

## Project funding

The state, county, and city are working with their legislatures to fund the projects assigned to them. The Port of Seattle is also committed to fund replacement of the viaduct's southern mile, which is a project that will improve port terminal operations.

The following funding sources, which are subject to approval by the state legislature, local legislatures and/or the Port of Seattle Commission, have been identified for each jurisdiction's projects.

### State - \$2.82 billion

- 2005 Gas Tax (Transportation Partnership Program) - \$1.6 billion
- 2003 Gas Tax (Nickel Funding) - \$251.4 million
- 2005 Federal Earmark Funds - \$209.4 million
- Federal Bridge Funds - \$72.6 million
- Other Funds - \$256.6 million
- *Source to be determined* - \$430 million

### King County - \$190 million

- One percent motor vehicle excise tax - \$172 million
- Federal grants - \$10 million
- Federal economic recovery funds - \$8 million

### City of Seattle - \$957 million

- Local Infrastructure Financing Tool (LIFT) and/or Local Improvement District (LID) - \$300 million
- Utilities - \$252 million
- Parking tax - \$200 million
- Federal economic recovery funds - \$80 million
- Transportation benefit district - \$65 million
- Federal grants - \$55 million
- Transportation Improvement Board - \$5 million

### Port of Seattle - \$300 million *(source to be determined)*

## Comments or questions?

Visit: [www.alaskanwayviaduct.org](http://www.alaskanwayviaduct.org)  
E-mail: [viaduct@wsdot.wa.gov](mailto:viaduct@wsdot.wa.gov)  
Call: 1-888-AWV-LINE

Write: Alaskan Way Viaduct and Seawall Replacement Program  
c/o Washington State Department of Transportation  
999 Third Ave, Suite 2424, Seattle, WA 98104

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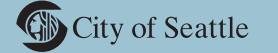
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## Alaskan Way Viaduct & Seawall Replacement Program

## Central Waterfront

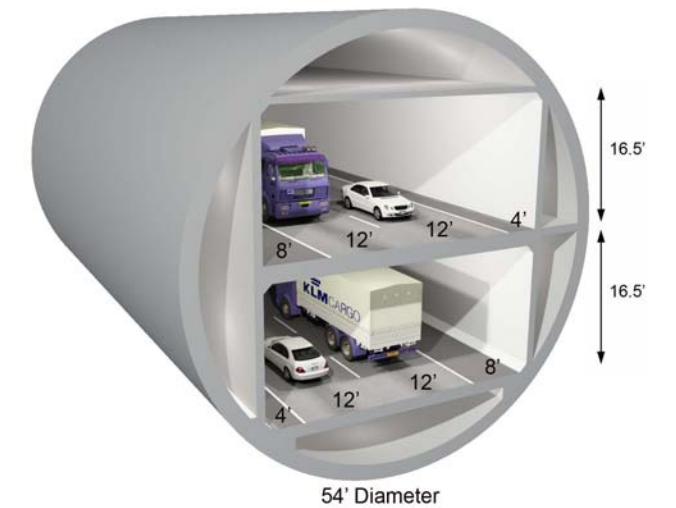


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## Understanding the cost and funding for the bored tunnel hybrid alternative

WSDOT, King County and the City of Seattle plan to replace the central waterfront portion of the Alaskan Way Viaduct and Seawall with an approximately two-mile-long bored tunnel beneath downtown, a new waterfront surface street, transit investments, and downtown city street and waterfront improvements.



To implement this recommendation, the governor, county executive and mayor signed a letter of agreement that assigns projects to each jurisdiction. Each jurisdiction will be responsible for their own projects' management, environmental work, design and construction, and any cost overruns.

The state is responsible for building the largest part of the recommendation – the new SR 99 bored tunnel. While we are in the early design phase for this project, we have taken steps to ensure our tunnel cost estimate accounts for risk, contingency and inflation. We are also benefiting from experts with local and international tunneling experience and lessons learned from other tunnel projects.



## Project cost and responsibility

The state, county and city are responsible for the following projects that are part of the bored tunnel hybrid alternative.

