SR 520 - Bridge and HOV Project
Westside Project Impact Plan
December 2008

Submitted to: Joint Transportation Committee, Governor Chris Gregoire

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SR 520 - Bridge Replacement and HOV Project

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This document was prepared in response to Engrossed Substitute Senate Bill (ESSB) 6099 passed during the 2007 legislative session. In May 2007, Governor Chris Gregoire signed the bill, which became Chapter 517, Laws of 2007. This directive outlined the elements for convening a community group to mediate a solution for a Westside solution in the City of Seattle for this project. This document is the mandated Project Impact Plan which summarizes the results of the mediation and describes the three Options that the group identified during that process. Through the mediation process the participants identified their community interests, this document outlines how those interests are met by each Option.

Mediation Participants:

David Dye	WSDOT (lead agency – EIS)
Greg Walker	Sound Transit (lead agency – EIS)
Ron Judd	Office of the Governor
Theresa Doherty	University of Washington
Kevin Desmond	King County Metro Transit
Tim Ceis	Seattle Mayor's Office
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Tasha Atchison	City of Seattle Design Commission
Paige Miller	The Arboretum Foundation and The Arboretum and Botanical Garden Committee (ABGC)
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Jorgen Bader	University District Community Council
Nancy Brainard	North Capitol Hill Community Council
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Grant Degginger	Bellevue, Mayor
Dave Asher	Kirkland, Mayor
Steve Boch	Federal Highway Administration
Mike Grady	NOAA Fisheries (National Marine Fisheries Service) & U.S. Fish and Wildlife Service
Austin Pratt	U.S. Coast Guard
Legislature	(one seat available)

Project Managed by:	Jennifer Ziegler, Transportation Policy Advisor Governor's Executive Policy Office
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Acronyms and Abbreviations

ATM	Active Traffic Management
Corps	U.S. Army Corps of Engineers
DAHP	Washington Department of Archaeology and Historic Preservation
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
ERP	expert review panel
ESA	Endangered Species Act
ESSB	Engrossed Substitute Senate Bill
FHWA	Federal Highway Administration
HOV	high-occupancy vehicle
MOHAI	Museum of History and Industry
NEPA	National Environmental Policy Act
NHRP	National Register of Historic Places
NMFS	National Marine Fisheries Service
SEPA	State Environmental Policy Act
SPUI	single-point urban interchange
TDM	Transportation Demand Management
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
WDFW	Washington Department of Fish and Wildlife
WSDOT	Washington State Department of Transportation

Executive Summary

ES 1.1 What was required by ESSB 6099?

The existing SR 520 bridges are vulnerable to earthquakes and windstorms and today carry approximately 155,000 to 160,000 people across Lake Washington each day. The Washington State Department of Transportation (WSDOT) is leading a project to replace these bridges to preserve public safety and add a high-occupancy vehicle (HOV) lane to improve mobility. One key challenge for replacing the SR 520 bridges is identifying the interchange design, community enhancements, and mitigation for the west side of the corridor. Recognizing the difficulty and urgency of choosing a westside interchange, the Washington State Legislature passed Engrossed Substitute Senate Bill (ESSB) 6099 during the 2007 legislative session. Governor Chris Gregoire signed the bill into law in May 2007.

ESSB 6099 directed the state Office of Financial Management to hire a mediator to facilitate an agreement on the interchange. Specifically, the bill directed the mediation group to develop a project impact plan to address the impacts of the SR 520 Bridge Replacement and HOV Program's design on Seattle city neighborhoods and parks. Additionally, the bill directed that the project impact plan provide a comprehensive approach to mitigating the impacts of the project, including incorporating construction mitigation plans.

The Office of Financial Management hired the Keystone Center from Colorado to serve as mediators and Parametrix to support the mediation effort and the development of the project impact plan.

Keystone and the Mediation Group

The mediation began in September 2007. The mediators established that the purpose of the group which was to:

- Create a common understanding of the transportation, environmental, neighborhood, and economic issues associated with SR 520 reconstruction.
- Articulate various solutions to these issues in Seattle and explore the advantages and disadvantages of each solution using the legislatively prescribed 6-lane preferred alternative as the only basis for discussion.
- Ensure that these possibilities fit with the emerging solutions to the same set of issues on the east side of the lake.
- Arrive, if possible, at a consensus solution.
- Reach agreement on the components of a project impact plan for addressing impacts of SR 520 bridge replacement and HOV project design on Seattle city neighborhoods, parks and institutions and ensure that these are integrated into the high capacity transit plan and the Supplemental Draft Environmental Impact Statement (SDEIS).

The stakeholders were defined through interviews with a broad range of stakeholders, including those identified in the legislation and others who had been actively involved with the SR 520 project team. Each interviewee was asked the following questions:

- Are all interests represented by at least one agency or group?
- Does each organization/agency represent a well-defined constituency (as opposed to an individual such as a single property owner)?
- Are the government agencies with permitting authority included?
- Which areas or neighborhoods are directly impacted (the facilities would lie within the boundary; the residents would see or hear the facility), and which are affected at some greater distance (potential for changes in traffic patterns, etc.)?

Once constituencies were identified, each was asked to nominate a person to represent their interests at the table.

The group consisted of the following individuals representing the following organizations:

1. David Dye	Washington State Department of Transportation (lead agency – EIS)
2. Greg Walker	Sound Transit (lead agency – EIS)
3. Ron Judd	Office of the Governor
4. Theresa Doherty	University of Washington
5. Kevin Desmond	King County Metro Transit
6. Tim Ceis	Seattle Mayor's Office
7. Richard Conlin	Seattle City Council, President
8. Tasha Atchison	City of Seattle Design Commission
9. Paige Miller	The Arboretum Foundation and The Arboretum and Botanical Garden Committee (ABGC)
10. David Hiller	Cascade Bicycle Club
11. Larry Sinnott	Friends of Seattle's Olmsted Parks
12. Rob Johnson	Transportation Choices Coalition
13. Gary Stone	Boating Community
14. Mark Weed	Seattle Chamber of Commerce
15. Shannon Boldizsar	Bellevue Chamber of Commerce
16. John Odland	Freight Advisory Committee
17. Jonathan Dubman	Montlake Community Council
18. Maurice Cooper	Madison Park Community Council
19. Ted Lane	Roanoke/Portage Bay Community Council
20. Colleen McAleer	Laurelhurst Community Council
21. Jorgen Bader	University District Community Council
22. Nancy Brainard	North Capitol Hill Community Council
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24. Virginia Gunby	Ravenna Bryant Community Council
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26. Mark Nelson	Medina, Mayor
27. George Martin	Clyde Hill, Mayor
28. Fred McConkey	Hunts Point, Mayor

29. Grant Degginger	Bellevue, Mayor
30. Dave Asher	Kirkland, Mayor
31. Steve Boch	Federal Highway Administration
32. Mike Grady	NOAA Fisheries (National Marine Fisheries Service) & U.S. Fish and Wildlife Service
33. Austin Pratt	U.S. Coast Guard
34. Legislature	(one seat available to any legislator who wishes to attend a mediation session)

The mediation group developed westside interchange options and identified their effects on neighborhoods, quality of life, traffic, and the environment. The legislation that established the mediation also required that they consider the effects on parks, the Washington Park Arboretum and the University of Washington.

The goal of mediation was to select westside interchange options for the six-lane configuration to analyze further in a supplemental draft EIS and to produce this project impact plan by December 2008.

This plan identifies the group's recommended westside interchange configurations. The plan also includes project effects and community mitigation recommendations. The plan summarizes the analysis from the Health Impact Assessment, prepared by Public Health - Seattle & King County and the Puget Sound Clean Air Agency.

ES 1.2 What were the primary drivers and trade-offs in developing Options A, K, and L?

Section 3 provides a general description of each option as developed by the mediation participants. These Options are a compilation of different elements that were developed during the initial stages of mediation. What follows is a high level description of how the option was conceived and what community interests were prioritized.

The primary difference among the Options is how to get to and from SR 520 north into the University District, and how traffic is handled through the Washington Park Arboretum. These two issues drive how the SR 520 roadway passes through the community, how access to the community is accommodated, and ultimately how cars and transit circulate within the area.

There are some variations among the Options to the west and east of the Montlake area. They include the type of aesthetic treatment to be used for the Portage Bay structure and the ultimate profile to be used at Foster Island and east to the bridge. However, decisions on these issues will need additional information on environmental impacts, constructability, and costs to help determine the final solution.

All options place an emphasis on multimodal transportation by decreasing reliance on single occupant vehicle travel and favoring transit. All options improve the overall flow of the SR 520 traffic. They all provide for enhanced bicycle and pedestrian facilities with some variation in terms of physical separation from traffic and routing. Every option promotes the use of Transportation Demand Management (TDM) techniques and Active Traffic Management (ATM), such as signal priority and signage, to encourage the use of

alternative modes of travel to the automobile and improve transportation system efficiencies.

Each Option highlights different choices in community priorities to be addressed. All community interests are important and each Option meets various interests in different forms. Each Option prioritizes community interests in a different way.

Option A prioritizes preservation of the Washington Park Arboretum by removing the Lake Washington Boulevard ramps that exist today. It focuses on the use of existing transportation corridors to minimize disruption of the area. It minimizes the size of the SR 520 roadway by trading off direct transit access to the eastbound SR 520 HOV lanes. Option A recommends an aggressive TDM strategy to reduce private auto trips. It also recommends the establishment of a multimodal Corridor Management Agreement that includes land use and development actions that encourage transit (and non-automobile) supportive decisions by local jurisdictions in the corridor. It is the lowest cost Option to construct and results in arterial traffic operations that are better than No Build.

Option K prioritizes moving people as quickly as possible through the SR 520 corridor and on local arterials while keeping the SR 520 roadway and ramps low or "out of sight." Based on the initial transportation analysis, it effectively moves people and goods through the system. It provides a Montlake Boulevard NE and Pacific Street intersection lid for grade-separated pedestrian and bicycle movements. It does maintain access at Lake Washington Boulevard to all movements through that area. It is the most costly of all options to construct and results in arterial traffic operations that are slightly better than Option's A and L.

Option L was developed to balance the transportation benefits found in Option K with a less costly Option to construct. South of SR 520, it maintains a connection at Lake Washington Boulevard and limits access to reduce the amount of traffic using this access point. It provides a Montlake Boulevard NE and Pacific Street intersection lid for grade-separated pedestrian and bicycle movements. It has a higher profile east of Foster Island, builds a bascule bridge at the east end of the Montlake Cut and does not meet any community objective for visual obtrusiveness. It is slightly more costly to construct than Option A and results in arterial traffic operations similar to Option K.

Common Elements and mitigation recommendations

While there are still three Options on the table, the participants have worked hard to come to agreement in many areas:

- A narrower footprint in the most critical areas by removing the Montlake Transit Flyer Stop and consolidating ramps, or access points that exist today.
- A lower overall profile from what was described in the draft EIS.
- A common Portage Bay Bridge alignment, with some slight variation on how the bridge aesthetics is decided.
- A common horizontal alignment from Foster Island to the floating bridge. There are variations of the height of the bridge.

- Added TDM elements, including transit improvements, which they see are essential. A combination of strategies was proposed (see Appendix 10.3) and should be discussed with stakeholders once a preferred Option is selected. TDM measures should be implemented before, during, and after construction.
- All options recognize the importance to transit facility and service improvements to address the removal of the Montlake Flyer stop. BRT plans have been developed that improve the transit connectivity and access to the Montlake Multimodal Center and University of Washington Station. All options recommend improving north-south transit service to offset the removal of the Montlake Transit Flyer Stop at SR 520.
- Noise reduction is a top priority during and after construction. The use of quieter pavement and many of the Acoustics Expert Review Panel (ERP) recommendations is essential. It is recommended that community input to noise reduction measures be considered.
- All options build green space along the corridor to enhance pedestrian and bicycle flow and connect communities.

There is a lot more that has been conveyed by the participants. They have worked very hard over the last several months to record their thoughts for you on the choices to be made. This document contains stakeholder statements in Section 9 regarding individual community positions on the Options. While mediation was not able to achieve consensus on a single westside design option, they have clarified their interests and have engaged in defining solutions for a project that they believe meets their interests.

ES 1.3 What do Options A, K, and L have in common and how do they vary?

What are the Common Design Elements for Options A, K, and L

The graphic below shows the sections of the Westside SR 520 corridor that are common.

Options A, K, and L

Common Design Elements:

- From I-5 to the middle of Portage Bay, the Options are common. The facility will include lids and a viaduct alignment that are common for each Option, including a reversible direct access ramp to and from the I-5 express lanes.
- East of Foster Island all Options realign the roadway to straighten curves and move the alignment 100 feet north.
- All Options have a low roadway profile compared to the prior Draft Environmental Impact Statement designs. The profile is the same for Options A, K, and L, except from Foster Island to the western highrise of the SR 520 Floating Bridge.
- The footprint has been reduced by the elimination of the Montlake Transit Flyer Stop.
- There is no widening of Montlake Boulevard NE north of Pacific Place.
- There are no additional lanes on Pacific Street.
- Constructs additional bicycle and pedestrian facilities along the corridor, improving connections and access to surrounding parks and neighborhoods including pedestrian connections at Foster Island.
- Adds lids over SR 520 throughout the corridor creating more open space and connecting communities.
- Future rail is accommodated in the corridor through the Foster Island section of SR 520 to I-405.
- Need to displace the Museum of History and Industry.
- All options remove the existing R.H. Thomson interchange ramps.

Community Interests:

- Noise reduction is a top priority. Noise mitigation including quiet pavement, sound walls and other measures along the majority of the corridor are recommended. Review and consider the Acoustics ERP recommendations.
- Increased transit service between SR 520 and Montlake Multimodal Center to address the removal of the Montlake Transit Flyer Stop.
- Improve transit service north and south to better service local neighborhoods.
- Recommend implementation of transportation demand and active traffic management to manage traffic flow and reduce single-occupant vehicle trips.
- A desire for the Portage Bay Bridge to be a visually appealing/historic structure with a consistent/compatible theme through the neighborhoods.
- Utilize good urban design by enhancing green space in the corridor with lid applications as appropriate for each Option.
- Aesthetic treatments, landscaping, and design guidelines to promote visual continuity and design consistency along the corridor.

Early Action Improvements Suggested by Mediation Participants

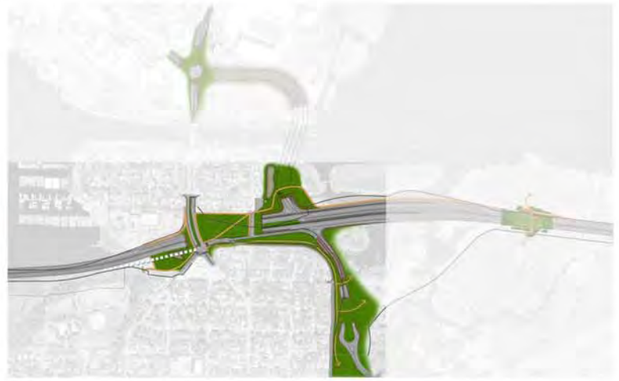
- Include traffic delineation for better separation of SR 520 and local traffic is needed on Montlake Boulevard from south of SR 520 to Pacific Place (signing and striping to get vehicles positioned into the correct lanes to reduce conflicts).
- Optimize traffic signal timing on Montlake Boulevard to favor progression and the efficient movement of the greatest number of people and goods.

Long Term Improvements Suggested by Mediation Participants

- Explore opportunities to develop a SR 520 Corridor Management Agreement with local jurisdictions along the corridor to encourage transit friendly land use and other development decisions.
- Implement best management practices for storm water, construction and design with the goal to exceed standard requirements.
- Limit the use of temporary bridges to reduce impacts.

Montlake Area

The graphics below show the varying design elements and community interests that influenced design decisions for the Montlake Area for Options A, K, and L.



How do the Design Elements vary in the Montlake Area?

Option A

Design Elements:

- Reconstruct Montlake Interchange with a similar configuration in the same location.
- Places an emphasis on transit priority where by including a westbound transit-only off-ramp to Montlake Boulevard.
- Removes Lake Washington Boulevard ramps.
- Two-lane on-ramp westbound with auxiliary lane from Montlake Interchange to I-5.
- Proposes a McCurdy Park Lid.

Community Interests Specific to each Option:

- Promotes increased transit access on Montlake Boulevard by retaining existing bus zones and calling for additional bus frequency.
- Preserves class 1 wetlands at McCurdy Park and through Foster Island.
- Preserves integrity of the Washington Park Arboretum by eliminating Lake Washington Boulevard ramps.
- Concentrates construction in existing areas thereby minimizing environmental impacts.
- Recommends development of a Corridor Management Agreement and the use of variable tolling.
- Restores McCurdy and East Montlake Parks and has a lid over SR 520.

Option K

Design Elements:

- Includes a SPUI under the mainline SR 520 at McCurdy Park.
- Provides a ramp connection between SR 520 and the University of Washington, the Montlake Multimodal Center and removes draw-bridge vehicle delay during off-peak hours.
- Includes southern access ramp to and from SR 520 to Lake Washington Boulevard through the Washington Park Arboretum.
- Moves Montlake Interchange to the east, changing access to SR 520 to north of the Montlake Cut and south of the existing interchange.

Community Interests Specific to each Option:

- Underground tunnel eliminates additional impacts caused by bascule bridge operations, which affect vehicle and boating operations.
- Compliment Rainier Vista improvements proposed by University of Washington, which includes no additional elevated crossing of the Montlake Cut.
- Minimizes impacts to the NOAA Science center.
- Restores McCurdy and East Montlake Parks and has a lid over SR 520.

Option L

Design Elements:

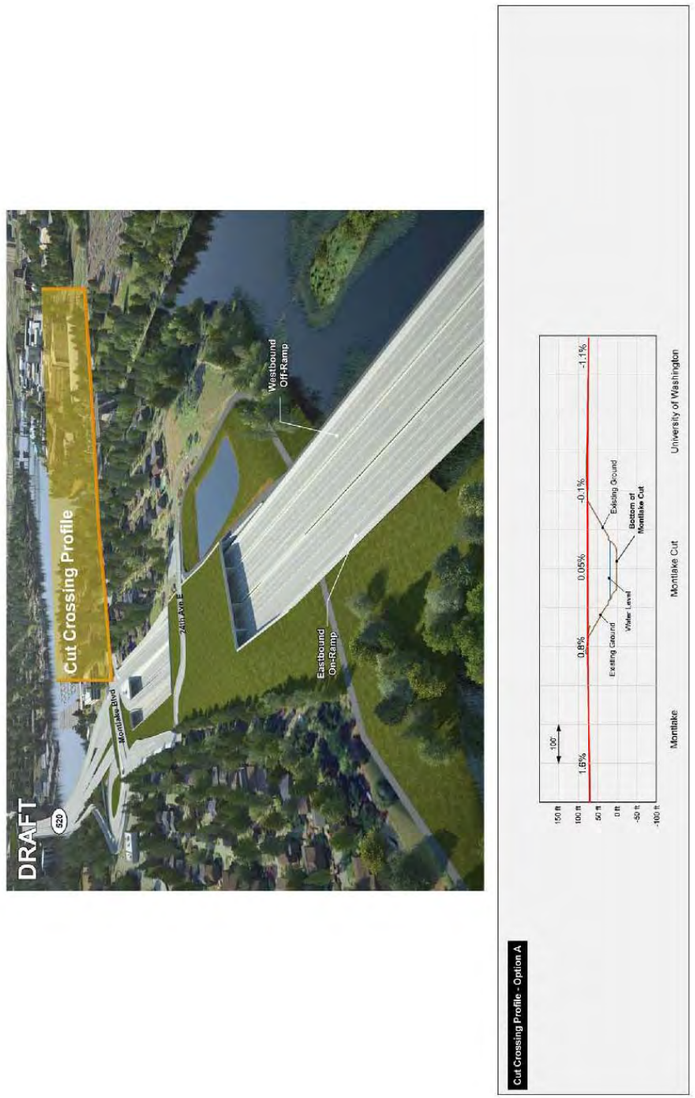
- Includes a SPUI over the mainline SR 520 at McCurdy Park.
- Includes ramp connections to Lake Washington Boulevard. Limits access from Lake Washington Boulevard to westbound SR 520.
- The grade from Montlake Boulevard east to the floating bridge rises at a gradual slope to manage stormwater runoff without additional pumping or facilities on Foster Island.
- Moves Montlake Interchange to the east, changing access to SR 520 to north of the Montlake Cut and south of the existing interchange.

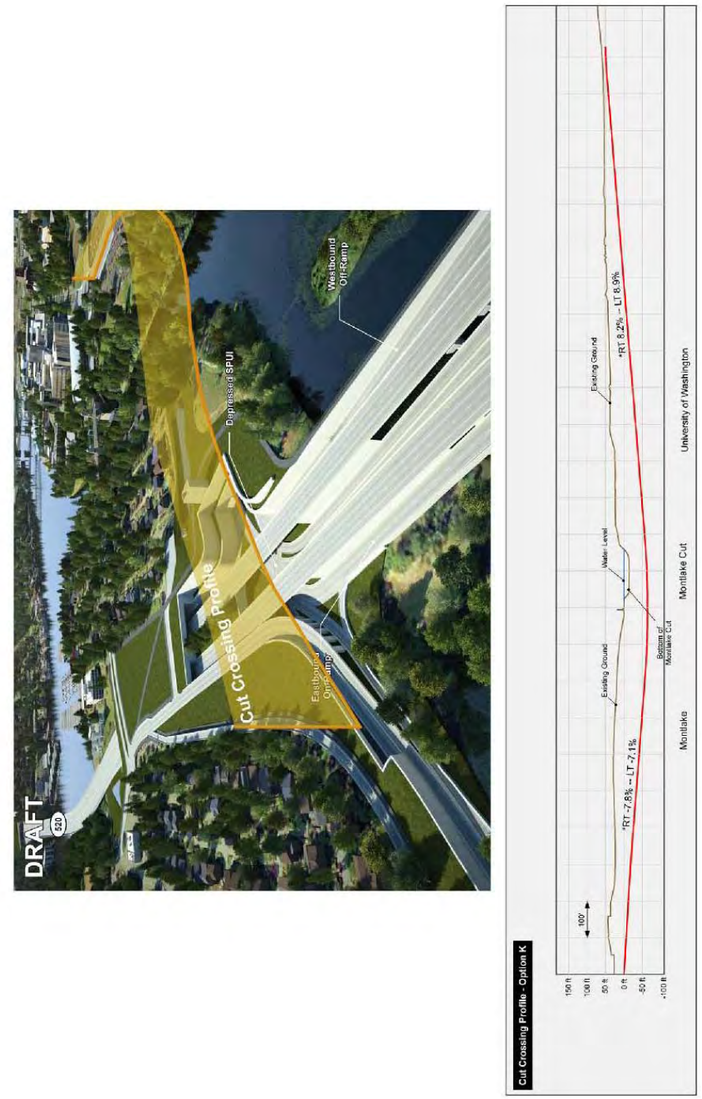
Community Interests Specific to each Option:

- Minimizes impacts to the NOAA Science center.
- Adds roadway capacity across the Montlake Cut.

Montlake Area

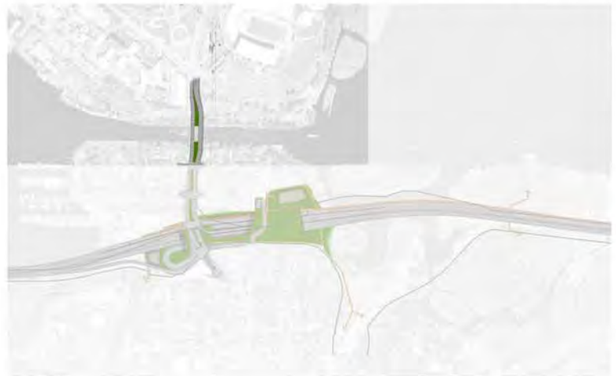
The graphics below show a perspective and how the cut crossing profiles vary in the Montlake Area for Options A, K, and L.

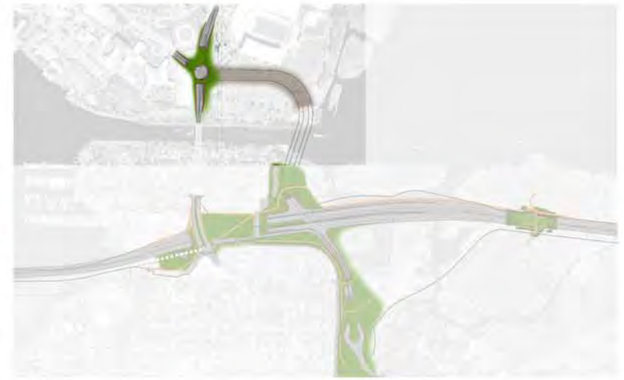




Pacific Street / Montlake Boulevard NE Area

The graphics below show the varying design elements and community interests that influenced design decisions for the Montlake Cut crossing and Pacific Street / Montlake Boulevard NE Area for Option A, K, and L.





How do the Design Elements vary in the Pacific Street / Montlake Boulevard Area?

Option A

Design Elements:

- Adds a second Montlake Cut bascule bridge parallel to the existing Montlake bridge, adding additional capacity to Montlake Boulevard. Complementary visual theme for second bridge.
- Recommends providing additional signage and lane delineation, including bus yield signs on Montlake Boulevard to improve auto and bus operations.
- Minimize impact to Montlake Boulevard NE and Pacific Street intersection.

Community Interests Specific to each Option:

- Protects Rainier Vista view corridor by not constructing within or adjacent to the view shed.
- Does not affect University of Washington Husky Stadium Property, preserving it for future development.
- Maintains existing at-grade pedestrian and bicycle crossings at the Montlake Boulevard NE and Pacific Street intersection.
- Adds roadway capacity across the Montlake Cut.

Option K

Design Elements:

- Includes a tunnel under the Montlake Cut eliminating additional navigation barriers.
- Constructs a grade-separated bicycle and pedestrian crossing at Montlake Boulevard NE and Pacific Street.
- Moves existing SR 520 Montlake Boulevard NE access to the Pacific Street and Montlake Boulevard NE intersection.

Community Interests Specific to each Option:

- Compliment Rainier Vista improvements proposed by University of Washington, which includes no additional elevated crossing of the Montlake Cut.
- Adds roadway capacity across the Montlake Cut without additional community visual impacts.
- No additional crossing over Montlake Cut, which reduces impacts to aquatic life due to increased shading.
- Grade-separated crossing eliminates conflicts between pedestrians and bicyclists with autos at this intersection.

Option L

Design Elements:

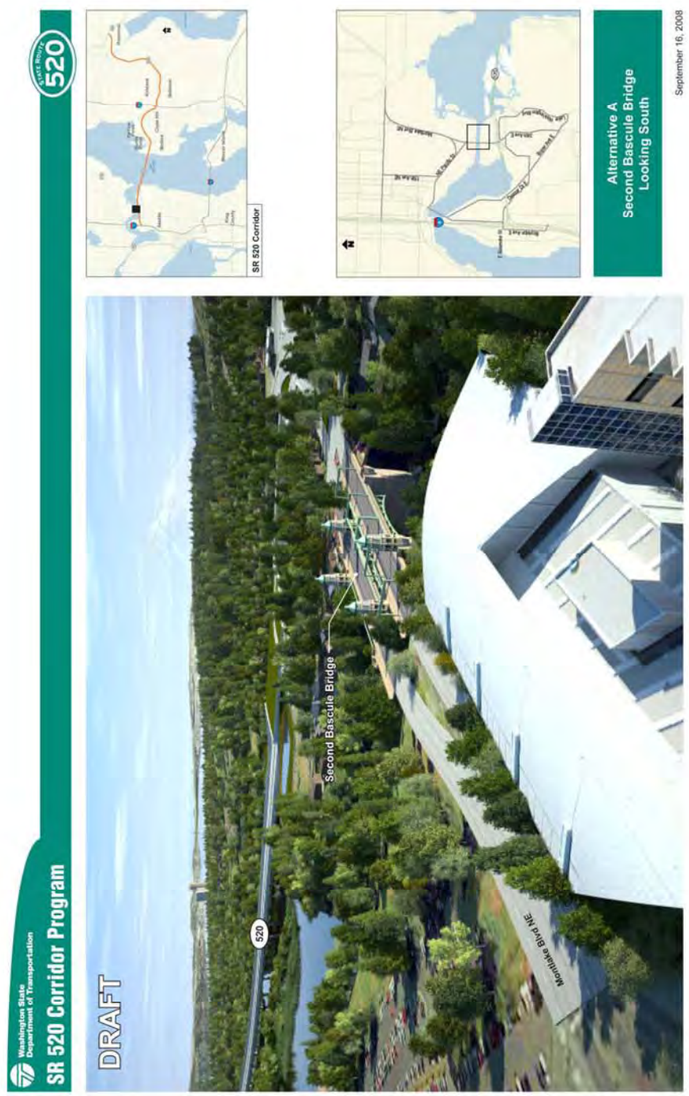
- Adds a second Montlake Cut crossing with a new bascule bridge at the east end of the Montlake Cut.
- Constructs a grade-separated bicycle and pedestrian crossing at Montlake Boulevard NE and Pacific Street.
- Moves existing SR 520 Montlake Boulevard NE access to the Pacific Street and Montlake Boulevard NE intersection.

Community Interests Specific to each Option:

- Adds roadway capacity across the Montlake Cut.
- Grade-separated crossing eliminates conflicts between pedestrians and bicyclists with autos at this intersection.

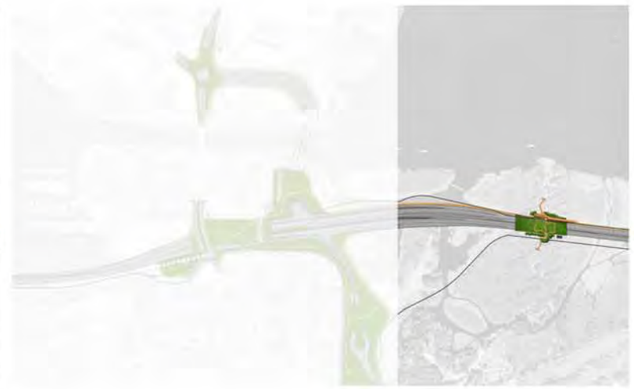
Pacific Street / Montlake Boulevard NE Area

The graphics below are representations of how Options A, K, and L propose to construct additional capacity over the Montlake Cut.



Washington Park Arboretum Vicinity

The graphics below show the varying design elements and community interests that influenced design decisions for the Washington Park Arboretum for Option A, K, and L.



How do the Design Elements vary in the Washington Park Arboretum Area?

Option A

Design Elements:

- Promotes a low bridge profile over Foster Island.
- Maintains existing water flow in and around Foster Island.
- Provides a bicycle and pedestrian connection under SR 520 at Foster Island.

Community Interests Specific to each Option:

- Protects the health of Union Bay and preserves the environment minimizing impacts to wetlands and recreational activities by limiting construction in this area.

Option K

Design Elements:

- Includes a land bridge over the roadway on Foster Island. The land bridge is approximately 600 feet long, 25 feet tall, 150 feet wide.
- Provides a bicycle and pedestrian connection over SR 520 at Foster Island.
- Provides visual open space connecting from the water through to the Washington Park Arboretum.

Community Interests Specific to each Option:

- Protects community views.
- Adds additional green space through the corridor.
- Recommends adding a fountain or other visual interest on the land bridge.

Option L

Design:

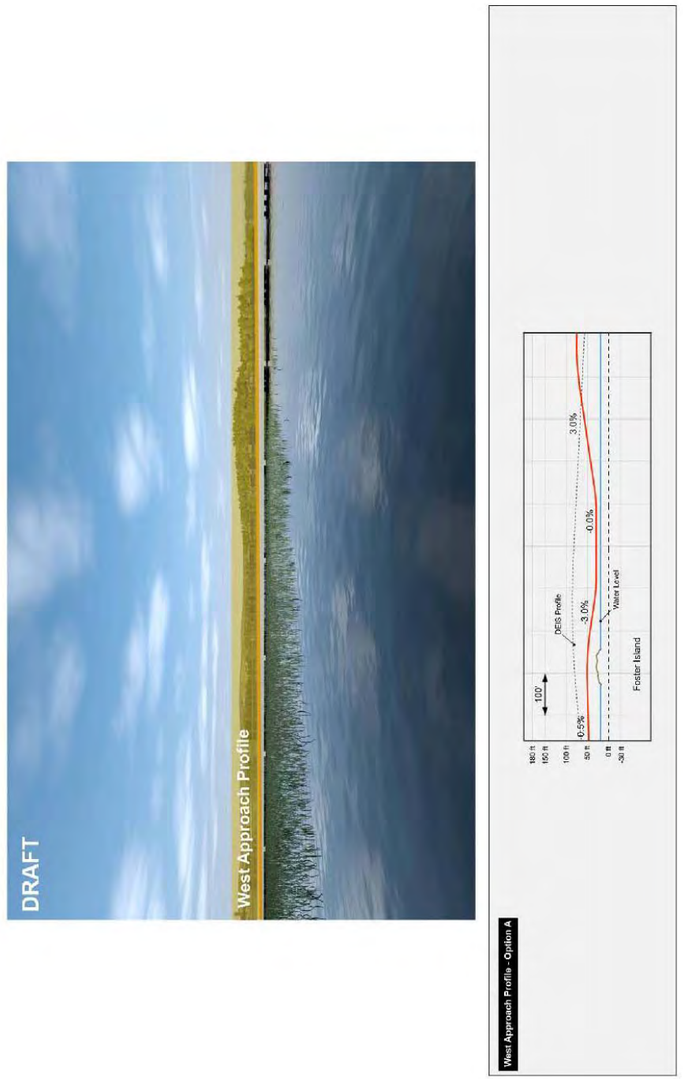
- Includes a gradual profile grade from McCurdy Park to the western navigation passage to improve storm water management.
- Maintains existing water flow in and around Foster Island.
- Provides a bicycle and pedestrian connection under SR 520 at Foster Island.

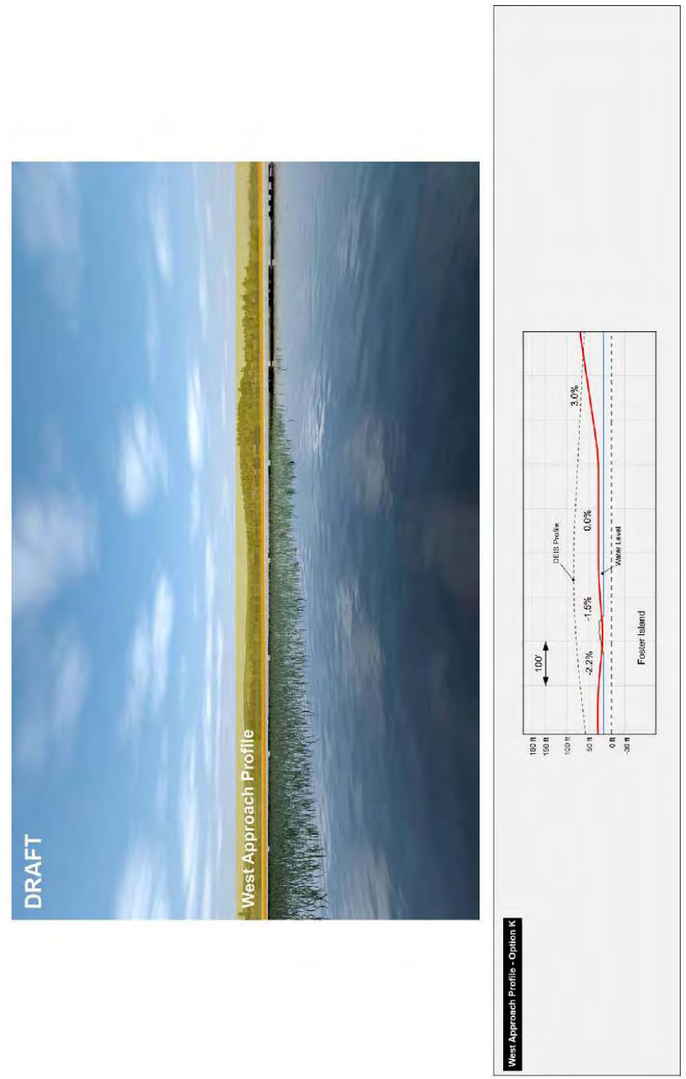
Community Interests Specific to each Option:

- Protects the health of Union Bay and preserves the environment minimizing impacts to wetlands and recreational activities by limiting construction in this area.

Washington Park Arboretum Vicinity

The graphics below show a perspective and how the cut crossing profiles vary in the Washington Park Arboretum vicinity for Options A, K, and L.





ES 1.4 How do Options A, K, and L meet the project's Purpose and Need?

	Common	Option A	Option K	Option L
Improving mobility for people and goods.	• Four general-purpose lanes and two HOV lanes, which moves more people than the existing four-lane option. • Improves regional mobility with bicycle and pedestrian trails. • Provides transit/HOV access ramps to and from the I-5 Express Lanes • Improved transit service provides alternatives to single occupant vehicle travel.	• Provides transit only direct access ramp from WB SR 520 and a Transit/HOV bypass on EB ramp. • Expanded capacity over the Montlake Cut via parallel bascule bridge. • Closure of Lake Washington Boulevard ramps increases congestion on Montlake Boulevard.	• Provides a direct connection expanding capacity under Montlake Cut, from SR 520 to the University of Washington campus area and points north. • Provides direct transit/HOV access ramps from SPUI to/from the east. • Provides transportation access to Lake Washington Boulevard.	• Provides a direct connection from SR 520 to the University of Washington campus area and points north of SR 520. • Provides direct transit/HOV access ramps from SPUI to/from the east. • Provides transportation access to Lake Washington Boulevard.
Safety, reliability, and cost-effectiveness.	• Improves travel times and reliability, with wider travel lanes and shoulders, and HOV lanes on SR 520. • HOV lanes provide travel time savings to transit riders. • Improved transit service increases the carrying capacity of the corridor.	• Westbound transit bypass to Montlake improves transit/HOV reliability. • Lower profile over Foster Island increases stormwater costs.	• Tunnel retains future developable area for University of Washington and reduces the visual impacts to the area. • Lower profile over Foster Island increases stormwater costs. • Direct transit	• Elevated structure less costly than tunnel, but impacts University of Washington development and increases visual impacts. • More gradual profile across Foster Island reduces stormwater costs.

ES 1.4 How do Options A, K, and L meet the project's Purpose and Need?

	Common	Option A	Option K	Option L
			connection to Montlake Multimodal Center.	• Direct transit connection to Montlake Multimodal Center.
Avoiding, minimizing, and/or mitigating effects on neighborhoods and the environment.	• Minimizes the total footprint and width of the bridge. • Incorporates green lids and visual connection across the highway at key locations. • Incorporates mitigation strategies to reduce noise intrusion in the corridor.	• Closing Lake Washington Boulevard reduces traffic, noise, and air quality impacts to the Washington Park Arboretum and southern neighborhoods. • Enhances the quality of the Washington Park Arboretum environment. • Preserves McCurdy Park and its waterfront. • Avoids impacts to Marsh Island and University of Washington's Waterfront Activities Center and Husky Stadium.	• Reconnects Foster Island with the Washington Park Arboretum and improves views from surrounding areas. • Tunnel reduces visual and noise impacts. Allows for restoration of the areas above ground.	• Avoids land bridge impacts to Foster Island.

ES 1.5How do Options A, K, and L meet Legislative Goals?

	Common	Option A	Option K	Option L
Minimize footprint and width of bridge.	• The roadway has reduced shoulders and lane widths. • Removed Montlake Transit Flyer Stop at Montlake Boulevard. • Removed westbound and eastbound auxiliary lanes between I-5 and Montlake Boulevard.	• Removes the Lake Washington Boulevard ramps without replacement. • Keeps the interchange in existing location to reduce the width in the Washington Park Arboretum.	• Moves the interchange east of the existing interchange to reduce width through Montlake Interchange. • Proposes a tunnel under the Montlake Cut to avoid footprint impacts to the navigation channel, fish migration path and University of Washington property. •	• Moves the existing interchange to the east to reduce width through Montlake Interchange. •
Incorporates enhancements for surrounding neighborhoods.	• Provides lids and pedestrian connectivity at I-5, 10th Avenue East and Delmar Drive, and Montlake vicinity • Implements increased bus rapid transit service to the University District to mitigate the loss of the Montlake Transit Flyer Stop.	• Removes Lake Washington Boulevard ramps and reduces trips through the Washington Park Arboretum and adjacent southern neighborhoods. • Lower roadway profile improves visual connectivity and reduces noise to the surrounding communities • Adds a separate westbound HOV bypass ramp to Montlake	• Retains connections to Lake Washington Boulevard through the Washington Park Arboretum and communities to the south. • Provides an underground direct connection between SR 520 and University of Washington. • Reduces SR 520 bound traffic on Montlake Boulevard East south of	• Retains connections to Lake Washington Boulevard through the Washington Park Arboretum and communities to the south. • Provides an elevated direct connection between SR 520 and the University of Washington with added pedestrian and bicycle access. • Supports an

ES 1.5How do Options A, K, and L meet Legislative Goals?

	Common	Option A	Option K	Option L
		Boulevard improving transit access. • Supports an aesthetically pleasing structure over Portage Bay through a design competition. • Preserves existing wetlands at Marsh Island and McCurdy Park.	the Montlake Cut. • Provides for an arch type bridge structure for Portage Bay Bridge. • Adds a land bridge on Foster Island to improve visual connectivity and reduce noise. • Lower roadway profile improves visual connectivity and reduces noise to the surrounding communities	aesthetically pleasing structure over Portage Bay through a design competition
Incorporates recommendations from health impact assessment.	• Incorporates noise mitigation strategies throughout the corridor as recommended by the Acoustics ERP. • Provides lids at I-5, 10th Avenue East and Delmar Drive, and Montlake vicinity. • Improves pedestrian and bicycle access through out the corridor and to surrounding areas.	• Removes the Lake Washington Boulevard ramps improving the integrity and ability to appreciate the Washington Park Arboretum.	• Provides tunnel access between SR 520 and the University of Washington reducing noise and visual impacts and leaving surface area for other uses. • Provides a land bridge on Foster Island improving the connectivity through the area and reducing noise. • Recommends quieter pavement through out the corridor reducing	

ES 1.5How do Options A, K, and L meet Legislative Goals?

	Common	Option A	Option K	Option L
			noise to surrounding communities and parks.	
Maintains travel speed and reliability for HOV.	• Provides continuous inside HOV lane across the corridor including a reversible HOV and transit ramp lane to I-5 into and out of Seattle.	• Provides a westbound transit/HOV bypass ramp at Montlake Boulevard. • Provides an eastbound transit/HOV bypass.	• Provides direct roadway access to the University of Washington light rail station and Montlake Multimodal Center. • Provides direct transit/HOV access ramps from SPUI to/from the east.	• Provides direct roadway access to the University of Washington light rail station and Montlake Multimodal Center. • Provides direct transit/HOV access ramps from SPUI to/from the east.
Articulate the alignment of the option, footprint, and affected areas in environmental documents.	• The Options are being fully evaluated in the supplemental draft EIS. • Sections 3 and 6 describe the Options and community interests.	•	•	•

ES 1.6 What are the Costs of Options A, K, and L?

The graphic below provides a cost comparison summary for Options A, K, and L for various segments of the corridor.

Washington State Department of Transportation

SR 520 Corridor Program

STATE ROUTE 520

2006 AND 2008 COST COMPARISON SUMMARY

Updated: November 2008

	I-5 to Floating Bridge	Pontoon Site and Floating Bridge		Evergreen Point Road to I-405	
2006 Montlake Interchange Option	Total Cost $1.892B	Total Cost $1.488B		Total Cost $680M	2006 Total Cost $4.060B
2006 Pacific Interchange Option	Total Cost $2.202B	Total Cost $1.488B		Total Cost $680M	2006 Total Cost $4.370B
2008 Corridor Concept					Note: Map inculdes major contstruction limits. Corridor work continues to SR 202.
	Option A*	Pontoon Site	Floating Bridge		
2008	Total Cost $2.022B to $2.298B	Total Cost $358M	Total Cost $1.370B	Total Cost $776M	2008 Most Likely Cost $4.526B to $4.802B
	Option K*				
2008	Total Cost $4.070B to $4.168B	Total Cost $358M	Total Cost $1.370B	Total Cost $776M	2008 Most Likely Cost $6.574B to $6.672B
	Option L*				
2008	Total Cost $2.562B to $2.642B	Total Cost $358M	Total Cost $1.370B	Total Cost $776M	2008 Most Likely Cost $5.066B to $5.146B

*Range inculdes optional features.

All costs at year of expenditure.

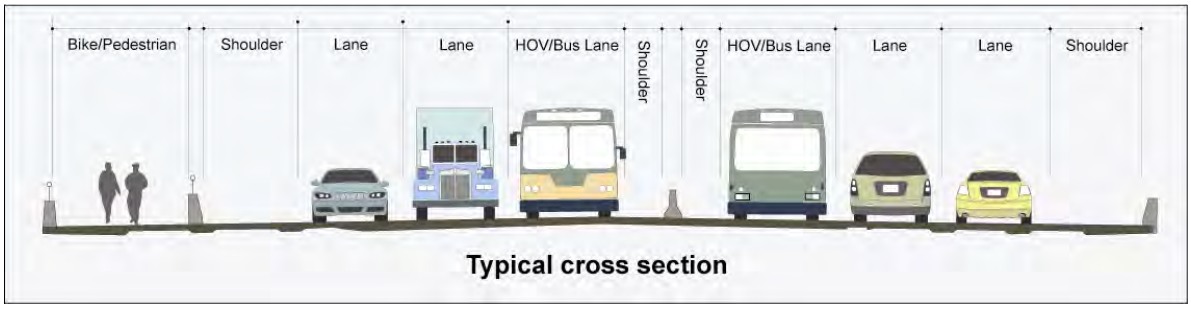
Section 1 – Introduction to the SR 520 Project Impact Plan

1.1 Why is SR 520 being replaced?

SR 520 is one of two east-west crossings across Lake Washington. The existing SR 520 bridges are considered vulnerable to earthquakes and windstorms. The SR 520 Corridor Program will result in a new bridge and a six-lane SR 520 corridor replacement from I-5 in Seattle to SR 202 in Redmond. The new SR 520 will improve safety and mobility, providing greater reliability for drivers and transit. The SR 520 Corridor Program is made up of four projects:

1. Bridge Replacement and HOV Project.
2. Eastside Transit and HOV Project.
3. Pontoon Construction Project.
4. Lake Washington Urban Partnership.

The east-west corridor will have four general-purpose lanes and two high-occupancy vehicle (HOV) lanes, as shown in the typical cross section. This is known as the "4+2" lane configuration. The project will replace all existing bridges, including the Portage Bay Bridge and Evergreen Point floating bridge, with new, safer bridges that are designed to withstand earthquakes and windstorms. Commuters will benefit from better transit reliability and improved travel times between Seattle and the Eastside.



The new bridge will also have a bicycle and pedestrian lane that connects to regional and local trails on both sides of the lake. Five lids are being planned on both sides of the lake to reconnect neighborhoods and jurisdictions and serve as transit stations and open space. Environmental improvements will also be made, including the treatment of stormwater from the roadway.

1.2 What is the 6-Lane Alternative?

In August of 2006, the Washington State Department of Transportation (WSDOT) published the SR 520 Draft Environmental Impact Statement (DEIS). The draft EIS discussed and evaluated a four-lane and a six-lane SR 520 corridor from I-5 in Seattle to I-405 in Bellevue. In December 2006, the Governor announced the direction to move

forward with a proposed six-lane SR 520 corridor as the foundation to any proposed interchange design option. The six-lane corridor consists of a 4+2 configuration, with two general-purpose lanes and one HOV and transit lane in each direction and a bicycle/pedestrian path along the north side of the corridor.

1.3 What environmental regulations apply to the project?

All major WSDOT projects involving federal funding or permits, including the SR 520 Corridor Program, must comply with the requirements of the National and State Environmental Policy Acts (NEPA and SEPA). These regulations are designed to ensure that environmental impacts are considered at an early stage of the project decision-making process. In compliance with NEPA and SEPA, WSDOT published a draft EIS on the SR 520 project in August 2006. The draft EIS evaluated a 4-Lane Alternative, a 6-Lane Alternative, and several design options of the 6-Lane Alternative, but it did not evaluate any alternatives or options involving tunnels under the Montlake Cut. A supplemental draft EIS is planned for publication in late 2009. That document will consider alternatives and design options identified through the SR 520 mediation process. WSDOT will solicit public comment on the supplemental draft EIS, and plans to publish a final EIS (which will include responses to comments on both the draft EIS and supplemental draft EIS) in late 2010.

1.4 How does the analysis in this plan relate to the supplemental draft EIS?

Three westside interchange options, known as Options A, K, and L, were selected by the mediation participants in April 2008. This allowed WSDOT to finalize the footprint and alignment of the three options and begin the analysis necessary to document environmental impacts in the supplemental draft EIS expected to be published in 2009.

The analysis contained in this plan is a preliminary and qualitative assessment of the potential impacts of the three options. It is based on previous analysis and preliminary quantitative analysis, including traffic modeling, identification of resources in the corridor, and assessment of potential mitigation strategies.

Analysis in the supplemental draft EIS may result in the identification of different impacts, which may lead to changes to mitigation and community enhancements. Those changes will be clearly identified in the supplemental draft EIS, and mediation participants and the public will be asked for comment.

This project impact plan is not intended to take the place of the environmental permitting, regulatory process, or government-to-government tribal consultation that may require additional mitigation and changes to the project design. These processes will begin after a preferred option is identified by the Governor and Legislature.

1.5 Has there been additional oversight on the mediation process?

An oversight committee met three times from November 2007 through April 2008. The committee included the following members:

1. Governor – Chris Gregoire
2. Joint Transportation Committee – House Chair – Judy Clibborn
3. Joint Transportation Committee – Senate Chair – Mary Margaret Haugen
4. Joint Transportation Committee – House Ranking Minority Member – Fred Jarrett
5. Joint Transportation Committee – Senate Ranking Minority Member – Dan Swecker
6. Mayor of Seattle – Greg Nickels
7. Executive, King County – Ron Sims
8. Senator, 48th District – Rodney Tom
9. Representative, 48th District – Ross Hunter
10. Representative, 48th District – Deborah Eddy
11. Senator, 43rd District – Ed Murray
12. Representative, 43rd District – Jamie Pedersen
13. Representative, 43rd District – Frank Chopp
14. President, University of Washington – Mark Emmert
15. CEO, Sound Transit – Joni Earl
16. Secretary of Transportation – Paula Hammond

The committee defined the following as necessary elements that should be in the option selected by the mediation group:

- The option is fiscally constrained.
- On schedule for 2012 construction.
- Include transit on the day a new facility opens, linked to the University of Washington light rail station.
- Use existing financial and other data whenever possible.
- Include mitigation responses to impacts.
- Include travel demand management (TDM) strategies.

Section 2 Other Work Completed in the review of the Corridor

2.1 What did the independent engineering firm and the tunnel expert review panel recommend about tubes and tunnels?

An independent engineering firm, COWI, evaluated tunnel options proposed by the mediation team. Because of time limitations, to identify tunneling approaches, COWI evaluated only cut-and-cover and immersed-tube tunneling methods for the mediation options. COWI did acknowledge other tunneling methods that have different trade-offs to the methods they evaluated.

Using immersed-tube tunneling for the tunnel under the Montlake Cut would require construction of tunnel elements in a large casting basin at the shoreline of Union Bay. Once complete, a gate would be opened to flood the basin, allowing the tunnel elements to be floated and sunk into place. There is a high likelihood that the Montlake Cut would be closed for periods of time for dredging and placing the elements. There would also be significant potential environmental impacts associated with this construction method.

As a result of the environmental impacts identified, the mediation team and WSDOT agreed to evaluate other tunneling methods to better understand the various techniques and provide a tunneling method recommendation that best met a number of interests that included environmental impact, navigation, design, constructability, and cost.

A tunnel expert review panel (ERP) convened to discuss and evaluate the feasibility of a tunnel under the Montlake Cut. The ERP looked at a range of tunneling techniques and tunnel alignments with the goal of comparing various considerations. These considerations were environmental, tunneling methods, geotechnical, alignments, and community. The tunneling methods evaluated were (1) immersed tube tunneling, (2) tunnel boring machine, and (3) sequential excavation method with ground stabilization.

The ERP recommended the following:

- Sequential excavation method tunneling with ground freezing best achieves the objectives of the panel.
- Investigate the geotechnical conditions of the project area to confirm that the sequential excavation method and ground freezing are achievable and to adjust roadway geometrics to optimize the design.
- Optimize the roadway grades and alignment within the constraints of the Sound Transit U-Link Station, the geology of the project area and the surrounding environment (wetlands, vessel navigation, fish migration, and usual and accustomed fishing rights).

2.2 What did the expert review panel recommend about noise reduction strategies?

In July 2008, the SR 520 team issued invitations to convene an ERP with the specific task of identifying Noise Reduction Strategies for the corridor. The panel's goals were to identify all potential noise reduction strategies and design options and to consider input from mediation participants about issues and ideas for noise reduction strategies. The ERP developed a menu of noise attenuation strategies that could be applied along the corridor. The menu included the following strategies:

- **Quieter pavements** – with alternatives that accommodate periodic renewal of the pavement surface for maintaining quieter pavement over time.
- **Roadway design** – with alternatives that seek to shield sensitive receptors from and/or reduce noise.
- **Noise barriers** – with alternatives that balance the need for noise abatement with potentially competing demands for aesthetics. Some alternatives departed from the more conventional use of noise barriers and included sound absorption applied to other design features.
- **Modeling** – recognizing the complexity of this issue, and thus the need for a more sophisticated assessment to quantify the costs and benefits of the various strategies.
- **Perception** – looking at how the public will perceive the noise generated along the project corridor, and what means can be taken to improve this perception.
- **Operation and finance** – using economic incentives and disincentives as a means to improve noise via traffic management.
- **Studded tires affecting acoustical (and other measures of) durability of pavements** – specific issues related to a paramount factor in the overall noise issue: the use of studded tires. Limiting or eliminating the use of studded tires is a recommendation of the ERP.
- **Vehicle sources** – identifying means to reduce vehicle noise beyond tire pavement noise sources.
- **Structures** – issues specific to the structures along the project, like those related to expansion joints.
- **Arterials** – issues specific to the arterial streets that are part of or immediately adjacent to this project. For example, heavy trucks on arterials drowning out potential noise improvements on SR 520.
- **Lids and tunnels** – issues specific to the proposed lids and tunnels found in various options for this project. For example, muting the noise that is directed out of the lids on either end.

The final report divides the corridor into segments. Each option was evaluated by segment, and recommendations were made on the most effective combination of noise abatement strategies for that area.

