

## Progressing on the Master Plan

The I-405 Master Plan is a balanced, multimodal approach to transportation in the corridor. The Master Plan calls for two new highway lanes in each direction. Most of the interchanges in the corridor will need to be reconstructed in order to accommodate these new lanes. Express toll lanes offer the most cost effective staging approach to the ambitious Master Plan by minimizing interchange reconstruction, while creating one new through lane in each direction.

### I-405 Master Plan Progress

Program element	Percent complete
Park and ride expansions	80%
New transit centers	70%
Bus Rapid Transit stations	70%
Local arterial improvements	50%
Direct access ramps	45%
Transit service increase	40%
Managed lanes system	40%
Vanpool service increase	30%
Add two new lanes in each direction	30%
Bike/pedestrian improvements	25%



## Securing support from corridor leaders and transit agencies

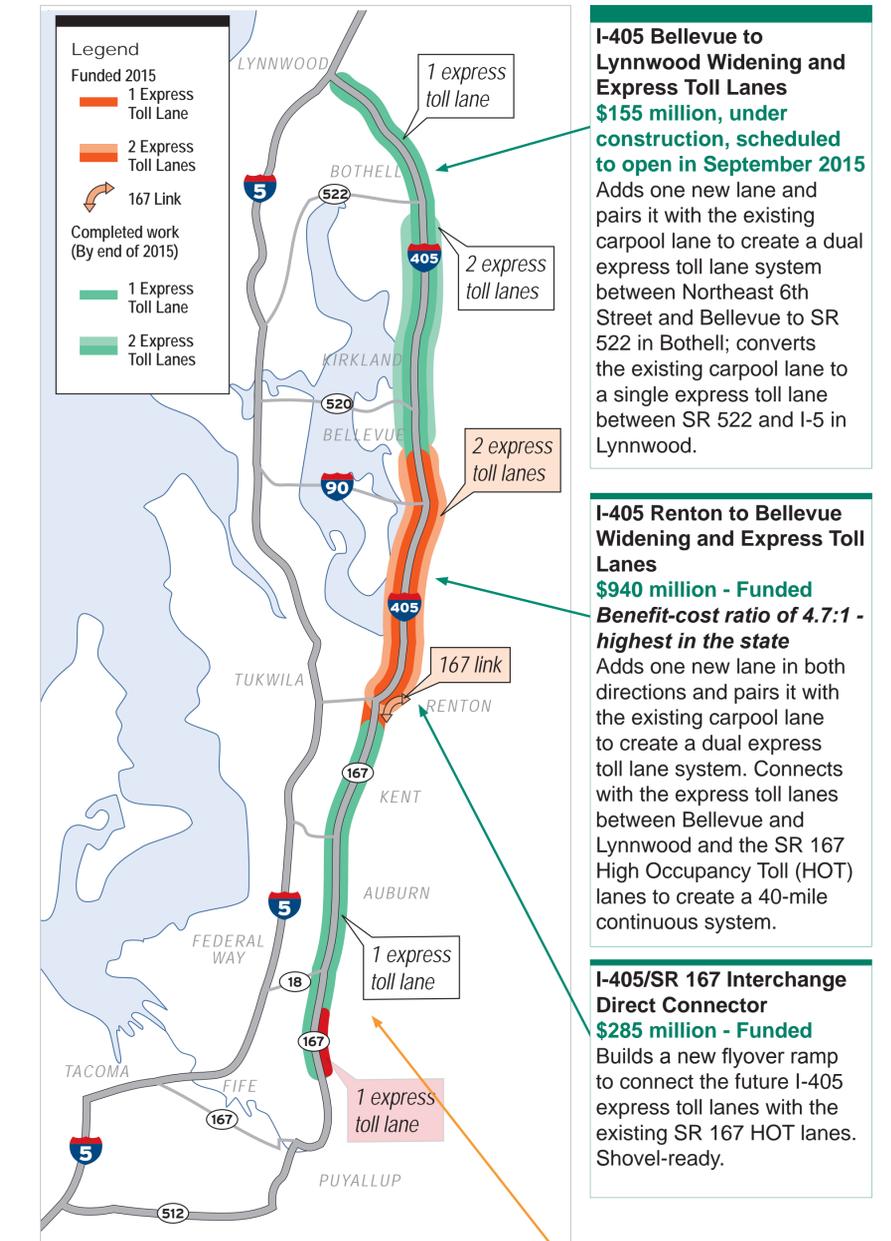
### 2010 I-405/SR 167 Executive Advisory Group endorsement of express toll lanes

### 2013 EAG endorsement of funding

The medium traditional funding option was endorsed because it funds the Renton to Bellevue section and the I-405/SR 167 Direct Connector; Phase 2 needs to move forward as soon as possible.

This option relies on gas tax or other traditional revenues for \$960 million of the \$1.175 billion needed. The remaining \$215 million would come from toll revenues (toll-backed general obligation bonds or pay-as-you-go).

