

Alaskan Way Viaduct Replacement Program



**Advisory Committee on Tolling and Traffic Management
September 19, 2012**

ACTT Purpose

- The committee will make advisory recommendations on strategies for:
 - Minimizing traffic diversion from the tunnel due to tolling.
 - Tolling the SR 99 tunnel.
 - Mitigating traffic diversion effects on city streets and I-5.

Overview

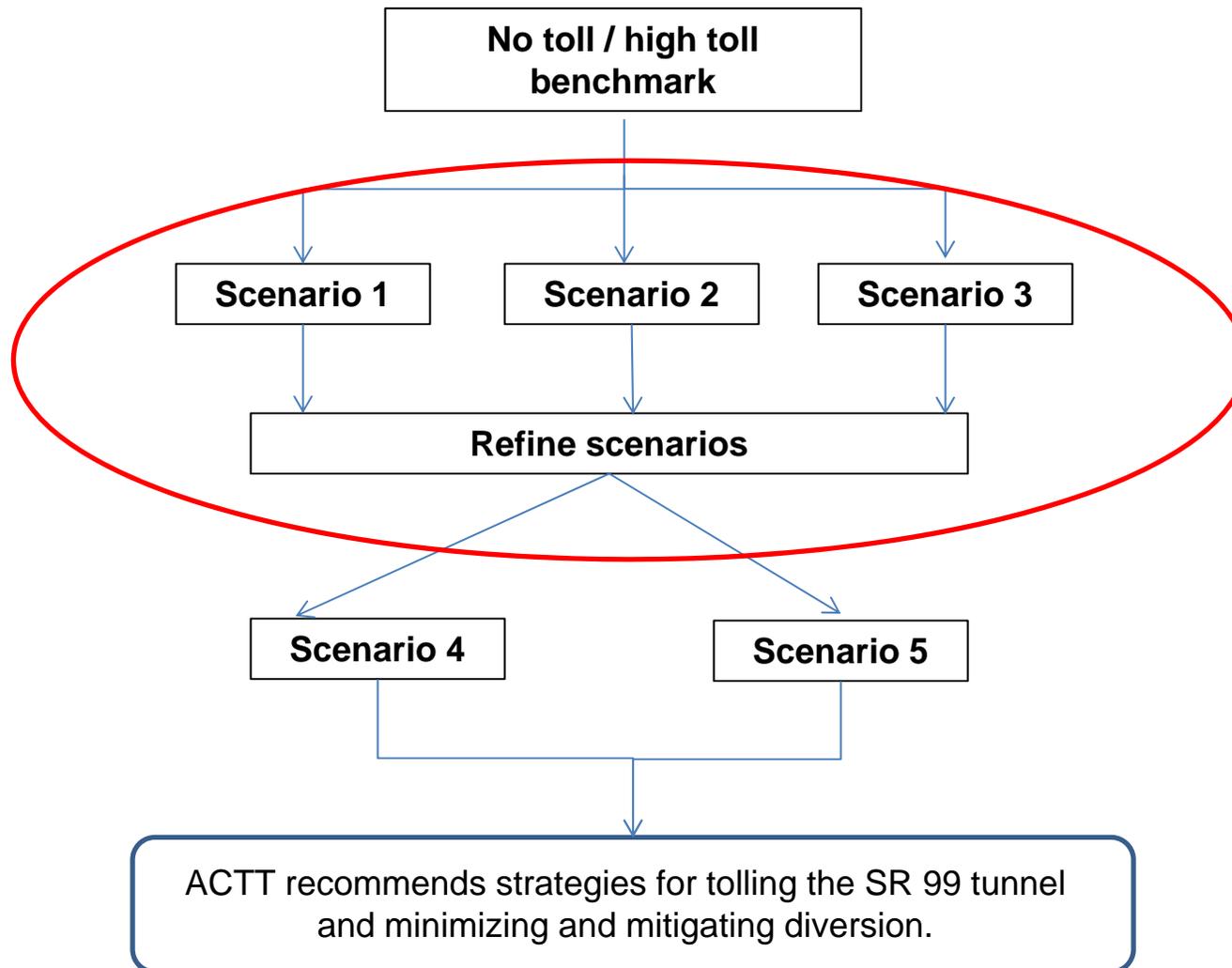
Previous discussions:

- Traffic modeling results for scenarios 1 – 3, high benchmark.

Today's topics:

- Review round 1 scenarios and traffic modeling results.
- Tolling revenue overview and round 1 results.
- Small group discussion.
- Introduction to potential round 2 scenarios / committee feedback.
- Committee recommendations and overall meeting schedule.

