

I-405 Express Toll Lanes

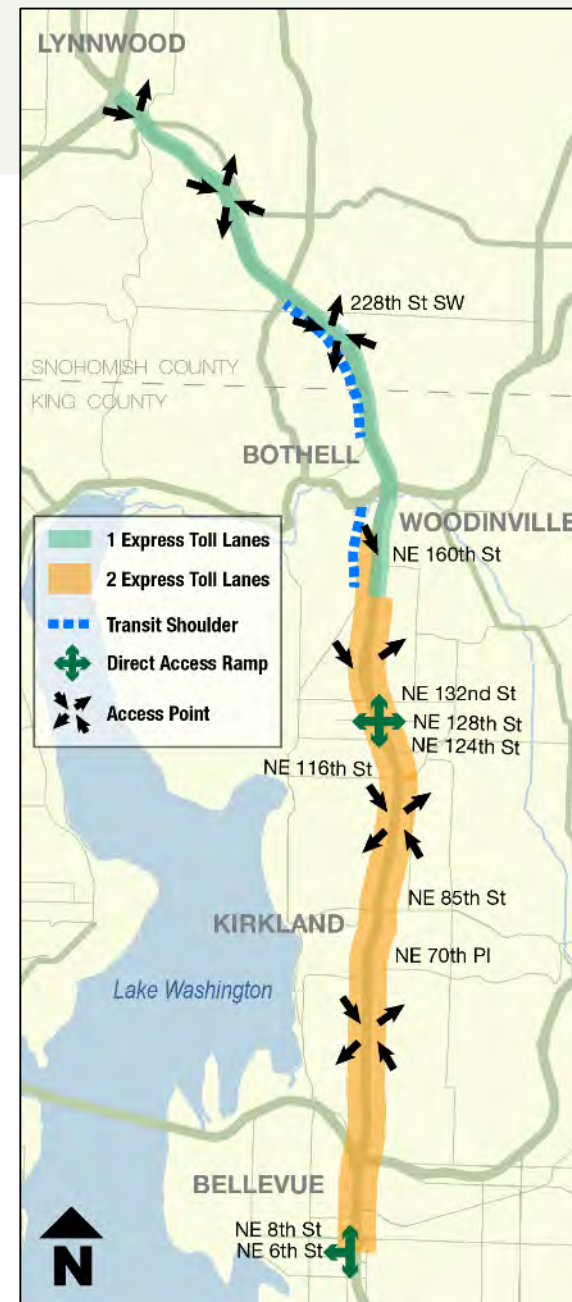
18 Month Update

Patty Rubstello, Assistant Secretary of Tolling
Washington State Transportation Commission
May 17, 2017

I-405 express toll lanes

Quick facts

- Opened Sept. 27, 2015
- **21 million** trips in first 18 months of operations
- 17 miles of express toll lanes
- Operation hours: **5 a.m. to 7 p.m. Mon – Fri**
- Toll Rates
 - Range from \$0.75 to \$10.00
- Carpool Policy
 - 3+ carpools with Flex Pass exempt at all times
 - 2+ carpools exempt between peak periods, 9 a.m. to 3 p.m., on weekdays



Steady trends in express toll lanes usage and travel time saving



53,000 trips each weekday for **36,000** toll paying vehicles and **17,000** toll-exempt carpools.

Drivers save an average **14 minutes** northbound and **11 minutes** southbound during peak periods.

Transit riders continue to experience time savings as high as **4 to 10 minutes** on routes using the express toll lanes.