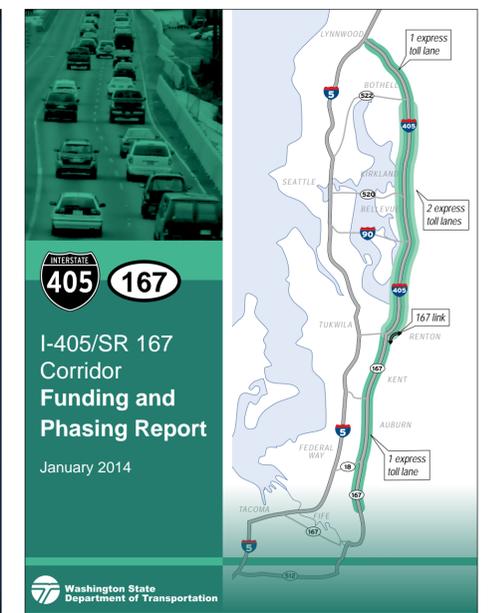
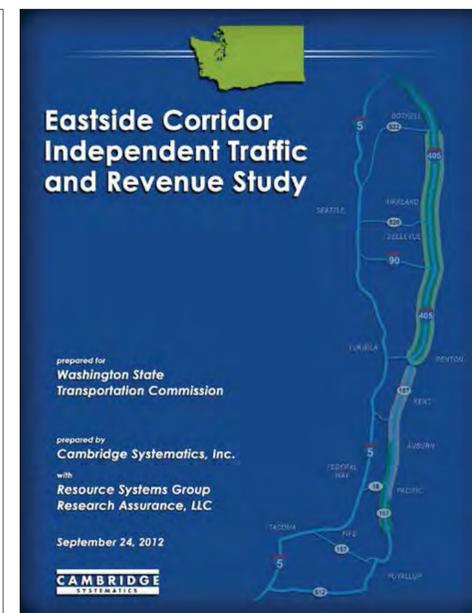
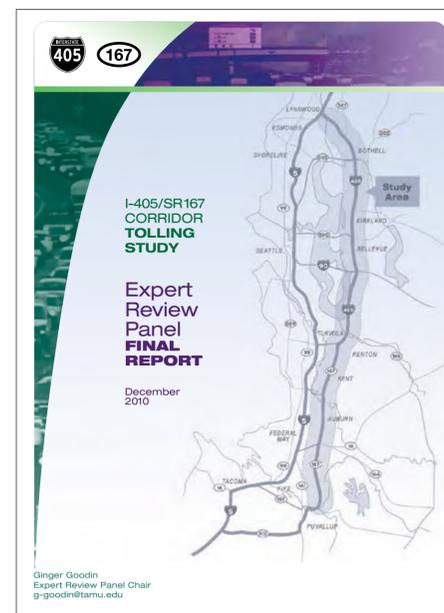
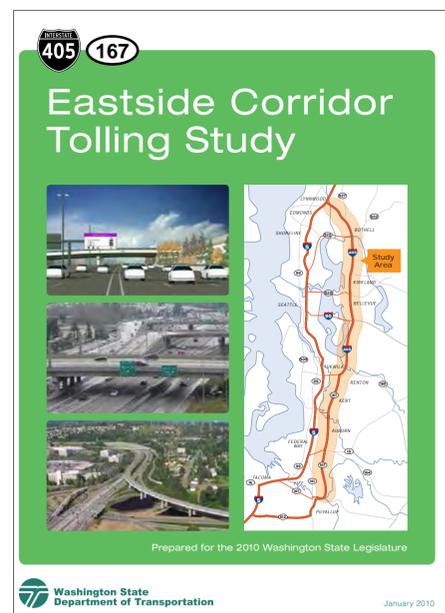
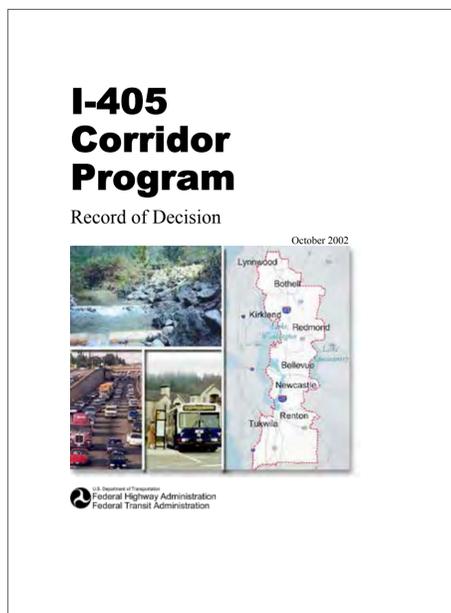
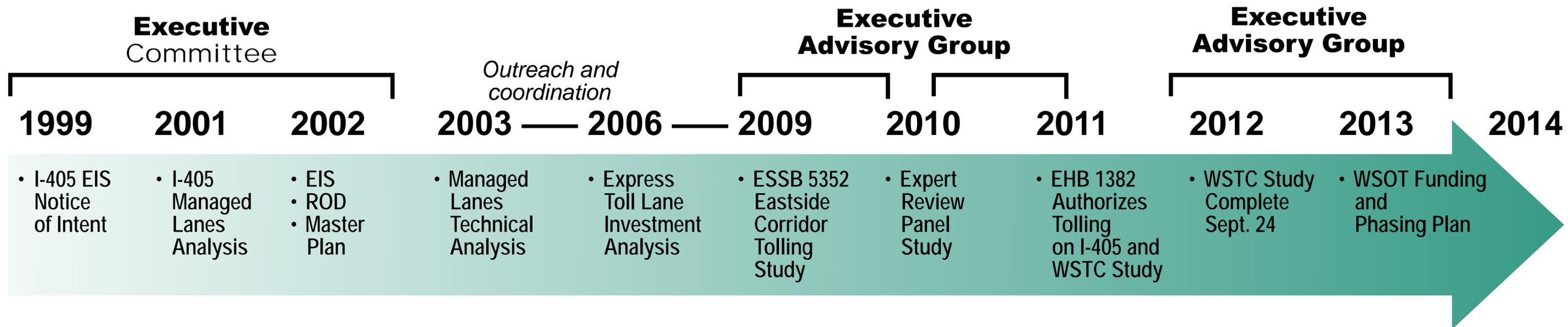
## Completing the 40-mile express toll lane system



**SR 167 HOT Lanes**  
**Operating since 2008**  
 Meeting performance and operational goals. Southbound extension scheduled to open in 2017. Northbound extension is unfunded (\$35 million).



