-----Original Message-----
From: T. Gould [mailto:4cleanair@usa.net]
Sent: Friday, April 16, 2010 3:32 AM
To: SR 520 Bridge SDEIS
Subject: Sierra Club comments-- 520 Replacement SDEIS

Hello,

Please find attached a comment letter on the SR 520 supplemental draft EIS.
Thank you.

Tim Gould
Volunteer Chair, Transportation & Land Use Committee Sierra Club Cascade Chapter
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15 April 2010

Jenifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Comments on SR 520, I-5 to Medina: Bridge Replacement and HOV Project Supplemental Draft EIS

Dear Ms. Young:

C-038-001

We appreciate this opportunity to comment on the Supplemental Draft Environmental Impact Statement for the SR 520 Bridge Replacement and HOV Project. Sierra Club urges the development of transportation options that support state, county and city greenhouse gas (GHG) emission reduction goals. We favor GHG assessments that evaluate, rank, and select project elements and design configurations, rather than simply identify mitigation measures for a business-as-usual approach. These assessments should be based on GHG emissions from construction as well as from operation of the various travel modes through the SR 520 corridor over the life of the facility. Since high capacity transit (HCT) promotes compact, walkable residential and commercial areas around transit stations thereby reducing associated GHG emissions, design of the SR 520 bridge and its interchanges should optimize the role of transit.

C-038-002

Objectives for SR 520 Project

The Washington State Department of Transportation (WSDOT) and its partner agencies should pursue the following objectives with any eventual design selected for the SR 520 bridge replacement project:

1. emphasize the movement of people and goods rather than vehicles;
2. mitigate climate change impacts through reducing GHG emissions;
3. prioritize transit use including provision for light rail transit;
4. restore and protect the Arboretum and its wetlands, and Lake Washington;
5. improve air quality and reduce traffic noise, for human and environmental health;
6. promote thriving communities while reducing sprawl.

While the SR 520 bridge is a regional facility, it connects intimately with the communities and streetscape of the corridor through which it passes. In addition to regional mobility, the project must place an emphasis on walking, biking, and transit use in the surrounding

C-038-001

Since the SDEIS was published, FHWA and WSDOT have developed a Preferred Alternative that is similar to Option A, but with a number of design refinements. Refinements related to transit, including forward compatibility with future light-rail infrastructure (discussed in Chapter 2 of the Final EIS), will optimize the role of transit. In the near term, high-capacity transit in the form of bus rapid transit (BRT) is proposed for the new HOV lanes when they open, as described in the 2008 SR 520 High-Capacity Transit Plan. Transit improvements on Montlake Boulevard, including two-way HOV lanes between the SR 520 interchange and NE Pacific Street, will also help to optimize the role of transit in the project area.

Along with the implementation of a toll on the Evergreen Point Bridge, increased transit reliability throughout the corridor as a result of the HOV lanes (see section 5.1 of the Final EIS) will contribute to increased ridership, supporting state, county, and city greenhouse gas emission reduction goals by reducing greenhouse gas emissions from operation of the SR 520 corridor compared to the No Build Alternative and existing conditions. Please see section 5.9 of the Final EIS and the Energy Discipline Report Addendum (Attachment 7 to the Final EIS.)

WSDOT based the greenhouse gas emissions analysis in the Final EIS on the results of the energy analysis. The energy analysis in the Final EIS, which satisfies NEPA requirements, provides estimates of greenhouse gas emissions resulting from construction and operation. The methodology used to generate the greenhouse gas estimates, developed by the California Department of Transportation, is widely used in energy analyses today.

C-038-002

Planning for the SR 520 project has always emphasized the movement of people and goods rather than the movement of vehicles. The project

C-038-002 corridor. The selected design should enhance livable neighborhoods and provide opportunities for transit-oriented development (TOD) to reduce sprawl. Instead of a focus on congestion mitigation, the project should expand mobility options, including transit improvement projects that minimize greenhouse gas emissions.

C-038-003 **Legislature prematurely narrows options before environmental analysis**

Under both the National Environmental Policy Act and Washington's State Environmental Policy Act, WSDOT should analyze a set of reasonable alternatives—those considered to "feasibly attain or approximate a proposal's objectives". Sierra Club strongly believes this obligation of the lead agency WSDOT has been impeded through a narrowly defined set of options. The Legislature through passage of ESSB 6099 in 2007 artificially constrained the set of design alternatives. It continued the narrow focus of design alternatives with passage of ESHB 3096 in 2008.

Many of the design flaws in option "A+" that we identify below are the result of the Legislature's prescription for a six-lane facility. Yet the guidance given by the Legislature does not preempt the obligation of WSDOT to analyze and select a preferred alternative consistent with NEPA and SEPA processes.