Potential Toll Scenario Evaluation Framework



Review ACTT Round 1 Scenarios

Round One Scenarios Analyzed

- No toll and high toll (\$1 - \$4) are being studied as benchmarks.
- Scenario 1 (\$1 - \$3.25): Objective is to achieve funding target.
- Scenario 2 (\$0.75 - \$2.25): Objective is to reduce diversion.
- Scenario 3 (\$0.75 - \$2.50): Objective is to balance funding and diversion.
- Scenarios 1 – 3 each have time periods with no tolls such as overnight or weekends.

Toll Rates by Time of Day - High Toll Benchmark

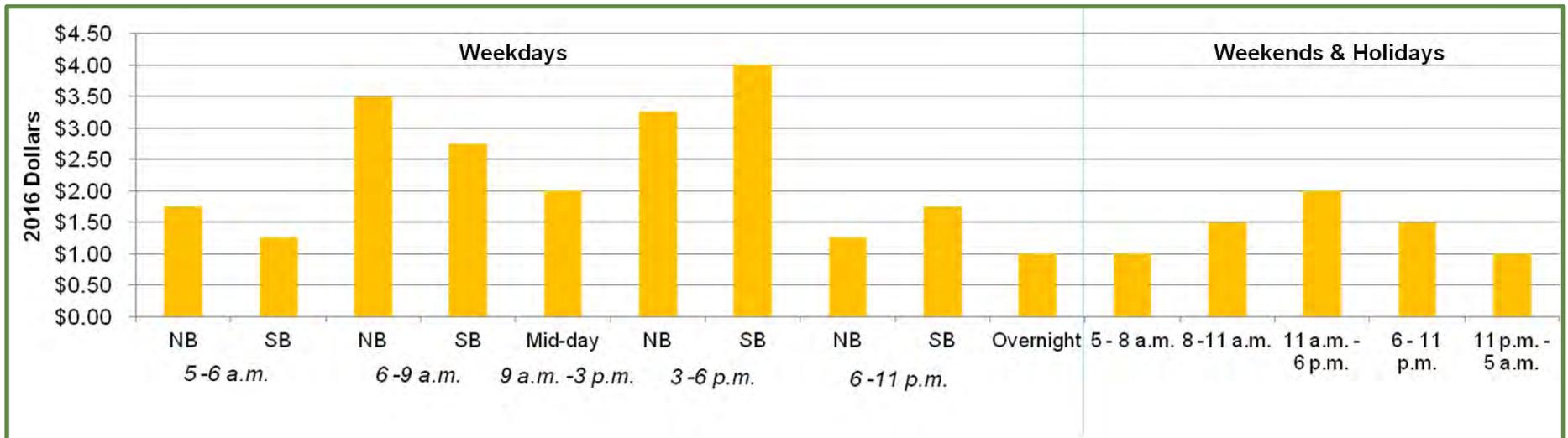


Chart represents Good To Go! rates. Pay by mail rates are approximately \$1.70 more.

