tunnel will be the interior of the tunnel. The visual interest of the panoramic views from the existing viaduct will not be available.

The loss of panoramic views will affect primarily the daytime users of the existing viaduct, who compose about two-thirds of the total daily use of around 100,000 vehicles per day. The views that include the most vivid natural features, such as the Olympic Mountains, are the northbound views available to about half of the daytime trips. The average trip length of around 2 minutes is a small part of the total trip time, but likely is a feature of the trip enjoyed and anticipated by regular commuters and that provides a vivid introduction to tourists or others who use the route infrequently.

Views from the Alaskan Way surface street will continue to be available, but will be at a lower elevation and therefore less panoramic. Views from the surface street also are available only between piers. The quality of views to the west of Puget Sound and the Olympic Mountains from the surface street is similar to views available from the existing viaduct. Views from vehicles of the Pioneer Square area to the east will be greatly enhanced as described for views from the waterfront below. About 12,000 vehicles per day will use the Alaskan Way surface street with this alternative. The time they spend traversing the corridor likely will be somewhat greater than trips on the existing viaduct because of slower speeds and stops at intersections. Traffic and pedestrians on streets perpendicular to Alaskan Way also will enjoy views unobstructed by the existing viaduct.

Pioneer Square Historic District

Views Toward the Road

The absence of an aerial structure in the Tunnel Alternative will transform the relationship of the Pioneer Square Historic District to the waterfront. The relationship with the waterfront will be enhanced north of Terminal 46 at S. Jackson Street where visual and physical access to the shoreline is available.

Views into the Historic District from the waterfront will be unobstructed for the first time since the early 1950s. As indicated in Exhibits A-9 and A-20, a street wall of historic brick buildings will face viewers along the waterfront promenade. In some portions of right-of-way, however, newer parking lots and other structures have been constructed that do not reflect the features of the historic district.

Exhibit A-14, which indicates the view to the northwest from S. Washington Street, also illustrates the proposed removal of a historic brick building at the corner to allow more direct northbound access to Western Avenue.

Views looking west from the perpendicular streets within the historic district toward the waterfront will have unobstructed views. In many cases, views will feature a vivid focus in the middleground of natural water features of Elliott Bay and distant features of the Olympic Mountains. The termination of the view differs on various streets based on conditions at their terminus. As indicated in Exhibits A-26 and A-30, Yesler Way terminates at the passenger ferry entrance to the Colman Dock Ferry Terminal. Portions of Elliott Bay, West Seattle, and the mountains of the Olympic Peninsula are visible in the distance. The termination of views on Railroad Way and S. King Street is at the Port of Seattle Terminal 46 and features a low office building with stacked shipping containers behind. S. Jackson Street terminates at a moorage area associated with Pier 48, with current foreground views of moored vessels, some middle distance views of the water, and distant views of mountains. The proposal includes ferry dock access west of Alaskan Way that will likely be similar to the existing character of the area. Main Street terminates with a full frontage view of Pier 48. The ferry access roadway is proposed in front of Pier 48; however, Pier 48 may be removed in the future as part of expansion of the ferry dock, as discussed under Secondary and Cumulative Impacts in Chapter 7, below. If this occurred, panoramic views of Elliott Bay and the Olympic Mountains would be available. The view down S. Washington Street is centered on the historic Washington Street Boat Landing, with the water behind it and distant views of hills and mountains.

All views down streets in the historic district will have a unity of composition resulting from being framed by buildings primarily of the same period with

similar materials and architectural style together with complementary elements of the streetscape, including sidewalks, street trees, and the roadway itself. This will contribute greatly to restoring the visual integrity of this Historic District.

The population of viewers in the Pioneer Square Historic District is likely to continue to be high and to include persons engaged in activities that make them sensitive to the visual context. The increased visual appeal of the areas fronting on and near Alaskan Way, after completion of the tunnel and demolition of the existing viaduct, is likely to result in a mix of uses more oriented to tourists, shoppers, and restaurant patrons as discussed below under Secondary and Cumulative Impacts in Chapter 7 (also see Appendix G, Land Use and Shorelines Technical Memorandum).

Views from private property (including views of employees and residents in buildings that face the viaduct and from buildings along perpendicular street corridors) will be similar to views discussed above. Views from buildings at the east side of the right-of-way will have unobstructed foreground views of the waterfront; middleground views of Elliott Bay, Puget Sound, West Seattle, Alki Point, and Magnolia; and distant views of the Kitsap Peninsula hills and the Olympic Mountains. Buildings on perpendicular streets to the east will enjoy framed views down the streets.

Elements of the tunnels that may add possible encroaching elements to the visual context include vent structures. In order to meet air quality standards, vent structures are generally required to be higher than existing streets where pedestrians may be present and higher than adjacent buildings to allow dispersion. Within this area, vent structures are anticipated to be needed near the tunnel portal south of S. King Street and near Yesler Way. If freestanding, vent structures generally will be about 15 feet taller than adjacent development. The absence of buildings at the portal site likely will involve a freestanding building, unless the vent could be incorporated into Terminal 46 offices or incorporated into restroom or other facilities to serve ferry parking.

The vent location near Yesler Way is likely in an existing surface parking lot. The vent will be required to exceed the height of the adjacent six-story building. A separate vent structure that height is indicated in terms of building mass in Exhibit A-14. New construction is required to be visually compatible with the architectural style, building materials, and historic character of the District and is reviewed by the Pioneer Square Preservation Board per SMC 23.66.

Removal of the existing viaduct will provide substantial support to policies in the Pioneer Square Neighborhood Plan to weave the east–west streets to the

waterfront by improving pedestrian connections, to emphasize view connections to the waterfront, and to restore the Washington Street Boat landing as the centerpiece of the south waterfront.

Light and Glare

The existing viaduct and associated lighting will be replaced by a surface street with lighting typical of an urban arterial. The removal of above-grade lighting for the viaduct will be more in keeping with the character of the historic district and will be beneficial in reducing glare impacts to upper levels of buildings adjacent to the existing viaduct.

Commercial Core

Views Toward the Road

The absence of the existing viaduct structure will transform the relationship of the Commercial Core to the waterfront in a manner similar to the Pioneer Square Historic District.

Views to the west from downtown streets will feature unobstructed scenes incorporating a variety of man-made and natural features as indicated in Exhibits A-32, A-46, and A-49. Depending on the street, the composition of the view will include a range of elements. Most of the views have a great deal of compositional unity provided by elements that frame the streetscape, such as buildings, sidewalks, and street trees. These elements also provide an orientation to the elements at the termination of the unobstructed corridor. At the termination of the view, the foreground is generally composed of man-made elements, such as the Colman Dock Ferry Terminal, the Fire Station at the foot of Madison Street, or the historic transit sheds of Piers 54 to 59. More vivid elements are present in middle views and distant views, including Elliott Bay, West Seattle, Alki Point, the hills of the Kitsap Peninsula, and the Olympic Peninsula. Generally, the peaks of the Olympic Mountains are not present in these views because of the southeasterly orientation of the streets.

These view corridors generally incorporate elements designated in the City of Seattle environmental code as specific significant natural and human-made features, including the Olympic Mountains and major bodies of water including Puget Sound and Elliott Bay. Views in the corridors will be characterized by a large degree of unity in the composition of the street corridor. The views generally have some elements of vividness such as the mountains in the distance. Views provide a coherent transition from close views of human elements to natural elements in the distance. Even with the diversity of the views, there is a general unity in the visual patterns. The

elimination of the viaduct frees the corridors of the existing substantial encroaching element.

The removal of the viaduct will restore public views of the designated Seattle landmark Olympic Warehouse at Alaskan Way and Seneca Street, which is currently obscured by the viaduct and off-ramp.

Views along Alaskan Way to the north incorporate vivid elements in the peaks of the Olympic Mountains to the west and northwest. These views are framed by Piers 54 through 59 between Madison and Pine Streets. The east–west orientation of the piers, which are at an angle to downtown streets, provides a view corridor to the northwest. In the absence of the viaduct, the buildings in the Commercial Core along the east side of Alaskan Way frame the view to the west and provide a unified and coherent composition of urban forms as shown in Exhibits A-23, A-38, and A-57. A similarly unified set of waterfront elements is present in the piers on the opposite side of the surface street. The two framing elements form a visual whole that is diverse, yet has a unity of common form. In the absence of the viaduct, it is free from major encroaching elements.

A continuous sidewalk 20 to 30 feet wide will tie the eastern side of Alaskan Way into a linear pedestrian corridor. The setback area between buildings and the right-of-way is likely to be developed into pedestrian-oriented uses. This entire corridor is likely to become an area of pedestrian congregation and a viewing area of the waterfront. Additional discussion of the potential for change of uses and streetscape are discussed below under Secondary and Cumulative Impacts.

