

# Tacoma Narrows Bridge Photo Toll Rate Analysis

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December 15, 2010



**Washington State**  
**Department of Transportation**

# Presentation Outline

- Need to set photo toll rate on the SR 16 Tacoma Narrows Bridge
- How proposed Pay By Mail rate increment is calculated
- Sensitivity tests on net revenue impacts of key assumptions
- Results of customer survey

# Chronology

- **Spring 2010:** ESSB 6499 provided for introduction of photo tolling and eliminates current violation process when new system is certified.
- **September 20:** Introduced photo toll rate-setting issues and process to the Transportation Commission.
- **October 19:** Provided status report on CAC proceedings to Commission.
- **Citizens' Advisory Committee (CAC) Meetings:**
  - October 6: Introduced photo toll rate-setting issues and process and suggested initial recommendation for a \$4.25 Pay By Mail toll rate
  - November 3: Responded to initial CAC questions
  - November 10: Provided additional Pay By Mail toll rate scenarios and analysis (\$4.25, \$4.75 and \$5.50)
  - November 17: CAC made recommendation for a \$7.00 photo toll rate
- **December 15 (Today): CAC recommendation to Transportation Commission for Commission Rate-setting Action** (File CR 102)
- **Upcoming:**
  - January 19: Public Input Meeting
  - January 25: Public Hearing
  - January 26: Final Commission action (File CR 103)

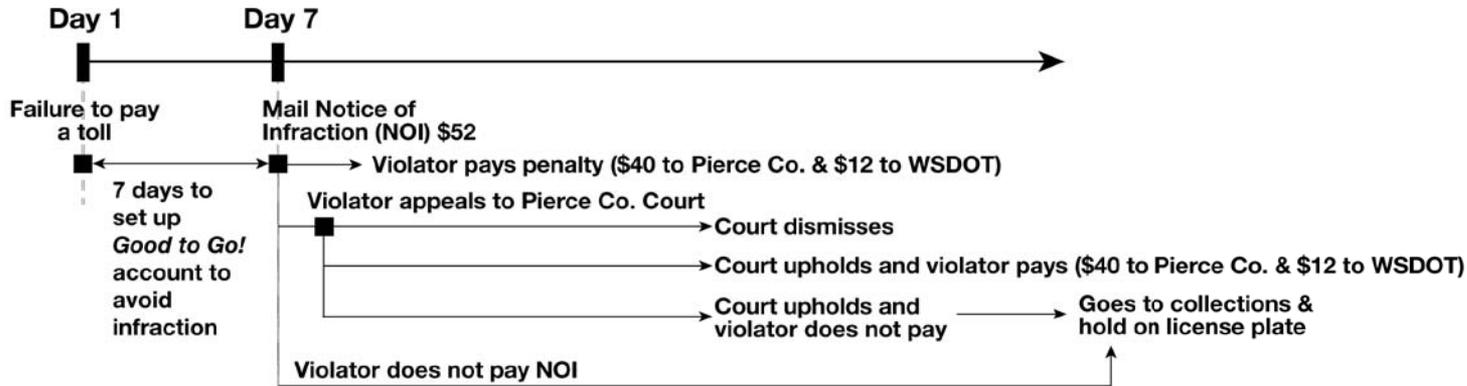
# Photo Tolling For the TNB

- **Photo tolling begins in spring for the Tacoma Narrows Bridge, concurrent with SR 520 tolling commencement**
- **Three new payment types will be introduced:**
  - **Pay By Plate:** Customers can open a *Good To Go!* account without using a transponder and have tolls assessed by reading their license plate.
  - **Customer-initiated payment:** Customers without accounts can initiate payment before or shortly after using the bridge.
  - **Pay By Mail:** Customers without an account and who don't initiate payment will be sent a bill. They have 80 days to pay before being subject to civil penalty.
- **One new toll rate is needed for Pay By Mail transactions**
  - **Fees and discounts** were included in companion rulemaking that will determine *Good To Go!* Pay By Plate and customer-initiated rates when applied to the transponder rate or Pay By Mail rates respectively.

