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# Discipline Report

## *Land Use*

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HNTB Corporation (2013 revision)

September 2004

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Seattle Department of Transportation  
Agreement No. T12-64

Environmental Assessment

**Magnolia Bridge Replacement**

City of Seattle

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# Contents

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<b>Contents</b> .....	<b>i</b>
<b>Purpose and Need</b> .....	<b>1</b>
Purpose .....	1
Need .....	1
Structural Deficiencies.....	1
System Linkage.....	2
Traffic Capacity .....	4
Modal Interrelationships .....	4
Transportation Demand.....	5
Legislation .....	5
<b>Description of Alternatives</b> .....	<b>7</b>
No Build Alternative .....	7
Alternative A (Preferred Alternative).....	8
Alternative C .....	8
Alternative D .....	8
<b>Methods</b> .....	<b>17</b>
<b>Affected Environment</b> .....	<b>19</b>
Existing Land Use.....	19
Existing Zoning .....	21
<b>Studies and Coordination</b> .....	<b>23</b>
Studies and Data Sources.....	23
Major Assumptions .....	23
<b>Impacts</b> .....	<b>25</b>
No Build Alternative .....	25
Land Required for Right of way.....	25
Future Development Pattern Considerations .....	25
Alternative A (Preferred Alternative).....	25
Land Required for Right of way.....	25
Relationship to Public Facilities and Utilities .....	26
Future Development Pattern Considerations .....	26
Consistency/Conflict with Adopted Plans and Policies.....	27
Alternative C .....	27

Land Required for Right of way .....	27
Relationship to Public Facilities and Utilities.....	28
Future Development Pattern Considerations.....	28
Consistency/Conflict with Adopted Plans and Policies .....	28
<b>Alternative D.....</b>	<b>29</b>
Land Required for Right of way .....	29
Relationship to Public Facilities and Utilities.....	30
Future Development Pattern Considerations.....	30
Consistency/Conflict with Adopted Plans and Policies .....	30
<b>Mitigation Measures.....</b>	<b>33</b>
No Build Alternative.....	33
Alternative A (Preferred Alternative).....	33
Alternative C.....	33
Alternative D.....	33
<b>Construction Impacts .....</b>	<b>35</b>
No Build Alternative.....	35
Impacts .....	35
Mitigation Measures .....	35
Alternative A (Preferred Alternative).....	35
Impacts .....	35
Mitigation Measures .....	35
Alternative C.....	36
Impacts .....	36
Mitigation Measures .....	36
Alternative D.....	36
Impacts .....	36
Mitigation Measures .....	36
<b>Applicable Land Use Plans and Regulations.....</b>	<b>37</b>
City of Seattle Comprehensive Plan and Neighborhood Plans .....	37
Comprehensive Plan .....	37
City of Seattle Land Use and Zoning Code .....	42
Industrial Zoning .....	42
Industrial Street Landscaping .....	42
View Corridors.....	43

City of Seattle Shoreline Master Program .....	43
Designated Shoreline Environment .....	44
Streets .....	44
Seattle Environmentally Critical Areas Ordinance .....	44
Seattle’s Parks and Recreation 2011 Development Plan .....	45
Port of Seattle Terminal 91 Development Options Study .....	45
Consistency Analysis.....	46
No Build Alternative .....	46
Alternative A (Preferred Alternative).....	46
Alternative C.....	47
Alternative D.....	47
<b>Summary of Findings .....</b>	<b>49</b>
Project Objectives.....	49
Affected Environment .....	49
Impacts .....	49
Operational Impacts .....	49
Construction Impacts.....	50
Secondary and Cumulative Impacts.....	50
<b>Mitigation Measures .....</b>	<b>52</b>
Operational Mitigation .....	52
Construction Mitigation.....	52
<b>Consistency with Plans and Policies .....</b>	<b>53</b>
No Build Alternative.....	53
Alternative A (Preferred Alternative).....	53
Alternative C.....	53
Alternative D.....	54
Comparison of Alternatives .....	54
<b>References .....</b>	<b>55</b>
<b>Appendix A: Right of way Needs .....</b>	<b>A-1</b>

## List of Figures

Figure 1 Vicinity Map.....	2
Figure 2 Study Area .....	3
Figure 3 Typical Sections – No Build Alternative .....	9
Figure 4 Typical Sections – Build Alternatives .....	10
Figure 5 No Build Alternative.....	11
Figure 6 Alternative A - Intersection .....	12
Figure 7 Alternative A – Ramps (Preferred Alternative) .....	13
Figure 8 Alternative C.....	14
Figure 9 Alternative D - Intersection.....	15
Figure 10 Alternative D - Ramps .....	16
Figure 11 Existing Land Use .....	20
Figure 12 Existing Zoning.....	22
Figure A- 1 Preferred Alternative Right of Way (Sheet 1 of 3) .....	A-3
Figure A- 2 Preferred Alternative Right of Way (Sheet 2 of 3) .....	A-4
Figure A- 3 Preferred Alternative Right of Way (Sheet 3 of 3) .....	A-5
Figure A- 4 Alternative A - Ramps Right of Way .....	A-0
Figure A- 5 Alternative A - Intersection Right of Way.....	A-1
Figure A- 6 Alternative C Right of Way .....	A-2
Figure A- 7 Alternative D - Ramps Right of Way.....	A-3
Figure A- 8 Alternative D - Intersection Right of Way.....	A-4

## Purpose

The purpose of this project is to replace the existing Magnolia Bridge structure, approaches, and related arterial connections with facilities that maintain convenient and reliable vehicular and non-motorized access between the Magnolia community and the rest of the City of Seattle. The bridge provides an important link to the Magnolia community in Seattle (see Figure 1 and Figure 2). Because the existing bridge provides the only public vehicular access to the land between North Bay, also referred to as Terminal 91, Smith Cove Park, Elliott Bay Marina, and U.S. Navy property, the project purpose also includes maintenance of access to these areas.

## Need

### *Structural Deficiencies*

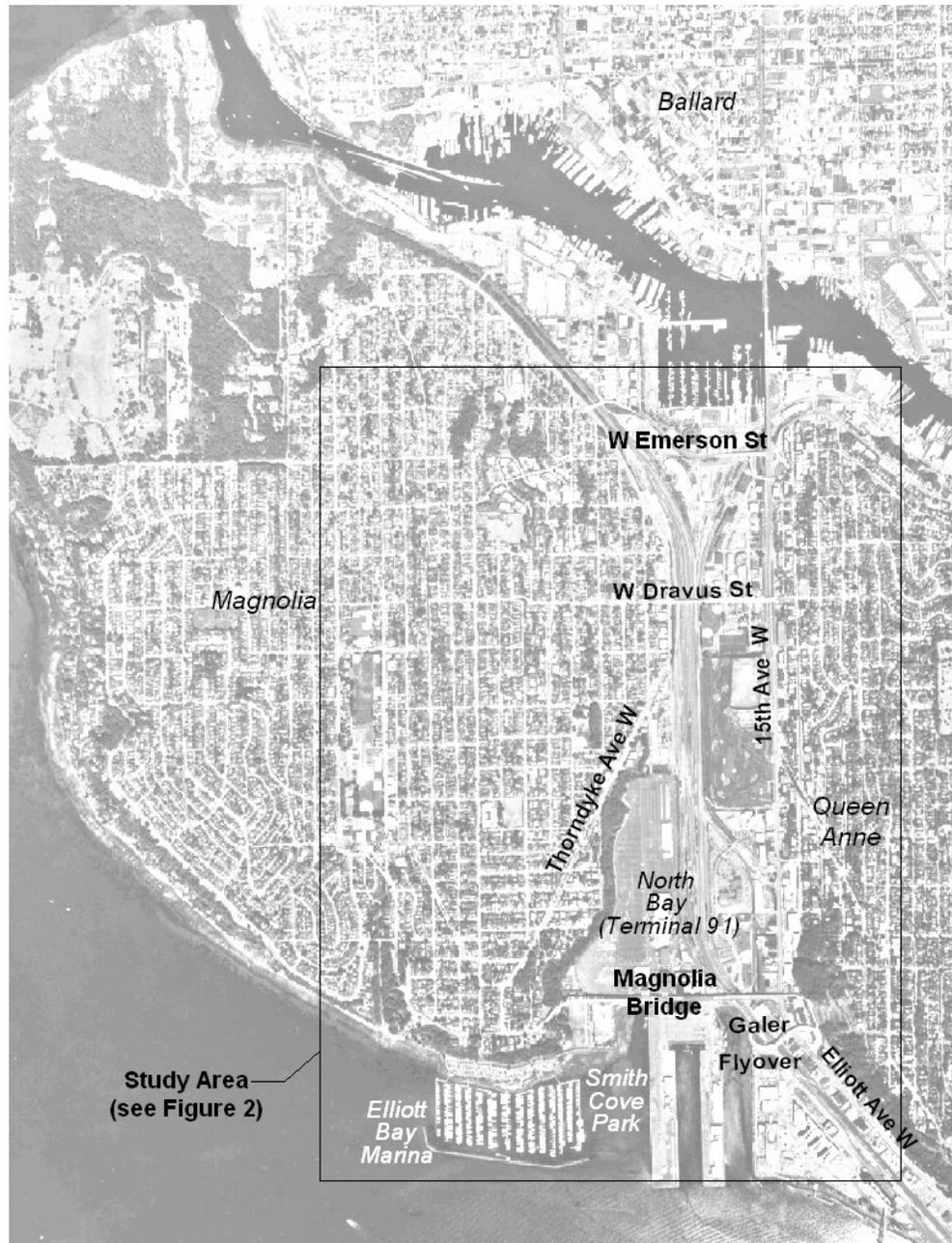
The City of Seattle has identified the Magnolia Bridge as an important bridge that should remain standing following a “design” seismic event (an earthquake with a peak ground acceleration of 0.3g that is anticipated to happen every 475 years<sup>1</sup> and may measure 7.5 on the Richter scale). Even with the repairs completed following the February 2001 earthquake, the existing bridge is susceptible to severe damage and collapse from an earthquake that is less severe than the “design” seismic event.

The original bridge was constructed in 1929 and has been modified, strengthened, and repaired several times. The west end of the bridge was damaged by a landslide in 1997, requiring repair and replacement of bridge columns and bracing, the construction of six additional supports, and a retaining wall north of the bridge to stabilize the bluff from further landslides. Repairs after the 2001 earthquake included replacement of column bracing at 27 of the 81 bridge supports. A partial seismic retrofit of the single-span bridge structure over 15th Avenue West was completed in 2001. The other spans were not upgraded.

Inspections of the bridge conclude that the concrete structure is showing signs of deterioration. The concrete is cracking and spalling at many locations, apparently related to corrosion of the reinforcing steel. The bridge requires constant maintenance in order to maintain its load capacity, but there does not appear to be any immediate load capacity problem. The existing foundations have insufficient capacity to handle the lateral load and uplift forces that would be generated by a “design” seismic event. The existing foundations do not extend below the soils that could liquefy during a “design” seismic event. If the soils were to liquefy, the foundations would lose their vertical-load-carrying ability and the structure would collapse.

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<sup>1</sup> Since the project “Purpose and Need” was adopted in 2004, seismic design criteria are for a peak ground acceleration of 0.44g, and a seven percent probability of exceedance in 75 years.



**Figure 1  
Vicinity Map**

## System Linkage

There are three roadway connections from the Magnolia community, with more than 20,000 residents, to the rest of Seattle. As the southernmost of the three connections, the Magnolia Bridge is the most direct route for much of south and west Magnolia to downtown Seattle and the regional freeway system.



In meetings with the public and the Seattle Fire Department, the importance of this route for emergency services has been emphasized. The loss of use of this bridge in 1997 and again in 2001 demonstrated to the City that the remaining two bridges do not provide acceptable operation. During the bridge closure following the February 2001 earthquake, the City addressed community concerns about reduced emergency response time to medical facilities outside of Magnolia by stationing paramedics at Fire Station 41 (2416 34th Avenue West) 24 hours a day.

## *Traffic Capacity*

The three Magnolia community connections to the 15th Avenue West corridor are adequate for the present volume of traffic. Each of the three connections carries 30 to 35 percent of the 60,100 daily vehicle trips (2001 counts) in and out of the Magnolia community<sup>2</sup>. Loss of the use of the Magnolia Bridge for several months after the February 2001 earthquake, and in 1997 following the landslide at the west end of the bridge, resulted in lengthy 15- to 30-minute delays and increased trip lengths for many of the users of the Magnolia Bridge. These users were required to use one of the two remaining bridges at West Dravus Street and West Emerson Street. Travel patterns in the Magnolia community changed substantially resulting in negative impacts on local neighborhood streets. The increase of traffic through the West Dravus Street and West Emerson Street connections also resulted in congestion and delay for the regular users of these routes. Losing the use of any one of these three bridges would result in redirected traffic volumes that would overwhelm the capacity of the remaining two bridges.

## *Modal Interrelationships*

The Magnolia Bridge carries three of the four local transit routes serving Magnolia and downtown Seattle destinations. The topography of the east side of Magnolia, East Hill, would make access to the 15th Avenue West corridor via the West Dravus Street Bridge a circuitous route for transit. Use of the West Emerson Street connection to 15th Avenue West would add significant distance and travel time for most trips between Magnolia and downtown Seattle.

The Magnolia Bridge has pedestrian facilities connecting the Magnolia neighborhood to Smith Cove Park and Elliott Bay Marina as well as to 15th Avenue West/Elliott Avenue West. These facilities need to be maintained. The Elliott Bay multi-use trail connects Magnolia with downtown Seattle through Myrtle Edwards Park. The trail passes under the Magnolia Bridge along the west side of the BNSF rail yard, but there are no direct connections to the bridge.

Bicycle facilities on Magnolia Bridge need to be maintained or improved. Even with the steep (about 6.3 percent) grade, bicyclists use the Magnolia Bridge in both directions. There are no bike lanes on the bridge, so cyclists use the traffic lanes and sidewalks. Once cyclists cross the bridge, they must either travel with motor vehicles on Elliott Avenue West or find a way back to the Elliott Bay Trail using local east-west streets such as the Galer Flyover.

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<sup>2</sup> Seattle Department of Transportation traffic counts through 2011 show little year to year variation in annual average weekday traffic (Seattle, 2013x). The average daily traffic count since 2001 has been 59,500.

## *Transportation Demand*

The existing Magnolia Bridge provides automobile access for Port of Seattle North Bay (Terminal 91) to and from Elliott Avenue West/15th Avenue West. Truck access between Terminal 91 and Elliott Avenue West/15th Avenue West is accommodated via the Galer Flyover. Future planned expansion of the Amgen facility on Alaskan Way West and redevelopment of underutilized portions of North Bay and other areas of Interbay will increase demand for traffic access to the Elliott Avenue West/15th Avenue West corridor. The Port of Seattle has a master planning process under way (July 2003) for its North Bay (Terminal 91) property and the Washington National Guard property east of the BNSF Railway between West Garfield Street and West Armory Way<sup>3</sup>. This area contains 82 acres available for redevelopment. There are also 20 or more acres of private property available for redevelopment east of the BNSF Railway between West Wheeler Street and West Armory Way. Redevelopment of the North Bay property will include public surface streets with connections to the replacement for the Magnolia Bridge. Forecasts of future (year 2030) traffic demand indicate that the access provided by the Galer Flyover and West Dravus Street would be inadequate. The capacity provided by the existing Magnolia Bridge or its replacement would also be needed.

## *Legislation*

Seattle Ordinance 120957, passed in October 2002, requires that the Magnolia Bridge Replacement Study: (1) identify possible additional surface roads from Magnolia to the waterfront (avoiding 15th Avenue West and the railroad tracks); (2) obtain community input on the proposed roads; and (3) identify the cost for such roads and include it in the total cost developed in the Magnolia Bridge Replacement Study.

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<sup>3</sup> The Port of Seattle has not approved the North Bay Master Plan. In 2010, the Port prepared Terminal 91 Development Options Study (Port of Seattle, 2010). The market analysis for this study focused only on uses permitted under current Terminal 91 zoning. It concluded the current highest and best use for North Bay property is for yard storage.

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# Description of Alternatives

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An alignment study process was implemented to help identify the specific bridge replacement alternatives to be studied in the EIS. Twenty-five concepts were developed and screened against the project goals and objectives. This resulted in nine alignment alternatives, identified as A through I, that merited further analysis. These nine went through an extensive public review and comment process as well as project screening criteria and prioritization. Initially, the top four priority alternatives, A, B, D, and H, were identified to be studied in the Environmental Assessment. Early on, Alternative B was eliminated because it became clear that it violated City shoreline policies and Federal Section 4(f) criteria. Upon detailed traffic analysis, Alternative H was eliminated because two key intersections were predicted to function at a level of service F and could not be mitigated. The next priority, Alternative C, was then carried forward for analysis in the Environmental Assessment.

In January 2007, the Federal Highway Administration rescinded the Notice of Intent to prepare an environmental impact statement for the Magnolia Bridge Replacement that had been issued in April 2003. This was done because FHWA, WSDOT and SDOT jointly decided the project will not likely results in significant impacts to the environment and that an Environmental Assessment (EA) is the most appropriate environmental document for compliance with the National Environmental Policy Act (NEPA).

Independent of this project, a new north-south surface street may be constructed on Port of Seattle property connecting 21st Avenue West at the north end of North Bay with 23rd Avenue West near Smith Cove Park when the North Bay portion of Terminal 91 is re-developed in the future<sup>4</sup>. In addition, a southbound ramp will be added to the Galer Flyover to accommodate eastbound to southbound Elliott Avenue West traffic movements. The Galer Flyover ramp has been identified as a needed improvement for expected future development of property west of the railroad tracks. Locations for new surface streets through the Port of Seattle property will be determined through the Port's process for Terminal 91 development. The north-south surface street and ramp are assumed to exist under any Build Alternative, but they are not part of this environmental process.

Typical cross sections and plans of the Build and No Build Alternatives are located at the end of this section.

## No Build Alternative

The No Build Alternative, shown in Figure 3 and Figure 5, would maintain the existing bridge structure in place with the existing connections at the east and west ends. Long-term strategies for maintaining the existing structure would be required for the No Build Alternative. To keep the existing bridge in service for over 10 years, the following would need to be accomplished:

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<sup>4</sup> A north-south surface road in the upland are of Terminal 91 was proposed in the North Bay Master Plan (Port of Seattle 2005). As of July 2013, there is no pending project to develop this road. The existing Magnolia Bridge ramps connect to 23rd Avenue West to the south and access cruise terminal parking to the north within Terminal 91.

- An in-depth inspection of the bridge would be required to determine needed repairs and a long-term maintenance program.
- Concrete repairs would be required. These repairs could include injection of epoxy grout into cracks, repair of spalled concrete, and replacement of deficient concrete and grout.
- Preservation measures to slow corrosion of the reinforcement would be required. These measures could include a cathodic protection system.
- Any structural elements that lack the capacity to carry a tractor-trailer truck with a 20-ton gross trailer weight would need to be identified, modeled, and strengthened.

## Alternative A (Preferred Alternative)

Alternative A would replace the existing bridge with a new structure immediately south of the existing bridge as shown in Figure 4 and Figure 6. The alternative would construct a half-diamond interchange to and from the east at 23rd Avenue West to provide access to the waterfront and the Port of Seattle Terminal 91 upland property. Connections at the east and west ends of the bridge would be similar to the existing bridge.

An optional signalized, elevated intersection (Alternative A – Intersection) in the bridge’s mid-span was evaluated to provide access to the waterfront and the Port of Seattle Terminal 91 upland property from both the east and west. This intersection is not included in the Preferred Alternative.

