Alaskan Way Viaduct and Seawall Replacement and State Route 520 Bridge Replacement Projects

Findings and Conclusions

A Path Forward to Action

Governor Chris Gregoire
December 15, 2006

OVERVIEW

In March 2006 the Legislature established an Expert Review Panel for the "Alaskan Way Viaduct and Seattle Seawall Replacement Project" and the "State Route (SR) 520 Bridge Replacement and HOV Project." The Expert Review Panel was tasked with reviewing the project implementation and finance plans for each of these projects, and directed to report its findings and recommendations to the Joint Transportation Committee, the Office of Financial Management, and the Governor by September 1, 2006. The law directs that following the expert review panel's review, "the Governor must make a finding of whether each finance plan is feasible and sufficient to complete the project as described in the draft environmental impact statement."

Today I make this finding, but with an appreciation that the finding alone will do little to move us forward. Therefore, I also focus on state, regional and city actions that are needed to take the next critical steps in moving these vital transportation projects forward to implementation.

While the law calls for a finding with regard to the Alaskan Way Viaduct and SR 520 projects, public officials and the traveling public are well aware that these projects are integral to, not separate from, the overall transportation systems in the Puget Sound region. Critical transportation corridors like SR 99 on the Alaskan Way Viaduct and SR 520 on the Evergreen Point Floating Bridge directly affect traffic flow on Interstate 90, Interstate 405, and Interstate 5. We must make our overall transportation system as efficient as possible in moving people and goods.

It is critical that we also find additional ways to make our transportation system rely less on cars as our population and our economy grows. What will be the impact on local and regional communities and other infrastructure in our state if we do not pursue alternatives to individual vehicles? We must continue to address both our regional highway system and transportation alternatives if we want to continue to enjoy the Puget Sound region as a vibrant area of natural beauty that is a wonderful place to live and work.

My review of these projects has benefited from the stages of the environmental review processes performed to date and which are still moving toward completion. I wish to thank technical experts including our Expert Review Panel, elected and appointed officials, the staff and consultant teams at the Washington State Department of Transportation (WSDOT) and their counterparts elsewhere in government and, of great importance, citizen committees, groups and individuals – all of whom have contributed their views to the project or shared their insights with me, to be taken in to account in making these decisions.

ALASKAN WAY VIADUCT AND SEAWALL REPLACEMENT PROJECT

INTRODUCTION

On September 1, 2006, an expert review panel appointed to review project finance and implementation plans for the Alaskan Way Viaduct and Seattle seawall replacement project reported its findings to the Governor. The Report of the Expert Review Panel began with this observation:

> With the conclusion of this review, we believe that now is the appropriate time for decisions. The Washington State Legislature, the Puget Sound region, and the people of Washington State have explored—diligently and faithfully—the various possibilities for these much-needed projects. The public thoughtfulness that has characterized them for the past several years is admirable.
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> But additional deliberation of the merits of various options would be counterproductive. If the decision-making process is extended much further, inflation will diminish the purchasing power of the funds that have already been committed. Meanwhile, the existing viaduct and bridge will continue to deteriorate and inch closer to catastrophic failure. The time has come to move forward with these vital public works projects.

The central issue addressed in these findings is how to move forward with the project after having considered and weighed all the complex and often competing issues. These include protection of the safety of the traveling public in the near term and the long term; transportation capacity that facilitates the economic vitality of the City of Seattle, the Puget Sound region, and Washington state and meets the intent to maintain SR 99 capacity; impacts on the environment; and the waterfront's contribution to the economy and quality of life in the City of Seattle and the region. Financing is also a major factor, given the magnitude of difference in the costs of project alternatives. Consideration must be given to the level of funding expected, planned for and committed to these projects and the impact of this funding on other regional transportation needs and projects. And finally, while it is not appropriate for state government to dictate land use and economic development strategies to local communities, the state does have an overriding responsibility for protecting public safety and accountability for efficient use of limited resources.

The issue of how to move forward is difficult, but we cannot let it confound us— I agree with the Expert Review Panel that now is the time to protect public safety by moving this project forward. The work and input of public officials, members of the public, public agencies, public interest groups, transportation experts, and tribal governments are all factored into the decision, but of course there are many divergent views and not all will agree with all elements of these decisions. It is my hope, however, that the members of the public and public officials will agree to move forward on a common path after considering all the central facts, the historical background, and the findings and conclusions outlined herein.

Historical Background

In 1932, the Aurora Avenue "speedway," including the Aurora Bridge, opened to traffic. The speedway was designed to give cars and trucks a quick route from north Seattle to downtown without intersections or traffic signals. Shortly thereafter, planning began for an Alaskan Way Viaduct to connect Aurora Avenue and Pacific Highway, which began south of the city. From planning to construction took over 20 years due to the Depression and World War II. Building an elevated structure on the waterfront was controversial and many community leaders questioned the wisdom of doing so and suggested a tunnel as a better choice. [1]

The viaduct was constructed between 1955 and 1958 in a cooperative effort between the State and the City of Seattle. It was the first double-deck bridge in Washington State. It was designed and constructed to meet the standards of the time and was expected to carry about 60,000 vehicles per day. The expected life of bridges built in the 1950s was approximately 50 to 75 years.

Understanding of earthquake risks and design approaches for seismic protection has evolved considerably since the 1950s. The Viaduct was built on fill from the Denny Hill re-grade project, which is now known to make the soil under the viaduct more susceptible to liquefaction in the event of earthquakes.

As part of the 1930's Denny Hill re-grade project, the Seattle Seawall was constructed to expand and extend Seattle's waterfront into Elliott Bay. The design of the seawall was based on a Dutch engineering plan similar to that used in Holland for dikes. This design uses a relieving platform to reduce the forces of retained fills on the wall itself. The connection of the relieving platform to the wall is critical to its structural integrity.

Two decades later, in the 1950s, plans were developed for a network of freeways through Seattle. In the 1960s I-5, I-405, and the SR 520 floating bridge across Lake Washington were constructed. Because of significant community opposition, plans for two other freeways and an additional bridge across Lake Washington (Kirkland to Sand Point) were halted. The envisioned highway system to accommodate projected population growth was never completed.

[1] *The Times*, November 1, 1947.

Since the Viaduct was built, significant population growth has occurred. In the 1960s the population in the Puget Sound region was under 1 million. By 2000, the population of King County alone was 1,737,034. Pierce and Snohomish counties, which are also served by I-5 and I-405, have experienced a 237 percent increase in population over the same period of time. By 2040, there are expected to be 1.6 million more people in the Puget Sound area and 1.1 million more jobs. [2] Some of this growth is projected to be within the City of Seattle. The City's population now stands at 563,374. [3] By 2024, the City of Seattle is predicted to gain 100,000 new residents and 84,000 new jobs. Out of that proposed population growth, the city's downtown neighborhoods will accommodate over half of the new jobs and one-fifth of the new residents.

The intervening decades since the construction of the Alaskan Way Viaduct have also brought significant changes in land use in and around the downtown Seattle area. In the late 1970s and early 1980s, land use began to transform from almost exclusively commercial and industrial to a mix of commercial, industrial, business and residential. Since the 1980s, residential housing has been constructed in downtown Seattle. In addition, infill throughout the entire city has occurred.

Changes have also occurred on the Seattle waterfront. By the late 1980s and early 1990s, the Seattle waterfront saw resurgence as a tourist destination, including the renovation of numerous piers for tourist-oriented businesses and the construction of a cruise ship terminal by the Port of Seattle. The Port of Seattle also is investing in a commercial and active water-based industry from Pier 46 south due to the rapidly expanding container trade. Washington State's ferry system, located in the heart of the waterfront, passes over nine million passengers each year through its largest terminal at Colman Dock. Ridership on routes serving Colman Dock is expected to increase significantly over the next 25 years. [4]

The City of Seattle is developing plans to improve the livability of downtown Seattle neighborhoods to meet the projected growth of jobs and housing over the next 20 years. The City of Seattle has developed a vision for the City that includes removing the Alaskan Way Viaduct to create new public space to attract the residential growth downtown and address complaints about the visual impact and the noise pollution of the viaduct. The City of Seattle began in 2003 to develop a vision for a waterfront without a viaduct.

The City is creating a conceptual plan for public areas, habitat improvements, and an improved streetcar on the waterfront. City ordinances make the Viaduct, while a grandfathered in use, inconsistent with plans for the waterfront.

[2] Puget Sound Population Trends, prepared by the Puget Sound Regional Council, published in Regional View, July 2001

[3] U.S. Census

[4] Washington State Ferries Long-Range Strategic Plan

The Need and Planning for Viaduct Replacement

The Condition of the Alaskan Way Viaduct

1. The Alaskan Way Viaduct, which is part of SR 99, is built on fill. This makes the soil under the Viaduct more susceptible to liquefaction. Liquefaction occurs when shaking motion from an earthquake turns wet, loose soil into a quicksand-like condition.

2. Several earthquake faults run near the SR 99 corridor.

3. Initial analysis of how the Viaduct will perform in an earthquake found the dominant mode of failure would be through soil liquefaction. A subsequent more comprehensive study included a detailed examination of the Viaduct's structure and incorporated new information about how an earthquake might affect the structure. This study found that a structural failure, not liquefaction, could be the primary failure mode.

4. The Viaduct has one of the lowest ratings for structural sufficiency in the state's inventory of 3,100 bridges. State bridges are given a structural sufficiency rating to prioritize them for rehabilitation and replacement. This rating is a number between 0 and 100 that reflects the physical condition of the bridge, load ratings, importance of the bridge and conformance to code. A new bridge would receive a rating of 100. When a bridge is rated at 80, it becomes eligible for rehabilitation funding. A rating of 50 warrants the bridge's replacement with a new structure. The Viaduct currently has a structural sufficiency rating of 9 to 12.

5. Two sections of the viaduct near Washington Street were damaged in the February 28, 2001, Nisqually Earthquake. Emergency repairs made on these two sections after the earthquake have kept the structure open. Following the earthquake, regular monitoring of the condition of the structure has occurred. This monitoring has identified that two other sections of the Viaduct have settled four and three-quarter inches. Additional repairs will be necessary if settlement reaches six inches.

6. Based on concerns about the structural integrity of the structure, the WSDOT has placed restrictions on load weights on SR 99. The weight limit for vehicles on the Viaduct is now 105,000 pounds and trucks and buses may only travel in the right lane.

7. Evaluations conclude that even an extensive retrofitting of the Viaduct would cost 80 to 90 percent of the cost to build a new elevated structure, and would only maintain the life of the current viaduct for 25 to 30 years. Such a retrofit would not provide wider lanes and shoulders to provide safety and mobility improvements on the facility.

8. Structural engineers have concluded the Viaduct should be taken down or permanently closed as soon as a feasible replacement can be built.

The Condition of the Seattle Seawall

1. The structural integrity of the Viaduct is dependent on the soils that are retained by the central portion of the Seattle Seawall, owned by the City of Seattle. The seawall holds the soil in place along Seattle's waterfront.

