

**Appendix A**  
**Environmental Justice Analysis**



# Appendix A - Environmental Justice

Executive Order 12898 (EO 12898), *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Population* (February 11, 1994) provides that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.” In the accompanying memorandum, President Clinton urged federal agencies to incorporate environmental principles into analyses prepared under the National Environmental Policy Act (NEPA) and emphasized the importance of public participation in the NEPA process.

The U.S. Department of Transportation (DOT), in its *Order to Address Environmental Justice in Minority Populations and Low Income Populations*, outlined how environmental justice analyses should be performed and how transportation project decisions should be made to avoid disproportionately high and adverse effects on minority and low-income populations. The DOT Order requires agencies to: 1) explicitly consider human health and environmental effects related to transit projects that may have a disproportionately high and adverse effect on minority or low-income populations; and 2) implement procedures to provide “meaningful opportunities” for public involvement by members of these populations during project planning and development. (DOT Order § 5[b][1]). The DOT order further provides that “[i]n making determinations regarding disproportionately high and adverse effects...mitigation and enhancement measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well the design, comparative impacts, and the relevant number of existing system elements in non-minority and non-low-income areas.” (DOT Order § 8[b]). See also the Federal Highway Administration’s (FHWA’s) Order entitled *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

In accordance with EO 12898, and the DOT and FHWA orders, this analysis describes the demographics of the Project study area; details the extensive public involvement efforts for the Project, including efforts directed at low-income and minority populations; and assesses whether the Project could have disproportionately high and adverse effects, taking into account mitigation/enhancement measures and project benefits, as appropriate. In conducting this analysis, each element of the environment discussed in the DEIS was reviewed to determine whether the Project may cause any disproportionately high and adverse impacts. Particular attention was paid to the following potential impacts that could be differentially distributed among population segments: displacements, land use, noise, air quality, visual resources, historic/archeological resources, parklands, and construction.

## Study Area

### A.1.1 Demographics of the Study Area

Field visits were conducted to determine which areas currently have impacts from I-90 and may be impacted by the Project. The study area for this report includes areas to the north and south of I-90 from 4th Avenue S on the west to Bellevue Way SE (I-405) on the east, and includes

portions of the Cities of Seattle, Mercer Island, and Bellevue. See Figures 1 and 2 for a map of the study area and census tracts.

U.S. Census Bureau data for the City of Seattle, City of Mercer Island, City of Bellevue, were used to identify the minority<sup>1</sup> and low-income<sup>2</sup> compositions of the study area. Census 2000 data at the census block group and census block level was reviewed. Block groups are divisions of census tracts and contain a number of census blocks that start with the same number. The most comprehensive Census 2000 data available at printing was used.

### Low-Income Composition of the Study Area

2000 Census Bureau data for block groups were analyzed to determine the percentage of the population below the poverty level within the study area. Poverty data are not available for individual census blocks.

According to the 2000 Census, 11.8 percent of residents in the City of Seattle, 3.2 percent of persons in the City of Mercer Island, and 5.7 percent of persons in the City of Bellevue were living in poverty in 1999, as shown in Table A-1 (U.S. Census Bureau 2000). The poverty level for King County was 8.4 percent. The percent of residents who were below the poverty level in 1999 ranged from 1 to 57 percent for block groups in the Seattle portion of the study area, 0 to 8 percent for block groups in the Mercer Island portion, and 1 to 2 percent for block groups in the Bellevue portion of the study area. Some of the block groups extend beyond the study area (see Table A-4 at the end of this Appendix for more details on poverty levels by census tracts).

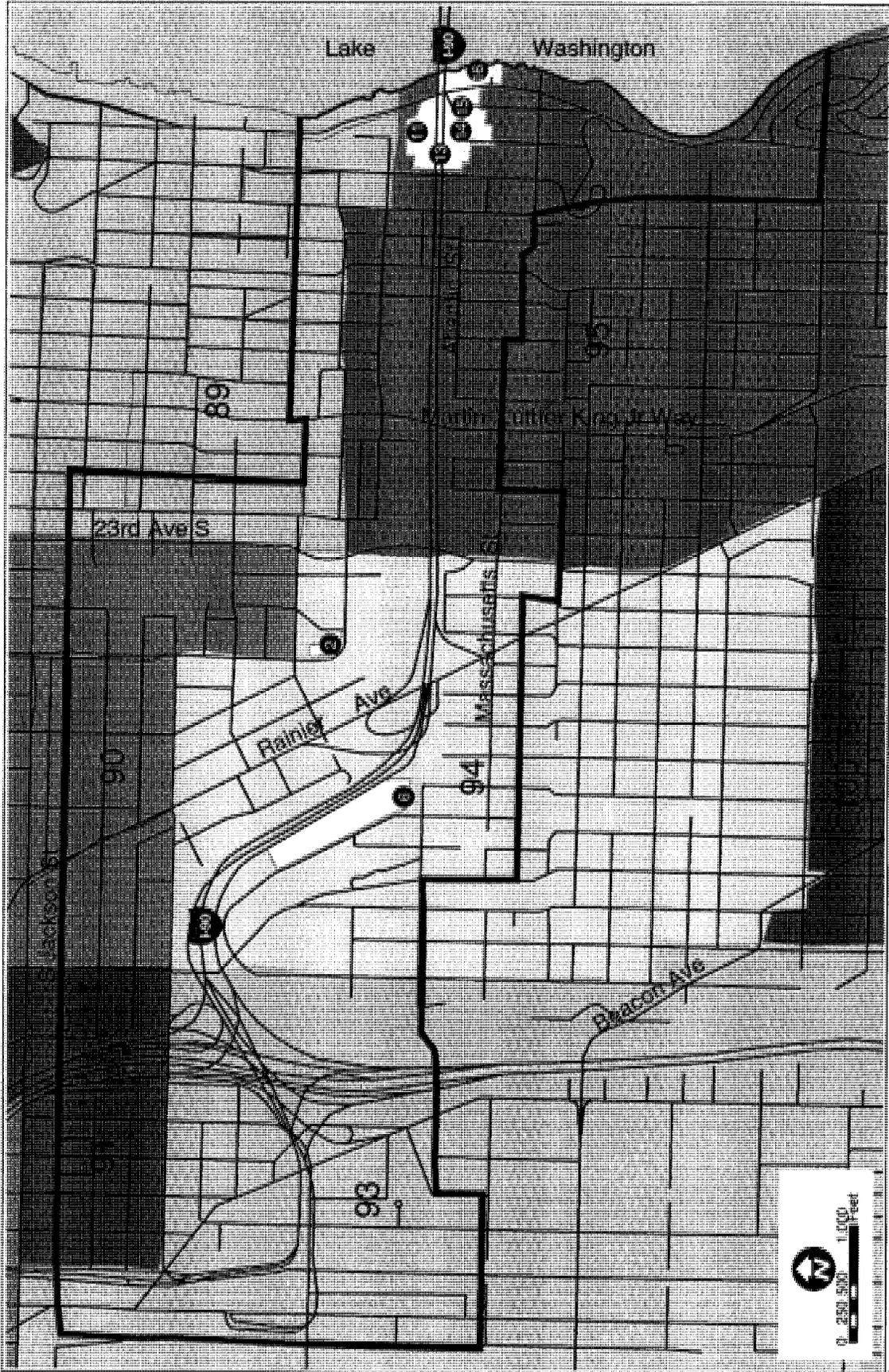
**Table A-1  
Poverty Data**

Jurisdiction	Total Percentage of People Below Poverty Level (2000 Census)	Total Percentage of Study Area Population of People Below Poverty Level (2000 Census)
Seattle	11.8	24.9
Mercer Island	3.2	4.5
Bellevue	5.7	1.6

Source: US Census Bureau

<sup>1</sup> The DOT order defines a minority person as “a person who is: (1) Black (a person having origins in any of the black racial groups of Africa); (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); (3) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or (4) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).”

<sup>2</sup> The DOT order identifies a low-income as “one whose median household income is at or below the Department of Health and Human Services poverty guidelines.” Income data based on Department of Health and Human Services (HHS) guidelines are difficult to gather, so Census Bureau data are often used for environmental justice analyses.

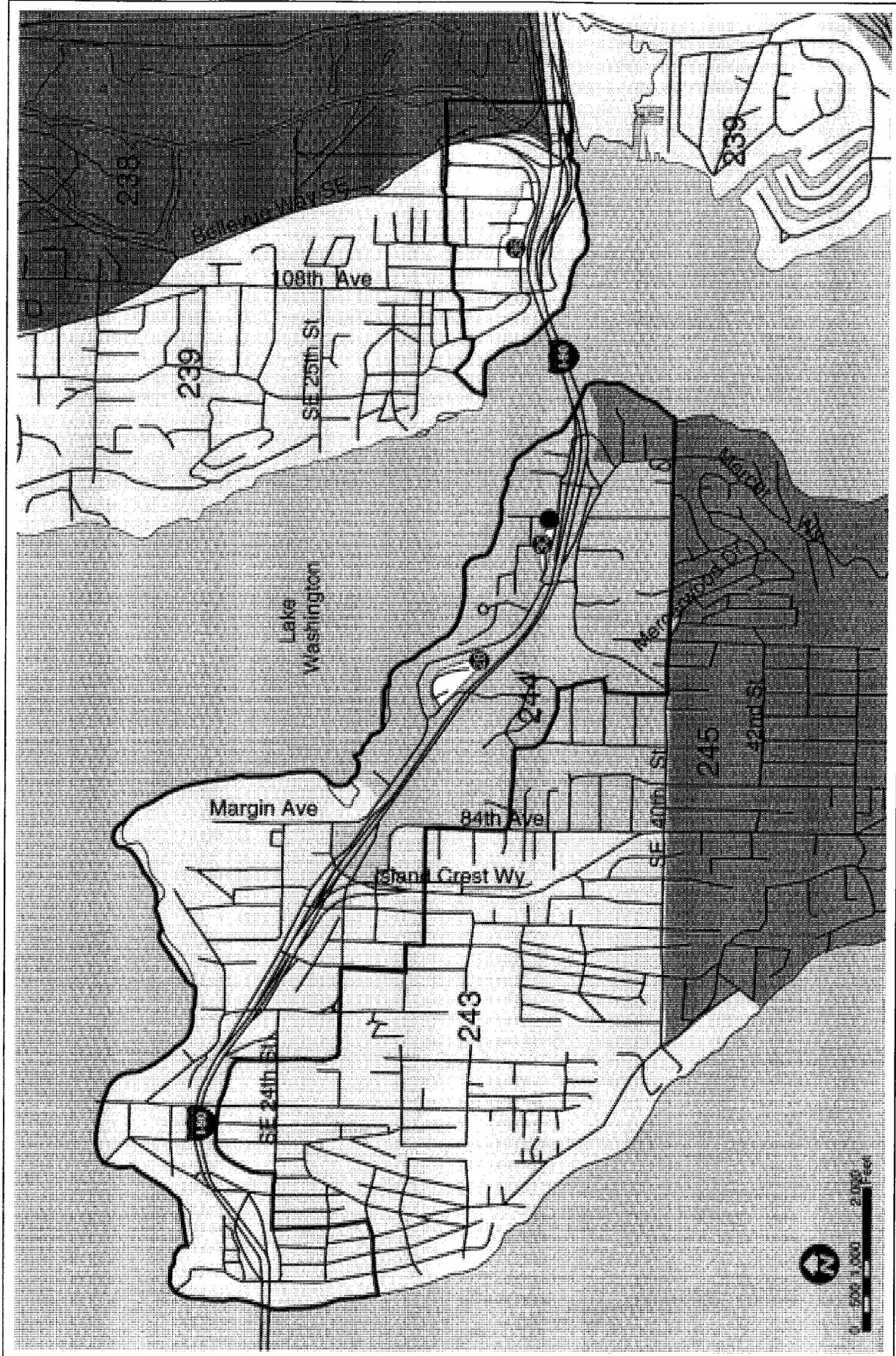


**Figure 1**  
Census Tracts

**Legend**

- Street
- Noise Receptor Locations
- 239 Census Tract
- Study Area
- Approximate Noise Locations
- Census Tract





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**Legend**  
 Street  
 Noise Receptor Locations  
 Census Tract  
 Study Area  
 Approximate Noise Locations  
**Figure 2**  
 Census Tracts

## Minority Composition of the Study Area

Census 2000 data for census blocks were analyzed to determine the percentage of the minority residents within the study area. These data are available for census blocks, the smallest geographic unit for which the Census Bureau tabulates basic data.

Overall population and minority population data for year 2000 for the City of Seattle, City of Mercer Island, City of Bellevue and King County are shown in Table A-2. Within the study area, the minority population ranges from 0 to 100 percent for census blocks in Seattle, 0 to 85 percent for census blocks in Mercer Island, and 0 to 42 percent for census block in Bellevue (see Table A-5 at the end of this Appendix for more details).

**Table A-2  
Minority Data**

Jurisdiction	Total Population	Total Minority Population	Total Minority Percentage	Study Area Minority Population	Study Area Minority Percentage
Seattle	563,374	180,842	32	5357	67.2
Mercer Island	22,036	3,787	17	514	16.2
Bellevue	109,569	30,871	28	128	15.9

Source: US Census Bureau 2000

### A.1.2 Public Process

#### Notification

The public process that has been conducted for the Project has included outreach to minority and low-income populations. The public process was initiated in October 1998 with a Project newsletter sent to 11,000 residents along the I-90 corridor, in Mercer Island, Bellevue and Seattle. Distribution of newsletters within low-income and minority areas in Seattle adjacent to I-90, advertising in ethnic newspapers, and newsletter mailings to interested parties within the 98144 zip code (the neighborhood on either side of I-90 in the Rainier Valley), all helped the Project to reach out to minority and low-income communities that may be affected by the Project. See Chapter 6 – Public Meetings for more details.

The Project has been the subject of numerous articles in the *Seattle Times*, *Seattle Post-Intelligencer*, *Eastside Journal*, *Mercer Island Reporter* and *Daily Journal of Commerce*, since the Project was initiated in 1998. Scoping meetings were advertised in the general circulation newspapers and ethnic newspapers including *El Mundo*, *Northwest Asian Weekly/Seattle Chinese Post*, *The Facts* and *The Seattle Medium*.

Meeting notices and newsletters were distributed at the Eastgate, South Bellevue and Mercer Island park-and-rides, and in the Mount Baker area of Seattle. Newsletters were mailed during the following months: September 1998, March 1999, October 1999, March 2000, November 2001 and May 2003.

## **Scoping Meetings and Open Houses**

The purpose of the scoping meetings and open houses over the life of the Project is to inform the public and obtain public comment on the Project and get suggestions for issues and options to consider.

The City of Seattle Department of Neighborhoods office was asked to recommend a meeting location convenient for all residents located near I-90. At their suggestion, an open house was held in April 1999 at the Mount Baker Community Club at 2811 Mt. Rainier Drive S. Other open houses were held: March 1999 in Mercer Island and Bellevue, April 1999 in Mercer Island, March 2000 in Mercer Island, and October 2000 in Mercer Island. Written and verbal comments were taken from all interested participants and documented.

Following further development of project alternatives, another set of public open houses and scoping meetings were conducted in December 2001 in Seattle (at Union Station, 201 S Jackson Street, held there for its accessibility for transit riders), Mercer Island and Bellevue on the scope of the DEIS. Written and verbal comments were taken from all interested participants and documented.

The I-90 Project team also participated in five Trans-Lake (SR 520) Project open houses in Seattle, Mercer Island and Bellevue in March 2001 to provide information and get public comment on the Project.

Three open houses (in Seattle, Mercer Island and Bellevue) were held immediately following the release of the Draft EIS where public comments were taken. Written comments regarding the Draft EIS were responded to in this Final EIS.

## **Briefings**

The Project team has held numerous briefings and meetings with local groups and committees. The Project team briefed Sound Transit's Bicycle Leaders team on the Project on several occasions to discuss their concerns about preserving bicycle access across the bridge. Public comment on the Project was also solicited at the Sound Transit Annual Bicycle Forum on June 4, 2001. On July 11, 2002, Sound Transit held a workshop for members of the bicycle community to brief them on project alternatives and to gather input on potential impacts and mitigation measures.

Other briefings and meetings with committees and groups, starting in 1998, included those with Seattle City Council Transportation Committee, King County Council Transportation Committee, Bellevue City Council, Eastside Transportation Partners, South King County Area Transportation Board, Sierra Club Transportation Committee, Trans-Lake Executive Committee, 1000 Friends of Washington, Transportation Choices Coalition, the Bicycle Alliance of Washington, Cascade Bicycle Club, the League of Women Voters and the Seattle Neighborhood Federation.

## **Steering Committee**

A Steering Committee provides oversight on the Project. The Steering Committee consists of representatives from the cities and agencies that were signatory to the 1976 Memorandum of Agreement on I-90 including: the cities of Mercer Island, Seattle and Bellevue; King County/Metro Transit; and the Washington State Department of Transportation. In addition, Sound Transit, the Federal Highway Administration and the Federal Transit Administration are represented on the Steering Committee. The Committee has met over 25 times since August 1998. The Committee meetings are open to the public, and an opportunity for public comment is always provided as part of the meetings.

Information about the Project and upcoming meetings and open houses is provided on the Sound Transit website, which has been in operation since 1998. Public comments are sent through the website to the Project team.

## **A.2 Impacts**

Using the information contained in the Draft EIS and the information set forth above, this section assesses whether the Project would result in potential disproportionately high and adverse effects. Table S-1 in the Summary of this DEIS summarizes the Project's potential impacts for all elements of the environment. The following analysis focuses on displacements, land use, noise, air quality, visual resources, historic/archeological resources, parklands, and construction. With the exception of noise impacts that result from the operation of all alternatives (including the No Build), the impacts described below are associated with the Build Alternatives. As discussed below, many of the project's impacts will be fully mitigated and the remaining unavoidable impacts are limited in scope. The Project would not result in disproportionately high and adverse effects.

### **Displacements and Relocations**

No displacements would occur with any of the alternatives.

### **Land Use**

No direct unavoidable adverse impacts to land use would occur. Temporary indirect unavoidable adverse impacts to land uses in the vicinity of the Project would be limited to the Project's construction phase. These indirect impacts would include dust and noise generation, visual and access control impacts. These impacts would be similar for all Build Alternatives, although less for Alternative R-5 Restripe due to less construction activity and greatest for Alternatives R-5 Modified and R-8A due to the incremental roadway widening work. The duration of impacts would exist for one to two construction seasons, however most construction activities would occur from April 1 through September 30 so impacts would be more limited in time. Construction dust would be controlled through practices such as watering and covering exposed earth. Construction noise would be intermittent and reduced with measures, such as mufflers on engines, turning off equipment during periods of nonuse, locating stationary equipment as far as possible from residences, or installing temporary noise barriers or noise curtains around stationary equipment. Advance notice would be provided of changes in access, or temporary

access closures, to both local residents and users of the I-90 facility. Due to the temporary nature of the impacts described above and the implementation of accompanying mitigation measures, the impacts on land use would not result in disproportionately high and adverse effects.

**Noise**

For the 40 locations where noise measurements were taken, noise levels are not predicted to change by year 2025 for 18 locations for the No Build Alternative, or with Alternatives R-5 Restripe and R-5 Modified. For those locations where a change is predicted, the change from existing conditions to year 2025 from traffic noise would be limited to 1 – 2 decibels, a noise increase that would be imperceptible to humans.

The noise analysis in the EIS documents that sound levels would increase adjacent to approximately 81 residences at nine locations along the I-90 corridor, under both the No Build and Build Alternatives. The FHWA and WSDOT criteria use a level of 67 dBA in determining whether a noise impact would occur from roadway traffic. WSDOT also considers noise levels of 66 dBA as “approaching” the noise impact level for purposes of determining whether noise mitigation measures must be considered. Table A-3 provides a summary of the information included in Table 4.5-7 in section 4.5 Noise of this EIS analysis for those residences where the predicted noise levels would either approach or exceed the noise level of 67 dBA. The predicted 2025 noise levels for the No Build Alternative, Alternative R-5 Restripe and Alternative R-5 Modified would be the same for 29 of the receptor locations and 1 decibel higher or lower at the remaining 9 locations. Alternative R-2B Modified is predicted to have noise levels 1 decibel lower in five locations than the No Build Alternative, and Alternative R-8A is predicted to have noise levels 1-2 decibels higher in 13 locations. A difference of 1-2 decibels which is imperceptible to humans. The highest noise levels are predicted for the Leschi area along 35th Avenue South. Existing noise levels are 72 dBA, and this level is predicted to be one decibel higher for Alternative R-8A in year 2025, and 72 dBA for the other alternatives, including the No Build. See Table 4.5-7 for details.

**Table A-3  
Predicted Traffic Noise Data**

Number of Affected Residences	2005 Existing	2025 R-1	2025 R-2B Modified	2025 R-5 Restripe	2025 R-5 Modified	2025 R-8A
Total number of residences where predicted noise levels would approach or exceed 67 dBA	80	81	81	82	82	82

The analysis concludes that mitigation of these impacts is not reasonable or feasible under WSDOT criteria. However, as described above, the scope of projected noise impacts is limited. These noise impacts, while not subject to mitigation, would not result in potential disproportionately high and adverse effects.

## **Air Quality**

There is a potential for short-term, localized, minor adverse air quality impacts during construction. These impacts would be mitigated through the implementation of dust control and other measures, and would not result in potential disproportionately high and adverse effects.

## **Visual Resources**

Short-term or temporary unavoidable adverse visual resource impacts would occur throughout the corridor during construction due to the visibility of dust, construction vehicles and lights after mitigation measures are applied. The residual visual impacts would be temporary and limited and would not result in potential disproportionately high and adverse effects.

## **Historical/Archeological Resources**

No unavoidable adverse impacts to historic or archaeological resources are anticipated.

## **Parklands**

Overall, the functions of or available activities at the parks adjacent to or in the vicinity of the I-90 corridor would not be affected by the Project; however, the appeal of the parks may be temporarily affected during construction due to additional visual, dust or noise changes. These potential impacts would be mitigated through the implementation of measures provided for air quality and noise, and would not result in potential proportionately high and adverse effects.

## **Construction Impacts**

During construction, long- and short-term closures of different portions of the I-90 roadway, ramps between 4th Avenue S and Bellevue Way SE, and the shared-use pathway are likely. Traffic delays due to construction may occur. These closures and delays would be temporary and the mitigation measures outlined in *Chapter 3 – Transportation* would mitigate impacts due to traffic delays and potential traffic spilling into adjacent neighborhoods during construction (construction in each of the areas along I-90 is expected to last 3 to 6 months over one or two seasons and rerouting of traffic would occur within the I-90 right-of-way and not onto neighborhood streets). Air quality and noise impacts due to the construction of the build alternatives are likely to be small in both magnitude and duration. The temporary and limited residual impacts associated with the Project's construction would not result in potential disproportionately high and adverse effects.

## **A.3 Project Benefits**

As discussed above, under the DOT and FHWA Orders, project benefits can be taken into account when considering whether substantial (or high and adverse) impacts may have a disproportionate affect on minority and low-income populations.

The purpose of the proposed action is to improve regional mobility by providing reliable and safe two-way transit and high-occupancy vehicle (HOV) operations on I-90 between Bellevue

and Seattle, while minimizing impacts to the environment and to other users and transportation modes. A benefit of the Project, in addition to improving reliability, is that it would increase the speed of transit in the corridor, and therefore in the region, and would create an incentive for increased transit usage. This improvement in transit service would be available to all users, including minority and low-income populations. National data on transit use demonstrate that minority and low-income individuals have a higher propensity to use transit than the general population. This suggests that those individuals would benefit from this project (APTA 1999). Specifically:

- Transit/HOV travel times would be reduced in the reverse-peak direction with all build alternatives.
- Transit reliability would improve in the reverse-peak direction with an HOV 3+ requirement, with Alternative R2-B, and would improve in the reverse-peak direction with both R-5 Restripe and Modified Alternatives and Alternative R-8A.
- Transit ridership would increase with all build alternatives.

The expected benefits of the project would not be realized with the No Build Alternative.

## **Conclusion**

As discussed above, most of the impacts associated with the Project's construction and operation are limited and would be fully mitigated. Residual impacts are limited in scope and/or duration. Under these circumstances, the Project would not result in potentially high and adverse effects that require further analysis for environmental justice purposes. It is not necessary, therefore, to assess whether minority or low-income populations would be disproportionately affected by the Project by comparing the project area demographics to an appropriate reference population or by undertaking the additional statistical analysis.

Further, under the DOT order, mitigation and enhancement measures, as well as offsetting benefits to affected minority and low-income populations, may be taken into account when making determinations regarding disproportionately high and adverse effects to those populations. As described above, the Project would provide benefits to the surrounding area and the I-90 corridor due to improved transit reliability and travel times, including its minority and low-income residents. The benefits further support the conclusion that the Project would not cause disproportionately high and adverse effects under EO 12898 or the DOT/FHWA Orders.

**Table A-4**  
**Low-Income Demographics Within the Study Area**

**2000 Census Data**

<b>Census Tract and Block Group (BG)</b>	<b>Total Number of Persons</b>	<b>Number of Persons Below Poverty Level</b>	<b>Percentage Below Poverty Level</b>
<b>Seattle</b>			
Tract 89, BG 1	971	7	1 %
Tract 89, BG 2	520	16	3 %
Tract 89, BG 3	543	166	31 %
Tract 89, BG 4	734	159	22 %
Tract 89, BG 5	728	181	25 %
Tract 90, BG 1	888	146	16 %
Tract 90, BG 2	437	61	14 %
Tract 90, BG 3	847	375	44 %
Tract 91, BG 1	964	554	57 %
Tract 91, BG 2	985	412	42 %
Tract 93, BG 1	898	262	29 %
Tract 93, BG 2	623	305	49 %
Tract 94, BG 2	885	287	32 %
Tract 94, BG 5	1276	148	12 %
Tract 95 BG 1	907	135	15 %
Tract 95 BG 3	551	8	1 %
Tract 95 BG 6	1269	263	21 %
<b>Mercer Island</b>			
Tract 243, BG 1	956	38	4 %
Tract 243, BG 2	1254	47	4 %
Tract 243, BG 5	962	9	1 %
Tract 244, BG 1	919	78	8 %
Tract 244, BG 2	1556	103	7 %
Tract 245, BG 1	490	0	0 %
<b>Bellevue</b>			
Tract 239, BG 5	593	13	2 %
Tract 239, BG 6	650	7	1 %

Source: U.S. Census Bureau. 2000 Census. *Poverty Status in 1999 by Age*.

**Table A-5  
Minority Demographics within the Study Area**

**2000 Census Data**

<b>Census Block</b>	<b>Total Number of Persons</b>	<b>Percentage Minority</b>
<b>Census Tract 89 –Seattle</b>		
Block 1019	38	5
Block 2003	101	34
Block 2008	43	72
Block 2009	19	32
Block 2010	42	38
Block 2011	60	30
Block 2012	6	50
Block 2013	45	47
Block 2014	34	26
Block 2015	2	100
Block 3004	34	56
3005	137	88
3006	54	67
3007	28	86
3008	96	91
3009	29	79
4003	39	56
4004	63	86
4005	34	66
4006	27	56
4011	64	69
4012	52	77
5005	71	85
5006	6	100
5007	0	0
5009	0	0
<b>Census Tract 90-Seattle</b>		
1006	101	76
1008	32	78
1009	31	84
1010	50	74
1011	33	64
1012	60	82
2000	41	73
2001	21	95
2002	7	100
2003	28	43
2004	13	100
2005	138	86
2006	58	83
2007	56	66
2008	41	78
2009	0	0
2010	48	96
2011	55	67
3018	52	88
3019	9	100
3020	3	100
3021	0	0
3022	0	0

**Table A-5 (Continued)  
Minority Demographics within the Study Area**

**2000 Census Data**

<b>Census Block</b>	<b>Total Number of Persons</b>	<b>Percentage Minority</b>
<b>Census Tract 91-Seattle</b>		
1003	0	0
1004	0	0
1005	0	0
1006	45	100
1007	68	100
1008	0	0
1009	14	100
1010	243	97
1011	36	100
1012	114	100
1013	0	0
1014	0	0
1015	53	94
1016	0	0
1017	0	0
2000	17	100
2001	0	0
2002	134	90
2003	145	90
2004	57	75
2005	180	28
2006	211	61
2007	163	99
2008	45	98
<b>Census Tract 93-Seattle</b>		
1001	0	0
1002	0	0
1003	0	0
1004	188	64
1005	0	0
1006	0	0
1007	0	0
1008	0	0
1011	707	62
1014	12	33
1015	0	0
1016	0	0
1017	0	0
1018	0	0
1019	0	0
2002	58	81
2019	0	0
2020	0	0
2021	0	0
2022	0	0
2023	0	0
2024	83	60
2025	0	0
2027	0	0

**Table A-5 (Continued)**  
**Minority Demographics within the Study Area**

**2000 Census Data**

<b>Census Block</b>	<b>Total Number of Persons</b>	<b>Percentage Minority</b>
<b>Census Tract 94-Seattle</b>		
2000	3	100
2001	25	80
2002	47	72
2003	27	78
2004	67	49
2005	0	0
2006	0	0
2007	0	0
2009	0	0
2010	0	0
2011	8	13
2012	0	0
2013	56	64
2014	46	65
2015	49	82
2016	0	0
2017	0	0
2018	0	0
2019	0	0
2020	0	0
2021	0	0
2022	29	79
2023	24	42
2024	16	100
2025	29	86
2026	63	90
2027	55	85
2028	109	72
2029	21	95
2030	0	0
2031	0	0
2032	12	100
2033	23	96
2034	36	83
5000	12	83
5002	0	0
5003	215	73
5004	155	76
5005	85	67
5006	138	76
5007	54	74
5008	76	84
5009	31	39
5010	37	84
5011	445	73

**Table A-5 (Continued)  
Minority Demographics within the Study Area**

**2000 Census Data**

<b>Census Block</b>	<b>Total Number of Persons</b>	<b>Percentage Minority</b>
<b>Census Tract 95-Seattle</b>		
1000	0	0
1001	0	0
1002	0	0
1003	14	7
1004	9	56
1005	26	62
1006	18	50
1007	17	59
1008	17	65
1009	8	100
1010	10	30
1011	18	28
1012	22	36
1013	2	100
1014	5	80
1015	6	50
1016	47	26
1017	72	39
1018	7	14
1019	39	31
1020	38	8
1021	33	55
1022	10	10
1023	5	0
1024	20	40
1025	4	50
1026	28	7
1027	14	14
1028	28	29
1029	27	30
1030	43	40
1031	66	52
1034	85	16
3000	122	16
3001	55	20
3002	10	0
3003	29	10
3004	28	11
6000	24	15
6001	14	14
6002	61	74
6003	4	0
6004	39	85
6005	13	85
6006	41	59
6007	0	0
6008	0	0
6009	42	76
6010	0	0
6011	0	0
6012	0	0
6013	0	0
6014	0	0

**Table A-5 (Continued)  
Minority Demographics within the Study Area**

**2000 Census Data**

<b>Census Block</b>	<b>Total Number of Persons</b>	<b>Percentage Minority</b>
<b>Census Tract 95-Seattle, continued</b>		
6015	0	0
6016	0	0
6017	0	0
6018	0	0
6019	18	28
6020	47	60
6026	1	100
6027	0	0
6028	0	0
6029	48	58
6030	0	0
6031	0	0
6032	68	62
<b>Census Tract 243-Mercer Island</b>		
1000	98	9
1001	94	19
1002	122	30
1003	82	13
1004	26	0
1005	97	12
1006	0	0
1007	31	32
1008	17	0
1009	17	6
1010	26	38
1011	0	0
1012	48	13
1013	30	30
1014	38	11
1015	63	21
1016	4	0
1017	0	0
1018	54	15
1019	36	8
1020	45	22
1024	12	0
2000	203	24
2001	0	0
2002	0	0
2003	0	0
2004	1	100
2005	113	10
2007	0	0
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0
2013	156	5
2014	0	0
2015	83	14
5000	7	71
5001	30	7
5002	39	15

**Table A-5 (Continued)  
Minority Demographics within the Study Area**

**2000 Census Data**

<b>Census Block</b>	<b>Total Number of Persons</b>	<b>Percentage Minority</b>
<b>Census Tract 243-Mercer Island, continued</b>		
5003	25	0
5004	37	14
5005	35	3
5006	46	17
5009	22	5
5010	30	23
5011	36	19
<b>Census Tract 244 Mercer Island</b>		
Block 1000	13	85
1001	49	12
1002	549	7
1003	16	13
1004	0	0
1005	259	22
1006	67	18
1007	7	0
1008	24	13
2000	227	32
2002	0	0
2003	0	0
<b>Census Tract 245 Mercer Island</b>		
1000	23	43
1001	32	3
1002	28	0
1003	81	21
<b>Census Tract 239 Bellevue</b>		
5017	31	0
5018	120	5
6000	89	39
6001	9	22
6002	12	42
6003	68	15
6004	69	13
6005	43	19
6006	45	11
6007	66	12
6008	109	27
6009	38	8
6011	30	0
6012	8	13
6013	14	0
6014	55	13
<b>Census Tract 238.01 Bellevue</b>		
3013	0	0
3014	0	0
<b>Total</b>	<b>11,953</b>	<b>50.1 percent</b>

Source: U.S. Census Bureau. Census 2000. Table P4. *Hispanic or Latino, and Not Hispanic or Latino by Race*. Available at <<http://factfinder.census.gov>>.



## **Appendix B**

### **Visual Quality Assessment Notes and Methodology**



# VISUAL ASSESSMENT METHODOLOGY

This study complies with the guidelines outlined in the WSDOT *Environmental Procedures Manual*, Section 4-9, "Expertise Reports," and Section 5-1-1, "NEPA EIS Outline." Visual quality assessments were conducted in accordance with the United States Department of Transportation (USDOT), Federal Highway Administration (FHWA) *Visual Impact Assessment for Highway Projects* (1980). The Washington State Department of Transportation Roadside Classification Plan (1996) was also used for guidance. The I-90 corridor is designated as both a National Scenic Byway by the FHWA National Scenic Byways Program and a Washington State Scenic Byway (the Mountains to Sound Greenway) by the WSDOT Heritage Corridors Program. This designation establishes a high level sensitivity to the visual quality for any action considered within the corridor.

## Describing Existing Visual Resources

The visual character and quality of the landscape are both considered when describing existing visual resources. The assessment of visual character is descriptive, not evaluative. Descriptions of visual character may include patterns in the landscape such as line, form, color, texture, and scale. This report incorporates visual character descriptions from WSDOT's *Roadside Classification Plan* (WSDOT 1996).

Visual quality is inherently subjective; therefore, objective evaluations were used to quantify the visual assessment. The three criteria used to perform this evaluative appraisal of the landscape visual quality are vividness, intactness, and unity. Expert evaluation based on the three criteria have proven to be good predictors of visual quality change using the following sample equation:

$$\frac{\text{Visual Quality} = \text{Vividness} + \text{Intactness} + \text{Unity}}{3}$$

Each of the three criteria is independent and is intended to evaluate one aspect of visual quality as defined below.

- **Vividness.** The memorability of the visual impression received from contrasting landscape elements (Land form, Water form, Vegetative form, and Human Built form) as they combine to form a striking and distinctive visual pattern.
- **Intactness.** The integrity of visual order in the natural and man-built landscape, and the extent to which the landscape is free from visual encroachment.
- **Unity.** The degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern. Unity refers to the compositional harmony or inter-compatibility between landscape elements.

The rating scales for the vividness, intactness, and unity are as follows:

### ***Vividness Ratings:***

**Very High (Rating Value = 7).** The visual impression received is highly memorable, as contrasting landscape elements combine to form distinctive visual patterns. Strongly defined landscape or landforms are noted, including mountains, large bodies of water, distinctive patterns, colors, and textures of vegetation or significant manmade structures.

**Medium Rating (Rating Value = 4).** The visual impression received is moderately memorable, with some distinctive patterns; moderately defined landscape or landforms are present, including low rolling hills and smaller water bodies. Vegetation patterns, colors, and textures are less visible. Some significant manmade structures may be present.

**Very Low Rating (Rating Value = 0).** The visual impression received is of low memorability. Little visual pattern is formed because landscape elements do not combine to form a striking and distinctive pattern. Homogeneous landforms or landscape and small bodies of water may be present. Vegetation patterns, colors, and textures are not noticeable and manmade structures are insignificant or not memorable.

### ***Intactness Ratings:***

**Very High (Rating Value = 7).** There is high visual integrity between the natural and manmade landscape to the extent that the landscape is free from visual encroachment. Visual integrity occurs where natural areas and manmade landscapes blend into the surrounding character and create no visual discontinuity between the natural and manmade elements. Natural and manmade patterns are not disturbed and they maintain visual order.

**Medium (Rating Value = 4).** There is an average visual integrity between the natural and manmade landscape. Some visual encroachment on to the landscape is present and it lacks visual order. There is some disruption of the natural and manmade patterns.

**Very Low (Rating Value = 0).** There is low visual integrity between the natural and manmade landscape features. Visual encroachment onto the landscape is very apparent. The pattern of elements is disrupted and the integrity of the natural visual order is lost.

### ***Unity Ratings:***

**Very High (Rating Value = 7).** The visual elements of the landscape join to form a moderately coherent, harmonious visual pattern. Manmade and natural elements blend together.

**Medium (Rating Value = 4).** The visual elements of the landscape join to form a moderately coherent, harmonious visual pattern. Manmade elements blend with natural elements, the visual order is disrupted.

**Very Low (Rating Value = 0).** Visual resources do not join together to form a coherent, harmonious visual pattern. Manmade elements do not have a visual relationship to natural landforms or land cover patterns and visual order is lacking.

### Identifying Viewer Groups

Scenic views of the landscape depend in equal parts on what is seen and who is seeing it. As a result, considering the viewers who may see the project is an important part of assessing its impacts. This analysis focused on two sensitive viewer groups: highway users and viewers adjacent to the highway. Highway users would have a view *from* the proposed alternatives. Highway neighbors may be residents or visitors who have a view *of* the proposed alternatives.

The sensitivity of viewers to visual resources along I-90 depends on three factors: the viewer position relative to the road; viewer's speed - whether the viewer is moving or stationary; and the duration of the view. Viewer position is the relationship that a viewer has to the view. It is evaluated as level, inferior or superior and establishes the amount of the view that a viewer will perceive. Viewer speed affects the viewer's awareness of detail. Someone resting or walking would be more aware of detail and scale in the view than someone moving at 60 miles per hour. The duration of the view is the length of time something is viewed in the landscape. A motorist may not notice an element in the landscape if she/he perceives it briefly, but if an element is seen from a distance as the motorist moves toward it, she/he will recognize and remember it. Likewise, a resident looking onto a highway facility, will have a longer duration of view and be more affected by the quality of that view.

A field study was conducted to identify 8 viewpoints (Table 1) that represent different viewer groups in the project area. The visual resources seen from these viewpoints are also representative of those visual resources which are most likely to be changed by the proposed alternatives.

**Table 1  
I-90 Corridor Viewpoints**

Viewpoint Number	Location	Alternative Views
1	From Judkins Park looking southeast (Superior view)	Views of Alternatives R-2B, R-5R, R-5M, R-8A
2	From the center lane of HMH Floating Bridge looking east (Level view)	Views of Alternatives R-2B, R-5R, R-5M, R-8A
3	From the shared-use pathway on HMH Floating Bridge looking east (Level view)	Views of Alternatives R-2B, R-5R, R-5M, R-8A
4	From Lake Washington looking south towards the HMH Floating Bridge (Inferior view)	Views of Alternatives R-2B, R-5R, R-5M, R-8A
5	From I-90 at 77th Avenue SE eastbound looking west (Level view)	Views of Alternatives R-2B, R-5R, R-5M, R-8A
6	From I-90 at E. Mercer Avenue looking westbound (6a) and eastbound (6b) (Level view)	Views of Alternatives R-2B, R-5R, R-5M, R-8A
7	From the Shorewood Avenue Overpass on Mercer Island looking westbound (Superior view)	Views of Alternatives R-2B, R-5R, R-5M, R-8A
8	From Shorewood Apartments at East Lexington Way looking northeast (Superior view)	Views of Alternatives R-2B, R-5R, R-5M, R-8A

### Visual Environment

I-90 is the primary east/west corridor in Washington State and is designated as both a National Scenic Byway by the FHWA National Scenic Byways Program and a Washington State Scenic Byway (the Mountains to Sound Greenway) by the WSDOT Heritage Corridors Program. These

designations recognize the unique scenic, historic, and recreation features along the corridor. The Mountain to Sound Greenway runs from Seattle's historic waterfront, across the Cascade Mountain Range to the town of Thorp in Central Washington. The project area encompasses I-90 from 4th Avenue S in Seattle, through the City of Mercer Island, to the I-405 interchange in Bellevue. This stretch of I-90 incorporates scenic views of Puget Sound and Lake Washington and historic views of the Seattle waterfront, as well as views of urban Seattle and the semiurban areas Mercer Island and Bellevue.

The physical context within the project area is created by a series of north-trending uplands such as Beacon Hill, Mount Baker, and Mercer Island that are bounded in the west by the Puget Sound and in the east by Lake Washington. As a result of the varied topography, I-90 runs along elevated freeway ramps (at the Seattle I-5/I-90 intersection and the Bellevue I-90/I-405 intersection), between ridges (in Beacon Hill, Mount Baker, and Mercer Island), through tunnels (Mount Baker), and over bridges (on the HMM/LVM Floating Bridges and the East Channel Bridge). The views from I-90, therefore, are continually changing in both aspect and visual character.

In addition to its physical context, the I-90 corridor within the project area is distinguished by its design elements. The architectural design standards used to develop the I-90 corridor from I-5 to Bellevue focused on the following goals (WSDOT 1986):

- Enhancing both safety and the quality of the driving experience
- Creating connections between communities
- Minimizing environmental disruption
- Using structural elements and siting to strengthen the visual character of existing landforms along the corridor

Ensuring safety and providing a high quality driving experience was accomplished with the use of consistent design elements like signage and roadside plantings that help drivers understand and enjoy the I-90 corridor. The planted overpass structures provide physical connections between Mercer Island neighborhoods that are separated by the freeway. The sensitive siting of the freeway in the landscape and the creation of the shared-use pathway minimizes the perception of environmental disruption caused by I-90. Finally, uniform structural elements such as the textured, concrete retaining walls and planting areas were designed to strengthen the visual character of existing landforms along the corridor.

In general, the I-90 corridor runs through a visual environment that can be divided into three visual landscape types:

- The urban landscape - downtown Seattle
- The semi-urban urban landscape - the neighborhoods of Beacon Hill, Mount Baker, and Judkins Park and the suburban communities of Mercer Island and Bellevue
- The open landscape - Lake Washington.

**Appendix C**  
**Biological Resources Agency Letters**





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Western Washington Fish and Wildlife Office  
510 Desmond Drive SE, Suite 102  
Lacey, Washington 98503  
Phone: (360) 753-9440 Fax: (360) 534-9331

SEP 4 2002

Dear Species List Requester:

We (U.S. Fish and Wildlife Service) are providing the information you requested to assist your determination of possible impacts of a proposed project to species of Federal concern. Attachment A includes the listed threatened and endangered species, species proposed for listing, candidate species, and/or species of concern that may be within the area of your proposed project.

Any Federal agency, currently or in the future, that provides funding, permitting, licensing, or other authorization for this project must assure that its responsibilities under section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act), are met. Attachment B outlines the responsibilities of Federal agencies for consulting or conferencing with us.

If both listed and proposed species occur in the vicinity of a project that meets the requirements of a major Federal action (i.e., "major construction activity"), impacts to both listed and proposed species must be considered in a biological assessment (BA) (section 7(c); see Attachment B). Although the Federal agency is not required, under section 7(c), to address impacts to proposed species if listed species are not known to occur in the project area, it may be in the Federal agency's best interest to address impacts to proposed species. The listing process may be completed within a year, and information gathered on a proposed species could be used to address consultation needs should the species be listed. However, if the proposed action is likely to jeopardize the continued existence of a proposed species, or result in the destruction or adverse modification of proposed critical habitat, a formal conference with us is required by the Act (section 7(a)(4)). The results of the BA will determine if conferencing is required.

The Federal agency is responsible for making a determination of the effects of the project on listed species and/or critical habitat. For a Federal agency determination that a listed species or critical habitat is likely to be affected (adversely or beneficially) by the project, you should request section 7 consultation through this office. For a "not likely to adversely affect" determination, you should request our concurrence through the informal consultation process.

Candidate species and species of concern are those species whose conservation status is of concern to us, but for which additional information is needed. Candidate species are included as an advance notice to Federal agencies of species that may be proposed and listed in the future. Conservation measures for candidate species and species of concern are voluntary but recommended. Protection provided to these species now may preclude possible listing in the future.

For other federally listed species that may occur in the vicinity of your project, contact the National Marine Fisheries Service (NOAA Fisheries) at (360) 753-9530 to request a list of species under their jurisdiction. For wetland permit requirements, contact the Seattle District of the U.S. Army Corps of Engineers for Federal permit requirements and the Washington State Department of Ecology for State permit requirements.

Thank you for your assistance in protecting listed threatened and endangered species and other species of Federal concern. If you have additional questions, please contact Yvonne Dettlaff (360) 753-9582.

Sincerely,

A handwritten signature in cursive script that reads "L. Lawrence Owens". The signature is written in dark ink and is positioned above the typed name of the sender.

*for* Ken S. Berg, Manager  
Western Washington Fish and Wildlife Office

Enclosure(s)

**LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES, CRITICAL  
HABITAT, CANDIDATE SPECIES, AND SPECIES OF CONCERN THAT MAY  
OCCUR IN THE VICINITY OF THE PROPOSED  
MERCER ISLAND INTERSTATE 90 ROAD IMPROVEMENT PROJECT  
IN KING COUNTY, WASHINGTON**

**(T24N R4E S1-4,9-12; T24N R5E S7-9)**

**FWS REF: 1-3-02-SP-2005**

**LISTED**

There are two bald eagle (*Haliaeetus leucocephalus*) nesting territories located in the vicinity of the project at T24N R4E S12 and T24N R5E S6. Nesting activities occur from January 1 through August 15.

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

Bull trout (*Salvelinus confluentus*) occur in the vicinity of the project.

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

1. Level of use of the project area by listed species;
2. Effect of the project on listed species' primary food stocks, prey species, and foraging areas in all areas influenced by the project; and
3. Impacts from project construction (i.e., habitat loss, increased noise levels, increased human activity) that may result in disturbance to listed species and/or their avoidance of the project area.

**PROPOSED**

None

## CANDIDATE

None

## CRITICAL HABITAT

None

## SPECIES OF CONCERN

The following species of concern have been documented in the county where the project is located. These species or their habitat could be located on or near the project site. Species in **bold** were specific occurrences located on the database within a 1-mile radius of the project site.

