APPENDIX H

I-405 Corridor Program
Final Preliminary 4(f) Evaluation

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Appendix H

FINAL PRELIMINARY

SECTION 4(f) EVALUATION

I-405 Corridor Program

June 2002

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1. INTRODUCTION

Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966 (49 U.S.C. 303 (C)) provides that the proposed use of any land from a significant publicly owned park, recreational area, wildlife and waterfowl refuge, or any significant historic site, will not be approved by the USDOT unless a determination is made that there is no feasible and prudent alternative to the use of land from that property. The Act also requires that the proposed action include all possible planning to minimize harm that may result from such use.

This Section 4(f) evaluation was prepared to provide information to the decision-makers concerning the potential effects of the I-405 Corridor Program alternatives. To advance the alternatives in the environmental decision-making process, it was necessary to identify the Section 4(f) resources that may be affected, and determine if it is possible to avoid or minimize those impacts.

Initial screening of Section 4(f) resources conducted at a program-level analysis revealed that 19 publicly-owned park/recreational areas, five registered historic properties, and one recorded archaeological resource within the I-405 Corridor Program study area could potentially be affected. After field investigation, 3 of the 19 total parks/recreation areas were determined to have areas that potentially would be permanently incorporated into a transportation facility. They include Mercer Slough Nature Park, Sammamish River Trail and the Cedar River Interpretive Trail and Park. None of the Section 4(f) resources would be temporarily occupied during construction to the extent that would constitute use, and 22 would have proximity effects that would be further evaluated during project-level review. The alternatives would not affect any wildlife or waterfowl refuges.

Consistent with 23 CFR 771.135(o), the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) have made a preliminary determination that the Preferred Alternative incorporates all possible planning to minimize harm to Section 4(f) land and resources to the extent allowable based on the level of detail available at this corridor-level EIS stage. Furthermore, there are no feasible and prudent locations or alternatives for the action to avoid the use of Section 4(f) land and resources; and no other feasible and prudent alternative is more effective than the Preferred Alternative in minimizing potential harm to Section 4(f) resources. Thus, opportunities to minimize harm at subsequent stages in the development process have not been precluded by decisions made at the corridor-level stage of analysis. Based upon this preliminary determination, the Preferred Alternative is recommended for advancement for follow-on project-level environmental analysis, documentation, and review.

2. DESCRIPTION OF ACTION

2.1 Interstate 405 (I-405) Corridor Program Description

The FHWA, FTA, King County Department of Transportation (KCDOT), Sound Transit (ST), and the Washington State Department of Transportation (WSDOT) are the co-lead agencies on a program to address the identified transportation deficiencies in the I-405 corridor. The I-405 Corridor Program, with assistance from other state agencies and local governments, seeks to

identify a reasonable range of the best mix of modal solutions, transportation investments, and demand management strategies for meeting the program's overall purpose and need, which are summarized below.

The I-405 corridor includes a large number of arterial streets maintained by local jurisdictions. One characteristic of the Eastside (generally east of Lake Washington) arterial street network is that it is not dense, providing relatively few lanes to carry traffic. The roadway density of the Eastside is 9 to 10 lanes per mile, which is considerably less than in Seattle's I-5 corridor (generally west of Lake Washington), where the road density is 19 to 20 lanes per mile. In addition, much of the adjacent arterial system is discontinuous because of topography, physical features, and development patterns. As a result, I-405 carries substantially higher levels of non-regional trips than would be expected given its designation as an interstate highway, while traffic congestion on arterial streets remains severe.

The I-405 Corridor Program Draft Environmental Impact Statement (DEIS) identified and evaluated four packages of transportation improvements and actions that might meet travel needs in the corridor over the next 20 years. A No Action Alternative also was evaluated in the DEIS. In addition, the Preferred Alternative, which is a multimodal solution similar to Alternative 3 in the DEIS, is evaluated in the Final EIS.

The need identified for the I-405 Corridor Program is to improve personal and freight mobility and reduce foreseeable traffic congestion in the corridor in a manner that is safe, reliable, and cost-effective.

The purpose of the proposed action is to provide an efficient, integrated, and multimodal system of transportation solutions within the I-405 corridor that meet the project need in a manner that:

- Provides for maintenance or enhancement of livability for communities within the corridor;
- Provides for maintenance or improvement of air quality, protection or enhancement of fish-bearing streams, and regional environmental values such as continued integrity of the natural environment;
- Supports a vigorous state and regional economy by responding to existing and future travel needs; and
- Accommodates planned regional growth.

2.2 Alternatives Considered but Not Advanced for Detailed Study

Seven preliminary corridor alternatives with a mix of multimodal solutions (referred to here as themes) were recommended for consideration by the I-405 Corridor Program Citizen, Steering, and Executive committees. All themes were subjected to a screening analysis based on five categories of criteria:

- Transportation performance
- Financial performance and cost-effectiveness
- Consistency with land use plans and policies
- Social impacts
- Environmental impacts

Each category of criteria includes key indicators, which are the measures used to estimate the benefits and effects of each theme. In all, more than 25 different key criteria were evaluated, covering a wide range of natural and built environment concerns, including potential effects on publicly owned parks, trails, and recreational areas; historic sites; and known cultural resources.

The themes and the results of the screening analyses were presented for public review and feedback through public open houses, as well as through jurisdictional workshops and numerous community presentations conducted throughout the study area. The Citizen and Steering committees also participated in a series of meetings to receive and assess the screening results and public feedback.

The results of the screening analyses and feedback from the public and I-405 Corridor Program study committees revealed several cases where a transportation improvement being considered within one theme might be moved to a different theme to improve performance and ability to satisfy the purpose and need for the I-405 Corridor Program. In other cases, the screening results and feedback from local jurisdictions demonstrated that several transportation improvements and mobility strategies were not reasonably effective in meeting the purpose and need, and/or were likely to result in unreasonable and unacceptable environmental consequences.

The results of the public feedback and input of the Citizen and Steering committees were advanced to the Executive Committee, which recommended reconfiguration of the seven themes into four action alternatives. These four alternatives, along with the No Action Alternative, were then recommended by the Executive Committee to the co-lead agencies to be advanced for detailed study in the DEIS. Concurrence with the recommendation was provided by the agencies with jurisdiction as part of the Reinventing NEPA process and the four alternatives plus the No Action Alternative were adopted by the I-405 Corridor Program co-lead agencies for consideration in the DEIS. A more detailed discussion of the alternative development and screening process is discussed in Section 2.2 of the I-405 Corridor Program Final EIS.

Transportation improvements and mobility strategies that were not advanced for further consideration in the EIS are as follows:

1. Development of a new east King County freeway corridor that would include the new freeway identified through the Corridor Needs for East King County Study. This proposal was not advanced because it falls entirely outside of the corridor that is the focus of the purpose and need for the I-405 Corridor Program. In addition, the proposal would likely fail to meet at least two important objectives of the purpose and need related to planned regional growth and environmental protection.

2. Development of new east King County arterials that would include the new arterial/parkways identified through the Corridor Needs for East King County Study. This arterial scenario assumed capacity equivalent to the east King County freeway described previously, using new and existing right-of-way over three alignments. Like the freeway, this proposal also would likely violate the objectives of the I-405 Corridor Program purpose and need related to planned regional growth and environmental protection because of its effects outside the Urban Growth Boundary and because of the substantial impacts to the natural environment.

3. Addition of capacity on several north-south arterials was not advanced because the proposed improvements were not reasonably effective in meeting the I-405 Corridor Program purpose and need.

4. Implementation of free-flow right-turns on arterials was not advanced as an individual strategy; however, the concept is included in the broader category of proposed arterial improvements that are evaluated in the EIS.

5. Implementation of two reversible express lanes on I-405 from I-5 south to SR 520 was not advanced because the directional split of traffic on I-405 is not sufficient to justify reversible lanes.

6. Addition of barrier-separated freight lanes was not advanced because study results indicated that the volume of trucks projected to use the lanes would not be sufficient to warrant this treatment.

7. Addition of one HOV lane (in each direction), in conjunction with the existing HOV lanes on I-405 was not advanced because it does not meet the I-405 Corridor Program purpose and need. Modeling results showed that the HOV lane utilization would not be sufficient to reasonably reduce congestion or improve mobility relative to its cost.

8. Converting existing general-purpose lanes on I-405 to HOV lanes would reduce the number of general-purpose lanes. This strategy was not advanced because it does not meet the I-405 Corridor Program purpose and need, and it does not meet the transportation objectives relating to improving mobility and reducing congestion.

9. Elimination of one travel lane in each direction on I-405 would result in the conversion of an existing general-purpose lane on I-405 to alternative uses. This proposal was not advanced because it does not meet the I-405 Corridor Program purpose and need. It failed to reduce or maintain congestion levels compared to the No Action conditions under any reasonable scenario of increased transit service based upon modeling results.

10. Reducing the number of interchanges on I-405 would likely result in reduced access and mobility for many study area residents, employees, and businesses. For these reasons, the proposal was not believed to be reasonable or effective in meeting the I-405 Corridor Program purpose and need.

11. Addition of barrier-separated bicycle arterials was not advanced as an individual proposal because it was not specific enough to assess; however, the concept is compatible with the broader category of proposed non-motorized and pedestrian trail improvements that are evaluated in the EIS.

12. Addition of bike lanes on the NE 70th overpass arterials was not advanced as an individual proposal; however, the idea was considered in the broader context of non-motorized grade crossings of I-405 that are evaluated in the EIS.

13. Addition of more pedestrian signals was not advanced as an individual proposal because it was not a corridor-level solution and was not specific enough to assess; however, the concept is compatible with the broader category of proposed non-motorized and pedestrian improvements that are evaluated in the EIS.

14. Improving the Evergreen Point transit station was not advanced as a proposal because it is outside the scope of the I-405 Corridor Program; however, the proposal was advanced to the SR 520 Trans-Lake Washington Project DEIS for consideration.

15. Provision of special event buses in the I-405 corridor was not advanced as an individual strategy because it is not related to typical trips in the study area, and the proposal is not one that could be effectively implemented as a corridor solution to meet the I-405 Corridor Program purpose and need. However, the concept is compatible with the broader category of proposed transportation demand management measures that are evaluated in the EIS.

16. Reduction of transit fares by 50 percent was not advanced because changes in transit fares are regional policy, and the proposal was not one that could be effectively implemented as a corridor solution. In addition, the proposal does not meet the I-405 Corridor Program purpose and need. Study results indicated that this policy would not result in a reasonable modal shift or improvement in mobility relative to its cost. Elimination of transit fares also was dropped from further consideration for the same reasons.

17. Implementation of corridor congestion pricing applied only within the I-405 corridor was not advanced because it is a state or regional policy that could not be effectively implemented as a corridor solution. The effects of a regionally-applied congestion pricing policy remained as an element of the broader transportation demand management measures that are evaluated in the EIS.

18. Increasing the gasoline tax was not advanced because it is a state or regional policy that could not be effectively implemented as a corridor solution in response to the I-405 Corridor Program purpose and need.

19. Subsidizing relocation of workers to residential areas nearer their place of employment was not advanced because it is a regional policy that could not be effectively implemented as a corridor solution; however, the concept may be compatible with the broader category of proposed transportation demand management measures that are evaluated in the EIS.

20. Removing unlicensed drivers from the roadway system was not advanced because it is a state policy that could not be effectively implemented as a corridor solution in response to the I-405 Corridor Program purpose and need.

21. Removing existing sound walls along I-405 was not advanced because it does not meet the I-405 Corridor Program purpose and need. The sound walls are needed to provide important environmental mitigation for the existing facility.

2.3 Alternatives Advanced for Detailed Environmental Analysis

During the scoping phase of the I-405 Corridor Program Draft EIS, the numerous potential improvements were grouped into four action alternatives for analysis of relative impacts. While each action alternative has a different emphasis (e.g., high-capacity transit (HCT), transportation demand management (TDM), general capacity, etc.), all of the alternatives include a mix of transportation solutions. These alternatives, the No Action Alternative and the Preferred Alternative that was identified after receipt of public and agency comments on the Draft EIS are summarized and detailed in Appendix A of this evaluation report *I-405 Corridor Program Alternative Descriptions*. The five action alternatives are:

- Alternative 1 — High-Capacity Transit/Transportation Demand Management Emphasis
- Alternative 2 — Mixed Mode with High-Capacity Transit/Transit Emphasis
- Alternative 3 — Mixed Mode Emphasis
- Alternative 4 — General Capacity Emphasis
- Preferred Alternative

After careful study and consideration of public and agency comments received on the Draft EIS (contained in Volume 2 of the I-405 Corridor Program Final EIS), the co-lead agencies concluded that Alternative 1 would not meet the adopted purpose and need for the I-405 Corridor Program. In the best professional judgment of agency staff, this alternative is not a feasible and prudent alternative to achieve the purpose and need because of its inability to provide meaningful long term improvement in general purpose mobility, freight mobility, or reduce foreseeable traffic congestion. Although it is likely that an aggressive pricing strategy could reduce VMT by about 15 percent based on national experiences, as discussed under operational impacts in Section 3.12.4.2 of the Final EIS, without roadway expansion, Alternative 1 would:

- accommodate a minimal amount of the increased peak-period person travel demand in 2020;
- have minimal effect on reliability of travel time for general traffic;
- not be expected to reduce travel times for either general purpose or 3+ HOVs;
- not provide truck freight mobility improvements in the corridor;
- not reduce congestion; and
- provide no meaningful improvement in overall safety on I-405 or other study area facilities.

Because it would provide little benefit beyond that resulting from the No Action Alternative, Alternative 1 is not considered a cost-effective solution for potential implementation. Thus, the results for Alternative 1 are reported in this evaluation for comparison purposes only; Alternative 1 is not a viable alternative for consideration or selection through this Section 4(f) Evaluation.

The No Action Alternative was also evaluated. It includes improvement projects that are scheduled to be implemented over the next 6 years or so regardless of the I-405 Corridor Program. Figures C-1 through C-6 in Appendix C of this evaluation report illustrate each alternative.

Under the No Action Alternative, only limited expansion of state highways would occur. No expansion of I-405 is included; however, a new ramp modification southbound I-405 to southbound SR 167 would be constructed. Approximately 15 arterial widening and interchange improvement projects would be implemented within the study area by local agencies. Short-term minor construction necessary for continued operation of the existing transportation facilities would be accomplished, and minor safety improvements would be constructed as required.

It is assumed that Phase I of Sound Transit's regional transit plan would be completed. Approximately 36 HOV direct access projects, arterial HOV improvements, park-and-ride expansions, and transit center enhancements would be implemented in the study area as part of the No Action Alternative. Bus transit service levels by the 2020 horizon year are based upon the Puget Sound Regional Council (PSRC) Metropolitan Transportation Plan. A 20 percent increase in bus transit service hours above the current King County 6-year plan level is assumed by year 2020. Parking costs are expected to increase due to market forces. Additional urban centers and

major employment centers within the study area are also assumed to implement parking charges by 2020.

These baseline transportation improvement projects are the subject of separate and independent project-specific environmental analysis, documentation, and review. Specifically the effects of the No Action Alternative would be or have been evaluated within separate environmental analysis, documentation, and review processes and Section 4(f) analyses, where required. Their direct impacts are not specifically evaluated by the I-405 Corridor Program. However, for baseline comparison purposes, the secondary and cumulative impacts of these projects are addressed in the I-405 Corridor Program Final EIS.

Figure C-1 shows the locations of the improvements contained in the No Action Alternative. For further detailed information, refer to Appendix B of this evaluation report, which identifies the specific transportation improvements and mobility solutions contained within each element and alternative.

3. DESCRIPTION OF SECTION 4(f) RESOURCES

3.1 Methodology of Analysis

Prior to beginning the I-405 Corridor Program Draft EIS, FHWA, FTA and WSDOT determined that applying a "project" level Section 4(f) evaluation was not feasible given the program focus of the EIS and the limited design information available. It was concluded that a program-level analysis would be conducted. First, Section 4(f) resources within a quarter-mile of proposed improvements contained within each alternative were identified. The identified resources were then field verified based on conceptual designs to assess potential effects and to identify opportunities for avoidance and minimization of impacts.

Conducting a program-level Section 4(f) analysis at this early stage in the transportation planning process, commensurate with the level of detail contained in the I-405 Corridor Program EIS, was considered appropriate based on 23 CFR 771.135(o):

> When the first-tier, broad-scale EIS is prepared, the detailed information necessary to complete the section 4(f) evaluation may not be available at that stage in the development of the action. In such cases, an evaluation should be made on the potential impacts that a proposed action would have on section 4(f) land and whether those impacts could have a bearing on the decision to be made.

