

From: Paige Miller [mailto:PMiller@arboretumfoundation.org]
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To: SR 520 Bridge SDEIS (2)
Cc: Young, Jenifer (Consultant); Barbara Wright; Susan Black;
seattlebelchers@comcast.net; Kathleen Pierce; Cheryl dos Remedios
Subject: The Arboretum Foundation's Comments on the SR520 SDEIS

The Arboretum Foundation's formal comments on the SR520 SDEIS are hereby submitted in the attachment to this email. We appreciate the extension of the deadline for all public comment to April 15th which allowed us the opportunity to review this extensive document and to prepare our comments.

Paige Miller

Paige Miller
Executive Director
Arboretum Foundation
2300 Arboretum Drive East
Seattle WA 98112
pmiller@arboretumfoundation.org
206.325.4510 (p)
206.325.8893 (f)

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**The Arboretum Foundation's Comments on
SR 520, I-5 to Medina: Bridge Replacement and HOV Project
Supplemental Draft Environmental Impact Statement (SDEIS) (Issued 01/2010)
04/15/2010**

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C-037-001

Since the SDEIS was published, FHWA and WSDOT have developed a Preferred Alternative that is most similar to Option A, but includes a number of design refinements that minimize the effects presented in the SDEIS. These refinements respond to comments made on the SDEIS and to WSDOT's work with many project stakeholders under Engrossed Substitute Senate Bill (ESSB) 6392, which was passed by the Washington State Legislature in 2010. See Chapter 1 of the Final EIS for a description of the workgroup planning and coordination process, and Chapter 2 of the Final EIS for a description of the Preferred Alternative. One of WSDOT's key efforts under ESSB 6392 was to work with the Arboretum and Botanical Garden Committee (ABCG), of which the Arboretum Foundation is a member, to identify appropriate mitigation for the impacts on the I-5 to Medina project on the Arboretum. This work involved review of the Arboretum Master Plan and commitments by WSDOT to provide funding toward a number of projects in the plan. This 8-month coordination effort resulted in the Arboretum Mitigation Plan, which is included in Attachment 9 of the Final EIS.

C-037-001 | Introduction

The Washington Park Arboretum is the State of Washington's only official arboretum and is a stunning gem of the Seattle Park system, a 230-acre oasis of gently rolling land, bucolic watery islets, and home to rare plant collections, cultural and historic assets, and diverse wildlife. The Arboretum provides respite, scenery, recreation, and solace to thousands of visitors in every season of the year. It provides educational and volunteering opportunities to thousands of friends, sightseeing to thousands of visitors, and cultural enrichment in gardening styles and distant ecosystems. A major purpose of the Arboretum Foundation is to preserve and enhance the outstanding qualities of the park, including the plant collections, recreation opportunities, educational opportunities, and physical assets that are prized by residents of Seattle, the King County, Washington State, and the national and international arboretum community.

In May 2001, the Seattle City Council approved the long-range Master Plan for the Washington Park Arboretum, creating a road map for Arboretum improvements over the next 20 years. The Master Plan ensures the Washington Park Arboretum will effectively fulfill three primary purposes—conservation, recreation and education—for decades to come. Together, the University of Washington Botanic Gardens, Seattle Parks and Recreation and the Arboretum Foundation are working to implement the Master Plan and enhance visitors' experiences. Substantial public and private funds have been invested to begin implementation of the Master Plan and enhance visitors' experience to the park. The first Pacific Connection Gardens have been created, the Japanese Garden Gatehouse has been built and the Gateway to Chile Garden is being installed this year. All of these investments, and much of the Arboretum's existing assets, will be significantly and negatively impacted by the proposed State Route 520 (SR 520) expansion project. The Arboretum Foundation is focusing its efforts on advocating for an "environmentally preferable (SR 520) alternative" that protects the Arboretum from harm.

The Arboretum Foundation understands that WSDOT must prepare a Final EIS and respond to the public and agency comments received on the draft (and supplemental draft). The Arboretum Foundation believes that there are significant environmental impacts and multiple environmental concerns that were not adequately evaluated in the DEIS or SDEIS and that would require a new SEPA/NEPA review process if they are not addressed in the Final EIS. Furthermore, since the EIS is intended to disclose the effects of a project at a stage when decision-making can still be shaped by the environmental analysis and by the comments of agency, tribal, and public reviewers, the **Arboretum Foundation would like to state clearly that Options K, L and A (and Option A+) significantly and adversely impact the Arboretum. In this document, we will elaborate on the reasons these are not reasonable options for the SR 520 expansion.**

Proposed upgrades to SR 520 across the north end of the Arboretum threaten significant adverse impacts to the whole Park for many, many years. The Arboretum Foundation's Board of Directors has approved the following five guiding principles.

1. Avoid harm to the Arboretum and its collections.
2. Preserve and restore Arboretum as an accessible place of quiet and respite.
3. Respect the historical, aesthetic, and design integrity of the Park.
4. Design improvements to promote health, safety, recreation and education in the Arboretum.
5. Fully compensate the Arboretum for loss of property and function if harm is unavoidable.

These five principles reflect the purposes and interests of the Arboretum Foundation. They also echo similar statements made by the Foundation's partners—the University of Washington, Seattle Department of Parks and Recreation—and the Arboretum and Botanical Garden Committee (ABGC), the governing board of the Washington Park Arboretum.

C-037-001	<p>The Arboretum Foundation’s Key Issues</p> <p>The Washington Park Arboretum is a regional treasure and resource for our citizens and needs to be valued and protected. The new SR 520 Bridge will have significant adverse impacts on the Arboretum—every effort needs to be made to reduce those impacts and to enhance the Arboretum.</p>
C-037-002	<p>The impacts on the Arboretum can be minimized in three key ways:</p> <ol style="list-style-type: none"> 1. Reduce the traffic on Lake Washington Blvd to 4,000 cars per day; the amount of traffic the Olmsted Brothers designed it for.
C-037-003	<ol style="list-style-type: none"> 2. Minimize the width of the bridge across Foster Island and the wetlands to reduce the impacts and the amount of land taken.
C-037-004	<ol style="list-style-type: none"> 3. Provide for good bicycle and pedestrian connections in the Arboretum across the new roadway and to the community.
C-037-005	<p>To achieve these goals we:</p> <ol style="list-style-type: none"> 1) Request that WSDOT eliminate from all options the SR 520 ramps connecting directly to Lake Washington Blvd. Lake Washington Blvd. is a park road and its use as a long on and off ramp to the highway puts a continuous stream of traffic through the park that severely damages pedestrian safety and the quiet enjoyment of much of the Arboretum, especially places adjacent to the road like the Japanese Garden. As described more fully below, the Arboretum Foundation believes that the Lake Washington Blvd. ramps are inconsistent with the park purpose of the boulevard and that such use is inconsistent with section 4(f).
C-037-006	<ol style="list-style-type: none"> 2) Request that WSDOT thoroughly analyze a 4-lane bridge with tolls and enhanced transit. Federal law (section 4(f)) requires that highway projects avoid taking park land if there is a feasible and prudent alternative and requires that the State perform a thorough study of alternatives to find one that avoids or minimizes the taking of park land. While the SDEIS carefully documents the many acres of Seattle parks that will be taken, it has not analyzed the feasibility of alternatives designed to minimize the taking of park land all along the corridor, including the Arboretum wetlands and Foster Island. For that reason the SDEIS is inadequate. The section 4(f) analysis in the Final EIS must evaluate a 4 lane, tolled bridge alternative as well as options that both include and do not include the direct SR 520 ramp connections to Lake Washington Boulevard.
C-037-007	<ol style="list-style-type: none"> 3) Request that WSDOT minimize the noise and visual blight in the Arboretum and improve bike/pedestrian connectivity. Current highway traffic across Foster Island and onto Lake Washington Blvd. has severe noise impacts on the Arboretum. All options, including Option A+, will impose even more noise, but the SDEIS makes clear that the State plans for no noise mitigation in the Arboretum. Further, WSDOT has not presented any information to help determine what the differing noise impacts would be of a higher vs. a lower bridge across Foster Island, nor have they modeled the differing visual impacts of the current options and how these work with the alternative bike/pedestrian connections. The Final EIS must evaluate these noise impacts and additional mitigation measures, including the changes resulting from different bridge heights.
C-037-008	<ol style="list-style-type: none"> 4) Request that WSDOT perform an accurate traffic study and model the traffic around the Arboretum to identify the measures that could be taken to manage traffic flow if the Lake Washington Blvd. ramps were removed. The narrow area of the traffic analysis contained in the SDEIS is inadequate. The traffic analysis in the Final EIS must at a minimum include Madison St. up through the intersection with 23rd Ave. E. and the

C-037-002

WSDOT has found no way to accurately estimate the capacity for which the Olmsted Brothers originally designed Lake Washington Boulevard and cannot determine whether the comment characterizes the design capacity correctly. However, the Preferred Alternative would reduce effects on the Arboretum, compared to No Build Alternative, by physically removing the existing Lake Washington Boulevard eastbound on-ramp and westbound off-ramp and the R.H. Thomson Expressway ramps. Access to Lake Washington Boulevard by westbound SR 520 traffic would be moved to a new intersection located on the Montlake Boulevard lid at 24th Avenue East. See Chapter 2 of the Final EIS for additional information. The result of this and other features of the Preferred Alternative is a reduction in trip volumes on Lake Washington Boulevard in the Arboretum compared to the No Build Alternative. Under the Preferred Alternative in 2030, a.m. peak hour volumes on Lake Washington Boulevard through the Arboretum would be 1,330 vehicles per hour, compared to 1,950 vehicles per hour with the No Build Alternative. P.m. peak hour volumes would be 1,410 vehicles per hour compared to 1,730 with the No Build Alternative. See the Final Transportation Discipline Report (Attachment 7 to the Final EIS) for further discussion of trip volumes. As part of the Arboretum Mitigation Plan, WSDOT has also committed to fund traffic calming measures along Lake Washington Boulevard and to work with the Seattle Department of Transportation on further measures to manage traffic in the Arboretum.

C-037-003

The Preferred Alternative has been designed to minimize SR 520's footprint across Foster Island to the maximum extent possible while accommodating potential future light rail through the corridor. Footprint in the Arboretum has been further refined, with right-of-way acquisition reduced from the SDEIS design options. In addition, a constant-slope profile improves the clearance of the crossing above the Arboretum

C-037-008	23 rd /24 th /Montlake corridor. Studies of how to accommodate and prioritize Metro bus service on this corridor to improve service reliability must be conducted. These studies could include bus lanes and/or queue jump traffic light signalization. As noted elsewhere, the traffic analysis must also include traffic flows on Lake Washington Blvd., with and without the proposed SR 520 on ramps (See Appendix 2 for more details).
C-037-009	5) Request that WSDOT make the new roadway light-rail ready when it is built, so that the Arboretum does not incur further damage from construction to widen the bridge at a later date. The City of Seattle's consultant (Nelson/Nygaard) has concluded that Option A+ is not designed to accommodate light rail. It is too narrow and its pontoons have neither the load-bearing capacity nor stability to carry light rail. That means that future light rail could only be built by adding more width to the roadway. The roadway needs to be built to accommodate light rail within 6-lanes so that we can avoid adding more lane width in the future and tearing up the Arboretum yet again during a future construction project in 10-20 years.
C-037-010	6) Request that the SDEIS' defined Area of Potential Effect (APE) be expanded to consider the Arboretum. The Area of Potential Effects is the area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties. The APE definition in the SDEIS is inadequate, because it fails to include the Arboretum, the Lake Washington Blvd. ramps, and other important properties. The APE in the Final EIS must be expanded to include these areas, and the related environmental analysis must be updated to reflect the impacts on the resources located within this larger area.
C-037-011	7) Request that the full impact of the current options on fish and wildlife habitats in Arboretum Creek, which will be adversely impacted by the excessive traffic use of Lake Washington Boulevard, be properly evaluated. These impacts should be addressed in the Final EIS.
C-037-012	8) Request that WSDOT focus on avoidance of damage to the environment rather than mitigation. However, if mitigation for damage is necessary, funding to the Washington Park Arboretum's Master Plan is a mitigation measure that the Arboretum Foundation would endorse.
	Our Arboretum is 75 years old. It is an irreplaceable treasure. Please continue to be vigilant in your efforts to preserve and protect it.

Waterfront Trail from its existing 8 feet to between 14 and 20 feet. The higher clearance also improves conditions for wetland vegetation east and west of the island. These aquatic bed wetlands would experience a slightly greater overall area of shading than under Option A—as a result of the gap between northbound and southbound lanes to accommodate future light rail—but would benefit from greater light penetration beneath the higher structures. See the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS) for further discussion of effects on wetlands

C-037-004

The Preferred Alternative would improve bicycle and pedestrian connections in the Arboretum, across SR 520, and to the community by providing a bicycle/pedestrian lane across the floating bridge that is accessible from the Arboretum and by improving connections between the Arboretum and other regional trails such as the Burke-Gilman Trail. The revised profile of the bridge allows room for easier passage under the bridge for pedestrians, bicycles, and watercraft. In addition, the Preferred Alternative includes a considerably larger Montlake lid than any of the SDEIS options. Running from Montlake Boulevard to the Lake Washington shoreline, the lid would provide better pedestrian amenities in the central part of the Montlake neighborhood, enhanced transit facilities, and better connections to the Arboretum, including a pedestrian crossing beneath the lid that would link the Arboretum to East Montlake Park. Bicycle and pedestrian connections are described in Chapter 2 of the Final EIS; their effects are described in Chapter 7 of the Final Transportation Discipline Report (Attachment 7 to the Final EIS) and in the Recreation Discipline Report Addendum (Attachment 7 to the Final EIS). As part of the Arboretum Mitigation Plan implementation, WSDOT will continue working with the Arboretum to optimize pedestrian and bicycle connections in the park, including funding contributions to a multi-use trail along Lake Washington Boulevard and implementation of recommendations from the Arboretum's Interpretive and Wayfinding

C-037-013

Comment organization

Comments in this document have been arranged to reflect discipline areas contained within the SDEIS presented to us. These areas will be presented and reviewed in the following order: Topic, Findings, and Discussion.

Transportation Act

I

Topic:

The SDEIS does not adequately identify and analyze feasible and prudent alternatives to minimize harm to Washington Park Arboretum, as required by Section 4(f) of the 1966 Transportation Act.

Finding:

There are feasible and prudent alternatives that were not evaluated in the SDEIS including:

- Option A with adequate traffic analysis to mitigate impacts.
- A 4-lane option with a **tolled** roadway and enhanced transit option.
- A 6-lane roadway option with high capacity transit (**HCT**) in place.

All of these alternatives should be evaluated in the Final EIS, including the required 4(f) analysis.

Discussion:

The SDEIS document does not analyze impacts of the bridge expansion on Lake Washington Boulevard (LWB); an historic, cultural, education and recreation resource. Section 4(f) of the Transportation Act of 1966 and federal regulations prohibit the Federal Highway Administration (FHWA) and state DOTs from approving a project or program that uses land from a significant public park, recreation area, wildlife or waterfowl refuge, or historic site without a determination that:

1. There is no feasible and prudent avoidance alternative to the use of the land; and
2. The project includes all possible planning to minimize harm to the property resulting from such use. (23 CFR 774)

The SDEIS fails to identify LWB as a historic and recreational resource, and thus fails to analyze whether there are feasible and prudent alternatives to the direct connection of LWB to SR 520. This direct ramp connection significantly increases car traffic on the boulevard, which causes adverse impacts on the park and is inconsistent with the requirements of Section 4(f). LWB is an Olmsted-designed park road and its use as a long on and off ramp to the highway currently puts a continuous stream of traffic through the park that severely damages pedestrian safety and the quiet enjoyment of much of the Arboretum. This stream of traffic will increase significantly if any of the current design options are implemented (See Appendix 10 for details).