The panel recommended the following next steps:

- Determine capital and recurring costs.
- Analyze the life cycle and benefit-cost analysis.

The report is being finalized in December; therefore the mediation group did not have a chance to review the specific recommendations for each segment. The selection of final noise attenuation elements on a preferred Option should include a community review in addition to the additional steps recommended by the panel.

2.3 What were the key findings of the Health Impact Assessment?

In 2007, Governor Gregoire signed Engrossed Substitute Senate Bill 6099 (ESSB), which became Chapter 517, Laws of 2007, a legislative directive to develop a SR 520 interchange design and plan for the westside of Lake Washington through mediation for a more reliable replacement of the existing SR 520 bridge (Evergreen Point Bridge and Portage Bay Bridge). The directive also asked Public Health – Seattle & King County and the Puget Sound Clean Air Agency to conduct a health impact assessment of the SR 520 Bridge Replacement and HOV Project, focusing on air quality, greenhouse gas emissions, and other public health issues, with final recommendations to be incorporated into the Mediation Group's Project Impact Plan. The health impact assessment research and the report indicate that choosing the right set of features for the SR 520 Project—regardless of which of the three Options under consideration is adopted—can contribute significantly to improving the health of people in communities adjacent to the corridor and the livability of their neighborhoods.

The SR 520 Bridge Replacement and HOV Project Draft EIS published in August 2006 proposed many elements that would contribute to a healthy community. These elements included pedestrian and bicycling amenities, transit improvements, design improvements, landscaped lids and green spaces, and noise reduction strategies.

No single action will solve society's chronic disease challenges. Multiple actions are needed to create healthy communities. For this reason, it is critical that these elements are integral to the project and that they are supported, despite challenging budget times, for optimal health benefits. The following are the key assessment recommendations:

Construction Period

- Reduce construction-related pollution by implementing the following actions:
  - Use new or retrofitted diesel-powered construction vehicles and equipment.
  - Implement an idling reduction program for construction vehicles and equipment.
  - Designate an HOV lane on the bridge to maintain or increase transit ridership. Increase transit service to attract new riders and reduce congestion.
  - Increase transit opportunities and incentives (such as free or subsidized transit passes) and trip reduction programs (such as carpooling and shuttle services) for construction workers, University of Washington students and staff, and adjacent neighborhood residents.

- Provide financial incentives for the contractor to accelerate construction.
- Schedule construction activities that can delay traffic during the lowest traffic periods to minimize congestion.

- Increase traffic management by implementing the following actions:
  - Develop safe and clearly marked alternative routes for pedestrians and bicyclists during the construction period.
  - Conduct a public education program to reduce traffic on the facility, and increase distribution of the information before beginning construction activities that are likely to increase congestion.
  - Provide clearly identified temporary lane configurations to maintain traffic flow in the corridor.
  - Install traffic calming devices, such as traffic circles, curb bulbs, and speed humps, and limit construction traffic routes in the affected neighborhoods.
  - Provide access to construction schedules so Emergency Medical Services can provide uninterrupted service in the corridor, especially where access is limited.
  - Provide real time traffic and road construction information in an easily accessible way so area residents, transit, freight, Emergency Medical Services, and other users can change routes and travel times as needed. Some possible strategies include increasing the number of traffic cameras and providing reader boards in the corridor.
  - Ensure Emergency Medical Services can quickly reach all construction areas (including water access).

- Provide for construction noise control, by implementing the following actions:
  - Use Occupational Safety and Health Administration (OSHA) approved broadband back-up warning devices on all construction vehicles and equipment.
  - Use approved noise control devices for generators, compressors, and similar equipment.
  - Limit the operating periods for equipment that produces loud noise, such as pile drivers and concrete cutters, particularly during nighttime periods.
  - Maintain construction equipment in good working condition so that it does not create additional noise.
  - Notify residents of potentially affected areas prior to construction activities, and provide a complaint hotline and web site.
  - Coordinate with agencies responsible for controlling noise during planning and construction and when responding to complaints.

Transit, Bicycling, and Walking

- Increase and improve transit service to meet increased demand, attract more riders, and reduce air pollution, by implementing the following actions:
  - Provide a significant increase in the number of buses operating in the peak periods over the projected service described in the SR 520 Bridge Replacement and HOV Project draft EIS.
  - Enhance transit and park-and-ride facilities serving the corridor with better weather protection, drop-off areas, and more bicycle and pedestrian facilities.
  - Ensure that transit transfer points and light rail facilities are located as near each other as feasible, and connected by pedestrian and bicycle paths.
  - Promote the corridor as an area for implementing pilot programs, such as bus rapid transit, that have the potential to reduce single-occupant vehicle travel.
  - Provide facilities and designs that make it easy for users to change modes without delaying their trips in the corridor.
- Install connected walking and bicycling facilities throughout the corridor, including:
  - To, from, and across the corridor to adjacent neighborhoods.
  - To and through parks, green spaces, regional trails, and the Washington Park Arboretum.
  - To bus stops, bus transfer points, and the light rail station.
- Create a common way-finding system in the corridor that includes these features:
  - Information on destinations and all mode choices that provides pedestrians and bicyclists a quick understanding in selecting non-motorized or multi-modal transportation routes.
  - Coordination of the design with municipalities, the University of Washington, transit agencies, and others within the corridor.
- Provide safe mobility on pedestrian and bicycling paths, and at transit stops and transfer points, by implementing the following actions:
  - Create lighted paths that are safe and perceived to be safe with high visibility.
  - Provide appropriate barriers and traffic calming features between shared paths and roadways where pedestrian, bicyclist and traffic activity will be high.
  - Mark shared paths for bicyclists and pedestrians to minimize possible conflict.
  - Program the traffic monitoring cameras on the bridge to also monitor pathway use.

Landscaped Lids and Green Spaces

- Include six landscaped freeway lids that connect SR 520 communities (i.e. on the west side at I-5, 10th Avenue East and Delmar Drive, and at Montlake Boulevard; and, on the Eastside at Evergreen Point Way, 84th Avenue NE, and 92nd Avenue NE).
  - Design lids with landscaping, green spaces, and amenities (such as benches, bike racks, public restrooms, and shaded areas) to attract more public use.
  - Design lids with good visibility and sightlines and that avoid isolated areas.
  - Install emergency call boxes on the lids to provide for personal security.
  - Use landscaping materials throughout the SR 520 corridor, along adjacent trails and roadways, and at transit stops to soften the concrete footprint.
  - Improve and preserve the integrity of the Washington Park Arboretum, and the ability of visitors to enjoy it and other green spaces and naturals areas.
  - Preserve access to the waterfront for water-related activities, such as those currently available at the University of Washington's Waterfront Activity Center.

Design Features

- Reduce noise throughout the corridor by implementing the following actions:
  - Incorporate multiple solutions (e.g., freeway lids, noise walls, quieter pavement, landscaping) to reduce noise in the corridor for the lifespan of the project.
  - Design sound walls that decrease noise but do not result in additional problems (e.g., isolated areas, unsightly concrete structures, and interference of natural views).
- Add to the adjacent communities' visual character with art and design by implementing the following actions:
  - Incorporate architectural, art, and design solutions into all elements of the project (i.e., landscaped lids, trails, noise walls, transit infrastructure, bicycle storage areas, signage, and structural components of the bridge) that harmonize with adjacent neighborhoods and natural surroundings and conceal the roadway footprint.
  - Design landscaped lids, walking and bicycling paths, transit infrastructure, and other elements within a human scale to make the user feel more comfortable and not overwhelmed by the adjacent large concrete structures.
  - Identify areas and opportunities for art early in the WSDOT design process that reflect and build upon strategies in the *SR 520 Corridor Aesthetics Handbook – Ideas for Urban Corridor Design* and partner with local jurisdictions, neighborhood organizations, or others to collaborate on these projects.
- Utilize innovative storm-water management practices along the SR 520 corridor to substantially reduce vehicular pollution from entering Lake Washington.

2.4 How does the High Capacity Transit Plan integrate with the overall program?

Each of the Options currently being evaluated in this Project Impact Plan is also being considered in the SR 520 Corridor High Capacity Transit (HCT) plan as required by ESSB 6099. This HCT Plan is identifying how bus rapid transit will work in the SR 520 corridor, improving transit service between major eastside origins to the University District and downtown Seattle. It will also ensure that the Montlake Multimodal Center, further defined in the HCT Plan submitted to the Legislature in December 2008, facilitates effective and efficient transfers between bus and rail service at that location. The final HCT Plan will be included in the traffic operations analysis of the SR 520 Bridge Replacement and HOV Program supplemental draft EIS. It is important to note that increased transit service is required to address the removal of the Montlake Transit Flyer Stop. This effort will help to identify any design modifications needed to support the increased levels of transit service on the SR 520 corridor and into the University District to mitigate the loss of the flyer stop.

Specialized services, including bus rapid transit, will be considered in all options. Two conclusions of the lead agencies (WSDOT, Sound Transit, and King County) are that transit service levels will be similar among all options and that the Montlake Multimodal Center will operate efficiently in replacing the functions of the current Montlake Transit Flyer Stop on SR 520.

Section 3 – Westside Interchange Options

The following section describes the essential elements of each Option including the reasoning behind the option and the trade-offs made during refinement.

3.1 What is Option A?

Option A focuses on transit and Active Traffic Management (ATM) in a design focused on the existing Montlake interchange. The basic elements of this design assume construction of a new interchange in the current location, a second bascule bridge, parallel to the existing one, across the Montlake Cut and removal of the Lake Washington Boulevard ramps.

Consideration in development of design

- To maintain a small footprint at the Montlake interchange this Option does not include a direct access ramp from Montlake to eastbound SR 520.
- Eliminates the Washington Park Arboretum ramps to preserve park area directs traffic to Montlake Boulevard.
- Requires taking the science lab associated with the NOAA facility to the northwest of Montlake interchange to expand westbound on-ramp from Montlake to SR 520.
- Implements new access through the Shelby neighborhood for local traffic to address traffic circulation.

Description

Option A has a Montlake Boulevard interchange similar to today's configuration. The goal of this option is to prioritize transit connections and be a low-cost option. As described by option proponents, this option consists of the following features:

- An interchange at Montlake Boulevard, similar to the configuration of the existing interchange.
- A second Montlake Cut bascule bridge, design to be determined by design competition, parallel to the existing Montlake Bridge.
- Traffic delineation on Montlake Boulevard, including signage on the Montlake Boulevard bridges, to better separate traffic as it approaches the SR 520 interchange.
- A westbound transit-only off-ramp to Montlake Boulevard.
- Delineated transit emphasis lanes on Montlake Boulevard from the SR 520 interchange to Pacific Street.
- A widened Montlake Boulevard structure over SR 520 with a planting strip.
- Lids at I-5, 10th Avenue E and Delmar Drive E. A McCurdy Park lid that is east of Montlake Boulevard, in the vicinity of 24th Avenue along SR 520 to Montlake Boulevard.

- Includes quiet pavement and/or noise walls as recommended by the Acoustics ERP – subject to neighborhood approval.
- A two-lane westbound on-ramp at Montlake Boulevard interchange and auxiliary lane to I-5 creating a 7 lane Portage Bay crossing – 3 eastbound lanes, 3 westbound lanes and 1 westbound auxiliary lane.
- Added roadway capacity south of the Montlake interchange on Montlake Place E to move through traffic more effectively through the SR 520 interchange area. Exact limits to be determined through SDEIS traffic analysis.
- A low profile through the Washington Park Arboretum.

This Option includes removal of the following:

- Lake Washington Boulevard ramps.

3.1.1. Alignment and footprint

The general height and alignment of SR 520 between I-5 and Montlake Boulevard is similar among all options. This section specifically addresses the alignment unique to Option A. The height of SR 520 between the Montlake shoreline and the Floating Bridge is low compared to the draft EIS profile. The height of SR 520 at the Western Highrise, which serves as the west navigation passage under SR 520, is similar in height to and is northwest of today's west highrise. The second Montlake Cut Bridge is similar in height to the existing bridge to maintain similar navigation passage clearances.

The footprint unique to Option A consists of the Montlake Boulevard interchange, the second Montlake Cut bridge and the added auxiliary lane across Portage Bay. The Montlake Boulevard interchange ramps extend onto the Portage Bay Bridge structure and partially extend into the Washington Park Arboretum on the west approach bridge structure. Stormwater facilities are also sited near the interchange in the vicinity of the existing Museum of History and Industry (MOHAI) site.

The second Montlake Cut Bridge is similar in width to the existing bridge crossing of approximately 60 feet. The proposed crossing will be adjacent to and east of the existing bridge. The approach for the proposed second Montlake Cut Bridge requires additional width on Montlake Boulevard north and south of the Montlake Cut. Two residences are required to be taken for right-of-way needs for the new bridge.

The addition of the westbound auxiliary ramp lane adds 10 feet in width across the western half of the proposed Portage Bay Bridge structure.

Possible Sub-Option Modifications

There are several modifications that will receive additional analysis. The modifications below could be added to Option A if the analysis shows a benefit for transit and/or a need to address traffic volumes. These are not a part of the baseline Option A as they increase the overall footprint and would add traffic impacts to the Washington Park Arboretum.

Potential modifications to Option A include:

- An eastbound direct access on-ramp for transit and HOV from Montlake Boulevard.

- A westbound off-ramp to Lake Washington Boulevard designed to split northbound traffic and southbound traffic approaching the Montlake interchange.
- An eastbound on-ramp from Lake Washington Boulevard.
- Similar to Option K, the addition of a Foster Island berm.

Should any of the modifications be constructed as part of Option A, additional footprint is required to provide ramp lanes. The Lake Washington Boulevard ramp connections will add width to the facility through the Washington Park Arboretum.

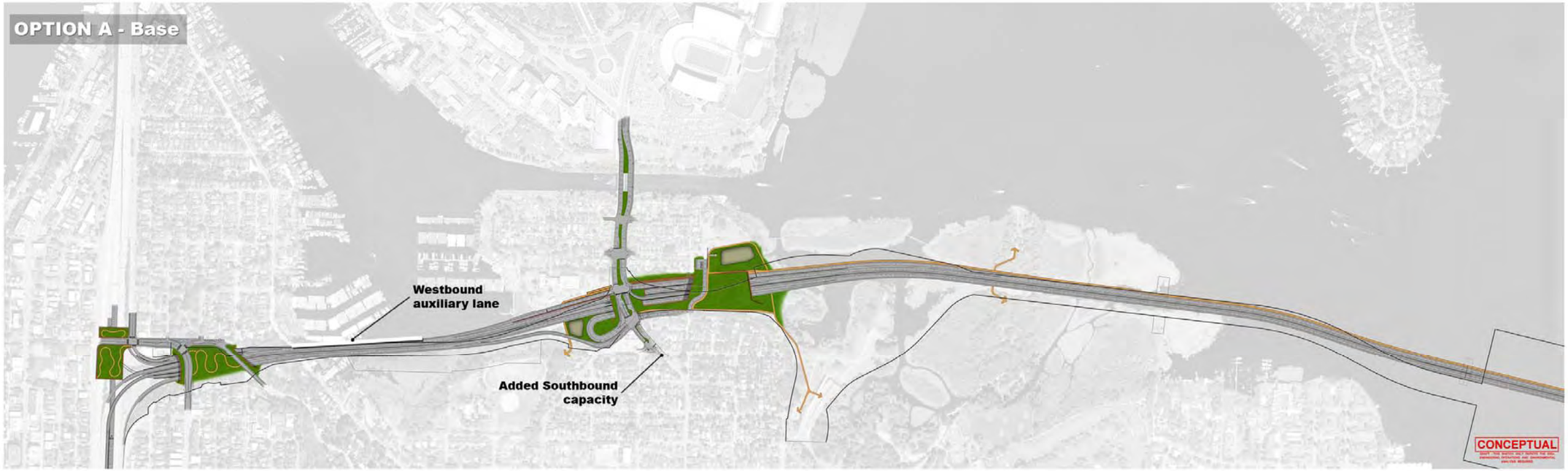
Option A was refined through December by:

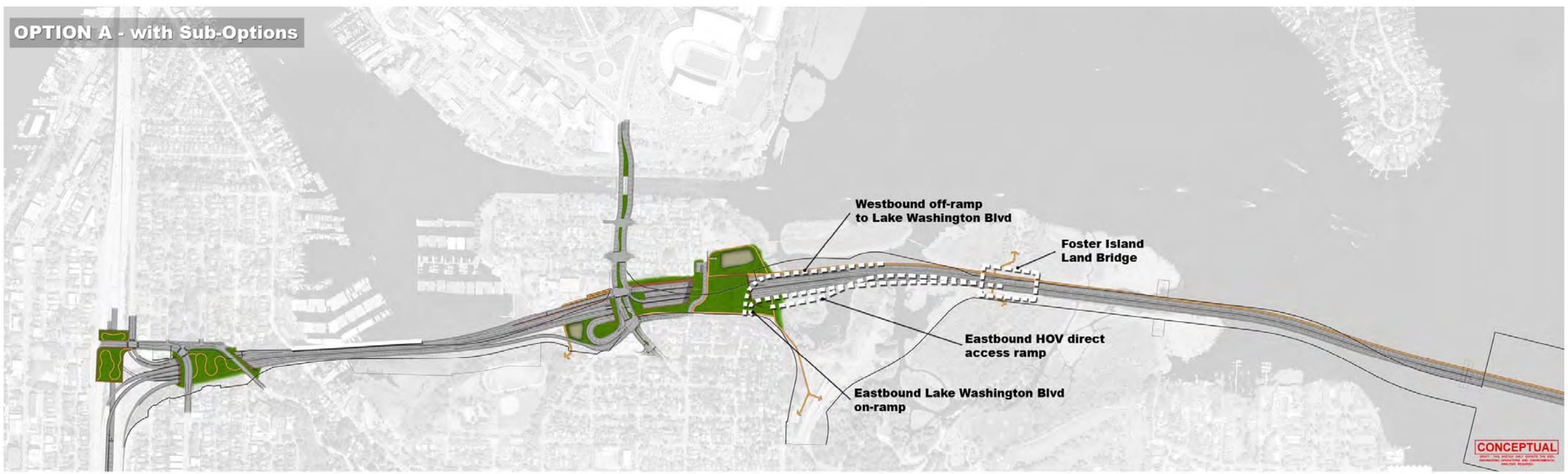
- Removing the SR 520 median transit stop as a sub-option as a result of the additional width in the Montlake vicinity and acknowledgement of the multimodal station area in the vicinity of the University of Washington Triangle.
- Removing the full transit 'T' connection as a sub-option as a result of additional width in Portage Bay and the Washington Park Arboretum and the unsafe weave condition for transit that would occur between I-5 and the transit 'T' ramps.
- Removing the transit mezzanine as a sub-option as a result of additional width in Portage Bay and the Washington Park Arboretum, the unsafe weave condition for transit that would occur between I-5 and the transit 'T' ramps, and the impact to the Portage Bay and Washington Park Arboretum shorelines.
- Adding an auxiliary lane westbound from the Montlake Boulevard on-ramp to the northbound I-5 exit lane.
- Adding additional capacity on Montlake Place E south of the SR 520 interchange.

3.1.2 Option A Corridor improvement graphics and cost estimates

The graphics on the next three pages show the following for Option A:

1. The base Option design and sub-option improvements,
2. The cost to construct along the entire SR 520 corridor, and
3. The detailed cost estimate for the base Option by segment and sub-option costs (where available) are provided at the bottom.


OPTION A - Base
Westbound
auxiliary lane
Added Southbound
capacity
CONCEPTUAL


OPTION A - with Sub-Options
Westbound off-ramp
to Lake Washington Blvd
Foster Island
Land Bridge
Eastbound HOV direct
access ramp
Eastbound Lake Washington Blvd
on-ramp
CONCEPTUAL

Washington State Department of Transportation

SR 520 Corridor Program

STATE ROUTE 520

COST ESTIMATE FOR SR 520 CORRIDOR WITH OPTION A

Updated: November 2008

	I-5 to Floating Bridge*	Floating Bridge		Evergreen Point Road to I-405	
2008 Six Lane Alternative With Option A					Note: Map inculdes major contstruction limits. Corridor work continues to SR 202.
	Option A	**Pontoon Site**	**Floating Bridge**		
2008	• 4+2 configuration • Six lane Portage Bay bridge • Narrow inside shoulder and lane width • Westbound transit-only ramp to Montlake Boulevard • Second bascule crossing • Lids at I-5, 10th/Delmar and McCurdy Park • Quieter pavement** • Portage Bay Bridge Aesthetic Treatment • Option for Foster Island Land Bridge • Option for Lake Washington Boulevard ramps • Option for Eastbound Direct Access Ramp Flyover	• 8 basin, 2 gate site • Shallow foundation design concept	• 4+2 configuration • Narrow inside shoulder and lane width • Single row of pontoons with added floatation	• 4+2 configuration • Move HOV lanes to inside between SR 202 • Lids at Evergreen Point Road, 84th Avenue E. and 92nd Avenue E. • 108th direct access • Transit stops at Evergreen Point Road and 92nd Avenue E.	
2008 Most Likely Cost	**Total Cost Range $2.022B to $2.298B**	**Total Cost $358M**	**Total Cost $1.370B**	**Total Cost $776M**	**2008 Total Cost Range $4.526B to $4.802B**

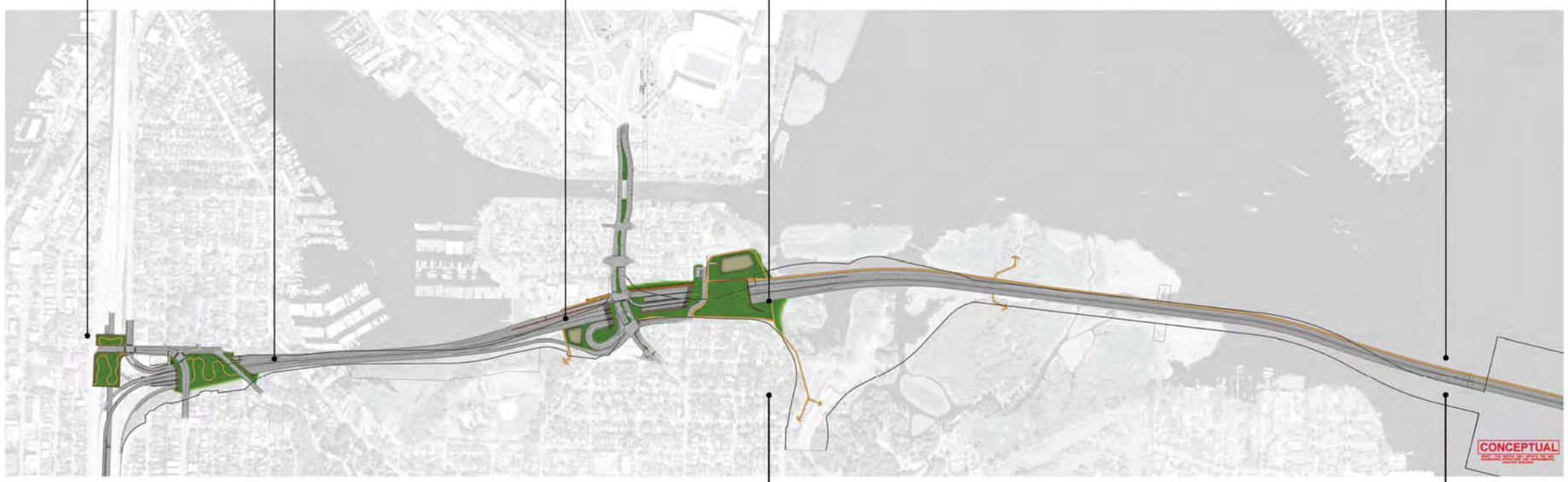
*Requires additional transit service, etc.
**Does not include life cycle renewal costs for quieter pavement; initial installation only.

All costs at year of expenditure.

DETAILED OPTION A ESTIMATE: I-5 TO FLOATING BRIDGE

Updated: November 2008

	I-5	Portage Bay	Montlake	West Approach
Cost	$322M	$482M	$442M	$776M
	• Includes Roanoke Lid ($68M) • Includes 10th & Delmar Lid ($72M)	• Includes Portage Bay Bridge Aesthetic Treatment	• Includes McCurdy Park Lid ($89M) • Includes Bascule Crossing ($81M)	• Includes Low Bridge Profile



Total Cost Range for I-5 to Floating Bridge

$2.022B to $2.298B

$1.052B

- Option for Foster Island Land Bridge ($80M). Not shown in graphic above.
- Option for Lake Washington Blvd Ramps ($98M). Not shown in graphic above.
- Option for Eastbound HOV Direct Access Ramp ($98M). Not shown in graphic above.

* Costs are 2008 CEVP, most likely at year of expenditure.

3.2 What is Option K?

Option K focuses on a lowered new single-point urban interchange (SPUI) just east of the existing Montlake interchange. Improvements across the Lake Washington Ship Canal are via an underground tunnel, which emerges just before the Montlake Boulevard and Pacific Street intersection. The focus of this Option was to reduce the visual intrusiveness of the roadway. It also focuses on separating freeway traffic from local traffic using Montlake Boulevard.

Consideration in development of design

- A depressed roadway and tunnel is more expensive, but provides a new transportation link north of the Montlake Cut while promoting visual connectivity between neighborhoods.
- Currently the tunnel requires an 8-percent grade to meet the Montlake Boulevard and Pacific Street intersection.
- Alternative flammable access would need to be accommodated.
- Lake Washington ramps and Washington Park Arboretum access needs to be maintained.
- The lower profile will require additional stormwater treatment (pump stations and vaults).

Description

Option K has a new interchange located east of Montlake Boulevard that combines the functions of the existing Montlake Boulevard interchange and Lake Washington Boulevard interchange. The goal of this option is to minimize noise and visual impacts. This option consists of the following features:

- A SPUI under the SR 520 mainline (the full 4+2 corridor configuration) located east of the Montlake area near the existing MOHAI site. Through movements from north to south are precluded at the interchange.
- HOV and transit access ramps to the SPUI to and from the east.
- The current design includes a tunnel under the Montlake Cut at an 8-percent grade. Further geotechnical evaluation is needed to determine whether a shallower grade is possible.
- Access to and from SR 520 and the Washington Park Arboretum with a modified roundabout at the south terminus of a new roadway parallel to the existing Lake Washington Boulevard. Current design is under review by WSDOT to address traffic issues through this new access.
- A low SR 520 profile, no higher than existing, and lower over Foster Island than the other Options.
- A 6 lane Portage Bay bridge crossing with a specified arch bridge design.

- Use of quiet rubberized asphalt pavement throughout the corridor with no noise wall construction.
- Lids at I-5, 10th Avenue E and Delmar Drive E, Montlake Boulevard, and a land bridge over the SR 520 roadway at Foster Island.
- Separates freeway and local traffic across the Montlake Cut, allowing Montlake Boulevard to be a local traffic roadway.
- A revised intersection at Montlake Boulevard and Pacific Street to include a new approach to and from the east and grade-separated pedestrian crossings.
- A grade-separated pedestrian crossing over the Montlake Boulevard and Pacific Street intersection that allows pedestrians to have free movements without traffic conflicts.
- A lowered intersection of the Montlake Boulevard and Pacific Street interchange requiring grade changes of the three existing legs of the intersection.

3.2.1 Alignment and footprint

The general height and alignment of SR 520 between I-5 and Montlake Boulevard is similar among all options. This section specifically addresses the alignment unique to Option K. The height of the SR 520 roadway between the Montlake shoreline and the Floating Bridge is similar to the low bridge height that exists today. The height of SR 520 at the Western Highrise, which serves as the west navigation passage under SR 520, is similar in height to and is northwest of today's west highrise.

The footprint unique to Option K is the following:

- A lowered interchange below the SR 520 mainline traffic lanes in the vicinity of the MOHAI site requiring the interchange to be 40 to 60 feet below the existing SR 520.
- A roundabout connection between SR 520 and Lake Washington Boulevard that includes a stacked roadway and paths to provide a lowered roadway directly south of SR 520.
- A sequential excavated methodology tunnel under the Montlake Cut requiring two tunnel sections, each approximately 50 feet wide with a 50-foot-wide pillar between them.
- A lowered intersection at Montlake Boulevard and Pacific Street requiring grade changes of the three existing legs of the intersection.
- Impacts on a University of Washington parking lot south of Husky Stadium and potential development in this area.

Stormwater facilities are also sited near the interchange in the vicinity north of the existing MOHAI site.

Possible Sub-Option Modifications

There are several modifications that will receive additional analysis. The modifications below could be added to Option K if the analysis shows a benefit for transit and/or a need

to address traffic volumes. These are not a part of the baseline Option K as they increase the overall roadway footprint in these areas.

Potential modifications to Option K include:

- An eastbound off-ramp to Montlake Boulevard, right turn only to Montlake Boulevard. This sub-option was evaluated to address possible traffic operational issues.
- A 5 lane section northbound on Montlake Boulevard NE to NE Pacific Place. Again, this sub-option was evaluated to address possible traffic operational issues.

If these modifications are implemented additional footprint would be required. The off-ramp to Montlake would require ramp lanes extending from the Portage Bay Bridge to Montlake Boulevard. This could potentially impact the NOAA science area.

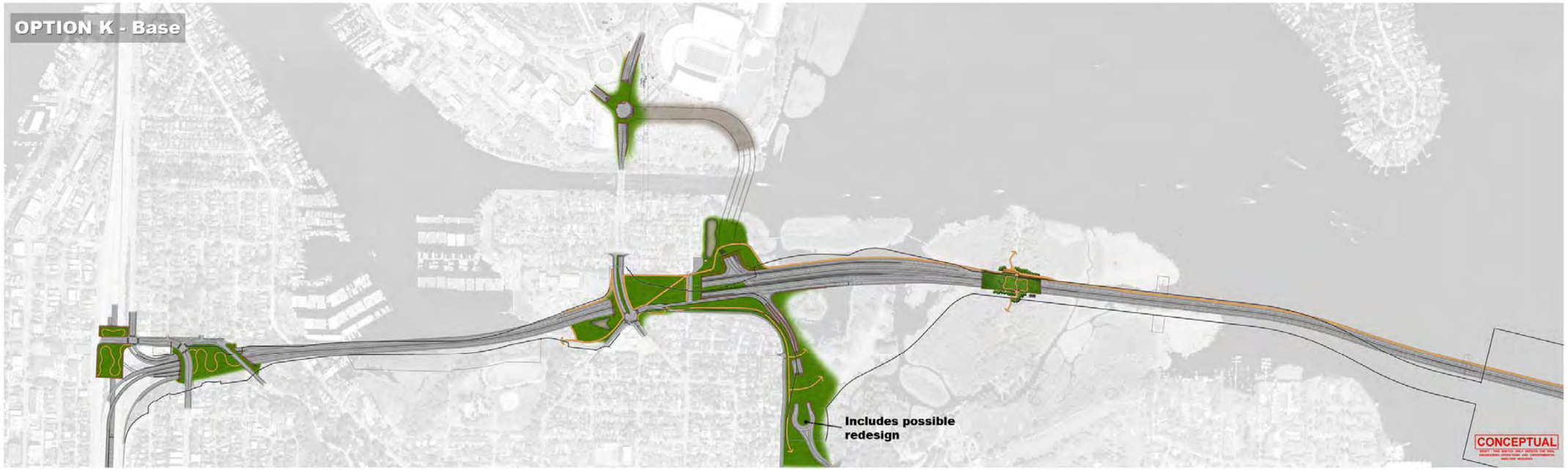
Option K was refined through December by:

- Removing the long tunnel on SR 520 through the Washington Park Arboretum and replacing it with a slightly lowered land bridge on Foster Island to reduce cost.
- Incorporating a false arch bridge type across Portage Bay to reduce cost but maintain the desired aesthetic look of the arch.
- Including a dual left-turn movement for the southbound Montlake Boulevard to the tunnel (SR 520) movement to help separate local traffic from freeway bound traffic.
- Allowing traffic movements from south of the Montlake Cut to access SR 520 using a new Lake Washington Boulevard alignment that is braided with local traffic using stacked roadways and a traffic turn-around to allow residents living south of the Montlake Cut to access the freeway from the south and to discourage trips through the Washington Park Arboretum.
- Converting a portion of the existing Lake Washington Boulevard to a one-way southbound lane that has a new local connection south of the existing Lake Washington Boulevard ramp terminus to reduce the impact on existing homes directly adjacent to the project.
- Refining the tunnel alignment and construction method as recommended by the WSDOT Tunnel ERP.
- Adding an eastbound off-ramp to Montlake Boulevard as an option.

3.2.2 Option K corridor improvement graphics and cost estimates

The graphics on the following three pages show the following for Option K:

1. The base Option design and sub-option improvements,
2. The cost to construct along the entire SR 520 corridor, and
3. The detailed cost estimate for base Option by segment and sub-option costs (where available) are provided at the bottom.


OPTION K - Base
Includes possible redesign
CONCEPTUAL

OPTION K - with Sub-Options
Northbound lane to Pacific Place
Eastbound off-ramp to Montlake Blvd
CONCEPTUAL

Washington State Department of Transportation

SR 520 Corridor Program

STATE ROUTE 520

COST ESTIMATE FOR SR 520 CORRIDOR WITH OPTION K

Updated: November 2008

	I-5 to Floating Bridge*	Floating Bridge		Evergreen Point Road to I-405	
2008 Six Lane Alternative With Option K					Note: Map inculdes major contstruction limits. Corridor work continues to SR 202.
	Option K	**Pontoon Site**	**Floating Bridge**		
2008	• 4+2 Configuration • Six lane Portage Bay bridge • Narrow inside shoulder and lane width • Lids at I-5, 10th/Delmar, Montlake and Foster Island • Single point urban interchange under SR 520 at the Montlake shoreline • Tunnel under the Montlake Cut • False arch type Portage Bay bridge • Quieter pavement** • Option for eastbound off-ramp and westbound on-ramp at Montlake Boulevard	• 8 basin, 2 gate site • Shallow foundation design concept	• 4+2 configuration • Narrow inside shoulder and lane width • Single row of pontoons with added floatation	• 4+2 configuration • Move HOV lanes to inside to SR 202 • Lids at Evergreen Point Road, 84th Avenue E. and 92nd Avenue E. • 108th direct access • Transit stops at Evergreen Point Road and 92nd Avenue E.	
2008 Most Likely Cost	**Total Cost Range $4.070B to $4.168B**	**Total Cost $358M**	**Total Cost $1.370B**	**Total Cost $776M**	**2008 Total Cost Range $6.574B to $6.672B**

*Requires additional transit service, etc.
**Does not include life cycle renewal costs for quieter pavement; initial installation only.

All costs at year of expenditure.

Washington State Department of Transportation

SR 520 Corridor Program

STATE ROUTE 520

DETAILED OPTION K ESTIMATE: I-5 TO FLOATING BRIDGE

Updated: November 2008

	I-5	Portage Bay	Montlake	West Approach
Cost	$322M	$414M	$2.346B	$988M
	• Includes Roanoke Lid ($68M) • Includes 10th & Delmar Lid ($72M)	• Includes False Arch Bridge Type	• Includes Montlake Lid ($69M) • Includes Pacific & Montlake Lid ($33M) • Includes Tunnel, Cut & Cover, Sequential Excavation Methods ($1,056M)	• Includes Foster Island Land Bridge ($80M)

Total Cost Range for I-5 to Floating Bridge

$4.070B to $4.168B

$512M

• Option for Eastbound Off-Ramp, Westbound On-Ramp at Montlake Boulevard ($98M). Not shown in graphic above.

* Costs are 2008 CEVP, most likely at year of expenditure.

3.3 What is Option L?

Option L replaces the tunnel in Option K with an elevated crossing of the Montlake Cut. In addition, a gradual grade on SR 520 is proposed from Montlake Boulevard to the Western approach to address stormwater drainage.

Consideration in development of design

- An elevated structure provides a lower-cost alternative than Option K; however, it does not address the visual intrusiveness of the corridor to surrounding communities.
- There are greater impacts to University of Washington property, the waterfront, and the historic boathouse.

Description

Option L was developed in response to regulatory agencies requesting an alternative to a tunnel crossing of the Montlake Cut and to develop a lower-cost option to be evaluated in the supplemental draft EIS. Option L is similar to Option K in transportation functions, but includes a second drawbridge across the Montlake Cut from the east Montlake area to Pacific Street. This option consists of the following features:

- A SPUI over the SR 520 mainline east of the Montlake area near the existing MOHAI site.
- HOV and transit direct access ramps to the SPUI to and from the east.
- A bascule bridge over the Montlake Cut at East Montlake Park.
- A six-lane Portage Bay bridge crossing with the architectural treatment to be determined.
- Ramp connections to Lake Washington Boulevard. However the option restricts left turn movements from Lake Washington Boulevard to westbound SR 520 to limit traffic through the Washington Park Arboretum.
- Includes quiet pavement and/or noise walls as recommended by the Acoustics ERP – subject to neighborhood approval.
- Lids at I-5, 10th Avenue E and Delmar Drive E, and Montlake Boulevard.
- A lowered intersection at Montlake Boulevard NE and Pacific Street to include a new approach to and from the east and a grade-separated pedestrian crossing.
- Impacts on a University of Washington parking lot south of Husky Stadium and potential development in this area.
- A lowered intersection of the Montlake Boulevard and Pacific Street interchange requiring grade changes of the three existing legs of the intersection.
- Vehicles traveling southbound on Lake Washington Blvd are restricted from taking a left turn at the on-ramp to access SR 520, eastbound, similar to existing conditions.

3.3.1 Alignment and footprint

The general height and alignment of SR 520 between I-5 and Montlake Boulevard is similar among all options. This section specifically addresses the alignment unique to Option L. The height of SR 520 between Montlake Boulevard and the floating bridge varies and has a constant slope of approximately .7 percent to the Western Highrise. The height of SR 520 at the Western Highrise, which serves as the west navigation passage under SR 520, is similar in height to and is northwest of today's west highrise. The proposed movable bridge across the Montlake Cut is similar in height to the existing Montlake Bridge to maintain similar navigation passage clearances.

The following footprint is unique to Option L:

- A raised interchange above the SR 520 mainline traffic lanes in the vicinity of the MOHAI site requiring the interchange to be 20 to 30 feet above the existing SR 520.
- Ramp connections between SR 520 and the existing Lake Washington Boulevard ramp terminus.
- A movable bridge crossing over the Montlake Cut that is similar in height to the existing Montlake Bridge.

Stormwater facilities are also sited near the interchange in the vicinity north of the existing MOHAI site.

Possible Sub-Option Modifications

There are three modifications that will receive additional analysis. The modifications below could be added to Option L if the analysis shows a benefit for transit and/or a need to address traffic volumes. These are not a part of the baseline Option L as they increase the overall roadway footprint in these areas and the impacts associated with the Foster Island land bridge have not been fully analyzed.

Potential modifications to Option L include:

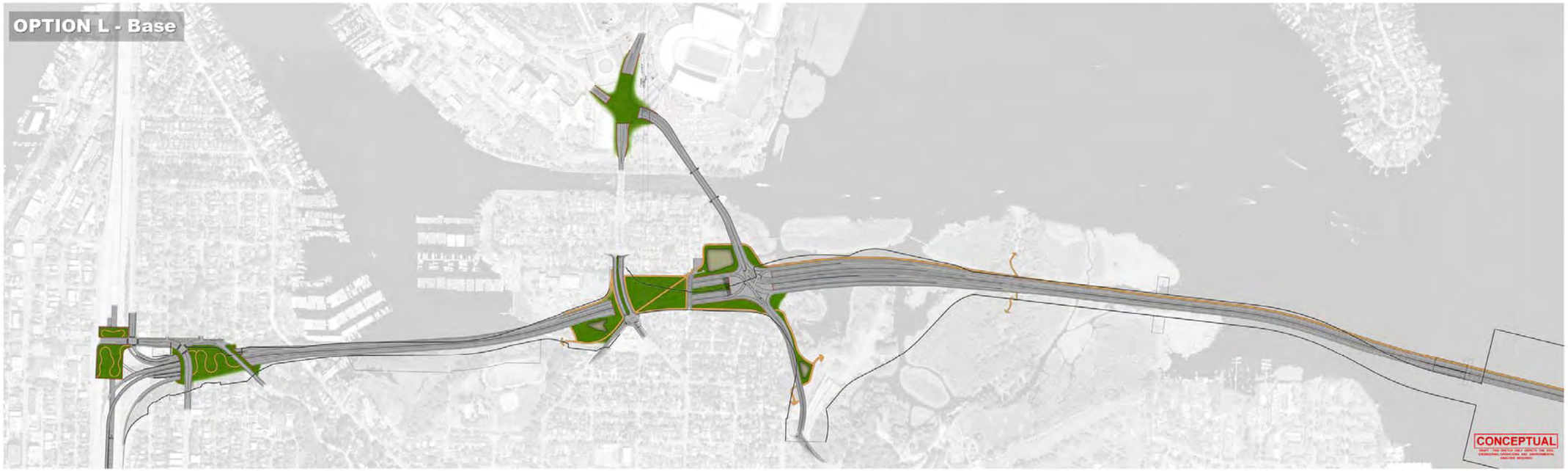
- Allowing left turns from southbound Lake Washington Boulevard to SR 520.
- Adding additional capacity northbound on Montlake Boulevard NE to 45th Avenue similar to the draft EIS 6-Lane Pacific Street Interchange option.
- Similar to Option K, the addition of a Foster Island land bridge.

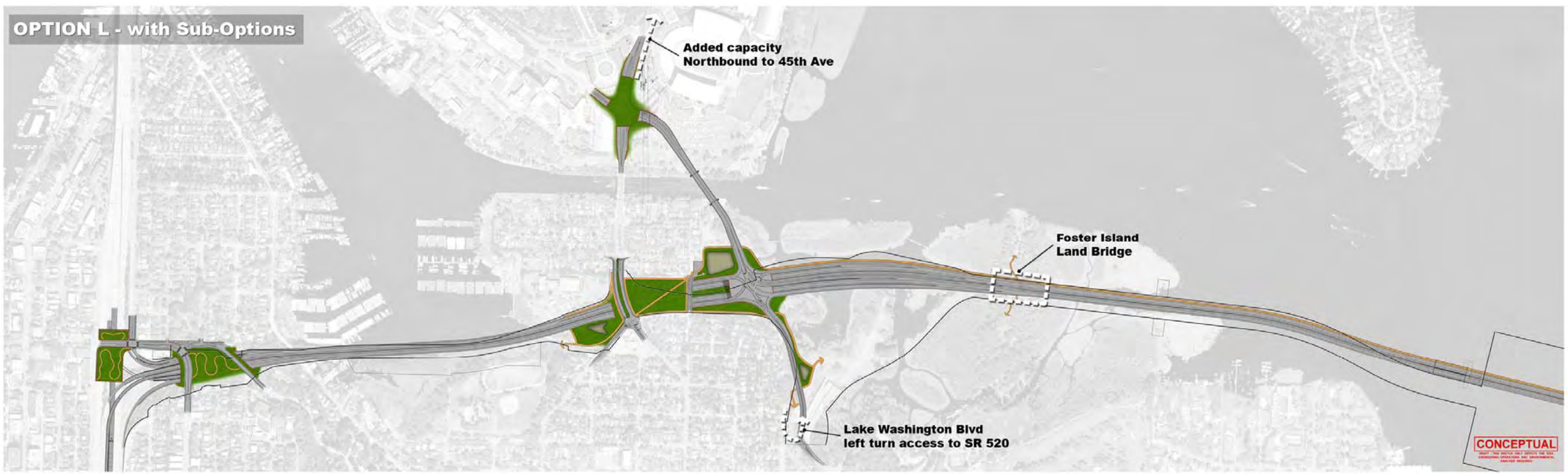
Option L was not refined.

3.3.2 Option L corridor improvement graphics and cost estimates

The graphics on the following three pages show the following for Option L:

1. The base Option design and sub-option improvements,
2. The cost to construct along the entire SR 520 corridor, and
3. The detailed cost estimate for base Option by segment and sub-option costs (where available) are provided at the bottom.


OPTION L - Base
CONCEPTUAL


OPTION L - with Sub-Options
Added capacity
Northbound to 45th Ave
Foster Island
Land Bridge
Lake Washington Blvd
left turn access to SR 520
CONCEPTUAL

Washington State Department of Transportation

SR 520 Corridor Program

COST ESTIMATE FOR SR 520 CORRIDOR WITH OPTION L

Updated: November 2008

	I-5 to Floating Bridge*	Floating Bridge		Evergreen Point Road to I-405	
2008 Six Lane Alternative With Option L					Note: Map inculdes major contstruction limits. Corridor work continues to SR 202.
	Option L	**Pontoon Site**	**Floating Bridge**		
2008	• 4+2 Configuration • Six lane Portage Bay bridge • Single point urban interchange over SR 520 at the Montlake shoreline • Narrow inside shoulder and lane width • Lids at I-5, 10th/Delmar and Montlake • Bascule crossing over the Montlake Cut • Portage Bay Bridge Aesthetic Treatment • Allowance for quieter pavement** • Option for Foster Island Land Bridge	• 8 basin, 2 gate site • Shallow foundation design concept	• 4+2 configuration • Narrow inside shoulder and lane width • Single row of pontoons with added floatation	• 4+2 configuration • Move HOV lanes to inside between SR 202 • Lids at Evergreen Point Road, 84th Avenue E. and 92nd Avenue E. • 108th direct access • Transit stops at Evergreen Point Road and 92nd Avenue E.	
2008 Most Likely Cost	**Total Cost Range $2.562B to $2.642B**	**Total Cost $358M**	**Total Cost $1.370B**	**Total Cost $776M**	**2008 Total Cost Range $5.066B to $5.146B**

*Requires additional transit service, etc.
**Does not include life cycle renewal costs for quieter pavement; initial installation only.

All costs at year of expenditure.

Washington State Department of Transportation

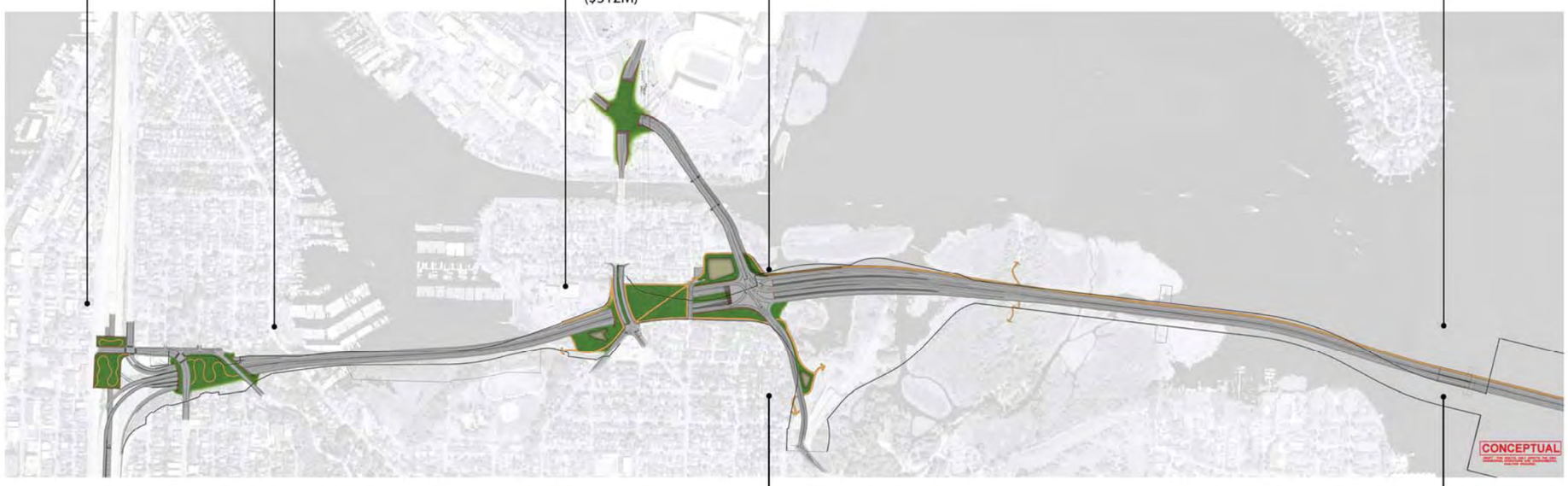
SR 520 Corridor Program

STATE ROUTE 520

DETAILED OPTION L ESTIMATE: I-5 TO FLOATING BRIDGE

Updated: November 2008

	I-5	Portage Bay	Montlake	West Approach
Cost	$322M	$426M	$701M	$1.113B
	• Includes Roanoke Lid ($68M) • Includes 10th & Delmar Lid ($72M)	• Includes Portage Bay Bridge Aesthetic Treatment	• Includes Montlake Lid ($63M) • Includes Pacific & Montlake Lid ($56M) • Includes Bascule Crossing ($312M)	



$1.193B

• Option for Foster Island Land Bridge ($80M). Not shown in graphic above.

Total Cost Range for I-5 to Floating Bridge

$2.562B to $2.642B

* Costs are 2008 CEVP, most likely at year of expenditure.

3.4 Are there common features among the Westside Options?

There are many common features among the three Westside Options. The common elements related to areas of agreement on design, how community interests are addressed and mitigation that should be included with all options are listed below.

Design

- From I-5 to mid-Portage Bay, the facility will include lids and a viaduct alignment that are common for each Option, including reversible direct access to and from the I-5 express lanes.
- All options have a low roadway profile compared to the prior draft EIS designs.
- The footprint has been reduced by the elimination of the Montlake Transit Flyer Stop, some ramps, and narrowing of lanes and shoulders. Added transit service and ultimate BRT services are proposed to mitigate for the loss of the flyer stop.
- High capacity transit is accommodated in the corridor from Foster Island to I-405.
- There is no widening of Montlake Boulevard north of the Montlake Multimodal Center.
- There are no additional lanes on Pacific Street; some additional footprint may be required for Option K.
- From Foster Island to the east, the roadway has been realigned to straighten curves, and the roadway alignment has been moved 100 feet north in all options.
- Lids at I-5, 10th Avenue East and Delmar Drive.
- Additional bicycle and pedestrian facilities along the corridor would be constructed, improving connections and access to surrounding parks and neighborhoods, including pedestrian connections at Foster Island.
- The MOHAI site would be acquired and relocated.

3.4.1 Commonality of alignment and footprint along the entire corridor

The alignment of the proposed SR 520 corridor is similar to today. In most areas, where SR 520 is on a bridge, the proposed alignment is shifted north of the existing roadway to provide for minimal traffic disruption during construction. SR 520 on the western half of the Portage Bay Bridge is proposed to follow the existing roadway centerline while the eastern half of the bridge is aligned farther north to provide safe sight lines and better constructability. Under Montlake Boulevard and 24th Avenue E, SR 520 is proposed to be in a similar location to today. The alignment through the Washington Park Arboretum and the west approach to the proposed floating bridge is north of the existing SR 520 Evergreen Point Bridge to allow WSDOT to construct four lanes of bridge structure while maintaining traffic on the current structure.

The footprint of the proposed SR 520 corridor is wider than today and varies among westside Options A, K, and L. The existing SR 520 consists of four general-purpose lanes

from I-5 to the shoreline in Bellevue just west of Evergreen Point Road. Today, the typical four-lane width—including lanes, shoulders and barriers—is approximately 60 feet wide. The proposed typical six-lane width, including lanes, shoulders, and barriers, is approximately 100 feet wide. The proposed lane and shoulder widths have been reduced since publishing the draft EIS to satisfy legislative goals and meet community interests. Without sacrificing safety and traffic operations, the general-purpose and shoulder lanes have been reduced to narrower widths. The project proposes an additional 14-foot width across the floating bridge for a regional bicycle and pedestrian path. This additional width extends across the west approach bridge and through the Washington Park Arboretum to the Montlake vicinity.

3.5 How did the group reach agreement on the Westside Options?

Governor Gregoire, in response to the requirements of ESSB 6099 from the 2007 legislative session, convened the mediation in September 2007 to explore ways to complete the SR 520 project, with particular attention to the design of the project in Seattle. Over the course of 7 months, the mediation participants developed and reviewed more than a dozen design options and sub-design options for the westside design of SR 520. By March 2008, the group had narrowed the list to three main design options that would be carried forward for further analysis in WSDOT's supplemental draft EIS. The following pages describe the mediation process and the evolution of the three design options.

3.5.1 How were the options developed?

The mediation participants brainstormed design options that were aimed at meeting all their community interests identified in Section 6. Design options were identified beginning in November through March. Briefly, the design options included these essential elements:

A. Redesign of the Montlake Interchange options evaluated in the draft EIS to address Seattle City Council resolution elements and draft EIS comments.

B. Redesign of the Pacific Street design option evaluated in the draft EIS to address Seattle City Council resolution elements and draft EIS comments.

C. Full Tunnel options:

1. Tunnel from the floating bridge to I-5 with no access points in Seattle; separate two-lane bus tunnel from the floating bridge to the light rail station; remains 50 feet below grade; reconfigure I-5 to remove the weave – all entrances/exits on the right side; use reclaimed viaduct land for a trail and park.
2. Tunnel from the floating bridge to I-5 with distributed access points.

D. Retrofit the current four-lane bridge with a separate two-lane tunnel for transit to the light rail station (separate structure across the lake and then a tunnel from the floating bridge).

E. A submerged exit/entrance just west of the floating bridge under Union Bay that surfaces at Pacific Street.

F. Second Montlake Cut Bridge – design should emulate and reflect, but not copy the historic bridge.

G. Tunnel and Viaduct – tunnel from the floating bridge under the Washington Park Arboretum with a viaduct through Portage Bay.

H. Similar to draft EIS Pacific Interchange design option with a refined SPUI northeast of Washington Park Arboretum (interchange with two levels – through traffic below, access traffic above with one signal without northbound–southbound through movements) with a bridge to Pacific Street and Lake Washington Boulevard.

I. Retrofit with revised alignment and tunnel to the north of the Washington Park Arboretum with a people mover below ground from flyer stop to University of Washington and a second Montlake Cut Bridge.

J. Interchange between draft EIS options A and B, with a short tunnel, spur to Lake Washington Boulevard with an intersection under the mainline, with no Washington Park Arboretum ramps.

K. Tunnel in Washington Park Arboretum and East Montlake Interchange with Tunnel under the Montlake Cut to the Pacific Street and Montlake Boulevard intersection.

L. Interchange east of Montlake Boulevard (similar location to Option K) with a bridge across the east end of the Montlake Cut instead of a tunnel.

3.5.2 How were the options evaluated?

Participants evaluated and refined design options from November through February. The meetings included presentations from WSDOT, independent experts, and the mediation participants; discussion of the pros and cons of each design option; attempts to make the design options more responsive to the criteria; and the elimination of those design options that were least likely to gain support in the mediation.