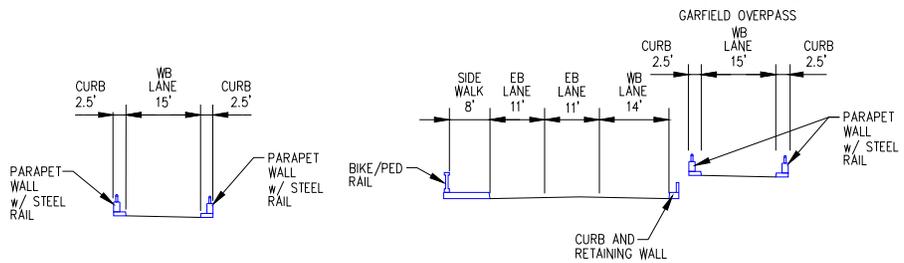
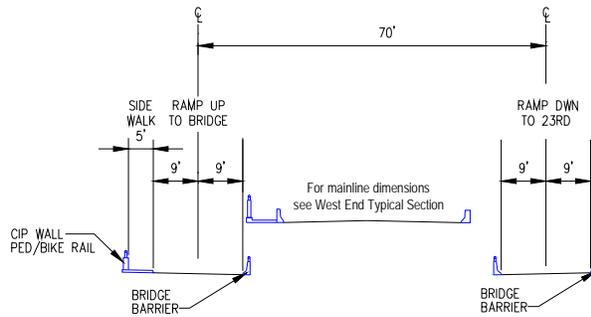
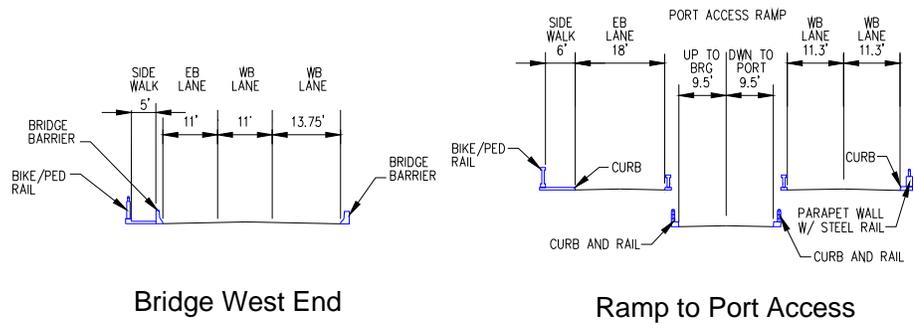
## Alternative C

Alternative C would provide 2,200 feet of surface roadway within the Port of Seattle North Bay property between two structures as shown in Figure 4 and Figure 8. The alternative alignment would descend from Magnolia Bluff on a structure running along the toe of the slope. The alignment would reach the surface while next to the bluff before turning east to an intersection with the north-south surface street. The alignment would continue east from the intersection, turning south along the west side of the BNSF rail yard. The alignment would rise on fill and structure, turning east to cross the railroad tracks and connect to 15th Avenue West.

## Alternative D

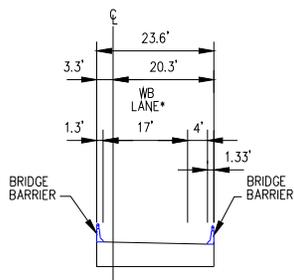
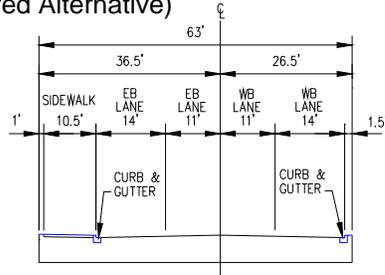
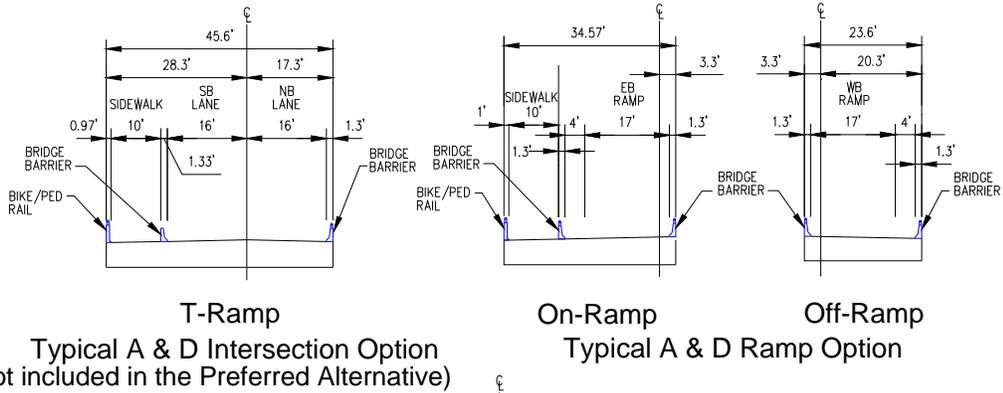
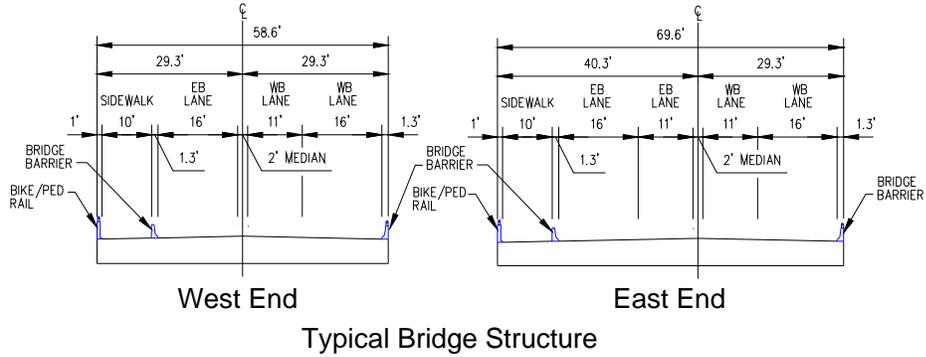
Alternative D would construct a new bridge in the form of a long arc north of the existing bridge as shown in Figure 4 and Figure 9. Connections at the east and west ends of the bridge would be similar to the existing bridge. This alternative would construct a signalized, elevated intersection (Alternative D – Intersection) in the bridge’s mid-span to provide access to the waterfront and Port of Seattle Terminal 91 upland property from both the east and west.

An optional half-diamond interchange (Figure 10, Alternative D – Ramps) could be constructed in lieu of the elevated intersection to provide access to the waterfront and the Port of Seattle Terminal 91 upland property to and from the east only.

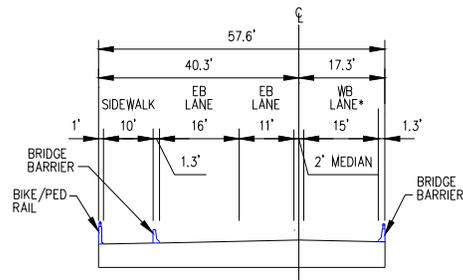


**NOTE:**  
Dimensions are approximate and obtained from construction plans and aerial photographs. The information shown has not been field verified.

**Figure 3**  
**Typical Sections – No Build Alternative**



\* 15' Alternative C  
\* 19' Alternative D



**Eastbound Off-Ramp**  
**Westbound On-Ramp**  
\* 16' Alternative D

**Figure 4**  
**Typical Sections – Build Alternatives**



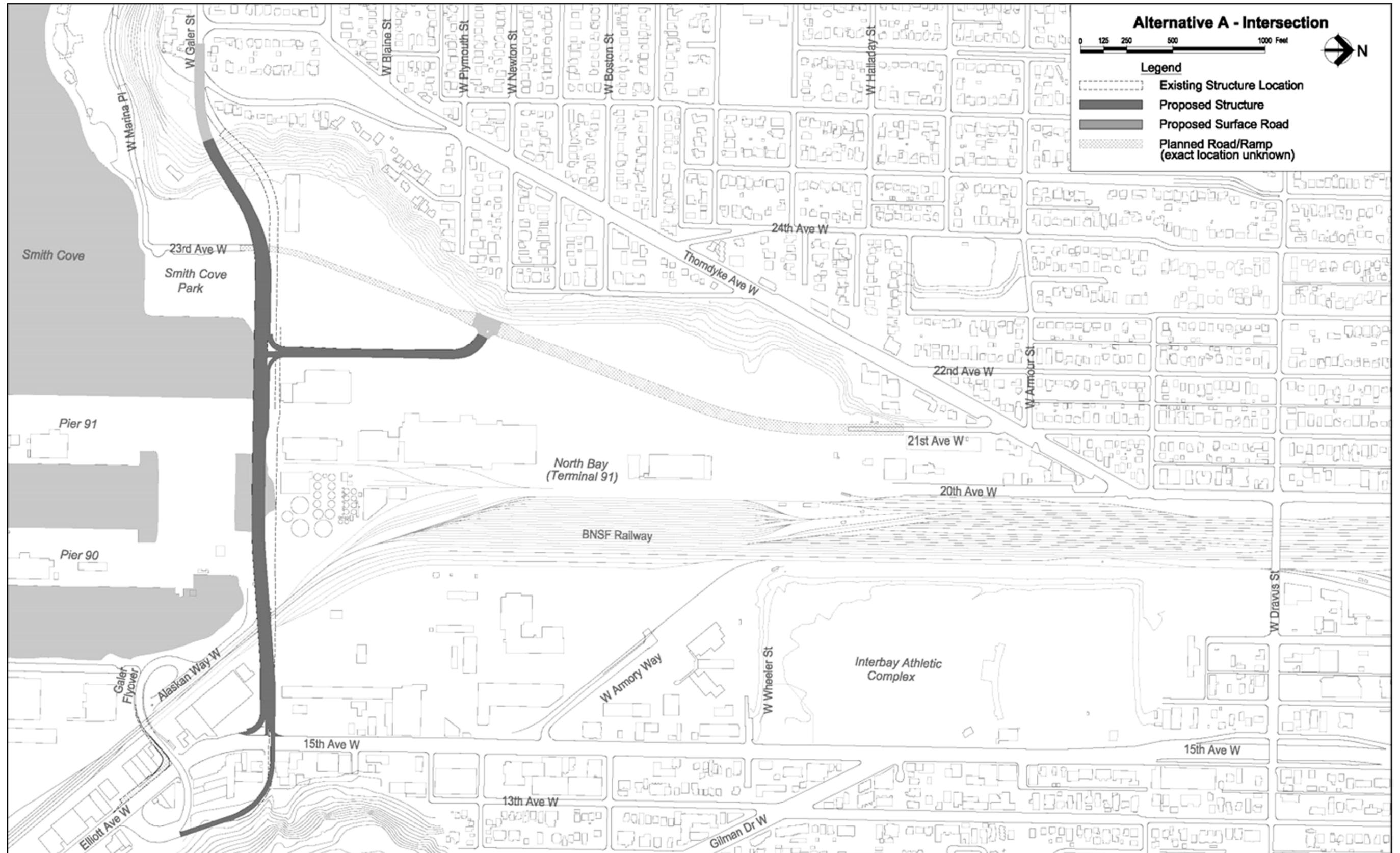


Figure 6 Alternative A - Intersection

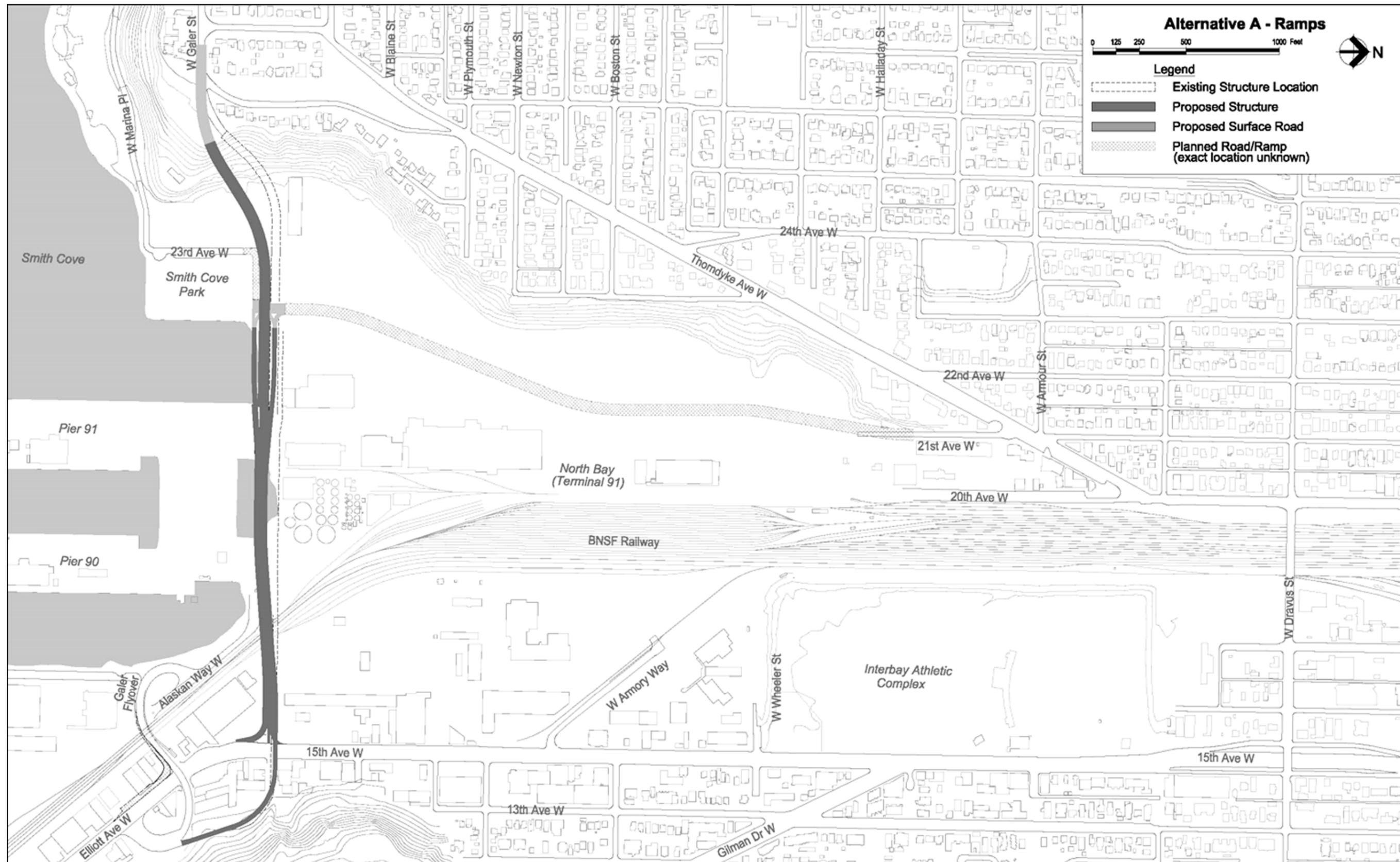
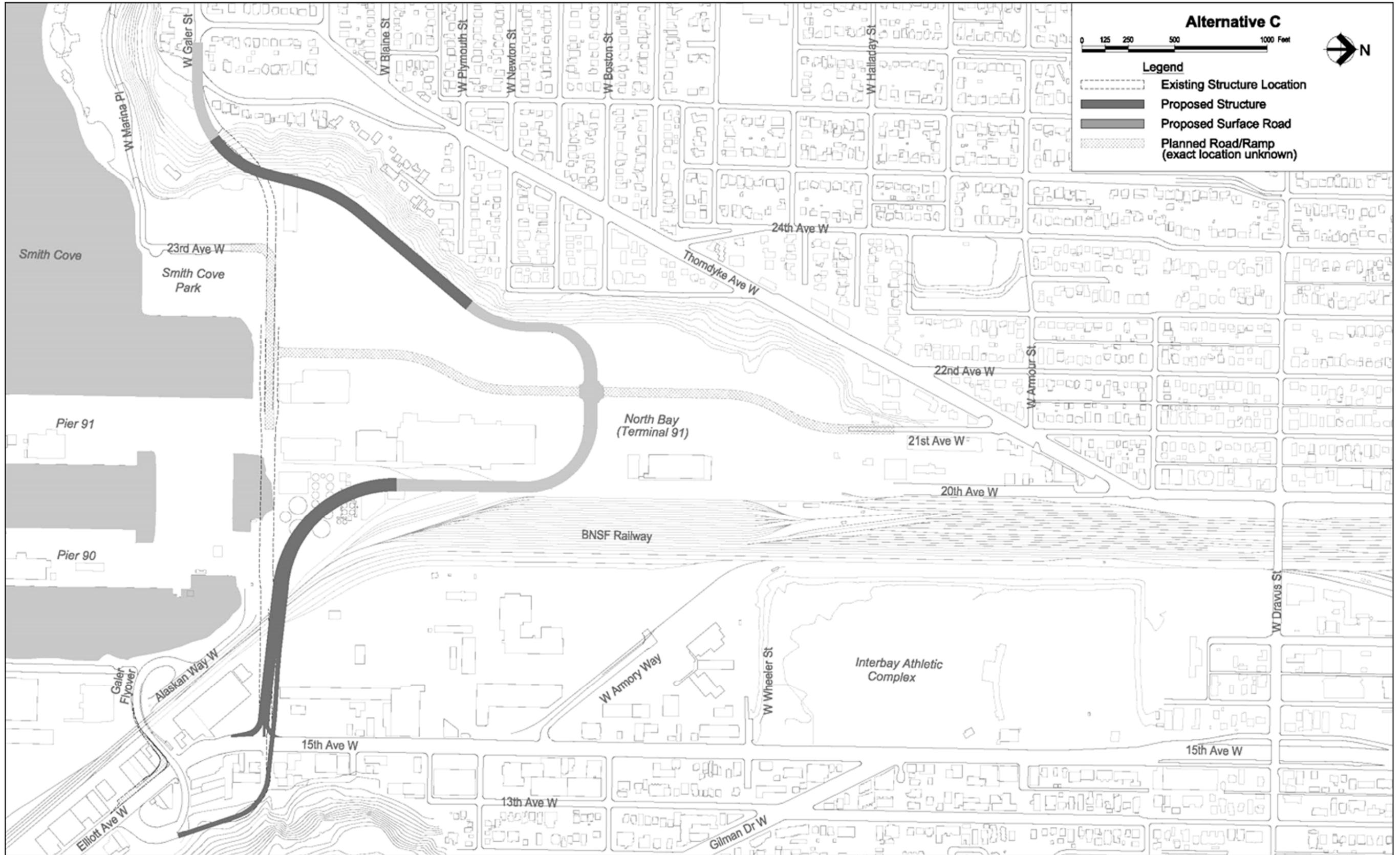
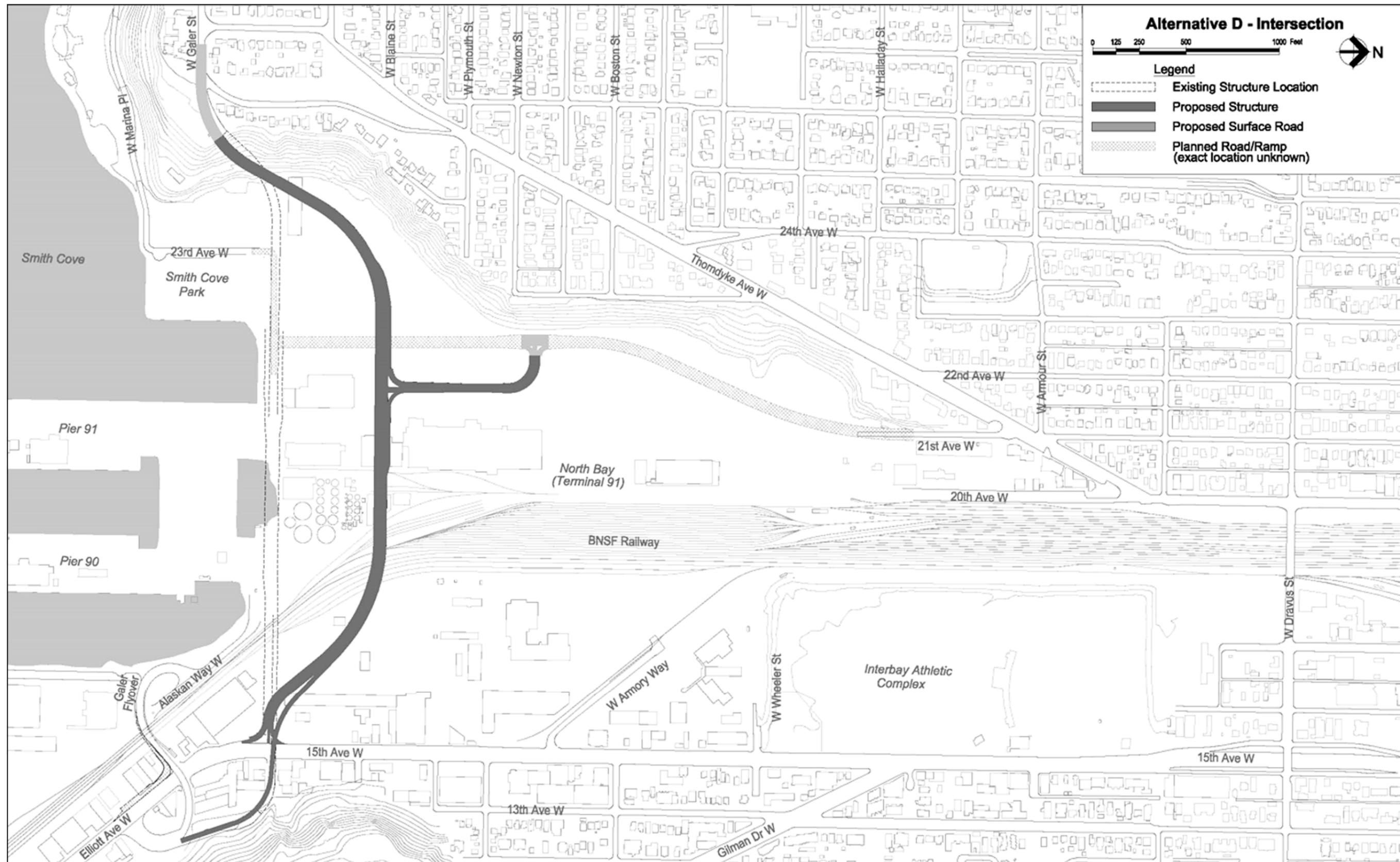