Furthermore, the agreed-upon approach and level of detail meets the intent of this section, which states:

> It is recognized that such planning at this stage would normally be limited to ensuring that opportunities to minimize harm at subsequent stages in the development process have not been precluded by decisions made at the first-tier stage.

3.1.1 Recreational Park Properties

The program-level identification and analysis of park lands and recreational resources was conducted using the following steps:

Step 1. Identify resources in the entire study area.

Step 2. Determine resources within a quarter-mile of the proposed improvements using GIS mapping of park lands. The initial review was also based on the comprehensive plans of individual jurisdictions as they related to park resources.

Step 3. Use local comprehensive plans to gain an understanding of the level of service for park facilities, policies for development and protection of the parks, and potential mitigation measures to minimize impacts.

Step 4. With the resources identified in Step 2 and the information in Step 3, conduct a site reconnaissance using design concepts to estimate those resource lands that would be affected by the transportation improvements (either permanently incorporated, temporarily occupied, or affected by proximity to the improvements).

The analysis evaluated the potential for impacts on existing park lands and trails. A detailed assessment of loss of park functions was not completed during this review. The public park lands and trails that were identified included state, county, city, and neighborhood parks; trails; recreational active parks; passive parks; and sports fields and are indicated in Figure H-1.

3.1.2 Historic, Cultural, and Archaeological Screening Analysis

In consultation with the Washington State Office of Archaeology and Historic Preservation, an approach was developed for the I-405 Corridor Program EIS to consider inventoried cultural resources (archaeological properties and/or traditional cultural properties) and properties of the historic built environment. The approach is consistent with the programmatic evaluation for the park lands and recreational resources above. Data collection and analyses were preliminary and were not intended to provide a project-level environmental analysis, documentation, and review.

Consistent with the criteria identified in 23 CFR 771.135(e) and (g), this Section 4(f) evaluation considers historic and archaeological sites that are on or eligible for the National Register of Historic Places. In addition to these Section 4(f) resources, other historic and archaeological sites that are listed on a state or local register are considered to be potential Section 4(f) resources although their eligibility for the National Register has not been determined. This approach provides a conservative analysis whereby actual impacts to Section 4(f) resources are likely overstated because some resources may be found not to qualify when determinations of National Register eligibility are conducted during follow-on project-level environmental analysis, documentation, and review.

This approach is in contrast to the NEPA/SEPA approach discussed in Section 3.21 of the I-405 Corridor Program EIS. That approach employs much broader and more inclusive criteria for considering historic and archaeological resources. Specifically, the EIS criteria also considers all buildings constructed prior to 1960 to be historic resources because of their age. This criterion differs from the Section 4(f) criterion discussed above whereby a significant historic resource is one that is listed, or has been determined eligible for listing, on the National Register. Thus, because of differences in the criteria that are used, the number of historic and archaeological properties considered in the EIS is substantially greater than the list of resources that may qualify as Section 4(f) resources.

Figure H-1: Existing Parklands within the Study Area

Parklands
Study Area Boundary
County Boundaries
Highways
Roadways
Railways
N
1 0 1 2 3 Miles

SNOHOMISH
KING

Mill Creek
Lynnwood
Edmonds
Woodway
Mountlake Terrace
Brier
Bothell
Kenmore
Woodinville
Shoreline
Lake Forest Park
Duvall
Kirkland
Redmond
Lake Washington
Union Bay
Lake Union
Yarrow Point
Hunts Point
Clyde Hill
Medina
Beaux Arts
Mercer Island
Bellevue
Newcastle
Issaquah
Sammamish
Lake Sammamish
Seattle
Tukwila
Renton
Burien
Normandy Park
SeaTac
Des Moines
Kent
Auburn
Federal Way
Covington
Maple Valley

MARTHA LAKE
RHODY RIDGE PARK
NORTH CREEK
SILVER CREEK PARK
SHENANDOAH WOODS
GRANNIS HILLS
LOGAN PARK
BONNEVILLE VIEW
QUEENSBOROUGH
BRENTWOOD
FORSGREN

SR 9 SE
Simonds Rd NE
NE 128th St
NE 8th St
SE 128th St
SE Petrovitsky Rd
Redmond Fall City Rd
68th Ave
132nd Ave SE
Duwamish River

5 9 405 522 527 524 202 520 99 90 169 167 515 900 509 18 516 203

Existing Parklands within the Study Area
Figure H-1

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It is important to note that archaeological sites do not qualify as Section 4(f) resources when a determination has been made that the archaeological resource is important chiefly because of what can be learned by data recovery, and the resource has minimal value for preservation in place (23 CFR 771.135(g)2).

4. IMPACTS ON THE RESOURCES

4.1 Recreational Resources

Step 4 of the analysis indicates that resource lands within up to 19 significant publicly owned parks or recreational resources could be impacted by the proposed I-405 Corridor Program improvements. Potentially, 3 of the 19 parks/recreation areas would be permanently incorporated into a transportation facility. They include Mercer Slough Nature Park, Sammamish River Trail, and the Cedar River Interpretive Trail and Park. None of the 19 would be temporarily occupied during construction to an extent that would constitute "use", and 17 would have proximity effects that would be further evaluated at project-level environmental analysis, documentation, and review. Conceptual design information related to improvements, such as alignments of new lanes, allowed for opportunities to avoid or minimize potential impacts to each resource. At this stage of project development, it is not possible to discern whether any proximity effects to Section 4(f) resources would occur that would result in "constructive" use of the resources. Constructive use occurs when the transportation project does not incorporate land from a Section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection are substantially impaired (substantially diminished). Determination of potential constructive use is reserved for the project-level design, environmental analysis, documentation, and review.

Table 1 summarizes the results of field reconnaissance of each resource, identifies the potential for effects, and takes into consideration avoidance or minimization of impacts into the results. Figure H-1 indicates general locations of recreational resources. Figures 1.1 – 1.19 in Appendix D of this evaluation report provide vicinity maps of each individual recreational resource that may potentially be affected by the I-405 Corridor Program improvements and indicate project identification numbers.

Table 2 provides data about each resource land, identifies the associated potential acquisitions, temporary occupancies, and proximity effects of the improvements. All the alternatives under consideration would acquire approximately the same acreage of resource lands in Mercer Slough Nature Park, Sammamish River Trail and the Cedar River Interpretive Trail and Park, where the greatest impacts from the program improvements are expected.

The effects to Mercer Slough Nature Park and Sammamish River Trail would stem from aerial structures and piers constructed within the natural areas and trail areas, although the trails would be avoided or relocated within the resources. Because of the ability to adjust pier locations, relocate trails and minimize effects to high quality natural areas, Alternatives 2, 3, 4 and the Preferred Alternative would have approximately the same affect on Mercer Slough Nature Park.

At Sammamish River Trail the structure would be relatively high above the resource, and would not be expected to affect natural areas. Because of the ability to adjust pier locations, relocate

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Table 1: Affected and Potentially Affected Section 4(f) Resources Based on Site Reconnaissance

Alternative[a]	Recreational Resource Lands					Historic, Cultural and Archaeological Resources							
	Number Potentially Affected by Proposed Transportation Improvements	Number and Approximate Acres Affected by Permanent Incorporation into Transportation Facilities		Number Affected by Temporary Occupancy During Construction	Number Affected by Proximity Effects	Number Potentially Affected by Proposed Transportation Improvements		Number Affected by Permanent Incorporation into Transportation Facilities		Number Affected by Temporary Occupancy During Construction		Number Affected by Proximity Effects	
		Number	Approximate Acres			Historic	Archaeological	Historic	Archaeological	Historic	Archaeological	Historic	Archaeological
No Action Alternative	2 of 19	1	<1	0	2	None	None	None	None	None	None	None	None
Alternative 1	14 of 19	2	1	0	14	2	None	None	None	None	None	2	None
Alternative 2	18 of 19	3	2	0	18	4	1	None	Unknown	None	None	4	None
Alternative 3	12 of 19	3	2	0	12	5	1	None	Unknown	None	None	5	None
Alternative 4	11 of 19	3	2	0	11	4	1	None	Unknown	None	None	4	None
Preferred Alternative	12 of 19	3	2	0	12	4	1	None	Unknown	None	None	4	None

[a] The results for Alternative 1 are reported here for comparison purposes only; Alternative 1 is not a viable alternative for consideration or selection through this Section 4(f) Evaluation.

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trails and minimize effects to high quality park areas, Alternatives 2, 3, 4 and the Preferred Alternative would have approximately the same affect on Sammamish River Trail.

At Cedar River Interpretive Trail and Park, Alternatives 2, 3, 4 and the Preferred Alternative would to some extent impact a grassy, landscaped area adjacent to parking areas. This buffer area is not considered to have high operational value for the resource and the amount of resource required for each alternative is approximately the same. No other area of the resource would be impacted. All alternatives under consideration are expected to create approximately the same effects to these three parks and therefore, impacts from these alternatives are expected to be similar.

The recreational resources that would have potential effects from permanent incorporation into transportation facilities or temporary occupancy during construction include the following:

- **Sammamish River Trail –** This resource is a regional trail that runs north and south along the Sammamish River. The primary function of the trail is to provide an active recreational path for pedestrians and bicyclists. The trail is presently asphalt with gravel shoulders and no lighting under the bridge areas. It also has an unpaved equestrian trail parallel to the paved trail.

  Due to the different arterial and overpass projects, the trail would be impacted at numerous locations. The actual location of the piers for placement or replacement of bridges could avoid or minimize the impact to the physical trail. The resource function would not be lost with the implementation of the arterial and overpass/bridge improvements.

- **Mercer Slough Nature Park –** This resource is a regional park with substantial wetland areas, natural habitat, and a slough (flowing into Lake Washington) that is utilized for active small boat recreation. The park is located north and south of I-90 and due west of I-405 with public roads on the east and west boundaries. Due to the location of I-90, which presently bridges the middle of the Mercer Slough, the slough and associated wetlands would be impacted by the placement of the piers in the water for the overpass expansions.

  These impacts would have unavoidable impacts by the widening of direct connections/ramps for HOV projects. There would be temporary traffic detours during construction activity. The placement of the piers would not have a long-term impact on the resource functions because the trail would be relocated within the recreational resource land.

- **Cedar River Interpretive Trail and Park –** This resource is a sub-regional park with several soccer, baseball, and general sports fields; a community center; a community theater and waterfront recreational area; and a pedestrian/bicycle trail. The park is west of I-405 and south of SR 169. The expansion of lanes on I-405 would impact a landscape buffer adjacent to a parking area. The impacts to these recreational facilities could be mitigated. The primary functions of the park and trail would not be lost with the implementation of the I-405 widening and SR 169 improvements. The existing access to the surrounding public roads would need to be reconfigured, but would be limited by the existing river and the existing traffic signal on SR 169. There would be temporary traffic detours during construction activity.

Two recreational resources that were identified in Table 3, Field Investigations of Recreational Resources, of the Draft Preliminary Section 4(f) Evaluation as being potentially affected and also subject to potential unavoidable effects, have been removed from this Final Preliminary Section 4(f) Evaluation. These resources are Welcome Park in the city of Redmond and Panther Creek

Wetlands in the city of Renton. Additional coordination with the parks departments of the two cities resulted in a determination that they were not significant local recreational resources that would qualify as Section 4(f) resources. Please refer to Section 6.

4.2 Historic and Archaeological Resources

Five inventoried historic properties that are listed on the national, state, or local historic registers would potentially be affected by improvements contained within the action alternatives, as shown in Table 1. Table 3 summarizes the results of field reconnaissance for these historic properties, identifies the potential for effects, and concludes that avoidance of impacts on historic resources is expected to be possible in all cases by shifting the proposed road improvements away from the resource. Determination of potential constructive use is reserved to project-level design and environmental analysis, documentation, and review. Figure H-2 provides the general locations and names of the five historic resources, as well as other historic resources that are located in the vicinity of the proposed alternatives but would not be affected.

One recorded archaeological site could potentially be affected by Alternatives 2 through 4 and the Preferred Alternative, as shown in Table 1. Because of federal protection policies, the exact location of this resource is not disclosed.

Table 2: Field Investigations of Section 4(f) Recreational Resource Lands

Park and Jurisdiction	Park Facilities	Applicable Projects and Alternatives[a]	Permanent Incorporation into Transportation Facility	Temporary Occupancy During Construction	Proximity Effects
Coal Creek Park City of Renton (Fig. 1.1)	Regional Park 30 Acres Open Space Water Resource Pedestrian Trails Parking	R.BI-4 I-90/Coal Creek Ramp Improvements/I-90 to Coal Creek Interchange (Alt. 1-4 and Preferred Alt.) R.TC-3 I-405 Two GP Lanes/N&S (Alt. 3 and Preferred Alt.) R.TC-11 I-405 One GP Lane/N&S (Alt. 2 and 4) R.TC-22 I-405 Two Express Lanes/N&S (Alt. 4) R.HOV-36 Coal Creek HOV Priority Lane (Alt. 1-3 and Preferred Alt.)	For all alternatives, no acquisition of resource lands would occur.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.
Sammamish River Trail King County, City of Woodinville, City of Bothell, City of Redmond (Fig. 1.2)	Regional Trail 144 Acres Bike/Pedestrian Trail Water Resource Parking	NM.CR-7 Bike Overpass (Alt.1-4 and Preferred Alt.) R.AC-30 SR 202 Overpass Connection to 120th. (Alt. 2-4 and Preferred Alt.) R.PA-25 SR 522 Interchange Ramps (Alt. 2, 3, 4, and Preferred Alt.) R.AC-18/ Widen 202 4/5 Lanes, NE 90th to NE 145th R.PA-28 (Alt. 2, 3, 4, and Preferred Alt.) R-47 Widen NE 124th 4/5 Lanes, Willows Rd to SR 202 (No Action Alt., Alt. 1-4, and Preferred Alt.)	For all alternatives, pier placement would cross over resource lands (not parallel to the resource) and could be placed within the resource land depending on the length of the structural span. Trails would be avoided or relocated within the resource land. Less than 1 acre of resource lands would be permanently incorporated into the transportation facility.	For all alternatives, temporary occupancy of construction equipment and materials would be so minimal that it would not constitute a use of resource lands. The occupancy would not cause a change in land ownership; would be minor in nature; would not create permanent adverse physical impacts; would not interfere with activities or purposes of the resource lands; and the land would be fully restored.	For all alternatives, potential noise, air, visual or shading effects may occur to the activities, features, or attributes of the resource lands.
Marymoor Park King County (Fig. 1.3)	Regional Park 560 Acres Bike/Pedestrian Trails Sports Facilities Picnic Areas Water Resource Parking	R.28 Widen West Lake Sammamish Pkwy (No Action Alt., Alt. 1-4, and Preferred Alt.)	For all alternatives, no acquisition of resources lands would occur.	For all alternatives, temporary occupancy of construction equipment and materials would be so minimal that it would not constitute a use of resource lands. The occupancy would not cause a change in land ownership; would be minor in nature; would not create permanent adverse physical impacts; would not interfere with activities or purposes of the resource lands; and the land would be fully restored.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.
Spinney Homestead Park City of Kirkland (Fig. 1.4)	Neighborhood Park 7 Acres Sports Facility Baseball Fields Parking	R.BI-3 I-405 Southbound 405 Access lane (Alt. 1, 2,and 4) R.TC-6 I-405 Two GP Lanes/N&S (Alt. 3 and Preferred Alt.) R.TC-14 I-405 One GP Lane/N&S (Alt.2) R.TC-25 I-405 Express Lanes/N&S (Alt. 4) R.PA-14 City Bike/Ped/Emergency Overpass (Alt. 2-4 and Preferred Alt.)	For all alternatives, no acquisition of resource lands would occur.	For all alternatives, temporary occupancy of construction equipment and materials would be so minimal that it would not constitute a use of resource lands. The occupancy would not cause a change in land ownership; would be minor in nature; would not create permanent adverse physical impacts; would not interfere with activities or purposes of the resource lands; and the land would be fully restored.	For all alternatives, potential noise and air effects may occur to the activities, features, or attributes of the resource lands.
Mercer Slough Nature Park City of Bellevue (Fig. 1.5)	Regional Park 140 Acres Pedestrian/Bike Trails Natural Areas Picnic Areas Parking	R.BI-8 I-90 HOV Direct Connection (Alt. 1,2,and 4) R.HOV-60 I-90 to South Bellevue Park-and-Ride (widening of Bellevue Way) (Alt. 1, 2, 3, and Preferred Alt.) R.HOV-27 I-90 Freeway to Freeway HOV Ramps (Alt. 2-4 and Preferred Alt.)	For all alternatives, there will be an aerial structure over the nature park and trail. Placement of piers/structure would require acquisition of less than an acre of natural areas. Trails would be avoided or relocated within the resource land. There are similar permanent effects for all alternatives.	For all alternatives, temporary occupancy of construction equipment and materials would be so minimal that it would not constitute a use of resource lands. The occupancy would not cause a change in land ownership; would be minor in nature; would not create permanent adverse physical impacts; would not interfere with activities or purposes of the resource lands; and the land would be fully restored.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.