Beller's ground beetle (*Agonum belleri*)  
California wolverine (*Gulo gulo luteus*)  
Cascades frog (*Rana cascadae*)  
Hatch's click beetle (*Eanus hatchi*)  
Long-eared myotis (*Myotis evotis*)  
Long-legged myotis (*Myotis volans*)  
Northern goshawk (*Accipiter gentilis*)  
**Northwestern pond turtle (*Clemmys marmorata marmorata*)**  
Olive-sided flycatcher (*Contopus cooperi*)  
Pacific fisher (*Martes pennanti pacifica*)  
Pacific Townsend's big-eared bat (*Corynorhinus townsendii townsendii*)  
Pacific lamprey (*Lampetra tridentata*)  
**Peregrine falcon (*Falco peregrinus*)**  
River lamprey (*Lampetra ayresi*)  
Valley silverspot (*Speyeria zerene bremeri*)  
Western toad (*Bufo boreas*)  
*Aster curtus* (white-top aster)

## ATTACHMENT B

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

#### SECTION 7(a) - Consultation/Conference

- Requires:
1. Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;
  2. Consultation with the U.S. Fish and Wildlife Service (FWS) when a Federal action may affect a listed endangered or threatened species to ensure that any action authorized, funded, or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the Federal agency after it has determined if its action may affect (adversely or beneficially) a listed species; and
  3. Conference with the FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or an adverse modification of proposed critical habitat.

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

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

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

---

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





State of Washington  
**DEPARTMENT OF FISH AND WILDLIFE**

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

Date: *Sept 4, 2002*

Dear Habitats and Species Requester:

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

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

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

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

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

WDFW updates this information as additional data become available. Because fish and wildlife species are mobile and because habitats and species information changes, project reviews for fish and wildlife should not rest solely on mapped information. Instead, they should also consider new information gathered from current field investigations. Remember, habitats and species information can only show that a species or habitat type is present, they cannot show that a species or habitat type is not present. These products should not be used for future projects. Please obtain updates rather than use outdated information.

Because of the high volume of requests for information that WDFW receives, we need to charge for these products to recover some of our costs. Enclosed is an invoice itemizing the costs for your request and instructions for submitting payment.

Please note that sensitive information (e.g., threatened and/or endangered species) may be included in this request. These species are vulnerable to disturbances and harassment. In order to protect the viability of these species we request that you not disseminate the information as to their whereabouts. Please refer to these species presence in general terms. For example: "A Peregrine Falcon is located within two miles of the project area".

If your request required a sensitive Fish and Wildlife Information Release Memorandum of Understanding (MOU) and you or your organization has one on file, please refer to that document for conditions regarding release of this information.

For more information on WDFW you may visit our web site at [www.wa.gov/wdfw](http://www.wa.gov/wdfw) or visit the Priority Habitats and Species site at [www.wa.gov/wdfw/hab/phspage.htm](http://www.wa.gov/wdfw/hab/phspage.htm).

For information on the state's endangered, threatened, and sensitive plants as well as high quality wetland and terrestrial ecosystems, please contact the Washington Department of Natural Resources, Natural Heritage Program at PO Box 47014, Olympia Washington 98504-7014, by phone (360)902-1667 or visit the web site at [www.wa.gov/dnr/htdocs/fr/nhp/wanhp.html](http://www.wa.gov/dnr/htdocs/fr/nhp/wanhp.html).

If you have any questions or problems with the information you received please call me at (360) 902-2543 or fax (360) 902-2946.

Sincerely,



Lori Guggenmos, GIS Programmer  
Priority Habitats and Species

Enclosures

## WASHINGTON DEPARTMENT OF FISH AND WILDLIFE REGIONAL HABITAT PROGRAM MANAGER CONTACTS

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

### County project is in...

### Contact...

Asotin, Columbia, Ferry, Garfield Lincoln,  
Pend Oreille, Spokane, Stevens, Walla Walla,  
Whitman

Kevin Robinette  
8702 North Division Street  
Spokane, WA 99218-1199  
Phone: (509) 456-4082

Adams, Chelan, Douglas, Grant, Okanogan

Tracy Lloyd  
1550 Alder Street NW  
Ephrata, WA 98823-9699  
Phone: (509) 754-4624

Benton, Franklin, Kittitas, Yakima

Ted Clausing  
1701 24th Avenue  
Yakima, WA 98902-5720  
Phone: (509) 575-2740

Island, King, San Juan, Skagit, Snohomish,  
Whatcom

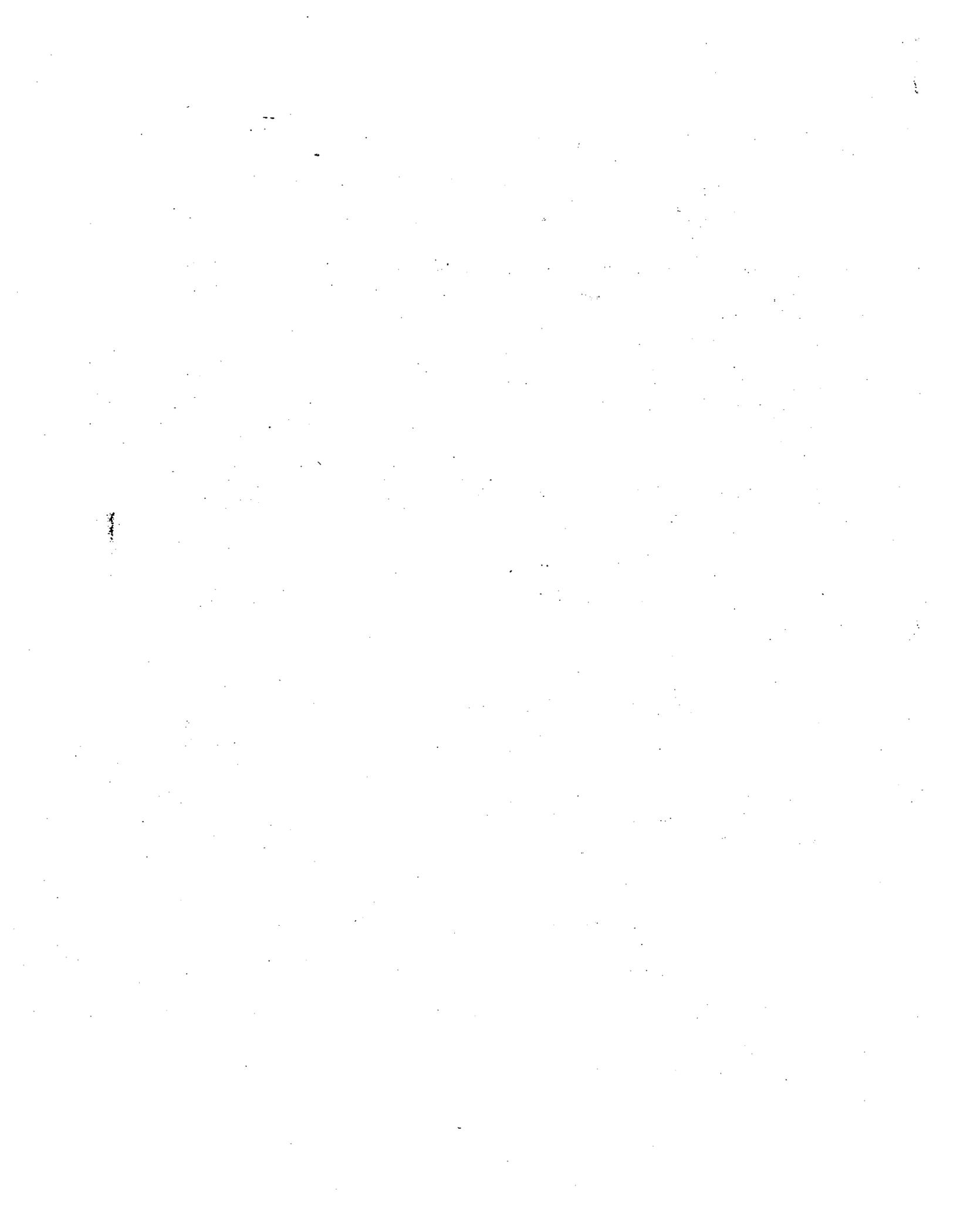
Deborah Cornett  
16018 Mill Creek Blvd.  
Mill Creek, WA 98012-1296  
Phone: (425) 775-1311

Clark, Cowlitz, Klickitat, Lewis, Skamania,  
Wahkiakum

Steve Manlow  
2108 Grand Blvd.  
Vancouver, WA 98661  
Phone: (360) 696-6211

Clallam, Grays Harbor, Jefferson, Kitsap, Mason,  
Pacific, Pierce, Thurston

Sue Patnude  
48 Devonshire Road  
Montesano, WA 98563-9618  
Phone: (360) 249-4628





"Shandra O'Haleck"  
<Shandra.O'Haleck@noaa.gov>

To: Jeffrey\_Walker@URSCorp.com  
cc:  
Subject: Re: species list request

08/27/02 07:06 AM  
Please respond to  
shandra.o'haleck

Jeff,

The National Marine Fisheries Service (NOAA Fisheries) concurs with your identification of threatened, candidate, and EFH species for your Mercer Island road improvement projects. If you have any questions feel free to contact me.

Shandra O'Haleck  
NOAA Fisheries

Jeffrey\_Walker@URSCorp.com wrote:

> Dear Ms. O'Haleck,  
> A list of threatened and endangered species was downloaded from your  
> website on August 26, 2002. We are requesting your concurrence with our  
> identification of threatened and endangered species found in the vicinity  
> of Mercer Island, King County, Washington. The proposed road improvements  
> would take place along the I-90 corridor from the I-5 freeway to the SR-405  
> interchange.  
>  
> Anadromous and resident fish are present in the project area. A list  
> identifying threatened, endangered, or candidate species in or near the  
> project area is provided below.  
>  
> Puget Sound Chinook Salmon ESU listed as Threatened  
> Puget Sound/Georgia Strait Coho Salmon ESU as Candidate  
>  
> We are requesting a concurrence or revision of this proposed list. We  
> understand that critical habitat has only been designated for chinook  
> salmon. EFH species include chinook and coho.  
>  
> A previous request for the same project was submitted to your office on May  
> 14, 2001 and a response of concurrence was emailed May 24, 2001 from  
> Christopher Clemons.  
>  
> We are also requesting information from the Washington Department of Fish  
> and Wildlife, Washington Natural Heritage Program, and the US Fish and  
> Wildlife Service.  
>  
> If you need any additional information, please do not hesitate to phone me  
> at (206) 438-2351  
> fax: 206-438-2699, or email: jeffrey\_walker@urscorp.com. Thank you for  
> your assistance with this request.  
>  
> Jeff Walker  
> Biologist  
> URS Corporation  
> (206) 438-2351



shandra.o'haleck.vcf



Date: August 26, 2002 Page 1 of: 3To: Lori Guggenmos From: Jeff WalkerFirm: WDFW - Priority Habitats and Species Telephone: (206) 438-2351Facsimile: (360) 902-2946Subject: Priority Habitats and Species Request

Message: \_\_\_\_\_

Please see attached order form. It specifies a request for Habitats and Species data. Please do not hesitate to call me if you have any questions. Thank you for your assistance on this and other projects.

Sincerely,  
Jeff Walker

---

**CONFIDENTIALITY NOTICE**

The information in this facsimile transmission is intended solely for the stated recipient of this transmission. If you have received this fax in error, please notify the sender immediately by telephone. If you are not the intended recipient, please be advised that dissemination, distribution, or copying of the information contained in this fax is strictly prohibited.



# FISH AND WILDLIFE ORDER FORM

## HABITATS AND SPECIES INFORMATION

Agency/Organization: URS Corporation

Contact Person: Jeff Walker

Address: 1501 4th Avenue, Suite 1400  
Seattle, WA 98101-1616

Phone #: (206) 438-2351 Date of Request: 8/26/02

Does your agency/organization have a Memorandum of Understanding (MOU) on file with the Washington Department of Fish and Wildlife regarding confidentiality of sensitive information?  yes  no  don't know

Identify yourself (or the party you represent if you are a consultant) as one of the following:  
 owner of land covered by this request  government agency  tribe  researcher with a university  utility  
 other (please specify) \_\_\_\_\_

### REQUESTER READ AND SIGN

By receiving fish and wildlife information from the Washington Department of Fish and Wildlife (WDFW), you incur an obligation to use it in a way that does not cause undue harm to our public fish and wildlife resources.  
All fish and wildlife species are vulnerable to harm from human activities. Harm can occur directly (e.g., an animal is harassed or injured) or indirectly (e.g., a nest tree is felled or a wetland is drained). Harm can occur unintentionally, even by those who value the fish and wildlife resources (e.g., repeated visits to a heron rookery which flushes birds from the nest and exposes eggs to cold weather and predators). The most serious threats to fish and wildlife, rather than being direct and malicious acts, are indirect human actions where harm to fish and wildlife was unintentional.  
The Washington State constitution confers fish and wildlife ownership to all citizens of the state. WDFW is mandated to safeguard this ownership by preserving, protecting and perpetuating fish and wildlife resources. The public has a crucial role in fulfilling this mandate, for two reasons. First, the statewide distribution of fish and wildlife species and habitat is beyond the monitoring capability of any single agency. Second, the state's constitution gives to the people ownership of fish and wildlife but not of the habitat on which fish and wildlife's survival ultimately depends. Property owners are also habitat owners and their collective actions have a profound effect on the state's fish and wildlife.  
The WDFW data gives you information on the location of many of Washington's most sensitive and vulnerable fish and wildlife resources. Use of this information must be commensurate with the vulnerability of fish and wildlife resources.  
Fish and wildlife species are protected through specific legislation. Regulations most applicable to users of WDFW information include RCW 77.16.120 (taking of protected fish and wildlife), WAC 232-12-292 (Bald Eagle protection rules) and WAC 232-12-064 (live fish and wildlife).  
I have read and understand the information above.  
I understand that the species and habitats covered by this information are especially sensitive to human disturbance.  
I understand human disturbance may be direct or indirect and may occur intentionally or unintentionally.  
I understand that I have an obligation to use this information in a way that does not cause undue harm to the fish and wildlife resource.\*

REQUESTER'S SIGNATURE X

Use of Data: For EIS Coking I-90 Corridor improvements from I-5 to 405 interchange

Special Requests: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# FISH AND WILDLIFE ORDER FORM

## HABITATS AND SPECIES INFORMATION

Geographic coverage of request [Specify in one of the following formats: legal description (township, range, and section), US Geological Survey (USGS) 7.5-minute quadrangle map name, USGS 1:100,000 scale quadrangle map name, county name, hydrologic basin]; List here or attach listing. Is your project along a marine shoreline?  yes  no

Seattle South, Mercer Island

STANDARD PRODUCTS	
Indicate desired products by checking appropriate blank box	
<b>MAP PRODUCTS</b>	
1. Detailed 1:24,000 Scale Habitats and Species Map (includes report) .....	<input type="checkbox"/>
2. ♦ Single Species Distribution 1:100,000 Scale Map .....	<input checked="" type="checkbox"/>
♦ Single Habitat Distribution 1:100,000 Scale Map .....	<input type="checkbox"/>
3. Habitats and Species Summary Map by County .....	<input type="checkbox"/>
4. Anadromous Fish Map (all species combined) .....	<input type="checkbox"/>
Resident Fish Map (all species combined) .....	<input type="checkbox"/>
Priority Fish Species Map (all species combined) .....	<input type="checkbox"/>
♦ Anadromous or Resident Fish Single Species Map .....	<input type="checkbox"/>
5. 1:24,000 Scale Old Growth (1988/1989) Map - covers most of Western Washington, excluding coastal lowlands .....	<input type="checkbox"/>
<b>DIGITAL DATA PRODUCTS (Provided in Arc/Info Export Format)</b>	
6. Priority Habitats and Species (PHS) Polygon Database and Wildlife Heritage (HRTG) Point Database .....	<input type="checkbox"/>
7. StreamNet Database .....	<input type="checkbox"/>
8. Old Growth Database (1988/1989) - covers most of Western Washington, excluding coastal lowlands .....	<input type="checkbox"/>
9. National Wetlands Inventory (NWI) Database .....	<input type="checkbox"/>

NOTE: ♦ Please specify desired single species or single habitat type in the Special Requests section on the first page of this form (only displays one species per map or one habitat type per map).

### MEDIA OPTIONS (check relevant options)

#### STANDARD MAPS

- Paper
- Mylar Film

#### DIGITAL DATA

- 3.5 inch Disk (only for low volume data requests)
- Compact Disk (CD)
- Iomega 100mg Zip Disk
- Helical Scan 8mm Cartridge
- ftp, please provide the following for your site:

address: \_\_\_\_\_

login: \_\_\_\_\_

password: \_\_\_\_\_

directory: \_\_\_\_\_

### SYSTEM PLATFORM

If requesting digital data please provide your system platform:

- UNIX
- NT
- PC
- Other \_\_\_\_\_

### INSTRUCTIONS

Mail completed form to: Washington Department of Fish and Wildlife, Priority Habitats and Species, 600 Capitol Way N., Olympia WA 98501-1091 or fax to (360)902-2946. For questions call (360)902-2543. You will receive an invoice itemizing the costs for your request and instructions for submitting payment.

Visit our web site at [www.wa.gov/wdfw/hab/phspage.htm](http://www.wa.gov/wdfw/hab/phspage.htm)



Jeffrey Walker  
08/26/02 04:37 PM

To: shandra.o'haleck@noaa.gov  
cc:  
Subject: species list request

Dear Ms. O'Haleck,

A list of threatened and endangered species was downloaded from your website on August 26, 2002. We are requesting your concurrence with our identification of threatened and endangered species found in the vicinity of Mercer Island, King County, Washington. The proposed road improvements would take place along the I-90 corridor from the I-5 freeway to the SR-405 interchange.

Anadromous and resident fish are present in the project area. A list identifying threatened, endangered, or candidate species in or near the project area is provided below.

Puget Sound Chinook Salmon ESU listed as Threatened  
Puget Sound/Georgia Strait Coho Salmon ESU as Candidate

We are requesting a concurrence or revision of this proposed list. We understand that critical habitat has only been designated for chinook salmon. EFH species include chinook and coho.

A previous request for the same project was submitted to your office on May 14, 2001 and a response of concurrence was emailed May 24, 2001 from Christopher Clemons.

We are also requesting information from the Washington Department of Fish and Wildlife, Washington Natural Heritage Program, and the US Fish and Wildlife Service.

If you need any additional information, please do not hesitate to phone me at (206) 438-2351 fax: 206-438-2699, or email: [jeffrey\\_walker@urscorp.com](mailto:jeffrey_walker@urscorp.com). Thank you for your assistance with this request.

Jeff Walker  
Biologist  
URS Corporation  
(206) 438-2351

# Endangered Species Act Status of West Coast Salmon & Steelhead

Updated: August 8, 2002

Species/ESU Status	(E = Endangered, T = Threatened, mo/yr)	Next Steps
<b>Pink Salmon</b>	<p>Listed: None</p> <p>Not Warranted: 1) Even-year ESU (10/95) 2) Odd-year ESU (10/95)</p>	
<b>Coho Salmon</b>	<p>Listed: 1) Central CA ESU (T - 10/96) 2) Southern OR/Northern CA Coasts ESU (T - 5/97) 3) OR Coast ESU (T - 8/98)</p> <p>Candidates: 1) Puget Sound/Strait of Georgia ESU (7/95) 2) Lower Columbia River/Southwest WA ESU (7/95)</p> <p>Not Warranted: 1) Olympic Peninsula ESU (7/95)</p>	<p>* Re-assess ESU's listing status</p> <p>* Re-assess ESU's listing status</p> <p>* Re-assess ESU's listing status &amp; critical habitat</p> <p>* Re-assess ESU's listing status</p>
<b>Chinook Salmon</b>	<p>Listed: 1) Sacramento River Winter-run ESU (E - 1/94) 2) Snake River Fall-run ESU (T - 4/92) 3) Snake River Spring/Summer-run ESU (T - 4/92) 4) Puget Sound ESU (T - 3/99) 5) Lower Columbia River ESU (T - 3/99) 6) Upper Willamette River ESU (T - 3/99) 7) Upper Columbia River Spring-run ESU (E - 3/99) 8) Central Valley Spring-run ESU (T - 9/99) 9) CA Coastal ESU (T - 9/99)</p> <p>Candidates: 1) Central Valley Fall and Late Fall-run ESU (9/99)</p> <p>Not Warranted: 1) Upper Klamath-Trinity Rivers ESU (3/98) 2) OR Coast ESU (3/98) 3) WA Coast ESU (3/98) 4) Mid-Columbia River Spring-run ESU (3/98) 5) Upper Columbia River Summer/Fall-run ESU (3/98) 6) Southern OR and Northern CA Coastal ESU (9/99) 7) Deschutes River Summer/Fall-run ESU (9/99)</p>	<p>* Re-assess ESU's listing status</p> <p>* Re-assess ESU's listing status</p> <p>* Re-assess ESU's listing status</p> <p>* Re-assess ESU's listing status &amp; critical habitat</p>
<b>Chum Salmon</b>	<p>Listed: 1) Hood Canal Summer-run ESU (T - 3/99) 2) Columbia River ESU (T - 3/99)</p> <p>Not Warranted: 1) Puget Sound/Strait of Georgia ESU (3/98) 2) Pacific Coast ESU (3/98)</p>	<p>* Re-assess ESU's listing status &amp; critical habitat</p> <p>* Re-assess ESU's listing status &amp; critical habitat</p>
<b>Sockeye</b>	<p>Listed: 1) Snake River ESU (E - 11/91) 2) Ozette Lake ESU (T - 3/99)</p> <p>Not Warranted: 1) Baker River ESU (3/99) 2) Okanogan River ESU (3/98) 3) Lake Wenatchee ESU (3/98) 4) Quinault Lake ESU (3/98) 5) Lake Pleasant ESU (3/98)</p>	<p>* Re-assess ESU's listing status &amp; critical habitat</p>
<b>Steelhead</b>	<p>Listed: 1) Southern CA ESU (E - 8/97) 2) South-Central CA Coast ESU (T - 8/97) 3) Central CA Coast ESU (T - 8/97) 4) Upper Columbia River ESU (E - 8/97) 5) Snake River Basin ESU (T - 8/97) 6) Lower Columbia River ESU (T - 3/98) 7) CA Central Valley ESU (T - 3/98) 8) Upper Willamette ESU (T - 3/99) 9) Middle Columbia River ESU (T - 3/99) 10) Northern CA ESU (T - 6/00)</p> <p>Candidates: 1) OR Coast ESU (3/98)</p> <p>Not Warranted: 1) Southwest WA ESU (8/96) 2) Olympic Peninsula ESU (8/96) 3) Puget Sound ESU (8/96) 4) Klamath Mountains Province ESU (4/01)</p>	<p>* Re-assess ESU's critical habitat</p> <p>* Re-assess ESU's listing status &amp; critical habitat</p>

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





August 26, 2002

Yvonne Detlaff  
U.S. Fish & Wildlife Service  
510 Desmond Drive #102  
Lacey, WA 98503

Dear Ms. Detlaff,

We are requesting an updated list of threatened and endangered species found in the vicinity of Mercer Island, King County, Washington. A proposed road improvement/development project would take place along the I-90 corridor from I-5 to the SR-405 interchange (project vicinity map enclosed). A previous request was processed on June 15, 2001 (FWS reference #1-3-01-SP-1623)

We are also requesting information from the Washington Department of Fish and Wildlife, Washington Natural Heritage Program, and National Marine Fisheries Service.

If you need any additional information, I can be reached by phone at (206) 438-2351, fax (206) 438-2699, or email: [jeffrey\\_walker@urscorp.com](mailto:jeffrey_walker@urscorp.com). Thank you for your assistance with this request.

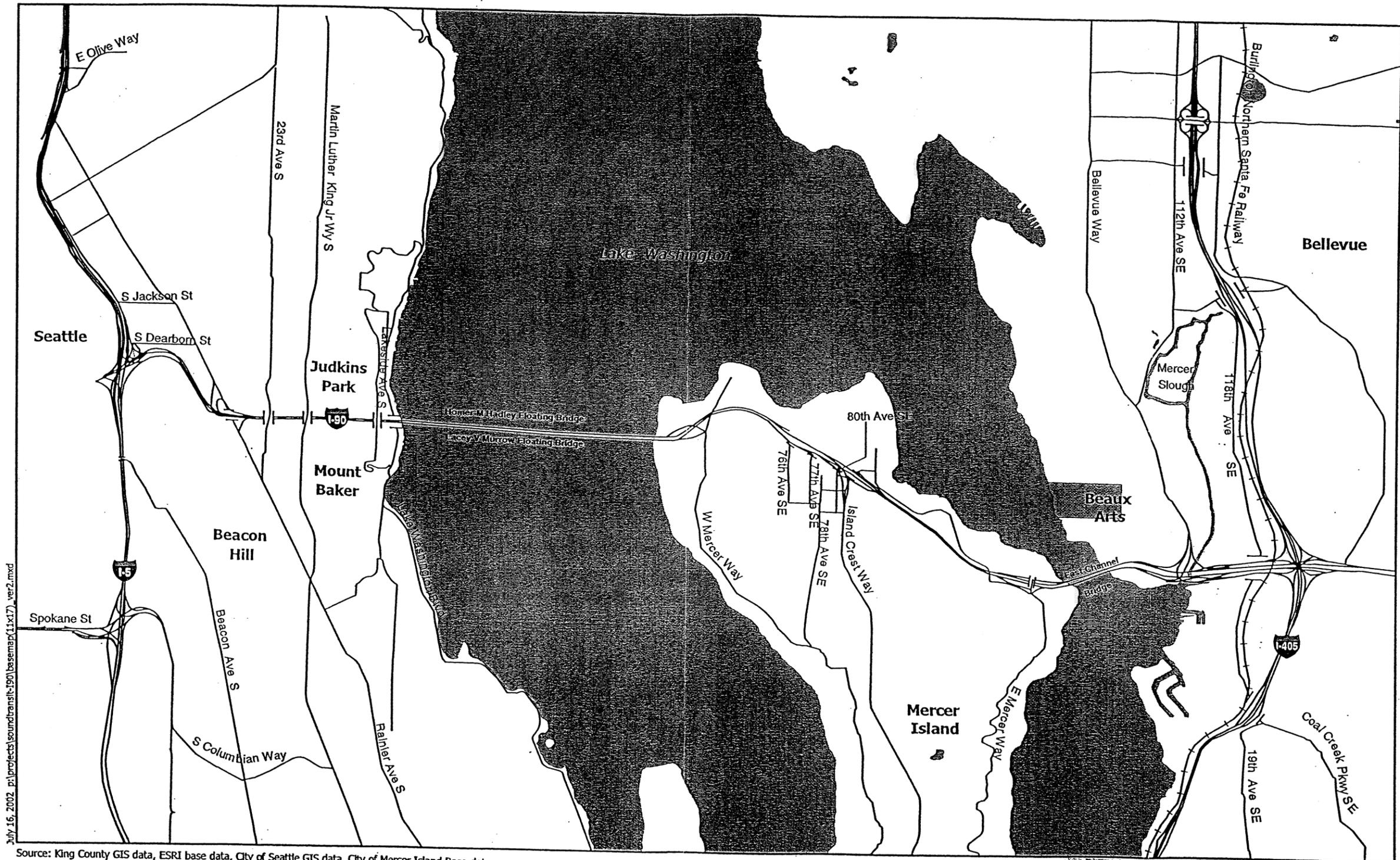
Sincerely,

URS Corporation

Jeff Walker  
Biologist

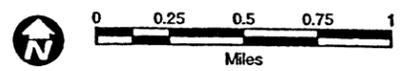
Enclosures  
Site Map





July 16, 2002 p:\projects\soundtransit\1501\basemap(11x17)\_ver2.mxd

Source: King County GIS data, ESRI base data, City of Seattle GIS data, City of Mercer Island Base data.



T 24, R 4, sections 1, 2, 3, 4, 9, 10, 11, 12  
 T 24, R 5, sections 7, 8, 9

**DRAFT**

Figure No.  
 Base Map

**Appendix D**  
**Hazardous Materials Data Tables**







Table 1  
WA Department of Ecology  
UST List Citations

SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
KING COUNTY COURTHOUSE	518 3RD AVE	Removed	1/1/1967 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
KING STREET CENTER	201 S JACKSON	Removed			
KC DEPT OF CONST	500 5TH AVE	Operational	1/1/1986 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
AMTRAK MATERIAL CONTROL FACILITY	1789 THIRD AVE S	Removed	5/12/1949 00:00:00		LEADED GASOLINE
KING STREET CENTER	201 S JACKSON	Removed			
FEDERAL RESERVE BANK	1015 2ND AVENUE	Closed in Place	1/1/1949 00:00:00	111 TO 1,000 GALLONS	OTHER PETROLEUM SUBS
83 KING STREET BUILDING	83 KING STREET	Removed		5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
CITY OF SEATTLE	810 VIRGINIA ST	Operational	6/2/1999 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
YESLER BUILDING KING CO	400 YESLER WAY	Removed			
SEA CTY CHARLES ST WEST	705 S CHARLES ST	Removed			
SEA CTY CHARLES ST WEST	705 S CHARLES ST	Removed			
SEA CTY CHARLES ST WEST	705 S CHARLES ST	Removed			
SEA CTY CHARLES ST WEST	705 S CHARLES ST	Removed			
HARBOR ISLAND PLANT	2720 13TH AVE SW	Removed			
GAI'S SEATTLE FRENCH BAKING COMPANY	2006 S WELER	Change in Service	6/6/1979 00:00:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
GAI'S SEATTLE FRENCH BAKING COMPANY	2006 S WELER	Removed	1/1/1977 00:00:00	111 TO 1,100 Gallons	USED OIL/WASTE OIL
GAI'S SEATTLE FRENCH BAKING COMPANY	2006 S WELER	Removed	1/1/1977 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
GAI'S SEATTLE FRENCH BAKING COMPANY	2006 S WELER	Removed	6/6/1961 00:00:00	111 TO 1,100 Gallons	UNLEADED GASOLINE
UNITED STATES BAKERY DBA UNITED STATES BAKERY	2901 8TH AVE S	Removed	1/1/1977 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
UNITED STATES BAKERY DBA UNITED STATES BAKERY	2901 8TH AVE S	Closure in Process	1/1/1985 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
UNITED STATES BAKERY DBA UNITED STATES BAKERY	2901 8TH AVE S	Closure in Process	1/1/1985 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
ARCO FACILITY #04090/RAJBIR SANDHU	2200 FOURTH AVE S	Operational	1/1/1985 00:00:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
ARCO FACILITY #04090/RAJBIR SANDHU	2200 FOURTH AVE S	Operational	7/1/1985 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
ARCO FACILITY #04090/RAJBIR SANDHU	2200 FOURTH AVE S	Operational	7/1/1985 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
STAR RENTALS & SALES	1919 4TH AVE S	Operational	1/26/1999 00:00:00		
STAR RENTALS & SALES	1919 4TH AVE S	Operational	1/26/1999 00:00:00		
STAR RENTALS & SALES	1919 4TH AVE S	Closure in Process	1/1/1972 00:00:00	111 TO 1,100 Gallons	DIESEL
BUDGET RENT-A-CAR OF WASHINGTON-OREGON	1919 4TH AVE S	Closure in Process	1/1/1982 00:00:00	1,101 TO 2,000 GALLONS	LEADED GASOLINE
BUDGET RENT-A-CAR OF WASHINGTON-OREGON	1961-4TH AVE SOUTH	Closure in Process	12/31/1964 00:00:00	111 TO 1,100 Gallons	USED OIL/WASTE OIL
BUDGET RENT-A-CAR OF WASHINGTON-OREGON	1961-4TH AVE SOUTH	Closure in Process	12/31/1964 00:00:00		
MACK TRUCK SALES & SERVICE	2025 AIRPORT WY S	Closure in Process	12/31/1964 00:00:00		
JACK IN THE BOX 4TH & HOLGATE	1907 4TH AVE S	Removed		5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
JACK IN THE BOX 4TH & HOLGATE	1907 4TH AVE S	Removed			HEATING FUEL
JACK IN THE BOX 4TH & HOLGATE	1907 4TH AVE S	Removed			
JACK IN THE BOX 4TH & HOLGATE	1907 4TH AVE S	Exempt			
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	USED OIL/WASTE OIL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	2,001 TO 4,999 GALLONS	USED OIL/WASTE OIL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	OTHER PETROLEUM SUBS
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	ANTIFREEZE
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	MOTOR OIL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	USED OIL/WASTE OIL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	2,001 TO 4,999 GALLONS	USED OIL/WASTE OIL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE

WA Department of Ecology  
UST List Citations

Table 1

SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	OTHER PETROLEUM SUBS
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	ANTIFREEZE
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	5,000 TO 9,999 GALLONS	MOTOR OIL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	2,001 TO 4,999 GALLONS	USED OIL/WASTE OIL
CENTRAL BASE MAINTENANCE FAC	640 S MASSACHUSETTE	Operational	1/1/1989 00:00:00	2,001 TO 4,999 GALLONS	USED OIL/WASTE OIL
LEAVITT SHAY INDUSTRIAL BLDG	1217 6TH AVE S	Removed			HEATING FUEL
LLOYDS ROCKET & HEATING OIL CO	110 BOREN AVE S	Closed in Place	12/31/1964 00:00:00	2,001 TO 4,999 GALLONS	
LLOYDS ROCKET & HEATING OIL CO	110 BOREN AVE S	Closed in Place	12/31/1964 00:00:00	2,001 TO 4,999 GALLONS	
LLOYDS ROCKET & HEATING OIL CO	110 BOREN AVE S	Closure in Process	12/31/1964 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
LLOYDS ROCKET & HEATING OIL CO	110 BOREN AVE S	Closure in Process	12/31/1964 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
LLOYDS ROCKET & HEATING OIL CO	110 BOREN AVE S	Closure in Process	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
LLOYDS ROCKET & HEATING OIL CO	110 BOREN AVE S	Closure in Process	12/31/1964 00:00:00	2,001 TO 4,999 GALLONS	LEADED GASOLINE
TRIANGLE PROPERTY	901 MAYNARD AVE S	Removed			LEADED GASOLINE
TRIANGLE PROPERTY	901 MAYNARD AVE S	Removed			LEADED GASOLINE
TRIANGLE PROPERTY	901 MAYNARD AVE S	Removed			LEADED GASOLINE
TRIANGLE PROPERTY	901 MAYNARD AVE S	Removed			LEADED GASOLINE
TRIANGLE PROPERTY	901 MAYNARD AVE S	Removed			LEADED GASOLINE
MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	3RD S & S ROYAL BROUGHAM WY	Removed			LEADED GASOLINE
SHEPARD AMBULANCE INC	932 12TH AVE	Closed in Place	1/1/1930 00:00:00		USED OIL/WASTE OIL
SHEPARD AMBULANCE INC	932 12TH AVE	Closed in Place	12/31/1964 00:00:00		
SCHUCKS AUTO SUPPLY	2905 4TH AVE S	Removed			
IMMIGRATION NATIONAL SERVICE	815 AIRPORT WAY	Closed in Place	12/31/1964 00:00:00		HEATING FUEL
SEARS AUTO CENTER	2789 1ST AVE S	Exempt			LEADED GASOLINE
UWAJIMAYA VILLAGE DEVELOPMENT	514 DEARBORN ST	Removed			HEATING FUEL
UWAJIMAYA VILLAGE DEVELOPMENT	514 DEARBORN ST	Removed			USED OIL/WASTE OIL
UWAJIMAYA VILLAGE DEVELOPMENT	514 DEARBORN ST	Removed			
UWAJIMAYA VILLAGE DEVELOPMENT	514 DEARBORN ST	Removed			
FLINT INK BLDG	1727 ALASKAN WAY S	Removed			HEATING FUEL
LOUGH MOTORS INC	810 RAINIER AVE SO	Exempt			
LOUGH MOTORS INC	810 RAINIER AVE SO	Exempt	12/31/1964 00:00:00	111 to 1,100 Gallons	
EVERGREEN ELECTRICAL CONTRACTORS INC	2615 S JACKSON ST	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
EVERGREEN ELECTRICAL CONTRACTORS INC	2615 S JACKSON ST	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
EVERGREEN ELECTRICAL CONTRACTORS INC	2615 S JACKSON ST	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
DAMM FINE PRINTING LTD-TYPE CONNECTION	1240 S JACKSON ST	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	HEATING FUEL
CANADIAN JUMBO INC	1212 S JACKSON	Unknown	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
EF JOHNSON CO	1300 S WELLES ST	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
CHIN BROTHERS INC	2901 17TH AVE S	Removed	12/31/1964 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
BELSHAW BROS INC	1750 22 ND AVE SO	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
BELSHAW BROS INC	1750 22 ND AVE SO	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
ARCTIC ICE CREAM NOVELTIES INC	1924 RAINIER AVENUE SOUTH	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
GUY F ATKINSON CONSTRUCTION COMPANY	2721 S IRVING STREET	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
DEENY CONSTRUCTION COMPANY, INC	2545 RAINIER AVE S	Operational	6/30/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
DEENY CONSTRUCTION COMPANY, INC	2545 RAINIER AVE S	Operational	6/30/1992 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
DEENY CONSTRUCTION COMPANY, INC	2545 RAINIER AVE S	Closure in Process	1/1/1977 00:00:00		
DEENY CONSTRUCTION COMPANY, INC	2545 RAINIER AVE S	Closure in Process	1/1/1977 00:00:00		LEADED GASOLINE

WA Department of Ecology  
UST List Citations

Table 1

SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
DEENY CONSTRUCTION COMPANY, INC.	2545 RAINIER AVE S	Closure in Process	11/15/1977 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
DEENY CONSTRUCTION COMPANY, INC.	2545 RAINIER AVE S	Closure in Process	11/15/1977 00:00:00		UNLEADED GASOLINE
MARTIN WAY SOUTH	2801 MARTIN LUTHER KING WAY	Operational	6/1/1991 00:00:00	5,000 TO 9,999 GALLONS	LEADED GASOLINE
MARTIN WAY SOUTH	2801 MARTIN LUTHER KING WAY	Operational	1/1/1991 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
MARTIN WAY SOUTH	2801 MARTIN LUTHER KING WAY	Operational	1/1/1991 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
MARTIN WAY SOUTH	2801 MARTIN LUTHER KING WAY	Removed	12/31/1964 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
MARTIN WAY SOUTH	2801 MARTIN LUTHER KING WAY	Removed	12/31/1964 00:00:00		LEADED GASOLINE
MARTIN WAY SOUTH	2801 MARTIN LUTHER KING WAY	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
BUD & COMPANY INC.	800 RAINIER AVE. SOUTH	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Removed	12/31/1964 00:00:00		LEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Removed	12/31/1964 00:00:00		LEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Removed	12/31/1964 00:00:00		LEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Removed	12/31/1964 00:00:00		LEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Operational	9/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Operational	9/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0383	2424 BEACON AVE S	Operational	9/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TIME OIL CO. 216	2465 SOUTH COLLEGE STREET	Removed	12/31/1964 00:00:00		HEATING FUEL
TIME OIL CO. 216	2465 SOUTH COLLEGE STREET	Removed	12/31/1964 00:00:00		HEATING FUEL
TIME OIL CO. 216	2465 SOUTH COLLEGE STREET	Removed	12/31/1964 00:00:00		HEATING FUEL
TIME OIL CO. 216	2465 SOUTH COLLEGE STREET	Removed	12/31/1964 00:00:00		HEATING FUEL
CONTINENTAL BAKING CO.	1805 SO MAIN ST	Removed	12/31/1964 00:00:00		HEATING FUEL
CONTINENTAL BAKING CO.	1805 SO MAIN ST	Removed	12/31/1964 00:00:00		HEATING FUEL
CONTINENTAL BAKING CO.	1805 SO MAIN ST	Removed	12/31/1964 00:00:00		HEATING FUEL
CONTINENTAL BAKING CO.	1805 SO MAIN ST	Exempt			DIESEL
CHEVRON 90333	2802 RAINIER AVE S	Removed	1/1/1982 00:00:00		DIESEL
CHEVRON 90333	2802 RAINIER AVE S	Removed	1/1/1982 00:00:00		USED OIL/WASTE OIL
CHEVRON 90333	2802 RAINIER AVE S	Removed	1/1/1982 00:00:00		LEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Removed	1/1/1982 00:00:00		UNLEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Removed	1/1/1982 00:00:00		UNLEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Operational	11/14/1994 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CHEVRON 90333	2802 RAINIER AVE S	Operational	11/14/1994 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE

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SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
CHEVRON 90333	2902 RAINIER AVE S	Operational	11/14/1994 00:00:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
CHEVRON 90333	2902 RAINIER AVE S	Operational	11/14/1994 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CHEVRON 90333	2902 RAINIER AVE S	Operational	11/14/1994 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CHEVRON 90333	2902 RAINIER AVE S	Operational	11/14/1994 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
D. L. DUCKEY AUTO FREIGHT, INC.	2212 RAINIER AVE S	Removed	12/31/1964 00:00:00		LEADED GASOLINE
D. L. DUCKEY AUTO FREIGHT, INC.	2212 RAINIER AVE S	Removed	12/31/1964 00:00:00		DIESEL
D. L. DUCKEY AUTO FREIGHT, INC.	2212 RAINIER AVE S	Removed	7/1/1980 00:00:00	10,000 TO 19,999 GALLONS	USED OIL/WASTE OIL
UHAUL CO OF RAINIER AVENUE 57	2515 RAINIER AVE S	Closure in Process	11/1/1978 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
UHAUL CO OF RAINIER AVENUE 57	2515 RAINIER AVE S	Closure in Process	10/1/1987 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
UHAUL CO OF RAINIER AVENUE 57	1121 RAINIER AVE SOUTH	Closed in Place	12/31/1964 00:00:00		UNLEADED GASOLINE
M&R INVESTMENTS	1121 RAINIER AVE SOUTH	Closed in Place	12/31/1964 00:00:00		UNLEADED GASOLINE
M&R INVESTMENTS	1121 RAINIER AVE SOUTH	Closed in Place	12/31/1964 00:00:00		UNLEADED GASOLINE
M&R INVESTMENTS	1121 RAINIER AVE SOUTH	Closed in Place	12/31/1964 00:00:00		UNLEADED GASOLINE
M&R INVESTMENTS	1121 RAINIER AVE SOUTH	Closed in Place	12/31/1964 00:00:00		UNLEADED GASOLINE
BUDGET BATTERIES INC	2006 RAINIER AVE SO	Closed in Place	12/31/1964 00:00:00		
BUDGET BATTERIES INC	2006 RAINIER AVE SO	Closed in Place	12/31/1964 00:00:00		
BUDGET BATTERIES INC	2006 RAINIER AVE SO	Closed in Place	12/31/1964 00:00:00		
TEXACO STATION #63-232-0271	852 RAINIER AVE S	Operational	12/31/1964 00:00:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
TEXACO STATION #63-232-0271	852 RAINIER AVE S	Operational	1/1/1986 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0271	852 RAINIER AVE S	Operational	1/1/1986 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
ALPAC CORPORATION	2900 26TH AVE SOUTH	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	
ALPAC CORPORATION	2900 26TH AVE SOUTH	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	
ALPAC CORPORATION	2900 26TH AVE SOUTH	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	
ALPAC CORPORATION	2900 26TH AVE SOUTH	Removed	9/15/1979 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
ALPAC CORPORATION	2900 26TH AVE SOUTH	Removed	10/15/1978 00:00:00		USED OIL/WASTE OIL
ALPAC CORPORATION	2900 26TH AVE SOUTH	Removed	9/15/1979 00:00:00		DIESEL
ALPAC CORPORATION	2900 26TH AVE SOUTH	Operational	8/1/1984 00:00:00	10,000 TO 19,999 GALLONS	
ACME POULTRY CO INC	2001 21ST SO	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	
ACME POULTRY CO INC	2001 21ST SO	Removed	12/31/1964 00:00:00		LEADED GASOLINE
BAUGH CONSTRUCTION CO.	900 POPLAR PL SO G14135	Removed	12/31/1964 00:00:00		LEADED GASOLINE
BAUGH CONSTRUCTION CO.	900 POPLAR PL SO G14135	Removed	12/31/1964 00:00:00		LEADED GASOLINE
BAUGH CONSTRUCTION CO.	900 POPLAR PL SO G14135	Removed	12/31/1964 00:00:00		
BAUGH CONSTRUCTION CO.	900 POPLAR PL SO G14135	Removed	12/31/1964 00:00:00		
BAUGH CONSTRUCTION CO.	900 POPLAR PL SO G14135	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
BEACON HILL SHELL	2415 BEACON AVE S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
BEACON HILL SHELL	2415 BEACON AVE S	Removed	1/1/1967 00:00:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
BEACON HILL SHELL	2415 BEACON AVE S	Removed	1/1/1967 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
BEACON HILL SHELL	2415 BEACON AVE S	Removed	1/1/1967 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
BEACON HILL SHELL	2415 BEACON AVE S	Operational	3/30/1993 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
BEACON HILL SHELL	2415 BEACON AVE S	Operational	3/30/1993 00:00:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
BEACON HILL SHELL	2415 BEACON AVE S	Operational	3/30/1993 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
UNOCAL 5473	401 RAINIER AVE SO	Removed	12/31/1964 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
UNOCAL 5473	401 RAINIER AVE SO	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
UNOCAL 5473	401 RAINIER AVE SO	Removed	12/31/1964 00:00:00		LEADED GASOLINE
THE SOUTHLAND CORP. 24497	2009 RAINIER AVE	Operational	11/1/1983 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
THE SOUTHLAND CORP. 24497	2009 RAINIER AVE	Operational	11/1/1983 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE