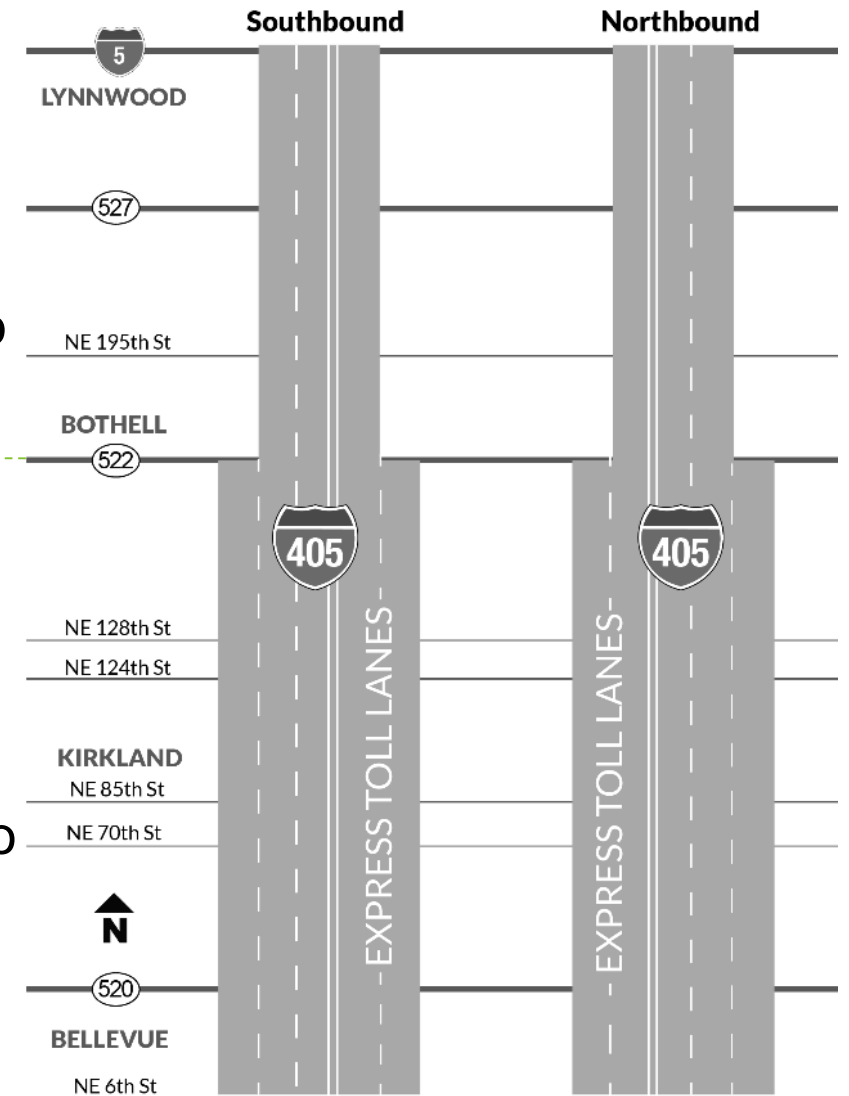
Capacity influenced challenges

Where WSDOT did not add capacity: Single-lane section

- Average peak period speed in express toll lanes: 47 mph
Average general purpose speed: 27 mph
- Average travel time savings in express toll lanes compared to general purpose lanes: 7 minutes

Where WSDOT added capacity: Dual-lane section

- Average peak period speed in express toll lane: 57 mph
- Average peak period speed in general purpose: 37 mph
- Average travel time savings in express toll lanes compared to general purpose lanes: 5 minutes



Express toll lanes carrying high volumes

Peak hour of peak period

dual express toll lanes

carry **43%** of vehicles on highway



2 express toll lanes

3 general purpose lanes

40% ← Percent of total lane capacity → **60%**

single express toll lane

carry **39%** of vehicles on highway



1 express toll lane

2 general purpose lanes

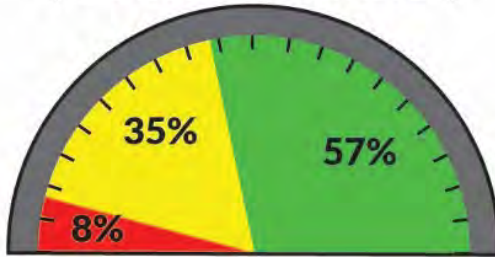
33% ← Percent of total lane capacity → **67%**

Speed differs depending on capacity

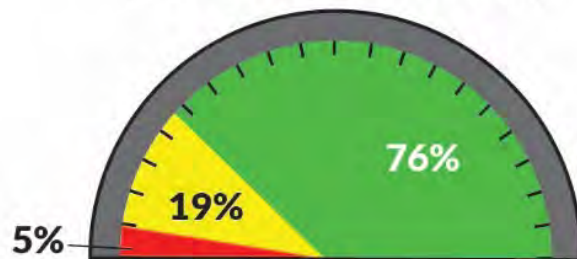
Limited capacity plus heavy demand in the single lane section make it a challenge to meet 45 mph 90% of peak periods

Full Corridor

HOV Pre-Tolling
(Oct. 2014- March 2015)



