

SR 99 Alaskan Way Viaduct and Seawall Replacement

Released July 2003

Scenario

Bypass Tunnel Plan



Project Description:

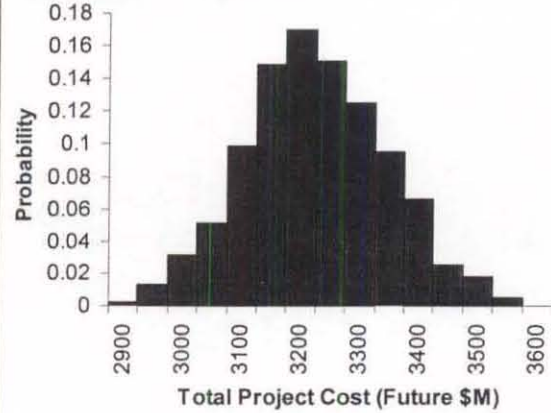
- Replaces the viaduct and seawall with a four lane bypass, cut and cover tunnel.
- Rebuilds the seawall from Pike Street to Myrtle Edwards Park.
- Access provided at the south end by Royal Brougham and Atlantic (SR 519), and at the north end of Battery Street Tunnel.
- Upgrades the Battery Street Tunnel to meet fire and life safety standards.
- Access from Ballard/Interbay to south end via new six lane Alaskan Way.
- Widens the Mercer Street underpass north of Battery Street Tunnel.
- Provides improved pedestrian and bicycle access.

Schedule:

Begin Construction
Range: 2008 - 2009

End Construction
Range: 2014 - 2015

CEVP Result:

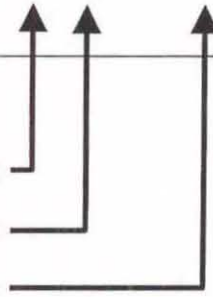


Project Benefits:

- Significantly reduces seismic risk for viaduct and seawall.
- Improves safety in Battery Street Tunnel through improved fire and ventilation systems.
- Improves central waterfront by building pedestrian promenade and creating bicycle trails.
- Improves storm drainage by upgrading to current requirements, which reduces storm water pollution.
- Reduces noise and visual impacts in central waterfront area.

Project Cost Range:

- 10% chance the cost < \$3.1 Billion
- 50% chance the cost < \$3.2 Billion
- 90% chance the cost < \$3.4 Billion



What's Changed Since 2002 CEVP:

- Scope: New plan added in Spring of 2003.
- Schedule: New Plan
- Cost: New Plan

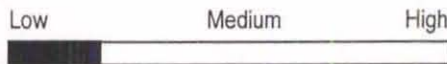
Project Risks:

- Catastrophic failure of viaduct and/or seawall occurs before replacement.
- Complex construction in a dense urban area.
- Limited number of contractors qualified and available to pursue a project this large.
- Complexity in maintaining traffic, relocating utilities, reducing impacts to businesses.
- Potential legal challenges.

Financial Fine Print (Key Assumptions):

- Full project funding available by July 2005.
- Inflation escalation is to 2012, approximate midpoint of construction.
- Additional federal, state, regional and local money is needed to complete this project.
- Project cost range includes \$25 million in past expenses, beginning 2001.

Level of Project Design:



July 16, 2003



SR 99 Alaskan Way Viaduct and Seawall Replacement

Revised July 2003

Scenario

Rebuild Plan



Project Description:

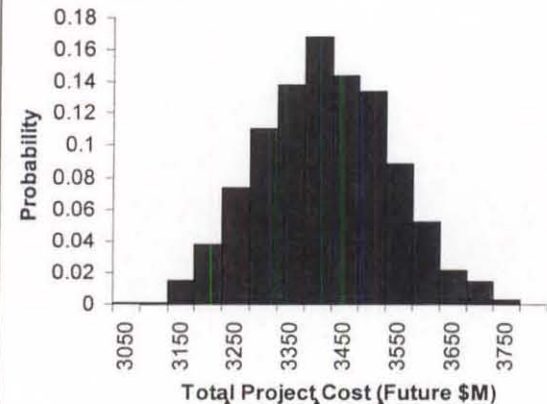
- Rebuilds viaduct in the same location with slightly wider lanes and some shoulders.
- Rebuilds seawall from Washington Street to Myrtle Edwards Park.
- Replaces the south end of the viaduct with a surface road. Connections to Royal Brougham and Atlantic provided by bridges crossing over SR 99.
- Restores Alaskan Way surface street.
- Provides improved pedestrian and bicycle access along Alaskan Way.