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THE SOUTHLAND CORP. 24497	2009 RAINIER AVE	Operational	11/1/1983 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
C AND C FOOD STORE	3002 BEACON AVE S	Operational	12/31/1964 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
C AND C FOOD STORE	3002 BEACON AVE S	Operational	12/31/1964 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
SEATTLE GOODWILL	1400 S LANE ST	Closed in Place	12/31/1964 00:00:00	111 TO 1,000 GALLONS	LEADED GASOLINE
SEATTLE GOODWILL	1400 S LANE ST	Closed in Place	12/31/1964 00:00:00	111 TO 1,000 GALLONS	USED OIL/WASTE OIL
SEATTLE GOODWILL	1400 S LANE ST	Removed	12/31/1964 00:00:00		
SEATTLE GOODWILL	1400 S LANE ST	Removed	12/31/1964 00:00:00		
HERZOG GLASS INC	1300 S DEARBORN	Removed	12/31/1964 00:00:00	1,101 TO 2,000 GALLONS	UNLEADED GASOLINE
HERZOG GLASS INC	1300 S DEARBORN	Removed	12/31/1964 00:00:00	111 TO 1,100 Gallons	HEATING FUEL
HERZOG GLASS INC	1300 S DEARBORN	Removed	11/1/1973 00:00:00		UNLEADED GASOLINE
HERZOG GLASS INC	1300 S DEARBORN	Removed	11/1/1992 00:00:00		LEADED GASOLINE
OBERTO SAUSAGE CO INC	1715 RAINIER AVE SO	Removed	12/31/1964 00:00:00		LEADED GASOLINE
OBERTO SAUSAGE CO INC	1715 RAINIER AVE SO	Removed	12/31/1964 00:00:00		LEADED GASOLINE
OBERTO SAUSAGE CO INC	1715 RAINIER AVE SO	Removed	12/31/1964 00:00:00		LEADED GASOLINE
OBERTO SAUSAGE CO INC	1715 RAINIER AVE SO	Removed	12/31/1964 00:00:00		LEADED GASOLINE
OBERTO SAUSAGE CO INC	1715 RAINIER AVE SO	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
OBERTO SAUSAGE CO INC	1715 RAINIER AVE SO	Removed	12/31/1964 00:00:00		LEADED GASOLINE
ATLAS SUPPLY (EXEMPT)	1736 4TH AV S	Exempt			HEATING FUEL
CANELLA, INC.	901 HIAWATHA PLS	Operational	11/1/1961 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
CANELLA, INC.	901 HIAWATHA PLS	Operational	11/1/1961 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
CANELLA, INC.	901 HIAWATHA PLS	Operational	11/1/1961 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
CANELLA, INC.	901 HIAWATHA PLS	Operational	11/1/1961 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
PACIFIC MEDICAL CENTER	1200 12TH AVE SOUTH	Exempt	12/31/1964 00:00:00		UNLEADED GASOLINE
24 HOUR CAR WASH	1240 S MAIN	Removed	12/31/1964 00:00:00		LEADED GASOLINE
24 HOUR CAR WASH	1240 S MAIN	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
24 HOUR CAR WASH	1240 S MAIN	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
WA DOT	1213 4TH AVE S	Closure in Process		2000	DIESEL
10004D RIGHT-OF-WAY	1616 NORMAN SOUTH	Removed	12/31/1964 00:00:00	20,000 TO 29,999 GALLONS	DIESEL
10004D RIGHT-OF-WAY	1616 NORMAN SOUTH	Removed	12/31/1964 00:00:00	10,000 TO 19,999 GALLONS	MOTOR OIL
SIGNAL EQUIPMENT INC	836 POPLAR PLACE SOUTH	Closed in Place	12/31/1964 00:00:00		UNLEADED GASOLINE
MODEL & INSTRUMENT WORKS	861 POPLAR PLACE SOUTH	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	HEATING FUEL
MODEL & INSTRUMENT WORKS	861 POPLAR PLACE SOUTH	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
SEATTLE FARWEST SERVICE CORPORATION	1300 SOUTH MAIN STREET	Removed	12/31/1964 00:00:00		LEADED GASOLINE
SEATTLE FARWEST SERVICE CORPORATION	1300 SOUTH MAIN STREET	Removed	12/31/1964 00:00:00		LEADED GASOLINE
SEATTLE FARWEST SERVICE CORPORATION	1300 SOUTH MAIN STREET	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
SEATTLE FARWEST SERVICE CORPORATION	1300 SOUTH MAIN STREET	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
SEATTLE FARWEST SERVICE CORPORATION	1300 SOUTH MAIN STREET	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
SEATTLE FARWEST SERVICE CORPORATION	1300 SOUTH MAIN STREET	Removed	12/31/1964 00:00:00		LEADED GASOLINE
WELCH INVESTMENT CO	2211 S JACKSON ST	Removed	12/31/1964 00:00:00		
WELCH INVESTMENT CO	2211 S JACKSON ST	Removed	12/31/1964 00:00:00		
SWEDISH HOSPITAL PARKING GARAGE	970 SUMMIT AVE	Exempt	12/31/1964 00:00:00		
SWEDISH HOSPITAL PARKING GARAGE	970 SUMMIT AVE	Exempt	12/31/1964 00:00:00		
SWEDISH HOSPITAL PARKING GARAGE	970 SUMMIT AVE	Exempt	12/31/1964 00:00:00		
VALLEY MARKET	2338 RAINIER AVE S	Closed in Place	12/31/1964 00:00:00		
VALLEY MARKET	2338 RAINIER AVE S	Closed in Place	12/31/1964 00:00:00		
SEATTLE I-90 TUNNEL & L10	1411 YAKIMA AVE S	Operational	10/4/1988 00:00:00	2,001 TO 4,999 GALLONS	LEADED GASOLINE
CONTINENTAL BAKING CO.	1924 S JACKSON ST	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	DIESEL
CONTINENTAL BAKING CO.	1924 S JACKSON ST	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	
CONTINENTAL BAKING CO.	1924 S JACKSON ST	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	
CONTINENTAL BAKING CO.	1924 S JACKSON ST	Exempt	12/31/1964 00:00:00	111 to 1,100 Gallons	HAZARDOUS SUBSTANCE

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CONTINENTAL BAKING CO.	1924 S JACKSON ST	Closure in Process	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
CONTINENTAL BAKING CO.	1924 S JACKSON ST	Closure in Process	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
CONTINENTAL BAKING CO.	1924 S JACKSON ST	Closure in Process	4/1/1977 00:00:00		LEADED GASOLINE
LESCHI PARK	201 LAKESIDE AVE S	Closure in Process	12/31/1964 00:00:00	111 TO 1,000 GALLONS	LEADED GASOLINE
EXHAUST SPECIALTIES / SEAN O'BRIEN	502 RAINIER AVE SOUTH	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
EXHAUST SPECIALTIES / SEAN O'BRIEN	502 RAINIER AVE SOUTH	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	KEROSENE
GARFIELD RECREATION CENTER	500 29RD AVE E	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
DELUXE PROPERTIES WAREHOUSE	417 18TH AVE S	Exempt			HEATING FUEL
TANIGUCHI PROPERTY	415 18TH AVE S	Unknown		111 TO 1,000 GALLONS	UNKNOWN
TANIGUCHI PROPERTY	415 18TH AVE S	Unknown		111 TO 1,000 GALLONS	UNKNOWN
TANIGUCHI PROPERTY	415 18TH AVE S	Unknown		111 TO 1,000 GALLONS	UNKNOWN
TANIGUCHI PROPERTY	415 18TH AVE S	Unknown		1,101 TO 2,000 GALLONS	UNKNOWN
TANIGUCHI PROPERTY	415 18TH AVE S	Unknown		111 TO 1,000 GALLONS	UNKNOWN
TANIGUCHI PROPERTY	415 18TH AVE S	Unknown		111 TO 1,000 GALLONS	UNKNOWN
TANIGUCHI PROPERTY	415 18TH AVE S	Unknown		1,101 TO 2,000 GALLONS	UNKNOWN
MOUNT BAKER BUILDING	3601 MCCLELLAN	Removed		111 TO 1,000 GALLONS	LEADED GASOLINE
MOUNT BAKER BUILDING	3601 MCCLELLAN	Exempt		111 TO 1,000 GALLONS	LEADED GASOLINE
WDOT CORWIN PLACE S	CORWIN PL S & I-90 NR DEARBORN			1,101 TO 2,000 GALLONS	HEATING FUEL
WDOT I-90/RAINIER AVE	I-90 & RAINIER AVE S	Removed			
FORMER UNOCAL #0166	1590 S DEARBORN ST	Removed		111 TO 1,000 GALLONS	USED OIL/WASTE OIL
FORMER UNOCAL #0166	1590 S DEARBORN ST	Removed		1,101 TO 2,000 GALLONS	LEADED GASOLINE
FORMER UNOCAL #0166	1590 S DEARBORN ST	Removed		2,001 TO 4,999 GALLONS	LEADED GASOLINE
FORMER UNOCAL #0166	1590 S DEARBORN ST	Removed		2,001 TO 4,999 GALLONS	LEADED GASOLINE
WSDOT I-90	LACEY MURROW BRIDGE(I-90)	Removed			HEATING FUEL
EAST-WEST INVESTMENTS	6TH AVENUE AND SO. LAINE	Removed			
BARRETT PROPERTY (EXEMPT)	416 RAINIER AVE S	Exempt			HEATING FUEL
BARRETT PROPERTY (EXEMPT)	416 RAINIER AVE S	Removed			LEADED GASOLINE
BARRETT PROPERTY (EXEMPT)	416 RAINIER AVE S	Removed			LEADED GASOLINE
RESIDENCE 34TH AVE S (EXEMPT)	2715 34TH AVE S	Exempt			HEATING FUEL
DAVIS DOOR SERVICE, INC.	2021 S GRAND ST	Closure in Process		2,001 TO 4,999 GALLONS	LEADED GASOLINE
DAVIS DOOR SERVICE, INC.	2021 S GRAND ST	Closure in Process		111 TO 1,000 GALLONS	LEADED GASOLINE
DAVIS DOOR SERVICE, INC.	2021 S GRAND ST	Closure in Process		5,000 TO 9,999 GALLONS	LEADED GASOLINE
WELLER STREET ASSOCIATES	12 AVENUE SOUTH AND SOUTH WELLS ST	Closure in Process		1,101 TO 2,000 GALLONS	DIESEL
WELLER STREET ASSOCIATES	12 AVENUE SOUTH AND SOUTH WELLS ST	Closure in Process		1,101 TO 2,000 GALLONS	LEADED GASOLINE
WELLER STREET ASSOCIATES	12 AVENUE SOUTH AND SOUTH WELLS ST	Closure in Process		1,101 TO 2,000 GALLONS	DIESEL
WELLER STREET ASSOCIATES	12 AVENUE SOUTH AND SOUTH WELLS ST	Closure in Process		1,101 TO 2,000 GALLONS	DIESEL
CITY VIEW APARTMENTS	2901 S JACKSON ST	Removed		5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
CITY VIEW APARTMENTS	2901 S JACKSON ST	Removed		5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
CITY VIEW APARTMENTS	2901 S JACKSON ST	Removed		5,000 TO 9,999 GALLONS	USED OIL/WASTE OIL
CITY VIEW APARTMENTS	2901 S JACKSON ST	Removed		5,000 TO 9,999 GALLONS	LEADED GASOLINE
CITY VIEW APARTMENTS	2901 S JACKSON ST	Removed		5,000 TO 9,999 GALLONS	DIESEL
CITY VIEW APARTMENTS	2901 S JACKSON ST	Removed		111 TO 1,000 GALLONS	USED OIL/WASTE OIL
CITY VIEW APARTMENTS	2901 S JACKSON ST	Removed		111 TO 1,000 GALLONS	HEATING FUEL
LAGO VISTA APARTMENTS	2525 14TH AVE S	Removed			UNLEADED GASOLINE
ARMORED TRANSPORT NORTHWEST INC	1401 EAST YESLER WAY	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
ARMORED TRANSPORT NORTHWEST INC	1401 EAST YESLER WAY	Removed	12/31/1964 00:00:00		DIESEL

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ARMORED TRANSPORT NORTHWEST, INC	1401 EAST YESLER WAY	Removed	12/31/1984 00:00:00		USED OIL/WASTE OIL
TEXACO STAR MART	700 12TH AVE	Operational	1/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STAR MART	700 12TH AVE	Operational	1/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STAR MART	700 12TH AVE	Operational	1/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STAR MART	700 12TH AVE	Operational	1/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STAR MART	700 12TH AVE	Removed	12/31/1984 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
TEXACO STAR MART	700 12TH AVE	Removed	1/1/1991 00:00:00		UNLEADED GASOLINE
TEXACO STAR MART	700 12TH AVE	Removed	1/1/1991 00:00:00		UNLEADED GASOLINE
TEXACO STAR MART	700 12TH AVE	Removed	1/1/1991 00:00:00		UNLEADED GASOLINE
TURNER & PEASE CO	809 WESTERN	Removed	1/1/1991 00:00:00		UNLEADED GASOLINE
TURNER & PEASE CO	809 WESTERN	Closure in Process	12/31/1984 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
LESCHI BOAT SERVICE	120 LAKESIDE AVE STE 350	Closure in Process	12/31/1984 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
LEE POLETTI	1622 YESLER WAY	Closed in Place	5/15/1985 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
LEE POLETTI	1622 YESLER WAY	Closed in Place	12/31/1984 00:00:00		
PARKS	100 LAKESIDE SOUTH	Unknown	12/31/1984 00:00:00		
SYSTEM TRANSFER & STORAGE COMPANY	2417 8TH AVENUE SOUTH	Removed	12/31/1984 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
R H BROWN CO	1900 4TH AVE S	Closed in Place	12/31/1984 00:00:00		UNLEADED GASOLINE
R H BROWN CO	1900 4TH AVE S	Closed in Place	12/31/1984 00:00:00		UNLEADED GASOLINE
POKE CYCLE/CLOSED	550 12TH AVE	Closed in Place	12/31/1984 00:00:00		UNLEADED GASOLINE
KING CO YOUTH SERVICE CENTER	1211 E ALDER ST	Operational	4/13/1992 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
SHELL STATION BANKS' LESCHI	121 LAKESIDE AVE	Removed		111 to 1,100 Gallons	DIESEL
SHELL STATION BANKS' LESCHI	121 LAKESIDE AVE	Removed		2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
SHELL STATION BANKS' LESCHI	121 LAKESIDE AVE	Removed		5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
SHELL STATION BANKS' LESCHI	121 LAKESIDE AVE	Removed		111 TO 1,000 GALLONS	UNLEADED GASOLINE
SHELL STATION BANKS' LESCHI	121 LAKESIDE AVE	Removed		2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
SHELL STATION BANKS' LESCHI	121 LAKESIDE AVE	Removed		5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
STERN PROPERTY (EXEMPT)	548 LAKE WASHINGTON BLVD	Exempt			
CAPITOL HILL ARCO	427 12TH AVE	Operational	4/1/1997 00:00:00	10,000 TO 19,999 GALLONS	HEATING FUEL
CAPITOL HILL ARCO	427 12TH AVE	Operational	4/1/1997 00:00:00	10,000 TO 19,999 GALLONS	HEATING FUEL
CAPITOL HILL ARCO	427 12TH AVE	Operational	4/1/1997 00:00:00	10,000 TO 19,999 GALLONS	HEATING FUEL
NEW HOPE BAPTIST CHURCH	120 21 ST AVENUE	Exempt			
NEW HOPE BAPTIST CHURCH	120 21 ST AVENUE	Exempt			
HONDA OF SEATTLE	1015 OLIVE WAY	Exempt			
SECOND AND UNION PARKADE	1400 SECOND AVE	Removed	12/31/1984 00:00:00		HEATING FUEL
SEATTLE STEAM CORPORATION	1319 WESTERN AVENUE	Exempt	1/1/1989 00:00:00		HEATING FUEL
SEATTLE STEAM CORPORATION	1319 WESTERN AVENUE	Exempt	12/31/1984 00:00:00		HEATING FUEL
TERMINAL 46	401 ALASKAN WAY S	Exempt	12/31/1984 00:00:00		HEATING FUEL
TERMINAL 46	401 ALASKAN WAY S	Operational	3/25/1992 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
TERMINAL 46	401 ALASKAN WAY S	Operational	3/25/1992 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
TERMINAL 46	401 ALASKAN WAY S	Closed in Place	3/25/1992 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
TERMINAL 46	401 ALASKAN WAY S	Closed in Place	12/31/1984 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
TERMINAL 46	401 ALASKAN WAY S	Closed in Place	12/31/1984 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
TERMINAL 46	401 ALASKAN WAY S	Closed in Place	12/31/1984 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
TERMINAL 46	401 ALASKAN WAY S	Removed	12/31/1984 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
TERMINAL 46	401 ALASKAN WAY S	Removed	12/31/1984 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
KENNEDY HOTEL GARAGE	1100 5TH AVE	Removed	1/1/1982 00:00:00		UNLEADED GASOLINE
DOLLAR RENT A CAR	701 STEWART	Removed	1/1/1978 00:00:00		UNLEADED GASOLINE

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Table 1

SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
APCOA CORPORATION	212 SENECA ST	Closure in Process	12/31/1984 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
APCOA CORPORATION	212 SENECA ST	Closure in Process	12/31/1984 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
HARBOR PROPERTIES INC	85 UNIVERSITY STREET	Closed in Place	12/31/1984 00:00:00		LEADED GASOLINE
HARBOR PROPERTIES INC	85 UNIVERSITY STREET	Closed in Place	12/31/1984 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
1101 4TH AVE CO 070139	1101 4TH	Removed	1/1/1987 00:00:00		KEROSENE
MAIN CO 070319	1122 3RD AVE	Operational	1/1/1989 00:00:00	2,001 TO 4,999 GALLONS	DIESEL
ATWATER CO 070322	1503 3RD AVE	Closed in Place	1/1/1956 00:00:00		DIESEL
ATWATER CO 070322	1503 3RD AVE	Operational	12/1/1990 00:00:00	2,001 TO 4,999 GALLONS	USED OIL/WASTE OIL
SEATTLE OLYMPIC GARAGE	415 SENECA	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
SEATTLE OLYMPIC GARAGE	415 SENECA	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
SEATTLE OLYMPIC GARAGE	415 SENECA	Removed	12/31/1984 00:00:00		LEADED GASOLINE
SEATTLE OLYMPIC GARAGE	415 SENECA	Removed	12/31/1984 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
HERTZ RENT A CAR	722 PIKE ST	Removed	1/1/1981 00:00:00		UNLEADED GASOLINE
AMPCO PARKING WASHINGTON BLDG GARAGE	315 UNION ST	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
AMPCO PARKING WASHINGTON BLDG GARAGE	315 UNION ST	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
AMPCO PARKING ONE UNION SQUARE GARAGE	623 UNION ST	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
AMPCO PARKING ONE UNION SQUARE GARAGE	623 UNION ST	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
AMPCO PARKING ONE UNION SQUARE GARAGE	623 UNION ST	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
AMPCO PARKING ONE UNION SQUARE GARAGE	623 UNION ST	Removed	12/31/1984 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
JOHN JONES/AMPCO PARKING-JONES BLDG GA	1331 3RD AVE	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
MOTORSPORTS INTERNATIONAL	1215 STEWART	Unknown	12/31/1984 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
AMPCO PARKING ONE UNION SQUARE GARAGE	623 UNION ST	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
THE SUMMIT AT FIRST HILL	1200 UNIVERSITY ST	Operational	10/2/2000 00:00:00		DIESEL
SEAFIRST FIFTY AVE PLAZA BLDG	800 5TH AVE	Exempt	12/31/1984 00:00:00		UNLEADED GASOLINE
SEAFIRST FIFTY AVE PLAZA BLDG	800 5TH AVE	Exempt	12/31/1984 00:00:00		UNLEADED GASOLINE
TEXACO STATION #69-232-0400	601 BOREN AVE N	Operational	1/1/1984 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #69-232-0400	601 BOREN AVE N	Operational	1/1/1984 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #69-232-0400	601 BOREN AVE N	Operational	1/1/1984 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CHEVRON 90083	1101 MADISON ST	Removed	12/31/1984 00:00:00		USED OIL/WASTE OIL
CHEVRON 90083	1101 MADISON ST	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
CHEVRON 90083	1101 MADISON ST	Removed	12/31/1984 00:00:00		LEADED GASOLINE
CHEVRON 90083	1101 MADISON ST	Removed	12/31/1984 00:00:00		UNLEADED GASOLINE
KING COUNTY FACILITIES	500 4TH AVE	Removed	1/1/1988 00:00:00	2,001 TO 4,999 GALLONS	DIESEL
KING COUNTY FACILITIES	500 4TH AVE	Operational	10/16/1999 00:00:00	1,101 TO 2,000 GALLONS	DIESEL
PUROLATOR COURIER CORP	1000 SOUTH WELLES STREET	Closed in Place	12/31/1984 00:00:00		LEADED GASOLINE
PUROLATOR COURIER CORP	1000 SOUTH WELLES STREET	Closed in Place	12/31/1984 00:00:00		USED OIL/WASTE OIL
KING COUNTY GARAGE	5TH & JEFFERSON	Closed in Place	1/1/1988 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
KING COUNTY GARAGE	5TH & JEFFERSON	Closed in Place	1/1/1988 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
KING COUNTY GARAGE	5TH & JEFFERSON	Exempt	12/31/1984 00:00:00		UNLEADED GASOLINE
COLLEGE CLUB OF SEATTLE	505 MADISON	Closed in Place	12/31/1984 00:00:00		UNLEADED GASOLINE
COLLEGE CLUB OF SEATTLE	505 MADISON	Closed in Place	12/31/1984 00:00:00		UNLEADED GASOLINE
SAINT FRANCES XAVIER CABRINI HOSPITAL	920 TERRY AVE	Removed	7/30/1958 00:00:00	1,101 TO 2,000 GALLONS	DIESEL
SAINT FRANCES XAVIER CABRINI HOSPITAL	920 TERRY AVE	Operational	8/7/1987 00:00:00	111 to 1,100 Gallons	DIESEL
MUNI BUILDING	600 4TH AVE	Closed in Place	1/1/1984 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
MUNI BUILDING	600 4TH AVE	Closed in Place	1/1/1984 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE

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SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
4TH & COLUMBIA PARKING	723 4TH AVE	Operational	8/1/1974 00:00:00	111 TO 1,000 GALLONS	UNLEADED GASOLINE
4TH & COLUMBIA PARKING	723 4TH AVE	Operational	1/1/1973 00:00:00	1,101 TO 2,000 GALLONS	UNLEADED GASOLINE
ACME POUSTRY CO INC-TRUCK PARKING LOT	1024 SO KING ST	Removed	12/31/1964 00:00:00		
ACME POUSTRY CO INC-TRUCK PARKING LOT	1024 SO KING ST	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
5475 (UNOCAL)	500 S JACKSON	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
5475 (UNOCAL)	500 S JACKSON	Removed	12/31/1964 00:00:00		USED OIL/WASTE OIL
5475 (UNOCAL)	500 S JACKSON	Removed	12/31/1964 00:00:00		LEADED GASOLINE
CITY OF SEATTLE, CITY LIGHT DEPARTMENT	1015 3RD AVE	Removed	1/1/1970 00:00:00	111 TO 1,000 GALLONS	UNLEADED GASOLINE
CITY OF SEATTLE, CITY LIGHT DEPARTMENT	1015 3RD AVE	Removed	3/1/1987 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
7TH AVENUE SERVICE	701 S JACKSON ST	Temporarily Closed	12/31/1964 00:00:00	2,001 TO 4,999 GALLONS	LEADED GASOLINE
JERRY A COSTACOS	701 S JACKSON ST	Temporarily Closed	12/31/1964 00:00:00		UNLEADED GASOLINE
JERRY A COSTACOS	801 4TH AVE	Operational	11/8/1990 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
JERRY A COSTACOS	801 4TH AVE	Operational	11/8/1990 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
JERRY A COSTACOS	801 4TH AVE	Operational	11/8/1990 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
1001 4TH AVENUE PLAZA GARAGE	310 MADISON ST	Removed	12/31/1964 00:00:00	111 TO 1,000 GALLONS	USED OIL/WASTE OIL
1001 4TH AVENUE PLAZA GARAGE	310 MADISON ST	Closed in Place	1/1/1969 00:00:00		DIESEL
1001 4TH AVENUE PLAZA GARAGE	310 MADISON ST	Closed in Place	1/1/1969 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
1001 4TH AVENUE PLAZA GARAGE	310 MADISON ST	Closed in Place	1/1/1969 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
NETTLETON APTS.	1000 8TH AVENUE	Closed in Place	12/31/1964 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
NETTLETON APTS.	1000 8TH AVENUE	Closed in Place	12/31/1964 00:00:00		
SERVICE STATION	1200 1ST AVE SOUTH	Removed		111 TO 1,000 GALLONS	UNKNOWN
SWEDISH HOSPITAL PARKING GARAGE	601 MINOR AVE	Removed	12/31/1964 00:00:00		LEADED GASOLINE
SWEDISH HOSPITAL PARKING GARAGE	601 MINOR AVE	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
SWEDISH HOSPITAL PARKING GARAGE	601 MINOR AVE	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
HARBORVIEW MEDICAL CENTER	325 NINTH AVENUE	Removed	12/31/1964 00:00:00		
HARBORVIEW MEDICAL CENTER	325 NINTH AVENUE	Removed	12/31/1964 00:00:00		
HARBORVIEW MEDICAL CENTER	325 NINTH AVENUE	Removed	12/31/1964 00:00:00		
HOLY FAMILY CHURCH	910 MARION ST.	Closed in Place	12/31/1964 00:00:00		
HOLY FAMILY CHURCH	910 MARION ST.	Exempt	12/31/1964 00:00:00		HEATING FUEL
HOLY FAMILY CHURCH	910 MARION ST.	Exempt	12/31/1964 00:00:00		HEATING FUEL
HOLY FAMILY CHURCH	910 MARION ST.	Exempt	12/31/1964 00:00:00		HEATING FUEL
E J BARTELLS	1212 6TH AVENUE SOUTH	Removed	1/1/1969 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
NORTHWEST BUILDING CORPORATION	801 2ND AVENUE	Removed	12/31/1964 00:00:00		LEADED GASOLINE
NORTHWEST BUILDING CORPORATION	801 2ND AVENUE	Removed	12/31/1964 00:00:00		LEADED GASOLINE
NORTHWEST BUILDING CORPORATION	801 2ND AVENUE	Removed	12/31/1964 00:00:00		LEADED GASOLINE
NORTHWEST BUILDING CORPORATION	801 2ND AVENUE	Removed	12/31/1964 00:00:00		LEADED GASOLINE
CENTRAL BUILDING (EXEMPT)	810 T HIRD AVENUE	Exempt	12/31/1964 00:00:00		
CENTRAL BUILDING (EXEMPT)	810 T HIRD AVENUE	Exempt	12/31/1964 00:00:00		
PUGET SOUND BLOOD CENTER	921 TERRY AVE	Closed in Place	1/1/1987 00:00:00		
SHEPARD AMBULANCE INC	1140 12TH AVE	Removed	12/31/1964 00:00:00		HEATING FUEL
SHEPARD AMBULANCE INC	904 12TH AVE	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
BURLINGTON N ELECTRICAL SHOP	2400 OCCIDENTAL AVE S	Closure in Process	12/31/1964 00:00:00		USED OIL/WASTE OIL
TURNER & PEASE CO	815 WESTERN AVE	Removed	1/1/1950 00:00:00		HEATING FUEL
YMCA OF GREATER SEATTLE	909 FOURTH AVE	Removed	1/1/1920 00:00:00		
PUROLATOR COURIER CORP	923 S JACKSON	Closed in Place	12/31/1964 00:00:00		LEADED GASOLINE
PUROLATOR COURIER CORP	923 S JACKSON	Closed in Place	12/31/1964 00:00:00		UNLEADED GASOLINE
PUROLATOR COURIER CORP	923 S JACKSON	Closed in Place	12/31/1964 00:00:00		LEADED GASOLINE
PUROLATOR COURIER CORP	923 S JACKSON	Closed in Place	12/31/1964 00:00:00	111 to 1,100 Gallons	

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SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
PURULATOR COURIER CORP	923 S JACKSON	Closed in Place	12/31/1964 00:00:00		LEADED GASOLINE
SEATTLE STEAM CORPORATION	639 POST STREET	Closed in Place	12/31/1964 00:00:00		HEATING FUEL
SEATTLE STEAM CORPORATION	639 POST STREET	Closed in Place	12/31/1964 00:00:00		HEATING FUEL
COMMUTER CENTRE PARKING	801.809 WESTERN AVE	Exempt	12/31/1964 00:00:00		HEATING FUEL
COMMUTER CENTRE PARKING	801.809 WESTERN AVE	Removed	1/10/1960 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
COMMUTER CENTRE PARKING	801.809 WESTERN AVE	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
COMMUTER CENTRE PARKING	801.809 WESTERN AVE	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
COMMUTER CENTRE PARKING	801.809 WESTERN AVE	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
COMMUTER CENTRE PARKING	801.809 WESTERN AVE	Closure in Process	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
COMMUTER CENTRE PARKING	801.809 WESTERN AVE	Closure in Process	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
KEN STATION	1030 7TH AVE S	Removed	12/31/1964 00:00:00	2,001 TO 4,999 GALLONS	UNLEADED GASOLINE
KEN STATION	1030 7TH AVE S	Removed	12/31/1964 00:00:00	111 TO 1,000 GALLONS	UNLEADED GASOLINE
KEN STATION	1030 7TH AVE S	Removed	12/31/1964 00:00:00	1,101 TO 2,000 GALLONS	LEADED GASOLINE
KEN STATION	1030 7TH AVE S	Operational	5/18/1994 00:00:00	20,000 TO 29,999 GALLONS	UNLEADED GASOLINE
KEN STATION	1030 7TH AVE S	Operational	5/18/1994 00:00:00	20,000 TO 29,999 GALLONS	UNLEADED GASOLINE
KEN STATION	1030 7TH AVE S	Operational	5/18/1994 00:00:00	20,000 TO 29,999 GALLONS	UNLEADED GASOLINE
REX HOTEL	657 S KING ST	Exempt			DIESEL
ALASKA TRAFFIC CONSULTANTS INC	2214 FOURTH AVE S	Removed	1/1/1962 00:00:00	5,000 TO 9,999 GALLONS	HEATING FUEL
ALASKA TRAFFIC CONSULTANTS INC	2214 FOURTH AVE S	Removed	1/1/1962 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
ALASKA TRAFFIC CONSULTANTS INC	2214 FOURTH AVE S	Removed	1/1/1962 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
PCY CORP	601 6TH AVE N	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
SHEPARD AMBULANCE INC	904 12TH AVE	Removed	12/31/1964 00:00:00		LEADED GASOLINE
SHEPARD AMBULANCE INC	904 12TH AVE	Closed in Place	12/31/1964 00:00:00		
NORTHWEST ENVIRONMENTAL SERVICES	1600 AIRPORT WAY SOUTH	Closed in Place	12/31/1964 00:00:00		HAZARDOUS SUBSTANCE
EVERGREEN TRAILS INC/CLUST	720 SOUTH FOREST STREET	Removed	12/31/1964 00:00:00	1,101 TO 2,000 GALLONS	USED OIL/WASTE OIL
EVERGREEN TRAILS INC/CLUST	720 SOUTH FOREST STREET	Removed	12/31/1964 00:00:00	1,101 TO 2,000 GALLONS	MOTOR OIL
EVERGREEN TRAILS INC/CLUST	720 SOUTH FOREST STREET	Removed	12/31/1964 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
SYSTEM TRANSFER & STORAGE COMPANY	2400 6TH AVENUE SOUTH	Removed	12/31/1964 00:00:00		USED OIL/WASTE OIL
FLAJOLE BROTHERS INC	2201 4TH SO	Removed	6/1/1984 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
FLAJOLE BROTHERS INC	2201 4TH SO	Removed	8/1/1974 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
FLAJOLE BROTHERS INC	2201 4TH SO	Removed	5/1/1984 00:00:00		
FLAJOLE BROTHERS INC	2201 4TH SO	Removed	12/31/1964 00:00:00		LEADED GASOLINE
FLAJOLE BROTHERS INC	2201 4TH SO	Removed	5/1/1984 00:00:00		LEADED GASOLINE
FLAJOLE BROTHERS INC	2201 4TH SO	Removed	8/1/1974 00:00:00		UNLEADED GASOLINE
CASCADE OIL COMPANY	1741 - 4TH AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
CASCADE OIL COMPANY	1741 - 4TH AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
CASCADE OIL COMPANY	1741 - 4TH AVE S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
CASCADE OIL COMPANY	1741 - 4TH AVE S	Removed	12/31/1964 00:00:00		USED OIL/WASTE OIL
CASCADE OIL COMPANY	1741 - 4TH AVE S	Removed	12/31/1964 00:00:00		LEADED GASOLINE
VECA ELECTRIC CO INC	1762 AIRPORT WAY SO	Removed	12/31/1964 00:00:00		HEATING FUEL
VECA ELECTRIC CO INC	1762 AIRPORT WAY SO	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	
PRINCETON PACKAGING INC	1505 6TH AVE S	Removed	12/31/1964 00:00:00		HAZARDOUS SUBSTANCE
PRINCETON PACKAGING INC	1505 6TH AVE S	Removed	12/31/1964 00:00:00		HAZARDOUS SUBSTANCE
PRINCETON PACKAGING INC	1505 6TH AVE S	Removed	12/31/1964 00:00:00		HAZARDOUS SUBSTANCE
PRINCETON PACKAGING INC	1505 6TH AVE S	Removed	12/31/1964 00:00:00		HEATING FUEL
PRINCETON PACKAGING INC	1505 6TH AVE S	Exempt	12/31/1964 00:00:00		

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SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
TEXACO STAR MART	511 DEARBORN ST	Operational	9/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STAR MART	511 DEARBORN ST	Operational	9/1/1992 00:00:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
TEXACO STAR MART	511 DEARBORN ST	Operational	9/1/1992 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STAR MART	511 DEARBORN ST	Removed	12/31/1964 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STAR MART	511 DEARBORN ST	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
TEXACO STAR MART	511 DEARBORN ST	Removed	12/31/1964 00:00:00		LEADED GASOLINE
TEXACO STAR MART	511 DEARBORN ST	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
TEXACO STATION #63-232-0043	2461 4TH AVE S	Operational	1/1/1984 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0043	2461 4TH AVE S	Operational	1/1/1984 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0043	2461 4TH AVE S	Operational	1/1/1984 00:00:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0043	2461 4TH AVE S	Operational	1/1/1984 00:00:00	10,000 TO 19,999 GALLONS	DIESEL
TEXACO STATION #63-232-0043	2461 4TH AVE S	Closure in Process	1/1/1987 00:00:00	10,000 TO 19,999 GALLONS	USED OIL/WASTE OIL
U.S. POSTAL SERVICE	2461 4TH AVE S	Exempt	12/31/1964 00:00:00		HEATING FUEL
U.S. POSTAL SERVICE	2401-2445 3RD AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
U.S. POSTAL SERVICE	2401-2445 3RD AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
U.S. POSTAL SERVICE	2401-2445 3RD AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
U.S. POSTAL SERVICE	2401-2445 3RD AVE S	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
UNION PACIFIC RR/CLOSED	801 1ST AVE SOUTH	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
TERMINAL 30	2431 E MARGINAL WAY S	Closed in Place	12/31/1964 00:00:00	111 TO 1,000 GALLONS	UNKNOWN
TERMINAL 30	2431 E MARGINAL WAY S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
TERMINAL 30	2431 E MARGINAL WAY S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
TERMINAL 30	2431 E MARGINAL WAY S	Removed	12/31/1964 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
TERMINAL 30	2431 E MARGINAL WAY S	Temporarily Closed	1/1/1984 00:00:00	5,000 TO 9,999 GALLONS	USED OIL/WASTE OIL
TERMINAL 37	1201 ALASKAN WAY S	Removed	1/1/1975 00:00:00		UNLEADED GASOLINE
TERMINAL 37	1201 ALASKAN WAY S	Removed	1/1/1978 00:00:00		UNLEADED GASOLINE
TERMINAL 37	1201 ALASKAN WAY S	Closed in Place	1/1/1978 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
TERMINAL 37	1201 ALASKAN WAY S	Operational	7/3/1983 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
TERMINAL 37	1201 ALASKAN WAY S	Operational	7/3/1983 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
CITY OF SEATTLE WATER DEPARTMENT	2700 AIRPORT WAY S	Removed	12/31/1964 00:00:00	5,000 TO 9,999 GALLONS	DIESEL
CITY OF SEATTLE WATER DEPARTMENT	2700 AIRPORT WAY S	Removed	7/1/1973 00:00:00	111 to 1,100 Gallons	DIESEL
CITY OF SEATTLE WATER DEPARTMENT	2700 AIRPORT WAY S	Removed	7/1/1981 00:00:00	111 to 1,100 Gallons	MOTOR OIL
CITY OF SEATTLE WATER DEPARTMENT	2700 AIRPORT WAY S	Removed	7/1/1973 00:00:00	2,001 TO 4,999 GALLONS	DIESEL
CITY OF SEATTLE WATER DEPARTMENT	2700 AIRPORT WAY S	Removed	7/1/1981 00:00:00	111 to 1,100 Gallons	USED OIL/WASTE OIL
CITY OF SEATTLE WATER DEPARTMENT	2700 AIRPORT WAY S	Removed	12/31/1984 00:00:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
CITY OF SEATTLE WATER DEPARTMENT	2700 AIRPORT WAY S	Removed	12/31/1984 00:00:00	111 to 1,100 Gallons	LEADED GASOLINE
CITY OF SEATTLE WATER DEPARTMENT	2700 AIRPORT WAY S	Removed	12/31/1984 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
LEE & EASTES TANK LINES INC	2418 AIRPORT WAY SO	Closure in Process	8/15/1964 00:00:00		
LEE & EASTES TANK LINES INC	2418 AIRPORT WAY SO	Closure in Process	8/15/1964 00:00:00		
LEE & EASTES TANK LINES INC	2418 AIRPORT WAY SO	Closure in Process	8/15/1964 00:00:00		
LEE & EASTES TANK LINES INC	2418 AIRPORT WAY SO	Unknown	12/31/1964 00:00:00		
LEE & EASTES TANK LINES INC	2418 AIRPORT WAY SO	Unknown	12/31/1964 00:00:00		
SEATTLE WA. LINE SEG 51 PRINT 448	2700 OCCIDENTAL ST S	Removed	12/1/1985 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
SEATTLE WA. LINE SEG 51 PRINT 448	2700 OCCIDENTAL ST S	Removed	12/1/1985 00:00:00	111 to 1,100 Gallons	UNLEADED GASOLINE
EXXON 7-9532/CLOSED	2401 4TH AVE SO	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE
EXXON 7-9532/CLOSED	2401 4TH AVE SO	Removed	12/31/1964 00:00:00		UNLEADED GASOLINE





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Table 1

SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	COMMENTS
BLANCHARD'S UNION SERVICE	CORNER OF 76TH AND 24TH				
NORTH MERCER PUMP STATION	7631 SE 22ND ST	REMOVED	7/1/68	111 TO 1,100 GALLONS	
NORTH MERCER PUMP STATION	7631 SE 22ND ST	OPERATIONAL	12/14/94	111 TO 1,100 GALLONS	DIESEL
TOSCO CORPORATION SITE #254518-30663	2411 76TH STREET SE	REMOVED	12/31/64	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
TOSCO CORPORATION SITE #254518-30663	2411 76TH STREET SE	OPERATIONAL	1/1/89	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
TOSCO CORPORATION SITE #254518-30663	2411 76TH STREET SE	OPERATIONAL	1/1/84	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TOSCO CORPORATION SITE #254518-30663	2411 76TH STREET SE	OPERATIONAL	1/1/84	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CLYDE'S CHEVRON	2270 SE 76TH				
BESTFIRE OIL CO.	7624 SE 24TH				
MERCER ISLAND AUTO REBUILD	7644 SE 24TH				
TEXACO STATION #63-232-0494	7655 SUNSET HWY	REMOVED	12/31/64		LEADED GASOLINE
TEXACO STATION #63-232-0494	7655 SUNSET HWY	REMOVED	12/31/64		LEADED GASOLINE
TEXACO STATION #63-232-0494	7655 SUNSET HWY	REMOVED	12/31/64		UNLEADED GASOLINE
TEXACO STATION #63-232-0494	7655 SUNSET HWY	REMOVED	12/31/64		UNLEADED GASOLINE
TEXACO STATION #63-232-0494	7655 SUNSET HWY	REMOVED	12/31/64		USED OIL/WASTE OIL
TEXACO STATION #63-232-0494	7655 SUNSET HWY	OPERATIONAL	1/1/81	10,000 TO 19,999 GALLONS	DIESEL
TEXACO STATION #63-232-0494	7655 SUNSET HWY	OPERATIONAL	1/1/81	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
TEXACO STATION #63-232-0494	7655 SUNSET HWY	OPERATIONAL	1/1/81	10,000 TO 19,999 GALLONS	LEADED GASOLINE
TEXACO STATION #63-232-0494	7655 SUNSET HWY	OPERATIONAL	1/1/81	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0494	7655 SUNSET HWY	OPERATIONAL	1/1/81	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
SIMBAS ENTERPRISES LTD	7620 SE 27TH STREET	REMOVED	12/31/64		LEADED GASOLINE
SIMBAS ENTERPRISES LTD	7620 SE 27TH STREET	REMOVED	12/31/64		LEADED GASOLINE
SIMBAS ENTERPRISES LTD	7620 SE 27TH STREET	REMOVED	12/31/64		UNLEADED GASOLINE
SIMBAS ENTERPRISES LTD	7620 SE 27TH STREET	REMOVED	12/31/64	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
CHEVRON 92736	7725 SUNSET HWY	REMOVED	1/1/70		LEADED GASOLINE
CHEVRON 92736	7725 SUNSET HWY	REMOVED	1/1/81		UNLEADED GASOLINE
CHEVRON 92736	7725 SUNSET HWY	REMOVED	1/1/81		UNLEADED GASOLINE
CHEVRON 92736	7725 SUNSET HWY	EXEMPT	10/10/94	111 TO 1,100 GALLONS	
CHEVRON 92736	7725 SUNSET HWY	OPERATIONAL	9/20/94	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CHEVRON 92736	7725 SUNSET HWY	OPERATIONAL	9/20/94	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CHEVRON 92736	7725 SUNSET HWY	OPERATIONAL	9/20/94	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
I & M ASSOCIATES	7810 SE 27TH AVE	REMOVED			
I & M ASSOCIATES	7810 SE 27TH AVE	REMOVED			
I & M ASSOCIATES	7810 SE 27TH AVE	REMOVED			
I & M ASSOCIATES	7810 SE 27TH AVE	REMOVED			
UNION OIL	7835 SE 27TH				
HAMILTON'S FUEL COMPANY	MERCER ISLAND BUSINESS CENTER				
REYNOLD'S SHELL	2918 SE 78TH				
TEXACO STATION #63-232-0276	2903 78TH AVE SE	REMOVED	1/1/88		LEADED GASOLINE
TEXACO STATION #63-232-0276	2903 78TH AVE SE	REMOVED	1/1/88		UNLEADED GASOLINE
TEXACO STATION #63-232-0276	2903 78TH AVE SE	REMOVED	1/1/88		UNLEADED GASOLINE
TEXACO STATION #63-232-0276	2903 78TH AVE SE	REMOVED	1/1/88		DIESEL
TEXACO STATION #63-232-0276	2903 78TH AVE SE	OPERATIONAL	11/1/93	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0276	2903 78TH AVE SE	OPERATIONAL	11/1/93	10,000 TO 19,999 GALLONS	LEADED GASOLINE
TEXACO STATION #63-232-0276	2903 78TH AVE SE	OPERATIONAL	11/1/93	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
TEXACO STATION #63-232-0276	2903 78TH AVE SE	OPERATIONAL	11/1/93	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE

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Table 1

SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
MERCER ISLAND SHELL	7833 SE 28TH ST	REMOVED	12/31/64		LEADED GASOLINE
MERCER ISLAND SHELL	7833 SE 28TH ST	REMOVED	12/31/64		LEADED GASOLINE
MERCER ISLAND SHELL	7833 SE 28TH ST	REMOVED	12/31/64		UNLEADED GASOLINE
MERCER ISLAND SHELL	7833 SE 28TH ST	OPERATIONAL	5/20/86	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
MERCER ISLAND SHELL	7833 SE 28TH ST	OPERATIONAL	3/17/87	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
MERCER ISLAND SHELL	7833 SE 28TH ST	TEMPORARILY CLOSED	6/15/54	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
MERCER ISLAND SERVICE CENTER INC.	7833 SE 28TH ST	OPERATIONAL	5/20/86	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
MERCER ISLAND SERVICE CENTER INC.	2728 80TH AVE SE	CLOSED IN PLACE	12/31/64		UNLEADED GASOLINE
MERCER ISLAND SERVICE CENTER INC.	2728 80TH AVE SE	CLOSED IN PLACE	12/31/64		USED OIL/WASTE OIL
ARCO	3006 SE 78TH				
5097	2831 ISLAND CREST WAY	REMOVED	12/31/64		
5097	2831 ISLAND CREST WAY	REMOVED	12/31/64		LEADED GASOLINE
5097	2831 ISLAND CREST WAY	REMOVED	12/31/64		UNLEADED GASOLINE
5097	2831 ISLAND CREST WAY	REMOVED	12/31/64		UNLEADED GASOLINE
CITY OF MERCER ISLAND FIRE DPRT.	2831 ISLAND CREST WAY	OPERATIONAL	1/1/80	1,101 TO 2,000 GALLONS	DIESEL
CITY OF MERCER ISLAND FIRE DPRT	3030 78TH AVE SE	OPERATIONAL	1/1/80	1,101 TO 2,000 GALLONS	LEADED GASOLINE
PECK'S HEATING	3030 78TH AVE SE	OPERATIONAL	5/20/90	1,101 TO 2,000 GALLONS	
MERCER ISLAND 66 STATION	2835 SE 80TH ST				
CHEVRON 93659	2727 SE 81ST				
CHEVRON 93659	2800 ISLAND CREST WY	REMOVED	12/31/64		LEADED GASOLINE
CHEVRON 93659	2800 ISLAND CREST WY	REMOVED	12/31/64		UNLEADED GASOLINE
CHEVRON 93659	2800 ISLAND CREST WY	REMOVED	12/31/64		UNLEADED GASOLINE
CHEVRON 93659	2800 ISLAND CREST WY	REMOVED	12/31/64	111 TO 1,100 GALLONS	UNLEADED GASOLINE
CHEVRON 93659	2800 ISLAND CREST WY	REMOVED	12/31/64	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
FIRE STATION	NE COR OF 76TH AND 27TH				
OWENS AUTO REBUILD and RUNDLE'S AUTO REPAIR	2855 SE 80TH				
MOBIL GAS	7802 SE 27TH				
BESTFIRE OIL CO.	2827 SE 81ST				
LAKESIDE FUEL CO.	3640 SE 86TH				
LUTHER BURBANK PARK/CLOSED	2040 84TH AVE SE	REMOVED	12/31/64	111 TO 1,100 GALLONS	UNLEADED GASOLINE
SHOREWOOD APARTMENTS	3209 SHOREWOOD DR.	CLOSED IN PLACE	12/31/64		
SHOREWOOD APARTMENTS	3209 SHOREWOOD DR.	CLOSED IN PLACE	12/31/64	111 TO 1,100 GALLONS	
SHOREWOOD APARTMENTS	3209 SHOREWOOD DR.	REMOVED	12/31/64	111 TO 1,100 GALLONS	UNLEADED GASOLINE
ADAMS CO 070323	3635 84TH AVE SE	CLOSED IN PLACE	1/1/67		
ADAMS CO 070323	3635 84TH AVE SE	CLOSED IN PLACE	12/31/64	111 TO 1,100 GALLONS	
WEST MERCER ELEM	4141 81ST SE	CLOSED IN PLACE	12/31/64	111 TO 1,100 GALLONS	
MR BYRD	4441 89TH SE	EXEMPT			HEATING FUEL
MERCER ISLAND SCHOLL DIST #2	BUS LOT	REMOVED	12/31/64	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
MERCER ISLAND SCHOLL DIST #2	BUS LOT	OPERATIONAL	12/31/64	111 TO 1,100 GALLONS	DIESEL
MERCER ISLAND SCHOLL DIST #2	BUS LOT	OPERATIONAL	9/1/89	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
CITY OF MERCER ISLAND	9601 SE 36TH ST	REMOVED	12/31/64		
CITY OF MERCER ISLAND	9601 SE 36TH ST	REMOVED	12/31/64		LEADED GASOLINE
CITY OF MERCER ISLAND	9601 SE 36TH ST	REMOVED	12/31/64		UNLEADED GASOLINE
CITY OF MERCER ISLAND	9601 SE 36TH ST	REMOVED	12/31/64	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
MERCER ISLAND HIGH SCHOOL	9100 SE 42ND	OPERATIONAL	1/1/87	111 TO 1,100 GALLONS	USED OIL/WASTE OIL
CITY OF MERCER ISLAND	4920 88 SE	REMOVED	1/7/76	111 TO 1,100 GALLONS	DIESEL
CITY OF MERCER ISLAND	4920 88 SE	REMOVED	1/1/82	111 TO 1,100 GALLONS	DIESEL
ATLAS PROPERTY	4468 FERNCROFT RD	EXEMPT			HEATING FUEL

