Alaskan Way Viaduct Stakeholder Advisory Committee
DRAFT - Summary of Findings for the Eight Scenarios
December 11, 2008

What was the purpose of the eight scenarios?
Eight scenarios were created earlier this year to test the performance of SR 99, I-5, surface streets, transit, and demand management building blocks. The purpose was to not select a particular scenario, but learn which elements worked best together as evaluated by the six guiding principles.

What did we learn about the eight scenarios?
WSDOT, King County, and the City of Seattle have completed a five month evaluation of the eight scenarios for the central waterfront section of the Alaskan Way Viaduct and Seawall. These results were used to assess how each scenario and the building blocks within them performed. Based on that assessment, hybrid alternatives will be prepared for further consideration by the three agencies prior to Governor Gregoire, King County Executive Sims, and Seattle Mayor Nickels making a recommendation at the end of December.

Six guiding principles were used to evaluate the scenarios. The first guiding principle related to public safety was not a distinguishing factor among the scenarios. All of the scenarios improved seismic and transportation safety compared to today by removing the viaduct, and making transportation investments that meet today's transportation and seismic safety standards. The last guiding principle related to improving the health of the environment was also not a significant distinguishing factor. All of the scenarios offered opportunities to meet current environmental standards and regulations and improve the environment through stormwater treatment, noise reduction, and habitat creation.

The following summarizes the distinguishing trade-offs between the scenarios according to the remaining four guiding principles related to transportation; economics; the urban environment; and fiscal responsibility.

Scenario A: Demand Management & Low Capital
Guiding Principle 2 – Provide efficient movement of people and goods now and in the future.

- The number of trips to and through the center city was reduced due to tolling and a high level of demand management. Vehicle miles traveled in the center city area would be reduced by six percent from today in 2015. However this did not make a significant difference in how the overall system performed.
- Travel times on the SR 99 corridor through the central waterfront would take five to 10 minutes longer than the bypass scenarios and 10 to 15 minutes more than today.
- Cordon tolling could be a possibility in managing future vehicle growth and generating transportation revenue.

- While this scenario did not have the greatest transit investment, it did have the largest mode split growth on transit due largely in part to the tolling and demand management strategies.

Guiding Principle 3 – Maintain or improve downtown Seattle, regional, the port, and state economies.

- There are less construction traffic mitigation impacts and a shorter construction time period than a bypass (2 to 3 years less) with a surface street option.
- There is an increase in property and land values as a result of noise reduction, open space and views.
- Overall the regional and local economy will grow. However, there will likely be changes to local businesses as a result of change in transportation access.

Guiding Principle 4 – Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.

- The four-lane Alaskan Way Boulevard has a wider footprint (approximately 25 to 30 ft. more than the one-way couplet) and more vehicles (approximately 15,000 more daily vehicles) than the SR 99 one-way couplet.
- The four-lane boulevard expands to five to six lanes at the intersections. This creates difficult pedestrian connections to the waterfront.
- The scenario provides improvements in open space, views, shading and noise. Surface intersections south of the Battery Street Tunnel improve the urban environment and connectivity in Belltown.

Guiding Principle 5 – Create solutions that are fiscally responsible.

- This scenario exceeds the state's commitment of $2.8 billion, however, the SR 99 elements could be constructed within the commitment. Additional resources would be required for I-5, surface streets and transit.

Scenario B: Surface Boulevard

Guiding Principle 2 – Provide efficient movement of people and goods now and in the future.

- Investments in I-5 improve vehicle throughput and maintain today's travel times.
- Travel times on the SR 99 corridor through the central waterfront would take 5 to 10 minutes longer than the bypass scenarios and 10 to 15 minutes more than today.
- The very high level of bus and streetcar investments exceeded that needed to meet mobility needs.
- The transit investment in RapidRide and Rapid Trolley Bus Network provide all day frequent transit service; most of these investments made a significant contribution to meeting the mobility needs.
- The First Avenue streetcar could replace most of the utility of the waterfront streetcar, attract more ridership, and connect to the First Hill Streetcar.

Guiding Principle 3 – Maintain or improve downtown Seattle, regional, the port, and state economies.

- There are less construction traffic mitigation impacts and a shorter construction time period (2-3 years less than a bypass) with a surface street element.

DRAFT

- As stated in Scenario A, there is an increase in property and land values as a result of noise reduction, open space and views.
- Overall the regional and local economy will grow. However, there will likely be changes to local businesses as a result of change in transportation access.

Guiding Principle 4 - Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.