Alternatives studied in the EIS do not recognize fiscal reality, the public's desire for a range of project scales with corresponding impacts, nor recent design modifications urged by the City of Seattle for the west side landing of the bridge and interchange. Furthermore, the EIS does not recognize that forecasts for growth extrapolated from recent decades will almost certainly be wrong due to the imminent decline of world oil production. The resulting end of cheap energy upon which our present transportation system is based will necessitate new approaches. Designs need to be evaluated relative to alternative scenarios for economic and traffic growth.

In short, the EIS process is broken. WSDOT cannot be expected to make an informed decision when its evaluations do not include a reasonable set of alternatives.

C-038-004 **Fixation on reducing congestion ignores urban form and reduction of sprawl.**

The design and function of the SR 520 replacement project will greatly influence future development in the region. A critical choice facing residents, commuters, and officials on the westside is whether to accommodate more vehicles entering Seattle or provide good options to encourage more transit usage. The solution that builds better urban form and reduces the incidence of sprawl is to better move people efficiently and conveniently through the corridor without adding to vehicle miles traveled, GHG emissions, and expanding infrastructure for vehicles.

Congestion is primarily a pricing problem best solved with tolling. We know from past experience and elsewhere that additional capacity produces latent demand for highway space and the new lane miles fill up producing more congestion. Instead, the focus must shift to emphasize the quality of the urban spaces. These guidelines are part of the alternative to congestion relief:

purpose statement (page 1-3 of the SDEIS) is "to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing, and/or mitigating impacts on affected neighborhoods and the environment." For this reason, traffic analysis for the project has always included estimates of both vehicle-trips and person-trips in the corridor. Modeling results have consistently shown that while a 6-lane alternative for SR 520 would not change vehicle-trips substantially compared to No Build, the number of person-trips in the corridor would increase because of the greater desirability of transit and carpooling. Because transit and carpools would not be tolled, and would travel in an HOV lane that was less congested than the general-purpose lanes, these modes would become a more attractive option. Bicycle commuting would also be greatly facilitated by the new regional bicycle-pedestrian path across the lake.

As noted in the response to comment C-038-001, tolling and the increased use of transit would result in lower GHG emissions in the corridor. Engrossed Substitute Senate Bill (ESSB) 6392 directed WSDOT to work collaboratively with the City of Settle, University of Washington, regional agencies including King County Metro Transit and Sound Transit, and other stakeholders to consider design refinements and transit planning for the Preferred Alternative. The Preferred Alternative optimizes transit, which effectively increases the movement of people and goods while reducing greenhouse emissions. Although compatibility with future light rail has been a design consideration since the project's inception, the Preferred Alternative includes additional features to facilitate the future implementation of light rail in the SR 520 corridor. Chapter 2 of the Final EIS provides more information.

As a result of design refinements following the SDEIS, the Preferred Alternative has a smaller footprint through the Washington Park Arboretum than any of the SDEIS options. In addition, as part of its

C-038-004

(1) Implement a mobility solution that improves air quality and reduces traffic noise, for human and environmental health

(2) Integration of transit-oriented development (TOD) into this major transit project

(3) Spend limited resources in most environmentally effective, least damaging manner.

C-038-005

No build alternative neglects use of tolling

Traffic demand management through tolling of the existing bridge is not included as part of the baseline scenario in the no build alternative. Yet the existing bridge will have tolls implemented by Spring 2011 through the Lake Washington Congestion Management Project. Variable toll rates set according to peak demand will invariably lead to improved traffic flow. Comparison of the no build alternative with assorted 6-lane alternatives does not consider the benefits from demand management.

WSDOT must incorporate predicted changes to commuter behavior resulting from tolling and construction closures in all corridor use projections and design work on reasonable alternatives. When models for traffic projection are not adequately sensitive to driver response to tolling, the result is an inaccurate characterization of traffic demand. The selection of alternatives evaluated in the EIS suffers from the inaccurate "need" for mobility.

More ambitious implementation of tolling needed

Sierra Club supports implementation of tolls on the SR 520 bridge as soon as is practical. The lack of real world data from tolling of SR 520 has contributed to unrealistic travel projections and the resulting deficient alternatives in this EIS. As noted in a December 2009 letter to the 520 Legislative Workgroup, we also support full general tolling of I-90 as soon as is practicable. The likelihood of traffic diversion from SR 520 to an I-90 corridor with only HOT lane tolling is too great to delay the inevitable tolling of both Lake Washington bridges. The current and past State Treasurer have recommended tolling of both Lake Washington bridges to create an acceptable finance plan.

Equity is a very important consideration when setting tolling policy. We strongly support the use of congestion management toll revenue for transit operations and maintenance. By providing better transit options, those travelers who might otherwise find tolls to present a hardship will have suitable alternatives for travel in the 520 corridor. Design and later installation of light rail transit should be considered a legitimate use for the congestion mitigation component of toll revenue.

Toll revenue from SR 520 must support transit operations in this same corridor. Good transit alternatives along with emphasizing privacy protection in all toll collection systems and technology will build public trust and support.