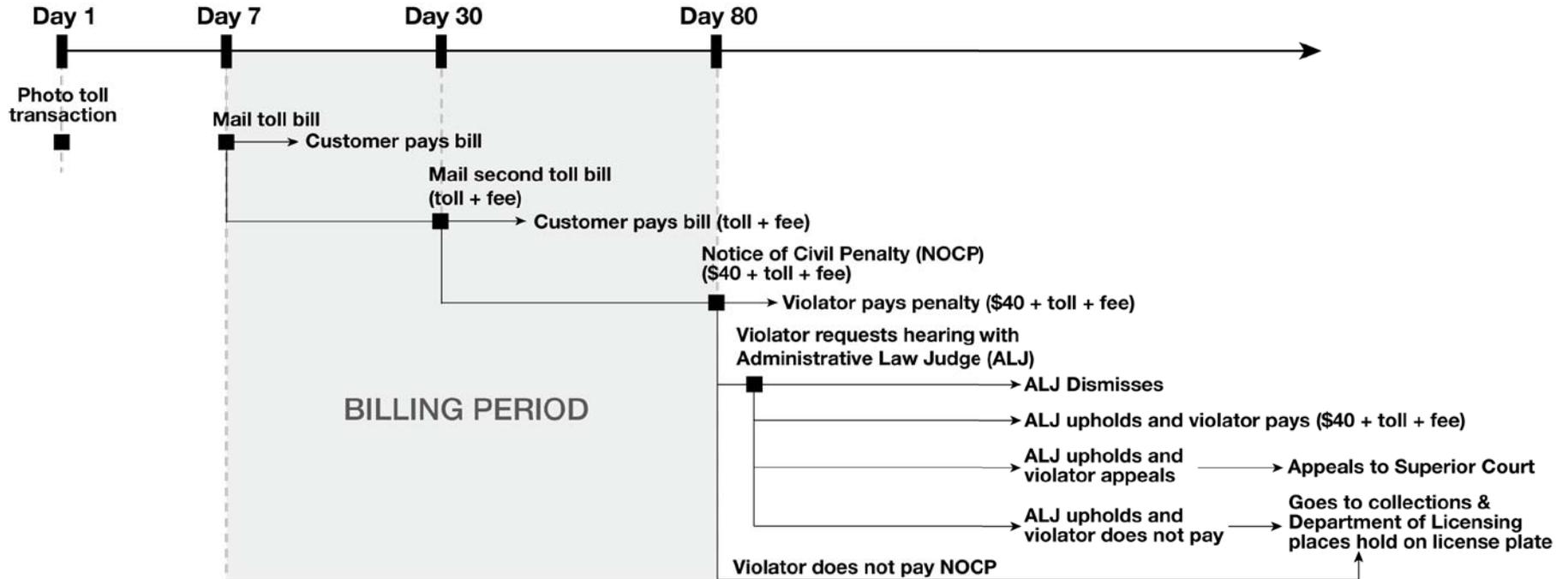
# Without Photo Tolling There Is No Violation Process

- As a result of ESSB 6499, current authorization to issue a traffic infraction for a toll violation through a photo enforcement system is removed. (RCW 46.63.030 RCW 46.63.160)
- Under the amended RCW 46.63.160 “A notice of civil penalty may be issued by the Department of Transportation **when a toll is assessed through the use of a photo toll** system and the toll is not paid by the toll payment due date, which is 80 days from the date the vehicle uses the toll facility and incurs the toll charge.” (RCW 46.63.160, subsection 3)
- One enforcement statute applies to all facilities: “Any registered owner of a vehicle traveling upon a toll facility operated under chapter 47.56 or 47.46 RCW is subject to a civil penalty” (RCW 46.63.160, subsection 4)
- Under the amended RCW 46.63.160, which applies equally to all toll facilities, if photo tolling with a civil penalty is not implemented, there is no enforcement mechanism for toll violations and toll facilities would not receive any revenue from toll penalties.