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Table 2: (Continued) Field Investigations of Section 4(f) Recreational Resource Lands

Park and Jurisdiction	Park Facilities	Applicable Projects and Alternatives[a]	Permanent Incorporation into Transportation Facility	Temporary Occupancy During Construction	Proximity Effects
Cedar River Interpretive Trail and Park City of Renton (Fig. 1.6)	Sub-Regional Park 23 Acres Outdoor Sports Facilities Community Center Community Theater Picnic Areas Bike/Pedestrian Trails Parking	R.TC-2 I-405 Two GP Lanes/N&S (Alt. 3 and Preferred Alt.) R.TC-21 I-405 Exp. Lanes/N&S (Alt. 4) R.HOV-43 SR-169 HOV Priority ramps (Alt. 2-4 and Preferred Alt.) R.TC-10 I-405 One GP Lane/N&S (Alt. 2 and 4)	For all alternatives, acquisition of resource lands would occur. These lands include a relatively narrow, grassy landscape buffer adjacent to parking lot. With flexibility during design, each alternative would require approximately one acre of buffer. Therefore, the effects for all alternatives would be considered the same.	For all alternatives, temporary occupancy of construction equipment and materials would be so minimal that it would not constitute a use of resource lands. The occupancy would not cause a change in land ownership; would be minor in nature; would not create permanent adverse physical impacts; would not interfere with activities or purposes of the resource lands; and the land would be fully restored.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.
Rhododendron Park (Kenmore Park) City of Kenmore (Fig. 1.7)	Sub-Regional Park 13. Acres Historic Horticultural Site Trails Picnic Areas Parking	R.PA-11& HOV-53 - 68th Ave HOV NB lane & Arterial Improvements (Alt. 1-3)	For all alternatives, no acquisition of resource lands would occur.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise and air effects may occur to the activities, features, or attributes of the resource lands
North Rose Hill Park City of Redmond (Fig. 1.8)	Neighborhood Park 13 Acres Water Resource Undeveloped	R.PA-12 124th Three Lanes, NE 85th St. to Slater Rd. NE (Alt. 2-4 and Preferred Alt.)	For all alternatives, no acquisition of resource lands would occur.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, no proximity effects are expected.
Arthur Johnson Park City of Redmond (Fig. 1.9)	Neighborhood Park 15 Acres Open Space Undeveloped	R.PA-18 Union Hill Road 4/5 Lanes, Avondale Rd to 196th Ave NE (Alt. 2-4 and Preferred Alt.)	For all alternatives, no acquisition of resource lands would occur	For all alternatives, no temporary occupancy of resource lands is expected	For all alternatives, potential noise and air effects may occur to the activities, features, or attributes of the resource lands
Watershed Park City of Kirkland (Fig. 1.10)	Neighborhood Park 66 Acres Pedestrian Trail Open Space Parking	R.TC-5 I-405 Two GP Lanes/N&S (Alt. 3 and Preferred Alt.) R.TC-13 I-405 One GP Lane/N&S (Alt. 2 and 4) R.TC-24/32 I-405 Exp. Lanes & Slip Ramps/N&S (Alt. 4)	For all alternatives, no acquisition of resource lands would occur.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise and air effects may occur to the activities, features, or attributes of the resource lands. Alternative 4 would have more potential for visual impacts from RTC24/32.
Interurban Trail City of Tukwila (Fig. 1.11)	Sub Regional Trail 17 Acres Bike/Pedestrian Trail, Water Resource Parking	R.TC-1 I-405 Two GP Lanes/N&S (Alt. 3 and Preferred Alt.) R.TC-18 I-405 One GP Lane/N&S (Alt. 3) R.TC-20/29a I-405 Two Express Lanes (Alt. 4) R.IC-3/R.AC-36 SR 181Arterial Improvements (Alt. 2-4 and Preferred Alt.) T.HCT-1 Fixed Guideway, HCT SeaTac to Renton CBD (Alt. 1 and 2)	All projects are aerial and pass over the trails (widths vary). Pier placements would not impact the trail and would not require acquisitions. The HCT improvements would occur predominantly on existing BNSF right-of-way. Enough right-of-way exists that no acquisition of resource lands is expected.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise and air effects may occur to the activities, features, or attributes of the resource lands.
Northshore Athletic Parks King County (Fig. 1.12)	Regional Park 19 Acres Athletic Fields Parking	R.AC-18 Arterial Improvements (Preferred Alt.)	No acquisition of resource lands would occur.	No temporary occupancy is expected of resource lands.	For all alternatives, potential noise and air effects may occur to the activities, features, or attributes of the resource lands.

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Table 2: (Continued) Field Investigations of Section 4(f) Recreational Resource Lands

Park and Jurisdiction	Park Facilities	Applicable Projects and Alternatives[a]	Permanent Incorporation into Transportation Facility	Temporary Occupancy During Construction	Proximity Effects
May Creek Park Cities of Newcastle and Renton (Fig. 1.13)	Regional Park 110 Acres Trails Gathering areas Passive uses	R.BI-7 Kennydale Hill Climbing Lanes (Alt. 1, 2, 4, and Preferred Alt.) R.TC-3 Two additional GP Lanes/N&S (Alt. 3 and Preferred Alt.) R.TC-11 One Additional GP Lane/N&S (Alt. 2) R.TC-22 Two Express Lanes/N&S (Alt. 4)	For all alternatives, no acquisition of resource lands would occur.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise and air effects may occur to the activities, features, or attributes of the resource lands.
Kelsey Creek Park City of Bellevue (Fig. 1.14)	Regional Park 146 Acres Pedestrian Trails Water Resource Parking	T.HCT-5 Fixed Guideway HCT Factoria to Downtown Bellevue (Alt. 1 and 2)	For both alternatives, the HCT improvements would occur predominantly on existing BNSF right-of-way. Enough right-of-way exists that no acquisition of resource lands is expected.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.
Bannerwood Ballfield Park City of Bellevue (Fig. 1.15)	Sub-Regional Park 13 Acres Sports Facility Parking	T.HCT-5 Fixed Guideway HCT Factoria to Downtown Bellevue (Alt. 1 and 2)	For both alternatives, the HCT improvements would occur predominantly on existing BNSF right-of-way. Enough right-of-way exists that no acquisition of resource lands is expected.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.
Peter Kirk Park City of Kirkland (Fig. 1.16)	Sub-Regional Park 13 Acres Sports Facilities Picnic Areas Parking Public Art	T.HCT-7 Fixed Guideway HCT Bellevue to Totem Lake (Alt. 1 and 2)	For both alternatives, the HCT improvements would occur predominantly on existing BNSF right-of-way. Enough right-of-way exists that no acquisition of resource lands is expected.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.
Terrace Park City of Kirkland (Fig. 1.17)	Neighborhood Park 2 Acres Sports Facilities Picnic Areas Parking	T.HCT-7 Fixed Guideway HCT Bellevue to Totem Lake (Alt. 1 and 2)	For both alternatives, the HCT improvements would occur predominantly on existing BNSF right-of-way. Enough right-of-way exists that no acquisition of resource lands is expected.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.
Gene Coulon Park City of Renton (Figure 1.18)	Regional Park 56 Acres Sports Facilities Picnic Areas Parking Water activities Natural areas Outdoor concerts	T.HCT-2 Fixed Guideway HCT Renton CBD to NE 44th (Port Quendall) (Alt. 1 and 2)	For both alternatives, the HCT improvements would occur predominantly on existing BNSF right-of-way. Enough right-of-way exists that no acquisition of resource lands is expected.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.
Kennydale Beach Park City of Renton (Figure 1.19)	Neighborhood Park 2 Acres Swimming Beach Parking	T.HCT-2 Fixed Guideway HCT Renton CBD to NE 44th (Port Quendall) (Alt. 1 and 2)	For both alternatives, the HCT improvements would occur predominantly on existing BNSF right-of-way. Enough right-of-way exists that no acquisition of resource lands is expected.	For all alternatives, no temporary occupancy of resource lands is expected.	For all alternatives, potential noise, air and visual effects may occur to the activities, features, or attributes of the resource lands.

[a] The results for Alternative 1 are reported here for comparison purposes only; Alternative 1 is not a viable alternative for consideration or selection through this Section 4(f) Evaluation.

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Table 3: Field Investigations of Historic and Archaeological Resources

Historic or Archaeological Resource	City/Address	Status	Applicable Projects and Alternatives[a]	Permanent Incorporation into Transportation Facility	Temporary Occupancy During Construction	Proximity Effects
Hollywood Farm	Woodinville Southeast of Woodinville at 14111 Northeast 145th Street	National Register, State Register	R.AC-17 Widen 202 4/5 lanes, NE 145th to SR 522 (Alt. 3, 4, and Preferred Alt.)	For all alternatives, no acquisition of resource would occur.	No temporary occupancy of resources is expected.	Potential noise, air, and visual effects may affect the activities, features, and attributes of the resources.
James Nelsen House	Tukwila 15643 West Valley Road	State Register	R.IC-3/R.AC-36 SR 181 Arterial Improvements (Alt. 2-4 and Preferred Alt.) NM.P&B-19 SR 181/West Valley Highway Add Bike Lanes (Alt. 1-4 and Preferred Alt.)	For all alternatives, no acquisition of resource would occur.	No temporary occupancy of resources is expected.	Potential noise, air, and visual effects may affect the activities, features, and attributes of the resources.
Bothell Lake Forest Park Highway (Brick Roadway in Curve)	Bothell Jaunita Drive and WA 522 at Wayne Curve	State Register	R.CF-5 SR 522 Connection, Bothell to NE 195th (Alt. 2 – 4 and Preferred Alt.)	For all alternatives, no acquisition of resource would occur.	No temporary occupancy of resources is expected.	Potential noise, air, and visual effects may affect the activities, features, and attributes of the resources.
French House	Kirkland 4202 Lake Washington Boulevard	Local Landmark	R.HOV-56 Lake Washington Blvd- HOV Priority Lane, SR 520 to Yarrow Bay (Alt. 1,2, 3, and Preferred Alt.)	For all alternatives, no acquisition of resource would occur.	No temporary occupancy of resources is expected.	Potential noise, air, and visual effects may affect the activities, features, and attributes of the resources.
Peter Saar Cemetery	Kent North side of S. 212th Street (Valley Freeway and 92nd Avenue S.)	Local Register	R.CF-8 SR 167 One GP Lane/N&S (Alt. 2 – 4)	For all alternatives, no acquisition of resource would occur.	No temporary occupancy of resources is expected.	Potential noise, air, and visual effects may affect the activities, features, and attributes of the resources.
45-KI467	Registered Archaeological Site Union Hill Road	State Register	R.PA-18 Union Hill Road 4/5 Lanes, Avondale Rd to 196th Ave NE (Alt. 2- 4 and Preferred Alt.)	For all alternatives, the potential for acquisition or displacement cannot be fully known until the extent of the resource site is adequately located and project design plans are developed.	No temporary occupancy of resources is expected.	Potential noise, air, and visual effects are not expected to affect the activities, features, and attributes of the resources.

[a] The results for Alternative 1 are reported here for comparison purposes only; Alternative 1 is not a viable alternative for consideration or selection through this Section 4(f) Evaluation.

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Figure H-2: Historic Sites

Historic Sites (Approx. Locations)

Study Area Boundary

County Boundaries

Highways

Roadways

Railways

N

1 0 1 2 3 Miles

SNOHOMISH

KING

Bothell Schoolhouse

Lake Forest Park Highway
R.CF.5

Hollywood Farm
R.PA.28, R.AC.17

Hollywood School

Union Hill Road Site
R.PA.18

Justice William White House

Fairwind Farm

Turple House and Barn

Merrilegs Farm

French House
R.HOV.56

Wilburton Trestle

Frederick Winters House

Coal Mine Hoist Foundation

Renton Fire Station/Renton Substation

Railroad Grade

Elliot Farm

James Nelson House
R.IC.3/R.AC.36
NM.PB-19

Peter Saar Cemetery
R.CF-8

Desmet House

Leroy Titus House

Lynnwood
Edmonds
Mountlake Terrace
Woodway
Brier
Bothell
Mill Creek
Kenmore
Woodinville
Shoreline
Lake Forest Park
Simonds Rd
Duvall
NE 128th St
Kirkland
Redmond
Lake Washington
Union Bay
Lake Union
Yarrow Point
Hunts Point
Clyde Hill
Medina
NE 8th St
Bellevue
Lake Sammamish
Seattle
Beaux Arts
Mercer Island
Sammamish
Duwamish River
Newcastle
Issaquah
Tukwila
SE 128th St
Renton
Burien
Normandy Park
SeaTac
68th Ave
132nd Ave SE
Kent
Des Moines
Covington
Maple Valley
Auburn
Federal Way

Historic Sites

Figure H-2

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5. MEASURES TO MITIGATE HARM

5.1 Potential Mitigation Measures

The purpose of mitigation measures with respect to Section 4(f) resources is to avoid or reduce harm caused by the construction and/or operation of alternatives. At this program level of analysis, potential mitigation measures are identified that might contribute to meeting federal, state, and local regulations. If the mitigation measures identified here are implemented, potential impacts associated with the projects could be substantially reduced. These measures could be considered individually or in combination with other measures, depending upon the identified impacts, which will be analyzed in greater detail during project-level design and environmental analysis, documentation, and review.

5.1.1 Recreational Resources

Typical potential mitigation measures for anticipated impacts on recreational resources include, but are not limited to:

- Modify project design to avoid or limit physical alteration, and/or visual, or long-term air and noise impacts.
- Create and implement Habitat Protection Plans where critical areas exist.
- Modify construction methods to avoid or limit construction-related impacts.
- Implement best management practices (BMPs), as approved and utilized by WSDOT, and other appropriate measures.
- Replace or enhance functions of parkland/trail.
- Protect significant trees.
- Provide traffic control (auto and pedestrian) to lessen the impacts to access and park functions during construction.

5.1.2 Historic Buildings and Structures

Typical potential mitigation measures for anticipated impacts on historic resources include, but are not limited to:

- Modify project design to avoid or limit physical alteration and/or visual, or long-term air and noise impacts.
- Modify construction methods to avoid or limit construction-related impacts.
- Ensure design compatibility with the historic setting and character of individual resources and historic districts.
- Consult with the State Historic Preservation Officer (SHPO) on project design elements that may damage, alter, or obscure views of National Register of Historic Properties (NRHP) listed or eligible historic resources.
- Employ sound-reduction measures such as landscape buffers, if appropriate.

When avoidance is not feasible and it is necessary to acquire and remove an historic resource, the resource may be moved to another site or, if no other mitigation is possible, the resource may be

demolished. The relocation or demolition of an historic resource requires complete review and approval by the SHPO and/or county or city landmark preservation board (or similar authority) and must meet established standards for documentation, site selection, and relocation methods. Finished documentation packages will be provided to the Washington SHPO and local consulting parties.

5.1.3 Archaeological Resources

General mitigation measures for archaeological resources may include archaeological monitoring, subsurface testing, and data recovery. Archaeological monitoring and subsurface testing (i.e., "presence/absence testing") may be warranted where construction is scheduled in areas of high probability for containing archaeological sites (but which exhibit no outward indications that such sites are actually present). Archaeological monitoring may also be warranted where preconstruction subsurface testing is not feasible.

Archaeological sites do not qualify as Section 4(f) resources when a determination has been made that the archaeological resource is important chiefly because of what can be learned by data recovery, and the resource has minimal value for preservation in place (23 CFR 771.135(g)2). Archaeological sites that qualify as Section 4(f) resources might be subject to "data recovery" (controlled archaeological excavations subject to SHPO review).

6. RECORD OF COORDINATION

FHWA held meetings with WSDOT and other agencies in September 2000 and May 2001 on the Section 4(f) analysis for the I-405 Corridor Program. The local agencies with jurisdiction of the Section 4(f) resources, including King County and the local cities, reviewed the draft recreational resources and historic resources discipline studies and could be directly involved in future detailed mitigation development as part of project-specific design. The consensus reached at the meetings was as follows:

- Historic and Archaeological Resources Consultation:– The scope was redefined[1] to acknowledge that an intensive project-level survey was not necessary (or possible) at this stage of the project development. It was acknowledged that there would be a subsequent project-level analysis for environmental clearance upon determination of the design and likely impacts of project-level alternatives.

  A corridor level of analysis could distinguish which alternatives were more or less likely to impact (require land acquisition or "constructively use") Section 4(f) historic, or archaeological resources, and a corridor level analysis was appropriate at this stage of the I-405 Corridor Program.