C-038-006

Minimize impacts on Arboretum

The rebuilding of the westside of SR 520 offers a generational opportunity to right a wrong of the previous generation, attaching a state highway access road to this regional jewel of the park system. A part of the 1903 Olmsted Plan for Seattle's boulevard system, Lake Washington Boulevard was never intended to carry the traffic volumes associated with

charge under ESSB 6392, WSDOT worked collaboratively with the Arboretum and Botanical Garden Committee to develop the SR 520 Arboretum Mitigation Plan, which includes wetland restoration and enhancement projects as well as other commitments that help implement the Arboretum Master Plan. Through collaboration with natural resource agencies, wetland and aquatic mitigation plans (included in Attachment 9 of the Final EIS) have been developed to avoid, minimize, and mitigate impacts on wetlands and aquatic habitat; water quality in Lake Washington will be improved as a result of stormwater treatment throughout the corridor where none currently exists.

The Preferred Alternative would also improve air quality and reduce traffic noise compared to No Build. As discussed in section 5.8 of the Final EIS, both criteria pollutants and air toxics are expected to decrease with the Preferred Alternative in comparison to No Build due to improved mobility and reduced VMT in the SR 520 corridor. The Preferred Alternative also incorporates noise reduction strategies recommended by an expert review panel, resulting in a substantial reduction in noise levels in many areas of the corridor without noise walls. Sections 5.7 and 5.8 of the Final EIS provide information on air quality and noise effects of the project.

In addition to increasing regional mobility, the Preferred Alternative would enhances and reconnect communities and landscapes by creating open space, restoring or creating views, and enhancing bicycle and pedestrian movement. Chapter 2 of the Final EIS described project features that would enhance livability.

C-038-003

NEPA requires the identification of a Preferred Alternative as part of the EIS process (see 23 CFR 711.125). This may occur as early as the Draft EIS; however, to provide full opportunity for public input, WSDOT typically does not identify a Preferred Alternative until the Final EIS.

C-038-006

direct-access ramps to and from SR 520. The EIS 4(f) evaluation fails to identify Lake Washington Boulevard as either a historic resource or a park and recreation resource. WSDOT must recognize its designation as an official Park Boulevard in all subsequent design work.

Sierra Club supports the Arboretum Foundation guiding principles for the SR 520 expansion, such as the priorities calling for adding no ramps to the Arboretum and discouraging commuter traffic through the Arboretum. We urge the following elements be incorporated into a selected alternative for this project:

(1) No ramps to/from Lake Washington Blvd. E. since they funnel excessive traffic into and through the Arboretum;

(2) Reduce in-water impacts of structures through Arboretum, Foster Island, and other wetlands;

(3) Manage storm water runoff, including requiring any holding ponds to be earthquake proof, ensuring long term protection of Lake water quality;

(4) Design a consolidated, lowest impact overall project footprint.

C-038-007

Context-sensitive design standards should prevail

Rather than typical design standards more appropriate for interstate highways in rural areas, the SR 520 project should employ context-sensitive design standards. The following features should be integrated into all aspects of the SR 520 design. Its westside landing in the midst of a built-up urban area is in particular need of these treatments:

(1) Narrowed lane and shoulder widths to lower vehicular speed; reduce noise and air pollution; increase fuel efficiency; and save lives;

(2) Lower posted speed limit and design speed; maximum vehicle throughput is achieved at approximately 45 mph, not 60 to 65 mph;

(3) Bridge design employing wave attenuation features to minimize water splash and allow for reduced bridge height, and bridge form determined by rigorous acoustics evaluation, and visual aesthetics;

(4) Avoid wider, taller, more massive project configurations since they increase greenhouse gas emissions during construction and through embodied energy.

(5) Calming of traffic through use of all signalized ramps, and priority intersection movements for transit.

C-038-008

Retain transit flyer stops along SR 520 at Montlake Blvd.

The interchange design ought to include retention of the Montlake transit "flyer" stops, as they provide convenient access to downtown Seattle oriented bus routes for riders with other destinations or points of origin. Passengers going to and from the south of Montlake, for example North Capitol Hill, and those going to and from the University District and points further north all benefit from the better transit connectivity. A crucial feature to incorporate in the interchange layout and operation consists of:

- Safe local bike, walk, and transit connections to and from regional transit service

Regardless of the timing of Preferred Alternative designation, the process is not complete, and identification of an alternative is not final, until the NEPA Record of Decision is signed by FHWA. As stated in the SDEIS (page 1-21): "Although the mediation participants, the legislative workgroup, and other political bodies can provide recommendations, it remains FHWA's responsibility under NEPA, and WSDOT's under SEPA, to select the final preferred alternative and to ensure that the environmental review process has evaluated a reasonable range of alternatives."