Toll Rates by Time of Day - by Scenario

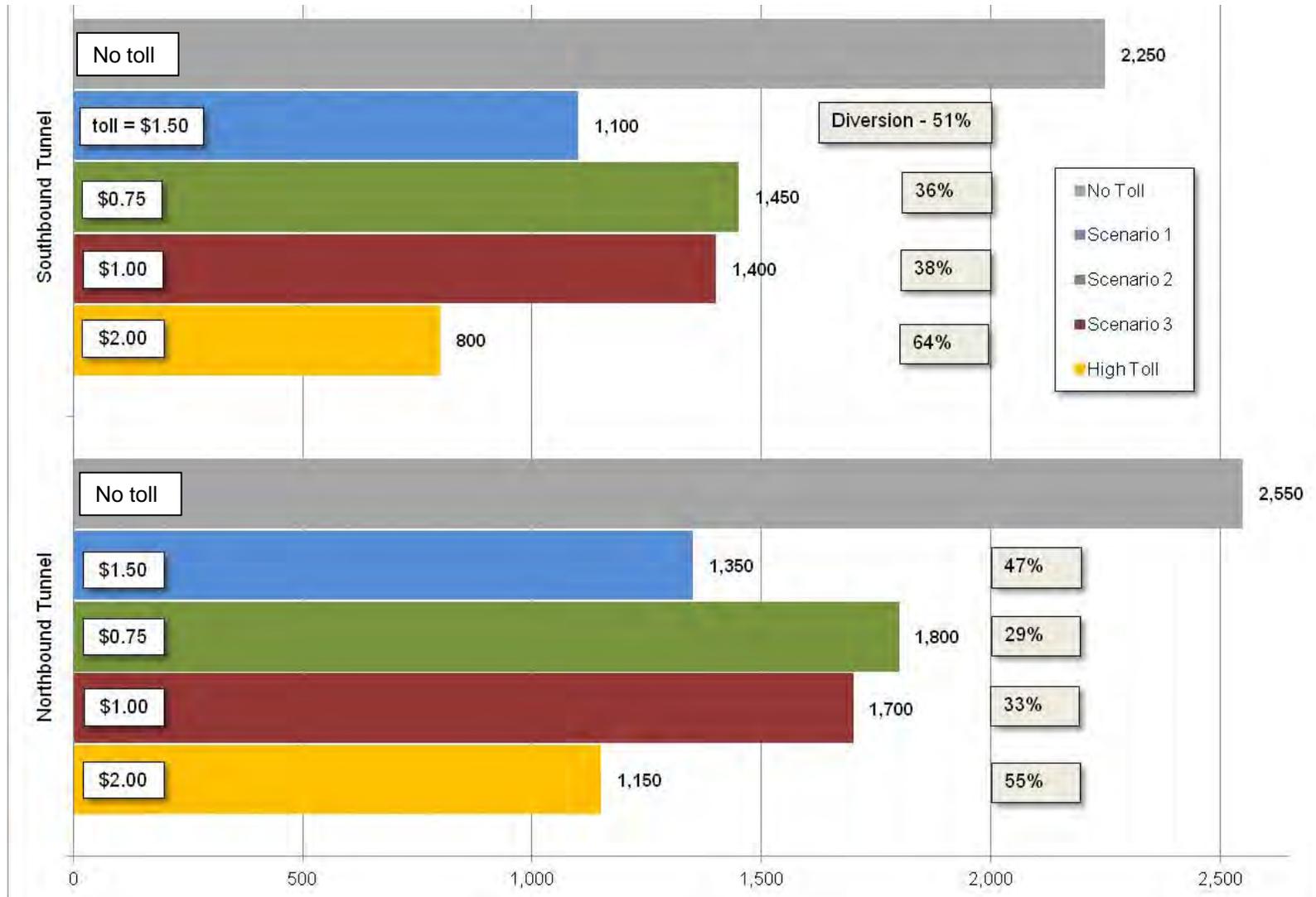


- Scenario 3 includes a 20 percent one-time adjustment for all toll rates in July 2030.
- Scenarios 2 and 3 reduce the freight toll to a 1.25 multiplier