Table 1  
WA Department of Ecology  
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SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
MERCER GARAGE	E MERCER WAY AND SUNSET HIGHWAY				
TEXACO	7695 SE 27TH				
<b>Bellevue (Information from Environmental Data Resources, Inc.)</b>					
MERCER MARINE & JOHN RADOVICH	3911 LAKE WASH. BLVD SE	Removed	5/15/78 0:00	111 to 1,100 GALLONS	LEADED GASOLINE
MERCER MARINE & JOHN RADOVICH	3911 LAKE WASH. BLVD SE	Removed	5/15/78 0:00	111 to 1,100 GALLONS	LEADED GASOLINE
MERCER MARINE & JOHN RADOVICH	3911 LAKE WASH. BLVD SE	Removed	5/15/78 0:00	111 to 1,100 GALLONS	LEADED GASOLINE
EVERGREEN SERVICES CORPORATION	12010 S.E. 32ND ST.	Removed	12/31/64 0:00	NOT REPORTED	UNLEADED GASOLINE
UDL INC	12020 SE 32ND STREET	EXEMPT	12/31/64 0:00	NOT REPORTED	NOT REPORTED
UDL INC	12020 SE 32ND STREET	Exempt	12/31/64 0:00	NOT REPORTED	NOT REPORTED
TOSCO 03134-30104	3727 128TH ST SE	Removed	12/31/64 0:00	NOT REPORTED	USED OIL/WASTE OIL
TOSCO 03134-30104	3727 128TH ST SE	Operational	1/1/83 0:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
TOSCO 03134-30104	3727 128TH ST SE	Operational	1/1/83 0:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
TOSCO 03134-30104	3727 128TH ST SE	Operational	1/1/83 0:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
TOSCO 03134-30104	3727 128TH ST SE	Operational	1/1/83 0:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	Operational	5/19/94 0:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	Operational	5/19/94 0:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	Operational	5/19/94 0:00	20,000 TO 29,999 GALLONS	UNLEADED GASOLINE
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	Operational	5/19/94 0:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	Operational	5/19/94 0:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
6690	4000 128TH AVE SE	Removed	12/31/64 0:00	NOT REPORTED	UNLEADED GASOLINE
6690	4000 128TH AVE SE	Removed	12/31/64 0:00	NOT REPORTED	NOT REPORTED
6690	4000 128TH AVE SE	Removed	12/31/64 0:00	NOT REPORTED	LEADED GASOLINE
CHEVRON 92360	3204 129TH PL SE	EXEMPT	12/31/64 0:00	NOT REPORTED	NOT REPORTED
CHEVRON 92360	3204 129TH PL SE	Operational	8/30/89 0:00	111 to 1,100 GALLONS	NOT REPORTED
CHEVRON 92360	3204 129TH PL SE	Operational	8/30/89 0:00	5,000 TO 9,999 GALLONS	UNLEADED GASOLINE
CHEVRON 92360	3204 129TH PL SE	Operational	8/30/89 0:00	10,000 TO 19,999 GALLONS	LEADED GASOLINE
CHEVRON 92360	3204 129TH PL SE	Operational	8/30/89 0:00	10,000 TO 19,999 GALLONS	UNLEADED GASOLINE
CHEVRON 92360	3204 129TH PL SE	Operational	8/30/89 0:00	111 to 1,100 GALLONS	USED OIL/WASTE OIL
Please see Table 3 for more information about the LUSTs listed below					
TOSCO 03134-30104	3727 128TH ST SE	AWAITING CLEANUP			
TOSCO 03134-30104	3727 128TH ST SE	CLEANUP STARTED			
TOSCO 03134-30104	3727 128TH ST SE	AWAITING CLEANUP			
TOSCO 03134-30104	3727 128TH ST SE	CLEANUP STARTED			
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	CLEANUP STARTED			
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	CLEANUP STARTED			
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	CLEANUP STARTED			
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	AWAITING CLEANUP			
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	AWAITING CLEANUP			
AT CAVANCOM	2000 118TH AVE SE	REPORTED CLEANED UP			
6690	4000 128TH AVE SE	CLEANUP STARTED			
6690	4000 128TH AVE SE	REPORTED CLEANED UP			
6690	4000 128TH AVE SE	CLEANUP STARTED			
6690	4000 128TH AVE SE	REPORTED CLEANED UP			
CHEVRON 92360	3204 129TH PL SE	MONITORING			
CHEVRON 92360	3204 129TH PL SE	CLEANUP STARTED			
CHEVRON 92360	3204 129TH PL SE	MONITORING			
CHEVRON 92360	3204 129TH PL SE	CLEANUP STARTED			

Table 1

WA Department of Ecology  
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SITE NAME	SITE ADDRESS	STATUS	INSTALLED	CAPACITY	CONTENTS
BELLEVUE SCHOOL ENATAL ELEMENTARY (EXEMPT)	10815 SE 23rd	REPORTED CLEANED UP			
WA DEPT OF TRANSPORTATION	3965 E MERCER WAY	CLEANUP STARTED			



**Table 2****Historic Usage of Concern List Citations - Seattle**

<b>ID Number</b>	<b>Site</b>	<b>Source</b>
1	American Paper Company	Kroll - 1920
2	Garage at 4th Ave. & Madison Street	Kroll - 1939
3	Grand Central Garage at 4th Ave and Columbia Street	Kroll - 1939
4	Garage at 5th Ave. & Cherry Street	Kroll - 1939
5	Garage at 1st. Avenue & Union Street	Kroll - 1950
6	Crucible Steel at 2759 1st. Avenue	Kroll - 1950
7	Barten Steel Company	Kroll - 1950
8	American Foundary Company at 2944 1st. Avenue	Kroll - 1950
9	American Radiator Company	Kroll - 1939
10	Associates Oil Company	Kroll - 1939
11	Abler Brother's Milling	Kroll - 1939
12	Railroad Round House	Kroll - 1939
13	Standard Oil	Kroll - 1939
14	Commerical Boiler Works	Kroll - 1939
15	Pudget Sound Machine Shop	Kroll - 1939
16	Pacific Metal Company at 2230 4th. Avenue South	Kroll - 1939
18	Mill & Mine Suppy Company at 2700 4th Ave. S	Kroll - 1939
17	Wire Work Shop at 2225 1st. Avenue South	Kroll - 1939
19	General Electric	Kroll - 1950
20	Washington Iron Works	Kroll - 1950
21	Service Station at Western Avenue & Union St.	Kroll - 1966
22	Garage at Spring Street & 5th Avenue	Kroll - 1966
23	Service Station at Cherry Street & 5th. Avenue	Kroll - 1966
24	Service Station at the NE corner of Madison St. & Boyston Avenue	Kroll - 1966
25	Seattle Dock Company	Kroll - 1939



Table 3  
WA Department of Ecology  
LUST List Citations

Site Name	Alternate Name	Site Address	Release Notification Date	Status Date	Release Status	Media
KINGDOME STATION	TEXACO APPEL	1045 1ST AVE S	9/29/1995 00:00:00	9/29/1995 00:00:00	Cleanup Started	Soil
JC PENNEY SITE (EXEMPT)	JC PENNEY SITE (EXEMPT)	2ND & UNION	1/24/1995 00:00:00	1/24/1995 00:00:00	Cleanup Started	Soil
MUSIC-VEND DISTRIBUTING CO	MUSIC-VEND DISTRIBUTING CO	1950 4TH AVE S	12/29/1993 00:00:00	12/29/1993 00:00:00	Reported Cleaned Up	Soil
MUSIC-VEND DISTRIBUTING CO	MUSIC-VEND DISTRIBUTING CO	1950 4TH AVE S	12/29/1993 00:00:00	12/29/1993 00:00:00	Monitoring	Ground Water
MUSIC-VEND DISTRIBUTING CO	MUSIC-VEND DISTRIBUTING CO	1950 4TH AVE S	12/29/1993 00:00:00	12/29/1993 00:00:00	Cleanup Started	Soil
MUSIC-VEND DISTRIBUTING CO	MUSIC-VEND DISTRIBUTING CO	1950 4TH AVE S	12/29/1993 00:00:00	12/29/1993 00:00:00	Monitoring	Ground Water
SEATTLE CITY CHERRY ST SITE	SEATTLE CITY CHERRY ST SITE	612 6TH AVE	3/16/2001 00:00:00	3/16/2001 00:00:00	Reported Cleaned Up	Soil
SEATTLE POLICE DEPT 18	HUGH CORBETT BUILDING	1919 7TH AVE	10/25/1988 00:00:00	10/25/1988 00:00:00	Cleanup Started	Soil
LUXURY AUTOMOTIVE	OLD SEATTLE PARKING GARAGE	74 S JACKSON ST	6/1/1995 00:00:00	6/1/1995 00:00:00	Cleanup Started	Soil
OLD SEATTLE PARKING GARAGE	KINGDOME	201 S KING ST	11/10/1995 00:00:00	11/10/1995 00:00:00	Awaiting Cleanup	Soil
KINGDOME	KINGDOME	201 S KING ST	11/10/1995 00:00:00	11/10/1995 00:00:00	Cleanup Started	Soil
SEATTLE UNIVERSITY PROPERTY (EXEMPT)	SEATTLE UNIVERSITY PROPERTY (EXEMPT)	1000 E SPRING ST	17/1993 00:00:00	17/1993 00:00:00	Cleanup Started	Ground Water
SEATTLE UNIVERSITY PROPERTY (EXEMPT)	SEATTLE UNIVERSITY PROPERTY (EXEMPT)	1000 E SPRING ST	17/1993 00:00:00	17/1993 00:00:00	Cleanup Started	Ground Water
SEATTLE UNIVERSITY PROPERTY (EXEMPT)	SEATTLE UNIVERSITY - CHILD DEVLPMNT CNTR (EXEMPT)	1000 E SPRING ST	5/24/1995 00:00:00	5/24/1995 00:00:00	Cleanup Started	Soil
LASALLE PARTNERS PROPERTY	LASALLE PARTNERS PROPERTY	6TH AVE & CHERRY	1/21/1995 00:00:00	1/21/1995 00:00:00	Cleanup Started	Soil
LASALLE PARTNERS PROPERTY	LASALLE PARTNERS PROPERTY	6TH AVE & CHERRY	1/21/1995 00:00:00	1/21/1995 00:00:00	Reported Cleaned Up	Soil
SWEDISH HOSPITAL GAS STATIONS	SWEDISH HOSPITAL GAS STATIONS	MADISON MINOR MARION BOREN	5/25/1995 00:00:00	5/25/1995 00:00:00	Cleanup Started	Soil
SWEDISH HOSPITAL GAS STATIONS	SWEDISH HOSPITAL GAS STATIONS	MADISON MINOR MARION BOREN	5/25/1995 00:00:00	5/25/1995 00:00:00	Cleanup Started	Soil
CHERRY STREET GARAGE	CHERRY STREET GARAGE	BETWEEN 2ND & 3RD & CHERRY	5/25/1995 00:00:00	5/25/1995 00:00:00	Reported Cleaned Up	Soil
CHERRY STREET GARAGE	CHERRY STREET GARAGE	BETWEEN 2ND & 3RD & CHERRY	5/25/1995 00:00:00	5/25/1995 00:00:00	Cleanup Started	Ground Water
29RD & JACKSON SITE	WALGREEN PROJECT	29RD & S JACKSON	5/17/1995 00:00:00	5/17/1995 00:00:00	Cleanup Started	Soil
29RD & JACKSON SITE	WALGREEN PROJECT	29RD & S JACKSON	5/17/1995 00:00:00	5/17/1995 00:00:00	Cleanup Started	Soil
BUTLER GARAGE	BUTLER GARAGE	114 JAMES ST	5/15/1995 00:00:00	5/15/1995 00:00:00	Reported Cleaned Up	Soil
KING STREET CENTER	KING STREET CENTER	201 S JACKSON	5/15/1995 00:00:00	5/15/1995 00:00:00	Cleanup Started	Soil
KING STREET CENTER	KING STREET CENTER	201 S JACKSON	5/15/1995 00:00:00	5/15/1995 00:00:00	Cleanup Started	Soil
YESLER BUILDING KING CO	KING COUNTY YESLER BUILDING	400 YESLER WAY	3/1/2001 00:00:00	3/1/2001 00:00:00	Cleanup Started	Ground Water
YESLER BUILDING KING CO	KING COUNTY YESLER BUILDING	400 YESLER WAY	3/1/2001 00:00:00	3/1/2001 00:00:00	Cleanup Started	Ground Water
SEA CTY CHARLES ST WEST	SEA CTY CHARLES ST WEST	705 S CHARLES ST	5/21/1995 00:00:00	5/21/1995 00:00:00	Reported Cleaned Up	Soil
GAI'S SEATTLE FRENCH BAKING COMPANY	GAI'S SEATTLE FRENCH BAKING COMPANY	705 S CHARLES ST	10/31/1990 00:00:00	10/31/1990 00:00:00	Cleanup Started	Soil
GAI'S SEATTLE FRENCH BAKING COMPANY	GAI'S SEATTLE FRENCH BAKING COMPANY	705 S CHARLES ST	10/31/1990 00:00:00	10/31/1990 00:00:00	Cleanup Started	Ground Water
ARCO FACILITY #4060RAJBR SANDHU	ARCO FACILITY #4060RAJBR SANDHU	2006 S WELLES	5/17/1997 00:00:00	5/17/1997 00:00:00	Cleanup Started	Soil
ARCO FACILITY #4060RAJBR SANDHU	ARCO FACILITY #4060RAJBR SANDHU	2006 S WELLES	5/17/1997 00:00:00	5/17/1997 00:00:00	Reported Cleaned Up	Soil
ARCO FACILITY #4060RAJBR SANDHU	ARCO FACILITY #4060RAJBR SANDHU	2200 FOURTH AVE S	5/1/1995 00:00:00	5/1/1995 00:00:00	Awaiting Cleanup	Ground Water
ARCO FACILITY #4060RAJBR SANDHU	ARCO FACILITY #4060RAJBR SANDHU	2200 FOURTH AVE S	5/1/1995 00:00:00	5/1/1995 00:00:00	Cleanup Started	Ground Water
STAR RENTALS & SALES	STAR RENTALS & SALES	2200 FOURTH AVE S	5/1/1995 00:00:00	5/1/1995 00:00:00	Awaiting Cleanup	Soil
STAR RENTALS & SALES	STAR RENTALS & SALES	2200 FOURTH AVE S	5/1/1995 00:00:00	5/1/1995 00:00:00	Cleanup Started	Soil
BUDGET RENT-A-CAR OF WASHINGTON-OREGON	BUDGET RENT-A-CAR OF WASHINGTON-OREGON	1918 4TH AVE S	1/21/1992 00:00:00	1/21/1992 00:00:00	Cleanup Started	Soil
BUDGET RENT-A-CAR OF WASHINGTON-OREGON	BUDGET RENT-A-CAR OF WASHINGTON-OREGON	1918 4TH AVE S	1/21/1992 00:00:00	1/21/1992 00:00:00	Cleanup Started	Soil
MACK TRUCK SALES & SERVICE	MACK TRUCK SALES & SERVICE	2025 AIRPORT WY S	7/29/1994 00:00:00	7/29/1994 00:00:00	Reported Cleaned Up	Soil
MACK TRUCK SALES & SERVICE	MACK TRUCK SALES & SERVICE	2025 AIRPORT WY S	7/29/1994 00:00:00	7/29/1994 00:00:00	Reported Cleaned Up	Soil
JACK IN THE BOX 4TH & HOLGATE	JACK IN THE BOX 4TH & HOLGATE	1907 4TH AVE S	5/21/1995 00:00:00	5/21/1995 00:00:00	Cleanup Started	Soil
JACK IN THE BOX 4TH & HOLGATE	JACK IN THE BOX 4TH & HOLGATE	1907 4TH AVE S	5/21/1995 00:00:00	5/21/1995 00:00:00	Cleanup Started	Soil
LEAVITT SHAY INDUSTRIAL BLDG	LEAVITT SHAY INDUSTRIAL BLDG	1217 6TH AVE S	5/21/1995 00:00:00	5/21/1995 00:00:00	Cleanup Started	Ground Water
LEAVITT SHAY INDUSTRIAL BLDG	LEAVITT SHAY INDUSTRIAL BLDG	1217 6TH AVE S	5/21/1995 00:00:00	5/21/1995 00:00:00	Cleanup Started	Soil
LLOYDS ROCKET & HEATING OIL CO	LLOYDS ROCKET & HEATING OIL CO	110 BOREN AVE S	7/27/1997 00:00:00	7/27/1997 00:00:00	Reported Cleaned Up	Soil
TRIAN QLE PROPERTY	TRIAN QLE PROPERTY	901 MAYNARD AVE S	5/21/1995 00:00:00	5/21/1995 00:00:00	Awaiting Cleanup	Soil
MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	9RD S & S ROYAL BROUGHAM WY	12/1/1997 00:00:00	12/1/1997 00:00:00	Reported Cleaned Up	Ground Water
MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	9RD S & S ROYAL BROUGHAM WY	12/1/1997 00:00:00	12/1/1997 00:00:00	Awaiting Cleanup	Soil
MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	2005 4TH AVE S	10/21/1995 00:00:00	10/21/1995 00:00:00	Cleanup Started	Soil
MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	MAJOR LEAGUE STADIUM PUBLIC FACILITIES DISTRICT	2005 4TH AVE S	10/21/1995 00:00:00	10/21/1995 00:00:00	Reported Cleaned Up	Soil
SCHUCKS AUTO SUPPLY	SCHUCKS AUTO SUPPLY	1727 ALASKAN WAY S	3/1/2000 00:00:00	3/1/2000 00:00:00	Reported Cleaned Up	Ground Water
SCHUCKS AUTO SUPPLY	SCHUCKS AUTO SUPPLY	1727 ALASKAN WAY S	3/1/2000 00:00:00	3/1/2000 00:00:00	Cleanup Started	Ground Water
FLINT INK BLDG	FLINT INK BUILDING	1727 ALASKAN WAY S	3/1/2000 00:00:00	3/1/2000 00:00:00	Reported Cleaned Up	Soil









WA Department of Ecology  
LUST List Citations

Table 3

Site Name	Address	Site Type	Start Date	End Date	Activity	Soil
JC PENNEY SITE (EXEMPT)	2ND & UNION	JC PENNEY SITE (EXEMPT)	1/8/1990 00:00:00	5/21/1985 00:00:00	Cleanup Started	Soil
Bellevue (Information from Environmental Data Resources, Inc.)						
TOSCO 09134-30104	3727 128TH ST SE	EXXON STATION # 7-2757	3/14/90		AWAITING CLEANUP	SOIL
TOSCO 09134-30104	3727 128TH ST SE	EXXON STATION # 7-2757	3/13/92		CLEANUP STARTED	SOIL
TOSCO 09134-30104	3727 128TH ST SE	EXXON STATION # 7-2757	3/14/90		AWAITING CLEANUP	SOIL
TOSCO 09134-30104	3727 128TH ST SE	EXXON STATION # 7-2757	3/13/92		CLEANUP STARTED	SOIL
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	TOSCO #5479	3/14/90 0:00		CLEANUP STARTED	GROUND WATER
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	TOSCO #5479	3/14/90 0:00		CLEANUP STARTED	GROUND WATER
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	TOSCO #5479	3/13/99		CLEANUP STARTED	SOIL
CIRCLE K STORE 5479 BP OIL	3724 128TH AVE SE	TOSCO #5479	3/25/98		CLEANUP STARTED	SOIL
ATC/VANCOM	3724 128TH AVE SE	TOSCO #5479	3/25/98		AWAITING CLEANUP	GROUND WATER
6990	2000 118TH AVE SE	SUBURBAN AIRPORTER	12/9/93		AWAITING CLEANUP	SOIL
6990	4000 128TH AVE SE	UNOGAL STATION 6990	12/9/93		REPORTED CLEANED UP	SOIL
6990	4000 128TH AVE SE	UNOGAL STATION 6990	12/7/90		CLEANUP STARTED	GROUND WATER
6990	4000 128TH AVE SE	UNOGAL STATION 6990	12/7/90 0:00		CLEANUP STARTED	GROUND WATER
6990	4000 128TH AVE SE	UNOGAL STATION 6990	12/7/90 0:00		REPORTED CLEANED UP	SOIL
CHEVRON 92360	4000 128TH AVE SE	UNOGAL STATION 6990	12/7/90		CLEANUP STARTED	SOIL
CHEVRON 92360	4000 128TH AVE SE	UNOGAL STATION 6990	12/7/90 0:00		CLEANUP STARTED	SOIL
CHEVRON 92360	9204 128TH PL SE	CHEVRON STATION #9-2360	3/1/85		MONITORING	SOIL
CHEVRON 92360	9204 128TH PL SE	CHEVRON STATION #9-2360	3/1/85		CLEANUP STARTED	GROUND WATER
CHEVRON 92360	9204 128TH PL SE	CHEVRON STATION #9-2360	12/13/94		MONITORING	GROUND WATER
CHEVRON 92360	9204 128TH PL SE	CHEVRON STATION #9-2360	3/1/85		CLEANUP STARTED	SOIL
BELLEVUE SCHOOL ENATAI ELEMENTARY (EXEMPT)	10815 SE 29rd	BELLEVUE SCHOOL ENATAI ELEMENTARY (EXEMPT)	10/1/92		REPORTED CLEANED UP	SOIL
BELLEVUE SCHOOL ENATAI ELEMENTARY (EXEMPT)	10815 SE 29rd	BELLEVUE SCHOOL ENATAI ELEMENTARY (EXEMPT)	10/1/92		REPORTED CLEANED UP	SOIL
WA DEPT OF TRANSPORTATION	3995 E MERCER WAY	WA DEPT OF TRANSPORTATION	5/3/93		CLEANUP STARTED	SOIL

Table 4

## EPA FINDS List Citations

ID NUMBER	SITE NAME	SITE ADDRESS	DATA BASES
Seattle (Information from Boateng & Associates, Inc.)			
WAD0-2024-7474	WAD020247474	CHINATOWN DEVELOPMENT CO	
WA00-0002-6799	WA0000026799	WA UW PIONEER SQUARE	RCRIS
WAD0-0948-1987	I10#198806024528	SEATTLE LIGHTING FIXTURE CO	RCRIS
WAD0-9855-8547	WAD098558547	BRIX MARITIME BARGING INC ALAS	NCDB
WAD0-9368-4777	I10#19871224WA003	KING CO STADIUM KINGDOME	RCRIS
WAD9-8176-8559	WAD981768559	KING CNTY FACILITIES MANAGEMENT	NCDB
WAD9-8265-9807	WAD982659807	KING CNTY COURTHOUSE E	RCRIS
WA00-0182-4242	WAR000009910	KING CNTY CORRECTION FACILITY	RCRIS
WAD9-8176-2214	I10#198611121513	SMITH TOWER	RCRIS
WAD9-8176-2214	WAR000002758	SMITH TOWER	NCDB
WAD9-8176-2214	WAR000002758	SMITH TOWER	BRS1995
WAD9-8177-0837	WAD981770837	KING CNTY COURTHOUSE	RCRIS
WAD9-8176-8245	WAD981768245	KING CNTY POLICE	RCRIS
WA00-0061-0329	007726WA 002	CHEM MARK OF KING COUNTY	RCRIS
WAD9-8847-4060	WAD988474060	NF CORP 1ST AVE S	SSTS
WAD0-9781-8835	WAD097818835	HEARTWOOD INC 1ST AVE	RCRIS
WAD9-8176-9565	WAD981769565	IMMUNODIAGNOSTICS INC	RCRIS
0000-0684-5040	WAH000002733	BIOCOLL LABS	RCRIS
WAD9-8265-6902	WAD982656902	KOLL MANAGEMENT SVCS	RCRIS
WAD9-8098-6681	I10#198712211513	SEATTLE MUNICIPAL BLDG	RCRIS
WAD0-9463-2031	WAD094632031	TRUCK CENTER CORP	NCDB
0000-0757-5424	WAD988495131	SEATTLE CITY DEPT ADMIN SVC	RCRIS
WAD9-8849-5511	WAD988495511	SEATTLE CITY FIRE DEPT UTILIT	RCRIS
WAD9-8852-1134	WAD988521134	C. E. I. SERVICES	RCRIS
WAD0-0948-3561	WAD009483561	SEATTLE CITY HEALTH DEPT	PADS
WAD0-4806-4836	I10#19871229WA003	DEXTER HORTON BLDG	RCRIS
WA00-0215-5547	WAR000002394	PIONEER TITLE BLDG	NCDB
WAD9-8846-6777	10-88-0009-0005	MCDONALDS RESTAURANT	RCRIS
WAD9-8846-6777	10-91-0365-0001	MCDONALDS RESTAURANT	DOCKET
WA00-0215-5489	WAH000001685	PIER 46 FERRY TERMINAL	DOCKET
WAD9-8072-5436	10-85-0015-0001	WDOT WA STATE FERRIES COLEMAN	RCRIS
WAD9-8848-8482	WAD988488482	SALVATION ARMY	DOCKET
WAD9-8265-8452	WAD982658452	JAMES G MURPHY CO	RCRIS

Table 4

## EPA FINDS List Citations

ID NUMBER	SITE NAME	SITE ADDRESS	DATA BASES
WAD0-8090-5490	WAD080905490	SEATTLE PORT TERM 48	RCRIS
WAD9-8176-8765	WAD981768765	SEATTLE CITY TRANSP DEPT	RCRIS
WAD9-8176-8765	WAD981768765	SEATTLE CY OF TRANSPORTATION D	RCRIS
WAD9-8176-8765	WAD981768765	SEATTLE CITY TRANSP DEPT	BRS1995
WAD9-8176-8765	WAD981768765	SEATTLE CY OF TRANSPORTATION D	RCRIS
WAD0-7663-8139	WAD076638139	OLYMPIC REPROGRAPHICS	BRS1995
WAD9-8176-9243	10-87-0088-0002	FRYE ART MUSUEM 1061 6TH AVE	RCRIS
WAD0-4749-7227	D10#1089-10-06-325	ROMAC INDUSTRIES	DOCKET
WAD0-4749-7227	I10#19890606AX001	ROMAC INDUSTRIES INC	NCDB
WAD0-4749-7227	WAD047497227	ROMAC INDUSTRIES INC	NCDB
WAD9-8176-6132	WAD981766132	METRO KING CNTY DOT TRANSIT DI	RCRIS
WAD9-8176-6132	WAD981766132	METRO KING CO-DOT-TRANSIT DIV-	RCRIS
WAD9-8177-2692	WAD981772692	SAYBOLT INC SEATTLE	BRS1995
WAD0-0490-8885	WAD004908885	LOWE PARKER CORP	RCRIS
WAD0-5886-8295	WAD053868295	WASHINGTON IRON WORKS INC	RCRIS
WAD0-5836-7152	WAD058367152	NORTHWEST ENVIROSERVICE INC	RCRIS
WAD0-5836-7152	I10#199411030739	NORTHWEST ENVIROSERVICE INC	BRS1995
WAD0-5836-7152	WAD058367152	EMERALD PETROLEUM SERVICES INC	NCDB
WAD9-8851-8411	WAD988518411	US DOJ DEA ALASKAN WAY S SEATT	RCRIS
WAD0-5836-7152	10-93-0109-0001	NORTHWEST ENVIROSERVICE	RCRIS
WAD0-5836-7152	WAD058367152	NORTHWEST ENVIRO SERVICE INC	RCRIS
WAD9-8850-9873	WAD988509873	FRYE ART MUSEUM	DOCKET
WAD9-8066-4593	WAD980664593	SEAFIRST COMPUTER SVCS CORP	PADS
WAD9-8098-3522	WAD980983522	METRO KING CNTY DOT TRANSIT SE	RCRIS
WAD9-8098-3522	WAD980983522	METRO KING COUNTY-DEPT OF TRAN	RCRIS
WAD0-0064-3593	WAD000643593	WESTERN PACIFIC VACUUM SVC INC	RCRIS
WAD0-5836-7152	I10#198203161709	NORTHWEST ENVIROSERVICE INC	BRS1995
WAD0-5836-7152	D10#1092-10-10-261	NORTHWEST ENVIROSERVICE INC SE	RCRIS
WAD0-5836-7152	I10#199202263124	NORTHWEST ENVIROSERVICE INC SE	NCDB
WAD0-5836-7152	I10#19900320WA03	NORTHWEST ENVIROSERVICE INC SE	NCDB
WAD0-5836-7152	I10#199308241513	NORTHWEST ENVIROSERVICE INC SE	NCDB
WAD9-8846-8567	WAD988468567	STANDARD BRANDS DROP	NCDB
0000-0755-4212	WAD010189769	INDUSTRIAL REBUILD INC	NCDB
		1714 1ST AVE S	RCRIS

Table 4

## EPA FINDS List Citations

ID NUMBER	SITE NAME	SITE ADDRESS	DATA BASES
WAD9-8848-6122	WAD988486122	PARAMOUNT SUPPLY CO 1717 6TH AVE S	RCRIS
WA00-0088-5533	WA0000885533	BURLINGTON NORTHERN SANTA FE R 1735 3RD AVE S	RCRIS
WAD9-8847-3724	WAD988473724	AMTRAK W KING ST YARD MATERIAL 1739 3RD AV S	RCRIS
WAD0-2741-2733	WAD027412733	BINKS MANUFACTURING CO 1749 1ST AVE S	RCRIS
WAD9-8851-0954	WAD988510954	VECA PLAZA 1762 AIRPORT WAY S	RCRIS
WAD9-8176-9300	10-87-0088-0003	FRYE ART MUSEUM 1765 6TH AVE 1765 6TH AVE S	RCRIS
WA00-0003-6244	WA0000036244	PORT OF SEATTLE TERM 34 19 S MASSACHUSETTS ST TERM	DOCKET
WA00-0003-6244	WA0000036244	SEATTLE PORT TERM 34 19 S MASSACHUSETTS ST TERM	BRS1995
WAD9-8098-7424	WAD980987424	301 DRUM 301 2ND S	RCRIS
WAD0-4403-6978	WAD044036978	NEMCO ELECTRIC CO 307 S MAIN ST	RCRIS
WAD9-8265-5367	WAD982655367	ATKINSON DILLINGHAM 500 ROYAL BROUGHAM WY	RCRIS
WAD0-0927-5652	WAD009275652	BEMIS CO INC 4TH 55 S ATLANTIC ST	RCRIS
0000-0755-4566	WAD027473974	SPIC N SPAN CLEANERS INC 652 S DEARBORN ST	RCRIS
WAD9-8847-1868	WAD988471868	SEATTLE CITY PUBLIC UTILITIES 707 S PLUMMER ST	RCRIS
WAD9-8850-5293	I10#19911010RX009	CRESCENT MFG CO INC 800 MAYNARD AVE S	RCRIS
WA00-0215-6776	WAR000000471	METRO KING CNTY DOT TRANSIT DI 802 S DEARBORN ST	RCRIS
WA84-7000-0037	WA-470000037	USGSA AIRPORT WAY 815 AIRPORT WAY	NCDB
WAD0-2747-4279	WAD027474279	SEATTLE CITY AIRPORT WAY BRIDG 830 4TH AVE S	RCRIS
WA00-0215-6859	WAR000000851	POPICH SIGN CO 831 AIRPORT WAY S	FFIS
WAD9-8848-6684	I10#199105012759	SEATTLE PORT OF TERMINAL 42 901 ALASKAN WAY S TERMINAL 4	RCRIS
WAD9-8849-0041	WAD988490041	KIEWIT PACIFIC CO SEATTLE TRA DEARBORNE & I5	BRS1995
WA46-9039-0006	WA4690390006	US DOT CG POLAR STAR PIER 37 USCG SUPPORT CTR	NCDB
WA46-9039-0006	WA-690390006	USDOT CG POLAR STAR PIER 37 USCG SUPPORT CTR	RCRIS
WAD9-8083-5433	WAD980835433	DYNACARE BEACON HILL LAB 1200 12TH AVE S	RCRIS
WAD9-8083-5433	I10#198909280822	PACIFIC MEDICAL CTR 1200 12TH AVE S	RCRIS
WAD9-8098-6889	WAD980986889	BRIGGS TECHNOLOGIES SEATTLE 1238 S WELLES ST	NCDB
WAD9-8851-6787	WAD988516787	WA DOT CONTRACTORS WORK AREA S 1360 LAKESIDE AVE S	RCRIS
0000-0755-7468	WAD980974745	GOODWILL INDUSTRIES SEATTLE 1400 S LN	RCRIS
WAD0-0924-6927	WAD009246927	RAINIER OVEN CORP 1419 S JACKSON ST	RCRIS
WAD9-8848-7898	WAD988487898	COLOR GRAPHICS 1421 S DEAN ST	RCRIS
WAD9-8848-0174	I10#19900927WA003	SEATTLE CITY LIGHT WELLER ST 1600 S WELLER ST	RCRIS
WAD1-0335-1581	WAD103351581	BELSHAW BROTHERS INC 1750 22ND AVE S	NCDB
WAD1-0335-1581	WAD103351581	BELSHAW BROTHERS INC 1750 22ND AVE S	BRS1995

Table 4

## EPA FINDS List Citations

ID NUMBER	SITE NAME	SITE ADDRESS	DATA BASES
WAD9-8847-7717	WAD988477717	INTERSTATE BRANDS CORP WONDER	RCRIS
WAD9-8847-7717	WAD945221	INTERSTATE BRANDS CORP (WOND B	RCRIS
WAD9-8265-3859	WAD982653859	SEATTLE ENGINE REBUILDERS INC	AIRS/AFS
WAD9-8847-6743	98144RCTCC19012	ARCTIC ICE CREAM NOVELTIES	RCRIS
WAD0-5549-8687	WAD055498687	UNITED STATES FILTER CORP SEAT	TRIS
WAD0-5258-1816	WAD052581816	KP CORPORATION - SEATTLE	RCRIS
WAD0-5258-1816	WAD052581816	KP CORP SEATTLE	BRS1995
WAD0-0924-6935	WA0918848	GAI'S SEATTLE FRENCH BAKING CO	RCRIS
WAD9-9128-1924	WAD991281924	SHERWIN WILLIAMS CO 2021 22ND	AIRS/AFS
WAD0-0168-7425	WAD001687425	SHERWIN WILLIAMS CO 2027 22ND	RCRIS
WAD9-8098-2540	WAD980982540	DANIEL RADIATOR CORP	RCRIS
WAD0-4669-0442	WAD046690442	ART PROCESS INC	RCRIS
WAD0-2744-9180	WAD027449180	MACPHERSON LEATHER CO	RCRIS
WAD9-8851-1069	C10#10-92044-02-NO	ZION PREPARATORY ACADEMY	RCRIS
WAD9-8850-7745	WAD988507745	LOUGH MOTORS INC	NCDB
WAD9-8848-9456	WAD988489456	TEXACO 632320271	RCRIS
<b>Mercer Island (information from Boateng &amp; Associates, Inc.</b>			
WAD988503876		TEXACO SS 63232494	RCRIS
WAD988487682		CLYDES SVC INC SUNSET CHEVRON	RCRIS
WAD988476636		TEXACO STA 63 232 0276	RCRIS
WAD988475972		MERCER ISLAND CY OF FIRE DEPT	RCRIS
WAD071846729		MERCER ISLAND SD 400	NCDB, RCRIS
WAD981768013		WDOE NRO MERCER ISLAND	RCRIS
WAD988471959		MERCER ISLAND CY OF MAINT DEPT	RCRIS, DUNS
WA0001135532		ORKIN PLANTSCAPING	RCRIS
WAD054839766		FARMERS NEW WORLD LIFE INSURANCE	RCRIS, DUNS
WAD988487831		CORRYS FINE DRY CLEANING	RCRIS
WAD982654626		SILERS CLEANERS	RCRIS
WA0001013465		PAYLESS 2817	RCRIS
WAD982653461		LAKEVIEW DRY CLEANERS	RCRIS, DUNS
WAT540012549		USWCOM MERCER ISLAND CO	RCRIS
WAD988521837		BUHACH CO	NCDB
WAD071836035		SMITH TRUCKING CO	RCRIS

Table 4  
EPA FINDS List Citations

ID NUMBER	SITE NAME	SITE ADDRESS	DATA BASES
WA0000242438		WDOT MERCER IS 60TH AVE SE	RCRIS
WAD070398391		WRITING WORKS INC THE	RCRIS
WAD988487823		CLAMPPITTS CLEANERS	RCRIS, DUNS
WAD981772403		MERCER ISLAND CLEANERS	RCRIS, DUNS
WA0001399832		PICTURE PERFECT THE PHOTO PLACE	RCRIS
WAD980833719		G L CONSTRUCTION	RCRIS, DUNS
WAD988485140		COVENANT SHORES	RCRIS
WA0000133041		WDOE NRO MERCER WAY DRUM	RCRIS
WAT540011152		USWCOM MERCER ISLAND RPTR	RCRIS
<b>Bellevue (information from Environmental Data Resources, Inc</b>			
WAD981772296		NEWPORT SHORES DRUM	RCRIS-SQG
WAD021831292		GERMAN CAR SPECIALISTS	RCRIS-SQG
WAR000006767		CIRCLE K STORE 5479 BP OIL	RCRIS-SQG
WAR000002543		KITS CAMERA 1004	RCRIS-SQG
WAD988510210		A&M INC	RCRIS-SQG
WAD988520342		GEMINI AUTO	RCRIS-SQG
Legend:			
	RCRIS: Resource Conservation and Re	RCRIS: Resource Conservation and Recovery Act List	
	PCS: Permit Compliance System	PCS: Permit Compliance System	
	BRS/DUNS: Dun and Bradstreet	BRS/DUNS: Dun and Bradstreet	
	AIRS/AFS: AIRS Facility System	AIRS/AFS: AIRS Facility System	
	NCDB: National Compliance Database	NCDB: National Compliance Database	
	DOCKET: Enforcement Docket System	DOCKET: Enforcement Docket System	
	FFIS: Federal Facility Information System	FFIS: Federal Facility Information System	
	CICIS: Chemical in Commerce Informat	CICIS: Chemical in Commerce Information System	
	PADS: PCB Handler Activity Data Base	PADS: PCB Handler Activity Data Base	
	TRIS: Toxic Chemical Release Inventor	TRIS: Toxic Chemical Release Inventory System	



Table 5

## EPA ERNS List Citations

Incident	Type of Spill	Cause of Spill	Date	Reporting	Unique Location	Location
Seattle (information from Boateng & Associates, Inc.)						
UNKNOWN / UNKNOWN SHEEN SIGHTING, SHEEN SIZE: UNKNOWN, CLR: RAINBOW ESTIMATE 10 GALS OF DIESEL.	UNKNOWN SHEEN	UNKNOWN	2-Jan-97	DISCOVERED		PIER 66
FERRY WALLA WALLA/OVERBOARD DISCHARGE LINE LEFT OPENED DURING INTERNAL FUEL TRANSFER	VESSEL	OPERATOR ERROR	2-Feb-97	OCCURRED		801 ALASKAN WAY SOUTH, PIER 52
USCGC BAYBERRY/OIL SPILLED DURING FIRE PUMP OPERATIONS	VESSEL	OTHER	18-Mar-97	OCCURRED		1517 ALASKAN WAY, PIER 36
55 GALLON DRUM WAS FOUND IN THE WATER (NOT LEAKING)	FIXED	DUMPING	15-May-97	DISCOVERED		PIER 36
OVERFILL OF UNDERGROUND STORAGE TANK	FIXED	OPERATOR ERROR	3-Jun-97	OCCURRED		6TH AND HOLGATE
PASSENGER FERRY "SKAGIT" / OIL COOLER FAILURE ALLOWED OIL TO SPILL OUTRAW WATER DISCHARGE VENT	VESSEL	EQUIPMENT FAILURE	11-Nov-97	OCCURRED		PIER 50 / ALASKAN WAY
BOTTOM OF TRAILER (F TRACTOR TRAILER)/UNKNOWN REASONS - CAUSE UNDER INVESTIGATION	MOBILE	UNKNOWN	16-Jan-98	DISCOVERED		SEATTLE TRAIN YARD, RAMP 7
CGC MARIPOSA / HYDRAULIC LEAKING FROM UNKNOWN SOURCE ON DECK OF VESSEL	VESSEL	UNKNOWN	11-May-98	DISCOVERED		1519 ALASKAN WAY SOUTH
P250 FIRE PUMP/RESIDUAL MATERIAL WAS DISCHARGED WHILE CLEANING THE USCG CUTTER "POLAR SEA"	VESSEL	OPERATOR ERROR	23-Sep-98	DISCOVERED		1519 ALASKAN WAY SOUTH, PIER 36
TRANSFER TANK WARNING LIGHTS WERE NOT OPERATING CAUSING A RELEASE OF SEWAGE INTO THE WATER	FIXED	EQUIPMENT FAILURE	16-Nov-98	OCCURRED		801 ALASKAN WAY, PIER 52
UNKNOWN / UNKNOWN SHEEN SIGHTING, SHEEN SIZE: 500' X 500'	UNKNOWN SHEEN	UNKNOWN	5-Dec-98	DISCOVERED		PIER 49 SEATTLE
UNKNOWN / UNKNOWN SHEEN SIGHTING, SHEEN SIZE: 100 FT X 100 FT / COLOR: RAINBOW	UNKNOWN SHEEN	UNKNOWN	30-Dec-98	DISCOVERED		PIER 50
HYDRAULIC LINE ON CRANE / BROKEN LINE	FIXED	EQUIPMENT FAILURE	5-Jan-99	OCCURRED		TERMINAL 46
UNKNOWN / UNKNOWN SHEEN SIGHTING, SHEEN SIZE: UNK / COLOR: RAINBOW	UNKNOWN SHEEN	UNKNOWN	13-Jan-99	DISCOVERED		PIER 36
HYDRAULIC STEERING RAM ON FERRY / LEAK IN STEERING RAM	VESSEL	EQUIPMENT FAILURE	15-Jan-99	DISCOVERED		PIER 50
PASSENGER FERRY MV SHINOOK / LEAKY TRANSFER HOSE	VESSEL	EQUIPMENT FAILURE	30-Jan-99	OCCURRED		PIER 46

Table 5

EPA ERNS List Citations

DOING LUBE OIL CHANGE ON ONE OF THE COMPANY BOATS SPILLED SMALL AMOUNT OF LUBE OIL	VESSEL	UNKNOWN	26-May-99	OCCURRED		801 ALASKAN WAY, PIER 52
CALLER STATES SOMEONE IS DUMPING SOME KIND OF MATERIALS INTO ELLIOTTBAY / MATERIALS HAS NO ODOR/SUSTAIN TURNING WATER WHITE/GRAY/GREEN	FIXED	DUMPING	18-Jun-99	OCCURRED		BETWEEN PIERS 56 AND 57
UNKNOWN / UNKNOWN SHEEN SIGHTING, SHEEN SIZE: UNK / RAINBOW	UNKNOWN SHEEN	UNKNOWN	18-Jun-99	DISCOVERED		PIER 48
UNKNOWN / UNKNOWN SHEEN SIGHTING, SHEEN SIZE: 100 X 100 YDS / COLOR: BLACK AND BROWN GOOEY MATERIAL	UNKNOWN SHEEN	UNKNOWN	23-Jul-99	DISCOVERED		PIER 46 ON ALASKAN WAY
UNKNOWN / UNKNOWN SHEEN SIGHTING, SHEEN SIZE: 15 FT AREA / COLOR: NO DISTINCT COLOR	UNKNOWN SHEEN	UNKNOWN	11-Aug-99	DISCOVERED		1519 ALASKAN WAY
UNKNOWN / UNKNOWN SHEEN SIGHTING, SHEEN SIZE: 15 FT AREA / COLOR: NO DISTINCT COLOR	UNKNOWN SHEEN	UNKNOWN	11-Aug-99	DISCOVERED		1519 ALASKAN WAY
A COUPLE OF CUPS OF OIL WHERE ACCIDENTALLY SPILLED DOWN THE DECK DRAIN AND INTO THE WATER	VESSEL	OPERATOR ERROR	13-Nov-99	OCCURRED		1519 ALASKAN WAY SOUTH, PIER 36
FUEL PORT CONNECTION ON FERRY "MV CHINOOK" / SOME MATERIAL SPILLED ON DECK DURING FUELING AND MATERIAL WENT INTO BIKE RACK / RAIN WASHEN IT OFF	VESSEL	OTHER	15-Nov-99	DISCOVERED		PIER 50
UNKNOWN / UNKNOWN	UNKNOWN SHEEN	UNKNOWN	13-Jan-00	DISCOVERED	UNKNOWN SHEEN INCIDENT	PIER 48
UNKNOWN / UNKNOWN	UNKNOWN SHEEN	UNKNOWN	19-Jan-00	DISCOVERED	BETWEEN 52 AND 54 PIERS	
M/V "CHINOOK PASSENGER ONLY FERRY" / EQUIPMENT FAILURE	VESSEL	EQUIPMENT FAILURE	11-Feb-00	OCCURRED		PIER 50
VACUUM TRUCK / HOSE DEVELOPED LEAK	MOBILE	EQUIPMENT FAILURE	10-May-00	OCCURRED		PIER 36
THE MATERIAL RELEASED FROM A PAINT CAN THAT SPILLED.	FIXED	OTHER	16-Jun-00	OCCURRED		1519 ALASKAN WAY SOUTH
WHILE ROTATING PORT SHAFT NOTICE AN OIL SHEEN	VESSEL	EQUIPMENT FAILURE	31-Jul-00	DISCOVERED		1519 ALASKAN WAY
CALLER REPORTED THAT SHE RECEIVED A CALL INFORMING HER OF AN UNKNOWN SUBSTANCE ON THE HIGHWAY.	FIXED	UNKNOWN	1-Aug-00	DISCOVERED		190 ON RAMP OFF OF FOURTH AVE S
CALLER REPORTING AN UNKNOWN SHEEN.	UNKNOWN SHEEN	UNKNOWN	17-Aug-00	DISCOVERED	UNKNOWN SHEEN INCIDENT	1519 ALASKAN WAY SOUTH
CALLER STATED THE "CHINOOK" HYDRAULIC LINE LEAKED DUE TO A BREAK IN THE LINE	VESSEL	EQUIPMENT FAILURE	24-Oct-00	OCCURRED		PIER 52