Figure 7 Alternative A – Ramps (Preferred Alternative)



**Figure 8 Alternative C**



**Figure 9 Alternative D - Intersection**

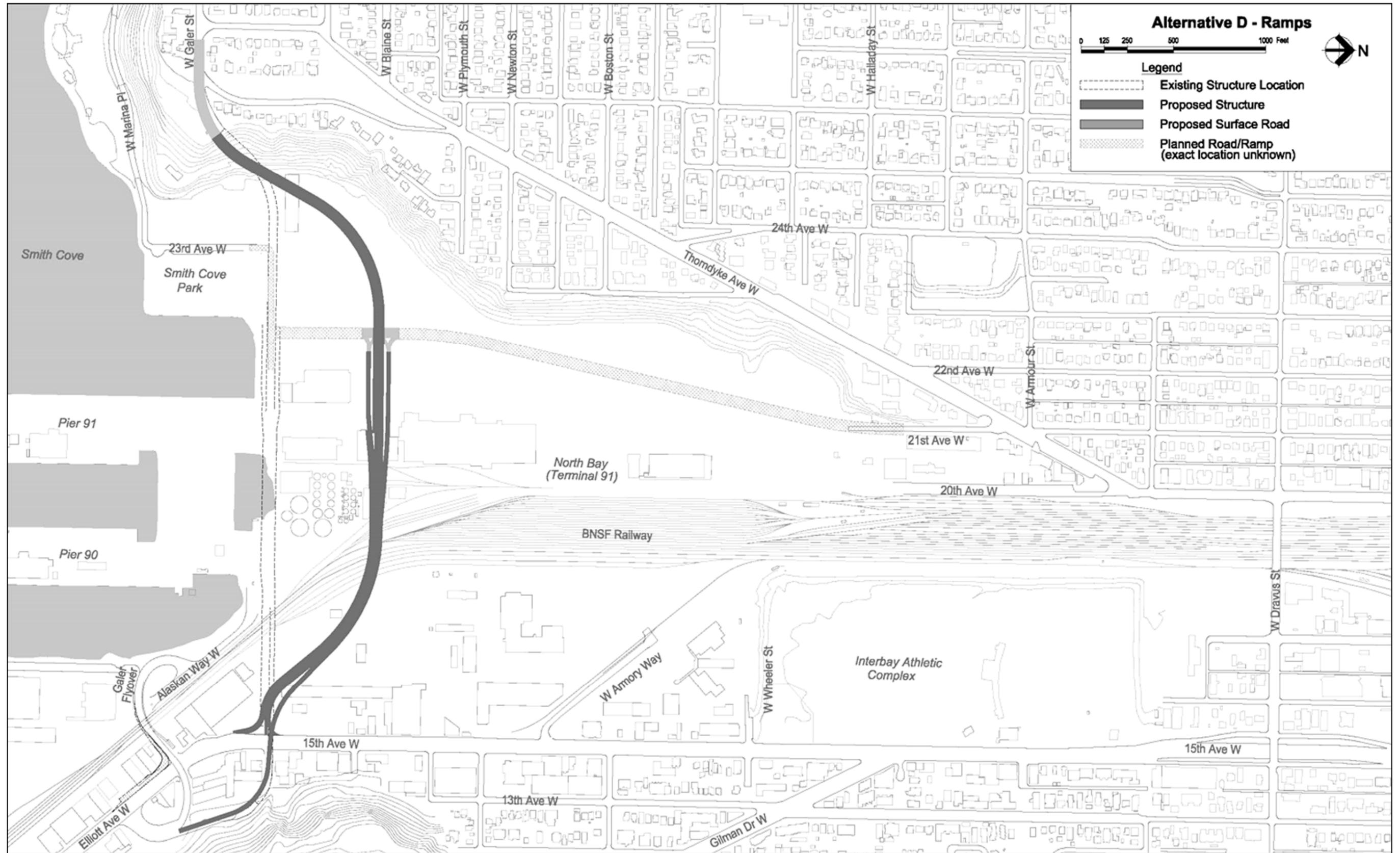


Figure 10 Alternative D - Ramps

## Methods

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This discipline report has been prepared consistent with the guidelines contained in Chapter 450 of the Washington State Department of Transportation (WSDOT) *Environmental Procedures Manual* (WSDOT 2013). For purposes of this land use analysis, the study area boundaries include West Dravus Street on the north, 10th Avenue West on the east, the Elliott Bay waterfront on the south (from Terminal 86 to the extension of 32nd Avenue West), and 32nd Avenue West on the west.

General land use characteristics and development patterns have been described for the Magnolia, Interbay, and Queen Anne neighborhoods through a field investigation and review of City and neighborhood plans. More detailed information has been collected and analyzed for the study area. Existing and projected land use and zoning information for the study area was collected through a field investigation of the project site, review of aerial photos, and review of City's Geographic Information System (GIS) data describing existing zoning and land use designations. This information was also used to describe land use changes and right of way requirements related to the alternatives. To gather information regarding potential new land uses in the study area, relevant portions of the City's Comprehensive Plan and Future Land Use Map were analyzed. Reasonably known future development in the study area was also considered to analyze future development patterns. Known future development includes expansion of the Amgen facility. The Ballard to Interbay Land Use Corridor Study is producing recommendations for proposed changes, if necessary, to the Seattle Comprehensive Plan or land use code for the Elliott Avenue West/15th Avenue West corridor in the project study area.

To analyze the relationship and consistency of the project alternatives with adopted plans, policies, and regulations, planning documents and regulations of the City of Seattle and the Port of Seattle were reviewed. Relevant policies and regulations in each document were identified and compared to each of the alternatives to determine if any of the alternatives would be inconsistent with the content of the documents.

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## Existing Land Use

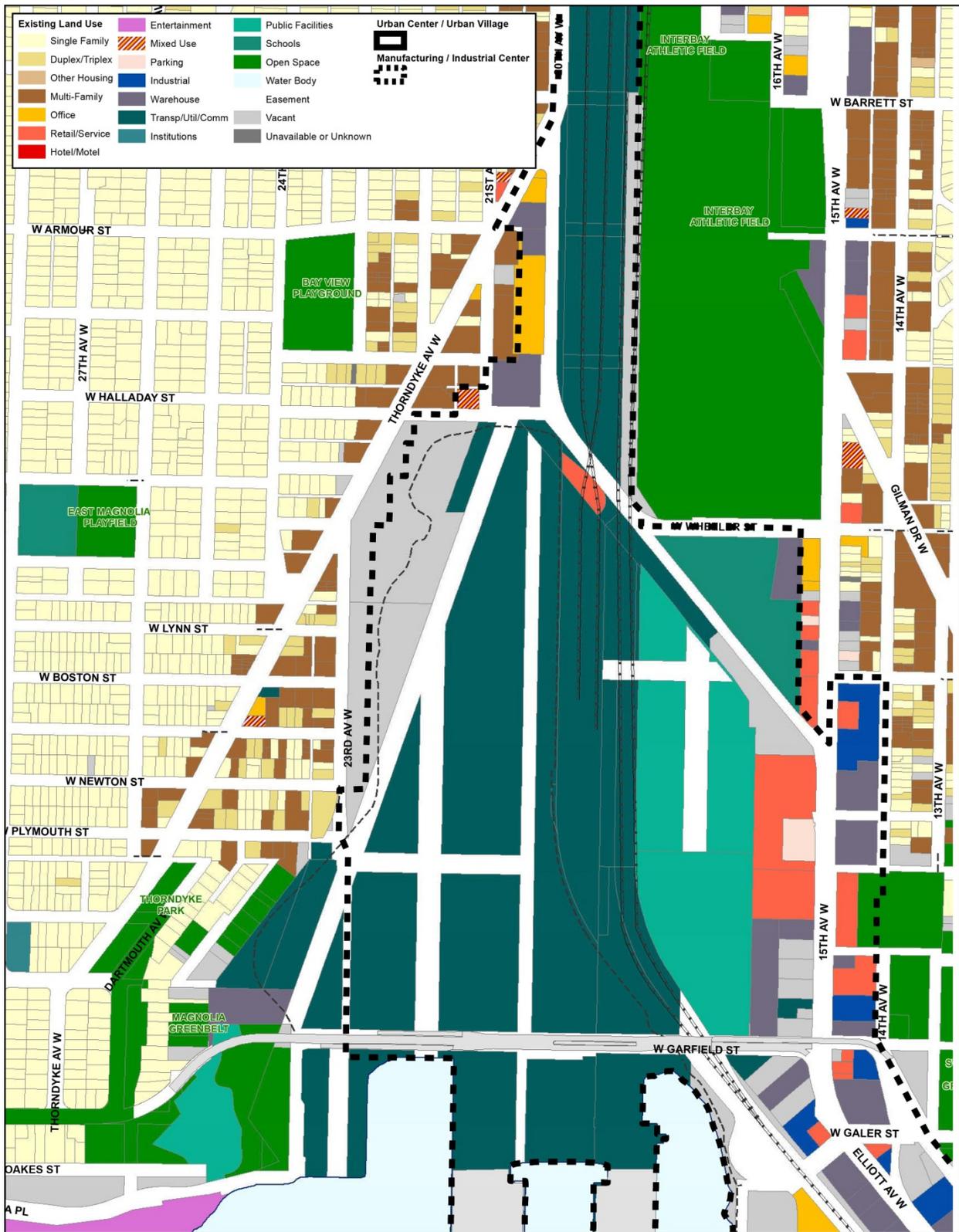
Figure 11 shows the general locations of existing land uses in the study area. The alternatives would primarily be located over land used for industrial and commercial purposes, with western connections to residential areas in the Magnolia neighborhood.

Single-family residential neighborhoods are located to the east and west of the project site, on the upper portions of the Magnolia Bluff and Queen Anne Hill. Multifamily residential buildings are generally located on the lower portions of both hills closer to the project site.

Interbay, which is the lowland area between Magnolia and Queen Anne, is used for a mix of industrial and commercial businesses. A variety of retail commercial, service, small office, and light industrial uses are located along the Elliott Avenue West/15th Avenue West corridor. The Washington National Guard Armory is located to the west of this corridor, and BNSF railroad tracks and rail yard run up the middle of the industrial area in Interbay. The Amgen offices are located along Elliott Bay to the southeast of the existing bridge.

The Port's Terminal 91 property is located to the west of the railroad tracks and east of the Magnolia Bluff. The Port is a major landholder in the study area. Major current uses on Port property include the cruise terminal, cold storage, fish processing, and vehicle storage for the Seattle School District.

Land uses to the north include a mix of light industrial and multifamily residential uses on the west side of the railroad tracks, the Interbay Golf Course and P-Patch on the east side of the tracks, and commercial/retail uses along Thorndyke Avenue West, 20th Avenue West, and 15th Avenue West.



**Figure 11**  
Existing Land Use

## Existing Zoning

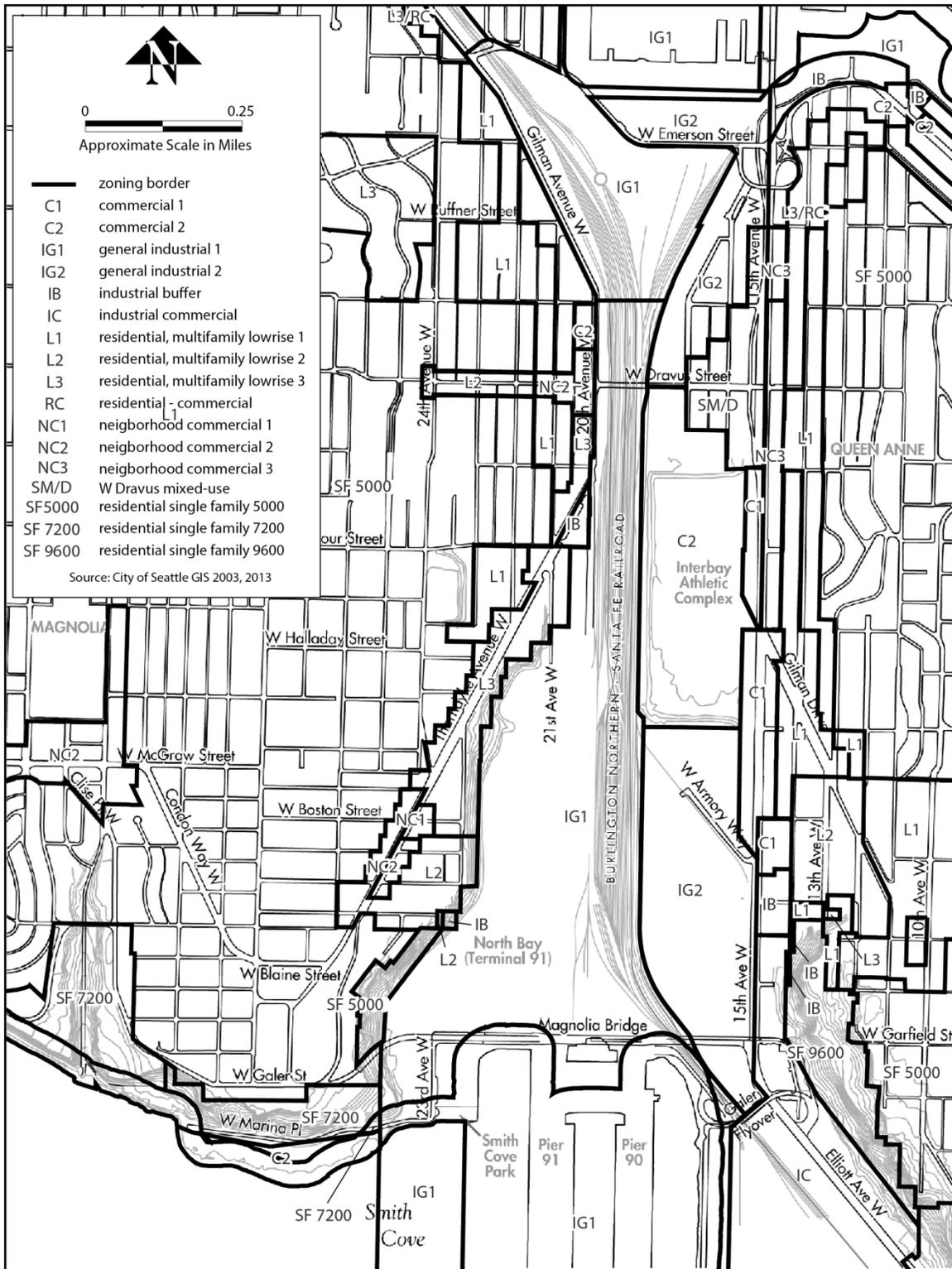
Figure 12 shows the current zoning designations in the project vicinity. Generally, existing land uses described above are consistent with the zoning designations.

The uphill portions of the Magnolia and Queen Anne neighborhoods are zoned Residential Single Family 5000, with lower areas on both hills zoned Lowrise 1, 2, or 3. Lowrise zoning designations allow multifamily residential development 25 to 30 feet in height, with densities of one dwelling unit per 800 to 1,600 square feet of lot area.

The Port's Terminal 91, including properties south of the bridge along Elliott Avenue West, and BNSF Railway property are zoned General Industrial 1/45 (IG1), which allows industrial development in areas characterized as having access to waterways and rail. This zoning designation indicates a height limit of 45 feet. The National Guard Armory and properties located along 15th Avenue West, south of West Armory Way, are zoned General Industrial 2/45 (IG2), which is intended to allow a broad mix of activities.

Some property fronting the eastern side of 15th Avenue West (south of West Armory Way) and fronting both sides of Elliott Way West (south of the existing bridge) is zoned Industrial Commercial. This zone is intended to promote development of businesses that incorporate a mix of industrial and commercial activities. Some areas to the east of 15th Avenue West are zoned Industrial Buffer (IB), which provides additional development regulations to limit impacts on neighboring non-industrial areas.

Parcels fronting 15th Avenue West north of West Armory Way are zoned Commercial 1 and Commercial 2, which indicate an auto-oriented, primarily retail/service commercial area that serves surrounding neighborhoods and the larger community or citywide clientele. A Neighborhood Commercial zone (NC-3), which allows less intensive commercial uses, is located along 15th Avenue West north of Gilman Drive West.



**Figure 12**  
**Existing Zoning**

# Studies and Coordination

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## Studies and Data Sources

To analyze the relationship and consistency of the proposed project alternatives with adopted plans, policies, and regulations, the following documents were reviewed:

- Seattle's Comprehensive Plan, Toward a Sustainable Seattle, A Plan for Managing Growth 1994-2014 (as amended) (City of Seattle Comprehensive Plan) (City of Seattle 2005)
- Land Use and Zoning, Title 23 (City of Seattle n.d.)
- Seattle Critical Areas Ordinance
- City of Seattle Shoreline Master Program
- The Ballard-Interbay Northend Manufacturing and Industrial Center (BINMIC) Plan (BINMIC Planning Committee 1998)
- Queen Anne Plan (Queen Anne Neighborhood Planning Committee 1998)
- Ballard to Interbay Land Use Corridor Study, Preliminary Recommendations (Seattle Department of Planning and Development 2013)

The City of Seattle Comprehensive Plan is the guiding policy document for the neighborhood.

Information regarding existing and future land uses was gathered through field investigations, analysis of City GIS information, review of the City's Comprehensive Plan and Future Land Use Map, and consideration of reasonably known future development in the study area.

## Major Assumptions

This analysis assumes that the Port's Terminal 91 North Bay property will be redeveloped consistent with the current industrial zoning for the site. This analysis also assumes that other likely future development, such as expansion of the Amgen facility and redevelopment of the Washington National Guard site, would occur under existing zoning and permit requirements.

Because the project alternatives would not create additional traffic capacity, this analysis assumes that the alternatives would not induce population or housing growth in the study area and would not increase demand for public services. The study area is expected to grow at less than 1 percent per year as allowed by current City of Seattle land use plans and zoning (Puget Sound Regional Council 2010). The same amount of growth would occur under the No Build Alternative and the Build Alternatives.

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## No Build Alternative

### *Land Required for Right of way*

The No Build Alternative would maintain existing traffic patterns and would not require acquisition of land for new right of way. No changes in land use would occur.

### *Future Development Pattern Considerations*

The existing structure could affect the type of development likely to occur on underused properties in the future, given its proximity to the water and its physical and aesthetic presence from the ground. The bridge's ramps occupy space along the water's edge and segregate Piers 90 and 91 within Terminal 91 from the uplands. The structure underneath the western end of the bridge would also inhibit development potential on adjacent property.

If the zoning and land uses in this area were to remain industrial in nature, the physical and aesthetic character of the underside of the bridge would not be an issue regarding future development. If there be a desire at some point in the future, however, for development of a different character, the structure would be a deterrent. Also, if the existing Magnolia Bridge needs to be replaced in the future, it would impact any development in the area built between the present and any future rebuild.

The No Build Alternative would retain existing businesses and access points. This alternative could keep access at the bridge level to the upper level of an existing business (Anthony's Seafood Distributing) in a building adjacent to the north side of the bridge. This business operates a loading dock with direct access to the existing bridge.