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- The four-lane boulevard expands to five to six lanes at the intersections. This creates difficult pedestrian connections to the waterfront.
- The scenario provides improvements in open space, views, shading and noise. Surface intersections south of the Battery Street Tunnel improve the urban environment and connectivity in Belltown.

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- This scenario exceeds the state's commitment of $2.8 billion, but SR 99 elements could be constructed within the commitment. Additional resources would be required for I-5, surface streets and transit.

Scenario C: Surface Couplet

Guiding Principle 2 – Provide efficient movement of people and goods now and in the future.

- The one-way couplet is the most effective surface alternative at moving vehicles through the waterfront.
- As stated in scenarios A and B, investments in I-5 improve vehicle throughput and maintain today's travel times.
- Travel times on the SR 99 corridor through the central waterfront would take 5 to 10 minutes longer than the bypass scenarios and 10 to 15 minutes more than today. Most trips to or through the Center City would have minimal changes in travel time.
- The transit investment in RapidRide and Rapid Trolley Bus Network provide all day frequent transit service; most of these investments made a significant contribution to meeting the mobility needs.
- The First Avenue streetcar could replace most of the utility of the waterfront streetcar, attract more ridership, and connect to the First Hill Streetcar.

Guiding Principle 3 – Maintain or improve downtown Seattle, regional, the port, and state economies.

- Overall the regional and local economy will grow. However, there will likely be changes to local businesses as a result of change in transportation access.
- There are less construction traffic mitigation impacts and a shorter construction time period (2 to 3 years less than a bypass) with a surface street element.
- As stated in scenarios A and B, there would be an increase in property and land values as a result of noise reduction, open space and views.

DRAFT

Guiding Principle 4 – Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.

- The SR 99 one-way couplet has a narrower footprint (approximately 25 to 30 feet less than the one-way couplet) and less vehicles (approximately 15,000 less daily vehicles) than the four-lane Alaskan Way Boulevard (directly on waterfront; overall increases in vehicles).
- The one-way couplet has a shorter pedestrian connection, with three lanes at the intersections.
- The character between Yesler Way and Pike Street on Western Avenue is affected.
- The undercrossing at Pike Place Market improves pedestrian connectivity between the market and Steinbrueck Park.
- A surface scenario provides improvements in open space, views, shading and noise.

Guiding Principle 5 – Create solutions that are fiscally responsible.

- This scenario exceeds the state's commitment of $2.8 billion, but SR 99 elements could be constructed within the commitment. Additional resources would be required for I-5, surface streets and transit.

Scenario D: Independent Elevated

Guiding Principle 2 – Provide efficient movement of people and goods now and in the future.

- This elevated option, along with scenarios E and G, most closely mimics the current traffic patterns.
- The elevated structure provides a bypass connection through downtown Seattle, with connections to Elliott/Western and Aurora Ave.
- Travel times for trips through the Central Waterfront would be closer to current times than surface scenarios.
- Flammables or hazardous materials are allowed on the elevated viaduct during non-peak periods.
- All RapidRide routes destined for downtown Seattle have high ridership especially in the peak period. Even with a bypass scenario, the new Delridge RapidRide is a well used service with over 19,000 riders per day.

Guiding Principle 3 – Maintain or improve downtown Seattle, regional, the port, and state economies.

- There are more construction effects, which requires higher construction mitigation costs.
- The construction period would be 2 to 3 years longer than a surface scenario.
- Overall the regional and local economy will grow. However, there will likely be changes to local businesses as a result of change in transportation access.

Guiding Principle 4 – Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.

- There are significant view, shading, noise, and open space effects on the waterfront.

Guiding Principle 5 – Create solutions that are fiscally responsible.

- This scenario exceeds the state's commitment of $2.8 billion, but SR 99 elements could be constructed within the commitment. Additional resources would be required for I-5, surface streets and transit.

DRAFT

Scenario E: Integrated Elevated

Guiding Principle 2 – Provide efficient movement of people and goods now and in the future.

- The elevated option, along with scenarios D and G, most closely mimics the current traffic patterns.
- Travel times for trips through the Central Waterfront would be closer to current times than surface scenarios.
- The elevated viaduct provides a bypass connection through downtown Seattle, with connections to Elliott/Western and Aurora Ave.
- Flammables or hazardous materials are not expected to be allowed in the Integrated Elevated structure.

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- There are concerns about the viability of the commercial development under the highway structure.
- Overall the regional and local economy will grow. However, there will likely be changes to local businesses as a result of change in transportation access.

Guiding Principle 4 – Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.