# More than a decade of collaboration and study on I-405 express toll lanes

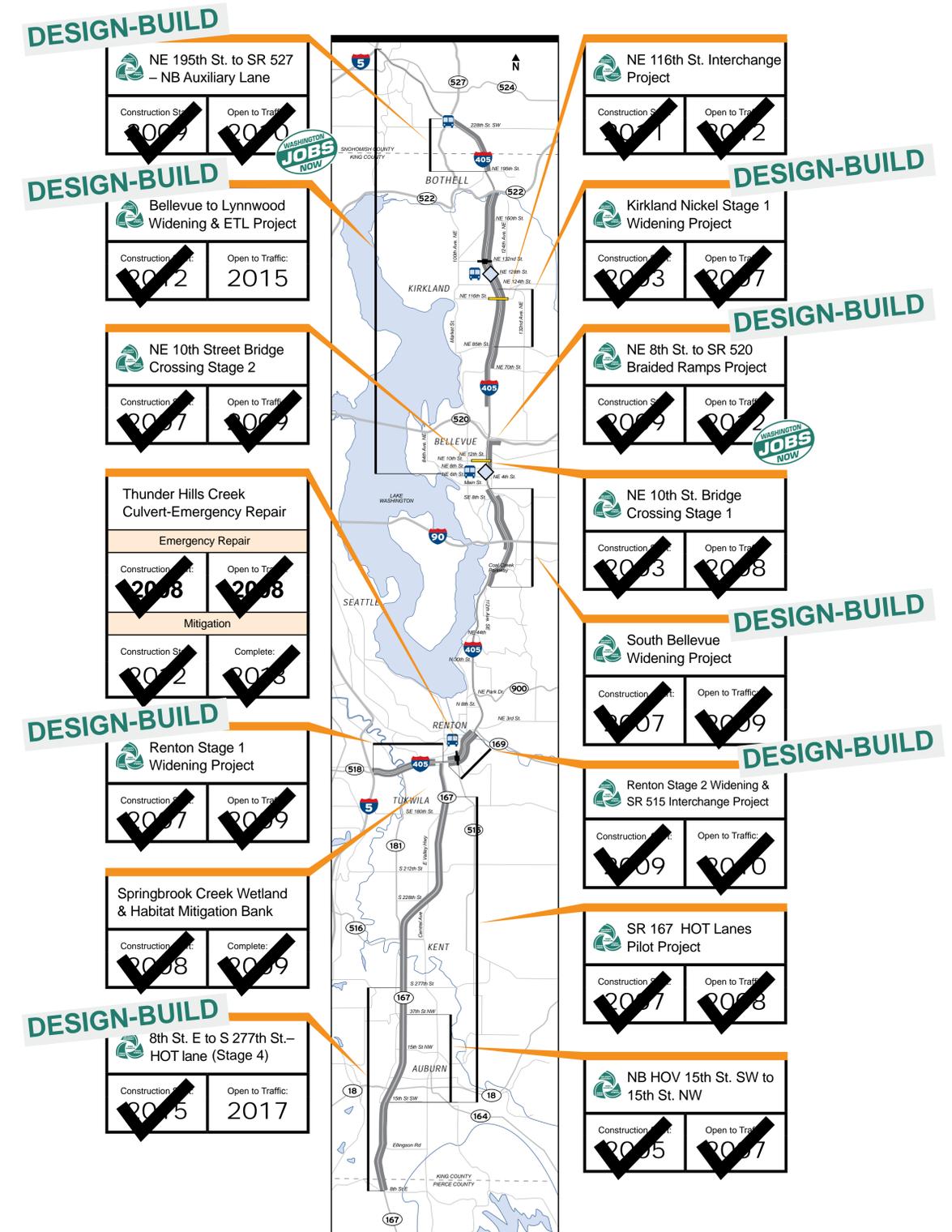




# Renton to Bellevue Express Toll Lanes

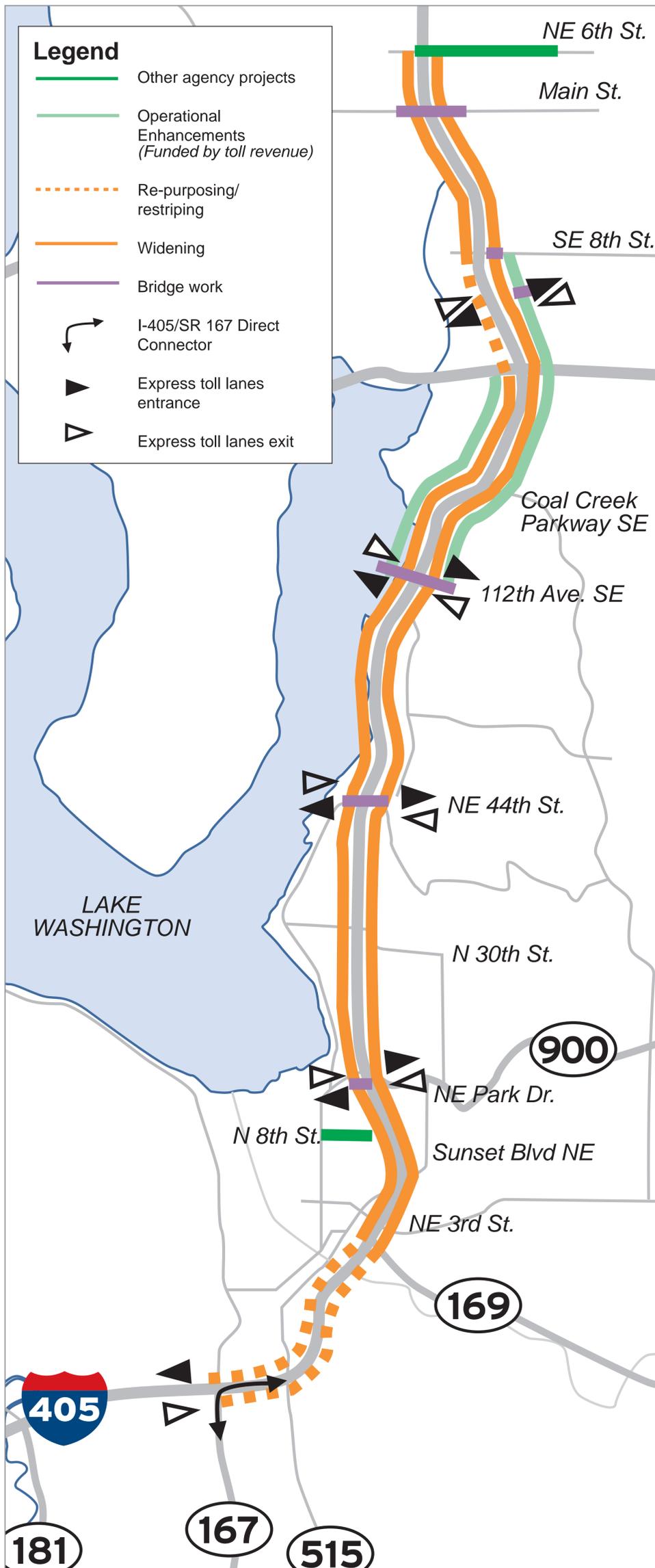
We've delivered 13 projects - on time and under budget

- Initial program investments addressed high-priority chokepoints in Bellevue, Bothell, Kirkland, and Renton.
- \$1.3 billion delivered on schedule and under budget.
- The I-405 Renton to Bellevue project is the next step towards a 40-mile corridor managed lanes system.