## Alternative A (Preferred Alternative)

### *Land Required for Right of way*

Alternative A would primarily require use of land currently zoned and used for industrial purposes. This alternative would require relocation of one business, Anthony's Seafood Distributing, whose access is located on the existing bridge. That company would no longer have access at its current location after the existing bridge is removed. See the Social, Economic, and Relocation Discipline Report for additional information.

The land required for Alternative A is located immediately south of the existing bridge. The area is composed of a combination of parcels that are either City of Seattle right of way or are owned by the Port, Seattle Parks and Recreation, or private parties. The land required for all but the western end of the bridge is zoned IG1 and is used for industrial purposes and for access from upland industrial activities to the waterfront and Piers 90 and 91.

The western end of the bridge approaching West Galer Street would be constructed over City-owned parkland (Ursula Judkins Viewpoint and Smith Cove Park) and

private land containing the Admiral's House (nationally-listed historic property) on the Magnolia Bluff hillside that is zoned Residential Single Family 5000. See the Public Land, Section 4(f) Discipline Report for a discussion of acquisition of the City-owned parkland and the historic site.

Alternative A would require that the City of Seattle obtain a right of way or an easement over Port of Seattle, Seattle Parks and Recreation, and Admiral's House property. The City would also need to work with BNSF Railway to construct over the railroad tracks at the existing bridge. Portions of the right of way and easement occupied by the existing bridge could be transferred to the Port, Seattle Parks and Recreation, or the Admiral's House owner.

Right of way or easements required for the Preferred Alternative would include an approximate 65- to 95-foot-wide corridor totaling 6.0 acres. This is about 0.4 acres larger than the 5.6 acres estimated for the Alternative A – Ramps design developed for the project's "Type, Size and Location" (TS&L) phase. Right of way or easement required for the Alternative A – Ramps Intersection option would include a 65- to 150-foot-wide corridor totaling 6.5 acres. See Appendix A for figures and tables showing right of way needs for each alternative.

### *Relationship to Public Facilities and Utilities*

The right of way or easement required for Alternative A could be used for joint location of telecommunication and electrical lines. Those utility lines would likely be attached to the bridge. Also, the western end of Alternative A would pass over Seattle Parks and Recreation park property. The Seattle Department of Transportation and Seattle Parks and Recreation have prepared a Joint Development Agreement to manage replacement of the Magnolia Bridge over the park property. The area under the bridge in that location (approximately 0.6 acre) would be used for public open space or non-organized recreation activities. See the Public Lands, Section 4(f) Discipline Report for more information. Finally, under Alternative A, the bridge would be designed to allow north-south vehicle access under the bridge between upland Port of Seattle property and the waterfront. BNSF Railway and bike path access under the bridge would also be maintained.

### *Future Development Pattern Considerations*

By moving the bridge location slightly to the south, Alternative A would continue to form a physical and visual barrier between the shoreline (including the piers) and the uplands. Constructing the bridge in this location would not substantially affect the ability to retain the types of uses that are currently in the area but would limit other types of development into the foreseeable future. Given that the amount of land along Elliott Bay is a finite resource, locating the bridge as a visual and physical separator between shoreline and uplands may have an impact if future development pressures shift over the lifetime of the structure.

The other area of impact for Alternative A would be the ramp running north into the Port's Terminal 91 North Bay property under the Alternative A – Intersection option. The visual quality of the area influenced by the height and bulk of the structure as well as noise associated with the ramp would affect the development potential on adjacent property, especially at the ramp's highest point near the bridge. This bridge intersection option is not an element of the Preferred Alternative.

Other potential changes from the bridge related to noise, air, water, and visual quality are not expected to cause land use changes and affect future development patterns. Please refer to relevant discipline reports for this project for a description of impacts related to other elements of the environment, including social and economic conditions, visual quality, transportation, water quality, air quality, and noise.

### *Consistency/Conflict with Adopted Plans and Policies*

Overall, Alternative A would be consistent with City of Seattle, Port of Seattle, and BINMIC policies for use of industrial zoned land and would not preclude development of that land in compliance with those policies. Alternative A would not comply with some City policies that call for public access and view protection in shoreline areas; however, City policies also allow for consideration of industrial use and function in shoreline areas. Streets are a use permitted outright on waterfront lots in an Urban Industrial (UI) shoreline (SMC 23.60.840.E). Decision-makers would need to weigh the functional benefits of Alternative A against view and public access factors. Please see the Applicable Land Use Plans and Regulations section of this report below for a detailed consistency analysis and disclosure of potential conflicts with adopted plans, policies, and regulations.

Alternative A is located within the ceded territory and the “usual and accustomed areas” of the Suquamish Tribe, Tulalip Tribes, Muckleshoot Tribe, Yakama Indian Nation, the Duwamish Tribe (pending federal recognition), and the Kikiallus Indian Nation (not federally recognized). The Alternative A alignment is adjacent to Elliott Bay, which includes tribal fishing areas; however, no conflicts between the project alternatives and tribal interests have been identified to date. As part of the Section 106 process for historic and cultural resources, the federal lead agency, the Federal Highway Administration (FHWA), is required to make formal government-to-government consultation with potentially affected tribes. FHWA will send a formal letter to these identified tribes and any other tribe FHWA determines to be appropriate to initiate the Section 106 consultation. If a response from a tribe is not received within 30 days after the delivery date of the initiation of consultation letter, project development is allowed to move forward. The tribes have the option, however, of entering consultation at a later date. Any issues identified by the tribes will be addressed through the ongoing environmental process.

Please see the Applicable Land Use Plans and Regulations section of this report below for a detailed consistency analysis and disclosure of potential conflicts with adopted plans, policies, and regulations.

## **Alternative C**

### *Land Required for Right of way*

As with Alternative A, Alternative C would primarily require use of industrial land and would require relocation of Anthony’s Seafood Distributing. In addition, Alternative C would require displacement of two vacant buildings north of the former petroleum tank farm, and reconfiguration of access drives and loading docks on the eastern side of the Trident Seafood’s building. Alternative C would also require removal of vacant warehouse immediately north of the existing bridge at the base of Magnolia bluff. See the Social, Economic, and Relocation Discipline Report for additional information.

The land required for Alternative C is located to the north of the existing bridge. The area for all but the western end of the bridge is owned by either the City or Port of Seattle, or BNSF Railway . These properties are zoned IG1 and IG2 and are used for industrial and warehouse purposes. The western end of the bridge approaching West Galer Street would be constructed on private residential property (Admiral's House) and a small portion of Seattle Parks and Recreation Ursula Judkins Viewpoint on the Magnolia Bluff hillside that is zoned Residential Single Family 5000.

Alternative C would require that the City obtain a right of way or an easement over Port of Seattle, Seattle Parks and Recreation, and private residential (Admiral's House) property. The City would also need to work with BNSF Railway to construct over the railroad tracks to the north of the existing bridge. Portions of the right of way and easement occupied by the existing bridge could be transferred to the Port of Seattle, Seattle Parks and Recreation, or the Admiral's House owner.

Right of way or easement required for Alternative C would include a 65- to 100-foot-wide corridor totaling 9.5 acres. See Appendix A for figures and tables showing right of way needs for each alternative.

### *Relationship to Public Facilities and Utilities*

Similar to Alternative A, the right of way or easement required for Alternative C could be used for joint location of telecommunication and electrical lines. Also, the configuration of this alternative, with a length of surface road on Port property, would allow north-south vehicle access between upland Port of Seattle property and the waterfront. BNSF Railway and bike path access under the bridge would be maintained. Unlike Alternative A, Alternative C would not be located over the Smith Cove Park portion of the Smith Cove Acquisition Parcels.

### *Future Development Pattern Considerations*

Constructing the bridge as proposed under Alternative C would not substantially affect the ability to retain the types of uses that are currently in the area. Alternative C would move the bridge alignment to the north away from the water; as a result, this would allow a greater visual and physical connection between an increased amount of land and the water, and it would decrease the impacts on properties adjacent to Smith Cove. The western end of the bridge would swing in toward the wooded slope and would increase the amount of land connected to the Elliott Bay shoreline. This may affect the type of development occurring on Port property adjacent to Smith Cove if future development pressures shift over the lifetime of the structure.

Other potential impacts from Alternative C, such as noise, air, water, and visual quality changes, are not expected to cause land use changes and affect future development patterns. Please refer to relevant discipline reports for this project for a description of impacts related to other elements of the environment, including social and economic conditions, visual quality, transportation, water quality, air quality, and noise.

### *Consistency/Conflict with Adopted Plans and Policies*

Overall, Alternative C would be consistent with City of Seattle, Port of Seattle, and BINMIC policies for use of industrial zoned land and would not preclude development of that land in compliance with those policies. Alternative C has a

small segment within the designated shoreline area northeast of Pier 90. This roadway use is allowed in the Urban Industrial shoreline classification.

As described for Alternative A, no conflicts between Alternative C and tribal interests have been identified to date. Alternative C would be less likely than Alternative A to have conflicts with tribal fishing interests because it would not be located adjacent to the shoreline. As part of the Section 106 process for historic and cultural resources, FHWA will make formal government-to-government consultation with potentially affected tribes. Any issues identified by the tribes will be addressed through the ongoing environmental process.

Please see the Applicable Land Use Plans and Regulations section of this report below for a detailed consistency analysis and disclosure of any potential conflicts with adopted plans, policies, and regulations.

## **Alternative D**

### *Land Required for Right of way*

As with Alternatives A and C, Alternative D would primarily require use of industrial land and would require relocation of Anthony's Seafood Distributing. Alternative D would also displace an unused warehouse on Port of Seattle industrial land north of the existing bridge near 15th Avenue West. In addition, this alternative would require removal of three buildings on the Port's Terminal 91 property. One is a vacant building north of the former petroleum tank farm site, and the other is one of five buildings occupied by Lineage CityIce Seattle, a cold storage operation. The third building, is a vacant warehouse north of the existing bridge at the base of Magnolia bluff. See the Social, Economic, and Relocation Discipline Report for additional information.

The land required for Alternative D is located to the north of the existing bridge. The area for all but the western end of the bridge is composed of a combination of parcels that are either City right of way or Port of Seattle, or BNSF Railway property. These properties are zoned IG1 and IG2, and are used for industrial and warehouse purposes.

The western end of the bridge approaching West Galer Street would be constructed over private party land (Admiral's House property) and a small portion of Seattle Parks and Recreation Ursula Judkins Viewpoint on the Magnolia Bluff hillside that is zoned Residential Single Family 5000.

Alternative D would require that the City obtain a right of way or an easement over Port of Seattle, Seattle Parks and Recreation, and private property. The City would also need to work with BNSF Railway to construct over the railroad tracks to the north of the existing bridge. Portions of the right of way and easement occupied by the existing bridge could be transferred to the Port, Seattle Parks and Recreation, or the private party for future use.

Right of way or easement required for the Alternative D – Intersection option would include an approximate 65- to 95-foot-wide corridor totaling 8.3 acres. Right of way or easement required for the Alternative D – Ramps option would include a 65- to 150-foot-wide corridor totaling 7.9 acres. See Appendix A for figures and tables showing right of way needs for each alternative.

## *Relationship to Public Facilities and Utilities*

Similar to Alternatives A and C, the right of way or easement required for Alternative D could be used for joint location of telecommunication and electrical lines. Also, the bridge would be designed to allow north-south vehicle access under the bridge between upland Port of Seattle property and the waterfront. BNSF Railway and bike path access under the bridge would be maintained. Unlike Alternative A, Alternative D would not be located over the Smith Cove Park portion of the Smith Cove Acquisition Parcels where recreation activities would occur.

## *Future Development Pattern Considerations*

Constructing the bridge as proposed under Alternative D would not substantially affect the ability to retain the types of uses that are currently in the area. Alternative D would move the bridge alignment north away from the water; as a result, this would allow a greater visual and physical connection between an increased amount of land and the water, and it would decrease the impacts on properties adjacent to Smith Cove. The western end of the bridge would swing in toward the wooded slope and improve the viability of development in the area north of Smith Cove. Given that the amount of land along Elliott Bay is a finite resource, increasing the amount of land connected to the shoreline may affect the type of development occurring on Port property adjacent to Smith Cove if future development pressures shift over the lifetime of the structure.

The Alternative D – Intersection option would include a ramp running to the north, which is similar to the Alternative A – Intersection option in that it would potentially render adjacent land less desirable for development.

Alternative D would impact the usability of the parcel of land just east of the railroad tracks and south of the bridge. This parcel would become a challenge to develop in terms of lot configuration and noise impacts because of its location between railroad tracks and the elevated roadway.

Other potential impacts from Alternative D related to air, noise, water, and visual quality changes are not expected to cause land use changes and affect future development patterns. Please refer to relevant discipline reports for this project for a description of impacts related to other elements of the environment, including social and economic conditions, visual quality, transportation, water quality, air quality, and noise.

## *Consistency/Conflict with Adopted Plans and Policies*

Overall, Alternative D would be consistent with City of Seattle, Port of Seattle, and BINMIC policies for use of industrial zoned land and would not preclude development of that land in compliance with those policies. Unlike Alternative A, Alternative D would not be located within the designated shoreline area and would not be subject to City shoreline policies.

As described for Alternative A, no conflicts between Alternative D and tribal interests have been identified to date. Alternative D would be less likely than Alternative A to have conflicts with tribal fishing interests because it would not be located adjacent to the shoreline. As part of the Section 106 process for historic and cultural resources, FHWA will make formal government-to-government consultation with potentially affected tribes. Any issues identified by the tribes will be addressed through the ongoing environmental process.

Please see the Applicable Land Use Plans and Regulations section of this report below for a detailed consistency analysis and disclosure of any potential conflicts with adopted plans, policies, and regulations.

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## No Build Alternative

No mitigation related to land use would be proposed for the No Build Alternative.

## Alternative A (Preferred Alternative)

Under Alternative A, right of way acquisition would need to comply with City of Seattle land use and zoning regulations, where applicable. Owners of displaced businesses would be compensated at fair market value and provided relocation assistance in accordance with the Uniform Relocation and Assistance and Real Property Act of 1970, as amended (see the Social, Economic, and Relocation discipline report for more information). Please refer to relevant project discipline reports for a description of mitigation measures related to other elements of the environment, including Section 4(f), social and economic conditions, visual quality, transportation, water quality, air quality, and noise.

## Alternative C

Mitigation measures for Alternative C would be the same those described for Alternative A.

## Alternative D

Mitigation measures for Alternative D would be the same as those described for Alternative A.

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## No Build Alternative

### *Impacts*

No construction impacts would occur under the No Build Alternative.

### *Mitigation Measures*

No construction impacts would occur under the No Build Alternative; therefore, no mitigation measures are proposed.

## Alternative A (Preferred Alternative)

### *Impacts*

Construction of Alternative A with ramps to 23rd Avenue West is estimated to take 39 months. The bridge would be closed to all traffic for a 14- to 20-month period within that time frame.

Construction of Alternative A could cause temporary disruptions for industrial uses located on Port of Seattle property. Marine terminal and industrial vehicles trying to access the waterfront and Piers 90 and 91 within Terminal 91 from upland areas may be diverted or delayed because of construction activities for the new bridge.

Up to 16.2 acres of temporary right of way or easement would be required to construct Alternative A. This includes staging areas, the area that would be affected by demolishing the existing bridge, and the right of way that would be retained for operation.

### *Mitigation Measures*

Construction of Alternative A would need to comply with City of Seattle land use and zoning regulations. Please refer to relevant discipline reports for this project for a description of mitigation measures related to other elements of the environment, including social and economic conditions, visual quality, transportation, water quality, air quality, and noise.

Construction in critical areas would need to meet the requirements of SMC Section 25.09.

A construction management plan would be prepared to manage construction traffic in the vicinity of the project. The plan would identify mitigation measures to be implemented during the construction phases. The measures would include, in part, providing advanced notice to local businesses of construction activities and stipulating detour routes and parking locations.

To mitigate construction impacts to specific businesses and residences, a public interaction plan for construction activities would be prepared. This plan could include public notices and mailings to affected businesses and residences about the scope of construction work, likely impacts, and access issues.

## Alternative C

### *Impacts*

Construction of Alternative C would take 41 months. The bridge would be closed to all traffic for one 11-month period within that time frame.

Similar to Alternative A, Alternative C could cause temporary disruptions for marine terminal and industrial uses located on Port of Seattle property. Movement of marine terminal and industrial vehicles within the Port's Terminal 91 property could be diverted or delayed because of construction activities for the new structures.

Approximately 21.7 acres of temporary right of way or easement would be required to construct Alternative C. These calculations include staging areas, the area that would be affected by demolishing the existing bridge, and the right of way that would be retained for operation.

### *Mitigation Measures*

Mitigation measures for Alternative C would be the same as those described for Alternative A.

## Alternative D

### *Impacts*

Construction of either option under Alternative D would take 45 months. The bridge would be closed to all traffic for one 9-month period within that time frame.

Similar to Alternative A, Alternative D could cause temporary disruptions for marine terminal and industrial uses located on Port of Seattle property. Movement of marine terminal and industrial vehicles within the Port's Terminal 91 property could be diverted or delayed because of construction activities for the new bridge. The Lineage CityIce Seattle cold storage business would experience temporary disruptions while one of its buildings is relocated to construct this alternative.

Approximately 19.9 acres of temporary right of way or easement would be required to construct the Alternative D – Intersection option, whereas approximately 17.9 acres of temporary right of way or easement would be required to construct the Alternative D – Ramps option. (These calculations include staging areas, the area that would be affected by demolishing the existing bridge, and the right of way that would be retained for operation.)

### *Mitigation Measures*

Mitigation measures for Alternative D would be the same as those described for Alternative A.

# ***Applicable Land Use Plans and Regulations***

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This section describes plans and policies relevant to the alternatives. The project would be located entirely within the Seattle city limits. No federal, state, or regional plans have been identified that contain specific policies that would be applicable to the Magnolia Bridge Replacement Project.

## **City of Seattle Comprehensive Plan and Neighborhood Plans**

### ***Comprehensive Plan***

In 1994, to meet the requirements of the Washington State Growth Management Act (GMA), the City of Seattle adopted its Comprehensive Plan. The plan is a 20-year policy document designed to articulate a vision of how Seattle will grow through the year 2014. It makes basic policy choices and provides a framework for adapting to conditions over time. The following analysis is based on the City's currently adopted Comprehensive Plan. The 10-year Update to the Comprehensive plan was adopted in December 2004 and annual amendments have been adopted each year since. The 2012-2013 Comprehensive Plan amendments were adopted in May 2013.

The City of Seattle Comprehensive Plan presents a vision to concentrate future growth in designated neighborhoods called Urban Centers or Urban Villages and to support that growth with the necessary infrastructure, including transportation, housing, social services, and open space. The initial building blocks of the Comprehensive Plan are the elements required by GMA and include land use, transportation, housing, capital facilities, and utilities. King County's Countywide Planning Policies require the addition of an economic development element, and the Seattle Framework Policies (Resolution 28535) call for the inclusion of a neighborhood planning element and a human development element. The Comprehensive Plan provides goals and policies relating to these elements that establish how the City will accommodate projected population and employment growth.

The City's Comprehensive Plan goals and policies that would relate most directly to environmental factors associated with the proposed project alternatives are described below. Land use designations for the study area are described on the Seattle Comprehensive Plan Future Land Use Map. These future land use designations are consistent with the zoning and existing land use in the study area shown on Figures 11 and 12.

### **Urban Village Element**

#### ***Manufacturing/Industrial Centers***

The proposed project alternatives are located within the BINMIC.

The Urban Village Element of the Comprehensive Plan describes City policies related to Manufacturing/Industrial Centers. Areas designated for these centers comprise the majority of the land that would be used for the project alternatives' footprints. Urban Village Goal UVG22 calls for ensuring that adequate accessible industrial land remains available to promote a diverse employment base and sustain Seattle's contribution to regional high-wage job growth. Goal UVG24 encourages supporting the retention and expansion of existing industrial businesses and

providing opportunities for the creation of new businesses consistent with the character of industrial areas.

Policies UV19 and UV20 call for establishment of Manufacturing/Industrial Centers, and Policy UV23 places particular emphasis on maintaining land that is uniquely accessible to water, rail, and regional highways for continued industrial use.

### *Open Space Network*

Policy UV55 seeks to provide public open space in conjunction with major public projects, such as utility and transportation projects, with the amount of open space based on the size of the project, open space needs of the adjacent areas, and the opportunities provided by the particular project. Policy UV52 is to guide development of shoreline public access and recreation as important elements in the city's open space network.