Schedule:

Begin Construction
Range: 2008 - 2009

End Construction
Range: 2014 - 2015

CEVP Result:



Project Benefits:

- Reduces seismic risk for viaduct and seawall.
- Rebuilds viaduct with 50 + year design life.
- Maintains current highway capacity.
- Improves access and circulation to stadium area, waterfront piers and Port terminals in south end.
- Construction can be phased over time if funding dictates (costs would be adjusted accordingly).
- Improves storm water treatment by upgrading to current requirements, which reduces storm water pollution.
- Maintains view from aerial structure.

Project Cost Range:

- 10% chance the cost < \$3.2 Billion
- 50% chance the cost < \$3.4 Billion
- 90% chance the cost < \$3.5 Billion

What's Changed Since 2002 CEVP:

- Scope: Builds surface road instead of viaduct in the south end and incorporates existing Battery Street Tunnel into design.
- Schedule: Construction begins one to two years later than previously estimated due to delay of funding. End Construction advanced by three to four years due to improved construction sequencing.
- Cost: No significant net change in cost, however scope changes, above, reduced the estimated costs. Increases in other elements raised costs: seawall condition, temporary bracing of the existing viaduct during construction, inflation, poor soils in the south end.

Project Risks:

- Catastrophic failure of viaduct and/or seawall could occur before replacement, which could result in a more expensive emergency replacement.
- Complex construction in a dense urban area.
- Limited number of contractors qualified and available to pursue a project this large.
- Potential legal challenges.

Financial Fine Print (Key Assumptions):

- Full project funding available by July 2005.
- Inflation escalation is to 2012, approximate midpoint of construction.
- Additional federal, state, regional and local money is needed to complete this project.
- Project cost range includes \$ 25 million in past expenses, beginning 2001.

Level of
Project Design:



July 16, 2003



SR 99 Alaskan Way Viaduct and Seawall Replacement

Released July 2003

Scenario

Surface Plan



Project Description:

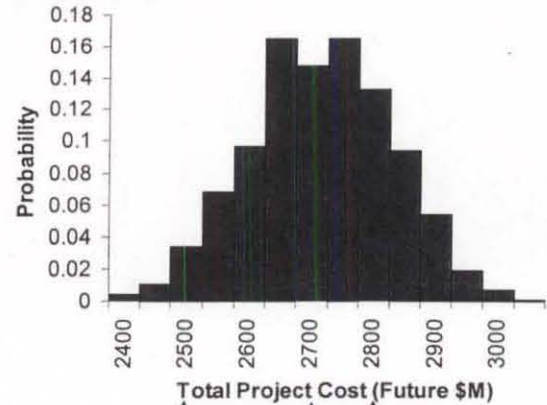
- Removes the viaduct.
- Rebuilds Alaskan Way to a 6-8 lane configuration.
- Re-builds the seawall from Washington Street to Myrtle Edwards Park.
- Replaces south end of viaduct with a surface road and connects Royal Brougham and Atlantic (SR 519) over SR 99.
- Upgrades the Battery Street Tunnel to meet fire and life safety standards.
- Widens the Mercer Street underpass north of Battery Street Tunnel.

Schedule:

Begin Construction
Range: 2008 - 2009

End Construction
Range: 2014 - 2015

CEVP Result:



Project Benefits:

- Significantly reduces seismic risk for viaduct and seawall.
- Improves central waterfront by building pedestrian promenade and creating bicycle trails.
- Improves safety in Battery Street Tunnel through improved fire and ventilation systems.
- Improves storm drainage by upgrading to current requirements, which reduces storm water pollution.
- Reduces visual impacts along central waterfront.