As described in Chapter 1 of the SDEIS and in the Range of Alternatives and Options Evaluated Report (Attachment 8), an extensive range of alternatives has been evaluated for this project. Alternative corridors, technologies (e.g. tubes and tunnels), and travel modes, as well as many design variations within the existing corridor, were evaluated as part of the Trans-Lake Washington Study and again after the initiation of NEPA review in 2000. Chapter 2 of the Final EIS provides additional information on how alternatives were developed and evaluated, and why some solutions were determined not to be reasonable alternatives.

In the 2006 Draft EIS, WSDOT studied the No Build Alternative, along with the 4-lane and 6-lane alternatives. The 2006 Draft EIS demonstrated that although the 4-lane alternative would improve safety and reliability, its ability to improve the movement of people and goods through the corridor would only be marginal. Therefore, FHWA and WSDOT concluded that the 4-lane alternative did not meet the project need. This conclusion was documented in the Draft EIS and confirmed in the 2010 SDEIS through additional modeling of the 4-Lane Alternative.

Based on the findings of the Draft EIS, Governor Gregoire recommended that a 6-lane SR 520 would best meet the needs of the regional transportation system. The Governor's report, A Path Forward to Action, cited the greater mobility benefits of the 6-Lane alternative compared to

C-038-008

We are concerned the proposed added subsidy for separate bus service across the replacement SR 520 bridge for downtown and U District markets is problematic. The plan proposed by Metro Transit and Sound Transit to increase cross-Lake bus service to separately serve the University District and Downtown Seattle markets can be effective during peak periods. But we are concerned that this duplication of bus routing across the bridge may not be the best allocation of resources in off-peak times, and may prove to be fiscally unsustainable given the recent experience with transit funding shortfalls and tepid state leadership to champion this funding.

A configuration that would allow this transit stop to be retained as part of the interchange without necessitating further width could include some of these elements:

(1) the two inside lanes of SR 520 are transit only at Montlake Blvd. interchange, rising to a signalized intersection with Montlake Boulevard E.;

(2) transit flyer stops at same level as Montlake Blvd. for ease of connection with local transit service, with no elevators, escalators, or stairs;

(3) stacked flyer stops for reduced footprint with eastbound stop at level of Montlake Blvd. to comingle bus routes originating from Downtown Seattle and the U District, while westbound stop at level of SR 520 serving routes bound for Downtown Seattle;

(4) transit lane and exit or on-ramp lane placed together on one ramp structure connecting from SR 520 to stoplight intersection at Montlake Blvd.

C-038-009

Smaller footprint options need adequate evaluation and consideration

The implication of the State curtailing the set of evaluated options is that no refined, transit-optimized 4-lane option has been considered in this supplemental EIS. While a 4-lane option was included in the original 2006 draft EIS, substantial refinement has occurred to the various 6-lane options since publication of the Project Draft EIS. No such refinement has occurred with a 4-lane option, casting some doubt on the finding that it was inadequate to carry forward into this Supplemental EIS.

Funding for this project is still inadequate compared with the identified alternatives. One reason for inclusion of a refined 4-lane option is it may prove to be the only alternative that is financially and environmentally affordable. The restriction of evaluated alternatives to only 6-lane configurations does not allow the environmental review to determine the final configuration as intended under NEPA and SEPA. Other alternatives for design and use of the project right-of-way that should be evaluated include:

(1) Hybrid with four lanes between Montlake Blvd. and I-5, and six lanes between SR-202 and Montlake Blvd.

(2) Additional two lanes where included in highway footprint dedicated for transit use;

(3) Width of lanes and shoulders reduced from FHWA standards

This project is complicated owing to its location in a built-up urban area with sensitive wetlands. We owe ourselves and future generations a comprehensive evaluation of reasonable alternatives.

the No Build and 4-Lane Alternatives, and its greater consistency with the project's purpose and need statement. She also noted the benefit of the proposed HOV lanes to regional transit service. At the same time, the Governor observed that more work was needed to minimize impacts and identify design solutions that would fit the character and needs of local communities.

Since the 4-Lane Alternative had already been evaluated in the Draft EIS, and other alternatives had been eliminated as not reasonable during earlier evaluation, ESSB 6099 (the legislation that created the SR 520 mediation process) limited the participants to developing 6-lane solutions. Because of the previous analyses that had taken place, the passage of ESSB 6099 and ESHB 3096 did not artificially constrain or restrict WSDOT's investigation of additional design alternatives. By the time ESSB 6099 passed in 2007, WSDOT had already concluded, through study of a number of design alternatives, that a 6-lane alternative would best meet the project purpose and need. The 4-lane and 8-lane alternatives did not meet the purpose and need and were not reasonable alternative as defined by NEPA. Consequently, WSDOT continued to study design variations on a 6-lane alternative. The Preferred Alternative, as described above and in the Final EIS, is consistent with the City of Seattle's recommendations for the west side landing and interchange as determined through the efforts of the ESSB 6392 workgroup.