## **Land Use Element**

### *Industrial*

Goal LUG24 calls for preservation of industrial land for industrial uses and for protection of viable marine and rail-related industries from uses competing for scarce resources. Goal LUG27 seeks to restrict or prohibit uses that may negatively affect the availability of land for industrial activity or that conflict with industrial uses.

Policies LU156 through LU160 describe the intent of and uses allowed in the General Industrial zones. IG1 zones provide opportunities for manufacturing and industrial uses and related activity in areas where these activities are already established and viable, and their accessibility by rail and/or waterway make them a specialized and limited land resource. IG2 zones provide areas and conditions that support existing industrial uses; provide space for new industrial development; and accommodate a broad mix of activity, including additional commercial development. In general, the industrial function of IG2 areas is less well established than in IG1 areas and lack the unique industrial infrastructure of rail and water access.

Policies LU161 through LU167 describe the intent of land uses allowed in the Industrial Buffer (IB) zone. This zone provides for the needs of industrial activity and allows for reduced conflicts between industrial development and abutting residential or commercial areas. Development standards address the need to provide an appropriate transition between industrial areas and less intensive use zones.

*Policy LU152 allows for certain additional view corridor standards to be applied outside of the Shoreline District in industrial areas to preserve views of the water through view corridors required in the Shoreline District.*

### *Shoreline Areas*

Policy LU231 encourages permitting of only those uses or conditions that retain shoreline use options for future generations unless identified benefits clearly outweigh the physical, social, and/or economic loss to future generations. Water-dependent uses generally will have priority.

Goal LUG44 calls for providing the optimum amount of public access, both physical and visual, to shorelines. Goal LUG45 calls for preserving and enhancing views of the shoreline and water from upland areas where appropriate.

Goal LUG47 calls for relocating transportation facilities that are functionally or aesthetically disruptive to the shoreline. Policy LU241 states that streets, highways, freeways, and railroads should be located away from the shoreline in order to maximize the area of waterfront lots and minimize the area of upland lots.

Policy LU250 allows landfill on submerged land that does not create dry land where necessary for a water-dependent or water-related use, for the installation of a bridge or utility line, or for wildlife or fisheries habitat mitigation or enhancement.

Policy LU270 states that the 35-foot height limit of the Shoreline Management Act (SMA) shall be the standard for maximum height in the Shoreline District except in the following two conditions: (1) where a greater height will not obstruct views of a substantial number of residences and the public interest will be served, and (2) where a greater height is necessary for bridges or the operational needs of water-dependent or water-related uses or manufacturing uses.

### **Transportation Element**

Policy T4 states that the City shall provide sufficient transportation facilities and services to promote and accommodate the growth the Comprehensive Plan anticipates in urban centers, urban villages, and manufacturing/industrial centers while reducing reliance on single occupancy vehicles.

Policy T11 calls for the City to a bicycle classification network that designates urban trails to facilitate bicycling and walking as viable transportation choices with links to major parks and open spaces. The Elliott Bay Trail/Terminal 91 Bike Path located along the exterior of the Port's North Bay/Terminal 91 property is designated as part of this system.

Goal TG6 supports efficient freight and goods movement.

Policy T7 designates a traffic network that includes principal arterial roadways that are intended to serve as the primary routes for moving traffic through the city connecting urban centers and urban villages to one another, or to the regional transportation network. Policy T9 establishes a transit network that indicates transit priority treatments. The 15th Avenue West/Elliott Avenue West corridor is designated as part of both of these networks.

Policy T10 designates major truck streets and a truck street classification network to accommodate trucks and to preserve and improve commercial transportation mobility. The 15th Avenue West/Elliott Avenue West corridor is designated a major truck street.

### **Economic Development Element**

Goal EDG7 seeks to ensure that the infrastructure needed to foster a positive business climate is in place.

Policy ED41 seeks to coordinate, where appropriate, City investment in transportation and other public facilities with business, employment, and economic development opportunities.

Under Policy ED5, the City will use plans adopted for the Manufacturing/ Industrial Centers to help guide investments.

Policy ED7 calls for the City to strive through efforts with other public jurisdictions to address infrastructure improvements, which may encourage industrial expansion in industrial areas.

Policy ED15 calls for preserving and supporting continued use of suitable shoreline areas for water-dependent and -related businesses.

### **Environmental Element**

Policy E2 states that the City will incorporate the improvement of the natural environment into the City's planning efforts and capital development projects. For instance, plan for transportation systems that control impacts on air quality and climate change, as well as on water pollution and the consumption of fossil fuels.

### **Neighborhood Planning Element**

Goal NG3 of City of Seattle Comprehensive Plan is to develop neighborhood plans for all areas of the city expected to take significant amounts of growth, and permit other areas interested in developing neighborhood plans to undertake neighborhood planning. The Comprehensive Plan, with amendments through April 2013, contains goals and policies of 33 adopted neighborhood plans. The Magnolia Bridge is located within the neighborhood planning area for BINMIC and is adjacent to the Queen Anne neighborhood planning area. The Magnolia neighborhood does not have a neighborhood plan.

#### ***BINMIC Plan***

The *Ballard-Interbay Northend Manufacturing and Industrial Center Plan* (BINMIC Plan) calls for retaining industrial uses within the Manufacturing/ Industrial Center. This plan acknowledges that some commercial and retail services are needed in and near BINMIC but that policies in the plan are designed to preserve the integrity of the area as a manufacturing and industrial center.

Goals BI-G1 and BI-G2 state that the City will strive to improve industrial traffic flow to and through BINMIC and will facilitate truck mobility.

Plan goal BI-G4 is to strive to maintain and enhance intermodal (barge, ship, rail and truck) connections.

BINMIC goal BI-G10 seeks to preserve freight mobility by striving to preserve and improve turning radii, visibility and sight lines, clearance and existing lane configuration of streets within the BINMIC; and considering impacts on BINMIC of changes to arterial access routes to the BINMIC.

A number of policies from the BINMIC Plan were adopted as part of the Neighborhood Planning Element of the City of Seattle Comprehensive Plan. Policies relevant to issues associated with the proposed project alternatives are described below.

Policy BI-P2 calls for preserving land in BINMIC for industrial activities such as manufacturing, warehousing, marine uses, transportation, utilities, construction, and services to businesses. Policy BI-P3 seeks to retain existing businesses and promote their expansion.

Policy BI-P6 establishes that the City will strive to provide infrastructure in the BINMIC that is sufficient to ensure the efficient operation and smooth flow of goods to, through and from the BINMIC. Infrastructure includes publicly built and maintained roads and arterial streets.

BINMIC Plan policy BI-P18 recognizes the interdependence of maritime and fishing industries to related businesses and their special requirements for transportation, utilities, pier space, and chill facilities. This policy calls for encouraging retention of this cluster of businesses and facilitating attraction of related businesses. Policy BI-P18 recognizes the interdependence of maritime and fishing industries and related businesses and their special requirements for transportation and other facilities.

Policy BI-P21 calls for retaining shorelines for water-dependent uses. Policy BI-P-22 calls for providing a physical and regulatory environment that fosters the continued health of maritime and fishing industries in the BINMIC.

Policy BI-P25 establishes that public services, utilities, and infrastructure shall be sufficient to accommodate projected growth.

### *Queen Anne Neighborhood Plan*

Policies in the *Queen Anne Neighborhood Plan* that are related to the proposed project alternatives are primarily associated with transportation connections between Queen Anne and other areas (including bicycle and pedestrian connections).

Policy T1.4 (Queen Anne Neighborhood Planning Committee 1998) promotes mobility between Queen Anne and other urban and recreation centers. Policy T1.9 calls for providing multimodal access, including transit and bicycle access, to BINMIC and other employment areas adjacent to Queen Anne.

Strategies for developing a bicycle beltway include construction of a bridge crossing over the BNSF railroad tracks at West Wheeler Street in the BINMIC. The purpose of this project would be to provide an alternative crossing from the existing bicycle route to Queen Anne Hill.

Relevant policies adopted as part of the Neighborhood Planning Element of the Comprehensive Plan are described below.

Policy QA-P34 calls for providing multimodal linkages from Queen Anne to adjacent employment centers.

Policy QA-P39 calls for providing convenient and safe bicycle and pedestrian access between Queen Anne and the Elliott Bay waterfront.

### **Container Port Element**

Seattle's container port facilities are located in the Greater Duwamish Manufacturing/Industrial Center. Container port policies address freight corridors and intermodal connections to these facilities. For example, policy CP6 calls for maintaining the "Major Truck Street" roadway classification. Freight will be the major priority on Major Truck Streets such as 15th Avenue West and Elliott Avenue West. Street improvements that are consistent with freight mobility but also support other modes may be considered in these streets.

### **2013-2014 Proposed Plan Amendments**

In June 2013, the Seattle City Council identified seven proposed Comprehensive Plan amendments to be considered for possible adoption, and requested the

Department of Planning and Development (DPD) and the Seattle Planning Commission review and make recommendations about the proposed amendments. DPD will send final recommendations on proposed 2013-2014 amendments to the Council in December 2013. The Council will vote on the proposed changes in the spring of 2014. Two of the seven proposed amendments are in the Magnolia Bridge project study area:

6. Ballard/Interbay. Amend the Future Land Use Map for an area west of 16th Avenue West, east of the railroad tracks, and north of West Dravus Street to remove it from the Ballard/Interbay MIC and change the designation from industrial to mixed-use commercial. The analysis will explore simply rezoning the area from industrial to industrial commercial, changing the Future Land Use Map designation for the area from industrial to mixed-use commercial, or a combination of these options.

7. Interbay Armory. Amend the Future Land Use Map for property south of West Wheeler Street, west of 15th Avenue West, north of West Garfield Street, and east of the railroad tracks to remove it from Ballard/Interbay MIC and change the designation from industrial to mixed-use commercial. The analysis will explore simply rezoning the area from industrial to industrial commercial, or, alternatively, changing the Future Land Use Map designation for the area from industrial to mixed-use commercial.

## City of Seattle Land Use and Zoning Code

The City of Seattle Land Use and Zoning Code implements the policies of the City's Comprehensive Plan. The zoning regulations are an official land use control intended to promote planned use of the City's land resources. The code establishes specific development standards and allowed land uses for each zoning category. Because the Code implements the policies of the Comprehensive Plan, its regulations correspond to policies discussed above for the Comprehensive Plan. Zoning requirements that would be most relevant to the proposed project alternatives are described below.

### *Industrial Zoning*

SMC Section 23.34.092 describes location criteria for the IG1 zone. For all proposed project alternatives, most of the bridge/roadway would be constructed on land zoned IG1. The IG1 zone is appropriate for areas directly related to the shoreline having suitable water access for marine industrial property, upland property of sufficient depth to accommodate industrial activity, an existing character of industrial uses and related commercial activity, and direct access to major rail lines serving industrial businesses.

SMC Sections 23.34.020 through 026 describe structure height restrictions in industrial zones. IG1, IG2, and IB zones have no maximum height limit except for designated nonindustrial uses, which include retail, office, entertainment, research, and institutional uses.

### *Industrial Street Landscaping*

SMC Section 23.50.016 establishes specific landscaping standards for designated industrial streets including requirements for street trees and screening. In the Magnolia Bridge vicinity, 15th Avenue West between West Galer Street and West

Armory Way has been designated on the Industrial Streets Landscaping Map (SMC Exhibit 23.50.016A)

## View Corridors

SMC Section 23.50.018 requires maintenance of view corridors on the non-shoreline portion of lots that are partially within the Shoreline District, if the portion of the lot in the Shoreline District is required to provide a view corridor under the Seattle Shoreline Master Program.

In addition, SMC Section 25.05.675(P) establishes specific environmental policies for public view protection. Attachment 1 to SMC 25.05.675 (titled *Seattle Views*) provides an inventory of 86 public view sites protected under the State Environmental Policy Act (SEPA). This document was reviewed, and none of the protected views would potentially be affected by the project alternatives. Smith Cove Park is included in the inventory, but the protected view corridor faces to the south, away from the proposed project alternative locations. Other protected views in the study area include those from Bayview Playground, Magnolia Elementary School Playground, and Soundview Terrace Park. The proposed project alternatives would not block views from those locations.

## City of Seattle Shoreline Master Program

Local Shoreline Master Programs are required by the Washington State SMA (RCW 90.58) for shorelines of the State. Shoreline Master Programs must include goals and policies related to shoreline uses, conservation, economic development, public access, recreation, circulation, and housing. Development regulations for specific shoreline uses must be included as well.

To better coordinate GMA and Shoreline Management Act (SMA) requirements, the GMA was amended in 1995. The goals and policies found in a Shoreline Master Program are now considered an element of a jurisdiction's comprehensive plan. The development regulations required as part of Shoreline Master Programs are now considered part of a jurisdiction's development regulations.

The SMA addresses priorities for shoreline uses. Shoreline master programs are to give preference to uses in the following order of preference that:

- Recognize and protect the statewide interest over local interest,
- Preserve the natural character of the shoreline,
- Result in long-term over short-term benefit,
- Protect the resources and ecology of the shoreline,
- Increase public access to publicly owned areas of the shorelines,
- Increase recreational opportunities for the public in the shoreline, and
- Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

SMC Chapter 23.60 establishes the Shoreline District as a zoning overlay district. The purpose of this SMC chapter is to implement the policies and provisions of the SMA and the Shoreline Goals and Policies of the City of Seattle Comprehensive

Plan. Sections of SMC Chapter 23.60 that are relevant to the project alternatives are described below.

### ***Designated Shoreline Environment***

The shoreline adjacent to the project site has a shoreline environment designation of Urban Industrial (UI). The purpose of this environment is to provide for efficient use of industrial shorelines by major cargo facilities and other water-dependent and water-related industrial uses. Views are secondary to industrial development, and public access is provided mainly on public lands.

SMC Section 23.60.840 establishes that streets, railroads, and bridges are permitted outright in the UI environment.

SMC Section 23.60.162 requires that view corridors be provided for uses and developments in the Shoreline District as required in the development standards of the environment in which the use or development is located. According to Section 23.60.876, a view corridor of not less than 35 percent of the width of the lot must be provided and maintained on all waterfront lots within the UI environment that are developed with non-water-dependent uses or a mix of uses where water-dependent or water-related uses occupy less than 50 percent of the dry land portion of the lot.

### ***Streets***

SMC 23.60.206 establishes criteria for placing streets in the Shoreline District. Except for bridges necessary to cross a water body, new streets shall be permitted in the Shoreline District only if necessary to serve lots in the Shoreline District or to connect to public access facilities. Where permitted, new streets on the shoreline will be designed to improve public visual and physical access to the shoreline, conform to natural features, provide means for the public to overcome the physical barrier created by the facility, and minimize the area of upland lots and maximize the area of waterfront lots.

## **Seattle Environmentally Critical Areas Ordinance**

SMC 25.09.020 establishes City of Seattle regulations relating to development in or near environmentally critical areas, which include geologic hazard areas; flood-prone areas; riparian corridors; wetlands, fish and wildlife habitat conservation areas; and abandoned landfills. These regulations implement Seattle Environmentally Critical Area Policies, which are described above for the City's Comprehensive Plan. Regulations relevant to the proposed project alternatives include the following.

SMC Section 25.09.080 establishes development standards for landslide-prone areas, requires complete stabilization of all disturbed areas, and provides for a review process of detailed geotechnical studies and engineering plans.

SMC Section 25.09.100 requires soil engineering studies for all development in areas subject to liquefaction. Mitigation measures in such areas are recommended through the requirements of SMC Title 22, Subtitle VIII, Grading and Drainage Control Ordinance, SMC Title 22, Subtitle I, Building Code, and any other applicable codes or regulations.

SMC Section 25.09.160 establishes development standards for wetlands. The wetland provisions apply only to wetlands of 100 square feet or greater, unless part of a larger drainage system. Grading, filling, draining, and/or development within or

over wetlands are only allowed under limited situations and conditions. (No disturbance of wetlands of exceptional value is allowed.) These regulations provide for restoration of degraded wetlands or creation of additional substitution wetlands as mitigation for wetland disturbance.

SMC Section 25.09.180 establishes development limitations for steep slopes. These regulations call for development to avoid areas with over (40 percent) slope whenever possible. When it is not practicable to avoid steep slope areas, conditions can be imposed concerning the type and method of construction that reflect the specific constraints of a site as well as regulations for the landslide-prone areas.

SMC Section 25.09.200 establishes development standards for fish and wildlife habitat conservation areas. Under these regulations, the characteristics of the conservation areas must be used to evaluate proposed development in order to minimize intrusion and preserve the integrity of the habitat areas.

SMC Section 25.09.220 regulates development on or near abandoned landfills. Areas within 1,000 feet of methane-producing landfills may be susceptible to methane leakage. Methane barriers or appropriate ventilation may be required in these areas as specified in SMC Title 22, Subtitle VIII, Grading and Drainage Control Ordinance; SMC Title 22, Subtitle I, Building Code; and Seattle-King County Health Department regulations.

## **Seattle's Parks and Recreation 2011 Development Plan**

The City adopted the *Seattle's Parks and Recreation 2011 Development Plan* in November 2011. The plan is focused on the acquisition and development efforts of the adopted 2011 to 2016 Capital Improvement Program (CIP) for parks and recreation facilities.

In the Magnolia Bridge project study area, the 2011-2016 CIP contains projects for the rehabilitation, restoration and improvement of the Interbay Golf Center, one of four City-owned golf courses. The other Parks and Recreation CIP projects in the Magnolia neighborhood are outside of the study area.

The 2000 Seattle Pro Parks Levy included an area north of Smith Cove as a Neighborhoods Parks Acquisition project. Transfer of property to the City of Seattle occurred in August 2003 for 7.3 acres of land, including 2.4 acres of property on West Galer Street along the Magnolia hillside (upper site), with views of Elliott Bay and downtown. The upper site is the Ursula Judkins Viewpoint. Also included is 4.9 acres of property along 23rd Avenue West (lower site). This property is Smith Cove Park and is a level site between the current Magnolia Bridge location and Elliott Bay Marina.

For further information on public park properties, see the *Public Lands, Section 4(f) Discipline Report*.

## **Port of Seattle Terminal 91 Development Options Study**

The Port of Seattle has determined that a portion of its Terminal 91 property is surplus to marine operations and has explored development options (Port of Seattle 2010). The Port issued a draft Market Report in late 2010 to assess real estate market conditions and estimate the development potential of Terminal 91 property surplus to marine and industrial operations. This study was conducted following the deep economic recession of late 2007 to mid-2009, when the economy and certain

segment of the real estate industry were showing signs of recovery. The study evaluated two Terminal 91 properties, the 3.2-acre West Yard property and the 30-acre North Bay property. Both properties have IG1 U45 zoning which allows industrial, and research and development uses, and a limited amount of office space.

The market study concluded the highest and best use of the 30-acre North Bay property is for yard storage. This has been a historic use of this property in the form of vehicle parking and equipment storage. If emphasis is placed on industrial job creation, the development of a range of small industrial and flex buildings, located on lower cost land with competitive rental rates represents the best use of the land.

In March 2013, an agreement was reached between the City, King County and the Port of Seattle to acquire the Terminal 91 West Yard property for the Magnolia Combined Sewer Overflow project and as an addition to the City's Smith Cove Park. The West Yard site is not under consideration for Terminal 91 development.

## **Consistency Analysis**

### *No Build Alternative*

The No Build Alternative would be consistent with City of Seattle, Port of Seattle, and BINMIC policies for use of industrial zoned land. This alternative would not preclude use and redevelopment of the industrial areas adjacent to the bridge in a manner that would be consistent with the purpose of the IG1 zone and other City, Port, and BINMIC policies for the industrial area. The No Build Alternative would not affect nearby commercial and residential areas.

Under the No Build Alternative, the Magnolia Bridge would be more likely to be damaged and closed if an earthquake were to occur than under the Build Alternatives. The No Build Alternative would, therefore, be less consistent than the Build Alternatives with Seattle Comprehensive Plan transportation and economic development policies calling for the City to maintain transportation systems to serve industrial areas and support economic vitality (Policies and Goals T4, EDG7, and ED7).

Because the existing bridge is located adjacent to the shoreline, the No Build Alternative would not provide for views of the shoreline from upland properties and would limit public shoreline access (Goals LUG44 and LUG45). Shoreline policies and regulations, however, also allow for consideration of the industrial function and use of industrial shoreline areas, as well as other benefits (Policy LU231). Decision-makers could determine that benefits such as maintaining existing traffic patterns and limiting displacements would outweigh view and public access factors under this alternative.