ETL Tolling
(Oct. 2016 - March 2017)

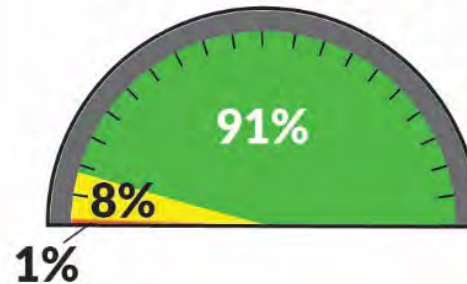


Goal

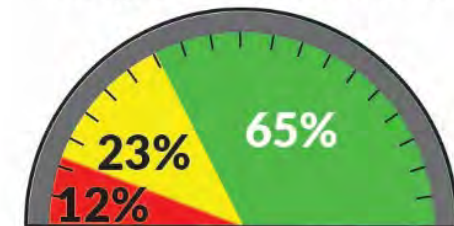
Speeds greater than 45 mph
90 percent of peak periods



Dual-lane section



Single-lane section



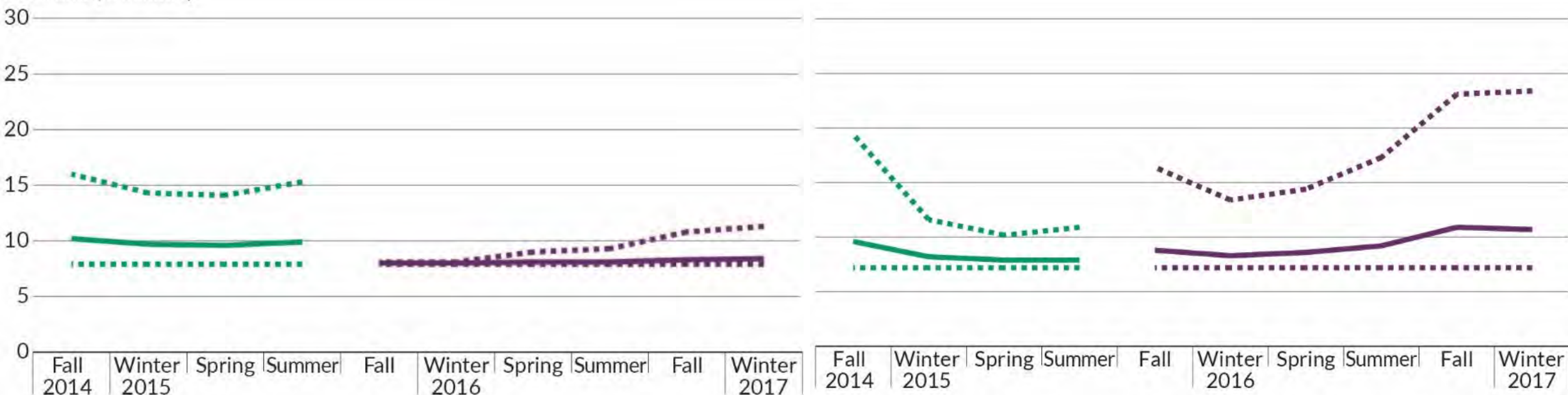
Performance of dual- and single-lane sections vary during morning peak period

During the southbound morning peak period (5 a.m. to 9 a.m.), dual-lane travel time variability has decreased after the express toll lanes were launched while travel time variability has increased in the single-lane section.

Dual-lane

Single-lane

travel time (in minutes)



— Pre-tolling average travel time — Tolling average travel time
⋯ Pre-tolling 5th-95th percentile ⋯ Tolling 5th-95th percentile