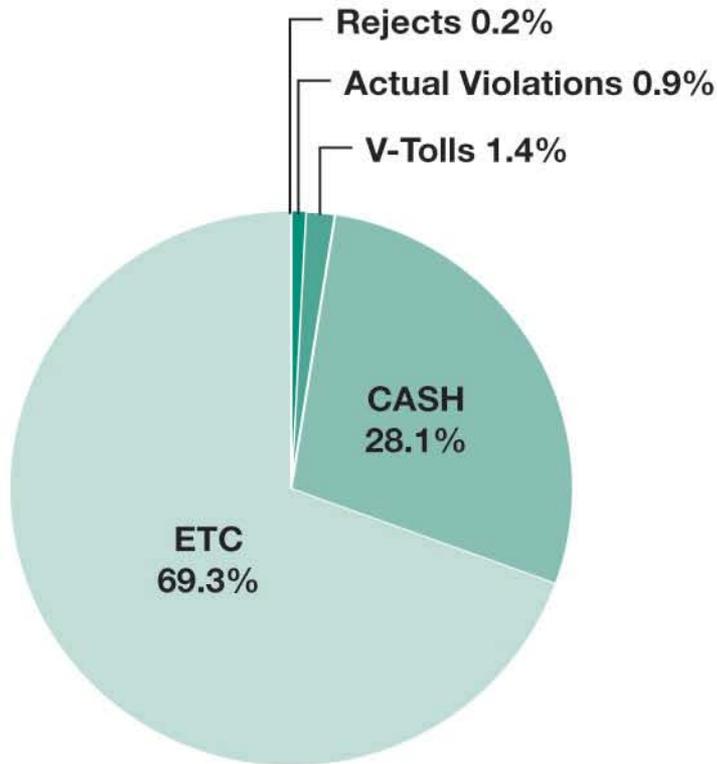
# Current Infraction Process



# Billing & Civil Penalty Process



# Tacoma Narrows Bridge Payment Methods Under the Current System



<b>Total Traffic*</b>	<b>15,449,212</b>	<b>100%</b>
<b>ETC</b>	<b>10,699,377</b>	<b>69.3%</b>
<b>CASH</b>	<b>4,346,680</b>	<b>28.1%</b>
<b>Potential Revenue Images</b>	<b>388,596**</b>	<b>2.5%</b>
<b>V-Tolls</b> <i>Good To Go! Customers identified by license plate</i>	<b>214,970</b>	<b>1.4%</b>
<b>Rejects</b> <i>bad images – 9.8% of potential revenue images</i>	<b>38,028</b>	<b>0.2%</b>
<b>Actual Violations</b>	<b>135,598</b>	<b>0.9%</b>

\* Based on Sept 1, 2009 through Sept 30, 2010 (13 months of data)