2. The Seawall includes as part of its structure, a substructure called a "relieving platform." This platform serves as a structural support for the seawall and is integral to and extends east of the Seawall. The relieving platform also supports sections of the Alaskan Way surface street and underground utilities.

3. Liquefaction during the 2001 Nisqually Earthquake caused structural damage to the Seattle Seawall.

4. Inspections have shown extensive damage to the seawall's relieving platform and the seawall face due to "marine borers," organisms that attack and destroy wood in the marine environment.

5. A study commissioned by the City of Seattle found that the Seawall is seismically vulnerable.

6. The existing Seawall provides poor habitat for Chinook salmon (listed as threatened under the Endangered Species Act) and other marine species.

Current Use of the Viaduct

1. One quarter of all north-south traffic through Seattle (110,000 vehicles) use the viaduct every day.

2. Of the 110,000 vehicles typically using the Viaduct each day, approximately 4,000 trucks are carrying freight.

3. Buses on the Viaduct carry 15,000 riders into and out of downtown Seattle each day.

4. Approximately 60 percent of the trips traveling on SR 99 through the project area use the Viaduct as a route through downtown Seattle. The remaining 40 percent go into or out of the downtown area.

5. Ramps to go to and from downtown are at First Avenue South, Seneca Street, Columbia Street, Elliott Avenue, and Western Avenue. The ramps at First Avenue South, Elliott Avenue, and Western Avenue are also used by long-distance trips from northwest Seattle neighborhoods to regional destinations and industrial centers.

6. The Viaduct provides an alternative north-south route to the often congested I-5.

7. The Viaduct links several key areas, including Sea-Tac Airport, the Duwamish and Interbay industrial areas, downtown Seattle, and Seattle's neighborhoods of West Seattle, Ballard, Magnolia, and North Seattle.

8. The Viaduct provides a grade-separated crossing from the roadway connection between the Port of Seattle container terminals and the BNSF railroad yards and Interstates 5 and 90, allowing the rail traffic to pass under the Viaduct traffic and avoiding interruption of rail or road traffic.

Projected Growth in Vehicle Trips and Transit Trips

1. Today, I-5 and I-405 are heavily congested for much of the day.

2. Vehicle trips on I-5 are expected to increase 25 to 30 percent by 2030.

3. Significant investments in transit are being made. Sound Transit's Central Link Light Rail from Sea Tac Airport to downtown Seattle will open in 2009. TransitNow, recently approved by King County voters, will expand transit service by 15 to 20 percent over the next 10 years. TransitNow and the City of Seattle's Bridging the Gap proposal, approved by City voters, will add 45,000 hours per year of expanded or new transit service, over the next 20 years.

Land Use in the Area of the Viaduct

1. Land use in and around the Seattle downtown area is a mix of commercial, industrial, business and residential.

2. The Seattle waterfront is a recreation and tourist destination, including numerous renovated piers that house small tourist-oriented businesses.

3. The Seattle waterfront is the location of a major cruise ship terminal operated by the Port of Seattle.

4. The Port of Seattle is investing in a commercial and active water-based industry from Pier 46 south due to the rapidly expanding container trade. This expansion is expected to increase rail and truck transport in the area.

5. Ridership on ferry routes serving Colman Dock is expected to increase significantly over the next 25 years, with increased traffic accessing the dock from or across the Alaskan Way surface street.

6. Residential housing in downtown Seattle has increased in recent years. As downtown residential housing has increased, concerns and complaints about the visual and noise pollution caused by the viaduct also have increased.

Development of Alternatives

1. In the initial planning stages for replacement of the Viaduct, 76 conceptual alternatives to the existing Viaduct were evaluated. These included an Elliott Bay Bridge, a retrofit of the existing Viaduct, a cut-and-cover tunnel under other city streets, a bored tunnel under the city, and a surface street or no replacement concept. From these, five concepts were identified for further consideration. A 2004 Draft Environmental Impact Statement analyzed the benefits and impacts of the following five alternatives.

    a. The Rebuild Alternative would rebuild a Viaduct in the present location, but four feet wider. Ramps would be built in their current locations.

    b. The Aerial Alternative would build a new double level stacked aerial structure 20 feet wider than the current structure.

    c. The Tunnel Alternative would build a six-lane side-by-side cut-and-cover tunnel from approximately King Street to Pine Street. The lane and shoulder widths would meet today's safety standards.

    d. The Bypass Tunnel Alternative was a four-lane side-by-side cut-and-cover tunnel from approximately King Street to Pine Street that did not replace the Elliott and Western ramps.

    e. The Surface Alternative was a six-lane surface roadway on Alaskan Way.

2. WSDOT eliminated from its alternatives the option of a tunnel under Western Avenue for a number of reasons. The Western Avenue right of way is narrow, and a tunnel along that corridor would impact existing buildings, including historic buildings. Traffic would have to slow from 55 mph to 30 mph at each end of the tunnel to navigate the necessary curves. Also, the design would require a steep climb to enable SR 99 to pass over the Burlington Northern railroad tunnel. The costs would be greater than the Alaskan Way tunnel alternative, in part because the seawall replacement could not be integrated with the tunnel and would be a separate project.

3. WSDOT also eliminated from its alternatives a bridge across Elliot Bay because it would negatively affect Seattle's shipping industry, scenic views, and aquatic habitat. In addition, the bridge concept would not replace the seawall, so a separate seawall construction project would still be needed.

4. A deep bored tunnel was a concept alternative reviewed early in the project's design and environmental processes. The deep bored tunnel was eliminated based on constructability and cost.

The deep bored tunnel requires competent soil, which means the alignment would have to be moved eastward, deep under another city street or under other downtown properties. Risk of building settlement, extensive city street and utility impacts, and additional property costs would result. The depth to competent soil means a bored tunnel would necessarily be longer than a cut-and-cover tunnel along the waterfront, running from approximately the Stadiums to Seattle Center. The close proximity to the existing Burlington Northern Railroad Tunnel near the Pike Place Market would add further risks, which would further increase costs. Preliminary cost estimates in the range of $8-12 Billion were developed based on preliminary concept designs. The bored tunnel would still require significant disruptions to State Route 99 traffic at each end of the project, where connections into the existing roadway are required. In addition, the Seattle waterfront and downtown businesses would experience impacts due to seawall construction and the staging activities necessary to construct the tunnel bores and material excavation. Finally, the bored tunnel would not allow for a direct connection from the Ballard/Interbay area to downtown as ramps at Elliot and Western Avenue would not be possible.

5. The WSDOT traffic analysis of the surface option in the DEIS uses traffic volumes projected for the surface Alaskan Way facility in 2030 as the base-line for traffic comparisons. According to the WSDOT analysis, traffic volumes on the Alaskan Way surface street would increase from 11,000 trips per day in 2030 to an expected 74,000 trips. WSDOT estimates the impact of this traffic volume would be that the surface street would be congested for up to nine hours per day.

   The surface alternative analyzed in the DEIS is expected to result in longer travel times and lower travel speeds than the existing facility with no improvements in 2030, even with key planning assumptions about significant transit service increases throughout the corridor. For example, northbound travel times during the evening peak period from South Spokane Street to the Aurora Bridge would increase from 12 minutes for the 2030 existing facility to 33 minutes with the surface alternative. In the southbound direction, this same trip is expected to increase from 9 minutes to 16 minutes.

   WSDOT's traffic data also indicates a substantial impact to Seattle's downtown streets. The number of congested intersections in the downtown area would increase from eight to 14, with an expected traffic increase in the downtown streets of approximately 16%, resulting in lower speeds and longer travel times.

WSDOT also anticipates an additional 22,000 trips per day on I-5 through downtown, which is an increase of about 6%. I-5 in the downtown Seattle area currently operates under severely congested conditions for five or more hours during a typical weekday. The surface option would add two more hours a day of congestion on I-5 by 2030.

The surface alternative also impacts the movement of freight. Northbound travel times during the PM peak period from the Ballard Bridge to the SR 519 ramps would increase from 19 minutes for the 2030 existing facility to 27 minutes with the surface alternative. In the southbound direction the trip would increase from 13 minutes to 22 minutes.

In June of 2006, the Seattle City Council hired the firm DKS to conduct an independent analysis of the surface option. DKS concluded that based upon the WSDOT traffic analysis and comparisons to comparable facilities, it is reasonable to assume that the surface facility would attract between 40,000 and 75,000 vehicle trips per day. DKS also concluded that the potential for speeds of eight to 15 miles per hour were very likely for a facility of that size with that traffic volume. According to the DKS report, "If a pedestrian friendly waterfront is desired, a surface roadway with 40,000-50,000 average daily traffic is contrary to this objective."

The DKS analysis also reaches some very specific conclusions regarding the impacts the surface option would have on transit capacity. The more vehicles added to the roadway, the less capacity there is for transit. Simply adding more buses degrades the overall capacity, since several modes of travel are competing for the same limited space. Transferring significantly more vehicles from the Alaskan Way Viaduct to the downtown grid limits the City's ability to provide expanded transit service and erodes the performance of the existing service.

In 2006, WSDOT updated the surface option cost estimate for comparative purposes with the options under consideration in the SDEIS. The most likely cost for the surface option is approximately $2.1 Billion. This cost estimate does not include long term investments to achieve expanded transit service.

6. Two alternatives were carried forward into the Supplemental Draft Environmental Impact Statement (EIS): The Elevated Structure Alternative (incorporating elements of the Rebuild and Aerial Alternatives evaluated in the Draft EIS) and the cut-and-cover Tunnel Alternative.

    a. Either alternative would be built to withstand a 2,500-year earthquake without collapse or loss of life.

b. Either alternative would add shoulders, increase lane widths, and improve on- and off-ramps in accordance with current design standards.

c. Both alternatives are composed of four component areas: the South End from S. Spokane to S. Dearborn; the Central Section from S. Dearborn to the Battery St. Tunnel; the North Waterfront Section from Pine to Broad; and the North End from Battery St. Tunnel to Comstock.

d. Both alternatives have the same configuration in the South and North End components.

    i. In the South End the existing Viaduct would be replaced with an at-grade roadway (with aerial structures at railroad track crossings). To facilitate traffic movements, changes would be made to railyards and frontage roads would be constructed. Ramps would be located at Atlantic and S. Royal Brougham Way. The Tunnel Alternative, but not the Elevated Structure Alternative, would also include ramps at S. King Street.

    ii. In the North End, the Battery Street Tunnel would be improved by increasing the vertical clearance, updating tunnel ventilation and safety systems, and improving the tunnel to meet earthquake requirements. North of the Battery Street Tunnel, SR 99 would be improved and widened in many places, and street connections improved by building new bridges over SR 99. Mercer Street would continue to cross under SR 99 as it does today, but with improvements.

c. The two alternatives have very different configurations for the Central and North Waterfront Sections.