The SDEIS DOES NOT evaluate a 4-lane alternative with tolls, a 6-lane option that is built to accommodate high capacity transit, or a correctly evaluated alternative without ramps, all of which would have less impact on the Washington Park Arboretum. New ramps will bring far more traffic to the boulevard than it was originally designed to carry, thus creating very direct and specific impacts to the cultural and historic resources.

There will be a significant decrease in traffic demand with a 4-lane **tolled** roadway and enhanced transit will absorb traffic, but the SDEIS has failed to analyze the feasibility and prudence of such options. In order to comply with 4(f) regulations this type of roadway should be evaluated

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Plan. Traffic calming measures committed to as part of the Arboretum Mitigation Plan will also improve the park environment for pedestrians and bicyclists. The plan is included in Attachment 9 to the Final EIS.

C-037-005

Please see the response to Comment C-037-002 above.

C-037-006

The 4-Lane Alternative was not considered as a Section 4(f) avoidance alternative because it does not avoid all Section 4(f) uses; further, it does not meet the project purpose and need. As described in Section 1.8 of the SDEIS and in Attachment 8 of the SDEIS, Range of Alternatives and Options Evaluated, the transportation analysis performed for the Draft EIS showed that while a 4-lane alternative would improve safety by replacing vulnerable structures and widening lanes and shoulders, it would not satisfy the project purpose of improving mobility in the SR 520 corridor. In 2010, based on SDEIS comments regarding a transit-optimized 4-lane alternative or a 4-lane alternative with tolling for congestion management, WSDOT evaluated these potential alternatives using an updated traffic model. The results showed that these alternatives would provide substantially lower mobility benefits than the 6-Lane Alternative for both general-purpose traffic and transit, and therefore would also not meet the project purpose and need. Section 2.4 of the Final EIS provides more information on the analysis of these alternatives.

C-037-007

The results of the noise analysis conducted for Options A, K, and L in the Arboretum were presented on pages 98 through 100 and in Exhibits 31 and 41 of the Noise Discipline Report. These results are summarized in SDEIS Table 5.7-1. The number of receivers in the Arboretum approaching or exceeding the FHWA noise abatement criteria would

C-037-014 | in the 4(f) analysis in the Final EIS. Furthermore, Option A without connecting ramps to Lake Washington Boulevard, as presented in the SDEIS, was not adequately evaluated under 4(f). The traffic analysis did not include looking at traffic improvements on the 23rd/24th/Madison corridor, at the Madison and 23rd intersection, along Madison to Lake Washington Boulevard and further south of Madison.

With the creation of new LWB ramps as proposed in all but one of the SDEIS options, Section 4(f) is again an issue. The construction of the new ramps attached to LWB will in effect become elongated ramps within the park and be a direct violation of Section 4(f), because WSDOT's own alternatives show that there are feasible and prudent alternatives that do not require this direct ramp connection to SR 520. WSDOT must accurately identify that the new ramps will be in direct conflict with 4(f) regulation and that there is a prudent alternative (See Appendix 5 for more details).

If the LWB ramps are included in the final project, traffic calming measures that would discourage or divert traffic on LWB should be evaluated as part of the Final EIS mitigation and might include elements such as improved turn traffic signal on 23rd and Madison and enhancement of 23rd as a major city arterial (See Appendices 2 and 5 for more details).

C-037-015 | The SDEIS also states that "No permanent loss in total park area would result from the proposed 6-Lane Alternative.... (because) adverse effects on recreational lands would be mitigated as consistent with applicable requirements." The Arboretum is unique *because* of its size, collections and continuity, not simply because it is a park. The Arboretum Foundation does not want the focus of the SDEIS placed on mitigation of land lost, but rather on *avoidance* of taking land unnecessarily (See Appendices 8 and 13 for more details).

II. C-037-016 | **Topic:**
The SDEIS fails to analyze WSDOT property in the SR 520 corridor that is currently used as a park, in accordance with section 4(f) of the Department of Transportation Act; and Section 106 of the National Historic Preservation Act (NHPA) because it is a landfill and a potential archeological site.

Finding:

The SDEIS does not identify and evaluate a WSDOT-owned parcel as a Section 4(f) resource. This land is currently used and managed as park land and will continue to do so in the future, and therefore this land should be considered "taken" from park use under the Section 4(f) of the Transportation Act of 1966.

Discussion:

Adjacent to LWB is a WSDOT-owned parcel that forms a peninsula extending into Union Bay and is enclosed by the LWB ramps. This area is commonly known as the WSDOT Peninsula (also known as the "Miller Street Landfill"), and although the public perceives this land to be part of the Arboretum, it is actually part of the existing WSDOT right-of-way for SR 520. The City of Seattle and WSDOT have a formal agreement that divides maintenance responsibilities for the peninsula between Seattle and the State. The agreement holds that, while the State allows Seattle to use and maintain portions of the property for park purposes, the property remains within WSDOT ownership and must be relinquished within 90 days if WSDOT needs it for transportation purposes. The City wishes to enhance this area further in conjunction with the implementation of the Washington Park Arboretum master plan. The Arboretum

have been reduced under Option A (and Option A with suboptions) compared to both existing conditions and the No Build Alternative. As described on page 5-105 of the SDEIS, noise walls were not proposed as mitigation in the Arboretum because they did not meet WSDOT's reasonableness and/or feasibility criteria. Even where noise walls are warranted and meet the criteria, comments on the SDEIS indicated that their use was controversial for aesthetic reasons. Design features included in the Preferred Alternative that help reduce noise levels include noise reduction measures throughout the corridor, such as modifications to the profile, 4-foot traffic barriers with noise-absorptive coating, and encapsulating expansion joints. Updated noise modeling for the Preferred Alternative indicates that these measures would reduce noise levels along the corridor to the point that noise walls are not recommended in the Seattle portion of the project area, except potentially along I-5 in the North Capitol Hill area where the reasonableness and feasibility of a noise wall is still be evaluated.

In the Arboretum area specifically, the higher profile of the Preferred Alternative provides further noise reduction. As a result, noise levels in the Arboretum in the areas closest to SR 520 would be reduced by several decibels compared to the No Build Alternative. This noise reduction approach would also avoid the aesthetic impacts of noise walls in this natural area. Information on noise modeling results for the Preferred Alternative can be found in the Noise Discipline Report Addendum and in Section 5.7 of the Final EIS. Regarding visual effects of SR 520 in the Arboretum, WSDOT has shared visualizations of the Preferred Alternative with the ABGC and has committed, as part of the Arboretum Mitigation Plan, to work with the ABGC on aesthetic enhancements at the Foster Island crossing. Because Foster Island is a traditional cultural property important to Native American tribes, these enhancements would be coordinated with tribal representatives to ensure compatibility with the island's ongoing cultural significance. See

C-037-016 Foundation argues that since this piece of land has been used as a park, and actively maintained that way for the past 45 years, it should be deemed a 4(f) resource and be evaluated as such in the Final EIS. Regardless of the SR 520 option chosen, or how the land is deeded, the peninsula area must continue to be used as park land and properly protected per section 4(f) and Section 106.

The federal appellate court decision of Stewart Park and Reserve Coalition Inc. v. Slater, 352 F.3d 545 (2nd Cir. 2003) holds that land acquired for transportation purposes can become a 4(f) resource by permissive interim use, where the land is managed as parkland for more than 30 years. Here, the WSDOT Peninsula/Miller Street Landfill has been managed as part of the Arboretum by the City of Seattle and others for more than 45 years. As a result, this land should be included as a 4(f) resource and be analyzed as such in the Final EIS.

The Arboretum Foundation would also like to stress that WSDOT consider that adverse effects, as defined by Section 106, may include reasonably foreseeable effects caused by an undertaking that may occur later in time or be farther removed in distance or be cumulative, such as traffic increases on LWB, and would like this evaluation to be completed in the Final EIS. The Arboretum Foundation would like to be included in negotiations regarding any mitigation of impacts on the WSDOT Peninsula/Miller Street Landfill.

C-037-017 **Historic and Cultural Resources Act**

III. Topic: The SDEIS fails to include the entire Arboretum within the defined Area of Potential Effect (APE) as required by the Historic Preservation Act.

Findings:

*WSDOT fails to consider the interplay of the **Geographic Area, Scale and Nature of the Undertaking, and Effects throughout the entire Arboretum as required by Section 106 of the National Historic Preservation Act (NHPA).** This must be corrected in the Final EIS if the document is to be adequate.*

Discussion:

Section 36 CFR 800.16(d), of the National Historic Preservation Act states that the Area of Potential Effects is the area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties. The Arboretum, as discussed below, includes numerous historic areas. Moreover, it is one property with continuous use by educators, visitors, recreationists, historians, programs and maintenance plans. A portion of the park cannot sustain impacts that the whole does not sustain. For example, noise impacts from the proposed action will impact areas of the Arboretum far south of the area currently defined as the APE. Pollution impacts, habitat degradation, and traffic impacts will be felt throughout the park. These impacts are not considered in the SDEIS due to WSDOT's limited defined area of the APE (See Appendices 4 and 7 for more details). This must be corrected in the Final EIS, the APE must be drawn more broadly, and the impacts in this larger area must be evaluated and mitigated.

IV. Topic: Section 106 applications for the whole of the Arboretum are not accurately reviewed in the SDEIS.

Findings:

7

also the Visual Quality and Aesthetics Discipline Report Addendum (Attachment 7 to the Final EIS).

C-037-008

Please see the response to Comment C-037-002. The Preferred Alternative would include removal of the Lake Washington Boulevard ramps, and the resulting effects on traffic volumes are discussed in Chapter 6 of the Final Transportation Discipline Report (Attachment 7 to the Final EIS) and in Section 5.1 of the Final EIS.

Traffic volumes on Lake Washington Boulevard are expected to decrease compared to the No Build Alternative. Under the Preferred Alternative in 2030, a.m. peak hour volumes on Lake Washington Boulevard through the Arboretum would be 1,330 vehicles per hour, compared to 1,950 vehicles per hour with the No Build Alternative. P.m. peak hour volumes would be 1,410 vehicles per hour compared to 1,730 with the No Build Alternative. As part of the Arboretum Mitigation Plan, WSDOT has also committed to fund traffic calming measures along Lake Washington Boulevard and to work with the Seattle Department of Transportation on further measures to manage traffic in the Arboretum.

The Preferred Alternative would facilitate transit reliability in the 23rd/24th/Montlake corridor by providing high-occupancy vehicle (HOV) lanes on Montlake Boulevard between SR 520 and the Montlake Triangle. WSDOT included this feature in the Preferred Alternative as a result of discussions with King County Metro, Sound Transit, and the Seattle Department of Transportation following the SDEIS. WSDOT also reevaluated the study area for effects on local transportation in preparing the analysis for the Final EIS. This reevaluation considered potential effects along the 23rd/24th/Montlake corridor as far south as the 23rd Avenue/East Madison Street intersection. However, based on standard methodology, the local study area reported in the Final EIS was determined by the change in traffic volumes on the local streets with the

C-037-017

Proposed actions threaten historic and cultural resources within the Arboretum that are eligible for listing on the National Register of Historic Places (NCRP), and the SDEIS does not identify these sites or evaluate the potential impacts to them. This inadequacy must be corrected in the FEIS.

Discussion:

The whole Arboretum and specific areas of the Arboretum are eligible for the NHRP (National Historic Rules and Procedures) and are APE sites due to potential archeological resources. The Washington Park Arboretum is unique; it is Washington State's only recognized arboretum, designed by the nationally significant named Landscape Architect, the Olmsted Brothers, and is a part of their body of work. Virtually all structures and features in the Arboretum are eligible for national historic register standing. Arboretum collections are of international significance. The Japanese Garden, threatened with impacts from LWB now qualifies as a Traditional Cultural Landscape (TCL). Foster Island also qualifies as a TCL because of Native American use over many centuries. Loss of land within the Arboretum cannot be mitigated by adding parkland elsewhere.

Section 106 of the National Historic Preservation Act requires review of project effects on archaeological sites, historic buildings, culturally important landscapes and sites, and cultural places of tribal groups. When viewed as a cultural resource, potential adverse effects on the Arboretum include changes in the character of the parks use and the introduction of visual or audible elements that diminish the integrity of the Arboretum's significant historic features. These adverse effects must be identified for the whole of the Arboretum in the Final EIS.

The *whole* Arboretum is a cultural resource and eligible for the National Register of Historic Places (NRHP) under:

- Criterion A (for its association with events that have made a significant contribution to the broad patterns of our history, including the Alaska-Yukon-Pacific Exposition, the development of the University of Washington, the work of the WPA, and the development of the parks system in Seattle);
- Criterion C (as the work of a master for its design by the noted Olmsted Brothers, as well as the many talented designers and architects who contributed to its multiple designed features); and
- Criterion D because of its potential to contribute information important to history including the archaeological site Foster Island, which has already been designated eligible for the NRHP.

Properties with traditional religious and cultural importance to a distinct cultural group, such as a Native American tribe, are eligible for the National Register. The Arboretum contains known ceremonial sites, traditional homes of a particular cultural group (Duwamish longhouse near Arboretum Creek), sites, buildings, structures and objects that are significant in American history, architecture, archaeology. A list of such resources includes LWB, the Gatehouse/Stone Cottage, the Holmdahl Rockery, the stone bridges and Arboretum Creek pond, the Japanese Garden, Wilcox bridge, the Barn, Arboretum Drive, Azalea Way, the former horserace course, the Woodland Garden, Rhododendron Glen, the Lookout/Gazebo and the Pinetum.

Potential adverse effects on these cultural and historic sites include changes in the character of the parks use and the introduction of visual or audible elements that diminish the integrity of the Arboretum's significant historic features. These adverse effects must be identified for the whole of the Arboretum in the FEIS. However, WSDOT postponed significance testing until additional

No Build Alternative versus the Preferred Alternative during peak hours; only intersections where traffic volumes would increase by more than 5 percent were included. Five percent was selected as the criterion because a change in traffic of that amount could result in measurable operational changes. If traffic volume increases were less than 5 percent on adjacent streets, the intersection was not included in the analysis. Thus, all intersections not included in the local study area would experience an overall change in traffic volumes during the a.m. and p.m. peak hours of less than 5 percent with implementation of the project.

While the Final EIS reports local transportation effects for the same study area as the SDEIS, work groups formed under ESSB 6392 looked at the expanded study area described in the comment to evaluate potential transit improvements and traffic calming. As described above, WSDOT has committed to fund traffic calming measures along Lake Washington Boulevard and to work with the Seattle Department of Transportation on further measures to manage traffic in the Arboretum.

C-037-009

Through coordination with Sound Transit, WSDOT has designed the Preferred Alternative to have enhanced compatibility with potential future light rail compared to the SDEIS design options. Light rail could be accommodated either by converting the HOV lanes for rail use or by constructing the rail alignment between the eastbound and westbound west approach bridges. Since rail transit in the SR 520 corridor is not programmed in current regional transit plans, any future project to add rail in the corridor would need to undergo an extensive planning and environmental review process by the responsible transit agency prior to implementation.