\*\* Figure does not include 14,559 duplicate images and non-revenue trips

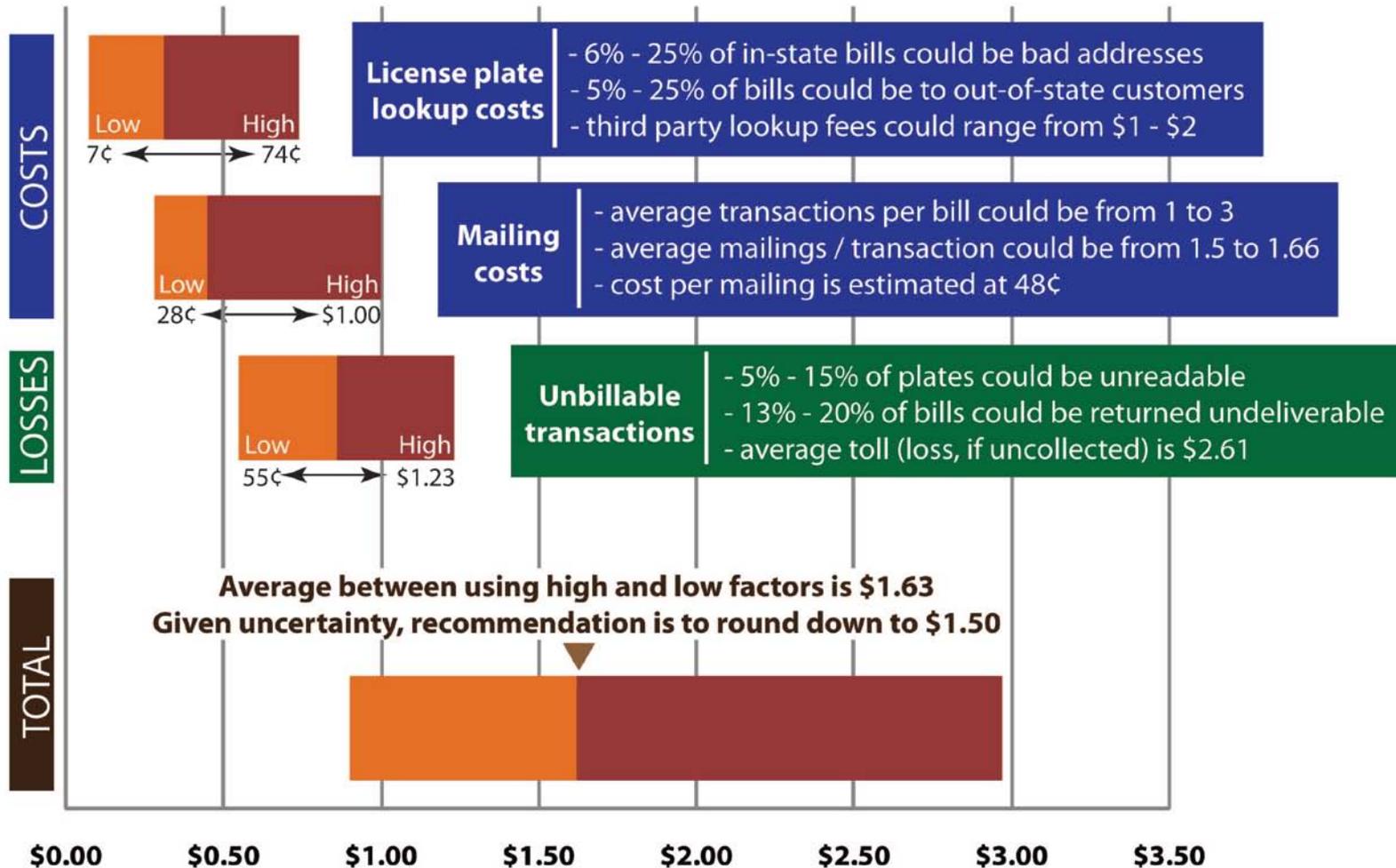
# Pay By Mail Rate Increment

- **The policy objective behind setting a higher rate for Pay By Mail transactions is to encourage frequent users to use lower cost payment methods**
- **Proposed rate differential is based on estimates of incremental costs and losses for Pay by Mail users**
  - Costs of billing
  - Costs of license plate look-ups
  - Losses from unbillable tolls (unreadable plates, returned bills, bad addresses)
- **Estimated losses due to failure of customers to pay toll bills are not included**
- **Without data on actual Pay By Mail costs and losses, there is significant uncertainty**
  - Costs and losses have been projected using low and high risk factors.

# How is the \$1.50 Increment Calculated?

- **\$1.50 increment was calculated for SR 520**
  - Rounded down from \$1.63 estimate
  - Commission direction to use a consistent rate on both facilities
- **Includes incremental cost of collection**
  - Reviewing and looking up license plates
  - Sending and processing bills
- **Includes losses from unbillable transactions**
  - Unreadable plates
  - Bad addresses
  - Does not include losses from billed but unpaid tolls and penalties
- **Increment set at a midpoint between high and low assumptions**
  - Used monte carlo simulation
  - Recognized that not all factors can be considered independently