## Project overview



Since 1999, WSDOT has worked with the public, local government, and partner agencies along I-405 and SR 167 to find multimodal solutions for one of our region's most congested corridors.

Today, drivers experience congestion in this vicinity for up to eight hours each day, even with new improvements in the South Bellevue and Renton area.

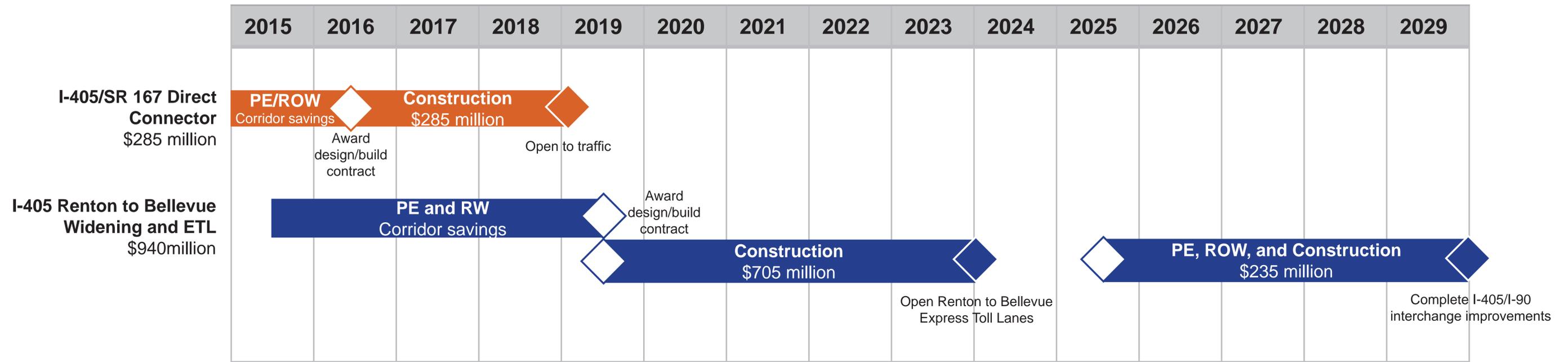
The I-405 Renton to Bellevue widening and express toll lanes project will bring much-needed relief for drivers, freight, and transit users.

- Benefit-cost ratio of 4:1 - highest in the corridor
- Creates a dual express toll lane system between NE 6th Street in Bellevue and SR 167 in Renton
- Connects with the express toll lanes between Bellevue and Lynnwood and the SR 167 High Occupancy Toll (HOT) lanes to link a 40-mile continuous system of express toll lanes



# Renton to Bellevue Express Toll Lanes

## Project timeline





## I-405/SR 167 Direct Connector



*The I-405/SR 167 interchange is one of the most heavily congested interchanges in the state. Today, drivers experience congestion in this area for up to eight hours each day.*

### **What will WSDOT build?**

A new flyover ramp connecting the SR 167 HOT lanes to the I-405 carpool lanes in Renton.

### **What are the project benefits?**

#### **Congestion relief and safety**

- Reduces delays for drivers and transit riders.
- Eliminates HOV weaving from trips between I-405 and SR 167.
- Reduces congestion-related collisions.

#### **Environment**

- Decreases air pollution and greenhouse-gas emissions because of more reliable speeds and lane performance.
- Relocates a noise wall.
- Builds stormwater management facilities.
- Upgrades or replaces stream crossings to promote fish passage.

#### **Economic impact**

- Provides better transit access to affordable housing and employment centers.
- Expands freight mobility to the Green River Valley cities' warehousing and distribution centers.
- Creates construction jobs in a variety of trades.

## Noise wall evaluation process

*WSDOT complies with Federal Highway Administration (FHWA) regulations for noise walls, following a three-step sequential process guided to determine:*

- Whether a location has high enough future noise levels (exceeding 66 dBA) to warrant further consideration for a noise wall
- Whether it is feasible to construct the noise wall (i.e., whether the proposed noise wall will provide a substantial reduction in noise and other constructability issues; the home's distance from the highway and topography relative to the roadway can play a role in this factor)
- Whether it is reasonable to construct the proposed noise wall (based on the cost to construct the noise wall per residence affected; density of homes plays a role in this factor)