C-037-010

The Area of Potential Effects (APE) shown in the SDEIS did include the

C-037-017 | information on potential effects due to construction and development were determined. As part of the Section 106 process, WSDOT must consult with the Department of Archaeology and Historic Preservation (DAHP) to assure that significant cultural resources are identified, and to obtain DAHP's formal opinion on the property's significance and the impact of the agency's proposed action upon the property. **It should be noted that Section 106 requires that effects on significant cultural resources be considered during the public environmental review process. This was not done.**

C-037-018 | **National Environmental Policy Act**
V. Topic: **The SDEIS fails to analyze the effects of the project on the entire Arboretum, including Lake Washington Boulevard, as required by the National Environmental Policy Act (NEPA).**
Finding:
The SDEIS improperly confines its impact analysis to the roadway right of way due to improper and inadequate APE area designation. This must be corrected in the Final EIS if it is to be considered adequate.
Discussion:
The WSDOT must evaluate:
1. Adverse effects that cannot be mitigated
2. Irreversible decisions made, or irretrievable resources used for building
3. Tradeoffs between the short-term use of environmental resources and long-term benefits from the project
(See Appendix 13 for more details)

C-037-019 | **VI. Topic: Wetlands classifications and full impact identification are not adequately evaluated in the SDEIS.**
Findings:
The SDEIS misclassifies the wetlands at the north end of the Arboretum, and does not fully evaluate impacts nor assess mitigations. This must be corrected in the Final EIS.
Discussion:
The current proposal involves a 6-lane highway that will be considerably wider and higher than the existing corridor across the wetlands and islands of the Arboretum. The conversions of the Arboretum properties and trail adjacent to the existing SR 520 will include filling of wetlands and the removal of mature trees. Vegetation along the corridor will be removed in 30- to 60-foot-wide swaths to accommodate the work bridges. Subsequent construction of the permanent new west approach bridges would further compound these effects.

The SDEIS states that the wetlands within the Arboretum are Category II and III but the Arboretum Foundation believes that the wetlands within the Arboretum area also include Category I wetlands, not just II and III as reported in the SDEIS. Wetlands within the Arboretum include Category I wetland because they represent a unique or rare wetland type, contain ecological attributes that are impossible to replace within a human lifetime and provide a high level of functions. These are considered the highest quality wetlands on the lake and have long been a protected urban resource for education, wildlife viewing and recreational enjoyment (See Appendices 3 and 14 for more details).

entire Arboretum, and it received concurrence from the Washington State Department of Archaeology and Historic Preservation (DAHP). However, since the SDEIS was published, the APE has been updated to include all potential Section 6(f) mitigation sites and all potential haul routes, as well as the potential additional pontoon construction sites identified in the Final EIS. In addition, WSDOT evaluated the approximately 2-mile segment of Lake Washington Boulevard from NE Pacific Street to East Madison Street as an individually eligible historic property, which received concurrence from DAHP (see the response to Comment C-037-013 below). Additional analysis of the possible effects on cultural resources was conducted for the Preferred Alternative. Please see the Final Cultural Resources Assessment and Discipline Report in Attachment 7 to the Final EIS for an updated map of the APE and for a description of effects in the expanded APE under the Preferred Alternative.

C-037-011

Arboretum Creek was included in the project study area for evaluation of ecosystems and water resources effects (see the Ecosystems and Water Resources discipline reports and addenda). As described in those reports, fish use in Arboretum Creek is limited by the existing low quality habitat and by blocked fish passage under Lake Washington Boulevard. Since the creek is outside the limits of construction, the project is not expected to have a direct ecosystems or water resources effect on it. In addition, the Preferred Alternative would (as discussed in earlier responses) reduce traffic on Lake Washington Boulevard compared to the No Build Alternative. Thus, the statement in the comment that "fish and wildlife habitats in Arboretum Creek...will be adversely impacted by the excessive traffic use of Lake Washington Boulevard" is inaccurate.

At the request of the ABGC, WSDOT studied Arboretum Creek as a potential mitigation site for wetlands and aquatic resources. The Arboretum Mitigation Plan includes wetland enhancements to the creek

C-037-020	<p>VII. Topic: Air Pollution in the Arboretum was not properly evaluated in the SDEIS, nor did the SDEIS provide evidence that the proposed option will meet conformity requirements.</p> <p>Findings: <i>WSDOT has not verified that the planned transportation projects will not cause or contribute to a violation of the federal standards for CO. WSDOT has also failed to analyze all of the air quality impacts resulting from the project, including traffic on local streets and intersections. This must be addressed in the Final EIS.</i></p> <p>Discussion: Because SR 520 will be a major transportation project located in a maintenance area for CO, it is subject to transportation conformity requirements. Conformity means that transportation activities will not produce new air quality violations, or worsen existing violations.</p> <p>While the SDEIS is very specific about air quality requirements in the traffic corridor, there is no mention of the collections in the Arboretum and how they will be impacted by the degrading air quality, not only from the expanded SR 520 roadway but also from idling cars on LWB that are queuing up for on or off ramps to SR 520. The Final EIS must properly evaluate the impact of degrading air quality on the Arboretum collections and historical structures from cars on SR 520 and increased traffic on LWB using best available science. This applies to intersections and CO levels as well.</p> <p>Acidic air pollutants are well-known to degrade historic structures throughout the world. There is no discussion of this effect of the proposed expansion or its construction period on the Arboretum historic structures (See Appendices 6 and 12 for more details).</p>
C-037-021	<p>VIII. Topic: Noise levels were not properly monitored in the Arboretum or along Lake Washington Boulevard as required by federal noise abatement criteria.</p> <p>Findings: <i>Proper noise readings were not taken on Foster Island and WSDOT did not consider noise from LWB along its length or within the Arboretum. In the FEIS, WSDOT must properly evaluate noise readings throughout an enlarged APE that includes the entire Arboretum, provide projection data regarding noise levels with varying bridge heights, and must calculate noise impacts on the Arboretum without the use of noise walls.</i></p> <p>Discussion: The Federal Highway Administration (FHWA) has established very specific noise abatement criteria (NAC) for new highway projects. It is likely that these criteria will be exceeded and visitors' experiences negatively impacted in many areas within the Arboretum as a result of increased levels of noise associated with the SR 520 Bridge expansion. Currently the highest sound levels measured along the SR 520 corridor were: near Montlake Boulevard, along LWB, and at the SR 520 access ramps. Noise readings were not made along the full length of LWB in the Arboretum.</p> <p>Potential mitigations for excess noise include noise walls. However, noise walls have been excluded from the proposed options because they did not meet "reasonableness" criteria.</p>

and Azalea Way Pond, which would provide benefit both for ecosystems and for the park's interpretive and educational mission. However, resource agencies participating in the Natural Resources Technical Work Group for the project generally agreed that improvements to Arboretum Creek would have limited benefits to fish habitat and use and would not fulfill mitigation requirements for the SR 520, I-5 to Medina project. Please see the Conceptual Wetland Mitigation Plan and the Conceptual Aquatic Mitigation Plan in Attachment 9 to the Final EIS for more information regarding mitigation.

C-037-012

Many regulations, including NEPA, SEPA, and Section 4(f), require agencies to avoid or minimize impacts before seeking to mitigate for them. FHWA and WSDOT developed conceptual project designs and conducted environmental analysis for a facility that would satisfy the intended purpose and need, could be constructed and operated in a legally compliant manner, and would minimize potential effects to the environment. The Preferred Alternative has benefited from extensive input from agencies and the public during NEPA/SEPA evaluation, and as a result has further minimized effects on the Arboretum compared to designs studied previously. Please see also the responses to comments C-037-001, C-037-002, and C-037-007 WSDOT will continue to work with the ABGC on implementation of the Arboretum Mitigation Plan, which identifies funding of a number of projects in the Arboretum's Master Plan as mitigation for project effects.

C-037-013

As discussed in the response to Comment C-037-006, the 4-Lane Alternative was not evaluated as a Section 4(f) avoidance alternative because it does not meet the project purpose and need. Further, it does not avoid all Section 4(f) uses; only the No Build Alternative would avoid all Section 4(f) uses. A 6-lane alternative with immediate implementation of high-capacity transit—either bus rapid transit, which is recommended

C-037-021	<p>WSDOT acknowledged that noise walls would significantly reduce the impact of noise but that they would forgo them due to excessive cost. Thus, WSDOT must calculate noise impact on the Arboretum without the noise walls.</p> <p>The Arboretum Foundation also urges WSDOT to evaluate Quiet Pavement as a mitigation option and for possible inclusion in any design option. WSDOT must also monitor and ensure compliance with local noise regulations for construction and equipment operation (See Appendix 7 for more details).</p>
C-037-022	<p>IX. Topic: Alternative visual impacts from bridge design heights have not been modeled and no artist program has been considered for improving the aesthetic impact of the bridge.</p> <p>Findings: <i>Visuals or modeling of alternative bridge heights have not been available from WSDOT for public consideration. No analysis has been completed for discussion as required by the National Environmental Policy Act. The effects of the current bridge options are negative; however, no enhancement program has been proposed to improve aesthetic impacts.</i></p> <p>Discussion: In Option A+ the highway main line provides 15 -18 feet of clearance above the crossing of the Arboretum Waterfront Trail on Foster Island, approximately 10 feet higher than the present structure. The highway would become a more dominant and noticeable feature, causing a negative visual impact in this area of the Arboretum and would negatively affect the visual environment for trail and park users. The Final EIS must recognize the negative effects of a more prominent roadway and bridge structure on Foster Island, while also recognizing that the permanent removal of the LWB ramps and R.H. Thomson Expressway ramps would remove visual clutter and improve views to and from the park over the long term. (See Appendices 1, 8 and 10 for more information.)</p> <p>Landscape architects, landscape historians, and artists should be included early and throughout the design process. A public art program should be established to ensure the visual and cultural integrity of the entire 520 bridge replacement project, and to help ensure context-sensitive design. The funding level should be consistent with the 0.5% for the Arts Programs in the State, and it should be managed by a local arts agency with significant transportation experience, such as 4Culture, City of Seattle's Office of Arts & Cultural Affairs or Sound Transit STArt. The managing arts agency should be designated and the hiring of design team artist(s) should proceed with urgency. Context sensitive design can also help to mitigate project impacts.</p>
C-037-023	<p>X. Topic: The SDEIS does not include appropriate data and consideration of the adverse impacts of shading on fish and wildlife.</p> <p>Findings: <i>The SDEIS does not evaluate the impacts on fish and wildlife of a narrower 4-lane tolled bridge, which is generally preferred for the preservation of existing fish habitat. Nor does it adequately evaluate the wider 6-lane options, which vary in height above the water. As a result, the public is unable to properly evaluate the options and their impacts on fish and wildlife. These impacts must be evaluated in the FEIS.</i></p>

in the SR 520 HCT Plan, or light rail transit—would have the same alignment and configuration as the Preferred Alternative described in this Final EIS, and therefore would not avoid or reduce the use of Section 4(f) properties. Section 2.4 of the Final EIS discusses alternatives that were proposed during the SDEIS comment process and how WSDOT evaluated them. As required by Section 4(f), all possible planning was conducted to minimize harm to the Section 4(f) properties resulting from use by the project. The agencies with jurisdiction over 4(f) resources, including the Seattle Parks and Recreation Department and the University of Washington, participated in this planning process. The Preferred Alternative evaluated in the Final EIS would result in the least harm to Section 4(f) properties, and the least overall harm, compared to the other alternatives considered in the Section 4(f) evaluation.

Regarding consideration of Lake Washington Boulevard as a historic and recreational resource, WSDOT evaluated the approximately 2-mile segment of the boulevard from NE Pacific Street to East Madison Street as a historic property that is eligible for the National Register of Historic Places (NRHP). The Final Section 4(f) Evaluation in Chapter 9 of the Final EIS discusses this resource. As noted in responses to previous comments, the Preferred Alternative would reduce traffic on Lake Washington Boulevard compared to the No Build Alternative. Please see the response to comment C-037-008 for a discussion of the study area for traffic analysis. Lake Washington Boulevard is a transportation facility undergoing transportation improvements as a part of this project. The integrity of the historic property would not be diminished as a result of those improvements and the official with jurisdiction has not objected to this finding. Therefore, Lake Washington Boulevard is excepted from Section 4(f) in accordance with 774.13(a).

C-037-014

Please see the response to Comment C-037-013. Although it is not required for Section 4(f) impacts, WSDOT has committed to funding

C-037-023 | **Discussion:**
Shading of the aquatic region leads to degradation of the resource. Shading by the bridge over shallow, near-shore habitats, in the Arboretum, will have greater potential effects than shading in the deeper, open lake environment. The near shore generally provides areas of greater habitat complexity to support a diverse biological community. Therefore, increased shading in these areas would have a greater potential to affect a variety of species, and alter fish behavior or habitat use. While the SDEIS states that studies are still inconclusive, the Arboretum Foundation would like clarification about the impacts of shading on vegetation and near-shore habitats before any option is chosen. The Arboretum Foundation believes that a roadway that is narrower and lower would have less negative impact than a higher, wider bridge.

C-037-024 | **XI. Topic: The SDIES does not include sufficient information regarding blockage and conversion of the Waterfront Trail, both during and after the bridge expansion.**

Findings:
The extent of the conversion is unknown, pending environmental review and the selection of the preferred alternative. No review opportunity is available. The SDEIS is inadequate to decision-making. This must be addressed in the Final EIS.

Discussion:
Portions of the Arboretum Waterfront Trail will be closed continuously during construction for 30 to 54 months, limiting access to Foster Island and blocking a regional trail linkage. Other portions of the Arboretum Waterfront Trail will be converted because of the expansion of the SR 520 right-of-way through the Arboretum.

This project will create a conversion at two previously funded projects for the Waterfront Trail (#66-037D and #85-9036D): the Land and Water Conservation Fund (LWCF) to the City of Seattle and the University of Washington and the Aquatic Lands Enhancement Account (ALEA) by the Washington Department of Natural Resources (DNR) which was awarded to the City for reconstruction of the boardwalk trail and installation of interpretive signs. The LWCF grant set of criteria must be met per the federal requirements. The ALEA grant was awarded for recreational facilities associated with a navigable waterway. This situation creates two conversions on the same property, and therefore WSDOT must find replacement property that will satisfy both grant programs' requirements. Replacement property must be located on a navigable waterway and meet the recreational needs for both the City of Seattle and University of Washington (See Appendix 11 for details).

C-037-025 | **XII. Topic: The SDEIS does not adequately evaluate adverse impacts to the fish and wildlife habitats in Arboretum Creek that result from excessive traffic use of Lake Washington Boulevard and project construction.**

Findings:
Restoration of habitat – a City of Seattle goal – is hampered by the SDEIS' lack of analysis of traffic growth on Lake Washington Boulevard or of impacts during construction. This analysis should be included in the FEIS. Moreover, LWB should be returned to its design capacity of 4,000 cars per day and the habitat allowed to regenerate. This can only be accomplished by the removal of the LWB ramps.

traffic calming measures on Lake Washington Boulevard in the Arboretum, as well as to further study of measures to manage traffic in the Arboretum area.

C-037-015
See the response to Comment C-037-012.

C-037-016
The area known as the “WSDOT peninsula” (which includes the Miller Street Landfill) is not subject to Section 4(f) as a recreational property. It was purchased for transportation purposes and still contains operating transportation facilities. The agreement between WSDOT and the City of Seattle regarding this WSDOT right-of-way holds that, while the state allows Seattle to use and maintain portions of the property for park purposes, the property remains under WSDOT ownership and must be relinquished within 90 days if WSDOT needs it for transportation purposes (see page 30 of the Cultural Resources Discipline Report). Both FHWA and the U.S. Department of Interior have concurred that the peninsula property is therefore not subject to Section 4(f) as a recreation property. However, since the SDEIS was published, FHWA and WSDOT have determined that, based on the peninsula’s former status as part of the Arboretum, the peninsula is subject to Section 4(f) as a historic property. Rather than being adversely affected, the peninsula would be benefited by removal of the existing Lake Washington Boulevard ramps and the R.H. Thomson Expressway ramps.