### *Alternative A (Preferred Alternative)*

Alternative A would be consistent with City of Seattle, Port of Seattle, and BINMIC policies for use of industrial zoned land. This alternative would not preclude use and redevelopment of the industrial areas adjacent to the bridge and thus would be consistent with the purpose of the IG1 zone and other City, Port, and BINMIC policies for the industrial area. This alternative would not affect nearby commercial and residential areas.

Alternative A would be located adjacent to the shoreline and would not provide for views of the shoreline from upland properties and would limit public shoreline

access (Goals LUG44 and LUG45). Shoreline policies and regulations, however, also allow for consideration of the industrial function and use of industrial shoreline areas, as well as other benefits (Policy LU231). Decision-makers could determine that benefits such as maintaining existing traffic patterns and limiting displacements would outweigh view and public access factors under this alternative.

Alternative A would be consistent with SMC 23.60.206, which establishes criteria for placing streets in the Shoreline District. Although Alternative A would not cross a water body, it would serve lots in the Shoreline District and continue to provide the shoreline public access connection to Smith Cove Park and the Elliott Bay Marina. Alternative A, however, would not minimize the area of upland lots and maximize the area of waterfront lots compared to Alternatives C and D.

Alternative A would require construction over a small portion of the tidelands of Elliott Bay west of Pier 91, which serves as fish habitat. The structure would be constructed and mitigation would be provided according to the requirements of SMC 25.09.200.

Alternative A would require construction in a soil liquefaction zone, steep slopes, and a landslide-prone area. Under Alternative A, the structure would be constructed and mitigation would be provided according to the requirements of SMC 25.09.080, 25.09.100, and 25.09.180.

### *Alternative C*

Alternative C would be consistent with City of Seattle, Port of Seattle, and BINMIC policies for use of industrial zoned land. This alternative would not preclude use and redevelopment of the industrial areas adjacent to the bridge and thus would be consistent with the purpose of the IG1 zone and other City, Port, and BINMIC policies for the industrial area. Compared to the No Build Alternative and Alternative A, Alternative C would provide more opportunity for development on the Port's North Bay/Terminal 91 property to conform to the purposes of the IG1 zone (SMC Section 23.34.092). Alternative C would provide more land that could be directly linked to water-dependent uses. This alternative would not affect nearby commercial and residential areas.

Alternative C is generally outside of the Shoreline District except for about 0.2 acre of right of way within the Shoreline District adjacent to and over the BNSF Railway right of way northeast of Pier 90. Alternative C would be consistent with SMC 23.60.206, which establishes criteria for placing streets in the Shoreline District.

Alternative C would require construction in a liquefaction zone, steep slope area, and a landslide-prone area. Under Alternative C, the structure would be constructed and mitigation would be provided according to the requirements of SMC 25.09.080, 25.09.100, and 25.09.180.

Alternative C would require construction near but outside of the 1,000-foot methane buffer of a former landfill, now the Interbay Golf Course. If necessary, the northern portion of Alternative C would be constructed and mitigation would be provided according to the requirements of SMC Section 25.09.220.

### *Alternative D*

Alternative D would be consistent with City of Seattle, Port of Seattle, and BINMIC policies for use of industrial zoned land. This alternative would not preclude use and

redevelopment of the industrial areas adjacent to the bridge and thus would be consistent with the purpose of the IG1 zone and other City, Port, and BINMIC policies for the industrial area. Compared to the No Build Alternative and Alternative A, Alternative D would provide more opportunity for development on the Port's North Bay/Terminal 91 property to conform to the purposes of the IG1 zone (SMC Section 23.34.092). Alternative D would provide more land south of the bridge that could be directly linked to water-dependent uses. This alternative would not affect nearby commercial and residential areas.

Alternative D would not be located within the Shoreline District, the boundary of which is 200 feet from the ordinary high water mark, and would not be subject to the requirements of the City's Shoreline Master Program (SMC Chapter 23.60).

Alternative D would require construction in a liquefaction zone, steep slopes, and a landslide-prone area. Under Alternative D, the structure would be constructed and mitigation would be provided according to the requirements of SMC 25.09.080, 25.09.100, and 25.09.180.

## Project Objectives

The purpose of this project is to replace the existing Magnolia Bridge structure, approaches, and related arterial connections with facilities that maintain convenient and reliable vehicular and nonmotorized access between the Magnolia community and the rest of the City of Seattle. Because the existing bridge provides the only public vehicular access to the land between North Bay, Smith Cove Park, Elliott Bay Marina, and U.S. Navy property, the project purpose also includes maintenance of access to these areas.

## Affected Environment

The proposed project alternatives would primarily be located over land used for industrial and commercial purposes, with western connections to residential areas in the Magnolia neighborhood. Generally, existing land uses in the study area are consistent with the zoning designations. The proposed project alternatives would be subject to City of Seattle policies and regulations. Port of Seattle policies would also be relevant to the alternatives.

## Impacts

### *Operational Impacts*

#### **No Build Alternative**

The No Build Alternative would maintain existing traffic patterns and would not require acquisition of land for new right of way. The existing structure could affect the type of development likely to occur on underused properties in the future, given its proximity to the water and its physical and aesthetic presence from the ground.

#### **Alternative A (Preferred Alternative)**

Alternative A would primarily require use of land currently zoned and used for industrial purposes. This alternative would require that the City of Seattle obtain a right of way or an easement over Port of Seattle, Seattle Parks and Recreation, and private property. The City would also need to work with BNSF Railway to construct over a portion of the railroad tracks to the south of the existing bridge. Displacements include creation of new access or relocation of a seafood processing company.

The project as constructed under Alternative A would continue to form a physical and visual barrier between the shoreline and the uplands. This location would not create a major impact in terms of retaining the types of uses that are currently in the area but would limit other types of development into the foreseeable future.

#### **Alternative C**

Land use changes under Alternative C would be similar to those described for Alternative A. Alternative C would primarily require use of land currently zoned and used for industrial purposes. Alternative C would require that the City of Seattle obtain a right of way or an easement over Port of Seattle, Seattle Parks and Recreation, National Guard, and private property. The City would also need to work

with BNSF Railway to construct over a portion of the railroad tracks to the north of the existing bridge. Displacements include creation of new access or relocation of a seafood processing company, removal of vacant buildings north of the former tank farm site, reconfiguration of loading docks and railroad tracks for another seafood processing and distribution company, and removal of one vacant warehouse.

Under Alternative C, the bridge alignment would move to the north away from the water; the result would be a connection between an increased amount of land and the water. Given that the amount of land along Elliott Bay is a finite resource, increasing the amount of land connected to the shoreline may affect the type of development occurring on Port property adjacent to Smith Cove if future development pressures shift over the lifetime of the structure. Alternative C would be more likely to influence development pressures than Alternative A, which would maintain a similar barrier between the uplands and the shoreline as existing conditions. Alternative C would also have a greater influence on development pressures than Alternative D, because it exposes more upland area to the water than Alternative D.

### **Alternative D**

Land use changes under Alternative D would be similar to those described for Alternatives A and C. Alternative D would primarily require use of land currently zoned and used for industrial purposes. Alternative D would require that the City of Seattle obtain a right of way or an easement over Port of Seattle, Seattle Parks and Recreation, National Guard, and private property. The City would also need to work with BNSF Railway to construct over a portion of the railroad tracks to the north of the existing bridge. Displacements include relocation of a seafood processing company, removal of vacant buildings north of the former tank farm site, removal of one of five buildings occupied by a cold storage company, and removal of a vacant warehouse.

Under Alternative D, the bridge alignment would move north away from the water, and as a result, would allow connection of an increased amount of land to the water. Given that the amount of land along Elliott Bay is a finite resource, increasing the amount of land connected to the shoreline may affect the type of development occurring on Port property adjacent to Smith Cove if future development pressures shift over the lifetime of the structure. Alternative D would be more likely to influence development pressure than Alternative A, which would maintain a barrier between the uplands and the shoreline similar to existing conditions. Alternative D would influence development pressure to a lesser extent than Alternative C because it exposes less upland area to the water than Alternative C.

## ***Construction Impacts***

Construction of the Build Alternatives could cause temporary disruptions for industrial and marine uses located on the Port's North Bay/Terminal 91 property. Movement of industrial vehicles within the North Bay property could be diverted or delayed because of construction activities for the new bridge.

## ***Secondary and Cumulative Impacts***

The Magnolia Bridge replacement is one of several projects in the study area in the planning and evaluation phases of development. Planning is underway for locating a new high capacity transit corridor and for redeveloping areas of underutilized land in

the area. These projects will influence future transportation patterns, land use patterns, and economic potential.

### **Ballard to Downtown High Capacity Transit Planning Study**

The Ballard to Downtown High Capacity Transit Planning Study is underway in 2013 through mid-2014 to identify possible rail transit improvement between Ballard and downtown Seattle for high capacity transit light rail and rapid streetcar alignments and station locations. Sound Transit and the Seattle Department of Transportation (SDOT) are partnering on this study which was included in the ST2 plan approved in 2008.

Initial corridor screening identified eight corridor alternatives. Four of these are located in the Magnolia Bridge study area. Two have elevated alignments along the north side of the Magnolia Bridge and north along the 20th Avenue West alignment across Terminal 91 property to West Dravus Street. One of the two has a station at West Garfield Street and 15th Avenue West, and both have stations at West Garfield Street at 20th Avenue West. Two alignments stay on Elliott Avenue West and 15th Avenue West with stations near West Prospect Street and at West Dravus Street.

The study team will identify up to four corridors to undergo further analysis. These will be presented to the public in a third open house (late 2013). In early 2014, the study team will present their findings to the City of Seattle leadership and Sound Transit Board for possible future action.

### **Terminal 91 Development Options Study**

The Port of Seattle has studied development options for the 30 acres of upland Terminal 91 that is considered surplus to marine and industrial use. Market conditions at the time of the 2010 real estate market analysis showed the current highest and best use was continued use for yard storage of equipment and vehicles. In the future, there may be a demand for more intensive uses allowed under the IG1 zoning.

### **Interbay 15th Avenue West Corridor**

The 2013-2014 proposed amendments to the Comprehensive Plan include a land use change to the National Guard Armory site between Magnolia Bridge and West Armory Way east of the BNSF Railway. If approved, the land use would be changes from industrial to mixed use-commercial.

## **Planned Development**

### *Terminal 91*

The location of the bridge structure and ramps would affect the development of currently vacant or underutilized Port of Seattle property. The existing bridge location limits views and a perception of a connection to the water from upland areas. Differences in land values would be expected for land with views and connection to Elliott Bay compared to properties separated from the waterfront by the bridge. Although industrial development is much less sensitive to the impacts of alignment location than other land use types, this effect would be true even for the industrial-related uses on Port property that are allowed under current zoning.

Under the No Build Alternative and Alternative A, upland properties would remain visually separated from the waterfront. However, Alternative A (as well as the No Build Alternative) would not physically separate these properties because the

spacing of the piers would allow vehicles to pass underneath almost without restriction. The Alternative A – Ramps option would impose a limited barrier. Under Alternatives C and D, more upland property would be visually connected to the waterfront, which could influence the type of redevelopment that would occur in the area.

### *15th Avenue West/Elliot Avenue West Corridor*

The Build Alternatives would not be located on Amgen property and would not affect future planned expansion of that facility. Alternative A would not affect the Washington National Guard Armory site and other properties between West Wheeler Street and West Garfield Street (Magnolia Bridge) proposed for mix use-commercial land use. Alternatives C and D, however, would be located within the southern end of the property potentially used for mixed used-commercial and would reduce the area available for development.

### *Ballard to Downtown High Capacity Transit Corridor*

All Build Alternatives would retain the same intersection configuration on 15th Avenue West and Elliot Avenue West and would be compatible with the Downtown to Ballard high capacity transit alignment and station concepts in that corridor. The two high capacity transit alignment concepts that use the 20th Avenue West alignment in Terminal 91 were developed for compatibility with the existing Magnolia Bridge and would be compatible with Alternative A (Preferred Alternative).

The elevated and surface segments of Alternative C along the west side of the BNSF Railroad right of way would conflict with the elevated high capacity transit alignment in this location. Right of way is constrained between the industrial building and freight access to the west and railroad right of way to the east.

The elevated Alternative D alignment would also conflict with an elevated high capacity transit alignment in the 20th Avenue West corridor. Adequate vertical separate would be required in the project designs.

## **Mitigation Measures**

### *Operational Mitigation*

Right of way acquisition for all Build Alternatives would need to comply with City of Seattle land use and zoning regulations, where applicable. Please refer to relevant discipline reports for this project for a description of mitigation measures related to other elements of the environment.

Owners of displaced businesses would be compensated at fair market value and provided relocation assistance when purchases occur in accordance with the Uniform Relocation and Assistance and Real Property Act of 1970, as amended.

### *Construction Mitigation*

Construction under all Build Alternatives would need to comply with City of Seattle land use and zoning regulations. Please refer to relevant discipline reports for this project for a description of mitigation measures related to other elements of the environment.

For all Build Alternatives, construction in critical areas would need to meet the requirements of SMC Section 25.09.

For all Build Alternatives, a construction management plan would be prepared to manage construction traffic in the vicinity of the project. This plan would include, in part, providing advanced notice to local businesses of construction activities and stipulating detour routes and parking locations.

To mitigate construction impacts to specific businesses and residences under all alternatives, a public interaction plan for construction activities would be prepared. This plan could include public notices and mailings to affected businesses and nearby residences about the scope of construction work, likely impacts, and access issues.

## **Consistency with Plans and Policies**

### *No Build Alternative*

The No Build Alternative would not preclude use and redevelopment of the industrial areas adjacent to the bridge and thus would be consistent with the purpose of the IG1 zone and other policies for the industrial area.

Under the No Build Alternative, the Magnolia Bridge would be more likely to be damaged and closed if an earthquake were to occur. This alternative would, therefore, be less consistent than the Build Alternatives with policies calling for the City to maintain adequate transportation systems.

The No Build Alternative is located adjacent to the shoreline and would not provide views from upland properties or public shoreline access as called for by City shoreline policies. City policies, however, also allow for consideration of other factors such as the function and use of the industrial area.

### *Alternative A (Preferred Alternative)*

Alternative A would be consistent with City of Seattle, Port of Seattle, and BINMIC policies and regulations. This alternative would not preclude use and redevelopment of the industrial areas adjacent to the bridge and thus would be consistent with the purpose of the IG1 zone and other policies for the industrial area.

Alternative A would be located adjacent to the shoreline and would not provide views from upland properties or public shoreline access as called for by City shoreline policies. City policies, however, also allow for consideration of other factors such as the function and use of the marine industrial area.

This alternative, as well as the other Build Alternatives, would require construction in critical areas and would need to meet the requirements of Seattle's Environmentally Critical Areas Ordinance.

### *Alternative C*

Alternative C would be consistent with City, Port, and BINMIC policies and regulations as described for Alternative A. Alternative C has a small area, about 0.2 acre within the Shoreline District.

## *Alternative D*

Alternative D would be consistent with City, Port, and BINMIC policies and regulations in a similar manner as described for Alternative A. Alternative D would not be located in the Shoreline District and would not be subject to Shoreline Master Program requirements.

## **Comparison of Alternatives**

The No Build Alternative would be more likely to be damaged in an earthquake than the Build Alternatives. The cost of retrofitting the bridge would approach the cost of building a new bridge to modern seismic standards.

Alternative A would displace one business and would be located within the designated Shoreline District, which could cause more potential conflicts with City shoreline policies and regulations than Alternatives C and D. Alternative C would displace one business and two vacant structures, and require reconfiguration of loading docks and access for another business. Alternative D would displace all or part of two businesses and three vacant structures on Port of Seattle property, requiring greater relocation costs than the No Build Alternative and Alternatives A and C.

The amount of land along Elliott Bay is a finite resource. The location of a new Magnolia Bridge and the amount of land connected to the shoreline may affect the type of development occurring on Port property adjacent to Smith Cove if future development pressures shift over the lifetime of the structure. Alternative A would be the least likely of the Build Alternatives to influence development patterns because it would provide a barrier between upland properties and the water, similar to existing conditions. Alternative A would also have the smallest potential to create views of the water from upland properties (for detailed analyses of potential view impacts from adjacent areas see the Visual Quality Discipline Report).

Under Alternative D, the bridge would be moved to the north away from the water and as a result would connect an increased amount of land to the water. Alternative D would be more likely to influence development patterns than Alternative A and would have a greater potential to create views of the water from upland properties. Of the three Build Alternatives, Alternative C would be most likely to influence development patterns and create views of the water from upland areas because it would not provide a raised structure across the center of the Port's property and therefore would expose the most land to the water.

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## ***Appendix A: Right of way Needs***

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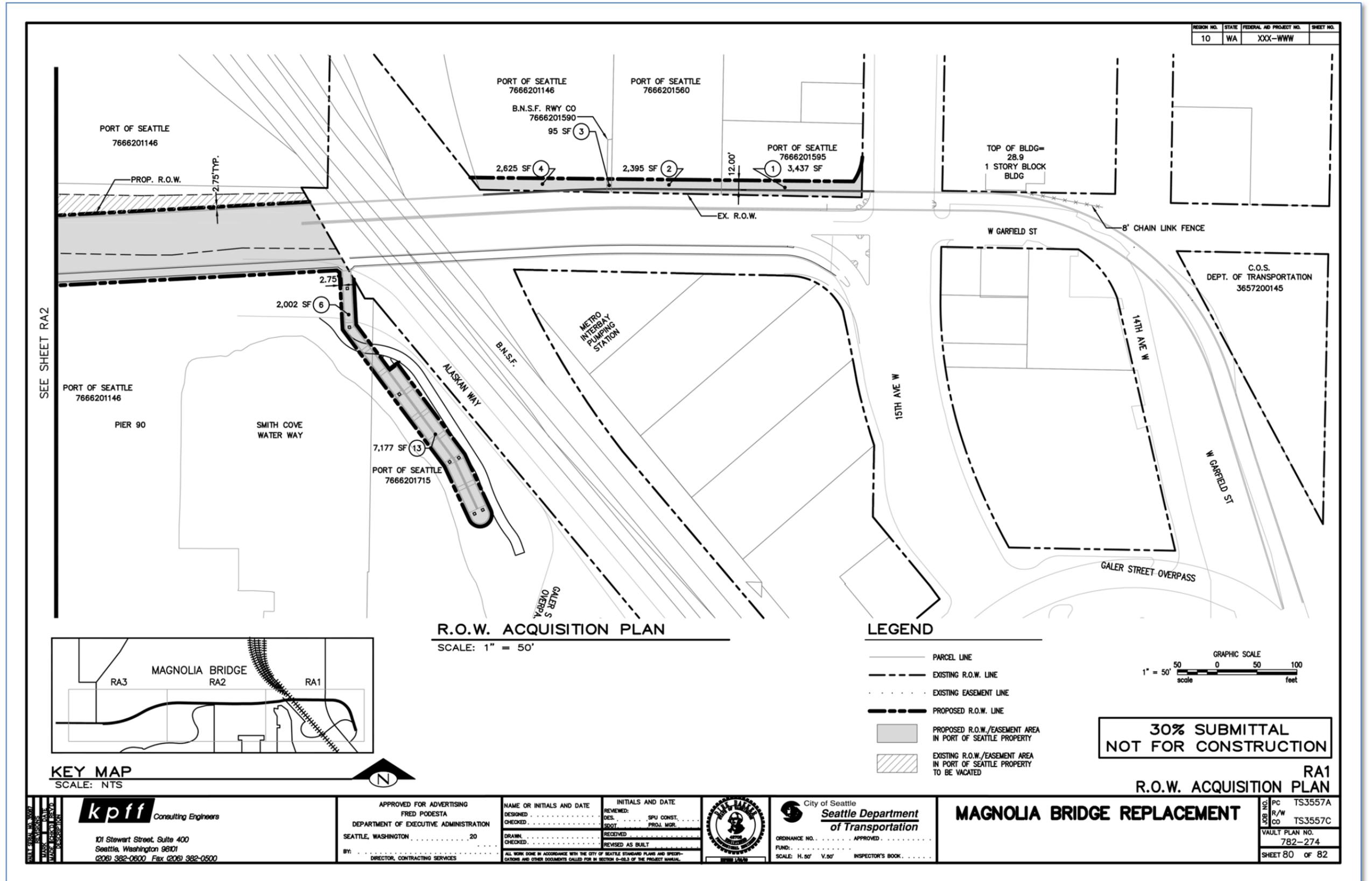
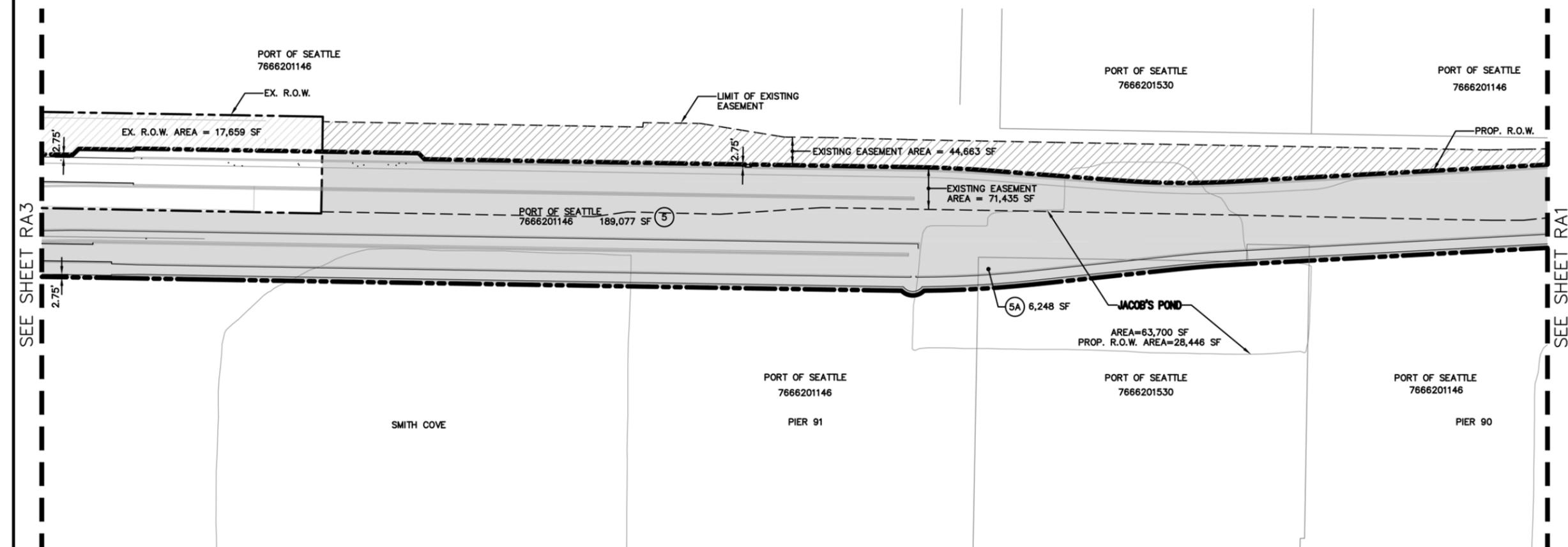