for all trucks, regardless of size or axle count.
- Chart represents Good To Go! rates. Current pay by mail rates are approximately \$1.70 more.

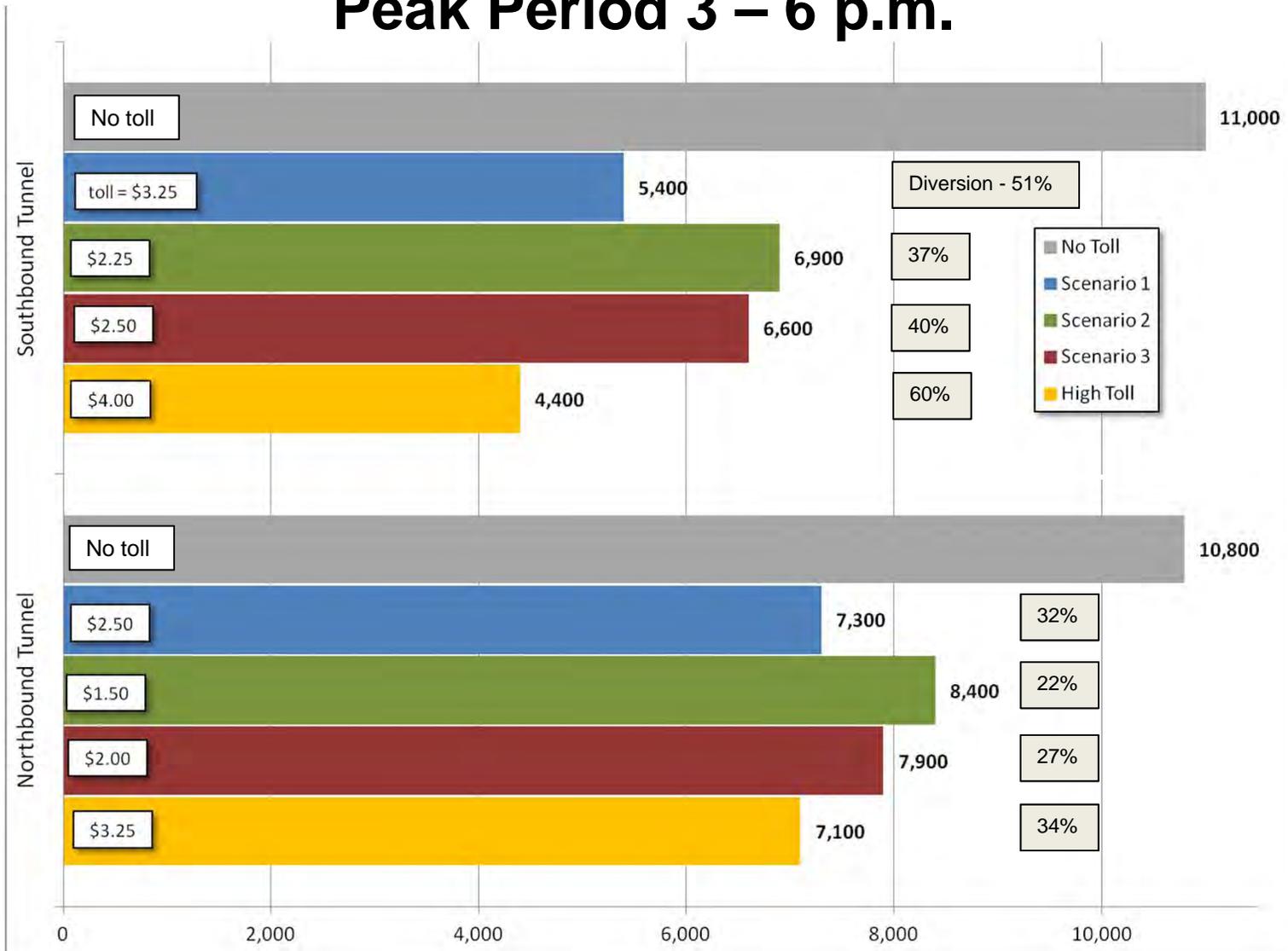
Initial Observations From Traffic Modeling

