Alaskan Way Viaduct Replacement Program

Lynn Peterson
Secretary of Transportation

Roger Millar
Deputy Secretary

Linea Laird
Assistant Secretary

Todd Trepanier
Program Administrator

Chris Dixon
Project Manager, Seattle Tunnel Partners

Marshall Foster
Director, Office of the Waterfront, City of Seattle

Joint Transportation Committee
December 17, 2015
Today’s Agenda

- SR 99 Tunnel Project update
- Monitoring the viaduct and other structures
- Program budget update
- Upcoming projects
- Coordination with partner agencies
Today’s Agenda

• SR 99 Tunnel Project update
  • Monitoring the viaduct and other structures
  • Program budget update
  • Upcoming projects
  • Coordination with partner agencies
Chris Dixon, Project Manager, Seattle Tunnel Partners

Background and experience

• Grew up in construction
• BSCE 1975
• 40 years experience
• Lived in 10 states and nine countries

STP Project Manager

• Manage design/construction
• Make day-to-day decisions
• Assure contract compliance
• Represent STP
• Negotiate subcontracts, purchase orders, changes, claims
Repairing Bertha

Recent and current activities

• Continuing system tests
• Completing assembly
• Backfilling the access pit
Repairing Bertha

Testing the cutterhead rotation
Decommissioning access pit dewatering wells
Repairing Bertha

STP’s next steps

• Finish backfilling access pit
• Perform load tests and begin tunneling inside access pit
• Mine to planned maintenance stop (Safe Haven 3)
STP’s current schedule

Key dates in STP’s current schedule (October 2015)

• Late December 2015: Ready to resume tunneling
• Late January 2016: Reach planned maintenance site (Safe Haven 3)
• March 2016: Tunnel under viaduct
• January 2017: Complete tunneling
• June 2017: Final concrete pour
• April 2018: Complete testing and commissioning
• April 2018: Tunnel ready for traffic
Mining with Bertha

TBM Mining
- TBM Parameters
- Alignment Control
- Pressure Control
- Ground Control
- Ground Conditioning
- Grouting
- Interventions (planned maintenance)

Monitoring
- Geotechnical Instrumentation
- Settlement/Movement Instrumentation
- Construction Monitoring Task Force
DBE progress

October 2015: $71 million or 6.3%

2015

KEY
- Contract DBE requirement: $96 million
- STP’s qualified payments: $71 million or 6.3 percent
Today’s Agenda

- SR 99 Tunnel Project update
- Monitoring the viaduct and other structures
- Program budget update
- Coordination with partner agencies
- Upcoming projects
Ground monitoring
Tunneling under the viaduct

Closure overview

• Viaduct to close for approximately two weeks while tunneling machine passes beneath

• Closure projected to occur in March, per STP schedule

• Details to be finalized after tunneling resumes

• Structure will be continuously monitored

Crews reinforce the viaduct in 2012 in preparation for the tunneling machine’s passage beneath the structure.
Tunneling under the viaduct

Working with our partners

- Regular coordination meetings
- Traffic operations
- Communicating with the public:
  - Media outreach
  - Social media
  - Community briefings

The viaduct was closed for eight days in 2011 while crews demolished the structure’s southern mile.
Today’s Agenda

- SR 99 Tunnel Project update
- Monitoring the viaduct and other structures
- **Program budget update**
  - Upcoming projects
  - Coordination with partner agencies
## Change order update

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requested by STP</td>
<td>$227.5 million*</td>
</tr>
<tr>
<td>Executed</td>
<td>$33.5 million**</td>
</tr>
<tr>
<td>Denied by WSDOT</td>
<td>$154.9 million*</td>
</tr>
<tr>
<td>Under review</td>
<td>$39.1 million</td>
</tr>
</tbody>
</table>

* Includes $125.3 million claim for costs associated with tunneling machine stoppage
** Includes $11.8 million from the Port of Seattle Fund, per contract
Today’s Agenda

• SR 99 Tunnel Project update
• Monitoring the viaduct and other structures
• Program budget update
• Upcoming projects
• Coordination with partner agencies
South Access Project
Tunnel connections and surface streets at the south portal

The future south portal
North Surface Streets Project

The north portal vicinity prior to construction
North Surface Streets Project

The future north portal vicinity
Today’s Agenda

- SR 99 Tunnel Project update
- Monitoring the viaduct and other structures
- Program budget update
- Upcoming projects
- Coordination with partner agencies
Working with our partners

The Alaskan Way Viaduct Replacement Program includes projects led by the Washington State Department of Transportation, City of Seattle, King County and Port of Seattle.
SR 99 tunnel and waterfront agreements

- Moving Forward Letter of Agreement 2009
- State-City Memoranda of Agreement 2009 and 2011
- State agreed to pay for the SR 99 Tunnel, the new Alaskan Way surface street, demolition of Viaduct and decommissioning of Battery Street Tunnel
  - State funding to be used for transportation improvements including streets, bicycle facilities, sidewalks (including standard elements such as street trees)
- City agreed to fund the seawall, City utility relocations, the waterfront promenade, Mercer corridor, Spokane Street Viaduct and First Avenue Streetcar.
WSDOT funding responsibility for surface street improvements
Why is the new Alaskan Way/Elliott Way important?