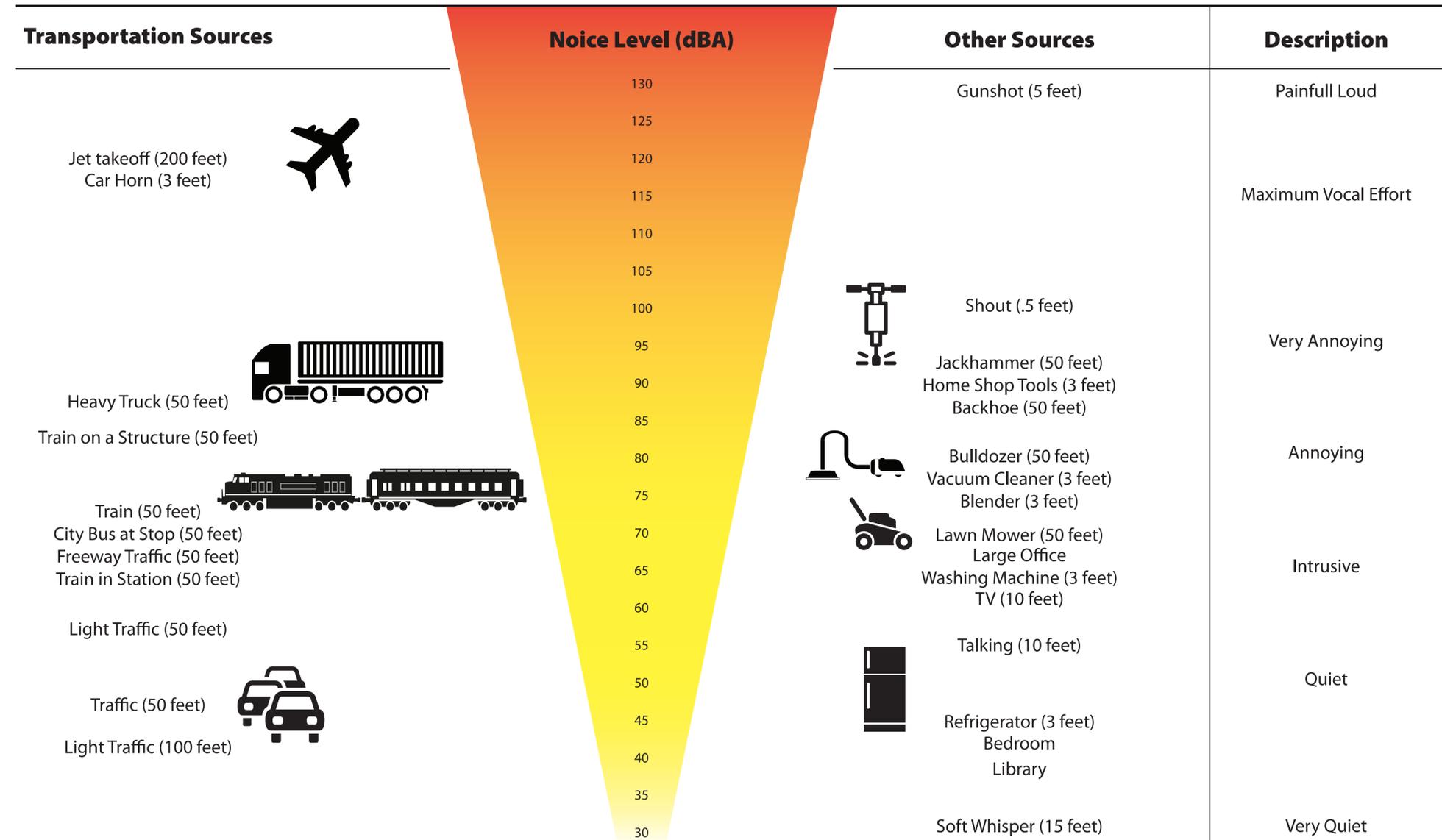


*The community side of a completed noise wall as part of the Bellevue braided ramps project*

## What's a dBA?

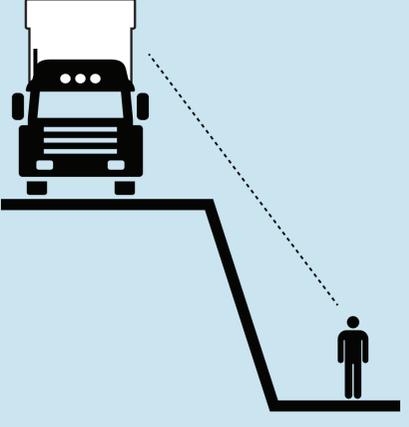
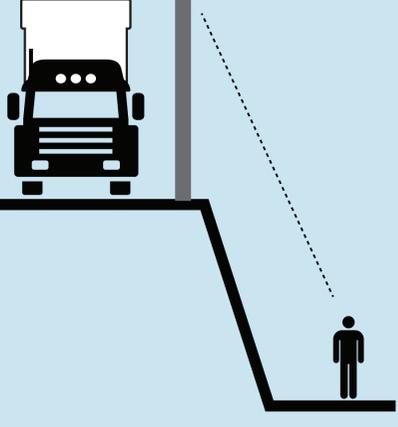
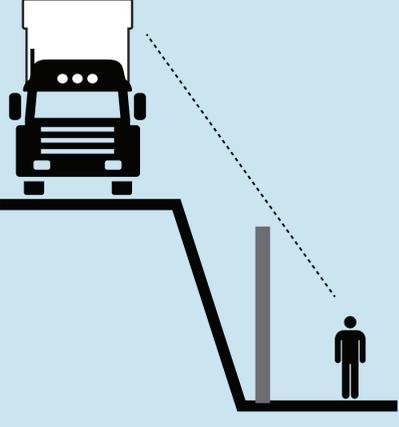
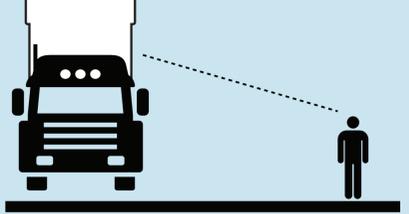
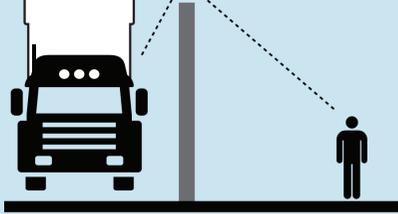
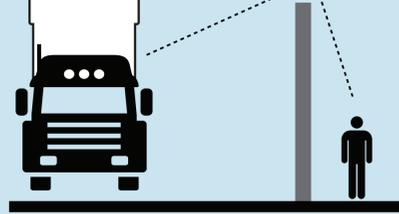
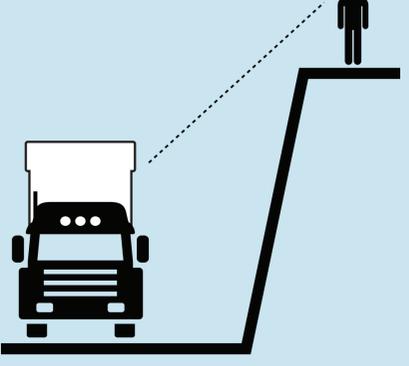
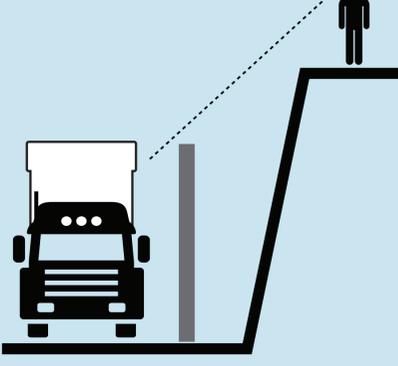
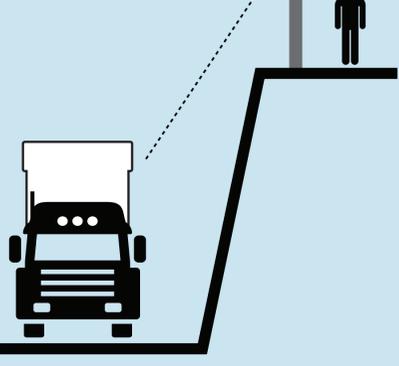
The first step in the noise wall evaluation process is to see whether a location has high enough future noise levels (exceeding 66 dBA) to warrant further consideration for a noise wall. But what is a dBA?