- Even modest mid-day tolls lead to diversion.
 - 30 – 50% of traffic leaves the tunnel.
- P.M. peak tolls caused some congestion in some areas and better performance in others.
- Higher southbound tolls resulted in higher diversion than we anticipated.
- Drivers making longer trips generally use the tunnel and pay the toll. Shorter, or in-city trips often use Alaskan Way or divert to other routes.

2017 Tunnel Volumes Mid-Day 1:30 – 2:30 p.m.

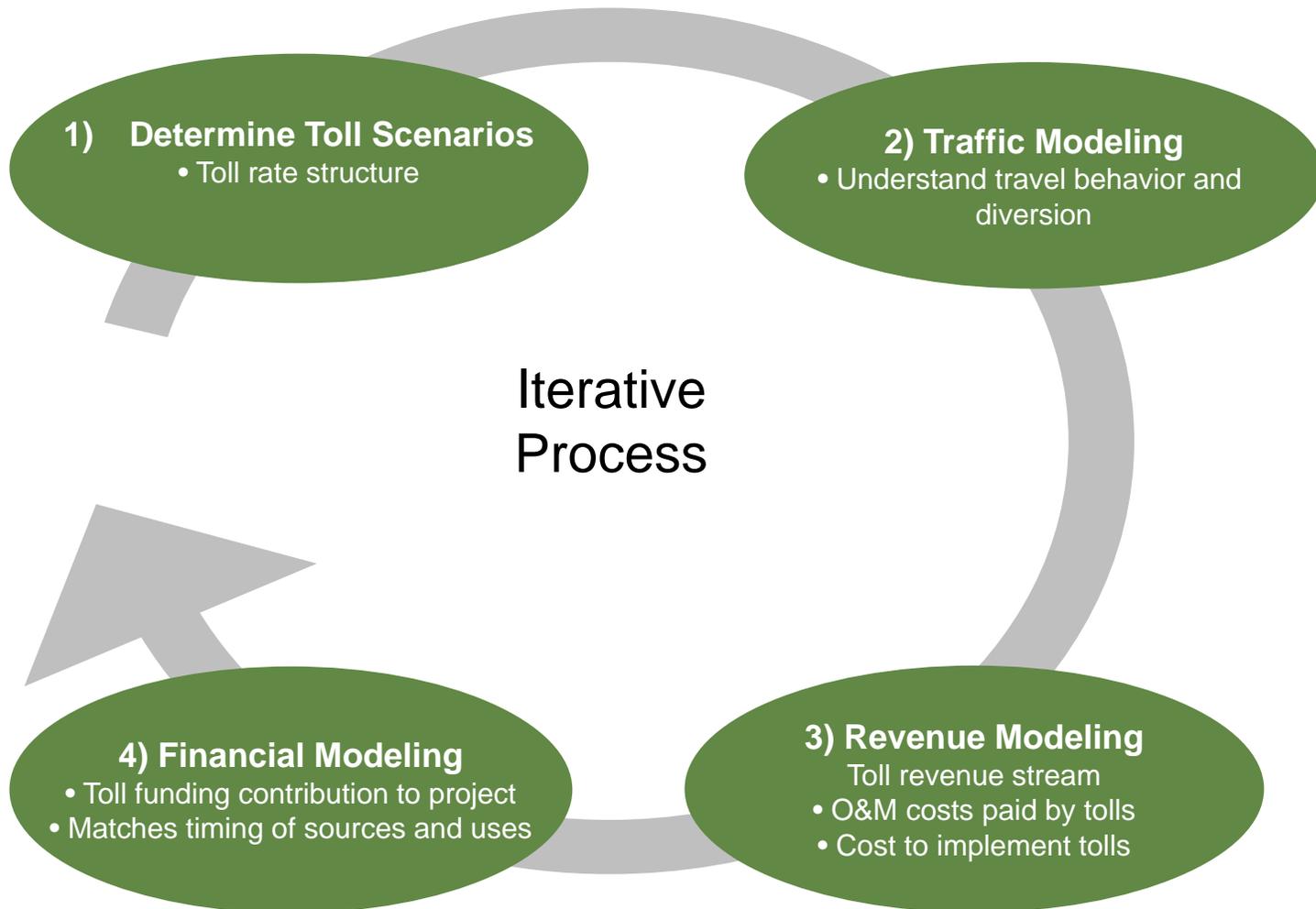


2017 Tunnel Volumes Peak Period 3 – 6 p.m.



Tolling Revenue Overview and Round 1 Revenue Results

Four-Step Planning Process



Funding Goal for Tunnel Project

- Washington State Legislature directed WSDOT fund SR 99 tunnel construction with bond proceeds from tolling.
- SR 99 tunnel construction funding need: \$200 million.
- Mitigation projects would require an additional funding source.

Toll Revenues Cover Various Costs

- Framework for walking through how toll revenues would be used.

	Revenue Collected from Tolls	Toll Collection Costs	Tunnel Ownership: Operations and Maintenance	Tunnel Ownership: Repair and Replacement	Facility Insurance Costs	Net Revenue
High Toll Benchmark						
Scenario 1						
Scenario 2						
Scenario 3						

Revenue Collected From Tolls

- Revenue models use traffic model projections to calculate how much toll revenue can be raised over a period of time.
- Results are estimates for approximately 30 years.

Toll rate X Transactions X Period of time = Tolls collected

Toll Collection Costs

Types of costs include:

- Vendors: Toll collections equipment on SR 99 and statewide customer service.
- Credit card fees.
- Postage for mailing toll invoices.
- State support staff: Toll operations including information technology, accounting and audit, marketing, customer service and program management.
- Maintenance of toll collection systems.



Tunnel Ownership Costs: Operations and Maintenance

Types of operations and maintenance costs include:

- Incident response teams.
- Maintenance of lighting; heating, ventilation and air conditioning; and electrical systems.
- Maintenance of fire, life and safety systems.



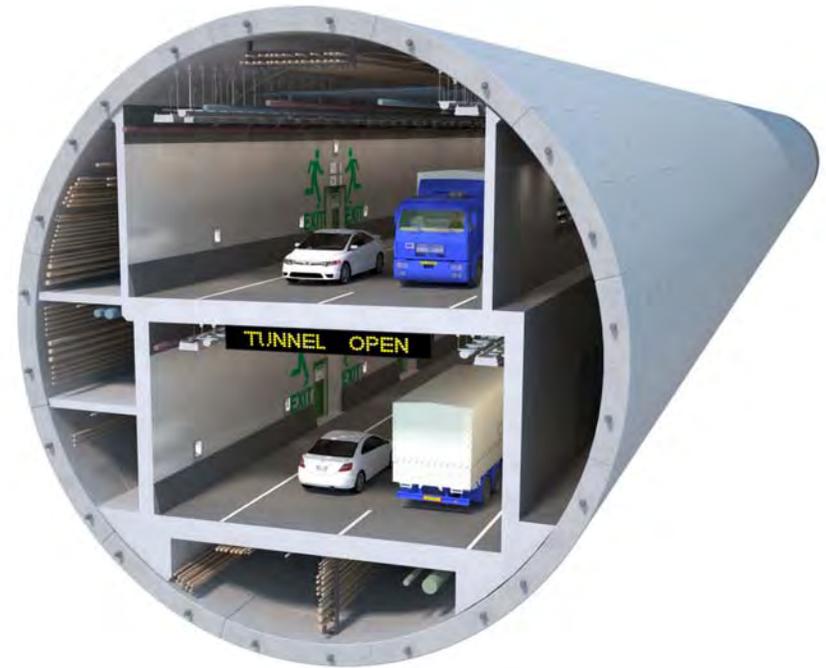
WSDOT's tunnel washing machine.

Tunnel Ownership Costs: Repair and Replacement

Policymakers and requirements of the bond market help determine how much money is set aside for long-term repairs.