Figure A- 1 Preferred Alternative Right of Way (Sheet 1 of 3)

REGION NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
10	WA	XXX-WWW	



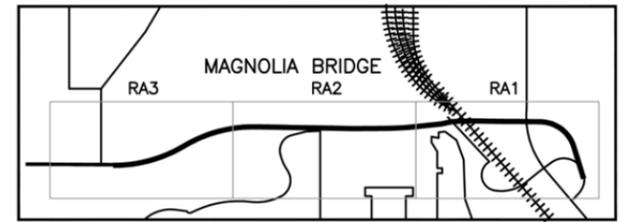
### R.O.W. ACQUISITION PLAN

SCALE: 1" = 50'

NOTE: THE RIGHT OF WAY INFORMATION SHOWN IS BASED ON PRELIMINARY DESIGN AND AVAILABLE EXISTING RECORDS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

### LEGEND

- PARCEL LINE
- EXISTING R.O.W. LINE
- EXISTING EASEMENT LINE
- PROPOSED R.O.W. LINE
- PROPOSED R.O.W./EASEMENT AREA IN PORT OF SEATTLE PROPERTY
- ▨ EXISTING R.O.W./EASEMENT AREA IN PORT OF SEATTLE PROPERTY TO BE VACATED



KEY MAP  
SCALE: NTS

R.O.W. NEEDS						
OWNER	#	PARCEL NUMBER	R.O.W. TAKE (1) (SF)	APPROX. TOTAL PARCEL (2) (SF)	ZONING	SHEET
P.O.S.	1	7666201595	3,437	17,360	GEN. INDUSTRIAL 2	RA1
P.O.S.	2	7666201560	2,395	78,874	GEN. INDUSTRIAL 2	RA1
B.N.S.F.	3	7666201590	95	620	GEN. INDUSTRIAL 2	RA1
P.O.S.	4	7666201146	2,625	2,085,220	GEN. INDUSTRIAL 2	RA2
P.O.S.	5	7666201146	189,077	-	GEN. INDUSTRIAL 1	RA2
P.O.S.	5A	7666201530	6,248	1,254,528	GEN. INDUSTRIAL 1	RA2
P.O.S.	6	7666201146	2,002	-	-	RA1
C.O.S. PARKS	7	7666201145	7,237	93,970	GEN. INDUSTRIAL 1	RA2
C.O.S. PARKS	8	2325039015	18,408	214,638	GEN. INDUSTRIAL 1	RA3
U.S. NAVY	9	2325039106	14,430	169,449	GEN. INDUSTRIAL 1	RA3
C.O.S. PARKS	10	2625039001	4,992	30,793	RES. SINGLE FAMILY 5000	RA3
C.O.S. PARKS	11	5037300312	2,874	2,672	RES. SINGLE FAMILY 5000	RA3
C.O.S. PARKS	12	5037300315	20	2,192	RES. SINGLE FAMILY 5000	RA3
P.O.S.	13	7666201715	9,180	565,013	-	RA1
<b>TOTAL</b>			<b>263,020</b>			

1) FROM PROPOSED ALIGNMENT OVERLAY ON C.O.S. G.I.S. PARCEL DATA MAP (2004)  
2) FROM KING COUNTY ASSESSOR PARCEL RECORDS



<p>101 Stewart Street, Suite 400 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500</p>	<p>APPROVED FOR ADVERTISING FRED PODESTA DEPARTMENT OF EXECUTIVE ADMINISTRATION SEATTLE, WASHINGTON . . . . . 20</p>	<p>NAME OR INITIALS AND DATE DESIGNED . . . . . CHECKED . . . . . DRAWN . . . . . CHECKED . . . . .</p>	<p>INITIALS AND DATE REVIEWED: . . . . . DES. . . . . SPU CONST. . . . . CHECKED . . . . . SPOOT . . . . . PROJ. MGR. . . . . RECEIVED . . . . . REVISED AS BUILT . . . . .</p>	<p>City of Seattle Seattle Department of Transportation</p>	<p><b>MAGNOLIA BRIDGE REPLACEMENT</b></p>	<p>PC TS3557A R/W TS3557C VAULT PLAN NO. 782-274 SHEET 81 OF 82</p>
	<p>BY: . . . . . DIRECTOR, CONTRACTING SERVICES</p>	<p>ALL WORK DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-20.3 OF THE PROJECT MANUAL.</p>	<p>ORDINANCE NO. . . . . APPROVED . . . . . FUND: . . . . . SCALE: H. 50' V. 50' INSPECTOR'S BOOK . . . . .</p>	<p>RA2 R.O.W. ACQUISITION PLAN</p>		

Figure A- 2 Preferred Alternative Right of Way (Sheet 2 of 3)

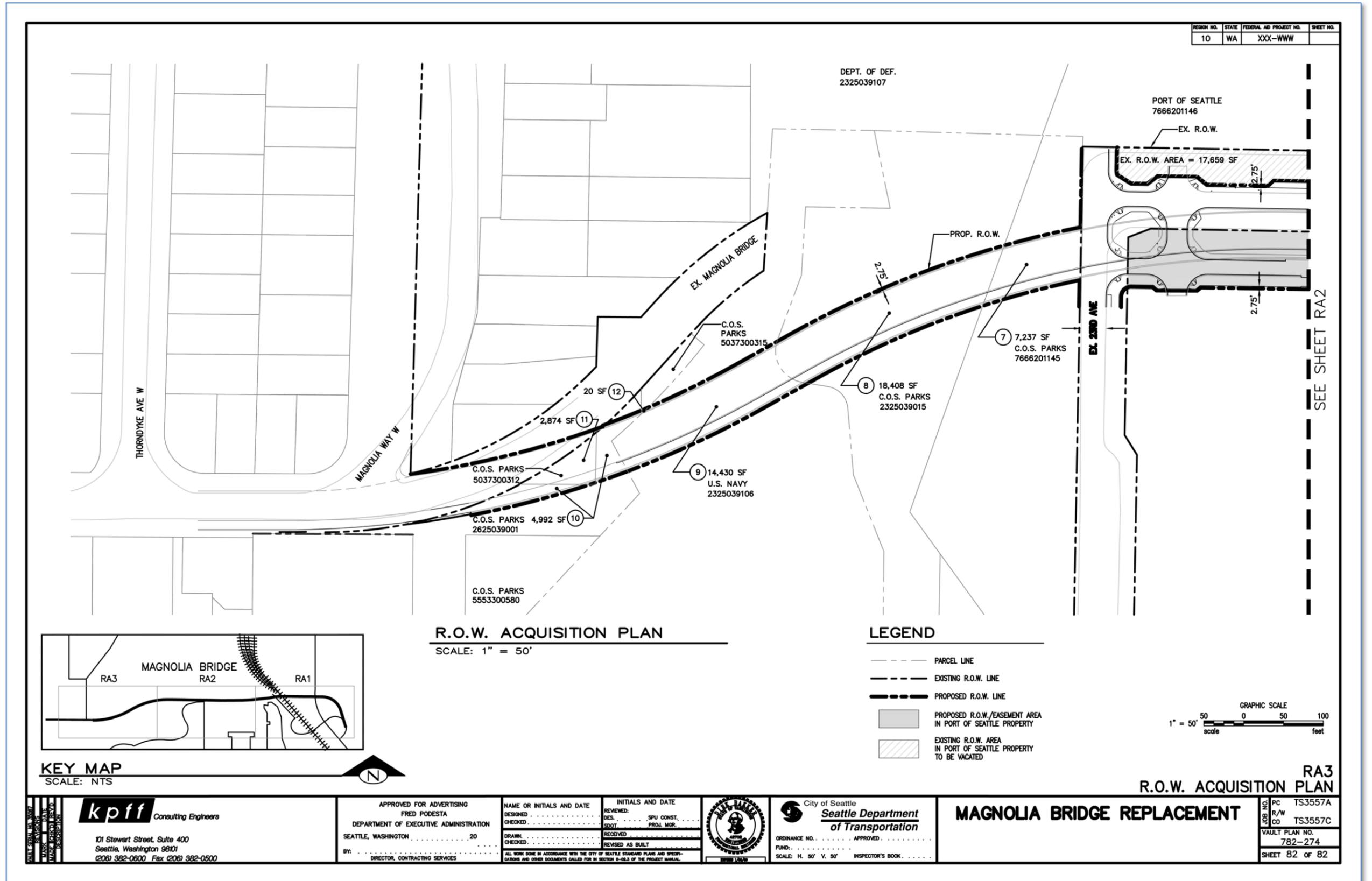
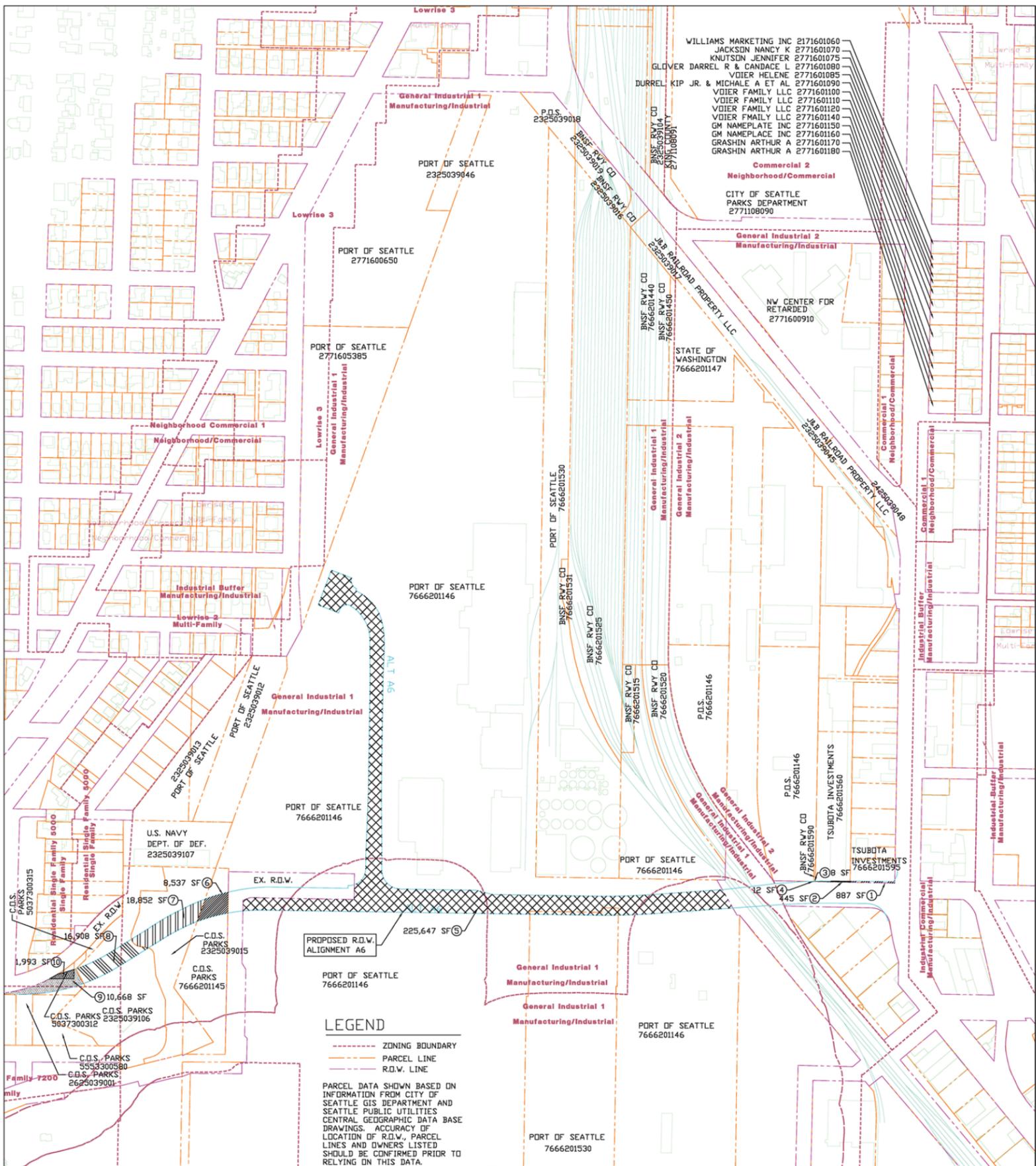


Figure A- 3 Preferred Alternative Right of Way (Sheet 3 of 3)



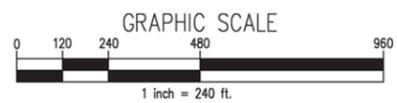
ALIGNMENT A6 - R.O.W. NEEDS

OWNER	#	ROW TAKE (SF)	APPROX. TOTAL PARCEL (SF)	ZONING
TSUBOTA	1	887	17,360	GEN. INDUSTRIAL 2
TSUBOTA	2	445	78,874	GEN. INDUSTRIAL 2
B.N.S.F.	3	8	620	GEN. INDUSTRIAL 2
P.O.S.	4	12	4,025,428	GEN. INDUSTRIAL 2
P.O.S.	5	225,647	4,025,428	GEN. INDUSTRIAL 1
C.D.S. PARKS	6	8,537	214,638	GEN. INDUSTRIAL 1
C.D.S. PARKS	7	18,852	109,098	GEN. INDUSTRIAL 1
C.D.S. PARKS	8	16,908	169,449	RES. SINGLE FAMILY 5000
C.D.S. PARKS	9	10,668	28,776	RES. SINGLE FAMILY 5000
C.D.S. PARKS	10	1,993	2,825	RES. SINGLE FAMILY 5000
TOTAL		283,957		

NOTE:  
RIGHT-OF-WAY INFORMATION SHOWN IS FOR PLANNING PURPOSES ONLY AND IS BASED ON PRELIMINARY DESIGN AND AVAILABLE EXISTING RECORDS.

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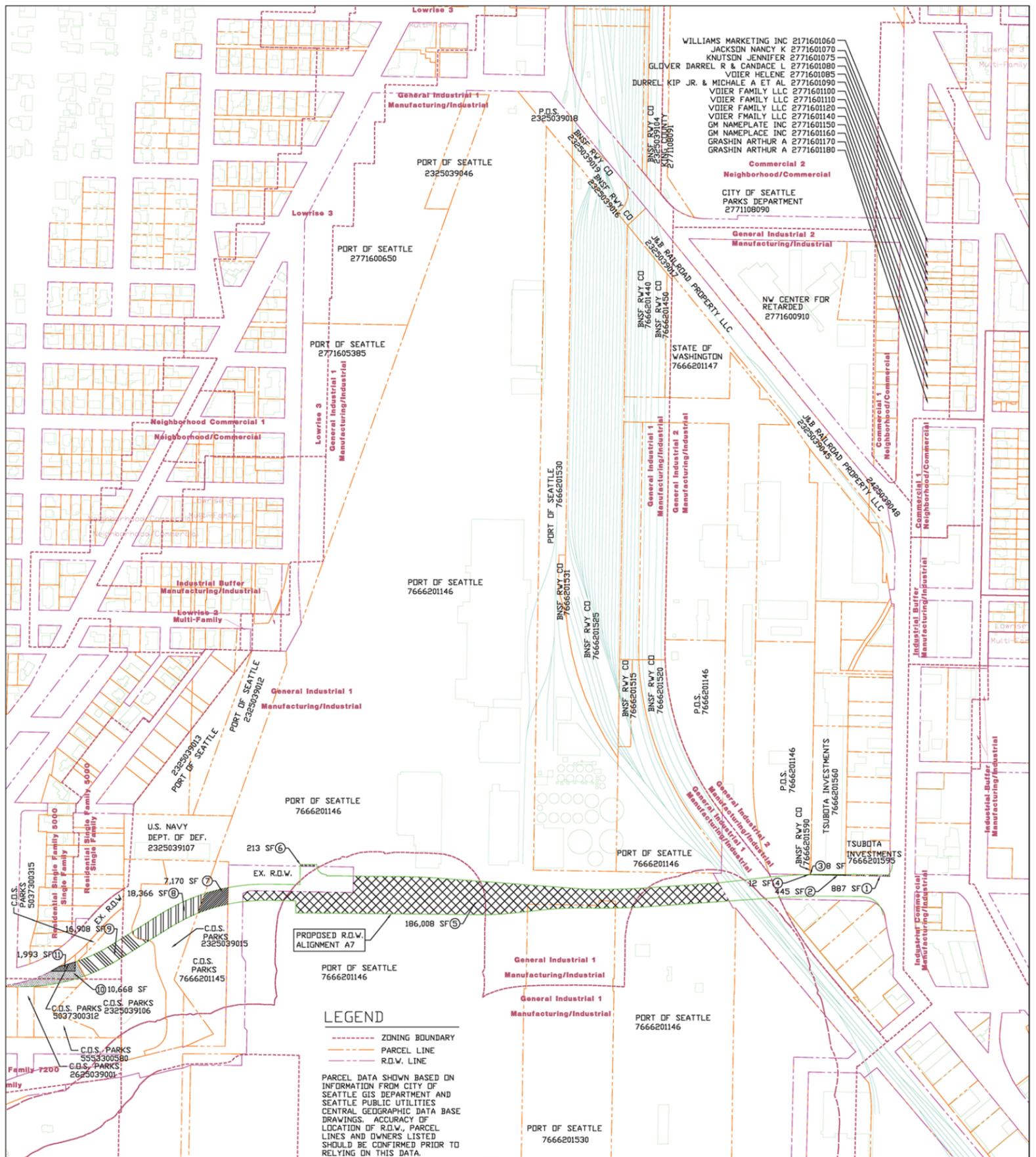
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**Magnolia BRIDGE PROJECT**

**ALIGNMENT A6  
R.O.W. MAP  
JULY 28, 2004**

Figure A- 4 Alternative A - Ramps Right of Way

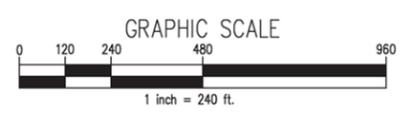


**ALIGNMENT A7 - R.O.W. NEEDS**

OWNER	#	ROW TAKE (SF)	APPROX. TOTAL PARCEL (SF)	ZONING
TSUBOTA	1	887	17,360	GEN. INDUSTRIAL 2
TSUBOTA	2	445	78,874	GEN. INDUSTRIAL 2
B.N.S.F.	3	8	620	GEN. INDUSTRIAL 2
P.D.S.	4	12	4,025,428	GEN. INDUSTRIAL 2
P.D.S.	5	186,008	4,025,428	GEN. INDUSTRIAL 1
P.D.S.	6	213	4,025,428	GEN. INDUSTRIAL 1
C.D.S. PARKS	7	7,170	214,638	GEN. INDUSTRIAL 1
C.D.S. PARKS	8	18,366	109,098	GEN. INDUSTRIAL 1
C.D.S. PARKS	9	16,908	169,449	RES. SINGLE FAMILY 5000
C.D.S. PARKS	10	10,668	28,776	RES. SINGLE FAMILY 5000
C.D.S. PARKS	11	1,993	2,825	RES. SINGLE FAMILY 5000
<b>TOTAL</b>		<b>242,678</b>		

**NOTE:**  
RIGHT-OF-WAY INFORMATION SHOWN IS FOR PLANNING PURPOSES ONLY AND IS BASED ON PRELIMINARY DESIGN AND AVAILABLE EXISTING RECORDS.