- Section 4(f) Recreational Resources Consultation:– It was determined that applying a standard "project" level Section 4(f) evaluation could not be done due to the limited design detail available for the corridor alternatives. It was also determined that it was not possible or prudent, due to the limited design detail for the alternatives, to accurately determine the extent of impacts of each alternative. The discussion then moved to a "corridor-level

[1] SHPO/FHWA/WSDOT Meeting 106/4(f) Agreed Upon Revised Methodology Scope, Sept. 7, 2000.

analysis," which would identify the parks and other potentially impacted Section 4(f) facilities based on approximate footprints of each of the alternatives.

Such an approach would allow for the Section 4(f) evaluation to be completed at the project level in later environmental analysis, documentation, and review when the specific impacts to the parks, trails, and historical and archeological resources could be adequately identified.

- Site Reconnaissance Section 4(f) Resources Consultation:– FHWA identified the need for further information on the specific park resources and historic resources that had been identified as being potentially affected or requiring land acquisition. Site reconnaissance, with the design engineers and planning staff, was determined to be the most effective approach to develop this information.[2]
- Cities of Redmond and Renton Section 4(f) Recreational Resources Consultation:– Consultation with Sharon Black at the City of Redmond Parks and Recreation Department and Leslie Betlach, the City of Renton Parks Administration Director occurred on May 2, 2002. Sharon Black and her staff confirmed that Welcome Park consisted of wetlands and possessed no significant recreational use potential. They agreed that this property was not a significant local recreational resource. Leslie Betlach confirmed that the Panther Creek Wetlands also did not contain any meaningful recreational use potential and should not be regarded as a significant local recreational resource.

7. CONCLUSION AND NEXT STEPS

The I-405 Corridor Program NEPA EIS process will conclude with a Record of Decision (ROD)that identifies a preferred alternative and mitigation. There will be additional opportunities and analyses to evaluate ways to avoid and/or minimize harm to Section 4(f) resources during project-level NEPA environmental analysis, documentation and review.

Consistent with 23 CFR 771.135(o), the FHWA and FTA have made a preliminary determination that the Preferred Alternative incorporates all possible planning to minimize harm to Section 4(f) land and resources to the extent allowable based on the level of detail available at this corridor-level EIS stage. Furthermore, there are no feasible and prudent locations or alternatives for the action to avoid the use of Section 4(f) land and resources; and no other feasible and prudent alternative is more effective than the Preferred Alternative in minimizing potential harm to Section 4(f) resources. Thus, opportunities to minimize harm at subsequent stages in the development process have not been precluded by decisions made at the corridor-level stage of analysis. Based upon this preliminary determination, the Preferred Alternative is recommended for advancement for follow-on project-level environmental analysis, documentation, and review.

[2] FHWA/DEA Meeting Agreed Upon Section 4(f) Site Reconnaissance Scope, May 15, 2001.

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APPENDIX A OF FINAL PRELIMINARY SECTION 4(f) EVALUATION: I-405 CORRIDOR PROGRAM ALTERNATIVE DESCRIPTIONS

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APPENDIX A:
I-405 CORRIDOR PROGRAM ALTERNATIVE DESCRIPTIONS

No Action Alternative

The No Action Alternative includes the funded highway and transit capital improvement projects of cities, counties, Sound Transit, and WSDOT. These projects are already in the pipeline for implementation within the next six years, and are assumed to occur regardless of the outcome of the I-405 Corridor Program. For this reason, they are referred to collectively as the No Action Alternative.

Under the No Action Alternative, only limited expansion of state highways would occur. No expansion of I-405 is included; however, a new southbound I-405 to southbound SR 167 ramp modification would be constructed. Approximately 15 arterial widening and interchange improvement projects would be implemented within the study area by local agencies. Short-term minor construction necessary for continued operation of the existing transportation facilities would be accomplished, and minor safety improvements would be constructed as required.

It is assumed that Phase I of Sound Transit's regional transit plan would be completed. Approximately 36 HOV direct access projects, arterial HOV improvements, park-and-ride expansions, and transit center enhancements would be implemented in the study area as part of the No Action Alternative. Bus transit service levels by the 2020 horizon year are based upon the Puget Sound Regional Council (PSRC) Metropolitan Transportation Plan. Parking costs are expected to increase due to market forces. Additional urban centers and major employment centers within the study area are also assumed to implement parking charges by 2020.

These baseline transportation improvement projects are the subject of separate and independent project-specific environmental analysis, documentation, and reviews. Their direct impacts are not specifically evaluated by the I-405 Corridor Program. The effects of the No Action projects are evaluated within separate environmental analysis, documentation, and review and Section 4(f) analyses, where required. For comparison purposes secondary and cumulative impacts of these projects are addressed as part of the analyses contained herein.

Figure C-1 shows the location of improvements contained in the No Action Alternative. For further details on the alternatives, refer to Appendix A of the I-405 Corridor Program Final EIS (Major Elements of Alternatives), which describes the major elements that are the building blocks for the alternatives. Appendix B of this evaluation report identifies the specific transportation improvements and mobility solutions contained within each major element and alternative.

Alternative 1: High-Capacity Transit/TDM Emphasis

This alternative attempts to minimize the addition of new impervious surface from general-purpose transportation improvements, and to encourage transit use within the study area. To do this, Alternative 1 emphasizes reliance on a new form of High Capacity Transit (HCT) system (light rail, commuter rail, and monorail), substantial expansion of local bus transit service, non-physical mobility solutions such as regional transportation pricing, and transportation demand management (TDM) strategies. It does not include any increase in roadway capacity beyond the no action condition. All improvements contained in the No Action Alternative are included in

Alternative 1, as well as in the other action alternatives. Table A1 shows the system elements contained in each of the alternatives.

Alternative 1 includes a physically separated, fixed-guideway HCT system, potentially using some form of rail technology. The HCT system would serve the major activity centers within the study area, and would include connections to Redmond and Issaquah and west across Lake Washington to Seattle. The connection across Lake Washington is being evaluated as part of the ongoing Trans-Lake Washington Project DEIS. In addition to the fixed-guideway HCT service, bus transit service would be increased by about 100 percent compared to King County Metro's Fall 2001 proposed 6-year transit development plan. Arterial HOV priority for transit, additional park-and-ride capacity for 4,500 vehicles, and 26 transit center improvements also would be provided.

A package of basic improvements to I-405 would be implemented including climbing lanes, auxiliary lanes, I-90/Coal Creek interchange improvements, and I-405/SR 167 interchange improvements, among others. No additional general-purpose lanes on I-405 would be provided. Limited arterial HOV/transit improvements would be provided to facilitate access to I-405 and the fixed-guideway HCT system, along with non-physical treatments such as providing priority for transit at signals and intersections. Regional pricing strategies similar to those currently being studied by the Puget Sound Regional Council (PSRC) would be implemented, along with a package of core TDM strategies that are common to all of the action alternatives.

Figure C-2 shows the location of improvements contained in Alternative 1. For further details on the alternatives, refer to Appendix A of the I-405 Corridor Program Final EIS (Major Elements of Alternatives), which describes the major elements that are the building blocks for the alternatives. Appendix B of this evaluation report identifies the specific transportation improvements and mobility solutions contained within each major element and alternative.

Table A1: System Elements Contained in Each Alternative

	No Action Alternative	Alternative 1 HCT/TDM Emphasis	Alternative 2 Mixed Mode with HCT/Transit Emphasis	Alternative 3 Mixed Mode Emphasis	Alternative 4 General Capacity Emphasis	Preferred Alternative
Committed and funded freeway projects	X	X	X	X	X	X
Committed and funded HOV projects	X	X	X	X	X	X
Committed and funded arterial projects	X	X	X	X	X	X
Park–and-ride expansions included in No Action	X	X	X	X	X	X
Transit center improvements included in No Action	X	X	X	X	X	X
Transportation Demand Management (TDM)	X	X	X	X	X	X
Expanded TDM regional congestion pricing strategies		X				[d]
Expand transit service by 100% compared to K. Co. 6-year plan		X	X	X		[e]
Expand transit service by 50% compared to K. Co. 6-year plan					X	
Physically separated, fixed-guideway HCT system		X	X			
Bus rapid transit operating in improved access HOV lanes				X		X
Arterial HOV priority for transit		X	X	X		X
HOV direct access ramps on I-405			X	X	X	X
Additional park-and-ride capacity expansion		X	X	X		X
Additional transit center improvements		X	X	X		X
Basic I-405 safety and operational improvements		X	X	X	X	X
I-405/ SR 167 interchange ramps for all major movements			X	X	X	X
One added general-purpose lane in each direction on I-405			X		X	
Two added general-purpose lanes in each direction on I-405				X		X
Two express lanes added in each on I-405 [a]					X	
Widen SR 167 by one lane each direction to study area boundary[c]			X	X	X	X
Improved capacity of freeways connecting to I-405			X	X	X	X
Planned arterial improvements			X	X	X	X
Complete missing segments of major arterial connecting routes [b]				X		X
Expand capacity on north-south arterials [b]					X	X
Upgraded arterial connections to I-405 [b]			X	X	X	X
Pedestrian / bicycle connections and crossings of I-405		X	X	X	X	X
Intelligent transportation system (ITS) improvements		X	X	X	X	X
Truck freight traffic enhancements		X	X	X		X

[a] To be studied as general-purpose lanes and as managed high-occupancy/toll (HOT) lanes.
[b] With jurisdictional approval.
[c] Preferred Alternative widens SR 167 by up to two lanes in each direction south to South 180th Street, but includes no widening beyond South 180th Street.
[d] Contingent upon adopted regional pricing strategy.
[e] Expansion limited to around 75 percent based on demand.

Alternative 2: Mixed Mode with High-Capacity Transit/Transit Emphasis

This alternative attempts to improve mobility options in the study area relative to Alternative 1 by providing the same substantial commitment to transit, combined with the minimum increase in roadway capacity for HOV and general-purpose traffic. To do this, Alternative 2 would implement a new physically separated, fixed-guideway HCT system; substantial expansion of local bus transit service; one added lane in each direction on I-405; and improvements to connecting arterials. All improvements contained in the No Action Alternative are included in Alternative 2, as well as in the other action alternatives.

Alternative 2 includes a physically separated, fixed-guideway HCT system, potentially using some form of rail technology. The HCT system would serve the major activity centers within the study area, and would include connections to Redmond and Issaquah, and west across Lake Washington to Seattle. The connection across Lake Washington is being evaluated as part of the ongoing Trans-Lake Washington Project EIS. In addition to the fixed-guideway HCT service, bus transit service would be increased by 100 percent compared to King County Metro's Fall 2001 proposed 6-year transit development plan. This is a 50 percent increase in service compared to the current King County, Sound Transit, and Community Transit 6-year plans. Arterial HOV priority for transit, additional park-and-ride capacity for 4,500 vehicles, and additional 26 transit center improvements are included, as well as completion of the HOV freeway-to-freeway ramps along I-405.

To increase general-purpose capacity, I-405 would be widened by one lane in each direction. One lane would also be added in each direction on SR 167 to the study area boundary. The package of basic improvements to I-405 would be implemented, along with the core TDM strategies that are common to all of the action alternatives. New capacity improvements on connecting arterials and freeways would be provided along with planned arterial improvements of local jurisdictions.

Figure C-3 shows the location of improvements contained in Alternative 2. For further details on the alternatives, refer to Appendix A of the I-405 Corridor Program Final EIS (Major Elements of Alternatives), which describes the major elements for the alternatives. Appendix B of this evaluation report identifies the specific transportation improvements and mobility solutions contained within each major element and alternative.

Alternative 3: Mixed Mode Emphasis

This alternative attempts to substantially improve mobility options for all travel modes, and to provide a HCT system throughout the study area at a lower cost than the physically separated, fixed-guideway system proposed in Alternatives 1 and 2. To do this, Alternative 3 would implement a new bus rapid transit (BRT) system, provide substantial expansion of local bus transit service, add two lanes in each direction on I-405, and improve arterials within the study area. All improvements contained in the No Action Alternative are included in Alternative 3, as well as in the other action alternatives.

Alternative 3 includes a BRT system operating in improved access HOV lanes on I-405, I-90, and SR 520. The proposed BRT system includes several features that distinguish it from regular bus service, including clearly identifiable priority lanes (using the existing HOV lane system in most locations), frequent and predictable schedules, uniquely identifiable vehicles, accessible transit stations, and convenient fare-collection procedures. Along 1-405, the BRT system would operate with stops every 2 to 3 miles and would use the HOV direct access ramps and in-line transit

stations to maximize speed and reliability. Other BRT operations would operate along connecting corridors (such as SR 522, SR 520, I-90 and SR 167 and would use portions of the I-405 BRT facility. The BRT system would serve the major activity centers within the study area, and would include connections to Redmond and Issaquah, and west across Lake Washington to Seattle. The connection across Lake Washington is being evaluated as part of the ongoing Trans-Lake Washington Project DEIS. Bus transit service would be increased by 100 percent compared to the King County Metro's Fall 2001 proposed 6-year transit development plan. This is a 50 percent increase in service compared to the current King County, Sound Transit and Community Transit 6-year plans. Improved arterial HOV priority for transit, additional park-and-ride capacity for 4,500 vehicles, 11 BRT stations, transit center and capacity improvements, and 9 freeway HOV direct access projects are included, as well as completion of the HOV freeway-to-freeway ramps along I-405.

This alternative would substantially increase capacity for general-purpose traffic on I-405 by adding two lanes in each direction, and improving major interchanges. These added general-purpose lanes replace many of the auxiliary and climbing lanes contained in the package of basic improvements to I-405 that are common to the other action alternatives. One lane would be added in each direction on SR 167 to the study area boundary. The core TDM strategies would be implemented. New capacity improvements on connecting arterials and freeways would be provided. Selected arterial missing links would be completed together with planned arterial improvements of local jurisdictions.

Figure C-4 shows the location of improvements contained in Alternative 3. For further details on the alternatives, refer to Appendix A of the I-405 Corridor Program Final EIS (Major Elements of Alternatives) which describes the major elements for all alternatives. Appendix B of this evaluation report identifies the specific transportation improvements and mobility solutions contained within each major element and alternative.

Alternative 4: General Capacity Emphasis

This alternative places the greatest emphasis on increasing general-purpose and HOV roadway capacity, with substantially less reliance on new transit facilities and added local bus service than any of the other action alternatives. To do this, Alternative 4 would provide one additional lane in each direction on I-405, a new four-lane I-405 express roadway, and the other general-purpose and HOV roadway improvements on I-405 and connecting freeways contained in Alternative 3. The expansion of local bus transit service would be minimal compared to that proposed under the other action alternatives. However, this alternative would add a new bus base in the Green River Valley. All improvements contained in the No Action Alternative are included in Alternative 4, as well as in the other action alternatives.

Alternative 4 would expand freeway capacity by adding one additional general-purpose lane in each direction on I-405 in most segments, improving major interchanges, and constructing a new four-lane I-405 express roadway consisting of two lanes in each direction with limited access points. Completion of the HOV freeway-to-freeway ramps along I-405, and the package of basic improvements to I-405 would be implemented.

Arterial improvements would include additional expansion of major arterial routes and connections to I-405 in conjunction with the planned arterial improvements of local jurisdictions. Transit in this alternative is assumed to be a continuation of the existing local and express bus transit system with a 50 percent increase in service compared to the current King County, Sound

Transit, and Community Transit 6-Year Plans. Additional park-and-ride capacity for 4,500 vehicles would be provided along with the core TDM strategies that are common to all action alternatives.

Figure C-5 shows the location of improvements contained in Alternative 4. For further details of the alternatives, refer to Appendix A of the I-405 Corridor Program Final EIS (Major Elements of Alternatives), which describes the major elements for the alternatives. Appendix B of this evaluation report identifies the specific transportation improvements and mobility solutions contained within each major element and alternative.

Preferred Alternative

The Preferred Alternative is a multimodal solution to the transportation needs in the I-405 corridor that is very similar to Alternative 3. It was identified after thorough analysis of its transportation performance and environmental effects in meeting the Purpose and Need for the I-405 Corridor Program. Based upon this analysis, the I-405 Corridor Program Citizen, Steering, and Executive committees recommended the Preferred Alternative to the co-lead agencies by consensus for the primary reasons listed below. The Preferred Alternative was adopted for consideration in the Final EIS by the I-405 Corridor Program co-lead agencies.

- Transportation performance of the Preferred Alternative was superior to the other alternatives in relation to the committees' adopted evaluation criteria;
- Environmental impacts of the Preferred Alternative within the corridor are believed to be avoidable or effectively mitigatable, and opportunities for enhancement of existing environmental conditions can be achieved through sound design practices and the proposed "basin approach" to considering key environmental features;
- Comparison of program benefits to costs for the Preferred Alternative (addressed separately from the EIS) was more desirable than for the other alternatives; and
- The mix of modal investments in the Preferred Alternative provides a balanced system of roadway, transit, and demand management strategies that are expected to provide a reasonable long-term solution to the needs for personal and freight mobility and congestion reduction within the I-405 Corridor Program study area.