Viewer populations in the Commercial Core are likely to respond positively to the increased visual coherence of the waterfront by frequenting open space or uses such as restaurants that are oriented to the unobstructed views provided.

Views from buildings facing Alaskan Way generally will have extensive views of the waterfront and features beyond. Views from buildings on east–west streets will enjoy framed view corridors.

The changes to the visual environment along the waterfront will provide substantial support for the Downtown Urban Center Neighborhood Plan policies for public development to make a positive contribution to the downtown physical environment by enhancing the relationship of downtown to its spectacular setting of water, hills, and mountains, preserving important public views; ensuring light and air at street level; and establishing a high-quality pedestrian-oriented street environment. The view corridors provided in the absence of the viaduct will support the intent of designation of view corridors on downtown streets to provide views of Elliott Bay, West Seattle,

Mount Rainier, and the Olympic Mountains as indicated in Exhibit 2-2. The general improvement of the visual environment is consistent with the purposes of the Downtown Harborfront zoning designation to enhance public access and enjoyment of the waterfront, including views of the water.

Light and Glare

The existing viaduct and associated lighting will be replaced by a surface street with lighting typical of an urban arterial. The removal of above-grade lighting for the viaduct will be beneficial in reducing glare impacts to upper levels of buildings.

Central Waterfront

Views Toward the Road

The elimination of the existing viaduct will contribute to visually integrating the waterfront with downtown.

Views from the waterfront promenade will clearly include the structure of the adjacent Commercial Core (consisting of street corridors defining blocks of buildings) rather than obscuring that basic structure with a homogenous feature. The structure and design unity of the city will be clearly readable as indicated in Exhibits A-22 and A-57. In the absence of the viaduct, buildings will clearly have a base, middle, and top. The three- to six-story buildings that frame the Alaskan Way surface street will provide a coherent set of urban elements, starting with the elements of the streetscape (such as the roadway, sidewalks, street trees, and vegetation), continuing with the full frontage of buildings, and in the background, tiers of buildings further to the east.

The same compositional harmony will be available looking east up street corridors into downtown as indicated in Exhibits A-42 and A-52. Buildings will not be visually truncated. There is a consistent transition up the street, without an abrupt boundary of shadow or structure cutting across the street corridor. The entire corridor is open to the sky. The more distant elements of the downtown skyline are the dominant and vivid elements of the view, rather than a view dominated by an elevated roadway structure cutting across the scene. The visual continuity of downtown extends to the waterfront.

Additional opportunities to enjoy views to the west will be available from the lid of the tunnel between Pike and Pine streets where it begins its transition to climb the hill to the Battery Street Tunnel. The water features of Elliott Bay and Puget Sound as well as the Olympic Mountains are currently visible from this location. The extent of future views will depend to some extent upon the location and height of structures to be proposed for the Waterfront Park to be developed in the vicinity of Piers 62 and 63.

Vent structures are estimated to be needed at approximately Spring Street and Union Street. Adjacent buildings are six to eight stories high. If located in the current parking lot at Spring Street and Western Avenue, a freestanding vent structure will be required that will be taller than the adjacent six- to eight-story buildings. Such a structure will be visually out-of-place in the context of the buildings in the area, unless incorporated into existing or new buildings. In the vicinity of Union Street, the buildings have a two- to three-story elevation on Alaskan Way and have at-grade rooftop parking or one-story elevations on Western Avenue. A vent stack at this location will be required to be higher than the five-story building across from the site on Western Avenue and will appear similarly out-of-place in the context.

If adjacent sites redeveloped in the future to the 160-foot maximum, vent heights will increase and be even more of an encroaching element.

Viewer populations, after completion of construction, can be presumed to recover to near current levels and are likely to be greater because of the greater visual quality of the setting.

The Tunnel Alternative can be expected to provide substantial support for the Downtown Urban Center Neighborhood Plan policies for integrating the waterfront with downtown discussed above. It will also support Shoreline Master Plan policies to preserve and enhance views of the shoreline and water from upland areas and relocate transportation facilities that are functionally or aesthetically disruptive to the shoreline.

Light and Glare

The existing viaduct and associated lighting will be replaced by a surface street with lighting typical of an urban arterial. The removal of above-grade lighting for the viaduct will be beneficial in reducing glare impacts to upper levels of buildings.

Pike Place Market and Belltown Areas

SR 99 will continue to divert from Alaskan Way north of Pike Street and is proposed to be carried by an aerial structure between a tunnel portal at about Pine Street to the Battery Street Tunnel. The design and visual impacts of the aerial structure on the Pike Place Market area will be substantially different with the removal of the elevated structure that cuts across Pike Street. The visual context of the entry to the Market from both Pike and Pine Streets will be transformed with the tunnel lid and open space, which will provide enhanced views to the west and eliminate the existing visual barrier, shadows, and noise.

The proposed aerial structure will be below the grade of Steinbrueck Park, at a slightly lower elevation as compared to the existing viaduct or Aerial Alternative. The visual character of views to the south will change substantially as compared to the existing viaduct. Instead of a long elevated roadway corridor extending to the horizon in the south, the surface roadway and downtown buildings fronting on the surface street will be apparent beyond the tunnel portal as indicated in Exhibit A-65.

In Belltown, an aerial structure will continue to cut diagonally across Western and Elliott Avenues on the same alignment, with similar impacts on visual quality as the Aerial Alternative.

An option for the Tunnel Alternative is the addition of access ramps at Elliott Avenue, which would add an additional linear element to the aerial structure to Pike Street but would change the visual quality of the view little.

5.4.3 North Waterfront – Pike Street to Broad Street

The proposal includes portals to allow traffic to access the tunnel to and from Alaskan Way at about Pine Street. The portals are in the center of the roadway and consist of an open section within which one lane in each direction climbs or descends to the level of the tunnel. Adjacent to the portal, the surface roadway will consist of one lane in each direction on either side of the portal. The roadway north of the portal is proposed to be retained in its current configuration of two lanes in each direction.

No change in the view from the road or the view of the road is anticipated from the Tunnel Alternative in this area.

5.4.4 North – Battery Street Tunnel to Ward Street

SR 99/Aurora Avenue N. is proposed to be retained as an at-grade roadway with widening of the Mercer Street underpass and closing the Broad Street underpass as with the Aerial Alternative above.

Views from and toward the road are likely to be similar to existing conditions. As with existing conditions and the Aerial Alternative, the highway will continue to be semi-limited access with a barrier in the center. The area will likely continue to have very low levels of pedestrian activity because of the noise and sense of exposure from adjacent traffic. Views from perpendicular streets will continue to be of a grade-level urban roadway, but with large volumes of fast-moving traffic. The widening of Mercer Street is not likely to be perceived as a substantial change in the visual environment.

Pedestrian volumes and viewer sensitivity along SR 99/Aurora Avenue N. will remain very low.

5.5 Bypass Tunnel Alternative

The impacts of the Bypass Tunnel Alternative after completion are almost identical to the Tunnel Alternative, except for the additional lane of traffic in each direction provided on the Alaskan Way surface street. The need for additional roadway width is accommodated by slightly narrower vehicle lanes than the Tunnel Alternative (11 feet rather than 12 feet) and slightly narrower sidewalks. The portals on Alaskan Way north of Pike street will be eliminated for the Bypass Tunnel Alternative. This will lead to a different lane and sidewalk configuration, as compared to the Tunnel Alternative. The difference in the appearance of the corridor for a pedestrian in the vicinity is not likely to change.

The change in the visual impacts from these minor differences in design will not change the visual impacts as described above for the Tunnel Alternative.

5.6 Surface Alternative

The impacts of the Surface Alternative after completion are very similar to the Tunnel and Bypass Tunnel Alternatives discussed above. Most of the differences in impact occur from the permanent removal of the existing viaduct as with the two tunnel alternatives. Some changes in surface configuration, however, may result in slight changes in surface impacts as discussed below.

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

The Surface Alternative includes construction of SR 99 at-grade with a full-access elevated interchange consisting of elevated overcrossings of the east–west arterial streets. The impacts of this alternative differ from the Aerial, Tunnel, and Bypass Tunnel Alternatives only in the roadway's transition to a surface roadway to the south rather than to an aerial structure or tunnel.

An option under consideration is construction of at-grade intersections with no elevation separation at S. Atlantic Street and S. Royal Brougham Way.

Views From the Road

The experience of drivers on the roadway will be of driving on a surface arterial in an industrial area. The visual context will be similar to the existing at-grade portion of SR 99, except that the roadway will contain additional lanes south of S. Atlantic Street. The driving experience will not be substantially different from other urban arterials, such as Fourth Avenue between S. Holgate and Spokane Streets. Views to the north will still include the downtown high-rises. Views to the west of Elliott Bay and the Olympic Mountains will be blocked by the container terminals.