    i. In the Central Section, the Tunnel Alternative would replace the viaduct structure with a "cut-and-cover" tunnel along the central waterfront from S. Dearborn St. to Pine St. The tunnel would be six lanes (three lanes in each direction). After the tunnel ends, from Pine St. to Virginia St., SR 99 would transition to an aerial structure covered by a partial lid that could link Steinbrueck Park and the Pike Place Market to the waterfront. While this alternative does not rebuild the ramps at Seneca and Columbia streets, new ramps at King Street will provide similar access. From just north of

Virginia St., SR 99 would connect to the Battery Street Tunnel traveling under Elliot and Western Avenues. The Alaskan Way surface street would be replaced with three lanes in each direction from about Railroad Way S. to Yesler Way. North of Yesler Way, most of Alaskan Way would have two lanes in each direction with center turn pockets. The waterfront streetcar would run on two tracks down the center of the roadway with alternating turn pockets and streetcar stops. Alaskan Way would have expanded open space, a wide waterfront promenade, broad sidewalks on both sides of the surface street, bicycle lanes, and parking.

ii. In the Central Section, the Elevated Structure Alternative would replace the existing viaduct with a stacked aerial structure along the central waterfront. The new structure would have three lanes in each direction, with wider lanes and shoulders. The existing ramps at Columbia and Seneca Streets and Elliot and Western Avenues would be rebuilt. Between S. King St. and the ramps at Columbia and Seneca Streets, SR 99 would have four lanes in each direction. SR 99 would be rebuilt over Elliott and Western Avenues. The new elevated structure would be 11.5 to 35 feet wider than the existing viaduct from south of S. Main Street up to Union Street. Near S. King Street to south of S. Main Street, the new elevated structure would be 54 to 74 feet wider than the existing viaduct as SR 99 transitions from a side-by-side at-grade roadway in the south to a new double-level elevated structure. The Alaskan Way surface street would be rebuilt in approximately the same location with two lanes in each direction. Between S. King Street and Yesler Way, left-turn pockets may be provided. A single waterfront streetcar track would be rebuilt on the east side of Alaskan Way. Alaskan Way would also have bicycle lanes, on-street parking, and sidewalks.

iii. In the North Waterfront Section (from Pine St. to Broad St.), the Tunnel Alternative would reconstruct the Alaskan Way surface street with four lanes, two in each direction. Streetcar tracks would run along the inside lane in both the northbound and southbound directions, with alternating turn pockets and streetcar stops.

iv. In the North Waterfront Section, the Elevated Structure Alternative would also reconstruct the Alaskan Way surface street with four lanes, two in each direction. A single waterfront streetcar track would be rebuilt on the east side of Alaskan Way.

d. The expected life of each alternative is 75 to 100 years.

9. The environmental impact statement work indicated that regardless of the alternative selected, construction impacts will be significant. The current proposed construction plan for the tunnel closes SR 99 for 39 months and the elevated option closes SR 99 for 4-6 months. Although the elevated option only completely closes SR 99 for a short period of time, WSDOT anticipates that SR 99 could be partially closed for 7-10 years.

   a. The severity of traffic disruption is greater if shorter construction durations are chosen. A longer construction plan can have less traffic disruptions, but extends those disruptions over a longer period of time. In general, the shorter the construction duration, the lower the expected project cost.

   b. During construction of the tunnel, traffic traveling through Seattle on SR 99 would reroute to surface streets or I-5, with heavy congestion and delays. Peak periods would extend throughout the day.

   c. During construction of the elevated structure, traffic traveling through Seattle on SR 99 would experience delays due to construction and reduced lane capacity. One lane in each direction on the Alaskan Way surface street may be provided, depending on phasing.

   d. A group of waterfront businesses and other organizations sponsored a study evaluating the impact of construction on the waterfront. The study concluded that full closure of the Alaskan Way Viaduct during construction would lead to a negative economic impact of $3.4 billion annually and a loss of 32,146 jobs per year. The impact area studied includes the Seattle Waterfront and Central Business Core, the Ballard Industrial Area, Duwamish and South downtown. The negative economic impacts primarily result from the diversion of traffic from SR 99 and the Viaduct and the resulting gridlock on city streets and I-5. The study concludes that customers affected by the traffic will either shift their business to other areas of King County, go to other counties or simply choose not to shop or attend events at all. However, there is some dispute regarding the validity of those findings.

Expert Review Panel

1. In 2006, the Legislature directed the Governor, along with the chairs of the senate and house transportation committees and the secretary of transportation, to form an Expert Review Panel to review funding and implementation plans to determine if they were feasible and sufficient. [5] The law provided the Expert Review Panel should include experts in relevant fields, such as planning, engineering, finance, law, the environment, emerging transportation technologies, geography, and economics.

2. The Expert Review Panel issued its findings on September 1, 2006 and found that the funding plan for the Alaskan Way Viaduct was reasonable given the stage of project development. [6] The panel also concluded the Alaskan Way Viaduct's project's overall financial plan provides a reasonable framework for funding the core project for either the elevated or tunnel alternatives.

3. The panel also found the project implementation plan was sound. This included the project management plan, environmental permits and regulatory approval strategy, and design approval process. The panel also found the process for selecting the two alternatives under consideration was sound.

Project Cost Estimation

1. WSDOT has estimated a "core project" and "full project" cost for each of the Elevated Structure Alternative and the Tunnel Alternative. The information below refers only to the "core project," which includes the most critical improvements (in the south end, along the central waterfront, up to and including the Battery Street Tunnel).

2. The most recent project cost estimates were prepared in response to comments made in the September 1, 2006, Expert Review Panel report. The Expert Review Panel reviewed the project finance and implementation plans to determine if the key assumptions upon which they were based were feasible and sufficient. The Panel found that the Cost Estimate Validation Process used by WSDOT to develop the cost estimates is a valid methodology for evaluating the variability of cost and schedule predictions due to unforeseen risks and opportunities. The Panel also commented that this cost estimate methodology represents a "best practice" and is gaining popularity nationally. However, the Panel noted that the cost estimates did not consider the recent worldwide construction cost inflation increases, and that the general inflation rate applied to the estimates was too low. The panel also observed that both projects are in a very early stage of design. As a result, the Panel recommended that WSDOT broaden the cost estimate range to

[5] Engrossed Substitute House Bill 2871, 59th Legislature, 2006 Regular Session.

[6] The Alaskan Way Viaduct and SR 520 Bridge Projects, Report of the Expert Review Panel, September 1, 2006

acknowledge that there are unknown issues at such an early design phase, and at the same time, the panel recommended that for budgeting purposes the cost that had a 60% confidence level of not being exceeded should be used. This figure has been labeled as "the most likely cost." Finally, the Panel also recommended that the project cost estimates be updated when approximately 15-20% designed engineering work is completed.

3. At the Governor's request in response to the Expert Review Panel's findings, WSDOT completed a cost reevaluation.

    a. The reevaluation found that the most likely cost for the "core project" for the Elevated Structure Alternative is $2.82 billion (compared to $2.0 to $2.4 billion in the July 2006 Supplemental Draft EIS).

    b. The reevaluation found that the most likely cost for the "core project" for the Tunnel Alternative is $4.63 billion (compared to $3.0 to $3.6 billion in the July 2006 Supplemental Draft EIS).

    c. Panel members participated in the cost reevaluation and found that "these new cost ranges more accurately reflect the uncertainty associated with both projects at this early stage of design." The panel also concluded that these revised estimates did not change their original conclusion that the "overall financial plan provides a reasonable framework for funding the core project for either the elevated or tunnel alternatives." However, they also noted that after design of the project reaches 15 percent there would be a better feel for the accuracy of these numbers. [7]

[7] Letter to Governor Gregoire from Expert Review Panel, October 31, 2006.

Project Funding

The following table summarizes secured and anticipated funding for the project.

Alaskan Way Viaduct and Seawall Replacement Project
Secured and Anticipated Funding
December 12, 2006

Source		Maximum funding for the elevated structure ($ millions)	Maximum funding for the tunnel ($ millions)
Secured			
Federal	TEA-21 earmarks	$19	$19
	U.S. Army Corps of Engineers (Water Resources Development Act)	$0.5	$0.5
	SAFETEA-LU Earmarks	$198	$198
State	Pre-2003 funding	$4	$4
	2003 Nickel Package	$177	$177
	2005 Transportation Partnership Account	$2,000	$2,000
Regional	Puget Sound Regional Council STP grant	$1	$1
Local	City of Seattle	$16	$16
Total secured funding		$2,415	$2,415
Anticipated			
Federal	Future transportation funding reauthorizations*	$0-$100	$0-$100
	Emergency relief funding	$60	$60
	U.S. Army Corps of Engineers: Water Resources Development Act*	$0-$150	$0-$150
Tolling	Tolling**	$0-$150	$0-$150
Regional	RTID ballot measure	$800***	$800
	Sales tax rebate	0	0
Local	Open space and other funding	0	$80
	Transportation funding	0	$20
	Utility relocation costs****	$0-$400	$400
	Local improvement district	0	$250
	Port of Seattle Capital improvement plan*	$0-$200	$0-$200
Total anticipated funding		$860-$1,860	$1,610-$2,210
Total potentially available funding		$3,276-$4,276	$4,026-$4,626
Most likely project cost		$2,820	$4,630

* Not currently confirmed.
** Included as a possibility but tolls are not likely.
*** It is unclear whether RTID would fund the elevated structure at the same level as the tunnel.
**** Paid by Seattle Public Utilities and Seattle City Light. City has committed to pay relocation of those utilities if the tunnel is selected.

1. To date $2.415 billion has been secured as funding for the project to replace the Alaskan Way Viaduct.

    a. Secured state funding from legislation that has been enacted provides $2.181 billion. The Legislature has expressed its intent that these funds be used for alternatives that preserve existing capacity. In the 2004 transportation budget the Legislature directed that "[f]unding provided by this act for the Alaskan Way Viaduct project shall not be spent for preliminary engineering, design, right of way acquisition, or construction on the project if it could have the effect of reducing roadway capacity on that facility." The expression of this intent does not include a project alternative preference.

    b. Secured federal funding provides $0.217 billion. The Federal Highway Administrator for the Western Division has stated that federal funds allocated to the project are to be used only for a project that maintains capacity in the project corridor.

    c. Secured local and regional funding, from the City of Seattle and the Puget Sound Regional Council, provides $0.017 billion.