WSDOT has determined, and the Washington State Department of Archaeology and Historic Preservation has concurred, that the Miller Street Landfill is not eligible for the NRHP. Therefore, the landfill is not a Section 4(f) resource. This determination is documented in the Final Cultural Resources Assessment and Discipline Report (Attachment 7 to the Final EIS). Because the landfill is not considered a historic property, no additional Section 106 consultation is required on the Miller

C-037-025

Discussion

Arboretum Creek parallels LWB from the Japanese Garden Pond on the south to the lake where its estuary helps to form the wetlands there. Endangered species including sockeye salmon and trout can be found in Arboretum Creek but not upstream of its lower reaches due to man-made barriers and excessive pollution and sedimentation. The fish habitats encompassing Marsh Island and Foster Island are naturally vegetated and areas that provide cover for juvenile salmon passing through the lake on their way to Puget Sound. The Montlake Cut is the only entrance and exit for anadromous fish migrating to and from Lake Washington (see Appendix 14 for more information).

Moreover, vegetation clearing associated with construction work bridges will involve removing several large trees in and near the Arboretum. These trees provide habitat for eagles, raptors, songbirds and waterfowl. Beaver dams will also be impacted by this project.

Due to the limited APE designation in the SDEIS, negative impacts of traffic growth on LWB and SR 520 construction on these fragile fish and wildlife ecosystems were not assessed. In the Final EIS, the APE must be expanded and adequate evaluations performed.

C-037-026

High Occupancy Transit Options and Traffic Modeling

XIII. Topic: The SDEIS does not evaluate the feasibility of including High Capacity Transit (HCT) or light rail within the proposed design.

The Arboretum Foundation, at this writing, supports initiatives for High Capacity Transit to be included in the proposed action and for the Final EIS to review a new, more environmentally friendly alternative to better address traffic needs in the future.

Findings:

Although there is significant public and legislative support for including HCT on SR 520 at some future date within the life span of the proposed new bridge, WSDOT did not evaluate the feasibility of adding HCT to the current design options. Nor did WSDOT evaluate impacts to the Arboretum or other areas within the APE if the new bridge must be enlarged in order to accommodate HCT. This must be addressed in the Final EIS.

Discussion:

Washington State Senate Committee on Transportation passed legislation (ESSB 6099) in the 2007 Regular Session which requires that the bridge be convertible to High Capacity Transit and this has not been analyzed properly as required. The Arboretum Foundation supports a High Capacity Traffic option for two significant reasons:

1. Transit is likely to reduce the traffic/transportation counts along Lake Washington Boulevard, thus assisting in achieving the return to the design traffic load of 4000 cars per day for Lake Washington Boulevard; and
2. Widening and retrofitting the new bridge for HCT in 10 to 20 years or more will result in untenable and avoidable harm to the collections, wetlands, and the programs of the Arboretum. We must think in far longer terms than a 20, even 50 year horizon because a tree's life is 100 years. If transit is "added at a later time" all the impacts of the current project will be repeated.

Street Landfill.

When NEPA analysis of a project shows no direct or indirect effects for a particular discipline, the project would not contribute to cumulative effects for that discipline. More specifically, because WSDOT has not identified direct or indirect increases in traffic volumes on Lake Washington Boulevard from the Preferred Alternative, it can be concluded that the project would not contribute to cumulative effects on Lake Washington Boulevard traffic volumes. Any changes in traffic volume on Lake Washington Boulevard beyond the reductions shown to result from the project would be a result of regional changes in population and/or employment and would occur with or without the project.

C-037-017

The Area of Potential Effects (APE) in the SDEIS included the entire Arboretum. Please see the response to Comment C-037-010 and the updated APE in the Final Cultural Assessment and Resources Discipline Report (Attachment 7 to the Final EIS).

WSDOT has determined, and the Washington State Department of Archaeology and Historic Preservation has concurred, that the Washington Park Arboretum is a historic property eligible for listing in the National Register of Historic Places. The revised historic boundary was used in determining effects under Section 106 in the Final Cultural Resources Assessment and Discipline Report (Attachment 7 to the Final EIS). The report found an effect on the Foster Island Traditional Cultural Property (TCP) would diminish the integrity of the TCP. Other potential effects on the Arboretum were found not to alter the integrity of historic properties, with the finding conditional upon measures to avoid or minimize those effects. WSDOT, through the Section 106 process, has coordinated with the Section 106 consulting parties to identify ways to mitigate the effects that would diminish the integrity of the Foster Island

C-037-026	<p>The Final EIS must properly identify and evaluate the impact of HCT lanes and/or light rail on the width of the bridge, and the potential for these additions to the roadway to protect the environment and species within the Arboretum due to decreased SOV usage.</p> <p>The Arboretum Foundation understands that WSDOT must prepare a new SDEIS when there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact. While we have been told by WSDOT that Option A+ may not require another SDEIS to be prepared because the modifications are considered by them to be 'minor'; WSDOT states that the Transit Option has too many alterations in the roadway to be considered within the existing SDEIS and that a new SDEIS would be required to pursue this option. Clearly, WSDOT does not want to take the time or the money to create a new SDEIS to review a more environmentally friendly option. There is another option that would work with the environment and will suit the transportation needs, it simply does not exist in the current SDEIS and therefore, a new SDEIS must be created that evaluates more environmentally acceptable alternatives, or they must be evaluated in the Final EIS.</p>
C-037-027	<p>XIV. Topic: The WSDOT traffic modeling, that all of the options are based upon, is not accurate.</p> <p>Findings: <i>The traffic analysis' performed in the SDEIS are based on old modeling methods and data which makes the WSDOT traffic projections irrelevant.</i></p> <p>Discussion: WSDOT cannot base their traffic projections on obsolete traffic modeling. The SDEIS is insufficient without proper traffic modeling and without the review of added capacity in the form of HOT and/or light rail. This must be addressed in the Final EIS.</p> <p>The Arboretum Foundations representatives have spoken to numerous professionals in the traffic modeling field about the traffic modeling performed for WSDOT in the SDEIS. The clear conclusion of these professionals has been that the modeling is not accurate, that input data used was out of date, that the program used does not take into consideration many of the variables that make this traffic corridor unique and finally, the modeling did not extend south of the corridor to include LWB, Madison at 23rd or beyond.</p> <p>This flawed traffic modeling makes any sound decisions about options impossible. Until the environmental analysis is able to reveal accurate traffic modeling throughout the full APE and beyond, a final option cannot be chosen.</p>

TCP and to avoid, minimize, or mitigate the adverse effect of the project on other historic properties. This consultation process resulted in a Programmatic Agreement that describes the results of that consultation, and measures to resolve the adverse effect of the project on historic properties. The Programmatic Agreement is included in Attachment 9 to the Final EIS.

C-037-018

Please see the response to Comment C-037-017 regarding the APE boundaries and the assessment of effects under Section 106. Chapters 5 and 6 of the Final EIS describe other potential effects of the Preferred Alternative and how they can be mitigated. Over the long term, the Preferred Alternative, in comparison to the No Build Alternative, would improve regional air quality and water quality, reduce noise in the Arboretum, lower traffic on Lake Washington Boulevard. As noted in responses to previous comments, WSDOT has worked closely with the ABGC to identify mitigation measures for adverse effects, including right-of-way acquisition and the increased size and bulk of the new highway facilities. Therefore, while Chapter 8 of the Final EIS provides updated discussions under the headings "What irreversible decisions or irretrievable resources would be committed to building the project?" and "What are the tradeoffs between the short-term uses of environmental resources and long-term gains (or productivity) from the project?" these discussions focus on long-term regional issues such as energy use and mobility.

C-037-019

WSDOT reevaluated the wetland ratings after the SDEIS was published and modified some of the function scores; however, the wetland categories did not change. Some of the Category III wetlands rated almost high enough to be classified as Category II. For this reason, WSDOT will develop mitigation for effects on these wetlands as Category II wetlands, although WSDOT still considers them to be

Mitigation

For mitigation of impacts that cannot be avoided, the Arboretum Foundation, as well as the owners and managers of the Washington Park Arboretum, look to the 2001 City Council and UW Regents approved Master Plan for guidance. We have included a brief summary of our current concerns and requests regarding mitigation.

- Our first priority is completion of the Washington Park Arboretum's Master Plan projects, including replacing 4000 square feet of office area lost due to state acquisition of the MOHAI property.
- Design enhancements can dovetail with mitigations for impacts, such as daylighting Arboretum Creek, and making habitat enhancements as part of the highway's water quality projects is highly encouraged.
- Owner and public participation is needed to address the many cumulative effects of wetland conversion and loss. Mitigation should therefore include increased participation of non-governmental organizations, such as the Arboretum Foundation, and other stakeholders in restoration efforts. The Arboretum Foundation further requests to be included in working with WSDOT, the City of Seattle, the University of Washington, the National Park Service, and the Recreation and Conservation Office to identify appropriate replacement land for park property permanently acquired.
- There must also be consultation among WSDOT, FHWA, the SHPO, the Arboretum Foundation, ABGC, the City of Seattle, the UW and interested Tribes to determine appropriate mitigation for any potential adverse effect on Foster Island, a presumed TCP, and on LWB, from the SR 520 ramps all the way to Madison Street.
- Mitigation must be made for the long term impacts of the toxic pollution created by cars on SR 520 and LWB to the valuable plant collections and historic structures.
- We seek to daylight, restore and enhance Arboretum Creek and its tributaries and develop infrastructure to enhance summer low stream flows for fish.
- Potential adverse effects to a potential archaeological site on Foster Island must be avoided by using Ground Penetrating Radar to identify subsurface cultural features. The area is known to have been an above-ground burial site for natives prior to colonization by Europeans. A longhouse possibly occupied the banks of Arboretum Creek. Where and when this longhouse existed must be properly evaluated and recorded.
- Public use and access of the Arboretum must be maintained during construction.
- A public art program should be established for mitigation of visual impacts from the entire project. This should be funded on a par with other .5% for the Arts Programs in the State, even though WSDOT has no such legislation supporting this type of visual mitigation.
- The direct effect of converting nearly 3 acres of Arboretum parkland adjacent to the SR 520 corridor to transportation right-of-way must be fully mitigated.
- Because quieter pavement has not been demonstrated to meet all FHWA and WSDOT avoidance and minimization requirements in tests performed in Washington State, it cannot be considered as noise mitigation under WSDOT and FHWA criteria. The decision to build sound walls depends on neighborhood interest, the findings of the Noise Discipline Report (WSDOT 2009c), and WSDOT's reasonability and feasibility determinations. These two options must be further evaluated and consultation must occur with the Arboretum Foundation, ABGC and the City of Seattle over their use.

Category III wetlands. Resource agencies participating in the project's Natural Resource Technical Working Group reviewed the revised ratings and concurred with the findings.

WSDOT has submitted a Final Wetland Assessment Technical Memorandum to the U.S. Army Corps of Engineers, the Washington State Department of Ecology, and the City of Seattle for verification of wetland delineation boundaries and ratings. The Corps has agreed with the wetland delineation with minor revisions. These revisions are included in the Final EIS and the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS). The effects of the Preferred Alternative on wetlands are discussed in Sections 5.11 and 6.11 of the Final EIS and in the Ecosystems Discipline Report Addendum in Attachment 7 to the Final EIS.

C-037-020

WSDOT performed air quality modeling of carbon monoxide (CO) for conformity analysis for both the SDEIS and the Final EIS, as required under the State Implementation Plan (SIP). The results of the conformity analysis for the SDEIS were described on page 5-112 under the heading "Local Air Quality." A more detailed discussion with reference to conformity standards is found on pages 17 through 22 and 23 through 25 of the Air Quality Discipline Report. The Air Quality Discipline Report Addendum and the Final EIS updated these analyses. The modeling demonstrated that the project will be in conformity with the SIP. As documented in the SDEIS and Final EIS and in the Air Quality Discipline Report and Addendum, criteria pollutant emissions would decrease from existing conditions by 2030. Modeling completed for the Preferred Alternative shows that vehicle miles traveled (VMT) in the project area would decrease compared to No Build, resulting in a slight decrease in both criteria pollutants and mobile source air toxics. In addition, average daily traffic on Lake Washington Boulevard would decrease compared to the No Build Alternative, resulting in reduced vehicle emissions in the

C-037-028

- The planter strips located along LWB are considered recreation facilities; they must be preserved.
- Install landscaping or landscaped buffers to compensate in those areas where buffer zones are being removed or reduced, and where new or relocated traffic lanes would intrude on the character of a historic district or the settings of individual historic properties. This will include consideration of LWB through the length of the Arboretum.
- Complete enhancement and restoration of the riverine wetland is required. These mitigation activities are compatible with the Arboretum's Master Plan.
- Restoration of approximately 1.09 acres of riparian wetlands near the headwaters of Arboretum Creek is also a priority.
- Mitigation needs to maintain the water storage volume of the existing storm water facility and expand seep areas on the hill slope.
- Identification of 0.88 acre of enhancement activities is a potential mitigation measure for land losses on Foster Island.
- Shoreline restoration opportunities were identified in the Initial Aquatic Mitigation Report and must be fully mitigated.
- After the ROD has been recorded, the Arboretum Foundation requests that WSDOT work with us to develop the engineering design for the project, including additional detail on project phasing, construction staging, construction techniques and the development of more specific designs for mitigation measures, documented in project permit applications.

Arboretum. Therefore, air quality in the Arboretum under the Preferred Alternative is expected to be similar to, or slightly improved over, No Build conditions.

C-037-021

Please see the response to Comment C-037-007. Noise analysis for the SDEIS and Final EIS has been consistent with current FHWA methodology, which is the accepted standard for modeling and mitigation of highway traffic noise. The study area and the noise monitoring locations were selected based on field reconnaissance to identify noise-sensitive land uses and local topography that would affect the transmission of noise. Noise measurements were taken north and south of SR 520 on Foster Island and at two locations on Lake Washington Boulevard to confirm existing noise levels in the project vicinity. Consistent with accepted methodology, field data from monitoring locations was used to calibrate the noise model and ensure the accuracy of existing modeled noise levels.

WSDOT policy requires that all properties within 500 feet of the proposed right-of-way be examined for noise effects. For this project, WSDOT went much further than required and included many residences and other land uses that were outside the required 500-foot limit. All major arterial roadways were included in the analysis, including Lake Washington Boulevard. However, measurements were not taken along the full length of Lake Washington Boulevard in the Arboretum because project-related changes in traffic volume were not high enough south of the modeled locations to produce any changes in noise levels. See Exhibits 29 and 31 in the Noise Discipline Report for monitoring and modeling locations in the Lake Washington Boulevard and Arboretum areas. The Noise Discipline Report provided further description of the measurement, calibration, and modeling process. Pages 21 through 23 describe the noise study process. Pages 37 through 38 describe the process for determining sound monitoring locations.

C-037-029

Summary of Specific Planning Requests

The Arboretum Foundation has prepared a summary of a number of our specific comments and planning requests. This summary includes comments and requests previously made in other sections of this document and its appendices.