Project Cost Range:

10% chance the cost < \$2.5 Billion

50% chance the cost < \$2.7 Billion

90% chance the cost < \$2.8 Billion

What's Changed Since 2002 CEVP:

- Scope: New plan added in Spring of 2003.
- Schedule: New Plan
- Cost: New Plan
- Risk: New Plan

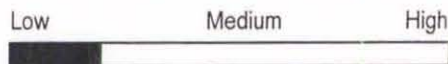
Project Risks:

- Catastrophic failure of viaduct and/or seawall occurs before replacement.
- Complex construction in a dense urban area.
- Complexity in maintaining traffic, relocating utilities, reducing impacts to businesses.
- Potential legal challenges.

Financial Fine Print (Key Assumptions):

- Full project funding available by July 2005.
- Inflation escalation is to 2012, approximate midpoint of construction.
- Additional federal, state, regional and local money is needed to complete this project.
- Project cost range includes \$ 25 million in past expenses, beginning 2001.

Level of
Project Design:



July 16, 2003



SR 99 Alaskan Way Viaduct and Seawall Replacement

Revised July 2003

Scenario

Tunnel Plan



Project Description:

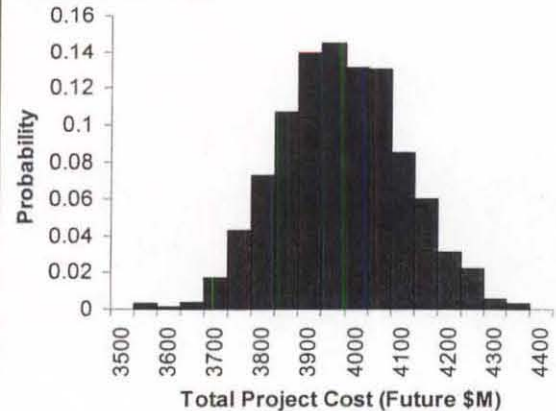
- Replaces the viaduct and seawall with a six-lane, side-by-side cut and cover tunnel.
- Re-builds the seawall from Pike Street to Myrtle Edwards Park.
- Replaces south end of viaduct with a surface road and connects Royal Brougham and Atlantic (SR 519) over SR 99.
- Upgrades the Battery Street Tunnel to meet fire and life safety standards.
- Widens the Mercer Street underpass north of Battery Street Tunnel to facilitate construction detours and improve access.
- Restores Alaskan Way with four lanes.
- Provides improved pedestrian and bicycle access along Alaskan Way.

Schedule:

Begin Construction
Range: 2008 - 2009

End Construction
Range: 2015 - 2016

CEVP Result:



Project Benefits:

- Reduces seismic risk for viaduct and seawall.
- Maintains current highway capacity.
- Improves central waterfront by building pedestrian promenade, creating open space, bicycle trails, and track for the streetcar.
- Improves safety in Battery Street Tunnel by installing new fire and ventilation systems.
- Improves storm drainage by upgrading to current requirements, which reduces storm water pollution.
- Reduces noise and visual impacts of elevated viaduct in central waterfront area.

Project Cost Range:

- 10% chance the cost < \$3.8 Billion
- 50% chance the cost < \$3.9 Billion
- 90% chance the cost < \$4.1 Billion

What's Changed Since 2002 CEVP:

- Scope: Project limits shortened. Significant reduction in scope. Midtown ramps are no longer included. Over-under (stacked) tunnel replaced with shorter, side-by-side tunnel through the central waterfront and incorporates upgraded Battery Street Tunnel (fire and ventilation system) into design.
- Schedule: Construction will begin one to two years later than previously estimated due to delay of funding. End Construction range advanced by three to four years due to improved construction sequencing.
- Cost: Changes in scope reduced costs by \$6.3 to \$7.5 billion.