2. The project's funding plan also identifies anticipated funding sources. These are designated "anticipated funds" because whether they are available will depend on future legal, institutional, or political actions, or the amount available may be uncertain. The Expert Panel's estimates for "anticipated funds" total $2.2 billion for the Tunnel Alternative, and $1.8 billion for the Elevated Structure Alternative.

    a. The Expert Review Panel anticipated federal funding of $0.310 billion for either alternative based on expected levels of future federal transportation funding reauthorizations, emergency relief funding, and U. S. Army Corps of Engineers Water Resources Development Act funding.

    b. The Expert Review Panel anticipated regional funding of $0.950 billion. This anticipated funding is based on the assumption that the Regional Transportation Investment District (RTID) will propose to the voters investing $800 million in the Alaskan Way Viaduct and Seawall Replacement Project and that the voters will approve a ballot measure in November 2007 that includes this level of funding. This regional funding total also includes $150 million in anticipated regional funding if it is decided to place tolls on the highway.

c. The Expert Review Panel anticipated local funding of $0.6 billion for the Elevated Structure Alternative and $0.95 billion for the Tunnel Alternative. This anticipated funding is based on the assumption that $400 million would be contributed by Seattle City Light and Seattle Public Utilities to the cost of utilities relocation and $200 million would be contributed by the Port of Seattle, and that this funding would be contributed under either alternative (although local authorities have indicated these funds would only go towards a tunnel). The Expert Review Panel found it reasonable to assume these funds could be anticipated for either alternative. The additional $350 million in anticipated local funds for the Tunnel Alternative include a local improvement district that the City envisions creating in the vicinity, with $250 million anticipated from assessments on the increased value of district properties resulting from construction of the tunnel, and $100 million from local open space and transportation funding.

   The Panel noted that "[t]he city pledged, in an open hearing with this panel, $500 million for the tunnel" and assumed the Port of Seattle would be willing to contribute "a maximum of $200 million" given the added value the Viaduct project would yield the port.

3. The City of Seattle has committed in a draft proposed agreement with the state to provide binding assurances that would ensure the anticipated funding from the city and its utilities is contributed to the project if the Tunnel Alternative is chosen.

4. There are no assurances that all of the anticipated funding from the federal government or the Port of Seattle would be approved for the project. The extent of regional funding that will be secured for the project will not be known until results are received from a November 2007 ballot measure by the Regional Transportation Investment District.

City of Seattle Planning and Preferences

1. The Legislature directed the City of Seattle to either submit an advisory ballot to the city voters at the 2006 general election seeking the preference of the city voters for the tunnel and rebuild alternatives relative to the Alaskan Way Viaduct project, or, in the alternative, to adopt by ordinance a preferred alternative for the Alaskan Way Viaduct and Seattle Seawall replacement project.

2. The Seattle City Council chose to proceed with hearings and adoption of an ordinance rather than a public advisory vote.

3. On September 22, 2006, the City Council adopted Ordinance Number 122246 identifying as its preferred alternative demolition of the existing Viaduct structure and its replacement with a tunnel through the central waterfront. In the event a tunnel proves to be infeasible, the city council recommended development of a transit and surface street alternative that met certain criteria.

4. On September 22, 2006, the City Council adopted Ordinance Number 122247 declaring that an aerial highway along the central waterfront is discouraged by adopted City of Seattle policies, stating that construction of an aerial highway structure is inconsistent with current use and height regulations, and stating the City's intent to amend existing regulations and policies to further clarify that an aerial highway structure in the central waterfront area is inconsistent with the City's Comprehensive Plan.

5. The City of Seattle's Central Waterfront Plant and Center City Strategy are waterfront and urban neighborhood planning efforts that have envisioned removal of the Alaskan Way Viaduct to create new public space and to attract the residential growth downtown.

6. A study sponsored by the Downtown Seattle Association has concluded that if the Viaduct were removed, new development and increased property values would generate over $200 million in one-time tax benefits and an ongoing tax stream of $32 to $60 million for the City of Seattle. That study also concluded that if the Viaduct were removed and the waterfront redeveloped, there would be increased tourism spending in the City of Seattle amounting to approximately $160 to $325 million, with ancillary tax benefits.

Public Comment on Alternatives

1. Since 2001 the public has been invited to provide its comments on what structure should replace the viaduct. Over 7,600 comments have been received at public meetings, community briefings, and local festivals and fairs, and from e-mails and letters. Not all comments received have expressed a preference for a replacement option. Of those that did express a preference and including comments on the Draft and Supplemental Draft EIS, the following preferences have been expressed:

    a. Over 400 comments have been received in favor of an elevated structure replacing the viaduct. Nearly all of these comments mention a desire to keep the scenic view from the viaduct because it makes commutes more bearable and it gives a chance to show Seattle to visitors. Other issues mentioned were a fear of driving in tunnels, safety during natural disasters, and the preservation of ramps at Seneca and Columbia Streets into downtown Seattle.

b. Over 900 comments have been received in favor of a tunnel replacing the viaduct. Those that support the tunnel see it as a chance to create a new waterfront that will enhance Seattle for those who live there and for tourists and businesses, and a spur to economic growth. While the tunnel costs more, comments that support that choice believe that both options are expensive, and as a result, such an expense should reflect an investment in the future. Many stated additional investment will pay for itself in the economic growth it will bring to the region.

c. Almost 60 comments asked that other alternatives be considered, including the Transit+Streets proposal; retrofitting the existing Viaduct; and an Elliot Bay Bridge.

2. Elected officials, state and federal agencies, and interest groups have also commented on the project.

a. In a letter to the Governor on November 16, 2006, Washington House of Representative Speaker Chopp, Appropriations Chair Sommers, and 28 other representatives expressed their support for a new elevated structure.

b. In a letter to the Governor on September 18, 2006, nine legislators from the Seattle delegation expressed their support for the tunnel.

c. In a letter to the Seattle City Council on September 22, 2006, the Waterfront for All Campaign expressed its support for the tunnel.

d. In a letter to the Expert Review Panel on August 28, 2006, the Greater Seattle Chamber of Commerce expressed its support for the tunnel.

e. The Downtown Seattle Association expressed its support for the tunnel in a letter written on November 2, 2006.

3. Surveys have been conducted by WSDOT, by the Seattle Times, and by a group that supports the Tunnel Alternative. These surveys show that public opinion on what alternative should replace the Viaduct is mixed, with some surveys expressing a narrow preference for the Elevated Structure Alternative and other surveys expressing a narrow preference for the Tunnel Alternative.

Project Schedule and the Cost of Delay

1. The current project schedule assumes the start of construction in 2008, beginning with utility relocation. If the schedule is not met, at least $10 million will be added to the project costs for every month of delay.

2. If a decision on the preferred alternative does not happen mid-2007, the start of construction will be delayed.

3. There are challenges associated with constructing a large transportation project in a dense urban area. For example, where the work involves soil with many unknown features or characteristics. The cut-and-cover tunnel involves a greater amount of soil excavation that probably makes the cut-and-cover tunnel more likely than the elevated alternative to encounter unforeseen soil conditions.

Key Decision Factors

The following are the key factors in making a decision:

1. **Public Safety:** A primary consideration is the safety of the traveling public. We must consider the near term need to protect public safety by avoiding delays in replacement of the existing viaduct, and the long term public safety provided by the alternatives.

2. **Traffic and Freight Mobility:** A choice among alternatives for SR 99 must consider the need for efficient traffic and freight mobility. Among other factors, the choice must consider the impacts on other transportation routes if there is reduced vehicle capacity or traffic speed on SR 99. Also, we must consider legislative intent to maintain vehicle capacity in the Alaskan Way Viaduct Corridor.

3. **Environment:** Another factor for consideration is the degree to which the alternatives provide opportunity to improve our natural environment involving marine habitat improvements and better control of stormwater discharges.

4. **City of Seattle Planning and Preferences:** The State government must consider decisions that have state-wide implications, however, must also defer to local government for decisions that have local implications. Values at these two levels of government must be considered together. Consideration must be given to the State's interests to maintain safety and mobility for the public and the City of Seattle's waterfront and urban neighborhood planning, and the desire for opportunities to enhance these areas for residents, businesses and visitors.

5. **Economic Benefits and Impacts:** The short-term and long-term economic benefits and impacts of each alternative are factors in determining if each alternative is a practicable and wise investment for the people of the state, the region and the city.

6. **Impacts on Traffic and Businesses during Construction:** SR 99 is a vital transportation corridor; however, constructing a replacement in a dense urban area limits the opportunities to maintain traffic during construction. The opportunities for keeping traffic moving during construction should be considered. Additionally, it is important to maintain access to businesses in the area of construction.

7. **Project Cost and Funding:** Cost and funding is a critical consideration of the cost of each alternative and whether there is the ability to develop a "feasible and sufficient" finance plan to complete the selected alternative. To do so, we must determine whether the cost estimates and funding assumptions are sound. We must consider project financing priority in light of other regional transportation project and program needs. We must also consider likely delays to the project and the impact of delays on costs.

Conclusions

Guided by the history and key decision factors discussed above, today I make the following conclusions regarding the Alaskan Way Viaduct Project:

1. "No action" is not an option. The Alaskan Way Viaduct is subject to damage in the event of even a modest earthquake, and its failure could cause injury or loss of life. The Viaduct could sustain damage causing it to be permanently closed in the event of an earthquake that has a one in twenty chance of occurring in the next 10 years, which could disrupt traffic in the region for a significant period, with attendant inconvenience and negative economic impacts.

2. A retrofitted Viaduct would not be a wise investment because to meet the required earthquake standards, it would require an investment of 80 to 90% of the cost of a new structure that would have only one third of the life. In addition a retrofit would not provide wider lanes and shoulders to improve safety and mobility on the facility. The underlying structure of a retrofitted viaduct would still be old and subject to more deterioration, which could ultimately cost more in maintenance and be less reliable than a new structure.

3. Alternatives other than the Elevated Structure Alternative and the Tunnel Alternative have been explored and rejected for sound reasons.

    a. A surface street alternative is not an acceptable alternative because it would significantly reduce the vehicle capacity of SR 99, forcing greater congestion on Interstate 5 and downtown city streets. Legislative intent limits spending of state and federal secured funding only for an alternative that maintains or increases vehicle capacity. Also, a surface street alternative would not provide a grade-separated crossing for rail traffic and road traffic, which would have a negative impact on traffic flow.

    b. A bridge across Elliot Bay is not an acceptable option because it would have significant environmental impacts and would not provide an option for replacing the seawall.

    c. A cut-and-cover tunnel under Western Avenue is not an acceptable option because it would include traffic-slowing curves, would have a steep grade up to the Battery Street Tunnel which limits freight accessibility, and would not address the seawall replacement.

    d. The bored tunnel is not an acceptable option because it would have extensive city street and utility impacts, the preliminary cost estimates ranged from $8-12 billion, and the tunnel would not allow for direct connection from the Ballard/Interbay area to downtown.

e. Delaying the decision of whether to pursue the Elevated Structure Alternative or the Tunnel Alternative could be costly, both in terms of prolonging the risk to public safety and in terms of increasing the costs of the project. A choice should be made now between the Elevated Structure Alternative and the Tunnel Alternative as described in the Supplemental Draft EIS.