With respect to independent expert review, the mediation group, as required by ESSB 6099, selected a consultant to advise them about tube and tunnel options. The group selected COWI, a Danish tunnel engineering consultancy and part of OCC, Ocean and Coastal Consultants. COWI offered an independent evaluation of the feasibility of tube and tunnel options across Lake Washington, including the connection through Seattle to I-5. With COWI's help, the participants agreed to eliminate tunnels across the lake and at I-5, focusing instead on tunnel and covered tube options in the Washington Park Arboretum, adjacent to the Montlake neighborhood and the University of Washington.

The group also commissioned COWI to review the option to retrofit the current floating bridge and add two lanes. COWI's review of the retrofit options showed that "a new bridge is less costly than strengthening the bridge; we do not see the advantage of choosing the strengthen [option]; adding the risk considerations further reinforces the conclusion" (final meeting summary, January 15, 2008, p.5). This conclusion echoed WSDOT's analysis of the retrofit option.

The mediation participants also eliminated other options through their work in late 2007 and early 2008. Specifically, the group eliminated these Options:

- Option C/Full tunnel options were removed because they were "too challenging to build, expensive and too much impact to the environment and neighborhoods" (Mediation Final Meeting Summary, December 18, 2007, pg 4).
- Option E/Full tunnel with car/bus tunnel to University of Washington was removed given concerns about cost, environmental, and neighborhood impacts (Mediation Final Meeting Summary, December 18, 2007).
- Option D/Retrofit was set aside at the January meeting. Option D was given additional evaluation from two different consultants (WSDOT consultant and COWI). The result was that the bridge could be retrofitted with additional lanes, but that the cost to retrofit would be similar to the cost to construct a new bridge, and the life span of the retrofitted bridge would be significantly less than a new bridge. The mediation group agreed in January to "set aside the retrofit Option and reconsider it if the agreed upon design costs are too much" (Mediation Final Meeting Summary, January 15, 2008, page 5).

3.5.3 What options were selected for further refinement and study?

In each meeting, the group focused time on those design options with the most promise. At the meeting on February 19, 2008, mediation members agreed to focus on Options A, K, and L with various sub-options to each. As a result, the group participated in a two-day workshop to provide more detailed designs for each of these. Design Option L, a sub-option to K at the March 20 workshop, was identified as an option that should not be defined as a sub-option to option K. At the end of the workshop, the participants affirmed their earlier decision, and on March 20, 2008, they agreed to take Options A, K, and L forward into the supplemental draft EIS analysis.

After the mediation session on March 20, 2008, the participants continued to work in small groups to refine the three options, explore the impacts of each, and assist WSDOT to develop the mitigation associated with each.

Section 4 – Relationship of the Westside Options to the Purpose and Need Statement

4.1 What is the project's purpose and need statement?

The purpose and need statement is an important component of environmental documents prepared under NEPA regulations. It identifies the reasons why the project is necessary and provides a framework for identifying the range of potential options to meet the identified need. The legal guidance on purpose and need statements comes from the NEPA regulations, which state that the Purpose and Need Statement "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the options including the proposed action." In addition, each federal agency has its own guidance on NEPA documents. The Federal Highway Administration (FHWA) guidance directs state departments of transportation to "identify and describe the proposed action and the transportation problem(s) or other needs which it is intended to address."

The purpose and need statement for the SR 520 Bridge Replacement and HOV Project was developed in 1998 by the Trans-Lake Washington Study Committee and adopted in 2000 by the Trans-Lake Washington Project Executive Committee. The committee highlighted four areas that described the current problems facing this corridor:

- Land uses and transportation systems are not integrated in their planning and implementation.
- The transportation system suffers from extensive congestion.
- Reliability and safety of the system are impaired.
- Neighborhoods, business centers, and the environment are impacted.

Based on these identified needs, the project's purpose was defined as "to improve mobility for people and goods across Lake Washington within the SR 520 corridor in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing, and where possible mitigating impacts on affected neighborhoods and the environment."

4.2 How do the options meet the project's purpose and need?

This section briefly describes Options A, K, and L in terms of how they meet the project's purpose and need. More detailed information on their traffic operations and environmental effects can be found in Section 6.

In conjunction with the purpose and need statement, the project's Technical and Executive Committees developed evaluation criteria that were used to screen the original alternatives for the draft EIS. These criteria allowed a comparative assessment of mobility, reliability, safety, environmental impacts, and cost for each Option and provided a basis for alternatives that performed poorly to be dropped from further consideration.

Under NEPA, the Options developed during mediation must be evaluated under the same criteria as the previous alternatives. This has not yet been done because there is not

sufficient data on each option to perform the evaluation. WSDOT will apply the evaluation criteria after sufficient results are available from the supplemental draft EIS analysis currently underway.

4.2.1 Improving mobility for people and goods

As described in Section 2, each of the Options developed during the mediation process includes four general-purpose lanes and two HOV lanes. Compared to the four general-purpose lanes that exist today, this "4+2" lane configuration improves mobility throughout the SR 520 corridor. Detailed traffic modeling has not been completed for Options A, K, and L; however, for comparison, the 6-Lane Alternative evaluated in the 2006 draft EIS carried 25 percent more people than the existing four lanes in only 3-percent more vehicles.

All options propose increases in transit accessibility and improvements to transit service and the implementation of bus rapid transit lines in the corridor. Option A provide a westbound transit only direct access ramp to Montlake Boulevard and a transit and HOV bypass on the eastbound ramp. This Option also calls for transit emphasis treatments and maintains transit stops along Montlake Boulevard between SR 520 and Pacific Street. Options K and L provide direct transit and HOV access to and from the east to the new SPUI interchange.

All options also include a regional bicycle and pedestrian path, which will improve mobility for these travel modes.

Although all of the options would improve mobility on SR 520, the three interchange configurations would have different effects on local traffic. Options K and L would improve traffic flow between SR 520 and points to the north, which currently must pass through the congested Montlake interchange area. Option A also provides improvement by creating a parallel Montlake Cut bridge to provide added capacity through this area. However, Option A closes the Lake Washington Boulevard ramps, which alters traffic circulation and focuses traffic onto Montlake Boulevard.

4.2.2 Safety, reliability, and cost-effectiveness

Options A, K, and L would all include design features that would improve safety in the corridor over existing conditions:

- SR 520's travel lanes would be somewhat wider than they are today, and there would be shoulders on both sides. Travel would be more reliable because disabled vehicles could pull out of traffic onto the shoulder rather than blocking a travel lane.
- New HOV lanes would provide much greater travel time reliability for transit vehicles and carpools. Rather than being delayed in general-purpose traffic, these vehicles would provide a travel time benefit that would encourage people to carpool or take the bus. This, in turn, would allow the highway to operate more efficiently.

Section 3 provides preliminary order-of-magnitude cost estimates for each of the three Options. At this stage of project development, it is not possible to gauge cost-effectiveness because neither the costs nor the benefits of the Options have been fully quantified.

4.2.3 Avoiding, minimizing, and/or mitigating effects on neighborhoods and the environment

All of the options were developed to meet the goals established by the Washington State Legislature. Many of these goals were established to reduce impacts on neighborhoods and the environment. They include minimizing the total footprint and width of the bridge, minimizing neighborhood impacts, including incorporation of green lids and connectors, minimizing traffic increases through the Washington Park Arboretum and adjacent neighborhoods, and incorporating the recommendations of the project's health impact assessment. The features included in the project to meet these legislative goals are described in Section 5 of this document.

Each option also incorporates other measures to avoid, minimize, and/or mitigate effects on neighborhoods and the environment. These measures differ among options; some involve trade-offs among resources. For example:

- Maintaining a low profile for SR 520 between the Montlake shoreline and the Evergreen Point Bridge improves the visual environment for neighborhoods on either side, but makes water quality treatment more difficult and may require new facilities in the sensitive Foster Island ecosystem.
- Constructing a land bridge over the roadway at Foster Island would improve pedestrian connections through the Washington Park Arboretum, but might require additional filling of wetlands protected by the Clean Water Act. Such filling is difficult to permit if other options exist.
- Constructing a tunnel beneath the Montlake Cut would reduce visual impacts and noise, but could affect endangered salmon and tribal treaty fishing.
- Closing the Lake Washington Boulevard ramps would reduce traffic, noise, and air emissions through the Washington Park Arboretum but would increase these same impacts in the Montlake neighborhood.

Section 5 – Legislative Goals for Westside Options

This section focuses on how each option meets the legislative goals identified in ESSB 6099. These legislative goals are described below.

5.1 What are the legislative goals for the project design?

As described in ESSB 6099, the following are the legislative goals for the project design:

> *Minimize the total footprint and width of the bridge, and seek appropriate federal design variances to safety and mobility standards, while complying with other federal laws;*
>
> *Minimize the project impact on surrounding neighborhoods, including incorporation of green lids and connectors, and minimize any increases in additional traffic volumes through the Washington park Arboretum and other adjacent neighborhoods;*
>
> *Incorporate the recommendations of a health impact assessment to calculate the project's impact on air quality, carbon emissions, and other public health issues, conducted by the Puget Sound clean air agency and King county public health;*
>
> *Ensure that the ultimate project configuration effectively prioritizes maintaining travel time, speed, and reliability on the two high-occupancy vehicle lanes; and*
>
> *Clearly articulate in required environmental documents the alignment of the selected preferred alternative for the state route number 520 bridge replacement and HOV project and the footprint of the project and the affected areas.*

5.2 Minimize footprint and width of bridge

The following elements for each option address the legislative goal of minimizing the footprint and width of the bridge for the SR 520 corridor project.

Common to all Options

- Reduced shoulder and lane widths to minimize the overall SR 520 roadway footprint.
- Removes the Montlake Transit Flyer Stop reducing width across Portage Bay, at Montlake Boulevard, and into the Washington Park Arboretum.

Option A

- Removes the Lake Washington Boulevard ramps and the Washington Park Arboretum interchange.
- Keeps the Montlake interchange in its present location to reduce the width in the Washington Park Arboretum and uses the existing highway right of way as much as possible.

Option K

- Includes tunneled ramps beneath the Montlake Cut to reduce project footprint on land.
- Moves the interchange east of the current location to reduce the width across Portage Bay.
- Proposes a sequential excavation tunneling method under the Montlake Cut to avoid in-water impacts to the navigation channel and fish migration path during construction.

Option L

- Moves the interchange east of the current interchange to reduce width through the Montlake Interchange and across Portage Bay.

5.3 Incorporates enhancements for surrounding neighborhoods

The following elements for each Option address the legislative goal of incorporating enhancements for surrounding neighborhoods for the SR 520 corridor project.

Common to all Options

- Provides lids and pedestrian connectivity at I-5, 10th Avenue East and Delmar Drive, and in the Montlake vicinity.
- Proposes increases in transit services.
- Adds HOV lanes on SR 520 to improve transit speed and reliability.

Option A

- Reduces trips in the Washington Park Arboretum adjacent to the SR 520 corridor by removing Lake Washington Boulevard ramps.
- Focus on cost-effective solutions for a signature Portage Bay structure be determined through a design competition and Seattle Design Commission review.

Option K

- Provides additional lids and pedestrian connectivity at Foster Island and the Montlake Boulevard and Pacific Street intersection.
- Provides modified connections to Lake Washington Boulevard E by constructing a new connection to the Washington Park Arboretum. The new connection between Montlake Boulevard and the Washington Park Arboretum provides full SR 520 access from the south side of SR 520.
- Recommends construction of a false arch Portage Bay signature bridge.

- Recommends a design competition and Seattle Design commission review for the aesthetic approach to the Portage Bay Bridge focused on cost-effective solutions.

Option L

- Recommends construction of a Portage Bay signature bridge.
- Proposes plantings and other structure "softening" treatments to reduce visual impacts of a new structure across the Montlake Cut.

5.4 Incorporates recommendations from health impact assessment

The following elements for each Option address the legislative goal of incorporating recommendations from the health impact assessment for the SR 520 corridor project.

Common to all Options

- Provides lids and pedestrian connectivity at I-5, 10th Avenue East and Delmar Drive, and in the Montlake vicinity.
- Reduces noise to surrounding communities and parks by including noise mitigation such as quieter pavement.
- Improves transit, walking, and bicycling through the corridor.

Option A

- Removes the Lake Washington Boulevard ramps and restores the integrity and ability of users' to appreciate the Washington Park Arboretum.

Option K

- Provides additional lids and pedestrian connectivity at Foster Island and the Montlake Boulevard and Pacific Street intersection.
- Moves the Lake Washington Boulevard ramps to the west, improving the users' ability to appreciate the Washington Park Arboretum.

Option L

- Moves the Lake Washington Boulevard ramps to the west and improves the users' ability to appreciate the Washington Park Arboretum.

5.5 Maintains travel speed and reliability for HOV

The following elements for each Option address the legislative goal of incorporating enhancements for maintaining travel speed and reliability for HOVs in the SR 520 corridor project.

Common to all Options

- Provides transit direct access at the interchanges.
- Provides a continuous inside HOV lane across the corridor, including a reversible HOV and transit ramp lane to the I-5 Express Lanes into and out of Seattle.
- Provides similar transit and bus rapid transit service levels among all options.

Option A

- Maintains transit connectivity along Montlake Boulevard from Montlake Interchange to Pacific Street.
- Provides transit-only direct access westbound off-ramp from SR 520 to Montlake Boulevard.
- Provides transit and HOV bypass on eastbound ramp from the Montlake Interchange to SR 520. This requires transit to merge across SR 520 traffic to access the HOV lane across the bridge.

Option K

- Provides transit and HOV direct access to and from eastbound SR 520 at the new Montlake SPUI.

Option L

- Provides HOV direct access to/from eastbound SR 520 to the new Montlake SPUI.

5.6 Articulate the alignment of the option, footprint, and affected areas in environmental documents

All three Options, including proposed variations, are currently under review and will be fully evaluated in the supplemental draft EIS. Section 7 provides a preliminary assessment of how each Option impacts applicable environmental regulations.

Section 6 – Community Interests for the Westside Options

This section lists the community interests for the westside Options as identified by mediation participants. It then summarizes how each option represents those interests, based on comments captured during mediation group meetings and through written comments by mediation participants from October through December 2008. Effort was taken to focus on how an Option met a community interest as compared to the No Build conditions.

Section 2, paragraph 3 of ESSB 6099 states:

> *In evaluating the project impacts, the mediator must consider the concerns of neighborhoods and institutions of higher education directly impacted by the proposed design, establish a process that incorporates interest-based negotiation, and work with the appropriate planning staff to develop mitigation recommendations related to the project design. The mediator shall work to ensure that the project impact plan provides a comprehensive approach to mitigating the impacts of the project, including incorporating construction mitigation plans.*

6.1 What community interests were identified for the Westside Options?

At the beginning of the mediation process, the participants developed a common list of interests that should be addressed by the options for the westside interchange. These interests included items related to:

- Balancing and integrating across multiple issues, including community, regulatory, and other projects.
- Improving transit access in the SR 520 corridor.
- Avoiding, minimizing, or mitigating environmental impacts, including wetlands, salmon, noise, air quality, and carbon emissions.
- Protecting and improving the park system.
- Improving how people and goods move through the corridor.
- Designing a project that considers the surrounding community and future generations.
- Improving bicycle and pedestrian connectivity.
- Integrating with regional solutions.
- Minimizing and addressing construction impacts.

The group expanded upon theses interests and organized based on the following themes:

- Balance and integration
- Transit

- Environment
- Parks
- Neighborhoods
- Transportation
- University of Washington Campus
- Boating Opportunities
- Schedule and Costs
- Design
- Bicycles and Pedestrians
- Regional and Statewide System
- Construction Effects

The following sections represent each general theme and include the detailed community interests followed by summarized responses from participants articulating how each Option meets community interests. Appendix 10.1 includes mediation participant responses gathered over the 4 month period.

6.2 What are the common interests and enhancements?

The SR 520 Bridge Replacement and HOV program has incorporated a number of features into the six-lane configuration that mitigate adverse effects to the environment and/or enhance the surrounding communities. The following features met common community interests:

- Landscaped lids at key locations along SR 520 to reconnect neighborhoods that were separated when the roadway was originally constructed in the 1960s.
- Noise mitigation, including quiet pavement and other measures along the majority of the corridor, to reduce traffic noise on adjacent properties.
- Designs are lower and have a smaller footprint than the alternatives carried in the draft EIS.
- All options enhance access for transit, bicycles, and pedestrians balanced with accommodations for addition car traffic.
- Improved path connections and new facilities for bicyclists and pedestrians, including linked bicycle/pedestrian trails between all lids and new pedestrian linkages between the Washington Park Arboretum and surrounding parks and lid locations.
- Increased transit service frequency and additional local feeder routes from south of Montlake Interchange to Montlake Multimodal Center to mitigate the removal of the Montlake Transit Flyer Stop on SR 520 today.
- Bicycle and pedestrian access and connectivity provided by improvements to the local and regional trail system along this corridor.

- Removal of the ramps for the never-completed R.H. Thompson Expressway.
- A comprehensive stormwater management plan and stormwater treatment to remove pollutants and improve water quality.
- Implementation of TDM and Active Traffic Management (ATM) strategies to manage traffic flow through the corridor and reduce single-occupant vehicle trips.
- Aesthetic treatments, landscaping, and design guidelines to promote visual continuity and consistency along the corridor, including continuing with design elements similar to an Olmsted-type feel and an integrated design.
- Addresses the long-term growth and transportation needs for the area as a result of economic growth and access to regional facilities such as the University of Washington, the University of Washington Medical Center and Seattle Children's Hospital.
- A plan for the preservation and protection of endangered species should be developed before construction starts. This plan should be developed in conjunction with federal regulatory agencies and Indian tribes.
- The project is encouraged to participate in habitat enhancement and protection projects identified by local jurisdiction and watershed groups.
- The construction of temporary bridges are recommended to be avoided to the greatest extent possible to reduce impacts.

In regards to enhancing the SR 520 corridor and surrounding area, participants came to agreement on a series of early and longer-term elements that are enhancements to the SR 520 project as follows:

Early Action Improvements Suggested by Mediation Participants

- Include traffic delineation, such as signing and striping, for better segregation and to reduce potential conflicts of SR 520 and local traffic on Montlake Boulevard from south of SR 520 to Pacific Place
- Optimize traffic signal timing on Montlake Boulevard to favor progression and the efficient movement of the greatest number of people and goods.

Long-Term Improvements Suggested by Mediation Participants

- Incorporate the recommendations of the Acoustics ERP. This study examined pavement types, noise attenuation at hot spot areas, use of absorptive materials, and special treatment at lid portals.
- Use ATM concepts, such as dynamic messaging systems, ramp metering, access control and others as a tool to achieve efficiencies, to be applied to the SR 520 and roadways approaching the corridor.

- Explore opportunities to develop an SR 520 Corridor Management Agreement. Suggested strategies and actions to consider include:
  - Develop/redevelop compact, well-designed pedestrian-oriented centers.
  - Establish targets for mixed-use centers.
  - Increase land use density in urban centers and other areas served by transit to encourage increased ridership.
  - Concentrate on mixed use new walkable developments near transit centers.
  - Create an improved system of pedestrian/bikeway connections.
  - Encourage infill and redevelopment of underdeveloped land.
  - Develop shared/centralized parking solutions.
  - Provide for affordable housing.
- Reflect consistent best management practices for stormwater and other areas of construction and design to target such things as better than minimum water quality requirements.
- Implement Transportation Demand Management (TDM) strategies and policies before, during, and after construction. These could include such proven actions as vanpools, van shares, tolling, parking pricing strategies, HOV and toll marketing, public information, and working with local jurisdictions on land use actions (see Appendix 10.3 for additional details).
- Develop a transit service plan that includes bus rapid transit service, which creates additional transit service that connects the Eastside with the University of Washington District and Downtown Seattle. This plan should increase cross-lake all-day, two-way service and should closely duplicate the frequency and span of service that would be accessible at the Montlake Transit Flyer Stop should it remain.
- Add additional transit service between the SR 520 corridor and the Montlake Multimodal Center to replace the functionality of the Montlake Transit Flyer Stop and better connectivity to surrounding communities.

6.3 Balance and integration

Participants identified the following community interests as goals that any option should accomplish with respect to balance and integration of the SR 520 corridor project:

- Produce a solution that balances all needs of each interest group.
- Ensure consistency with guidance from the legislature.
- Develop a solution that meets all local, state, and federal regulatory requirements.
- Blend community vitality with regional responsibility.
- Integrate with other existing projects and plans.
- Protect existing agreements and solutions (including the Eastside).

Below is a summary of mediation participants' statements about how each option met the community goals for balance and integration.

Option A

- Proposes less-costly solutions to the Montlake interchange by replacing the existing interchange with a similar facility as well as other elements to reduce cost in keeping with the legislative direction.
- Focuses on improvements to sensitive areas such as the Washington Park Arboretum, McCurdy Park and surrounding park areas, creating a less obtrusive corridor for adjacent neighborhoods.
- Proposes to achieve a visually pleasing Portage Bay Bridge structure with the goal of lowering costs. The style to be determined through a design competition and oversight by the Seattle Design Commission.
- Has the least physical impact on the University of Washington campus, University neighborhoods and the University of Washington Hospital.
- Preserves future development opportunities on University of Washington existing property.

Option K

- Reduces the footprint of the SR 520 mainline, reduces noise, and targets congestion relief in keeping with legislative intent.
- Provides a direct connection between SR 520 and the University of Washington and removes draw-bridge delay during off-peak hours for transit to and from the University of Washington.
- Preserves some development potential on University of Washington parking areas next to Husky stadium.

Option L

- Provides a direct connection between SR 520 and the University of Washington. However, transit would be subject to bridge openings on the new Montlake Cut Bridge during off peak hours.
- Improves multimodal access via transit and improves pedestrian and bicycle access to the University of Washington, proposed Montlake Multimodal Center, University of Washington Station, and SR 520 corridor and the Washington Park Arboretum.

6.4 Transit

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to transit:

- Provide convenient access to transit and high occupancy vehicle options to reduce single-occupant trips.
- Optimize the multimodal transit system.
- Provide transit connectivity, access and ease of movement.
- Integrate local and regional transit service.
- Provide fast, reliable, predictable and well-integrated local and regional transit.
- Provide easy, convenient and accessible transfers – bus to bus, bus to rail.

Below is a summary of mediation participants' statements about how each option met the community goals for transit.

Option A

- Convenient access for transit is provided by a westbound transit-only exit ramp to Montlake Boulevard.
- Proposes transit emphasis delineation on Montlake Boulevard from the SR 520 interchange to Pacific Street.
- It is recommended that the existing and proposed Montlake Cut Bascule Bridge openings be further restricted by expanding peak hour bridge closures to reduce interruptions to transit and traffic flows on Montlake Boulevard.
- Proposes transit enhancement infrastructure, such as transit signal priority, and retains in-lane bus zones on Montlake Boulevard for transit speed, access, and reliability benefits.
- Keeps existing transit stop on Montlake Boulevard East between Pacific Street and SR 520.

Option K

- Reduces traffic volumes on Montlake Boulevard, which is a key transit route.
- Adds transit/HOV direct access from the SPUI to and from eastbound SR 520.
- Constructs a grade-separated pedestrian crossing at Montlake Boulevard NE and Pacific Street that would provide a safer, faster crossing for pedestrians and bicyclists. This would also improve local and regional access to transit between the future Montlake Multimodal Center and the University of Washington Station.
- Constructs a tunnel beneath the Montlake Cut, providing transit with access from SR 520 to Pacific Street that would not be delayed due to Bascule Bridge operations

that exist today. Local routes traveling on Montlake Boulevard would still be subject to delays from Montlake Cut Bridge openings.

- Provides a new direct connection between SR 520 and Montlake Boulevard NE and Pacific Street intersection allowing for increased capacity in the Montlake area. Transit agencies have indicated that steep grades for a short distance are possible.

Option L

- Reduces traffic volumes on Montlake Boulevard, which is a key transit route.
- Adds transit/HOV direct access from the SPUI to and from eastbound SR 520.
- Constructs a grade-separated pedestrian crossing at Montlake Boulevard NE and Pacific Street that would provide a safer, faster crossing for pedestrians and bicyclists. This would also improve local and regional access to transit between the future Montlake Multimodal Center and the University of Washington Station.

6.5 Environment

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to the environment:

- Avoid, minimize, or mitigate environmental impacts—air, water, land, and animal.
- Offset indirect and cumulative environmental impacts.
- Reduce pollution from idling vehicles.
- Enhance the environment—air, water, carbon (green house gas), and biodiversity—through baseline and outcome audits.
- Protect the wetlands from direct, indirect, and cumulative impacts.
- Protect Endangered Species Act (ESA) species.
- Protect salmon in- and out-migration and spawning areas.
- Understand implications for ESA—avoid and minimize and mitigate.
- Protect wildlife.
- Protect the health of Union Bay and Lake Washington.
- Reduce storm-water pollution from vehicles using the corridor.

Below is a summary of mediation participants' statements about how each option met the community goals for the environment. Appendix 10.4 provides a summary of the potential mitigation sites that have been identified to address wetland and fish impacts. The potential mitigation costs for these sites have been incorporated as appropriate into the cost estimates for each option.

Option A

- Smallest footprint and impacts to the Washington Park Arboretum.
- Option proposes to maintain water flow in and around Foster Island and Washington Park Arboretum areas and preserve Lake Washington "Class 1" wetlands.
- Limits impact to fish species by focusing impacts into already disturbed areas.
- Proposes to implement ATM and TDM strategies to reduce single occupant vehicle travel and associated greenhouse gas impacts.
- Proposes a comprehensive Corridor Management Plan to reduce automobile traffic.
- Involves the least impacts to wetland areas.

Option K

- By constructing below ground facilities, such as the Montlake Cut Tunnel, lowering the SR 520 mainline through Foster Island, and adding a land bridge, new green space can be created and used. These strategies permit some of the previously disturbed SR 520 corridor areas to be restored.
- No additional shading occurs over the Montlake Cut thus no additional impacts to the fish environment.
- SPUI design attempts to provide additional capacity to relieve idling emission and improve air quality.
- Design provides a new land bridge over SR 520 through Foster Island for wildlife habitat and creates logical connections between green spaces for a better experience.

Option L

- Option proposes to maintain water flow in and around Foster Island and Washington Park Arboretum areas and preserve Lake Washington "Class 1" wetlands.
- SPUI design attempts to provide additional capacity to relieve idling vehicle emissions and improve air quality.

6.6 Parks

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to parks:

- Protect the park system, greenbelt, and open spaces.
- Meet FHWA Section 4(f) and 6(f) requirements to avoid parks and open space, unless there is no other alternative.
- Promote trail connections to adjacent parks.

- Connect the parks to create a greenbelt.
- Protect the woody plant population impacted by air pollution.
- Preserve Marsh Island, Foster Island, and Duck Bay.
- Preserve the Washington Park Arboretum's:
  - Role as an urban oasis.
  - New gardens and entry.
  - Tranquility
- Minimize the amount of traffic passing through the Washington Park Arboretum.
- Create and enhance the northern gateway to the Washington Park Arboretum.

Below is a summary of mediation participants' statements about how each option met the community goals for parks.

Option A

- No interchange in the Washington Park Arboretum. Removes the Lake Washington Boulevard ramps to increase the green space and natural habitat in this area.
- Lid at McCurdy Park connects to the Washington Park Arboretum and reduces noise impacts and enhances landscaping surrounding drainage ponds.
- Preserves waterfront activities at the University of Washington Activity Center and surrounding parks areas.
- Protects the park system, greenbelt and open spaces by developing an approach that is environmentally sound and recognizes the impacts on the Washington Park Arboretum, area waterways, fish and wildlife, and global greenhouse gas issues.
- Provides improved pathways for safe walking and cycling connections and for park areas in the corridor.
- Reduces the amount of traffic passing through the Washington Park Arboretum to preserve it as park property.
- Provides protection for rare plant species in the Washington Park Arboretum by attempting to reduce vehicle impacts through the area.
- Trail connections are promoted with good path connections along the SR 520 corridor. Trail connection improvements are included to the University of Washington, McCurdy Park, and Roanoke Park.
- Minimizes park land impacts as construction occurs within the existing corridor.

Option K

- Reconnects Foster Island by constructing a land bridge over SR 520, providing visual connectivity from the waterfront through to Washington Park Arboretum and creates a northern Washington Park Arboretum entrance.

- Trail connections are promoted with good path connections along the SR 520 corridor and provision of a continuous greenbelt from the Washington Park Arboretum to Portage Bay. Trail connection improvements are included to the University of Washington, McCurdy Park, and Roanoke Park.
- Preserves Rainier Vista viewshed areas.
- Preserves waterfront activities at the University of Washington Activity Center and surrounding parks areas.
- The Washington Park Arboretum should be preserved as an educational facility and the volume of motor vehicle traffic through the Washington Park Arboretum should be minimized. To minimize the amount of traffic passing through the Washington Park Arboretum, an option to restrict turning movements at Boyer and Interlaken into the northern half of the Washington Park Arboretum is proposed.
- Regarding creating a northern gateway to the Washington Park Arboretum, participants identified that gateway elements exist today.
- Recommends that tolling revenues be used to mitigate impacts to the Washington Park Arboretum.

Option L

- Trail connections are promoted with good path connections along the SR 520 corridor. Trail connection improvements are included to the University of Washington, McCurdy Park, and Roanoke Park.
- Protects the park system by providing improved pathways for safe walking and cycling connections and for park areas in the corridor.
- Continued preservation of the Washington Park Arboretum as an education facility is a priority.

6.7 Neighborhoods

Participants identified the following community interests as goals that the preferred Option should accomplish for neighborhoods adjacent to the SR 520 corridor:

- Narrow the footprint as much as possible.
- Minimize noise from the corridor.
- Minimize negative visual impacts to the surrounding scenic and recreational areas and neighborhoods.
- Protect the scenic views from the corridor.
- Protect or enhance parking opportunities.
- Be consistent with the State Growth Management Act, adjacent cities' relevant adopted plans and policies and the Puget Sound Regional Council's *VISION 2020*.
- Serve neighborhoods effectively—transportation, design, and impact mitigation.

- Reduce local street congestion related to the bridge.
- Maintain and enhance local environment and communities.
- Maintain current access points for neighborhoods.
- Decrease use of local roads as on-ramps.
- Decrease potential for additional traffic on local arterials as an alternative to the bridge.
- Reconnect neighborhoods separated by SR 520.
- Minimize lighting impacts to adjacent communities.

Below is a summary of mediation participants' statements about how each option met the community goals for neighborhoods.

Option A

- Improves the existing interchange location and limits construction limits to the existing interchange area.
- Design restores previous impacts to McCurdy Park areas by locating infrastructure rebuilding mostly within existing footprint.
- Does not encroach on the WSDOT peninsula area, which should be investigated for environmental mitigation use.
- Recommends measures that reduce road noise in the corridor, such as quieter pavement designs, and other noise reduction measures and strategies recommended in the Acoustics ERP report.
- Preserves views and shorelines and addresses noise impact at McCurdy Park.

Option K

- Minimizes requirements for additional right-of-way.
- Removes visual impacts to surrounding communities.
- Preserves multiple viewsheds within the project area.
- Recommends that the construction of temporary bridges be avoided to the greatest extent possible to reduce impacts.
- Recommends specific noise mitigation measures, such as rubberized asphalt quiet pavement through out the corridor, and other noise reduction measures and strategies in lieu of noise wall construction.
- Reduces noise impacts to the Shelby/Hamlin area by depressing the roadway.
- Preserves views and shorelines and addresses noise impact at McCurdy Park.
- Maintains a small roadway width across Portage Bay and on Montlake Boulevard south of SR 520.

Option L

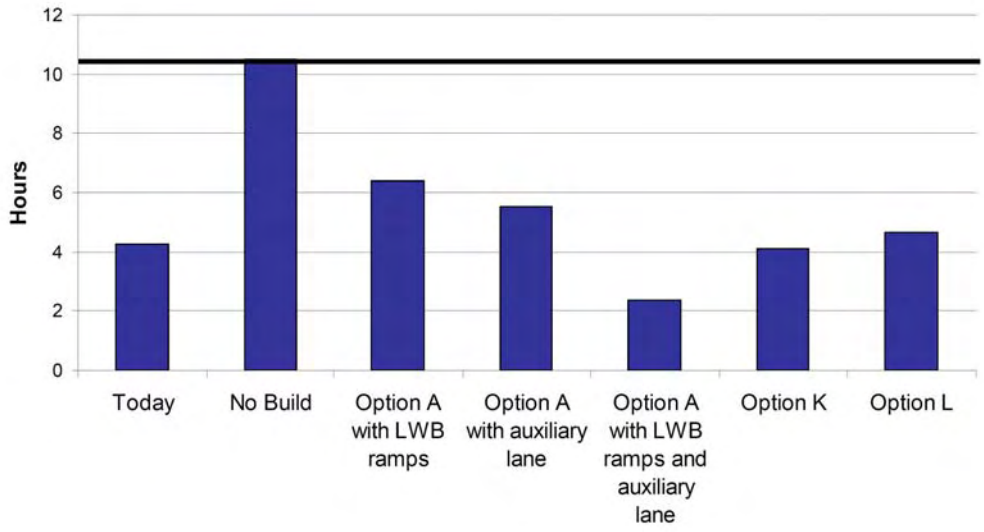
- Recommends measures that reduce road noise in the corridor, such as quieter pavement designs, and other noise reduction measures and strategies recommended in the Acoustics ERP report.
- Provides a low profile mainline west of Foster Island that preserves view corridors and includes a context promotes context-sensitive design elements to preserve the existing landscape and architectural style of the area.
- Maintains a small roadway width across Portage Bay and on Montlake Boulevard south of SR 520.

6.8 Transportation

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to transportation:

- Improve accessibility for people and goods—locally and regionally.
- Provide integrated multimodal connections—locally and regionally.
- Ensure a safe infrastructure that works.
- Reduce traffic congestion.
- Minimize long term unavoidable effects.
- Reduce vehicle miles traveled (VMT).

The initial transportation results for arterial traffic operations, as shown below, are expressed by a summation of travel times along key routes. The data presented represents a summation of the average travel time along twenty four travel paths in the Montlake Boulevard and Lake Washington Boulevard interchange. They represent the PM peak hour in the Year 2030.



Below is a summary of mediation participants' statements about how each option met the community goals for transportation.

Option A

- Provides an eastbound two-lane on-ramp plus auxiliary lane on SR 520 from the Montlake Interchange to I-5 to relieve traffic queuing on Montlake Boulevard and expand capacity. Development of a Corridor Management Agreement (CMA) or Multimodal CMA to focus on land use development actions to reduce auto travel demand.
- Retains transit stops on Montlake Boulevard between SR 520 and Pacific Street.
- Proposes replacing existing bike storage lockers near the Montlake Transit Flyer Stop and relocating them to the University of Washington Station.
- Reduces traffic congestion on Montlake Boulevard compared to No Build by constructing additional capacity between the Montlake Interchange and Pacific Street with another new three-lane bridge over the Montlake Cut.
- Construction of the westbound direct access bus-only off-ramp would provide priority to transit. By having direct access ramps, westbound buses would be able to stay in the HOV lane on SR 520 and directly access northbound Montlake Boulevard.
- Provides a transit/HOV bypass lane on the eastbound on-ramp from Montlake Boulevard to SR 520.
- Compared to no-build, traffic on E Lake Washington Boulevard at Montlake Boulevard E is reduced, reducing traffic through the Arboretum.
- Installs a two-lane eastbound on-ramp and off-ramp at the Montlake Boulevard interchange to create additional storage and capacity to reduce traffic queuing onto local streets and congestion spilling back across Portage Bay Bridge.

Option K

- The new interchange east of the existing Montlake Interchange would provide eastbound direct transit and HOV on- and off-ramps.
- Provides additional capacity over the Montlake Cut that is not impacted by bascule bridge operation; however the existing Montlake Cut Bridge remains in place and is subject to bridge operations.

Option L

- The new interchange east of the existing Montlake Interchange would provide eastbound on/off direct transit and HOV access ramps
- Additional capacity provided at the interchange off-ramps would reduce backups onto the freeway mainline.

6.9 University of Washington Campus

Participants identified the following community interests as goals that the preferred Option should accomplish for the University of Washington Campus, including the Medical Center:

- Improve the campus.
- Accommodate future growth.
- Improve mobility for people and goods.
- Protect all viewsheds, particularly the Rainer Vista view.
- Preserve the campus' role in the neighborhood for open space, park space, and access to waterfront activities.
- Protect the short-term and future mission and the interests of the University, its students, and its employees.

Below is a summary of mediation participants' statements about how each option met the community goals for the University of Washington campus.

Option A

- Preserves views along the Rainier Vista Corridor.
- Preserves historic/waterfront area.
- Compliments existing bridge designs maintaining the visual integrity in the area.
- Maintains at grade bicycle/pedestrian crossings at the Pacific Street and Montlake Boulevard NE intersection maintaining the connectivity of University of Washington Upper Campus with the Medical school complex.
- Does not limit future building on the University of Washington parking areas next to Husky Stadium.
- Has the least impact on University of Washington property and preserves the greatest amount of flexibility for future University of Washington growth and development
- Recommends increased north to south transit service along Montlake Boulevard to improve accessibility for surrounding neighborhoods, the University of Washington, the Montlake Multimodal Center, and the University of Washington Station.
- Preserves waterfront accessibility to the University of Washington Activity Center.

Option K

- Preserves Rainier Vista viewshed.
- Retains some future building opportunities at the E-11/E-12 parking areas, next to Husky Stadium.

- Depresses the Montlake Boulevard NE and Pacific Street intersection and adds a lid to provide a grade-separated pedestrian crossing and maintains the connectivity of University of Washington Upper Campus with the Medical school complex.
- Preserves waterfront accessibility to the University of Washington Activity Center.

Option L

- Depresses the Montlake Boulevard NE and Pacific Street intersection and adding a lid provides a grade-separated pedestrian crossing maintaining the connectivity of University of Washington Upper Campus with the Medical school complex.
- Elevated structure from the new interchange provides visual interest through a "gateway" signature design.

6.10 Boating opportunities

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to boating opportunities in Portage Bay, through the Montlake Cut, and on Lake Washington in the vicinity of the SR 520 corridor:

- Preserve existing vessel and floating home moorages.
- Protect regional boating recreational activities.
- Protect access to the waterfront and adequate depth and height for boat passage.
- Protect the navigable waterways.
- Improve vehicle, bicycle, and pedestrian access to boating facilities and activities.

Below is a summary of mediation participants' statements about how each option met the community goals for boating opportunities

Option A

- Preserves activities and access to the University of Washington Activity Center and boating activities in Union Bay.

Option K

- Does not introduce any additional boating barriers through the Montlake Cut.
- Smaller Portage Bay bridge footprint minimizes right-of-way requirements and impacts to the local marinas.
- Provides greater access to the Shelby Hamlin Area and potential park activities.
- Foster Island land bridge provides greater access to waterfront activities in this area.

Option L

- Smaller Portage Bay bridge footprint minimizes right-of-way requirements and impacts to the local marinas.

6.11 Schedule and costs

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to schedule and cost:

- Complete the project in a timely schedule.
- Consider timing to avoid or minimize environmental impacts—e.g., salmon in- and out-migration and spawning patterns.
- Develop a cost-effective solution that truly solves the problems.
- Maximize the use of the mitigation budget by early acquisition of mitigation sites.
- Control expenses.
- Develop a solution the state can fund.
- Develop a project financial plan based on realistic estimates of implementing tolls before, during, and after construction.

Below is a summary of mediation participants' statements about how each option met the community goals regarding project schedule and costs.

Option A

- The estimated cost for the SR 520 section between Interstate-5 and the Floating Bridge for Option A is approximately $2 billion.
- By reducing the amount of new structure and roadway to be constructed, the time to construct the project is significantly reduced.
- Reduces environmental impacts and associated costs by limiting disruption in sensitive areas.
- Seeks to control expenses by building above ground to reduce risk of building below ground, also reducing the amount of cut and fill required to be handled during the duration of the project.
- Reduces amount of unknown construction impacts by building within the existing footprint and constructing similar facilities as today.

Option K

- The estimated cost for the SR 520 section between Interstate-5 and the Floating Bridge for Option K is approximately $4 billion.
- Construction will occur deep underground avoiding disruptions to salmon migration

- Tunnel and interchange construction underground reduces noise to adjacent neighborhoods.

Option L

- The estimated cost for the SR 520 section between Interstate-5 and the Floating Bridge for Option L is approximately $2.5 billion.
- Reduces costs associated with stormwater runoff and treatment through a gradual gradient from the western highrise and across Foster Island; this also avoids the potential need to construct stormwater management facilities on Foster Island.

6.12 Design

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to design:

- Create an aesthetically pleasing people-oriented design that is respectful of its context—historic urban fabric in an iconic natural landscape.
- Minimize the scale and project footprint.
- Create something to be proud of.
- Utilize context-sensitive urban design.
- Consider future generations.
- Create a sustainable solution.
- Utilize corridor travel demand efficiency tools, including tolling.
- Look beyond the pavement and the corridor.
- Include the needs of the region in 50 to 100 years.
- Protect communities, the Washington Park Arboretum, and the University of Washington campus with context-sensitive corridor designs.

Below is a summary of mediation participants' statements about how each option met the community goals for design opportunities.

Option A

- Good, aesthetically pleasing, people-orientated design is achieved by focusing on preserving the integrity of the Washington Park Arboretum and Lake Washington Boulevard as park drives, by proffering solutions to reduce traffic through the Washington Park Arboretum.
- Does not include major changes in grade for interchange or access into the University of Washington area.
- A lower profile on the SR 520 mainline east of Montlake Boulevard reduces the visual intrusiveness of the roadway.

- Future generations are considered with an emphasis on improving transit ridership and reducing single-occupant vehicle trips with the objective of reducing trips through the Washington Park Arboretum.
- The Westside design should be implemented in consultation with a citizen's advisory committee, which will include the Design Advisory Group and representative from the community.
- Communities are protected with emphasis on the University of Washington Campus and Medical Center by making the area people- and transit-friendly.
- The scale of the project footprint is reduced with the elimination of the ramps to the Washington Park Arboretum.
- Looking beyond the pavement requires no expansion or widening of Montlake Boulevard or Pacific Street and treatments for low-volume roadways through the Washington Park Arboretum.
- Drainage ponds in McCurdy Park should be designed for visual and education use, in harmony with the surrounding environment. Where the opportunity arises, the design should consider and allow for use by migratory birds.

Option K

- A SPUI is proposed to replace the existing Montlake interchange configuration. SPUI's are examples of good urban design practices by creating an innovative and efficient interchange solution with a minimal footprint.
- An aesthetically pleasing arch design is created by maintaining a low profile on the Portage Bay Bridge, which also preserves views along the corridor.
- Drainage ponds in McCurdy Park should be designed for visual and education use, in harmony with the surrounding environment. Where the opportunity arises, the design should consider and allow for use by migratory birds.
- Additional visual interests adjacent to the corridor are recommended, such as water features on top of the Foster Island land bridge.
- Minimizes footprint across Portage Bay.
- Implements sound attenuation measures, other than noise walls, to preserve community viewsheds.
- Best preserves the historic view corridor of ship canal, less demanding on applied design (struggle of getting new bridge to fit in with landscape).

Option L

- Aesthetically, the new bridge over the Montlake Cut would be constructed in keeping with the Olmsted-type look and feel. Also, solutions to soften structures, such as adding planting boxes, are to be explored.

- Improvements to the walking and bicycling environment create an enhanced people-oriented design with good east-west and north-south connectivity options between Washington Park Arboretum and the University of Washington under the new SPUI.
- A SPUI is proposed to replace the existing Montlake interchange configuration. SPUI's are examples of good urban design practices by creating an innovative and efficient interchange solution with a minimal footprint.
- Context-sensitive design includes placing emphasis on University of Washington Campus and Medical Center, making the area people and transit (bus and light rail) friendly. This is achieved by providing green space over the Montlake Boulevard and Pacific Street intersection.
- Gradual grade from Foster Island to the floating bridge eliminates additional stormwater pumping requirements.
- Drainage ponds in McCurdy Park should be designed for visual and education use, in harmony with the surrounding environment. Where the opportunity arises, the design should consider and allow for use by migratory birds.

6.13 Bicycle and pedestrian facilities

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to bicycles and pedestrians:

- Provide bicycle and pedestrian access and connectivity with the least environmentally damaging increase in wetland fill.
- Consider the bicycle and pedestrian system locally and regionally.
- Create a safe and more inviting environment for pedestrians and bicyclists on SR 520 and in surrounding areas and connections with the trail system.

Below is a summary of mediation participants' statements about how each option met the community goals regarding bicycles and pedestrians.

Option A

- Reduced traffic volumes in the Washington Park Arboretum provide a benefit to on-street bicyclists by reducing amount of conflicting traffic.
- Second Montlake Cut Bridge provides additional pedestrian facilities across the cut.

Option K

- Improved safety, convenience, and connectivity along SR 520 with access to Foster Island, Washington Park Arboretum, through the Montlake neighborhood, to the Burke-Gilman Trail, to University of Washington and the Montlake Multimodal Center, across the corridor form north to south, to North Capitol Hill, Roanoke Park, and to Eastlake over I-5.

- Construction of a lid over the Montlake Boulevard and Pacific Street intersection will provide an un-encumbered, grade-separated pedestrian and bicycle crossing. This provides a more seamless route between local and regional bus facilities to the planned Montlake Multimodal Center and University of Washington Station. This requires depressing the Montlake Boulevard and Pacific Street intersection.

Option L

- Improved safety, convenience, and connectivity along SR 520 with access to the Washington Park Arboretum, through the Montlake neighborhood, to the Burke-Gilman Trail, to University of Washington and the Montlake Multimodal Center, across the corridor form north to south, to North Capitol Hill, Roanoke Park, and to Eastlake over I-5.

6.14 Regional and statewide system

Participants identified the following community interests as goals that the preferred Option should accomplish with respect to the regional and statewide system.

- Consider the regional system as a whole for connectivity (transit, bicycles, pedestrians, etc.) and the implications one solution has on other parts of the system (e.g., I-90 and SR 520).
- Integrate with the regional freight system.
- Promote regional vitality and competitiveness.
- Enhance the connection between employment centers, areas of vitality, and homes.

Below is a summary of mediation participants' statements about how each option met the community goals for the regional and statewide system.

Option A

- Results in lower traffic volumes in the University of Washington and Montlake vicinities.

Option K

- Provides a grade-separated pedestrian/bicycle connection from the University of Washington Station to the surrounding area.
- Additional connectivity to SR 520 from north of the Montlake Cut is not impacted by drawbridge openings.

Option L

- Provides a grade-separated pedestrian/bicycle connection to the University of Washington Station.

6.15 Construction effects

Participants identified the following community interests as goals that the preferred Option should accomplish for construction effects:

- Minimize construction impacts temporary roads, construction staging sites, piers/pilings, docks, barges, etc.
- Maintain access from and to neighborhoods.

In general it was assumed that the construction of the Westside Options would be generally the same.

The participants identified the following general mitigation for all options:

- Limiting the use of temporary bridges wherever possible.
- Consider barging of spoils and materials to reduce truck traffic on area streets.
- Provide construction worker access alternatives to limit the amount of daily traffic associated with construction.

Below is a summary of mediation participants' statements about how each option met the community goals related to Construction effects.

Option A

- Reduced impacts in the Pacific Street, Montlake Boulevard, and through the Washington Park Arboretum by having the least amount of soil removal, import/export of soil, and concrete poured.

Option K

- Consider the development of special access roadways for trucking materials due to tunnel excavation to minimize impacts on local streets.

Option L

- Community interests are met in common with other Options.

Section 7 – Potential Regulatory Issues of Westside Interchange Options

7.1. What is the regulatory approach to mitigating the impacts of the project?

WSDOT recognizes and values the natural and built environment and incorporates protection of all environmental resources into the decisions that guide project implementation. The SR 520 Bridge Replacement and HOV Project is being designed to avoid or minimize negative effects and to mitigate any unavoidable effects. WSDOT's goal is to improve the environment in the neighborhoods and natural areas surrounding the bridge corridor.

It is important to note that many of the project mitigation requirements are mandated by regulatory agencies. These federal, state, and local agencies administer many laws designed to protect the natural and built environments. Under these laws, WSDOT is held to very specific requirements for mitigation, including, for example, the ratio of replacement wetlands to project-affected wetlands and the pollutant levels in stormwater discharge. Mitigation planning with resource agencies and affected jurisdictions will be ongoing throughout development of the supplemental draft EIS and Final EIS.

Federal regulation states that "the NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment" [40 CFR 1500.1(b)]. Mitigation measures are identified in an EIS for the range of effects, or impacts, associated with the proposed action. The Council of Environmental Quality (CEQ) and FHWA regulations define mitigation under NEPA to include, in general: "avoiding, minimizing, rectifying, reducing over time, and compensating" for adverse impacts (40 CFR 1508.20).

FHWA and WSDOT support a comprehensive approach to mitigation that includes exploring innovative solutions and enhancement measures, in addition to more "traditional" mitigation, to help projects fit harmoniously within communities and natural environs (FHWA Environmental Policy Statement, 1990 & 1994). Mitigation planning for SR 520 includes identifying opportunities to integrate built and natural environment mitigation elements and evaluating those opportunities for their ability to more effectively meet project objectives, while enhancing the environment.

Mitigation identified in the draft EIS is consistent with regulatory requirements and agreements between WSDOT and regulatory agencies outlined in WSDOT's *Environmental Procedures Manual*. For the most part, mitigation is discussed qualitatively. More specific mitigation and/or enhancements will be determined following additional design and subsequent negotiation and discussion with agencies with jurisdiction (for example, impacts to park lands, wetlands, and related to ESA compliance).

7.2 What environmental regulations apply to the project?

After the EIS process is complete, WSDOT must obtain a number of permits to build the project. These permits are issued by federal, state, and local agencies with legal responsibilities for stewardship of various environmental resources. WSDOT also must work with Native American tribes to ensure that cultural resources and treaty fishing rights are protected. The following are some of the key permits and approvals that WSDOT will need to obtain for SR 520, and the agencies that administer them:

- U.S. Army Corps of Engineers (Corps) Section 404 permit under the Clean Water Act (regulates dredging and filling in water bodies and wetlands, and requires that the "least environmentally damaging practicable alternative" be selected).
- Washington State Department of Ecology (Ecology) Section 401 Water Quality Certification (required to protect water quality for most projects that need a Section 404 permit).
- U.S. Coast Guard Section 9 permit under the Rivers and Harbors Act (regulates impacts to navigation).
- Corps Section 10 permit (regulates obstructions or alterations in navigable waters, including work in, over, or under the water).
- Consultation with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) in compliance with Section 7 of the Endangered Species Act (requires issuance of an "incidental take" permit for activities that may adversely affect listed species under ESA).
- Government-to-government consultation with the Muckleshoot Indian Tribe to address potential effects on tribal treaty fishing rights in Lake Washington and its tributaries.
- Compliance with Ecology regulations and WSDOT standards for collecting and treating stormwater runoff from the roadway.
- Consultation with the Washington Department of Archaeology and Historic Preservation (DAHP) in compliance with Section 106 of the National Historic Preservation Act (requires protection of historic and cultural resources). Also includes government-to-government consultation with the Muckleshoot, Snoqualmie, Tulalip, Suquamish, and Duwamish Tribes on cultural resource effects of the project.
- Compliance with Section 4(f) of the Department of Transportation Act (FHWA), which forbids the use of park land and certain historic properties for transportation facilities unless no "feasible and prudent" alternative exists.
- Compliance with Section 6(f) of the Land and Water Conservation Act (National Park Service and RCO), which requires that recreational lands purchased with certain federal funding be replaced in kind.
- Washington Department of Fish and Wildlife (WDFW) Hydraulic Project Approval under the Washington Hydraulic Code (regulates all work within water bodies).

- Local shoreline permits under the Shoreline Management Act (regulate work within 200 feet of the ordinary high water mark).
- Local critical areas permits (regulate work in designated critical areas, including wetlands, streams, steep slopes, and wildlife habitat).

Additional analysis on methods to minimize or mitigate impacts is being conducted through the separate and parallel Regulatory Agency Coordination process.

7.3 How does each design option comply with these regulatory requirements?

At this point in project development, it is not possible to determine with certainty the full extent to which any of the design options complies with all applicable regulations. The design is still at a very conceptual level, and WSDOT has not had an opportunity for extensive work with regulatory agencies on opportunities to avoid, minimize, or mitigate impacts. However, the Options do differ with respect to some of the regulations that WSDOT must follow. The discussion below identifies how each set of regulatory requirements applies to the project as a whole, and then describes differences among the Options based on their current configuration and level of design.

Clean Water Act Section 404 and Section 401

Wetland areas are found along the shoreline of Union Bay, including much of Marsh and Foster Islands. Many of the wetlands on the fringes of Union Bay have substantial vegetation at the water's edge.

All of the design Options would involve impacts to wetlands. These effects would occur primarily in the Washington Park Arboretum/Foster Island area and on the fringes of Portage Bay. Installation of bridge columns and earthwork in wetland areas and open water would be considered fill under the Section 404 regulations. In addition, sections of elevated roadway would produce shade that would eliminate or impair wetland plant communities underneath the roadway. Lower structure heights (especially below about 20 feet) would increase the depth of the shade and the degree of impairment to the wetlands. Work bridges and other construction activities would also involve filling and shading of wetlands for periods of up to several years.

Based on preliminary estimates for the current designs, Option K would involve the largest amount of fill in wetlands and open water, followed by Option L and Option A. WSDOT will conduct detailed studies as part of the supplemental draft EIS to determine specific impacts and mitigation measures that would be required.

Appendix 10.4 identifies possible wetland mitigation sites that could be used. It is important to note that a range of mitigation costs has been added to the overall cost of each Option. As part of its analysis, WSDOT will work with the Corps to identify the least environmentally damaging practicable alternative for the project.

U.S. Coast Guard Section 9 and U.S. Army Corps of Engineers Section 10

Changes or modifications to an existing bridge that would affect the future navigational use of a waterway require issuance of a Section 9 permit by the U.S. Coast Guard. In addition, any work that could obstruct or alter navigable waters requires a Section 10 permit from the Corps. All of the options that would be studied in the supplemental draft EIS include elimination of the Evergreen Point bridge draw span opening, which would shift vessels to the navigational channels at the east and west end of the floating bridge. Options A and L would each require a new bridge crossing of the Montlake Cut at approximately the same height as the existing Montlake Cut Bridge. Both would be bascule (draw) bridges and would be operated in coordination with the Montlake Cut Bridge. The WSDOT will work with the U.S. Coast Guard and the Corps to ensure that all Section 9 and 10 requirements are met. For Option K, WSDOT would need to coordinate with the Corps to ensure that work on the tunnel did not interfere with the navigation channel.