Views Toward the Road

Views of the at-grade interchange option would be similar to the impacts of the same facility as the Rebuild, Tunnel, and Bypass Tunnel Alternatives. The option of at-grade intersections would remove all overcrossings and would have little visual impact on either the Duwamish Industrial Area or the Sports Complex. At both locations, there would be no aerial structure. From the major viewing areas to the east, the surface street would not be visible because of intervening distance and buildings.

Light and Glare

The proposed at-grade SR 99 in this area is expected to be lighted with standard street light fixtures. The light from the highway will be a minor source of light and glare compared to the higher intensity and higher mounting height of lighting for the Port of Seattle terminals to the west and is likely to be typical of urban street lighting levels.

5.6.2 Central – S. King Street to Battery Street Tunnel

Views From the Road

Views for vehicle occupants traveling northbound on the surface street are indicated in conceptual form in Exhibit A-10. It will not be qualitatively much different than the driving experience on a similar six- to eight-lane urban arterial. The proposed landscaped central median will reduce somewhat the visual impacts of a wide expanse of pavement.

Views for occupants will include some downtown high-rises in the distance to the north. The road will be framed by historic buildings on the east and a variety of waterfront uses on the west. Views to the west will be available to passengers and to drivers when stopped at intersections. Foreground elements of the view will include the waterfront and downtown buildings. Middleground and distant elements such as Elliott Bay, Puget Sound, the Kitsap Peninsula hills, and the Olympic Mountains will be available in views between piers. Most of the elements of the view from the existing viaduct will be present, but they will be framed by waterfront piers and blocked in some areas by shipping terminals or the parked cars on the Colman Dock Ferry Terminal. The composition of elements will be different than the view from above on the existing viaduct where a panoramic scene is available. The views will be available to vehicle occupants for a longer time period because travel time will be longer and stops at traffic signals will be expected.

Pioneer Square Historic District

Views Toward the Road

Views from perpendicular streets within the Pioneer Square Historic District will be very similar to views for the Tunnel Alternative. The additional width of the surface roadway will not be apparent except at a close distance.

Views adjacent to the right-of-way are indicated in Exhibits A-10 and A-15 and show the conceptual plan with additional width for the additional southbound lane (as well as the removal of the corner building which is also included in the Tunnel and Bypass Tunnel Alternatives). The major features of the view will continue to be the restored visibility of the buildings framing the roadway on the east and the unobstructed views to the north and northwest. Compared to the impacts of removal of the viaduct, the impacts of more or fewer lanes on the surface street are a relatively small component of views.

Augmented local circulation on other roadways to offset decreases in the capacity of the Alaskan Way corridor include proposed replacement of the parking on First Avenue with a second vehicle lane in each direction. This will not change the static design and visual features of the street, but will introduce moving vehicles next to the sidewalk that will change the dynamic visual environment for pedestrians on the sidewalk.

From the context of the historic district, an eight-lane arterial may be considered an out-of-scale transportation element. The features of the proposed arterial, however, have far less impact on the visual unity and context of the area than the existing viaduct. The Alaskan Way surface street can be expected to have moderate speed limits and to stop traffic at signals. It will not have the character of a high-speed semi-limited access roadway like Aurora Avenue N. Most of the visual connectivity between the waterfront and the area east of Alaskan Way will be maintained, notwithstanding the number of lanes.

The Surface Alternative will avoid the need for tunnel vent structures and the associated visual encroachment where freestanding vent structures must be constructed higher than adjacent buildings.

From the context of the conditions on Alaskan Way when the historic district was developed near the turn of the century, the visual separation of the surface roadway will be substantially less than past conditions. The roadway (then known as Railroad Way) carried multiple railroad tracks on trestles over the water. These tracks crossed one another to provide sidings to piers and buildings within downtown. The visual environment at that time would have included parked rail cars at many locations and a distinct separation between

the pedestrian environment of the city streets to the east and the rail corridor along the waterfront. The visual separation of the proposed surface street is much less than the visual separation that existed within the Alaskan Way corridor at the time the Pioneer Square Historic District was built.

Light and Glare

The viaduct and associated lighting will be replaced by a surface street with lighting typical of an urban arterial. The removal of above-grade lighting for the viaduct will be beneficial in reducing glare impacts to upper levels of buildings.

Commercial Core and Central Waterfront

Views Toward the Road

The proposed roadway configuration between Yesler Way and Pike Street is the same as the Tunnel and Bypass Tunnel Alternative: a surface street with three lanes in each direction, with a left turn lane and a central landscaped median where left turn storage is not required. As stated above, the visual impacts of either a two-lane or three-lane surface street on a 180-foot-wide right-of-way is not likely to result in a discernable difference in the visual context for either views from the road or views of the roadway improvements.

The proposed access to the Colman Dock Ferry Terminal includes a vehicle overcrossing of Alaskan Way along the alignment of Columbia Street. This is shown in Exhibits A-23, A-33, and A-35. Such a ramp will cut across the general orientation of the linear corridor. It is generally at about the same elevation as the roof of the Colman Dock and the existing pedestrian overcrossing. It will not, therefore, be a completely new intrusion into the scene. It is likely to obstruct some views of the Olympic Mountains from viewpoints to the south because vehicles on the ramp, especially trucks, will be higher than the roof of Colman Dock.

The opportunities for additional public open space to enjoy views to the west in the vicinity of the Pike Street Hillclimb will be somewhat less than with the Tunnel and Bypass Tunnel Alternatives because of the lack of the tunnel lid and the open space opportunities that feature would provide. Views to the north from the vicinity of the Pike Street Hillclimb and the existing Waterfront Park are illustrated in Exhibit A-62 and feature an urban arterial corridor. There are some opportunities for reorienting streets at the intersection of the aerial structure that connects to the Battery Street Tunnel and the Alaskan Way surface street to the north. This may provide some additional public open space. The views of existing structures to the east of Alaskan Way in

this area are dominated by a parking garage and lack visual coherence and integration with the character of the Pike Street Public Market to the east.

Light and Glare

The existing viaduct and associated lighting will be replaced by a surface street with lighting typical of an urban arterial. The removal of above-grade lighting for the viaduct will be beneficial in reducing glare impacts to upper levels of buildings.

Pike Place Market and Belltown Areas

Views Toward the Road

As with other alternatives, the SR 99 corridor diverts from Alaskan Way north of Pike Street and is proposed to be carried by an aerial structure from north of Pike Street to the Battery Street Tunnel. The design and visual impacts of the aerial structure on the Pike Place Market and Belltown areas are similar to that discussed for the Tunnel Alternative above.

The proposed aerial structure will be below the grade of Steinbrueck Park, at a slightly lower elevation as compared to the existing viaduct or Aerial Alternative, but slightly higher than the Tunnel or Bypass Tunnel Alternatives. The visual character of views from the south will be of a continuous urban arterial connecting to the surface street at Alaskan Way. The character of mid-distance views will be of the Alaskan Way surface street and downtown buildings fronting on one side and waterfront piers on the other, as indicated in Exhibit A-66. This will provide a coherent composition of urban forms that is diverse, yet has a unity of common elements.

An option for the Tunnel Alternative is the addition of access ramps at Elliott Avenue, which would add an additional linear element to the aerial structure to Pike Street but would change the visual quality of the view little.

5.6.3 North Waterfront – Pike Street to Broad Street

The Surface Alternative will retain the Alaskan Way surface street north of Pike Street with two lanes in each direction. Visual impacts of views from or of the road will not change from the existing visual context.

5.6.4 North – Battery Street Tunnel to Ward Street

Aurora Avenue N. is proposed to be retained as an at-grade roadway with widening of the Mercer Street underpass and closing the Broad Street underpass as with the Aerial Alternative above.

As with that alternative, the highway will continue to be semi-limited access with a barrier in the center. The area will likely continue to have very low

levels of pedestrian activity because of the noise and sense of exposure from adjacent traffic. Views from perpendicular streets will continue to be of a grade-level urban roadway, but with large volumes of fast-moving traffic. The widening of Mercer Street is not unlikely to be perceived as a substantial change in the visual environment.

Pedestrian volumes and viewer sensitivity along SR 99/Aurora Avenue N. will remain very low.

The option of operating Aurora Avenue N. with at-grade signalized intersections at cross streets would not change the visual quality of the street either for views from the road or views toward the road. The street would continue to be a six-lane urban arterial. The major difference would be the slower speed of traffic and the periodic queuing of cars at intersections.