In developing alternatives and forecasting future travel demand, WSDOT has consistently used the most current available data and models from the Puget Sound Regional Council. PSRC's data reflects the adopted land use and transportation plans of all regional jurisdictions, and is the only established basis for estimating future demand. Consideration of alternative scenarios for economic and traffic growth is appropriate at a regional level, not at the level of individual projects that improve existing facilities in support of adopted plans. WSDOT's approach to identifying

C-038-010

Design and construct the bridge to accommodate light rail transit

Sierra Club advocates for a replacement SR 520 bridge and corridor that prioritizes transit use. A project of this magnitude with its long-term implications for regional travel and growth patterns needs to be equipped with high-capacity transit to serve the region in an era of rising energy costs. Building a long-term facility that is not capable of accepting light rail in the future would be extremely short sighted.

The addition of light rail transit (LRT) to a new SR 520 bridge can provide a key segment in a more developed network of high capacity transit for our region. An alignment using the SR 520 corridor can directly connect Kirkland, Bellevue, or Overlake with the University of Washington and eventually extend west as a Seattle cross-town route through to Ballard. The recent work by City of Seattle transportation consultant Nelson\Nygaard illustrates the challenges of making this project capable of including LRT in its configuration. Sierra Club supports the following features to assist inclusion of LRT in the 520 project:

(1) dedicated high-capacity transit lanes capable of carrying light rail trains connecting major urban centers;

(2) construct bridge from outset to accommodate weight of light rail trains without costly retrofit in the future;

(3) phased approach with bus rapid transit (BRT) when new structure opens convertible to light rail when plan and finances are identified and ready;

(4) separate the east- and west-bound lanes of SR 520 near Foster Island for light rail alignment to drop below or rise above highway and diverge to connect with UW light rail station;

(5) minimize overall width especially by speed reduction in design standards to reduce need for wider bridge corridor to serve light rail needs. Keep bike / pedestrian path consistent with City of Seattle standards.

Sierra Club supports this EIS process examining the inclusion of LRT as part of the eventual configuration for SR 520. Even if an additional Supplemental EIS is needed, we cannot afford to preclude the addition of light rail simply to hold the project timeline to a somewhat arbitrary alternative selection schedule. The quality of the final outcome matters more than the amount of sunk cost and time already expended on this project. We face key challenges from climate change and rising energy costs; hence the imperative to "get this right" now before moving forward.

C-038-011

Sierra Club is committed to a future of smarter energy and transportation choices. The choices we make today will determine whether or not the region can navigate a path toward sustainability tomorrow. When investing in transportation infrastructure for half or three-quarters of a century, the region needs to take into account the imperative to reduce GHG emissions and to provide high quality transit in this corridor. The public will be best served when our resources are spent in the most environmentally effective, least damaging manner. Consistent with these values and objectives, Sierra Club urges WSDOT to revise the SR 520 project by:

future transportation needs in the corridor is consistent with NEPA, SEPA, and regional and local planning requirements, including the Washington State Growth Management Act.

C-038-004

Please see the response to comment C-038-002. The project's purpose statement, quoted in that response, focuses on mobility rather than congestion reduction. As described in the response, person-trips in the corridor with the project would increase to a greater degree than vehicle-trips, maximizing the efficiency of the system as a result of greater use of transit and carpooling. This result would be brought about partly by tolling and partly by the enhanced travel time savings and reliability afforded to transit and carpools using the HOV lanes. The ESSB 6392 workgroup process developed recommendations to improve bicycle and pedestrian environments near the corridor and identified priority treatments for transit in the SR 520, I-5 to Medina project vicinity. Through these improvements, the project would expand mobility options and reduce VMT and GHG emissions in the corridor.

Given its purpose of enhancing mobility and its location in an urban setting that is already densely populated, the SR 520, I-5 to Medina project does not include provisions for transit-oriented development. Such activities are outside the project's scope. However, WSDOT has collaborated extensively with Sound Transit, King County Metro, and Sound Transit in their development of the Montlake Multimodal Center, which is discussed in the Final EIS and described in more detail in the 2008 SR 520 High-Capacity Transit Plan.

As noted in the response to comment C-038-001 and 002, the project would improve air quality and reduce noise compared to No Build. It is consistent with the recommendations of the SR 520 Health Impact Assessment prepared by King County Public Health and the Puget Sound Clean Air Agency in 2008. Because the Preferred Alternative has

C-038-011

* eliminating ramps to/from Lake Washington Blvd. E.;
* retaining the transit flyer stops along SR 520 at Montlake Blvd.;
* incorporating the response to tolling more accurately into traffic projections and resulting capacity assumptions and designs;
* adopting minimal impact design standards;
* designating any additional two lanes as transit only; and
* designing the bridge corridor to accommodate light rail transit within never more than a 6-lane footprint.