Endangered Species Act

Lake Washington supports a number of fish species that have recreational, commercial, and/or tribal importance. These include three species listed as threatened under the ESA: Puget Sound Chinook salmon, steelhead salmon, and bull trout. Lake Washington and the Montlake Cut are part of a documented rearing and migration corridor for both adult and juvenile salmonids (trout and salmon species). As such, this area is designated as “critical habitat” for Chinook salmon and bull trout. (Steelhead were listed only recently under ESA, so critical habitat for them has not yet been designated.)

All of the options under study include the Evergreen Point floating bridge, fixed structures across the water from Montlake to the west floating bridge transition span, and a crossing of the Montlake Cut. WSDOT is evaluating many issues related to fisheries and aquatic habitat as part of the supplemental draft EIS and ESA compliance process. These issues include underwater noise and turbidity (i.e., stirring up of sediment) from construction, water quality, effects on fish rearing and migration, and effects to fish habitat, including those of shading from overwater structures.

All three options would have similar alignments through the Foster Island area and would avoid in-water construction in the Montlake Cut through either bridging or tunneling. In this respect, their ESA effects are likely to be similar. However, stormwater quality and treatment issues differ among the design options based on the different slopes and profiles. The low slope of Option K, and the “camelback” profile of Option A as it crosses Foster Island and then rises to the highrise, will complicate stormwater collection and treatment. Water quality—in particular, the concentration of metals in roadway runoff—is an area of strong concern for ESA listed salmonids.

Tribal Treaty Fishing Rights

Tribal fishing is an important use of Lake Washington, and tribal fisheries managers work with state and federal agencies to manage fisheries resources. The Lake Washington system, including the Montlake Cut, is a “usual and accustomed” fishing

area for the Muckleshoot Indian Tribe. In addition to Chinook and steelhead salmon, many other species are considered valuable, including but not limited to chum salmon, sockeye salmon, rainbow trout, and coastal cutthroat trout.

Any work that occurs within the water has the potential to affect tribal fishing, either by changing access to fishing areas or by affecting habitat. In addition, new or changed in-water structures can affect habitat conditions and fishing access. WSDOT is working with the Muckleshoot Indian Tribe to identify areas of concern and potential mitigation measures for any identified impacts. At the current stage of design, it is not possible to determine how the options might differ with respect to tribal fishing.

Stormwater Collection and Treatment

Untreated roadway runoff flushes contaminants, including petroleum products and metals, into project area lakes and streams. Currently, the runoff from SR 520 is not treated. As part of the project, WSDOT will build facilities to collect and treat stormwater in accordance with regulatory requirements.

The efficiency and effectiveness of stormwater treatment are related to the roadway design. Especially important is the roadway profile, or vertical slope. Highways are typically designed with a profile that allows stormwater to drain by gravity to a central collection point where it can be treated. However, Options A and K have profiles that do not allow gravity drainage and require stormwater to be pumped to the treatment location. Pumping requires electrical power, which involves a risk of spillage of untreated stormwater in the event of a power failure. In addition, pump stations and/or treatment vaults may need to be located on Foster Island, which conflicts with Section 4(f) regulations (see below), or below the bridge and partially in water, which could impede fish passage.

Stormwater is also a key issue in ESA compliance. Removal of metals, especially copper, from runoff is a concern for regulatory agencies and requires enhanced levels of treatment. Designing and siting enhanced treatment facilities is challenging in the limited space available in the project area. WSDOT is working with the Ecology, the NMFS, and the USFWS to identify the most appropriate treatment methods for each SR 520 design option.

Section 106 of the National Historic Preservation Act

The SR 520 project area—in particular Foster Island—was a crossroads for tribal activity in the years before and after European settlement of Seattle. Foster Island was used as a resting place for the dead, who were placed in canoes that were hoisted into the island's trees. Although the remains are reported to have been removed when the Washington Park Arboretum was developed, the island remains a place of great cultural importance to descendants of the Lakes Duwamish. It is likely that Foster Island will be designated as a Traditional Cultural Property under Section 106 of the National Historic Preservation Act. Also in the project area are two historic districts that could be eligible for listing in the National Register of Historic Places (NRHP)—Montlake and Roanoke Park—along with several NRHP-listed resources, including the Montlake Bridge and Cut and the University of Washington Canoe House.

Under Section 106, adverse effects to NRHP-eligible historic and cultural resources must be evaluated, and WSDOT must enter into a Memorandum of Agreement with DAHP and the affected tribal governments on appropriate mitigation measures. WSDOT is currently consulting with DAHP and five tribal nations (Muckleshoot, Snoqualmie, Tulalip, Suquamish, and Duwamish) on the project. Tribal and agency officials will be asked to review the design of each option and identify any potential issues of concern. Although no specific option-by-option feedback has been received to date, previous communications with the tribes have indicated strong concerns about any substantial excavation taking place on Foster Island.

Section 4(f) of the Department of Transportation Act and Section 6(f) of the Land and Water Conservation Act

Section 4(f) prohibits transportation facilities from using land from a park, recreation facility, wildlife refuge, or property eligible for the NRHP unless there is no feasible and prudent alternative to doing so. Section 6(f) of the Land and Water Conservation Act protects parks and recreational facilities acquired or developed using funds from the Land and Water Conservation Fund from conversion to uses other than public outdoor recreation without replacement with property of fair market value and reasonable equivalent use and location. In the project area, this means that acquisition or conversion of any land on Foster Island and/or any portion of the Washington Park Arboretum Waterfront Trail must be replaced by an equivalent amount of new park land that provides the same functions and values.

Parks, recreation facilities, and historic and cultural resources are abundant along the SR 520 alignment, and all of the design options would affect these resources to some degree. All options would require replacement of Bagley Viewpoint and would result in acquisition of portions of McCurdy Park, East Montlake Park, and the Washington Park Arboretum. On the positive side, lids proposed as part of project design would help to reconnect neighborhoods on either side of the highway and would promote pedestrian and bicycle linkages and create green space over the highway.

The options would differ in their effects on park lands. Under the current design, Option L would result in the highest amount of permanent park acquisition, followed by Option K and Option A. However, Options A and K would have greater effects on the Montlake Historic District than Option L, and Option K would have more excavation in potential cultural resource areas on Foster Island. Option K would also involve more conversion of Section 6(f) properties from their intended use, and hence would require more mitigation than the other design options. As part of the supplemental draft EIS, WSDOT will conduct a detailed evaluation of potential effects for areas protected by Section 4(f) and will identify measures to minimize harm to these resources. Depending on the mitigation measures agreed upon, it is possible that an option with a larger footprint in Section 4(f) properties could still become part of the preferred Option.

Hydraulic Project Approval under the Washington Hydraulic Code

The Hydraulic Project Approval applies to all in-water work on SR 520, and is designed to protect aquatic habitat and fish. The design and construction considerations described

for ESA are also relevant to the Hydraulic Project Approval, which is administered by WDFW.

Local Shoreline and Critical Areas Permits

The Washington State Shoreline Management Act requires local agencies to regulate activities within 200 feet of the ordinary high water mark of water bodies within their jurisdiction. The Washington State Growth Management Act allows agencies to regulate designated critical areas, such as wetlands, streams, and steep slopes. Options A, K, and L will all pass through regulated shorelines and critical areas. In general, roads and highways are permitted uses in these areas, although the Seattle shoreline and critical areas codes require that conditions be included in City-issued permits to protect these areas during project construction and operation.

The following table summarizes the key regulatory considerations for each option:

Comparison of Regulatory Considerations for SR 520 Westside Design Options

Regulation	Option A	Option K	Option L
Clean Water Act Sections 401 and 404	Least wetland and in-water fill; low profile would impair wetlands by shading vegetation	Largest amount of wetland and in-water fill; low profile would impair wetlands by shading vegetation	More wetland and in-water fill than A, but less than K; low profile would impair wetlands by shading vegetation
U.S. Coast Guard Section 9 and U.S. Army Corps of Engineers Section 10	New Montlake Cut bridge would require coordination with Corps and Coast Guard	Coordinate with Corps to ensure no effects on navigation channel	New Montlake Cut bridge would require coordination with Corps and Coast Guard
Endangered Species Act	Potential to affect listed species; WSDOT consulting with NMFS and USFWS	Potential to affect listed species; WSDOT consulting with NMFS and USFWS	Potential to affect listed species; WSDOT consulting with NMFS and USFWS
Treaty Fishing Rights	Construction and operation would affect habitat and fishing access; WSDOT will consult with Muckleshoot Indian Tribe to determine effects and mitigation	Construction and operation would affect habitat and fishing access, with greater effects than A and L. Because of in-water filling; WSDOT will consult with Muckleshoot Indian Tribe to determine effects and mitigation	Construction and operation would affect habitat and fishing access; WSDOT will consult with Muckleshoot Indian Tribe to determine effects and mitigation

Comparison of Regulatory Considerations for SR 520 Westside Design Options

Regulation	Option A	Option K	Option L
Stormwater Compliance	Profile across Foster Island requires pumping	Profile of West Approach requires pumping	Allows gravity flow to treatment location
Section 106	Construction of parallel Montlake Cut Bridge would affect setting of Montlake historic district and remove two houses in the district	Excavation on Foster Island for land bridge increases impact on traditional cultural property and potential for encountering cultural resources; interchange design affects setting of Montlake historic district	New Montlake Cut Bridge would affect setting of Montlake historic district
Section 4(f) and 6(f)	Least acquisition of 4(f) and 6(f) resources	Less 4(f) acquisition than Option L, but largest conversion of Section 6(f) land with resulting higher mitigation requirements	More 4(f) acquisition than Options A and K, but has less effect on 6(f) resources than Option K
Hydraulic Project Approval	Construction and operation would affect fish habitat and passage; WSDOT working with WDFW to avoid, minimize, and mitigate impacts	Construction and operation would affect fish habitat and passage, with greater effects in water column than A and L because of in-water filling and permanent cofferdams; WSDOT working with WDFW to avoid, minimize, and mitigate impacts	Construction and operation would affect fish habitat and passage; WSDOT working with WDFW to avoid, minimize, and mitigate impacts
Local Permits	Project crosses shorelines and critical areas; WSDOT will work with the City to ensure compliance and appropriate mitigation	Project crosses shorelines and critical areas; WSDOT will work with the City to ensure compliance and appropriate mitigation	Project crosses shorelines and critical areas; WSDOT will work with the City to ensure compliance and appropriate mitigation

Section 8 – Next Steps

8.1 What is the environmental review process?

WSDOT published the SR 520 Bridge Replacement and HOV Project Draft EIS in August 2006. That document evaluated a 4-Lane Alternative, a 6-Lane Alternative, and several options for the 6-Lane Alternative, including the Pacific Interchange and a second Montlake Cut Bridge. Because the mediation Options are substantially different than those studied in the draft EIS, WSDOT is preparing a supplemental draft EIS on the new Options. The supplemental draft EIS is planned for publication in late 2009, followed by a final EIS in late 2010.

After the final EIS is complete, FHWA will issue a Record of Decision for the project. The Record of Decision, expected in early 2011, will include documentation of how the preferred Option was chosen, along with a list of mitigation measures committed to by WSDOT. WSDOT will then be able to acquire right-of-way for SR 520 and obtain permits issued by the federal, state, and local resource agencies. These permits will include additional conditions on project development that will mitigate the project's impacts.

8.2. Public involvement plans

At open houses held in June 2008, members of the public had a chance to review and comment on the options developed by the mediation team for evaluation in the supplemental draft EIS. Members of affected neighborhoods have also had ongoing opportunities to comment through their representatives to the mediation process. The next formal opportunity for comment will be after publication of the supplemental draft EIS. At that time, WSDOT will solicit formal written comments and hold public hearings. All of these comments—along with the comments submitted on the August 2006 draft EIS—will be responded to in the final EIS.

In addition, WSDOT will prepare other opportunities for public involvement upon publication of the supplemental draft EIS. These opportunities include the following:

- Community design forums.
- Open houses.
- Continued outreach at fairs and festivals.
- Community group briefings.

Section 9 – Mediation Participants' Comments

Mediation participants were asked to submit a five-page memorandum for inclusion in this document. The following two questions were provided as guidance:

- Which westside interchange Option do you prefer and why?
- Are there changes that could be made to the other Options that would make them more acceptable?

The following responses were not evaluated or edited.

The Arboretum and Botanical Garden Committee's Project Impact Plan Comments and Response

In response to the request for comments by members of the mediation committee to the ESSB 6099 Project Impact Plan (PIP), this document contains the comments on the PIP on behalf of the Arboretum and Botanical Garden Committee (ABGC) of the Washington Park Arboretum and lists its priorities, interests, and recommendations for the SR520 replacement project. We respectfully request that the Governor, the members of the legislature, and the national, state, regional, and local agencies involved in the decision-making on the SR520 project carefully consider the information contained in this response.

The specific questions posed were:
1. Which west side interchange Option do you prefer and why?
2. Are there changes that could be made to the other Options that would make them more acceptable?

This response to the PIP outlines the priorities and guiding principles identified by the ABGC, answers the above questions and summarize how each of the three interchange options relates to the ABGC's principles and priorities.

ABGC Priorities:

- Reduce traffic along the two lane park road, Lake Washington Blvd. E. (LWB) through the Arboretum and concentrate traffic on the four lane arterial road of 23rd/24th Avenues. East.
- Remove all physical ramps in the heart of the Arboretum.
- Reduce the traffic impacts on the Arboretum including the number of vehicles, vehicle conflicts with pedestrians, noise pollution and air pollution.
- Take into consideration the natural environment: ecosystems, wetlands, water resources, listed species, and geology.
- Improve the bike/pedestrian connectivity between SR520, Montlake, the Arboretum and the surrounding areas.
- Address, reduce and minimize temporary impacts on the Arboretum during the long construction period.
- Optimize traffic and transit movement, circulation and access around and in the Arboretum.
- Protect and improve the Arboretum and the park system.
- Protect all view sheds.
- Preserve the Arboretum's role in the neighborhood for open space, park space and access to waterfront activities.
- Protect the short-term and future mission and the interests of the Arboretum as a world-renowned botanical collection to better serve its visitors, volunteers, students and employees.

- Avoid, minimize, or mitigate environmental impacts including wetlands, noise, air quality, and carbon emissions.
- Design a project that considers the surrounding community and future generations.

ABGC Guiding Principles:

The ABGC recognizes the following guiding principles for the SR520 project requiring that:

- everything possible be done to minimize the harm to the Arboretum and, if possible, to reverse the damage inflicted on the Arboretum by the original SR520 bridge;
- the ABGC opposes any options that make Lake Washington Boulevard (LWB) the sole or primary southern access point to SR520;
- to the extent that ramp access to LWB must be accommodated, such ramps should be to the west of the heart of the Arboretum, and traffic flow through the Arboretum to and from such ramps should be reduced through design, ramp-metering and/or differential pricing of tolls.

ABGC answers to the specific questions posed:

1. Which west side interchange Option do you prefer and why?

The ABGC has adopted a resolution in favor of Option K subject to further discussion and engineering modifications necessary to direct traffic movement away from the Arboretum and LWB on the roundabout configuration of the access ramp road south of the SR520 East Montlake interchange and toward the four lane city arterial of Montlake/24th and 23rd Avenues East;

. ABGC's resolution clarifies its guiding principles (above) and opposes any options that make Lake Washington Boulevard (LWB) the sole or primary southern access point to SR520. However, if ramp access to LWB must be accommodated, such ramps should be to the west of the heart of the Arboretum, and traffic flow through the Arboretum to and from such ramps should be reduced through design, ramp-metering and/or differential pricing of tolls.

Why the ABGC does not support Option A:

Option A features a second bascule bridge which will adversely impact traffic flow in the Arboretum, 7 lanes on the Portage Bay Bridge, and LWB ramps.

Traffic studies performed by the WSDOT indicate that Option A cannot successfully move traffic. Specifically traffic through the Arboretum will be stopped and idling with Option A, thus increasing noise and exhaust pollution in the Arboretum and on LWB.

Base Option A does not include any lid over SR520 on Foster Island or any equivalent design to reduce the impact of the roadway on the Arboretum. Thus, the ABGC believes that Option A does not protect or improve the interests of the Arboretum nor does it reverse the damage inflicted on the Arboretum by the original SR520 bridge. Further, ABGC does not believe that Option A creates a solution that considers the surrounding community and future generations.

Why the ABGC does not support Option L:
Option L features a single-point urban interchange *over* the SR520, a long bascule bridge, *and* ramp connections directly to LWB and Pacific Street. Option L will increase visual and noise impacts in the Arboretum, increase traffic on LWB, will have a larger footprint than Options K and A in the east Montlake section.

Option L does not protect or improve the Arboretum or its view sheds. The bridge, when open, will create a visual nuisance equivalent to a 20 story building. Nor does this option consider the surrounding communities and future generations in its design. Base Option L is similar to Base Option A across Foster Island and similarly does not minimize the harm to the Arboretum or reverse the damage inflicted on the Arboretum by the original SR520 Bridge.

As previously noted, the ABGC opposes any options that make LWB the sole or primary southern access point to SR520 which Option L does.

Why the ABGC DOES support Option K: The ABGC supports Option K as the preferred option for the legislated SR520 project because Option K moves the new on-off ramps to the most North-Westerly section of the Arboretum and provides a depressed single-point urban interchange at the eastern edge of Montlake. This lower profile through the Arboretum will limit the noise, air and visual pollution. Option K also preserves historic views, provides a safer bicycle/pedestrian access through corridor and promotes the use of quiet pavement instead of view-impairing noise walls. In addition, Option K provides a berm and lid over the main SR520 highway to reduce its visual, noise, and air pollution impact on the Arboretum.

Option K elongates and enhances LWB in the Northwestern area of the Arboretum, separating LWB from the SR520's access.

Critical to ABGC's decision to support Option K was WSDOT's traffic modeling which showed that mobility for transit, SOVs and HOVs was better in K than any other option. WSDOT explained that the successful movement of traffic in Option K was because of the separation of local and freeway traffic. Option K further enhances traffic movement because there is no delay of traffic due to bridge openings.

It is worth noting that Option K appears to have broad support from the most-impacted nearby neighborhoods and some key stakeholders.

Lake Washington Boulevard is a winding, 2-lane, 25 mph historic parkway through one of Seattle's most important parks. In contrast, 23/24th Avenue is a four lane, 30 mph, direct city arterial. Therefore, the ABGC qualifies its endorsement subject to further discussion and engineering modifications by WSDOT on Option K to ensure that traffic be directed away from the Arboretum and LWB on the roundabout configuration (sometimes called "the keyhole") of the access ramp road south of the SR520 East Montlake interchange and toward the four lane city arterial of Montlake/24th/23rd. Aves. E.

Additional traffic modifications need to be made by the City of Seattle for surface traffic improvements at East Madison St. and 23rd Ave E., along 23rd Ave E., and at East Madison and LWB to reduce the commuter use of LWB through the Arboretum and to direct surface traffic to the city arterial of 23rd and 24th Avenues East and WSDOT should work with the City to accomplish such changes.

2. *Are there changes that could be made to the other Options that would make them more acceptable?*

Option A:

The ABGC considers Option A a nonstarter because even though proponents of Option A do not want LWB ramps, traffic modeling shows that LWB ramps are essential to effective local traffic flow in Option A. Further, ***even with the Arboretum ramps added*** traffic studies show back-ups into neighborhoods and along LWB at a level that would be unacceptable.

The ABGC also believed that Option A was not acceptable because the second bascule bridge does not ameliorate the traffic issues associated with bridge openings. Also, even though this option is called "Transit Friendly", traffic studies show that transit will suffer the most with this plan.

Option A would be more acceptable with a lid on Foster Island similar to the one proposed for Option K.

Option L:

The ABGC members believed that Option L was the *worst possible option* of the three proposed. Option L provides an on-off ramp directly from the SR520 Bridge to LWB which will vastly increase the number of cars on Arboretums park road – LWB. In addition, this off ramp has a 5.5% grade further increasing braking and acceleration noise in the Arboretum.

This option has a much higher profile through the Arboretum, a larger footprint than Options K and A in the east Montlake section and broad opposition from nearby neighborhoods

Option L increases visual and noise impact in the Arboretum by offering the largest bascule bridge ever constructed (300 ft) and when open would resemble a 20 story building. The current Montlake Bridge opens up to 90 times/day in the summer for 6 minutes per opening. This open bridge would impair the view from any of the surrounding view sheds including the Rainier Vista view shed. As stated for Option A, a second bascule bridge does not ameliorate the traffic issues associated with bridge openings.

Option L would be improved by a lid on Foster Island similar to the one proposed for Option K.

In summary:
The ABGC appreciates the opportunity to participate in the mediation and comment on the draft PIP. The importance of the Arboretum is well-recognized in the region and the world, due to its renowned botanical collections and important wetland resources. Option K offers a depressed single-point urban interchange at the eastern edge of Montlake thus preserving views in the Arboretum and decreasing noise and pollution in the area. With Option K the LWB ramps are removed and yet the WSDOT traffic modeling of mobility for transit, SOV and HOVs is better in K than in the other two options. A lid is provided over the main SR 520 roadway on Foster Island, thus mitigating for some of the impact of the original construction of the SR520 roadway through the Arboretum.

The mediation of this project has been a long and arduous. While all of the mediation members are not in agreement on the best option, Option K delivers an option that is supported by the ABGC, nearby neighborhoods and some key stakeholders (boating & cycling communities). Option K represents an effective transportation solution for the region, and also suggests that it may reduce the risk of major litigation and the construction delays that this might entail.

Submitted by Paige Miller as a member of the SR520 Mediation Committee on behalf of the Arboretum and Botanical Garden Committee.

December 23, 2008

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WSDOT-ORG 589205

Statement of the University District Community Council

by Matt Fox, President and Jorgen Bader, mediation representative

The University District Commnity Council supports Option A. Our commnity council represents residents and people working within the University District, bounded by the Lake Washington Ship Canal on the south, Lake Washington on the east, I-5 on the west, and N.E. 45th St. and N.E. Ravenna Boulevard on the north. Options K and L would build a new interchange on the UW campus in our community and shift more of the through traffic to and from SR 520 from south of the Ship Canal to our district.

All three designs have six lanes: four general purpose, two transit/high occupancy vehicles lanes. Each provides lids in Montlake, in the Roanoke neighborhoods, and by Seward School. Eastside to I-5 and transit travel times are similar for all options. Of the three, Option A is the best for motorists and transit, for the environment, and for the surrounding neighborhoods and the only one within the statutory budget.

A. Option A Described

(75% of these statements apply only to Option A.)

Option A builds the new SR 520 bridge within its existing right-of-way. It keeps the location of the existing on and off ramps to Montlake Boulevard East south of the Lake Washington Ship Canal. It builds a parallel Montlake Bridge so that each bridge has three lanes one way. This relieves the bottleneck caused when six lanes on the south and seven lanes on the north squeeze into four lanes to cross the current bridge. Option A adds no more traffic there; it just does not divert it to other neighborhoods as Options K and L do.

Option A reconstructs the intersections of Montlake Boulevard East. It replaces the "U" turn with a left turn for north-to-west traffic (mostly to I-5), it adds a second holding lane to the westbound on-ramp by the NOAA Science Center to help traffic on Montlake Boulevard East, and it connects the on ramp to the I-5 off ramp to assist the cross-movement of entering traffic and traffic exiting north. It adds another northbound left turn lane for eastbound traffic at the intersection of Montlake Boulevard East and Lake Washington Boulevard by the Union 76 Service station. Channelization will aid traffic flow on surface streets. On and off ramps on Montlake Boulevard East are spread over a distance of one-sixth mile and are on both sides of the Boulevard. 24th Avenue East will serve as a second access for the easterly Shelby-Hamlin enclave.

Option A builds a westbound transit only off ramp from SR 520 to Montlake Boulevard East northbound. This ramp allows buses to use the bus ramp without crossing over lanes of general purpose traffic to exit SR 520. It keeps the transit only lane on N.E. Pacific St., and, keeping roadways at current grade, allows pull-outs for local tranist, shuttles, and vans by the Sound Transit UW Station.

Option A removes the Arboretum interchange. There is no direct connection from SR 520 to Lake Washington Boulevard in the Arboretum. If kept, the Arboretum ramps would make that boulevard a prime freeway access road on the south. The unused R.H. Thomson ramps ("ramps to nowhere") by 24th Avenue N.E. are removed from the lagoon, which reverts to its earlier park-like appearance.

Ramps are above ground and in the open air, except under lids and overpases. It has good sight distances. Road grades are gradual and meet federal standards. Bike lanes and trails are provided.

Option A provides a lid over SR 520 at McCurdy Park east of Montlake Boulevard East in the vicinity of 24th Avenue East. A partial lid covers SR 520 on the south adjacent to Lake Washington Boulevard between the McCurdy Park lid and Montlake Boulevard East. It widens and landscapes the crossing of Montlake Boulevard East over SR 520.

The McCurdy Park waterfront and Marsh Island waterfront trail remain. The portions of McCurdy Park taken for right-of-way may become a retention pond for drainage and will be developed into a park setting. The Arboretum wetlands are not disturbed more than necessary for construction of a six lane bridge. It makes the least excavations and least fill in the fragile Union Bay ecosystem.

Option A retains the at-grade intersection of Montlake Boulevard North East and North East Pacific Street on the north side of the Lake Washington Ship Canal by Husky Stadium and University Hospital. Traffic in all directions stays at-grade approaching that intersection and the Montlake Bridges. Sound Transit plans to build a pedestrian bicycle overpass from its station to the main campus in the vicinity.

Quiet pavement will be used where recommended by the Expert Acoustical Review team. Option A stipulates that best management practices will be used in refinement of the design to protect the environment and the surrounding community, during construction, and during its operation to minimize water, air, and ground pollution and to protect endangered species and Indian fishing rights.

Option A modifies the current surface bus stops slightly on both Montlake Boulevard E. and N.E.

B. Comparison Chart

Option A	Options K and/or L
Location	
+ Option A builds the new SR within the existing corridor and uses sites of existing ramps.	- Options K and L disconnct all existing ramps to Montlake Boulevard East.
+ The Montlake interchange is at the junction 520 and Montlake Blvd E., the only north-south arterial in the Montlake isthmus. Siting at a geographic center minimizes distanes traveled. Off and on travel uses the most direct route. (Caveat: closing the Arboretum interchange adds ⅓ mile roundtrip for one-sixth of motorists.)	- Options K and L move the interchange over 1/6th mile east of Montlake Blvd E. All traffic. now using Montlake Boulevard E. for access (five-sixth of vehicles) go ⅓ mile extra roundtrip. Most using the Arboretum interchange for access travel the same distance as now. Option K has a gooseneck, hairpin ramp one-eight mile long on the south. Those using it travel ¼ mile more, ½ mile round-trip, besides the detour to the interchange.
+ The parallel bridge allows ready detour when the historic Montlake bridge closes for repairs.	
+ Montlake Boulevard East, the sole north-south arterial, remains the prime access, which it has been for the last century.	- Options K and L shift the interchange north to the UW campus by Husky Stadium and University Hospital. Projected 2030 peak hour traffic volumes will increase by 51% on Montlake Boulevard N.E.
Ramps to bridge/tunnel	
The on and off ramps on Montlake Boulevard East are spaced over a distance of one-sixth mile and are on both sides of the arterial for smooth flow.	- Option K funnels 85% of on and off traffic through the intersection of Montlake Boulevard N.E. and N.E. Pacific St. mixing with local traffic.
+ The ramps are in open air with gradual grades to the surface using natural contours.	- Option K's ramps start diving one-sixth of a mile from the tunnel portal, mostly under the mainline roadway to a depth 50 feet under ground line and 25' below water line.
+ It ends the north-to-west "U" turn by rebuilding the intersection and widening the ramp.	-- Option K's on-ramps rise so that entering traffic looks up to the mainline, giving motorists relatively less time to adjust to mainline, faster traffic. The sSouthbound to westbound ramp is under the Montlake lid after a 90° turn, next to 20' + retaining wall. The southside north-to-east ramp uses a gooseneck extension with a roundabout hairpin turn and a 90° turn to merge with eastbound traffic from the tunnel on a rising ramp to eastbound ramp.
+ On ramps: At mergers to the west, entering traffic looks downward on mainline, faster traffic, and motorists are better able to set their speed. At mergers to the east, traffic uses a loop road. Ending the METRO flyer stop and the Arboretum entry ramp extends the entering lane to the mainline SR 520. Sight and merger distances are longer than currently.	
+ Off ramps: Option A builds a westbound transit ramp on the south/left and gives buses priority at the signal. The west to south ramp is rebuilt for an easier slope and a right turn is right turn is kept to Montlake Boulevard East southbound. The parallel bridge adds 50% more capacity for quicker, easier entry for westbound vehicles to enter and crosss the Lake Washington Ship Canal.	- The westbound off-ramp of Option K dives from the mainline to the tunnel portal level 50' lower with a 90° turn, merging with the westbound transit/HOV ramp in a short distance before the portal. The eastbound off-ramp dives under the mainline SR 520 south of the tunnel portal. A traffic light controls all turns there. Motorists stop in a forrest of concrete columns like that under sections of the West Seattle bridge.
+ The westbound entering trafffic from Montlake Blvd East to I-5 and SR 520 trafffic exiting to I-5 northbound or to Roanoke cross more safely in an auxiliary lane over Portage Bay.	- Westbound entering traffic from the tunnel ramp and SR 520 exiting to I-5 northbound or to Roanoke cross each other on the north lane of the mainline of SR 520. over Portage Bay.
Bridge v. Tunnel	
+ Roadways use the current natural, level contours. The steepest slope on the south is 1.6%.	- Option K digs a tunnel like a sickle with over a 90° turn at a radius curve of 325', designed for a speed of 25 mph. Westbound traffic takes an "s" curve to enter.
+ All connecting roads meet at-grade at all intersections.	- Facing north, the right tunnel descends at 7.8%.

+ The parallel bridge ends the bottleneck where the seven lanes on the north of the Ship Canal and the six lanes on the south squeeze to four lanes on the current Montlake Bridge.

and the left at 7.1% on the south; and the right tunnel rises at 8.2% on the north and the left at 8.9%. Sharp curves cause the effective grade at the inside tunnel face to be steeper than at the outside face. Steep grade make for less safe/ more risky construction. Grades exceed federal standards and those of WSDOT's design manual.

+All types of trucking may use all ramps and lanes, except the transit only off ramp to Montlake Boulevard East westbound.

- The bridges may open during off peak hours altho closed during peak hours. Open times are 3 to 5 minutes; 2 bridges will speed clearing back-ups.

- Tunnels bar trucks with flammable, other cargos.
- Portals and approaches are below water level and have seepage requiring constant pumping.
- Ventilation is needed all the time.
- Option L extends the duration of openings since neither bridge may close until a vessel clears both.

Approach and Access Roadways

+ Montlake Boulevard N.E. and N.E. Pacific St. are at-grade, and access to the Husky Stadium parking lots is retained at-grade. North-south traffic has clear level sightlines.

+ The intersection of Montlake Boulevard N.E. and N.E. Pacific Street is a Y-shaped intersection with four traffic movements and a spur access to Husky Stadium parking. A traffic light coordinates movements.

+ The parallel bridge ends the bottleneck at the bridge crossing. A left turn lane and a wider on ramp aids north-to-west movement, ending the U-turn crossover; and a left turn lane and a wider loop ramp reduces congestion at Roanoke St.,

- Options K and L lower Montlake Boulevard N.E. and N.E. Pacific St. at their intersection by at least 10'. All north-south traffic goes into a down-and-up dip to pass under the pedestrian overpass. The trench closes the southern most access to parking.
- Options K and L seek to move 4,200+ vehicles with seven different traffic movements and two double left turn lanes under a concrete overpass. A traffic signal coordinates movements.
- A Montlake bridge opening may cause the queue to intrude into this intersecton and impair passage.
- Traffic congestion moves further out. 30% more. vehicles clog N.E. Pacific St. at 15th Ave. N.E. 81 % more clog Montlake Boulevard East at Boyer Ave. E. Lake Washington Blvd at E. Madison St. almost doubles the traffic volumes of Option A.

Arboretum/McCurdy Park

+ "A" retains most of McCurdy/East Montlake Park. The drainage pond will be landscaped into a parklike setting. The site of the Arboretum ramps and "ramps to nowhere" revert to Arboretum use.

+ The Marsh Island trail remains intact.

+ Option A removes the direct connection to Lake Washngton Boulevard, the central spine of the Arboretum. Traffic by the Japanese Tea Garden drops 18% from current volumes (2030 P.M. Peak).

+ "A" disturbs the fragile wetland ecosystem the least. It excavates only for the new bridge foundation

+ No disturbance of Foster Island burial site.

+"A" ids SR 520 by McCurdy Park and builds partial lid by Lake Washington Boulevard from 24th Avenue E. to Montlake Boulevard East.

- Options K & L take most of McCurdy/East Montlake Park for an interchange. Its south extension supplants the site of the "ramps to nowhere." Only the area of the Arboretum ramps revert.
- Access to the Marsh Island trail is affected.
- Both options make Lake Washington Blvd. in the Arboretum its south access.. In K, trucks barred from the tunnel must use it. 2030 traffic volumes go up 48.6% P.M. peak: 960 vehicles more than for A
- Option K excavates and fills for the approach, for the tunnel, and for the south extension. (est. 47,000 truckloads) The approach descent disrupts wetland.
- Option K's excavation may disturb the site.

+ Options K and L build lids at Montlake Blvd. East westward of A's McCurdy Park lid. Only Option K builds 600' of berms and a lid to Foster Island.

UW Campus

+ A keeps the Campus intact, except it takes a three lanes width for the parallel bridge on the east and south of the intersection of Montlake Boulevard N.E. and N.E. Pacific St.

+ The Husky Stadium south parking lot keeps

Both K and L widen Montlake Boulevard N.E. on its east at its intersection with N.E. Pacific St. to make merging lanes for right turns.

- Both K and L slice a 100' swath through the UW Stadium parking lot, severing building site 63E.

Option A	Comparison Chart (Cont.)	Options K and/or L
its southerly at-grade access + The UW Hospital and medical school complex and the West Campus are spared SR 520 through traffic volumes. +No tunnel portal noise occurs. + Option A minimizes traffic volumes through campus arterials, respecting the integrity of the campus.		- Option K tunnels under the U waterfront activities center, takes subsurface rights, and other rights. Option L takes a 100' surface swath, widerng to a delta at the west and brushes by the Canoe House. - Tunnel construction uses cut-and-cover technique on land, dewaters the site and may impair structures. - K and L trisects the campus with SR 520 traffic. Noise shoots from the tunnel portals and higher traffic volumes impact the Hospital and the campus.
	2008 Estimated Costs of Construction and Lifetime Costs	
+ **$ 4.526 Billion** Construction Cost (The Portage Bay auxiliary lane ($ 15 million est.) and the cost of acquiring two houses for the parallel bridge and replacing park land are not included.) Option A has the lowest lifetime costs. One existing tender can operate both bridges		- Option K is estimated at **$6.574 Billion** and Option L is estimated at $ **5.066 Billion.** The costs of acquiring real estate from the UW and of replacing McCurdy Park are not included. - Option K requires tunnel lighting, ventilation, and continuous pumping. Option L requires a second bridge tender.

C. Modifications Rejected

The "A Team" considered and rejected these potential modifications:

(a) Adding **Arboretum ramps** would cost $ 98 million dollars, expand the project footprint, and over double the traffic on Lake Washington Boulevard there than Option A without it. Many businesses and residents on Capitol Hill and southerly areas would use it rather than Montlake Boulevard East for access.

(b) Adding an **Arboretum lid** ("land bridge" to proponents) would cost $ 80 million, excavate a large coffer dam and fill for the berm, add drainage and pumping expenses, and perhaps impair Indian burial sites. It would likely have damaging impacts on the fragile ecosystem of the wetlands, which nourish Union Bay with biota at the base of the food chain and help cleanse its waters.

(c) Keeping the **Metro Flyer Stop** at Montlake Boulevard East would widen SR 520 with a bulge 60-70' wide and tapering exit and entry lanes. The added width would encroach on the NOAA Science Center.

(d) Adding a **pedestrian overpass at N.E. Pacific Street** and Montlake Boulevard N.E. ("lid"?) , which both Options K and L do, would cost $ 33 million; put a dip into both roadways which are level now; and force pedestrians (many hosptital patients and elderly) to climb a 10-12' hump to cross the street. Options K and L make that intersection the spout of their traffic funnel (4,240+ vehicles in the P,M, Peak hour (2030)) and need to separate out pedestrians to function at all. The intersection works now without it. Sound Transit plans to build a pedestrian/bicycle overpass from its station to the Upper Campus. In the neighborhood ("UCUCA") and University planning a decade ago, participants rejected the concept.

(e) Requiring quiet ("rubberized") pavement for the entire distance in Seattle would add construction costs and frequent replacement expense. Option K makes it a basic requirement. Options A and L call for quiet pavement where the Acoustical Review Team recommended it This follows expert advice and gives parity with the Eastside. Quiet pavement costs more and has a much shorter life than regular pavement.

D. Counterpoint to Arguments for Other Options

The final draft Project Impact Plan excluded from the text statements deemed "negative" about an option although true and material. Here are some of them: Option K occupies McCurdy/East Montlake Park; its south interchange has a ¼ mile gooseneck extension with a hairpin turn and acts as a holding lane for metering traffic entering from the south to the mainline; the excavation and fill will involve over 47,000 truck loads of fill and to keep the descending roadways in place will take heavy layers of concrete that may displace the underlying soils with undetermined effects; the environmental consequences on the biota and the food chain will first be investigated as part of the later environmental process; the design greatly magnifies the accident potential under conditions of heavy rain, fog, ice, and snow; and the tunnel grades are 7.1% to 8.9%. WSDOT Design Manual, Jan. 2005, M-22, Figure 940-2, states that the maximum desirable grade is 5% and the highest grade permissable is 7% for design speeds of 25-30 mph. The Expert Tunnel Review Team Report estimates construction will last 3-3.5 years. It cites design assumptions that need to be verified and urges that more soils testing be done. Legislators should be aware of these facts..

WSDOT made some traffic simulations for local travel times in the 2030 P.M. Peak Hour. Adding the

auxiliary lane and intersection changes reduced delay. The projected trips start close to and go through the intersections of either N.E. Montlake Boulevard and N.E. Pacific St. or Montlake Boulevard East and East Roanoke St. Options K and L. have lower times for trips using their Arboretum ramps. Similar studies had been made for the Pacific Street Interchange concept; they showed that it would push the congestion further outward to the next major neighborhood intersection and the gain lessened. Our request for data at more distant locations went unanswered. More data is definitely needed.

Much is claimed about "direct" access by K and L to the Sound Transit UW Station. Buses pass by, but can't stop there any more than the Monorail can stop at Virginia street. Their closest bus stops occurs at N.E. Pacific St., ⅓ of a mile away. Those are the current stops and the same ones Option A uses.

Options K and L say "Montlake Boulevard" returns to a local street. Think twice. Traffic north of the Ship Canal will rise 51% under K and L, 15% under A in 2030. Most vehicles from the due south and the southwest will cross the Montlake bridge to get to the UW portals of SR 520 as the most direct route; most vehicles leaving SR 520 there to go due south or to the southwest will cross it. Option A will add 28% more traffic on 23rd Avenue East at Boyer Avenue E.: Option K adds 81% more there (2030)! The UW interchange redirects mainly the traffic to and from the northwest around the Shelby-Hamlin area of Montlake .

Bullet points ballyhoo the $ 30 million pedestrian overpass, which Options K and L would build at N.E. Pacific St. and Montlake Boulevard N.E. as a "lid" for "connectivity." The 4,200+ vehicles going to and coming from the tunnel funnel or bridge approach require it. The volumes overload the intersection. The better solution is to avoid the overload as Option A does.

Much is made of the support of some of the community groups on the south side of the Ship Canal and of Laurelhurst for Option K. The University District Community Council, the area most strongly affected, strongly opposes it. Community councils for Ravenna-Bryant, University Park, Hawthorne Hills, Windermere North, and Ravenna Springs, among others, are for Option A..

Consider also social justice and the disparate impacts of Options K and L. By detouring traffic, they benefit the wealthy Shelby-Hamlin enclave of Montlake at the expense of the University Campus and of Madison Valley. Traffic congestion and tunnel portal noise would afflict University Hospital; the traffic would bulge westerly through the now tranquil UW's West Campus occupied with dorms; and at Madison St. by the Arboretum, their traffic volumes would exceed those of Option A by 88%. The University's campus, student housing and the University District and Madison Valley are all well-integrated neighborhoods.

Option A builds four lids south of the Lake Washington Ship Canal: McCurdy Park ($ 89 million), Roanoke ($ 68 million), and 10th and Delmar ($ 72 million), --- $ 229 million ---plus a transverse lid from 24th Ave. East to Montlake Boulevard East and a wider Montlake crossing. The sum totals more than some city-wide parks levies. The traffic volumes across Lake Washington are projected to rise by 10% over current volumes during 2030 PM. Peak hours and decline by 2% across Portage Bay. The lids mitigate impacts to those communties for continuing to live with a freeway that been there for fifty years already.

E. Budget Busting

Option A is the only option that comes within the legislative budget of $ 4.37 billion in 2006 dollars. (2008 dollars are 15.54% above 2006 dollars, and can be adjusted by dividing by 1.154). Option K is over $ 2 billion over budget in 2008 dollars and $ 1⅓ billion over in 2006 dollars.) The Tolling Implementation Committee estimates that State gas taxes will raise $ 554 million, Federal bridge moneys may raise $ 114 million, and that tolling SR 520 alone could raise $ 1.5 billion and tolling both SR 520 and I-90 together could raise $ 2.450 billion if all the funds went to SR 520. That's $ 3.68 billion --- still short of the total.

WSDOT's cost estimates graphic breaks out segments. Option A costs $ 1.7 billion and Option K costs $ 3.748 billion for the segment from Madison Point to across Portage Bay (Portage Bay, Montlake, & West approach). K is over $ 2 billion more, 2.2 times as much. The entire project east of Seattle (Eastside construction, the floating bridge section, and the pontoons cost) totals $2.5 billion. Option K's cost of $ 3.748 billion for the Montlake segment exceeds all the other parts of the project combined! It spends $ 2 billion more just to cross a Ship Canal 150' wide and 375' from bank top to bank top at Montlake Blvd.

F. Closing Comments

As to Question II, Options K and L are not acceptable. Each builds on a bad idea (pushng traffic from its natural crossroads with Montlake Bouelvard East to McCurdy Park, the Arboretum, and the UW Campus). All options would benefit by using our construction stipulations and the provisions for transit.

We thank the legislature for letting our community council participate in the designing of SR 520 and WSDOT's personnel for their assistance and courtesies, especially Dave Warner and Larry Kyle.

Richard Conlin, President
Seattle City Council

December 23, 2008

Re: ESSB 6099 Project Impact Plan

Thank you for the opportunity to participate in the mediation process under ESSB 6099. In accordance with the provisions of the legislation, the City Council is currently reviewing the outcomes of the mediation and will provide formal comments in January.

As a participant in the mediation, I want to make the following personal observations. While I will recommend them to the Council, and I believe that the Council's comments will be compatible, I am submitting these as comments to include in Section 9, as provided for in the mediation process.

I support the SR 520 mediation group's decision to include Options A, K, and L in the Supplemental Draft Environmental Impact Statement (SDEIS) to be completed in 2009 as part of the Project Impact Plan. I am not personally prepared to state a preference for a west side Interchange Option, and I am not recommending that the Council endorse one of the options. The fact is that though the mediation process has included some data and information that helps inform the development of new options and the tradeoffs associated with each, the full analytical work is not complete. Furthermore, some options have continued to change even as recently as the last mediation session, and it would be premature to comment on options that include new elements which have been introduced so recently. At this time, it is not possible to fairly evaluate their consequences.

I am particularly concerned about the incomplete nature of the new elements in Option A, and the apparent conflict between the assessment of WSDOT and the proponents of Option A over how to make it work most effectively. At that last mediation session, we were presented with a new element, an additional lane that extends from the Montlake interchange as far south as 2000 feet along 23rd/24th Avenue. Introducing a new element at this late stage of the discussion is very problematic. This one in particular raises important questions.

The 2000 foot distance, which extends beyond the recently constructed Montlake Library and potentially affects that building as well as dozens of other residential and commercial properties along this corridor, was given as an approximation. There is a clear need for more analytic work to verify what distance is required and how the proposal will function. There is also a need for a better understanding of what the impacts of this addition would be on both individual properties and the Montlake community as a whole.

While this element apparently has agreement between WSDOT and the proponents of Option A, there was disagreement over the addition of interchange ramps in the Arboretum, which Option A proponents vigorously resist (indeed, the addition of these ramps would seem to defeat a major objective of the proponents), but which WSDOT staff indicated could be essential to making the option work to WSDOT's satisfaction. If this element is added, it becomes very difficult (in my mind) to distinguish Option A from the original Base Six Montlake Interchange with the second Montlake Bridge.

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There is also still no agreement on the alternative design for the "keyhole" feature in Option K, and on whether or how such an alternative design would be incorporated in Option L.

There are other elements of analysis that have not been developed for any of the design alternatives, and that would be essential to determining their feasibility. For example, we were presented with only PM peak travel time considerations for each new alternative, with no data for the AM peak or for off-peak operations. To be able to make an informed choice, these must be evaluated. We do not have detailed analysis on environmental impacts, such as fisheries, loss of park lands, and tribal issues. We do not know if there are any fatal flaws that may yet emerge due to regulatory or permitting issues. These are critical elements in determining what works and what doesn't.

There are also additional sources of data that must be incorporated into the SDEIS in order to properly assess the alternatives, such as the results of recent traffic analyses completed for Children's Hospital and University Village, and the fact that Sound Transit light rail is funded to extend north to Northgate and Lynnwood (prior to the 2030 evaluation date), which will increase the number of transit passengers that utilize the University of Washington station. With the extension of light rail, the ridership on bus routes that serve the station area is also likely to rise.

It is also important to note that phasing the construction of the project may allow more time to address neighborhood issues. If the project can begin with the components that have been settled, such as construction of the pontoons, then the urgency to resolve the west side approach and interchange issues is less pressing. The mediation did not result in a consensus on an alternative. Until there has been sufficient analysis to make options and choices clearer, it is difficult to identify the best possible solution for Seattle's neighborhoods.

For all those reasons, it is most appropriate, I believe, for the Council to wait until there is sufficient analysis from the SDEIS process to allow us to fully assess how each alternative works before we consider a recommendation on a specific alternative. I would also seriously question whether it is appropriate for the State to designate a Preferred Alternative at this early stage of analysis.

I do concur, and will recommend that the Council also concur, with the consensus design elements and community interests identified by the mediation group. These items, which are incorporated in Options A, K, and L, should be part of the final design alternative that is selected for the SR 520 corridor. I also urge that the recommendations included in the health impact assessment completed by Seattle-King County Public Health be included in all alternatives, along with the maximum amount of transportation demand management (TDM) along the SR 520 corridor.

Nothing in the mediation process has called into question the validity of the key design and mitigation criteria affirmed by the Council and Mayor in Resolution 30974 (April 2007) for the Seattle portion of SR 520. The criteria and recommendations included in Resolution 30974 may be summarized as follows:

1. Design for transit connectivity and reliability.
2. Refine project alternatives to reduce congestion at the Montlake Bridge and improve north-south mobility between Seattle neighborhoods.
3. Narrow the SR 520 corridor by reducing the lane and shoulder widths.
4. Reduce noise and visual impacts.
5. Protect open space, the environment, and the Washington Park Arboretum.
6. Promote bike and pedestrian access.

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7. Incorporate design excellence and aesthetic quality.
8. Address the concerns of the University of Washington.
9. Protect access for freight.
10. Give priority to interagency cooperation and coordination efforts.

The design alternative that is ultimately selected for the Seattle portion of SR 520 should benefit the region's transportation system as a whole. Rather than just improving traffic flow along the SR 520 mainline, the functionality of interchanges and the effects on nearby neighborhoods should also be considered. The impacts on drivers, transit riders, bicyclists, and pedestrians traveling between various destinations within the City of Seattle must also be evaluated. I believe that a new Montlake interchange that provides improved traffic flow on SR 520 at the expense of increased congestion on neighborhood streets is not acceptable. Negative impacts on neighborhoods and the Washington Park Arboretum must both be minimized. The preservation of one should not come at the expense of the other.

As the SDEIS process goes forward and the Governor and State Legislature continue to evaluate Options A, K, and L, WSDOT should provide the mediation participants and the City with periodic project updates. WSDOT should also provide opportunities to comment and offer guidance on the SR 520 project as it continues to move ahead.

I look forward to continuing to work with the Governor, State Legislature, and WSDOT to identify a final design alternative for SR 520 that offers the best long-term solution to the challenges posed by the bridge replacement project. This solution must balance the life-cycle cost of the SR 520 project with the neighborhood, environmental, and transportation impacts that the new bridge will have on the areas that surround it.

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EASTLAKE COMMUNITY COUNCIL

T0:

Governor Christine Gregoire
2008 Joint Legislative Committee

Statement of the Eastlake Community Council
For the final report of the SR-520 mediation process
December 23rd, 2008

This letter describes the position of the Eastlake Community Council (ECC) regarding the options A, K and L which were developed in the SR 520 mediation meeting.

A lot of work has been accomplished in the many meetings we had - the efforts of all mediation members to find a workable design for this important project were tremendous. It was a priviledge to work alongside with experts in many fields of public service, transportation, ecology, parks, federal agencies and neighborhood leaders to find a workable solution for the rebuilding of SR520. While representing my neighborhood Eastlake I realized that our concerns were best echoed by the comments and criticism of Mike Grady of NOAA who spoke to the environmental impacts of the project alternatives in a very concise manner.

Our neighborhood will be directly affected by the planned changes of the SR520 Bridge and welcomes this opportunity to comment on the proposed options 'A','K' and 'L':

The Eastlake community is in full support of the State of Washington's and the City of Seattle's efforts to facilitate safe and improved traffic flow while reducing single occupancy vehicle induced traffic by rebuilding SR-520 with a safer and larger bridge. ECC has supported the study of the various six-lane alternatives in the mediation process. The realization of the planning results shown in options A K and L will be financially challenging; they all bring larger levels of traffic into Seattle and they all in one way or another will place heavy burdens onto neighborhoods, wetlands, Union and Portage Bays, salmon fisheries, parks, the University of Washington's south Campus and most importantly the Arboretum.

I think we can all agree that the solution which will be chosen needs to improve our environment, our public open spaces and establish viable pedestrian, bicycle and mass-transit alternatives. From the three options available we favor Option 'A'. From the remaining two options we favor option 'L' the least. The option 'K' lost its appeal when a tunnel through the arboretum was sacrificed for an expensive submerged interchange at Montlake. Our preferred alternative continues to be an enhanced four-lane format with wider lanes and shoulders and improved ramps, which would accommodate more traffic and enhance safety on the corridor, while also improving transit service.

Below is a summary of the key issues which wehave used to compare the viability of the alternatives A,K and L.

Cost. A pre-condition for any alternative should be that it is affordable, especially in the currently difficult fiscal climate. The cost and revenue estimates that WSDOT released in recent weeks suggest that all of the six-lane alternatives, and especially alternative K and L, have an imbalance of costs and revenues that render them unaffordable under the plausible scenarios.

Traffic. The six-lane alternatives have in common that they bring into Seattle an unsustainable increase in traffic that would tend to congest an already overburdened I-5 and local streets, and increase pedestrian and bicycle danger. The traffic flow benefits of the tunnel at Montlake seem to be marginal compared to a second bascule bridge if the bridges can remain closed at peak time.

Transit. The position of the Eastlake Community Council has been that it would accept more than four lanes on the SR-520 bridge for the addition of a rail line. If the corridor is to continue to rely on buses, bus service should be improved, but not in ways that encourage more single-occupancy driving. The SR-520 corridor currently has a transit share, which would be diminished by all of the six-lane alternatives. The main reason for a driver to switch to a bus or train is a lack of SOV lanes not added ones.

Global warming. Increased driving is our region's greatest, and growing, contribution to carbon emissions. The City Council's April 2007 Res. 30974 calls for the SR-520 to "reduce carbon emissions in the corridor." The Sightline Institute's analysis of highway expansions around the world shows that adding highway lanes substantially increases carbon emissions, and this appears to be the case with all of the six-lane SR-520 alternatives.

Local ecology. Despite WSDOT's best efforts to minimize these impacts, all of the six-lane alternatives would do damage to air quality, salmon fisheries, wetlands, parks, the Arboretum, and neighborhoods. In each of these categories the mitigating measures for the Arboretum and the adjacent neighborhoods need to be of the highest priority and not fall victim to 'value engineering'. We acknowledge that option A lowers impacts on the by closing the on/off ramps to SR 520.The removal of the east west ramps is a more direct and less costly benefit than the 'berm'.

Trans-Lake. The 1997-99 Trans-Lake Washington Study, which included both SR-520 and I-90, found that two more lanes of traffic were needed across Lake Washington. Since that time, Seattle went along with amending the I-90 agreement of the 1970s to expand the current eight-lane I-90 to ten lanes, and this expansion will be completed in the next few years. The impending addition of two lanes to I-90 will achieve the Trans-Lake recommendation for two more lanes and does therefore not need to be used to justify any six-lane alternatives for SR-520.

Construction. Within the EIS process attention needs to be paid to the magnitude of construction noise, dust, vibration, and heavy truck traffic from the various SR-520 alternatives. The construction impacts are very high for all of the six-lane alternatives, and would be considerably less for the enhanced, transit-optimized four-lane alternative.

Conclusion:
The outcome of this project will dramatically shape this City and region in the near and distant future. The options that have emerged within the mediation process represent a lot of hard work by WSDOT all the other agencies which were involved. It was a priviledge to work with experts on the subject and neighborhood representatives towards a common solution. The results are impressive but do not yet live up to what our region deserves as a solution. We do not believe that future generations will regard them as the wisest possible choice.

The Eastlake Community Council will continue to fully support any solution which will ensure a 'net-zero' impact to the arboretum and its wetlands. Proposals should discourage vehicular traffic through the Arboretum and should enhance public transit for the SR520 corridor (rail preferred). We will not endorse a SR-520 alternative that is unaffordable, further damages one of the most beautiful parks in the city, overburdens I-5 and neighborhood streets with additional traffic and causes higher carbon emissions.

I hope this statement is in keeping with the intent of the mediation goals and will be glad to further discuss any issues concerning the SR520 expansion plans with you.