5.7 Summary Ratings

A rating system for views allowing comparison of a given view among the alternatives is provided in Exhibit 5-1. These ratings are designed to provide a comparison between given measures of vividness, intactness, and unity. It is useful primarily as a comparison of the visual quality of the same view between different alternatives.

5.8 Project Benefits

The visual quality benefits of the Build Alternatives relate primarily to opportunities for improved views related to removal of the existing viaduct structures. Views from the downtown and Pioneer Square areas to the west would feature the water vistas of Puget Sound and distant mountains. Views from the waterfront would feature the cityscape to the east. In the absence of the existing viaduct or Aerial Alternative, these views would not be blocked or dominated by the elevated roadway facility.

The Tunnel, Bypass Tunnel, and Surface Alternatives all provide similar benefits with regard to maintaining distant views. They vary slightly in the extent to which the surface of the Alaskan Way right-of-way is dedicated to roadway facilities such as ramp structures. The surface facilities, however, are only a minor portion of views compared to the existing viaduct. The substantial benefits to the visual quality of the waterfront environment would be little affected by these differences in surface improvements.

Viewpoint		View from the Roadway					
Location - Cross Streets		Roadway Northbound/Dearborn St					
Location - Viewpoint		A	A	A	A	A	A
Alternative		**Existing**	**Rebuild**	**Aerial**	**Tunnel**	**Bypass Tunnel**	**Surface**
Photo Simulation		A-1	A-1	A-1	A-1	A-1	A-1
Visual Character Unit		Sport Complex	Sport Complex	Sport Complex	Sport Complex	Sport Complex	Sport Complex
View Orientation		North & North-west	North & North-west	North & North-west	North & North-west	North & North-west	North & North-west
View Distance	Foreground	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet
	Middle Ground	3,000 feet	3,000 feet	3,000 feet	3,000 feet	3,000 feet	3,000 feet
	Background	2-60 miles	2-60 miles	2-60 miles	2-60 miles	2-60 miles	2-60 miles
Viewer Position	Inferior						
	Level				X	X	X
	Superior	X	X	X			
Vividness	Landform	9	9	9	0	0	8
	Waterform	8	8	7	0	0	0
	Vegetative	2	2	2	0	0	2
	Human Made	9	9	9	0	0	9
	Average	7	7	6.75	0	0	4.75
Intactness	Development	8	8	8	0	0	8
	Encroachment	8	8	8	0	0	8
	Average	8	8	8	0	0	8
Unity	Overall	8	8	8	0	0	8
Total Visual Quality		7.4	7.4	7.3	0.0	0.0	6.1

Visual Quality Assessment Rating Scale							
Vividness		Unity		Intactness Human Environment		Intactness Encroachment	
10	Very High	10	Very High	10	Very High	10	None
9	High	9	High	9	High	9	Few
7,8	Moderately High	7,8	Moderately High	7,8	Moderately High	7,8	Some
4,5, 6	Average	4,5, 6	Average	4,5, 6	Average	4,5, 6	Average
2.3	Moderately Low	2.3	Moderately Low	2.3	Some	2.3	Several
1	Low	1	Low	1	Little	1	Many
0	Very Low	0	Very Low	0	None	0	Very Many

Exhibit 5-1
Visual Analysis Matrix

Viewpoint		View Toward the Roadway					
Location - Cross Streets		Yesler Way/Alaskan Way					
Location - Viewpoint		H	H	H	H	H	H
Alternative		**Existing**	**Rebuild**	**Aerial**	**Tunnel**	**Bypass Tunnel**	**Surface**
Photo Simulation		A-17		A-18	A-20		
Visual Character Unit		Pioneer Square District	Pioneer Square District	Pioneer Square District	Pioneer Square District	Pioneer Square District	Pioneer Square District
View Orientation		South	South	South	South	South	South
View Distance	Foreground	100 feet	100 feet	100 feet	100 feet	100 feet	100 feet
	Middle Ground	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet
	Background	2 miles	2 miles	2 miles	2 miles	2 miles	2 miles
Viewer Position	Inferior	X	X	X			
	Level				X	X	X
	Superior						
Vividness	Landform	4	4	3	6	6	6
	Waterform	2	2	2	5	5	6
	Vegetative	4	4	2	6	6	5
	Human Made	4	4	3	8	8	8
	Average	3.5	3.5	2.5	6.25	6.25	6.25
Intactness	Development	3	3	2	7	7	7
	Encroachment	3	3	2	8	8	8
	Average	3	3	2	7.5	7.5	7.5
Unity	Overall	4	4	3	7	7	7
Total Visual Quality		3.4	3.4	2.4	6.7	6.7	6.7

Visual Quality Assessment Rating Scale							
Vividness		Unity		Intactness Human Environment		Intactness Encroachment	
10	Very High	10	Very High	10	Very High	10	None
9	High	9	High	9	High	9	Few
7,8	Moderately High	7,8	Moderately High	7,8	Moderately High	7,8	Some
4,5, 6	Average	4,5, 6	Average	4,5, 6	Average	4,5, 6	Average
2.3	Moderately Low	2.3	Moderately Low	2.3	Some	2.3	Several
1	Low	1	Low	1	Little	1	Many
0	Very Low	0	Very Low	0	None	0	Very Many

Exhibit 5-1
Visual Analysis Matrix (continued)

Viewpoint		View Toward the Roadway					
Location - Cross Streets		Yesler Way/Western Ave					
Location - Viewpoint		K	K	K	K	K	K
Alternative		**Existing**	**Rebuild**	**Aerial**	**Tunnel**	**Bypass Tunnel**	**Surface**
Photo Simulation		A-27	A-28	A-29	A-30		
Visual Character Unit		Pioneer Square District	Pioneer Square District	Pioneer Square District	Pioneer Square District	Pioneer Square District	Pioneer Square District
View Orientation		West	West	West	West	West	West
View Distance	Foreground	300 feet	300 feet	300 feet	300 feet	300 feet	300 feet
	Middle Ground	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet
	Background	2-5 miles	2-5 miles	2-5 miles	2-5 miles	2-5 miles	2-5 miles
Viewer Position	Inferior	X	X	X			
	Level				X	X	X
	Superior						
Vividness	Landform	4	4	4	8	8	8
	Waterform	4	4	4	7	7	7
	Vegetative	4	4	4	6	5	5
	Human Made	7	7	6	8	8	8
	Average	4.75	4.75	4.5	7.25	7.25	7
Intactness	Development	3	3	3	7	7	6
	Encroachment	3	3	2	8	8	8
	Average	3	3	2.5	7.5	7.5	7
Unity	Overall	4	4	3	8	8	8
Total Visual Quality		4.1	4.1	3.7	7.4	7.4	7.1

Visual Quality Assessment Rating Scale							
Vividness		Unity		Intactness Human Environment		Intactness Encroachment	
10	Very High	10	Very High	10	Very High	10	None
9	High	9	High	9	High	9	Few
7,8	Moderately High	7,8	Moderately High	7,8	Moderately High	7,8	Some
4,5, 6	Average	4,5, 6	Average	4,5, 6	Average	4,5, 6	Average
2.3	Moderately Low	2.3	Moderately Low	2.3	Some	2.3	Several
1	Low	1	Low	1	Little	1	Many
0	Very Low	0	Very Low	0	None	0	Very Many

Exhibit 5-1
Visual Analysis Matrix (continued)

Viewpoint		View Toward the Roadway					
Location - Cross Streets		Madison St/Alaskan Way					
Location - Viewpoint		O	O	O	O	O	O
Alternative		**Existing**	**Rebuild**	**Aerial**	**Tunnel**	**Bypass Tunnel**	**Surface**
Photo Simulation		A-39		A-40	A-42		
Visual Character Unit		Waterfront	Waterfront	Waterfront	Waterfront	Waterfront	Waterfront
View Orientation		East	East	East	East	East	East
View Distance	Foreground	50 feet	50 feet	50 feet	50 feet	50 feet	50 feet
	Middle Ground	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet
	Background	2,500 feet	2,500 feet	2,500 feet	2,500 feet	2,500 feet	2,500 feet
Viewer Position	Inferior	X	X	X			
	Level				X	X	X
	Superior						
Vividness	Landform	2	2	2	5	5	5
	Waterform	0	0	0	0	0	0
	Vegetative	2	2	2	3	3	3
	Human Made	3	3	3	7	7	7
	Average	1.75	1.75	1.75	3.75	3.75	3.75
Intactness	Development	3	3	3	7	7	7
	Encroachment	2	2	2	7	7	7
	Average	2.5	2.5	2.5	7	7	7
Unity	Overall	3	3	3	7	7	7
Total Visual Quality		2.1	2.1	2.1	5.1	5.1	5.1