• Unlike the Viaduct, the SR 99 Tunnel has no off-ramps or on-ramps through the downtown corridor or connections to northwest Seattle via Western Avenue.

• The new SR 99 Tunnel, Alaskan Way and Elliott Way must function together to meet the transportation needs of the area.

• The new Alaskan Way/Elliott Way surface street must accommodate freight, ferry traffic and transit, as well provide local access to waterfront businesses and public recreation.
Existing SR 99 traffic patterns

Existing (2008)

<table>
<thead>
<tr>
<th>Daily Traffic Volumes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Viaduct</td>
<td>110,000</td>
</tr>
<tr>
<td>Alaskan Way</td>
<td>11,000</td>
</tr>
<tr>
<td>1st Avenue</td>
<td>9,000</td>
</tr>
<tr>
<td>Total</td>
<td>130,000</td>
</tr>
</tbody>
</table>

Downtown and Northwest Seattle access from Viaduct Ramps
Traffic changes after bored tunnel opens

After Bored Tunnel Opens

<table>
<thead>
<tr>
<th>Daily Traffic Volumes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bored Tunnel</td>
<td>86,000</td>
</tr>
<tr>
<td>Alaskan Way</td>
<td>30,000</td>
</tr>
<tr>
<td>1st Avenue</td>
<td>12,000</td>
</tr>
<tr>
<td>Total</td>
<td>128,000</td>
</tr>
</tbody>
</table>
Functions of the street

- **TRANSIT**: SW TRANSIT PATHWAY
- **VEHICLES, PARKING AND LOADING**
- **NORTH/SOUTH BICYCLE AND PEDESTRIAN MOVEMENT**
- **FERRIES**: LOADING AND UNLOADING
2030 average daily traffic

- Triple current traffic volume: 35,000
- Double current traffic volume: 24,200
- Current traffic volume: 5,600
- Average daily traffic: 18,300

Source: Washington State Department of Transportation
Key freight corridor

- Alaskan Way is the only surface freight route through downtown Seattle
- Tunnel does not allow hazmat cargo or over-legal loads
- Critical to support other state investments in freight (SR 99 Tunnel, SR 519)
Practical design and value engineering

• The City is committed to using State transportation funds wisely and coordinating closely with WSDOT

• The City is utilizing Practical Design and Value Engineering in the design of a safe and cost effective surface street

• Examples where a practical design approach has been incorporated:
  o Elliott Way structural design (bridge and walls)
  o Elliott Way lane configurations
  o Alaskan Way lane configurations
  o Alaskan Way pedestrian accommodations
  o Bike facility design
ELLIOIT WAY: PINE TO LENORA [SOUTH SEGMENT]
SEPTEMBER 2015

60% DESIGN (2014)
82 FT SECTION WIDTH

REDUCED CONCEPT
77 FT SECTION WIDTH
Practical design: Alaskan Way widths

FERRY QUEUING LANES CURRENT DESIGN

FERRY QUEUING LANES CURRENT DESIGN
Practical design: Alaskan Way widths

- Early design featured 10-foot wide ferry queuing lanes from King Street to Yesler Way, and did not add “turning roadway width” through the curve
- WSF preferred that the lanes be 12 feet wide per the Design Manual
- WB-67 turn simulation validated 10-foot lane width from King to Washington streets, but indicated an 11-foot lane width was needed from Washington Street to Yesler Way
- Design was revised per results of turn simulations – performance based design
Updated environmental review schedule

- Draft EIS was released in June 2015
  - Public comment period (60 days)
  - Public meeting in July
  - Received more than 100 comments
- City will complete a Supplemental Draft EIS in spring 2016
- Final EIS is anticipated in fall 2016
# Alaskan Way Agreement development schedule

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>End of 2015</td>
<td>Practical Design Report</td>
</tr>
<tr>
<td>Early 2016</td>
<td>Begin drafting elements of agreement</td>
</tr>
<tr>
<td>Mid 2016</td>
<td>Complete 60 percent design</td>
</tr>
<tr>
<td></td>
<td>Updated cost estimate</td>
</tr>
<tr>
<td></td>
<td>CEVP Workshop</td>
</tr>
<tr>
<td>End of 2016</td>
<td>Complete funding agreement for design and construction</td>
</tr>
</tbody>
</table>
How to reach us

Website: www.AlaskanWayViaduct.org

Twitter: @BerthaDigsSR99

Email: viaduct@wsdot.wa.gov

Hotline: 1-888-AWV-LINE

Our information center, Milepost 31, is located at 211 First Ave. S. in Seattle’s Pioneer Square neighborhood.