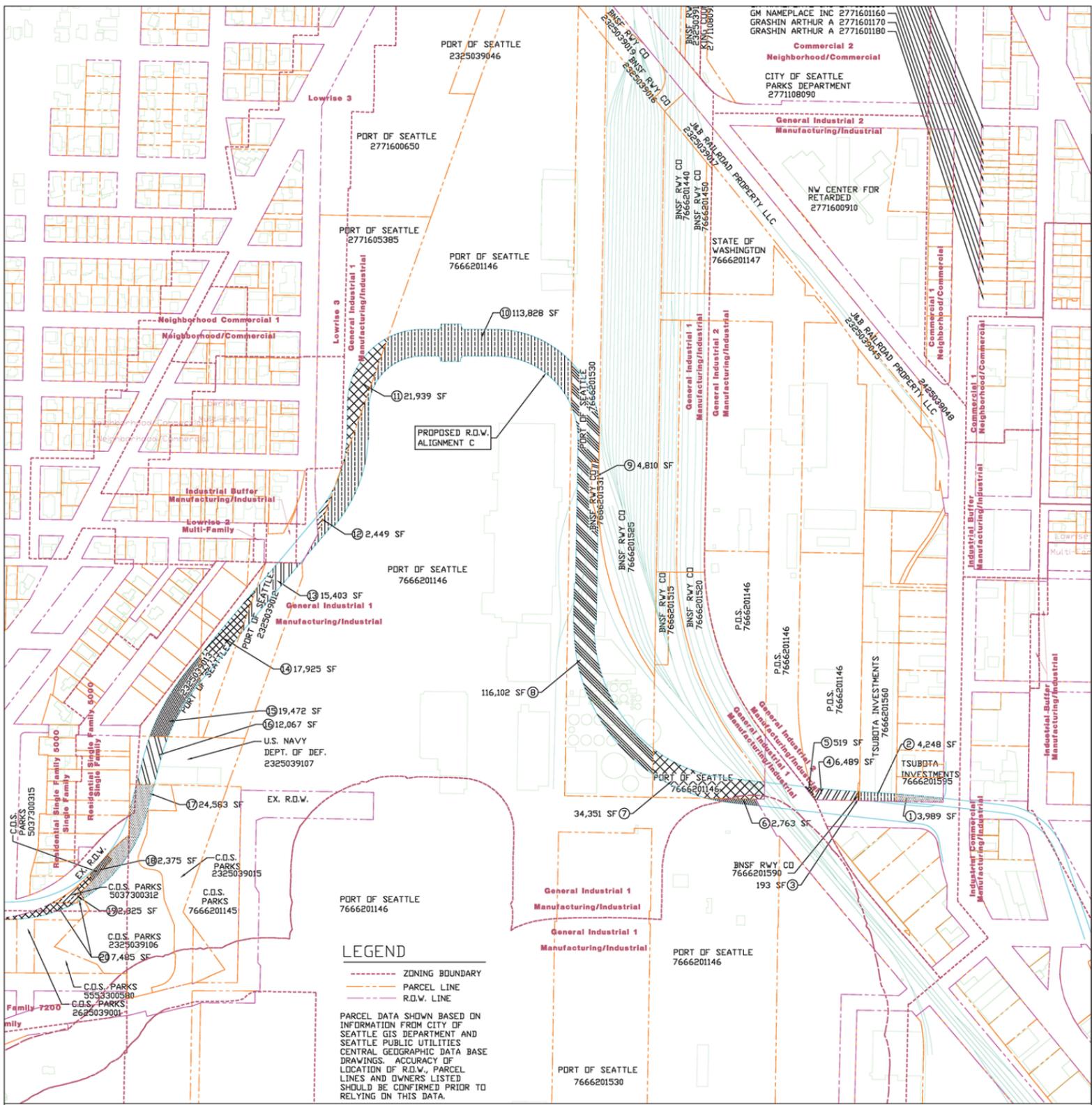
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**ALIGNMENT A7  
 R.O.W. MAP  
 JULY 28, 2004**

**Figure A- 5 Alternative A - Intersection Right of Way**



ALIGNMENT C - R.O.W. NEEDS

OWNER	#	ROW TAKE (SF)	APPROX. TOTAL PARCEL (SF)	ZONING
TSUBOTA	1	3,989	17,360	GEN. INDUSTRIAL 2
TSUBOTA	2	4,248	78,874	GEN. INDUSTRIAL 2
B.N.S.F.	3	193	620	GEN. INDUSTRIAL 2
P.D.S.	4	6,489	4,025,428	GEN. INDUSTRIAL 2
P.D.S.	5	519	4,025,428	GEN. INDUSTRIAL 2
P.D.S.	6	2,763	4,025,428	GEN. INDUSTRIAL 1
P.D.S.	7	34,351	4,025,428	GEN. INDUSTRIAL 1
P.D.S.	8	116,102	1,254,528	GEN. INDUSTRIAL 1
B.N.S.F.	9	4,810	5,051	GEN. INDUSTRIAL 1
P.D.S.	10	113,828	4,025,428	GEN. INDUSTRIAL 1
P.D.S.	11	21,939	256,697	GEN. INDUSTRIAL 1
P.D.S.	12	2,449	256,697	GEN. INDUSTRIAL 1
P.D.S.	13	15,403	107,593	GEN. INDUSTRIAL 1
P.D.S.	14	17,925	80,586	GEN. INDUSTRIAL 1
P.D.S.	15	19,472	80,586	GEN. INDUSTRIAL 1
U.S. NAVY	16	12,067	200,360	GEN. INDUSTRIAL 1
C.D.S. PARKS	17	24,583	169,449	RES. SINGLE FAMILY 5000
C.D.S. PARKS	18	2,375	2,375	RES. SINGLE FAMILY 5000
C.D.S. PARKS	19	2,825	2,825	RES. SINGLE FAMILY 5000
C.D.S. PARKS	20	7,485	28,776	RES. SINGLE FAMILY 5000
TOTAL		413,815		

NOTE: RIGHT-OF-WAY INFORMATION SHOWN IS FOR PLANNING PURPOSES ONLY AND IS BASED ON PRELIMINARY DESIGN AND AVAILABLE EXISTING RECORDS.

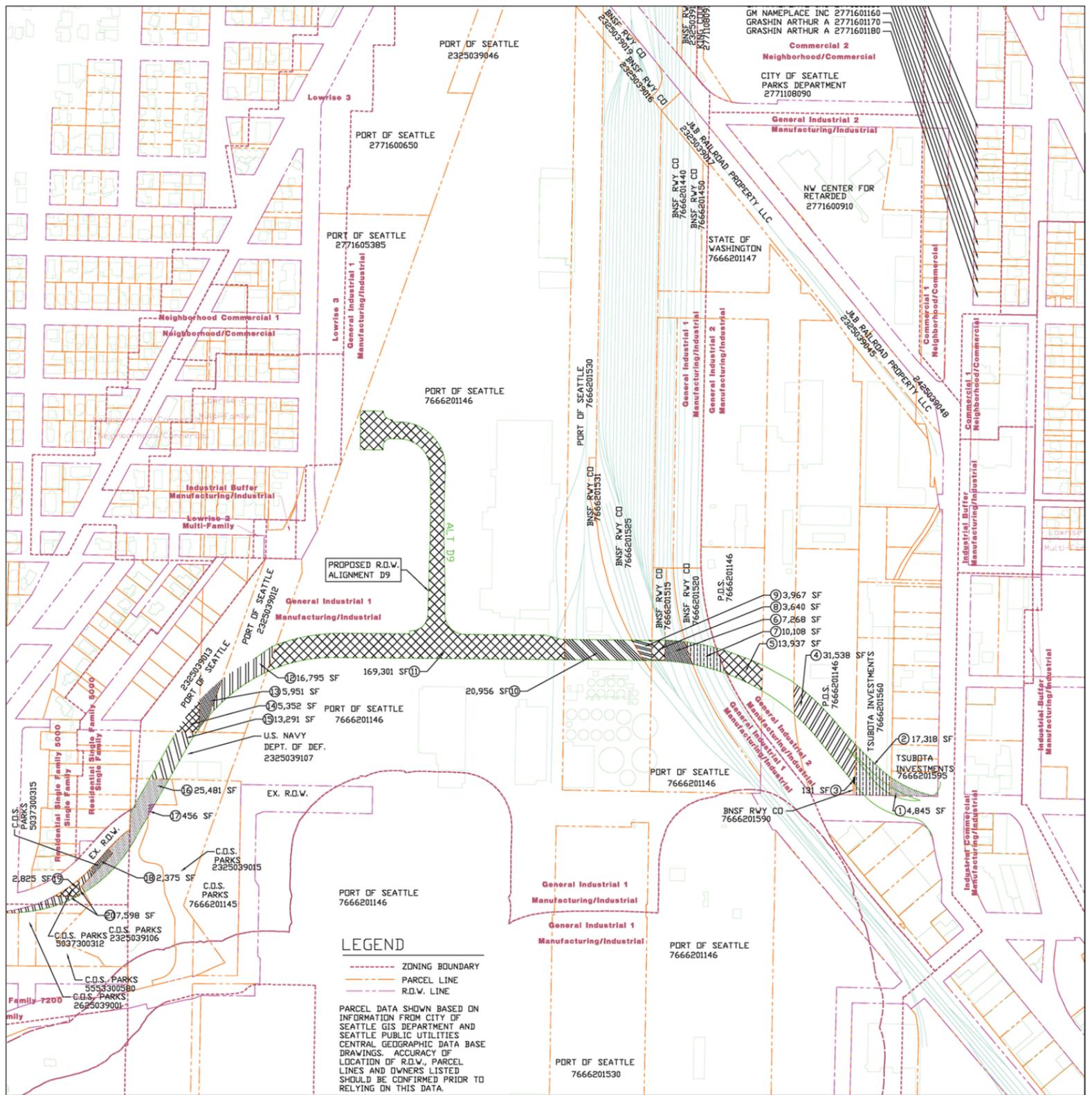
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**ALIGNMENT C R.O.W. MAP**  
 JULY 28, 2004

Figure A- 6 Alternative C Right of Way

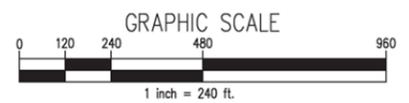


ALIGNMENT D9 - R.O.W. NEEDS

OWNER	#	ROW TAKE (SF)	APPROX. TOTAL PARCEL (SF)	ZONING
TSUBOTA	1	4,845	17,360	GEN. INDUSTRIAL 2
TSUBOTA	2	17,318	78,874	GEN. INDUSTRIAL 2
B.N.S.F.	3	131	620	GEN. INDUSTRIAL 2
P.D.S.	4	31,538	4,025,428	GEN. INDUSTRIAL 2
P.D.S.	5	13,937	4,025,428	GEN. INDUSTRIAL 2
P.D.S.	6	7,268	4,025,428	GEN. INDUSTRIAL 1
B.N.S.F.	7	10,108	87,991	GEN. INDUSTRIAL 1
B.N.S.F.	8	3,640	17,376	GEN. INDUSTRIAL 1
B.N.S.F.	9	3,967	452,998	GEN. INDUSTRIAL 1
P.D.S.	10	20,956	1,254,528	GEN. INDUSTRIAL 1
P.D.S.	11	169,301	4,025,428	GEN. INDUSTRIAL 1
P.D.S.	12	16,795	107,593	GEN. INDUSTRIAL 1
P.D.S.	13	5,951	80,586	GEN. INDUSTRIAL 1
P.D.S.	14	5,352	80,586	GEN. INDUSTRIAL 1
U.S. NAVY	15	13,291	200,360	GEN. INDUSTRIAL 1
C.D.S. PARKS	16	25,841	169,449	RES. SINGLE FAMILY 5000
C.D.S. PARKS	17	456	109,098	GEN. INDUSTRIAL 1
C.D.S. PARKS	18	2,375	2,375	RES. SINGLE FAMILY 5000
C.D.S. PARKS	19	2,825	2,825	RES. SINGLE FAMILY 5000
C.D.S. PARKS	20	7,598	28,776	RES. SINGLE FAMILY 5000
TOTAL		363,493		

NOTE: RIGHT-OF-WAY INFORMATION SHOWN IS FOR PLANNING PURPOSES ONLY AND IS BASED ON PRELIMINARY DESIGN AND AVAILABLE EXISTING RECORDS.

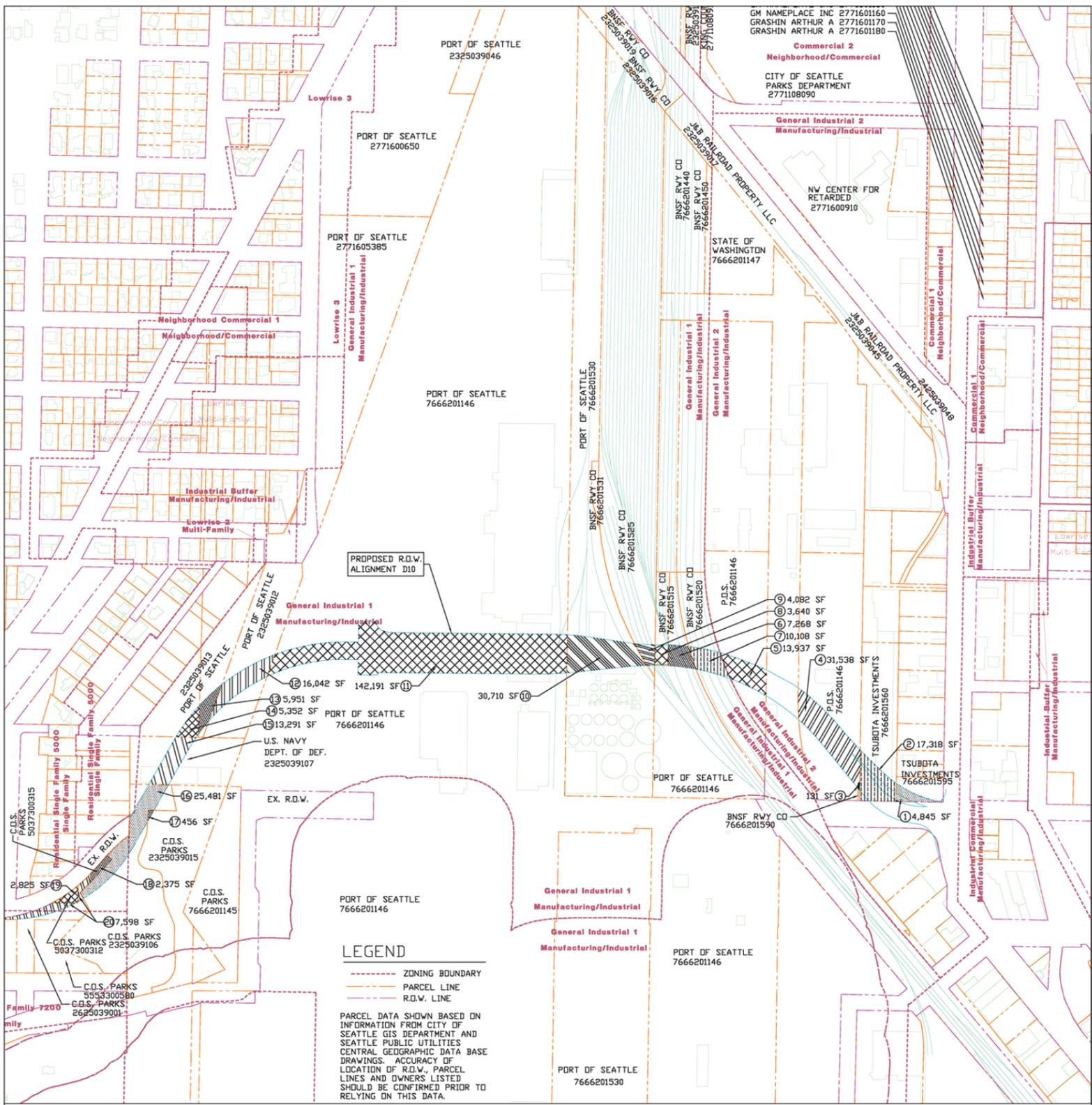
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**ALIGNMENT D9  
 R.O.W. MAP  
 JULY 28, 2004**

Figure A- 7 Alternative D - Ramps Right of Way

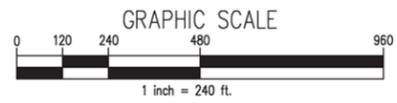


ALIGNMENT D10 - R.O.W. NEEDS

OWNER	#	ROW TAKE (SF)	APPROX. TOTAL PARCEL (SF)	ZONING
TSUBOTA	1	4,845	17,360	GEN. INDUSTRIAL 2
TSUBOTA	2	17,318	78,874	GEN. INDUSTRIAL 2
B.N.S.F.	3	131	620	GEN. INDUSTRIAL 2
P.D.S.	4	31,538	4,025,428	GEN. INDUSTRIAL 2
P.D.S.	5	13,937	4,025,428	GEN. INDUSTRIAL 2
P.D.S.	6	7,268	4,025,428	GEN. INDUSTRIAL 1
B.N.S.F.	7	10,108	87,991	GEN. INDUSTRIAL 1
B.N.S.F.	8	3,640	17,376	GEN. INDUSTRIAL 1
B.N.S.F.	9	4,082	452,998	GEN. INDUSTRIAL 1
P.D.S.	10	30,710	1,254,528	GEN. INDUSTRIAL 1
P.D.S.	11	142,191	4,025,428	GEN. INDUSTRIAL 1
P.D.S.	12	16,042	107,593	GEN. INDUSTRIAL 1
P.D.S.	13	5,951	80,586	GEN. INDUSTRIAL 1
P.D.S.	14	5,352	80,586	GEN. INDUSTRIAL 1
U.S. NAVY	15	13,291	200,360	GEN. INDUSTRIAL 1
C.D.S. PARKS	16	25,841	169,449	RES. SINGLE FAMILY 5000
C.D.S. PARKS	17	456	109,098	GEN. INDUSTRIAL 1
C.D.S. PARKS	18	2,375	2,375	RES. SINGLE FAMILY 5000
C.D.S. PARKS	19	2,825	2,825	RES. SINGLE FAMILY 5000
C.D.S. PARKS	20	7,598	28,776	RES. SINGLE FAMILY 5000
TOTAL		345,499		

NOTE: RIGHT-OF-WAY INFORMATION SHOWN IS FOR PLANNING PURPOSES ONLY AND IS BASED ON PRELIMINARY DESIGN AND AVAILABLE EXISTING RECORDS.

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**ALIGNMENT D10 R.O.W. MAP**  
 JULY 28, 2004

Figure A- 8 Alternative D - Intersection Right of Way