C-037-030

C-037-031

C-037-032

C-037-033

C-037-034

C-037-035

C-037-036

- The former Miller Street Landfill, Foster Island, the areas along Arboretum Creek that may have had a longhouse present and the whole of the Arboretum per Section 106 of the National Historic Preservation Act (NHPA) must be evaluated for significant cultural resources before an option is approved and certainly before all licensing, permitting, and funding decisions are completed.
- The Arboretum Foundation requests that Section 106 consultations begin with regards to the whole of the Arboretum, including the WSDOT Peninsula. The Area of Potential Effect (APE) must be expanded to include the Arboretum and the adjacent Lake Washington Boulevard.
- WSDOT must consult with the Department of Archaeology and Historic Preservation to assure that significant cultural resources are identified throughout the Arboretum, and to obtain DAHP's formal opinion on the impact of the proposed option upon the Arboretum. WSDOT has not evaluated the whole of the Arboretum, its Archeological and Historical significance and how increased traffic on SR 520 AND LWB will impact these areas. This must be completed as part of the Final EIS.
- Staging areas appear to be very destructive to trees, habitat and wildlife. Clear delineation of the areas to be used and a visual depiction of what they would look like are requested for the Final EIS.
- The Arboretum Foundation formally requests that all of these studies be completed and included in the Final EIS and be made publicly available before a ROD is issued.
- The SDEIS fails to evaluate a 4-lane tolled option, the addition of ramps, and the 4(f) implications and does not specify that LWB is a historic and recreation resource that would be harmed by the increase in car traffic on the boulevard. WSDOT must evaluate a 4 lane tolled option and the optional LWB ramps as part of the 4(f) analysis in the Final EIS, and it should identify that the new ramps will be in direct conflict with 4(f) regulations because there is a prudent and feasible alternative.
- The whole Arboretum must be included in the Area of Potential Effect (APE).
- As a cultural resource, adverse effects on the Arboretum include changes in the character of the parks use and the introduction of visual or audible elements that diminish the integrity of the Arboretum. These adverse effects must be identified for the whole of the Arboretum in the Final EIS, and mitigation should focus on avoidance first and THEN on proper mitigation to address project impacts.
- The Final EIS must not include the option for creating interim connections to the existing LWB ramps from Montlake. The addition of these ramps is unacceptable and will cause significant adverse impacts on the Arboretum.
- The Final EIS must include full disclosure of the impact on the Arboretum of the LWB ramp option, specifically what mature trees will be removed along the east side of LWB.
- Foster Island should be considered eligible for the NRHP as an archaeological site, and further archeological investigation must be included in the Final EIS before a final SR 520 option is chosen and construction begins.

C-037-022

The visual quality analysis was conducted using accepted methodology based on FHWA guidance (see pages 16 through 20 of the Visual Quality and Aesthetics Discipline Report). Simulations of all the bridge profiles studied for the west approach area were presented from several viewpoints in Attachment 2 to that discipline report, and Exhibit 5.5-7 in the SDEIS showed views of the bridge profile from the Arboretum Waterfront Trail. With the Preferred Alternative, while the new SR 520 roadway would be wider and higher than the existing structure, the analysis found that operation of the project would not result in a change in the character, vividness, intactness, or unity of views in the Arboretum and its vicinity. Visualizations in the Arboretum for the Preferred Alternative, showing a view from the trail, are included in the Visual Quality and Aesthetics Discipline Report Addendum (Attachment 7 to the Final EIS) to analyze the Preferred Alternative. The Addendum also includes two new viewpoints approximately 100 feet from the bridge, showing the bridge profile of the Preferred Alternative over Foster Island. WSDOT has shared visualizations of the Preferred Alternative with the ABGC and has committed, as part of the Arboretum Mitigation Plan, to fund and work with the ABGC on aesthetic enhancements at the Foster Island crossing. Because Foster Island is a traditional cultural property important to Native American tribes, these enhancements would be coordinated with tribal representatives to ensure compatibility with the island's ongoing cultural significance.

C-037-023

Fish and wildlife effects of the 4-Lane Alternative were evaluated in the Draft EIS. See the response to Comment C-037-006 regarding analysis of a 4-lane tolled alternative and why a 4-Lane Alternative is not being studied further for the SR 520, I-5 to Medina project. Different bridge heights in the Arboretum area, and the resulting shading effects, were analyzed as part of Options A and L in the SDEIS. WSDOT worked extensively with resource agencies as part of the Natural Resources

C-037-037	<ul style="list-style-type: none"> Regardless of the SR 520 option chosen, the WSDOT peninsula area must continue to be used as park land and properly protected per Section 106. Additional fieldwork is necessary to substantiate the WSDOT peninsula's historic significance. Section 106 of the National Historic Preservation Act (NHPA) requires that all federal agencies consider significant cultural resources as part of all licensing, permitting, and funding decisions. WSDOT must consult with the Department of Archaeology and Historic Preservation (DAHP) to assure that significant cultural resources are identified, and to obtain DAHP's formal opinion on the property's significance and the impact of the agency's proposed action upon the property. <i>It should be noted that Section 106 requires that effects on significant cultural resources be considered during the public environmental review process.</i> The Arboretum Foundation objects to the fact that this area has not been properly evaluated prior to the public review process. The fieldwork necessary to substantiate its historic significance has not been completed. This work must be completed as part of the Final EIS and before an option can be chosen. WSDOT must consider that adverse effects, as defined by Section 106, may include reasonably foreseeable effects that may occur later in time or be farther removed in distance or be cumulative, such as traffic increases on LWB, and would like this evaluation to be completed in the Final EIS. The Arboretum Foundation would like to be included in negotiations regarding any mitigation relating to the former Miller Street Landfill.
C-037-038	
C-037-039	<ul style="list-style-type: none"> The SDEIS states that the wetlands within the Arboretum are Category II and III but the Arboretum Foundation believes that the wetlands within the Arboretum area also include Category I wetlands, not just II and III as reported in the SDEIS. These wetlands must be reevaluated for the Final EIS.
C-037-040	<ul style="list-style-type: none"> The Final EIS must recognize that because of their proximity to Seattle, the Arboretum, and the UW, the wetlands provide social values through opportunities for both educational and recreational use.
C-037-041	<ul style="list-style-type: none"> WSDOT must make every effort to complete the project over Foster Island in one phase in order to reduce the cumulative impact of construction on wetlands.
C-037-042	<ul style="list-style-type: none"> The Arboretum must be properly mitigated for wetland loss, not only direct but indirect affects due to prolonged shading.
C-037-043	<ul style="list-style-type: none"> Minimize pile driving near the Broadmoor eagle pair nest site during the early part of the bald eagle nesting season when the birds are most sensitive to disturbance (Jan. 1 to Aug. 15, but most susceptible to noise from Feb 1 - May 1). Avoid or minimize effects on the beaver lodge near Foster Island during construction. Limit construction clearing to minimal area needed.
C-037-044	<ul style="list-style-type: none"> Return portions of any recreation facilities used during construction to preconstruction conditions.
C-037-045	<ul style="list-style-type: none"> Minimize removal of specimen trees in the Arboretum. If this is not possible, replant or replace trees nearby. Move trees and other vegetation from the Arboretum and save or replant to mitigate effects to vegetation that is removed to accommodate the new structures and detour bridge.

Technical Working Group to better understand and document the effects of shading on both wetlands and aquatic organisms, as well as appropriate mitigation for these effects. The findings of the working group are reflected in the Final EIS analysis of the Preferred Alternative. The selection of a constant-slope profile for the Preferred Alternative was made in large part to minimize the potential effects of shading on fish. Please see also the Ecosystems Discipline Report Addendum in Attachment 7 to the Final EIS.

C-037-024

As described in the Draft Section 4(f)/Section 6(f) Evaluation in the SDEIS, WSDOT has been working with the National Park Service, the Washington State Recreation and Conservation Office, and the LWCF grantees (the Seattle Parks and Recreation Department and the University of Washington) to evaluate the impacts to properties protected by Section 6(f) of the Land and Water Conservation Fund Act (LWCFA). Of necessity, the precise effects of the Preferred Alternative could not be evaluated until the alternative had been defined.

The Preferred Alternative would result in intermittent closures of the Arboretum Waterfront Trail at the SR 520 crossing on Foster Island, but these closures would be for fewer than 180 days. Access to Foster Island via the trail would be available from one or both directions at all times. However, permanent acquisition of portions of the Arboretum and East Montlake Park, as well as construction in East Montlake Park and along the Ship Canal Waterside Trail, would constitute a conversion of Section 6(f) property that would require replacement. The Section 6(f) Evaluation in Chapter 10 of the Final EIS documents the areas converted from park use to right-of-way and the replacement property agreed upon by the grantees. As noted in the comment, this property is located on a navigable waterway and meets the needs of both the City of Seattle and the University of Washington.

C-037-046	<ul style="list-style-type: none"> Construction activities along LWB would require clearing, grading, and paving activities where the new ramps would transition to the local roadway. This must all be repaired and returned to existing or better condition.
C-037-047	<ul style="list-style-type: none"> The SDEIS must properly evaluate the impact of degrading air quality on the Arboretum collections and historical structures from cars on SR 520 and increased traffic on LWB. Specific standards for park areas must be used as baseline measures and the full length of LWB must be evaluated in the Final EIS.
C-037-048	<ul style="list-style-type: none"> WSDOT must verify that the planned transportation projects will not cause or contribute to a violation of the federal standards for CO. WSDOT must also analyze the most congested intersections in the Arboretum and demonstrate that CO levels will be below CO standards after the project is in operation. The full noise impacts on the Arboretum must be measured along the length of LWB and into the park itself. The Final EIS must make explicitly clear that the Arboretum park experience will be significantly impacted by greater levels of noise associated with SR 520 Bridge. Additional suggestions must be made and mitigation measures included in the Final EIS to address the areas with the highest sound levels (SR 520 near Montlake Boulevard, along LWB, and at the SR 520 access ramps) other than noise walls which have been excluded because they did not meet reasonableness criteria. Quiet Pavement should continue to be evaluated as a mitigation option and possibly included into any design option. WSDOT must calculate noise impact on the Arboretum without the noise walls. WSDOT acknowledged that noise wall would significantly reduce the impact of noise but that they would forgo them due to excessive cost. WSDOT must also monitor and ensure compliance with local noise regulations for construction and equipment operation.
C-037-049	<ul style="list-style-type: none"> The Arboretum Foundation would like clarification about the impacts of shading on vegetation and near-shore habitats.
C-037-050	<ul style="list-style-type: none"> The Final EIS must recognize the negative effects of a more prominent roadway and bridge structure on Foster Island.
C-037-051	<ul style="list-style-type: none"> The Arboretum Foundation requests to be included in a dialogue regarding an appropriate way to guarantee Seattle's ability to maintain the park waterfront trails in perpetuity and protect the state's previous investment.
C-037-052	<ul style="list-style-type: none"> WSDOT must establish required detour routes in advance of the initiation of construction in order to protect LWB from excessive detour traffic. SDOT and WSDOT must formulate and implement a construction traffic management plan to minimize traffic effects on historic properties, especially LWB. Improvements in the Montlake interchange (to Louisa Street) will occur before the closure of the LWB ramps. The selected contractor must prepare a traffic management plan to be approved by the City of Seattle that would identify measures and practices to minimize construction effects.
C-037-053 C-037-054	<ul style="list-style-type: none"> The Final EIS must identify a long-term plan regarding fish in this area of the project. The Final EIS must not include the option for creating interim connections to the existing LWB ramps from Montlake. The addition of these ramps is unacceptable. If the LWB ramps are included in the final project, impacts on LWB traffic patterns must be thoroughly analyzed and traffic calming measures that would discourage or divert

C-037-025

Please see the response to Comment C-037-011 regarding Arboretum Creek. Page 4-44 of the Ecosystems Discipline Report describes effects on beavers, and page 4-65 describes how these effects could be avoided or minimized. The Ecosystems Discipline Report provides an extensive discussion of effects on bald eagles, a federally protected species under the Bald and Golden Eagle Protection Act, and describes effects on other birds mentioned in the comment.

Please see the response to Comment C-037-002 regarding expected traffic volume on Lake Washington Boulevard and removal of the Lake Washington Boulevard ramps.

C-037-026

Please see the response to Comment C-037-013 regarding why high-capacity transit (HCT) in the SR 520 corridor is not evaluated for the SR 520, I-5 to Medina project. The 6-Lane Alternative design options evaluated in the SDEIS were designed to accommodate light rail in the future, should a decision be made by regional planning and transit agencies to use SR 520 as a second high-capacity transit route across Lake Washington. With the Preferred Alternative, the design has been modified to enhance the compatibility with potential future light rail (please see the response to Comment C-037-009).

Please see the response to Comment C-037-002 regarding traffic volumes on Lake Washington Boulevard.

C-037-027

The transportation analysis for the SR 520, I-5 to Medina SDEIS was conducted using the Puget Sound Regional Council's travel demand model, which is the regional standard for travel demand, and traffic operations models that are the accepted professional standards. PSRC collects and maintains data and models that describe growth and travel

C-037-054

traffic on LWB should include elements such as improved turn traffic signal on 23rd and Madison and enhancement of 23rd as a major city arterial.

- If it is decided that LWB ramps will be included, full disclosure of all impact on the Arboretum is required including what mature trees will be removed along the east side of LWB.
- The SDEIS states that if the LWB ramps are removed, improvements on Montlake Boulevard can help traffic to operate similarly to existing conditions, and drivers would experience the same level of congestion that they currently experience. This should be evaluated in more detail in the Final EIS, including the 4(f) analysis.
- The SDEIS reports that the closure of the LWB ramps may result in no substantial effect on SR 520 operations and substantially reduced congestion in the Arboretum. This should be evaluated in more detail in the Final EIS, including the 4(f) analysis.
- The narrow area of the traffic analysis contained in the SDEIS is inadequate. The traffic analysis in the Final EIS must include Madison St. up through the intersection with 23rd Ave. E. and the 23rd/24th/Montlake corridor.
- HCT must be properly evaluated for all bridge options in the Final EIS.

C-037-055

demand for the region. All jurisdictions contribute to this regional planning process, and projects that are carried out within the region need to be coordinated with that process. The analysis in the Final EIS is based on an updated Puget Sound Regional Council travel demand model that reflects current regional transportation planning assumptions and includes updated population and employment forecasts from the local jurisdictions. It accounts for implementation of Sound Transit's ST2 plan and includes updated assumptions about tolling and bus service. Without more specific information on the commenter's concerns regarding the modeling methodology, WSDOT cannot respond in further detail.

C-037-028

Please see the response to Comment C-037-001. The Arboretum Mitigation Plan, developed through coordination between WSDOT and the Arboretum and Botanical Garden Committee (which includes the Arboretum Foundation), documents the measures agreed upon for mitigating effects on recreation and natural resources within the Arboretum. WSDOT continues to work with the ABGC on agreements to implement these mitigation measures, which include funding for projects identified in the Arboretum Master Plan that would mitigate for effects of the SR 520 project. Please see also the response to Comment C-037-007 regarding noise reduction measures and the response to C-037-024 regarding replacement of properties protected by Section 6(f) of the Land and Water Conservation Fund Act. WSDOT is also continuing to coordinate with Native American tribes on project effects to the Foster Island TCP, and has included the ABGC in these coordination efforts.