We appreciate the opportunity to discuss our perspectives regarding this important transportation investment.

Sincerely,

Morgan Ahouse
Chair, Sierra Club Cascade Chapter

cc: Mayor Mike McGinn, City of Seattle
Seattle City Council

lower impacts in almost all environmental disciplines than any other alternative that meets the project purpose and need, it is identified in the Final EIS as the environmentally preferable alternative.

C-038-005

As explained on page 1-37 of the SDEIS, the SR 520 Variable Tolling Project will implement tolling on SR 520 in 2011 for the primary purpose of managing traffic congestion. This toll would remain in place until the construction of the SR 520, I-5 to Medina project, and would then be replaced with new tolls adopted by the Transportation Commission to provide project funding in accordance with the financing plan. Although the state Legislature has authorized allocation of revenues from the Variable Tolling Project to fund the SR 520 Pontoon Construction Project and the SR 520, Medina to SR 202: Eastside Transit and HOV Project, the toll would be removed when the bonds for those projects are repaid, which is expected to be before 2030. Therefore, if the SR 520, I-5 to Medina project were not built, there would be no toll in effect in 2030, which is the year used to compare the No Build Alternative and the Build alternatives. This is why the baseline No Build Alternative assumption is that the SR 520 corridor would not be tolled.

WSDOT and FHWA recognize the possibility that the Legislature might choose to extend the duration of variable tolling for congestion management purposes, even if the I-5 to Medina project were not implemented. Additionally, discussions of tolling are taking place at a regional level. Accordingly, WSDOT performed a sensitivity analysis to understand how traffic modeling results for the SR 520, I-5 to Medina project might differ if the No Build Alternative were tolled. This analysis showed that transit and HOV use would increase with a tolled No Build, but only by about half as much as they would under the Preferred Alternative. It also showed that the tolled No Build Alternative would move about 10,000 fewer people each day through the SR 520 corridor than the untolled No Build, and about 20,000 fewer people than the

Preferred Alternative. In other words, the mobility benefits of the Preferred Alternative are even greater when compared to a tolled No Build Alternative than they are compared to the untolled No Build used for the EIS analysis. The sensitivity analysis is summarized in more detail in Section 5.1 of the Final EIS.

As described in the SDEIS, Engrossed Substitute House Bill (ESHB) 2211 established a Tolling Implementation Committee, which evaluated ten different approaches to tolling SR 520 and I-90. The committee submitted its findings to the legislature and the Governor on January 28, 2009, including those for a potential tolling of I-90.Ultimately, the Washington State Legislature decided to implement tolls only on SR 520.However, ESHB 2211 does contain language allowing the tolling policy to be reconsidered if there are significant effects on nearby transportation facilities. Traffic analysis completed for the Final EIS does not show substantial diversion from SR 520 to I-90 in the design year, primarily because improved transit choices would be available on both routes through the startup of East Link on I-90 and the improved transit mobility provided by the SR 520 HOV lanes. While future region-wide tolling is being contemplated as part of PSRC's Transportation 2040 plan, there are no implementation steps in place that would make tolling on I-90, or any other currently untolled routes in the region, a reasonable and foreseeable action.

By law, tolls collected from SR 520 users, including both tolling of the existing bridge under ESSB 2211 and tolling following completion of the new bridge can be used only for SR 520 improvements, operations, and maintenance. Redirecting tolling revenue to support transit service would require legislative changes that are unlikely in the foreseeable future. However, the inclusion of HOV lanes and the project's forward compatibility with light-rail infrastructure will support transit optimization in the SR 520 corridor.

C-038-006

The Final EIS acknowledges Lake Washington Boulevard as a separate NRHP-eligible historic resource and a designated park boulevard.

The Washington State Department of Archaeology and Historic Preservation concurred with the boulevard's NRHP eligibility in August 2010.

The Preferred Alternative would reduce effects on the Washington Park Arboretum compared to previously studied design options in a number of ways. First, it would remove 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 at 24th Avenue East lid. The resulting access changes would reduce traffic volumes on Lake Washington Boulevard in comparison to the No Build Alternative.

The Preferred Alternative would also reduce SR 520's footprint through the Arboretum and over Foster Island compared to the SDEIS options. The Preferred Alternative includes a narrow footprint across Foster Island, with reduced right-of-way acquisition in the Arboretum compared to the SDEIS options (and compared to any 6-lane design option studied in the Draft EIS). In-water impacts of structures have been reduced to the maximum extent feasible through extensive consultation with natural resource agencies (see Chapter 1 of the Final EIS for details). The project includes the installation of facilities to collect and treat stormwater runoff using best management practices approved by the Washington State Department of Ecology. No detention ponds are proposed.

Following the identification of the Preferred Alternative, WSDOT worked extensively with the Arboretum and Botanical Garden Committee (ABGC) on the SR 520 Arboretum Mitigation Plan, as discussed in the

response to comment C-038-002. The Arboretum Foundation, as a member of the ABGC, participated in developing the plan and concurred with its recommendations.