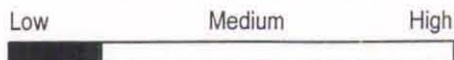
Project Risks:

- Catastrophic failure of viaduct and/or seawall could occur before replacement
- Complex construction in a dense urban area could increase cost and delay schedule.
- Limited number of contractors qualified and available to pursue a project this large.
- Complexity in maintaining traffic, relocating utilities, impact to businesses along central waterfront.
- Potential legal challenges.

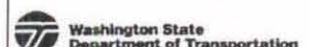
Financial Fine Print (Key Assumptions):

- Full project funding available by July 2005.
- Inflation escalation is to 2012, approximate midpoint of construction.
- Additional federal, state, regional and local money is needed to complete this project.
- Project cost range includes \$25 million in past expenses, beginning 2001.

Level of
Project Design:



July 16, 2003



SR 99 Alaskan Way Viaduct and Seawall Replacement

Revised July 2003

Scenario

Aerial Plan



Project Description:

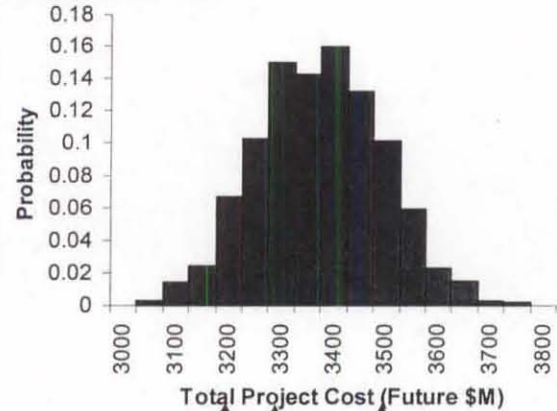
- Constructs new six-lane facility built to full standards in same location as existing viaduct.
- Constructs a new seawall from Washington Street to Myrtle Edwards Park.
- Provides full connections to Royal Brougham and Atlantic (SR 519).
- Upgrades the Battery Street Tunnel to meet fire and life safety standards.
- Widens the Mercer Street underpass north of Battery Street Tunnel to facilitate construction detours and improve access.
- Restores Alaskan Way surface street.
- Provides improved pedestrian and bicycle access along Alaskan Way.

Schedule:

Begin Construction
Range: 2008 - 2009

End Construction
Range: 2017 - 2018

CEVP Result:



Project Benefits:

- Significantly reduces seismic risk for viaduct and seawall.
- Adds new facility with 75-year design life.
- Maintains current highway capacity.
- Improves traffic operations and safety by providing standard lane and shoulder widths and ramp lanes.
- Improves safety in Battery Street Tunnel by installing new fire and ventilation systems.
- Improves storm drainage by upgrading to current requirements, which reduces storm water pollution.
- Maintains view from aerial structure.

Project Cost Range:

- 10% chance the cost < \$3.2 Billion
- 50% chance the cost < \$3.3 Billion
- 90% chance the cost < \$3.5 Billion

What's Changed Since 2002 CEVP:

- Scope: Project limits shortened. Builds surface road instead of viaduct in the south end. Incorporates Battery Street Tunnel (fire and ventilation systems) into design.
- Schedule: Construction begins one to two years later than previously estimated due to delay of funding. End Construction range advanced by one year due to improved construction sequencing.
- Cost: Changes in scope reduced costs by \$2.5 to \$2.9 billion.

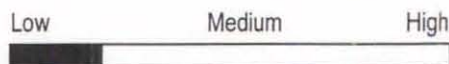
Project Risks:

- Catastrophic failure of viaduct and/or seawall could occur before replacement.
- Complex construction in a dense urban area.
- Limited number of contractors qualified and available to pursue a project this large.
- Potential legal challenges.
- Temporary aerial structure required for detour may cause significant visual and noise impacts.
- Construction sequencing may impact businesses.

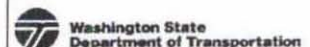
Financial Fine Print (Key Assumptions):

- Full project funding available by July 2005.
- Inflation escalation is to 2014, approximate midpoint of construction.
- Additional federal, state, regional and local money is needed to complete this project.
- Project cost range includes \$25 million in past expenses, beginning 2001.