The Preferred Alternative, like Alternative 3, focuses on substantial improvement of mobility options for all travel modes and provision of an effective HCT system throughout the study area at a lower cost than the physically separated, fixed-guideway system proposed in Alternatives 1 and 2. To achieve this, the Preferred Alternative proposes a new bus rapid transit (BRT) system, substantial expansion of local bus transit service, up to two added lanes in each direction on I-405, improvements to arterial capacity and connectivity within the study area, and the other general purpose and HOV roadway improvements contained in Alternative 3. All improvements contained in the No Action Alternative are included in the Preferred Alternative. Table A1 identifies the system elements contained in the Preferred Alternative and each of the other alternatives.

The Preferred Alternative includes a BRT system operating in improved-access HOV lanes on I-405, I-90, and SR 520 as described for Alternative 3. The proposed BRT system includes several features that distinguish it from regular bus service, including clearly identifiable priority lanes (using the existing HOV lane system in most locations), frequent and predictable schedules, uniquely identifiable vehicles, accessible transit stations, and convenient fare-collection procedures. Along I-405, the BRT system would operate with stops every 2 to 3 miles and would

use the HOV direct access ramps and in-line transit stations to maximize speed and reliability. Other BRT operations would operate along connecting corridors (such as SR 522, SR 520, I-90, and SR 167) and would use portions of the I-405 BRT facility. It would serve the major activity centers within the study area, and would include connections east to Redmond and Issaquah and west across Lake Washington to Seattle. The connections across Lake Washington are being evaluated as part of the ongoing Trans-Lake Washington Project EIS.

Local bus transit service within the study areas would be increased, based on demand, by up to 75 percent compared to the current King County, Sound Transit, and Community Transit 6-year plans. Improved arterial HOV priority for transit, additional park-and-ride capacity for 5,000 vehicles, 11 BRT stations, transit center and capacity improvements, 9 freeway HOV direct access projects, and completion of the HOV freeway-to-freeway ramps along I-405 are included, as well as a variety of pedestrian and bicycle connections.

The Preferred Alternative, similar to Alternative 3, would substantially increase capacity for general purpose traffic on I-405 by adding up to two lanes in each direction, along with providing collector-distributor lanes along I-405 at locations where they are warranted. These added general purpose lanes replace many of the auxiliary and climbing lanes contained in the package of basic I-405 improvements that are common to the other action alternatives. In addition, this alternative includes improvements for major interchanges and added capacity on arterials and freeways connecting to I-405.

The freeway design includes a buffer separation between the general purpose lanes and the HOV lane. This buffer, envisioned as a 4-foot painted barrier in most sections, would allow for safer and more reliable HOV and transit operations within I-405 corridor. Access to and from the HOV lane would likely be limited to the HOV direct access ramps, freeway-to-freeway connections, and clearly identifiable locations along the mainline freeway where the buffer would be open for merging traffic. The buffer design allows for future consideration of expanded managed lane operations along I-405, which could include managing up to two lanes each direction. Expansion of managed lane operations beyond the single HOV lane proposed in the Preferred Alternative would be subject to further analysis outside of the I-405 Corridor Program EIS process.

The I-405/SR 167 interchange would be expanded to include ramps for all major movements, and SR 167 would be widened by up to two lanes in each direction south from I-405 to S 180th Street in Kent, with no widening beyond that limit. The same expanded list of capacity enhancements on north-south arterials and continuity improvements to complete missing segments of major arterial connecting routes as included under Alternative 4 would be completed, together with other arterial improvements already planned by the local jurisdictions. Truck freight traffic improvements, intelligent transportation system improvements, and an expanded package of more aggressive TDM measures similar to Alternative 1 also would be implemented. This could include expanded options for managing lanes on I-405 such as regional congestion pricing or other management approaches, contingent upon adoption of a regional pricing policy by the PSRC.

Figure C-6 shows the location of improvements contained in the Preferred Alternative. For further details of the alternatives, refer to Appendix A of the I-405 Corridor Program Final EIS (Major Elements of Alternatives), which describes the major elements for the alternatives. Appendix B of this evaluation report identifies the specific transportation improvements and mobility solutions contained within each major element and alternative.

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APPENDIX B OF FINAL PRELIMINARY SECTION 4(f) EVALUATION: I-405 CORRIDOR PROGRAM EIS ALTERNATIVES PROJECT MATRIX

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APPENDIX B

I-405 Corridor Program EIS Alternatives Project Matrix

	Jurisdiction	*ACTIONS*		*Alternatives* 5	1	2	3	4	
Element #				**No Action**	**HCT/TDM**	**Mixed Mode with HCT/Transit Emphasis**	**Mixed Mode**	**General Capacity**	**Preferred**
1.	**TRANSPORTATION DEMAND MANAGEMENT (TDM)**								
	Various	TDM-1	TDM Package		✓	✓	✓	✓	✓
		TDM-2	Expanded TDM Package- Regional Congestion Pricing		✓				✓
2.	**TRANSIT EXPANSION WITHIN STUDY AREA**								
	Various	TS-0	Twenty percent more service than in the proposed 6-year plans for sound Transit, METRO and Community Transit	✓					
	Various	TS-1	Seventy percent more service assumed in the current 6-year plans for Sound Transit, METRO and Community Transit						✓
	Various	TS-1A	New Bus Base - Green River Valley		✓	✓	✓	✓	
	Various	TS-2	Twice the service in the proposed 6-year plans for Sound Transit, METRO and Community Transit		✓	✓	✓		
	Various	TS-3	Fifty-percent more service assumed in the current 6-year plan for Sound Transit, Metro, and Community Transit.					✓	
3.	**HIGH CAPACITY TRANSIT**								
	BUS RAPID TRANSIT STATIONS								
	Sea-Tac Airport	BRT-1	Sea-Tac Airport Transportation Center				✓		✓
	Tukwila	BRT-2	Tukwila (Commuter Rail Station)				✓		✓
	Renton	BRT-3	Renton Transit Center				✓		✓
	Renton	BRT-4	Port Quendall				✓		✓
	Newport	BRT-5	Newport Hills				✓		✓
	Bellevue	BRT-6	Bellevue Transit Center				✓		✓
	Kirkland	BRT-7	Central Kirkland (NE 85th Street)				✓		✓
	Kirkland	BRT-8	Totem Lake				✓		✓
	Bothell	BRT-9	Bothell/UW Campus				✓		✓
	Bothell	BRT-10	Canyon Park				✓		✓
	Lynnwood	BRT-11	Lynnwood Transit Center				✓		✓
	High Capacity Transit (Physically Separated, Fixed Guideway HCT)								
	Tuk. & Renton	T.HCT-1	HCT- SeaTac to Renton CBD		✓	✓			
	Renton	T.HCT-2	HCT-Renton CBD to NE 44th (Port Quendall)		✓	✓			
	Ren< New & Bel	T.HCT-3	HCT- NE 44th (Port Quendall) to Factoria		✓	✓			
	Bell & Issa	T.HCT-4	HCT - Factoria To Issaquah		✓	✓			
	Bellevue	T.HCT-5	HCT Factoria to Downtown Bellevue		✓	✓			
	Bell & Red	T.HCT-6	HCT - Bellevue to Redmond		✓	✓			
	Bell & Kirk	T.HCT-7	HCT- Bellevue to Totem Lake		✓	✓			
	Kirk & King Co	T.HCT-8	HCT - Totem Lake to Bothell		✓	✓			
	Various	T.HCT-9	HCT - Bothell to Lynnwood		✓	✓			
					✓	✓			
	High Capacity Transit (Bus Rapid Transit (BRT) operating improved access HOV lanes on the existing freeway system)								
	Tuk. & Renton	T.HCT-1	HCT- SeaTac to Renton CBD				✓		
	Renton	T.HCT-2	HCT-Renton CBD to NE 44th (Port Quendall)				✓		
	Ren< New & Bel	T.HCT-3	HCT- NE 44th (Port Quendall) to Factoria				✓		
	Bell & Issa	T.HCT-4	HCT - Factoria To Issaquah				✓		
	Bellevue	T.HCT-5	HCT Factoria to Downtown Bellevue				✓		
	Bell & Red	T.HCT-6	HCT - Bellevue to Redmond				✓		
	Bell & Kirk	T.HCT-7	HCT- Bellevue to Totem Lake				✓		
	Kirk & King Co	T.HCT-8	HCT - Totem Lake to Bothell				✓		
	Various	T.HCT-9	HCT - Bothell to Lynnwood				✓		
							✓		
	High Capacity Transit Stations								
	Sea-Tac	HCT.TS-1	Sea-Tac (Outside of Study Area)						
	Tukwila	HCT.TS-2	Southcenter		✓	✓			
	Tukwila & Renton	HCT.TS-3	Tukwila (Longacres)		✓	✓			
	Renton	HCT.TS-4	Downtown Renton		✓	✓			
	Renton	HCT.TS-5	North Renton		✓	✓			

∗ Evaluated within another project.

✳ Project redefined for the Preferred Alternative

APPENDIX B

I-405 Corridor Program EIS Alternatives Project Matrix

					Alternatives					
		Jurisdiction		*ACTIONS*	5	1	2	3	4	
Element #					**No Action**	**HCT/TDM**	**Mixed Mode with HCT/Transit Emphasis**	**Mixed Mode**	**General Capacity**	**Preferred**
		Renton	HCT.TS-6	Port Quendall		✓	✓			
		Bellevue	HCT.TS-7	Factoria		✓	✓			
		Bellevue	HCT.TS-8	Bellevue Transit Center		✓	✓			
		Bellevue	HCT.TS-9	Bellevue Library		✓	✓			
		Bell & Kirk	HCT.TS-10	SR 520/Northup Way		✓	✓			
		Kirkland	HCT.TS-11	Downtown Kirkland (NE 85th Street)		✓	✓			
		Kirkland	HCT.TS-12	Totem Lake		✓	✓			
		Woodinville	HCT.TS-13	NE 145th Street		✓	✓			
		Woodinville	HCT.TS-14	Woodinville		✓	✓			
		Bothell	HCT.TS-15	NE 195th		✓	✓			
		Bothell	HCT.TS-16	Canyon Park		✓	✓			
		Sno County	HCT.TS-17	164th Street AW (AshWay)		✓	✓			
		Bellevue	HCT.TS-18	Eastgate		✓	✓			
		King County	HCT.TS-19	Lakemont		✓	✓			
		Issaquah	HCT.TS-20	Issaquah 9Outside of Study area)						
		Bellevue	HCT.TS-21	132nd Avenue NE		✓	✓			
		Bellevue	HCT.TS-22	148th Avenue NE		✓	✓			
		Redmond	HCT.TS-23	Overlake (NE 40th Street)		✓	✓			
		Redmond	HCT.TS-24	Redmond Town Center		✓	✓			
		Redmond	HCT.TS-25	Bear Creek		✓	✓			
		Mercer Island	HCT.TS-26	Mercer Island		✓	✓			
4.	**ADD ARTERIAL HOV AND TRANSIT PRIORITY**									
		Bellevue	R.HOV-36	Coal Creek Pkwy from I-405 to Forest Drive		✓	✓	✓		
		Bellevue	R.HOV-36	Coal Creek Pkwy from I-405 to Factoria Blvd						✓
		Bellevue	R.HOV-37	NE 8th Street from I-405 to 120th Ave NE		✓	✓	✓		✓
		Kirk, Redmond	R.HOV-38	NE 85th St from Kirkland Way to 148th Ave NE Vicinity		✓	✓	✓		✓
		Kirkland	R.HOV-39	NE 116th from 115th Ave NE to 124th Ave NE		✓	✓	✓		✓
		Kirkland	R.HOV-40	NE 124th from 113th Ave NE to 132 Ave NE		✓	✓	✓		
		Kirkland	R.HOV-40	NE 124th from 113th Ave NE to 124th Ave NE						✓
		Bothell	R.HOV-41 & R.IC-11	SR 527 From SE 228th St to SR 524		✓	✓	✓		
		Bothell	R.HOV-41 & R.IC-11	SR 527 From SE 228th through I-405 interchange						✓
		Renton	R.HOV-43 & R.IC-4	SR 169 from SR 405 to Riverview Park Vicinity - HOV/Transit Preferential treatment		✓	✓	✓		✓
		Renton	R.HOV-44	SW 27th St Corridor in Renton from Oaksdale Ave to SR 167		✓	✓	✓		✓
		Redmond	R.HOV-47	Avondale Rd from Novelty Hill Rd to Avondale Way/ Construct SB HOV lane		✓	✓	✓		✓
		Renton, King Co	R.HOV-48	SW 43 St from SR 167 to 140 Ave SE		✓	✓	✓		✓
		Renton	R.HOV-49	Logan Ave N/N 6 St from S 3 St to Park Dr, Transit Signal Priority		✓	✓	✓		✓
		Renton	R.HOV-51	Park Dr/Sunset Blvd from Garden Ave to Duvall Ave NE, Que Bypass'		✓	✓	✓		✓
		Kenmore	R.HOV-53 & R.PA-11	68 Ave NE (Simonds Rd to SR 522) - Construct NB HOV lane		✓	✓	✓		
		Redmond	R.HOV-55	Willows Rd (Redmond Wy to NE 124 St)		✓	✓	✓		
		Kirkland, Bellevue	R.HOV-56	Lake Washington Blvd (SR 520 to Yarrow Bay) - HOV lanes		✓	✓	✓		✓
		Kirkland	R.HOV-57	NE 68 St/NE 72 Pl (I-405 Vicinity) Que Bypass'		✓	✓	✓		✓
		Bellevue	R.HOV-60	Bellevue Way - I-90 to South Bellevue Park and Ride Vicinity		✓	✓	✓		✓
5.	**HOV EXPRESS ON I-405 WITH DIRECT ACCESS RAMPS**									
		Bellevue	HOV-01	I-405 at NE 4th/6th/8th (Bellevue) / Construct new HOV direct access at NE 6th, Improve arterial capacity at NE 4th/8t interchanges	✓	✓	✓	✓	✓	✓
		Bellevue	HOV-02	I-90 (Eastgate) / New I-90 HOV direct access connection to P&R	✓	✓	✓	✓	✓	✓
		WSDOT	HOV-14	I-405 (I-5 Swamp Creek to SR 527)/Construct NB and SB HOV lanes total 6 lanes	✓	✓	✓	✓	✓	✓
		ST	HOV-102, R.HOV-58 & R.PA-1	Woodinville Arterial Enhancements/HOV arterial enhancements	✓	✓	✓	✓	✓	✓
		Renton	R.HOV-32	Between Sunset and SR-900 /Park Ave interchange in Renton	✓	✓	✓	✓	✓	✓
		Bothell	R.HOV-62	Vicinity of NE 195th (Bothell Campus)	✓	✓	✓	✓	✓	✓
		Bothell	R.HOV-63	Vicinity of SR 527	✓	✓	✓	✓	✓	✓
		ST	R.HOV-66	I-405 at NE 128th St/HOV Direct Access Improvements	✓	✓	✓	✓	✓	✓
		Tukwila	R.HOV-25	SR 5 I/C @ Tukwila Fwy to Fwy HOV ramps,			✓	✓		✓

∗ Evaluated within another project.