# How is the \$1.50 Increment Calculated?

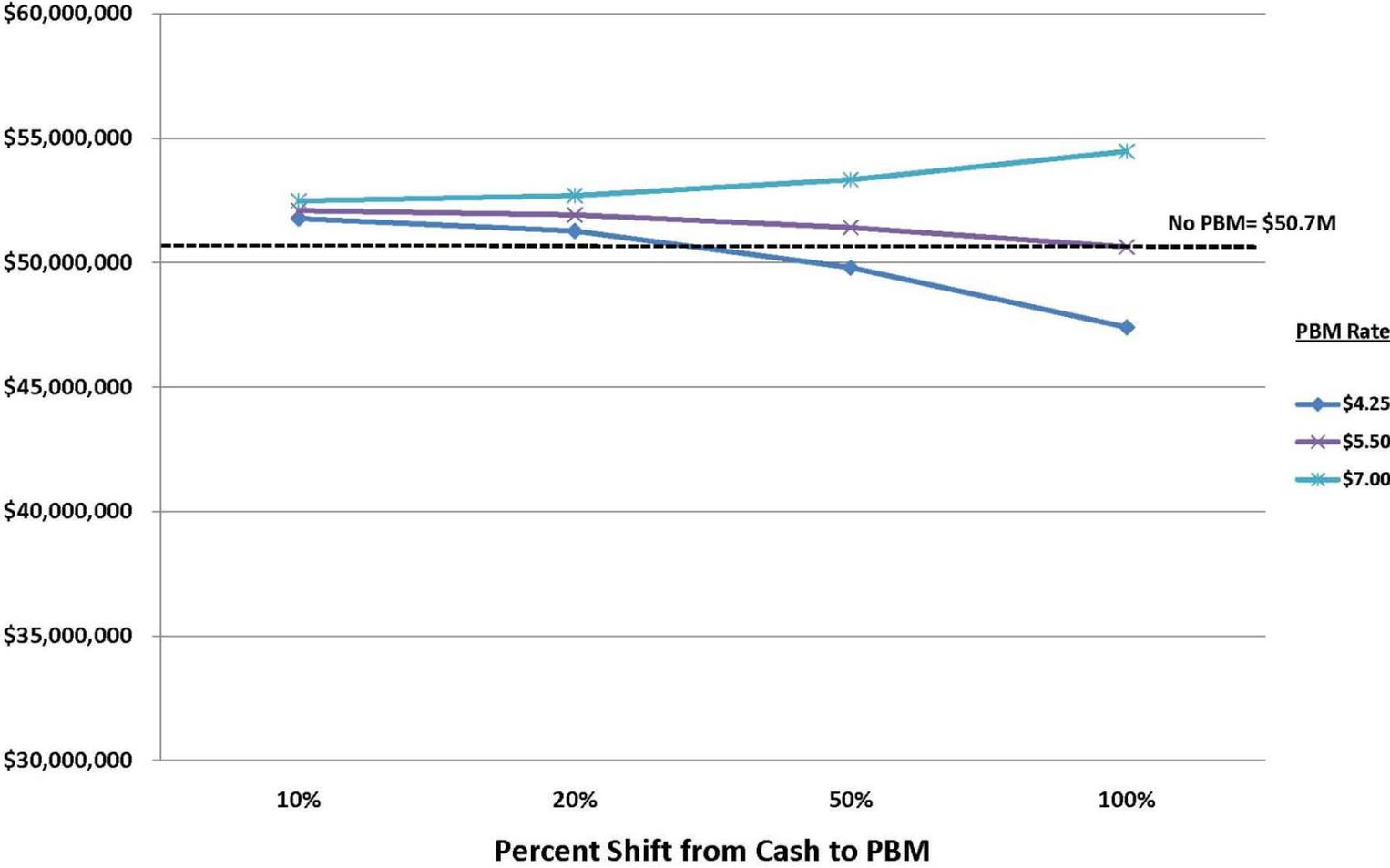


# Pay By Mail Toll Rates Analyzed

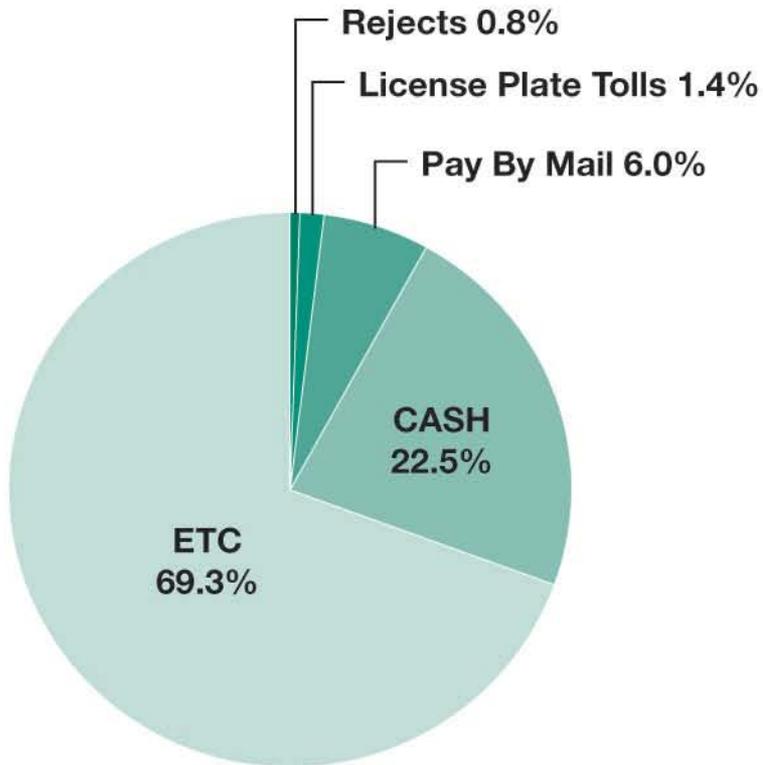
- **Good To Go! transponder rate + \$1.50 (\$4.25 total)**
  - Uses same \$1.50 rate differential as proposed for SR 520.
  - Added the differential to the transponder rate, similar to SR 520
- **Cash rate + \$1.50 (\$5.50 total)**
  - Uses the \$1.50 rate differential
  - Added the differential to the cash rate, rather than the transponder rate
- **Cash rate + \$3.00 (\$7.00 total)**
  - Proposed by CAC
  - Based on all cost and loss factors assumed at their highest values applied to a cash toll rate