Level of
Project Design:



July 16, 2003





Fall 2003

Alaskan Way Viaduct and Seawall Replacement Project

Did You Know?

- The viaduct carries 110,000 vehicles per day even though it was designed to only carry 65,000 per day.
- The gribbles eating away at Seattle's seawall have 4 mouths and 7 pairs of legs.
- Enough traffic to fill two freeway lanes in each direction per day would be forced onto I-5, I-405 and streets in Seattle if the viaduct and seawall were to fail.
- The Port of Seattle estimates that another large earthquake will cost the seaport over \$2.5 million in losses per month, largely due to severe highway damage.

Replacing the 50-year old Alaskan Way Viaduct and 69-year old waterfront seawall is a critical need for the entire state and region. Thousands of ferry riders, business owners, employees, and tourists walk along the waterfront every day.

If the viaduct and seawall are damaged beyond repair in the next earthquake, traffic will become worse, freight will have to find different routes, ferries will be unable to load and unload passengers, and businesses will have to move. The Washington State Department of Transportation and City of Seattle are moving forward to select a replacement alternative.

After considering over 75 concepts, five replacement alternatives in the central waterfront have been selected: Rebuild, Aerial, Tunnel, Bypass Tunnel and Surface. All five of these alternatives will be evaluated in the environmental review process.

The Washington State Department of Transportation and the City of Seattle are working to select and build a replacement option for both the viaduct and seawall. Inside this brochure is more information about the alternatives being considered.

Replacement Alternatives



Rebuild Alternative

Features
▲ Surface from Holgate St. to King St.
● Rebuild from King St. to Pike St.
■ Retrofit from Pike St. to Battery Street Tunnel
● Rebuild independent seawall from King St. to Myrtle Edwards Park

Daily Traffic		
Number of Vehicles	2002	2030
Using SR 99	102,000	133,000
Using Alaskan Way	9,000	10,000
Average Travel Times	2002	2030
Aurora Bridge to Spokane St.	8 min	9 min
Downtown Seattle to Spokane St.	8 min	10 min
Ballard Bridge to SODO	14 min	15 min
Downtown Seattle to Aurora Bridge	13 min	13 min

Cost Range
\$3.2 to \$3.5 billion
Construction Duration
6 to 8 years

Aerial Alternative

Features
▲ Replace aerial from Holgate St. to Battery Street Tunnel
● Rebuild independent seawall from Washington St. to Myrtle Edwards Park
■ Upgrade Battery Street Tunnel for fire/life safety
■ Build widened Mercer St. underpass

Daily Traffic		
Number of Vehicles	2002	2030
Using SR 99	102,000	129,000
Using Alaskan Way	9,000	10,000
Average Travel Times	2002	2030
Aurora Bridge to Spokane St.	8 min	8 min
Downtown Seattle to Spokane St.	8 min	9 min
Ballard Bridge to SODO	14 min	15 min
Downtown Seattle to Aurora Bridge	13 min	13 min

Cost Range
\$3.2 to \$3.5 billion
Construction Duration
9 to 11 years

Tunnel Alternative

Features
▲ Surface from Holgate St. to King St.
● Tunnel from King St. to Pike St.
■ Aerial from Pike St. to Battery Street Tunnel
■ Upgrade Battery Street Tunnel for fire/life safety
■ Rebuild seawall from Virginia St. to Myrtle Edwards Park
■ Build widened Mercer St. underpass

Daily Traffic		
Number of Vehicles	2002	2030
Using SR 99	102,000	122,000
Using Alaskan Way	9,000	21,000
Average Travel Times	2002	2030
Aurora Bridge to Spokane St.	8 min	8 min
Downtown Seattle to Spokane St.	8 min	9 min
Ballard Bridge to SODO	14 min	15 min
Downtown Seattle to Aurora Bridge	13 min	13 min