✳ Project redefined for the Preferred Alternative

APPENDIX B

I-405 Corridor Program EIS Alternatives Project Matrix

					Alternatives					
		Jurisdiction		*ACTIONS*	5	1	2	3	4	
Element #					No Action	HCT/TDM	Mixed Mode with HCT/Transit Emphasis	Mixed Mode	General Capacity	Preferred
		Renton	R.HOV-26	SR 167 I/C Fwy to Fwy HOV ramps,			✓	✓	✓	✓
		Bellevue	R.HOV-27	SR 90 I/C Fwy to Fwy HOV ramps,			✓	✓	✓	✓
		Bellevue	R.HOV-28	SR 520 Fwy to Fwy HOV ramps,			✓	✓	✓	✓
		Bothell	R.HOV-29	SR 522 Fwy to Fwy HOV Ramps			✓	✓	✓	✓
		Sno. Co.	R.HOV-30	SR 5 I/C @ Swamp Creek Fwy HOV ramps.			✓	✓	✓	✓
		Newcastle	R.HOV-65	112th St SE (In-Line Station)			✓			✓
		SR 181	R.HOV-102	SR 181 (Commuter Rail Access)						✓
		ST	HOV-101	I-405 @ Lind/HOV direct access improvements.				✓		
		Renton	R.HOV-33 & R.IC-12	NE 44th I/C - HOV Direct Access and Arterial Improvements (assumes Port Quendall)(Remove from NA))		✓	✓	✓	✓	✓
		Kirkland	R.HOV-61	NE 85th				✓		✓
6.		**ADD PARK & RIDE CAPACITY TO MEET DEMAND**								
		Renton	T.PR-3	Renton Highlands	✓	✓	✓	✓	✓	
		Tukwila & Ren	T.PR-6	Tukwila Commuter Rail (Longacres)	✓	✓	✓	✓	✓	
		K C	T.PR-8	SR 169 and 140th Place SE		✓	✓	✓		
		K C	T.PR-9	Petrovitsky Rd and 157th Ave SE		✓	✓	✓		
		K C	T.PR-10	140th Ave SE and SE 192nd		✓	✓	✓		
		K C	T.PR-11	SR 515 and SE 208th		✓	✓	✓		
		Kent & Renton	T.PR-12	SR 167 and SW 43rd		✓	✓	✓		
		Kent & Renton	T.PR-13	SR 167 and 84th Ave		✓	✓	✓		
		Redmond	T.PR-17	Willows Rd @ NE 100th		✓	✓	✓		
		Redmond	T.PR-18	SR 202 @ NE 100th		✓	✓	✓		
		Bell & Kirk	T.PR-20	South Kirkland	✓	✓	✓	✓	✓	
		Redmond	T.PR-21	Overlake	✓	✓	✓	✓	✓	
		Bellevue	T.PR-22	South Bellevue	✓	✓	✓	✓	✓	
		Bellevue	T.PR-23	Newport (112th Ave. SE)	✓	✓	✓	✓	✓	
		KC	T.PR-24	NE 160th/Brickyard Rd	✓	✓	✓	✓	✓	
		Bothell	T.PR-25	Canyon Park (SR 405 and SR 527)	✓	✓	✓	✓	✓	
		KC	T.PR-26	SR 202 @ NE 145th		✓	✓	✓		
		Tukwila	T.PR-30	Tukwila	✓	✓	✓	✓	✓	
		Kirkland	T.PR-31	Houghton	✓	✓	✓	✓	✓	
		Kirkland	T.PR-32	Kingsgate	✓	✓	✓	✓	✓	
		Medina	T.PR-33	Evergreen Point	✓	✓	✓	✓	✓	
		Bellevue	T.PR-34	Wilburton	✓	✓	✓	✓	✓	
		King County	T.PR-35	Lakemont	✓	✓	✓	✓	✓	
		Redmond	T.PR-36	Rendmond	✓	✓	✓	✓	✓	
		Redmond	T.PR-37	Bear Creek	✓	✓	✓	✓	✓	
		Bothell	T.PR-38	Bothell	✓	✓	✓	✓	✓	
		Kenmore	T.PR-39	Northshore	✓	✓	✓	✓	✓	
		Kenmore	T.PR-40	Kenmore	✓	✓	✓	✓	✓	
		Woodinville	T.PR-41	Woodinville	✓	✓	✓	✓	✓	
		Mercer Island	T.PR-42	Mercer Island	✓	✓	✓	✓	✓	
		Bellevue	T.PR-43	Eastgate	✓	✓	✓	✓	✓	
		SE Snohomish	T.PR-44	Southeast Snohomish County (inside Study Area) (+800 spaces)						✓
		Bothell, Kenmore, Woodinville	T.PR-45	Bothell, Kenmore, Woodinville & vicinity (+300 spaces)						✓
		Kirkland & vicinity	T.PR-46	Kirkland & vicinity (+300 spaces)						✓
		Redmond & vicinity	T.PR-47	Redmond & vicinity (+500 spaces)						✓
		Mercer Island	T.PR-48	Mercer Island (+300 spaces)						✓
		Bellevue & vicinity	T.PR-49	Bellevue & vicinity (+1200 spaces)						✓
		Renton & vicinity	T.PR-50	Renton & vicinity (+200 spaces)						✓
		Tukwila & vicinity	T.PR-51	Tukwila & vicinity (+700 spaces)						✓
		Kent & vicinity	T.PR-52	Kent & vicinity (inside study area) (=700 spaces)						✓

Placeholder- 4500 new spaces analyzed and costed

Total of 5,000 spaces- to be verified by transit forecassts

∗ Evaluated within another project.

✳ Project redefined for the Preferred Alternative

APPENDIX B

I-405 Corridor Program EIS Alternatives Project Matrix

	Jurisdiction	*ACTIONS*		*Alternatives* 5	1	2	3	4	
Element #				**No Action**	**HCT/TDM**	**Mixed Mode with HCT/Transit Emphasis**	**Mixed Mode**	**General Capacity**	**Preferred**
7.	**ADD TRANSIT CENTER CAPACITY TO MEET DEMAND**								
	Renton	T.TC-6	Downtown Renton	✓	✓	✓	✓	✓	✓
	Bellevue	T.TC-8	Downtown Bellevue	✓	✓	✓	✓	✓	✓
	Redmond	T.TC-9	Overlake	✓	✓	✓	✓	✓	✓
	Kirkland	T.TC-12	Downtown Kirkland	✓	✓	✓	✓	✓	✓
	Kirkland	T.TC-14	Totem Lake	✓	✓	✓	✓	✓	✓
	Lynnwood	T.TC-18	Lynnwood						✓
	Woodinville	T.TC-19	Downtown Woodinville						✓
	Newcastle	T.TC-20	Downtown Newcastle						✓
	Tukwila	T.TC-21	Tukwila						✓
	Bothell	T.TC-22	Canyon Park						✓
8.	**BASIC I-405 IMPROVEMENTS**								
	Renton	R.BI-1 & R.FR-10	SR 167 Interchange - Direct Connection with auxiliary lane SB SR 169 to SR 167		✓	✓	✓	✓	✓
	Kirkland	R.BI-2	Continue NB climbing Lane from NE 70th to NE 85th and continue as auxiliary Lane to NE 116th		✓	✓		✓	
	Kirkland	R.BI-3	SB auxiliary Lane NE 124th to NE 85th		✓	✓		✓	
	Bellevue	R.BI-4	I-90 / Coal Creek Interchange		✓	✓	✓	✓	✓
	Both,King Co,Kirk	R.BI-5	SB SR 522 to 124th continue climbing lane as an auxiliary lane (SB SR 522 to 160th climbing lane)		✓	✓		✓	✓
	Bothell	R.BI-6	NB auxiliary lane SR 522 to SR 527		✓	✓		✓	
	Renton	R.BI-7	Kennydale Hill climbing lane - SR 900 to 44th - NB 900 to 30th, SB 44th - 30th (OPTION)		✓	✓		✓	✓
	Bellevue	R.BI-8	I-90 to Bellevue SB HOV direct connection to I-90 west		✓	✓		✓	
	Bellevue	R.BI-9	NB auxiliary lane I-90 to NE 8th		✓	✓		✓	
	Bellevue	R.BI-10	Increase SR 405 to Eastbound SR 520 Ramp capacity		✓	✓		✓	✓
	Renton	R.BI-14	NB Auxilliary Lane I-5 to SR 167		✓	✓		✓	
	Various	R.FR.24	Improve interchange geometrics at all major truck routes (WB-20 Design Criteria) (No cost included)		✓	✓	✓	✓	✓
	Committed Freeway Projects								
	WSDOT	R-55	I-405/SR 167 Interchange/Construct new southbound I-405-to-southbound SR 167 ramp modification.	✓	✓	✓	✓	✓	✓
9.	**ONE ADDITIONAL GP OR AUXILIARY LANE EACH DIRECTION ON I-405**								
	Tukwila,Renton	R.TC-18	One additional GP lanes in each direction - SR 5 Tukwila to SR 167			✓		✓	
	Renton	R.TC-10	One additional GP lanes in each direction - SR 167 to SR 900/North Renton I/C			✓		✓	
	Renton, Nwcas,Bel	R.TC-11	One additional GP lanes in each direction - SR 900/North Renton I/C to SR 90			✓		✓	
	Bellevue	R.TC-12	One additional GP lanes in each direction - SR 90 To SR 520			✓		✓	
	Bellevue,Kirkland	R.TC-13	One additional GP lanes in each direction - SR 520 to NE 70th			✓		✓	
	Kirkland	R.TC-14	One additional GP lanes in each direction - NE 70th to NE 124th			✓		✓	
	Kirk,K C,Both	R.TC-15	One additional GP lanes in each direction - NE 124th SR 522			✓		✓	
	Bothell,Sno Co	R.TC-16	One additional GP lanes in each direction - SR 522 to SR 527			✓		✓	
	Sno Co	R.TC-17	One additional GP lanes in each direction - SR 527 to SR 5 Swamp Creek			✓		✓	
10.	**ADD 2 GENERAL PURPOSE LANES EACH DIRECTION ON I-405**								
	Tukwila,Renton	R.TC-1	Two additional GP lanes in each direction - SR 5 Tukwila to SR 167				✓		✓
	Renton	R.TC-2	Two additional GP lanes in each direction - SR 167 to SR 900/North Renton I/C				✓		✓
	Renton, Nwcas,Bel	R.TC-3	Two additional GP lanes in each direction - SR 900/North Renton I/C to SR 90				✓		✓
	Bellevue	R.TC-4	Two additional GP lanes in each direction - SR 90 To SR 520				✓		✓
	Bellevue,Kirkland	R.TC-5	Two additional GP lanes in each direction - SR 520 to NE 70th				✓		
	Bellevue,Kirkland	R.TC-5	Two additional GP lanes SB, One additional GP lane NB - SR 520 to NE 70th						✓
	Kirkland	R.TC-6	Two additional GP lanes in each direction - NE 70th to NE 124th				✓		✓
	Kirk,K C,Both	R.TC-7	Two additional GP lanes in each direction - NE 124th SR 522				✓		✓
	Bothell,Sno Co	R.TC-8	Two additional GP lanes in each direction - SR 522 to SR 527				✓		✓
	Sno Co	R.TC-9	Two additional GP lanes in each direction - SR 527 to SR 5 Swamp Creek				✓		✓
	Various	R.ML-1	Managed Lane Buffer Option (4 feet) - I-5 Tukwila to I-5 Swamp Creek						✓
11.	**PROVIDE COLLECTOR DISTRIBUTOR LANES ON I-405**								
	Renton	R.CD-1	SR-167, SR-169, Sunset and SR 900/North Renton; Note: Impacts and costs included as part				✓		✓

∗ Evaluated within another project.

✳ Project redefined for the Preferred Alternative

APPENDIX B

I-405 Corridor Program EIS Alternatives Project Matrix

Element #	Jurisdiction	ACTIONS		Alternatives 5 — No Action	1 — HCT/TDM	2 — Mixed Mode with HCT/Transit Emphasis	3 — Mixed Mode	4 — General Capacity	Preferred
	Bellevue	R.CD-2	Coal Creek, SR 90, SE 8th, NE 4th, NE 8th and SR 520; of Element 10.				✓		✓
	Kirkland	R.CD-3	NE 70th and NE 85th;				✓		✓
	Kirkland	R.CD-4	NE 116th and NE 132nd;				✓		✓
	Bothell, King Co	R.CD-5	NE 160th, SR-522 and SR 527				✓		✓
	Newcastle	R.CD-6 & R.BI-7	3rd Northbound Lane - NE 30th St to NE 44th St						✓
	Bellevue	R.CD-7 & R.BI-7	3rd Northbound and Southbound Lanes - NE 44th ST to Coal Creek I/C						✓
12.	**EXPRESS LANES - 2 LANES EACH DIRECTION ON I-405**								
	Tukwila,Renton	R.TC-20 + R.TC-29a	Add Express Lanes - SR 5 Tukwila to SR 167					✓	
	Renton	R.TC-21	Add Express Lanes - SR 167 to SR 900/North Renton I/C					✓	
	Renton, Nwcas,Bel	R.TC-22 + R.TC-33	Add Express Lanes - SR 900/North Renton I/C to SR 90					✓	
	Bellevue	R.TC-23	Add Express Lanes - SR 90 To SR 520					✓	
	Bellevue,Kirkland	R.TC-24 + R.TC-32	Add Express Lanes - SR 520 to NE 70th					✓	
	Kirkland	R.TC-25	Add Express Lanes - NE 70th to NE 124th					✓	
	Kirk,K C,Both	R.TC-26 + R.TC-31	Add Express Lanes - NE 124th SR 522					✓	
	Bothell,Sno Co	R.TC-27	Add Express Lanes - SR 522 to SR 527					✓	
	Sno Co	R.TC-29 + R.TC-30	Add Express Lanes - SR 527 to SR 5 Swamp Creek					✓	
	Renton	R.TC-28	Add Express Lanes - SR 167 north of 180th up to I-405					✓	
	EXPRESS LANES - ACCESS LOCATIONS								
	Tukwila,Renton	R.TC-29a + R.TC-20	Southern end to Express Lanes - Between SR 181 and SR 167					✓	
	Bothell	R.TC-30 + R.TC-29	Northern end to Express Lanes - Between SR 527 and I-5					✓	
	Renton, Nwcas,Bel	R.TC-31 + R.TC-26	Slip Ramp - South of NE 160th Street					✓	
	Bellevue	R.TC-32 + R.TC-24	Slip Ramp - South of NE 70th Street					✓	
	Bellevue,Kirkland	R.TC-33 + R.TC-22	Slip Ramp - South of Coal Creek Parkway					✓	
	Kirkland	R.TC-34	Interchange access location - SR 167					✓	
13.	**WIDEN SR 167 BY 1 LANE EACH DIRECTION TO KENT**								
	Renton, Kent	R.CF-8	SR 167 I-405 to Study Area Boundary (2 lanes to 180th only; No added lanes south of 180th)			✓	✓	✓	✓
14.	**SR 167/ I-405 INTERCHANGE IMPROVEMENTS**								
	Renton	R.FR-10 & R.BI-1	SR 167/I-405 Interchange Add Directional Ramps for major movements			✓	✓	✓	✓
15.	**IMPROVE CONNECTING FREEWAY CAPACITY TO I-405**								
	Tuikwila	R.CF-1	SR 518 I-405 to SR 99/Airport Access			✓	✓	✓	✓
	Bellevue	R.CF-3	I-90 South Bellevue to Eastgate			✓	✓	✓	✓
	Bellevue	R.CF-4	SR 520 Bellevue Way to 148th (to 124th, tie to TransLake)					✓	✓
	Bothell, Woodin	R.CF-5	SR 522 Bothell to NE 195th			✓	✓	✓	✓
	Sno Co, Lynnwood	R.CF-6	SR 525 I-405 to SR 99			✓	✓	✓	✓
	Tukwila	R.CF-9	I-5 at Tukwila			✓	✓	✓	✓
	Lynnwood	R.CF-10	I-5 at Swamp Creek - 44th to 155th			✓	✓	✓	✓
16.	**IMPLEMENT PLANNED ARTERIAL IMPROVEMENTS** (Note: ID numbers are same as ETP ID's)								
	Bothell, Snohomish C	R.AC-21	120th NE/39th SE - NE 95th to Maltby Rd - 4/5 lanes including new connection	✓	✓	✓	✓	✓	✓
	Bellevue	R-08	NE 29th Pl (148th Ave NE to NE 24th St)/Construct new 2-lane road	✓	✓	✓	✓	✓	✓
	Snohomish Co.	R-10	SR 524 (24 St SW to SR 527)--- Widen to 4/5 lanes including sidewalks, bike lanes	✓	✓	✓	✓	✓	✓
	Kirkland	R-21	NE 120 St (Slater Ave to 124 Ave NE)--- Construct new 3-lane roadway with ped/bike facilities	✓			✓		✓
	Redmond/ WSDOT	R-25	SR 202 Corridor Improvements(East Lake Sammamish Pkwy to Sahalee Way)--- Widen to 3/5 lanes; intersection improvements with bike/ped facilities	✓	✓	✓	✓	✓	✓
	Redmond	R-26	NE 90 St (Willows Rd to SR 202)--- Construct new 4/5 lanes + bike facilities	✓	✓	✓	✓	✓	✓
	Redmond	R-28	West Lake Sammamish Parkway (Leary Way to Bel-Red Rd)--- Widen to 4/5 lanes + CGS, bike lanes	✓	✓	✓	✓	✓	✓
	Renton	R-36	Oakesdale Ave SW (SW 31st to SW 16th)--- Construct new 5 lane roadway with CGS	✓	✓	✓	✓	✓	✓
	KCDOT	R-39 & R.AC-2	140 Ave SE (SR 169 to SE 208 St)--- Widen to 5 lanes SR 169 to SE 196 St, widen for turn channels on SE 196. Combines 2 King County CIP projects. A major North-South arterial which serves the Soos Creek Plateau and Fairwood.	✓	✓	✓	✓	✓	✓

∗ Evaluated within another project.