C-037-029

Please see the response to Comment C-037-016 regarding the Miller Street Landfill and the WSDOT peninsula. Also see the response to Comment C-037-010 regarding the expanded APE for cultural resources evaluated in the Final EIS. See the response to Comment C-037-002

C-037-056

Inaccurate Statements and analysis' made in the SDEIS:

The following are comments with which the Arboretum Foundation disagrees. They suggest a lack of understanding on the part of the authors of the document of the very real impacts they are having on this institution. They also suggest a bias in favor of a solution – at any cost – to get the highway constructed, disrespecting highly valued historic and cultural resources, indifference to future disruption and a less-than-holistic approach to accomplishing WSDOT's mission. These inaccuracies also are the basis for flawed analysis. Both the factual inaccuracies and the consequent flawed analysis should be reviewed and corrected in the Final EIS.

C-037-057

- The SDEIS states that "No permanent loss in total park area would result from the proposed 6-Lane Alternative.... (because) adverse effects on recreational lands would be mitigated as consistent with applicable requirements." The Arboretum is unique *because* of its size, collections and continuity, and cannot be evaluated in the same category as other parks. Furthermore, because of its unique character, the Final EIS must NOT focus on mitigation of land lost, but rather on *avoidance* of taking land unnecessarily.

C-037-058

- The SDEIS states that the addition of new LWB ramps would "introduce little additional effect to the Arboretum." The SDEIS further states that most of the length of the on- and off-ramps would run along the north and south sides of the main line, introducing little additional effect to the Arboretum. These statements reflect the physical positioning of the ramps, but they ignore the impact of the ramp connection with LWB. Traffic through the Arboretum would be greatly increased with the addition of the LWB ramps, thus adversely impacting the whole Arboretum. These adverse traffic impacts must be evaluated in the Final EIS and 4(f) analysis.

C-037-059

- The SDEIS states that although the northern section of the Arboretum was heavily affected by the original construction of SR 520 and has suffered a loss of integrity, the rest of the Arboretum remains intact. *This is not accurate.* The Arboretum has suffered from the use of LWB as a short cut to and from SR520. Increased traffic along LWB has grown exponentially over the years negatively impacting visitors experience, the educational capacity and the integrity of the Arboretum's woody collections. These significant adverse impacts must be evaluated in the Final EIS.

C-037-060

- According to the SDEIS Lake Washington Boulevard, Boyer Avenue, 24th Avenue East (north of Galer) and East Madison Street are all classified by the city of Seattle as arterials and increased traffic has no potential to constitute an effect on historic properties that may be located on LWB between E. Madison Street and 32nd Avenue or Boyer Avenue between 24th Avenue and LWB. *This assumption is inaccurate and must be corrected in the Final EIS.* Lake Washington Boulevard is an official park boulevard, and must be recognized as such in the Final EIS and 4(f) analysis.
- Although it was recommended that WSDOT include LWB between Madison Street and 32nd Avenue AND Boyer between 24th Avenue and LWB in the APE, WSDOT elected not do so in the SDEIS. This must be corrected for the Final EIS and the APE expanded. The traffic on LWB and the other areas is excessive and should be reduced, not increased by the expansion project.
- Lake Washington Boulevard is an official park boulevard, and must be recognized as such in the Final EIS. The distinction is crucial. It is imperative that WSDOT stop referring to Lake Washington Boulevard as a city street (as it does in the SDEIS) and consider its designation as an official Park Boulevard, with all its associated functions and purposes. It is crucial that decisions about the future design of the SR 520 improvements be made with the understanding that Lake Washington Boulevard was

regarding traffic volume on Lake Washington Boulevard. Since a Preferred Alternative was developed, WSDOT has completed the Section 106 consultation process, including fieldwork on Foster Island to investigate the potential for cultural resources. WSDOT has engaged in formal consultation with the Washington State Department of Archaeology and Historic Preservation (DAHP) and with a number of consulting parties, including the Arboretum Foundation, regarding the effects of the Preferred Alternative on the Arboretum. DAHP provided concurrence with WSDOT's effect determination in March 2011. The findings were that the Preferred Alternative would diminish the integrity of the Foster Island Traditional Cultural Property, but would not alter the integrity of the Arboretum as a historic property given conditional measures stipulated in the Section 106 Programmatic Agreement.

C-037-030

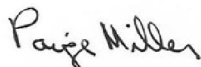
Staging areas are shown in Chapter 3 of the Final EIS and in the Social Elements Discipline Report Addendum (Attachment 7 to the Final EIS). The Visual Quality and Aesthetics Discipline Report provides some description of how staging areas may appear under the heading "How would construction of the project affect visual quality and aesthetics?" The appearance of staging areas would vary depending on the specific construction activities being supported there. Clearing of staging areas and their restoration following construction is described in the Ecosystems Discipline Report and its Addendum in Attachment 7 to the Final EIS. All work in staging areas would comply with permit conditions imposed by resource agencies to ensure the protection of habitat and wildlife.

C-037-031

The Final EIS and its attachments include the Final Cultural Resources Assessment and Discipline Report and the Final Transportation Discipline Report, which have been updated as described in the responses to previous comments in the Arboretum Foundation letter;

C-037-060	<p>never designed to function as an extension of direct-access ramps to and from SR 520. <i>These corrections must be</i> incorporated in the Final EIS.</p> <ul style="list-style-type: none"> The Final EIS must state clearly that not only would the removal of the ramps positively impact the Arboretum but that some traffic analyses state that improvements on Montlake Boulevard can help traffic to operate similarly to existing conditions, and that removal of the ramps would result in no substantial effect on SR 520 operations.
C-037-061	<ul style="list-style-type: none"> The Final EIS must remove any statements such as: "...because of the similarity to the existing condition, this would have no effect on historic properties" or that the canoe passage experience would be (positively) altered as a result of the higher profile, wider bridge structure and wider spaced columns..." These statements are simply not accurate and must be corrected.
C-037-062	<ul style="list-style-type: none"> Statement made regarding the impact of the LWB ramps in the Arboretum must be corrected. The addition of new LWB ramps will introduce <i>significant</i> additional impacts on the Arboretum. Traffic through the Arboretum would be greatly increased with the addition of the LWB ramps, thus adversely impacting the whole Arboretum.
C-037-063	<ul style="list-style-type: none"> The traffic analyses made by the WSDOT team in the Final EIS must take into consideration that Sound Transit would be in place on I-90, and from downtown Seattle to the UW, that there would be increased bus service and bike lanes on SR 520 and SR520 would be tolled. The Final EIS must update the traffic modeling by including the new tolling assumption in the analysis of the No Build Alternative and the preferred alternative.
C-037-064	<ul style="list-style-type: none"> The Final EIS must make explicitly clear that the Arboretum park experience will be significantly impacted by greater levels of noise associated with SR520 Bridge.
C-037-065	<ul style="list-style-type: none"> The Final EIS must recognize the negative effects of a more prominent roadway and bridge structure on Foster Island and excessive traffic on Lake Washington Boulevard. Artist(s) must be a part of the Design Team before the ROD is signed. This is necessary for the SR 520 project due to its intrusion of an irreplaceable cultural landscape. The SDEIS states that the new bridge on Foster Island "...because of the similarity to the existing condition, this would have no effect on historic properties." This is simply not accurate. Furthermore, the SDEIS states that canoe passage would still occur under SR520 but the experience would be (positively) altered as a result of the higher profile, wider bridge structure and wider spaced columns..." This is not accurate. These statements must be corrected in the Final EIS.
C-037-066	<ul style="list-style-type: none"> The wetlands within the Arboretum must be properly evaluated. The Arboretum Foundation believes that the wetlands within the Arboretum area also include Category I wetlands, not just II and III as reported in the SDEIS. The wetlands should be reevaluated for the Final EIS.

These comments are submitted on behalf of the Arboretum Foundation. Thank you.
Sincerely,



Paige Miller
Executive Director
Arboretum Foundation
pmiller@arboretumfoundation.org

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addenda and errata-sheet attachments to other pertinent discipline reports such as Noise, Visual Quality and Aesthetics, Social Elements, Ecosystems, and Water Resources; and the Final Section 4(f) Evaluation. Publication of the Record of Decision is expected to follow publication of the Final EIS by approximately six weeks.

C-037-032

Staging areas are shown in Chapter 3 of the Final EIS and in the Social Elements Discipline Report Addendum (Attachment 7 to the Final EIS). The Visual Quality and Aesthetics Discipline Report provides some description of how staging areas may appear under the heading "How would construction of the project affect visual quality and aesthetics?" The appearance of staging areas would vary depending on the specific construction activities being supported there. Clearing of staging areas and their restoration following construction is described in the Ecosystems Discipline Report and its Addendum in Attachment 7 to the Final EIS. All work in staging areas would comply with permit conditions imposed by resource agencies to ensure the protection of habitat and wildlife.

C-037-033

Please see the response to Comment C-037-017.

C-037-034

Please see the response to Comment C-037-018.

C-037-035

The interim connection referred to in the comment was part of the Phased Implementation Scenario discussed in the SDEIS, which considered the possibility of constructing the project in separate phases over time, with the vulnerable structures (the Evergreen Point floating bridge, west approach bridge, and Portage Bay bridge) built first. This

**Appendices to Arboretum Foundation Response
To
WSDOT SR 520 SDEIS
April 15, 2010**

- C-037-067** | **Appendix 1: City's Shoreline Management Act:**
The Arboretum Foundation requests that the Recreation and Conservation Office (RCO) staff provide a briefing on the potential conversion associated with proposed improvements to SR 520 in the Arboretum. The Arboretum Foundation requests to be included in a dialogue regarding an appropriate way to guarantee Seattle's ability to maintain the park waterfront trails in perpetuity and protect the state's previous investment.
- C-037-068** | **Appendix 2: Traffic Management during construction:**
The northern section of the Arboretum was heavily affected by the original construction of SR 520 and has suffered a loss of integrity, but it should be stressed that the rest of the Arboretum has been significantly impacted by the excessive use of LWB by traffic occasioned by on and off ramps to the freeway.
- WSDOT must establish required detour routes in advance of the initiation of construction in order to protect LWB from excessive detour traffic. SDOT and WSDOT must formulate and implement a construction traffic management plan to minimize traffic effects on historic properties, especially LWB.
- Improvements in the Montlake interchange (to Louisa Street) will occur before the closure of the LWB ramps.
- The selected contractor must prepare a traffic management plan to be approved by the City of Seattle that would identify measures and practices to minimize construction effects.
- C-037-069** | **Appendix 3: Planning Context:**
The Growth Management Act (GMA) requires that state and local governments work cooperatively to identify and protect critical areas and natural resource lands. Since 1990, the City of Seattle and King County have been working to establish protection for designated fish and wildlife habitat areas and wetlands. The areas in the Arboretum have not been properly evaluated in the SDEIS in light of the GMA.
- These wetlands will be adversely impacted during the construction of the bridge specifically; construction work bridges and detour bridges will shade wetland vegetation in the Arboretum areas. Staging areas will compact and destroy wetlands areas. Because the shading could occur for more than 5 years in some areas, it is expected that wetland functions would be negatively affected during the construction period. WSDOT must make every effort to complete the project over Foster Island in one phase in order to reduce the cumulative impact of construction on wetlands.
- C-037-070** | **Appendix 4: Scope of the APE:**
The scope of the project greatly affects the effort required to identify historic properties, and thus the way an APE is defined. WSDOT must consider different aspects of the scale and nature of undertaking when defining the APE:

"Phased Implementation scenario" was analyzed for each environmental resource. Due to the funding shortfall, FHWA and WSDOT still believe it is prudent to evaluate the possibility of phased construction of the corridor should full project funding not be available by 2012. Currently committed funding is sufficient to construct the Evergreen Point floating bridge and landings; a Request for Proposals has been issued for this portion of the project, with proposals due in June 2011. Accordingly, this Final EIS discusses the potential for the floating bridge and landings to be built as the first phase of the SR 520, I-5 to Medina project. This differs from the SDEIS Phased Implementation scenario, which included the west approach and the Portage Bay bridge in the first construction phase. See Section 2.8 of this Final EIS for further information on potential project phasing.

The interim connection mentioned in the comment is not part of the revised potential phasing discussed in the Final EIS; therefore, it no longer under consideration.

The proposed access to and from Lake Washington Boulevard under the Preferred Alternative would not remove the any of the large trees along the boulevard's east side.

C-037-036

In the summer and fall of 2010, following identification of the Preferred Alternative, additional archaeological investigation took place on Foster Island in the areas that would be disturbed by project construction. This work was conducted in consultation with the affected tribes. The Final Cultural Resources Assessment and Discipline Report provides further discussion of archaeological investigation on Foster Island. (Most of the information regarding the investigation is not publicly available due to its sensitive nature.) WSDOT has obtained concurrence from the Department of Archaeology and Historic Preservation that Foster Island is a National Register-eligible Traditional Cultural Property; project

C-037-070

- 1) If new construction—how large, how many stories with this bridge be, and how many square feet?
- 2) What is the extent of the ground disturbance? Are access roads or staging areas needed?
- 3) Are additions to or demolition of an existing building involved?
- 4) What is the scale of new construction in relation to the surrounding setting?

When defining an APE and WSDOT must remember that effect can be direct or indirect, beneficial or adverse:

- 1) Physical changes to the area—actual takings, ground disturbance
- 2) Visual changes, including changes to the appearance of the bridges or site. Also a change in view sheds.
- 3) Changes to existing pedestrian and traffic patterns.
- 4) Changes in land use.

Foster Island is a known archaeological site from the early Native American settlements in the area. While we understand that Archeological surveys are generally limited to the project footprint, the survey area for above ground resources—such as bridges and landscapes is larger and must take into account the potential for visual, auditory, and other effects.

C-037-071**Appendix 5: Lake Washington Boulevard Ramps:**

In 1963, with the construction of the new SR 520 Bridge, the Arboretum lost 60 acres of wetlands and historically significant property. By removing the old LWB ramps, and not adding new ones, traffic volumes on LWB would drop, creating safer and quieter conditions for park and trail users. Removal of the LWB ramps and R.H. Thomson Expressway ramps would remove visual clutter and improve views to and from the park over the long term.

Option A without ramps would reduce vehicle traffic in the Arboretum by up to 900 vehicles per hour, improving the walking, bicycling, and recreation environment. The continued use of LWB by SR 520 traffic would diminish the integrity of the property's location, design, setting, and feeling.

The SDEIS states that if the LWB ramps are removed, improvements on Montlake Boulevard can help traffic to operate similarly to existing conditions, and drivers would experience the same level of congestion that they currently experience. The SDEIS also reports that the closure of the LWB ramps may result in no substantial effect on SR 520 operations and substantially reduced congestion in the Arboretum.

The SDEIS states that the addition of new LWB ramps would “introduce little additional effect to the Arboretum.” The SDEIS further states that most of the length of the on- and off-ramps would run along the north and south sides of the main line, introducing little additional effect to the Arboretum. These statements are simply not true. Traffic through the Arboretum would be greatly increased with the addition of the LWB ramps, thus adversely impacting the whole Arboretum.

The Final EIS must state clearly that not only would the removal of the ramps positively impact the Arboretum but that some traffic analysis state that improvements on Montlake Boulevard can help traffic to operate similarly to existing conditions, and that removal of the ramps would result in no substantial effect on SR 520 operations.

The creation of new ramps would not abide by 4(f) regulations because there is a prudent alternative (no ramps) and because the SDEIS evaluation fails to identify LWB as a historic resource and a park and recreation resource. It is a parkway, owned by the Parks Department, not a city street. These errors must be corrected in the Final EIS, including the 4(f) analysis.

The new ramps would require an additional 27 permanent columns and 55 temporary piles. The piers would occupy approximately 760 more square feet of lake bed, this is unacceptable.

design and construction will take the necessary precautions to preserve this area's significance.