4. Both alternatives would provide equal benefits for the public safety and for traffic and freight mobility.

    a. The Elevated Structure Alternative and the Tunnel Alternative would provide equivalent safety for the traveling public from earthquake damage, since either alternative would be built to withstand a 2,500-year earthquake without collapse.

    b. The Elevated Structure Alternative and the Tunnel Alternative would provide equivalent driving safety for the traveling public, since either alternative would add shoulders, increase lane widths, and improve on- and off-ramps in accordance with current design standards.

    c. The Elevated Structure Alternative and the Tunnel Alternative would have equal capacity to carry people and goods through the downtown Seattle area.

    d. Because they would have equal capacity to carry traffic, the Elevated Structure Alternative and the Tunnel Alternative would have the same impacts on I-5 and other transportation routes in the area.

    e. The two alternatives would provide different but comparable access to downtown Seattle. Travel times to downtown are similar for the two alternatives.

    f. Both alternatives would replace the deteriorating seawall with a long-term solution that would serve the region for many generations.

5. The Tunnel Alternative would provide greater opportunities for environmental enhancements.

    a. For either alternative, replacing the existing Viaduct and seawall would help improve water quality by reducing the effects of surface run off that today flows directly into Elliot Bay.

    b. The Tunnel Alternative will significantly reduce traffic noise levels along the central waterfront.

6. The Tunnel Alternative provides the greater opportunity for improving the downtown area of the City of Seattle as a place to live, work, and enjoy the waterfront.

    a. The Tunnel Alternative would provide additional space for public open space and street amenities, such as landscaping.

    b. The Tunnel Alternative would remove the existing Viaduct from the waterfront, opening up views of Elliot Bay.

    c. The Tunnel Alternative would provide increase space for sidewalks, bike trails, and an expanded streetcar system.

    d. The Tunnel Alternative would improve the central waterfront area as a destination for existing and new businesses, residents, users, and visitors.

    e. The Elevated Structure Alternative would allow commuters and other travelers on SR 99 to enjoy views of Elliot Bay.

7. The Tunnel Alternative provides the greater opportunity for economic benefits to property owners and businesses in the areas near the waterfront, with ancillary tax benefits for the City of Seattle.

    a. A restored waterfront will increase property values in certain areas of the City of Seattle, with ancillary tax revenue benefits.

    b. Redevelopment of the waterfront will increase tourism spending in the City of Seattle, with ancillary tax revenue benefits.

8. The Elevated Structure Alternative would cost at least $1.81 billion less than the Tunnel Alternative. The most likely cost for the Elevated Structure Alternative is $2.82 billion, compared to the most likely cost for the Tunnel Alternative of $4.63 billion.

9. Both alternatives have risks and challenges during construction.

    a. Both alternatives have similar impacts to the businesses on the waterfront.

    b. Both alternatives have significant construction risk. The risk has been accounted for in the cost estimates. There is slightly more risk with tunnel construction.

10. Both alternatives will require significant investments in transportation mitigation.

    a. Little space for staging or re-routing of traffic means there will be significant disruptions to traffic for both alternatives.

    b. If the corridor is open during construction, it will only be during peak travel times and only two lanes in each direction will be available to traffic. The remainder of the day traffic will be routed to downtown surface streets.

Financial Findings

Based on the statutory requirements and information referenced above, today I make the following findings with regard to financing the project:

The finance plan for the Elevated Structure Alternative project as described in the draft environmental impact statement is feasible and sufficient to complete the project.

1. To date $2.415 billion of the likely cost of $2.82 billion has been secured as funding for the Elevated Structure project to replace the Alaskan Way Viaduct.

2. No more than $0.310 billion in anticipated federal funding sources can be realized.

3. It is reasonable to expect anticipated regional and local funding equivalent to at least the remaining $0.095 billion to be contributed to the project.

The finance plan for the Tunnel Alternative as described in the draft environmental impact statement is not feasible and sufficient to complete the project.

The finance plan would become feasible and sufficient to complete the Tunnel Alternative only after the anticipated funding from the Federal Government, the City of Seattle and the Port of Seattle are secured by binding commitments, and after passage of the RTID ballot measure approving the anticipated regional funding of $800 million.

1. The most likely cost for the Tunnel Alternative is $4.63 billion. To date, $2.415 billion has been secured as funding for the project to replace the Alaskan Way Viaduct. Over $2.2 billion in anticipated funding must be realized to make the finance plan feasible and sufficient to complete the project as described in the draft environmental impact statement.

2. No more than $0.310 billion in anticipated federal funding sources can be realized.

3. Anticipated regional and local funding is the primary source for the remaining $1.89 billion difference in the most likely cost for the Tunnel Alternative core project and the secured funding. Today the financing plan is not feasible and sufficient to complete the Tunnel Alternative project as described in the Supplemental Draft EIS because there is no assurance that the anticipated funding will in fact be provided for the project. For a project of this magnitude, I do not believe the nonbinding assurances of city officials and the assumption that Port of Seattle officials would be willing to contribute significant amounts to the project meet the test the legislature has set forth for a feasible finance plan.

A Path Forward to Action

There is little disagreement that the Alaskan Way Viaduct needs to be replaced. There is no agreement on the replacement option. There are very strongly held and opposite views about which of the alternatives should be chosen. As I have prepared these findings, I have attempted without success to find a path forward that brought these diverse sides together, committed to a single alternative and implementation. Still we must move forward.

I personally would prefer the cut and cover tunnel alternative as the Viaduct replacement because I share the belief that there is value to the community and the environment, strongly urged by supporters of the plan that would result from burying the roadway along Seattle's waterfront. Some have said this is not just a highway project, it is an investment in the future of the waterfront.

However, affordability is key and, I cannot in good conscience make the finding that the funding prospects are now sufficient to move forward on the tunnel plan, a judgment shared by a substantial number of state legislators including Speaker Chopp and House Appropriations Chair Sommers from Seattle, and others. Some have said we simply can't afford the tunnel when we have other important priorities, like the SR 520 bridge.

The elevated structure has its own problems. I believe that deference should be given to local government where appropriate, and the elevated plan is opposed by Mayor Nickels and the majority of the City Council, as well as many legislators and others.

It is clear that state and city officials intend to obstruct the choice of an alternative with which they disagree, through legislative actions or through denying permits necessary for the construction of the facility. Therefore, my required findings alone will not move the project forward. We are at a political stalemate.

Therefore, here is my recommended path forward:

Let's ask the voters of Seattle. I will accept their vote and ask legislative and City leaders to do the same.

1. Will it be a cut and cover tunnel or an elevated structure?

2. Are the Seattle voter's willing to accept the additional cost of the tunnel?

3. The public discourse and educational value associated with a public vote is a powerful tool to help City residents lead us all past the stalemate. Ultimately it is the voters of the City who will primarily bear the financial, cultural and economic consequences of the choice.

4. Experience shows, and the Expert Review Panel emphasized, the need for any successful transportation project to have broad political support. The panel explained that all levels of government—federal, state and local—will be involved with any large transportation project. We need to find a way to coalesce.

5. The vote must happen soon. It should take place in Spring 2007, in time to inform the final regional project and funding package being developed by the Regional Transportation Investment District (RTID).

Second, I have asked WSDOT to continue work on and make substantial improvements to the design and construction impacts for both alternatives until we know the results of the vote

1. It is essential for a safe and functioning transportation system that we keep moving forward for the start of construction on the project so that the viaduct can be taken down timely to minimize the risk of disaster.

2. Regarding the elevated structure, I am directing WSDOT to develop options that provide the highest achievable standards of urban design and architectural quality for this roadway corridor.

3. I have asked WSDOT to develop a plan to carry out the construction work while minimizing disruption to businesses, residents and the traveling public to the maximum extent possible.

4. The environmental review process will move forward to an FHWA Record of Decision without further consideration of any other alternatives.

5. In the meantime we must continue the weight and vehicle restrictions and the monitoring programs currently in place to protect the traveling public using the existing Viaduct.

Finally, I have asked WSDOT to enter into formal negotiations with the City of Seattle to develop a comprehensive Project Municipal Agreement for the project.

1. The state has agreed to pay for the replacement cost of the viaduct. The agreement should fully describe the binding financial commitments the City is willing to make and detail the level of support necessary from the City to pay for additional costs associated with the construction of a tunnel including cost overruns resulting from the tunnel option.

2. In addition, the agreement must inform voters about the sources and certainty of the funding to which the city would be committed if the tunnel were the option selected.

Time is of the essence; we cannot wait for a disaster to make us fully appreciate the urgency of the situation. We are accountable to the residents of Washington and, in that interest, we must decide and act.

SR 520 BRIDGE REPLACEMENT AND HOV PROJECT

It is important to move forward with the SR 520 Bridge Replacement and HOV project. The SR 520 bridge is at a high risk of failure in the next twenty years. Both windstorms and earthquakes present significant risks. It must be replaced to maintain public safety and to keep this critically important transportation corridor open. The severe traffic congestion experienced by drivers today on SR 520 and the spillover effects onto the region's Interstate highways would be reason enough to proceed. But the ever-present danger of structural failure from an earthquake or a major windstorm means we must resolve to move forward as swiftly as possible. Replacing the structures is the only way to avoid these risks.

The Expert Review Panel expressed concern about the shortfall in funding sources to address these problems: "[W]e find that the funding sources identified in the SR 520 finance plan fall far short in secured and anticipated funding categories. This shortfall is of particular concern, given the impacts to regional circulation if the structure should fail. The lack of alternative routes makes it essential to fully fund the solution chosen for SR 520 bridge alternative."

Historical Background

Until 1940, cars drove around Lake Washington to the north and south, and only boats carried people and goods across the water. A floating bridge connecting Seattle to the Eastside was first proposed in the 1930s, but faced opposition due to concerns about environmental impacts to the shores and lake. As Seattle grew into a sizable city and more and more people settled in the Eastside, the demand for a bridge grew. The first bridge built across Lake Washington was a floating bridge with hollow pontoons on the route that has since become known as Interstate 90 (I-90). That bridge opened in July 1940 and was the largest floating structure in the world at that time. The bridge proved so popular that its toll proceeds retired its bonds by 1949 – a full 19 years ahead of schedule.

During the 20 years that followed the opening of the first floating bridge, the Eastside became the fastest-growing part of the metropolitan area. Citizens, business leaders and government officials started thinking about a second Lake Washington bridge to solidify the link between the east and west sides of the lake. After years of studies and long debate over its location, a new floating bridge was designed between Medina and Montlake.

Built prior to current environmental laws, the highway was constructed through and over a sizable park, through wetlands, and over sensitive ecosystems. The highway was also constructed through the middle of neighborhoods on both sides of the lake, effectively dividing them.

In August 1963, State Route 520 (SR 520), including the Portage Bay Bridge and the tolled Evergreen Point Floating Bridge, was opened to cross-Lake Washington traffic and became the longest floating bridge in the world. Once open, many travelers selected SR 520 because it was 10 minutes faster than the Lake Washington (I-90) floating bridge. The Evergreen Point Floating Bridge was expected to carry about 20,000 vehicles a day with a maximum operational capacity of 37,000 vehicles. However, by 1979 four times as many vehicles were crossing the bridge each day as when it opened.