Cost Range
\$3.8 to \$4.1 billion
Construction Duration
7 to 9 years

Bypass Tunnel Alternative

Features
▲ Surface from Holgate St. to King St.
● Bypass tunnel from King St. to Pike St.
■ Aerial from Pike St. to Battery Street Tunnel
■ Upgrade Battery Street Tunnel for fire/life safety
■ Rebuild seawall from Virginia St. to Myrtle Edwards Park
■ Build widened Mercer St. underpass

Daily Traffic		
Number of Vehicles	2002	2030
Using SR 99	102,000	90,000
Using Alaskan Way	9,000	48,000
Average Travel Times	2002	2030
Aurora Bridge to Spokane St.	8 min	11 min
Downtown Seattle to Spokane St.	8 min	10 min
Ballard Bridge to SODO	14 min	20 min
Downtown Seattle to Aurora Bridge	13 min	14 min

Cost Range
\$3.1 to \$3.4 billion
Construction Duration
6 to 8 years

Surface Alternative

Features
▲ Surface from Holgate St. to Pike St.
■ Aerial from Pike St. to Battery Street Tunnel
■ Upgrade Battery Street Tunnel for fire/life safety
● Rebuild seawall from Washington St. to Myrtle Edwards Park
■ Build widened Mercer St. underpass

Daily Traffic		
Number of Vehicles	2002	2030
Using SR 99	102,000	N/A
Using Alaskan Way	9,000	74,000
Average Travel Times	2002	2030
Aurora Bridge to Spokane St.	8 min	23 min
Downtown Seattle to Spokane St.	8 min	15 min
Ballard Bridge to SODO	14 min	24 min
Downtown Seattle to Aurora Bridge	13 min	15 min

Cost Range
\$2.5 to \$2.8 billion
Construction Duration
6 to 8 years

Funding

Many sources are providing funding for the design of viaduct and seawall replacement alternatives. The 2003 Washington State Legislature passed a nickel-funding package, which secured \$177 million for this project. This funding means project development can be completed and some early construction work can begin. Additional funding will be needed to begin major construction.

Through 2002, project funding came from state funds (\$20 million), a state grant to the City of Seattle for the seawall (\$500,000) and a federal budget authorization (\$3.8 million). Since Janu-

ary 2003, new funding has been secured from the state nickel package (\$177 million), City of Seattle (\$5 million), Puget Sound Regional Council (\$1.2 million), federal 2003 earmark (\$2 million), and the U.S. Army Corps of Engineers (\$100,000).

Funding a project of this size, no matter which alternative is chosen, is going to require assistance from the local, state and federal levels. The City of Seattle and the Washington State Department of Transportation will continue to develop a funding package that is realistic and will offer the best opportunity for the city, state and region.

Progress Toward Construction

WSDOT and the City are moving toward constructing a replacement for the viaduct and seawall as soon as possible. The schedule below highlights the major milestones if funding becomes available.