C-037-037

Please see the response to Comment C-037-017 regarding the WSDOT peninsula and Miller Street Landfill. As noted in that response, the landfill is not eligible for listing in the National Register of Historic Places and therefore is not a historic resource protected by Section 106. Also, please see the response to Comment C-037-029 regarding the Washington State Department of Archaeology and Historic Preservation's concurrence with WSDOT's Section 106 effect determination.

C-037-038

Please see the response to Comment C-037-003 regarding the modified footprint of the Preferred Alternative compared to the SDEIS design options. The Preferred Alternative minimizes the footprint of projects 520 wherever possible while complying with safety and operational standards.

C-037-039

Please see the response to Comment C-037-019.

C-037-040

Exhibit 2-9 in the Ecosystems Discipline Report (Attachment 7 to the SDEIS) lists the functions of the wetlands in the Arboretum as having moderate social values, which includes educational, scientific, and recreational values.

C-037-041

See the response to Comment C-037-035 regarding the Phased Implementation scenario. The portion of the project over Foster Island is

- C-037-071** Adding new LWB ramps would require removal of the mature trees located along the east side of LWB.
The SDEIS further states that capacity improvements to handle traffic demand at Montlake might include interim connections to the existing LWB ramps. These could include a new flyover ramp from the new west approach bridge to the existing westbound LWB off-ramp and a connection from the existing eastbound on-ramp from LWB to the new west approach bridge. These ramps could remain in operation until full build out of the 6-Lane Alternative and would be removed and/or replaced in a later phase, depending on the Montlake interchange option constructed. This is unacceptable.
- C-037-072** **Appendix 6: Air Pollution:**
The Final EIS must properly evaluate the impact of degrading air quality on the Arboretum collections and historical structures from cars on SR 520 and increased traffic on LWB. WSDOT must verify that the planned transportation projects will not cause or contribute to a violation of the federal standards for CO.
WSDOT must analyze the most congested intersections in the Arboretum and demonstrate that CO levels will be below CO standards after the project is in operation. Specific standards for park areas must be used as baseline measures and the full length of LWB must be evaluated. Indirect effects on air quality, primarily from trucks hauling construction materials to and from SR 520, must be evaluated relative to the impacts on the collections and historic structures. This analysis must be included in the Final EIS.
- C-037-073** **Appendix 7: Noise:**
The Final EIS must make explicitly clear that the Arboretum park experience will be significantly impacted by greater levels of noise associated with SR520 Bridge. Suggestions must be made on how to deal with the area of the highest sound levels (SR 520 near Montlake Boulevard, along LWB, and at the SR 520 access ramps) other than noise walls which have been excluded because they did not meet WSDOT's financial criteria.
The full noise impacts on the Arboretum must be measured along the length of LWB and into the park itself and Quiet Pavement should continue to be evaluated as a mitigation option in the Final EIS and possibly included into any design option.
- C-037-074** **Appendix 8: Views:**
The Final EIS must recognize the negative effects of a more prominent roadway and bridge structure on Foster Island and excessive traffic on Lake Washington Boulevard. While the studies are still inconclusive, the Arboretum Foundation would like clarification about the impacts of shading on vegetation and near-shore habitats. The Arboretum Foundation believes that a roadway that is narrow would have a greater positive impact than a higher, wide bridge. The Final EIS must remove any statements such as: "...because of the similarity to the existing condition, this would have no effect on historic properties" or that the canoe passage experience would be (positively) altered as a result of the higher profile, wider bridge structure and wider spaced columns..." These statements are simply not accurate and must be corrected.
The original construction and future expansion of SR520 inhibits the Arboretum Creek's ability to support fish life.... endangered species including sockeye salmon and trout can be found in Arboretum Creek but they are unlikely upstream of its lower reaches due to man-made barriers. The Final EIS must identify these concerns and suggests avoidance and mitigation options.
- C-037-075** **Appendix 9: Repair new damage completely and comprehensively:**

planned to be completed in one phase, as evaluated in the Final EIS. Section 2.8 of this Final EIS discusses potential project phasing based on funding that has been secured. See Chapter 3 of the Final EIS for a discussion of construction sequencing with the Preferred Alternative.

C-037-042

WSDOT will mitigate for all effects on wetlands and wetland buffers from construction and operation of the project, including both wetland fill (loss) and wetland shading. Please see the Ecosystems Discipline Report Addendum in Attachment 7 to the Final EIS and the Conceptual Wetland Mitigation Plan in Attachment 9 to the Final EIS for details.

C-037-043

WSDOT will minimize pile driving near the Broadmoor eagle pair nest site during the early part of the bald eagle nesting season when the birds are most sensitive to disturbance, as described on page 4-65 of the Ecosystems Discipline Report (Attachment 7 to the SDEIS). One beaver lodge adjacent to Foster Island would be affected by the project. Beavers are an urban-adapted species. They are not an Endangered Species Act-listed species or a state priority species; therefore, WSDOT is not required to provide mitigation for lost habitat. However, as stated on page 4-65 of the Ecosystems Discipline Report, WSDOT will avoid or minimize effects to the lodge to the extent possible. Also as stated on page 4-65, WSDOT will limit construction clearing to as small an area as needed.

C-037-044

As described in the Recreation Discipline Report, that construction areas within parks would be regraded and landscaped, although restored vegetation would require time to mature to its preconstruction size.

- C-037-075** All areas used within the Arboretum for the expansion of the bridge must be repaired completely, comprehensively and agreed upon by the City of Seattle, University of Washington, Arboretum Foundation and the Arboretum Botanical Garden Committee (ABGC). Staging areas appear to be very destructive propositions. Clear delineation of the areas used and a visual of what they would look like are requested before construction begins. Construction activities along LWB would require clearing, grading, and paving activities where the new ramps would transition to the local roadway. This must all be repaired and approved of by the City of Seattle, University of Washington, Arboretum Foundation and the Arboretum Botanical Garden Committee (ABGC).
- C-037-076** **Appendix 10: Preserve & restore the Arboretum as an accessible place of quiet and respite:** Portions of the Arboretum Waterfront Trail will be closed continuously during construction for 30 to 54 months, depending on the design option chosen and its sequencing; this will limit access to Foster Island. This transportation project will create a conversion at two previously funded projects at the Washington Park Arboretum (#66-037D and #85-9036D). This situation creates two conversions on the same property, and therefore WSDOT must find replacement property that will satisfy both grant programs' requirements. Seattle has until December 2010 to adopt the updated Washington State Shoreline Management Act (Chapter 90.58 RCW), until then usage of the shoreline in the Arboretum is not clearly identified. Seattle's 2006 Parks and Recreation Development Plan also states that public shoreline access will be regarded with the same degree of importance as open space and will be planned to ensure a reasonable amount of public access along each shoreline. All of these Plans and Act must be aligned before a final decision can be made about the closure of the Waterfront Trail.
- C-037-077** **Appendix 11: Bikes and Pedestrians access must be maintained throughout construction:** Option A without ramps would reduce vehicle traffic in the Arboretum by up to 900 vehicles per hour, improving the walking, bicycling, and recreation environment. However, during construction boats would be prevented from passing beneath all structures and canoe paddling would be restricted to the waterways north of SR 520. Bicyclists will also be impacted by construction since 24th Avenue East, which is used by bicyclists and is part of the Lake Washington Loop Route, would be closed continuously for between 45 and 78 months. WSDOT must establish required detour routes in advance of the initiation of construction in order to accommodate bikes and pedestrians before and after construction; detour routes must be easy and continuous paths from the Arboretum to the University of Washington.
- C-037-078** **Appendix 12: Minimize traffic impacts on the Arboretum:** The Arboretum is of regional, national and even international significance and cannot be judged as a sum of its parts....As a historic designed landscape meant to educate and provide public beautification; it is an icon of the Seattle Parks system. It has been acknowledged by WSDOT that the northern section of the Arboretum was heavily affected by the construction of SR 520 and has suffered a loss of integrity, but it should be stressed that the rest of the Arboretum has been significantly impacted by the excessive use of LWB by traffic going to and coming from SR520. WSDOT must establish required detour routes in advance of the initiation of construction in order to protect LWB from excessive detour traffic. For example, improvements in the Montlake interchange (and to Louisa Street) must occur before the closure of the LWB ramps. The selected contractor must prepare a traffic management plan to be approved by the City of Seattle that

C-037-045

Page 4-65 of the Ecosystems Discipline Report includes the measure to "minimize removal of specimen trees in the Arboretum. If this is not possible, replant or replace trees nearby." As stated on pages 74 through 75 of the Recreation Discipline Report, WSDOT, the City of Seattle, the University of Washington, and appropriate regulatory agencies will determine the best methods for protecting specimen trees and important vegetation in the Arboretum.

C-037-046

The Preferred Alternative would not include construction of any new ramps in the Arboretum, and would remove both the existing Lake Washington Boulevard ramps and the R.H. Thomson Expressway ramps. Access to Lake Washington Boulevard by westbound SR 520 traffic would be moved to a new intersection located on the Montlake Boulevard lid at 24th Avenue East. All construction areas would be restored to preconstruction condition or better.

C-037-047

Please see the response to Comment C-037-020.

C-037-048

Please see the responses to comments C-037-007 and C-037-021 regarding assessment of noise in the Arboretum. WSDOT will comply with local noise regulations, although some variances may be sought to minimize the overall duration of construction.

C-037-049

Please see the responses to comments C-37-023 and C-37-042.

C-037-050

The Final EIS analyzes the effects of the Preferred Alternative on Foster

C-037-078 | would identify measures and practices to minimize construction effects. These detour routes and mitigation measures should be included in the Final EIS

C-037-079 | **Appendix 13: Respect the historical, aesthetic, and design integrity of the Arboretum:**
The Arboretum should be considered separate from other City parks due to its historical significance, unique collections and usage. The Arboretum, in its entirety, should be identified as a TCP and eligible for inclusion and protection by the NRHP registry under:

- Criterion A (for its association with events that have made a significant contribution to the broad patterns of our history, including the Alaska-Yukon-Pacific Exposition, the development of the University of Washington, the work of the WPA, and the development of the parks system in Seattle) and
- Criterion C (as the work of a master for its design by the noted Olmsted Brothers, as well as the many talented designers and architects who contributed to its multiple designed features).

The Arboretum, in its entirety, should be identified as a TCP and eligible for inclusion and protection by the NRHP registry. The Arboretum contains ceremonial sites, traditional homes of a particular cultural group (Duwamish longhouse near Arboretum Creek), sites, buildings, structures (Wilcox Bridge, the stone cottage, the gates and the gazebo), and objects that are significant in American history (Japanese Garden), architecture, archaeology (Foster Island and the Miller Street Landfill), and that represents the work of a master (Olmsted). A full list of historical sites within the Arboretum might include: LWB, the Gatehouse/Stone Cottage, the Holmdahl Rockery, the stone bridges and Arboretum Creek pond, the Japanese Garden, Wilcox bridge, the Barn, Arboretum Drive, Azalea Way, the Woodland Garden, Rhododendron Glen, the Lookout/Gazebo and Pinetum, to name a few. The Final EIS must reevaluate the impact that SR 520 expansion will have on these properties.

While fourteen parks and recreational facilities are located along the Seattle portion of the SR520 project corridor, the Arboretum should be considered separate from these City parks due to its historical significance, unique collections and usage. The National Park Service's Guidelines defines a traditional cultural property (TCP) as a site "that is eligible for inclusion in the National Register [of Historic Places] because of its association with cultural practices or beliefs of a living community that:

- (a) are rooted in that community's history, and
- (b) are important in maintaining the continuing cultural identity of the community."

C-037-080 | The Final EIS will identify the TCP status of Foster Island. This designation would make the island eligible for the NRHP, even though they haven't recognized the rest of the Arboretum as eligible for TCP status.

These NRHP laws require that consideration be given to protecting significant historic, archaeological, and traditional cultural sites from damage or loss from the project. Foster Island could also be considered eligible for the NRHP as an archaeological site, but at present its archaeological status is unknown. Further archeological investigation at Foster Island could result in the discovery of below-ground resources that could warrant determination of Foster Island as eligible under Criterion D as an archaeological site. These evaluations must be completed as part of the Final EIS before a final SR 520 option is chosen and construction begins.

C-037-081 | **Appendix 14: Include landscape architects, landscape historians, and artists early and throughout the design process.**

Island (see the response to Comment C-037-037). See the response to Comment C-037-003 regarding how the Preferred Alternative bridge footprint over Foster Island would minimize potential effects. WSDOT is working to create a context-sensitive bridge design across the island and to avoid or minimize effects on culturally sensitive locations.

C-037-051

Please see the responses to comments C-037-001 and C-037-024 regarding mitigation planning with the ABGC and analysis of impacts and mitigation for the Arboretum Waterfront.

C-037-052

The Final EIS analyzes the effects of the Preferred Alternative on Foster Island (see the response to Comment C-037-037). See the response to Comment C-037-003 regarding how the Preferred Alternative bridge footprint over Foster Island would minimize potential effects. WSDOT is working to create a context-sensitive bridge design across the island and to avoid or minimize effects on culturally sensitive locations.

C-037-053

Please see the response to Comment C-037-023 regarding effects on fish under the Preferred Alternative. WSDOT has worked extensively with all resource agencies with jurisdiction over aquatic resources, as well as the Muckleshoot Indian Tribe Fisheries Division, to develop avoidance and minimization strategies, impact assessments, and mitigation proposals. Please see the Conceptual Aquatic Resources Mitigation Plan in Attachment 9 to the Final EIS.

C-037-054

Please see the responses to comments C-037-035 regarding the interim connection to Lake Washington Boulevard, C-037-002 regarding the removal of the Lake Washington Boulevard ramps, C-037-014 regarding

- C-037-081** | A public art program should be established to ensure the visual and cultural integrity of the project, and to help ensure context-sensitive design. Context sensitive design can also help to mitigate project impacts.
- C-037-082** | **Appendix 15: Wetlands:**
 The Arboretum Foundation would like a re-evaluation of the wetlands in the Final EIS. The AF believes that the wetlands within the Arboretum area also include Category I wetlands which would require enhanced mitigation.
 WSDOT must make every effort to complete the project over Foster Island in one phase in order to reduce the cumulative impact of construction on wetlands. Wetlands located in transition areas between project phases would be affected more than once. Wetlands in the Arboretum would be affected to the greatest extent if interim connections to the existing LWB ramps were constructed for Phased Implementation and then subsequently removed to facilitate the new LWB ramps that may be constructed under Option A.
 The federal wetland regulatory goal of No Net Loss and recently updated state and local regulations for protecting and managing critical areas under the Growth Management Act were both created to slow the cumulative decline of wetlands. The cumulative effect of wetland conversion and loss must be mitigated by increased participation of non-governmental organizations, such as the Arboretum Foundation, and other stakeholders in restoration efforts.
Long-term watershed-based mitigation and mitigation banking will also aid in the protection of this wetland resource. These issues should be addressed in the Final EIS.

the Section 4(f) evaluation with and without the ramps, and Comment C-037-008 regarding the study area for local transportation and traffic calming in the Arboretum and its vicinity. Also, please see the Transportation Discipline Report and the Final Transportation Discipline Report (Attachment 7 to the Final EIS).

C-037-055

Please see the response to Comment C-037-013 regarding why high-capacity transit in the SR 520 corridor is not studied for the SR 520, I-5 to Medina project.