Types of costs include:

- Repaving and restriping.
- Replacement of fans and HVAC systems.
- Electrical and software upgrades for fire, life and safety systems.



Facility Insurance Costs

Insurance is necessary to:

- Protect against potential loss of revenue if the tunnel and tolling had to be shut down temporarily.
- Provide funding for repairs in the event of a catastrophic loss.

Revenue Results

Minimum and Maximum Tolls by Scenario



Chart represents *Good To Go!* rates. Pay by mail rates are approximately \$1.70 more.

Preliminary Revenue Results for High Toll and Scenarios 1 - 3

	Revenue Collected from Tolls*	Toll Collection Costs**	Tunnel Ownership: Operations and Maintenance	Tunnel Ownership: Repair and Replacement	Facility Insurance Costs***	Net Revenue
High Toll Benchmark	\$1,340	\$220 to \$280	\$170	\$180	\$80	\$630 to \$690
Scenario 1	\$1,220	\$230 to \$300				\$490 to \$560
Scenario 2	\$770	\$200 to \$260				\$80 to \$140
Scenario 3	\$980	\$210 to \$260				\$290 to \$340

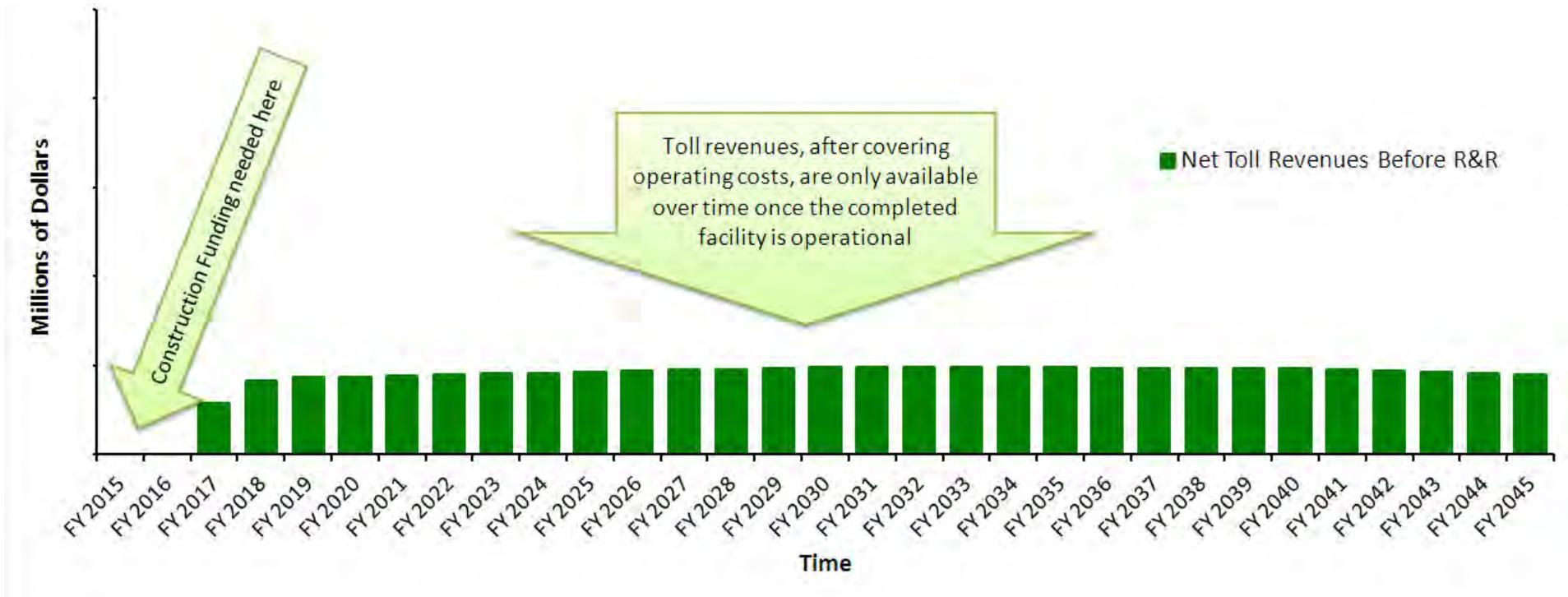
Numbers represent estimates for approximately 30 years. Costs in millions of dollars.

* After adjustments for fees, credits and uncollectible accounts.