Visual Quality Assessment Rating Scale							
Vividness		Unity		Intactness Human Environment		Intactness Encroachment	
10	Very High	10	Very High	10	Very High	10	None
9	High	9	High	9	High	9	Few
7,8	Moderately High	7,8	Moderately High	7,8	Moderately High	7,8	Some
4,5, 6	Average	4,5, 6	Average	4,5, 6	Average	4,5, 6	Average
2.3	Moderately Low	2.3	Moderately Low	2.3	Some	2.3	Several
1	Low	1	Low	1	Little	1	Many
0	Very Low	0	Very Low	0	None	0	Very Many

Exhibit 5-1
Visual Analysis Matrix (continued)

Viewpoint		View Toward the Roadway					
Location - Cross Streets		University St/Western Ave					
Location - Viewpoint		R	R	R	R	R	R
Alternative		Existing	Rebuild	Aerial	Tunnel	Bypass Tunnel	Surface
Photo Simulation		A-47		A-48	A-49		
Visual Character Unit		Downtown	Downtown	Downtown	Downtown	Downtown	Downtown
View Orientation		West	West	West	West	West	West
View Distance	Foreground	500 feet	500 feet	500 feet	500 feet	500 feet	500 feet
	Middle Ground	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet
	Background	2-30 miles	2-30 miles	2-30 miles	2-30 miles	2-30 miles	2-30 miles
Viewer Position	Inferior						
	Level						
	Superior	X	X	X	X	X	X
Vividness	Landform	6	6	6	8	8	8
	Waterform	6	6	6	8	8	9
	Vegetative	4	4	4	6	6	6
	Human Made	6	6	6	8	8	8
	Average	5.5	5.5	5.5	7.5	7.5	7.75
Intactness	Development	4	4	4	7	7	7
	Encroachment	2	2	2	8	8	8
	Average	3	3	3	7.5	7.5	7.5
Unity	Overall	4	4	4	8	8	8
Total Visual Quality		4.6	4.6	4.6	7.6	7.6	7.7

Visual Quality Assessment Rating Scale							
Vividness		Unity		Intactness Human Environment		Intactness Encroachment	
10	Very High	10	Very High	10	Very High	10	None
9	High	9	High	9	High	9	Few
7,8	Moderately High	7,8	Moderately High	7,8	Moderately High	7,8	Some
4,5, 6	Average	4,5, 6	Average	4,5, 6	Average	4,5, 6	Average
2.3	Moderately Low	2.3	Moderately Low	2.3	Some	2.3	Several
1	Low	1	Low	1	Little	1	Many
0	Very Low	0	Very Low	0	None	0	Very Many

Exhibit 5-1
Visual Analysis Matrix (continued)

Viewpoint		View Toward the Roadway					
Location - Cross Streets		Union St/Alaskan Way					
Location - Viewpoint		T	T	T	T	T	T
Alternative		**Existing**	**Rebuild**	**Aerial**	**Tunnel**	**Bypass Tunnel**	**Surface**
Photo Simulation		A-53	A-54	A-55	A-57		
Visual Character Unit		Waterfront	Waterfront	Waterfront	Waterfront	Waterfront	Waterfront
View Orientation		South	South	South	South	South	South
View Distance	Foreground	500 feet	500 feet	500 feet	500 feet	500 feet	500 feet
	Middle Ground	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet
	Background	2-3 miles	2-3 miles	2-3 miles	2-3 miles	2-3 miles	2-3 miles
Viewer Position	Inferior	X	X	X			
	Level				X	X	X
	Superior						
Vividness	Landform	6	6	6	9	9	9
	Waterform	7	7	7	8	8	8
	Vegetative	4	4	4	6	6	6
	Human Made	4	4	4	8	8	8
	Average	5.25	5.25	5.25	7.75	7.75	7.75
Intactness	Development	5	5	5	7	7	7
	Encroachment	2	2	2	8	8	8
	Average	3.5	3.5	3.5	7.5	7.5	7.5
Unity	Overall	5	5	5	8	8	8
Total Visual Quality		4.7	4.7	4.7	7.7	7.7	7.7

Visual Quality Assessment Rating Scale							
Vividness		Unity		Intactness Human Environment		Intactness Encroachment	
10	Very High	10	Very High	10	Very High	10	None
9	High	9	High	9	High	9	Few
7,8	Moderately High	7,8	Moderately High	7,8	Moderately High	7,8	Some
4,5, 6	Average	4,5, 6	Average	4,5, 6	Average	4,5, 6	Average
2.3	Moderately Low	2.3	Moderately Low	2.3	Some	2.3	Several
1	Low	1	Low	1	Little	1	Many
0	Very Low	0	Very Low	0	None	0	Very Many

Exhibit 5-1
Visual Analysis Matrix (continued)

Viewpoint		View Torward the Roadway					
Location - Cross Streets		Union St/Alaskan Way					
Location - Viewpoint		U	U	U	U	U	U
Alternative		**Rebuild**	**Aerial**	**Tunnel**	**Bypass Tunnel**	**Surface**	**Surface**
Photo Simulation		A-58	A-59	A-60			
Visual Character Unit		Waterfront	Waterfront	Waterfront	Waterfront	Waterfront	Waterfront
View Orientation		North	North	North	North	North	North
View Distance	Foreground	500 feet	500 feet	500 feet	500 feet	500 feet	500 feet
	Middle Ground	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet	1,000 feet
	Background	2,500 feet	2,500 feet	2,500 feet	2,500 feet	2,500 feet	2,500 feet
Viewer Position	Inferior	X	X				
	Level			X	X	X	X
	Superior						
Vividness	Landform	7	6	6	6	6	6
	Waterform	0	0	0	0	0	0
	Vegetative	3	3	7	7	5	5
	Human Made	3	3	8	8	8	8
	Average	3.25	3	5.25	5.25	4.75	4.75
Intactness	Development	4	4	7	7	7	7
	Encroachment	3	3	7	7	7	7
	Average	3.5	3.5	7	7	7	7
Unity	Overall	4	4	7	7	7	7
Total Visual Quality		3.4	3.4	3.3	6.0	6.0	6.0

Visual Quality Assessment Rating Scale							
Vividness		Unity		Intactness Human Environment		Intactness Encroachment	
10	Very High	10	Very High	10	Very High	10	None
9	High	9	High	9	High	9	Few
7,8	Moderately High	7,8	Moderately High	7,8	Moderately High	7,8	Some
4,5, 6	Average	4,5, 6	Average	4,5, 6	Average	4,5, 6	Average
2.3	Moderately Low	2.3	Moderately Low	2.3	Some	2.3	Several
1	Low	1	Low	1	Little	1	Many
0	Very Low	0	Very Low	0	None	0	Very Many

Exhibit 5-1
Visual Analysis Matrix (continued)

This Page Intentionally Left Blank

Chapter 6 CONSTRUCTION IMPACTS

Construction impacts common to all Build Alternatives will involve a variety of elements common to construction activities, including staging areas, closed roadway sections, detours, heavy equipment, drill rigs, scaffolding, cranes, and temporary storage of materials. The visual impacts of all the Build Alternatives will be similar in that the location of a variety of active construction sites along the corridor at any one time will disrupt a variety of neighborhoods. With construction impacts, there will be a complex system of vehicular and pedestrian detours that will change the normal habits and sensitivities of the viewing public.

Visual impacts of construction are unlikely to change the overall regional views. Where distant views of water features and mountains are present, they likely will remain visible. They may, however, be cluttered by construction activities, construction equipment, stored materials, and a general disruption of normal streetscapes with fencing, equipment, vehicles, and activity.

The major difference in the alternatives is discussed below.

6.1 Rebuild Alternative

The Rebuild Alternative includes reconstructing the viaduct in-place with dimensions substantially the same as the existing structure. The seawall along the west side of Alaskan Way will be reconstructed largely with a drilled secant retaining wall and jet grouting. Total construction time for the reconstruction of the existing viaduct and reconstruction of the seawall is estimated to be 7.5 years.

Construction of the Rebuild Alternative will have little impact beyond the boundaries of the existing viaduct corridor, except at the interchange with SR 519 at S. Atlantic Street and S. Royal Brougham Way, which will extend over most of the right-of-way of E. Marginal Way.

Visual impacts are likely to be typical of roadway and building construction. The construction area will be large. The construction time period will be long, but the visual attributes of construction of a new interchange, or of lateral bracing of the existing viaduct while it is rebuilt will not be substantially more of a visual impact than normal construction of roads and buildings.

The most likely visual impact of construction is on the elements that provide visual cohesion to the lateral views along the waterfront. The continuous street surface and the continuous waterfront promenade will be interrupted by construction sites, which will block the continuity of views. From many

viewpoints, the waterfront will be visually broken into many discrete sites, rather than appearing to be a continuous corridor.