# Effect of Rates on Gross Revenue

## Gross Revenue vs Percentage Shift From Cash to PBM FY 2012



# Tacoma Narrows Bridge Payment Methods with Photo Tolling



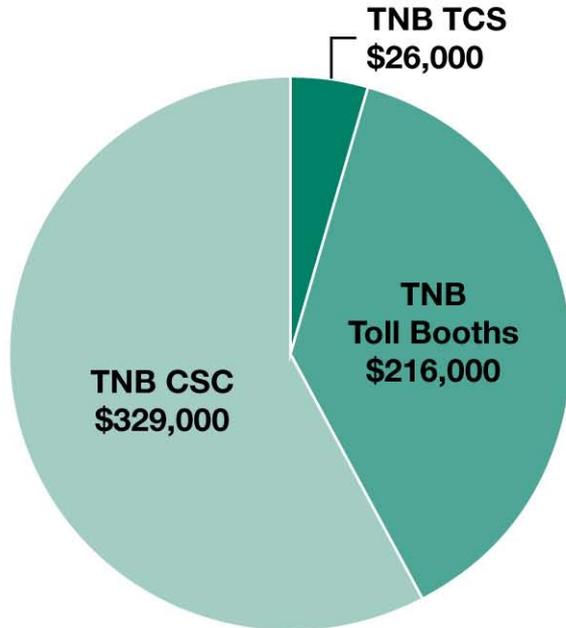
<b>Total Traffic*</b>	<b>15,449,212</b>	<b>100%</b>
<hr/>		
<b>ETC</b> <i>(remains the same)</i>	<b>10,699,377</b>	<b>69.3%</b>
<b>CASH</b> <i>(80% of former cash)</i>	<b>3,477,344</b>	<b>22.5%</b>
<b>Potential Pay By Mail</b> <i>20% of former cash + former potential revenue images</i>	<b>1,257,932**</b>	<b>8.1%</b>
<hr/>		
<b>License Plate Tolls</b> <i>Good To Go! customers without transponders</i>	<b>214,970</b>	<b>1.4%</b>
<b>Rejects</b> <i>9.8% of potential revenue images</i>	<b>123,277</b>	<b>0.8%</b>
<b>Actual Pay By Mail</b>	<b>919,685</b>	<b>6.0%</b>

\* Based on Sept 1, 2009 through Sept 30, 2010 (13 months of data)

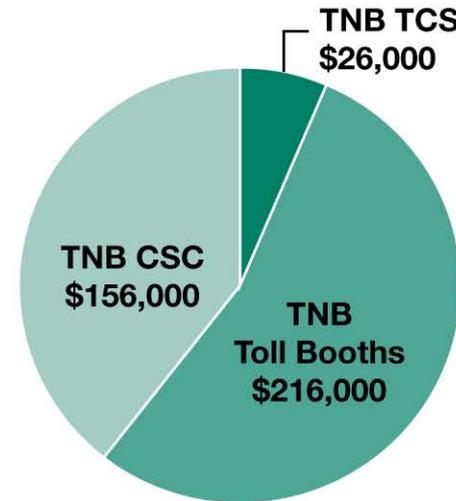
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# Cost of Collection on Tacoma Narrows Bridge

**CURRENT: July 2010 Monthly Cost**



**PROJECTED: July 2011 Monthly Cost**



**PRELIMINARY PROJECTED  
REDUCTION: \$1.6 – \$2.2 MILLION**

**TCS, Toll Collection System** includes toll lane equipment, readers, controllers, cameras, classification system. The most important function of the TCS is to correctly identify and apply the correct toll to every vehicle in the toll lanes.