C-038-007

The Preferred Alternative includes a number of context-sensitive design components.

Lane and shoulder widths throughout the corridor have been reduced to the extent allowable for protection of driver safety. In response to community suggestions, the SR 520 corridor between I-5 and the Montlake interchange would have a posted speed limit of 45 miles per hour and would operate as a boulevard or parkway. To support the boulevard concept, the width of the inside shoulders in this section of SR 520 would be narrowed from 4 feet to 2 feet, and the width of the outside shoulders would be reduced from 10 feet to 8 feet. The 10-foot outside and 4-foot inside shoulders in the remainder of the corridor are the smallest that FHWA will allow.

The Evergreen Point Bridge would be rebuilt in compliance with all current design standards. As a result of comments on the SDEIS, the height of the bridge above the water has been lowered compared to the Draft EIS and SDEIS designs to reduce visual effects. At midspan, the floating bridge would now be approximately 20 feet above the water, which is approximately 10 feet above its existing height. At this height, the bridge deck would not be susceptible to water splash from wind storms. Aesthetic design for the bridge (and the corridor as a whole) will be developed in coordination with affected communities and the Seattle Design Commission. Four-foot concrete traffic barriers with noise-absorptive coating would be used throughout the corridor, contributing to noise reduction compared to the No Build Alternative.

As discussed in the response to comment C-038-006, WSDOT analyzed

a number of roadway profiles and configurations to determine the design that would have least negative effects. This has reduced the project's width and bulk to the extent compatible with meeting the purpose and need. Once completed, the Preferred Alternative would improve greenhouse gas emissions, air quality, and noise effects in the corridor compared to the No Build Alternative.

As discussed in the response to comment C-038-002, the ESSB 6392 workgroup considered design refinements and transit planning for the Preferred Alternative. The ESSB 6392: Design Refinements and Transit Connections Workgroup Recommendations Report (Attachment 16 to the Final EIS) recommends design improvements that include priority intersection movements for transit on Montlake Boulevard, as well as a variety of traffic calming measures.

The ESSB 6392 workgroup considered priority treatments for transit in the project area and the Montlake corridor. The workgroup process resulted in a number of recommendations for improving transit speed and reliability between East Roanoke Street and the Montlake Multimodal Center. Furthermore, since the SDEIS was published, WSDOT has evaluated transit signal priority within the Montlake interchange area, in collaboration with the City of Seattle, King County Metro Transit, and Sound Transit. New traffic signal controller equipment would be compatible with transit signal priority equipment where it is currently provided:

- NE Pacific Place/Montlake Boulevard NE
- Montlake Boulevard NE northbound at East Shelby Street

Existing transit queue jump lanes on NE Pacific Place eastbound (also for 3+HOV) and Montlake Boulevard southbound would be retained.

Traffic signal controllers with the capability to include transit signal

priority would also be provided at:

- Montlake Boulevard NE southbound at East Shelby Street
- Montlake Boulevard NE/HOV Direct Access road
- NE 24th/HOV Direct Access road

WSDOT has committed to fund traffic calming measures along Lake Washington Boulevard and to work with the Seattle Department of Transportation on additional measures to manage traffic in the Washington Park Arboretum. More details are provided in the SR 520 Arboretum Mitigation Plan (Attachment 9 to the Final EIS).

C-038-008
WSDOT developed the transit elements of the Preferred Alternative through collaborative coordination with King County Metro Transit, Sound Transit, Seattle Department of Transportation, and University of Washington. Although the Preferred Alternative removes the Montlake Freeway Transit Station, transit connectivity is improved on the Montlake lid with additional bus stops and enhanced access between neighborhoods and to the Eastside. Along with improved transit connections, the lid will also enhance bicycle and pedestrian movement.

The workgroup made specific design recommendations to facilitate an adequate level of midday service between the University of Washington and Montlake and the Eastside. With the addition of service between the University District and Eastside destinations, riders would have a similar quality of service during peak periods as they do today. Since, SR 520 bus service in the Montlake interchange area would be reduced during the off-peak period in current plans, transit riders would have reduced cross-lake bus availability. During the off-peak, buses traveling between Downtown Seattle and the Eastside could exist at Montlake Boulevard to serve the new stops on the lid. Transit riders will also have new options due to light rail between the future Montlake Multimodal Center (currently

Montlake Triangle) and downtown Seattle.

Please see Chapter 8 of the Final Transportation Discipline Report (Attachment 7 to the Final EIS) for updated information regarding the effects of removing the Montlake Freeway Transit Station, and the subsequent transit facilities, rider connections, and bus stops on the Montlake lid.