Views from viewpoints east of the existing viaduct will largely be confined to street corridors and will be changed little by construction. The portions of the viaduct being worked on will be obscured by scaffolding for a time, but the impact of that element will be relatively minor, compared to the visual impacts of the viaduct structure. For views from the east, the existing structure will screen construction activities along the waterfront to some extent.

6.2 Aerial Alternative

Construction of the Aerial Alternative also will involve construction activities that will be largely consistent with the appearance of sites for ordinary roadway or building construction. The total construction period for this alternative is estimated to be 11 years.

Temporary structures proposed to accommodate traffic during construction of a new aerial structure, however, will have substantial visual impact as described below.

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

An interim aerial structure is proposed in this area generally above the E. Marginal Way surface street. The visual impacts are likely to be moderate in this area because this portion of the corridor is bounded by Port of Seattle terminals on the west and the existing viaduct and industrial buildings to the east. The viewing population can be expected to be primarily port-related traffic on the surface road under the structure, or occupants of other vehicles traversing the area. It is probable that others, especially pedestrians, will avoid the area because of the noise and the overwhelming scale of two aerial structures side-by-side.

6.2.2 Central – S. King Street to Battery Street Tunnel

Views from viewpoints east of the existing viaduct will largely be confined to street corridors and will be changed little by construction. The interim aerial structure and construction along the waterfront will be screened to an extent by the existing viaduct.

The scale of the interim aerial structure along the waterfront in the Pioneer Square area is indicated in Exhibit A-19. The interim structure is at or near the west margin of the street. It completely dominates the pedestrian corridor, shadows the area, and overwhelms the scale of other elements.

Further to the north, Exhibit A-56 indicates the location of the interim structure overlapping the pedestrian promenade along the waterfront. Exhibit A-61 shows the route of the interim aerial structure following the waterfront to the north where the existing viaduct continues to the east on a separate right-of-way. Exhibit A-41 shows the similar impacts on views to the east into downtown.

The interim structure will be the dominant feature of the waterfront for the construction period and will largely overwhelm the visual coherence of the waterfront structures, such as Piers 54 to 59. The temporary structure will displace street trees and other landscape amenities along the route either through direct removal or shadow. The visual and shadow impacts will be reinforced by overhead noise. The likely response to such a visual intrusion is avoidance. Persons will likely find alternative locations for elective activities. Those who wish to access specific destinations such as restaurants, the Aquarium, or public access areas near the ends of the piers are likely to use the waterfront promenade to traverse the area, but not as a setting to appreciate the visual amenities.

6.2.3 North Waterfront – Pike Street to Broad Street

To the north of Pike Street, the temporary aerial structures will transition to grade to accommodate traffic from the Broad Street Detour. Under the Battery Street Flyover Detour Option, the aerial structure would cross over the Art Institute to connect to the Battery Street Tunnel.

For the Broad Street Detour, the aerial structure will descend in the vicinity of Pike and Pine Streets. The aerial structure will have a similar impact as discussed above on the visual context for pedestrians using the waterfront promenade or the multi-purpose trail. For occupants of the dwellings to the east of Alaskan Way, the ramp to the surface street will transform the existing visual context of views of the waterfront, Elliott Bay, and the mountains in the distance to a near view dominated by concrete columns and a sloping roadway.

The other end of the Broad Street Detour will involve an overpass over the BNSF railroad at Broad Street. As with the aerial structure further south, this structure will dominate the visual field of persons on the waterfront promenade, as shown in Exhibit A-77. Impacts will primarily occur for Pier 70, the restaurant on the east side of Alaskan Way, and the proposed Olympic Sculpture Park.

The Olympic Sculpture Park as currently envisioned will experience substantial visual impacts from the overpass structure. The overpass will be approximately the same elevation as the pedestrian overpass within the park.

It will visually dominate the portion of the park that is near grade level on Broad Street and the exhibit area that slopes up to the north to the pedestrian overpass structure. The visual impacts will be reinforced by noise from vehicles on the structure. Pedestrians on the Z-shaped pedestrian corridor through the Olympic Sculpture Park will be at about the same level as the overpass. Their views to the south of the waterfront and Mount Rainier will be obscured. The vehicles on the overpass will be within the line of sight of pedestrians circulating through the western portion of the site. The visual context in which people view sculpture and the view amenities of the site will be substantially altered by the sight of moving vehicles on the overpass. These visual and noise impacts will occur during the 8 years the detour is under construction or in use.

The Battery Street Flyover Detour Option would replace the Broad Street Detour. For this option, the temporary aerial structure would continue along Alaskan Way, then rise around Blanchard Street to cross over the Art Institute building fronting Elliott Avenue and connect with the Battery Street Tunnel. Exhibit A-71 depicts a view of the structure from Pier 63. Exhibit A-73 indicates the view from beneath the structure at Lenora Street. The structure would dominate the surface street. Impacts on pedestrians would be similar to the aerial structure along the central waterfront. The hotel and office building between Lenora Street and Bell Street would experience a transformation of views from many rooms. Rather than views of the waterfront marina, Elliott Bay, and distant mountains, they would experience a foreground view of a concrete structure. Many hotel rooms and office suites would see the bottom of the structure; others would view traffic on top. The structure would dominate the visual environment.

The portion of the aerial structure east of Elliott Avenue would add a second aerial structure to the Elliott and Western Avenue corridors. The structure would be higher and the column spacing would allow relatively unobstructed views under the structure; however, it would be a visual barrier cutting across the neighborhood. It would also obstruct views down the Bell Street and Battery Street view corridors. This would be especially true for the triangle of buildings between this structure and the existing SR 99 corridor.

6.3 Tunnel and Bypass Tunnel Alternatives

The construction of the Tunnel Alternative will not involve any unusual construction features that will be especially prominent elements of the visual environment. Much of the construction will be below grade.

The estimated construction time for the Tunnel Alternative is 9 years. The construction period for the Bypass Tunnel Alternative is estimated to be 8.5 years.

Views from viewpoints east of the existing viaduct will largely be confined to street corridors and will be changed little by construction. The existing viaduct will stay in place for the first phase of tunnel construction and for the entire bypass tunnel construction. The existing structure will screen much of the view from the east of construction activities along the waterfront.

The same visual impacts will occur from the Broad Street Detour, including the ramp from the existing viaduct to the Alaskan Way surface street north of Pine Street and the Broad Street railroad overpass, as discussed for the Aerial Alternative.

6.4 Surface Alternative

The Surface Alternative will have a construction period of about 8 years and therefore will subject observers to the visual environment of a construction site for less time than the Aerial or Tunnel Alternatives. In addition, after seawall reconstruction is completed, most construction occurs north and south of the central waterfront in areas of relatively little visual sensitivity and with lower populations of viewers.

The same visual impacts will occur from the Broad Street Detour, including the ramp from the existing viaduct to the Alaskan Way surface street north of Pike Street and the Broad Street railroad overpass, as discussed for the Aerial Alternative.

This Page Intentionally Left Blank

Chapter 7 SECONDARY AND CUMULATIVE IMPACTS

Secondary and cumulative impacts relate to actions by other parties that may be encouraged or discouraged by construction or operational impacts of the alternatives. This includes known projects of public agencies; public projects that are not determined in final form, but are in some stage of development; and private actions on private and public property. Indirect impacts also consider changes in context that change use patterns and may change the character of demand for parks, recreational facilities, or public access facilities.

Known public projects include the following:

Elliott Avenue to Alaskan Way Underpass: This project in the City of Seattle North Waterfront Access Project identifies a vehicle underpass as the preferred grade separation option to address delays from trains on the BNSF railway line to traffic on Broad Street, which is a transportation link for traffic to and from Seattle Center, the Mercer corridor, and the Ballard/Interbay corridor. From a regional perspective, the improvement is regarded as a component of the FAST Corridor concept for improving freight mobility in the central Puget Sound region, which includes grade separation and port access projects from Everett to Tacoma.[6]

This roadway would cross under the Olympic Sculpture Park. It is conceptually consistent with the Sculpture Park preliminary design, which features an elevated crossing over Elliott Avenue and the BNSF railroad. Except at the portals, the underpass would be lower than the sculpture park and would not intrude visually. A visual and design impact would occur at the portal at Alaskan Way and Broad Street where north–south pedestrian connections would be moved to the west, closer to the waterfront. At the portal to the north on Elliott Avenue, the underpass would require a landscaped section of the site to be maintained at the level of the pedestrian overpass rather than slope down to the west.