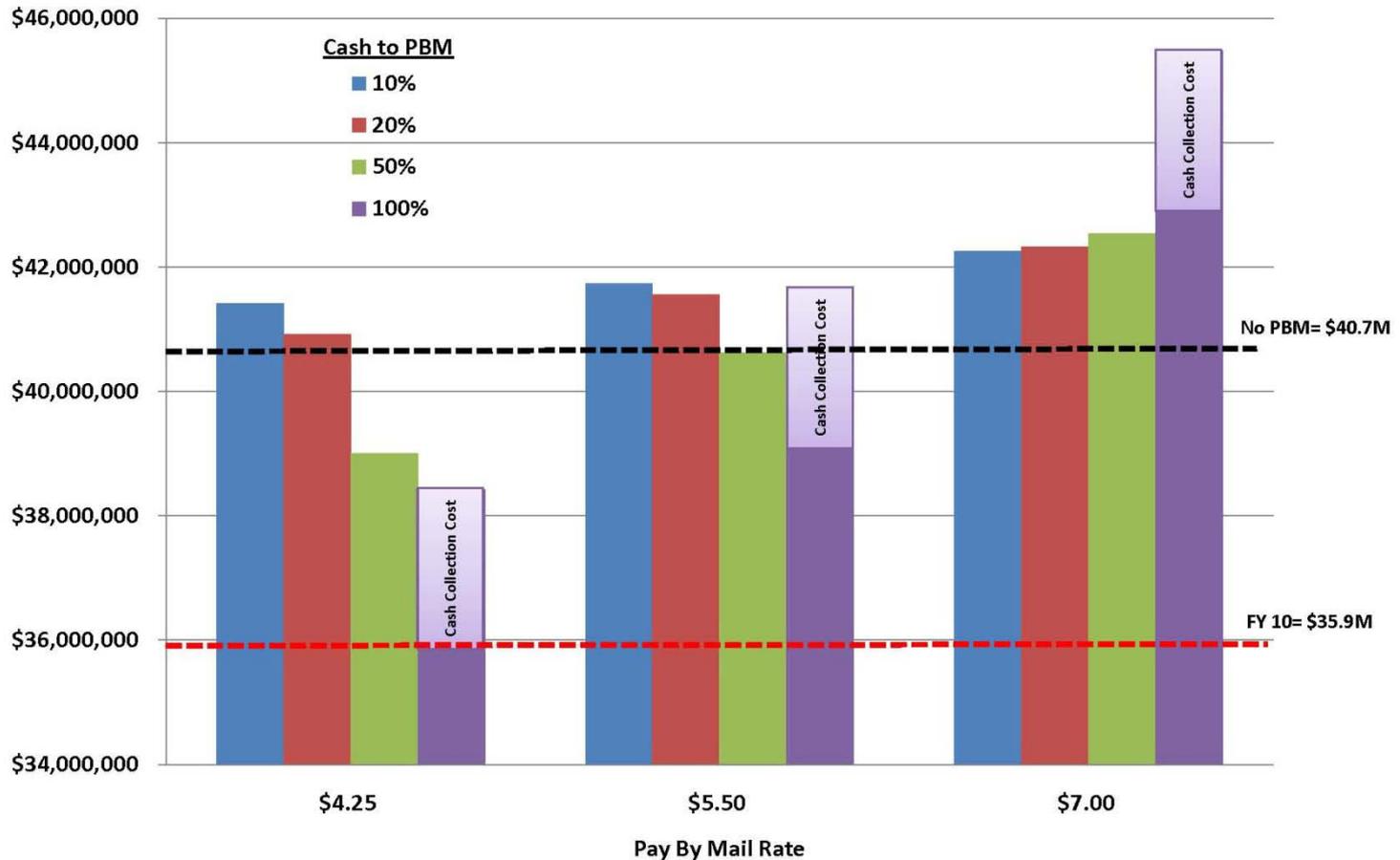
**CSC, Customer Service Center** includes all systems and equipment necessary to record tolls, manage customer accounts, bill Photo Toll customers and accurately account and report on toll collection. CSC also includes staff necessary to operate and maintain the CSC system(s).