Thank you for your consideration

Carsten Stinn
SR 520 Representative for the Eastlake Community Council
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Town of Yarrow Point

City of Clyde Hill – City of Bellevue – Town of Yarrow Point – City of Medina

December 23, 2008

The Honorable Christine Gregoire
Governor
State of Washington
PO Box 40002
Olympia, WA 98504-0400

The Honorable Mary Margaret Haugen
The Honorable Judy Clibborn
Co-Chairs, Joint Transportation Committee
3309 Capitol Boulevard SE
PO Box 40937
Olympia, WA 98504-0937

Re: Bellevue, Clyde Hill, Medina and Yarrow Point Statement concerning the SR 520 ESSB 6099 Project Impact Plan

Dear Governor Gregoire, Senator Haugen and Representative Clibborn**,**

Over the last decade, Eastside communities have been engaged with the State of Washington, the public and the important decision-making processes addressing the urgent need to replace the SR 520 Bridge, and at the same time, build a corridor that meets current and future growth demands. The 520 corridor is a vital transportation link that ties together the educational and life science centers in Seattle to the high technology centers on the Eastside.

Eastside cities have worked cooperatively to reach agreement on a corridor design East of Lake Washington that meets the financial constraints imposed by the Governor while mitigating project impacts as much as possible within the financial constraints. It is only fair to expect the design West of Lake Washington to do the same.

The statements below are intended to focus primarily on the west side interchange options contained in the Project Impact Plan, although over the next few months, the cities will expect to continue directly engaging with the State on funding, final design considerations and how to best meet multimodal travel service demands now and in the future in this critical state highway corridor.

As participants in the ESSB 6099 mediation process, we were asked to provide a statement to the following two questions:

1. ***Which west side interchange Option do you prefer and why?***

2. ***Are there changes that could be made to the other Options that would make them more acceptable?***

A response to each of these questions is provided below:

With regard to the most desired west side interchange option, using cost/benefit as a primary consideration, we prefer Option A. This option incorporates elements that address key issues raised by west side communities and meets the goal of a lower cost option that is in keeping with the legislative direction. We would appreciate receiving additional information in regard to how the sub options of Option A are to be considered, as these sub options have both system functionality and cost implications. We are specifically interested in how the sub options most affecting Eastside operations will be determined.

With regard to improving acceptability of the other options (K and L), it is abundantly clear after over a year of technical and cost analysis, that no changes have been considered to either Option K or to Option L that would make these options financially or environmentally viable.

Thank you for the opportunity to participate in the mediation process. We look forward to continued communication and collaboration, particularly as you undertake final decision-making on the configuration and funding options for the corridor.

Sincerely,

George Martin Mayor City of Clyde Hill	Grant Degginger Mayor City of Bellevue	David Cooper Mayor Town of Yarrow Point	Mark Nelson Mayor City of Medina

cc: Jennifer Zeigler, Policy Advisor, OFM
Barbara Gilliland, Parametrix

To: 2008 Washington State Legislature 12/23/08
Governor Christine Gregoire
From: Virginia Gunby, Member, SR 520 Panel, Representing Ravenna/Bryant Comm. Assoc.
RE: Ravenna/Bryant Community Assoc. Responses to Questions --Why A, and How to fix K and L?

First question-**Why the "A"SR 520 Design Features Should Be the Preferred Alternative?–(PIP Sec. 9)**
15 months ago I was appointed to represent the Seattle Ravenna Community's interests during the Mediation negotiations to meet the requirements of the Washington State Law, relating to the rebuilding of SR 520. In 1973 I was appointed by Gov. Dan Evans to the Washington State Highway/Transportation Commission and the Toll Bridge Authority, and served from 1973 and 1979. While on the Commission, and since then I have followed SR 520 issues and was member of the er ***SR 520 Translake study,*** *a 4- year 1997-2002 study of primarily 520. I* represented 1000 Friends of Washington, now called Futurewise. Today the SR 520 "A" is supported by many north-end Seattle communities, the 46th District Democrats and Friends of the Arboretum.

Summary -How "A" Addresses Our Community Interests and Chapter 517, 2007 laws of Washington (ESSB 6099
The "A" design meets the Washington state's adopted Law of 2007, Chapter 517 (ESSB 6099) criteria to--
-"Minimize the total footprint of the bridge,
- Minimize the project impact on surrounding communities, including incorporation of green lids and connections to minimize increases in additional traffic volumes through Washington Park Arboretum and other adjacent neighborhoods;
--Incorporate the recommendations of a health impact statement assessment to calculate the project's impact on air quality and carbon emissions and other public health issues, conducted by the Puget Sound Clean Air Agency and King County Public Health, (The HIS summarized in the PIP)
--Ensure that the ultimate configuration effectively prioritizes maintaining travel time, speed and reliability on the two high-occupancy lanes; and
--Clearly articulate in required environmental documents the alignment of the selected "preferred alternative".

Lack of Consensus on Design
The SR 520 Panel agreed on many of the west-side's SR 520 design elements, but did not reach agreement on the Preferred Alternative design in the vicinity of the Montlake Cut and the Arboretum. The 2009 SR 520 "**Project Impact Plan** report should be considered a **"SR 520 Progress Report**". It is premature for our Panel or the Legislature, in my opinion, to select a "Preferred SR 520 Design Alternative" until the information from the SR 520 Supplemental DEIS is completed in the fall of 2009 and available for Public Review and Comment.

A" fulfills many community interests. The following describes how it is the environmentally sustainable, cost effective and the lowest overall cost of the three proposed SR 520 design options.

"A" is Better Bang for Limited State and Federal Transportation Bucks!
1. "A" Costs at least $2 billion less than K, and less that L, and would not use the funding of the already approved East-side 520 segment which needs about $800 million to complete. The "A" supporter's goals were to keep within the budget constraints, develop a financially reasonable and feasible design that met the above criteria, emphasize the use of the new HOV lanes, restore wetlands and promote a less environmentally damaging design. The SR 520 Legislature's Oversight Committee directed that the 520 Panel to stay within the limits of the project budget, which assumed that any new project costs over the $1.5 billion available project budget, would come from new variable priced tolls, electronically collected, to pay for unmet project costs. With "A" design approved, users would pay lower tolls and pay off the project debt faster and retain a budget and to manage the continuing operations and maintenance of SR 520, after completed and opened.

Costs- The estimated current cost for the west-side "A" option is $4.2 billion, the lowest cost of the three proposed designs proposed in the SR 520 Project Impact P. .With the current down-turn in our national economy, many people losing their homes, the closing schools in Seattle and the state government trying to cope with a $5.+billion dollar budget shortfall, it is not fiscally responsible to support a risky design option such as the "K" tunnel, which is at least, in the preliminary estimate, $2 billion more than the "A'" in the Montlake area segment. We must get more cost effective and efficient "BANG" for our limited state and federal Transportation Bucks!

A major Goal for "A" was to realistically plan stay within 2007 Legislature's adopted SR 520 Project Budget of $3.6 to $3.9 billion for the 520 design decision, complete the Supplemental DEIS move ahead to complete a new cross-lake bridge that will meet and corridor goals with many fewer impacts, in less time. In addition, prevent more damage to the sensitive wetlands, open spaces and park areas adjacent ot under 520, to their former natural conditions, before the current 1963 520 was constructed, before EISs.

Show Us the Money for K and L! Where are the additional public funds to pay for any of the 520 proposed design options? —There currently is only $1.5 billion in funds allocated for all of the SR 520 project Plans to fill the project funding gap through the Legislature's approval for initiating tolls on SR 520 and the other cross-lake corridor I-90 to reduce diversions of trips and increase revenue, during or after construction, The 2008 State Tolling Commission has been meeting with the public and studying the major tolling options for closing the funding gap for the rebuilt SR 520 project. It will be reporting their Findings to the 2009 Session. But we all know that the more costly the SR 520 project, the higher and longer the tolls will be on users. Also, remember that under the current SR 520 Urban Partnership agreement with Federal DOT Transit, Tolling Telecommuting and improved information Technology (4 T's) through Federal grants, will assist, if action on SR 520is taken to start a new system of Tolling by 2009, as recommended by the 2008 Tolling Commission. SR 520 needs the Federal funds.

2. "A'" promotes increasing transit and aggressive use of the new HOV lanes, to meet our state's CO_2 reduction goals by decreasing SOV trips. It is consistent with the PSRC's Regional Transportation Plan and Vision 2040. There is already a significant 520 transit ridership in comparison to other urban corridors, an in proportion to the number of 520's SOVs. This is due to installing the unusual Eastside 520

westbound shoulder HOV lanes in 1973 and the Park and Ride lot system, plus the growing 520 congestion that helps commuters make improved travel choices on the existing corridor.

A" provides greater emphasis and incentives to develop a market for transit through the increased movement of people on transit on SR 520 Transti/HOVs. This will enable future generations will use the future 520 Light Rail Transit, when needed. As a current suburban to major regional center state limited access freeway, with only shoulder HOV lanes on the eastside, that has not been widened, it moves more people in transit than I -90, with 70% of the520 transit users from the Eastside traveling to and from the Seattle CBD. We are promoting the cross-lake HOV lanes and trips to reduce the impact of additional vehicles into and out of Seattle, through our neighborhoods, and meet new laws requiring us to reduce the Green House Gas pollution from vehicles, reduce our contribution to world-wide Climate Change and, meet the reduction to 1990 520 trips, by 2020, 4 years after the SR 520 project is to be completed. New SOV capacity may temporarily reduce short term congestion, but latent traffic demand, results in the attracting new SOV trips. Without emphasizing the use of transit and commuter HOV campaigns the new capacity is shortly overwhelmed.

"A" promotes new innovative tools for the reduction of SOV trips and monitoring the performance of SR 520 during and after construction with incentives and revisions, if needed, in the operations to increase the use transit/HOV and reduce SOV trips through a **new 520 *Corridor Management Partnership Agreement***, described in the PIP report. It is a new innovative agreement between the local public interests, major businesses and institutions to set overall 520 Corridor benchmarks to promote reduction of SOV trips and increase HOV and transit use, during and after construction. After completed, the performance of 520 will be monitored regularly, to evaluate whether it is meeting overall adopted performance policies and objectives. This will reported back to the "Partnership" and the public, and revised needed to improve the performance toward the long term goal of reducing 520 SOV trips. A major 520 component is to use the 2008 voter-approved Sound Transit Prop.1 funds for providing increased reliable, new Bus Rapid Transit service to SR 520. The BRT peak hour plan is for transit service 5 minutes, 30 per hour, and every 10 minutes during the non-peak hours. We are urging that a portion of the cross-lake tolls be used to help subsidize increased transit services by METRO and other agencies.

"A" supporters have proposed a parallel 3-lane Montlake Bridge (Bascule) of complementary design to the existing bridge designed by architect Carl Gould, who designed the original U of W campus and buildings. WSDOT owns the existing Montlake Bridge, on the formerly SR 519 state Corridor. The added bridge widens the narrowest point of the current arterial. There are 6 arterial lanes south and six lanes on the north side of the bridge. Today these north and south lanes converge at the "pinch-point," which is the four lanes of the current Montlake Bridge. With the new parallel bridge, each bridge will have 3 lanes to add one lane in capacity, in each direction, to relieve congestion and allow faster passage of transit/vehicles through this area. These bridges will not open during the Peak Hours, nor for major Husky events. (*The negative aspect of the bridge widening is that it will take two rental houses.)*

"A" improves transit speeds and promote more reliable service with two transit controlled traffic lights on Montlake Blvd E and NE, to improve transit access the new Sound Transit light rail station for surrounding communities and for Uof W students In addition the new SR 520/I-5 Transit HOV lanes ramps to and from the I-5 Express lanes will increase the speed by 20 minutes of the 70% of the 520 transit users who travel to the Seattle CDB every weekday.. (*NOTE:"A" is also supportive and complementary to the completion in 2016 the funded and planned, U of W approved Sound Transit Light Rail Station and Transit service, from the new U of W Station, by the Husky Stadium. It will operate new 6 minute scheduled service between the U of W station to the Seattle CBD, after opening.)*

The overall purpose and mission of "A" SR 520 design is to not only rebuild a SR 520 in its existing location, and do no new harm, but to reduce past and current impacts. All proposed designs take out the high-rise curve for a straighter corridor but for 6 lanes, increase the minimum width of the highway from 60' to about 100' with wider shoulders and two-way HOV lanes in the center, increasing the SOV lane capacity at least 35% more than the existing highway.

"A" avoids impacting the Arboretum with increased traffic, by closing the on/off ramps to SR 520. Removal of the east/west Arboretum Ramps is a major component of "A. They were built originally for the RHT Freeway but Seattle it down 1972 and stopped the R.H. Thompson north/south freeway. Restoring, "greening," and respectfully protecting the ARBORETUM is "A"s goal and accomplished by rerouting traffic destined to and from SR 520 through our city's valuable, Olmsted heritage legacy, open spaces, wetlands and park.

"A" does not violate or do harm to the University of Washington properties, dedicated for educational purposes, either during or after construction. "A" also does require any U of W property, that is in the Master Plan for expansion of the U of W Medical School/ Hospital as K and L do by tunneling and/or landing on U of W land then into a 20 'below with a street underpass. The underpasses completely lidded at the Montlake Blvd. NE/NE Pacific Place St. intersection with a pedestrian/overpass, which slows K and L users, includes transit that is in mixed traffic, that must jointly use the SR 520 exit and entrance ramps, adjacent to the local through traffic.

"A" stays in the existing SR 520 corridor location. "A" doesn't consider accept the costly and environmentally damaging 520 underwater "K" Interchange in McCurdy Park, a costly, 1500' a risky tunnel, 150' wide, at least 60' underground for 4 lanes, a sharp curve, reducing safety and sight distances, 7-8% grade, allowing no trucks, buses are allowed in mixed traffic with an estimated travel speed of 25 mph or less, *if not backed up at the north side exit/entrance Traffic lights at the underpass intersection at Montlake Blvd, NE/ NE Pacific Street*.

"A" Goals and Objectives were adopted to improve multimodal mobility at lower cost of pubic funds by favoring a design option that uses the existing south side of the Ship Canal SR 520 corridor, rather than lengthening trips for many users from the South side of the Cut.

"A" has less overall major construction an is more likely to be faster to built and completed before the aging 520 bridge blows away in one of our wind storms, or is destroyed by an major earthquake. Both the "K or L .are not only more complicated, but they have risky designs that could lead to project cost overruns. The costly designs also are located within parklands and wetlands, which is not allowed under federal "4" and "6F", Land and Water Conservation Act, if there is a non-impacting alternative, and there is—it is the "A design option

"A" rehabilitates restores and improves McCurdy and East Montlake Waterfront Parks and has added a landscaped 520 Lid adjacent to the parks over SR 520 which also provides for a connecting bike/ped trail to reduce traffic impacts and noise from the highway corridor. Restoring McCurdy Park, the surrounding wetlands, including development of a natural appearing clean storm-water pond, is an important new addition A proposes for SR 520. WSDOT is required best management practices for the collecting SR 520 highway storm-water for the first time and will use this pond, located in a former wetland area. "A' 's supporters will seek to restore, and rebuild 520 abiding with the current environmental laws and choosing the least cost, least impact option. There is a need to great need to restore many sensitive areas from damage done by the existing 520, completed in 1963, before the 1970's federal and passed environmental laws were passed. Sensitive environments like the last Class A wetlands and open spaces were filled and converted to use as a state highway corridor.

"A" supporters propose bridge a design competition for the Portage Bay Bridge. With joint community involvement, plus a review by the Seattle Design Commission would assist in deciding the final selection. The objective is a new, welcoming, cost effective, high quality, 'context-sensitive- designed' bridge/viaduct over Portage Bay, for all our communities, that is acceptable to Portage Bay area water- users, houseboat owners, residences, and future users of the bridge.

"A"promotes quiet pavement and noise walls, where the community finds their use appropriate, and as recommended by qualified Noise Experts. They should provide the impacts on long term WSDOT maintenance budgets, and info on quiet pavement replacement life costs.
-
I believe there are trade-offs between the long term 520 maintenance costs and reduction of noise for the low profile or so-called "**Land Bridge**" sections by Foster Island in" **A"(low profile**) **K and L** need further study before we make a knowledgeable decision. The information on the construction of the Land bridge and the collection and treatment of 520 freeway storm-waters, must meet many regulations and will be considered by WSDOT during the SDEIS, and/or future planning and design of roadways segments, near the Arboretum..

A" proponents support the 520 "Health Impact Statement required by 2007 Legislature. it is a first for WSDOT. The Health Impact Statement (HIS) Section 5.4-PIP was prepared to guide and reduce future health impacts from the rebuilt highway. The HIS is complementary of our A design for SR 520 when it seeks to improve our health and reinforces recommendations to improve user's and the adjacent communities health, by reducing single driver 520 trips, moving people and goods, increasing SR 520 transit services and encouraging more biking and walking through connecting trails and landscaped Lids.. "A" supports this new important 520 addition to the SDEIS. We urge that it be given greater emphasis by WSDOT with follow-ups to its initial recommendations. It of this well-written study and summarized in the **SR 520 Project Impact Statement**. Monitoring the lasting changes our nearby population's health, due to changes in human behavior and mobility choices, the reduction of auto trips could result in Health impacts being included in future policies and SEPA, to promote greater oversight and accountability, about up to now, undocumented health impacts of highways . (For complete report go the HIS Link listed in the PIP Appendix)

"A" adds a westbound to I-5 on-ramp to expedite the vehicles entering from the nouth, that use the ramp for trips to on I-5 South and North. It provides space for former trips that had been made through the Arboretum**. Important**: The purpose for adding the additional on-ramp to the west to I-5 at Montlake Blvd. NE is to accelerate the movement of transit and other vehicles onto the SR 520 corridor and reduce the local arterial congestion.

(NOTE: After the Sound Transit U of W LRT Station opens in 2016, one will be able to take fast LRT trains, not ,buses, into the Seattle CBD, arriving every 8 minutes, at the peak hou,r and will make a 6 1/2 minute trip to the Seattle CBD Transit Tunnel station.)

"A" adds a parallel Montlake Bridge, each bridge with have 3 lanes and will reduce this current Montlake "pinch-point". New Lane signage will "Channelize"520 west and eastbound vehicles into the appropriate ramps. (The current "Flyer stops will be removed to reduce the 520 footprint). Bus transfers to SR 520 west of eastbound will be made either at the Triangle Garage bus/rail transfer-point, on NE Pacific St,. or on Montlake Blvd. This plan, along with the new east to west exclusive westbound transit only ramp at Montlake Blvd. It meets the requirements of ESSB 6099's criteria to connect transit to the LRT station. At the transit exiting ramp to Montlake Blvd E., transit has priority of the traffic lights, in order to turn left at the intersection of Montlake Blvd NE/NE Pacific St. Transit turns right to a Bus/LRT passenger/transfer area at NE Pacific Place, close to the soon to be built Sound Transit overpass to the U of WLRT station, or if walking or biking, to the U of W or the Burke Gillman Trail.
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Second Question: Are there changes that could be made to the other 520 options more acceptable?

First of all, the SR 520 Mediation products, including the Project Impact Plan, should be qualified as being very incomplete, until the SR 520 SDEIS is completed by WSDOT in the fall of 2009. The SR 520 Mediators were discharged from their positions in March 2008, and replaced by staff from the Governor's office, plus consultants. The meetings between March and November were spent with "informational meetings" until after the November 2008 Election, when the Panel finally was presented with A, K and L information on the Traffic Projection and Project Cost Estimates. Even though the "K" proponents sought and were provided with 2 sets of tunnel consultants, "A" supporters requested, but never receives any independent Transit Expert's input and on how to improve their plan for Transit/HOV use on SR 520 corridor. "A" supporters have also been working diligently to reinvent WSDOT's urban corridor planning process to include the changes to meet a host of future mobility challenges of the 21st Century. So there is a stalemate on the west side location of theSR 520 Interchange that is still to be resolved.
Many North-End Seattle Communities and the 46th District Democrats have passed Resolutions in support of keeping the SR 520 Interchange south of the Montlake/Ship Canal Cut. So there is only one major way that would support any change K and L That is to change the designs from their location from north of the Ship Canal significantly impacting the U of W land. At our last 520

meeting the K supporters asked about adding another lane northbound on Mountlake Blvd. NE, to handle the traffic that will be jammed at their proposed location at the Montlake Blvd. NE/NE Pacific Street, the only Montlake Exit/Entrance to SR 520. This is a indication of future pressure for widening connecting city arterials, at the I-5/SR 520 intersection if built, as congestion increases. The north end arterials will have more cut-through traffic and used as alternate routes to SR 520.

Global Warming and the reduction of CO2 was not really covered in our Panel Discussions of in the Health impact Statement. Even with the reduced size the in 2006 DEIS, the SOV capacity of a 4-lane 520 was estimated to be about 35%, without the HOV lanes. The Ravenna Bryant Community Association I represent, supported building a sustainable 4 lanes with the potential to widen 520 when needed for Light Rail Transit use in the future.. We know that if you increase capacity and "*if you build it they will come"* and highway widening impact more of the environment and increase total global warming emissions over the long term, even though they may reduce congestion, of over the short term. (The Sightline Institute, www.sightline.org projects has found in their research that each extra lane mile built will increase emissions of carbon dioxide, the main greenhouse gas by over 100,000 tons over 50 years. But if our state would adopts a comprehensive, economically wise "cap and trade" system to reduce global warming in the future, concerns about the global warming impacts of highway widening would be reduced.

With the regional voter approval the Sound Transit I-90 LRT funding this past 2008 election, the extra HOV highway capacity built into I-90, is being used by narrowing the existing mainline lanes to add 2 HOV lanes called the R8A project, to allow the center HOV lanes to be used for Sound Transit LRT to be built east from Seattle to the Eastside. This results in additional cross-lake travel capacity in the near future. Unfortunately due to the lack of integrated multimodal planning S 520 and I-90 are competing public cross-lake investments. They should have been planned together, as one integrated cross-lake corridor, as USDOT does. But WSDOT ownership and staff's role as SR520's lead resulted in Sound Transit becoming a silent partner, except for the state required 520 High Capacity Plan. The WSDOT Staff's/Consultant's cultures are focused on highway building. Improved cost effective, integrated, multimodal, Transportation planned corridor must give more emphasis to providing urban transit solutions on urban state corridors, to meet the state's goals for reduction of GHG pollution. This needs changing in order to fix the SR 520 A, K, and L options,

Planned K and L interchanges and design profiles are not shown in detail in the PIP. Panel members have not seen them The interchanges are planned to are located in the middle of McCurdy and East Montlake Parks. K has a complex, Single Point Underground/Underwater (SPUI) interchange, and "L" with a larger above ground elevated L (SPUI) interchange connecting to the new, long diagonal Montlake Cut bascule Bridge. Both conflict with major federal laws such as ESA, "4f", "6f", Land and Water Conservation Act, and wetland/shoreline, and impact Historic Buildings on the Federal Register such as the U of W Canoe House (the first Boeing Hangar) or call for the removal of the U of W Water Activities center, depending upon which tunnel route is chosen. Other Federal, state laws and city ordinances must be applied when K and L are evaluated in the SR 520 Supplemental DEIS, due the Fall of 2009. The "L" diagonal bridge if chosen, when open, is most likely to be within the view shed of the protected Olmsted created "U of W "Mount Rainier View Shed."" K and L increase SOV capacity and encourage more and longer SOV trips, due to the and length of the on and off ramps at to the north side of the Cut , and to exit on both options transit will be in mixed traffic. The 2009 SDEIS when completed will document the added trip mileage across the cut on a bridge or costly tunnel due to moving the location to the north side on U of W property.

Current information on the A, K, and L designs is very limited, but the tunnel will be at least 60' underground. No trucks will be allowed passage and buses will be in mixed traffic. A 7-8% tunnel grade, a sharp turn and sight distance issues reduces traffic speed to less than 25 mph. The 20' below the street intersection/interchange at Montlake Blvd NE/NE Pacific St emerging onto two city arterials which will require widening to deal with the additional traffic at this location. The K and L move the only 520 exit/entrance to the northeast side of the Montlake Blvd NE., into a non-functional, depressed, congested interchange with over 4000+ vehicles projected to converge at the peak hour.

NOTE: *See my Page 5 for more details with an Excel one sheet Comparison of A. K, and L.)*

Our communities and supporters would find K and L more acceptable to support if their proponents were more concerned about the many environmental impacts and lowering their K and L construction costs. We would also like them to be aware of the traffic diversions and impacts on local arterials in the North-end if K of L were built. Evaluation is needed of the impacts to communities north of the cut SR 520 interchange, but that information will not be available until the SR 520 2009 SDEIS- Westside, is completed and circulated for public comment. Another consideration is the cost of the West side projects, and reserving eastside SR 520 funds of $778 million for implementing the Eastside SR 520 plans, already completed and ready to go. The costs are from Evergreen Point to I 405.

Another" K" and "L" issue is the disguised highway with "Land Bridge "or "Berm" at Foster Island, that has estimated costs of $80 M in dollars, but could cost much more due to the impact to the last 1st Class Wetlands on Lake Washington, that cannot be replaced. The dimensions are 600' long, 100 feet wide and landscaped on top, and because it is lower it requires long term maintenance costs for pumping of highway storm-water. In order to construct, over peat with no bedrock for at least 100', there needs to a huge coffer dam built, with metal sheeting that surrounds the 100'deep dewatered dam. The "Berm" construction time can only be done during the Endangered Species Act "construction windows", from November to April, to prevent impacts on the endangered migratory salmon that use the Ship canal for passage to and from rivers, Lake Washington and Puget Sound.

Please e-mail Virginia Gunby vgunby@aol.com if you have any questions relating to my written SR 520 Comments.
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COMPARISON of SR 520 "A", "K" and "L"DESIGN OPTIONS **12/23/08-Virginia Gunby**

COSTS-- A= $4.568 to $4.802 B K=$6.574 to $6.628 B L=$5.066 B to $5.146 Billion (Maximum Project Budget $3.6-$3.9 B)

PROJECT REVENUE AVAILABLE= $1.5B -Balance from 2008 Tolling Commission's Recommendations for SR 520 and I-90

ALL-6 lanes: 4 GP, 2-HOV, New Transit/HOV Reversible Ramps to I-5 Express lanes, Bike/Ped Connecting Trails, Lids at Roanoke, 10th Ave E. and Delmar Drive, Approved 2008 Prop.1 New Fast Sound Transit 520 Bus Rapid Transit (BRT) Service

SCHEDULE -- SDEIS 2009, CONSTRUCTION- 2010, Bridge Opens 2014, Project Completed-2016

I-5 Roanoke Area	**Portage Bay**	**Montlake Intersection**	**North of "cut " UW/LRT area.**	**McCurdy Watefront Park**	**Pontoon**
A-Transit Friendly/ Least-Cost Option	**Viaduct**			**Arboretum Area**	**Bridge**
*Aggressive Transit *Lids over I-5 10th Ave.,Delmar Dr. *CorridorManagement Agreement (CMA) to Monitor SR 520's Performance. *NoiseWalls, if found effective by experts. *Peak hour BRT, ST, 5 routes/30 per hour	*Arched Bridge or Design Competition *7 lanes-see * below. *Added merge lane between Montlake Blvd. E to I-5 to use capacity from new 3 lane Montlake . bridge. *Segmented tolling moderates peaks	*520 Bus Ramp to LRT/Uof W *Bus lane to 520 east HOV lane *N/S busstops at Montlake Blvd. *Add 3-lane Bridge over Montlake Cut *Takes 2 houses on east side of Montlake Blvd E. *Channelization of East/West-bound lanes to ease 520 traffic, and use new M.Bridge capacity. *Adds Southbound Mtl.Bvd, left turn to Lk. Washington Blvd. *Connecting Bike/Ped Paths.	*Transit activated lights at Montlake ramp Exit and at the NE Pacific St./Montlake Blvd. NE for left turn to Triangle bus layover stop & new LRT station. * Bridges closed during peak hours and some Husky events. *Few Winter openings. (Note: Montlake Bridge owned by WSDOT/SR 513.)	*520 Landscaped lid by McCurdy Park on SR 520, and restores McCurdy and East Montlake Parks. *Removes ramps to/from SR 520 to reduce 520 traffic through the Arboretum on Washington Park Boulevard, protect the Olmsted legacy, the unique plants and natural environment, Japanese & others gardens, & to enjoy with less traffic, noise, fumes & impacts.	*Pontoon capacity for future LRT use.
K DESIGN *No Noise Walls. *Quiet Pavement-+ increase maint.costs. *Lids same as A	*Arched Bridge 6-lanes	*Green Lids over SR 520 lanes at Montlake. *Connecting Bike/Ped paths.	*520 Exit/Entrance, UW North. of Cut--potential for future growth on South Stadium Lot is limited, due to risky Tunnel construction. *Transit in Mixed Traffic from 520 thru 2/2 lanes in 1500' Tunnel, *150' wide, 8% Grade, sharp curve, low speed & sight issues. *Method of tunneling requires freezing land under "cut" for 5 months, before excavation *Entrance,So/UW Stad.Parking is restricted at NE Pacific St/ MontlakeBlvd.NE, Ped lid over the 20' arterial underpass, at all crossroads intersection. *Transit transfer to LRT station is not close to station.(1500')	*Major Underwater Interchange is built in McCurdy Park with a costly 1500' tunnel,150' wide 60'+under Cut, 8% grade,buses in mixed traffic,sharp curve. *Rebuilds Ramps to/from the Arboretum/Lake Washington Blvd, needs "queu" roundabout. *600' "Land/Highway Bridge" by Foster Island, landscaped. *Lower lidded "Berm" requires pumping of storm water & long-term maintenance costs *Large Coffer dam,dewatering in 600'x100' wide, 100'deep thru peat to bed-rock for columns. *Last 1st Class Wetlands on Lake WA.-- Impact Issue	Same as A.
L DESIGN (Few L supporters) Same as A and K	*Either A or K..	*Large Urban Interchange above ground, 245' wide footprint in McCurdy Waterfront Park. *Federal 4f and 6f impacts	*520 Exit/Entrance- UW So.Lot. * Long Diagonal Bascule Bridge at Montlake "cut" into lowered Interchange 20' under Montlake Blvd/NE Pacific St.,like K.	*Interchange in McCurdy Park. * On/Off Ramps from Arboretum increased traffic impacts the plant collections,park ambience, and retreat from urban noise	Same as A and K.

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King County
Department of Transportation
Metro Transit Division
General Manager's Office
201 S. Jackson Street
KSC-TR-0415
Seattle, WA 98104-3856

December 22, 2008

The Honorable Christine Gregoire
Governor of Washington
PO Box 40002
Olympia, WA 98504-0002

Joint Transportation Committee
3309 Capitol Blvd SE
PO Box 40937
Olympia, WA 98504-0937

Re: Comments on SR-520 West Interchange Design Proposals 'A', 'K', and 'L'

Dear Governor Gregoire and the Joint Transportation Committee:

King County Metro Transit appreciates the opportunity to participate in the 520 Mediation process that has yielded three potential west interchange options, 'A', 'K', and 'L'. As has been documented by the 520 High Capacity Transit Plan that is being submitted as a companion piece to the mediation process, transit demand on the SR-520 corridor will continue to grow. As such, the state is adding HOV lanes to the bridge, and has included numerous important transit supportive features in the overall project design. All three of the west interchange options include important transit supportive features; we applaud the Washington State Department of Transportation's (WSDOT) design work and the very strong interest in effective transit service among the mediation participants. Because all three options include critical transit supportive features, we are not at this time supporting one particular option. Rather, the following identifies King County Metro Transit's key interests in the design options and the project plan.

Metro's specific interests in the SR-520 project are related to:

- Improving transit speed and reliability across Lake Washington
- Achieving fast and direct transit access to and from SR-520
- Providing adequate capacity to meet increased transit demand
- Replacing the function of the Montlake Freeway Station
- Providing convenient transfers between transit services
- Ensuring necessary layover space is provided for buses
- Mitigating traffic congestion impacts on local connecting streets where buses operate
- Mitigating increased operating costs during construction

With the many competing interests involved in this process, Metro acknowledges the substantial challenges in deciding on an option to move forward. Metro appreciates the fact that all of the options include many design elements that address Metro's specific interests as listed above. In particular, the completion of the HOV system in the SR-520 corridor will provide travel time and reliability improvements for transit service by freeing buses from congestion in the general purpose lanes. The reversible ramp between SR-520 and the I-5 express lanes will also allow transit to have a faster connection to downtown Seattle in the morning and to the Eastside in the evening. Each of the design options proposed include HOV direct access or transit-only ramps, which will allow for quicker access to park and rides and transit centers in the corridor.

However, Metro must also highlight other issues that need to be addressed including: mitigating the loss of the Montlake Freeway Station, traffic impacts on local transit service, further refinement of the design options, and transportation demand management and corridor management strategies. These issues are discussed in further detail below.

Montlake Freeway Station

To reduce the footprint of the Montlake Freeway Station, which helps to contain overall project costs and address significant community interests, all of the proposed Westside replacement options for the SR-520 Bridge remove this facility. The Montlake Freeway Station is a critical component of cross-lake transit service, providing access to 355 daily bus trips for transit riders. Replacing the function this facility currently provides as a prime transfer point requires an increase in direct service to the University District that would necessitate an additional 65,000 to 85,000 service hours or $6-8 million dollars annually. Establishing an on-going source of operating funding is an issue that must be addressed in light of the loss of transit access at the Montlake Freeway Station, otherwise there will in effect be less transit service than exists today due to the need to split the existing services between downtown Seattle and the University District.

Some of the building blocks are already in place that could help fund the additional service. Voter approval of the Sound Transit 2 plan in November 2008 could provide improvements for cross-lake routes to the University and to downtown Seattle. The Lake Washington Urban Partnership, a $139 million federal grant could provide infrastructure to implement variable pricing strategies on the SR-520 to reduce traffic congestion. The program could provide congestion reduction benefits to the traveling public as early as September 2010 through the implementation of four key strategies: tolling, technology, transit, and telecommuting. A portion of Urban Partnership funding is designated for the purchase of 45 new buses, improvements to capital facilities such as shelters, and addition of real time information. Operating funding for these additional buses must be identified as described in the Urban Partnership agreement with the United States Department of Transportation. These funds along with additional Sound Transit resources described above could fund much of the service required to mitigate the loss of the Montlake Freeway Station.

The bottom line is that replacing the function of the Montlake Freeway Station is a necessary project element that would preserve currently available transit connections on SR-520 and benefit many transit riders.

Local Transit Service Impacts

Nearly 50 percent of all transit trips in the Montlake/SR-520 area are local transit trips that connect residential areas to core routes, transit hubs, or activity centers. These transit services allow riders from neighborhoods on both sides of the Montlake Cut to reach major destinations such as in the University District and Capitol Hill and transfer to cross-lake service to reach Eastside communities such as Bellevue and Redmond. Ensuring that local trips can be made in a fast and convenient manner is essential to providing attractive and competitive transit service.

The traffic operations analysis performed by WSDOT and presented at mediation meetings show an increase in transit travel times between SR-520 and the Montlake Multimodal Station for all proposed design options. This affects all transit routes using Montlake Boulevard and 24th Avenue East. Depending on the interchange option, northbound peak period afternoon transit travel times range from 17-27 minutes, compared to 8 minutes today. Such an increase in travel time is not conducive to providing competitive transit service, will result in increased operating costs for transit, and significantly impact transit riders who depend on these routes. Transit signal priority, queue jumps and transit lanes are potential measures that could be taken to address travel time issues for local transit.

The impacts on local transit travel time should be considered equally with SR-520 corridor services in the decision-making process. These impacts are equally important components as improvements to the corridor when considering the need to operate a transit system that is both accessible and able to provide riders with an attractive travel options.

Refining Options A, K and L

All of the interchange options could work better for transit service with further refinements to include elements that will improve transit operations. Several recommendations came out of the traffic analysis work performed by WSDOT that should be included in the final design for the Westside interchange options.

Option A: For this option to meet transit interests, inclusion of a westbound auxiliary lane on SR-520 between Montlake Boulevard on-ramp and I-5 is needed to eliminate backups from the westbound on-ramp onto Montlake Boulevard that limit the throughput of vehicles on Montlake Boulevard and 24th Avenue East. The traffic analysis suggests that the Lake Washington Boulevard ramps to SR-520 should remain as part of this option to prevent congestion at the Montlake interchange caused by traffic shifting to Montlake Boulevard and 24th Avenue East due to the Lake Washington Boulevard ramps closure.

Metro believes the interest of communities promoting the closure of the Lake Washington Boulevard ramps can be met by restricting the use of the ramps to carpools or placing time of day restrictions on ramp use to limit traffic flow through the area to certain times of day, such as during peak periods.

Options K and L: For these options to meet transit interests, additional roadway capacity is needed on Montlake Boulevard north of Pacific Place and Montlake Boulevard to alleviate congestion created by traffic accessing SR-520 through the tunnel or via the new bridge crossing.

There are additional key elements Metro supports that should be included in any design option that moves forward. These include transportation demand management and corridor management strategies described below.

Transportation Demand Management Strategies

Metro has been and will continue to be a leader in actions that provide incentives to individuals to use transit and other non-SOV travel. As a transit provider and operator of the largest public vanpool commuter program in the country, Metro recognizes that offering a variety of viable modes of transportation is an integral component of moving people through the SR-520 corridor. Metro is highly supportive of including transportation demand management strategies as a central part of the SR-520 project.

Demand management strategies should build on existing programs targeting key destinations near SR-520 including the University District, northeast Seattle, and communities south of the SR-520 Bridge. Existing demand management strategies include employer incentive programs, community based marketing through the InMotion program, carpool, and vanpool programs as well as carsharing programs such as Zipcar. Additional strategies for the SR-520 corridor could include designating new Growth and Transportation Efficiency Centers to bring new funding to communities, establishing shared parking programs with residential parking facilities, parking management technologies including real-time parking information, additional incentive programs, and more extensive carsharing and use of variable tolls to manage traffic. Using a variety of programs can help educate the public and promote transit services and travel alternatives to encourage more people to travel by other modes of transportation than single occupancy vehicles.

Metro is committed to working with the state and others to support and incorporate transportation demand management strategies into SR-520 corridor planning.

Corridor Management Strategies

Monitoring and managing the SR-520 corridor is important to ensure efficient operation of the facility. Metro is committed to working with state and local agencies as well as neighborhoods to develop corridor management strategies that would include transit service and transportation demand management concepts for the construction mitigation period and beyond. The inclusion of management concepts and programs for the corridor is a key component to improving travel for all King County residents across Lake Washington. These management strategies can include demand management, additional transit service, identification of alternative routes, real-time travel information, and tolling which will help reduce construction related impacts and reduce vehicle miles traveled and greenhouse gas emissions.

The SR-520 Bridge and HOV Replacement project provides a unique opportunity to improve transit speed and reliability through the capital investments included in the project, while ensuring that transit service and demand management strategies are incorporated to manage activity in the corridor. Metro will continue to work with Sound Transit, the state, local jurisdictions, and the public to ensure that transit elements are incorporated in SR-520 corridor planning and to make certain that attractive travel options are provided for those traveling both within the SR-520 corridor and to and from neighborhoods adjacent to the corridor.

Thank you for the opportunity to share our interests in the SR-520 project.

Sincerely,

Kevin Desmond
General Manager
Metro Transit Division

cc: The Honorable Ron Sims, King County Executive
Harold S. Taniguchi, Director, Department of Transportation

December 23, 2008

To: Governor Chris Gregoire and the Joint Legislative Committee
From: Mediation Participants for Option K

Based on all we have learned and worked for as participants in the Mediation process, our communities are united in presenting the following report supporting Option K.

We believe Option K performs decisively above all other options, both in solving current regional transportation problems and in minimizing the creation of new problems for those who live, who work, or who travel or transport goods to public facilities, parks and businesses near SR 520. That is why we have formed the Coalition for Option K. We urge you to review the facts in the following report, and we welcome your support.

Boating Community
by ……

Laurelhurst Community Council
by ……

Madison Park Community Council
by …Maurice B. Cooper, P.E.

Montlake Community Council
by …Jonathan M. Dubman…

N. Capitol Hill Neighborhood Assoc.
by …Nancy Brainard……

Roanoke Park/Portage Bay Community Council
by….Theodore Rave…….

Report from the Coalition for Option K

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I. Why We Unite for K

The Coalition for Option K (the Parkway Plan)

Option K has earned the support of the neighborhoods contiguous to, and communities most affected by SR 520: the Arboretum and Botanical Garden Committee, Laurelhurst, Portage Bay / Roanoke Park, Madison Park, Montlake, North Capitol Hill, the Bicycle Community and the Boating Community.

It has done so in a manner that has resulted in a durable coalition, one able to withstand the rigors of an extended decision-making time period, as well as the inevitable pressure of individual neighborhoods desiring greater attention to their needs. It has done so because a dozen or so citizens have kept a promise made to each other and themselves: that they would stick with it through the highs and lows until a plan for SR 520 is adopted that represents the greatest possible good.

How and Why a Coalition Came To Be
It is historic that the most-affected stakeholders lining the corridor in Seattle are united behind a plan, especially one that contemplates an expansion from 4 to 6 lanes and a near doubling of its footprint.

In Seattle, approaches to regional or state-wide issues often represent exercises in which individual neighborhoods and affected communities view themselves as the center of the universe. Concessions are made and compromises reached only when each narrow interest is convinced that "What's in it for me?" is answered to their satisfaction.

The Option K coalition has turned this self-centered perspective on its head. From the first time the group convened two years ago until the present, the overriding interests against which K-supporters have weighed all decisions have been those of the region and the State. This commitment to interests broader than their narrow self-interest developed for the following reasons:

- Recognition that for a project as challenging as SR 520, the only way a sustainable plan would emerge was to put the greater good front and center in every decision

- Each member entered the Option K coalition with the trust and authority of its constituents, and made clear to its base that tradeoffs would have to be made throughout the process. Each has continued to maintain a strong relationship with its base

- Strong executive leadership within the group

    - A commitment to spend the significant time necessary to fully understand the issues, develop the relationships with those within state and local government associated with the project, and to provide regular feedback to its constituents.

Success in the Big Picture
The result, according to WSDOT's traffic analyses, is that relative to the other plans in the DEIS, Option K maximizes mobility and capacity, while minimizing congestion and delay. Whether you are a farmer in Eastern Washington delivering your goods to Port, a parent driving your children to school or soccer practice, or an ambulance driver taking a patient to a hospital, Option K will best serve your needs.

Option K supporters recognize that the region needs a transportation corridor that allows the free flow of people and goods. On the other hand, some NIMBYs have taken the position that a plan that makes SR 520 unattractive to drivers is somehow in their best interest. It is telling that at the December 16th mediation session one of Option A's architects and loudest supporters said "Option A creates congestion meaning fewer vehicles will use it" as a selling point. The Option K coalition takes a broader view of what Washington State and Puget Sound need in the 21st Century in order to have a thriving and competitive economy, position our region to absorb population growth, and lead the way on environmental progress in part by making public transit more attractive.

Each Option K coalition member represents a neighborhood or community profoundly impacted by SR 520. These impacts are primary in nature; noise, views, air quality. Option K communities also experience all the secondary impacts of non-contiguous communities such as those representing Option A, but at greater intensity and with greater frequency. Unless SR 520 gets the big things right, which Option K does, no amount of promised mitigation would be seen as sufficient, even were the promise of it kept.

Public policy decisions that represent the alignment of broad and narrow interests are the essence of 'good government.' The political courage to implement such decisions is often tested, especially when budget matters make cheaper options appear to provide an easy way out. But the big picture, from which Option K evolved and on which it has stayed focused, demands such courage.

Our Objectives

A**) Improve traffic flow, both on SR 520 and on the local roads that get people to their destinations. Separate local from freeway traffic, avoid drawbridges' stopping traffic.** The current Montlake and Arboretum interchanges are replaced by a single interchange located in East Montlake, with all freeway traffic to and from the north side to the Montlake Cut accessing the freeway via a new set of ramps located in a tunnel under the cut surfacing near the Husky Transit Station, thus separating local and freeway traffic and avoiding sending traffic to and from the north over a drawbridge, improving traffic flow and transit connectivity and balancing the impacts of the interchange between those located north and south of the Cut.

B) **Enable transit speed and connectivity.** Option K has direct access from SR 520 to the transit station at Husky stadium and the buses there, so buses to and from the East side can deliver passengers directly without waiting for drawbridges

C) **Improve the safety and the experience for pedestrians and bicyclers, to encourage these modes of transportation.** Option K has grade-separated pedestrian/bicycles crossing near the Husky stadium, as well as a network of paths.

D) **Re-connect neighborhoods**, using lids and park spaces over the main SR 520 highway in keeping with the original Olmsted vision for the area.

E) Maintain long established neighborhoods. The highway is designed with a low profile and quiet pavement to reduce view-blockage and noise impacts in nearby neighborhoods. The Portage Bay Viaduct is only six lanes to reduce its visual impact and its impact on the boating community and is designed to fit with the historic Olmsted structures nearby.

f) Reduce the impacts on the heavily-used and world-renowned Arboretum. Option K removes the ramps on Lake Washington Boulevard. There is a lid over the main highway at Foster Island to decrease noise and visual impact there, and to reconnect the waterfront to the rest of the Arboretum, thereby repairing some the of damage done by the original SR 520 roadway.

II. How K Is Best (Specifics from East to West)

From the Navigation Channel (western high rise) to the Arboretum

Option K keeps height of the new SR 520 from Foster Island to the Western High Rise low, similar to what exists today. As it comes from the high rise towards Seattle, SR 520 is 100 feet north of its current position. This low profile helps reduce noise and visual obstruction. It enables boating.

Option A has a somewhat higher profile in this area. Option L's bridge is much higher in this area, and would produce much noise and blockage of views.

Stormwater Considerations
Modern freeway design calls for capturing and treating all runoff from rainfall on the roadway surface in order to prevent the oils, asbestos and other pollutants from vehicles passing directly into the natural surface waters and thus impacting aquatic life. It is critical in the area surrounding the 520 bridge to fully capture and treat the runoff because the bridge structure transects one of the major salmon migratory routes in the northwest.

Stormwater treatment is usually accomplished by a transfer of the large volumes of runoff to a holding pond constructed on the nearest land mass. There are two ways to accomplish this transfer. Both Options A and K propose essentially a flat causeway section to the freeway north of Madison Park, collecting the rainfall runoff water via traditional type drains in the roadway surface, and then piping the runoff back to the land. It is likely that a pump station would be required in both these scenarios, because the distance from the western high-rise bridge to the nearest land suitable for construction of a treatment pond is more than 1,000 feet; hence, and because of the required slope on the pipe(s), the water, when it arrived at the pond, would be below a suitable elevation for pond construction.

A crude, but cheaper solution is proposed for Option L, whereby the freeway slopes continuously westward down from the western high-rise structure, and the rainfall runoff is allowed to flow over or immediately under the roadway surface for this whole length, thus obviating the need for a pump station. This proposal, however, causes a major view blockage for the Madison Park community, in addition to distributing the freeway noise over a much larger area of both Madison Park and Laurelhurst.

Through the Arboretum

The current SR 520 interchange funnels cars onto a historic park drive, Lake Washington Boulevard, and turns the Arboretum into a scenic commuter shortcut onto and off of SR 520. Current traffic studies indicate that the 2-lane Boulevard averages about 17,000 cars per day, while the nearby 4-lane arterial 23/24th Avenue East averages slightly more at 20,000 cars per day. The daily congestion created by the excessive number of cars on the park road causes thousands of cars to crawl through the Arboretum in stop-and-go traffic, spewing exhaust into the plant collections and thus damaging irreplaceable specimens.

Option K moves the new on-off ramps to the most North-Westerly edge of the Arboretum and provides a depressed single-point urban interchange at the eastern edge of Montlake. This lower profile through the Arboretum will limit the noise, air and visual pollution. Option K also preserves historic views, provides a safer bicycle/pedestrian access through the Arboretum and promotes the use of quiet pavement instead of noise walls.

A key feature of Option K through the Arboretum is the lid over the main highway at Foster Island to decrease noise and visual impact there and reconnect the waterfront to the rest of the Arboretum, thereby repairing some the of damage done by the original SR 520 roadway.

Option K elongates and enhances Lake Washington Boulevard in the Northwestern area of the Arboretum, separating Lake Washington Boulevard from the SR 520's access roadway which will allow for the final completion of the original Olmsted Brothers Master Plan for Seattle Parks dating back to 1903.

Problems with Options A and L

Option A features a second bascule bridge which will adversely impact traffic flow in the Arboretum, and contains a sub-option with Lake Washington Boulevard ramps.

Traffic studies performed by the WSDOT indicate that Option A cannot successfully move traffic. Specifically, rush hour traffic through the Arboretum will be stopped and idling with Option A, thus increasing noise and exhaust pollution in the Arboretum and on Lake Washington Boulevard.

Option A does not protect or improve the interests of the Arboretum nor does it reverse the damage inflicted on the Arboretum by the original SR 520 bridge, in part, because it does not contain a lid over the highway on Foster Island. Even though proponents of Option A want no Lake Washington Boulevard ramps, traffic modeling shows that Lake Washington Boulevard ramps would be necessary for effective local traffic flow. Further, ***even with the Arboretum ramps added*** traffic studies show back-ups into neighborhoods and along Lake Washington Boulevard would be at unacceptable levels.

Option A does not protect or improve the interests of the Arboretum nor does it reverse the damage inflicted on the Arboretum by the original SR 520 bridge, in part because it

does not contain a lid over the highway on Foster Island. Even though proponents of Option A want no Lake Washington Boulevard ramps, traffic modeling shows that Lake Washington Boulevard ramps would be necessary for effective local traffic flow. Further, ***even with the Arboretum ramps added*** traffic studies show back-ups into neighborhoods and along Lake Washington Boulevard would be at unacceptable levels.

Option L features a single-point urban interchange *over* the SR 520, the longest bascule bridge ever built *and* ramp connections directly to Lake Washington Boulevard and Pacific Street. Option L has a much higher profile through the Arboretum, will increase visual and noise impacts in the Arboretum, increase traffic on Lake Washington Boulevard, will have a larger footprint than Options K and A in the east Montlake section, and has produced broad opposition from nearby neighborhoods.

Option L does not protect or improve the Arboretum and its view sheds nor does it minimize the harm to the Arboretum or reverse the damage inflicted on the Arboretum by the original SR 520 Bridge, in part, because it does not contain a lid over the highway on Foster Island..

Any option that makes Lake Washington Boulevard the sole or primary southern access point to SR 520 is unacceptable and this is exactly what Option L does. Option L provides an on-off ramp directly from the SR 520 Bridge to Lake Washington Boulevard which will vastly increase the number of cars on Arboretum's park road – Lake Washington Boulevard. In addition, this off ramp has a 5.5% grade further increasing braking and accelerating noise in the Arboretum.

Option L increases visual and noise impact in the Arboretum by offering the largest bascule bridge ever constructed (300 ft) and when open would look like a 20 story building. The current Montlake Bridge opens up to 90 times/day in the summer for 6 minutes per opening. Thus, this would have a significant negative impact on the nearby view sheds.. As stated for Option A, a second bascule bridge does not ameliorate the traffic issues associated with bridge openings.

The Montlake Interchange and Regional Mobility to and from the North

Roughly 70% of the vehicular traffic and 100% of the buses that get on or off SR 520 in the Montlake vicinity are traveling to or from the north. Today, access to SR 520 from the north is severely impaired and subject to significant and unpredictable delays. The travel delays in this area are caused partly by drawbridge openings and partly by capacity constraints across the Ship Canal. Option K uniquely addresses both of those limitations and best leverages the region's most significant transit investments. Option K provides reliable access to SR 520 and from the north for freight, carpools, vanpools and other vehicles, uninterrupted by unpredictable drawbridge openings.

The official stated purpose and need of the SR 520 project has long been "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." If one defines the "SR 520 corridor" to be the highway itself, without including the ability to access it, then the mobility requirement is fairly easy to satisfy; in the strictest definition, no interchange access whatsoever in Montlake would be required. But roughly one third of the trips on the Seattle segment of SR 520 use the Montlake interchange; the primary destinations of the University of Washington, University Village, Children's Hospital, as well as a significant portion of the City of Seattle, all lie to the north of SR 520, across the Ship Canal; access from those areas to SR 520 is severely constrained today. It would remain compromised with Options A and L, but it is optimized with Option K.

Option K Leverages the Region's Major Investments

Essentially all of the transit routes using the Montlake interchange have an origin or destination north of the Ship Canal. The need for reliable transit service between NE Seattle and the Eastside is increasing due to residential, employment and institutional growth. Three Bus Rapid Transit (BRT) lines connecting the Eastside to the University District are proposed in the SR 520 High Capacity Transit plan. Sound Transit will open the highest-ridership light rail station outside of downtown Seattle at the University of Washington in 2016. Connecting and coordinating these major transit investments is a well-established priority for City of Seattle (via Resolution 30974) and the State of Washington, affirmed through ESSB 6099 in 2007, which authorized both the mediation process and the SR 520 High Capacity Transit Plan, and reaffirmed by ESHB 3096 in 2008.

The University Link light rail line will be extended to Northgate and Lynnwood as part of the $18 billion Sound Transit 2 package passed approved by the voters in November, 2008, further increasing the benefits of an effective transit connection. Passengers on that rail line coming from the north and headed to Bellevue, Kirkland and Redmond would have a dramatically shorter trip by transferring to an SR 520 bound bus at UW than they would by remaining on the rail line, but the reliability of the SR 520 connection is contingent on the selection of Option K. A trip from Northgate to Overlake/Microsoft in Redmond would take 48 minutes via light rail, via downtown Seattle and Mercer Island. With Option K, the same trip could be made by taking light rail for 7 minutes to UW and boarding a bus that reliably arrives at Microsoft 14 minutes later, for a total trip time of 21 minutes plus a short walk and short wait. The BRT lines and the rail lines would be traveling very frequently and reliably (with Option K) and wait times would not be significant. With Option K, the short walk is made safe and comfortable with a pedestrian plaza capping the intersection of Montlake and Pacific. Importantly, there are no trips for which an additional transfer is *required* with Option K; only *opportunities* are created. Those transit riders who prefer the slower one-seat ride would have that option under any plan.

Travel time reliability is commonly acknowledged to be one of the primary factors in drawing new riders to transit. Option K uniquely provides that reliability throughout the day, 7 days a week. Thus the very configuration of Option K can be seen as effective form of TDM (Transportation Demand Management). The capacity of the overall transit system is optimized with Option K. Everyone who gets off the rail line to board an Eastside bound bus at the UW multimodal hub will free up an empty seat on the rail line for others to board from the Eastside who are headed to the south.

Montlake Blvd. across the Montlake Bridge is a state corridor, SR 513. Chronic congestion on this corridor from limits King County Metro's ability to run reliable bus service connecting both the Eastside the UW rail station to major employment and commercial centers in NE Seattle; despite the high demand, transit service on this corridor has been reduced over the years due to the impossibility of providing a reliable trip. Option K addresses this longstanding problem.