C-037-056

The SDEIS provided a comprehensive analysis of effects based on the project design and construction information available at that time. Project alternatives and design options strive to minimize effects while fulfilling the adopted purpose and need for the project. Analyses presented in the SDEIS used accepted methodology based on WSDOT and FHWA guidance, as well as other guidance where applicable. The discipline reports describe the methodologies as well as policies and regulations applicable to the specific resource. Specific topics regarding the characterization of the SDEIS documentation and analysis are addressed in the responses to subsequent comments.

C-037-057

Please see the response to Comment C-037-015.

C-037-058

Because the comment does not contain a page number for the statement that the Lake Washington Boulevard ramps would “introduce little additional effect to the Arboretum” it is unclear which discipline the statement pertains to. However, because the Lake Washington Boulevard ramps already exist, none of the alternatives or options

evaluated in the SDEIS showed “greatly increased” traffic on Lake Washington Boulevard when compared with the No Build Alternative. Please see the response to Comment C-037-002 regarding traffic volumes on Lake Washington Boulevard with the Preferred Alternative, which would remove the existing ramps and provide access to Lake Washington Boulevard from westbound SR 520 by way of a new intersection located on the Montlake Boulevard lid at 24th Avenue East. As noted in responses to previous comments, the Preferred Alternative would reduce average traffic in 2030 on Lake Washington Boulevard in the Arboretum compared to the No Build Alternative. Regarding the Section 4(f) evaluation, please see the response to Comment C-037-014.

C-037-059

The statement referred to in the comment was made on page 115 of the Cultural Resources Discipline Report as a characterization of the existing historic integrity of the Arboretum. WSDOT has reviewed the statement and concluded that it remains true. DAHP has concurred with the Historic Property Inventory submitted by WSDOT for the Arboretum, which included this characterization, as well as with WSDOT's determination that the project would not alter the integrity of the Arboretum as a historic property. As noted elsewhere, the Preferred Alternative would improve conditions in the Arboretum by reducing traffic on Lake Washington Boulevard compared to the No Build Alternative.

C-037-060

Lake Washington Boulevard is acknowledged as a designated park boulevard and evaluated as such in the Final EIS, the Final Cultural Resources Assessment and Discipline Report (Attachment 7 to the Final EIS), and Recreation Discipline Report Addendum (Attachment 7 to the Final EIS), and discussed as such in the Final Section 4(f) Evaluation (Chapter 9 of the Final EIS). However, under this designation it remains a city arterial street; the Seattle Department of Transportation has not

defined special traffic restrictions or other protective measures for park boulevards. It should also be noted that Lake Washington Boulevard is discussed in the Final Section 4(f) Evaluation as a historic property, not as a park property, because its primary use is not as a park.

See the response to Comment C-037-008 regarding the study area for local transportation. Any traffic volume changes resulting from the project on these road segments would not be expected to result in measurable operational changes and would not alter the integrity of historic properties along these road segments. While the portion of Boyer Avenue between Lake Washington Boulevard and the Arboretum boundary is within the Area of Potential Effects (APE) for cultural resources, the other road segments mentioned in the comment are outside the APE, which was determined with the concurrence of the Washington State Department of Archaeology and Historic. Please see the Final Cultural Resources Assessment and Discipline Report (Attachment 7 to the Final EIS) for discussion of the APE. See the response to Comment C-037-002 regarding removal of the Lake Washington Boulevard ramps and traffic volume changes on Lake Washington Boulevard with the Preferred Alternative. Also see the response to Comment C-037-058 regarding traffic effects of Option A with and without suboptions that include new Lake Washington Boulevard ramps. Option A was found to have traffic volumes in the Arboretum similar to existing; however, modifications to the Montlake Boulevard roadway were necessary to achieve the lowered traffic volumes, which would have resulted in impacts to other homes within a historic district. By keeping the traffic in the Arboretum at levels less than No Build while minimizing effects to properties in the historic district, the Preferred Alternative minimizes effects on all entities within the APE.

C-037-061

The statement regarding historic properties was made on pages 180, 184, and 187 of the Cultural Resources Discipline Report and refers to

effects from the height of the West Approach bridge under the SDEIS design options. While WSDOT has concluded that the original statement was accurate, it has been modified in the Final Cultural Resources Assessment and Discipline Report (Attachment 7 to the Final EIS) to provide greater clarity.

The statement regarding the canoe passage experience was on pages 66 and 67 of the Recreation Discipline Report, describing effects with Options A and L; the statement read, “The wider spacing of the new columns (to support the elevated structure) on the proposed bridge would also contribute to the positive visual change.” WSDOT reviewed the statement and has modified it in the Recreation Discipline Report Addendum (Attachment 7 to the Final EIS) to provide more supporting information because it also applies to the Preferred Alternative.

C-037-062

Please see the response to Comment C-037-058.

C-037-063

Please see the response to comment C-037-027. The Final Transportation Discipline Report (Attachment 7 to the Final EIS) provides analysis based on an updated model that accounts for the East Link light rail project on I-90, as well as other projects included in the ST2 plan. The University Link was assumed in the SDEIS transportation model and continues to be assumed in the Final EIS model. The new regional bicycle/pedestrian path on SR 520 has been part of all build alternatives evaluated for the project. Please see the Final Transportation Discipline Report and Section 1.11 of the Final EIS for more discussion of tolling assumptions.

C-037-064

Please see the responses to comments C-037-007 and C-037-021 regarding assessment of noise in the Arboretum.

C-037-065

Please see the responses to Comment C-037-003 regarding the Preferred Alternative design and Foster Island, Comment C-037-007 regarding visual quality effects on Foster Island, and Comment C-037-029 regarding the Foster Island Traditional Cultural Property (TCP). In addition, please see the responses to comments C-037-061 regarding the statement of no effect on historic properties and C-037-061 regarding canoe passage.

C-037-066

Please see the response to Comment C-037-019.

C-037-067

Please see the response to Comment C-037-024 regarding coordination with the Recreation and Conservation Office (RCO) and other agencies on effects on the Arboretum Waterfront Trail. Operation of the project would not affect use of the trail, and would provide improved pedestrian conditions at the Foster Island crossing.

C-037-068

See the response to Comment C-037-052.

C-037-069

WSDOT has evaluated the Preferred Alternative in light of the Growth Management Act (GMA). In addition to the requirements listed in the comment, the GMA also integrates transportation and land use planning to encourage economic and community development around designated urban centers and transportation corridors. Please refer to Section 5.11 of the SDEIS as well as the Land Use, Economics, and Relocations

Discipline Report (Attachment 7 to the SDEIS) regarding consistency with GMA and applicable critical area regulations. For information regarding past and ongoing coordination with resource agencies on wetland impact analysis and mitigation, please see the responses to comments C-037-019, C-037-023, C-037-041, and C-037-042, as well as the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS) and the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS).

C-037-070

Please see the response to Comment C-037-010 regarding the expanded Area of Potential Effects (APE) evaluated in the Final EIS. As noted in that response, the APE for the SR 520, I-5 to Medina project was concurred upon by the Washington State Department of Archaeology and Historic Preservation. See the Final Cultural Resources Assessment and Discipline Report [Attachment 7 to the Final EIS] for discussion of the APE; see page 16 of the Cultural Resources Discipline Report for discussion of what is considered in determining the APE. The Final EIS APE accounts for all property on which construction or demolition would occur, all potential construction staging and laydown areas, all potential hauling routes, and all potential permanent and temporary property acquisitions and easements. The APE also includes a buffer area around the construction footprint sufficient to encompass historic structures, commercial buildings, and residences, historic districts, and public facilities (including parks and bridges) that might be directly or indirectly affected by demolition, change of land use, noise, dust, vibration, visual quality, or other effects. Further, it encompasses additional area to include the entire Roanoke Park Historic District, the entire Washington Park Arboretum, a two-mile long segment of Lake Washington Boulevard, and all of the navigable waters of Portage Bay.

C-037-071

Please see the responses to Comment C-037-002 and Comment C-037-

058 regarding removal of the ramps under the Preferred Alternative and the resulting traffic volumes. See also the response to Comment C-037-060 for a discussion of the effects of local street improvements required to accommodate traffic on Montlake Boulevard if the function of the Lake Washington Boulevard ramps had been completely removed, as proposed under Option A. As noted in responses to several previous comments, the Preferred Alternative would reduce traffic along Lake Washington Boulevard in the Arboretum compared to No Build. As discussed in the Final Section 4(f) Evaluation (Chapter 9 of the Final EIS), the Preferred Alternative's revised connection to Lake Washington Boulevard would not result in a Section 4(f) use. (The only Section 4(f) uses in the Arboretum from the Preferred Alternative would occur on Foster Island and Marsh Island.) Lake Washington Boulevard is a transportation facility undergoing transportation improvements as a part of this project. The integrity of the historic property would not be diminished as a result of those improvements and the official with jurisdiction has not objected to this finding. Therefore, Lake Washington Boulevard is excepted from Section 4(f) in accordance with 774.13(a). The Preferred Alternative also would not require the additional 27 permanent columns, 55 temporary piles, and 760 square feet of lake bed that the ramps included in Option A with suboptions (Option A+) would have entailed compared to Option A.

See the response to Comment C-037-035 regarding the interim connection, which was part of the Phased Implementation Scenario evaluated in the SDEIS and is not part of revised potential phasing being considered in this Final EIS.

C-037-072

Please see the response to Comment C-037-047, regarding the operational air quality analysis and conclusions. The types of construction air quality effects mentioned in the comment would be considered direct effects. A quantitative analysis of construction air

quality effects is included in the Air Quality Discipline Report Addendum (Attachment 7 to the Final EIS). The Final Cultural Resources Assessment and Discipline Report (Attachment 7 to the Final EIS) evaluates construction effects on historic resources, including Lake Washington Boulevard. As described in previous responses, WSDOT is developing a Community Construction Management Plan (outlined in Attachment 9 to the Final EIS) that will establish best management practices and other measures to reduce potential effects, in consultation with the affected communities and organizations.

C-037-073

Please see the responses to comments C-037-007, C-037-021, and C-037-048.

C-037-074

See the responses to comments C-037-007 and C-037-022 regarding visual quality on Foster Island and in the Arboretum. As discussed in the response to comment C-037-002, traffic volumes on Lake Washington Boulevard would decrease with the Preferred Alternative. See also the responses to comments C-037-049 regarding shading effects, C-037-061 regarding canoe passage, and C-037-011 and C-037-025 regarding Arboretum Creek. The culverts on Arboretum Creek under Lake Washington Boulevard would not be affected by the project and, therefore, would not require replacement.

C-037-075

Please see the response to Comment C-037-001 regarding WSDOT's coordination with the ABGC on mitigation for impacts of the SR 520, I-5 to Medina project. This coordination effort resulted in the Arboretum Mitigation Plan, which is included in Attachment 9 of the Final EIS. WSDOT will continue to work with the ABGC to enter into the agreements necessary to implement the mitigation plan. See also the

response to Comment C-037-030 regarding staging areas. The area where the existing Lake Washington Boulevard ramps are located would be used for staging, then restored at the completion of construction.

C-037-076

Please see the response to Comment C-037-024 regarding the Arboretum Waterfront Trail and compliance with the terms of LWCF and ALEA grant funding under Section 6(f). As stated in that response, trail closures would be intermittent (not continuous as suggested in the comment), and access to Foster Island would be maintained from one or both ends of the trail. The Land Use, Economics, and Relocations Discipline Report discussed consistency with the Seattle Shoreline Master Program (SMP) and other applicable City of Seattle plans and policies. WSDOT is working with the City to ensure compliance with the SMP provisions in force at the time of project permitting, as well as with other applicable local permit requirements.

C-037-077

The Recreation Discipline Report Addendum (Attachment 7 to the Final EIS) provides an updated and expanded discussion of effects to recreational boating, including boating in the Arboretum shoreline areas. To maintain public safety, boat movements would be restricted beneath the SR 520 bridge and the construction work bridges in areas where the construction work bridges are being built or while demolition of the existing bridge was occurring overhead. The exact durations of such closures have not been defined, but they would not constitute the entire construction period. Unlike Option A, the Preferred Alternative would allow paddling in the waterways south of SR 520 during some portions of the construction period, but movement around Foster Island would be interrupted at times for safety reasons.

As stated in Section 6.1 of the Final EIS, with Options A, K, L and the Preferred Alternative, the 24th Avenue East bridge across SR 520 north

of Lake Washington Boulevard would be closed to all traffic for approximately one year while the bridge is demolished and reconstructed. Chapter 10 of the Final Transportation Discipline Report (Attachment 7 to the Final EIS) provides an updated discussion of the effects on bicycle and pedestrian traffic during construction. WSDOT will work with the City of Seattle to prepare a Construction Traffic Management Plan prior to construction, including detour routes for bicyclists and pedestrians. Detour routes would connect the original paths in the safest and most efficient way possible, and additional wayfinding signs would be installed to guide people to their desired routes.

C-037-078

Please see the response to Comment C-037-059 regarding effects on the Arboretum and the response to Comment C-037-052 regarding construction traffic and detour routing. Current construction sequencing calls for improvements to the Montlake interchange to be completed before closure of the Lake Washington Boulevard ramps. No improvements to Louisa Street are proposed as part of the project.

C-037-079

WSDOT has determined, and the Washington State Department of Archaeology and Historic Preservation has concurred, that the entire Washington Park Arboretum is an NRHP-eligible historic property. However, to be considered a Traditional Cultural Property (TCP), a property must be significant because it is rooted in the culture, beliefs, customs, and practices of a traditional group or community. For all of the reasons listed in the comment, the Arboretum qualifies as a historic property, but not as a TCP. Foster Island meets the criteria for a TCP and is evaluated as such, as described in the response to the following comment.

WSDOT will maintain its recognition of the Arboretum as a NRHP-

eligible historic property and will continue to work with the Arboretum Foundation in the Section 106 process through implementation of the Programmatic Agreement.

The Final Cultural Resources Assessment and Discipline Report (Attachment 7 to the Final EIS) provides additional analyses of some of the components that contribute the Arboretum as a historic property, including Foster Island and Lake Washington Boulevard.

C-037-080

The Cultural Resources Discipline Report states that Foster Island is considered to be a TCP and is treating it as eligible for the National Register of Historic Places. The formal determination of eligibility for this property has been completed, and the Washington State Department of Archaeology and Historic Preservation has concurred. Please see the response to Comment C-037-037 regarding addition archaeological investigation. WSDOT conducted extensive archaeological investigations and found no significant resources. Therefore, WSDOT determined that Foster Island would not be eligible as an archaeological site under Criterion D. However, WSDOT will take the necessary precautions to preserve the significance of Foster Island as a TCP.

C-037-081

Please see the response to Comment C-037-001. In conjunction with implementation of the Arboretum Mitigation Plan, WSDOT is continuing to work with the ABGC on context-sensitive design for SR 520 within the Arboretum.

C-037-082

Please see the response to Comment C-037-019 regarding wetland categories and the responses to comments C-037-035 and C-037-041 regarding project phasing. Mitigation for the project's wetland impacts

has been developed using a watershed-based approach and will meet the goal of no net loss. In accordance with the requirements of ESSB 6392, impacts in the Arboretum will be mitigated within the Arboretum to the fullest extent consistent with regulatory mitigation requirements. The Conceptual Wetland Mitigation Plan and the Conceptual Aquatic Resources Mitigation Plan, both in Attachment 9 to the Final EIS, describe the proposed mitigation, which is consistent with applicable federal, state, and local regulations. See also the response to Comment C-037-069 regarding consistency with the Growth Management Act.