The bridge tolls paid by the ever-increasing numbers of drivers retired the bonds used to pay for it years ahead of schedule. Between 1980 and 1990, average daily traffic across the bridge grew from 70,000 vehicles to approximately 110,000. Today, nearly 115,000 vehicles cross the SR 520 floating bridge each day. SR 520 has also become an important transit corridor. There are over 10,000 transit riders on SR 520 every day.

The opening of two newer floating bridges across Lake Washington on I-90, the Homer Hadley in 1989 and the replacement Lacey V. Murrow in 1993 provided additional traffic capacity across Lake Washington, but not enough to meet the growing demand.

When the Portage Bay and Union Bay bridges and SR 520 floating bridge and approach structures were designed, they were expected to have a life of approximately 70 years. However, this expectation was based on limited knowledge about seismic design and geologic contributors to earthquakes in the Puget Sound region (such as the Seattle fault). Knowledge about windstorm design was also limited in the 1950s. The bridge was designed to withstand sustained wind speeds of approximately 57 miles per hour.

In 1999, several fish species were listed under the Endangered Species Act. Migration routes of these species are from the Pacific Ocean through the Montlake Cut into Lake Washington. Within the project area are Usual and Accustomed fishing areas for area tribes.

Much of the development in the Eastside in the last 50 years has been supported by SR 520 and the Evergreen Point Bridge. Between 1960 and 1970, the population of the Eastside more than tripled. Along SR 520, Microsoft moved to Redmond and grew, in less than two decades, to be a major regional employer. Other high-tech businesses have congregated around the SR 520 and I-405 corridors, bringing in thousands of workers and making the morning commute from Seattle to the Eastside as common as the commute from Eastside to Seattle.

The Need and Planning for the SR 520 Bridge Replacement and HOV Project

The Condition of the SR 520 Floating Bridge and Approach Structures

1. The SR 520 floating bridge is built across Lake Washington and is connected to land by two approaches supported by columns.

    a) The floating portion of the Evergreen Point Bridge was originally designed for a sustained wind speed of 57.5 miles per hour.

    b) The 1993 inaugural day storm, with wind speeds up to 70 mph, caused serious damage to the SR 520 floating bridge. A study that year found that Lake Washington could experience 20-year period storms with wind speeds as high as 77 mph and 100-year period storms with wind speeds up to 92 mph.

    c) WSDOT performed major rehabilitation projects on the SR 520 bridge from 1994-2000. The bridge can now withstand sustained winds up to 77 miles per hour if the draw span is opened to relieve wind-driven wave forces on the bridge.

    d) Retrofit projects have added weight to the structure, and currently the bridge sits six to ten inches lower in the water than provided for by the original design. This increases the likelihood of waves breaking onto the bridge deck.

    e) Recent wind storms have caused additional cracks in the pontoons. Water is able to enter the pontoons through these cracks.

    f) Because every new retrofit adds weight to the bridge, additional retrofits are not feasible due to structural limitations.

    g) Wind speeds exceeded 45-50 miles per hour twice in 2006, forcing the opening of the draw span and causing additional damage to the bridge mechanical systems due to wave action. This damage included shearing off bolts on the draw pontoon guide rollers, and additional cracking in the pontoons. This damage has been repaired.

    h) WSDOT estimates the remaining service life of the floating portion of the Evergreen Point Bridge to be 13 to 18 years, based on its structural condition and the likelihood of severe windstorms.

2. Hollow columns support the west high rise approach to the Evergreen Point Bridge, the Portage Bay Bridge, Union Bay Bridge, and several SR 520 on- and off-ramps in Montlake and the Arboretum. These columns are vulnerable to damage from earthquakes.

    a) In shallow water locations, the bridge rests on a series of hollow, concrete pile foundations. These piles were driven through layers of poor soil on the bottom of the Lake (in some cases, up to 90 feet of poor soil) until they gained the strength necessary to carry the bridge's weight, penetrating some 15 feet into good soils.

    b) In 1993, WSDOT analyzed SR 520's seismic vulnerabilities. WSDOT found the hollow-core pilings were vulnerable during a seismic event. Research shows that hollow-core pilings would not withstand the forces of an earthquake. Presently, there is no established method for effectively retrofitting hollow-core piles to improve their ability to withstand an earthquake.

    c) There are 10 structures on the SR 520 corridor that have hollow-core pilings and do not meet current seismic design standards.

    d) In 2002, the Alaska Denali Earthquake caused a small tsunami, or seiche, in Lake Washington which caused damage at the connections between the western high rise and floating structure. This damage occurred because of the difference in movement between the fixed and floating structures created by lake motion.

    e) A Department of Natural Resources Study in 2003 confirmed that tsunamis and earthquakes could result from a Seattle Fault earthquake.

    f) An earthquake powerful enough to cause catastrophic damage to the current SR 520 bridges is estimated to recur every 210 years, which is a probability of 1 in 22 over the next 10 years. The SR 520 structure remains highly vulnerable to significant damage in any seismic event.

    g) WSDOT estimates that over the next 50 years, there would be a 20 percent chance of serious damage to these structures in an earthquake.

3. Sufficiency ratings are used to prioritize bridges for rehabilitation and replacement. A brand new bridge would have a rating of 100, a rating of 80 makes the bridge eligible for rehabilitation and a rating of 50 makes it eligible for replacement. In the state's inventory of 3,100 bridges, the SR 520 Bridge has a rating of 44.78.

4. A Draft Catastrophic Failure Transportation Management Plan is being developed to deal with an unexpected disaster by making the best possible use of the remaining transportation network. The plan will serve as a guide for intra and inter-agency communication, detail the emergency traffic management and closure plan for SR 520, and describe the methods and alternate routes for moving people through the region if the bridge were to fail. It is not a substitute for an aggressive plan to replace the at-risk structure.

Current Use of SR 520

1. SR 520 serves as one of two routes for vehicles to cross Lake Washington and carries 43 percent of the vehicles crossing the lake.

2. SR 520 carries approximately 115,000 vehicles per day, over three times its design capacity. Approximately 500 vehicles are buses.

3. Economic growth has created high density on both sides of the lake. This means the historic "reverse commute" on SR 520 has evened out; traffic is now heavy in both directions throughout the day.

4. There are access ramps for SR 520 at I-5, Roanoke, Montlake Boulevard, Lake Washington Boulevard, 84th Avenue, 92nd Avenue, and 108th Avenue.

5. The bridge has no shoulders and two 10-foot lanes in each direction. The bridge does not meet current roadway design standards.

4. Disabled vehicles block the road on an average of one per day. A vehicle that breaks down or gets into an accident has no shoulder area where it can wait, and thus blocks a full lane of traffic.

5. No shoulder area and the resulting congestion make it difficult for emergency vehicles to gain passage.

6. The SR 520 corridor experiences more than 7 hours of congestion per day. The evening peak commute lasts for nearly 5 hours.

7. The westbound high occupancy vehicle (HOV) lane, which is restricted to vehicles containing three or more people, ends before the bridge. This creates congestion as HOV traffic must merge into general purpose lanes.

8. Buses and carpools share the general purpose lanes and are regularly slowed by congestion, from the general purpose traffic.

9. Congestion on I-5 and I-405 results in congestion on SR 520 as vehicles attempt to enter the north-south highways.

10. Congestion on SR 520 causes traffic waiting to enter the corridor to back up onto local streets. This causes congestion on local streets and results in cut-through traffic on neighborhood streets.

11. Event traffic at the University of Washington and bridge openings at the Montlake Cut causes congestion on SR 520 and Montlake Boulevard.

12. Storm-related closures of the Evergreen Point Floating Bridge have forced traffic onto alternate routes and lengthened commute times from Seattle to Bellevue to approximately 3 hours, with impacts to many major regional facilities, including I-5, I-405, SR 167, SR 522, SR 99, I-90, SR 169.

Land Use in the Area of SR 520

1. Land use adjacent to the corridor is a mix of residential, business, parks, and wetlands.

2. Land uses on the west side of Lake Washington include:

    a) Established and historical residential neighborhoods including Roanoke Park and Montlake. Both the Montlake and Roanoke neighborhoods form a historic district and are eligible for listing on the National Register of Historic Places. Neighborhood density along SR 520 in Seattle is not projected to change significantly.

    b) The University of Washington owns property including a stadium, parking lots, a medical center, and an academic campus, north of SR 520 on the west side of the lake. The University provides oversight and management for the Washington State Arboretum. The 640-acre campus now serves a population of over 55,000 students, faculty, and staff. Tens of thousands of staff and students travel to and from campus daily. The University of Washington's Campus Master Plan provides for development of approximately 3 million square feet at 68 potential sites to accommodate nearly 10,000 more students, faculty and staff by 2012.

    c) The Arboretum is a historical park designed by the Olmstead Brothers. It includes wetlands and supports fish and wildlife habitat, and a variety of native and non-native plant species. Arboretum visitors primarily travel there by car.

1. Land uses on the east side of Lake Washington include:

    a) Smaller residential cities and towns of Hunts Point, Clyde Hill, Medina, and Yarrow Point are not projected to grow significantly.

    b) Bellevue is the fifth largest city in Washington and the financial, retail and office center of the Eastside. Bellevue neighborhoods are a mixture of commercial, business and residential uses. Continued commercial and business growth is projected.

    c) Microsoft is the destination of 25,000 employees each day and recently announced plans to expand their Redmond campus.

Development of Alternatives

1. In 1997, the Trans-Lake Washington Study Committee was authorized by the Legislature to identify ways to improve transportation across and/or around Lake Washington. The 47-member Study Committee included representatives of cities, public agencies, transportation interest groups, neighborhoods, and business.

2. In an 18-month process, the Study Committee developed and evaluated over 100 concepts for the SR 520 corridor. The Study Committee recommended beginning the development of a draft environmental impact statement (EIS) that would further analyze SR 520 concepts "book ended" by a four-lane and an eight-lane replacement facility. The Committee placed significant emphasis on transit, bicycle/pedestrian facilities, community connection opportunities, and environmental protection and enhancements.

3. The first alternative screening analysis for the environmental process was completed in October 2000. WSDOT selected 19 alternatives from more than 100 concepts considered in the Trans-Lake Study process for initial evaluation.

4. The second screening was conducted from April through June 2001 and focused on the potential for high capacity transit in the project corridor. The results of this screening were seven multi-modal alternatives, each with highway and high capacity transit components.

5. Sound Transit confirmed that the first high-capacity transit crossing of Lake Washington would be made on I-90, not SR 520. However, a facility on I-90 does not preclude the possibility of adding high capacity transit on SR 520 in the future.

6. The project for the environmental impact statement (EIS) process became the SR 520 Bridge Replacement and HOV Project in 2000, led by WSDOT with Sound Transit and the Federal Highway Administration (FHWA) as co-lead agencies, for preparation of the EIS. The alternatives were narrowed to a 4-lane, 6-lane, and 8-lane replacement facility with several interchangeable design options.