- There are more significant view and shading effects on the waterfront than the independent elevated.
- Noise levels at the east-west streets would be similar to the existing viaduct, but quieter in mid-block locations.
- This scenario has the most acres of open space but is a lower quality compared to the other scenarios. There are concerns about accessibility and safety. For example, access for security, emergency response, and large crowd volumes pose concerns.
- The 40 foot promenade on the waterfront is the smallest and will be used for multiple purposes such as vehicle access to the piers which compromises the quality of the open space.
- The elevated structure divides the historic waterfront from downtown and Pioneer Square.

Guiding Principle 5 – Create solutions that are fiscally responsible.

- The SR 99 component of this scenario exceeds the state's commitment of $2.8 billion.

Scenario F: Bored Tunnel

Guiding Principle 2 – Provide efficient movement of people and goods now and in the future.

- The bored tunnel provides a SR 99 bypass through downtown, but does not include access to Elliott and Western avenues.
- Elliott and Western traffic needs to use the surface couplet for access to or through the waterfront.
- Flammables or hazardous materials are not expected to be allowed in the bored tunnel.
- The bored tunnel requires other improvements to the system such as I-5 improvements and demand management strategies to accommodate transportation system needs.

- This scenario has the least transit investment and thus the fewest transit riders (with 15,000 less riders each day than scenarios B or C and 25,000 less riders each day than A).

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- Overall the regional and local economy will grow. However, there will likely be changes to local businesses as a result of change in transportation access.
- The bored tunnel requires the longest construction time (over 10 years including all the building block elements), but the current SR 99 viaduct could remain in place during construction.
- Construction disruptions to the waterfront are similar to Scenario C.
- There is an increase in property and land values as a result of noise reduction, open space and views.

Guiding Principle 4 – Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.

- As stated in Scenario C, the SR 99 one-way couplet has a narrower footprint (approximately 25 to 30 ft. less than the one-way couplet) and less vehicles (approximately 15,000 less daily vehicles) than the four-lane Alaskan Way Boulevard.
- As stated with Scenario C, the one-way couplet has three lanes at intersections, which is a shorter pedestrian connection.

Guiding Principle 5 – Create solutions that are fiscally responsible.

- Alternative construction techniques may reduce the cost by several hundred million and save at least 2 years in schedule.
- The SR 99 component of this scenario substantially exceeds the state's commitment of $2.8 billion.

Scenario G: Cut and Cover Tunnel

Guiding Principle 2 – Provide efficient movement of people and goods now and in the future.

- Transportation performance is similar to Scenario D.
- Flammables or hazardous materials are not expected to be allowed in the cut and cover tunnel.

Guiding Principle 3 – Maintain or improve downtown Seattle, regional, the port, and state economies.

- Construction disruptions on the waterfront will be the most significant with the cut and cover tunnel, taking 2 to 3 years longer than surface and transit scenarios.
- The cut and cover tunnel has the highest construction risk.
- There is an increase in property and land values as a result of noise reduction, open space and views.
- Overall the regional and local economy will grow. However, there will likely be changes to local businesses as a result of change in transportation access.

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- Scenario G includes a four lane boulevard with approximately 76 feet of open space directly adjacent to the waterfront.

DRAFT

- With SR 99 under Elliott and Western avenues, the urban environment and the connectivity in Belltown is the improved with this scenario.
- The north/south portals of the tunnel restrict pedestrian movements (two blocks on each end).
- The west wall of the tunnel serves as the new seawall, which precludes seasonal construction.
- This scenario provides improvements in open space, views, shading and noise.

Guiding Principle 5 – Create solutions that are fiscally responsible.

- The SR 99 component of this scenario substantially exceeds the state's commitment of $2.8 billion.

Scenario H: Lidded Trench

Guiding Principle 2 – Provide efficient movement of people and goods now and in the future.

- As configured, this scenario does not provide significant bypass capacity. If lengthened to provide bypass capacity, costs approach the costs of a cut-and-cover tunnel.
- Travel times in the SR 99 corridor are similar to the surface scenarios (5 to 10 minutes slower than bypass scenarios). This could be improved by removing signalized intersections in the north.
- Flammables or hazardous materials are not expected to be allowed in the lidded trench.

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- Construction disruptions on the waterfront will be similar to the cut and cover tunnel, taking 2 to 3 years longer than surface and transit scenarios.
- Overall the regional and local economy will grow. However, there will likely be changes to local businesses as a result of change in transportation access.

Guiding Principle 4 – Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.

- The open space, pedestrian crossings, and views, are similar to the surface boulevard, but noise levels are slightly higher.
- The north/south portals of the tunnel restrict pedestrian movements (two blocks on each end).

Guiding Principle 5 – Create solutions that are fiscally responsible.

- The SR 99 component of this scenario substantially exceeds the state's commitment of $2.8 billion.

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