Table 5

## EPA ERNS List Citations

THE CALLER IS REPORTING THAT A MATERIAL WAS SPILLED FROM A CONTAINER OVER THE SIDE OF THE VESSEL DUE TO OPERATOR ERROR.	VESSEL	OPERATOR ERROR	31-Oct-00	OCCURRED	PIER 36 AND PIER 37	1519 ALASKAN WAY
THERE WAS HYDRAULIC SPILL ON THE DECK WHICH IS GOING INTO THE WATER AND THE VESSEL DOESN'T HAVE ANYONE ONBOARD.	VESSEL	UNKNOWN	6-Nov-00	DISCOVERED	PIER 58 SEATTLE	
WASTE OIL WAS INADVERTENTLY DISCHARGED FROM A VENT PIPE ON A MILITARY VESSEL INTO THE DUWAMISH EAST WATERWAY.	VESSEL	EQUIPMENT FAILURE	8-Jan-01	OCCURRED		PIER 36
THE CALLER STATED THAT SOMEONE IS WASHING SOMETHING ON THEIR BALCONY AND ANTI-FREEZE IS SPILLING TOWARDS A STORM DRAIN.	FIXED	DUMPING	29-Jan-01	DISCOVERED	BALCONY IS ON 4TH OR 5TH FLOOR OF THE CORNER UNIT ABOVE THE LAMPREAI RESTAURANT	2414 1ST AVE
AN OIL SHEEN WAS DISCOVERED COMING FROM AN UNKNOWN SOURCE ON A PASSENGER FERRY VESSEL IN ELLIOT BAY.	VESSEL	EQUIPMENT FAILURE	8-Feb-01	DISCOVERED	PIER 46	ELLIOT BAY
THE CALLER STATED THAT WHILE FILLING A REMOTE FILL, THE OVERFILL ALARM DID NOT WORK, AND THE FAULTY POP UP VALVE RELEASED FUEL.	STORAGE TANK	EQUIPMENT FAILURE	15-Feb-01	OCCURRED	1915 4TH AVE. S.	
DIESEL TANK ON VESSEL, MATERIAL LEAKED OUT DURING CLEANING	VESSEL	OTHER	21-Feb-01	OCCURRED	PIER 36	1519 ALASKAN WAY
THE CALLER REPORTS THAT DURING INERTING OPERATION FOR GAS FREE CERTIFICATION ON A FLANGE ON A FUEL OIL PIPE, 2 GALLONS BSM (DIESEL) WERE PURGED FROM PIPE, ONTO 01 WEATHER DECK AND WENT OUT THE DECK DRAIN INTO THE SOUND.	VESSEL	OTHER	21-Feb-01	OCCURRED	PIER 34, ISC SEATTLE	
THE CALLER REPORTS THAT DURING INERTING OPERATION FOR GAS FREE CERTIFICATION ON A FLANGE ON A FUEL OIL PIPE, 2 GALLONS BSM (DIESEL) WERE PURGED FROM PIPE, ONTO 01 WEATHER DECK AND WENT OUT THE DECK DRAIN INTO THE SOUND.	VESSEL	OTHER	21-Feb-01	OCCURRED	PIER 34, ISC SEATTLE	
THE CALLER REPORTS THAT DURING INERTING OPERATION FOR GAS FREE CERTIFICATION ON A FLANGE ON A FUEL OIL PIPE, 2 GALLONS BSM (DIESEL) WERE PURGED FROM PIPE, ONTO 01 WEATHER DECK AND WENT OUT THE DECK DRAIN INTO THE SOUND.	VESSEL	OTHER	21-Feb-01	OCCURRED	PIER 34, ISC SEATTLE	

Table 5

EPA ERNS List Citations

THE MATERIAL WAS RELEASED FROM THE PRESSURE WASHER MACHINE FUEL LINE DUE TO CORROSION.	VESSEL	OTHER		21-May-01	OCCURRED	BERTH B	1519 ALASKAN WAY SOUTH
THE SUSPECTED RESPONSIBLE PARTY HAD TWO "FIVE GALLON PALES DROP IN ELLIOTT BAY BY ACCIDENT DUE TO MOVING THE PALES.	FIXED	OTHER		30-May-01	OCCURRED		955 ALASKAN WAY WEST
THE MATERIAL SPILLED FROM THE USCGC POLAR SEA'S FIRE MAIN DUE TO AN UNKNOWN CAUSE. THE MATERIAL IS 500 PARTS WATER TO .5 A PINT OF OIL.	VESSEL	UNKNOWN		8-Jun-01	OCCURRED		1519 ALASKAN WAY S., PIER 36
RELEASE DUE TO AN OVERFLOW OF A FLUSHING PUMP	FIXED	EQUIPMENT FAILURE		6-Jul-01	DISCOVERED		PIER 52
THE CALLER STATED DIESEL LEAKED OUT OF A STORAGE TANK AND FROM A PIPELINE DUE EQUIPMENT FAILURE.	STORAGE TANK	EQUIPMENT FAILURE		16-Oct-01	DISCOVERED		1519 ALASKAN WAY SOUTH
THE MATERIAL RELEASED OUT OF THE TRACTOR TRAILER'S SADDLETANK FROM A PUNCTURE IN THE TANK	MOBILE	TRANSPORT ACCIDENT		7-Dec-01	OCCURRED	SAFE CO FIELD	ROYAL BROUGHAM & 1ST
HYDRAULIC OIL SPILLED INTO THE PUGET SOUND FROM A HYDRAULIC LINE ON A FERRY.	VESSEL	EQUIPMENT FAILURE		12-Dec-01	OCCURRED		PIER 46
THE CALLER IS REPORTING THE DERAILMENT OF ONE LOCOMOTIVE AT A RAIL YARD. THE LOCOMOTIVE IS IN THE UPRIGHT POSITION. THE CAUSE OF THE DERAILMENT IS A BORKEN RAIL.	RAILROAD NON-RELEASE	OTHER		16-Nov-01	OCCURRED	KING ST. STATION	
Mercer Island							
No sites on ERNS list							
Bellevue (Information from Environmental Data Resources, Inc.)							
UNKNOWN	UNKNOWN	UNKNOWN					3900 Lake Washington Blvd SE

Table 6 WA Department of Ecology  
CSCS List

SITE NAME	SITE ADDRESS	METALS	PCBS	PETSTICIDES	PETROLEUM	PHENOLICS	NON-HALOGENATED SOLVENTS	DIOXIN	PAHS	REACTIVE WASTES	CORROSIVE WASTES	RADIOACTIVE WASTES	CONVENTIONAL ORGANICS	CONVENTIONAL INORGANICS	ASBESTOS	Halogenated org compounds
	Seattle (Information from Boateng & Associates, Inc.)															
A	CENTRAL SEATTLE WATERFRONT	C	C	S	C	C	C		C	C						
B	SEATTLE STEAM CO WESTERN AV	C		S	S	S	S		C							
B	SEATTLE STEAM CO WESTERN AV	C		S	S	S	S		C							
C	Central District YMCA	C							C							
D	Barg French Cleaners	C		C												
D	Barg French Cleaners	C		C												
E	COLMAN DOCK SEDIMENTS	C		C					C	C						
F	DEAN STRALEYS 9TH & JAMES BP	C							C							
G	SEATTLE STEAM CO POST AV	C		S	S	S	S		C							
G	SEATTLE STEAM CO POST AV	C		S	S	S	S		C							
H	Seattle Technical Finishing Inc	S		S	S	S	S									
H	Seattle Technical Finishing Inc	S		S	S	S	S									
H	Seattle Technical Finishing Inc	C		C	R											
I	UNION STATION SITE	S		S	S	S	S		S	S						
I	UNION STATION SITE	C		C	C	C	C		C	C	C					
I	UNION STATION SITE	C		C	C	C	C		C	S	S					
J	Emerald Petroleum Services Inc	S		S												
J	Emerald Petroleum Services Inc	S		S												
K	Industrial Plating Corp	S		S												
K	Industrial Plating Corp	C		C												
L	METRO CENTRAL OPERATING BASE	S		S	S	S	S		S							
L	METRO CENTRAL OPERATING BASE	S		S	S	S	S		S							
L	METRO CENTRAL OPERATING BASE	C		S	S	S	S		C							
L	METRO CENTRAL OPERATING BASE	S		S	S	S	S		S							
M	Metro King Onty DOT Transit Div Dearborn	C		C	S	S	S		C	S	S					
M	Metro King Onty DOT Transit Div Dearborn	C		C	S	S	S		C	S	S					
N	PORT OF SEATTLE TERM.30	C		C					C							
N	PORT OF SEATTLE TERM.30	C		C					C							

Table 6 WA Department of Ecology  
CSCS List

	SITE NAME	SITE ADDRESS	METALS	PCBs	PETSTICIDES	PETROLEUM	PHENOLICS	NON-HALOGENATED SOLVENTS	DIOXIN	PAHs	REACTIVE WASTES	CORROSIVE WASTES	RADIOACTIVE WASTES	CONVENTIONAL ORGANICS	CONVENTIONAL INORGANICS	ASBESTOS	Halogenated org compounds
N	PORT OF SEATTLE TERM 30	2715 E MARGINAL WAY S	S							S							
N	PORT OF SEATTLE TERM 30	2715 E MARGINAL WAY S	C							C							
N	PORT OF SEATTLE TERM 30	2715 E MARGINAL WAY S	C							C							
O	SEATTLE CITY FIRE GARAGE	815 S DEARBORN ST	S		S	S				S	S						
P	Seattle Public Utilities Operations Ctr	2700 AIRPORT WY S	S							S							
P	Seattle Public Utilities Operations Ctr	2700 AIRPORT WY S	C							C							
Q	EAST WEST INVESTMENTS	6TH AVE & S LANE	C		S					C							
Q	EAST WEST INVESTMENTS	6TH AVE & S LANE	C		S					C							
R	RAINIER BREWERY	3100 AIRPORT WAY S	C							C							
R	RAINIER BREWERY	3100 AIRPORT WAY S	R							R							
S	Spic N Span Cleaners Inc	652 S DEARBORN ST	C		C					C							
S	Spic N Span Cleaners Inc	652 S DEARBORN ST	C		C					C							
T	RALPHS CONCRETE	800 POPLAR PLACE S															
T	RALPHS CONCRETE	800 POPLAR PLACE S	S							S							
T	RALPHS CONCRETE	800 POPLAR PLACE S	C							C							
U	RALPHS CONCRETE PUMPING	1511 RAINIER AV S	S							S							
U	RALPHS CONCRETE PUMPING	1511 RAINIER AV S	C		C					C							
U	Ralphs Concrete Pumping Vacant Lot	1517 RAINIER AVE S	C							C							
W	METAL LAUNDRY INCORPORATED	614 12TH	C		C	S				C		C					
W	METAL LAUNDRY INCORPORATED	614 12TH	C		C	C				C		C					
X	TD AUTO BODY & REPAIR	1209 E FIR ST	C		S	S				C		S					
X	TD AUTO BODY & REPAIR	1209 E FIR ST	C		S	S				S		S					
X	TD AUTO BODY & REPAIR	1209 E FIR ST	S		S	S				S		S					
	<b>Bellevue (information from Environmental Data Resources Inc.)</b>																
	Factoria Pit Sunset Park	132 Ave SE/Se 38th	S		S									S			
	Lakeside Industries Eastgate	13620 SE Eastgate Way	C		C	C		C									C
	C: Confirmed																
	S: Suspected																
	Data for Bellevue sites includes all affected media.C may include S for other media																

Table 7

## Other Possibly Contaminated Sites

0061

MAP ID	SITE NAME	ADDRESS	TYPE OF BUSINESS	APPX. DATES	DISTANCE AND DIRECTION FROM I-90*
	Mercer Island (information from Boateng & Associates, Inc.)				
7	CLYDE'S RADIATOR SHOP	2270 SE 76TH	RADIATOR SHOP	1960	0.05 N
9	MERCER ISLAND AUTO REBUILD	7644 SE 24TH	AUTO REBUILD	1965	0.01 S
16	STROM'S CUSTOM CLEANERS	2918 SE 78TH	DRY CLEANERS	1980-?	0.23 SW
28	FOUR SEASONS'S CLEANERS	7800 SUNSET HWY	DRY CLEANERS	1999	0.01 S
70	AUTO REPAIR	2807 SE 78TH	AUTO REPAIR		0.1 SW
71	USED CARS	McGILVRAS BLOCK 17 LOT 12	CAR SALES		0.1 SW
72	MERCER IS AUTOMART	7631 SUNSET HWY	CAR SALES	1970	0.01 S
73	OIL BURNER	7705 SUNSET HWY	HEATING OIL		0.01 S
74	EASTSIDE CLEANERS	8017 SE 28TH	DRY CLEANERS	1960-1970	0.07 SW
75	BETTY BRITE	8000-B SE 28TH	DRY CLEANERS	1970-1980	0.2 SW
76	MERCER ISLAND CLEANERS	2451 N MERCER WAY	DRY CLEANERS	1959-1970	0.01 N
77	COLOR CHIP PAINT STORE	7652 SE 27TH	PAINT STORE	1959-1960	0.15 SW
78	MERCER ISLAND LUMBER CO/ACE HARDWARE	3001 SE 78TH	LUMBER YARD	1960-1985	0.25 SW
79	TOWN CLEANERS	MERCER IS SHOPPING CTR	DRY CLEANERS	1960	0.1 SW
80	NICK'S PRINTERY	10070 N MERCER WY	PRINTER	1960	
81	PRIM SERVICE (CLEANERS)	MERCER IS SHOPPING CTR	DRY CLEANERS	1965-1970	0.1 SW
82	SPIC N SPAN CLEANERS	7615 SE 27TH	DRY CLEANERS	1965-1970	0.15 SW
83	MERCER CLEANING VILLAGE	7437 SE 27TH	DRY CLEANERS	1965-1980	0.2 SW
84	RUJAX CLEANERS	3441 SE 77TH PLACE	DRY CLEANERS	1975	0.45 SW
85	BUSY BEE CLEANERS	8004 SE 30TH	DRY CLEANERS	1980	0.18 SW
86	ISLAND BUILDER'S SERVICE	7688 SE 24TH	CONTRACTOR	1980	0.01 S
87	OSCAR CLEANERS	2835 SE 78TH	DRY CLEANERS	1999	0.15 SW
88	CLEANERS PLUS	7700 SE 27TH	DRY CLEANERS	1999	0.1 SW
89	PRIM CLEANERS	7822 SE 28TH	DRY CLEANERS	Assessor Recs	0.1 SW

\*Miles



## **Appendix E**

### **Consultation with Native American Tribes**



## APPENDIX E

A copy of the following letter of notification and consultation on the I-90 Project was sent to each of the individuals listed below:

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

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

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

JoAnn Batiste, General Manager  
Muckleshoot Tribe  
39015 172nd Avenue SE  
Auburn, WA 98092

Melissa Calvert, Wildlife and Cultural Resources Director  
Muckleshoot Tribe  
39015 172nd Avenue SE  
Auburn, WA 98092

Isable Tinoco, Natural Resources Director  
Muckleshoot Tribe  
39015 172nd Avenue SE  
Auburn, WA 98092

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

John Halliday, Executive Director  
Snoqualmie Tribe  
P.O. Box 670  
Fall City, WA 98024

Ray Mullen, Cultural Resources Director  
Snoqualmie Tribe  
P.O. Box 670  
Fall City, WA 98024

Matthew Mattson, Environmental Programs Director  
Snoqualmie Tribe  
P.O. Box 670  
Fall City, WA 98024

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

Alexis Barry, Executive Director  
Suquamish Tribe  
P.O. Box 498  
Suquamish, WA 98292

Charlie Sigo, Cultural Resources Director  
Suquamish Tribe  
P.O. Box 498  
Suquamish, WA 98292

Rob Purser, Fisheries Program Director  
Suquamish Tribe  
P.O. Box 498  
Suquamish, WA 98292

The Honorable Herman A. Williams, Jr.  
Tulalip Tribes  
6700 Totem Beach Road  
Marysville, WA 98271

Hank Gobin, Cultural Resource Manager  
Tulalip Tribes  
6700 Totem Beach Road  
Marysville, WA 98271

The Honorable Robert Wahpat, Chair  
Yakama Nation  
PO Box 151  
Toppenish, WA 98055-2000

Johnson Meninick, Cultural Resources Manager  
Yakama Nation  
PO Box 151  
Toppenish, WA 98055-2000





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

Northwest Washington Division  
Urban Corridors Office  
401 Second Avenue South, Suite 560  
Seattle, WA 98104-3850  
206-464-1220 / Fax 206-464-1190  
TTY: 1-800-833-6388  
[www.wsdot.wa.gov](http://www.wsdot.wa.gov)

October 28, 2002

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

Dear Chairperson Hansen:

The Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), Sound Transit, and the Washington State Department of Transportation (WSDOT) are preparing an environmental impact statement (EIS) to document the environmental consequences and possible mitigation measures for alternatives to improve two-way transit and high occupancy vehicle (HOV) operations on I-90 between Seattle and Bellevue. The EIS will be prepared to comply with both the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA). Sound Transit and WSDOT are the project proponents. The proposed I-90 Two Way Transit and HOV Operations Project would improve regional transit service by providing reliable two-way operations on I-90 between Seattle and Bellevue.

The study corridor encompasses the I-90 freeway between 4<sup>th</sup> Avenue South in Seattle and I-405 in Bellevue (see Figure 2-1). The present day facility comprises three independent freeway alignments: two three-lane outer roadways (eastbound and westbound) and a reversible two-lane barrier separated center roadway. The center roadway is commonly referred to as the I-90 Express Lanes and forms a portion of the region's high-occupancy vehicle (HOV) system.

The draft EIS will be evaluating a No-Build alternative and the build alternatives described below. The build alternatives would all improve transit travel times and reliability compared to the No-Build alternative. None of the alternatives being considered would widen I-90 outside of the existing right-of-way. With some of the alternatives, minor widening would occur on Mercer Island and in Seattle, in conjunction with reconfiguration of lane and shoulder widths throughout the corridor. The lane and shoulder widths on the existing bridges may be reconfigured in the proposed alternatives and widening will be evaluated to allow the existing bicycle/pedestrian path on the Homer Hadley (westbound) floating bridge to be preserved at its existing ten-foot width.

Based on information to date, it is anticipated the project will likely not result in the disturbance of any previously undisturbed soils. For this reason, the likelihood of finding or affecting any cultural, historical, or archaeological resources is likely to be very low. The Historical and Archaeological Resources section of the EIS will evaluate any existing resources in the project corridor and whether the project would result in any effects.

The following alternatives will be evaluated in the I-90 Two-Way Transit and HOV Operations DEIS:

**Alternative R-1: Existing/No Build**

Alternative R-1 would not involve any roadway modifications or construction apart from those required for preservation and maintenance of the corridor. Activities could include pavement and bridge deck rehabilitation, landscaping renovation, ITS upgrades, channelization and signing renewal, and heavy maintenance activities associated with the mechanical, electrical, and fire protection systems for the Mount Baker Ridge Tunnels and Lid, and the First Hill Lid.

**Alternative R-2B Modified: Two-Way Center Roadway**

With Alternative R-2B Modified, the outer roadways would continue to operate as they do currently. The center roadway would be changed to a two-way operation 24 hours per day, seven days per week, and only transit and HOV traffic would be able to use the center roadway. The HOV eligibility requirements would likely be changed from 2+ occupants per vehicle in the year of opening to 3+ occupants per vehicle in the year 2025.

Two center roadway off-ramps would be added on Mercer Island at 77<sup>th</sup> Avenue SE and 80<sup>th</sup> Avenue SE.

**Alternative R-5 Restripe: Transit-Only Shoulders without Widening**

With either R-5 Alternative, the existing reversible operations in the center roadway would be maintained, with both lanes operating in the same direction, westbound in the morning and eastbound at all other times. Transit-only shoulders would be created in both I-90 outer roadways for use by transit buses, eastbound in the morning peak period and westbound in the evening peak period. Transit buses would use the shoulders when traffic in the outer roadways is moving at speeds of less than 35 to 45 mph. Bus drivers would not be required to use the shoulder but would be allowed to use the shoulder at their discretion. Transit operators may opt not to use the transit-only lanes due to the difficult weaving movements required to access the lane. With this design option for Alternative R-5, the outer roadways would be restriped, and the traffic lanes and inside shoulder would be narrowed to create transit-only shoulder lanes on the outside shoulders.

**Alternative R-5 Modified: Transit-Only Shoulders with Outer Roadway Widening**

Portions of the outer roadways would be reconfigured to allow for a wider inside shoulder for westbound buses, providing continuity with the existing westbound HOV lane and transit connections to downtown Seattle. Ramps at Bellevue Way SE and on Mercer Island would be modified to provide connections to the westbound transit shoulder. The eastbound outer roadway would be widened to allow for standard inside shoulder and traffic lane widths in much of the corridor, while providing a wider outside shoulder for use by transit buses.

A westbound HOV lane would be added to the 80<sup>th</sup> Avenue Southeast off-ramp.

### **Alternative R-8A: Add HOV Lanes in Outer Roadway**

Alternative R-8A would retain the current reversible operations in the center roadway, with both lanes operating in the same direction. Single-occupant vehicles could use the center roadway only between Seattle and Mercer Island, per the existing restrictions on center roadway use. The outer roadways would be modified to provide one additional travel lane in both the eastbound and westbound direction for use by HOV traffic. This would be accomplished by restriping, reducing the width of existing shoulders and travel lanes, and where feasible, widening the outer roadways within the existing right-of-way. The center and outer roadways would likely operate with a two or more occupants per vehicle restriction. New ramps would be added on Mercer Island at 80<sup>th</sup> and 77<sup>th</sup> avenues southeast and the existing ramp at Bellevue Way modified to provide direct access to and from the new HOV lanes in the outer roadways.

### **R-2/R-8 Hybrid: Two-Way Center Roadway; Add 4<sup>th</sup> Lane Eastbound and Westbound in Outer Roadways (Subject to further evaluation)**

The I-90 center roadway would be modified to provide two-way operation, restricted to transit and eligible HOV traffic. A fourth lane would be added to the outer roadways. This fourth lane would accommodate Mercer Island and/or HOV 2 person carpools displaced from the center roadway with its conversion to two-way operation. *[Lane restrictions, operational hours, and other parameters are yet to be determined.]*

The I-90 center roadway would receive a center barrier and new exit ramps at 77th and 80th on Mercer Island. The outer roadways would be restriped and possibly widened to provide a fourth lane in each direction. The extent and type of widening would be dependent on the type of operation of the outer roadways.

### **The Section 106 Consultation Process**

To ensure that we take into account the effects of this undertaking on cultural, historical, and archaeological resources including properties listed in or eligible for listing in the National Register of Historic Places, WSDOT and Sound Transit are initiating formal Section 106 consultation pursuant to 36 CFR 800.2(c)(4). Recognizing the government-to-government relationship that the Federal Highway Administration (FHWA) has with the tribe, they will continue to play a key role in this undertaking as the responsible Federal agency. Please note that both FHWA and FTA are the lead federal agencies on this project but, by agreement of the project partners, FHWA will take the lead on the Section 106 consultation. We recognize the government-to-government relationship that the FHWA has with the tribe; however, WSDOT has been delegated the authority from the FHWA to coordinate with the tribes. Thus WSDOT, in coordination with Sound Transit, will be directly managing the cultural resources evaluation, and carrying out this undertaking. You may contact either WSDOT or Sound Transit (see below) for assistance with the process and/or the undertaking.

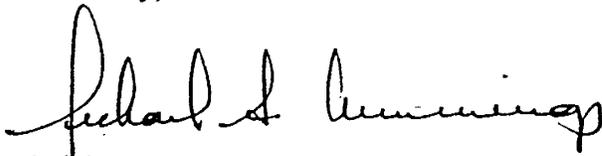
Name  
Date  
Page 4

Through consultation, we want to ensure that the tribe is afforded the opportunity to identify any concerns you may have regarding the effects of the proposed undertaking on historic properties; that you have a reasonable opportunity to advise the Federal Highway Administration, the Federal Transit Administration, Sound Transit, and the Washington State Department of Transportation on the identification and evaluation of historic properties, including those of traditional religious and cultural importance; that you have the opportunity to express your views on the undertaking's effects on such properties; and, that the tribe is a participant in the resolution of any adverse effects which the undertaking might have on such properties.

As defined by the Advisory Council on Historic Preservation, *consultation* means "...the process of seeking, discussing, and considering the views of other participants and, where feasible, seeking agreement with them regarding matters arising in the section 106 process." As such, consultation is fundamental to the process of seeking ways to avoid, minimize or mitigate the affects of the undertaking on historic properties. Consequently, your active participation as a consulting party in the proposed undertaking is encouraged.

Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party and identifying key tribal contacts, would be greatly appreciated. Please provide a response by **December 6** so that we may have your key input and discuss this undertaking and the area of potential effects. Should you have any questions about this project, you may contact Steve Kennedy, Senior Environmental Planner, Sound Transit, 401 S. Jackson, at (206) 398-5302 or [kennedys@soundtransit.org](mailto:kennedys@soundtransit.org) or, Paul Krueger, Environmental Coordinator, WSDOT, 401 2<sup>nd</sup> Avenue South, Seattle, WA, 98104, at (206) 464-1226 or [kruegep@wsdot.wa.gov](mailto:kruegep@wsdot.wa.gov).

Sincerely,



Michael Cummings  
Environmental and Systems Integration Director  
Urban Corridors Office

Enclosures: Map of Project Area (Figure 2.1)

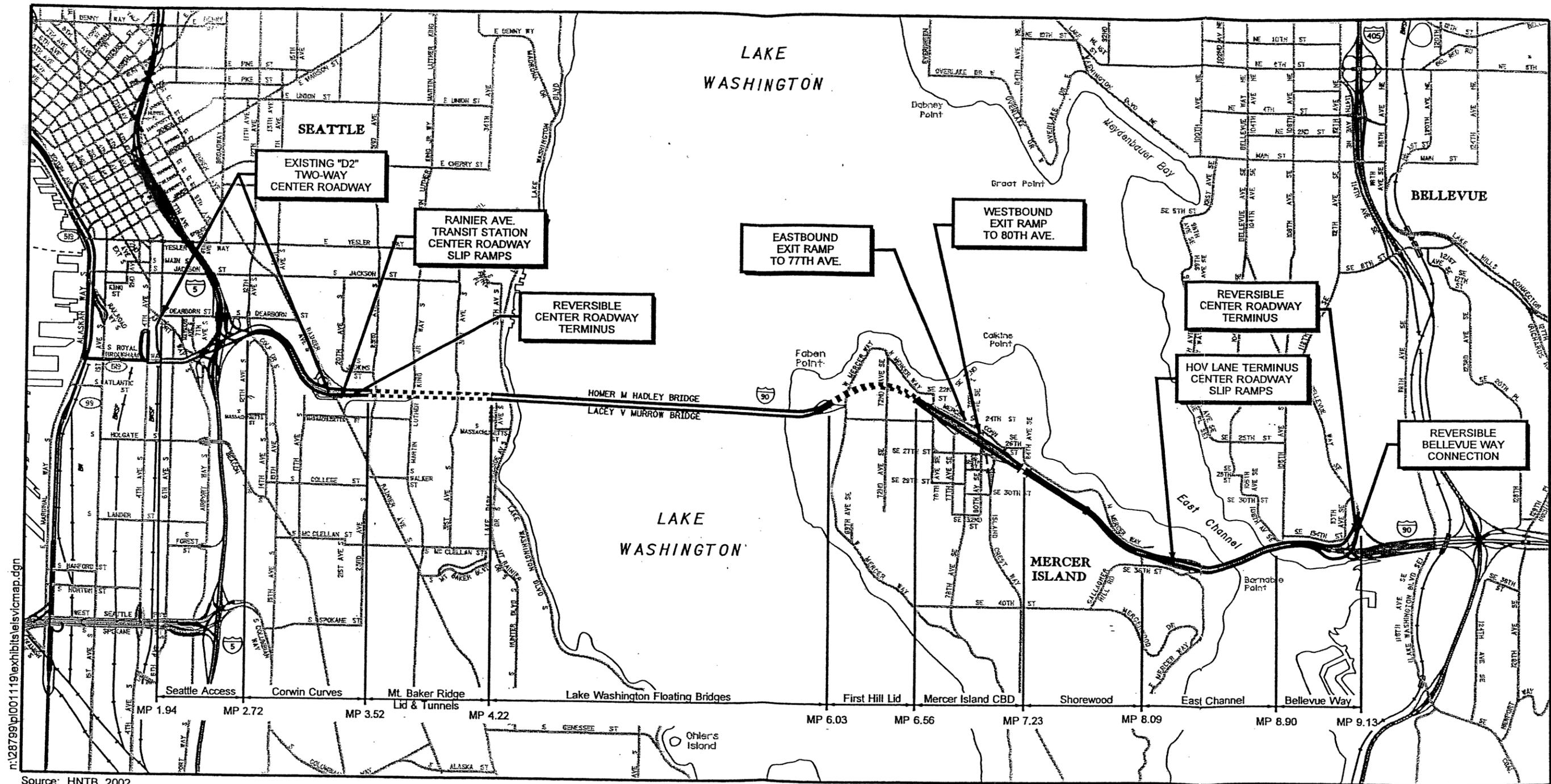
cc: SHPO (Dr. Allyson Brooks)

FHWA (Jim Leonard)

WSDOT (Paul Krueger, Mehrdad Moini, Lone Moody)

FTA (John Witmer)

Sound Transit (Steve Kennedy, Andrea Tull)



n:\28799\p1001119\exhibits\sls\icmap.dgn

Source: HNTB, 2002



Washington State Department of Transportation



No Scale

Figure 2-1  
Vicinity Map

**Appendix F**  
**Agency Correspondence**



## **Appendix F**

### **Letters Requesting Cooperating Agencies to NEPA Process**

July 30, 2002 To National Marine Fisheries Service  
July 30, 2002 To United States Coast Guard  
July 30, 2002 To United States Fish and Wildlife Service  
December 30, 2002 Reply from Army Corps of Engineers, Seattle District, Declining  
Cooperating Agency Status  
January 8, 2003 Letter from FTA Changing Status from Co-Lead to Cooperating  
Agency

### **Letters Concerning Evaluation of I-90 Bicycle and Pedestrian Path as a Potential Section 4(f) Resource**

November 19, 2002 To Federal Highway Administration  
November 19, 2002 To Federal Transit Administration  
November 25, 2002 Reply from FHWA and FTA to Department of Transportation

### **Letter Concerning Design Year for Air Quality Analysis**

June 26, 2003 To FHWA

### **Letters Recommending R-8A as Preferred Alternative**

July 15, 2003 From King County  
July 15, 2003 From City of Mercer Island  
July 15, 2003 From City of Seattle  
July 15, 2003 From City of Bellevue  
November 5, 2003 From City of Bellevue

### **Letters Concerning Determination of Eligibility and Effect for Floating Bridges**

December 19, 2003 To Office of Archaeology and Historic Preservation (OAHP)  
December 26, 2003 Response from OAHP on Historic Properties  
January 12, 2004 Response from OAHP on Lacey V. Murrow Floating Bridge  
January 13, 2004 Response from OAHP on Homer Hadley Floating Bridge

### **Letters Concurring on Findings of Biological Assessment**

January 20, 2004 From NOAA Fisheries  
February 24, 2004 From United States Fish and Wildlife Service (\*This letter refers to  
a Biological Assessment completed by Adolfson. The Biological  
Assessment to which USFWS refers was in fact completed by URS  
Corporation.)



**Letters Requesting Cooperating Agencies  
to NEPA Process**





U.S. Department  
of Transportation  
**Federal Highway  
Administration**

Washington Division

Suite 501 Evergreen Plaza  
711 South Capitol Way  
Olympia, Washington 98501-1284  
(360) 753-9480  
(360) 753-9889 (FAX)  
<http://www.fhwa.dot.gov/wadiv>

July 30, 2002

HFO-WA.3/I-90

Steve Landino  
Branch Chief  
Washington Habitat Branch  
National Marine Fisheries Service  
510 Desmond Dr. SE, Suite 103  
Lacey, WA 98503-1273

**I-90 Two-way Transit Project**  
**Request to be a Cooperating Agency**

Dear Mr. Landino:

The Federal Transit Administration (FTA), Federal Highway Administration (FHWA), Sound Transit, and the Washington State Department of Transportation (WSDOT) as co-lead agencies are initiating an Environmental Impact statement (EIS) to evaluate alternatives to improve regional mobility by providing reliable and safe two-way transit and HOV operations on I-90 between Bellevue and Seattle, while minimizing impacts to the environment and to other users and transportation modes.

**Request to Be a Cooperating Agency:**

We anticipate this project may require informal consultation under Section 7 of the Endangered Species Act. While adverse impacts to threatened and endangered species under NMFS jurisdiction are not anticipated, the project is likely to result in a relatively minor amount of new impervious surface which could increase stormwater runoff. A Biological Assessment (BA) will be prepared and is expected to be submitted to USFWS and NMFS following the identification of a preferred alternative. Because your agency is likely to be an agency of legal jurisdiction for permits required by the project, or may fall within your area of expertise, **we are requesting that you be a cooperating agency.**

**Whether NMFS is a cooperating agency or not, your agency is expected to be closely involved with the project as a part of the BA review, and anticipated informal consultation.**

***Responsibilities of Lead and Cooperating Agencies:***

As Lead Agencies for the project, we will do (or have already done) the following to maximize interagency cooperation:

- Offer you membership on the Technical Steering Committee which will discuss and make recommendations to the Steering Committee about the key decisions during the Alternatives Analysis and EIS process (approximately every 5-6 weeks)

- Consult with you on any relevant technical studies that will be required for your agency decision making
- Organize joint field reviews with you
- Provide you with project information, including study results
- Give you the opportunity to review the pre-drafts and pre-final EIS and to express your views on the adequacy of documents
- Include information in the project environmental documents that cooperating agencies need to discharge their NEPA and SEPA responsibilities and any other requirements for jurisdictional approvals, permits, licenses, and/or clearances.

As a Cooperating Agency, your responsibilities would be to:

- Attend and actively participate at the Technical Advisory Committee meetings
- Provide meaningful and early input of issues of concern
- Review and comment on pre-draft and pre-final EISs
- Use the FEIS to support your agency's decision-making process for insurance of permits and/or clearances on the proposed action

You have the right to expect that the EIS will enable you to discharge your jurisdictional responsibilities. Likewise you have the obligation to tell us if, at any point in the process, your needs are not being met. We expect that at the end of the process the EIS will satisfy your NEPA/SEPA requirements including those related to project alternatives, environmental consequences, and mitigation. Further we intend to use the EIS and our subsequent record of decision as our decision-making documents and as the basis for permit applications.

In an effort to reduce administrative effort, we will assume that you agree to act as a cooperating agency on this project unless we receive a written response, to the contrary, by August 30, 2002.

If you have any questions or would like to discuss the project in more detail, please contact, Andrea Tull, Sound Transit, at (206) 398-5040, Steve Kennedy at Sound Transit, (206) 398-5302, or Mehrdad Moini, WSDOT, at (206) 440-4775. If you wish to discuss our agencies respective roles and responsibilities during the preparation of this EIS, please contact Jim Leonard at (360) 753-9408.

Sincerely,

**Daniel M. Mathis**

DANIEL M. MATHIS, P.E.  
Division Administrator

Cc: Andrea Tull;  
Mehrdad Moini;  
Steve Kennedy;  
Paul Krueger



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

Washington Division

Suite 501 Evergreen Plaza  
711 South Capitol Way  
Olympia, Washington 98501-1284  
(360) 753-9480  
(360) 753-9889 (FAX)  
<http://www.fhwa.dot.gov/wadiv>

July 30, 2002

HFO-WA.3/I-90

Austin Pratt  
United States Coast Guard, 13<sup>th</sup> District  
915 2<sup>nd</sup> Avenue  
Seattle, WA 98174-1067

**I-90 Two-way Transit Project**  
**Request to be a Cooperating Agency**

Dear Mr. Pratt:

The Federal Transit Administration (FTA), Federal Highway Administration (FHWA), Sound Transit, and the Washington State Department of Transportation (WSDOT) as co-lead agencies are initiating an Environmental Impact statement (EIS) to evaluate alternatives to improve regional mobility by providing reliable and safe two-way transit and HOV operations on I-90 between Bellevue and Seattle, while minimizing impacts to the environment and to other users and transportation modes.

**Request to Be a Cooperating Agency:**

We anticipate this project may require a permit under Section 9 of the Rivers and Harbors Act as a result of potential navigation issues. The project may increase the width of the I-90 floating bridge by two feet. Because your agency is likely to be an agency of legal jurisdiction for permits required by the project, or may fall within your area of expertise, **we are requesting that you be a cooperating agency.**

***Responsibilities of Lead and Cooperating Agencies:***

As Lead Agencies for the project, we will do (or have already done) the following to maximize interagency cooperation:

- Offer you membership on the Technical Steering Committee which will discuss and make recommendations to the Steering Committee about the key decisions during the Alternatives Analysis and EIS process (approximately every 5-6 weeks)
- Consult with you on any relevant technical studies that will be required for your agency decision making
- Organize joint field reviews with you
- Provide you with project information, including study results

- Give you the opportunity to review the pre-drafts and pre-final EIS and to express your views on the adequacy of documents
- Include information in the project environmental documents that cooperating agencies need to discharge their NEPA and SEPA responsibilities and any other requirements for jurisdictional approvals, permits, licenses, and/or clearances.

As a Cooperating Agency, your responsibilities would be to:

- Attend and actively participate at the Technical Advisory Committee meetings
- Provide meaningful and early input of issues of concern
- Review and comment on pre-draft and pre-final EISs
- Use the FEIS to support your agency's decision-making process for insurance of permits and/or clearances on the proposed action

You have the right to expect that the EIS will enable you to discharge your jurisdictional responsibilities. Likewise you have the obligation to tell us if, at any point in the process, your needs are not being met. We expect that at the end of the process the EIS will satisfy your NEPA/SEPA requirements including those related to project alternatives, environmental consequences, and mitigation. Further we intend to use the EIS and our subsequent record of decision as our decision-making documents and as the basis for permit applications.

In an effort to reduce administrative effort, we will assume that you agree to act as a cooperating agency on this project unless we receive a written response, to the contrary, by August 30, 2002.

If you have any questions or would like to discuss the project in more detail, please contact, Andrea Tull, Sound Transit, at (206) 398-5040, Steve Kennedy at Sound Transit, (206) 398-5302, or Mehrdad Moini, WSDOT, at (206) 440-4775. If you wish to discuss our agencies respective roles and responsibilities during the preparation of this EIS, please contact Jim Leonard at (360) 753-9408.

Sincerely,

**Daniel M. Mathis**

DANIEL M. MATHIS, P.E.  
Division Administrator

cc: Andrea Tull  
Mehrdad Moini  
Steve Kennedy  
Paul Krueger



U.S. Department  
of Transportation

**Federal Highway  
Administration**

Washington Division

Suite 501 Evergreen Plaza  
711 South Capitol Way  
Olympia, Washington 98501-1284  
(360) 753-9480  
(360) 753-9889 (FAX)  
<http://www.fhwa.dot.gov/wadiv>

July 30, 2002

HFO-WA.3/I-90

Ken Berg  
Manager, Western Washington Fish and Wildlife Office  
United States Fish and Wildlife Service  
510 Desmond Dr. SE,  
Lacey, WA 98503-1273

**I-90 Two-way Transit Project**  
**Request to be a Cooperating Agency**

Dear Mr. Berg:

The Federal Transit Administration (FTA), Federal Highway Administration (FHWA), Sound Transit, and the Washington State Department of Transportation (WSDOT) as co-lead agencies are initiating an Environmental Impact statement (EIS) to evaluate alternatives to improve regional mobility by providing reliable and safe two-way transit and HOV operations on I-90 between Bellevue and Seattle, while minimizing impacts to the environment and to other users and transportation modes.

**Request to Be a Cooperating Agency:**

We anticipate this project may require informal consultation under Section 7 of the Endangered Species Act. While adverse impacts to threatened and endangered species under USFWS jurisdiction are not anticipated, the project is likely to result in a relatively minor amount of new impervious surface which could increase stormwater runoff. A Biological Assessment (BA) will be prepared and is expected to be submitted to USFWS and NMFS following the identification of a preferred alternative. Because your agency is likely to be an agency of legal jurisdiction for permits required by the project, or may fall within your area of expertise, **we are requesting that you be a cooperating agency.**

**Whether USFWS is a cooperating agency or not, your agency is expected to be closely involved with the project as a part of the BA review, and anticipated informal consultation.**

***Responsibilities of Lead and Cooperating Agencies:***

As Lead Agencies for the project, we will do (or have already done) the following to maximize interagency cooperation:

- Offer you membership on the Technical Steering Committee which will discuss and make recommendations to the Steering Committee about the key decisions during the Alternatives Analysis and EIS process (approximately every 5-6 weeks)
- Consult with you on any relevant technical studies that will be required for your agency decision making

- Organize joint field reviews with you
- Provide you with project information, including study results
- Give you the opportunity to review the pre-drafts and pre-final EIS and to express your views on the adequacy of documents
- Include information in the project environmental documents that cooperating agencies need to discharge their NEPA and SEPA responsibilities and any other requirements for jurisdictional approvals, permits, licenses, and/or clearances.

As a Cooperating Agency, your responsibilities would be to:

- Attend and actively participate at the Technical Advisory Committee meetings
- Provide meaningful and early input of issues of concern
- Review and comment on pre-draft and pre-final EISs
- Use the FEIS to support your agency's decision-making process for insurance of permits and/or clearances on the proposed action

You have the right to expect that the EIS will enable you to discharge your jurisdictional responsibilities. Likewise you have the obligation to tell us if, at any point in the process, your needs are not being met. We expect that at the end of the process the EIS will satisfy your NEPA/SEPA requirements including those related to project alternatives, environmental consequences, and mitigation. Further we intend to use the EIS and our subsequent record of decision as our decision-making documents and as the basis for permit applications.

In an effort to reduce administrative effort, we will assume that you agree to act as a cooperating agency on this project unless we receive a written response, to the contrary, by August 30, 2002.

If you have any questions or would like to discuss the project in more detail, please contact, Andrea Tull, Sound Transit, at (206) 398-5040, Steve Kennedy at Sound Transit, (206) 398-5302, or Mehrdad Moini, WSDOT, at (206) 440-4775. If you wish to discuss our agencies respective roles and responsibilities during the preparation of this EIS, please contact Jim Leonard at (360) 753-9408.

Sincerely,

*Daniel M. Mathis*

DANIEL M. MATHIS, P.E.  
Division Administrator

*cc: Andrea Tull  
Mehrdad Moini  
Steve Kennedy  
Paul Krueger*



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
SEATTLE DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 3755  
SEATTLE, WASHINGTON 98124-3755

Regulatory Branch

DEC 30 2002

James Leonard  
Urban Area Engineer  
Federal Highway Administration  
#501, Evergreen Plaza  
711 South Capitol Way  
Olympia, Washington 98501

Reference: I-90 2-Way Transit

Dear Mr. Leonard:

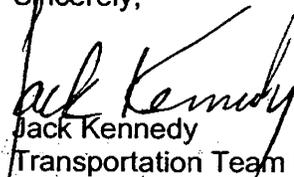
The Seattle District, U.S. Army Corps of Engineers, declines your offer to become a cooperating agency in the preparation of an Environmental Impact Statement (EIS) for the I-90 Two-Way Transit and HOV project.

Your letter of November 27, 2002, summarized the cooperating agency role, but it is one we take on only if the work is likely to involve a standard Department of the Army individual permit as well a Federal EIS. As I read the text of the draft EIS presently being circulated, it was not immediately apparent that the work's likely effects on the aquatic environment would be of such magnitude as to require a standard individual DA permit.

For transportation projects, we normally make these cooperating agency decisions via the Signatory Agency Committee Process (SAC). We may revisit this decision if your agency or Sound Transit makes a SAC presentation. We will also revisit the decision if the necessity of obtaining a standard individual DA permit becomes apparent.

Thank you for the opportunity to be a cooperating agency on this project. If you have any questions about this letter, please call me at telephone (206) 764-6907.

Sincerely,

  
Jack Kennedy  
Transportation Team Leader



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

January 8, 2003

Joni Earl  
Executive Director  
Sound Transit  
401 S. Jackson Street  
Seattle, Washington 98104-2826

Re: Change in FTA Status on I-90 Two-Way Transit and HOV Operations Project from Co-lead to Cooperating Agency

Dear Ms. Earl:

This is to notify you that the Federal Transit Administration (FTA) is changing its status on the Environmental Impact Statement (EIS) for the I-90 project from a co-lead agency to a cooperating agency. Sound Transit has indicated that no FTA funds will be used for the project. Therefore, our role is better served as a cooperating agency. As such, we will review the EIS to the extent that transit interests are properly considered. We will also review the document for consistency with FTA requirements.

If you have any questions, please do not hesitate to contact John Witmer at (206) 220-7964.

Sincerely,



R. F. Krochalis  
Regional Administrator

Cc. Agnes Govern, Andrea Tull, Steve Kennedy, ST  
James Leonard, FHWA



**Letters Concerning Evaluation of I-90 Bicycle and  
Pedestrian Path as a Potential Section 4(f) Resource**





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

Northwest Washington Division  
Urban Corridors Office  
401 Second Avenue South, Suite 560  
Seattle, WA 98104-3850  
206-464-1220 / Fax 206-464-1190  
TTY: 1-800-833-6388  
[www.wsdot.wa.gov](http://www.wsdot.wa.gov)

November 19, 2002

Daniel M. Mathis, P.E.  
Division Administrator  
Federal Highway Administration, Washington Division  
Suite 501, Evergreen Plaza  
711 South Capitol Way  
Olympia, WA 98501

Attention: James Leonard

Re: I-90 Two Way Transit and HOV Operations Project

Dear Mr. Mathis:

Enclosed is a copy of the paper "Evaluation of the I-90 Bicycle and Pedestrian Path as a Potential Section 4(f) Resource" prepared by the Washington State Department of Transportation (WSDOT) for the I-90 Two Way Transit and HOV Operations Project.

This document has been thoroughly reviewed by staff at FHWA, as well as FTA and Sound Transit, and revised accordingly to represent the view of all four co-lead agencies.

Based on these prior discussions, please provide us with a written determination that the shared use trail on the I-90 Homer Hadley floating bridge is not a protected resource under 49 U.S.C. Section 303, commonly referred to as "Section 4(f)".

Sincerely,

Judy Giniger  
Sound Transit Program Manager  
Urban Corridors Office

PK:pk  
Enclosure

cc: Mehrdad Moini, Paul Krueger (WSDOT)  
Andrea Tull, Steve Kennedy (Sound Transit)



# **Evaluation of the I-90 Bicycle and Pedestrian Path as a Potential Section 4(f) Resource**

Prepared for the I-90 Two Way Transit and HOV Operations Project

October 2002



**Washington State  
Department of Transportation**

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Urban Corridors Office, 401 Second Avenue South, Suite 560, Seattle, WA 98104-2887

## **Project Background**

Four of the five build alternatives being evaluated in the Draft Environmental Impact Statement (DEIS) for the Sound Transit Two-way Transit and HOV Project would affect the bicycle and pedestrian path on the I-90 floating bridge. The project would not affect the path on Mercer Island. The bicycle and pedestrian path consists of a barrier-separated shared-use ten-foot wide path on the north side of the Homer Hadley I-90 bridge. The path is separated from traffic by a ten-foot shoulder and a 34-inch high concrete bridge rail.