7. WSDOT analyzed, but did not continue full evaluation of an eight-lane alternative that would include three new general purpose lanes and one HOV lane in each direction. This alternative would create significant operational problems where SR 520 connected to I-5 and I-405, the need for reconfigurations of I-5 and I-405 to serve the additional traffic crossing the bridge, significant impacts to local streets, and would require significantly more acquisitions of park land, wetlands and residences.

8. WSDOT evaluated a tube/tunnel replacement concept between I-5 and the SR 520 floating bridge. This concept would increase net environmental effects; create technical difficulties due to underwater tunnel and interchange construction resulting in high project risks; have short work windows due to environmental issues relating to endangered species; require the design and location of complex underwater interchanges; and be prohibitively expensive.

9. The Draft EIS full evaluated the Four-Lane and Six-Lane alternatives. The Six-Lane (4 General and 2 HOV Lanes) Alternative includes seven design options.

10. All alternatives in the Draft EIS would:

    a) Meet the current design standard for a new bridge to withstand sustained winds of up to 92 miles per hour.

    b) Meet the current design standard to withstand an earthquake that has a one in 50 chance of occurring in the next 50 years.

    c) Rebuild SR 520 from I-5 to Bellevue Way Northeast, with two 12-foot general purpose lanes in each direction; replace both the Evergreen Point and Portage Bay bridges and rebuild all bridges that carry local streets over SR 520.

    d) Add shoulders to comply with current roadway design standards.

    e) Add bike/pedestrian lanes, stormwater treatment, and sound walls.

    f) Be designed so future high capacity transit could be accommodated.

    g) Construct the floating portion of the Evergreen Point Bridge up to 200 feet north of the existing bridge.

h) Provide 70 feet of navigational clearance at the new east approach instead of a new draw span. This would be 13 feet more than the existing high rise.

i) Replace the Portage Bay Bridge to the north in order to avoid shoreline impacts to the south. The slope of the bridge would be more gradual than it is today, with portions of it 20 feet higher than the existing bridge. The distance between support columns would average 250 feet, compared with the existing bridge's 100-foot average column spacing.

j) Build a new westbound off-ramp to Lake Washington Boulevard and a new eastbound on-ramp from the Boulevard that would pass over the WSDOT-owned peninsula, west of the Arboretum, instead of over the water, as the existing ramps do.

k) Remove the existing ramps on the west side that do not connect to local streets. (Part of the defunct R.H. Thompson Expressway.)

11. The Four-Lane Alternative in the Draft EIS would improve safety and reliability of the corridor. Some of the modifications to improve safety would include

    a) The Portage Bay Bridge would have four general-purpose lanes; a lane each way for bus acceleration or deceleration to access the Montlake transit stop; and a westbound auxiliary lane from the Montlake interchange to I-5 northbound to allow safe merging of traffic.

    b) The new Montlake interchange would be similar to the existing interchange, with some modifications to the eastbound off-ramp and westbound off- and on-ramps to improve operations and safety along Montlake Boulevard.

12. The Four-Lane Alternative would accommodate 105,000 vehicles in 2030.

13. In addition to improving the safety and reliability of the corridor, the Six-Lane alternative would improve traffic mobility and transit options.

    a) This alternative would add one HOV lane in each direction.

    b) It would include five lidded areas throughout the corridor to enhance community connectivity across the highway.

c) The Portage Bay Bridge would have nine general purpose lanes; two auxiliary lanes coming into and out of the Montlake Boulevard interchange and the I-5/SR 520 interchange; a westbound acceleration lane from the Montlake freeway transit station; and two HOV lanes connecting to the I-5 express lanes and mainline. The westbound HOV lane that connects to the I-5 mainline would only be used westbound in the mornings.

d) The new Montlake interchange would be similar to the Four-Lane Alternative, but would have new HOV direct access ramps and different freeway station locations. A westbound HOV direct access off-ramp would begin at Foster Island, weave over SR 520 to the north side of the highway, and exit to northbound Montlake Boulevard adjacent to the mainline exit. The eastbound loop ramp would have two general purpose lanes and one HOV bypass lane.

e) The SR 520 eastbound on-ramp to Bellevue Way Northeast would be rebuilt at a single general purpose lane ramp, and the eastbound off-ramp to Lake Washington Boulevard Northeast would be rebuilt as a single-lane loop ramp. A portion of the SR 520 westbound on-ramp from Bellevue Way would be rebuilt in a tighter loop, with one general-purpose lane and one HOV bypass lane.

12. The Six-Lane Alternative would accommodate 120,000 vehicles in 2030.

13. A total of seven design options are being considered for the Six-Lane Alternative. These include:

a) Removing freeway transit stops at Montlake and Evergreen Point Road, which could reduce the width of SR 520.

b) Adding transit improvements to the South Kirkland Park and Ride at Bellevue Way Northeast or 108th Avenue.

c) Relocating the bike/pedestrian path to the north of SR 520 on the Eastside of the floating bridge.

d) The Pacific Street Interchange design option would close the current Montlake interchange and freeway transit stop, returning Montlake Boulevard to a north-south local arterial. A new interchange would be constructed to the east, involving a four-lane bridge over Union Bay to the University of Washington area (intersection of Montlake Boulevard and Pacific Avenue) which would separate pedestrian and vehicle movements at that intersection. A new lane would be added in each direction on Montlake Boulevard up to 45th Street.

e) The Pacific Street Interchange design option would handle more traffic more efficiently than any other option. It is estimated that traffic congestion along Montlake Boulevard would be reduced with time savings of up to 20 minutes.

f) The Pacific Street Interchange design option would require acquisition of property near the University of Washington's Husky Stadium, including parking. A full evaluation of the effects on the natural and built environment is pending.

g) The Second Montlake Bridge design option would add an additional draw bridge east of the existing bridge and close the existing Montlake freeway transit stop. Each bridge would carry three lanes of traffic in one direction. The second bridge would improve traffic operations by increasing capacity. The periodic opening of the draw bridges would continue to stop traffic on Montlake Boulevard. The Second Montlake Bridge design option would require property acquisition in an historic district. It would also affect natural habitat by creating additional shading of the Montlake Cut.

Expert Review Panel

1. In 2006, the Legislature directed the Governor, along with the Chairs of the Senate and House Transportation committees and the Secretary of Transportation, to form an Expert Review Panel to review the funding and implementation plans for the SR 520 Bridge Replacement and HOV Project to determine if they were reasonable and feasible. The law provided the panel should include experts in relevant fields, such as planning, engineering, finance, law, the environment, emerging transportation technologies, geography, and economics.

2. The Expert Review Panel issued its findings on September 1, 2006 and found that the funding sources for the SR 520 project "fall far short in secured and anticipated funding sources." [8] The panel found it unreasonable to assume the project will realize sufficient funding from secured and anticipated funding sources.

3. The Expert Panel found the project implementation plan comprehensive and sufficient for the level of design development, noting the SR 520 project design and construction plans are still in the preliminary stages.

[8] The Alaskan Way Viaduct and SR 520 Bridge Projects, Report of the Expert Review Panel, September 1, 2006.

Project Cost Estimation

1. WSDOT has estimated costs for a Four-Lane Alternative, a base Six-Lane Alternative, and a Six-Lane alternative with the Pacific Street Interchange design option. The cost estimate for the Six-Lane with Pacific Interchange also includes the removal of the Montlake freeway transit stop, relocation of the bike/pedestrian path to the north of the highway on the Eastside, and improvements to the South Kirkland Park and Ride at 108th Avenue NE.

2. The most recent project cost estimates were prepared in response to comments made in the September 1, 2006, Expert Review Panel report. The Expert Review Panel reviewed the project finance and implementation plans to determine if the key assumptions upon which they were based were feasible and sufficient. The Panel found that the Cost Estimate Validation Process used by WSDOT to develop the cost estimates is a valid methodology for evaluating the variability of cost and schedule predictions due to unforeseen risks and opportunities. The Panel also commented that this cost estimate methodology represents a "best practice" and is gaining popularity nationally. However, the Panel noted that the cost estimates did not consider the recent worldwide construction cost inflation increases, and that the general inflation rate applied to the estimates was too low. The panel also observed that both projects are in a very early stage of design. As a result, the Panel recommended that WSDOT broaden the cost estimate range to acknowledge that there are unknown issues at such an early design phase, and at the same time the panel recommended that for budgeting purposes the cost that had a 60% confidence level of not being exceeded should be used. This figure has been labeled as "the most likely cost." Finally, the Panel also recommended that the project cost estimates be updated when approximately 15-20% design engineering work is completed.

3. In response to the Expert Review Panel's findings and the Governor's request, WSDOT completed a cost reevaluation of the project alternatives that considered new information about the likely impact of recent worldwide construction cost inflation on project costs, and effects of increased construction costs that have resulted from the activity to address Hurricane Katrina damage, which occurred after original cost estimates.

    a) The reevaluation found that the most likely cost for the Four-Lane Alternative is $2.79 billion (compared to $1.67 - $2.02 billion in the prior cost estimate).

    b) The reevaluation found that the most likely cost for the base Six-Lane Alternative (4 General and 2 HOV Lanes) is $3.90 billion (compared to a range from $2.3 to $2.83 billion in the prior cost estimate).

c) The reevaluation found that the most likely cost for the Six-Lane Alternative (4 General and 2 HOV Lanes) with the Pacific Street Interchange is $4.38 billion (compared to a range from $2.73 to $3.10 billion in the prior cost estimate).

d) Panel members participated in the cost reevaluation and found that "these new cost ranges more accurately reflect the uncertainty associated with both projects at this early stage of design."

Project Funding

The following table summarizes secured and anticipated funding for the project.

SR 520 Bridge Replacement and HOV Project
Secured and Anticipated Funding
December 12, 2006

Source		Maximum funding for the 4-lane structure ($ millions)	Maximum funding for the 6-lane structure ($ millions)
Secured			
Federal	TEA-21 earmarks	**$6**	**$6**
	Pre-2003 funding	**$12.5**	**$12.5**
State	2003 Nickel Package	$52	**$52**
	2005 Transportation Partnership Account	**$500**	**$500**
Regional	RTA Sound Transit	**$1.5**	**$1.5**
	Puget Sound Regional Council STP grant	**$1**	**$1**
Local	City of Seattle	**$0.25**	**$0.25**
Total secured funding		**$573**	**$573**
Anticipated			
Federal	Future transportation funding reauthorizations*	**$0-$40**	**$0-$40**
State	Sales tax rebate	**$0**	**$0**
Regional	Tolling**	**$700**	**$700**
	RTID ballot measure (June 2006 plan)***	**$0**	**$800**
Total anticipated funding		**$700-$740**	**$1,500-$1,540**
Total potentially available funding		**$1,252-$1,292**	**$2,052-$2,092**
Most likely project cost		**$2,790**	**$3,900-4,380**

* Not currently confirmed.
** Approval would be required.
*** It is unclear whether RTID would fund the 4-lane option at the same level as the 6-lane option.