### Typical Sound Levels



Sources: USDOT 1995; EPA 1971, 1974  
Note: dBA = A-weighted decibel

# How do noise walls work?

Barrier Roadway	NONE	NEAR SOURCE	NEAR RECEIVER
<b>ELEVATED</b>	May be some noise reduction by terrain	Barrier is very effective	Barrier has no effect
			
<b>LEVEL</b>	Noise travels directly to the receiver	Barrier is effective	Barrier is effective
			
<b>DEPRESSED</b>	May be some noise reduction by terrain	Barrier has no effect	Barrier is effective
			



# I-405 has one of the worst commutes



## Bad traffic

- Drivers on I-405 experience some of the worst traffic in the state, up to eight hours of congestion each day
- By 2030, employment will grow by 50% and the area will see 25% more residents

## Crowded HOV lanes

- I-405 HOV lanes are not meeting state and federal requirements to operate at 45 miles per hour 90 percent of the time
- I-405 HOV lanes are often just as congested as the regular lanes

## Transit suffers

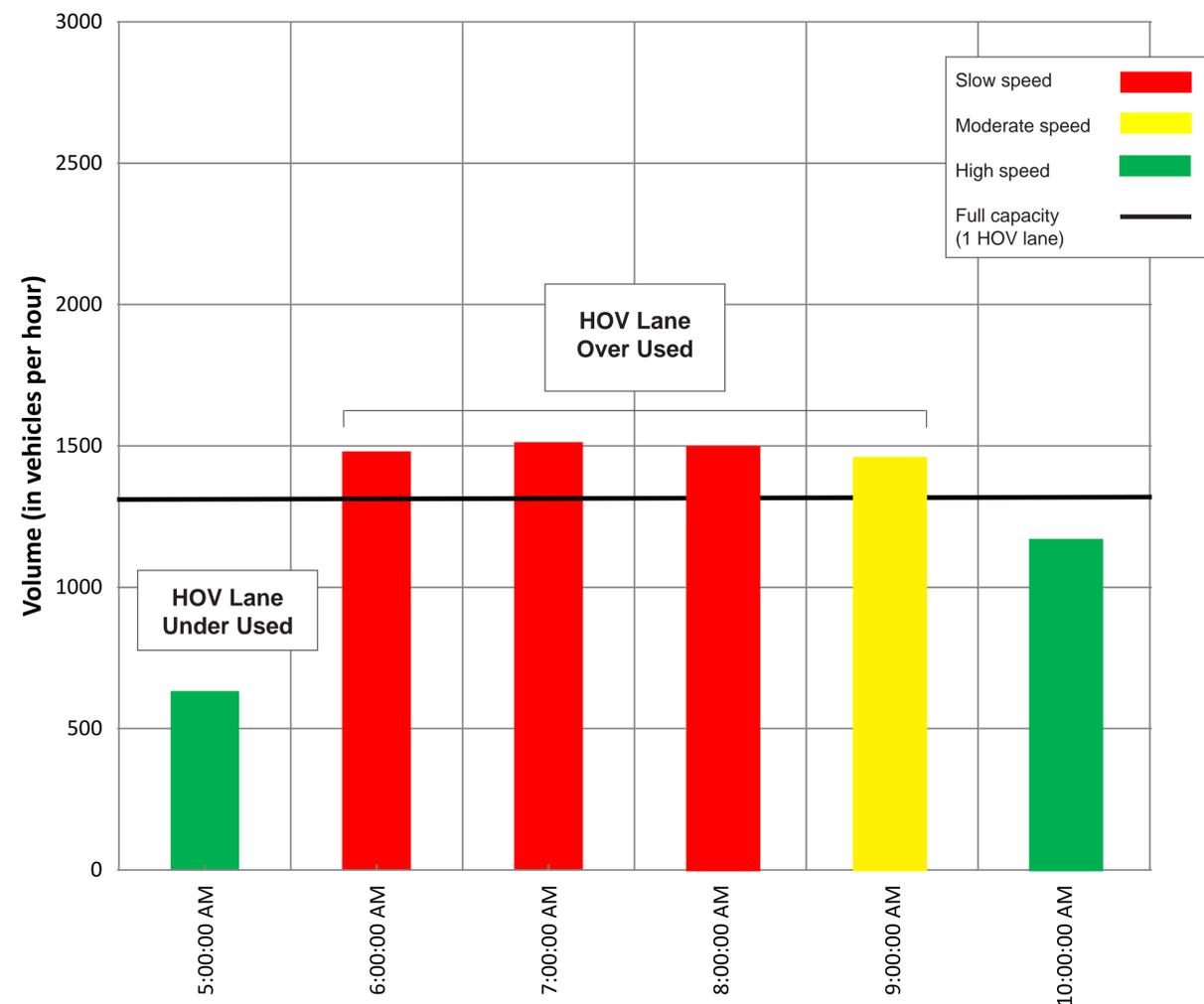
- Congested lanes severely delay transit trips and reduce reliability, requiring more buses and increasing the costs