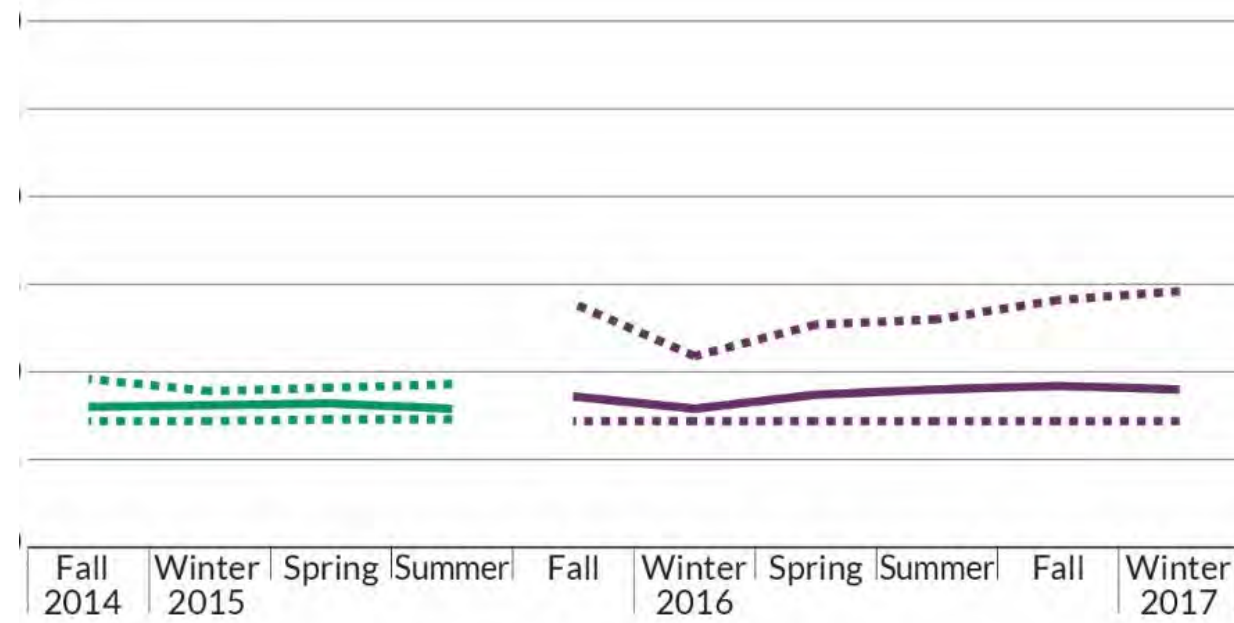
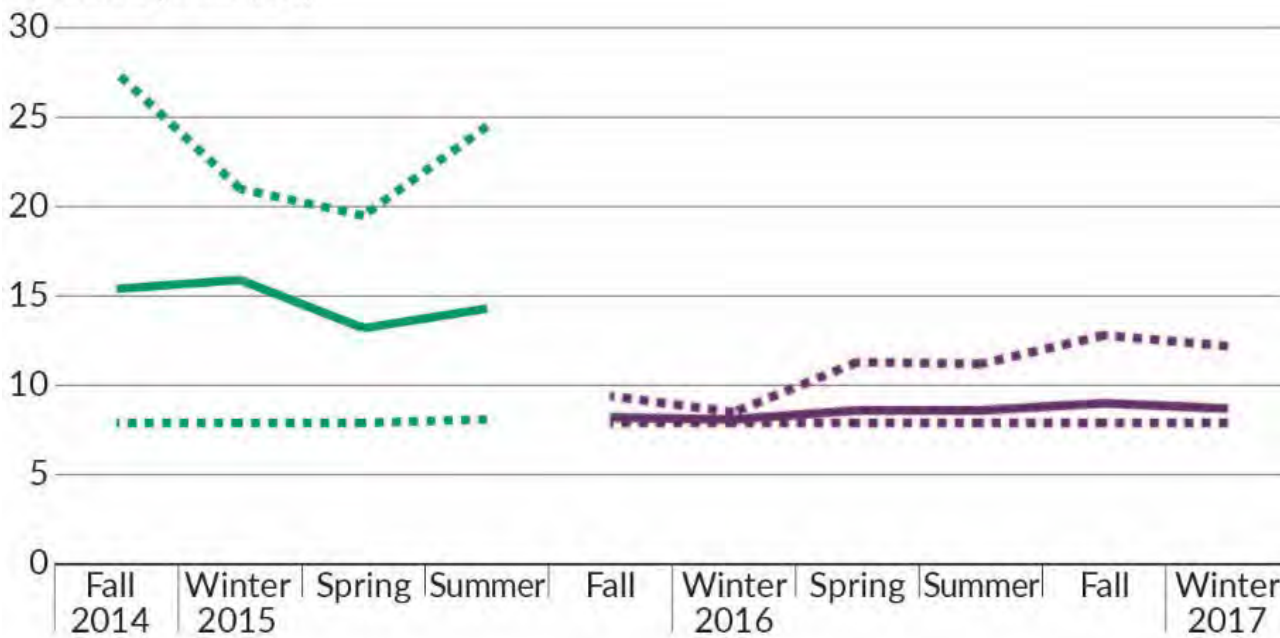
Performance of dual- and single-lane sections vary during afternoon peak period

During the northbound afternoon peak period (3 p.m. to 7 p.m.), dual-lane travel time variability decreased after operations began since tolling but increased in the single-lane.