The potential project effects on the bicycle and pedestrian path could include the following:

- narrowing of the bicycle lane by two feet (preliminary analysis has determined that it feasible to add two feet to the bicycle/pedestrian pathway on the water side of the bridge to replace the two feet that would be removed)
- narrowing of the outer roadway shoulder from 10 feet to 2 feet resulting in traffic moving closer to the path

All but one of the alternatives would have some effect on the bicycle and pedestrian path, due to possible narrowing of the path and/or relocation of traffic closer to the path. Attachment A depicts the current location of the path within I-90 and illustrates the potential project effects.

All impacts to the path will be fully considered in the NEPA process for the I-90 project. During the scoping period, Sound Transit received 400 comments about the I-90 project. The majority of the comments were from individuals and organizations speaking against any adverse impacts to the I-90 bicycle and pedestrian path. Several of these comments requested a Section 4(f) evaluation of the path. It is likely that a decision not to do a Section 4(f) evaluation would be legally challenged.

This paper describes the 4(f) policy issues relevant to determining if a Section 4(f) evaluation is required in this case and presents the preliminary determination by WSDOT and Sound Transit on the 4(f) status of the I-90 bicycle and pedestrian path.

## **Policy Background**

In the USDOT Act of 1966 (49 U.S.C. 303 (C) ), a special provision was included to provide protection to public park and recreation lands, wildlife and waterfowl refuges, and historic sites. It is known as Section 4(f), and it stipulates that the USDOT (including FHWA and FTA) will not approve any program or project which requires the use of any publicly owned public park, recreation area, or wildlife or waterfowl refuge, or any land from an historic site of national, state, or local significance unless:

1. there is no feasible and prudent alternative to the use, and
2. all possible planning to minimize harm resulting from such use is included.

Whether the I-90 bicycle/pedestrian pathway would be considered a 4(f) facility must be determined. The following portions of the FHWA *Section 4(f) Policy Paper (FHWA, 1987)* provide a framework for this analysis:

***When is publicly owned land considered to be a park, recreation area or wildlife and waterfowl refuge? Who makes the decision?***

*Publicly owned land is considered to be a park, recreation areas, or wildlife and waterfowl refuge when the land has been officially designated as such or when the Federal, State, or*

*local officials having jurisdiction over the land determine that one of its major purposes or functions is for park, recreation, or refuge purposes. Incidental, secondary, occasional, or dispersed recreational activities do not constitute a major purpose . . . The final decision on applicability of Section 4(f) to a particular type of land is made by FHWA. In reaching this decision, however, FHWA normally relies on the official having jurisdiction over the land to identify the kinds of activity or functions that take place.*

***Do the requirements of Section 4(f) apply to bikeways?***

*If the bikeway is primarily for transportation and is an integral part of the local transportation system, the requirements of Section 4(f) do not apply. Section 4(f) applies to bikeways (or portions thereof) designated or functioning primarily for recreation unless the official having jurisdiction determines it not to be significant for such purpose.*

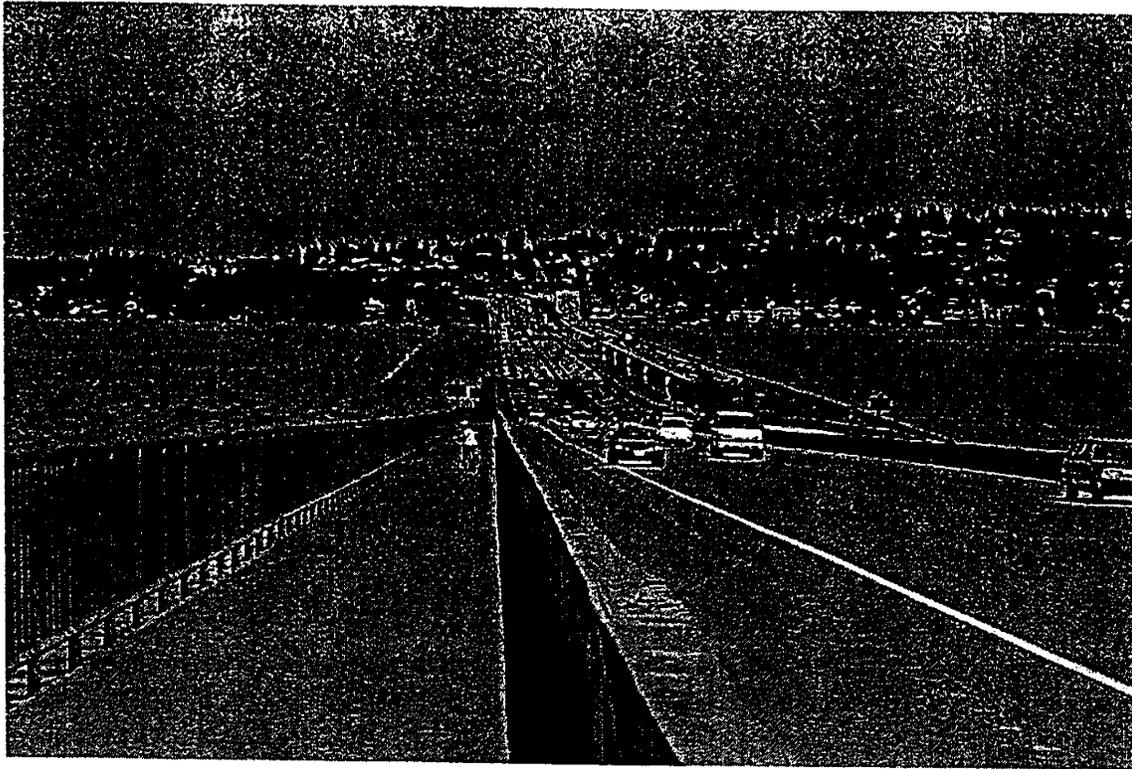
### **The 4(f) status of the I-90 path**

As the “officials having jurisdiction over” the I-90 bicycle and pedestrian path, WSDOT has determined that the major purpose of that facility is transportation. The path was built as part of a multi-modal transportation facility, using federal and state highway funds. No funds designated for recreational facilities were used in constructing the path and separate accounts were used to ensure the separation of recreational and transportation funds. According to the WSDOT Design Manual, the I-90 bicycle and pedestrian path is considered a “shared-use” path which is a facility on exclusive right-of-way with minimal cross flow by motor vehicles. It is designed and built primarily for use by bicycles but is also used by pedestrians, joggers, skaters, wheelchair users (both non-motorized and motorized) and others.

By providing a means of non-motorized access across Lake Washington, the path permits users to travel between Seattle and Mercer Island and access other areas in the Puget Sound Region. The path, in fact, is the only means for non-motorized access to Mercer Island and across Lake Washington. As such, it is an important link in the regional transportation system. While the path can be used for recreational purposes, it was developed and exists primarily for transportation, and serves as an integral part of the local transportation system.

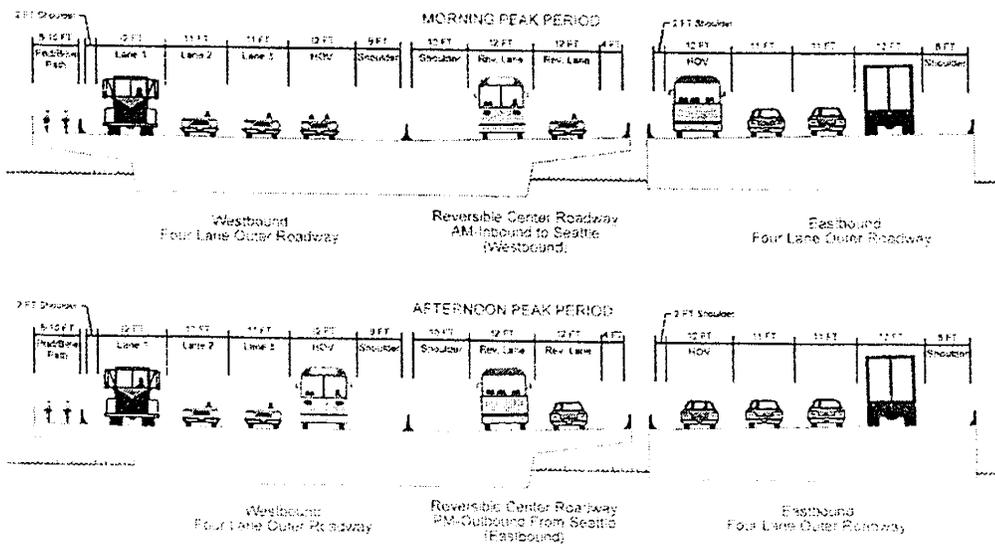
WSDOT and Sound Transit are requesting FHWA and FTA concurrence with the determination that the I-90 bicycle and pedestrian path is not a 4(f) resource. The potential effects of the I-90 project on the path, however, will be fully considered in accordance with NEPA and other applicable law.

# Attachment A



Existing Condition

## ALTERNATIVE R-8A FLOATING BRIDGES



One of the Proposed Build Alternatives



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

Northwest Washington Division  
Urban Corridors Office  
401 Second Avenue South, Suite 560  
Seattle, WA 98104-3850  
206-464-1220 / Fax 206-464-1190  
TTY: 1-800-833-6388  
[www.wsdot.wa.gov](http://www.wsdot.wa.gov)

November 19, 2002

Richard F. Krochalis  
Regional Administrator  
Federal Transit Administration Region 10  
Jackson Federal Building  
915 Second Avenue, Suite 3142  
Seattle, WA 98174-1002

Attention: John Witmer

Re: I-90 Two Way Transit and HOV Operations Project

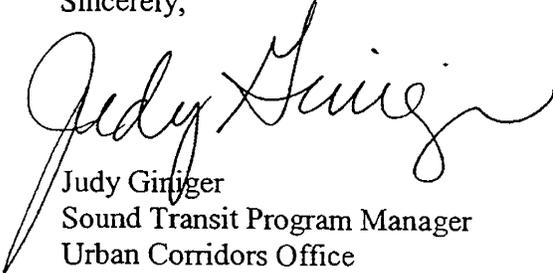
Dear Mr. Krochalis:

Enclosed is a copy of the paper "Evaluation of the I-90 Bicycle and Pedestrian Path as a Potential Section 4(f) Resource" prepared by the Washington State Department of Transportation (WSDOT) for the I-90 Two Way Transit and HOV Operations Project.

This document has been thoroughly reviewed by staff at FTA, as well as FHWA and Sound Transit, and revised accordingly to represent the view of all four co-lead agencies.

Based on these prior discussions, please provide us with a written determination that the shared use trail on the I-90 Homer Hadley floating bridge is not a protected resource under 49 U.S.C. Section 303, commonly referred to as "Section 4(f)".

Sincerely,



Judy Giringer  
Sound Transit Program Manager  
Urban Corridors Office

PK:pk  
Enclosure

cc: Mehrdad Moini, Paul Krueger (WSDOT)  
Andrea Tull, Steve Kennedy (Sound Transit)





U. S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION  
WASHINGTON DIVISION  
SUITE 501, EVERGREEN PLAZA  
711 SOUTH CAPITOL WAY  
OLYMPIA, WA 98501

FEDERAL TRANSIT ADMINISTRATION  
915 SECOND AVENUE, SUITE 3142  
SEATTLE, WA 98174

November 25, 2002

HFO-WA.3/I-90

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

Attention: Don Nelson

**I-90 Two Way Transit and HOV  
Operations Project**

Dear Mr. MacDonald:

The Washington State Department of Transportation (WSDOT) is developing a project in the I-90 corridor, between Bellevue and Seattle, jointly with Sound Transit. Alternatives under consideration will affect the shared-use path on the Homer Hadley floating bridge. Surveys conducted by WSDOT in 2001 and 2002 have shown the path is used primarily by bicyclists with limited usage by pedestrians.

The Federal Highway Administration and the Federal Transit Administration, Federal Co-lead agencies responsible for project development review of the noted I-90 project, have been asked to provide a written determination that your proposed undertaking on the floating bridge would not constitute an impact under 49 U.S.C. Section 303, commonly referred to as "Section 4(f)".

In making our determination we have considered the following factors, as presented through documentation by WSDOT<sup>1</sup>:

The shared-use path was funded, constructed, and exists primarily for transportation use;

The shared-use path serves as an integral part of the local transportation system, providing a linkage for bicycle, pedestrian, and other non-motorized modes of travel between regional destinations;

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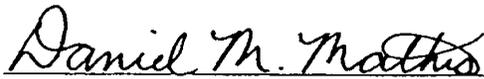
<sup>1</sup> "Evaluation of the I-90 Bicycle and Pedestrian Path as a Potential Section 4(f) Resource," WSDOT, October 2002.

The Puget Sound Regional Council has identified the facility as part of the regional non-motorized transportation system in Destination 2030;

Pursuant to 23 CFR Section 771.135, the ultimate decision on the applicability of Section 4(f) to a particular site rests with the Federal Transit Administration and the Federal Highway Administration. In reaching our decision, however, we first look to the official having jurisdiction over the site to identify whether it is a site for which Section 4(f) applies. Our review is to determine the reasonableness of that determination. Your agency has jurisdiction of the I-90 shared-use path, and, as noted above, we understand that WSDOT has determined that the primary purpose of the shared-use path on the floating bridge is transportation, and, therefore, is not a "significant recreational area", as that term is used in 23 CFR 771.135. While WSDOT has acknowledged that recreation is an important function of the path, it considers this function secondary to the primary purpose of transportation.

We concur with your determination that the shared-use path is not a Section 4(f) protected resource and, therefore, find that the modification of the path, as a result of the joint Sound Transit/WSDOT undertaking will not constitute a Section 4(f) impact. Please be advised that in making this finding we in no way lessen our expectations that, to the extent feasible, all appropriate measures and actions will be taken to reduce or eliminate the project impacts to the shared-use path and its users.

If there are any questions regarding this finding, please do not hesitate to call either Jim Leonard at 360-753-9408 or John Witmer at (206) 220-7964.



Daniel M. Mathis, P.E.  
Division Administrator  
Federal Highway Administration



R.F. Krochalis  
Regional Administrator  
Federal Transit Administration

CC: Mehrdad Moini, Paul Krueger, Lone Moody (WSDOT)  
Andrea Tull, Steve Kennedy (Sound Transit)

**Letter Concerning Design Year  
for Air Quality Analysis**





June 26, 2003

Dan Mathis  
Division Administrator  
Federal Highway Administration  
711 S. Capitol Way, Suite 501  
Olympia, WA 98501

Dear Mr. Mathis: *Dan*

This letter requests the Federal Highway Administration (FHWA) concurrence with Sound Transit and the Washington State Department of Transportation's (WSDOT) determination that the Final EIS (FEIS) for the I-90 Two Way Transit and HOV Operations Project should continue to use the same design year (2025) for the air quality analysis that was used to prepare the Draft EIS (DEIS). The DEIS was issued on April 25, 2003, and the comment period ended on June 9, 2003. The Puget Sound Regional Council (PSRC) raised the issue of potentially using an alternative design year (2030) in their DEIS comment letter dated June 9, 2003 (see attached letter).

In their comment letter, PSRC stated:

"In August 2002, the Environmental Protection Agency determined that the project-level conformity analyses should have a design year equal to the horizon year of the long-range metropolitan transportation plan, which in our region is 2030. The air quality analysis included in the I-90 Transit and HOV Operations DEIS has a design year of 2025. The air quality consultation partners in the central Puget Sound region have recommended that an analysis conducted prior to the August 2002 date could be "grandfathered" from the 2030 analysis year requirement, as long as the analysis was not reopened at a later date due to changes in the project. Additionally, some flexibility may be allowed for analyses conducted after the August 2002 date on a case-by-case basis. Our recommendation for the I-90 Transit and HOV Operations project is that the project sponsor either 1) demonstrates that the air quality analysis was performed prior to August 2002, or 2) if the analysis was performed after this date, provide documentation indicating that the project would not exceed emissions standards in 2030."

In addressing PSRC's comment, it is first important to note that all of the transportation forecasts for the I-90 Two Way Transit and HOV Operations project were completed by May 2002, prior to the August 2002 date of the EPA determination. The air quality modeling, which is based on these transportation forecasts, was completed in August 2002. As a result, we believe the I-90 project would qualify to be "grandfathered" in as discussed above in the PSRC comment.

Central Puget Sound  
Regional Transit Authority  
Union Station  
401 S. Jackson St.  
Seattle, WA 98104-2826  
Reception 206.398.5000  
Facsimile 206.398.5499  
www.soundtransit.org

**Chair**

Ron Sims  
*King County Executive*

**Vice Chairs**

Dave Earling  
*President, Edmonds City Council*

John Ladenburg  
*Pierce County Executive*

Jack Crawford  
*Kenmore Councilmember*

Bob Drewel  
*Snohomish County Executive*

David Enslow  
*Sumner Councilmember*

Mary Gates  
*Federal Way Councilmember*

Jane Hague  
*King County Councilmember*

Doug MacDonald  
*Washington State Department  
of Transportation Secretary*

Richard McIver  
*Seattle Councilmember*

Chuck Mosher  
*Bellevue Councilmember*

Greg Nickels  
*Seattle Mayor*

Mark Olson  
*Everett Councilmember*

Julia Patterson  
*King County Councilmember*

Dwight Pelz  
*King County Councilmember*

Kevin Phelps  
*Tacoma Councilmember*

Cynthia Sullivan  
*Chair, King County Council*

Claudia Thomas  
*Lakewood Deputy Mayor*

**Executive Director**

Joni Earl

Secondly, FHWA and the Federal Transit Administration (FTA), the original co-leads for the project, agreed in January 2002 that the I-90 project EIS would use 2025 as the design year. This was formally agreed to in an Issue Paper approved by the Environmental Action Team (EAT) on January 4, 2002 (Issue Paper # 27: Design Year, which is attached for your reference). The Issue Paper was signed by FHWA, FTA, Sound Transit, and WSDOT.

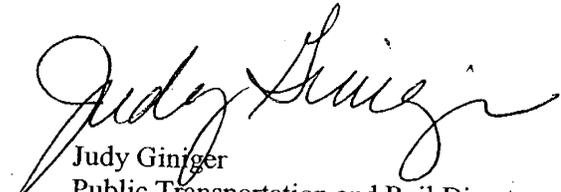
Finally, the 2025 air quality analysis prepared for the DEIS found that modeled carbon monoxide (CO) concentrations were significantly below the threshold of 9 parts per million (ppm) for all intersections modeled as a part of the CO "hot-spot" analysis. 2025 CO concentrations for intersections modeled for the various alternatives ranged from 3.00 ppm to a high of 4.2 ppm. As a result, there appears to be a low likelihood that the project would be expected to result in exceedances of emission standards in 2030.

Based on the preceding facts and information, Sound Transit and WSDOT are planning to continue to use 2025 as the Design Year for the I-90 FEIS.

Please indicate your concurrence by signing below. Please contact either of us if you would like to discuss this further (Agnes Govern 206-398-5037 or Judy Giniger 206-464-1218).

Sincerely,

  
Agnes Govern  
Director Regional Express  
Sound Transit

  
Judy Giniger  
Public Transportation and Rail Director  
WSDOT

CONCUR:

 Date: 07/01/03  
Dan Mathis  
Division Administrator  
Federal Highway Administration

**Letters Recommending R-8A as Preferred Alternative**





## King County

### Ron Sims

King County Executive

516 Third Avenue, Room 400  
Seattle, WA 98104-3271

206-296-4040 206-296-0194 Fax  
TTY Relay: 711

[www.metrokc.gov](http://www.metrokc.gov)

July 15, 2003

Sound Transit Board of Directors  
401 S. Jackson Street  
Seattle, WA 98104

Washington State Transportation Commission  
PO Box 47308  
Olympia, WA 98504-7308

Dear Members of the Sound Transit Board and Washington State Transportation Commission:

I am writing to communicate our recommendation for selection of the R8-A alternative for the I-90 two-way Transit/HOV project and our commitment towards development and execution of a future Memorandum of Agreement (MOA) outlining our collective interest in developing and implementing High Capacity Transit (HCT) in the I-90 corridor. Both efforts are essential to furthering our common vision to improve cross-lake mobility. In doing so, we will be strengthening the economic vitality of our region and building upon our regional commitment to move people and freight better.

This recommendation is the result of years of analysis and solid evaluation of the performance and benefits of the alternatives for achieving two-way transit/HOV access across I-90. The R8-A alternative has been shown to provide the greatest overall cost/benefit for all modes of travel in the corridor.

Additionally, through the work of the consultants and the Steering Committee, R8-A addresses safety concerns<sup>1</sup> and preserves the bicycle lane at its current width of 10 feet. In response to concerns of the bicycle community, the R8-A alternative includes screens to block debris and glare, lighting upgrades on the path, and spaces for aid personnel to reach the path if necessary.<sup>2</sup> We encourage WSDOT to keep the bike path open during all phases of construction.

We view R8-A as an essential first step towards achieving a long term transit vision for the Eastside, providing a strong transit connection between East and West King County and improving our region's economy, mobility and quality of life. Selection of R8-A as the preferred alternative means this initial phase will provide mobility improvements for transit and HOV users – a key for building strong support for the development of HCT in the corridor.

<sup>1</sup> 4/29/03 Presentation to I-90 Steering Committee, 5/03 Project Newsletter, and I-90 DEIS (4/25/03)

<sup>2</sup> 4/25/03 I-90 DEIS, 5/03 Project Newsletter



We support the approval of the MOA before Sound Transit adopts the final EIS for I-90. The MOA will address the development and implementation of High Capacity Transit (HCT) in the I-90 corridor according to the following principles:

- R8-A with HCT deployed in the center lanes is the ultimate configuration for I-90;
- Construction of R8-A should occur as soon as possible as a first step to the ultimate configuration;
- Upon adoption of R8-A, move as quickly as possible to implement HCT in the center lanes; and
- Commit to the earliest possible conversion of center roadway to two-way HCT operation based on outcome of studies and funding approvals.<sup>3</sup>

We believe this MOA will provide policy direction and commitment among the key stakeholders. Thank you for your consideration.

Sincerely,



Ron Sims  
King County Executive

cc: King County Councilmembers

ATTN: David deCourcy, Chief of Staff

Shelley Sutton, Policy Staff Director

Anne Noris, Clerk of the Council

The Honorable Connie Marshall, Mayor, City of Bellevue

The Honorable Alan Merkle, Mayor, City of Mercer Island

The Honorable Greg Nickels, Mayor, City of Seattle

The Honorable Doug MacDonald, Secretary, Washington State Department of  
Transportation

Joni Earl, Executive Director, Sound Transit

---

<sup>3</sup> HCT is defined as a transit system operating in dedicated right-of-way such as light rail, monorail, or a substantially equivalent system



**CITY OF MERCER ISLAND, WASHINGTON**

9611 S.E. 36th Street • Mercer Island, WA 98040-3732  
(206) 236-5300 • TDD (206) 232-9598  
www.ci.mercer-island.wa.us

July 15, 2003

Sound Transit Board of Directors  
401 S Jackson Street  
Seattle, WA 98104

Washington State Transportation Commission  
PO Box 47308  
Olympia, WA 98504-7308

Dear Members of the Sound Transit Board and Washington State Transportation Commission:

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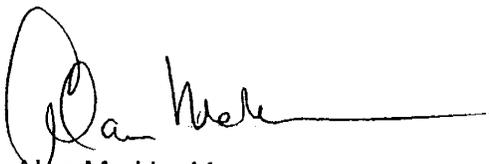
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- Commit to the earliest possible conversion of center roadway to two-way HCT operation based on outcome of studies and funding approvals.<sup>3</sup>

We believe this MOA will provide policy direction and commitment among the key stakeholders. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Merkle", with a long horizontal line extending to the right.

Alan Merkle, Mayor,  
City of Mercer Island

cc Mercer Island City Council

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<sup>3</sup> HCT is defined as a transit system operating in dedicated right-of-way such as light rail, monorail, or a substantially equivalent system



Gregory J. Nickels  
Mayor of Seattle

July 15, 2003

Sound Transit Board of Directors  
401 S Jackson Street  
Seattle, WA 98104

Washington State Transportation Commission  
PO Box 47308  
Olympia, WA 98504-7308

Dear Members of the Sound Transit Board and Washington State Transportation Commission:

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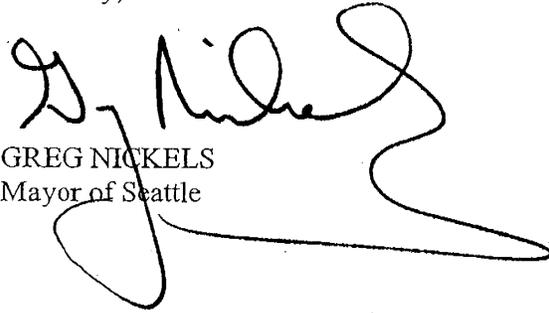
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We believe this MOA will provide policy direction and commitment among the key stakeholders. Thank you for your consideration.

Sincerely,



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GREG NICKELS  
Mayor of Seattle

---

<sup>3</sup> HCT is defined as a transit system operating in dedicated right-of-way such as light rail, monorail, or a substantially equivalent system

**City of  
Bellevue**



Office of the Mayor • Phone (425) 452-7810 • Fax (425) 452-7919  
Post Office Box 90012 • Bellevue, Washington • 98009 9012

July 15, 2003

Sound Transit Board of Directors  
401 S Jackson Street  
Seattle, WA 98104

Washington State Transportation Commission  
PO Box 47308  
Olympia, WA 98504-7308

Dear Members of the Sound Transit Board and Washington State Transportation Commission:

I am writing on behalf of the Bellevue City Council to communicate our recommendation for selection of the R8-A alternative for the I-90 2-way Transit/HOV project and our commitment towards development and execution of a future Memorandum of Agreement (MOA) outlining our collective interest in developing and implementing High Capacity Transit (HCT) in the I-90 corridor. Both efforts are essential to furthering our common vision to improve cross-lake mobility. In doing so, we will be strengthening the economic vitality of our region and building upon our regional commitment to move people and freight better.

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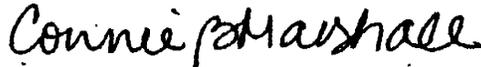
City of Bellevue offices are located at Main Street and 116th Avenue S.E.

Letter to Sound Transit Board of Directors and  
Washington State Transportation Commission  
July 15, 2003  
Page 2

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- Commit to the earliest possible conversion of center roadway to two-way HCT operation based on outcome of studies and funding approvals.<sup>3</sup>

We believe this MOA will provide policy direction and commitment among the key stakeholders. Thank you for your consideration.

Sincerely,



Connie B. Marshall  
Mayor, City of Bellevue

cc: Bellevue City Council  
The Honorable Jane Hague  
The Honorable Rob McKenna  
The Honorable Alan Merkle  
The Honorable Greg Nickels  
The Honorable Ron Sims

---

<sup>3</sup> HCT is defined as a transit system operating in dedicated right-of-way such as light rail, monorail, or a substantially equivalent system.

City of  
Bellevue



Office of the Mayor • Phone (425) 452-7810 • Fax (425) 452-7919  
Post Office Box 90012 • Bellevue, Washington • 98009 9012

November 5, 2003

The Honorable Ron Sims  
Chair, Sound Transit Board of Directors  
Sound Transit - Union Station  
401 South Jackson Street  
Seattle, Washington 98104-2826

**Re: I-90 Two-Way Transit/HOV Project: Support for Alternative R8A as Preferred Alternative**

Dear Executive Sims:

I am writing on behalf of the Bellevue City Council to reaffirm our Council's strong support for Alternative R8A. As a member of the I-90 Steering Committee, I regret that I cannot be present on the two dates Sound Transit is scheduled to identify its Preferred Alternative for the I-90 Two-Way Transit/HOV Project to express the Council's support in person (as I will be out of the country acting as a Sister City delegate for the City of Bellevue). I would greatly appreciate communication of our support to the entire Board.

Alternative R8A meets the I-90 project purpose and need by providing reliable two-way transit and HOV operations while minimizing the effects on other users. It improves transit, carpool, and vanpool user capacity of the I-90 corridor while also reducing congestion. This is extremely important to our residents and to those who commute to Bellevue for employment, retail, and other purposes. Alternative R8-A also represents the first step toward the ultimate configuration of I-90 for future high capacity transit.

Bellevue considers Alternative R2-B, conversion of the center roadway to two-way operations for transit and carpools, infeasible due to the congestion impacts that it would cause. Alternative R2-B does not improve transit and carpool operations or reduce congestion – it divides the center roadway in half and creates serious congestion impacts during peak transit and carpool operations. Over the long-term, it would be better to do nothing than to implement R2-B, which functions worse than the No-Build Alternative by 2025.

Having served on the I-90 Steering Committee for over five years, I can attest to the Committee's strong commitment to moving this important *Sound Move* project forward. While the journey has been long and often times challenging, I am delighted that we are nearing the completion of the environmental process and are poised to implement the project. The unanimous agreement reached on July 15, 2003 among I-90 Steering Committee members to advance R8A and begin to plan for High Capacity Transit for I-90 center lanes represents a significant regional partnership unlike any other in recent years.

In this spirit of cooperation, I urge the Sound Transit Board to support the Committee's years of work by identifying Alternative R8A as its Preferred Alternative. My hope is that this action will signal the implementation of R8A and solidify our shared commitment to develop the ultimate configuration for I-90 – High Capacity Transit across the lake connecting King County's largest urban centers. This project is a great example of the type of transportation improvements that our residents not only support, but expect, in order to preserve our high quality of life and dramatically improve our region's mobility.

Sincerely,

  
Connie B. Marshall  
Mayor

cc: Bellevue City Council  
Goran Sparrman

City of Bellevue offices are located at Main Street and 116th Avenue S.E.



**Letters Concerning Determination of Eligibility and  
Effect for Floating Bridges**





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

REC'D DEC 24 2003

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

360-705-7000  
TTY: 1-800-833-6388  
[www.wsdot.wa.gov](http://www.wsdot.wa.gov)

19 December 2003

Allyson Brooks, Ph.D.  
State Historic Preservation Officer  
Office of Archaeology and Historic Preservation  
P.O. Box 48343  
Olympia, WA 98504-8343

**Re: I-90 Two-Way Transit and HOV Project, King County  
Determinations of Eligibility and Effect**

Dear Dr. Brooks:

WSDOT plans to make minor modifications to the decks of two floating bridges on Lake Washington in Seattle: the Lacey V. Murrow and the Homer M. Hadley. Enclosed please find two historic property inventory forms for the floating bridges. The original Lacey V. Murrow was listed in the NRHP, but subsequently de-listed after its accidental sinking in 1990. Only the two fixed spans linking the transition spans and the highways on either side of the bridge remain from the original bridge. Although both the present Murrow and Hadley bridges have engineering significance, neither of the bridges is 50 years old. The Homer Hadley Bridge was completed in 1989, and the L.V. Murrow was redesigned and rebuilt in 1991-1993. Thus we have determined that neither bridge meets the eligibility requirements for listing in the NRHP.

WSDOT is also adding a lane to one of the original Mount Baker Ridge Tunnels (constructed in 1940), which are listed in the NRHP. The two tunnels, along with a third tunnel dug parallel to the original structures in 1989, connect the floating bridges with the greater Seattle downtown and industrial areas to the west. The original tunnels were modified on their interiors in 1993. (The portal artwork was not modified. See the enclosed four-page HNTB document). WSDOT's primary work proposed in the vicinity of the tunnels constitutes changing signs and lighting above the roadways, and re-striping the existing east-bound and west-bound roadways to convert the existing three lanes to four lanes in each direction.

Allyson Brooks  
19 December 2003  
Page 2

As neither floating bridge is NRHP eligible, and the proposed alterations will have no effect on the tunnels, we have determined that no historic properties will be affected by the proposed project.

I look forward to your concurrence with our determinations. If you have questions, or should you have concerns regarding the project, please contact me at 360-570-6639, email at [holstinec@wsdot.wa.gov](mailto:holstinec@wsdot.wa.gov), or Paul W. Krueger at 206-464-1226. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Holstine". The signature is fluid and cursive, with a large initial "C" and a long, sweeping underline.

Craig Holstine  
Cultural Resources Specialist

Enc.

Cc: Paul W. Krueger, WSDOT Urban Corridors Office



STATE OF WASHINGTON

OFFICE OF COMMUNITY DEVELOPMENT  
Office of Archaeology and Historic Preservation  
1063 S. Capitol Way, Suite 106 - Olympia, Washington 98501  
(Mailing Address) PO Box 48343 • Olympia, Washington 98504-8343  
(360) 586-3065 Fax Number (360) 586-3067

December 26, 2003

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DEC 30 2003

ENVIRONMENTAL AFFAIRS POINT PLAZA

Mr. Craig Holstine  
Cultural Resources Specialist  
Washington State Department of Transportation  
Post Office Box 47300  
Olympia, WA 98504-7332

In future correspondence please refer to:

Log: 122603-02-WSDOT

Property: Mt. Baker Ridge Tunnel reconfiguration

Re:

Dear Mr. Holstine:

Thank you for contacting the Washington State Office of Archaeology and Historic Preservation (OAHP). The above referenced project has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication.

We concur that no historic properties will be affected by the current project as proposed. If additional information on the project becomes available, or if any archaeological resources are uncovered during construction, please halt work in the area of discovery and contact the appropriate Native American Tribes and OAHP for further consultation.

Thank you for the opportunity to review and comment. Should you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Russell Holter".

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





STATE OF WASHINGTON

OFFICE OF COMMUNITY DEVELOPMENT  
Office of Archaeology and Historic Preservation  
1063 S. Capitol Way, Suite 106 - Olympia, Washington 98501  
(Mailing Address) PO Box 48343 • Olympia, Washington 98504-8343  
(360) 586-3065 Fax Number (360) 586-3067

January 12, 2004

Mr. Craig Holstine  
Cultural Resources Specialist  
Washington State Department of Transportation  
6639 Capitol Blvd. S  
Tumwater, WA 98501

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JAN 20 2004

ENVIRONMENTAL AFFAIRS POINT PLAZA

In future correspondence please refer to:  
Log: 122603-02-WSDOT  
Property: Mt. Baker Ridge Tunnel reconfiguration  
Re: Determination of Eligibility

Dear Mr. Holstine:

Thank you for contacting the Washington State Office of Archaeology and Historic Preservation (OAHP). The above referenced property has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication.

Research indicates that the Interstate-90, Lacey V. Murrow Floating Bridge span across Lake Washington, was de-listed from the National Register of Historic Places on February 13, 1991. Therefore, we concur with your finding that the I-90 Floating Bridge span is NOT ELIGIBLE for listing on the National Register of Historic Places. As a result of this finding, further contact with OAHP is not necessary. However, if additional information on the property becomes available, or if any archaeological resources are uncovered during construction, please halt work in the area of discovery and contact the appropriate Native American Tribes and OAHP for further consultation.

Thank you for the opportunity to review and comment. Please feel free to contact me if you have any questions.

Sincerely,

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





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JAN 16 2004

STATE OF WASHINGTON

ENVIRONMENTAL AFFAIRS POINT PLAZA

OFFICE OF COMMUNITY DEVELOPMENT  
Office of Archaeology and Historic Preservation  
1063 S. Capitol Way, Suite 106 - Olympia, Washington 98501  
(Mailing Address) PO Box 48343 - Olympia, Washington 98504-8343  
(360) 586-3065 Fax Number (360) 586-3067

January 13, 2004

Mr. Craig Hölstīnē  
Cultural Resources Specialist  
Washington State Department of Transportation  
6639 Capitol Blvd. S  
Tumwater, WA 98501

In future correspondence please refer to:  
Log: 011304-03-WSDOT  
Property: Homer Hadley Floating Bridge  
Re: Determination of Eligibility

Dear Mr. Holstine:

Thank you for contacting the Washington State Office of Archaeology and Historic Preservation (OAHP). The above referenced property has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication.

Research indicates that the above referenced property is not currently listed in the Washington Heritage Register or National Register of Historic Places. The referenced property is NOT ELIGIBLE for the National Register of Historic Places under criterion "C" because of its age. As a result of this finding, further contact with OAHP is not necessary. However, if additional information on the property becomes available, or if any archaeological resources are uncovered during construction, please halt work in the area of discovery and contact the appropriate Native American Tribes and OAHP for further consultation.

Though the Homer Hadley Bridge is not considered historic, the Evergreen Point Floating Bridge could be historic due to its age, level of integrity and engineering significance. Therefore, this office requests that the Department of Transportation conduct a context statement on all floating bridges:

- To better understand the history of floating bridges,
- To evaluate floating bridge rehabilitation projects,
- and, To determine the eligibility of floating bridges for exceptional or engineering significance.

Mr. Holstein  
January 13, 2004  
Page 2

Thank you for the opportunity to review and comment. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Holter". The signature is written in a cursive style with a long horizontal flourish at the end.

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

# **Letters Concurring on Findings of Biological Assessment**





**UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration**

NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
7600 Sand Point Way N.E., Bldg. 1  
Seattle, WA 98115

NOAA Fisheries No.:  
2003/01437

January 20, 2004

Ms. Michelle Steinmetz  
Washington State Department of Transportation  
Northwest Washington Division  
Urban Corridors Office  
401 Second Avenue South, Suite 560  
Seattle, WA 98104-3850

Re: Endangered Species Act Section 7 Informal Consultation and Magnuson-Stevens Fishery Conservation Management Act Essential Fish Habitat Consultation for I-90 Two-Way Transit and High Occupancy Vehicle (HOV) Operations Biological Assessment. (WSDOT Project No. 0L 3518) 6<sup>th</sup> field HUC code 171100120302 Cedar River.

Dear Ms. Steinmetz:

This correspondence is in response to your request for consultation under the Endangered Species Act (ESA). Additionally, this letter serves to meet the requirements for consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

### **Endangered Species Act**

The Washington State Department of Transportation (WSDOT) and Sound Transit submitted a Biological Assessment (BA) for the above referenced project to NOAA's National Marine Fisheries Service (NOAA Fisheries) on November 24, 2003. A project modification was received on December 16, 2003, and additional clarifying information describing the proposed stormwater management design was received on January 20, 2004. WSDOT requested NOAA Fisheries' concurrence with an effect determination of "may affect, but not likely to adversely affect" Puget Sound chinook salmon (*Oncorhynchus tshawytscha*). This consultation with WSDOT, the non-federal designee of the Federal Highway Administration (FHWA), is conducted under section 7(a)(2) of the ESA, and its implementing regulations, 50 CFR 402. Puget Sound chinook salmon were listed as threatened under the ESA on March 24, 1999 (50 CFR 223 and 224).

WSDOT and Sound Transit, with funding from the FHWA, propose to improve the section of Interstate 90 between Interstate 5 in Seattle and the Bellevue Way Southeast Interchange in Bellevue, Washington, to provide two-way transit and high occupancy vehicle (HOV) lanes. The modifications will retain the current reversible operations in the center roadway, while adding a lane to each of the outer roadways for exclusive transit and HOV use. An additional



lane in each direction will be added either by re-striping the existing roadway and/or adding two to six feet of pavement width (the bridges will be re-striping only). Two new access ramps will be constructed on Mercer Island, and the ramp to Bellevue Way Southeast will be widened by four to 20 feet.

Existing stormwater management facilities will be upgraded as needed to provide water quality treatment for 100 to 140 percent of the new impervious surface area of 5.76 acres. The stormwater facilities will be designed in accordance with the 1995 WSDOT Highway Runoff Manual and WSDOT's ESA Stormwater Effects Guidance Instructional Letter 4020.02. The stormwater facilities will be maintained according to WSDOT's High Runoff Manual and Maintenance Manual.

The 5.76 acres of new impervious area will be spread over four drainage sub-basins. Three of the sub-basins flow to Lake Washington, and one flows to the Duwamish River. Both of these waterbodies are habitat for chinook salmon, however given the stormwater management design and size of the receiving waters, the project will have an insignificant or discountable effect on peak flows and water quality. Potential effects of sedimentation and hazardous spills during construction are expected to be insignificant or discountable based upon the conservation measures described in the BA for temporary erosion and sediment control, spill prevention, and construction methods, staging, and timing. In-water work may occur if the stormwater outfall in Mercer Slough is upgraded. This work would occur during the appropriate in-water work window of July 16<sup>th</sup> through September 1<sup>st</sup>.

Based on information in the BA, NOAA Fisheries concurs with WSDOT's effect determination of "may affect, not likely to adversely affect"; concurrence is contingent upon full implementation of the project and conservation measures as proposed.

This concludes informal consultation on this action in accordance with 50 CFR 402.14(b)(1). WSDOT must re-analyze this ESA consultation if: 1) new information reveals that the action may affect listed species in a way not previously considered; 2) the action is modified in a manner that causes an affect to the listed species that was not previously considered; or 3) a new species is listed, or critical habitat is designated, that may be affected by the proposed action.

### **Magnuson-Stevens Fishery Conservation and Management Act**

Federal agencies are required, under section 305(b)(2) of the MSA and its implementing regulations (50 CFR 600 Subpart K), to consult with NOAA Fisheries regarding actions that are authorized, funded, or undertaken by that agency that may adversely affect Essential Fish Habitat (EFH). The MSA (section 3) defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." If an action would adversely affect EFH, NOAA Fisheries is required to provide the Federal action agency with EFH conservation recommendations

(MSA section 305(b)(4)(A)). This consultation is based, in part, on information provided by the Federal action agency and descriptions of EFH for Pacific salmon contained in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (August 1999) developed by the Pacific Fishery Management Council and approved by the Secretary of Commerce (September 27, 2000).

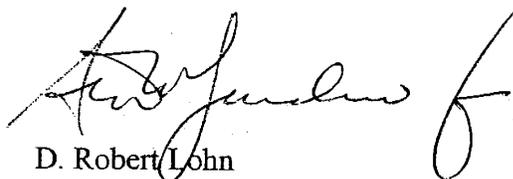
The proposed action is described in section 5 of the BA. The proposed action includes habitats which have been designated as EFH for various life stages of chinook and coho (*O. kisutch*) salmon.

*EFH Conservation Recommendations:* Because the habitat requirements (*i.e.*, EFH) for the MSA-managed species in the action area are similar to that of the ESA-listed species, and because the conservation measures that WSDOT included as part of the proposed action to address ESA concerns are also adequate to avoid, minimize, or otherwise offset potential adverse effects to designated EFH, conservation recommendations pursuant to MSA (section 305(b)(4)(A)) are not necessary. Since NOAA Fisheries is not providing conservation recommendations at this time, no 30-day response from WSDOT is required (MSA section 305(b)(4)(B)).

This concludes consultation under the MSA. If the proposed action is modified in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations, WSDOT will need to reinitiate consultation in accordance with the implementing regulations for EFH at 50 CFR 600.920(l).

NOAA Fisheries appreciates your efforts to comply with requirements under the ESA and the MSA. If you have questions, please contact Janet Curran ([janet.curran@noaa.gov](mailto:janet.curran@noaa.gov)) at the Washington Habitat Branch Office, (206) 526-6146.

Sincerely,



D. Robert Lohn  
Regional Administrator

cc: WSDOT- Paul Wagner  
FHWA- ~~Megan Hall~~ Jim Leonard  
FHWA- Elizabeth Healy  
Sound Transit- Chris Townsend  
USFWS- Jennifer Quan





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Western Washington Fish and Wildlife Office  
510 Desmond Dr. SE, Suite 102  
Lacey, Washington 98503



RECEIVED

FEB 27 2004

SOUND TRANSIT  
LEGAL DEPT.

FEB 24 2004

In Reply Refer to:  
1-3-04-I-0176

Michelle Steinmetz  
Biology Program Manager – Urban Corridors  
Washington State Department of Transportation  
401 Second Avenue South Suite 560  
Seattle, Washington 98104-3850

Dear Ms. Steinmetz:

This letter is in response to your request for informal consultation on the Interstate 90 Two Way Transit and High Occupancy Vehicle Operations Project in King County, Washington. It is our understanding that this request is being submitted by the Washington State Department of Transportation on behalf of the Federal Highway Administration. Your letter dated November 20, 2003, and Biological Assessment (BA) prepared by Adolfson Associates, Inc. were received in our office on November 24, 2004. On December 15, 2003, we received a letter from you amending the proposed project. In your letters you request U.S. Fish and Wildlife Service concurrence with your determination of “may affect, but is not likely to adversely affect” for the Coastal/Puget Sound bull trout (*Salvelinus confluentus*), in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act)(16 U.S.C. 1531 et seq.).

The Washington State Department of Transportation has determined that the project will have “no effect” on bald eagles (*Haliaeetus leucocephalus*). There is no requirement for U.S. Fish and Wildlife Service concurrence, nor do the regulations provide the U.S. Fish and Wildlife Service with the authority to concur with that determination. The determination that this project will have no effect on bald eagles rests with the action agency; therefore, consultation on the bald eagle for this project is not required.

The U.S. Fish and Wildlife Service believes that sufficient information has been provided on project effects to the bull trout for the lead agency to make effect determinations. Our concurrence would be based on the justification in the BA, the additional information received via electronic mail from you on 2/12/2004 and on 2/23/2004, complete and successful implementation of the conservation measures and the following rationale.

### Bull Trout

The project “may affect” the bull trout and bull trout habitat because:

- Bull trout are known to occur in Lake Washington. Lake Washington supports foraging migratory and overwintering bull trout.

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IN AMERICA 

- The proposed project will increase impervious surfaces and stormwater discharge to Lake Washington.
- The project proposes to replace a damaged stormwater outfall in Mercer Slough that will require in-water work. In-water work could result increased sediment levels and temporary habitat disruption.

The project is “**not likely to adversely affect**” the bull trout or bull trout habitat because:

- The proposed in-water work will occur during the summer months (July 16 – September 1), a time when bull trout are least likely to occur.
- New impervious surface will be treated for quality and quantity through the use of engineered wetland facilities and/ or wetvault. The proposed stormwater facilities are not expected to eliminate - but will minimize - the hydrologic effects of the new impervious surface and the pollutants generated by the proposed project. Additionally, the projected increase in stormwater runoff (during a 100-year event) is small - 0.45 cubic feet per second. This projected increase is not expected to have a significant effect on water levels in Mercer Slough or Lake Washington.

In order to expedite the environmental review process, if the Federal Highway Administration concurs with your effect determinations for listed species, then you may consider this action to be in compliance with requirements of 50 CFR 402.13, thereby concluding the consultation process. The project should be re-analyzed if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; if the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; and/or if a new species is listed or critical habitat is designated that may be affected by this project.

Should an Army Corps of Engineers permit (i.e., Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899) be required for your proposed project, we may provide additional comments at that time regarding the proposed permitted action.

If you have further questions about this letter or your responsibilities under the Act, please contact Jennifer Quan at (360) 753-6047.