C-038-009

Over the past decade, WSDOT has investigated a number of alternatives for the SR 520, I-5 to Medina project, ranging in design from an 8-lane alternative to a 4-lane alternative. In 2010, based on public comment 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. These design options are also not feasible and prudent alternatives under Section 4(f). Therefore, the 4-lane concepts were eliminated from further study. Section 2.4 of the Final EIS discusses why these alternatives are not being studied further for the SR 520, I-5 to Medina project.

C-038-010

The decision to locate Sound Transit's initial east-west light rail transit corridor on I-90 rather than SR 520 has been made through extensive regional deliberation. Chapter 2 of the Final EIS describes the history of regional decision making on east-west mass transit routes, which began in 1967 when the Comprehensive Public Transportation Plan for the Seattle Metropolitan Area identified a rail corridor from Seattle to Bellevue and Redmond on I-90. Subsequent studies and agreements over the next 40 years have all continued to identify I-90 as the preferred rail transit corridor, with predicted ridership similar to or more than SR

520 and with substantially lower costs and environmental effects.

Since the Trans-Lake Washington Project alternatives analysis determined in 2003 that light rail would not be an initial component of the SR 520 corridor, WSDOT has worked with Sound Transit to design the corridor for future rail compatibility. The April 2010 Nelson/Nygaard report identified several changes to the SDEIS options that were believed to be necessary to “meet the mayor’s goal of an SR 520 bridge that is readily convertible to rail.” Although WSDOT believed that the design had already achieved this goal, it continued to work with the City of Seattle and Sound Transit to identify changes that would enhance the corridor’s rail compatibility. The Preferred Alternative reflects these design changes. As discussed in Chapter 2 of the Final EIS, the Preferred Alternative is compatible with two future rail options:

- Option 1: Convert the HOV/transit lanes to light rail. This approach would accommodate light rail by converting the HOV lanes to exclusive rail use. Trains would use the direct-access ramps at Montlake Boulevard to exit, or they could use a 40-foot gap between the northbound and southbound lanes of the west approach to make a more direct connection to the University Link station at Husky Stadium.
- Option 2: Add light-rail-only lanes. This approach could provide several connections—via a high bridge, a drawbridge, or a tunnel, as suggested in the Nelson/Nygaard report—to the University Link station.

Both approaches would require supplemental floating bridge pontoons to support the additional weight of light rail if the regional decision to implement light rail were made and funded. Such a decision would need to be planned and programmed by regional land use and transit agencies, funded by a public vote, and evaluated in its own environmental analysis.

The Preferred Alternative is consistent with the comment's suggestions regarding accommodation of future light rail. Features of the project that support future light rail include:

- HOV lanes capable of carrying future light rail trains if supplemental stability pontoons are added(the modular design of the pontoons makes this feasible without major retrofit)
- Flexibility to accommodate a phased HCT approach, with BRT recommended for initial implementation when the new structure opens and the potential for conversion to light rail when plans and finances are identified and ready
- Eastbound and westbound lanes of west approach bridge separated for light rail alignment to drop below or rise above the highway to connect with the UW light rail station
- Overall width minimized to the extent consistent with maintaining mobility in the corridor
- Bike/pedestrian path width consistent with applicable standards

Because construction of a light rail line across SR 520 is not reasonably foreseeable under current regional planning and is not part of the proposed action for the SR 520, I-5 to Medina project, it is not evaluated in the project's EIS. However, the Preferred Alternative's features to accommodate future rail transit support continued regional planning for rail as a long-term transportation option in the corridor.

C-038-011

A number of design refinements in the Preferred Alternative are consistent with the suggestions provided in the comment. They include:

- The Preferred Alternative would remove the Lake Washington Boulevard ramps. Although traffic would still be able to move between Lake Washington Boulevard and SR 520, the change in

access would reduce vehicle trips through the Arboretum compared to No Build.

- As a result of coordinated planning efforts and the ESSB 6392 workgroup process, transit connectivity will be enhanced on the Montlake lid. One of the design modifications at the Montlake transit stop will allow off-peak SR 520 buses to exit to Montlake Boulevard and provide similar service as the existing freeway transit stop.
- Context-sensitive design has been applied through the corridor. The Preferred Alternative reduces overall right-of-way needs (including acquisition of park lands) compared to the SDEIS options and incorporates innovative measures to reduce noise.
- The Preferred Alternative includes one HOV lane in each direction on SR 520, along with new HOV lanes on Montlake Boulevard. The traffic analysis assumed that the HOV lane would be designated for use by transit and carpools with 3 or more people. This occupancy requirement would keep the carpool traffic volume relatively low so that transit travel time and reliability would not be impeded. Traffic operations in the SR 520 HOV lanes would provide similarly improved travel times and reliability for transit whether the lanes are dedicated for transit or also allow carpool use for vehicles with 3 or more people.
- The Preferred Alternative would optimize future compatibility with light-rail transit.

See the response to Comment C-038-005 regarding the sensitivity analysis that WSDOT performed for a tolled No Build scenario.