Dual-lane

Single-lane

travel time (in minutes)

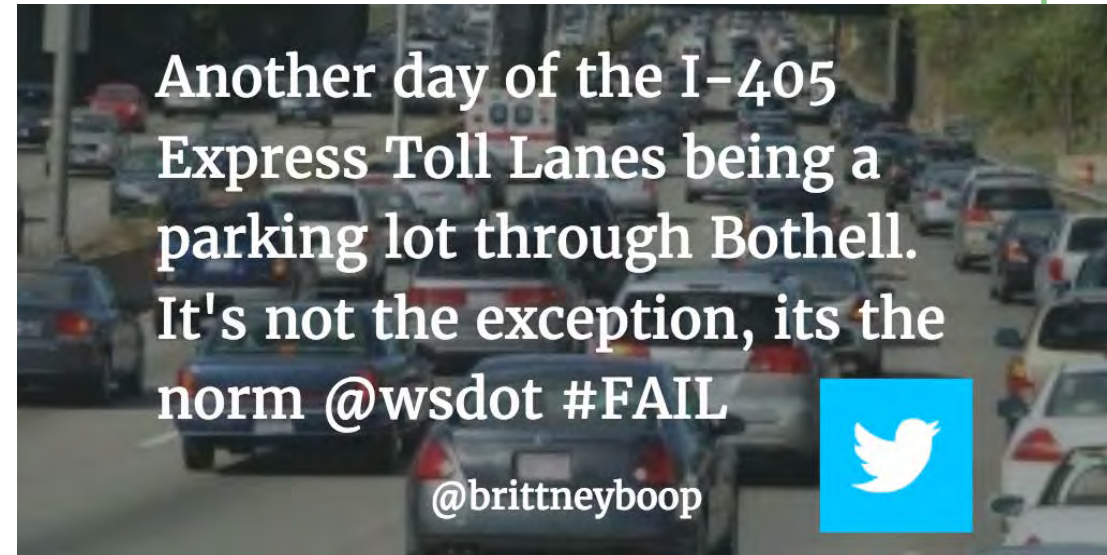


— Pre-tolling average travel time
 Pre-tolling 5th-95th percentile

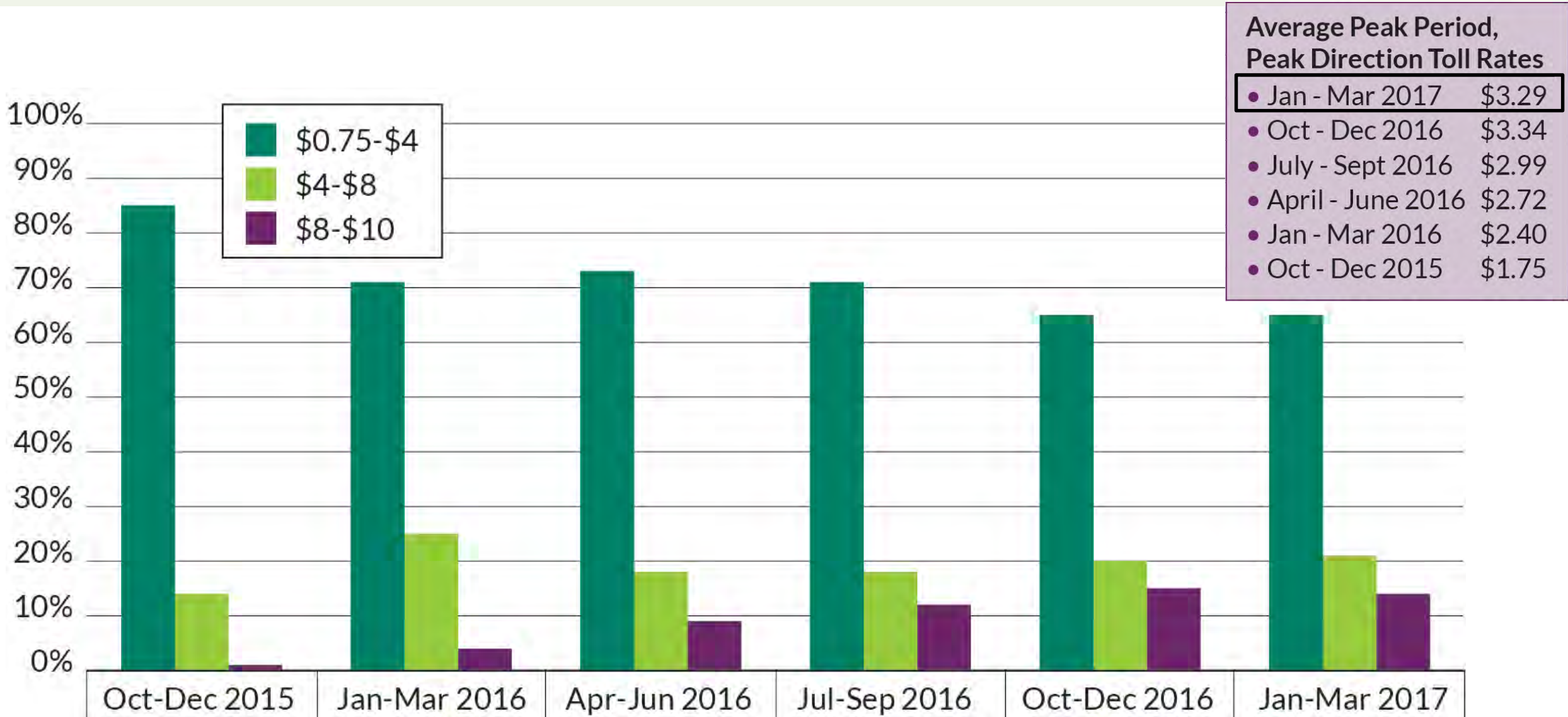
— Tolling average travel time
 Tolling 5th-95th percentile

Legislature funds additional work on potential improvements in the single lane section

The 2017 Transportation Budget includes \$5 million in funding to continue engineering work for the potential first phase of major north end improvements, which would add a new lane and improve interchanges in the section of I-405 between SR 522 and SR 527.