### State projects:

- Complete the Alaskan Way Viaduct program's Moving Forward projects:
  - Electrical line relocation between S. Massachusetts Street and Railroad Way S.
  - Viaduct replacement between S. Holgate Street and S. King Street.
  - Battery Street Tunnel safety repairs.
- Build the bored tunnel beneath downtown from the stadium area to Aurora Avenue N.
- Take down the existing viaduct structure.
- Provide a new Alaskan Way surface street that connects to Elliott and Western avenues in the north and to SR 99 and city streets near the stadiums.
- Construction mitigation.

### King County projects:

- Add RapidRide and peak express bus service to downtown.
- Simplify downtown trolley service.
- City street improvements related to improved bus operations.

### City of Seattle projects:

- Improve major east-west city streets:
  - Make Mercer Street two-way between Elliott Avenue and I-5.
  - Widen and improve the S. Spokane Street Viaduct.
- Relocate public utilities along the central waterfront.
- Replace the seawall between Colman Dock and Pine Street.
- Add a new streetcar line along First Avenue between Pioneer Square and Seattle Center.
- Build the new central waterfront promenade.

Project Responsibility	State	King County	City of Seattle	Port of Seattle	Cost
Moving Forward Program and Prior Expenditures	\$600 million			\$300 million	\$900 million*
SR 99 Bored Tunnel	\$1.9 billion				\$1.9 billion
Alaskan Way Surface Street and Promenade	\$290 million		\$100 million		\$390 million
Central Seawall			\$255 million		\$255 million
Public Utility Relocation			\$250 million		\$250 million
City Streets and Transit Pathways		\$25 million	\$190 million		\$215 million
Transit Infrastructure and Services		\$115 million	\$135 million		\$250 million
Construction Transit Service	\$30 million	\$50 million			\$80 million
<b>Total</b>	<b>\$2.82 billion</b>	<b>\$190 million</b>	<b>\$930 million</b>	<b>\$300 million</b>	<b>\$4.24 billion</b>

\* Reflects cost savings from the Moving Forward projects by not repairing the viaduct between Lenora Street and the Battery Street Tunnel and not completing Battery Street Tunnel improvements.

### Bored tunnel cost estimate

While the total cost of the bored tunnel alternative is \$4.24 billion, we estimate the bored tunnel itself will cost \$1.9 billion. The design for the tunnel is very preliminary, however, and there are things we do not know yet. To account for this in the cost estimate, we estimated the risks and identified a potential cost if none of the risks materialize and a potential cost if all of the risks materialize. Our estimate also accounts for seven years of inflation from now until the tunnel is complete in 2015.

This method of cost estimating is based on WSDOT's Cost Estimate Validation Process (CEVP). A key difference between conventional estimating and CEVP is the expression of project cost and schedule as a range rather than as a single number. This range accounts for risk factors that might otherwise cause costs to balloon over time. Because of the CEVP process, WSDOT has a strong record of delivering projects on time and on budget. For example, almost 90 percent of the Transportation Partnership and Nickel gas tax projects have been completed under or on budget.

Bored tunnel cost estimate	Cost (millions)
Construction	\$944
Right-of-way costs	\$149
Preliminary and final design	\$118
Construction management and administration	\$118
Contingency	\$150
Risk	\$268
Escalation (per Global Insight)	\$166
<b>TOTAL</b>	<b>\$1,913</b>

The cost estimate for the bored tunnel has also been reviewed by experts with local and international tunneling experience. When we came out with our first estimate, some experts thought the costs were too high. When we

sat down together and went through the costs, we actually agreed on the first number – \$944 million for construction of the bored tunnel. Where we differed was other costs such as construction management and design costs that are not typically born by the contractor, but by the agency. We include these costs so the public and decision-makers are able to see the true costs of completing the project. With those funds we complete the design so it can be turned over to the contractor, complete the environmental review process, and manage the contractor's work during construction.

As the tunnel's design progresses, we have a number of resources available to help us. Industry veterans lending their expertise to this project include Harvey Parker, past president of the International Tunneling Association; John Reilly, past president of the American Underground Construction Association; and Hatch Mott MacDonald, a consulting firm that has engineered more than 1,600 miles of tunnels worldwide.