** Varies based on number of operational toll facilities.

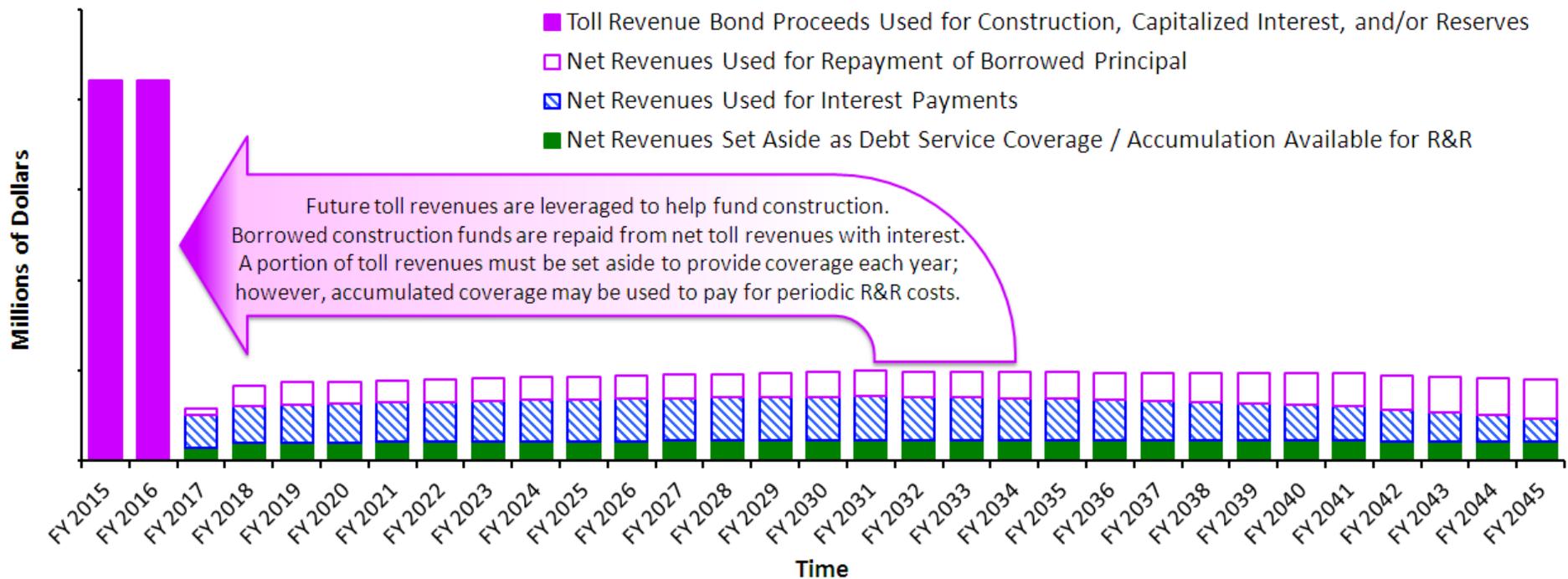
*** Insurance study in progress.

Net Toll Revenue Over Time – Why Bonds?



- Construction funding is needed up front.
- Toll revenues are generated over time once the tunnel is completed and operational.
- Need to advance future toll revenues into the construction period by issuing toll-backed bonds.

Conceptual Financing of Net Toll Revenues



- Financing allows future toll revenues to contribute to construction.
- Borrowed funds are repaid from net toll revenues.

Bonding Considerations for WSDOT Projects

- Project-specific options:
 - Triple pledge bonds.
 - Toll revenue bonds.
 - Grant Anticipation Revenue Vehicle (GARVEE) bonds.
 - Transportation Infrastructure Finance and Innovation Act (TIFIA) loan.
- WSDOT also uses bonds backed by motor vehicle fuel tax which generally provide funding for a variety of projects.
- Bond covenants typically require the owner to pay for operations and maintenance and insure the facility and revenue stream.
- Requirements / guidance from the bond market, State Finance Committee, federal or state agencies.

Assumptions for ACTT Revenue Calculations

Revenue

- No toll rate escalation assumed for financial planning purposes. Toll rate when the tunnel opens could be the same as the toll rate in 2030.
 - Scenario 3 has a one-time, 20 percent toll-rate adjustment in 2030.
- Toll collection and tunnel ownership costs will increase over time.

Financing

- For purposes of net present value calculations:
 - Interest rate: 6.5%
 - Timing: Bond proceeds would be needed in 2015.
 - Coverage ratio: 1.3. This shows we can “cover” our payments.

Preliminary Revenue Results for High Toll and Scenarios 1 - 3

	Net Revenue*	Potential Financing and Coverage**	Potential Project Funding**
High Toll Benchmark	\$630	\$380 to \$420	\$210 to \$250
Scenario 1	\$490	\$280 to \$320	\$170 to \$210
Scenario 2	\$80		
Scenario 3	\$290	\$140 to \$180	\$110 to \$150

Costs in millions of dollars.

Likely couldn't finance scenario 2 for tunnel project funding.