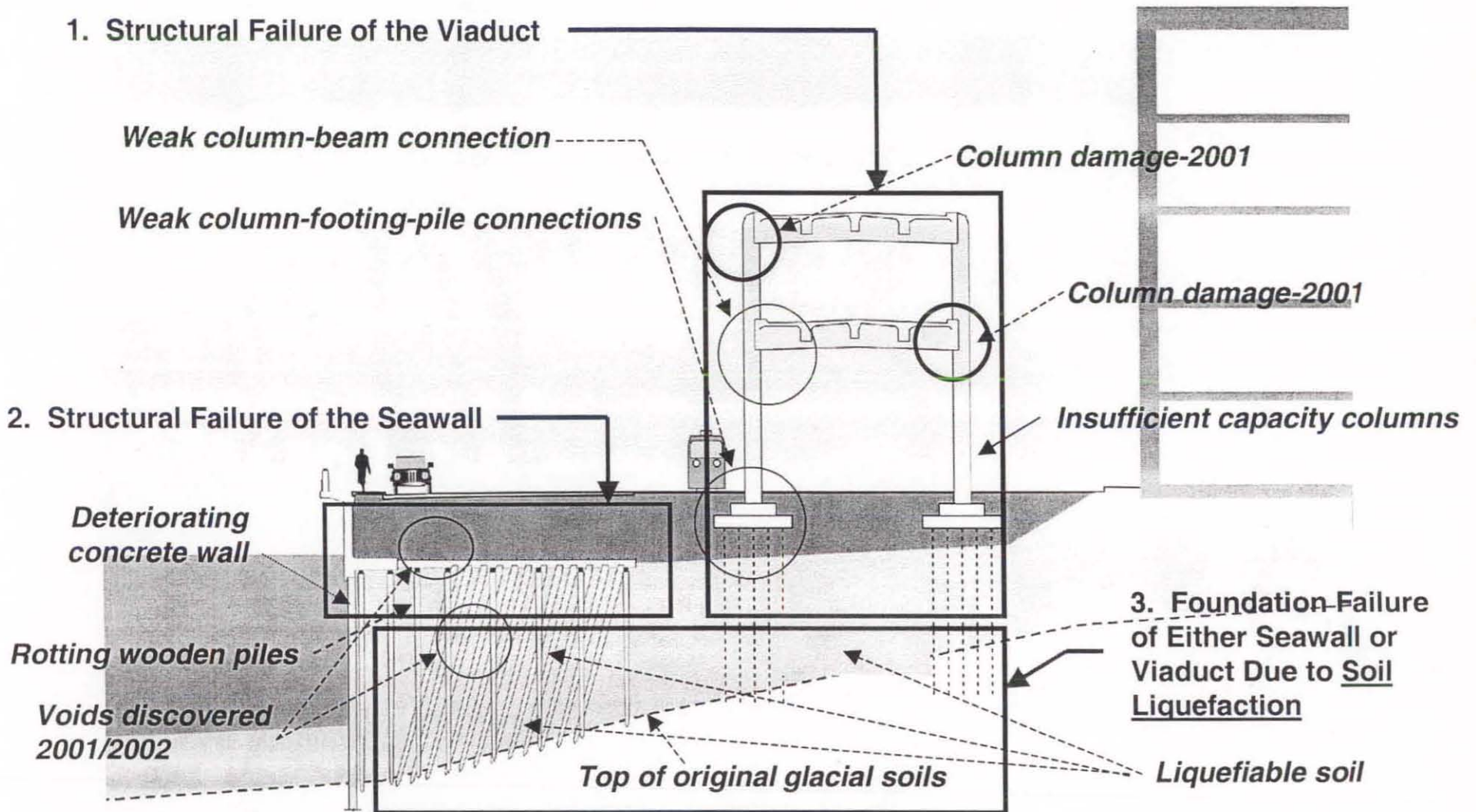
Project Schedule

2001	2002	2003	2004	2005	2006	2007	2008
★ Identify Options			★ DEIS	★ Environmental Approval		★ Advertise for Construction (Design/Build)	★ Begin Construction
Viaduct Repair			★ Identify Preferred Plan				
	Conceptual Engineering						
		Environmental Review					
			Design Preferred Plan				
			Permitting/Right-of-Way/Utilities				
Community Outreach							

For More Information

- Visit the website at www.wsdot.wa.gov/projects/viaduct
- Call the hotline at 206-269-4421
- Send an e-mail to viaduct@wsdot.wa.gov
- Send a letter to: Alaskan Way Viaduct and Seawall Replacement Project
c/o Washington State Department of Transportation
401 Second Avenue South, Suite 560
Seattle, WA 98104

Possible Failure Scenarios



October 10, 2003

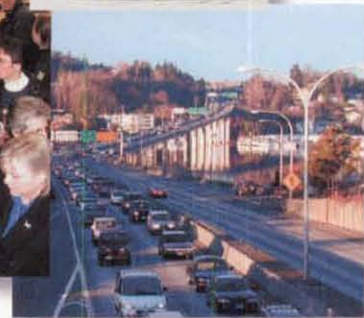
EnviroIssues

Technical and Policy Decision Consultants

101 Stewart Street, Suite 1101, Seattle, WA 98101

For more than a decade, EnviroIssues has consulted with clients and stakeholders to successfully implement controversial complex and technical decisions. Our experience in public involvement, facilitation and regulatory integration bring communities, agencies and decision makers together from coast to coast. Our knowledge spans a variety of markets across both public and private sectors. The firm's reputation is based on understanding technical issues, working cooperatively with multi-interest parties and dealing with controversy directly and successfully. Our goal is to provide our clients with the tools for complex decision making.