Besides the Montlake area, the other principal access to SR 520 from the north of Seattle is via I-5. The Ship Canal crossing of I-5 is notoriously congested and will remain so for the foreseeable future. Other major projects in the area are likely to increase, not decrease, the demand on the Ship Canal Bridge. Option K provides a much-needed relief valve for traffic from NE Seattle that avoids I-5, and enables the future growth of the neighborhoods and regional employment and commercial centers in a manner that is consistent with regional growth management policies.

State, Regional and Local Issues North of the Montlake Cut

Northeast Seattle is undergoing a surge in population and business growth, which will result in the creation of new permanent jobs and residences within two miles of the SR 520 Bridge. From the north, SR 520 is the most direct regional route to points east of Lake Washington, to connections to north and south on I-5 via westbound SR 520, and to destinations south of the Ship Canal Bridge across the Montlake Interchange.

In addition to transportation issues, citizens in Northeast Seattle are also concerned about increased noise and view shed obstructions resulting from the design of the new SR 520.

Geography and Access

The geography of these densely populated neighborhoods limits residents' choices for egress. Residential communities directly affected are Laurelhurst, Windermere, Hawthorne Hills, Ravenna, Bryant, and View Ridge. For example, the Laurelhurst neighborhood with 8,000 residences is a landlocked peninsula with its only exit via the NE 45th Street/Sandpoint Way road. To travel the 5 miles to downtown Seattle for work, recreation or other local trips, residents have only two options.

> -The first is to travel south on SR 513 (Montlake Blvd) to connect with SR 520 west to I-5, and the other is east/west on NE 45th Street, a city arterial which snakes through the University District and includes 12 stoplights to reach I-5 with only one lane eastbound.

--The other choice is to "backtrack" and cut through Seattle arterials of NE 65th Street or NE 75th Street to access I-5.

Clearly, the most efficient transportation route is travel southbound Montlake Blvd (SR51) to connect west or east on SR 520, and then to I-5, north or south.

Traffic Origins and Volumes

The volume of vehicles north of the Seattle Ship Canal, SR 520 Montlake Interchange, includes the following businesses and institutions:

A. The main campus of the University of Washington -population of approximately 35,000 students, 14,800 employees and 7,900 or more daily visitors, more than 65,000 people daily. Major sporting events can add 5,000 to 40,000 vehicles.

B. University Village Regional Shopping Center site with 981,000 square feet, with plans to add 105,000 in retail space (a 25% increase) by 2011, over 1.2 million annual trips.

C. On that adjacent site, the Kroger Company had filed plans to build 338 units of apartments on the current QFC parking lot and expand both retail and parking.

D. Seattle Children's Regional Hospital is located only 2 miles northeast of SR 520 and has filed a master plan to triple in size, resulting in over 42,000 trip generations daily. (According to 2008 Standard Institute of Traffic Engineers, Gibson Traffic Consultants)

E. Warren G Magnuson Park, three miles northeast of SR 520 has expanded its facilities to include an all day/night soccer field, new tennis center, 7500 indoor sports arena and concessions. The users will primarily use SR 513 as the main access to freeways.
This results in over 105,000 new and existing cumulative volumes of vehicles and transit serving both the existing and future growth in NE Seattle. The new SR 520 Bridge design must provide reasonably accessible and minimize the travel times from the north. Regionally, 33% of vehicles using the Montlake Interchange originate in heavily populated Seattle and must be accommodated in a viable transportation plan.

Avoiding congestion and reducing travel times will be the key to promoting regional economic growth, job generation, and the quality of life of existing citizens.

Option Solutions

1. Option K provides the fastest travel time of any option. This efficiency will reduce "cut through" traffic throughout the City of Seattle's residential streets.
Projected travel times southbound from Montlake Blvd. (SR 513) to the Portage Bay Bridge (SR 520 Interchange) **ONE MILE** in distance are:

Option K 15 minutes
Option A 47 minutes
Option L 23 minutes

47 minutes for this segment equates to a speed of 2.3 mph, on an arterial signed for 35mph…. slower than walking speed.
Mapquest on 12/ 2008 predicts the trip should be only 3 minutes!

Going reverse from eastbound SR 520 to north Montlake and 25th Ave NE:

Option K 5 minutes
Option A 20 minutes
Option L 6 minutes

Transit times were similar except southbound from Pacific Place to Montlake Blvd:

Option K 4 minutes
Option A 9 minutes
Option L 4 minutes

The only acceptable transportation plan is Option K by reducing travel time by 300% more than Option A and 50% quicker than Option L, southbound on SR 513 (Montlake Blvd) to access SR 520

2. Off peak travel times must be considered for the SR 520 users from the north. Vehicles using SR 520 frequently are "off peak" such as the shoppers at the University Village, students, patients, visitors and employees at the University of Washington , fans for Husky games and families, and visitors and employees round the clock at Seattle Children's Hospital. The Warren G Magnuson Park recreational facilities will also generate as many as 1200 vehicle trips on weekends. All of these users must be calculated in designing access from the north to SR 520.

How do the options perform during "off peak" times?

Option K-no drawbridge stoppages occurring to access SR 520, allowing a continuous flow of vehicles along both directions of SR 513 and predictable travel times.

Option A- adds second, but parallel drawbridge to access SR 520 -will create congestion and long travel times with frequent, unpredictable bridge openings.

Option L- adds a drawbridge to access SR 520 from Montlake Blvd from the north and TWO drawbridges to access SR 520 from south of the Ship Canal. This design will create maximum off peak congestion and back up onto SR 520 during frequent bridge openings.

Thus, off peak travel times (unfortunately, this analysis is not required in this study) are much more reliable, especially during summer months with Option K due to an underpass tunnel under the drawbridge at the Montlake Interchange. Currently, SR 523 can be backed up for over 45 minutes for the 6 minute for each cycle of drawbridge openings. This can be as frequent as 90 times daily on a summer weekend!

Building Option K *eliminates* this wait time and carbon footprint in vehicle emissions!

3**.** Transit operations from the north will be simplified with Option K. More direct access to the Sound Transit Station at the University of Washington will reward and encourage riders to use it. Metro buses can then offer more flexibility by having them directly connect to the Sound Transit Station in Option K. Elimination of drawbridge openings will also improve transit schedule reliability in Option K. Option L is by far the worst option since the drawbridge openings will be longer, unpredictable and create congestion back ups onto SR 520 westbound.

4. Noise reduction for neighborhood residents of Northeast Seattle is also a top priority. Option K addresses this issue directly by requiring quiet pavement as part of the noise reduction mitigation. (See noise section for details.) With all of the building expansions and congestion, a quieter environment will reduce stress and add to better quality of life. Options A and L are not specific and would allow noise walls along view sheds which is opposed due to obstruction of view sheds.

5**.** View sheds are another key concern for residents in Seattle's neighborhoods.
Option K improves and preserves the view corridors/sheds in several ways:
The tunnel design and SPUI below grade interchange eliminates an additional above grade drawbridge which is designed as part of Options A and L. Roadways are more elevated and can be seen in Options A and L.

- Option K specifies a low profile roadway east from Foster Island to the western high rise, which minimizes the blocked view sheds from residents in Laurelhurst, Madison Park and East Montlake.

- Option A has no berm over the Arboretum and has a higher profile overall (all at grade level or HIGHER) which interferes with views and does not reduce bridge noise. Option A design has University of Washington students and staff crossing Montlake Blvd (SR 513) at grade level, experiencing more visual/noise congestion from vehicles. Option A has the widest profile through the Montlake neighborhood, wiping out the NOAA building, some Montlake residences and extends the plan 2,000 feet through 24th Ave. businesses and residences on Seattle street to make it function to move vehicles.

- Option L will have a bascule span opening of approximately 165 feet projecting straight up during bridge openings over Union Bay-creating a huge visual blight to residences, in additional to the horn sounding at every opening. It also has a raised roadway from east of Foster Island to the western high rise resulting in reduced view sheds across the Arboretum, the University of Washington, and the Laurelhurst, East Montlake and Madison Park neighborhoods.
Option L does not include a berm over the Arboretum section, exposing traffic to park users and noise and the view of vehicles, not green to adjacent neighborhoods.

Option K is the clear choice to minimize the visual impacts from the re-design of SR 520.

Access to Neighborhoods and Businesses to the South

Although the majority (approximately 70%) of the SR 520 related travel demand in the Montlake area is to and from the north, reliable access to SR 520 from the south is also a critical component of a successful SR 520 project. Option K provides this by providing a reliable bypass for the bulk of the traffic accessing SR 520 from the north, yielding dramatic reductions in congestion in the Montlake interchange area.

The arterial variously known as 24th Ave. E and Montlake Blvd. E is the most important southern approach to SR 520. It is the only four-lane arterial in this area of Seattle. The approach to SR 520 from the south frequently suffers from congestion-related delays when traffic backs up behind the drawbridge; the capacity of this arterial has remained unchanged since 1925. This major arterial carries a number of transit routes that are among the most heavily used in the King County Metro system. It is a primarily residential arterial, lined with single family homes, that includes a small business district in Montlake.

Today, this major arterial is subject to unpredictable delays due to a combination of factors including SR 520 congestion and drawbridge openings. Under Option A, there is additional congestion in the area, and the arterial is proposed to be widened for almost half a mile to the south, in front of dozens of homes, contrary to long-established City of Seattle policy. This would also impact parking in a business district that is already parking-constrained, thus impacting the very survival of that district, the location of a new Seattle Public Library branch.

The other access south from SR 520 is via Lake Washington Blvd. This connection has long been seen as problematic because Lake Washington Blvd. is a two-lane, historic park boulevard that allows no freight and was never intended for highway access; it passes through the Washington Park Arboretum. Today, this approach is used as a shortcut to bypass congestion on SR 520, either by traveling the length of the Arboretum, or by accessing it in the middle of the Arboretum using tiny neighborhood streets. It is in appropriate as a shortcut from neighborhoods to the west, but it is the direct route for Madison Park and nearby neighborhoods to access SR 520. Unfortunately, the secondary effects of constraining all access to SR 520 from Lake Washington Blvd., as with Option A, are differently and highly problematic. Option L, meanwhile, concentrates all SR 520 access south of the Ship Canal at one spot in the Arboretum.

The traffic volumes through the Arboretum are considered too high under all options, and effort will be required to reduce and mitigate this, including coordination between WSDOT and the City of Seattle.

Option K enables balance in this system, provides more reliable transit access for key routes, and improves regional access to SR 520 from the south by significantly reducing congestion in the Montlake interchange area. Furthermore, Montlake Blvd. is sufficiently close to I-5 that if a westbound on-ramp is constructed from Montlake Blvd. to SR 520,

an additional "auxiliary" lane is required by Option A on SR 520 across Portage Bay in order to handle the traffic weaving motions safely. This auxiliary lane is not required by Option K, thus reducing environmental impacts for the SR 520 crossing of Portage Bay.

From Montlake to I-5

Option K meets the state's mandate for mobility between Montlake and I-5 by providing six lanes (one HOV and two general purpose lanes in each direction), increasing the current 60-foot width of the roadway to 100 feet.

Option A, which adds a seventh "auxiliary" lane between Montlake and I-5, would require WSDOT to negotiate with already closely adjacent property holders for an extra 10 feet of right of way. Those impacted would include the Queen City Yacht Club and nearby condo moorages. The additional width would also encroach upon wetlands, casting a greater shadow and providing more room for fish predators to lurk. The additional width is also highly objectionable to nearby neighbors.

Providing Direct Access from the North

Option K allows vehicles coming from the north of the ship channel to access SR 520 westbound directly from the ship-channel tunnel without entering local traffic.

Option A, by forcing vehicles coming from the north to cross the Montlake Bridge to access SR 520 westbound, would create unacceptable congestion on local streets, which will only worsen over time. The *Option A* on-ramp at Montlake to westbound SR 520 would also impact the Seattle Yacht Club and Fisheries properties.

Preserving Waterfront Aesthetics

Option K complements surrounding homes and views with a faux arch design for the Portage Bay viaduct. Additionally, *Option K*, by routing traffic to and from SR 520 through a ship-channel tunnel, retains unobstructed views of the channel and Union Bay from surrounding neighborhoods between Montlake and I-5.

Option A and L each add a new drawbridge over the cut. In the case of option L, the added drawbridge would be 175 feet high when opened. Typical openings, which may occur as many as 90 times a day, would degrade views from miles around.

Reducing Noise

Option K rubberized asphalt pavement and appropriate noise-control coatings under lids and overpasses are the most effective means of reducing noise between Montlake and I-5, where most homes and businesses are set on hills above the roadway. (In any option, noise walls would be pointless as well as unsightly.)

Reconnecting Neighborhoods

Option K lids at 10th/Delmar and at I-5 add park space and reconnect the neighborhoods of North Capitol Hill, Roanoke Park and Eastlake, divided by the current SR 520. These passive-use lids increase pedestrian and bicycle connectivity as well as green space.

III. Other K Benefits and Questions

Noise Control

Noise is the single biggest adverse impact identified by communities along the SR 520 corridor, and only Option K directly addresses all the associated noise issues.

Many homes surrounding the highway corridor are on hillsides and sit above the roadway. This is particularly true in the Portage Bay and Union Bay segments. The only known method of abating the noise that will impact these hillside homes is rubberized asphalt quite pavement, and Option K is the only option that will use quiet pavement technology.

Options A and L both use "quieter pavement" (which is the term used to denote tined – or ridged – concrete) and/or noise walls. Although tined concrete has been experimented with in several states and is widely promoted by the concrete industry, it has never been operationally implemented, and the experiments that have been conducted showed only modest noise abatement. Noise walls, in addition to being very expensive to construct and adding significant weight to elevated structures such as the Portage Bay Viaduct, offer no noise relief to homes located above the roadway. Additionally, noise walls cause visual blight by blocking the views from homes along the corridor.

We cannot emphasize the importance of noise abatement enough. Noise invades the tranquility of our neighborhoods and reduces the value of the noise-impacted real estate. The SR 520 Health Assessment identified noise as one of the major health impacts related to construction of SR 520.

Option K is the only option that provides a straight forward, economically effective, and efficient engineering solution to alleviating – if not eliminating – the life style, financial, and health impacts that will be produced by noise from an expanded SR 520 roadway.

Impacts on Boaters, Bicycles and Pedestrians

Private and commercial vessels are an historic feature of the Puget Sound area culture and economy. Recreational boating inspires important cultural and economic events and activities. Portage Bay, at the nexus of the ship canal and Lake Washington, is a critical maritime staging area for the boating community and a part of our heritage.

Improvements for Boating
Option K meets the interests of the Seattle Boating community in the following ways:

- Preservation of existing moorage, floating homes and commercial activities. This is accomplished by keeping the Portage Bay Viaduct within the State's current right of way and eliminates the need to purchase additional property.

- Improves access to Portage Bay homes and businesses by reducing surface street traffic and provides free access to the Hamlin/Shelby/Montlake neighborhoods.

- Continues safe and convenient boating access to Portage Bay and through Montlake Cut by the addition of a tunnel under the cut.

- Preserves Portage Bay as a staging area for the annual Opening Day celebration, a key part of our boating heritage.

- Extends the distance between the viaduct support columns to accommodate recreational navigation.
- Improves canoe and kayak access to the Arboretum

- Conserves the marine environment in Portage Bay and Lake Washington by maintaining a narrow foot print. Reduces fish habitat shading encroachment of wet lands to the south Portage Bay.

- Storm water containment preserves water quality.

Improvements for Bicyclists and Pedestrians

All Options for SR 520 include a regional bicycle/pedestrian trail across Lake Washington. Option K best leverages this investment. Option K:

- Provides a safe, above-ground connection through a greenbelt to parks and neighborhoods to the west, including the Montlake Playfield and Community Center, North Capitol Hill, Roanoke Park, and to Eastlake over I-5 and eliminates the requirement for pedestrians and bicycles to go through tunnels to these same destinations.
- Provides a safe approach from south of the Ship Canal to the Burke-Gilman regional trail, the University of Washington, SR 520 bus rapid transit and the Sound Transit Link light rail. Option K does this by providing bicycle lanes separated from pedestrians, on an arterial with much lower traffic volumes, while minimizing hazardous street crossings.
- Includes a lid at the Montlake Blvd/Pacific Street intersection at the southern entrance to the University of Washington that provides safe bicycle and pedestrian movements separated from vehicles at a high volume, critical location.
- Improves pedestrian and bicycle safety at the southern gateway to the University of Washington campus by lowering Pacific Place and extending Rainier Vista view and pedestrian corridor over what is today a busy arterial crossing with poor sight lines.
- Provides new pedestrian linkages between the Washington Park Arboretum and surrounding parks and lid locations.

- Provides a new northern entrance to the Arboretum on the historic Lake Washington Blvd. for bicyclists and pedestrians, separated from traffic, and integrated with the Arboretum trail system.

The net result is an integrated trail system that provides safety and convenience for walking and bicycling, contributing meaningfully to mobility in the SR 520 corridor in a way that enhances the University of Washington campus and the Washington Park Arboretum.

Construction Impacts

The proponents of Option K are most concerned with construction impacts, as we live in the neighborhoods that surround the SR 520 roadway. (The proponents of Options A and L live either in Seattle's north end or to the east of Lake Washington.)

Because WSDOT has identified construction impacts in only the most general terms, we don't really know enough yet to make detailed comments. We have, however, identified the following construction issues that need to be addressed and impacts that need to be mitigated:

Vibration

Will videos be taken of homes prior to construction related to chronicling the occurrence of window failure and vibration cracks especially in and near earthquake liquefaction zones?

Will there be a safety inspection of on shore buildings such as the Bayshore and Canterbury Shores Condominiums to insure the portion of the buildings and docks supported by pier structures will withstand construction vibration?

What is WSDOT doing to insure vibration will not cause slides on nearby critically steep slide prone slopes and if they occur what will be WSDOT's responsibility to correct any problems to property and damaged homes?

Noise

What will be the contractor hours of operation?

Will there be weekend construction operations?

What technology or construction restrictions can be mandated with the contractors to lessen noise during construction?

The draft EIS graphically shows that pile driving needed to install supports for temporary and new bridge piers will create a decibel level of over 100 DBA for a distance of about 300 feet. Residences such as the Bayshore and Canterbury Shores Condominiums are well within 300 feet. What methods of mitigating these extreme noise construction impacts will be used?

Will there be weekend and night construction occurring?

Boating

Properties such as the Bayshore and Canterbury Shores condominiums, as well as numerous private residences, have moorage slips that accommodate recreational, non-live-aboard, boats up to 40 ft. in length. Will SR 520's construction hamper or prohibit access to these moorage slips? With many slips rented, mitigating financial impacts is one of several concerns we have about SR 520 construction impacts.

Will mitigation be provided by installation of marked boat passage routes during construction?

Traffic

Will there be a traffic study done to determine how traffic will flow through the impacted neighborhood once construction begins?

How will trucks move from the construction site away from the neighborhood?

What streets will be closed for what period of time during construction, and how will residents access their homes and properties?

Are measures available to prevent cross traffic from using residential streets?

How will neighbor's cars be protected on narrow streets with large equipment moving continually past our homes and cars? Trucks traveling through our neighborhood will have negative impact due to noise, vibration, dust, dirty/muddy streets, added congestion and damage to cars parked along the truck corridors.

How will the construction impact the Metro bus routes that currently service our neighborhoods? We are concerned that Metro service may be eliminated or reduced.

Cost Questions

WSDOT's costs estimates show that Option A is the least costly, Option K the most costly and Option L falls in between. However, we view WSDOT's estimates for all options with more than some skepticism, because they all lack transparency and consistency and are based on very little engineering.

WSDOT's Cost Estimating Validation Process (CEVP) has the following structure:

- An Estimated Base Cost is calculated for each project component contained in an option based on engineering construction estimates.
- Each component's Budget Risk is calculated based on the likelihood of changes in the cost of materials, labor and capital.
- Each component's Event Risk is calculated based on the likelihood of things happening that are out of the project's control – such as extremes weather conditions.

- Each component's Scope Risk is calculated based in the likelihood of changes in project specifications – either from unanticipated construction engineering difficulties or changed public policy concerns.
- The calculated Budget, Event and Scope Risk costs are summed and added to the Estimated Base Cost to derive each component's total estimated cost.
- The total estimated costs for all components in an option are summed to derive its total cost.

First, we need to know the data that was used in the CEVP estimates. Specifically we need the following information for each of the Options: A, K and L

Project Component	Total Cost	Base Cost	Budget Risk Cost	Event Risk Cost	Scope Risk Cost
I-5					
Portage Bay					
Montlake					
Ship Canal Tunnel					
Arboretum Land Bridge					
West Approach					
Etc					

Further, WSDOT says inflation is in addition to the costs of risk even though the cost of higher prices is already a partly part of the Budget Risk. Not knowing the numerical basis of the cost estimates or the definition of basic cost estimating terms represents a lack of transparency that gives us concern.

IV. Additional Comments from Our Communities

Why Laurelhurst supports Option K

The Laurelhurst Community Club, (the LCC), has been an active participant in the plans for replacement of the SR 520 floating bridge for over 20 years. This 100-year-old Seattle neighborhood of 8,000 is located directly north in full view of the SR 520 Bridge.
The overarching goals of LCC include minimizing the new structure's footprint while providing for access to a safe, reliable transportation corridor. In addition, we promote the use of reliable transit, access to major highways for residents, the reduction of noise generated by SR 520, and reduction of the visual obstructions caused by the bridge. Preservation and the provision of connections for park users through the Arboretum, the preservation of the wildlife in Union Bay, and at the Center for Urban Horticulture are also of the highest priority. We support the logical and safe connectivity of pedestrian trails and bike paths to encourage non-motorized travel throughout the corridor.
The LCC recommends implementing Travel Demand Management programs as well as tolling on SR 520 as a means of trip and travel time reductions.

There are 5 major goals of the LCC for the SR 520 replacement bridge design.

1. Provide access and mobility in and out of the residential areas to SR 520 and to I-5. Can people get to transit and roads and does the design enable vehicles to move? Northeast Seattle has documented massive development planned through 2020.
-Seattle Children's Hospital has requested adding one and a half million square feet to its Laurelhurst Campus (this is the size of Bellevue Square dropped on top of its current campus), creating a daily trip generation in excess of 42,000 vehicles, employees, patient families, visitors, and service vehicles.
-University Village Shopping Center and the Kroger Inc. owned land on the QFC parking area will expand 25% - 150,000 square footage in retail and apartments by 2012.
-Warren G Magnuson Park is rapidly expanding its soccer and tennis facilities.
This cumulative traffic congestion will add another 48,000 trip generations through SR 513 (Montlake Blvd) and up through NE 45th St, a one lane eastbound arterial with 2 lanes westbound, creating traffic gridlock bottlenecked into the neighborhood streets. The main intersection at Union Bay is predicted to be Level F-maximum wait times.

2. Reduce noise. The new bridge is more than double in size of the current footprint and will be located 120 feet closer to the citizens' homes in Laurelhurst. Minimizing noise is a central quality of life issue. Higher population and traffic density can cause more stress and ill health effects. Bridge noise reduction is essential to provide a respite from such higher levels of stress. It ensures all residents a quieter outdoor recreation experience.

3. Minimize visual blight. The profile of the new structure will be more than doubled and its design should minimize the blocking of the view sheds (view corridor plus adjacencies) Views of the Bald Eagles, Lake Washington and Mount Rainier are precious resources that merits protection. Quiet views are not only part of the quality of life of this neighborhood, but will preserve tax dollars from land values for the State and City coffers. Blocked views drastically reduce real estate values.

4. Reduce the "cut through" traffic on Seattle residential streets. Effective transportation will draw vehicular traffic to utilize it if it is reliable and efficient, minimizing travel wait times. This will reduce local street congestion.

5. Maximize transit opportunities and reliability. The LCC supports accessible and efficient use of Metro and Sound Transit connections by providing reliable service.

The Laurelhurst Community Club strongly endorses Option K.

Transportation

Option K provides the most efficient travel times to access SR 520 north of the Ship Canal. (See detailed section "North of the Ship Canal.") **-15 minute** wait time-1 mile
Option A triples the wait time southbound on Montlake Blvd. **-45 minute** wait-1 mile
Option L increases travel times by 60% on Montlake Blvd.**-23 minute** wait-1 mile

Non peak travel time reduction (drawbridges open up to 90 times daily on weekend days)

- Option K- eliminates back-ups caused by drawbridge openings and improves traffic flow and reliability for non-peak times, 18 hrs./day used by shoppers, hospital employees, etc.
- Option A requires travel over a bascule bridge to access SR 520
- Option L adds another drawbridge which will back up during bridge openings accessing SR 520, especially during non-peak times .It adds traffic accessing SR 520 from the south
- Option K is the only option with a tunnel under the Ship Canal providing access, less travel time, and continuous flow of vehicles to access SR 520 and then onto I-5 .

Noise

Option K specifies the use of quiet pavement on the bridge surface, mitigating the sound generated by the bridge, which will more than double in size and be 130 feet closer to residences than existing. It also specifies use of additional sound-reduction techniques.

Visual

Option K requires a low bridge profile from east of Foster Island and berm in Arboretum. This plan minimizes the visual obstructions to view sheds of Laurelhurst residences.
The tunnel and 60 feet underground Montlake Interchange reduces visual obstruction by lowering the entire Arboretum bridge profile, improving view sheds and reducing noise.
Option A is built much above grade, exposing views to vehicles.
Option L is the most obtrusive design with a massive extra drawbridge protruding permanently above grade and its openings at 165 feet in the air into Union Bay.

Transit

Option K offers the most reliable, predictable travel times for transit and direct connections to the new Sound Transit Station at the University of Washington Stadium.
Option A has pedestrians crossing at grade level to make connections to Sound Transit.
Options A and L have transit stuck waiting on a drawbridge 18 hours a day.

Bike and Pedestrians Access and Safety
Option K specifies a separated pedestrian crossing along Montlake Blvd using a safer, grade separated lid for easy and safe access to Sound Transit and parking lots.
Option A retains a more noisy, less safe crossing of pedestrians and bikes at street level.
Option L has grade separated crossings, but requires a north crossing of the drawbridge.

In summary, Option K best fulfills the goals of the Laurelhurst Community Club in the replacement of the SR 520 Bridge and we strongly support it!

Why Madison Park Supports Option K

The Madison Park community values a replacement for the current SR 520 bridge that reduces noise, preserves landmark views, enhances our urban green spaces, improves water quality, enhances bike and pedestrian connectivity and improves traffic performance of key city traffic routes and intersections. Based on these values, Madison Park prefers Option K over Options A or L. Alt K balances the regions transportation needs with the usability and health of an important civic asset – the Washington Park Arboretum, and the livability of SR 520's adjoining neighborhoods, specifically Madison Park. Alt "K" provides a reasonable compromise among many competing interests and is endorsed by all of the relevant communities neighboring the bridge, a testament to its carefully crafted package of features and benefits.

Traffic
Option K provides the best solution for connecting the new SR 520 to the Seattle communities that surround it. The new SR 520 interchange combines the current Montlake and Arboretum on-ramps into one system of on- and off-ramps thereby minimizing noise and visual impacts. Option K also more effectively separates highway-bound trips from local traffic thereby greatly improving the "Montlake mess" centered around the Montlake bridge, improving local arterial flow and reducing traffic through the Arboretum. Arboretum traffic could be additionally reduced by creating a connection from Lake Wash Blvd back to the arterial on 24th St (e.g. down McGraw St.). This needs to be studied in further detail and as yet a solution as not yet been identified.

Most importantly to the Madison Park community, Alt K presents an opportunity to reduce rush hour traffic seeking to avoid I-5 between SR 520 and downtown. Today significant traffic flows through the Madison St./Lake Washington Blvd intersection, a key intersection for the residents of Madison Park, by drivers connecting between the Eastside and Seattle's downtown. This is a response to the current positioning of the existing Lake Washington Blvd on- and off- ramps and the terrible performance of SR 520 and I-5 west of this interchange. Alt K may be arranging the interchange in a way that encourages traffic to utilize 23rd/24th, the main artery intended to connect drivers to Madison and downtown. Additional refinements to signal lights (shorter left turn light off Madison into the Arboretum, longer left turn signal onto 23rd) would provide further improvements – a significant win for our community. These and other improvement

would encourage commuters to use the 23rd St. arterial, thereby returning the Arboretum to a more local road and reducing congestion near Madison Park. Further study is needed to encourage the south bound traffic from SR 520 to use the 23rd/24th St. arterial instead of the Arboretum.

Visual/Noise
Madison Park values a bridge with a low profile, low bulk, a narrow footprint and reduced noise. Alt K height is generally the same height as the current SR 520 bridge from the Montlake shoreline through the Arboretum. The SR 520, in Alt K, at the Western High Rise is also similar to the current bridge height with the alignment 100ft northwest of the current bridge.

We value the reduction of noise through the use of quiet rubberized asphalt pavement and additional noise treatments as an integral design element and not through the use of sound walls. Constructing noise walls would be blight our views north and would be an unattractive and unwanted solution.

Environment
Madison Park values a "do no harm" policy toward the Arboretum and wetlands and benefits from the services the immediate local ecosystem provides including water filtration, animal habitat, child education, and the chance for solitude. The Arboretum wetlands are a wetland of exceptional value. Damage to it should be assiduously avoided or, when unavoidable, minimized to the greatest extent possible. Any mitigation, to the extent that it is necessary, should be carried out in the Arboretum itself and should be of the same kind and quality or better than that which was taken.

Alt K minimizes the environmental impacts to the Washington Park Arboretum and the surrounding area while restoring the Olmsted Legacy. A plan for the preservation and protection of endangered species should be in place before construction begins and should be developed in conjunction with the federal regulatory agencies and all of the Indian tribes.

The tunnel in Alt K is a particularly important feature that preserves the environment by reducing the long-term impact on the wetlands. It preserves the sight lines, improves water quality (by containing storm-water) and has a neutral affect on salmon migration and wildlife. It also prevents shading and the use of artificial light which fosters invasive species and disrupts birds and ducks that are migrating or raising their young.

The low profile of the SR 520 bridge in Alt K through Foster Island, will allow for the construction of green berms and a lid on either side of the freeway for wildlife habitat. This reconnects Foster Island and allows for an enhanced experience for both pedestrians and bikers. No longer will visitors to the Arboretum have to creep through the damp, dark underpass beneath SR 520. The additional green space and lid will allow for more wetland plantings and restoration while enhancing the Marsh Island, Foster Island and Duck Bay experience as a nature preserve. The berms and lids at Foster Island also allow for a continuous green-belt from the Arboretum to Portage Bay.

Bike and Pedestrian Connections
Madison Park values safe, convenient, and economically sensible connectivity for bicycles to the surrounding area and regional trail system. Madison Park supports the creation of bike and pedestrian connections through the Arboretum and on to the SR 520 bridge and surrounding areas north (Burke-Gilman). Madison Park does not support a connection that encroaches upon open waters or the wetlands. Alt K provides a pedestrian and bicycle route that connects the SR 520 regional trail to the Univ. of Washington, the Arboretum and Seattle neighborhoods. It provides bicycle and pedestrian access and connectivity with the least environmentally damaging increase in wetland fill. The green berms and lid at Foster Island also increase the bike connections to the Arboretum paths as well as access across SR 520.

Construction
Further information is needed regarding the phases of construction for the new SR 520 bridge. Are materials going to be barged in or trucked? Lighted nighttime construction? Is a temporary bridge being planned? What noise mitigations are being planned during the construction? Noise reduction is a top priority during as well as after construction.

Why Montlake Supports Option K

Seattle's Montlake neighborhood is at a geographic crossroads, as the southern gateway to the University of Washington and as the northern and western gateways to a vital state resource, the Washington Park Arboretum.

All vehicular, transit, pedestrian, bicycle and marine traffic crossing Lake Washington must pass through, over or under Montlake to access I-5, the University of Washington, and a large swath of East and Northeast Seattle. Major destinations in the area include the UW, with a student, faculty and staff population of 65,000, major commercial activity at University Village, which continues to expand, and Children's Hospital, a major regional institution attempting to more than double in size. All of these major destinations, along with the future multimodal transit hub at the UW centered on a major light rail station due to open in 2016, are **north** of the Ship Canal.

SR 520 has essentially one interchange in Seattle east of I-5. Today, that interchange, like the highway itself, is **south** of the Ship Canal, in the heart of the Montlake neighborhood. About 70% of the vehicular traffic that uses this interchange today has an origin or destination north of the Ship Canal, and must cross the Montlake drawbridge, also known as Montlake Boulevard and Washington State Highway 513. The Montlake Bridge is severely overburdened today; half-hour backups approaching it are common. According to WSDOT the bridge opens as many as 90 times in a single day, for at least 6 minutes per bridge opening. Although the bridge does have opening-restrictions during certain "peak" hours between Monday and Friday, it does not serve a typical 9-5 office employment market like downtown Seattle; the traffic volumes on SR 520 and on the arterials approaching it are spread throughout a long period of the day, and on weekends.

The primary destinations are schools, neighborhoods, shopping districts, and major regional hospitals where reliable emergency vehicle access is critical for public health.

Today, a third of the buses coming from the Eastside crossing Lake Washington on SR 520 are headed to the UW. This proportion will go up in the future, now that Sound Transit is constructing a regional light rail station at the University of Washington. The SR 520 High Capacity Transit plan calls for three bus rapid transit (BRT) lines, connecting the University District to Redmond, Kirkland and Bellevue across SR 520. These BRT lines, like the Sound Transit light rail station they will connect to, will operate 20 hours a day, 7 days a week; **they can not be considered reliable** if they are subject to random and frequent delays due to drawbridge openings. Only Option K addresses these critical transportation needs by providing a reliable connection for vehicles and transit between SR 520 and those major regional destinations.

Montlake Boulevard through the Montlake neighborhood is also a vitally important local transit route. It is the only approach from the south to the University of Washington and its multimodal transit hub. It carries some of King County Metro's most productive transit routes; although these are "local" routes, they serve regional destinations. With Option K, these transit routes will be far more reliable.

In contrast, Option A 'doubles down' on decisions made in the early 1960's to concentrate all SR 520 interchange access on the wrong side of the Ship Canal from the principal destinations. Options A and L forever preclude the possibility of providing the reliable transit and vehicular access through this area that Option K provides.

Roanoke Park, Bagley Viewpoint, Interlaken Park and Boulevard, Montlake Boulevard, Lake Washington Boulevard, the Arboretum, the University of Washington campus and in particular Rainier Vista are all part of the historic Olmsted Brothers legacy of landscape architecture from the early 20th century. Option K respects and enhances this legacy in numerous ways. A key component of the Olmsted design philosophy is a connected system of greenbelts and trails; Option K provides those connections while also meeting the region's mobility needs. In contrast, Option A would effectively destroy much of what remains of this legacy in the Montlake neighborhood by widening Montlake Boulevard, and ruining the setting of the landmark Montlake Bridge. Options A and L are certain to galvanize local opposition to the project even as they fail to deliver regional benefits.

The lid park associated with Option K effectively knits the Montlake neighborhood together despite the fact that a much larger highway will pass below it. This lid effectively connects to bicycle/pedestrian trails and local streets. In contrast, Option A forever precludes the opportunity to create a continuous greenbelt extending from the Arboretum to the Montlake Playfield and Community Center on Portage Bay, which is well-used by all surrounding communities.

Option K calls for construction of a major interchange at the east edge of the Montlake neighborhood, but since this interchange is below grade, its local impacts are reduced. In

contrast, Option L constructs a noisy, view-blocking elevated structure that would forever tarnish one of Seattle's landmark view corridors, the Montlake Cut and Ship Canal. This is the location of significant recreational and commercial activity, as well as the University of Washington crew races and boat parades. It is a special place full of memories that holds civic and cultural significance for many Washingtonians.

The Montlake neighborhood is ground zero for a major construction project that will last the better part of a decade. We understand that the project as a whole is necessary and that there will be significant unavoidable impacts. What is most important to us is that the result after all of this construction is **something that will work for the rest of the 21st century** for the State of Washington, the Puget Sound and metropolitan region, the City of Seattle, the Arboretum, the University of Washington, as well as our community and the neighbors we see every day. Option K delivers that.

Why North Capitol Hill Supports Option K

The North Capitol Hill Neighborhood Association believes Option K provides the balance we all seek between viable transportation, usable green space and vibrant community life. We in North Capitol Hill believe that Option K is also the way to meet these goals without sacrificing the livability of our particular neighborhood. Here is why.

Option K meets mobility needs.

- Expands the current 60-foot width of the roadway between Montlake and I-5 to only 100 feet. (Option A would widen the road to 110 feet, that much closer to our already closely adjacent homes.)
- Maximizes the convenience of our bus connections at light rail's planned University of Washington Station.
- Eliminates the Montlake Bridge bottleneck, separating traffic entering and exiting SR 520 from local traffic, thus facilitating local north-south trips across the Montlake Cut and beyond.

Option K preserves views.

- Puts SR 520 traffic crossing the Montlake Cut into a tunnel, retaining views. (Options A and L each add a new drawbridge over the cut. Option L's drawbridge would be 175 feet high when opened and visible for miles.)
- Complements its surroundings with a faux arched Portage Bay Viaduct.

Option K controls noise and adds green.

- Specifies rubberized asphalt pavement and appropriate noise-control coatings under lids and overpasses. (For homes and businesses on North Capitol hill, all set above the roadway, noise walls would be ineffective as well as unsightly.)
- Lids at 10th/Delmar and at I-5 reconnect the neighborhoods of North Capitol Hill, Roanoke Park and Eastlake, divided by the current SR 520. These passive-use lids

add pedestrian and bicycle connectivity as well as green space. We also support a new Portage Bay park adjacent to and/or under the roadway.

While we continue work with WSDOT and the City of Seattle to mitigate noise and air-pollution, impacts on trees, local access and parking in North Capitol Hill during and after construction, Option K is our neighborhood's choice for an SR 520 that works for us, for the region and for the state.

Why Roanoke Park/Portage Bay Supports Option K

The Roanoke Park/Portage Bay neighborhood supports the K Option as the one that best addresses its concerns with noise, traffic, community amenities and the best applicable use of "green" technology.

Noise

Noise and traffic induced vibration are among the most important issues in the RP/PB community. Only Option K calls for paving SR 520 with rubberized asphalt to achieve the maximum noise attenuation feasible. Both of the other options call for tined concrete paving and/or noise walls. These technologies do not address the impact of noise on homes located on the hillsides surrounding 520.

Option A will add a seventh lane to the Portage Bay viaduct for traffic going west from Montlake to accelerate up to freeway speeds. Such acceleration will appreciably add to the noise generated by 520 vehicle movements.

Traffic

Increased traffic on neighborhood streets as a result of expanding SR 520 is a major concern. Both Options A and L will generate increased traffic congestion on Montlake Boulevard, and we know from experience that when this occurs traffic using Fuhrman Avenue East to access the University Bridge increases.

Additionally, Option A adds a seventh lane to 520 as it crosses Portage Bay and will increase the volume of traffic using the Roanoke exit to enter our community.

Community Amenities

At three different community meetings, PB/RP residents expressed their preference for an arched design for the west side of 520 as it crosses Portage Bay. Only the K Option specifies this design. Options A and L both say the design should be determined by the Design Commission with no requirement for input from the impacted neighborhood.

By adding a seventh lane, Option A has the widest footprint and presents the worst visual impact for our neighborhood.

While all three Options specify lids at Delmar/10th and I-5, only Option K specifies that working committees of neighborhood representatives should design the lid landscapes and that the I-5 lid should be a full 500 long from north to south.

Green Technologies

SR 520 should be designed for the future and should make maximum use of green technologies. Only Option K provides for the creation of new wetlands and an urban park from land that will be used for construction and then surplussed by WSDOT.

The use of rubberized asphalt quiet pavement allows for the recycling of used tires. The State of Arizona reports that it has been able to recycle 70% of its used tires since it began paving its highways with quiet pavement. Option K is a step in that direction. The other options use environmentally destructive concrete pavement.

Why the Seattle Boating Community Supports Option K

Option K has the smallest impact on Portage Bay, reducing issues of mitigation such as vibration, critical slopes, noise, traffic and parking, equipment staging, dredging and pile driving. The scope of environmental restoration, impacts on property values and health are also minimized with Option K.

Navigation: Option K is the only plan that maintains the flow of commercial and recreational boat traffic, which would be compromised by the addition of a second bridge. It preserves the navigable waterway of Portage Bay and the Lake Washington Ship Canal as a protected venue for the rowing community: for racing and practicing at the University of Washington, as well as for the Junior and Senior rowers of this area.

Cultural Heritage: Option K results in the least impact upon the cultural traditions of the Seattle boating community. Boating is an historic feature of the Puget Sound area culture and economy stretching back to tribal times and continuing through European settlement in the modern era. Recreational boating continues to inspire important cultural and economic events and activities. Portage Bay, at the nexus of the ship canal and Lake Washington, is a critical maritime staging area and a part of our heritage.

Economic Impact: Option K has the least impact on existing (or additional) moorage, floating homes and boating services on Portage Bay, both as features of the overall regional supply and as unique features of this area. Moorage and boating services are in limited supply in the region because of the premium on waterfront and submerged real estate. Any diminishment of the current supply in Portage Bay would have ripple effects throughout the boating community and the businesses that provide for its needs.

Traffic: Option K relieves congestion on Montlake Blvd. and enables easier access at all times to waterfront activities. Removal of the ramp to westbound SR520 from northbound Montlake Blvd removes the need for a seventh lane across Portage Bay and dangerous merging on Montlake Blvd at Shelby Street and on westbound SR520 between Montlake Blvd. and Roanoke Street.

Mitigation: Portage Bay is home to a vibrant urban population and unique environment. Mitigation during and after construction is an important reason for our support of Option K. Our concerns include vibration, critical slopes, noise, traffic and parking on Boyer Ave., equipment staging, dredging, environmental restoration, property values, health impacts, appropriate bridge and roadway design and quiet pavement through the project corridor.

Cost: The SR520 replacement should not be judged by how cheaply automobiles can be moved across Lake Washington. It should be judged on how well it permits people to move, be they in automobiles, on foot, on a bicycle or on public transit. It should also be judged on how it preserves historic neighborhoods and activities that are at ground-zero of this major project. Option K is a more costly SR 520 alternative that will deliver more benefits, not only for commuters, but for Seattle's urban population, urban wildlife (beaver, salmon, hundreds of birds) and the unique character of Seattle's mixed urban/environmental/boating lifestyle.

Loss of Private Property: With no seventh lane across Portage Bay, Option K takes the least amount of private property. It preserves existing moorage, floating homes and commercial activities and the cultural heritage of Portage Bay as reflected by the boating community. The Option K tunnel and its portal south of Husky Stadium leave our University more options for further development of its property in that area..

Stormwater: Option K includes collecting the solid particulate (ground up tires and break shoes) produced by traffic, thus helping to relieve the surrounding neighborhoodsand waterways of the current filth that rains down on boats, roofs, parking lots and docks in this area. The control of stormwater runoff and the elimination of the traffic-caused debris that pollutes the adjacent waterways, homes, docks and boats are extremely important to the boating community and its neighbors.

Visual: Option K offers a low profile, narrow footprint and architecture in the spirit of Henry Olmsted.

Noise: The affected neighborhoods have rejected the use of sound walls in favor of the use of quiet rubberized asphalt pavement and additional noise treatments. Reduction of noise by use of quiet pavement will have a positive benefit for all who use the water, be they pleasure boaters, rowers, paddlers, or house-boat owners.

Noxious Weeds: Option K preserves the efforts of the residents of Portage Bay to control and eradicate the deadly noxious weeds that attack and snarl the waterways thus inhibiting the swimming, rowing, sailing and cruising.

Seattle design Commission

December 23, 2008

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Mayor

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Hon. Christine Gregoire
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RE: SR 520 Bridge Replacement and HOV Project

Dear Joint Transportation Committee and Governor Gregoire,

The Seattle Design Commission appreciates the opportunity to participate in the west-side solution for the SR 520 Bridge Replacement and HOV Project. Throughout the mediation process, we made every effort to contribute objective ideas and to give each alternative equal consideration while learning from the rich perspective each participant brought to the group. With much deliberation, we have responded to the two questions presented to each mediation participant.

Which west side interchange Option do you prefer and why?

We found it very difficult to choose between Options A (Montlake Interchange with Second Bascule Bridge) and K (Single Point Urban Interchange with Tunnel under the Montlake Cut), whereas too many aspects of Option L (Single Point Urban Interchange with Bascule Bridge over Montlake Cut) were found to be unacceptable. Ultimately, our preferred option looks most like Option K, in that we support a significant investment in the Montlake neighborhood to restore conditions and provide for the future. Three primary opportunities are created by Option K that are unique from the others presented so far:

- Option K significantly improves mobility for transit, general purpose traffic, freight movement, the boating community, as

well as bicyclists and pedestrians. This option has the potential to solve the transportation problem for 50, possibly 100 years to come.

- The proposed Pacific & Montlake Lid is *the* crucial link to the complicated puzzle surrounding it. It manages an overwhelming number of people traveling in conflicting directions by separating out traffic in a depressed intersection. It creates direct transit access between the triangle, light-rail station, SR 520, and ultimately I-5 unlike any other option. It fits seamlessly with the University of Washington's Rainier Vista vision. It places light-rail patrons on a landscaped lid, with the option to move freely between the university campus, the Hospital, or transit connections below, without traversing a series of sky-bridges.
- The Montlake Lid at SR 520 creates a far superior space than any other option. The depressed single-point interchange combined with its easterly location results in a larger, more functional, open space. As the City of Seattle and the Parks Department struggles to find open space with the urban core, transportation projects can provide real estate that would otherwise be cost prohibitive.

Other aspects of Option K that we support are use of quieter pavement and limiting noise walls to areas where there is neighborhood support and they will be effective. We support the low vertical profile, specifically between the new single-point interchange and the west highrise.

Common to all Options, including Option K, we applaud the direct HOV ramps between SR 520 and I-5. It is imperative that this project improves transit mobility to meet the growing travel needs of our city and region. We support the Roanoke and 10th/Delmar landscaped lids across I-5 and SR 520, respectively. These lids are necessary to improve mobility for pedestrians, bicyclists, provide open space, and reconnect historical neighborhoods.

Potential issues with Option K

While Option K seems to do a great job at solving all problems for all people, it also encourages a great deal of new traffic growth in Seattle neighborhoods that are of concern. Most notable are the impacts to the Arboretum. Traffic volumes in the Arboretum are expected to increase by 16 percent over No Build conditions and 49 percent over existing conditions. Already, traffic in the Arboretum is a slow, steady, and constant stream of cars between the 520 ramps and E Madison Street. The proposed "keyhole" alignment encourages vehicles to use the Arboretum (Lake Washington Boulevard E) to access neighborhoods to the south.

We suggest a much more restricted access plan for this area, by eliminating the keyhole and limiting access between the new single-point interchange and E Montlake Place E (south of SR 520) to occur *only* on Lake Washington Boulevard E as it parallels 520 in an east/west direction

would preserve the Arboretum. As depicted in the Option K drawings, there is an opportunity to create a frontage road along the mainline alignment, and still provide a green buffer between this road and the existing Lake Washington Boulevard E and its neighboring homes.

The neighborhoods north and west of the Pacific /Montlake triangle would also see a substantial increase in traffic as a result of the new capacity provided by Option K. Traffic volumes are projected to increase by 15 percent increase on NE Pacific Street and 23 percent increase on Montlake Boulevard NE over No Build conditions. Transportation mitigation beyond the footprint of this project should be evaluated to offset direct impacts. The project responsibility of Option K has not been fully met and more work needs to be done to identify solutions.

Are there changes that could be made to the other Options that would make them more acceptable?

Option K – Single Point Urban Interchange with Tunnel under the Montlake Cut

Our preferential support of Option K has required a philosophical shift in values. A shift that places great value on overall mobility and place-making for the city and region. That being said, we feel more work is needed to pay closer attention to conditions beyond the WSDOT right-of-way and protect Seattle neighborhoods in a manner consistent with the investment being made within the project limits.

Suggested modifications to Option K include:

- Replace the keyhole configuration in the Arboretum with more direct access to E Montlake Place E, via E Lake Washington Boulevard. All traffic between SR 520 and neighborhoods to the south should travel on city arterials, rather than through the Arboretum.

- If access between SR 520 and neighborhoods to the south is retained through the use of Lake Washington Boulevard E in the Arboretum, we urge Option K to use segmental tolling with higher tolls on this route.

- We recommend a design competition for the Portage Bay Bridge design. A design competition would generate a more diverse range of ideas to draw from. Also use the *Corridor Aesthetics Handbook,* May 2006, as a resource for design concepts.

- We suggest removing the Foster Land Bridge from Option K's scope as a cost savings measure. We also question whether the construction impacts to the surrounding sensitive areas are worth the long-term environmental and recreational benefits.

- Include HOV preferential treatment in the Montlake Cut tunnel. The current design calls for two general purpose lanes in each direction of the tunnel. We recommend one general purpose, one transit/HOV only lane in each direction. This shift would support the travel mode splits the City of Seattle is trying to achieve in our long-range growth goals and support Sound Transit's BRT plans, while potentially reducing new traffic demand impacts on areas north and west of the Pacific /Montlake triangle.

- Retain transit bus zones on Montlake Boulevard E at the interchange and increase local transit service serving areas between the Montlake Multimodal Center and neighborhoods to the south.

Option A – Montlake Interchange with Second Bascule Bridge

In many ways, we support Option A. It addresses many of the requirements stipulated by the Seattle City Council. The Commission holds many of the same core principals of Option A. However, the results of the Base A transportation analysis indicated much higher congestion than either Options K or L. To improve congestion, a combination of sub-options would have to be adopted. The sub-options as proposed by the proponents make great gains but at the expense of some of the core values of the alternative.

Retaining the Lake Washington Boulevard E ramps increases traffic in the Arboretum, adding a westbound auxiliary lane on Portage Bay results in the footprint found unacceptable by many people, and widening E Montlake Place E south of the interchange would require even more right-of-way acquisition making this alternative comparable to the others in terms of impact area.

However, we see Option A as a viable alternative with great potential. We suggest the following modifications and additions of sub-options to balance the transportation needs with the core principals of this Option.

- Split the westbound off-ramp traffic to occur in two locations: westbound to northbound Montlake Boulevard E at existing location, and westbound to southbound Montlake via the E Lake Washington Boulevard ramp, as depicted as a "Possible Addition". This split off-ramp configuration would ease congestion on Montlake Boulevard E.
- Configure the westbound to southbound off-ramp to E Lake Washington Boulevard so that it operates in a one-way direction, westbound towards Montlake Boulevard E. This new ramp would direct traffic away from the historic E Lake Washington Boulevard and protect the Arboretum. It could meet up with the historic E Lake Washington Boulevard in advance of the Montlake intersection.

Seattle design Commission

- Align the westbound Transit Only Direct Access ramp adjacent to the westbound to northbound off-ramp, crossing over the mainline in advance of the intersection so these three right-turn lanes are in alignment.

We believe this combination of sub-options would provide transportation mobility comparable to Option K. To minimize the project footprint, we favor this combination over the sub-options of a westbound auxiliary lane or additional widening of Montlake Boulevard.

Option L – Single Point Urban Interchange with Bascule Bridge over Montlake Cut

Too many aspects of Option L are undesirable to support this option, even with modifications. The primary reasons we do not support any variation of Option L are:

- The concept of an elevated single-point interchange in vicinity of the Arboretum is contrary to the core principal of enhancing the natural and recreational environment.
- A second draw-span bridge within proximity to the Rainier Vista view corridor is unacceptable.
- The idea of a draw-bridge serving as an actual on- or off-ramp to SR 520 and its potential for creating congestion, delay, and safety hazards is unsupportable.
- The proposed gradual slope between the interchange and west highrise provides natural storm-drainage opportunities, which we support in concept, but the vertical profile creates a visual barrier to the surrounding neighborhoods that is undesirable.
- The in-water and near shore impacts associated with construction of the bridge abutments are too great.

The favorable aspects of this Option are only found in segments that are common to Options A and/or K. The unique aspects of Option L are not supported by the Commission.

We offer this position to help frame your decision on the SR 520 Bridge Replacement and HOV Project. We believe this project is a critical investment in the vitality of the city and the region as a whole.

Sincerely,

Mary Johnston
Chair, Seattle Design Commission

Sincerely,

Tasha Atchison
Seattle Design Commission

Larry Sinnott
Friends of Seattle's Olmsted Parks Boardmember
Representative to SR 520 Mediation
6700 Roosevelt Way NE #A-404
Seattle, WA 98115

Tuesday December 23, 2008

Governor Gregoire & State Legislators
Olympia, WA

Summary of SR 520 Mediation

Dear Gov. Gregoire and Legislators,
The Friends of Seattle's Olmsted Parks want an environmentally responsible alternative for the SR 520 Bridge Rebuild that truly satisfies the transportation and parks needs for generations into the future. Our boardmembers would very much like to see a transit priority 4-lane option re-evaluated, but if a 6-lane replacement has to be built, then it should be Alternative A with no re-connection to the Washington Park Arboretum. Many of the elements of Alternative A were developed before SB 6099 to be adaptable for both a 4-lane and a 6-lane corridor. Alternative A is environmentally responsible for traffic volumes and user experience in our largest urban park, the Washington Park Arboretum, which is also a state designated arboretum, and still transit performance is virtually identical for all alternatives. Friends of Seattle's Olmsted Parks supports Alternative A for SR 520 Bridge Replacement.

Alternative A has been developed through on-going consultation with many diverse groups; Friends of Seattle's Olmsted Parks, Ravenna-Bryant Com. Assoc., University District Com. Council, University of Washington, Parks and Open Space Advocates, Wallingford Com. Council, Eastlake Com. Council, Sierra Club, and the Retired APA Planners Group. As the primary developer of Alternative A, I will describe what our plan is;
1) Most importantly, it un-does a very bad decision from 50 years ago to connect the abandoned RH Thomson Freeway ramps to Lake Washington Blvd., which is the central spine of our 100 year old citywide park and boulevard system, designed by John Charles Olmsted, of the nationally renown firm Olmsted Brothers Landscape Design, on his first visit here in 1903. The entirety of Lake Washington Blvd. is, was, and continues to be park property, with only a maintenance agreement with the city transportation department. In eliminating those ramps, we are very cognizant of the substantial need to re-direct entrenched traffic patterns (much of which is non-neighborhood traffic avoiding I-5 and 520's Portage Bay), and we have worked very hard to improve the Montlake Interchange.
2) The long-term answer to congestion is to give the highest priority to transit. Alternative A does this in many ways, the most significant being the utilization of the second draw bridge concept from the 2006 DEIS, combined with a westbound bus-only off-ramp to northbound Montlake Blvd. The second draw bridge alleviates the bottleneck caused by 7 lanes on the north side of the Cut and 6 lanes on the south side of the Cut trying to cross a 4-lane bridge. That old 4-lane bridge would be re-configured to 3-lanes southbound, with the new bridge having 3-lanes northbound. With additional signage and road-buttons, we can channelize SR 520 traffic to one side, allowing buses and through traffic to avoid gridlock. The westbound bus-only off-ramp has a bus stop, for local users, and gets signal priority as the fifth leg of the new traffic signal that has been in WSDOT plans since 2006. This creates a direct connection to the future light rail station at Husky Stadium. With numerous double left-turn pockets with double receiving lanes, all traffic does move, and what we should be promoting is helping commuters move to transit, to which we give the highest priority.