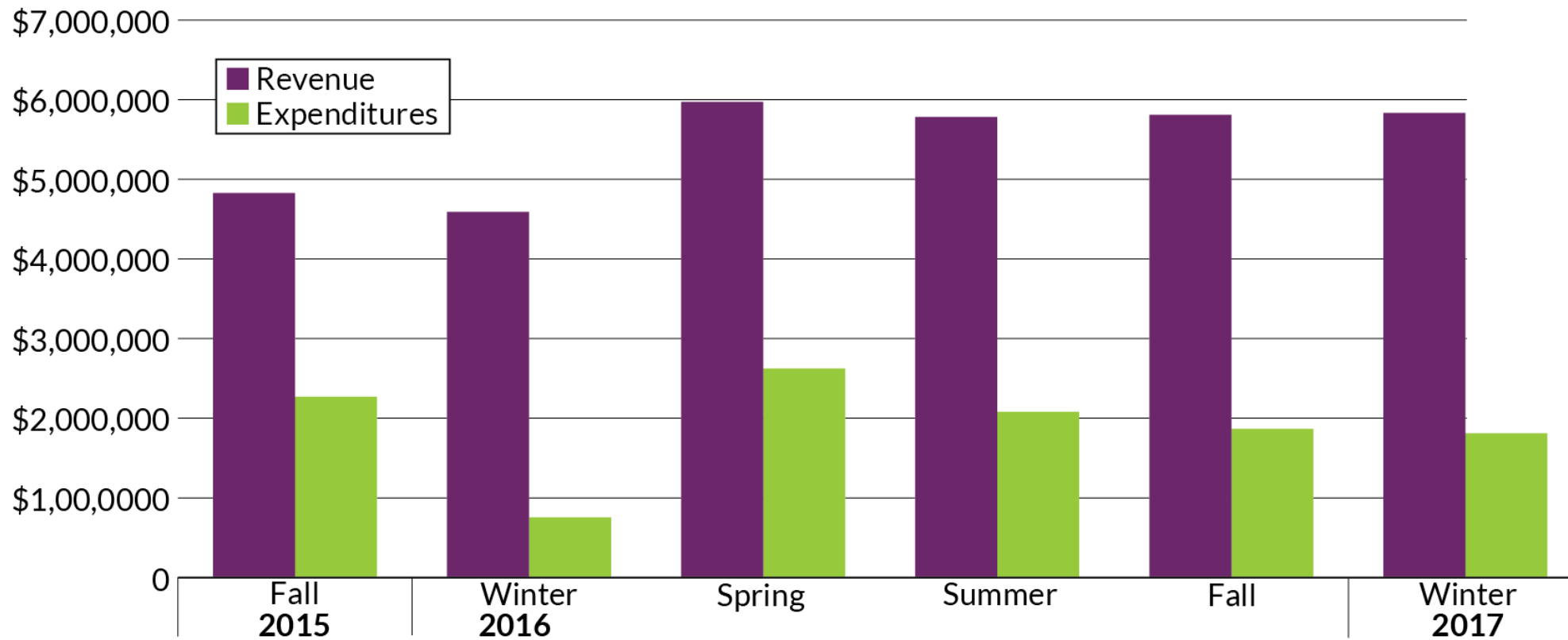


What drivers choose to pay



Revenue continues to exceed operating costs

Nearly two-thirds of revenue can be reinvested back into I-405 corridor



Total gross revenue:
\$33.2 million

Total operational costs:
\$11.7 million

Peak-Use Shoulder Lane Northbound I-405 from SR 527 to I-5

How it works

- Right shoulder opens to general traffic during afternoon peak periods on northbound I-405 between SR 527 and I-5