Transportation is just one of the environmental topics on which EnviroIssues helps clients solve problems. The debates on growth management, transit versus cars, and environmental protection make transportation the type of controversial, complex, and technical issue at which EnviroIssues excels. From elected officials to department heads, from neighborhood activists to commuters, and from business to environmental advocates, EnviroIssues works with the many voices on transportation issues to craft a solution that allows progress to be made.



COMMUNICATION SPEAKS RESULTS

Some of the specific talents EnviroIssues brings to its transportation clients are:

√ **Communications** - A government agency must communicate today with a multitude of interested parties – the media, public and environmental interest groups, tribal governments, federal regulatory agencies, and perhaps most important, the citizens that use the state's transportation system every day. EnviroIssues assists in developing strategic communication strategies that identify the appropriate targeted parties, develop key messages, and work to ensure the most effective communication tools are used.

√ **Public Involvement** - Focusing on the substantive issues, the firm specializes in identifying issues of potential concern; developing resolution strategies; implementing outreach activities such as public meetings, information materials, community briefings, editorial board briefings, and ensuring an outcome that meets the needs of all involved.

√ **Facilitation** - Many projects today are undertaken with input from an advisory committee, design charette, or small group of interested parties. EnviroIssues' experience facilitating large and small multi-interest groups toward reaching consensus helps guide decision making and ensure that projects have the support needed to move forward.

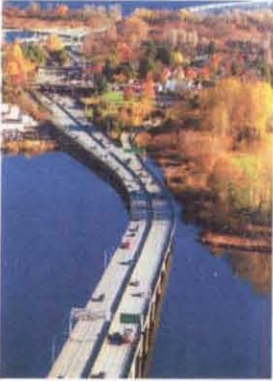
EXPERIENCE TELLS THE STORY

Alaskan Way Viaduct and Seawall Project, Washington State Department of Transportation and City of Seattle. Public outreach and facilitation for the replacement of the seismically vulnerable viaduct and seawall through downtown Seattle and along the central waterfront.



Trans-Lake Washington Project, Washington State Department of Transportation and Sound Transit. Public outreach and facilitation for the replacement of the seismically vulnerable SR 520 floating bridge across Lake Washington with a new bridge and an additional HOV lane.

Renton HOV Access, Sound Transit. Public outreach and facilitation for the construction of a new direct access for HOV and transit into the City of Renton's new transit station.



Tacoma Dome Commuter Rail Station, Sound Transit. Community relations for design of new commuter rail station at transportation hub at Freighthouse Square in Tacoma.

Ferry Public Outreach, Washington State Ferries. Public outreach for proposal to raise fares for ferry passengers on an annual basis throughout Puget Sound. Also community relations for construction of ferry terminals.

Local Transportation Vision, City of Bellevue. Public involvement for development of local transportation vision that included bicycles, pedestrians, arterials, demand management, environmental protection, and local streets.

Light Rail Station Siting, Sound Transit, City of Seattle, and University of Washington. Facilitation of partnering agreement between three agencies to determine location and characteristics of light rail stations next to major University.



Public Involvement Toolkit, City of Bellevue. Development of public involvement toolkit for use by planners, project managers, and construction managers throughout life cycle of projects.

Magnolia Bridge Replacement, City of Seattle. Public outreach and facilitation for the design of a new bridge, replacing the current seismically vulnerable bridge connecting the neighborhood of Magnolia to the City of Seattle.

FOR MORE INFORMATION:

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