# Survey of Current TNB Customers

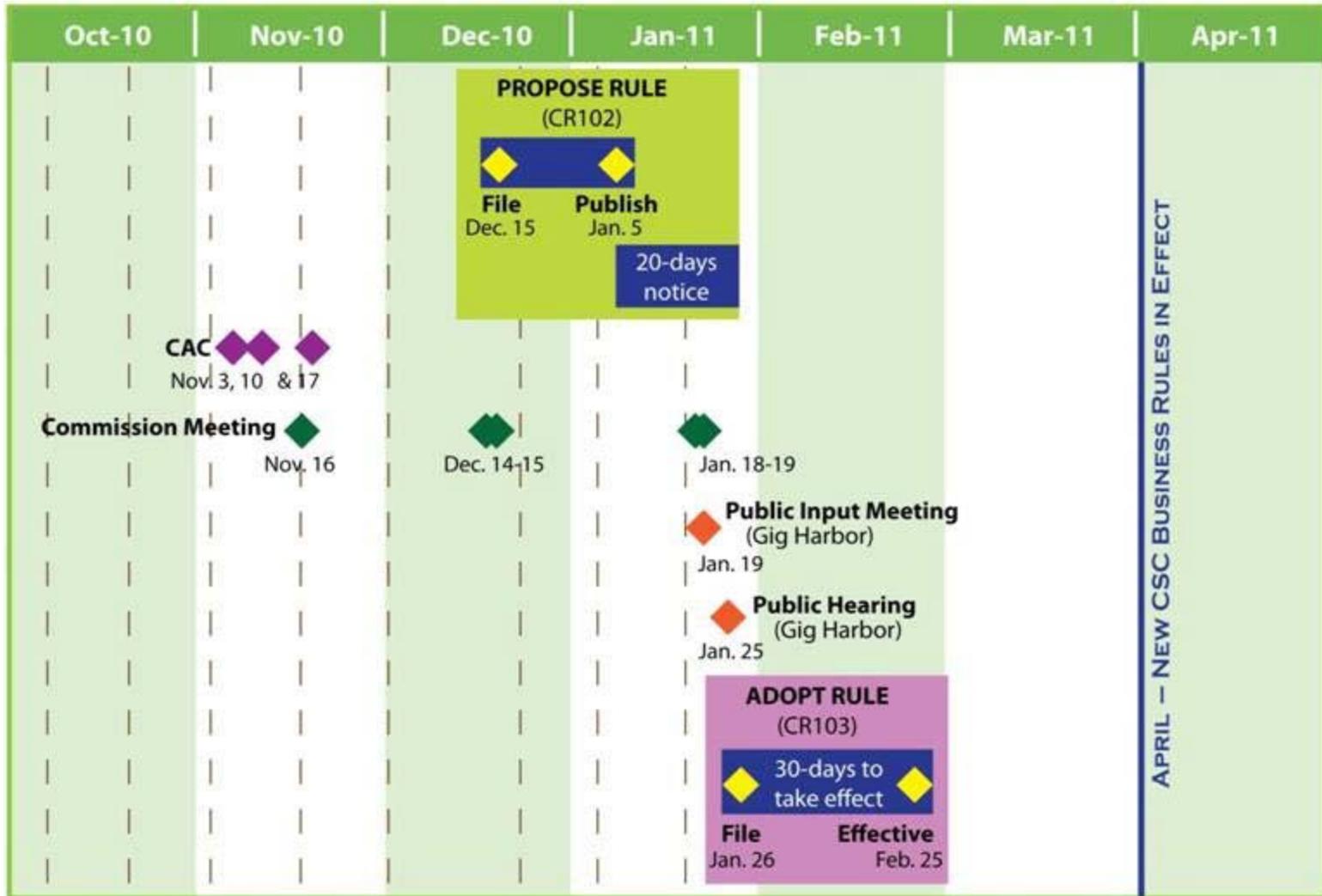
- **Online survey conducted November 9 – 16, 2010**
- **835 responses**
- **Survey results** show the percentage of existing customers stating they will use Pay By Mail at various toll rates, assuming that cash payment remains an option:
  - \$4.25 rate - 6% of users would switch to Pay By Mail
  - \$5.50 rate - 2% of users would switch to Pay By Mail
  - A \$7 toll rate was proposed by the CAC after completion of the survey. It is estimated that 1% of users would use Pay By Mail at that toll rate.

# Effect of Rates and Pay By Mail Use on Net Revenues (FY 2012)

Tacoma Narrows Bridge PBM Net Revenue vs. Rate  
(FY12: Before Debt Service)



# WSDOT WAC Schedule Related to Adjudication and Operations



--- Washington State Register filing dates

# Questions?

For more information,  
please contact

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**Washington State  
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