✳ Project redefined for the Preferred Alternative

APPENDIX B

I-405 Corridor Program EIS Alternatives Project Matrix

				Alternatives					
Jurisdiction	*ACTIONS*			5	1	2	3	4	
Element #				**No Action**	**HCT/TDM**	**Mixed Mode with HCT/Transit Emphasis**	**Mixed Mode**	**General Capacity**	**Preferred**
KCDOT	R-40 & R.IC-24	Juanita-Woodinville Way (NE 145 St to 112th Ave NE) Widen to 5 lanes + CGS, walkway/pathway		✓	✓	✓	✓	✓	✓
KCDOT	R-47	NE 124 St (Willows Rd to SR 202)--- Widen to 4/5 lanes + CGS, bike facilities; traffic signal.		✓	✓	✓	✓	✓	✓
Woodinville	R-51	Woodinville-Snohomish Rd/140 Ave NE (NE 175 St to SR 522)--- Widen to 4/5 lanes + CGS, bike lanes		✓	✓	✓	✓	✓	✓
Bellevue	R-101	150th Ave SE---Widen to 7 lanes from SE 36th to SE 38th; add turn lanes		✓	✓	✓	✓	✓	✓
Redmond	R-111 & R.AC-15	Willows Rd Corridor Improvements-- Channelization of Willows Rd/Redmond Way intersection and widening of Willows Rd from NE 116th to NE 124th		✓	✓	✓	✓	✓	✓
Snohomish Co.	R-117	39th Ave SE Realignment at SR 524 and York Rd--- Construct 4-way intersection to replace 2 offset intersections		✓	✓	✓	✓	✓	✓
Planned Arterial Projects									
Bellevue	R.PA-2	148 Ave SE (SE 24 St to SE 28 St) New SB lane from SE 24 St to the WB I-90 on-ramp (ETP 203)				✓	✓	✓	✓
Bothell	R.PA-3	SR 522 Multimodal Corridor Project--- Widen SR-522 mostly within existing ROW to provide transit lanes, safety improvements, consolidated driveways & left turn lanes; and sidewalks. (ETP R-107)				✓	✓	✓	✓
Bothell	R.PA-4	SR 524 (SR 527 to Bothell City Limit)--- Widen to 5 lanes + CGS, bike facilities (class III) (ETP R-11)				✓	✓	✓	✓
KCDOT	R.PA-5	SE 212 Way/SE 208 St (SR 167 to Benson Rd/SR 515)--- Widen to 6 lanes + bike facilities, Transit/HOV preferential treatment, turn channels. (ETP R-46)				✓	✓	✓	✓
KCDOT	R.PA-8	NE 124/128 St (SR 202 to Avondale Rd)--- Widen to 4/5 lanes including bike & equestrian facilities (ETP 164)				✓	✓	✓	✓
KCDOT	R.PA-10	NE 132 St Extension (132 Ave NE to Willows Rd Ext.)---- Construct new 3 lane arterial with CGS, bike lanes (ETP 61)				✓	✓	✓	✓
Kenmore/KCDOT	R.PA-11 & R.HOV-53	68 Ave NE (Simonds Rd to SR 522)--- Construct NB HOV lane total of 5/6 lanes (ETP 22)				✓	✓	✓	
Kirkland	R.PA-12	124 Ave NE (NE 85 St to Slater Rd NE)--- Widen to 3 lanes (s. of NE 116th St, 5 lanes n. of NE 116th St with ped/bike facilities (ETP R-23)				✓	✓	✓	✓
Kirkland	R.PA-13 & R.IC-26	NE 132 St (100 Ave NE to 116 Way NE)--- Widen to 3 lanes + CGS, Bike lane (ETP R-124)				✓	✓	✓	✓
Kirkland	R.PA-14	NE 100 St (117 Ave NE to Slater Ave) --- Construct bike/pedestrian/emergency Vehicle overpass across I-405 (ETP 309)		✓		✓	✓	✓	✓
Newcastle	R.PA-15	Coal Creek Pkwy (SE 72 St to Renton City Limits)--- Widen to 4/5 lanes + CGS, bike lanes, traffic signals (ETP R-24)				✓	✓	✓	✓
Redmond	R.PA-16	Redmond 148th Ave NE Corridor - 3 projects--- Turn lane and channelization improvements along corridor – BROTS;				✓	✓	✓	✓
Redmond	R.PA-17	Bear Creek Pkwy--- Construct new 162nd Ave NE arterial and new 72nd St arterial w/ bike/ped and CSG; widen Bear Creek Pkwy (ETP R-110)				✓	✓	✓	✓
Redmond	R.PA-18	Union Hill Rd (Avondale Rd to 196 Ave NE)--- Widen to 4/5 lanes with bike facilities (ETP R-27)				✓	✓	✓	✓
Renton	R.PA-19	Duvall Ave NE (NE 4 St to NE 25 Court -City Limits)--- Widen to 5 lanes + CGS, bikeway (ETP R-31)				✓	✓	✓	✓
Renton	R.PA-20	Oakesdale Ave SW (Monster Rd to SR 900) Replace Monster Rd Bridge; widen to 4/5 lanes +Bike Lanes + CGS (ETP R-35)				✓	✓	✓	✓
Renton	R.PA-21	Rainier Ave / Grady Way (intersection)-- Grade separation				✓	✓	✓	✓
Renton	R.PA-22	SW Grady Way (SR 167 to SR 515)--- Rechannelize and modify signals for a continuous eastbound lane (ETP R-37)				✓	✓	✓	✓
Renton	R.PA-23	SR 167 at East Valley Road--- New southbound off-ramp and signalization at East Valley Road (ETP 255)				✓	✓	✓	✓
Renton/ KCDOT	R.PA-24	Soos Creek Regional Links--- Placeholder for Trans-Valley Study (ETP R-115)				✓	✓	✓	✓
Woodinville	R.PA-25 & R.AC-30	SR 522 Interchange Package(SR 522/SR 202 &SR522/195th St)--- Access improvements and new freeway ramps (ETP R-53) (See R.AC-30)				✓	✓	✓	✓
Woodinville	R.PA-26	SR202 Corridor Package (SR202/148th Ave & SR202/127th Place)--- Intersection improvements (ETP R-54)				✓	✓	✓	✓
WSDOT	R.PA-27	SR 520/SR 202 Interchange --- Complete interchange by constructing a new ramp and thru lane on 202 to SR 520 (ETP R-29)				✓	✓	✓	✓
WSDOT	R.PA-28 & R.AC-17	SR 202 / 140 Place NE (NE 124 St to NE 175 St)--- Widen 4/5 lanes (ETP R-43) (See R.AC-17, 18)				✓	✓	✓	✓
17.	**EXPAND CAPACITY ON NORTH-SOUTH ARTERIALS**								
King Co	R.AC-2 & R-39	138th Ave - Petrovitsky Rd to SR 169- Add 1 lane. See R-39							
King Co, Renton	R.AC-3	138th Ave SE - Construct roadway link to 4/5 lanes- SR 169 to NE 4th St					✓	✓	✓
Redmond	R.AC-15 & R-111	Willows Rd- NE 90th St to NE 116th St- Add 1 lane each direction						✓	✓
King Co,Woodin	R.AC-16	Willows Rd- NE 124th St to NE 145th St- construct new facility -4/5 lanes					✓	✓	✓
Woodinville	R.AC-17 & R.PA-28	SR 202- NE 145th St to SR 522- widen to 5 lanes					✓	✓	✓
Red,K C,Woodin	R.AC-18 & R.PA-28	SR 202 - NE 90th to NE 145th						✓	✓
Both,S C,Mill Cr	R.AC-20	SR 527/Bothell Everett Hwy - SR 522 to SR 524 - Widen by 1 lane each direction						✓	
Both,S C,Mill Cr	R.AC-20	SR 527/Bothell Everett Hwy - SR 522 to 228th - Widen by 1 lane each direction							✓
Both,Woodin	R.AC-30 & R.PA-25	SR 202 connection across SR 522 to 120th					✓	✓	✓
Tukwila	R.AC-35	SR 181- S 180th to S 200th						✓	
Tukwila	R.AC-35	SR 181- Strander to S 200th							✓
Tukwila	R.AC-36& R.IC-3	SR 181- 144th to Strander Blvd.						✓	
Tukwila	R.AC-36& R.IC-3	SR 181- 144th to Grady Way							✓
Tukwila	R.AC-37	Southcenter Pky - Tukwila Pky to Strander Blvd						✓	✓

∗ Evaluated within another project.

✳ Project redefined for the Preferred Alternative

APPENDIX B

I-405 Corridor Program EIS Alternatives Project Matrix

					Alternatives					
		Jurisdiction		*ACTIONS*	5	1	2	3	4	
Element #					**No Action**	**HCT/TDM**	**Mixed Mode with HCT/Transit Emphasis**	**Mixed Mode**	**General Capacity**	**Preferred**
18.	**UPGRADE ARTERIAL CONNECTIONS TO I-405**									
		Tukwila	R.IC-3 & R.AC-36	SR 181 West Valley Highway/ Interurban See R.AC-36			✓	✓	✓	✓
		Renton	R.IC-4 & R.HOV-43	SR 169 Maple Valley Hwy SR 900 to NE 5th See R.HOV-43			✓	✓	✓	✓
		Kirkland, Redmond	R.IC-8	NE 85th St-Kirkland Way to 124th			✓	✓	✓	
		Kirkland, Redmond	R.IC-8	NE 85th St-Kirkland Way to 120th						✓
		Kirkland	R.IC-9	NE 116th- 114th Ave NE to 124th Ave NE			✓		✓	✓
		Kirkland	R.IC-10	NE 124th- 113th Ave NE to 124th Ave NE (spot intersection improvements)			✓	✓	✓	
		Kirkland	R.IC-10	SR 527- 228th through I-405 interchanges						✓
		Bothell	R.IC-11 & R.HOV-41	SR 527- 228th to SR 524			✓	✓	✓	✓
		Kirk,King Co	R.IC-14	New half diamond interchange to/from north at NE 132nd St				✓	✓	✓
		Bothell	R.IC-21	New SR 405 Interchange at 240th Street SE(Bothell)				✓	✓	✓
		Bothell	R.IC-24 & R-40	NE 160th Street-112th Ave to Juanita/Woodinville Wy See R-40			✓	✓	✓	
		Kirkland	R.IC-26 & R.PA-13	NE 132nd - 113th to 124th Ave NE				✓	✓	✓
19	**CORRIDOR PEDESTRIAN AND BICYCLE IMPROVEMENTS**									
	I-405 Crossings									
		Bellevue	NM. CR-1	Lk Washington Blvd/112th Ave. SE - crossing I-405 from 106th Ave. SE to 112th Place SE - Add sidewalks		✓	✓	✓	✓	✓
		Bothell	NM. CR-2	Fitzgerald Rd/27th Ave. - crossing I-405 from 228th St. SE to 240th St. SE - Add ped/bike facility		✓	✓	✓	✓	✓
		Sno. County	NM. CR-3	SR-524 (Filbert Road) - crossing I-405 from North Rd to Locust Way - Add sidewalk/paved shoulder		✓	✓	✓	✓	✓
		Sno. County	NM. CR-4	Damson Road - crossing I-405 from 192nd St SW to Logan Rd - Add sidewalk/paved shoulder		✓	✓	✓	✓	✓
		Renton	NM. CR-5	NE Park Drive - crossing I-405 from SR-900/Sunset Blvd to Lake Wash Blvd - Add sidewalk/paved shoulder		✓	✓	✓	✓	✓
		Renton	NM. CR-6	Jackson SW/Longacres Dr SW - crossing I-405 from S. Longacres Way to Monster Rd SW - Add sidewalk/paved shoulder		✓	✓	✓	✓	✓
		Bothell	NM. CR-7	Connection between Sammamish River Trail and North Creek Trail - between SR-522 and NE 195th St. - Add ped/bike overcrossing of I-405		✓	✓	✓	✓	✓
		Bothell	NM. CR-8	SR-527 - crossing I-405 from 220th St SE to 228th St SE - ped/bike facility		✓	✓	✓	✓	✓
	Pedestrian/Bicycle Connections									
		Bellevue,Kirkland	NM.P&B-2	BNSF Right of Way - SE 8th to Totem Lake - Add ped/bike facility.		✓	✓	✓		✓
		Bellevue	NM.P&B-4	Lk Washington Blvd - SR 405 to SE 60th - Add ped/bike facilities		✓	✓	✓		✓
		Bothell	NM.P&B-5	North Creek Trail Link - 240th to 232nd - Add ped/bike trail.		✓	✓	✓		✓
		Bel,Nwcas,Ren	NM.P&B-6	Lk Washington Blvd/112th - SE 60th to May Creek I/C - Add ped/bike facility		✓	✓	✓		✓
		Renton	NM.P&B-14	Cedar River Trail S. Extension - I-405 to Burnett Ave - Add ped/bike facilities		✓	✓	✓		✓
		Renton	NM.P&B-15	Cedar River Trail/Lake Washington Blvd Connector - Cedar River Trail to Lk Wash Blvd Loop - Add ped/bike facilities		✓	✓	✓		✓
		Renton	NM.P&B-16	Cedar-Duwamish Trail Connection - I-405 to Interurban Ave. S. - Add ped/bike facilities		✓	✓	✓		✓
		Renton	NM.P&B-17	I-405/SR-167 trail connection - Lind Ave. SE to Talbot Rd S. - Add trail connection		✓	✓	✓		✓
		Renton/Tukwila	NM.P&B-18	I-405/1-5 - via or around I-405/I-5 interchange - Add ped/bike facilities		✓	✓	✓	✓	✓
		Tukwila	NM.P&B-19	SR-181/W. Valley Hwy - crossing I-405 from Strander Blvd to Fort Dent Way - Add bike lanes		✓	✓	✓	✓	✓
20.	**I-405 CORRIDOR INTELLIGENT TRANSPORTATION SYSTEM ENHANCEMENTS**									
		Various	ITS-1	Add Camera Coverage to decrease TMC blind spots		✓	✓	✓	✓	✓
		Various	ITS-2	Complete Ramp Metering		✓	✓	✓	✓	✓
		Various	ITS-4	Dual Lane Ramp Metering		✓	✓	✓	✓	✓
		Various	ITS-5	Increased Incident Response		✓	✓	✓	✓	✓
		Various	ITS-6	Traffic adaptive control on arterials		✓	✓	✓	✓	✓
		Various	ITS-7	TIS before all major decision points		✓	✓	✓	✓	✓
		Various	ITS-8	WSDOT support of in-vehicle traffic information		✓	✓	✓	✓	✓
		Various	ITS-9	Arterial camera coverage		✓	✓	✓	✓	✓
21.	**I-405 CORRIDOR FREIGHT ENHANCEMENTS**									
		Renton	R.FR-10 & R.BI-1	Modify SR 167 Interchange for East to South Freight movements(modify for "multiple" movements- don't limit to "east to south")		✓	✓	✓	✓	✓
		Various	R.FR-11	Improve truck flow with ITS		✓	✓	✓	✓	✓
		Various	R.FR-23	Remote area for overnight freight parking and staging for early morning deliveries		✓	✓	✓	✓	✓
		Various	R.FR-26	Full depth shoulders for truck usage on key freeways and arterials)		✓	✓	✓	✓	✓

∗ Evaluated within another project.

✳ Project redefined for the Preferred Alternative

APPENDIX B

I-405 Corridor Program EIS Alternatives Project Matrix

					Alternatives					
		Jurisdiction		*ACTIONS*	5	1	2	3	4	
Element #					**No Action**	**HCT/TDM**	**Mixed Mode with HCT/Transit Emphasis**	**Mixed Mode**	**General Capacity**	**Preferred**
		Various	R.FR-27	Traveler Information System (TIS) on SR 167 for I-405 "options"		✓	✓	✓	✓	✓
		Various	R.FR-28	TIS on I-5 for SR 18/I-90; and 164th to I-405; and South 200th to I-405		✓	✓	✓	✓	✓
		Various	R.FR-29	Centralized fax/radio for real time congestion reporting for dispatchers and truck drivers. Leverage WSDOT video linkages (e.g., a "T-911" number).		✓	✓	✓	✓	✓
		Various	R.FR-30	Hours of operation and service periods optimized—"JIT" redefined for applicable service sectors (e.g. restaurants)		✓	✓	✓	✓	✓
		Various	R.FR-32	Light cargo delivery using Sound Transit service		✓	✓	✓	✓	✓

∗ Evaluated within another project.
✳ Project redefined for the Preferred Alternative

APPENDIX C OF FINAL PRELIMINARY SECTION 4(f) EVALUATION: FIGURES OF ALTERNATIVES

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Legend: No Action Alternative Projects

- Transit
- HOV
- Freeways
- Arterials
- Non-motorized
- Study Area Boundary
- County Boundaries
- Highways
- Roadways
- Railways

N

1 0 1 2 3 Miles

Note: All projects contained in the No Action Alternative would be implemented as part of each action alternative.