The railroad underpass would not affect views from the sculpture park to the west or south. Pedestrians on Alaskan Way and Broad Street would view the portal to the tunnel rather than the southerly end of the Sculpture Park pedestrian overpass and associated retaining walls and landscaping. The overall elevation of fill to accommodate the Olympic Sculpture Park and the

[6] City of Seattle, DCLU Waterfront Connections Planning Program http://www.ci.seattle.wa.us/dclu/planning/commdev/Waterfront/AccessProject.htm.

associated pedestrian circulation system would remain as currently proposed, which would be the major determinant of visual impacts.

Washington State Ferries Colman Dock Ferry Terminal: The existing terminal, which extends between Yesler Way and Madison Street, has a current capacity for approximately 650 parked vehicles. Various alternatives are being considered for expansion to a capacity ranging between 1,000 and 1,200 parked vehicles. These alternatives include expansion on upland sites, including the Washington Oregon Shippers Cooperative Association (WOSCA) site east of Alaskan Way between S. King Street and S. Royal Brougham Way and expansion of the over-water pier on the waterfront. Preliminary concepts for expansion of the over-water pier involve demolition of the over-water portion of Pier 48 and transferring the over-water coverage to expand the existing dock to the south.

The expansion of the ferry dock could have a substantial impact on views to the west down Yesler Way. The impact would be most pronounced for the alternatives involving no aerial structure. The views of water areas of Elliott Bay that are currently available south of the existing dock would be blocked by the expanse of the dock, as well as possibly by headworks for loading ferries.

In addition, the placement of toll collection booths could block the line of sight down east–west streets, as the current tollbooths do on Columbia Street.

Expansion of the Colman Dock Ferry Terminal to the south would cut off direct views of Elliott Bay from persons on the promenade south of Yesler Way. The presence of parked cars along this section of the promenade also would reduce the visual appeal of this section of waterfront. Facilities on the dock, such as tollbooths and ferry ramp headwalls, also may block or restrict views from Alaskan Way. This may be partially compensated for by public access areas that would be required on the dock, depending upon design. Many persons using the pedestrian promenade on a regular basis would not travel out-of-direction to enjoy alternative viewing locations.

The projected traffic circulation needs of the expanded Colman Dock Ferry Terminal with the Surface Alternative could require an overpass structure to downtown. This would be a visual intrusion in the views along the Alaskan Way corridor as indicated in Exhibit A-23. In addition, it would reintroduce an aerial structure at Columbia Street that would block views of the waterfront down that corridor as indicated in Exhibits A-33 and A-35.

Seattle Aquarium and Waterfront Park: The Seattle Parks and Recreation Department and the Seattle Aquarium Society have proposed an expanded new aquarium incorporating the existing building at Pier 59 and the existing

Waterfront Park south of Pier 59. A new waterfront park would be developed on Piers 62 and 63. A new design for this site is in development.

The Aquarium could have a number of visual impacts, which may combine with impacts of alternatives that eliminate an aerial structure and increase pedestrian congregation areas on the waterfront. These opportunities, such as a park over the tunnel lid at Pike Street, generally improve the context for views. The major potential visual impact is the possible blockage of views over the water by new structures. This could be compensated for to some extent by public access and viewing facilities not requiring admission fees at the perimeter and end of Pier 59 and other over-water structures.

Seattle Monorail Project: Construction of a monorail from West Seattle to Ballard is proposed by a governmental authority established by Seattle voters. The proposed alignment within downtown Seattle would follow the alignment of Second Avenue from Stewart to Main Streets. This project would not change the visual context or impacts of the alternatives for viewpoints west of Second Avenue. These viewpoints include the most substantial impacts of the existing viaduct and the Aerial Alternative and represent the most substantial beneficial change for alternatives that eliminate the aerial structure. Views from east of Second Avenue would feature the monorail as a feature that crosses the view corridors oriented toward the water and the existing viaduct. This 40- to 65-foot-high structure would become a more prominent feature of views down these corridors than the viaduct in the distance for views between S. Jackson Street and University Street. For views north of University Street, the viaduct is lower than the line of sight over the topographical break at Western Avenue, and the viaduct and alternatives are not part of the view from west of Second Avenue.

Green Street Implementation: The City of Seattle has designated a number of east–west streets as Green Streets in the City's neighborhood plans. These streets between Alaskan Way and First Avenue, with the exception of Harbor Steps and Spring Street, have not been developed consistent with the objectives of the plan. General concepts for Green Streets include providing landscaped recreation space, widened and landscaped sidewalk space, pedestrian amenities, limits on traffic or removing traffic to provide more space for pedestrians, and commercial activities to bring life to the space with outdoor cafes, stalls, and displays to enliven the street and lend a special identity to the surrounding area.

For alternatives including removal of the existing viaduct, the addition of Green Street landscaping and other amenities would be a beneficial contribution to the visual environment in the area.

Private Development: Privately owned buildings and undeveloped parcels adjacent to Alaskan Way generally have building frontages devoted to service entrances and loading docks reflecting the past industrial character of the area and the visual, noise, and shadow impacts of the existing viaduct. Recent development on the east side of Alaskan Way in the Commercial Core includes the Waterfront Place Building between Madison and Spring Streets, which has restaurant and other uses fronting on a 20–foot-wide pedestrian area, but use is currently low because of proximity impacts of the existing viaduct.

Port of Seattle-sponsored development between Pine and Bell Streets has included condominiums, a hotel, and office buildings on the east side of the street and redevelopment of Pier 66 on the west side.

After completion of construction, the character of the waterfront would be substantially improved for alternatives including removal of the existing viaduct. The most substantial improvement would be in the visual context of the westerly facing buildings on Alaskan Way. The ground floors of these buildings would have visual access to Alaskan Way as a corridor with views of the waterfront and downtown. This may lead to the redevelopment of current loading and parking areas into pedestrian-oriented spaces providing landscaping, seating, and commercial activities such as outdoor cafes. Additional sidewalk, landscaping, and exterior uses would further improve the visual environment on Alaskan Way. Additional discussion is contained in Appendix G, Land Use and Shorelines Technical Memorandum.

The waterfront from Madison Street to the south, including the Pioneer Square Historic District, may be discouraged from waterfront-oriented redevelopment by the lack of visual interest of the parked cars on the expanded Colman Dock Ferry Terminal and the additional distance to the waterfront produced by the over-water ferry access in some alternatives. From S. Jackson Street south, the adjacent container terminal is a visually uninteresting use that may discourage redevelopment of western-facing buildings unless amenities are incorporated in surface street design.

The area near Aurora Avenue N. may be affected by the option of lowering the roadway in the Aerial Alternative and the option of introducing at-grade signal-controlled intersections. Both of these options would reduce noise levels and the sense of exposure to fast-moving traffic for pedestrians. For both vehicles and pedestrians, circulation between the east and west sides of Aurora Avenue N. would be greatly enhanced. Development more oriented to the Aurora Avenue N. frontage might be encouraged.

Chapter 8 OPERATIONAL MITIGATION

A variety of visual amenities can be incorporated into a linear transportation project such as this. Visual resource enhancement and mitigation for this project may be integrated with the City of Seattle Waterfront Planning process currently being initiated.

Mitigation may include enhancement of positive effects as well as mitigation of negative effects of the proposal. Opportunities for positive impacts for all alternatives include development of a design standard for the project addressing a number of visual, design, architectural, sign, and lighting parameters of the project. This can provide a consistent visual pallet for the project and also be designed to respect the surrounding streetscape.

Opportunities for such enhancements and design consistency vary with the alternatives. For all Build Alternatives, a number of features may be addressed in a set of design guidelines. These guidelines can ensure that the visual composition of the roadway improvements are unified internally and mesh with the variety of built elements along the highway corridor. An effective highway design is based on predictability and coherence in the visual environment.

For all alternatives, elements of design guidelines can include the following:

- Consistent sidewalk, median, and crosswalk treatments to provide visual unity and also reinforce way-finding by clearly demarcating pedestrian routes and continuing those themes into the area on either side of the corridor.
- Consistent landscape materials and street trees, including placement of trees such that they do not block view corridors.
- Consistent signage within the corridor and adjacent to the corridor, ensuring readability for drivers while also ensuring consistency with the surrounding landscape.
- Designation of standard street lighting supports and fixtures throughout the corridor, including the potential for recessed or shielded lighting that minimizes impacts on adjacent uses. The hue of lighting also can be coordinated for consistency with surrounding streets.

For the Rebuild and Aerial Alternatives, design standards will not be able to address the impacts of the aerial structure in dominating near views and blocking distant views and the extent to which the aerial structure introduces

horizontal above-grade elements at variance with the rhythm of the streets. Elements that could be addressed include the following:

- Consistent design standards for structural elements through the corridor, or in segments of the corridor, could be specified. This may include a similar architectural design and surface materials throughout, or may include specific elements that reflect specific sub-areas. For example, it may be possible to design vertical piers within the Pioneer Square area to incorporate a brick veneer that better reflects the building materials within the historic district.
- Landscaping could be incorporated into the Rebuild and Aerial Alternatives to include street trees to soften vertical elements and partially screen the lower level of the structure and climbing plants that might soften the concrete structure.
- Lighting and special sidewalk materials as well as buffer areas between sidewalks and roadways and public art may provide a clearer and more inviting visual environment for crossing under the viaduct.