* The low end of the net revenue range was assumed for financial calculations.

** This is a preliminary calculation and requires analysis by the Office of the State Treasurer.

Small Group Discussion

Small Group Discussion Overview

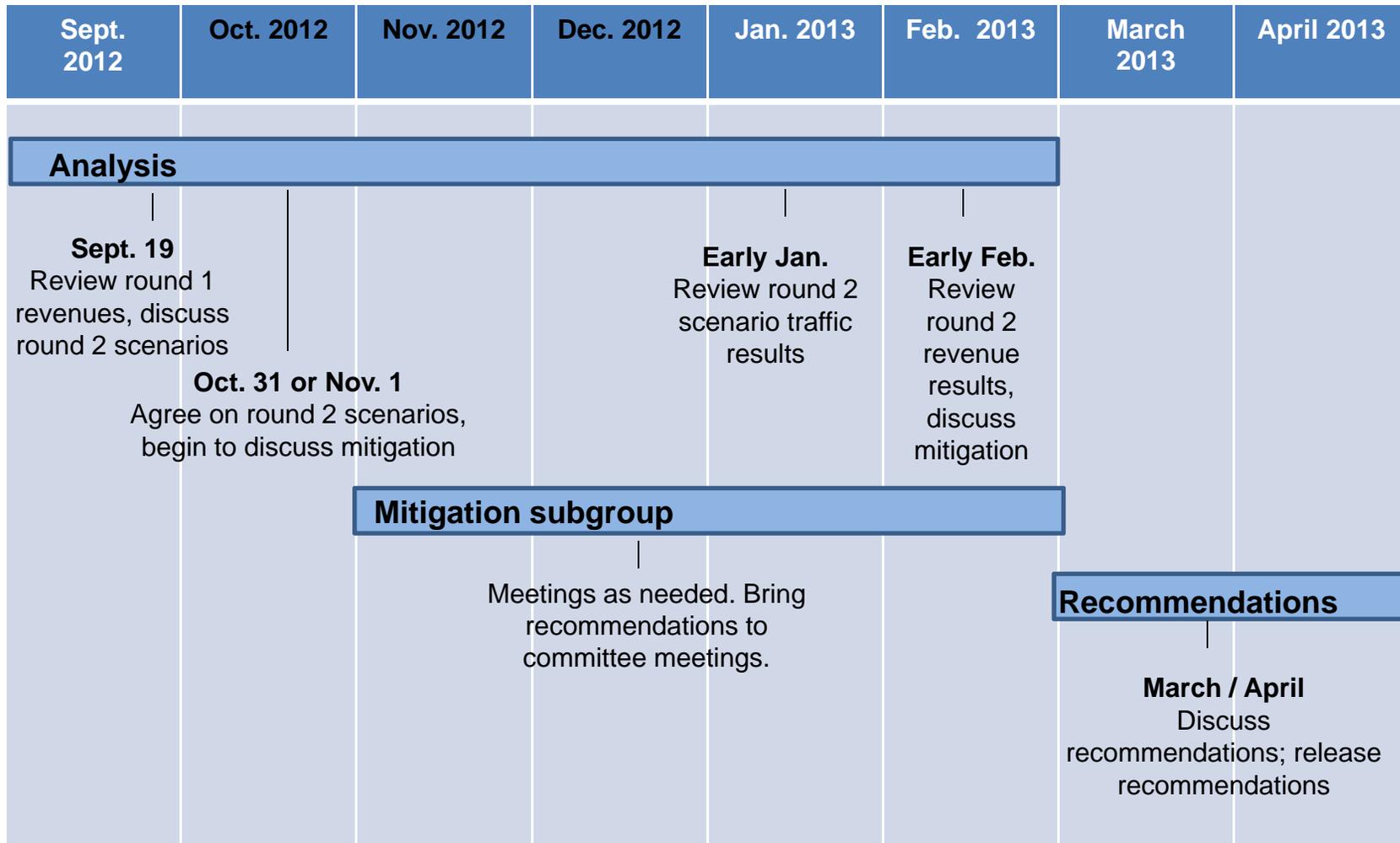
- Break into three groups to continue dialogue about toll revenues.
- Each group will have 30 minutes to cover one of the following topics:
 - Toll collection costs.
 - Tunnel ownership costs.
 - Financing costs.
- Each group should elect a committee member to report out.
- 30 minutes for group report outs and questions.
- Each group will have technical staff to answer questions.
- Each group will have someone to take notes.

Small Group Report Out

Introduction to Potential Round 2 Scenarios

Committee Schedule and Recommendations

Draft ACTT Work Plan



Closing: Next Steps



Website:

www.alaskanwayviaduct.org

Email:

viaduct@wsdot.wa.gov

Hotline:

1-888-AWV-LINE