Sincerely,



Ken S. Berg, Manager

Western Washington Fish and Wildlife Office

cc:

FHWA, Olympia (J. Leonard)

FTA, Seattle (C. Townsend)

WDFW Region 4

WSDOT - ESO, Olympia (P. Wagner, M. Carey)

**Appendix G**  
**Land Use Policies**



## APPENDIX G

### King County Comprehensive Plan Policies Relevant to the Project

#### Chapter 4: Environment

##### I. Natural Environment

##### B. Air Quality

*E- 111 Air quality impacts of proposed land use actions shall be assessed when developing countywide, subarea, and local plans and transportation strategies.*

*E- 113 Emissions from construction and land clearing activities should be minimized.*

##### C. Water Resources

*E- 117 Development shall support continued ecological and hydrologic functioning of water resources and should not have a significant adverse impact on water quality or water quantity, or sediment transport and should maintain base flows, natural water level fluctuations, ground water recharge in Critical Aquifer Recharge Areas and fish and wildlife habitat.*

*E- 126 Stormwater runoff shall be managed through a variety of methods, with the goal of limiting impacts to aquatic resources, protecting and enhancing the viability of agricultural lands and promoting groundwater recharge. Methods of stormwater management shall include temporary erosion and sediment control, flow control facilities, water quality facilities as required by the Surface Water Design Manual, and Best Management Practices as described in the Stormwater Pollution Control Manual. Runoff caused by development shall be managed to prevent adverse impacts to water resources and farmable lands. Regulations shall be developed for lands outside of the Urban Areas that favor non-structural stormwater control measures when feasible including: vegetation retention and management; seasonal clearing limits; limits on impervious surface; and limits on soil disturbance.*

*E- 132 King County's overall goal for the protection of wetlands is no net loss of wetland functions within each drainage basin. Acquisition, enhancement, regulations, and incentive programs*

*shall be used independently or in combination with one another to protect and enhance wetlands functions.*

*E- 139 Alterations to wetlands may be allowed to:*

- a. Accomplish a public agency or utility development;*
- b. Provide necessary utility, stormwater tightline and road crossings; or*
- c. Avoid a denial of all reasonable use of the property, provided all wetland functions are evaluated, the least harmful and reasonable alternatives are pursued, affected significant functions are appropriately mitigated, and mitigation sites are provided with monitoring.*

*E- 146 The existing flood storage and conveyance functions and ecological values of floodplains, wetlands, and riparian corridors shall be protected, and should, where possible, be enhanced or restored.*

**D. Erosion and Landslide Hazards**

**1. Erosion Hazard Areas**

*E- 154 Grading and construction activities shall implement erosion control Best Management Practices and other development controls as necessary to reduce sediment and pollution discharge from construction sites to minimal levels.*

*E- 159 The use of native plants should be encouraged in landscaping requirements and erosion control projects, and in the restoration of stream banks, lakes, shorelines, and wetlands.*

**E. Fish and Wildlife**

*E- 166 Fish and wildlife should be maintained through conservation and enhancement of terrestrial, air, and aquatic habitats.*

*E- 167 Habitats for species which have been identified as endangered, threatened, or sensitive by the state or federal government shall not be reduced and should be preserved. In the Rural Area and Natural Resource Lands, habitats for candidate species identified by the county, as well as species identified as endangered, threatened, or sensitive by the state or federal government shall not be reduced and should be preserved.*

*E- 171 Development proposals should be assessed for the presence of species of local importance. A comprehensive assessment should follow a standard procedure or guidelines and shall occur one time during the development review process.*

*E- 174 King County should protect salmonid habitats by ensuring that land use and facility plans (transportation, water, sewer, electricity, gas) include riparian and stream habitat conservation measures developed by the County, cities, federally recognized tribes, service providers, and/or state and federal agencies. Development within basins that contain fish enhancement facilities should consider significant adverse impacts to those facilities.*

*E- 178 The County should be a good steward of public lands and should integrate fish and wildlife habitats into capital improvement projects whenever feasible. Fish and Wildlife Habitat Conservation Areas should be protected and where possible, enhanced as part of capital improvement projects.*

## **Chapter 6: Transportation**

### **I. Regional System**

#### **B. Public Transportation**

##### **2. Transit Infrastructure**

*T- 108 In areas where transit services and ridership demand warrant, the County should invest in transit supportive facilities and road improvements that support passenger comfort, speed and reliability, such as signal and intersection prioritization, passenger waiting areas and nonmotorized improvements through the prioritization process in the Transportation Needs Report and Capital Improvement Program.*

#### **C. Regional Arterial Network**

*T- 112 King County should pursue the cooperation of cities and the State in developing a countywide arterial/transit route system. The system should provide preferential treatment for high occupancy vehicles including transit, and for efficient, seamless operation across jurisdiction boundaries.*

#### **D. Transportation Demand Management**

*T- 114 Transportation Demand Management (TDM) strategies should be used to promote travel efficiency and energy*

*conservation and reduce the adverse environmental impacts of the transportation system. These strategies should include commute trip reduction, demand management and system management. TDM measures may include telecommuting, congestion pricing, parking management, non-motorized travel, site design standards, public information, ridesharing, public transportation, joint use of parking facilities, and park and ride and other intermodal transfer facilities.*

## **II. Linking Transportation, Infrastructure and Services with Growth**

### **A. Land Use**

*T- 202 Travel modes should be interconnected to form an integrated, coordinated and balanced multi-modal transportation system that serves the travel needs of the County both effectively and efficiently.*

*T- 203 The transportation system should include:*

- a. Freeways, arterial streets and local/neighborhood streets;*
- b. Local and express bus transit and paratransit services, including Americans with Disabilities Act (ADA) service programs;*
- c. High capacity transit;*
- d. High-occupancy-vehicle lanes and ridesharing facilities;*
- e. Demand and system management programs;*
- f. Facilities and programs for pedestrians, bicycles and equestrians;*
- g. Facilities to accommodate freight and goods delivery, including railroads, intermodal yards and distribution centers;*
- h. Airports; and*
- i. Marine transportation facilities and navigable waterways.*

## **III. Transportation System Planning and Design**

### **A. Arterials and Streets**

*T- 301 The most cost-effective improvement should be considered first to solve existing and future deficiencies before higher cost, capital-intensive projects are considered. Efficiency improvements supporting high-occupancy-vehicles (HOV) and transit operations on existing roads should be a higher priority than general capacity improvements enhancing single-occupant-vehicle (SOV) travel.*

*T- 302 Transportation improvements should be designed, built, and operated to minimize air, water and noise pollution and the disruption of natural surface water drainage in compliance with provisions and requirements of applicable Federal, state and local*

*environmental regulations. Particular care should be taken to minimize impacts when facilities are located where they could increase the pressure for development in sensitive areas or rural or resource lands. Natural and historic resource protection should also be considered.*

**B. *Public Transportation Strategies***

*T- 310 King County should plan, design, and implement a system of services and facilities that support integration of regional and local services, and that facilitate access to the system for pedestrian, bicyclists, transit collection/distribution services, and persons with disabilities, thereby providing a viable alternative to auto usage.*

*T- 314 High Capacity Transit facilities and services which are consistent with, and supportive of, the Comprehensive Plan should be supported and implemented.*

**C. *Nonmotorized Transportation***

*T- 316 King County should include nonmotorized transportation when general transportation improvements are made, including road construction, reconstruction, subdivision development and development of new transit systems.*

**D. *Air Quality***

*T- 324 King County should consider the following strategies to reduce criteria pollutants including, but not limited to: trip reduction strategies, transportation pricing controls, employer transportation management programs, work schedule changes; ridesharing programs, dedicated facilities for high-occupancy-vehicles, traffic flow improvements, parking management, bicycle and pedestrian programs, mixed use development, and car sharing programs.*

**City of Seattle Comprehensive Plan Policies Relevant to the Project**

***Transportation Element***

**A. *Environmental Stewardship***

*Policy T1 Identify, evaluate, and fully consider environmental impacts of transportation investments and operating decisions. Pursue transportation projects, programs, and investment*

*strategies consistent with noise reduction, air quality, and water quality objectives.*

*Policy T5 Work with the state Department of Transportation, public transportation providers, and the public to identify, design, and incorporate noise mitigation measures into existing and planned traffic and transit operations and capital improvements. Encourage air and rail transport operators to reduce and mitigate their noise impacts.*

**B. *Changing and Managing Travel***

*Goal TG4 Meet the current and future mobility needs of residents, businesses, and visitors with a balanced transportation system.*

*Goal TG5 Provide a range of viable transportation alternatives, including transit, bicycling, and walking.*

**D. *Use of Streets***

*Goal TG9 Ensure adequate capacity on the street system for transit and other important uses.*

*Goal TG10 Support a shift towards transit, carpools and vanpools, bicycling, and walking.*

*Policy T20 Do not attempt to provide street space to meet latent demand for travel by car. Do not pursue freeway expansion for the sole purpose of increasing general traffic capacity. Increase capacity of principal arterials where and as appropriate, either by expansion or by operating changes. Increase capacity on streets other than principal arterials only if needed to improve safety; but allow increased capacity for isolated connections to regional roadways to maintain the integrity and continuity of the street system, or if needed to achieve level-of-service standards. Use transportation system management (TSM) techniques as appropriate to manage street space. Reallocate street space among various uses (e.g., general traffic, transit, trucks, carpools, bicycles, parking, pedestrians) as needed to enhance the key function(s) of a street.*

**G. *Transit and Public Transportation***

*Goal TG18 Increase transit ridership, and thereby reduce use of single-occupant vehicles to reduce environmental degradation and the societal costs associated with their use.*

*Policy T36 Support development of an integrated, multi-modal, regional transportation system that links urban centers within the city and the region, and includes commuter rail, light rail, interstate passenger rail, ferries, regional and local-service buses, community feeder/circulator services, taxis, carpools, vanpools, bicycles, pedestrians, and support facilities. Design and operate the facilities and services to make inter-modal transfers easy and convenient.*

*Policy T38 Work with the transit provider(s) to provide transit service that:*

- a. Is within 1/4 mile of at least 90 percent of the city's residences and businesses;*
- b. Connects urban centers and urban villages with at least ten-minute frequency during most of the day, 15- to 30-minute frequency during the evening, and one-hour frequency at night;*
- c. Is competitive with auto travel;*
- d. Operates reliably;*
- e. Is convenient, safe, secure, and comfortable; and*
- f. Has affordable fares and an integrated fare system.*

### ***Environment Element***

#### ***B. Air Quality***

*Policy E11 Support regional growth management activities that help reduce the need for automobile transportation and related air pollution.*

#### ***G. Reduction of Noise Pollution***

*EG22 Improve the City's ability to respond to and control sources of noise pollution in Seattle and mitigate its impacts.*

*E41 Promote actions, such as equipment modifications and operational limits, that reduce noise from transportation modes, construction sites, industrial uses, and commercial business establishments.*

*E42 Promote actions, such as sound attenuating surfaces and reductions in traffic speed, by the City and other agencies that reduce the noise impacts of freeways and arterials within the city.*

*E47 Support the use of technologies and engineering practices to attenuate noise produced by traffic, aircraft, construction, and commercial and industrial facilities located near residential areas.*

## **City of Mercer Island Comprehensive Plan Policies Relevant to the Project**

### ***Land Use Element***

#### ***Land Use Policies Outside the Central Business District***

*Goal 9 – The protection of the natural environment will continue to be a priority in all Island development.*

*Policy 9.1 Enforcement of Critical Lands and other ordinances designed to protect environmentally sensitive lands such as watercourses, steep slopes, shorelines, and wetlands should continue.*

*Policy 9.2 Land use actions should reflect an intent to maintain and improve watercourses and Lake Washington water quality. Establishment of storm water management policies should proceed in a timely manner.*

*Goal 10 – Continue to maintain the Island’s unique quality of life through open space preservation, park and trail development and well-designed public facilities.*

*Policy 10.1 Acquisition, maintenance and access to public areas, preserved as natural open spaces or developed for recreational purposes, will continue to be an essential element for maintaining the community’s character.*

### ***Transportation Element***

#### ***Transportation Goals and Policies***

*Goal 1 – To encourage the most efficient use of the transportation system through effective management of transportation demand and the transportation system.*

*Policy 1.1 The City of Mercer Island encourages measures to reduce vehicular trips consistent with the city’s adopted Commute Trip Reduction (CTR) Plan.*

*Policy 1.3 The City of Mercer Island employs transportation system management (TSM) techniques to improve the efficient operation of the transportation system including, but not limited to: traffic through and turn lanes, management of street parking, signals and other traffic control measures.*

*Goal 3 – To minimize negative transportation impacts on the environment.*

*Policy 3.3 The City of Mercer Island will work with WSDOT and other agencies to minimize impacts on island facilities and neighborhoods from traffic congestion on regional facilities, implementation of ramp metering on regional facilities, provision of transit services and facilities.*

*Goal 4 – To provide choices for travelers through the provision of a complete range of transportation facilities and services.*

*Policy 4.1 The City of Mercer Island will work with King County Metro and other transit providers to develop adequate transit services to meet the needs of the island, including;*

- *convenient transit connections to regional activity centers, including the Seattle CBD, Bellevue, the University of Washington and other centers,*
- *convenient transit service for travel on Mercer Island; and*
- *potential new services including demand responsive transit for the general public, subscription bus, custom bus services or school buses on a space available basis.*

*Goal 8 – To preserve adequate levels of accessibility between Mercer Island and the rest of the region.*

*Policy 8.1 The I-90 Memorandum Agreement dated December 21, 1976 provides that the I-90 center roadway shall be used only for transit, high occupancy vehicles and Mercer Island single occupancy traffic. The contractual rights of access set forth in the Memorandum Agreement are necessary to address Mercer Island's unique access constraints to the region's transportation system. Any future modification to such access for Mercer Island traffic must comply with the terms and conditions of the Memorandum Agreement and must properly mitigate the impacts of any reduction in Mercer Island traffic mobility and capacity.*

*Policy 8.2 The City of Mercer Island will work with King County Metro and the Sound Transit to ensure adequate levels of transit service linking Mercer Island to the rest of the region.*

*Policy 8.4 The City of Mercer Island will continue to maintain an effective role in regional transportation planning, decisions-making and implementation of transportation system improvements.*

***Shoreline Goals and Policies, Circulation Element***

*Goal – A balanced transportation system for moving people and goods is to be encouraged within existing corridors.*

*Policy 4: Provisions for METRO Public Transit should be implemented in transportation facilities crossing Mercer Island.*

*Policy 5: No new regional vehicular traffic corridors should be opened across Mercer Island's shoreline.*

- a. The width of the I-90 corridor shall be limited to that approved by the City of Mercer Island as stated in Mercer Island Resolution 595 adopted September 24, 1973.*
- b. Future regional requirements for moving people through Mercer Island's shorelines shall be limited to public mass transit systems constructed within the approved I-90 corridor.*

*Policy 8: Proposals for additional transportation across Lake Washington should consider alternative modes above, on, or below the surface of the Lake.*

*Policy 9: Cross-lake transportation facilities must be designed to minimize the increase in noise, air or water pollution above existing levels and, in addition, must reduce to the maximum extent, similar impacts from existing facilities via upgrading and improvement.*

**City of Bellevue Comprehensive Plan Policies Relevant to the Project**

***Transportation Element***

***Transportation and Land Use***

*Policy TR-1a. Work proactively and cooperatively with other Eastside jurisdictions and regional and state agencies to plan, design, fund and construct regional transportation projects that carry out the City's transportation and land use goals.*

## ***Mobility Management***

*Goal 1: To provide multiple travel options, for transit, pedestrians, bicycles, and ridesharing, as well as the private auto.*

*Policy TR-21. Coordinate improvements and operations among travel modes, providing connections between modes.*

*Policy TR22. Incorporate pedestrian and bicycling improvements into roadway projects, and incorporate transit/high-occupancy vehicle improvements where feasible.*

## ***Transit***

*Policy TR-47. Work with the transit providers to implement Bellevue's transit vision. Plan to make transit an attractive travel option for local residents, employees, businesses and users of regional facilities.*

*Policy TR48. Work with the transit providers to establish a hierarchy of transit services focused on three major elements:*

- *Neighborhood Services*
- *Local Urban Service*
- *Inter-Community and Regional Services*

## ***Pedestrian and Bicycle Transportation System***

*Policy TR-54. Promote and facilitate the effective use of non-motorized transportation.*

## ***State Highways/Corridors***

*Goal: To improve mobility on State Highways through a mix of travel options.*

*Policy TR-68b. Support completion of the regional HOV system. Work with state and regional agencies to improve HOV access to the freeway system and freeway-to-freeway HOV linkages at I-405/SR 520, I-405/I-90 and I-5/SR 520.*

*Policy TR-68d. Work with state and regional agencies to ensure adequate capacity for both general purpose and HOV traffic on state highways.*

*Policy TR-68e. Work with state agencies to incorporate enhancements to minimize neighborhood impacts when improving State highways.*

*Policy TR-68f. Support multi-modal transportation solutions including general purpose lanes, High Capacity Transit, HOV lanes, transit and non-motorized improvements that use the best available technologies.*

*Policy TR-68g. Support options for the I-90 bridge to maintain general purpose capacity and freight mobility and to provide for 24-hour two-way transit and HOV operations.*

*Policy TR-68h. Support High Capacity Transit (HCT) facilities on I-90 and SR 520, with service to Downtown Bellevue included as an integral part of each option.*

### ***Regional Transit***

*Goal 1: To provide a regional transit service at levels that support the land use goals of the City.*

*Goal 2: To provide high performance transit connections with the other urban centers in the region.*

*Goal 3: To develop programs to encourage ridership on regional transit.*

*Policy TR-70a. Work with transit providers to maintain and expand direct and frequent regional bus routes to support the City's land use and mode split goals.*

*Policy TR-70c. Increase the frequency of transit serving the permanent park and ride lots in the I-90 corridor to better balance commuter usage of the lots.*

### ***Environmental Element***

*Goal: To integrate the natural and built environments to create a sustainable urban habitat with clean air and water, habitat for wildlife, and comfortable and secure places for people to live and work.*

### ***Environmental Stewardship***

*Goal: To promote a sustainable urban environment by weighing environmental concerns in all decision-making processes.*

*Policy EN-3. Minimize, and where practicable, eliminate the release of substances into the air, water, and soil that may degrade the quality of these resources or contribute to global atmospheric changes.*

### **Water Resources**

*Goal: To preserve and enhance water resources.*

*Policy EN-11. Maintain good surface water quality as defined by federal and state standards and rehabilitate degraded surface water.*

*Policy EN-12. Restore and protect the biological health and diversity of the Puget Sound Basin including the Lake Washington and Lake Sammamish watersheds in Bellevue's jurisdiction.*

*Policy EN-15. Preserve and maintain wetlands in a natural state.*

### **Earth Resources and Geologic Hazards**

*Goal: To preserve and enhance vegetation and earth resources.*

*Policy EN-19. Regulate land use and development in a manner which protects natural topographic, geologic, vegetational, and hydrological features.*

*Policy EN-20. Promote soil stability and the use of the natural drainage system by retaining critical native areas of existing native vegetation.*

*Policy EN-21. Preserve existing vegetation or provide or enhance vegetation that is compatible with the natural character of Bellevue.*

*Policy EN-23. Minimize and control soil erosion during and after construction through the use of the best available technology and other development restrictions.*

### **Air Quality**

*Goal: To meet federal, state, regional, and local air quality standards through coordinated, long-term strategies that address the many contributors to air pollution.*

*Policy EN-32. Implement transportation projects that provide significant air quality improvements to areas with existing air quality problems, even where the project does not bring all locations up to adopted standards, provided that the project is the best feasible solution and it significantly improves the air quality at each substandard location.*

## **Noise**

*Goal: To control the level of noise pollution in a manner which promotes the use, value, and enjoyment of property; sleep and repose; and a quality urban environment.*

*Policy EN-40. Ensure that excessive noise does not impair the permitted land use activities in residential, commercial, and industrial land use districts.*

*Policy EN-41. Protect residential neighborhoods from noise levels that interfere with sleep and repose through development standards and code enforcement.*

*Policy EN-43. Work with the State to mitigate freeway noise, while addressing aesthetic concerns.*

## **Shoreline Management Program Element**

### **Shoreline Uses and Activities**

*Policy SH-7. Discourage expansion or redevelopment of existing shoreline uses or activities that are incompatible with the shoreline environment.*

### **Conservation**

*Policy SH-13. Protect and improve wildlife and aquatic habitats, particularly spawning waters.*

*Policy SH-19. Maintain an optimum water flow in the Mercer Slough Canal.*

### **Circulation**

*Policy SH-43. Design roadways and improvements to existing roadways and parking areas within, or adjacent to, shoreline wetlands to minimize pollution from storm water runoff.*

**Appendix H**  
**Cumulative Traffic Effects**



### I-90 Scenarios

	I-5	+550	<1%	I-405	
		<b>ASSUMPTIONS</b>			<b>SR 520</b>
+900	<1%	<u>SR 520</u> No Improvements			+2000 to 3000 1-2%
		<u>I-90</u> R-8: HOV 3+			
+3500	1.0%				
		+4100	2.5%		<b>I-90</b>

### SR 520 Scenarios

	I-5	+9200	8%	I-405	
		+56,000	46%		
		<b>ASSUMPTIONS</b>			<b>SR 520</b>
+7200	2-3%	<u>SR 520</u> Add HOV Lanes Add 1 HOV and 1 GP Lane			-3000 to +900 1-3%
+13,000	4-5%	<u>I-90</u> No Improvements			-2000 to +10,000 0-6% (South,North)
+500	<1%				
+2200	1%				
		-3500	-2%		<b>I-90 No Build</b>
		-5500	-3%		
		Could be much higher reduction in short term			

### Combined I-90 and SR 520 Scenarios

	I-5	+10,550	8.7%	I-405	
		+56,380	46.5%		
		<b>ASSUMPTIONS</b>			<b>SR 520</b>
+7030	2.4%	Add HOV Lane SR520 + I-90 R-8 (HOV 3+)			+2665 1.4%
+12,060	4.1%	Add 1 HOV + 1 GP Lane SR520 + I-90 R-8 (HOV 3+)			+11,515 6.0%
+1075	0.8%				-2120 -1.2%
+2545	0.9%				-1840 -1.1%
		1390	0.9%		<b>I-90</b>
		-600	-0.4%		

Assumptions:  
2020 Daily Traffic  
HOV 3+ Definition for use of HOV lanes



**Appendix I**  
**Memorandum Agreement**



MEMORANDUM AGREEMENT

City of Seattle  
City of Mercer Island  
City of Bellevue  
King County  
Metro  
Washington State Highway Commission

December, 1976



MEMORANDUM AGREEMENT

WHEREAS, the cities of Seattle, Mercer Island and Bellevue; the Municipality of Metropolitan Seattle (hereinafter "Metro"); and King County by and through their respective councils and the Washington State Highway Commission (hereinafter "the Commission") desire to resolve the disputes which have surrounded the plans to construct an improved Interstate 90 (I-90) facility between Interstate 405 (I-405) and Interstate 5 (I-5); and

WHEREAS, there is a desire to create an environment of cooperation in which agreement is reached among all parties concerned relative to the design of the I-90 facility and related transportation projects; and

WHEREAS, the decisions of the Ninth Circuit Court of Appeals of the United States District Court for the Western District of Washington have required that all alternatives to the proposed highway be studied; and

WHEREAS, all parties hereto state that they have reviewed the proposed highway development and all currently available alternatives to it, including the option of withdrawal and substitution; and

WHEREAS, the I-90 facility from I-405 to I-5, when constructed, must contain all of the social and environmental amenities included in the Commission's previously adopted plans and modifications thereof contained in the Findings and Order of the Board of Review in order to be acceptable to all jurisdictions; and

WHEREAS, the parties believe that construction of the agreed upon I-90 facility will be of definite advantage to all four local jurisdictions because it will provide an excellent transit way between Seattle, Mercer Island and Bellevue; it will eliminate the dangerous three-one reversible lane operation presently employed in that corridor; it will provide improved truck access from the east to Seattle's south industrial/commercial area and port; it will provide improved capacity in the off-peak direction; it will probably provide an improved facility sooner than other approaches; it will provide access to and from I-90 and I-5 south of downtown Seattle eliminating traffic presently going through Beacon Hill residential areas; it will provide many jobs for our citizens during the period of construction; and it will repair the corridor and help knit together the communities now split by U.S. 10 west of the Mount Baker ridge and across Mercer Island; and

WHEREAS, the parties have concluded that withdrawal and substitution is not a desirable option because it would double the local matching monies required and because Mercer Island and Seattle find unacceptable a major highway/transit I-90 facility without extensive environmental amenities which amenities might not be funded under the withdrawal and substitution alternative; and

WHEREAS, it is in the best interest of the citizens of the Puget Sound area and the State of Washington that this segment of I-90 be completed in an expeditious manner; and

WHEREAS, all jurisdictions believe that sufficient public hearings have been held on the project and that no further hearings should be held unless legally required; and

WHEREAS, the parties desire to identify and establish a reasonable assurance of construction of certain priority public transportation facilities which are contained in the 1990 Transportation System Plan for the Central Puget Sound Region and which serve to ensure that I-90 functions as an integral part of the region's transportation system; and

WHEREAS, the parties desire to ensure that these future improvements are consistent with the goals and policies for regional development presently under consideration by the Puget Sound Council of Governments (hereinafter "PSCOG") and the subsequent subregional land use element of the Regional Development Plan for the Central Puget Sound Region;

NOW THEREFORE, in consideration of the mutual and reciprocal benefits accruing to each of the parties hereto, it is hereby agreed as follows:

1. The Cities of Seattle, Mercer Island and Bellevue; King County; Metro and the Commission support the construction of a facility which will accommodate no more than eight motor vehicle lanes which are arranged in the following general manner:

- (a) Three general-purpose motor-vehicle lanes in each direction shall be constructed between the South Bellevue Interchange and I-5. In addition, there will be provision for necessary weaving lanes and possible local access across the East Channel, to be determined in accordance with paragraph 1(e) below.

- (b) The facility shall also contain provision for two lanes designed for and permanently committed to transit use. The eastern and western termini for these lanes shall be designed to facilitate uninterrupted transit and carpool access to downtown Seattle and to downtown Bellevue in accordance with paragraph 3 hereinbelow. The design shall be such as to accommodate the operation of the two transit lanes in either a reversible or in a two-way directional mode.
- (c) The facility shall be designed in a manner which, as much as practicable, minimizes the width of the roadway and the taking of land.
- (d) To the extent practical, the facility shall provide priority by-pass access for local transit to the general purpose motor-vehicle lanes.
- (e) The parties agree that the transit lanes shall operate initially in a two-way directional mode, at no less than 45 mph average speed, with the first priority to transit, the second to carpools, and the third to Mercer Island traffic. In the direction of minor flow, the transit lane shall be restricted to busses. The parties further agree that the initial operation of the East Channel bridge shall consist of only three general purpose auto

lanes in each direction in addition to the transit lanes. In addition, there will be an acceleration lane from the South Bellevue Interchange which will terminate prior to the exit ramp at the East Mercer Interchange. The subsequent mode of operation of the facility shall be based upon existing needs as determined by the Commission in consultation with the affected jurisdictions, pursuant to paragraph 14 of this agreement. That determination will consider efficient transit flow, equitable access for Mercer Island and Bellevue traffic, and traffic-related impacts on Seattle.

2. The I-90 facility shall be designed and constructed so that conversion of all or part of the transit roadway to fixed guideway is possible.
3. The parties recognize that the planning, design and construction of efficient access at the eastern terminus and western terminus of this facility will enhance the operation of I-90 as a regional transportation facility. Therefore, the Commission, jointly with Seattle, Mercer Island, Bellevue, King County, and Metro, as their respective interests and responsibilities may dictate, shall immediately upon execution of this agreement undertake the development of the necessary plans and designs for, and shall further proceed, with

the required public hearings and the preparation of the necessary environmental impact statements in order to obtain maximum eligibility for Federal Interstate funding for the construction of the following projects:

- (a) Transit access from I-90 to downtown Seattle;
- (b) Transit access from I-90 to I-405 and to the Bellevue central business district;
- (c) Transit and general-purpose access from I-90 to the King County Stadium area; and
- (d) Transit and general-purpose access from I-90 to arterials serving the north Duwamish industrial/commercial area and the Seattle waterfront;
- (e) Transit access from I-90 transit lanes to I-5;

For any of the above projects or portions thereof which are not eligible for Federal Interstate funding, the Cities, the County and Metro with full support of the Commission, shall seek any available funding for such projects and shall make reasonable effort to complete the construction thereof prior to the completion of I-90.

4. The parties further agree, except as otherwise provided in this agreement, that the modified design of the facility will preserve and incorporate all of the provisions for community amenities and for reducing adverse environmental impacts as contained in limited access plans adopted by the State Highway Commission for

- (a) the segment of I-90 from the West Shore of Mercer Island to the East Channel Bridge and for

(b) the segment from I-5 to the West Shore of Mercer Island (modified by the Findings and Order of the Board of Review dated March 26, 1973, and the Stipulation to Resolve Certain Issues incorporated therein, including but not limited to the provisions for a full lid tying affected Seattle neighborhoods together. The lid shall be constructed to permit park and/or two-story residential or business construction (not industrial uses) to take place on top of the highway between the Mt. Baker tunnel and 23rd Avenue South. Additional loads may be acceptable following specific agreement between the Commission and the City of Seattle. The Commission agrees to fund the landscaping of the lid and the maintenance thereof except as may be agreed to by other parties.

5. The parties agree that the design of the entire facility shall include the following additional features:
- (a) a transit station permitting transfer of transit passengers at Empire Way South or 23rd Avenue South as more particularly set forth in the Findings and Order of the Board of Review.
  - (b) a direct Highway connection for Rainier Valley to and from the east.
  - (c) the Commission's plan for preserving access between Seattle communities over adjacent local city streets shall include improvements of South Norman Street between 20th Avenue South and 23rd Avenue South to provide access to the Judkins neighborhood,

this being done in lieu of the development of South Judkins Street as provided in the Commission's adopted plan as modified by the Findings and Order of the Board of Review.

- (d) a continuous park/pedestrian link between Judkins Park and the lid over I-90 west of the Mt. Baker Ridge Tunnel.
6. The Commission agrees to participate jointly with the City of Seattle in an I-90 corridor area planning study for the purpose of designing alternative means of redeveloping areas adjacent to the I-90 project in Seattle. The extent of such study shall be defined and agreed to by Seattle and the Commission, and to the extent that the study relates to the effects of the I-90 facility in the corridor, it shall be funded by the Commission.
  7. At the option of the local jurisdictions to be exercised within a reasonable time, the Commission shall transfer to the appropriate jurisdiction fee title of all state-purchased lands acquired for the I-90 project but which are outside the finally determined right-of-way lines of I-90 to the fullest extent and at the lowest cost legally possible.
  8. The parties hereto agree that they will proceed under established legal processes, including regional transportation planning procedures of PSCOG and consistent with the approved Regional Development Plan of PSCOG, to determine those projects which are of highest priority in the Transportation System Plan and the Transportation

Improvement Program as the Plan and Program apply to the King County subregion. The parties hereby agree that projects (a) through (g) listed below are of highest priority and shall so indicate in the process of establishing the King County Subregional Transportation Improvement Program, the Regional 1990 Transportation System Plan, and Metro's Comprehensive Public Transportation Plan. The Commission and Metro shall work with the local jurisdictions in undertaking location and design studies for these projects at the earliest possible date commensurate with state, regional, metropolitan and local planning and priority programming practices. Projects to be considered through these processes shall include, but not be limited to, the following regional components of PSCOG 1990 Transportation Plan:

- (a) Transit/carpool lanes and/or Surveillance Control and Driver Information Systems (SC&DI) on I-5 from I-405 at Tukwila to the King County Snohomish County line;
- (b) The park-and-ride lots and flyer stops contained in the approved 1980 Plan as may be modified by Metro;
- (c) Provision for a busway or exclusive transit/carpool lane(s) as a part of the SR 99 and SR 509 corridor including a crossing of the First Avenue South Bridge, consistent with Metro's transition planning for this corridor;

- (d) Provision for a busway or exclusive transit/carpool lane(s) and/or SC&DI as a part of SR 520 from I-5 to I-405;
  - (e) Redesign, in a manner acceptable to the City of Seattle, of the lanes where SR 520 meets I-5 and at the Mercer Street egress from I-5 in order to improve transit flow and reduce the congestion on I-5 between Mercer Street and Roanoke Street;
  - (f) Provision for a busway or exclusive transit/carpool lane(s) and/or SC&DI as a part of I-405 from Bothell to Renton
  - (g) Provision for exclusive transit lane(s) on I-405 through Bellevue which shall also include provision for a freeway flyer stop and a park-and-ride facility on I-405 between Main Street and N.E. 8th in Bellevue and provision for I-405 access improvements to the Bellevue central business district as determined by the Joint State Legislative/Highway Commission and City of Bellevue I-405 Access Study.
9. The parties agree that the I-90 facility should be operated in such a manner as to encourage growth and development in the presently urbanized areas of King County rather than in undeveloped areas. Therefore, the Commission shall conduct a study in coordination with the parties to this agreement to determine the feasibility and means of metering and controlling local access to I-90 east of Bellevue during peak hours.

10. Seattle, Bellevue, Mercer Island, King County and Metro agree that dedicated public transit rights-of-way through downtown Seattle and through downtown Bellevue are compatible with the public transportation plans of this area and are desirable to be implemented in conjunction with the completion of the I-90 facility.
11. Immediately upon the issuance of the environmental impact statement, another review team comprised of representatives chosen by each of the parties to this agreement shall be established to further monitor and advise the Commission on the development of the design and the implementation of the entire I-90 facility and the I-90 transit access provisions listed in paragraph 3 above. In addition, review teams including elected officials and citizens from Seattle, Bellevue, Mercer Island and King County may be established to further monitor and advise the Commission upon the implementation and design of the I-90 facility.
12. Upon execution of this agreement, the Commission becomes responsible for the design and construction of the facilities described in this agreement that can be funded with federal interstate funds as well as any other facilities referred to in this agreement for which the Commission, by law, has the sole responsibility; and the several parties to this agreement become responsible for the design and construction of the remaining facilities referred to in this agreement; provided that all such undertakings are subject to available funding and legal and procedural requirements. Seattle,

Bellevue, Mercer Island, King County and the Commission agree to process any permits required for construction of the agreed upon facilities in a timely and expeditious manner, as provided by law.

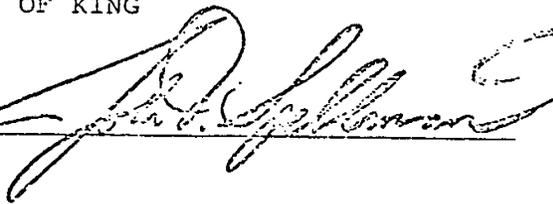
13. It is expressly understood that agreement to the above by the Commission is tentative pending review of (1) the final environmental impact statement to be filed in connection with the project and (2) the hearing record being prepared in connection with the corridor-design hearing held in January and February 1976. It is also understood that the parties have reached this agreement under the assumption and on the condition that the funding for the project, in accordance with the modified design of said project as referred to in paragraphs 1, 2 and 4 and those eligible portions under paragraph 3 which will qualify for Federal Aid Interstate monies, is approved prior to the initiation of construction and shall be funded from federal and state funds, except as agreed to by the affected jurisdiction(s).
14. This agreement represents substantial accommodations by the parties of positions held heretofore. Such accommodations were made in order to achieve a unanimous agreement upon which to proceed with the design and construction of I-90 and related projects. This agreement, therefore, sets forth the express intent of the existing governing bodies that the parties to this agreement understand that their respective governing bodies are limited in the degree to which they can bind their successors with respect to the exercise of govern-

mental powers vested in those governing bodies by law. Accordingly, the Commission will take no action which would result in a major change in either the operation or the capacity of the I-90 facility without prior consultation with and involvement of the other parties to this agreement, with the intent that concurrence of the parties be a prerequisite to Commission action to the greatest extent possible under law.

Dated this 21st day of December, 1976

COUNTY OF KING

CITY OF SEATTLE

By: 

By: 

MUNICIPALITY OF METROPOLITAN  
SEATTLE

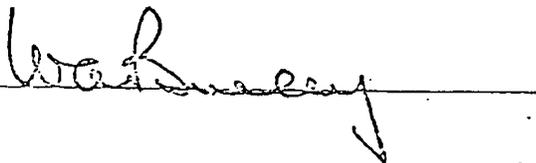
CITY OF MERCER ISLAND

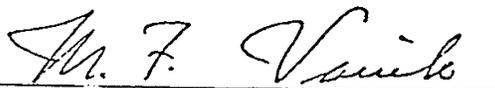
By: 

By: 

WASHINGTON STATE HIGHWAY  
COMMISSION

CITY OF BELLEVUE

By: 

By: 



**Appendix J**  
**List of Mitigation Measures**



# Appendix J – Mitigation Measures

The following is a list of mitigation measures proposed for the I-90 Two-Way Transit and HOV Operations Project.

## 3.1 Transit/HOV Operations

None

## 3.2 Freeway Operations

**TRAN-1.** Rumble strips would be provided for Alternative R-8A to mitigate the effects of non-standard lane and shoulder widths. The rumble strips would likely be implemented using profiled edge lines, due to the extent of I-90 roadways carried on structures, where ground-in rumble strips would not be desirable (also see TRAN-3). Rumble strips would not be used with Alternative R-5 because transit vehicles would be driving on the shoulders during peak periods. Standard lane widths would be maintained in Alternative R-2B Modified, and fixed-object crashes are not expected to be a concern.

**TRAN-2.** Speed management measures would be included as a part of all Build Alternatives. The most promising of these measures, variable speed limits, would be studied further for potential implementation with Alternative R-8A on I-90 between Seattle and Bellevue. These studies would include development and evaluation of system options and functions to be addressed by the system (e.g. changing speed limits in response to congestion, incidents, weather, etc.), and will consider operational, enforcement, institutional, and legal issues. If variable speed limits are not implemented, other speed management measures, such as reduced speed limits and/or speed advisory signing, would be implemented as a part of Alternative R-8A. In Alternative R-2B Modified, variable speed limits could manage speeds in congested locations. With the other alternatives, their use could mitigate the effects of changes in stopping sight distance in the First Hill Lid and Corwin Curves.

**TRAN-3.** For all Build Alternatives, lane visibility would be enhanced by replacing existing painted edge lines and other lane markings throughout the corridor with profiled edge lines and lane lines and other enhancements to existing pavement markings.

**TRAN-4.** Lane visibility in I-90 lids and tunnels could be enhanced by using illuminated pavement markers. The feasibility of installing illuminated pavement markers would be investigated for any chosen alternative. Illuminated pavement markers would be investigated further as a part of final design, including consideration of trade-offs with potential tunnel lighting enhancements.

**TRAN-5.** Lane visibility in I-90 lids and tunnels for all Build Alternatives could be enhanced by attaching a linear delineation system attached to the face of traffic barriers in locations where shoulders are of less than standard width. One example of a linear delineation system consists of aluminum panels 6-inches high by 30-inches long that are laminated with retroreflective sheeting and crimped in a sharp “wave” shape. The feasibility and specific types and application of linear delineation would be investigated as part of final design.

**TRAN-6.** For all Build Alternatives, existing signs could be replaced or refaced as required to maintain reflectivity requirements and to provide improved legibility for older motorists. The final design would include a survey of existing signs to determine which signs should be replaced or refaced. Replaced or refaced signs would meet current standards for reflectivity and would provide improved legibility for older motorists.

**TRAN-7.** For all Build Alternatives, illuminated guide signs westbound in the Mount Baker Ridge Lid could give motorists more time to change lanes for the Rainier Avenue S and I-5 exits. The feasibility of illuminated guide signs to supplement existing signage would be investigated as part of final design.

**TRAN-8.** The feasibility of adding new or supplementing existing variable message signs would be investigated for any chosen alternative, including a survey of existing variable or dynamic message signs to determine the need for new or supplemental signs.

**(TRAN-9.** Removed from further consideration.)

**(TRAN-10.** Removed from further consideration.)

**TRAN-11.** The feasibility of providing roadway illumination enhancements at enforcement/refuge areas and areas with reduced shoulder widths adjacent to general purpose traffic would be considered during final design.

**TRAN-12.** Enhanced tunnel lighting would be investigated for any chosen alternative, except Alternative R-2B Modified, which would not affect the outer roadway lane and shoulder configuration in the tunnels and lids.

**TRAN-13.** Enhanced incident management would be provided for all Build Alternatives in the portions of the corridor with restricted shoulder widths. These areas would include the Mount Baker Ridge Tunnels and Lid, the floating bridges, the First Hill Lid, and the Mercer Island CBD. The focus of the increased service would be on the center roadway for Alternative R-2B Modified, and the outer roadways for Alternatives R-5 Restripe, R-5 Modified, and R-8A.

**TRAN-14.** Shoulder widths in the center roadway for Alternative R-2B Modified could be maximized in narrow median sections by using a narrow profile traffic barrier. A narrow profile barrier has face-to-face dimensions of 12 inches in lieu of the 24-inch dimension of standard barriers. The barrier is designed to be movable, which could be used to facilitate maintenance and incident response in narrow lane configurations. The barrier can be realigned after impact by means of a roller attached to a tow truck.

**TRAN-15.** Barrier gates could be used with Alternatives R-2B Modified or R-8A on the HMM Floating Bridge where access is limited by the available bridge deck width and the feasible limits on deck widening. Final design would include consideration of barrier gates as a part of the development of enhanced incident management provisions (TRAN-13).

**(TRAN-16.** Removed from further consideration.)

**TRAN-17.** With Alternative R-8A, an existing auxiliary lane on eastbound I-90 at the I-405 off-ramp would be extended west towards the Bellevue Way SE off-ramp. The limits of the auxiliary lane extension would be determined during final design.

### **3.3 Surface Street Operations**

**TRAN-18.** Information would be distributed to provide drivers with advance notice of road closures and detours. Detour signs would be erected during road closures.

**TRAN-19.** To the extent feasible, WSDOT would request special event sponsors to indicate preferable directions of travel in advertisements for special events. If feasible, the construction schedule would be varied to avoid carrying out construction activities that would exacerbate potential delays during special events.

**TRAN-20.** During construction of the ramps at both 77th and 80th Avenues SE for Alternatives R-2B Modified and R-8A, road closures would not occur on 77th Avenue SE and 80th Avenue SE at the same time. This will ensure that access to the Mercer Island CBD is not adversely impacted.

**TRAN-21.** A warrant analysis would be performed to determine if installing a traffic signal at the intersection of East Mercer Way and the I-90 westbound on/off ramp would meet warrant criteria.

(TRAN-22. Removed from further consideration.)

**TRAN-23.** The approach at the unsignalized intersection of 76th Avenue SE/I-90 westbound on-ramp/North Mercer Way would be changed to a left turn lane and a shared right and through lane.

**TRAN-24.** An evaluation would be performed on the feasibility of adding a southbound HOV lane through the intersection of Bellevue Way SE/112th Avenue SE/Bellevue Park-and-Ride.

(TRAN-25. Removed from further consideration.)

(TRAN-26. Removed from further consideration.)

### **3.4 Pedestrian/Bicycle Access**

**TRAN-27.** Shuttle service during construction could be provided for pedestrian and bicycle users of the shared-use pathway on the HMH Floating Bridge. This would be similar to service provided during construction of the low-level West Seattle Bridge. It could be a shuttle on existing buses, deadheading buses, or a dedicated shuttle.

**TRAN-28.** A detour route during construction could be provided on the I-90 center or eastbound roadways. This would be similar to the detour route provided on the Morrison Bridge in Portland, OR, during reconstruction of the Hawthorne Bridge. This route could supplement the dedicated shuttle service (TRAN-27) to accommodate weekend recreational traffic, or could be in lieu of a shuttle.

**TRAN-29.** The addition of the type “BP” railing, which is higher than the existing traffic barrier between the shared-use pathway and the westbound outer roadway, would decrease the effective width of the shared-use pathway. To mitigate this operational issue, rub rails could be installed on the railings on both sides of the pathway, or incorporated into the potential screening on the traffic barrier (see TRAN-30). Rub rails would reduce the potential that a cyclist could snag a bicycle handlebar in the balusters of the existing railing and the type “BP” railing, and would allow cyclists to ride closer to the railings. Trade-offs involving rub-rails would be evaluated during subsequent design phases of the Project.

**TRAN-30.** To reduce the proximity impact of westbound auto and truck traffic operating closer to the shared-use pathway, screening would be provided on top of the 32-inch high traffic barrier in lieu of the standard WSDOT type “BP” aluminum railing. The impacts to be mitigated by screening are noted below.

- Wind buffeting due to passing traffic and/or gusting winds.
- Improved protection from roadway debris for bicyclists.
- Glare from on-coming traffic (present under existing conditions for westbound bicyclists in the winter months, but would be worsened with a reduced westbound outer roadway shoulder width).

Many design options for screening that could accomplish these goals exist. These could include chain-link fencing, wire mesh panels, lightweight concrete panels, or Plexiglas™ panels mounted on top of the concrete bridge rail for a total maximum height of six to eight feet. Simulations of examples of wire mesh and Plexiglas™ panel screening options are shown in Figure 4.3-4, along with a simulation of the type “BP” railing installation, and a photo of the existing condition. Design issues that would be considered for screening include:

- Wind loads on the floating bridge.
- Maintenance issues including access for bridge inspections.
- Safety and security issues, particularly related to reductions in visibility of the shared use path from the westbound roadway.
- Reductions in access to the shared-use path as a refuge for motorists with disabled vehicles.
- Aesthetic concerns, including views to the south from the pathway and views to the north from the roadway.

In addition, with Alternatives R-5 Modified and R-8A, rub rails could be installed on the railings on both sides of the pathway, or incorporated into the potential screening on the traffic barrier (see TRAN-29).

### **3.5 Freight Movement**

None

### **3.6 Navigable Waterways**

None

### **4.1 Land Use**

None

### **4.2 Environmental Justice**

None

### **4.3 Visual Resources**

**VIS-1.** Construction would be scheduled so that night lighting would be kept to a minimum; however, night construction would be required with all Build Alternatives to minimize impacts to roadway users.

**VIS-2.** Vegetation, including trees, would be preserved or restored wherever possible after construction. Mitigation areas for vegetation that cannot be preserved or restored would consist of additional plantings to enhance existing landscaped areas within the I-90 corridor between I-5 and I-405.

**VIS-3.** *I-90 Architectural Design Standards* (WSDOT, Revised Edition, December 1986) would be followed for all visual elements including walls and bridge structures, exposed concrete texture and color, lighting, and signing.

**VIS 4.** Restoration of roadside functions such as guidance and navigation, screening, and roadway buffering would be done in accordance with the *WSDOT Roadside Manual* where these functions would be affected by the Project.

### **4.4 Air Quality**

The following controls would be implemented to mitigate air quality impacts where applicable to the specific construction location and activity and are applicable to all Build Alternatives:

**AQ-1.** Restrict construction activities to specific periods of the day when traffic volumes are at a minimum, which would reduce the emissions from increased traffic congestion and the public's exposure to primarily emitted pollutants. If permitted, construction activities may be limited to nighttime hours.