For the Tunnel, Bypass Tunnel, and Surface Alternatives, many opportunities to enhance the surface corridor in the absence of an aerial structure may be developed, including the following:

- Consistent treatment of tunnel approaches, portals, and tunnel interior finish treatments can provide consistency within the structure and also provide a sense of entry and transition.
- Consistent treatment of open space opportunities provided by removal of the aerial structure could include the following:
    - The waterfront promenade on the west side of the corridor could be designed with consistent pavement materials, plantings, street furniture, lighting, street trees, and landscaping to provide a unified corridor along the waterfront and to enhance locations for congregating and viewing the waterfront and distant views such as the Olympic Mountains.
    - Open space areas could be developed, including the new over-water structure between Piers 48 and 50 and the tunnel lid in the vicinity of Pike Street.
    - Street corridors leading from the waterfront to downtown could be developed with a variety of open space and landscape features to provide more inviting transitions and augment open space.

        - This could be coordinated with development of City designated Green Streets to provide open space and congregating and seating areas at intersections with Alaskan Way, with consistent corridors extending into downtown to the east.
        - Railroad Way could become an inviting entry to the Seahawks Stadium northwest entry with incorporation of street trees, widened sidewalks, and landscaping to create a boulevard-style design.
    - Opportunities for public art installations along the corridor can be explored to add visual interest and cultural enrichment.
- Treatment of the sidewalk along the east side of the corridor can be designed to be consistent with adjacent buildings and provide opportunities for outside uses such as outdoor restaurant seating, together with elements such as pavement materials, plantings, street furniture, lighting, street trees, and landscaping.
- For the Tunnel and Bypass Tunnel Alternatives, the visual impacts of freestanding vent structures could be avoided by incorporating tunnel vents into adjacent existing or new buildings through cooperative agreements with landowners. Structures above building rooflines could incorporate landmark features or public art.

The visual impacts of a roadway enclosed by retaining walls such as the Mercer Street underpass or the option of lowering the SR 99/Aurora Avenue mainline north of Denny Street can be reduced by acquiring sufficient right-of-way to incorporate landscaping in stepped planters to soften the appearance of retaining walls.

Widening pedestrian overcrossings of highways to provide widened sidewalk areas and landscape buffers between traffic at the crossing grade and the high-speed traffic below the overcrossing can substantially improve the immediate visual context and help tie the overpass to development on either side. This mitigation could be applied to overcrossings of the Lowered Aurora/SR 99 Option. A similar widening and provision of buffering vegetation between vehicles and pedestrians could be incorporated in those portions of the Mercer Street underpass that are open to sunlight. Barriers consisting of railings and greater distance could be provided under the roadway.

This Page Intentionally Left Blank

Chapter 9 CONSTRUCTION MITIGATION

Construction mitigation generally is of limited effectiveness in addressing the general disruption of the visual environment during construction. There are a number of features that can be incorporated in project scheduling to help restore the visual character of the foreground or middleground and add visual interest during construction.

The most effective construction mitigation is to restore the construction corridor where construction has been completed in intermediate stages rather than wait until completion of the entire project. This is most relevant to seawall construction. After completion of each section of seawall, complete reconstruction to the final configuration will allow that portion of the corridor to return to a stable landscape while other portions are still disrupted. This has the greatest application to seawall construction north of Pike Street and to seawall construction as part of the Rebuild Alternative.

For the Tunnel Alternative, complete reconstruction of the waterfront corridor with completion of the initial tunnel section would allow that area to return to near its completed configuration during the final 4 years of construction of the second tunnel and aerial connections to the existing Battery Street Tunnel. For the Surface Alternative, the central waterfront could be restored to near final configuration about 4 years after initiation of construction while construction proceeds on other elements over the following 5 years.

Local visual interest can be added to construction sites by viewing areas with information to make the construction activity a point of interest. Construction barriers can incorporate pedestrian-oriented murals or other graphic interest. Displays can be integrated with public notification of detours, areas to be closed, and the general public access plan. Detours for vehicles and pedestrians can include common graphic themes of way-finding displays.

This Page Intentionally Left Blank

Chapter 10 REFERENCES

City of Seattle DCLU Directors Rule 11-93, Design Guidelines/Implementation Process for Green Streets.

City of Seattle Downtown Design Guidelines.

City of Seattle Pedestrian/Bicycle Plans and routes.

City of Seattle. 1994. Seattle's Comprehensive Plan, A Plan for Managing Growth, City of Seattle Department of Construction and Land Use. Adopted July, 1994, last amended December 2002. Available at: http://www.cityofseattle.net/dclu/planning/comprehensive/homecp.htm.

City of Seattle. 1995. Central waterfront master plan draft programmatic draft EIS. December 1995.

City of Seattle. 1998. City of Seattle, Pioneer Square Neighborhood Plan.

City of Seattle. 1998a. Pioneer Square Neighborhood Plan, Approval and Adoption Matrix Item PS 48 Resolution 29814.

City of Seattle. 1999. Downtown Urban Center Neighborhood Plan.

City of Seattle. 1999a. City of Seattle, Belltown Neighborhood Plan.

City of Seattle. 1999b. City of Seattle, Queen Anne Neighborhood Plan.

City of Seattle. 1999c. City of Seattle, South Lake Union Neighborhood Plan.

City of Seattle. 2000. City of Seattle, Duwamish Manufacturing and Industrial Center Neighborhood Plan.

City of Seattle. 2000a. City of Seattle, Downtown Urban Center Neighborhood Plan.

City of Seattle. 2000b. Seattle's Parks and Recreation Plan 2000, City of Seattle Department of Parks and Recreation. Resolution 30181.

City of Seattle. 2003. Seattle Shoreline Master Program, Seattle Land Use Code, Ch. 23.60.

Hubel, D.H. 1988. Eye, brain, and vision. W.H. Freeman, New York.

Jacques, D.L. 1980. Landscape appraisal: The case for a subjective theory. Journal of Environmental Management 10:107-113.

Kaplan, R. 1985. The analysis of perception via preference: A strategy for studying how the environment is experienced. Landscape Planning 12:161-176.

Kaplan, S. and R. Kaplan. 1982. Cognition and environment: Functioning in an uncertain world. Praeger, New York. (Republished by Ann Arbor, MI: Ulrich's, 1989.)

Pike Place Market Public Development Authority. 2002. Learn about the market. Available at: http://www.pikeplacemarket.com/learn/default.asp.

Real, E., C. Arce, J.M. Sabucedo. 2000. Classification of Landscapes using quantitative and categorical data, and prediction of their scenic beauty in north-western Spain. Journal of Environmental Psychology 20(4):355-373.

Roma Design Group. 2002. Alaskan Way Viaduct and Seawall Project urban design assessment.

SDOT (Seattle Department of Transportation). 2001. Metropolitan improvement district pedestrian study. Available at: http://www.downtownseattle.com/EconomicInfo/EconomicProfile/ParkingTrafficPedestrians.cfm.

Seattle Seahawks Webpage. 2002. Available at: http://www.seahawks.com. May 30, 2002.

Seattle-King County Convention and Visitors Bureau. 1999. Market profile and economic impact of Seattle-King County visitors.

Sekuler, R., and R. Blake. 1994. Perception. McGraw-Hill.

US National Park Service. 2003. Seattle, National Register of Historic Places travel itinerary. Available at: http://www.cr.nps.gov/nr/travel/seattle/index.htm.

Washington State Major League Ballpark Public Facilities District. 1997. New Pacific NW baseball park, Draft pedestrian connections plan. Weinstein Copeland Architects, Seattle, Washington.

WSDOT (Washington State Department of Transportation). 1996. Roadside classification plan. Available at: http://www.wsdot.wa.gov/eesc/design/roadside/default.htm#rcp.

WSDOT (Washington State Department of Transportation). 2002. Washington State Ferries, traffic statistics rider segment report, January 1, 2002 thru December 31, 2002. Available at: http://www.wsdot.wa.gov/ferries/traffic_stats/annualpdf/2002.pdf.

WSDOT (Washington State Department of Transportation). 2003. Roadside Manual, M25-30. Available at: http://www.wsdot.wa.gov/fasc/engineeringpublications/Manuals/RoadsideManual.pdf.

Yarbus, A.L. 1967. Eye movements and vision. Plenum Press, New York.