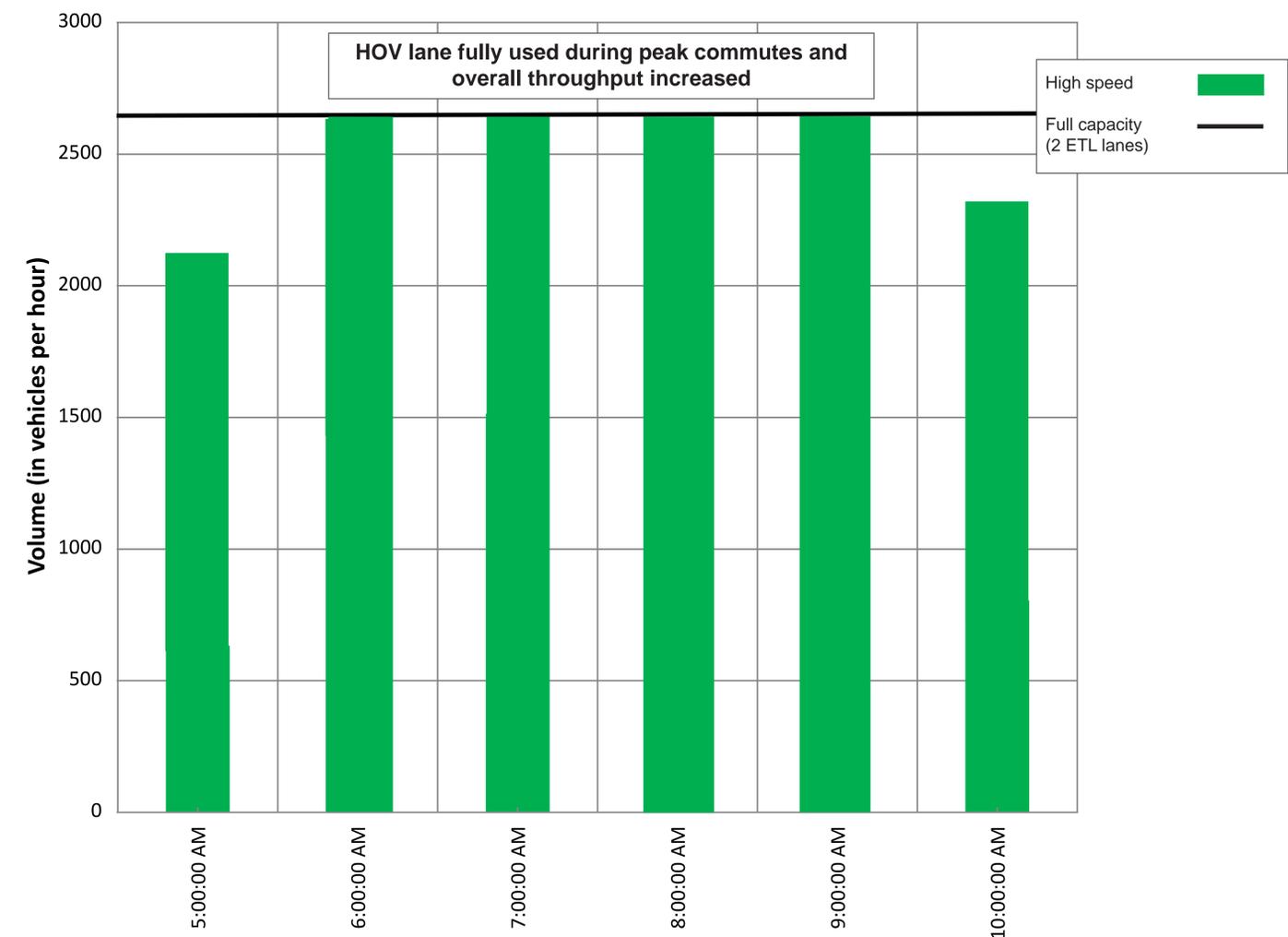
## Express toll lanes maximize lane capacity

### Northbound I-405 HOV lane under today's conditions



The existing HOV is under used during shoulder periods. During peak periods, the HOV lane is over used which causes the lane to slow down.

### Northbound I-405 two-lane HOV after express toll lane conversion



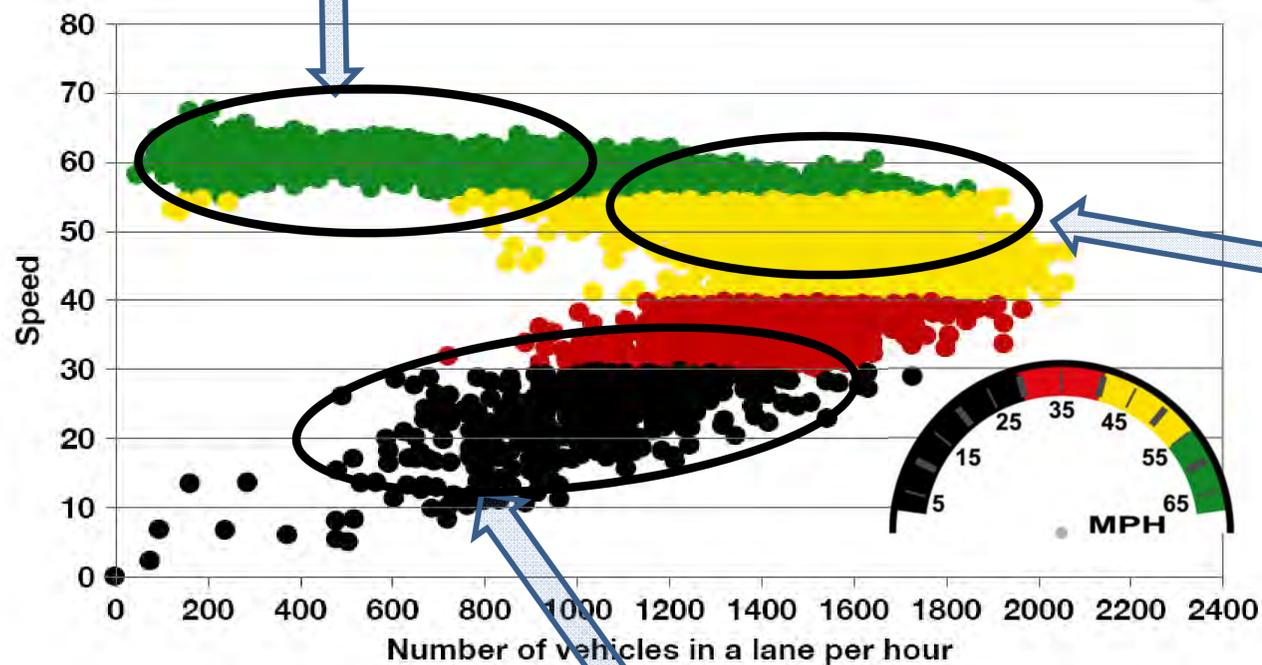
Where an additional ETL/HOV lane is added total capacity and high speed travel grow substantially.