**AQ-2.** If feasible, restrict construction activities on hot days when region is at risk for ozone exceedances.

- AQ-3.** Stage construction among separate or related projects to minimize overall traffic congestion.
- AQ-4.** Route transport vehicles to minimize the impacts to traffic flow.
- AQ-5.** Make maintaining HOV lane operation during construction a priority.
- AQ-6.** Control dust emissions by using measures such as spraying water or other dust suppressant on bare surfaces and covering any soils that may need to be transported to, from, and within the construction area.
- AQ-7.** Maintain adequate freeboard on trucks when transporting soil/materials.
- AQ-8.** Cover soil/materials during transport to minimize wind-borne particulate emissions.
- AQ-9.** Minimize the size of the construction area, cover exposed soil and re-vegetate disrupted areas as soon as possible.
- AQ-10.** Use newer construction equipment and maintain all equipment in good mechanical condition to minimize exhaust emissions.
- AQ-11.** Use emission reduction retrofit equipment for on/off road vehicles and equipment (Diesel Solutions Program).
- AQ-12.** If feasible, replace regular diesel fuel usage with bio-diesel or use alternative fuel vehicles/equipment.
- AQ-13.** Construct wind barriers to reduce wind velocity over exposed earth.
- AQ-14.** Restrict the speed of construction vehicles when operating in areas of exposed earth.
- AQ-15.** Use wheel washers to remove mud from construction vehicles prior to exiting site (reduce the potential emissions from re-entrained particulate matter).
- AQ-16.** Clean road surfaces regularly to reduce re-entrained particulate matter.
- AQ-17.** Locate construction equipment away from sensitive populations and building air intakes. Locate truck/equipment staging zones to minimize impacts to the public, especially the elderly and the very young.
- AQ-18.** Limit construction vehicle idling to a maximum of 5 minutes.
- AQ-19.** Encourage construction workers to car pool or use other forms of mass transportation.

#### **4.5 Noise**

Construction activities with the proposed Project would include the construction industry's best management practices to reduce construction noise at nearby receptors along I-90. Construction activities would comply with local construction noise regulations. Construction mitigation

would be incorporated into construction plans and contractor specifications in the construction contract. The following construction noise mitigation measures are recommended for all Build Alternatives.

**NOI-1.** Engines of construction equipment would be equipped with adequate mufflers, intake silencers, or engine enclosures.

**NOI-2.** The quietest equipment available would be used.

**NOI-3.** Construction equipment would be required during prolonged periods of nonuse.

**NOI-4.** Contractors would be required to maintain all equipment and train their equipment operators.

**NOI-5.** Stationary equipment would be located away from receiving properties where feasible.

**NOI-6.** Where stationary equipment must be located close to residences, temporary noise barriers or curtains would be constructed around the equipment to decrease noise levels at the nearby sensitive receptors.

#### **4.6 Biological Resources**

**BIO-1.** Replacement of the outfall in Mercer Slough, if required, would be conducted during the appropriate in-water work window for the Mercer Slough. All work would be completed over one construction season. The work window for the Mercer Slough is generally between July 16 and September 1, and would be established by WDFW.

**BIO-1a.** Construction staging for the replacement of the Mercer Slough outfall would occur from dry upland locations. A temporary access road would be placed through the wetlands adjacent to Mercer Slough in the vicinity of the outfall. The access roads would be removed and the shoreline and adjacent wetlands would be restored to preexisting conditions or better.

**BIO-1b.** New piles for the Mercer Slough outfall replacement would be installed using an impact pile driver. The work area would be isolated by a cofferdam, effectively reducing pressure vibrations. The cofferdam would be removed and the shoreline and adjacent wetlands would be restored to preexisting conditions or better.

**BIO-1c.** Appropriate in-water work BMPs would be followed to minimize the effects to fish and fish habitat.

**BIO-2.** Revegetation and landscaping efforts for the I-90 corridor would not use noxious weed species in either seed or plant mixes. In areas disturbed by construction, measures would be taken to prevent noxious weeds from colonizing.

#### **4.7 Water Resources**

**WAT-1.** The Project would be designed to minimize erosion and to prevent sediment from leaving the construction area. BMPs would be employed to control erosion and sediment. These

BMPs are outlined in detail in the WSDOT 1995 *Highway Runoff Manual* (Section 4-3). In addition, the WSDOT Endangered Species Act Stormwater Effects Guidance Instructional Letter (IL 4020.02) shall be used as guidelines. A temporary erosion and sediment control (TESC) plan would provide for the prevention, interception, and treatment of all potential silt-laden runoff that may occur during Project construction. The TESC Plan would consist of a set of plans and narrative, as outlined in the 1995 *Highway Runoff Manual* (Section 5-3.4). The TESC Plan would show design and location of all BMPs, clearing limits, drainage contours, and all other major hydraulic features. The TESC Plan would also address construction schedule issues to ensure BMPs are in place and functional prior to grading operations, and that exposed soils are stabilized in a timely manner. The TESC Plan would also include a maintenance and operations schedule explaining how each BMP would be maintained. WSDOT would prepare a stormwater pollution prevention plan (including erosion and sediment control) in accordance with guidance in the 1995 *Highway Runoff Manual*.

**WAT-2.** The best available design practices would be used to maintain existing hydrologic function and drainage patterns based on site geology, hydrology, topography, and practicability.

**WAT-3.** The Project would provide a Spill Prevention, Control, and Countermeasures (SPCC) Plan for control of construction-related pollutants (such as petroleum products, lubricants, fuel, and oils). BMPs for the SPCC Plan are detailed in the WSDOT 1995 *Highway Runoff Manual*. WSDOT would prepare stormwater pollution prevention, including erosion and sediment control, plans in accordance with guidance in the 1995 *Highway Runoff Manual*.

**WAT-4.** Construction equipment would be maintained during the Project construction phase in order to prevent spill events, or chronic impacts, such as oil or lubricant drips from vehicles.

**WAT-5.** Temporary erosion and sediment control plans would be implemented to minimize impacts to Lake Washington during construction. These may include silt fences, straw bales, and any other means of controlling and filtering stormwater prior to discharge into Lake Washington.

**WAT-6.** Spill prevention plans would be implemented to minimize impacts to Lake Washington during construction. These could include booms in the water surrounding vessels/barges or other related construction to minimize and/or prevent spills of petroleum products or other pollutants.

**WAT-7.** If in-water work is required, BMPs would be implemented to reduce or eliminate the potential for the release of sediments and water pollutants associated with road construction to the slough and lake.

If the outfall into Mercer Slough is determined to require replacement as a part of the I-90 project, these additional measures would be implemented (WAT-7a through 7e).

**WAT-7a.** Construction staging for the replacement of the Mercer Slough outfall would occur from dry upland locations.

**WAT-7b.** During construction for the Mercer Slough outfall, a cofferdam would be installed along the entire length of the existing pipe. The total area enclosed in the cofferdam will be minimized to the greatest extent possible.

**WAT-7c.** Prior to the removal of the existing Mercer Slough outfall pipe, a temporary by-pass system would be installed to divert existing pipe flows around the established work areas.

**WAT-7d.** Once the new Mercer Slough outfall pipe is in place, soil would be placed back on top of the new Mercer Slough outfall pipe in the upland areas to the original ground contour.

**WAT-7e.** Riprap would be placed around the water end of the Mercer Slough outfall to dissipate the energy of the water leaving the outfall and to prevent shoreline erosion.

**WAT-8.** All stormwater runoff from new impervious surfaces would be treated according to WSDOT 1995 *Highway Runoff Manual* and the Endangered Species Act (ESA) Stormwater Effects Guidance Instructional Letter 4020.02 (WSDOT, 2002) and would discharge into new stormwater treatment facilities for water quality treatment prior to discharge at existing outfall locations. The new stormwater treatment facilities would provide water quality treatment for up to 140 percent of the new impervious area.

**WAT-9.** Road maintenance practices should conform to guidance in Section 7 of the WSDOT 1995 *Highway Runoff Manual*. Practices should address disposal of highway-generated waste (street sweepings, catch basin cleanings), maintenance of stormwater facilities (e.g., channel conveyance capacity), and snow and ice control operations.

**WAT-10.** Any hazardous materials spills that occur on the roadway would be cleaned up according to the SPCC.

**WAT-11.** Drainage structures (culverts, ditches) built or replaced for the Project would be designed per WSDOT 1997 *Hydraulic Manual* design guidance.

#### **4.8 Energy**

The following mitigation measures are recommended to reduce energy consumption:

**EN-1.** Limit the idling of construction equipment and employee vehicles.

**EN-2.** Plan to minimize double handling of fill and construction materials.

**EN-3.** Maintain equipment in good condition.

**EN-4.** Recycle materials generated during construction and use recycled materials.

**EN-5.** Consult with gasoline stations in the area to ensure that adequate gasoline supplies are available during and near the most intensive construction activities.

**EN-6.** Encourage carpooling or vanpooling among construction workers.

**EN-7.** Locate construction staging areas as close as possible to work sites.

## **4.9 Geology and Soils**

**GEO-1.** The duff layer (loose leaf matter, needles, bark, and other easily identified plant parts), native topsoil, and natural vegetation would be retained in an undisturbed state to the maximum extent practicable.

**GEO-2.** The control or prevention of pollutant release would be the first line of defense by selecting source control BMPs. Erosion prevention would be prioritized over the treatment of turbid runoff.

**GEO-3.** BMPs would be specific to onsite characteristics (topography, drainage, soil type, ground cover, and critical areas) and the construction plan.

**GEO-4.** Runoff would be diverted away from exposed areas wherever possible. Clean water will be kept clean.

**GEO-5.** The extent of clearing operations and phase construction operations would be minimized.

**GEO-6.** Before reseeding a disturbed soil area, all soils would be amended with compost wherever topsoil has been removed.

**GEO-7.** Natural drainage features would be incorporated whenever possible, using adequate buffers and protecting areas where flow enters the drainage system.

**GEO-8.** Slope length and steepness would be minimized wherever possible.

**GEO-9.** Runoff velocities would be reduced to prevent channel erosion wherever possible.

**GEO-10.** Tracking of sediment offsite would be prevented wherever possible. During construction the wheels and undercarriage of trucks, and other vehicles leaving the site would be washed and managed using best management practices for construction projects. Erosion and run-on/runoff control methods and structures should be specified as engineering controls and practices in plans and specifications.

**GEO-11.** Erosion would be minimized using best management practices. Exposed areas would be re-vegetated or protected from water and wind erosion using erosion control blankets or similar devices.

**GEO-12.** Permanent and adequate drainage for surface water would be installed as specified by engineering controls and practices in the plans and specifications.

## **4.10 Hazardous Materials**

No mitigation measures are required for construction.

In the event of discovery of a hazardous site, health and safety monitoring will be conducted on work sites with potential hazardous materials. If applicable, air will be monitored for

combustible organic compounds such as gasoline, explosive atmospheres, oxygen concentration, and carbon monoxide, and water will be tested for the presence of hazardous or toxic materials. Proper clothing, breathing equipment and other measures will be used to provide a safer environment for construction workers. Measures would be implemented to address public health, worker health and safety, and to prevent the spread of any existing contamination encountered during construction.

#### **4.11 Public Services**

**PUB-1.** To the extent it would be feasible, shoulders would be provided on the I-90 roadways during construction to facilitate passage of emergency vehicles during congested periods.

**PUB-2.** Personnel controlling the movement of vehicles in areas where construction works are being carried out would give priority to emergency vehicles over other vehicles. Emergency vehicles would only be allowed to proceed when it is safe to do so.

**PUB-3.** Emergency vehicles would not be restricted from responding to emergencies on streets where detours are in effect, provided it is not unsafe for them to proceed.

**PUB-4.** Signs would be erected to inform users of detours.

**PUB-5.** Development of construction staging plans would include consideration of limiting closures of 77th Avenue SE and 80th Avenue SE to avoid closing them at the same time.

**PUB-6.** Emergency service providers would be provided with regular updates on the progress of the construction activities and adequate notice of any proposed road closures or lengthy traffic delays.

**PUB-7.** Construction equipment would not be parked in front of fire hydrants.

#### **4.12 Utilities**

**UTI-1.** Prior to any construction activities or pre-construction excavation, utilities would be located using a locator service. Representatives of each utility would be contacted and involved in the process to ensure that utility infrastructure is not damaged and that services are not interrupted.

**UTI-2.** Existing utilities would be protected and kept in operation. If necessary, temporary luminaires and traffic signals would be established to maintain safety and traffic flow along the corridor. Temporary services would be constructed prior to shut off and/or relocation of existing utility services, where necessary.

#### **4.13 Historic and Archaeological Resources**

None

#### **4.14 Parklands**

Construction proximity impacts to parklands are caused by visual, dust or noise changes. There would be no substantial impairment of any park or Section 4(f) resources, and no “use” under Section 4(f) regulations. As a result, no mitigation would be required as per Section 4(f) regulations. There are no additional recommended mitigation measures beyond those listed in Sections 4.3 Visual Resources, 4.4 Air Quality, and 4.5 Noise of this EIS.

No mitigation measures are required for operation.

**Appendix K**  
**Risk Analysis**



# FLAMMABLE LIQUID CARGO RISK ANALYSIS

*Sound Transit Regional Express  
I-90 Two-Way Transit and HOV Operations*



*Prepared By:  
Washington State Department of Transportation*

*May 2004*

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## 1. INTRODUCTION

The purpose of this analysis is to determine the change in risk of a crash involving a truck carrying flammable liquids on Interstate 90 between Interstate 5 and Interstate 405 if the Preferred Alternative R-8A were to be implemented. The design of R-8A includes a number of crash reduction measures intended to reduce the likelihood of a crash. These measures include: speed management; shoulder rumble strips; enhanced delineation and signing; enhanced illumination; and enhanced incident management program.

Collisions involving trucks carrying flammable liquids can occur on the open road or within tunnels and lidded highways. When these collisions occur, four outcomes generally result. In descending order of the number of occurrences, a collision may result in vehicle damage only, spill without fire, and spill with fire or with an explosion. Collisions involving one or more trucks carrying flammable liquids are considered to be random events with a very low probability of occurrence. When collisions do occur, the consequence may be high to both the surrounding infrastructure and road users.

Transportation officials are particularly concerned when flammable cargoes are carried through enclosed spaces such as tunnels and lidded highways. In the Seattle metropolitan region, a number of routes exist for the transportation of flammable cargo that includes these enclosed spaces. This includes Interstate 90, between I-5 in Seattle and I-405 in Bellevue, and I-5 under the Washington State Convention and Trade Center. Both of these routes fall into the tunnel/lid classification. Future design alternatives for SR 520 are also considering lids over the highway although this consideration is early in the planning process. In addition to routes with enclosed portions of the highway, areas of residential units close to the highway can pose particular concern to citizens.

## 2. CRASH PREDICTION METHODOLOGY

To assess the risk posed by the movement of flammable liquids, a number of steps were taken using nationally recognized methods. The first step was to identify alternate routes that could be used should I-90 be closed partially or entirely to flammable cargo.

If flammable cargo were prohibited from using the I-90 corridor, trucks carrying flammable liquid cargo would have to use I-5, I-405, SR 520, SR 522 or some combination of these roadways as part of their alternate route. The regional sources of flammable liquid cargoes being hauled over I-90 are concentrated at the fuel terminals in the industrial area near Spokane Street and I-5. These fuel terminals are located south of I-90. Based on studies conducted by WSDOT, most trucks appear to use SR 520 or the I-5/I-405 route to the south of Lake Washington when I-90 is closed to trucks carrying flammable cargoes.

Potential alternate routes for trucks carrying flammable cargo were divided into logical units for the assessment of crash rates throughout these corridors. By first comparing crash rates, a relative assessment of safety performance of current conditions was made between the possible routes. Crash rates are also used to determine the number of crashes for a given section of highway.

For any given section of highway the Institute of Transportation Engineers defines the crash rate as:

$$AccidentRate = \frac{(NumberOfAccidents) * (1,000,000)}{(SectionLength) * (AADT) * (365\_days)} \quad \text{Equation 1}$$

Crash rates were developed using the Washington State Patrol's crash data. The data was reviewed to determine the number of crashes for each section for medium and heavy trucks combined and for all vehicles. Light trucks were considered as automobiles in the development of truck crash rates.

Section lengths were reported in miles by determining the distance between the beginning and ending point of each segment. Average Annual Daily Traffic (AADT) was accessed from the WSDOT traffic database. The denominator in Equation 1 represents the annual vehicle-miles of travel (VMT) in each corridor. Crash rates from Equation 1 are typically expressed as crashes per million vehicle-miles (MVM) of travel.

### **3. EXISTING CONDITIONS**

#### **3.1 EXISTING DATA**

Data used in the projected crash rate estimates are presented in Table 1. A truck crash index was computed to represent the overall rate at which all trucks are involved in crashes, based on annual corridor VMT. These rates were used as the basis for the analysis of future conditions.

Research has found that trucks transporting flammable cargoes are typically involved in fewer crashes than general truck traffic. This has been attributed to improved driver training and safety awareness on the part of companies involved in the transportation of flammable cargo. The truck crash indices listed in Table 1 do not account for this fact and are, therefore, conservative.

**Table 1**  
**Annual Crash Rates - 2002**

Route	Description	Direction	Length (miles)	Volume (vpd)	Overall Crash Rate (all crashes /total MVM)	Truck Crash Index (truck crashes/ total MVM)
I-5	I-405 to I-90	NB	10.07	116,000	1.11	0.08
		SB	9.62	116,000	0.62	0.10
I-5	I-90 to SR 520	NB	3.65	106,100	2.45	0.14
		SB	3.77	106,100	2.92	0.14
I-5	SR 520 to SR 522	NB	2.65	103,200	1.80	0.09
		SB	2.68	103,200	2.60	0.12
I-5	SR 522 to I-405	NB	11.65	95,900	0.81	0.04
		SB	11.82	95,900	1.54	0.07
I-90	I-5 to I-405	EB	6.72	66,000	0.62	0.04
		WB	6.63	66,000	0.61	0.03
I-405	I-5 to I-90	NB	10.78	68,800	1.81	0.11
		SB	10.77	68,800	1.40	0.07
I-405	SR 520 to I-90	NB	3.69	100,300	0.91	0.05
		SB	3.8	100,300	1.08	0.04
I-405	SR 520 to SR 522	NB	8.93	83,500	0.74	0.02
		SB	8.87	83,500	0.61	0.03
I-405	SR 522 to I-5	NB	6.48	51,400	1.09	0.02
		SB	6.47	51,400	1.00	0.04
SR 520	I-5 to I-405	EB	6.76	41,100	1.41	0.03
		WB	6.71	41,100	1.90	0.03
SR 522	I-5 to I-405	EB	10.75	19,400	2.75	0.05
		WB	10.93	19,400	3.90	0.03
I-5 EXP	Reversible lanes	NB	7.14	21,300	1.06	0.04
		SB	7.14	21,300	0.95	0.07

Source: WSDOT, 2003

### 3.2 EXISTING CRASH PREDICTIONS

Table 2 presents truck volumes counted during a 12-hour period on July 11 and July 17, 2002. Three to four percent of all trucks were found to be carrying flammable liquid cargoes. A daily truck volume of 90 trucks in each direction was estimated from the twelve-hour count of Class 3 vehicles assuming 30 percent of the trucks traveled at night. A total of 180 flammable liquid truck trips are estimated to travel on I-90 daily.

**Table 2**  
**I-90 Weekday 12-Hour Flammable Truck Volumes - 2002**

Truck Type	Westbound I-90				Eastbound I-90			
	Truck Counts 7/11/02	Truck Counts 7/17/02	Average	% of Total Trucks	Truck Counts 7/11/02	Truck Counts 7/17/02	Average	% of Total Trucks
Medium <sup>1</sup>	1049	804	926.5	51%	864	828	846.0	47%
Heavy <sup>2</sup>	690	937	813.5	44%	714	1024	869.0	48%
Class 3 <sup>3</sup>	62	61	61.5	3%	73	84	78.5	4%
Other <sup>4</sup>	29	29	29.0	2%	16	18	17.0	1%
<b>Total</b>	<b>1830</b>	<b>1831</b>	<b>1830.5</b>		<b>1667</b>	<b>1954</b>	<b>1810.5</b>	

Note: Trucks entering/exiting Mt. Baker Ridge Tunnel, 6:00 AM to 6:00 PM, Thursday July 11 and Wednesday July 17, 2002.

<sup>1</sup> Medium Trucks - 2-axle, 6-tire trucks.

<sup>2</sup> Heavy Trucks - all trucks with more than 2 axles and 6 tires.

<sup>3</sup> Class 3 - Tanker trucks placarded for flammable loads, loaded or empty.

<sup>4</sup> Other - Other trucks with hazardous material placards or other tanker trucks not readily identifiable as flammable cargo.

Source: HNTB, 2002

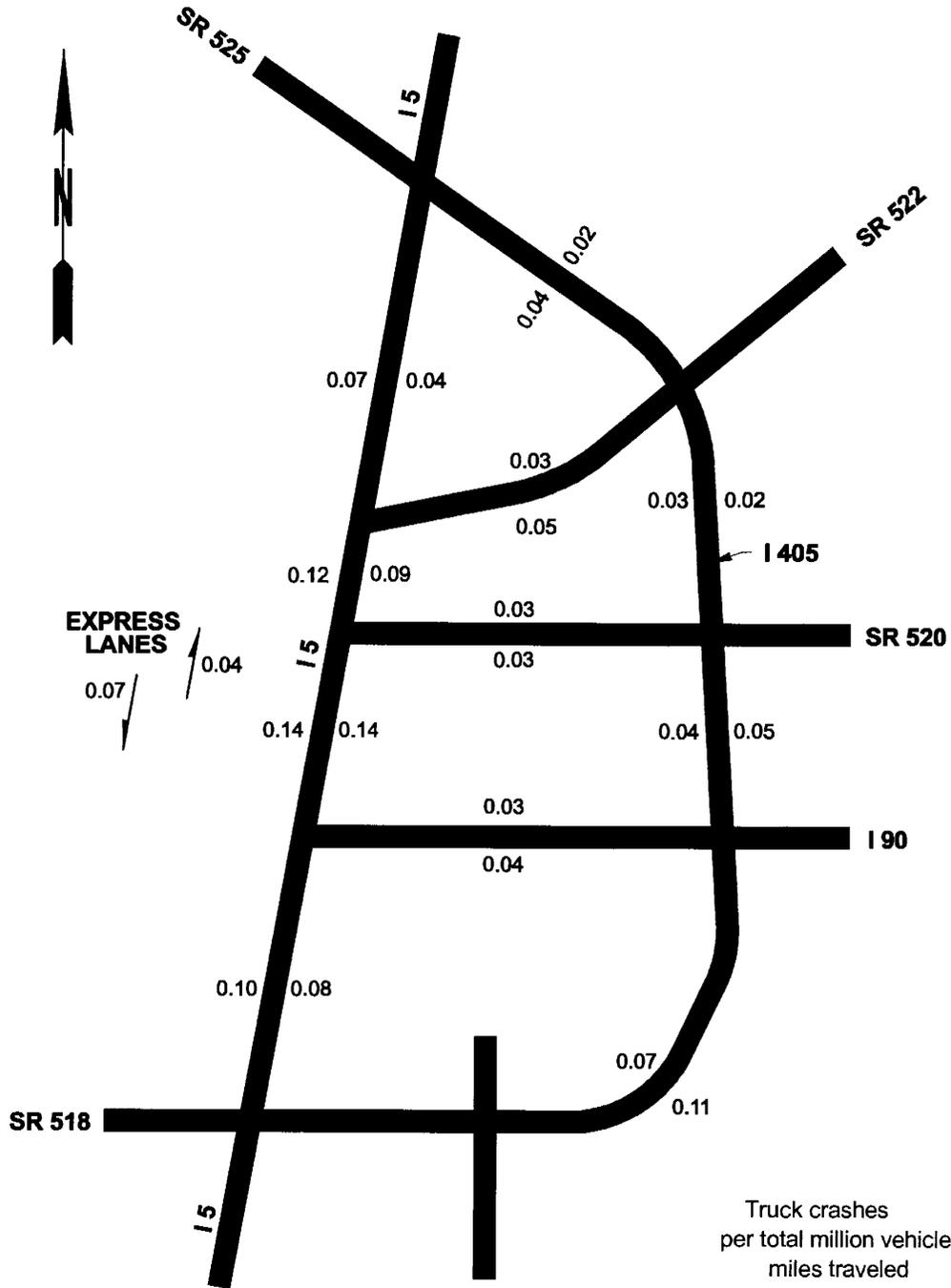
To determine the projected change in crashes caused by Class 3 trucks (those carrying flammable liquids) the following steps were taken. The crash rate for trucks was determined by assuming 90 trucks per day in each direction of travel. The inverse of Equation 1 was used to develop crash predictions. Truck crash rates and section lengths were taken from Table 1. The estimate of 90 trucks per day in each direction was derived from Table 2.

Table 3 shows the annual predicted crashes of trucks transporting flammable liquid cargo for various routes based on existing patterns of truck travel and the computed truck crash index. Figure 1 and Figure 2 present the predicted crash index for all trucks and crashes for trucks carrying flammable liquid cargo in 2002.

**Table 3**  
**Predicted Annual Flammable Liquid Cargo Truck Crashes - 2002**

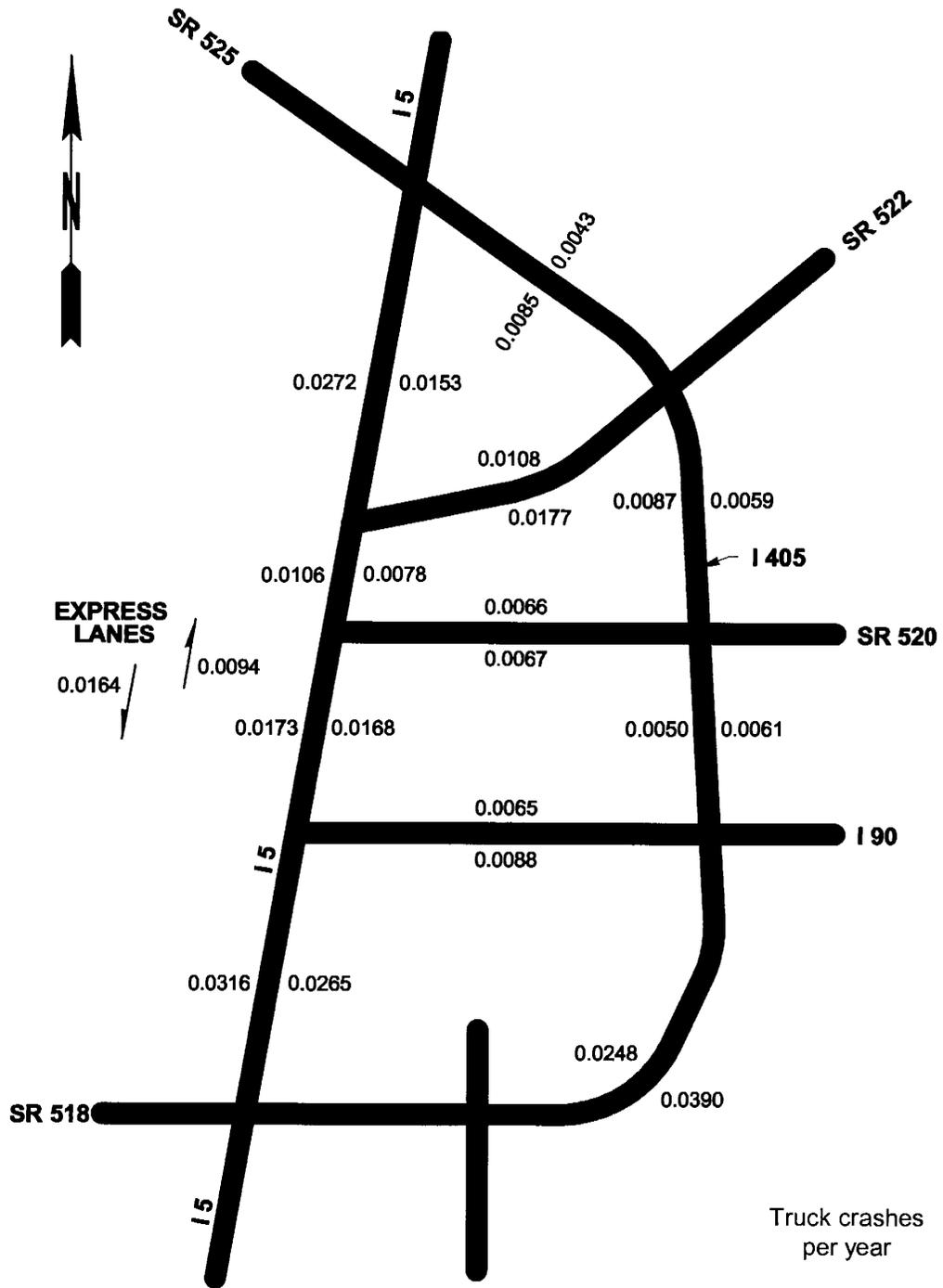
Route	Description	Direction	Truck Crash Index (truck crashes/ total MVM)	Uni-Directional Liquid Cargo Crashes (truck crashes/ year)	Bi-Directional Liquid Cargo Crashes (truck crashes/ year)
I-5	I-405 to I-90	NB	0.08	0.0265	0.0581
		SB	0.1	0.0316	
I-5	I-90 to SR 520	NB	0.14	0.0168	0.0341
		SB	0.14	0.0173	
I-5	SR 520 to SR 522	NB	0.09	0.0078	0.0184
		SB	0.12	0.0106	
I-5	SR 522 to I-405	NB	0.04	0.0153	0.0425
		SB	0.07	0.0272	
I-90	I-5 to I-405	EB	0.04	0.0088	0.0153
		WB	0.03	0.0065	
I-405	I-5 to I-90	NB	0.11	0.039	0.0638
		SB	0.07	0.0248	
I-405	SR 520 to I-90	NB	0.05	0.0061	0.0111
		SB	0.04	0.005	
I-405	SR 520 to SR 522	NB	0.02	0.0059	0.0146
		SB	0.03	0.0087	
I-405	SR 522 to I-5	NB	0.02	0.0043	0.0128
		SB	0.04	0.0085	
SR 520	I-5 to I-405	EB	0.03	0.0067	0.0133
		WB	0.03	0.0066	
SR 522	I-5 to I-405	EB	0.05	0.0177	0.0285
		WB	0.03	0.0108	
I-5 EXP	Reversible lanes	NB	0.04	0.0094	0.0258
		SB	0.07	0.0164	

Note: <sup>1</sup> Crashes of trucks carrying flammable liquid cargo.  
Source: WSDOT, 2003



Source: WSDOT

Figure 1  
Predicted Truck Crash Index - 2002



Source: WSDOT, 2003

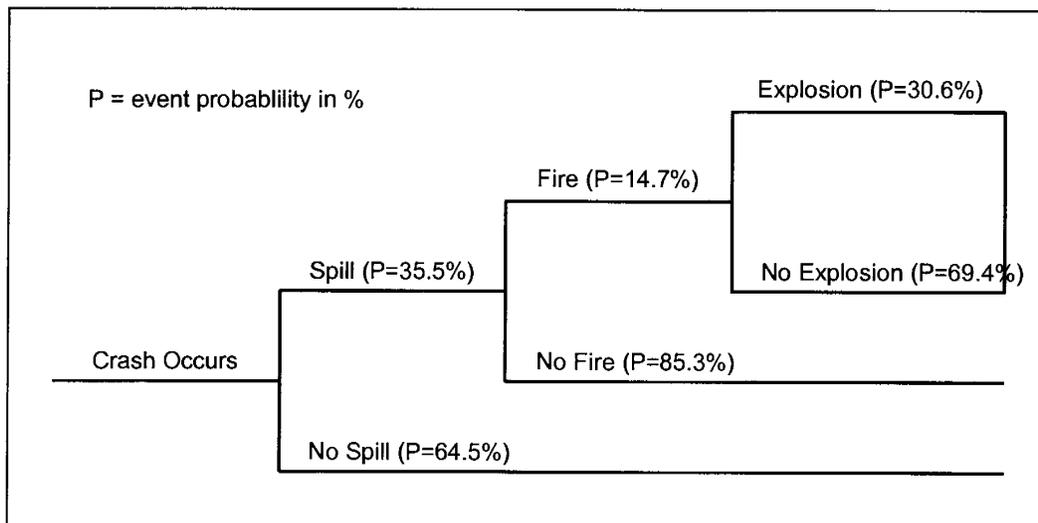
Figure 2  
Predicted Flammable Truck Crashes - 2002

### 3.3 CRASH EVENT PROBABILITY

Crashes involving trucks carrying flammable liquids are considered to be rare events. As shown on Table 3 above, trucks carrying flammable liquid cargo on I-90 between I-5 and I-405 would be predicted to be involved in 0.0153 crashes per year, or about one crash every 65 years. The majority of these crashes would not result in a cargo spill, a fire, or an explosion.

Figure 3 is an event tree that depicts potential consequence probabilities of a crash involving a truck carrying flammable liquid cargo. The probabilities shown on the event tree were determined from national data using the United States Department of Transportation's Motor Carrier Management Information System databases. The results of which are contained in the Battelle Corporation, March 2001 report "Comparative Risks of Hazardous Materials and Non-Hazardous Materials Truck Shipment Crashes/Incidents, Final Report."

Based on the national database, about 65 percent of the crashes involving trucks carrying flammable liquids do not result in the release of flammable liquids. Without a release, there would not be a fire or explosion as a consequence of the crash. If a spill of flammable liquid were to occur, there is about a 15 percent probability that the spill would result in fire. If a spill were to result in a fire, there is about a 30 percent probability that the fire would include an explosion. The overall probability of a fire from any crash involving trucks carrying flammable cargo is the product of the included probabilities, or about 5 percent of all crashes involving trucks carrying flammable liquid cargo.



Source: Battelle Corporation, March 2001

**Figure 3**  
**Event Tree for Flammable Liquids (Class 3)**

Crashes occur based on a number of variables. In some circumstances, crash rates can be determined based on geometric and traffic related factors. However, this is only true when a location exhibits a number of events that when totaled

yield statistically valid results. Given the infrequency of crashes involving vehicles carrying flammable liquids, this analysis does not allow for a large enough sample to predict location with a reasonable degree of certainty. This analysis, therefore, assumes that these crashes would be random events and could occur at any location throughout the corridor.

### 3.4 PREDICTED EVENT OUTCOMES

Table 4 describes the possible types of crash events with their associated probabilities of occurrence.

**Table 4**  
**Predicted Outcomes for Crashes**  
**Involving Trucks Carrying Flammable Liquid Cargo - 2002**

Route	Description	Total Crashes <sup>1</sup> (truck crashes /year)	Crashes with Spills (35.5% of total crashes)	Crashes with Fires (14.7% of spill crashes)	Crashes with Explosions (30.6% of fire crashes)
I-5	I-405 to I-90	0.0581	0.0206	0.0030	0.0009
I-5	I-90 to SR 520	0.0341	0.0121	0.0018	0.0005
I-5	SR 520 to SR 522	0.0184	0.0065	0.0010	0.0003
I-5	SR 522 to I-405	0.0425	0.0151	0.0022	0.0007
I-90	I-5 to I-405	0.0153	0.0054	0.0008	0.0002
I-405	I-5 to I-90	0.0638	0.0226	0.0033	0.0010
I-405	SR 520 to I-90	0.0111	0.0039	0.0006	0.0002
I-405	SR 520 to SR 522	0.0146	0.0052	0.0008	0.0002
I-405	SR 522 to I-5	0.0128	0.0045	0.0007	0.0002
SR 520	I-5 to I-405	0.0133	0.0047	0.0007	0.0002
SR 522	I-5 to I-405	0.0285	0.0101	0.0015	0.0005
I-5 EXP	Reversible lanes	0.0258	0.0092	0.0013	0.0004

Note: <sup>1</sup> Total crashes involving flammable liquid cargo.  
 Source: WSDOT, 2003

## 4. FUTURE CONDITIONS

Two alternatives for I-90 and two routing options for trucks carrying flammable cargo were investigated in this risk assessment. The alternatives are:

- No Build Alternative
- Alternative R-8A with and without flammable cargo prohibitions on I-90

Alternative R-8A with a prohibition of flammable cargo in the I-90 tunnels and lids would result in the diversion of trucks carrying flammable cargo to alternate routes.

The volume of trucks on I-90 carrying flammable liquid cargo would be expected to remain at about 180 trucks in 2005, and increase to about 220 trucks in 2025.

## 4.1 NO BUILD ALTERNATIVE

For the No Build Alternative, truck crash patterns on I-90 would remain similar to existing conditions.

## 4.2 ALTERNATIVE R-8A WITHOUT FLAMMABLE CARGO PROHIBITIONS

Crash rates along I-90 could be affected by the reduced lane and shoulder widths proposed with Alternative R-8A. As part of the design of this alternative, a number of crash reduction measures will be included to reduce the likelihood of an occurrence of a crash. These measures, again integral to the design of Alternative R-8A, include speed management; shoulder rumble strips; enhanced delineation and signing; enhanced illumination; and an enhanced incident management program. The estimates shown below for Alternative R-8A are based on the inclusion of the crash reduction measures.

Based on the collision analysis in the FEIS, a range of crash rate increases were established for trucks operating on I-90, reflecting the range of effectiveness of the crash reduction measures proposed for Alternative R-8A. These rates also include the effect of additional travel in the I-90 corridor associated with Alternative R-8A. The adjusted accident rates were then used to estimate frequencies of crashes involving the various events (spills, fire and explosion) on I-90. The crash frequency would be higher than the No Build Alternative by 10 to 20 percent.

## 4.3 ALTERNATIVE R-8A WITH FLAMMABLE CARGO PROHIBITIONS AND TRUCK RE-ROUTING

Flammable cargoes may be prohibited from I-90 with the Preferred Alternative R-8A. Due to maintenance activities, the I-90 tunnels are currently closed to trucks carrying flammable cargo approximately 14 percent of the time. WSDOT studies of use of alternate routes during the flammable cargo prohibitions indicate that approximately two-thirds of the re-routed trucks use a northern route via I-5, SR 520, and I-405. About one-third of the re-routed trucks use a southern route around Lake Washington via I-5 and I-405. For the purposes of the analysis included in this FEIS, it is assumed that a similar percentage of trucks would use the SR 520 or I-405 routes if a permanent prohibition on I-90 tunnel use were to be put in place. The route that includes SR 520 is referred to as the North Alternate Route; the route using I-405 south of Lake Washington is referred to as the South Alternate Route.

Crash predictions for the North and South Alternate Routes are presented on Table 5, together with those for I-90 without a prohibition of flammable cargo with the No Build and R-8A Alternatives. With a prohibition of flammable cargo on I-90, the composite 2025 prediction of annual crashes for all rerouted trucks indicates that the potential crash frequency would be 75 to 115 percent higher on

the North and South Alternate Routes than Alternative R-8A without prohibitions and the No Build Alternative. These differences reflect the added travel distances involved with the North and South Alternate Routes, and the presence of higher crash rates on some segments of the alternate routes.

**Table 5  
 Comparison of Predicted Annual Crashes  
 for Trucks Carrying Flammable Liquid Cargo on I-90 & Alternate Routes**

Alternative/Route	Direction	Total Bi-directional Crashes <sup>1</sup> (truck crashes/year)	Crashes with Spills (truck crashes/year)	Crashes with Fires (truck crashes/year)
<b>2005</b>				
No Build Alternative (trucks on I-90)	EB	0.0153	0.0054	0.0008
	WB			
Alternative R-8A without Flammable Cargo Prohibitions (trucks on I-90)	EB	0.0169	0.0060	0.0009
	WB			
Alternative R-8A with Flammable Cargo Prohibitions (trucks on North and South Alternate Routes)				
North Alternate Route (2/3 of Trips)	EB	0.0325	0.0115	0.0017
	WB			
South Alternate Route (1/3 of Trips)	EB			
	WB			
<b>2025</b>				
No Build Alternative (trucks on I-90)	EB	0.0188	0.0067	0.0010
	WB			
Alternative R-8A without Flammable Cargo Prohibitions (trucks on I-90)	EB	0.0225	0.0080	0.0012
	WB			
Alternative R-8A with Flammable Cargo Prohibitions (trucks on North and South Alternate Routes)				
North Alternate Route (2/3 of Trips)	EB	0.0397	0.0141	0.0021
	WB			
South Alternate Route (1/3 of Trips)	EB			
	WB			

Note: <sup>1</sup>Crashes of trucks carrying flammable liquid cargo.  
 Source: WSDOT & HNTB, 2003

## 5. STRUCTURAL CONSEQUENCES

While the possibility of a truck crash involving a flammable liquid is extremely rare, the consequences of an event could be large. The following analyses were completed to assess the consequences to major freeway structures. These analyses were developed using conservative values for a fire event since little data exist for these events.

### 5.1 FLOATING BRIDGE DAMAGE

Damage from a tanker truck fire on the concrete portion of a floating bridge, whether the concrete pontoons, concrete elevated superstructure on pontoons, or concrete approach spans, would require deck repair and possible steel reinforcing bar replacement. The traffic barrier could also require replacement. Based on the heat parameters specified for this analysis, the damaged section would be assumed to be 100 feet in length. Repairs required after the July 2003 flammable cargo fire on I-5 in Lynnwood consisted of deck repair, polyester concrete overlay, and traffic barrier replacement. Based on repairs to this bridge, the structure construction cost is estimated at \$300,000, including mobilization but excluding engineering, contingencies, taxes, inflation, traffic control, and other civil work items. The construction time is estimated to be 30 working days under staged construction conditions.

Damage from a tanker truck fire on the steel portion of a bridge, whether the steel truss span or the steel grid deck transition span, is assumed to be less critical and costly than the above concrete repair. The steep profile grade of the steel spans, the openness of the steel truss, and the presence of the open grid deck, all combine to disperse and distribute the released fuel, thereby dissipating the heat and its effects. There would be damage, and associated repair costs. But the damage and repair costs would be less severe than for the concrete repair discussed above.

### 5.2 ROADWAY OVERPASSES

Damage from a tanker truck fire beneath prestressed girder superstructure bridges would be similar to the damage incurred to the Puyallup River Bridge No. 509/11. The worst case scenario for these bridges would be the requirement to remove and replace the superstructure spans. Based on reconstruction with the same superstructure (prestressed concrete girders) to the same city street roadway geometrics, the superstructure removal and replacement cost is estimated at \$300,000, including mobilization but excluding engineering, contingencies, taxes, inflation, traffic control, and other civil work items. Fabrication of the prestressed concrete girders would require nine weeks. Once the girders become available, construction time for the removal and replacement is estimated to be 40 working days.

Damage from a tanker truck fire beneath a cast-in-place concrete box girder superstructure bridge would likely be less severe than for the prestressed concrete girder superstructures described above. Repairs would likely consist of concrete spall repair and application of pigmented sealer.

### **5.3 TUNNELS**

Because of the containment caused by the fascia walls and ceiling of a tunnel, structural damage would probably also extend to these areas. In addition to the deck repair, polymer concrete overlay, and barrier replacement, repair and replacement of the fascia walls and ceiling elements would also be required. While the fascia walls and ceiling elements would offer some temporary protection to the main tunnel structural elements, some repair of these tunnel structural elements could also be required.

Based on these assumptions and parameters, the structure construction cost is estimated at \$1,000,000, including mobilization but excluding engineering, contingencies, taxes, inflation, traffic control, ventilation system and fire suppression system repairs, and other civil work items. The construction time is estimated to be 60 working days under staged construction conditions.

### **5.4 FREEWAY LIDS**

The minimum amount of damage would be similar to that previously described for a tunnel. Although the heat intensity would be less, many freeway lid structures lack the protection offered by the fascia wall and ceiling panels found in the Mt. Baker Ridge and First Hill Lids on I-90. For the purposes of this analysis, our conclusion is that the extent of damage would be the same for tunnels and lids.

Based on these assumptions and parameters, the structure construction cost is estimated at \$1,000,000, including mobilization but excluding engineering, contingencies, taxes, inflation, traffic control, ventilation system and fire suppression system repairs, and other civil work items. The construction time is estimated to be 60 working days under staged construction conditions.

## **6. CONCLUSION**

This analysis used a rate-based approach to develop crash predictions for trucks carrying flammable liquids. Results indicate that if these trucks remained on I-90 with Alternative R-8A, the likelihood of a fire involving these trucks would increase by about 20 percent relative to the No Build Alternative with year 2025 traffic volumes. Rerouting trucks carrying flammable liquid cargo with Alternative R-8A would increase the likelihood of crashes by approximately 75 percent, or about 110 percent over the No Build Alternative with 2025 traffic volumes. This would be due to the combined effects of the increase in vehicle miles of travel and higher crash rates on the South Alternate Route (see Table 5).

For all alternatives and alternate routes, the risk of a crash involving flammable liquid cargo would remain extremely low.

The predicted likelihood of truck crashes resulting in fires with year 2025 volumes is 0.0021 crashes/year on the North and South Alternate Routes, as compared to 0.0012 crashes/year on I-90 for Alternative R-8A without flammable cargo prohibitions. The likelihood of truck crashes resulting in fires is predicted to be 0.0010 crashes/year on I-90 with the No Build Alternative.

The impacts due to tanker truck fire along the alternate routes could cause varying degrees of structural damage depending on location and bridge type. The damage to a freeway lid could be in excess of \$1,000,000 and to roadway overpass structures in the \$300,000 range. Repair of this damage could result in roadway closures of 40 to 60 days. Based on incidents that have occurred elsewhere in the region and projected energy levels, a fire on open roadway portions of the freeway would not likely result in major structural damage to freeway structures.

The prohibition of flammable cargoes in the I-90 tunnels and lids requires consideration of both the frequency of recurrence and the consequences of crashes resulting in fires. WSDOT, in an attempt to allow the continued use of the I-90 tunnels and lids by trucks carrying flammable cargo, is committed to further study of the issues associated with the movement of flammable cargo and the means of managing risks associated with the movement of these cargoes in the I-90 tunnels and lids.

If this effort results in a policy decision to prohibit trucks carrying flammable cargo in the I-90 tunnels and lids, WSDOT is committed to further studying the means of managing risks associated with the movement of these cargoes on alternate routes. An operational decision will be made in consultation with FHWA and other project stakeholders, including local fire departments.

WSDOT is also studying an extension of the current operating policy that prohibits flammable cargo to also include all hazardous cargo in the I-90 tunnels and lids while the fire suppression systems is undergoing routine maintenance.

Before a policy decision is made to prohibit flammable and/or hazardous cargo on I-90, a public participation process would be implemented as outlined in the Code of Federal Regulations, *Title 49 -- Transportation, part 397 -- Transportation of Hazardous Materials; Driving and Parking Rules, Subpart C -- Routing of Non-Radioactive Hazardous Materials, Section 71 Federal Standards (49CFR397.71)*, which states that prior to the establishment of a change in flammable or hazardous route designation, WSDOT shall provide public notification and a 30-day period in which to comment. If a public hearing is determined to be necessary the public shall be notified 30 days in advance of the hearing date.

If a policy decision is made to allow the continued use of the I-90 tunnels and lids by trucks carrying flammable cargo a public notification will be provided by WSDOT.