R-10
R-117
HOV-14
R-HOV63
R.AC-21
R.HOV-58
R-51
R.HOV-62
R-40
R-47
R.HOV-66
R-21
R-111 & R.AC.15
R-26
R-28
R-25
R-08
HOV-01
HOV-2
R-101
R.IC-6
R.HOV-33
R.HOV-32
R-36
R-39 & R.AC.2
R-55

Mill Creek
Lynnwood
Edmonds
Woodway
Mountlake Terrace
Brier
Bothell
Kenmore
Woodinville
Shoreline
Lake Forest Park
Simonds Rd NE
NE 128th St
Duvall
Kirkland
Redmond
Lake Washington
Union Bay
Lake Union
Yarrow Point
Hunts Point
Clyde Hill
Medina
NE 8th St
Bellevue
148th Ave SE
Seattle
Beaux Arts
Sammamish
Lake Sammamish
Mercer Island
Duwamish River
Coal Creek Pky SE
Newcastle
Issaquah
Tukwila
SE 128th St
Renton
Burien
Normandy Park
SeaTac
SE Petrovitsky Rd
68th Ave
132nd Ave SE
Kent
Des Moines
Covington
Maple Valley
Auburn
Federal Way
Redmond Fall City Rd

SNOHOMISH
KING

No Action Alternative Projects

Section 4(f) Evaluation: Figure No. C-1

Legend: Alternative 1 Projects

- Transit
- HOV
- Freeways
- Arterials
- Non-motorized
- Study Area Boundary
- County Boundaries
- Highways
- Roadways
- Railways

N

1 0 1 2 3 Miles

Note: All projects contained in the No Action Alternative (not indicated in Figure) would be implemented as part of each action alternative.

NM.CR-3
NM.CR-4
R.HOV-41
NM.CR-8
NM.P&B-5
R.BI.6
NM. CR-7
T.HCT-9
R.HOV-53
R.BI.5
T.HCT-8
R.HOV-55
R.HOV-40
R.HOV-39
R.HOV-38
R.BI.3
R.BI.2
R.HOV-47
T.HCT-7
NM.P&B-2
R.HOV-56
R.HOV-57
T.HCT-6
R.BI.10
T.HCT-5
R.HOV-37
R.BI.9
R.HOV-60
T.HCT-1
NM.CR-1
R.BI.4
T.HCT-3
R.HOV-36
T.HCT-4
NM.P&B-4
NM.P&B-6
T.HCT-2
R.HOV-51
NM.CR-5
R.HOV-49
R.BI.7
NM.P&B-16
NM.P&B-15
NM.P&B-19
NM.P&B-18
NM.P&B-14
R.HOV-43
R.BI.1
NM.P&B-17
NM.CR-6
R.BI.14
R.HOV-44
R.HOV-48

Mill Creek
Lynnwood
Edmonds
Mountlake Terrace
Woodway
Brier
Bothell
Kenmore
Woodinville
Shoreline
Lake Forest Park
Simonds Rd NE
Duvall
NE 128th St
Kirkland
Redmond
Lake Washington
Union
Yarrow Point
Hunts Point
Lake Union
Clyde Hill
Medina
NE 8th St
Bellevue
148th Ave SE
Seattle
Beaux Arts
Mercer Island
Sammamish
Duwamish River
Coal Creek Pky SE
Newcastle
Issaquah
SE 128th St
Tukwila
Renton
Burien
Normandy Park
SeaTac
SE Petrovitsky Rd
68th Ave
132nd Ave SE
Kent
Des Moines
Covington
Maple Valley
Auburn
Federal Way
Redmond Fall City Rd

SNOHOMISH
KING

Alternative 1: HCT/TDM Emphasis

Figure No. C-2

Legend: Alternative 2 Projects

- Transit
- HOV
- Freeways
- Arterials
- Non-motorized
- Study Area Boundary
- County Boundaries
- Highways
- Roadways
- Railways

N

0 1 2 3 Miles

Note: All projects contained in the No Action Alternative (not indicated in Figure) would be implemented as part of each action alternative.

RCF.10
R.CF.6
T.HCT-9
R.HOV-30
R.PA-4
NM.CR-3
R.TC-17
NM.CR-4
R.HOV-41
R.TC-16
NM.CR-8
R.BI.6
NM.CR-2
NM.P&B-5
R.HOV-29
RPA-11
R.HOV-53
RPA-25
R.CF.5
R.BI.5
RPA-3
R.IC-24
R.TC-15
T.HCT-8
R.PA-28
RPA-10
R.IC-10
RPA-13
RPA-8
R.HOV-55
R.HOV-40
R.BI.2
R.HOV-39
R.TC-14
R.IC-9
R.BI.3
RPA-12
R.HOV-47
RPA-14
R.HOV-38
RPA-18
R.PA-17
R.IC-8
T.HCT-7
NM.P&B-2
R.HOV-57
RPA-27
R.HOV-56
R.TC-13
T.HCT-6
R.BI.10
R.HOV-28
T.HCT-5
R.HOV-37
R.TC-12
R.BI.9
R.HOV-60
R.HOV-27
RPA-2
R.HOV-36
R.BI.8
T.HCT-4
R.BI.4
T.HCT-3
R.HOV-65
NM.P&B-4
NM.CR-1
NM.P&B-6
NM.P&B-15
R.TC-11
RPA-15
R.HOV-49
R.HOV-51
T.HCT-2
R.BI.7
RPA-21
RPA-22
NM.CR-5
RPA-20
RPA-19
R.TC-10
R.HOV-26
NM.P&B-19
R.TC-18
NM.P&B-14
R.CF.9
R.IC-4
NM.P&B-18
R.CF.1
R.HOV-43
R.HOV-25
R.BI.1
R.BI.14
R.FR-10
NM.P&B-17
T.HCT-1
NM.PB-16
R.IC-3
NM.CR-6
R.HOV-48
R.HOV-44
RPA-5
RCF-8
RPA-23

SNOHOMISH
KING

Shoreline
Lake Forest Park
Kenmore
Woodinville
Duvall
Bothell
Brier
Mountlake Terrace
Woodway
Edmonds
Mill Creek
Kirkland
Redmond
Lake Washington
Lake Union
Hunts Point
Yarrow Point
Clyde Hill
Medina
Bellevue
Lake Sammamish
Seattle
Beaux Arts
Mercer Island
Sammamish
Issaquah
Newcastle
Renton
Tukwila
Burien
Normandy Park
SeaTac
Des Moines
Kent
Auburn
Federal Way
Covington
Maple Valley

Simonds Rd NE
NE 128th St
Redmond Fall City Rd
148th Ave SE
Coal Creek Pky SE
SE 128th St
SE Petrovitsky Rd
68th Ave
132nd Ave SE
NE 8th St

Alternative 2: Mixed Mode With HCT/Transit Emphasis

Figure No. C-3

Legend: Alternative 3 Projects

- Transit
- HOV
- Freeways
- Arterials
- Non-motorized
- Study Area Boundary
- County Boundaries
- Highways
- Roadways
- Railways

N

1 0 1 2 3 Miles

Note: All projects contained in the No Action Alternative (not indicated in Figure) would be implemented as part of each action alternative.

R.CF.10
R.HOV-30
NM.CR-3
NM.CR-4
T.HCT-9
R.CF.6
RPA-4
R.TC-9
NM.CR-8
R.HOV-41
R.IC-11
R.IC-21
R.TC-8
NM.CR-2
NM.P&B-5
T.HCT-9
NM.CR-7
R.HOV-29
R.CF.5
R.HOV-53
RPA-25
RPA-3
RPA-28
R.IC-24
T.HCT-8
R.TC-7
R.AC-17
R.IC-10
RPA-10
R.AC-16
RPA-13
R.IC-26
RPA-8
R.IC-14
R.HOV-55
R.HOV-40
R.IC-9
R.TC-6
R.HOV-39
RPA-12
R.PA-17
RPA-14
R.HOV-38
RPA-18
HOV-61
R.HOV-47
T.HCT-7
R.IC-8
RPA-27
NM.P&B-2
R.HOV-57
R.HOV-56
R.TC-5
T.HCT-6
R.HOV-28
Clyde Hill
T.HCT-5
NE 8th St
R.HOV-37
R.TC-4
Bellevue
RPA-2
R.HOV-27
R.CF.3
R.HOV-36
T.HCT-4
R.HOV-60
R.BI.4
T.HCT-3
NM.CR-1
NM.P&B-6
NM.P&B-4
NM.P&B-15
R.TC-3
RPA-15
R.HOV-49
R.HOV-51
T.HCT-2
RPA-21
RPA-22
NM.CR-5
RPA-20
RPA-19
R.HOV-26
R.TC-2
NM.P&B-19
SE 128th St
NM.P&B-14
R.CF.9
R.TC.1
R.IC-4
R.AC-3
NM.P&B-18
R.HOV-43
R.BI.1
R.HOV-25
R.FR-10
R.CF.1
T.HCT-1
NM.P&B-17
NM.PB-16
NM.CR-6
HOV-101
R.IC-3
R.HOV-48
R.HOV-44
RPA-5
RCF-8
RPA-23

Seattle
Lynnwood
Edmonds
Woodway
Mountlake Terrace
Brier
Mill Creek
Kenmore
Shoreline
Lake Forest Park
Woodinville
SNOHOMISH
KING
Duvall
Simonds Rd NE
NE 128th St
Kirkland
Redmond
Lake Washington
Union Bay
Lake Union
Narrow Point
Hunts Point
Medina
Beaux Arts
Mercer Island
Lake Sammamish
Sammamish
Issaquah
Newcastle
Coal Creek Pky SE
148th Ave SE
Redmond-Fall City Rd
Tukwila
Renton
Burien
Normandy Park
SeaTac
Des Moines
Kent
68th Ave
132nd Ave SE
SE Petrovitsky Rd
Maple Valley
Covington
Auburn
Federal Way
Duwamish R.

Alternative 3: Mixed Mode Emphasis

Figure No. C-4

Legend: Alternative 4 Projects

- Transit
- HOV
- Freeways
- Arterials
- Non-motorized
- Study Area Boundary
- County Boundaries
- Highways
- Roadways
- Railways

N

1 0 1 2 3 Miles

Note: All projects contained in the No Action Alternative (not indicated in Figure) would be implemented as part of each action alternative.

R.CF.10
R.HOV-30
NM.CR-3
NM.CR-4
NM.CR-3
R.CF.6
RPA-4
R.TC-17 & 29
NM.CR-8
R.IC-11
R.AC-20
R.BI.6
NM.CR-2
R.TC-16 & 27
R.IC-21
NM.CR-7
R.HOV-29
R.CF.5
RPA-25
R.HOV-53
R.AC-30
RPA-3
R.BI.5
RPA-28
R.IC-24
R.TC-15 & 26
R.AC-17
R.AC-16
R.AC-18
RPA-10
R.IC-10
R.IC-14
RPA-8
RPA-13
R.PA-12
R.IC-26
R.BI.2
R.TC-14 & 25
R.IC-9
R.AC-15
R.BI.3
RPA-18
RPA-14
R.IC-8
R.TC-13 & 24
RPA-27
R.PA-17
R.CF.4
R.HOV-28
R.BI.10
R.TC-12 & 23
R.BI.9
RPA-2
R.CF.3
R.BI.8
R.BI.4
R.HOV-27
NM.CR-1
R.TC-11 & 22
RPA-15
R.BI.7
RPA-21
RPA-22
NM.CR-5
RPA-20
RPA-19
R.HOV-26
R.TC-10 & 21
R.TC-18 & 20
R.AC-3
R.AC-36
R.IC-4
R.CF-9
R.CF.1
R.BI.1 & R.FR-10
R.HOV-25
NM.P&B-18
R.BI.14
R.AC-37
NM.P&B-19
R.IC-3
NM.CR-6
R.TC-28
R.AC-35
RPA-5
RCF-8
RPA-23

Lynnwood
Edmonds
Woodway
Mountlake Terrace
Brier
Kenmore
Shoreline
Lake Forest Park
Woodinville
Duvall
Kirkland
Redmond
Medina
Bellevue
Seattle
Beaux Arts
Sammamish
Mercer Island
Newcastle
Issaquah
Tukwila
Renton
Burien
Normandy Park
SeaTac
Kent
Des Moines
Covington
Maple Valley
Auburn
Federal Way
Lake Washington
Lake Sammamish
Union Bay
Lake Union
Duwamish River
Narrow Point
Hunts Point
Clyde Hill
NE 128th St
NE 8th St
148th Ave SE
Coal Creek Pky SE
SE 128th St
SE Petrovitsky Rd
68th Ave
132nd Ave SE
Redmond Fall City Rd
Simonds Rd NE

SNOHOMISH
KING

Alternative 4: General Capacity Emphasis

Figure No. C-5

Legend: Preferred Alternative

- Bus Rapid Transit
- HOV
- Freeways
- Arterials
- Non-motorized
- Study Area Boundary
- County Boundaries
- Highways
- Roadways
- Railways

N

1 0 1 2 3 Miles

Note: All of the projects contained in the No Action Alterative (not indicated in Figure) would be implemented as part of each action alternative.

R.CF.10
R.HOV-30
NM.CR-3
R.CF.6
NM.CR-4
T-TC.18
RPA-4
R.TC-9
NM.CR-8
R.HOV-41
R-HOV-63, T-TC.22
R.IC-11
R.IC-21
NM.P&B-5
NM.CR-2
R.AC-20
R.CD-5
R.TC-8
NM.CR-7
R.HOV-62
R.HOV-29
R.CF.5
RPA-26
R.AC-30 & R.PA-25
RPA-3
T.TC-19
R.BI-5
R.PA-28
R.TC-7
R.AC-17
R.IC-10
RPA-10
R.AC-16
RPA-13
R.IC-26
RPA-8
R.IC-14
R.HOV-39
R.HOV-40
R.CD-4
R.TC-6
R.IC-9
R.AC-15
RPA-12
R.AC-18
RPA-14
R.HOV-38
RPA-18
R.HOV-61
R.PA-17
R.HOV-47
R.IC-8
RPA-27
NM.P&B-2
R.HOV-57
R.HOV-56
R.CD-3
R.TC-5
R.CF.4
R.TL-1
R.PA-16
R.HOV-28
R.CD-2
R.TC-4
R.HOV-37
R.PA-2
R.HOV-60
R.CF.3
R.HOV-27
R.HOV-36
R.HOV-65
R.BI-7 & R.CD-6 & R.CD-7
NM.P&B-4
NM.CR-1
NM.P&B-6
NM.P&B-15
T.TC-20
R.HOV-33
RPA-15
R.TC-3
R.IC-12
R.HOV-49
R.HOV-51
RPA-21
RPA-22
NM.CR-5
RPA-20
RPA-19
R.HOV-26
R.TC-2
NM.P&B-19
NM.P&B-14
R.TC.1
R.CD-1
R.CF.9
R.AC-36
R.AC-3
NM.P&B-18
R.HOV-43 & R.IC-4
R.CF-1
R.HOV-25
NM.P&B-17
R.AC-37
NM.PB-16
NM.CR-6
R.HOV-102
R.IC-3
R.HOV-48
RCF-8 (+2 -GP)
R.AC-35
RPA-5
T.TC-21
RPA-23
R.HOV-44

Woodway
Mountlake Terrace
Brier
Edmonds
Lynnwood
Mill Creek
Kenmore
Shoreline
Lake Forest Park
Woodinville
Simonds Rd NE
NE 128th St
Kirkland
Redmond
Duvall
Union
Lake Union
Yarrow Point
Hunts Point
Clyde Hill
Medina
NE 8th St
Bellevue
148th Ave SE
Lake Sammamish
Redmond Fall City Rd
Seattle
Beaux Arts
Mercer Island
Sammamish
Lake Washington
Issaquah
Newcastle
Coal Creek Pky
SE 128th St
Tukwila
Renton
SE Petrovitsky Rd
Normandy Park
SeaTac
Des Moines
Kent
68th Ave
132nd Ave SE
Covington
Maple Valley
Federal Way
Auburn
SNOHOMISH
KING

Preferred Alternative

Section 4(f) Evaluation: Figure No. C-6

APPENDIX D OF FINAL PRELIMINARY SECTION 4(f) EVALUATION: SPECIFIC PARKLANDS AND TRAILS WITHIN THE STUDY AREA

Note: The call-out boxes in the following Figures 1.1 through 1.19 refer to project numbers and descriptions contained in Appendix B.

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