# Express toll lanes keep traffic moving

## Dynamic Pricing Solution *The most effective price to move the most traffic*

If the price is too high, the lane will be empty

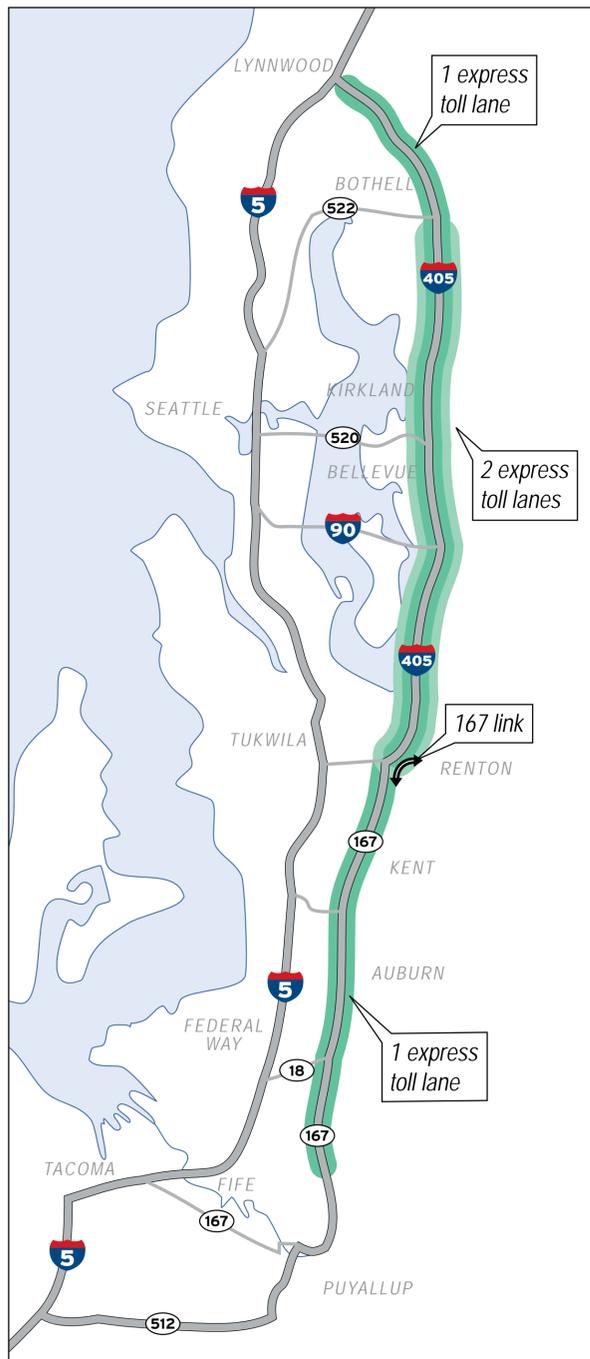


Allow the users to determine the price to keep consistent speeds

If the price is too low, the lane will be congested and slow moving



# Express Toll Lanes from Bellevue to Lynnwood is the next step of the 40-mile system



## Improves traffic performance

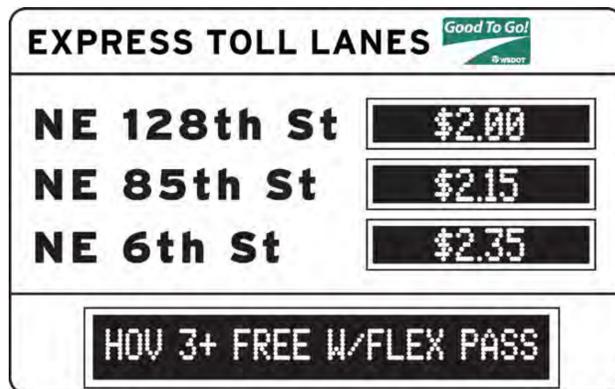
- Provides sustainable reliability
- Moves more people and vehicles throughout the entire freeway
- Improves transit speed and reliability
- Provides a bypass around congestion for the trips users feel are important

## Funds future improvements

- Dynamic toll rates adapt for growth in corridor traffic
- Provides funding for improvements
- Supplements gas tax revenue
- Market-based direct user fee



# How will express toll lanes work?



## Toll rates adjust based on demand

- Keeps lanes moving at 45mph+
- Signs display toll rates based on your destination
- Non-carpool drivers pay rate posted upon entry – even if rate changes during trip

## Transit, vanpools, motorcycles and carpools are free

- Carpoolers must use new Flex Pass in HOV mode to ride free
- Considering 2+ person carpools free during off-peak hours and 3+ person carpools free anytime

## Ways to pay

- Use a *Good To Go!* pass to pay the lowest toll rate
- *Good To Go!* Pay By Plate
- *Good To Go!* short term account
- Pay By Mail at a higher toll rate