1. To date just over $573 million has been secured as funding for the SR 520 Bridge Replacement and HOV Project.

    a) Secured state funding provides $564.5 million.

    b) Secured federal funding provides $6 million.

    c) Secured regional funding, from Sound Transit and the Puget Sound Regional Council, provides $2.5 million.

    d) Secured local funding from the City of Seattle totals $250,000 or $0.25 million.

2. The project's funding plan also identifies anticipated funding sources. These are designated "anticipated funds" because whether they are available will depend on future legal, institutional, or political actions, or the amount available may be uncertain.

    a) The Expert Review Panel found the reasonable maximum anticipated funding for the SR 520 Four-Lane Alternative is $700 million from tolling and $40 million from federal transportation reauthorizations, for a total of $740 million. Based on discussions with RTID staff, the panel concluded that the $800 million allocated for the SR 520 project in the RTID plan, was not available for the Four-Lane Alternative. The RTID's published plan, "The Blueprint for Progress" states that the $800 million is provided to "ensure that the bridge span's critical infrastructure can be replaced or augmented up to 6-lanes.

    b) The Expert Review Panel found the reasonable maximum anticipated funding for the SR 520 Six-Lane Alternative is $700 million from tolling, $40 million from federal transportation reauthorizations, and $800 million if the Regional Transportation Investment District proposes and the voters will approve a ballot measure in November 2007 that includes this level of funding, for a total of $1.54 billion.

Public Comment on Alternatives

1. Public comment was invited on how to replace the SR 520 corridor as part of the Trans-Lake Washington Study, which together with the scoping process and community outreach as the project moved into the environmental review process, have generated thousands of public comments.

2. Since 2003, approximately 2,500 additional comments on the SR 520 Bridge Replacement and HOV Project have been received at public meetings, community briefings, local fairs and festivals, from e-mails and letters, and as comments on the Draft EIS. Many of the comments received provided input on wide-ranging aspects of the project. A subset expressed a preference for a particular project alternative. In summary, comments addressed:

    a) Over 150 comments in favor of a Four-Lane Alternative. Supporters of this alternative often mention the reduced cost, the smaller footprint, and a desire to limit the number of vehicles in already congested areas.

    b) Over 150 comments in favor of a base Six-Lane Alternative that maintains the existing Montlake interchange. Support for this alternative is linked to added HOV lanes and improved travel times and transit connections. Some comments note that the extra cost is worth the regional benefits.

    c) Over 600 comments in favor of a Six-Lane Alternative with a Pacific Street Interchange. Support for this alternative is based on improved transit connections, specifically at the future Sound Transit light rail station at Husky Stadium, improved travel/commute times along SR 520 and Montlake Blvd., and congestion relief along the Montlake Blvd. north-south corridor (SR 513). Many comments also mention the improved parks/green space neighborhood connections associated with the full lid at Montlake.

    d) Regardless of whether a specific alternative is mentioned, many comments have addressed the following issues:

        i. Desire for traffic and transit improvements along the SR 520 corridor;

        ii. Concern with visual design and aesthetics; support for designs that include lids and reconnect neighborhoods and communities;

        iii. Environmental effects, including wetlands, water quality, air quality, noise, and habitats should be considered; the Arboretum is often specifically mentioned as part of these comments;

        iv. Construction effects and duration;

        v. Funding and tolling.

City of Seattle Neighborhood Planning

2. In 2003, the State Legislature funded the Local Impact Committee to review and provide input to the project, focusing on effects to Seattle neighborhoods. This group focused on North Capital Hill improvements to local streets.

3. In 2006, the Governor directed WSDOT to work with the City of Seattle to coordinate a Stakeholder Advisory Group to review the project alternatives and design options and provide input about design and potential mitigation.

4. Recommendations from these groups were considered by the City of Seattle as they drafted a recommendation on the project's preferred alternative. This recommendation has not yet been submitted for approval by the City Council.

Key Decision Factors

The following are the key factors in making a decision:

1. **Public Safety:** A primary consideration is the safety of the traveling public. We must consider the need to protect public safety by replacing these aging structures as soon as feasible, and the long term public safety provided by the alternatives.

2. **Traffic Mobility and Transit Opportunities:** The need for increased vehicle capacity to meet current and future traffic volumes must be considered, along with opportunities to increase use of buses and carpools, trips by bicyclists and pedestrians, and to accommodate future expansion of high capacity transit.

3. **Environment:** Another factor for consideration is the degree to which the alternatives provide opportunity to improve our natural environment, including fish habitat that is important to citizens of the state and members of the affected tribes.

4. **Community and Neighborhood Planning and Preferences:** Consideration must be given to the impacts on the cities and neighborhoods through which SR 520 passes.

5. **Funding:** An important consideration is the cost of each alternative and whether there is the ability to develop a "reasonable and sufficient" finance plan to complete the selected alternative. To do so, we must determine whether the cost estimates and funding assumptions are sound. Also, we must consider project financing priority in light of other regional transportation project and program needs.

Conclusions

Today I make the following conclusions regarding the SR 520 Project:

1. The "No Build" alternative or retrofitting the floating bridge and bridge approach structures are not viable options. The floating bridge has been retrofitted to withstand a 20-year storm. Future retrofits are not feasible due to structural and pontoon floatation limitations.

2. The floating bridge is subject to damage, closure or even catastrophic failure from windstorms and waves. Failure of the floating bridge or of the bridge approaches could cause injury or loss of life.

3. Damage and periodic closures of the floating bridge creates major traffic congestion throughout the region with greatly increased commute times. These periodic closures may become more frequent as the bridge suffers more damage in windstorms.

4. Catastrophic failure of the floating bridge or bridge approaches would disrupt traffic in the region for a significant period, with attendant inconvenience and negative economic impacts.

5. There is enough information to conclude alternatives other than the Four-Lane and Six-Lane Alternatives have been explored and rejected for sound reasons. An eight-lane concept would create significant traffic operation problems at each end of the SR 520 corridor and would impact significantly more park land and wetlands and require additional acquisition of residences. A tube/tunnel concept between I-5 and the SR 520 floating bridge would have more environmental impacts, be technically challenging, and prohibitively expensive.

6. A Four-Lane Alternative and a Six-Lane (4 General and 2 HOV Lanes) alternatives would provide equivalent benefits for public safety.

    a) The Four-Lane and Six-Lane alternatives would meet current design standards for storms and earthquakes.

    b) The Four-Lane and Six-Lane alternatives would provide equivalent safety for the traveling public, since either alternative would add shoulders, increase lane widths, and improve on- and off-ramps in accordance with current design standards.

7. Only the Six-Lane Alternative would provide significant improvements to mobility and transit reliability. The addition of an HOV lane in each direction would greatly improve transit reliability. The design options for the Six-Lane Alternative provide additional opportunities for transit and mobility improvements.

8. Although some transit and HOV improvements would be made, the Four-Lane Alternative would not significantly encourage greater use of bus transit or carpools, since it would not provide HOV lanes across the bridge.

9. Both alternatives will impact the traveling public and neighborhoods during construction. The new bridge will be built north of the existing bridge to minimize impacts during construction and allow the corridor to remain open. However, short-term and limited closures would be required during nights and weekends and there may be closures of ramps. A Construction Traffic Management Plan will be developed after the preferred alternative is selected.

10. There are differences in some environmental impacts between the design options.

    a) Both alternatives will improve stormwater treatment and significantly reduce noise impacts on adjacent communities and ecosystems.

    b) The Four-Lane Alternative and base Six-Lane Alternative will be constructed in today's existing right-of-way.

    c) The Pacific Street Interchange design option adds a new structure over water and wetland areas.

    d) The Second Montlake Bridge design option adds a new structure over water.

11. Both alternatives include features to address community and neighborhood impacts.

    a) All alternatives add a bicycle/pedestrian facility across Lake Washington and connections to regional trails.

    b) The base Six-Lane Alternative provides lids, which will connect communities and add green space.

    c) The Six-Lane Alternative with Pacific Street Interchanges provides a more complete lid at Montlake which will connect the community and green space. However, it also requires property acquisition near Husky Stadium and the Waterfront Activities Center.

Financial Findings

Based on the statutory requirements and information referenced above, today I make the following findings with regard to financing the project:

The finance plan for the SR 520 Bridge Replacement and HOV project as described in the environmental impact statement is not "feasible and sufficient" to complete the project.

1. Funding sources for the project fall far short. The panel found that it was reasonable to assume $0.700 billion from tolling for the bridge.

2. Either the Four-Lane or the Six-Lane Alternative would accommodate Sound Transit's long range transportation plans by providing a structure that would allow high capacity transit development.

A Path Forward to Action

We must move forward on the SR 520 corridor replacement project. The risks of structural failure within the next twenty years are high. We need to protect public safety, avoid loss of a major transportation corridor, and address the severe traffic congestion by making timely decisions and providing adequate funding for this project.

Here is my recommended path forward for the SR 520 Replacement Project:

1. The replacement of the vulnerable SR 520 corridor is a matter of urgency for the safety of the traveling public and the needs of regional transportation.

2. The Regional Transportation System would be best served by an alternative that provides four general traffic lanes and two HOV lanes.

I believe the needs of the regional transportation system will best be served by an alternative that replaces the four existing general purpose lanes and adds two HOV lanes to strengthen regional transit services. The ongoing environmental review process provides support for this approach.

3. The State must address its funding commitment for the SR 520 Bridge capacity replacement.

The state funding that has been secured for this project to date is inadequate. The State must develop a finance plan that will provide the necessary resources to replace the capacity of this key transportation facility. I have asked the Washington Department of Transportation to work with the Legislature and others to develop a plan that will work. All financing alternatives should be explored.

4. The final Regional Transportation Investment District Plan should include at least the proposed $800 million contribution toward the replacement of the Evergreen Point Floating Bridge.

In its initial planning, the RTID has indicated the plan it would send to the voters in November 2007 would invest $800 million for this critical link in the regional transportation system. I encourage the RTID to maintain at least this funding level for this aspect of the project.

5. Westside Community Leaders and Residents Must Come Together to Develop a Common Vision of How the Project Should be Designed to Best Serve Community Needs.

The impacted communities on the west end of the project need to determine what design from Union Bay and westward to I-5 will best serve the neighborhoods, the University of Washington, and parks and natural resources. City and community leaders and residents need to come together and develop a common vision on the best solution that fits the character and needs of the local communities. I have asked WSDOT to provide support when requested for such a process.

6. Regional and local funding will need to address community special feature mitigation.

The City of Seattle and the Regional Transportation Investment District need to provide funding for special features that address community desires for the project beyond the usual mitigation requirements. The regional funding should be beyond the $800 million RTID proposes to include in its plan for the floating bridge replacement.

7. State, regional and local leaders must give the SR 520 Project Higher Priority.

Much work has been done to address the SR 520 corridor. But our work is not finished. The work needed to complete the design and fund construction of a replacement must be given a higher priority by state, regional and local leaders.

Time is of the essence; we cannot wait for a disaster to make us fully appreciate the urgency of the situation. We are accountable to the residents of Washington and, in that interest, we must decide and act.