3) Lids re-connecting the Montlake neighborhood and the nearby park elements are also a high priority. The main width of our lid is moved slightly eastward, in the proximity of McCurdy Park, and has cantilevered park strips connecting back to Montlake Blvd., where we add park strips to each side of the Montlake overpass. This accomplishes nearly equal connectivity of neighborhoods and parks as found in the other alternatives.
4) The lid, or "land bridge", at Foster Island has major wetland impacts on its approaches to both sides of the island, as well as very large footings required for structure and retaining walls on the island, which previous geology reports have said is barely more substantial than a peat bog. We believe these impacts and the $ 80 million cost are not justified. We prefer to lift the roadway above Foster Island to about 12-foot clearance, with only the impacts of individual column footings, while returning to the same low roadway height throughout the rest of this segment.
Alternative A is the most environmentally responsible, transit prioritized, and most cost effective option for the westside interchange and approaches of the SR 520 Corridor Replacement Project

Let's now look at some of the consequences of the other alternatives. Both K and L have tremendously higher traffic volumes on all arterials to and from SR 520. They virtually scream "It's OK to stay in your car". (The following percentages are WSDOT data compared to existing volumes.) Traffic on Montlake Blvd. toward University Village is 51% higher. Traffic on Pacific St. toward the University District and Wallingford is 40% higher. Traffic through the Washington Park Arboretum is 49% higher. Traffic on Montlake Blvd. south of SR 520 is 81% higher. What?! The Montlake representatives have long stated their intent is to improve traffic safety in their small business district. Is this 81% increase really what all of the neighborhood wants? Traffic on the east-west section of Lake Washington Blvd. that fronts on SR 520 is 88% higher. The only area getting a traffic decrease (and a BIG one) is the Shelby-Hamlin area, between SR 520 and the Ship Canal. This is the very small part of the Montlake neighborhood that gets the very big benefit of the additional $2 billion for Alternative K, (and the University Village developers really like it too). Add to that the traffic and construction impacts to the University of Washington, including the consequent limited development potential caused by both K and L in the existing Husky parking lot. Add to that the increasingly choking traffic volumes through the pastoral and educational Arboretum and the absolutely devastating disfiguration of Lake Washington Blvd (across from MOHAI), which have FHWA 4-f issues. Alternatives K and L have highly unconscionable consequences.

We are asked to comment on what might be done to make the other alternatives better. If you totally disconnected K and L from Lake Washington Blvd., you would eliminate the park and boulevard impacts, but you would still have the high traffic consequences for the surrounding neighborhoods. You would also not have any incentive for changing mode to transit. If you eliminate the very costly tunnel of K and the visually obtrusive 40 foot high interchange of L, then you are right back to making the existing interchange location work better, which is Alternative A.

In conclusion, you can not overcome the defects we see in Alternatives K and L. Alternative A is the environmentally responsible option for now and into the future. Alternative A has effective mechanisms for moderating congestion, needed mainly in the peak hour commutes, and gives the highest priority to transit. Alternative A is the option that still comes closest to the projected budget target, If you have to do a 6-lane corridor replacement, then Alternative A is the future-conscious plan for the westside interchange.

Sincerely,
Lawrence A. (Larry) Sinnott

UNIVERSITY OF WASHINGTON

OFFICE OF THE PRESIDENT

Mark A. Emmert, President

December 23, 2008

Governor Christine Gregoire
Joint Transportation Committee

RE: SR 520 Project Impact Plan

Dear Governor Gregoire and Legislative Members of the Joint Transportation Committee:

The University of Washington is a world-class institution that is an essential asset to our community and our state. Granting over 12,000 degrees annually, we have numerous highly rated academic programs, including bioengineering, drama, microbiology, computer science and engineering, medicine, and much more. We win more research funding than any other public university in the nation, more than $1 billion annually. Our partnerships with business and industry have spawned more than 200 startups out of the intellectual property that has flowed from our laboratories and our research. Additionally, the University is home to one of the top ten hospitals in the nation, serving all patients regardless of where they come from or their socioeconomic background.

The University is also a national leader in environmental stewardship. Through our aggressive Transportation Management Plan more than 75 percent of the campus population commutes to campus in a greener mode than driving alone. Despite a 24 percent growth in employee and student population since 1990, today's University-related peak hour traffic remains below 1990 levels. Furthermore, we have committed to reducing greenhouse gases by signing the Seattle Climate Partnership Agreement. We are a strong partner in managing the internationally renowned Washington Park Arboretum, which offers recreation and educational opportunities for citizens state-wide.

The State's investment in SR 520 is critical to the region's continued prosperity. SR 520 and its connection to the Montlake Boulevard is one of the principal gateways to the campus. But we cannot allow the investment in the SR 520 infrastructure to adversely affect the investment that already exists at the University of Washington. With proper mitigation, we could accept any of the alternatives being considered so long as they:

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- Allow the University of Washington to grow in the future by retaining the building capacity of our property south of Husky Stadium.
- Fund the needed transit service and facility enhancements that result from removal of the Montlake Flyer Stop.
- Maintain the campus parking supply by replacing parking lost due to construction or permanent facilities.
- Do not degrade traffic operations through the Montlake Boulevard corridor.
- Protect the University's assets, including UW Medical Center, Husky Stadium, Washington Park Arboretum, and Waterfront Activities Center.

Attached are the University's comments on the SR 520 Project Impact Plan. These reflect specific elements that we believe need to be included in the various plan options in order to mitigate the project impacts to the University. Any final plan must commit to fully funding mitigation of University concerns. Otherwise, a project meant to solve transportation problems in the region may permanently damage one of the state's greatest assets.

Sincerely yours,

Mark Emmert
President

Enclosures

ATTACHMENT

UNIVERSITY OF WASHINGTON COMMENTS ON THE SR 520 PROJECT IMPACT PLANS

The University of Washington has been an active participant in the SR 520 Mediation process and has considered the questions posed to all 34 members of the SR 520 Mediation Panel.

A. Which west side interchange Option do you prefer and why?
B. Are there changes that could be made to the other Options that would make them more acceptable?

The University has no position regarding our preference for a west side interchange option. Any of them could work if properly mitigated to address the UW's concerns. There is no question that Option A has the least impact on University of Washington property. The other two options (K & L) would require extensive mitigation to retain the UW's building capacity and parking in the area south of Husky Stadium. Our mitigation requirements are outlined in these five pages. The final page presents a matrix of our requirements for all three options.

OPTION A REQUIREMENTS:

- **Retain the SR 520 ramps to Lake Washington Boulevard.** WSDOT's analysis shows that eliminating these ramps would increase congestion at the SR 520/Montlake Boulevard Interchange, but would not substantially reduce traffic through the Arboretum.

- **Implement traffic calming through the Arboretum.** The project should provide design treatments in the Arboretum to slow traffic and enhance mobility for non-vehicular modes.

- **Construct the auxiliary westbound lane on SR 520 between the Montlake Boulevard On-ramp and the Roanoke Street/I-5 Off-ramp.** WSDOT's analysis shows that this auxiliary lane would dramatically improve traffic operations of Option A through the Montlake corridor. The lane would require very little additional pavement width on the Portage Bay Viaduct since much of the width would be required for the ramp transitions at each end. The operational benefits of this slight widening warrant including the auxiliary lane in Option A.

- **Construct the second Montlake Bridge.** The second bridge allows transit lanes to be provided across the Ship Canal, which would improve transit reliability to the UW.

OPTION K AND L REQUIREMENTS

- **Retain future building opportunities.** Construction of the new tunnel/depressed roadway south of Husky Stadium must maintain the UW's potential development capacity of that area, which is the largest remaining building area on campus near the Medical Center. Options to maintain development capacity could include relief of development regulations such as increasing the height, reducing set backs and other options. It must also include allowances for future development over and under the tunnel/depressed roadway, and increased cost of building over this tunnel.

- **Depress and lid the Montlake Blvd/Pacific Street intersection to accommodate unencumbered, at-grade pedestrian crossings.** Creating a four-leg intersection at the Montlake Boulevard/Pacific Street intersection (the new tunnel connection would be the new east leg) requires that pedestrian crossings be grade-separated. This provides the needed capacity at the intersection and improves pedestrian safety. Unlike other lids in the plan, this lid is required for the system to function and cannot be eliminated as a cost-trimming measure.

- **Replace parking displaced by construction.** Parking that is temporarily eliminated during the multi-year construction period must be replaced prior to construction. There are about 1,600 parking spaces in the stadium area parking lots. Replacement parking could be accomplished with a new parking structure somewhere south of the stadium or elsewhere on the southeast portion of the campus, such as an underground parking facility beneath Rainer Vista, near the Medical Center, or along side the stadium in a tiered garage as initially shown in the stadium renovation drawings completed by HOK Architects.

- **Do not degrade operations on Montlake Boulevard between Pacific Street and Wahkiakum Lane.** The Pacific Street Extension will become the higher-volume route across the Ship Canal. The design should provide a dual-left-turn lane from southbound Montlake Boulevard to eastbound Pacific Street to optimize the capacity and reduce potential queues for this route. This may be accomplished without (or with limited) widening of Montlake Boulevard. Operations with Option K or L should be no worse that expected for the No Build condition.

- **Provide direct access from Pacific Street Extension.** After construction is complete, any vehicular parking facility located south of the stadium must have access to all directions of the Pacific Street Extension. If parking is located in this area during construction, temporary access, including the ability to unload the garage in a timely manner after events, must be retained.

- **Retain pedestrian access to Husky Stadium from new parking facilities.** Replacement parking facilities must retain pedestrian access during construction.

- **Relocate the Waterfront Activities Center, moorage docks and Climbing Rock.**

- **Indemnify UW for potential structural damage to Husky Stadium and historic Canoe House.** Excavation and dewatering in the vicinity of Husky Stadium has the potential to affect the foundation and structural integrity of the stadium. A plan to monitor and remedy potential settling and damage during construction must be developed in association with the UW.

REQUIREMENTS THAT ARE THE SAME FOR ALL OPTIONS

- **Fund improvements recommended by the High Capacity Transit (HCT) Plan.** All three Westside interchange options propose eliminating the Montlake Flyer Stop to decrease the width of I-5 through the Montlake neighborhood. Replacing the function of the Montlake Flyer stop will require significantly increased bus service hours between the Eastside and the University District, as well as improvements to the Montlake Multimodal Center to handle the increase in passengers and transit layover.

- **Implement the Rainier Vista Concept Plan by lowering Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover.** Elimination of the

Montlake Flyer Stop on SR 520 will increase bus transit trips to the UW from the Eastside. Additional bus layover space may be needed to accommodate added bus transit trips. The UW has proposed a plan to lower Pacific Place between Pacific Street and Montlake Boulevard to provide for grade-separated pedestrian crossings as well as to increase the curb space available for transit layover. This location would also be a logical transit transfer point due to its proximity to the planned Link Light Rail station.

- **Minimize dust and noise impacts on the UW Medical Center during construction.** WSDOT must develop a plan subject to UW Medical Center (UWMC) requirement to minimize dust and noise impacts on the UWMC. This would be similar to the requirements that UWMC imposes on its own construction, and were also imposed on Sound Transit construction.

- **Retain emergency access to the UWMC from Pacific Street.** The existing driveway to the hospital's emergency unit is located off Pacific Street. Access to and from both directions on Pacific Street must be maintained.

- **Signalize driveway at Montlake Boulevard/Wahkiakum Lane.** Increased capacity across the Ship Canal and increased volumes Montlake Boulevard **would require that the intersection be signalized.**

- **Provide bicycle parking displaced by removal of the Montlake Flyer Stop.** It is expected that removal of the flyer stop will increase bicycle parking in the vicinity of the Sound Transit station.

- **Provide for additional event management staff during construction.** Construction adjacent to Husky Stadium will create confusion for vehicular and pedestrian access. Additional event management and traffic control staff will likely be needed.

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December 23, 2008

Governor Chris Gregoire &
Joint Transportation Committee
Olympia, WA 98504

RE: SR 520 Mediation Position Favoring Alternative L with Modifications

Dear Governor Gregoire and Joint Transportation Committee Members:

The Greater Seattle Chamber of Commerce believes that the SR 520 replacement project is critical to our region's economic vitality and the current structure presents a significant risk of structural failure. This important project requires decisive leadership and an expedited schedule with adequate funding and construction beginning as soon as possible.

This letter represents the Greater Seattle Chamber's response to the following questions posed to the constituents of the SR 520 Westside Interchange process. Our letter will become part of the last element of the Project Impact Plan.

- Which West Side interchange option A, K or L do you prefer and why?

- Are there changes that could be made to the other options that would make those options more acceptable to you?

Consistent with earlier correspondence, the Greater Seattle Chamber of Commerce supports the expandable six-lane alternative that includes HOV lanes and the improvement of the Westside Interchange capacity at Montlake and I-5. We believe consensus has been reached on the major aspects of this replacement: Eastside work, the Lake Bridge, Foster Island area, Portage Bay Viaduct and I-5 Connection and Lids. From our point of view, all three interchange alternatives in the Montlake area have been thoroughly studied and preserve neighborhood livability while providing needed SOV, HOV, and freight capacity for today and the future.

The Greater Seattle Chamber conducted a thorough and inclusive process and has been an active participant in the 520 Mediation. We represent a broad constituency of member businesses from throughout King County. We have continuously informed and discussed the 520 process with our Transportation Committee and Board of Trustees.

Alternative L best balances capacity, transit, community and economic considerations. This alternative creates a well-designed structural footprint, improves transit connections, and delivers the best mix of traffic mitigation for Lake Washington Boulevard and Montlake. We recognize that L is not the least expensive, but it best accomplishes the objectives set by the Legislature.

Alternative K is not feasible due to its exorbitant cost, and troublesome grades and sight lines, as well as and other unknowns. Alternative A appears less costly and less impactful on the University of Washington during construction, but the traffic data shows lasting degradation of capacity and travel times.

We have not been persuaded to the reduction of access to Lake Washington Boulevard as argued in Alternative A. Furthermore, we would seek inclusion of K's key hole connection benefits when finalizing L's design.

Serious reservations remain about the potential effects on the University of Washington. We understand the University's concerns regarding alternatives that feed additional traffic directly onto Pacific Avenue and the implications for current and future land use. The University of Washington is a major economic driver in our region. Reasonable mitigation measures need to be developed for both during and after construction.

We also ask that the preferred design anticipate and allow for future capacity improvements. This particularly relates to connections to the ST University Link Station and development to the north, including University Village and Seattle Childrens' Hospital. This could also include the widening of Montlake Boulevard North to University Village, a feature common to all alternatives.

In conclusion, the economic vitality of the Puget Sound area relies on dependable infrastructure. Alternative L provides the right balance of capacity and transit improvements to accommodate future growth. The replacement of the 520 Bridge is of paramount importance to the entire Puget Sound region. The Greater Seattle Chamber of Commerce appreciates the opportunity to state its view on this critical matter.

Sincerely,

Mark A. Weed
Greater Seattle Chamber of Commerce
SR 520 Mediation Representative

Steve Leahy
President & CEO
Greater Seattle Chamber of Commerce

Section 10 – Appendices

10.1 Community Interest Tables A, K, & L

10.2 Mediation Chronology

10.3 Potential TDM Measures

10.4 Wetland Mitigation Summary of Potential Sites

10.5 Annotated Bibliography of Reports and Expert Studies consulted during the Mediation Process

Appendix 10.1 Community Interest Tables A, K, & L

Appendix 10.1: Option A, K, and L Community Interest Tables

The following tables summarize responses collected by mediation participants relating to how a specific option meets community Interests as well as applicable comments from participants to the identified community interests.

Option A: Design		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Minimize the scale and project footprint	• Reduces footprint by elimination of SR 520 flyer-stop. • Adds westbound left hand direct Transit ramp. Right hand eastbound ramp with transit bypass merges with mixed traffic.	• Only addresses westbound direction for transit - eastbound in mixed traffic.
Create an aesthetically pleasing people-oriented design and respectful of its context – historic urban fabric in an iconic natural landscape.	• Restores the integrity of the Washington Park Arboretum & Lake Washington Boulevard as a park drive. • Focuses on improving transit ridership and reduction of single occupancy trips.	• Treatments for low volume roadways • No ramps to Washington Park Arboretum (Lake Washington Blvd).
Create something to be proud of.		
Utilize good urban design.	• Proposes a design competition for Portage Bay and Montlake Cut bridges. • Westside design shall be developed with a citizen's design advisory committee. • Drainage ponds in McCurdy Park should be designed for	• Stormwater treatment facilities designed to code, operated with best management practices. • Develop a plan and assess site conditions for appropriate hazardous materials storage, use BMP.

Option A: Design		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
	visual and educational use, in harmony with the surrounding environment. Where the opportunity arises, the design should consider and allow for use by migratory birds.	
Consider future generations.	• Reduces traffic through the Washington Park Arboretum by eliminating the existing Lake Washington Boulevard ramps.	• Have endangered species plan for protection and preservation in place prior to construction.
Create a sustainable solution.	• Protects "class 1" wetlands. • Preserves stream and natural ground water flow.	• Stormwater treated using BMPs. • Remove invasive species brought in from construction. • No indirect effects shall be allowed to impact endangered fish species. • 3 to 5 years post project, survey habitat to determine impact, remedy if adverse. • I-405 precedent, SR 520 will participate in habitat enhancement / protection projects.
Utilize corridor travel demand efficiency tools, including tolling.	• Recommends development of a Corridor Management Agreement.	• CMA is also a mitigation action • Include methods such as signal timing, active traffic

Option A: Design		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
		management.
Look beyond the pavement and the corridor.	• No expansion or widening of Montlake Boulevard NE north of University Station or NE Pacific Street.	• Recommends CMA cover array of topics, including land use.
Include the needs of the region in 50-100 years.		
Protect communities, the Washington Park Arboretum and the University of Washington campus with context sensitive corridor designs.	• Places emphasis on University of Washington Campus and Hospital, making the area people and transit (LRT) friendly. • Uses existing corridor and ramp sites to maintain similar traffic patterns. • Removing Lake Washington ramps makes area available for parks.	• If recommended by review panel, quiet pavement shall be used on SR 520 mainline and ramps.

Option A: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Avoid, minimize, or mitigate environmental impacts – air, water, land, and animal	• Minimizes environmental impacts by maintaining existing corridor footprint. • For the Washington Park Arboretum, keep the stream and ground water flow intact.	• Enhancement or mitigative action to restore or enhance environment surrounding construction areas.
Offset indirect and cumulative environmental impacts.		• Long term monitoring and use restoration or replacement if necessary • Part of long term corridor management agreement.
Reduce pollution from idling vehicles.		• Emphasis on increasing moving people transit/HOV/and goods, which is common to all options.
Enhance the environment – air, water, carbon (green house gas), and biodiversity – through baseline and outcome audits.		• Community reports from WSDOT are important part of the outcome - at least annually.
Protect the wetlands from direct, indirect and cumulative impacts.	• Preserves existing wetland areas around Foster Island, Marsh Island, McCurdy Park, and Washington Park Arboretum.	
Protect Endangered Species Act (ESA)		

Option A: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
species.		
Protect salmon in and out migration and spawning areas.		
Understand implications for ESA – avoid and minimize and mitigate.		
Protect wildlife.		
Protect the health of the Union Bay and Lake Washington.	• Fish and wildlife habitat and migratory patterns will be protected using the best management practices and damage to species and habitat will be avoided, minimized, mitigated or repaired. • For Lake Washington, preserves existing wetland areas around Foster Island, Marsh Island, McCurdy Park, and Washington Park Arboretum.	
Reduce stormwater pollution from vehicles using the corridor.		
Narrow the footprint as much as possible.	• Minimizes impact to Marsh Island	

Option A: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Minimize noise from the corridor.	• Recommends measures that reduce road noise in the corridor - follow Acoustics ERP recommendations	
Minimize negative visual impacts to the surrounding scenic and recreational areas and neighborhoods.	• Provide low profile mainline roadway. • Removes all Washington Park Arboretum ramps.	• No advertising signs except for TDM and transit. • Remove temporary bridges before the replacement bridge opens for traffic. • Remove graffiti promptly.
Protect the scenic views from the corridor.		• Do not destroy historic Lake Washington Boulevard near MOHAI. • No noise walls by Madison Park since community objected.
Protect or enhance parking opportunities.		
Be consistent with the State Growth Management Act, adjacent cities' relevant adopted plans and policies and the PSRC 2020 vision.	• Corridor management agreement will monitor lane use and transport on SR 520 to be consistent with regional policies.	
Serve neighborhoods effectively – transportation, design and impact mitigation.		• Improve information systems on transit schedules, routes when University Station opens.

Option A: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Reduce local street congestion related to the bridge.	• 2nd Montlake bridge adds additional capacity	
Maintain current access points for neighborhoods.	• Ramps at Montlake Boulevard E, maintained and lanes added	• Lake Washington Boulevard ramps removed.
Maintain and enhance local environment and communities.		
Decrease use of local roads as on-ramps.		• Channelization and new signage help to reduce bottlenecks at Montlake.
Decrease potential for additional traffic on local arterials as an alternative to the bridge.	• Adds additional capacity westbound auxiliary lane to Portage Bay Bridge to reduce backups that could cause diversions.	
Reconnect neighborhoods separated by SR 520.		
Minimize lighting impacts.		• Shield freeway lights from adjacent communities and users.
Produce a solution that balances all needs of each interest group.	• Aesthetics on Portage Bay Bridge, take to Design Review by Seattle Design Commission.	

Option A: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Ensure consistency with guidance from the legislature.	Option represents the lowest cost improvements that meet community interests.	
Develop a solution that meets all local, state and federal regulatory requirements.		
Blend community vitality with regional responsibility.		
Integrate with other existing projects and plans.		
Protect existing agreements/solutions (ex. Eastside).		

Option A: Transit and Transportation		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Provide convenient access to transit and high occupancy vehicle options to reduce single occupancy trips.	• Improves transit service and facilities in the vicinity of the Montlake Multimodal Hub. • Constructs 2nd parallel Montlake Cut Bridge a westbound off-ramp with transit priority/carpool lanes and accords transit transit/carpool priority on eastbound ramps.	• Implement toll strategies to encourage transit and HOV 3+.
Optimize the multi-modal transit system.	• Improves transit service and facilities in the vicinity of the Montlake Multimodal Hub. • Retains local bus stops on Montlake Boulevard between SR 520 and Pacific Street. • Dedicated off-ramp for transit from westbound SR 520 to northbound Montlake Boulevard. • Promotes aggressive TDM strategies encouraging transit and non-automobile travel.	• Recommends transit priority improvements and signal priority activation where possible. • Support alternate mode strategies such as game-day / event shuttle services and rideshare programs. • Supports enhanced facilities for bicycles, such as wayfinding and bike racks/storage facilities within 2 miles of the corridor.
Provide transit connectivity, access and ease of movement.	• Bus preference lanes on Montlake Boulevard to speed transit. • Bus stops convenient to intermodal connections,	• Post current toll rates on-line and at highway access points.

Option A: Transit and Transportation		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
	including Husky Stadium Station. • Improves speed and reliability for transit by adding transit priority and installing a dedicated westbound transit off-ramp at Montlake Interchange. • Preserve local bus stops south of Montlake cut.	
Integrate local and regional transit service.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center and University Station.	
Accommodate fast, reliable, predictable and well integrated local and regional transit.	• Recommends development of a Corridor Management Agreement (CMA) • Segregate/Align Montlake Boulevard traffic between Pacific Street and Montlake Interchange. • Provides additional transfer location between Montlake Interchange and Pacific Street.	• Construct 2nd Montlake Cut Bridge with install transit priority. • Install Transit Signal Priority (TSP) at intersections to favor transit movements. • Implement ITS improvements in the corridor (VMS – real time traffic updates, CCTV, etc).
Provide easy, convenient and accessible transfers – bus to bus, bus to rail.		
Improve accessibility for people and	• Recommends aggressive TDM	• Consider signal changes at

Option A: Transit and Transportation		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
goods – locally and regionally.	actions including ridesharing, public education programs, parking cash outs, etc to encourage transit and non-automobile travel. • Recommends a Corridor Management agreement focusing on land use actions and activities promoting transit friendly development.	Montlake Boulevard / Wahkiakum Lane to favor Montlake Boulevard flow. • By promoting transit, helps to reduce SOV trips. • Recommends developing a plan for bicycle parking displaced by removal flyer stop.
Provide integrated multimodal connections – locally and regionally.	• Improves transit service and facilities in the vicinity of the Montlake Multimodal Center. • Dedicated bus ramp from SR 520 to Montlake Boulevard-northbound improves transit connections.	• ST to provide bicycle parking displaced by removal of the Montlake Transit Flyer Stop at University Station.
Ensure a safe sustainable infrastructure that works.	• Second Montlake Cut Bridge provides additional space for bicycle and pedestrian movements. • Retain emergency access to the UWMC from Pacific Street	• Wider sidewalk provided with 2nd Montlake Cut Bridge. • Constructing additional grade separated crossing for pedestrians over Pacific St to UW Hospital is an option. • Recommends traffic calming measures where appropriate on residential streets, including

Option A: Transit and Transportation		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
		maintaining parking.
Reduce traffic congestion.	• Constructs 2nd Montlake Cut Bridge to provide additional capacity between UW and SR 520. • Reduces traffic through the Washington Park Arboretum. • Increased signage to differentiate traffic in lanes (early action) on Montlake Boulevard north of SR 520. • Provides two-lane on-ramp with westbound auxiliary lane from Montlake Boulevard to I-5.	• Recommend installing video surveillance to monitor system incidents and capture violators. • Recommends expanded restrictions on bridge openings during peak periods and during major events.
Minimize long-term unavoidable effects.	• Provide transit priority to favor transit and reduce SOV use.	• Retain on-street parking to the greatest extent possible. • North Seattle traffic volumes. • Reduce Arboretum impacts.
Reduce vehicle miles traveled.	• Recommends TDM strategies, such as variable pricing, to reduce VMT.	• Recommends, no tolling of transit, school or private buses. • Tolling should encourage high vehicle usage 3+ minimum. • Toll collection shall not delay traffic flow.

Option A: Parks		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Protect the park system, green belt and open spaces.	• Maintains McCurdy Park, East Montlake Park, and enhances the Washington Park Arboretum.	• Retain Lake Washington Arboretum waterfront trail. • Drainage ponds in McCurdy Park shall be designed for visual and educational use.
Meet FHWA 4f requirements to avoid parks and open space, unless there is no other alternative.	• An approach that is environmentally sound and recognizes the impacts on the Washington Park Arboretum, our waterways fish and wildlife and global greenhouse gas issues.	• Lake Washington Boulevard is park property, not a city street. • Design may take no park land, wildlife refuge, or NOAA Science Center if there is a feasible alternative. • No net loss of publicly held lands, replace within vicinity of the project.
Promote trail connections to adjacent parks.		• Need to integrate the SR 520 new trails with City of Seattle's existing pedestrian and bicycle trails.
Connect the parks to create a greenbelt.		
Protect the woody plant population impacted by air population.		• Relocate rare species if possible in the way of construction. • No net tree loss.
Preserve Marsh Island, Foster Island and	• Does not impact these areas beyond that required for SR 520	

Option A: Parks		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Duck Bay.	widening.	
Preserve the Washington Park Arboretum's role as an urban oasis, new gardens and entry, and tranquility.	• Removes ramps to Lake Washington Boulevard. • Does not propose any additional disruption to the area beyond that necessary for the widening of the SR 520 roadway itself.	
Minimize the amount of traffic passing through the Washington Park Arboretum.	• Disconnects Lake Washington Boulevard ramps from SR 520. • Use tolling, traffic calming measures and other TDM strategies to limit automobile use of this area.	• Minimize any increase in additional traffic through the Washington Park Arboretum and adjacent neighborhoods.
Create a northern gateway to the Washington Park Arboretum.		

Option A: University of Washington Campus		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Improve the campus.		
Accommodate future growth.	• Improves transit service and facilities in the vicinity of the Montlake Multimodal Center. • Transit Service should be subsidized from tolling revenues.	
Improve mobility for people and goods.		• Lower Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover
Protect all view sheds, particularly the Rainer Vista view.		• Lower Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover
Preserve the campus' role in the neighborhood for open space, park space and access to waterfront activities.		• Depress and lid the Montlake Boulevard / Pacific Street intersection to accommodate unencumbered, at-grade pedestrian crossings
Protect the short-term and future mission and the interests of the University, its students and its employees.		• Maintain emergency access to UW Hospital at all times. • Valet parking for disabled residents if parking is disrupted

Option A: University of Washington Campus		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
		by construction. • Implement dust control practices. • Minimize noise and vibrations. • Do not widen Montlake Boulevard NE north of Montlake Multimodal Hub or Pacific Street west of its intersection with Montlake Boulevard NE.

Option A: Boating Opportunities		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Preserve existing vessel and floating home moorages.	• Maintains canoe and kayak access to Arboretum from University of Washington.	
Protect regional boating recreational activities.		
Protect access to the waterfront and adequate depth and height for boat passage.		
Protect the navigable waterways.		
Improve vehicle, bicycle and pedestrian access to bating facilities and activities.		

Option A: Schedule and Costs		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Complete the project in a timely schedule.	• Shorter structure significantly reduces time to construct. • Montlake area construction less than other Options. • Above ground and at grade construction less risky.	
Consider timing to avoid or minimize environmental impacts – ex. Sample in/out migration and spawning patterns.	• Reduces traffic in Arboretum. • Reduces environmental impact by minimizing construction in wetlands and smaller footprint. • Minimize cut and fill and subsequent impacts.	• Recommends mitigation for the use, transfer and storage of hazardous materials in sensitive areas. • Supports BMP for control and reduction of construction related sediment and water contamination.
Develop a cost-effective solution that truly solves the problems.	• See notes on existing footprint (as above). • Meets "least-cost" state statute.	
Maximize the use of the mitigation budge by early acquisition of mitigation sites.		
Control expenses.	• Does not include the Foster Island berm, ramps to Lake Washington Boulevard, eastbound HOV Direct access, or	

Option A: Schedule and Costs		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
	lid at Montlake Boulevard and Pacific Street. • Reduced construction risks and less overall construction.	
Develop a solution the state can fund.		• Meets least cost statute.
Develop a project financial plan based on realistic estimates of implementing tolls before, during and after construction.		

Option A: Bicycle and Pedestrian		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Provide bicycle and pedestrian access and connectivity with the least environmentally damaging increase in wetland fill.		
Consider the bicycle and pedestrian system locally and regionally.	• Provide bicycle parking displaced by removal of the Montlake Transit Flyer Stop.	
Create a safe and more inviting environmental for pedestrians and bicycles on 520 and surrounding areas and connections with the trail system.		

Option A: Regional and Statewide System		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Consider the regional system as a whole for connectivity (transit bicycles, pedestrians, etc.) and the implications one solution has on other parts of the system (ex. I-90 and SR 520).	• Implement Corridor Management Agreement (CMA) and Multimodal CMA (MCMA)	
Integrate with the regional freight system.	• Maintains existing routes for local and regional freight traffic.	
Promote regional vitality and competitiveness.		
Enhance the connection between employment centers, areas of vitality and homes.	• Corridor Management Agreement focuses on land use actions to promote transit friendly and non-automobile development.	

Option A: Construction Effects		
Identified Community Interests*	**How Option A Meets Community Interests**	**Comments**
Minimize construction impacts, temporary roads, construction staging sites, piers/pilings, docks, barges, etc.	• Noise length of project lower profile of bridge, temp bridge. • No impacts to north of canal communities and/or widening local arterials. • Use construction related erosion control BMPs. • Provide for additional event management staff during construction.	• Minimize dust and noise impacts on the University of Washington Medical Center during construction • No construction on Husky football game days. • Do not use Montlake playfield for construction staging. • Noise mitigation measures such as enclosures or walls surrounding noisy equipment, mufflers on engines, and other methods should be used.
Maintain access to and from neighborhoods.	• Keep the Hop-In Grocery open during construction. • Less construction activities in area surrounding corridor, provides increased / available staging opportunities.	• No contractor / employee parking shall be allowed on neighborhood streets during construction. • Consult affected neighborhoods in developing a construction mobilization plan.

Option K: Design		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Minimize the scale and project footprint	• Reduces the footprint of the Portage Bay Viaduct. • Preserves the context sensitive design experience. • Enhances travel demand options. • There will be no widening of Montlake Boulevard NE north of the Husky Stadium Sound Transit Station nor of NE Pacific Street west of its intersection with Montlake Boulevard NE.	• On-ramp impact would require queue spill back meter and then adjust to flush traffic (WSDOT not likely to allow this) • If the on-ramp metering is adopted, the metering may not impair access to the UW Medical Center.
Create an aesthetically pleasing people-oriented design and respectful of its context – historic urban fabric in an iconic natural landscape.	• Creates a pleasing arch type Portage Bay Bridge and improves views. • The Westside design should be implemented in consultation with a citizen's advisory committee, which will include the Design Advisory Group and representatives from the community.	
Create something to be proud of.	• Roanoke Bridge should be arched.	

Option K: Design		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Utilize good urban design.	• Enhance and preserve urban green space. • Drainage ponds in McCurdy Park should be designed for visual and educational use, in harmony with the surrounding environment. Where the opportunity arises, the design should consider and allow for use by migratory birds. • Maintain the connectivity of Upper Campus with the medical school complex.	
Consider future generations.	• Retain future building opportunities for University of Washington on E-11/E-12 lots	
Create a sustainable solution.		
Utilize corridor travel demand efficiency tools, including tolling.		• No fragmented, segmented tolling, e.g. no additional toll for going southbound through the Arboretum.
Look beyond the pavement and the corridor.	• Tread lightly on Foster Island and other Indian archeological sites. An archeological study of all affected areas should be conducted before any	

Option K: Design		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
	construction begins.	
Include the needs of the region in 50-100 years.	• Provide for increased mobility to and through the area, especially for transit.	
Protect communities, the Arboretum and the University of Washington campus with context sensitive corridor designs.	• Protect rare species	• Reduce impact of mainline bridge traffic through the Arboretum. • Rare species in the Washington Park Arboretum in the way of construction should be relocated if possible.

Option K: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Avoid, minimize, or mitigate environmental impacts – air, water, land, and animal	• The tunnel under the cut preserves the environment by reducing the impact on wetlands. • Stormwater containment improves water quality.	
Offset indirect and cumulative environmental impacts.		• Provide efficient design for all forms of people movement.
Reduce pollution from idling vehicles.	• Provides faster transit connection from the Eastside with I-5/SR 520 HOV connection. • Allows for more efficient metering by increasing the number of locations to meter.	• Keep speeds up, especially in the tunnel. • Need to pay close attention to tunnel depth to limit grades as much as possible.
Enhance the environment – air, water, carbon (green house gas), and biodiversity – through baseline and outcome audits.		
Protect the wetlands from direct, indirect and cumulative impacts.	• Neither shading nor artificial light should foster invasive species into the wetlands or park lands	• Provides an opportunity to plant wetlands on top of SR 520 underpasses. • Encourages quick building

Option K: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
	• Remove invasive species • No indirect effects should be allowed to impact endangered fish species.	methods to allow for maximum salmon passages.
Protect Endangered Species Act (ESA) species.	• A plan for preservation and protection of endangered species should be in place before construction starts, and should be developed in conjunction with the federal regulatory agencies and all of the Indian tribes.	
Protect salmon in and out migration and spawning areas.		• Underpasses are shallow and salmon pass close to the surface.
Understand implications for ESA – avoid and minimize and mitigate.		
Protect wildlife.	• The project will participate in habitat enhancement and protection projects identified by local jurisdictions and watershed groups. • For all Options, consider barging, and evaluate impacts to migrating young salmon. • Provides a green berm through Foster Island for wildlife habitat.	• At an interval after construction, such as 3 to 5 years, a survey and evaluation of the impact of the project on avian and fish life, and if significant adverse affects are found, remedies should be implemented.

Option K: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Protect the health of the Union Bay and Lake Washington.	• Tunnel will allow wetlands to be rebuilt. • Streams, natural groundwater and rainwater flowing through the Arboretum and McCurdy Park should continue to flow freely. • Water quality from the shorelands to Lake Washington should be improved, with contaminants decreased.	
Reduce stormwater pollution from vehicles using the corridor.	• Stormwater should be treated by the best management practices. Sediment should be prevented from entering water.	
Narrow the footprint as much as possible.	• Avoid the use of Temporary bridges as much as possible.	.
Minimize noise from the corridor.	• Quiet pavement should be laid on SR 520 and on-and off ramps.	• Need to use other Noise mitigating techniques suggested by Acoustics' ERP at the entrance and exits of lids, the noise at the underside of viaducts/over water structures, absorptive materials on the inside of barriers.

Option K: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Minimize negative visual impacts to the surrounding scenic and recreational areas and neighborhoods.	• Roanoke Lid designed to decrease impact on the community. • Connects the Arboretum to Montlake Park.	• Has the least impact on local congestion.
Protect the scenic views from the corridor.	• Keeps roadway facilities low to preserve view corridors. • There should not be commercial advertising, unless such notices implement a traffic demand management agreement or encourage the use of transit.	• Graffiti needs to be removed promptly per the Seattle City Council resolution on SR 520.
Protect or enhance parking opportunities.	• Retains Montlake parking lot for usage	
Be consistent with the State Growth Management Act, adjacent cities' relevant adopted plans and policies and the PSRC 2020 vision.		• Increases people's mobility to and from SR 520 from Westside neighborhoods but improving capacity in the Montlake Area.
Serve neighborhoods effectively – transportation, design and impact mitigation.	• Examine methods for reducing construction traffic.	• Consider direct access for construction workers to construction sites. • All Options: Examine ways to transport people to construction sites and storing worker

Option K: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
		vehicles elsewhere.
Reduce local street congestion related to the bridge.		• Relieves local traffic congestion on City streets and arterials, reduces cut-through traffic by offering more predictable travel times.
Maintain current access points for neighborhoods.		
Maintain and enhance local environment and communities.	• Constructs Foster Island berm to connect to Lake Washington Arboretum for a better experience – logical connections of the green lids will create more green space.	
Decrease use of local roads as on-ramps.		• Any increase in traffic should be minimized. • Preferably, the volume of motor vehicle traffic through the Arboretum should be reduced, including non-arterials such as Boyer Ave East. • Also decrease use of local roads as off-ramps.
Decrease potential for additional traffic on local arterials as an alternative to the	• Reduces congestion on local arterials by separating local	

Option K: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
bridge.	versus highway traffic thereby reducing cut through traffic.	
Reconnect neighborhoods separated by SR 520.		
Minimize lighting impacts.	• Install same Olmstead-type lighting on Montlake, Roanoke and I-5 lids.	
Produce a solution that balances all needs of each interest group.	• Neighborhoods most closely adjacent concur with the plan – it reduces footprint, noise, bulk and congestion.	
Ensure consistency with guidance from the legislature.	• Consistent with intent to establish high capacity transit connections (all Options)	• Provides direct connection to the University of Washington Station.
Develop a solution that meets all local, state and federal regulatory requirements.		
Blend community vitality with regional responsibility.		
Integrate with other existing projects and plans.	• Improves local and regional bus access to University of Washington and University	

Option K: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
	Station. • Does not construct new drawbridge which would add to traffice and transit delays.	
Protect existing agreements/solutions (ex. Eastside).		

Option K: Transit and Transportation		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Provide convenient access to transit and high occupancy vehicle options to reduce single occupancy trips.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center	• Provides flexible and physically direct access for transit in the Montlake Multimodal Hub area with the depression of Pacific St/Montlake Boulevard and lid, providing grade separated pedestrian movements.
Optimize the multi-modal transit system.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Hub. • Addition of tunnel under Montlake Cut eliminates delay to transit from existing bascule bridge operations.	
Provide transit connectivity, access and ease of movement.	• Constructs direct access ramps from SR 520 to new Montlake Cut tunnel.	• Lower Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover • Depress and lid the Montlake Boulevard and Pacific Street intersection to accommodate unencumbered, at-grade pedestrian crossings
Integrate local and regional transit service.	• Improve transit service and facilities in the vicinity of the	

Option K: Transit and Transportation		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
	Montlake Multimodal Hub.	
Provide fast, reliable, predictable and well integrated local and regional transit.		• Constructs a tunnel under the Montlake Cut, eliminating delay from drawbridge for some movements between SR 520 and Pacific Street.
Provide easy, convenient and accessible transfers – bus to bus, bus to rail.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center. • Provides a grade separated bicycle/pedestrian crossing of Pacific and Montlake Boulevard intersection.	
Improve accessibility for people and goods – locally and regionally.		• Signalize driveway at Montlake Boulevard/Wahkiakum Lane (access to Montlake Parking lot).
Provide integrated multimodal connections – locally and regionally.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Hub.	• Lower Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover. • Replace bicycle parking displaced by removal of the Montlake Transit Flyer Stop.
Ensure a safe infrastructure that works.	• Retain emergency access to the UWMC from Pacific Street.	

Option K: Transit and Transportation		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Reduce traffic congestion.	• Do not degrade operations on Montlake Boulevard between Pacific Street and Wahkiakum Lane	• Provide two-lane on-ramp with auxiliary lane to westbound SR 520.
Minimize long-term unavoidable effects.		
Reduce vehicle miles traveled.	• Go transit, tolling and telecommuting as part of TDM solutions to manage traffic in the corridor and coming to the University area.	

Option K: Parks		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Protect the park system, green belt and open spaces.	• The design should take no park land or wildlife refuge or the NOAA Science Center or its land when there is a feasible alternative. • Protects and enhances – lids, Arboretum, etc. • Reconnects Foster Island. • Presents/creates a northern Arboretum entrance.	• Lake Washington Boulevard is a park property, not a city arterial.
Meet FHWA 4f requirements to avoid parks and open space, unless there is no other alternative.		
Promote trail connections to adjacent parks.	• Continuous greenbelt from Arboretum to Portage Bay with trail connections to University of Washington, McCurdy Park and Roanoke Park. • Good path connections.	
Connect the parks to create a greenbelt.		
Protect the woody plant population		

Option K: Parks		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
impacted by air pollution.		
Preserve Marsh Island, Foster Island and Duck Bay.	• Creates additional green area with Foster Island Berm.	• Additional green space enhances adjoining islands as a nature preserve.
Preserve the Arboretum's role as an urban oasis, new gardens and entry, and tranquility.	• Preserve the Arboretum as an educational facility.	
Minimize the amount of traffic passing through the Arboretum.	• Option to restrict turning movements at Boyer and Interlocken into northern half of Arboretum.	• FHWA – 4F impacts in McCurdy Park and Arboretum. • Minimize traffic increases. Preferably, the volume of motor vehicle traffic through the Arboretum should be reduced.
Create a northern gateway to the Arboretum.	• Gateway elements exist today.	

Option K: University of Washington Campus		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Improve the campus.	• Enhances pedestrian and cyclist access. • Compliments Rainier Vista concepts of University of Washington	• Reduces Pacific Street and Montlake Boulevard congestion. • Works best with Rainier Vista concepts of University of Washington.
Accommodate future growth.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center.	• Retain future building opportunities on E-11/E-12 lots • Replace parking from E-11/E-12 displaced by construction.
Improve mobility for people and goods.	• Retain pedestrian access to Husky Stadium from new replacement parking facilities in E-11/E-12 • Provides safe above ground walkways over Montlake Boulevard and easy walking to waterfront activities without crossing at stoplights.	• Lower Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover. • Provide direct access from Pacific Street Extension to parking replaced in E-11/E-12 lots.
Protect all view sheds, particularly the Rainer Vista view.	• Sunken roadways of Option K works to do this.	• Depress and lid the Montlake Boulevard and Pacific Street intersection to accommodate unencumbered, at-grade pedestrian crossings • Lower Pacific Place at Rainier Vista to improve pedestrian

Option K: University of Washington Campus		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
		movements and accommodate transit layover
Preserve the campus' role in the neighborhood for open space, park space and access to waterfront activities.		• Waterfront activities and historic buildings impacted. • Relocate the Waterfront Activities Center, moorage docks and Climbing Rock. • Depress and lid the Montlake Boulevard and Pacific Street intersection to accommodate at-grade pedestrian crossings
Protect the short-term and future mission and the interests of the University, its students and its employees.	• Examine strategies for working with University of Washington to increase parking for SOV trips made by staff and faculty. • The replacement property should be identified and acquisition should be underway before construction commences.	• Encourage the University to charge more for parking for staff and faculty. • Property taken from the University of Washington shall be replaced in kind, and to the extent practicable, in the same vicinity and of equal usefulness for educational purpose. • Implement an effective program of dust control and airborne particles around the University Hospital. • Noise and vibrations should be

Option K: University of Washington Campus		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
		controlled so that equipment, vehicles and construction activities do not affect delicate surgeries, diagnostic equipment or other hospital operations.

Option K: Boating Opportunities		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Preserve existing vessel and floating home moorages.	• The Portage Bay Viaduct remains within the state right of way. This preserves irreplaceable moorage. • This alignment provides space for opening day. • Stormwater containment preserves water quality. • A tunnel under the cut allows for no change in boat traffic.	
Protect regional boating recreational activities.	• Heights give good access with Option K.	
Protect access to the waterfront and adequate depth and height for boat passage.	• Support columns should be located to accommodate recreational navigation. Canoe and kayak access to the Arboretum from the University of Washington Waterfront Activities Center maintained for all Options.	
Protect the navigable waterways.		
Improve vehicle, bicycle and pedestrian	• There is an alternate route to the tunnel that allows for the routing	

Option K: Boating Opportunities		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
access to boating facilities and activities.	of freight two ways. • Provides two ways to get to the Shelby Hamlin area.	

Option K: Schedule and Costs		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Complete the project in a timely schedule.		
Consider timing to avoid or minimize environmental impacts – ex. Sample in/out migration and spawning patterns.		
Develop a cost-effective solution that truly solves the problems.	.	
Maximize the use of the mitigation budget by early acquisition of mitigation sites.		
Control expenses.		
Develop a solution the state can fund.		
Develop a project financial plan based on realistic estimates of implementing tolls before, during and after construction.		

Option K: Bicycle and Pedestrian		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Provide bicycle and pedestrian access and connectivity with the least environmentally damaging increase in wetland fill.	• Works to provide bicycle traffic solution. Less congestion. Better access to Arboretum. Much safer solution. • Provides grade separated crossing at Montlake Boulevard for pedestrians and cyclists.	• Depress and lid the Montlake Boulevard and Pacific Street intersection to accommodate unencumbered, at-grade pedestrian crossings • Agree it finally adds bike and pedestrian paths promised since 1978!
Consider the bicycle and pedestrian system locally and regionally.	• Improved bicycle/pedestrian safety, convenience and connectivity along SR 520, and access to Foster Island, to the Arboretum, through the Montlake neighborhood, to the Burke-Gilman trail, to University of Washington and the light-rail station, across the corridor from North to south, through Montlake, North Capitol Hill, Roanoke Park, and to Eastlake over I-5.	• Provide bicycle parking displaced by removal of the Montlake Transit Flyer Stop .
Create a safe and more inviting environmental for pedestrians and bicycles on 520 and surrounding areas and connections with the trail system.	• Better than it is today. Safer and more visually pleasing. • Grade separated crossing of Pacific Street and Montlake Boulevard intersection,	• The Arboretum waterfront trail should be retained; and, if affected, those parts affected should be replaced. • Lower Pacific Place at Rainier

Option K: Bicycle and Pedestrian		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
	connecting Montlake Multimodal Hub, UW Light Rail Station, and University of Washington Campus.	Vista to improve pedestrian movements and accommodate transit layover

Option K: Regional and Statewide System		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Consider the regional system as a whole for connectivity (transit bicycles, pedestrians, etc.) and the implications one solution has on other parts of the system (ex. I-90 and SR 520).		
Integrate with the regional freight system.		• Provides two ways for trucks to access SR 520.
Promote regional vitality and competitiveness.		• Creates better mobility, which will allow for regional growth. Key employment centers can grow – has more predictable travel time for employees travelling along this corridor.
Enhance the connection between employment centers, areas of vitality and homes.		

Option K: Construction Effects		
Identified Community Interests*	**How Option K Meets Community Interests**	**Comments**
Minimize construction impacts, temporary roads, construction staging sites, piers/pilings, docks, barges, etc.	• We need more information on construction impacts. • This is a problem in all options except retrofit. • On Lake Washington Boulevard and on the Arboretum.	• Explore barging versus trucking for soil removed because of neighborhood noise and congestion impacts – not purely costs. • Minimize dust and noise impacts on the UW Medical Center during construction • Indemnify University of Washington for potential structural damage to Husky Stadium due to tunneling and/or trenching • Indemnify University of Washington for potential structural damage to historic Canoe House
Maintain access to and from neighborhoods.		• Provide for additional event management staff during construction

Option L: Design		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Minimize the scale and project footprint	• Creates a pleasing Portage Bay Bridge and improves views.	
Create an aesthetically pleasing people-oriented design and respectful of its context – historic urban fabric in an iconic natural landscape.	• Provides walking and cycling connectivity east-west along SR 520 corridor and from Washington Park Arboretum to University of Washington.	
Create something to be proud of.		
Utilize good urban design.	• Single point urban interchange (SPUI): full-access interchange.	
Consider future generations.		• Consider adding HOV bypass lanes to bridge to ensure transit travel speed and reliability in the future.
Create a sustainable solution.		
Utilize corridor travel demand efficiency tools, including tolling	• Ramp metering provided along SR 520 corridor. Tolling provided per State decision. • Single point urban interchange (SPUI) provided for traffic exiting SR 520 north to University of Washington and south to access Lake Washington Boulevard.	

Option L: Design		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Look beyond the pavement and the corridor.	• No expansion or widening of Montlake Boulevard NE and NE Pacific.	
Include the needs of the region in 50-100 years.	• Provide for increased mobility to and through the area.	
Protect communities, the Washington Park Arboretum and the University of Washington campus with context sensitive corridor designs.	• Protect rare species. • Places emphasis on University of Washington Campus and Hospital, by providing green space over the Montlake Boulevard and Pacific St intersection. • Restricts traffic into the Arboretum similar to existing.	

Option L: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Avoid, minimize, or mitigate environmental impacts – air, water, land, and animal	• Design options such as SPUI and additional capacity north-south on the Montlake Cut bridge may relieve congestion and reduce greenhouse gases.	• For the Washington Park Arboretum, keep the stream and ground water flow intact. • Avoid harm, or, if unavoidable, limit its extent; first-class wetlands should be protected.
Offset indirect and cumulative environmental impacts.		
Reduce pollution from idling vehicles.	• Provides faster transit connection from the Eastside with I-5/SR 520 HOV connection.	
Enhance the environment – air, water, carbon (green house gas), and biodiversity – through baseline and outcome audits.	• Move traffic efficiently with good signal timing and efficient highway design.	
Protect the wetlands from direct, indirect and cumulative impacts.		
Protect Endangered Species Act (ESA)		

Option L: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
species.		
Protect salmon in and out migration and spawning areas.		
Understand implications for ESA – avoid and minimize and mitigate.		
Protect wildlife.		
Protect the health of the Union Bay and Lake Washington.		
Reduce stormwater pollution from vehicles using the corridor.	• Provides for gravity stormwater collection from Montlake Boulevard to the bridge avoiding additional pumping.	
Narrow the footprint as much as possible.	• Maintains a small footprint across the Portage Bay bridge.	
Minimize noise from the corridor.	• Provide measures that reduce road noise in the corridor.	• Follow Acoustics ERP recommendations.
Minimize negative visual impacts to the surrounding scenic and recreational areas and neighborhoods.	• Provide low profile mainline roadway. • Use of Olmsteadian design to draw design features together to reduce contrast of new	• Add planting boxes to outer elevated roadway to soften the structural impacts of the bridge.

Option L: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
	construction.	
Protect the scenic views from the corridor.		
Protect or enhance parking opportunities.		
Be consistent with the State Growth Management Act, adjacent cities' relevant adopted plans and policies and the PSRC 2020 vision.	• Improves traffic flow through the area.	
Serve neighborhoods effectively – transportation, design and impact mitigation.		
Reduce local street congestion related to the bridge.	• Moves Montlake access to a new bridge from Pacific Street to SR 520.	
Maintain current access points for neighborhoods.		
Maintain and enhance local environment and communities.	• Stormwater containment preserves water quality. • Gravity system eliminates need for additional pumping stations and vaults.	

Option L: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Decrease use of local roads as on-ramps.	• Provides new vehicle storage capacity for SR 520 traffic via a new structure, off local streets.	
Decrease potential for additional traffic on local arterials as an alternative to the bridge.		
Reconnect neighborhoods separated by SR 520.	• Provides lids (similar to all Options) to reconnect communities.	
Minimize lighting impacts.	• Install same Olmstead-type lighting on Montlake, Roanoke and I-5 lids.	
Produce a solution that balances all needs of each interest group.	• Incorporates comments from local interest groups to move SR 520 destined traffic off community streets.	
Ensure consistency with guidance from the legislature.		
Develop a solution that meets all local, state and federal regulatory requirements.		
Blend community vitality with regional responsibility.		

Option L: Neighborhood and Environmental Interests		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Integrate with other existing projects and plans.	• Improves local and regional bus access to University of Washington and the light-rail station there.	
Protect existing agreements/solutions (ex. Eastside).		

Option L: Transit and Transportation		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Provide convenient access to transit and high occupancy vehicle options to reduce single occupancy trips.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Hub.	
Optimize the multi-modal transit system.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center.	
Provide transit connectivity, access and ease of movement.		• Lower Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover • Depress and lid the Montlake Boulevard and Pacific Street intersection to accommodate unencumbered, at-grade pedestrian crossings
Integrate local and regional transit service.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center.	
Provide fast, reliable, predictable and well integrated local and regional transit.		
Provide easy, convenient and accessible transfers – bus to bus, bus to rail.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center.	

Option L: Transit and Transportation		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Improve accessibility for people and goods – locally and regionally.		• Signalize driveway at Montlake Boulevard/Wahkiakum Lane (access to Montlake Parking lot)
Provide integrated multimodal connections – locally and regionally.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center.	• Lower Pacific Place at Rainier Vista to improve pedestrian movements and accommodate transit layover • Provide bicycle parking displaced by removal of the Montlake Flyer Stop
Ensure a safe infrastructure that works.	• Retain emergency access to the University of Washington Medical Center from Pacific Street	
Reduce traffic congestion.	• Do not degrade operations on Montlake Boulevard between Pacific Street and Wahkiakum Lane	• Provide two-lane on-ramp with auxiliary lane to westbound SR 520
Minimize long-term unavoidable effects.		
Reduce vehicle miles traveled.		

Option L: Parks		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Protect the park system, green belt and open spaces.	• Provides improved, safe walking and cycling connections and park areas in the corridor.	
Meet FHWA 4f requirements to avoid parks and open space, unless there is no other alternative.		
Promote trail connections to adjacent parks.	• Trail connectivity north-south between University of Washington and Washington Park Arboretum areas as well as east-west along SR 520 corridor including across Lake Washington.	
Connect the parks to create a greenbelt.	• Improves trail connectivity. • Continuous greenbelt from Washington Park Arboretum to Portage Bay with improved trail connections to University of Washington, McCurdy Park and Roanoke Park.	
Protect the woody plant population impacted by air population.		
Preserve Marsh Island, Foster Island and		

Option L: Parks		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Duck Bay.		
Preserve the Washington Park Arboretum's role as an urban oasis, new gardens and entry, and tranquility.	• Preserve the Washington Park Arboretum as an educational facility.	
Minimize the amount of traffic passing through the Washington Park Arboretum.		
Create a northern gateway to the Washington Park Arboretum.		

Option L: University of Washington Campus		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Improve the campus.	• Enhances walking and cycling connections.	
Accommodate future growth.	• Improve transit service and facilities in the vicinity of the Montlake Multimodal Center.	
Improve mobility for people and goods.	• Retain pedestrian access to Husky Stadium from new replacement parking facilities in E-11/E-12.	
Protect all view sheds, particularly the Rainer Vista view.		
Preserve the campus' role in the neighborhood for open space, park space and access to waterfront activities.		
Protect the short-term and future mission and the interests of the University, its students and its employees.		• Evaluate property impacts at Husky Stadium Parking area. Identify mitigation to address impacts.

Option L: Boating Opportunities		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Preserve existing vessel and floating home moorages.	• The Portage Bay Viaduct remains within the state right of way. This preserves irreplaceable moorage.	
Protect regional boating recreational activities.	• Roadway profile permits access to park by canoe/kayak.	
Protect access to the waterfront and adequate depth and height for boat passage.	• Support columns should be located to accommodate recreational navigation. Canoe and kayak access to the Washington Park Arboretum from the University of Washington Waterfront Activities Center should be maintained.	
Protect the navigable waterways.		
Improve vehicle, bicycle and pedestrian access to bating facilities and activities.		

Option L: Schedule and Costs		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Complete the project in a timely schedule.		
Consider timing to avoid or minimize environmental impacts – ex. Sample in/out migration and spawning patterns.		
Develop a cost-effective solution that truly solves the problems.		
Maximize the use of the mitigation budge by early acquisition of mitigation sites.		
Control expenses.		
Develop a solution the state can fund.		
Develop a project financial plan based on realistic estimates of implementing tolls before, during and after construction.		

Option L: Bicycle and Pedestrian		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Provide bicycle and pedestrian access and connectivity with the least environmentally damaging increase in wetland fill.	• Works to provide walking and bicycle trail connections that reduce impact on wetlands. Examine porous surface alternatives.	
Consider the bicycle and pedestrian system locally and regionally.	• Improved bicycle/pedestrian safety, convenience and connectivity along SR 520, and access to Foster Island, to the Washington Park Arboretum, through the Montlake neighborhood, to the Burke-Gilman trail, to the University of Washington and the light-rail station, across the corridor from North to south, through Montlake, North Capitol Hill, Roanoke Park, and to Eastlake over I-5.	
Create a safe and more inviting environmental for pedestrians and bicycles on 520 and surrounding areas and connections with the trail system.	• Provides safe off-street connections in the corridor and beyond.	

Option L: Regional and Statewide System		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Consider the regional system as a whole for connectivity (transit bicycles, pedestrians, etc.) and the implications one solution has on other parts of the system (ex. I-90 and SR 520).		
Integrate with the regional freight system.		
Promote regional vitality and competitiveness.		
Enhance the connection between employment centers, areas of vitality and homes.		

Option L: Construction Effects		
Identified Community Interests*	**How Option L Meets Community Interests**	**Comments**
Minimize construction impacts, temporary roads, construction staging sites, piers/pilings, docks, barges, etc.	• We need more information on construction impacts.	
Maintain access to and from neighborhoods.		

Appendix 10.2: Mediation Chronology

Appendix 10.2: Mediation Chronology

Date/Event	Highlight/Action
September 11, 2007	
Mediation Meeting - 1	o Identified interests o Produced Operating Protocols o Selected an independent reviewer for tubes and tunnels
October 16, 2007	
Mediation Meeting – 2	o Presented (WSDOT) key points of data developed through the draft EIS process up until the present o Presented (community members) other work done to date – • Communities Forming Agreements on SR 520 • City of Seattle, City Council Resolutions o Presented (Sound Transit, Metro, and WSDOT) an update on the High Capacity Transit Plan o Introduced the independent reviewer for tubes and tunnels: COWI, Casper Paludan-Müller & Poul Marnus Nielsen o Discussed the Health Impact Assessment process o Discussed participants' data needs to develop and select a design Option
November 9, 2007	
Oversight Committee Meeting 1	Key Messages: The mediation will design a six-lane (4+2) facility. Design of six lanes means six; "accommodate" does not mean a design for additional structure beyond six lanes. The Oversight Committee needs to see these elements in any solution offered by the mediation group: - Fiscally constrained; - On schedule for 2012 construction (in particular, tunnel feasibility analysis must not create a delay); - Include transit on the day a new facility opens, linked to the University of Washington light-rail station; - Use existing financial and other data whenever possible; - Mitigation responds to impacts (not a competition between jurisdictions); and - Include TDM strategies.

Appendix 10.2: Mediation Chronology

November 20, 2007	
Mediation Meeting 3	o Presented key messages from the Oversight Committee meeting o Presented (COWI) the independent reviewer's draft report: Tubes across the lake are feasible but not recommended; fatal flaws with tunnel I5/Roanoke section (grades are too steep and inability to make connections) o Developed a list of design options, including: **A.** Redesign the draft EIS Montlake design option to address Seattle City Council resolution elements and draft EIS comments **B.** Redesign the draft EIS Pacific Street design option to address Seattle City Council resolution elements and draft EIS comments **Ci.** Tunnel from the floating bridge to I-5 with no access points in Seattle (see COWI presentation for example) a. Separate two-lane bus tunnel from the floating bridge to the light rail station; remains 50 feet below grade b. Reconfigure I-5 to remove the weave—all entrances/exit on the right side c. Use reclaimed viaduct land for a trail and park **Cii.** Tunnel from the floating bridge to I-5 with distributed access points **D.** Retrofit the current four-lane bridge with a separate two-lane tunnel for transit to the light rail station (separate structure across the lake and then a tunnel from the floating bridge, same as Ci) a. Extend the on ramp at Montlake, eastbound, to create a collector lane that merges traffic onto SR 520 after the Washington Park Arboretum; remove the eastern arboretum on-ramp and create a new on-ramp at the arboretum closest to the current off-ramp that moves traffic into the collector lane b. Retrofit i. jacket columns and fill with cement ii. Secure the draw span (close) to remove the weak point iii. Remove jersey barriers and concrete sidewalks to lighten the bridge to create wider lanes and allow the floating bridge to ride higher in the water c. Cantilever a bicycle/pedestrian lane d. Add aluminum barriers

	e. Phased – phase I retrofit; phase II bus tunnel **E.** A submerged exit/entrance just west of the floating bridge under Union Bay that surfaces at Pacific Street **F.** Second Montlake Cut bridge – design should emulate and reflect, but not copy, the historic bridge a. T intersection for buses exiting SR 520 with a separate turn lane b. Signal timing prioritized for buses c. Extend the turn lanes for buses from Montlake onto Pacific d. Designate lanes for bus and through traffic e. Remove ramps in the Washington Park Arboretum f. Raise the roadway over Foster Island for access beneath g. Lid at Montlake, used partially to create turn pockets **G.** Tunnel and Viaduct – tunnel from the floating bridge under the Washington Park Arboretum with a viaduct through Portage Bay a. Interchange – TBD b. Viaduct – apply Seattle City Council resolution elements to design c. Access ramp from Madison Street **H.** Similar to draft EIS design option with a refined SPUI northeast of Washington Park Arboretum (interchange with two levels—through traffic below, access traffic above with one signal) with a bridge to Pacific street and Lake Washington Boulevard
November 20 - December 18, 2007	
Between Meeting work	WSDOT engineers developed the concepts/options into drawings with similar level of detail
December 18, 2007	
Mediation Meeting 4	o Presented (Transit Agencies) their vision and operational considerations o Discussed options A through G o Introduced/Discussed new options **I.** Retrofit with revised alignment and tunnel to the north of the Washington Park Arboretum with a people mover below ground from flyer stop to University of Washington and a second Montlake Bridge **J.** Interchange between draft EIS options A and B, with a short tunnel, spur to Lake Washington Boulevard with an intersection

	under the mainline, with no Washington Park Arboretum ramps **Agreements:** • Remove C (full tunnel) options – too challenging to build (cost and impacts) • Remove E option (C with bus tunnel to University of Washington) - too challenging to build (cost and impacts)
January 15, 2008	
Mediation Meeting 5	o Discussed/Evaluated/Refined Options G, D, J, and A **Agreements:** • Set aside option D and reconsider if the agreed upon design costs are too much.
January 15 – February 18, 2008	
Between meeting work	*Members contacted constituency to get feed back on Options A through J (excluding C and D since they are off the table)*
February 18, 2008	
Oversight Committee Meeting 2	Key Messages: - Thank you for your hard work to date and keep working - Move forward to design and build a six-lane facility on the west side—four general-purpose lanes and two joint-use HOV/bus transit lanes - Provide options to go forward in the EIS by April 1 - Provide efficient and effective bus linkages to University of Washington light rail station - No more than $3.9 billion budget
February 19, 2008	
Mediation Meeting 6	o Update on Oversight Committee meeting o Discussed/Evaluated/Refined Options G, J, K o Introduced new options • **K.** Tunnel in Washington Park Arboretum & East Montlake Interchange with Tunnel Pacific Street a. East Washington Park Arboretum - Floating bridge no higher than existing with quiet pavement b. Washington Park Arboretum - Tunnel through Washington Park Arboretum (a long tunnel or short berm) c. Montlake – move intersection east of Montlake, under the main line; tunnel (same as J1) under the Montlake Cut and comes up to an intersection at Pacific d. Portage Bay - a narrow, innovative design on the current alignment

Appendix 10.2: Mediation Chronology

	e. Roanoke – a lid adjacent to Roanoke Park, one off-ramp lane, remove free right turn on Harvard; fly over for direct access into express lanes; lid in front of Seward School • **K w/ Bridge (sub-option w/ bridge, to be named L on March 20).** Option K with a bridge across the cut instead of a tunnel **Agreement**: • Options A, K, and K w/ bridge move forward for further refinement at the March meeting
March 18 & 20, 2008	
Mediation Meeting 7	o Refined Options A, K, and 'newly named' L by roadway sections (I-5/Roanoke/Portage Bay, Montlake, and east of Montlake/Washington Park Arboretum) **Agreement**s: • A, K, and L will move forward in draft EIS • Work in smaller sub-groups to make final revisions to A, K, and L
April 21, 2008	
Oversight Committee Meeting 3	Key Messages: - The mediation will design a six-lane (4+2) facility. Design of six lanes means six; "accommodate" does not mean a design for additional structure beyond six lanes. - The Oversight Committee needs to see these elements in any solution offered by the mediation group: o Fiscally constrained; o On schedule for 2012 construction (in particular, tunnel feasibility analysis must not create a delay); o Include transit on the day a new facility opens, linked to the Mountlake Multimodal Center; o Use existing financial and other data whenever possible; o Mitigation responds to impacts (not a competition between jurisdictions); and o Include travel demand management strategies.

Appendix 10.3 Potential TDM Measures

Regional: Preliminary Transportation Demand Management Strategies

For a TDM/TSM program to be effective in reducing the amount of single occupant vehicle trips on the SR 520 corridor, the following programs must be developed to equally affect the following areas, which represent the primary origin and destination locations for trips that use the SR 520 corridor:

- Downtown Seattle
- Northwest Seattle
- University District
- East Central Seattle
- Kirkland/Totem Lake
- Redmond/Overlake
- Downtown and Northwest Bellevue

Element	Existing Activities	Minor TDM	Moderate TDM	Maximum TDM
Level of Effectiveness		• Minor investments to expand existing demand management efforts impacting the corridor	• Additional effort with moderate cost	• Comprehensive TDM program including strategies with high cost or significant policy changes
Tolling		• Implement toll program on the SR 520 bridge to generate revenue for repayment of bonds for construction and ongoing O&M costs • Allow HOV and transit to operate free of toll	• Implement toll program on the SR 520 bridge to manage traffic • Variable toll responsive to system congestion • Charge all vehicles; provide discounted tolls to transit and registered HOVs	• Toll all vehicles crossing SR 520 and I-90 to manage traffic • Variable toll responsive to system congestion • Include pricing of local streets into sensitive areas
Growth and Transportation Efficiency Center (GTEC): Serves as a base organizational structure and delivery mechanism for implementing some of the other Demand Management strategies by working with small employers, colleges/universities, and residents (in addition to major employers already in the CTR program)	Seattle, Bellevue, Redmond/Overlake GTEC programs funded through June 2009. Kirkland is voluntary (no state funds).	• Continued funding for Seattle, Bellevue, and Redmond/Overlake. Provide state funding for Kirkland	• New GTECs established in University District, Capitol Hill, First Hill, South Lake Union, Downtown Redmond, Bothell/Canyon Park, Woodinville, Northgate	• Implement new GTECs in areas designated as activity centers by local jurisdictions (beyond designated Urban and Manufacturing centers) i.e. Crossroads, downtown Kirkland, University Village / Childrens Hospital
Parking Management	Employer incentive programs to reduce parking and /or eliminate parking subsidies to employees City of Seattle's Center City Access Plan And Center City Parking Plan University of Washington Parking Program Major Institutional Building Ordinance	• Shared-use leased parking program focused on residential-based parking facilities (grocery stores, malls, churches, etc.), with the goal to provide more spaces for carpools and vanpools to form • Guidance on land use changes focused on eliminating parking minimums and establishing parking maximums (CTED) • Technical support to CTR employers in the corridor directed at reducing employer provided subsidies for parking	• State financial incentives for GTECs to tax commuter parking • Provide information to commuters on parking availability (Parking ITS) • Incentives and information to move vanpoolers out of transit (P&R) lots • Flexible carpooling investment focused on two primary routes (formalized casual carpool lines to improve the efficiency of P&R lots as rideshare facilitators)	• Strong financial incentives for GTECs to change parking policies with a focus on expanding short term and eliminating long-term parking (similar to the parking plan developed for the Moving Forward mitigation of AWV.) • State funding will only be made available for GTECs that have made changes to their parking policies designed to achieve the economic development and transportation goals o Mandates for cities with GTECs to make specific parking changes o Tax parking • Equipping all P&Rs serving the corridor with Parking ITS • Charge for SOV parking at P&R
Parking Supply	P&R lots that are already funded for construction Identify co-location opportunities	• Expansion of the KC Metro leased P&R lot program • Market underused P&R lots	• Expand existing lots where transit service available • Procurement of land in advancement of P&R construction • Incentives to jurisdictions and developers to limit parking supply at new developments	• Expand P&Rs where transit service is available • Construction of new P&Rs with transit service • Require reduction in parking ratios in new developments

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Note: Strategies assume joint effort between agencies, jurisdictions and state.

Regional: Preliminary Transportation Demand Management Strategies

Element	Existing Activities	Minor TDM	Moderate TDM	Maximum TDM
Encourage Travel Alternatives	CTR/GTEC InMotion ORCA/Smart Card* RSO	• Community-based marketing • Improve trip planning and information availability for transit • Ongoing incentives and marketing through RideshareOnline.com • Broad promotion, project information with pushes to change mode • Real-time ridematching services through RSO	• Increase incentives and marketing through RideshareOnline.com • Targeted promotions delivered directly to home, employer networks, local partners. • Coordinate Ridesharing incentives with tolling • Provide resources so that each GTEC has a one-stop shopping commuter information "store"	• Covered bike parking, bike lockers, bike shops, other bike/ped amenities at all transit facilities • Enhanced incentives and marketing through Rideshareonline • Targeted marketing on everyone who uses 520 bridge four or more times per week • Regional focus with target on project
Land Use	Growth Management Act	• Establish GTEC funding criteria that creates incentives for HOV supportive land use decisions • Guidance for local government and developers on land use issues including transit and pedestrian friendly design, height limits, density, mixed use etc. • Provide bonuses for developments exceeding the standards	• Require bus passes for new development • Incentives for transit and pedestrian friendly, height limits, density, mixed use etc. standards and provide bonuses for development	• Require bus passes for all employers (existing) development • Regional/state regulation for transit and pedestrian friendly, height limits, density, mixed use etc. standards and provide bonuses for development • Address parking minimums through code • Place cap on parking maximums
Employer Based Strategies	CTR/GTEC RTRIP Transportation Management Plans University of Washington UPASS	• Add resources to the very successful Redmond RTRIP program • Launch an expansive telework & CWW education program focused on employers in the SR 520 travel shed. • Implement telework findings from Kitsap telework demonstration project to support telework campaign	• Provide additional resources for jurisdictions to implement strategies identified in their 2007 CTR plans • Expand the focus of the Redmond GTEC so that all employers located within the GTEC boundaries participate in the program • Expand the RTRIP program model o all GTECs in the corridor • Establish telework centers in the corridor's travel shed based on CTR/GTEC data identifying teleworkers and home zip code	• Expand support for CTR services by establishing building-based CTR programs where the total employment at the building exceeds 100 employees • Provide financial incentives for employees who use alternative mode •
Market for VMT reduction	Mileage based auto insurance TRPP	• Additional incentives for individuals to participate in mileage-based insurance	• Develop a program to pay entrepreneurs for reductions in vehicle trips in the corridor. The program design would be based on WSDOT's TRPP program.	• Policy changes to tax VMT
Educational Awareness and Policy Support	Carsharing (Zipcar)	• Put Zipcars in all PSRC centers and transit centers. Subsidize the use to meet minimal fare recovery rates	• Same as minimum but outside the centers in second priority locations • Require parking garages to provide Carshare spaces in GTECs	• Convene leadership forums in each GTEC, with government, transit and business partners to set goal, discuss policy changes, and provide support • Place all-electric fleet of Zipcars in all neighborhoods and activity centers (est 1000-2000 vehicles).
Data Collection and Performance Measurement	Surveys of commuters to CTR sites and within GTECs every two years captures origin/destination, mode split, distance to work, and other data	• Increase survey frequency and add additional questions to capture additional data • Implement additional data collection methods to capture effectiveness of other 520 TDM strategies	• Provide staff/organizational support for detailed analysis of data and coordination of service and policy improvements to meet commuters needs	• Invest in real-time data collection and telematics for transit, vanpools

Note: Strategies assume joint effort between agencies, jurisdictions and state.

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Appendix 10.4: Wetland Mitigation Summary of Potential Sites

Table 1: Potential/Candidate Mitigation Sites – East Side

Initial Wetland Mitigation Site List for SR520 Bridge Replacement & HOV Project - East Side

Last updated 5/15/2008

ID #	Potential Wetland Mitigation Site Name and Description	Source	On-site (Y/N)	Mitigation Type	Total Parcel Size (Acres)	Local Jurisdiction	Location in Sub-basin / Watershed	Mitigation Type (Creation, Rehabilitation, Enhancement, or Preservation)	Potential Mitigation Activities	Concept	Mitigation Value	NOAA Fisheries/USFWS Priority Evaluations: Functional Relationship to Identified Site Impacts (note the project impact(s)	Species and ESU that will benefit from proposed mitigation	Correlation of Mitigation to Recovery Plan Priorities, Identified Limiting Habitat Factors, or other Related Restoration Plan*	Certainty of Benefit of Mitigation to Meet Recovery Objectives (3 = highly certainty, 2 = moderate certainty, 1 = low certainty)
1	**Yarrow Creek Headwaters**	520 Potential Wetland Mitigation Conceptual Locations/Projects Potential 520 Mitigation Options in Bellevue	Y	Wetland	13 acres (7.59 acres, 5.83 acres)	Bellevue	Yarrow Creek	Enhancement, creation	culvert replacement	Restore, enhance, and create approximately 13 acres of wetland and buffer at the headwaters of Yarrow Creek. Would require the demolition of a single family home (permit for demo of building closed in 1980) and abandonment of well(s).	Create and improve wetlands in the headwater areas of Yarrow Creek to provide wildlife habitat, stormwater quality improvement, improve floodplain connectivity and storage, mitigate impacts within same basin, and mitigation improves stream condition throughout downstream reaches. The current condition is second growth deciduous forest, unmanaged wet pastures, and channelized streams.	Wetland impacts, water quality impacts, fish passage/migration interferences from pile driving and other construction related disturbance and in-water conservation measures	coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
2	**Yarrow Creek Relocation - Bellevue Way**	Preferred Integrated Yarrow Creek System Design	Y	Wetland/Stream	5 acres (YCN-1 : <0.1 ac YCS-1: 1.2 ac YCS-2: 2.7 ac)	Bellevue	Yarrow Creek	Enhacnement, creation	Enhance, create, restore wetland and riapoarin functions			Wetland impacts, water quality impacts, fish passage/migration interferences from pile driving and other construction related disturbance and in-water conservation measures	coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
3	**Spring Hills Park**	Potential 520 Mitigation Options in Bellevue	Y	Wetland	2.97 acres	Bellevue	Yarrow Creek	Enhancement		Enchane wetland vegetation by removing reedcanary grass, move driveway to edge of wetland to reduce impacts		Wetland impacts from construction.	coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
4	**YBS-1**	field studies SR520 Bridge Replacement & HOV Project Draft Eis	Y	Wetland	2.14 acres	Bellevue	Yarrow Creek	Enhancement	Remove invasive weeds, restore native vegetation			Wetland impacts from construction.	coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
5	**Kelsey Creek Riparian Enhancement**	Jeff Meyer Field Visit	N	Wetland/Stream	23 acres	Bellevue	Kelsey Creek	Enhancement	wetland and riparian			Shoreline disturbance; wetland and water quality impacts from roadway development.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
6	**Hartson Property**	Jeff Meyer Field Visit	N	Wetland/Stream	9 acres	Bellevue	Kelsey Creek	Enhancement	wetland and riparian			Shoreline disturbance; wetland and water quality impacts from roadway development.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
7	**Mercer Slough Site**	Email from Bernard Vandekamp (6/8/2006)	N	Wetland	107 acres (Site 1: 9.4 acres Site2: 5.7 acres Site 3: 1.7 acres Site 4: 4.8 acres Site 5: 2.0 acres Site 6: 2.0 acres Site 7: 5.3 acres Site 8: 2.0 acres Site 9: 1.0 acre Site 10: 2.0 acres)	Bellevue	Mercer Slough	Enhancement	Buffer enhancement	Remove invasive weeds, restore native vegetation and or open water habitat to improve wetland functions.	Larger area with greater likelihood of success, wildlife habitat, land use buffer, and water quality.	Shoreline disturbance; wetland and water quality impacts from roadway development.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
8	**Larsen Lake Wetland Restoration**	520 Potential Wetland Mitigation Conceptual Locations/Projects Potential 520 Mitigation Options in Bellevue	N	Wetland/Stream	79 acres (20 acres of headwater wetlands around Larsen Lake)	Bellevue	Kelsey Creek	Enhancement, restoration, and possibly some creation		The project would enhance the wetland buffer surrounding Larsen Lake, the Kelsey Creek outfall, and associated wetlands to help improve salmon and wildlife habitat, and increase the pollution and flood control values of the headwater wetland. Site drainage and vegetation have been historically manipulated through farming, building, and other land use activities to the extent that much of the land may no longer be considered wetland creating opportunities for wetland restoration, and possibly some creation opportunity as well. Some farming activities could be abandoned to create improved habitat buffering around the lake and connectivity between the lake and forested wetlands to the SE. Land currently delineated as wetland and covered with monocultures of noxious vegetation would be enhanced to improve existing wetland functions and values.	Kelsey Creek is Bellevue's largest drainage basin containing viable populations of Chinook salmon. The surrounding wetland would be enhanced and restored to provide wildlife habitat, improve water quality, and enhance floodplain connectivity and storage. The project would mitigate impacts within the basin and improve stream condition throughout downstream reaches.	Shoreline disturbance; wetland and water quality impacts from construction roadway development.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
9	**Lake Hills Greenbelt Site**	Email from Bernard Vandekamp (6/8/2006)	N	Wetland	59 acres (Site 1: 6.8 acres Site 2: 1.0 acre Site 3: 1.2 acres Site 4: 2.4 acres Site 5: 3.9 acres)	Bellevue	Phantom Creek	Enhancement		Remove invasive weeds, restore native vegetation to improve wetland functions.	Larger area with greater likelihood of success, wildlife habitat, water quality, land use buffer, flood control. Historical agricultural area.	wetland impacts;	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
10	**Phantom Lake**	Jeff Meyer Field Visit	N	Wetland	24.5 acres	Bellevue	Phantom Creek	WL rehabilitation	decomission farm plots and replant	Remove invasive weeds, restore native vegetation, improve wetland functions.		wetland impacts	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
11	**Kelsey Creek Headwaters 1**	Jeff Meyer Field Visit	N	Wetland/Stream	7.14 acres	Bellevue	Kelsey Creek	Enhancement		Remove invasive weeds, restore native vegetation, improve wetland functions.		wetland impacts	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
12	**Kelsey Creek Headwaters 2**	Jeff Meyer Field Visit	N	Wetland/Stream	25 acres	Bellevue	Kelsey Creek	Enhancement				insufficient information to qualify	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
13	**Kelsey Creek Headwaters 3**	Jeff Meyer Field Visit	N	Wetland/Stream	6 acres	Bellevue	Kelsey Creek	Enhancement		Remove invasive weeds, restore native vegetation, improve wetland functions.		wetland impacts	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook

Table 1: Potential/Candidate Mitigation Sites – East Side

ID #	Potential Wetland Mitigation Site Name and Description	Source	On-site (Y/N)	Mitigation Type	Total Parcel Size (Acres)	Local Jurisdiction	Location in Sub-basin / Watershed	Mitigation Type (Creation, Rehabilitation, Enhancement, or Preservation)	Potential Mitigation Activities	Concept	Mitigation Value	Functional Relationship to Identified Site Impacts (note the project impact(s)	Species and ESU that will benefit from proposed mitigation	Correlation of Mitigation to Recovery Plan Priorities, Identified Limiting Habitat Factors, or other Related Restoration Plan*	Certainty of Benefit of Mitigation to Meet Recovery Objectives (3= highly certainty, 2 = moderate certainty, 1 = low certainty)
14	**Ferrin-Benitez Property Restoration**	520 Potential Wetland Mitigation Conceptual Locations/Projects Potential 520 Mitigation Options in Bellevue	N	Wetland/Stream	11.7 acres (2.52 acres, 1.0 acres, 0.8 acres, 0.84 acres , 2.49 acres, 1.26 acres, 1.89 acres)	Bellevue	Kelsey Creek	Preservation, restoration, enhancement, and creation		Acquire up to 10.8 acres of disturbed wetland. Preserve, restore, enhance, and create wetland and buffer along the Kelsey Creek West Tributary to improve function and values. The 4 eastern most properties (6.48 acres) would provide the most benefit as the West Tributary runs through the properties, they contain considerable flood plain, and have been most heavily impacted. Would require the demolition of a single family residence. Could include both stream and wetland enhancement and restoration opportunities as well as possible opportunities for wetland creation. Additional 20 acres of adjacent wetland could be included to expand project scope if necessary.	Create and improve riparian wetlands associated with the reach in the West Tributary of Kelsey Creek just before confluence with Kelsey Creek main stem with possibility of ehnancement and restoration activities of the main stem as well. Project would provide wildlife habitat, stormwater quality improvement, improve floodplain connectivity and storage, and mitigate impacts within same basin. Mitigation would improve stream condition in downstream reaches of Kelsey Creek and the Mercer Slough Nature Park. The current condition is filled and degraded wetlands containing major Chinook salmon spawning streams.	Wetland, shoreline and stream impacts from construction and final buildout.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
15	**Kelsey Creek Wetlands**	Email from Bernard Vandekamp (6/8/2006)	N	Wetland	54 acres	Bellevue	Kelsey Creek	Enhancement		Remove invasive weeds, restore native vegetation, improve wetland functions.	Larger area with greater likelihood of success, chinook and other anadromous salmonid benefits, wildlife diversity and water quality. Identified in WRIA 8 Salmon Recovery Plan as a primary restoration location for Kelsey Creek, a tier 2 stream.	Shoreline disturbance; wetland and water quality impacts from roadway development.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
16	**Kelsey Creek Farm**	EEI Task Force (City of Bellevue)	N	Wetland/Stream	20 acres	Bellevue	Kelsey Creek	Restoration		Approximately 3,200 feet of stream restoration and 7.5 acres of riparian buffer restoration		Wetland, shoreline and stream impacts from construction and final buildout.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
17	**Kelsey Creek Golf Course Restoration**	EEI Task Force (City of Bellevue)	N	Stream	Total parcel: 117 acres (approximately 13 acres of enhancement)	Bellevue	Kelsey Creek	Enhancement	Restoration, floodplain connection	Improve migration, stabilize eroding banks and spawing gravel, enhance floodplain connectivity, improve rearng habitat, and increase habitat complexity		Wetland, shoreline and stream impacts from construction and final buildout.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
18	**Wetland Restoration, stream segment 76-05 (P4)**	WRIA 8 Near-Term Action Agenda (Aug. 2002)	N	Wetland/Stream	40 acres	Bellevue	Kelsey Creek	Restoration		Restore and enhance degraded wetlands to restore off-channel and riparian wetland habitats along stream segment 76-05 of Kelsey Creek		Wetland, shoreline and stream impacts from construction and final buildout.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
19	**Kelsey Creek daylighting - Larsen to north of Main St.**	EEI Task Force (City of Bellevue)	N	Wetland/Stream	8.4 acres	Bellevue	Kelsey Creek	Enhancement/Creation	Stream restoration and riparian creation	Half the length of the project involves restoration of the natural meander zone of Kelsey Creek. The remaining section would be stream daylighting through the shopping center parking lot		Wetland and stream impacts from construction and final buildout.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
20	**Richards Rd Wetlands**	Email from Bernard Vandekamp (6/8/2006)	N	Wetland	15 acres	Bellevue	Richards Creek	Enhancement		Remove invasive weeds, restore native vegetation, improve wetland functions.	Larger area with greater likelihood of success, chinook and other anadromous salmonid benefits, wildlife diversity and water quality.	Wetland and stream impacts from construction and final buildout.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
21	**Richards Creek (North of I-90)**	Potential 520 Mitigation Option in Bellevue	N	Stream	3.5 acres	Bellevue	Richards Creek	Enhancement	wetland and riparian				PS Chinook (non-essential population), coho	Not recognized as a priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
23	**Bellevue Highlands Park - Bel-Red Road & 140th Ave NE**	Potential 520 Mitigation Option in Bellevue	N	Stream	11.4 acres	Bellevue	Valley Creek	Enhancement	Riparian enhancement			Water quality and wetland impacts.	PS Chinook (non-essential population), coho	Not recognized as a Tier 1 priority watershed for recovery planning in either the NOAA recovery plan, or the Chinook Conservation Plan	1--unlikely to help recovery of PS Chinook
24	**Vasa Creek Mouth Restoration (I299)**	Chinook Salmon Conservation Plan – WRIA 8 (February 2005)	N	Stream	18.5 acres	Bellevue	Lake Sammamish	Restoration	Restoration of a portion of Vasa Creek; mouth is channelized			Shoreline disturbance.	PS Chinook (non-essential population), coho	Addresses limiting factor for Lake WA shoreline (riparian function). Addresses strategy identified in NOAA PS Recovery Plan (improving rearing habitat in L. WA)	1--ability to help recovery of PS Chinook dubious; potentially of value for coho
26	**Chism Beach lakeshore restoration**	EEI Task Force (City of Bellevue)	N	Wetland/Stream	17 acres	Bellevue	Lake Washington	Restoration		Riparian/shoreline restoration and revegetation, instream fish habitat restoration		Shoreline disturbance.	PS Chinook (non-essential and essential populations), coho	Addresses limiting factor for Lake WA shoreline (riparian function). Addresses strategy identified in NOAA PS Recovery Plan (improving rearing habitat in L. WA)	Insufficient information to qualify
27	**Sammamish River Mouth Wetland Restoration**	WRIA 8 Near-Term Action Agenda (August 2002)	N	Wetland/Stream	16 acres	Kenmore	Lake Washington	Restoration	several parcels along Sam River	Restore wetlands at mouth of Sammamish River		Shoreline disturbance; wetland impacts from roadway development.	PS Chinook (non-essential and essential populations), coho	Addresses limiting factor for Lake WA shoreline (riparian function). Addresses strategy identified in NOAA PS Recovery Plan (improving rearing habitat in L. WA)	Insufficient information to qualify
28	**Restoration and Revegetation of Juanita Creek in Juanita Beach Park**	EEI Task Force (City of Kirkland)	N	Stream	25 acres	Kirkland	Juanita Creek	Stream restoration		In-stream habitat restoration		Stream disturbances and impacts on eastside approach from construction.	PS Chinook (non-essential population), coho.	Addresses limiting factor and NOAA recovery strategy focus of improving rearing habitat in L. WA. Could provide off-lake (in-stream refugia) for Chinook. Need further information on concept to fully understand functional value. Juanita Creek not recognized as essential to recovery, and no specific action items are identified for Juanita Creek in Chinook Conservation Plan.	1 or 2 (Need further information on concept to fully understand functional value.)

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29	**Park at Forbes Creek Channel Stabilization/Restoration**	EEI Task Force (City of Kirkland)	N	Stream	47 acres	Kirkland	Forbes Creek	Stream restoration		In-stream habitat restoration		Stream disturbances and impacts on eastside approach from construction.	PS Chinook (non-essential population), coho.	Addresses general action item of improving channel complexity basin wide, but Forbes Creek is not recognized as a Tier 1 or 2 stream essential to PS Chinook recovery in Chinook Conservation Plan. Some possible benefit to coho habitat from project could indirectly benefit PS Chinook essential to recovery through reduced predation by cutthroat (justification for actions in Conservation Plan). Need further information on concept to understand functional value of mitigation.	1 or 2 (Need further information on concept to fully understand functional value.)
30	**Juanita Bay Park**	Potential 520 Mitigation Option in Kirkland	N	Wetland/Stream	67 acres	Kirkland	Forbes Creek	Enhancement	riparian enhancement			Riparian disturbance to lakeshore from construction and buildout	PS Chinook (non-essential populatoin), coho, sthd.?	Some possible benefit to coho habitat from project could indirectly benefit PS Chinook essential to recovery through reduced predation by cutthroat (justification for actions in Conservation Plan). Need further information on concept to understand functional value of mitigation.	1 or 2 (Need further information on concept to fully understand functional value.)
31	**Keller Farm (between Union Hill Rd, Avondale Rd, and NE 95th) - in-channel restoration in Bear Creek and Evans Creek**	Potential 520 Mitigation Option in Redmond Chinook Salmon Conservation Plan WRIA 8 (2005) City of Redmond Stormwater Capital Improvement Program (June 2007); Gersib #455	N	Wetland/Stream	124 acres	Redmond	Bear Creek	Rehabilitation, Creation, Enhancement	Approximately 10 acres of buffer along the stream could be enhanced. In-stream enhancements may be needed			Wetland impacts; riparian disturbance. Need more information, but likely to address some take from in-water construction.	PS Chinook, Tier 1 N. Lake WA; coho	Addresses desires to enhance floodplain connectivity, and restore channel complexity within urban growth area of Bear/Evans watershed. Need further information on concept to understand functional value of mitigation.	2 or 3 (Need further information on concept to fully understand functional value).
32	**Bear Creek Restoration (282H & 291H) - End of SR520 to Redmond Town Center**	Potential 520 Mitigation Option in Redmond City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Wetland/Stream	28.5 acres	Redmond	Bear Creek	Enhancement, restoration	Riparian and buffer enchancmen	Improve buffer function, reduce erosion, and improve in-stream habitat		Wetland impacts; riparian disturbance; floodplain connectivity.. Need more information, but likely to address some take from in-water construction.	PS Chinook, Tier 1 N. Lake WA population; coho; sthd?	Addresses desires to enhance floodplain connectivity, and restore channel complexity within urban growth area of Bear/Evans watershed. Need further information on concept to understand functional value of mitigation.	2 or 3 (Need further information on concept to fully understand functional value).
33	**Marymoor Park - north and west of Lake Sammamish**	SR520 Bridge Replacement and HOV Project EIS: Light Intensity Analysis Technical Memorandum (3/3/2006); Gersib #5	N	Wetland/Stream	408 acres	Redmond	Lake Sammamish	Restoration, enhancement				insufficient information to qualify	insufficient information to qualify	insufficient information to qualify	insufficient information to qualify
34	**Lake Samamish State Park**	SR520 Bridge Replacement and HOV Project EIS: Light Intensity Analysis Technical Memorandum (3/3/2006) Lake Sammamish State Park Wetland Stream and Lakeshore Restoration Plan (2005); Gersib # 158, #453	N	Wetland/Stream	459 acres	City of Issaquah	Lake Sammamish	Enhancement, restoration	Channel stability riparian plantings on the lower reaches of Issaquah Creek and extensive areas of reed canarygrass.	Wetland and in-stream enhancement, buffer revegetation		Wetland impacts from construction in Arboretum; unclear what the concept is for in-stream enhancement. Would appear to be a challenge to manage non-native encroachment.	PS Chinook (non-essential population); coho	Addresses lakeshore restoration in Lake Sammamish, but there are no action items in conservation plan that expressly identify this as a functional element of recoveryy planning for either Tier 1 populations, or non-essential populations (Issaquah Creek). Need more information on concept to qualify mitigation value, but appears	1
35	**Coho Realty -** high quality forested hillslide seeps, adjacent to Yarrow Creek, WSDOT property and WSDOT access road	Potential 520 Mitigation Options in Bellevue	Unknown	Wetland	1.2 acres	Bellevue	Yarrow Creek	Enhancement, creation		Wetland protection, enhancement, some creation		Water quality and wetland impacts.	No direct habitat benefit likely to PS Chinook (essential and non-essential populations); possible improvement/stabilization strategy for water quality to benefit coho	Some benefit to floodplain connectivity , securing infiltration capacity in watershed to control stormwater quality, possible benefit to water quality of Yarrow Creek. some possible benefit to coho to indirectly benefit PS Chinook through reduced predation by cutthroat (justification for actions in Conservation Plan)	1
36	**Evans Creek Relocation 118H** (Union Hill north and west to the mouth at Bear Crk) - increase riparian and wetland habitat	City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Wetland/Stream	18.51	Redmond	Bear Creek					Wetland and stream impacts from construction and final buildout.	PS Chinook, Tier 1 population; coho; sthd?	Addresses desires to enhance floodplain connectivity, and restore channel complexity within urban growth area of Bear/Evans watershed. Need to explore potential linkages with projects 37, 38, 41 and 42 to ensure opportunities for holistic restoration package in lower Bear/Evans are not overlooked.	2 (Need further information on concept to understand functional value of mitigation).
37	**Foss Property Buffer Restoration 112H** (18809 NE 95th St) - improve riparian and wetland habitat	City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Wetland/Stream	4.46	Redmond	Bear Creek					Wetland and stream impacts from construction and final buildout.	PS Chinook, Tier 1 population; coho; sthd?	Addresses desires to enhance floodplain connectivity, and restore channel complexity within urban growth area of Bear/Evans watershed. Need further information on concept to understand functional value of mitigation. Need to explore potential linkages with projects 37, 38, 39, 40, 41 and 42 to ensure opportunities for holistic restoration package in lower Bear/Evans are not	2 (Need further information on concept to understand functional value of mitigation).

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38	**Friendly Village Buffer Enhancement 241H** (East of Avondale Rd and south of NE 95th) - enhance fish habitat	City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Stream	40.6	Redmond	Bear Creek					Wetland and stream impacts from construction and final buildout.	PS Chinook, Tier 1 population; coho; sthd?	Addresses desires to enhance floodplain connectivity, and restore channel complexity within urban growth area of Bear/Evans watershed. Need further information on concept to understand functional value of mitigation. Need to explore potential linkages with projects 37, 38, 41 and 42 to ensure opportunities for holistic restoration package in lower Bear/Evans are not overlooked.	
39	**116th Culvert and Stream Relocation at Fischer Village 104H** (NE 116th St) - improve riparian and wetland habitat, provide/improve fish passage	City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Wetland/Stream	5.47	Redmond	Bear Creek					Wetland and stream impacts from construction and final buildout. Impacts of construction on migration patterns (i.e., passage as proxy for migration impacts).	PS Chinook, Tier 1 population; coho; sthd?	Addresses desires to enhance floodplain connectivity, and restore channel complexity within urban growth area of Bear/Evans watershed. Need to explore potential linkages with projects 37, 38, 39, 40, 41 and 42 to ensure opportunities for holistic restoration package in lower Bear/Evans are not overlooked.	2 or 3 (Need further information on concept to understand functional value of mitigation).
40	**Cold Water Creek Farm Buffer Improvement 106H** (18951 NE 95th St) - improve riparian buffer function	City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Stream	4.04	Redmond	Bear Creek					Wetland and stream impacts from construction and final buildout.	PS Chinook, Tier 1 population; coho; sthd?	Addresses desires to enhance floodplain connectivity, and restore channel complexity within urban growth area of Bear/Evans watershed. Addresses Conservation Plan action item of protecting cold water groundwater source of Cold Water Creek (Tier 1). Need to explore potential linkages with projects 37, 38, 39, 40, 41 and 42 to ensure opportunities for holistic restoration package in lower Bear/Evans are not overlooked.	3
41	**Sammamish River Habitat Improvements 90th to Willows 244H** - improve riparian and wetland habitat	City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Wetland/Stream	24.12	Redmond	Sammamish River					Wetland and stream and in-water (lake) impacts from construction and final buildout.	PS Chinook, Tier 1 population; coho; sthd?; non-essential PS Chinook (Issaquah Cr.)	Addresses action item identified in Chinook Conservation Plan for Sammamish River basinwide (protect and restore riparian habitat)	2 (need more information to understand functional values of proposed mitigation)
42	**Sammamish River Habitat Improvements Willows outfall to Valley Estates 245H** - improve riparian and wetland habitat	City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Wetland/Stream	23.07	Redmond	Sammamish River					Wetland and stream and in-water (lake) impacts from construction and final buildout.	PS Chinook, Tier 1 population; coho; sthd?; non-essential PS Chinook (Issaquah Cr.)	Addresses action item identified in Chinook Conservation Plan for Sammamish River basinwide (protect and restore riparian habitat)	2 (need more information to understand functional values of proposed mitigation)
43	**Sammamish River Habitat Improvements Valley Estates to 116th 246H** - improve riparian and wetland habitat	City of Redmond Stormwater Capital Improvement Program (June 2007)	N	Wetland/Stream	12.25	Redmond	Sammamish River					Wetland and stream and in-water (lake) impacts from construction and final buildout.	PS Chinook, Tier 1 population; coho; sthd?; non-essential PS Chinook (Issaquah Cr.)	Addresses action item identified in Chinook Conservation Plan for Sammamish River basinwide (protect and restore riparian habitat)	2 (need more information to understand functional values of proposed mitigation)
44	**Wetland and Side Channel Restoration on Right Bank Across from Willows Run Golf Course (4-3)**	Sammamish River Corridor Action Plan (Sept. 2002)	N	Wetland/Stream	33.45	Redmond	Sammamish River					Wetland and stream and in-water (lake) impacts from construction and final buildout.	PS Chinook, Tier 1 population; coho; sthd?; non-essential PS Chinook (Issaquah Cr.)	Addresses action item identified in Chinook Conservation Plan for Sammamish River basinwide (increase off-channel habitats; protect and restore riparian habitat)	2 (need more information to understand functional values of proposed mitigation)
45	**Riparian and Wetland Restoration in Willows Run Golf Course (4-4)**	Sammamish River Corridor Action Plan (Sept. 2002) Chinook Salmon Conservation Plan WRIA 8 (2005)	N	Wetland/Stream	203.61	Redmond	Sammamish River					Wetland impacts from construction in Arboretum; unclear what the concept is for restoration.	PS Chinook, Tier 1 population; coho; sthd?; non-essential PS Chinook (Issaquah Cr.)	Addresses action item identified in Chinook Conservation Plan for Sammamish River basinwide (protect and restore riparian habitat)	2 (need more information to understand functional values of proposed mitigation)
46	**Lake Sammamish State Park Channel Enhancement**	Issaquah Creek Final Basin and Action Plan (Dec. 1996)	N	Stream	255.81	Issaquah	Issaquah Creek					In-water impacts in lake from construction and buildout.	Non-essential PS Chinook; coho; sockeye/kokanee	May address action item of providing channel complexity in Issaquah Creek	1

***The four most significant strategies and actions identified in the Lake Washington/Cedar/Sammamish recovery plan include: (1) protect remaining habitat through regulations and incentives in King County; (2) Protect and rehabilitate the Cedar River; (3) Improve rearing habitat in Lake Washington, and (4) Improve fish passage in the Ship Canal and Locks. Strategy (1) is outside the jurisdiction and control of WSDOT.**

Table 2: Candidate Mitigation Sites – Westside

Initial Wetland Mitigation Site List for SR520 Bridge Replacement & HOV Project - West Side

Last updated 5/15/2008

NOAA Review--Green Shaded columns

ID #	Potential Wetland Mitigation Site Name and Description	Source	On-site (Y/N)	Mitigation Type	Total Parcel Size (Acres)	Local Jurisdiction	Location in Sub-basin/ Watershed	Mitigation Type (Creation, Rehabilitation, Enhancement, or Preservation)	Potential Mitigation Activities	Concept	Mitigation Value	Functional Relationship of Mitigation to Identified Site Impacts to Fish (note the project specific impact(s) that the mitigation compensates)	Species and ESU that will benefit from project	Correlation of Mitigation to Recovery Plan Priorities, Identified Limiting Habitat Factors, or other Related Restoration Plan	Certainty of Benefit of Mitigation to Meet ESU Recovery Objectives (3= highly certainty, 2 = moderate certainty, 1 = low certainty)
W1	**Washington Park Arboretum**	David Graves AICP	Y	Wetland	150 acres (22.31 ab, 9.21 pfo, 31.48 pss, 2.99 pss/pem, 6.69 pem = 72.68 total usable acres)	Seattle	Lake Washington		Shoreline restoration by planting upland and wetland trees, shrubs, removal of exotics; trapping nutria.	Mitigation work in the Arboretum could include both stream and wetland enhancement and restoration opportunities as well as possible opportunities for wetland creation.	Mitigation work in the Arboretum could create and improve riparian habitat associate with Lake Washington. Restoration, creation, and enhancement and/or creation would provide wildlife habitat, including habitat for migrating salmonids, stormwater quality improvement, and mitigate impacts within the same basin.	Loss of wetland and riparian habitat and function from bridge construction and operation. Water quality impacts from stormwater and constr	PS Chinook (North LW tribs and Cedar River essential populations), coho	Tributary mouths in L. WA identified for enhancement for PS Chinook refugia; unclear, however, if Chinook would be able to, or desirous of seeking out this tributary given predator habitat in arboretum. Salmonid PCE values unclear.	1
W2	**Montlake Playfield** - wetland and shoreline restoration/enhancement	David Graves AICP, field studies	Y	Wetland	26 acres	Seattle	Portage Bay	WL Creation, enhancement; Shoreline rehab		Restore and enhance wetlands affected by the project.	Mitigation work may include shoreline restoration, native plantings, removal of debris and invasive plants, installation of habitat features, signage, and benches/tables. Area of affected wetland undetermined.	Loss of wetland and riparian habitat and function from bridge construction and operation.	PS Chinook (North LW tribs and Cedar River essential populations), coho	Limited salmonid habitat value.Salmonid PCE values unclear.	1
W3	**Magnuson Park -** north and south end shoreline and wetland restoration/creation	David Graves AICP; Park master plan Chinook Salmon Conservation Plan – King County (February 2005)	N	Wetland/Stream	290 acres	Seattle	Lake Washington			Restore wetlands and shoreline.	Plans for the site already exist. Phase 3 (which includes most of the wetland and shoreline work). This site would be available after restoration was done at the Washington Park Arboretum and Montlake playfield sites.	Loss of wetland and riparian habitat and function from bridge construction and operation. Shoreline disturbance.	PS Chinook (North LW tribs and Cedar River essential populations--particularly North LW tribs), coho	Addresses a major limiting factor in Lake WA productivity (riparian function along lakeshore) and action item for L. WA system, although project concept unclear	3
W4	**Seward Park Shoreline Restoration**	WRIA 8 Near-Term Action Agenda (August 2002)	N	Wetland	307 acres	Seattle	Lake Washington					Loss of wetland and riparian habitat and function from bridge construction and operation. Shoreline disturbance.	PS Chinook (Cedar River stock)	Addresses a major limiting factor in Lake WA productivity (riparian function along lakeshore) and action item for L. WA system, although project concept unclear	3
W5	**Arboretum Creek**	Field Studies	Y	Wetland/Stream	0.8 acre	Seattle	Lake Washington	Restoration, Stream Channel rehab	Excavate new meanders and wetlands on eastside of creek nearest road.			Could address stream impacts on east approach	coho, PS Chinook (possible, but very unlikely).	Tributary mouths in L. WA identified for enhancement for PS Chinook refugia; unclear, however, if Chinook would be able to, or desirous of seeking out this tributary given predator habitat in arboretum. Salmonid PCE values unclear, particularly for this small creek that conveys water from the most developed subbasin in the watershed. Active management of riparian vegetation, and arboretum sanctuary provide tangible benefits for public education that may outweigh insignificance of benefits directly to	1
W6	**WSDOT Owned Peninsula**	Initial Wetland Mitigation Plan, (May 2008)	Y	Wetland	8.3 acres	Seattle	Lake Washington	WL creation	Excavate uplands to match shore and replant.			Loss of wetland and riparian habitat and function from bridge construction and operation. Shoreline disturbance.	PS Chinook (North LW and Cedar River Stock); coho; sthd	Addresses a major limiting factor in Lake WA productivity (riparian function along lakeshore) and action item for L. WA system, although project concept unclear as to how much of the restoration would qualify as aquatic habitat; also unknown if habitat area is simply in milfoil zone, wherein little, to any benefit would be afforded to salmonids.	1
W7	**University of Washington Arboretum**	Field Studies	N	Wetland	111 acres	Seattle	Lake Washington					Insufficient information to qualify; does not appear to represent functional mitigation.	Insufficient information to qualify	Insufficient information to qualify; does not appear to address recovery goal or identified limiting factor	Insufficient information to qualify
W8	**University of Washington Shoreline Wetland**	Shane Cherry UW Master Plan Seattle Campus Final EIS (September 2001)	N	Wetland		Seattle	Lake Washington					Insufficient information to qualify what the project is, or what impacts it would mitigate.	Insufficient information to qualify	Insufficient information to qualify; does not appear to address recovery goal or identified limiting factor, and cannot locate project on map.	Insufficient information to qualify

Appendix 10.5: Annotated Bibliography

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SR 520 Corridor Program Legislative Reports

The following reports were used by the mediation participants in the preparation of the impact plan.

Tunnels at East Montlake and the Arboretum, Conceptual Design and Cost Estimate, Part 1
Keystone Center – March 2008
Access at: http://www.keystone.org/spp/520publicdocs/public_indyreview.html

This report describes the investigation carried out for the tunnel components of "Proposal K." The proposal assumes an interchange connection from SR 520, just east of Montlake, to the University of Washington area routed in tunnel under the navigation channel east of the Montlake Cut. It further includes a tunnel for SR 520 along the Washington Park Arboretum. The report analyzes various construction methods, cost estimates, and impact mitigation methods associated with constructing a tunnel under the Montlake Cut.

Tunnels Expert Review Panel Report
WSDOT – July 2008
Access at: http://www.wsdot.wa.gov/Projects/SR520Bridge/library-technical.htm

Upon completion of the *Tunnels at East Montlake and the Arboretum, Conceptual Design and Cost Estimate, Part 1*, the mediation panel requested for consideration other tunneling options that would reduce environmental effects and consider tribal fishing rights. This report responds to that request. The panel analyzed three methods for tunneling under the Montlake Cut: sequential excavation method, bored tunnel, and immersed tunnel. The panel found that the sequential excavation method and immersed tunnel methods are considered capable of being successfully constructed in this location, while the bored tunnel method is considered not feasible.

Noise Reduction Strategies – Expert Review Panel
WSDOT – December 2008
Access at: http://www.wsdot.wa.gov/Projects/SR520Bridge/library-technical.htm

In September 2008, WSDOT convened an ERP to determine the most viable solutions for reducing noise along the SR 520 corridor. The panel developed recommendations that focused on noise-reduction strategies that could be considered by WSDOT for the SR 520 Corridor Program. Some key components of these strategies included quieter pavements, roadway design, noise barriers, modeling, perception, operation and finance, and studded tires affecting acoustical (and other measures of) durability of pavements. The panel determined that no one noise-reducing component would work by itself and that the best solution will be a system of components that are designed to work together.

Appendix 10.5: Annotated Bibliography (continued)

SR 520 Health Impact Assessment
Puget Sound Clean Air Agency and Public Health – Seattle & King County – September 2008
Access at: http://www.wsdot.wa.gov/Projects/SR520Bridge/library-technical.htm

The SR 520 health impact assessment is a tool to help the mediation group and decision makers recognize the relationship between health and transportation systems. The SR 520 health impact assessment report provides general information about the health impact assessment tool, explains how the SR 520 project can affect health, and describes measures that can be taken to help promote healthy communities. The report is organized into four main categories: design features; landscaped lids and green spaces; transit, bicycling and walking; and the construction period.

SR 520 High Capacity Transit Plan
WSDOT, King County Metro, Sound Transit, and the University of Washington – Expected December 2008
Access at: http://www.wsdot.wa.gov/Projects/SR520Bridge/library-technical.htm

The SR 520 Final High Capacity Transit Plan outlines a strategy for bringing high capacity transit service to the SR 520 Corridor. The report defines a phased program for bus rapid transit that responds to projected increases in transit demand on the SR 520 corridor, expands existing demand for transit, builds on speed and reliability benefits from new HOV lanes on SR 520, and builds ridership needed for future high capacity transit improvements in the corridor.