- Typically open weekdays 2–7 p.m.
- *Project funded with I-405 express toll lane revenue*

After three weeks of operations

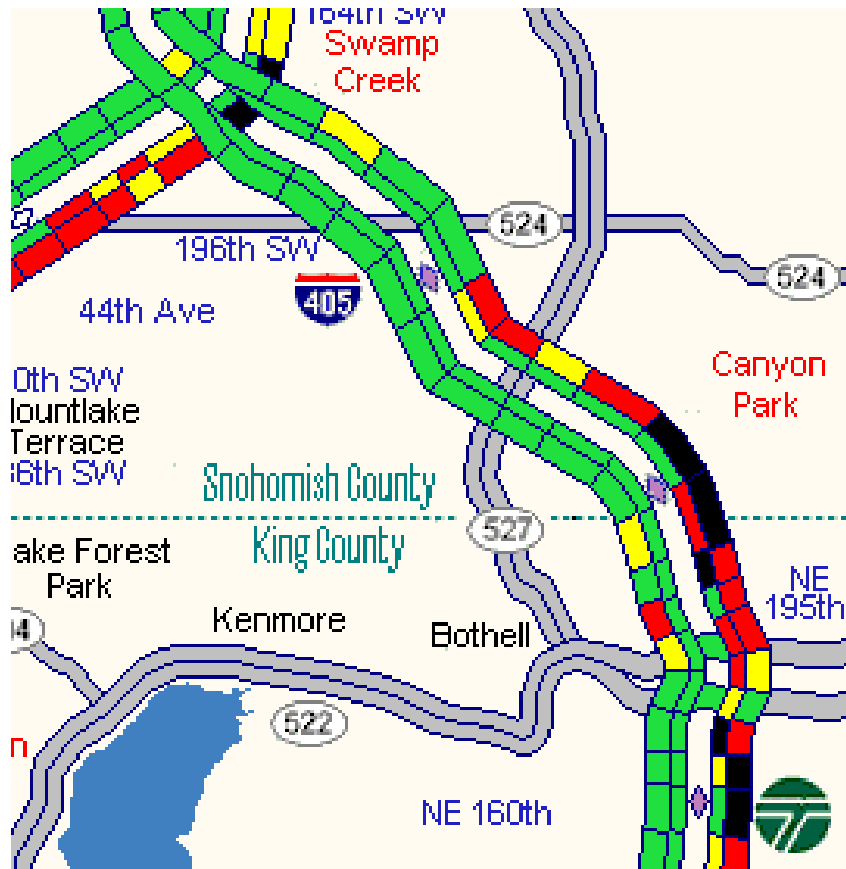
- Lighter congestion between SR 527 and I-5
- Reduced travel times and lower toll rates

Incidents on other roadways such SR 525, I-5 and weather can have an impact on operations. Still monitoring impacts northbound I-5.



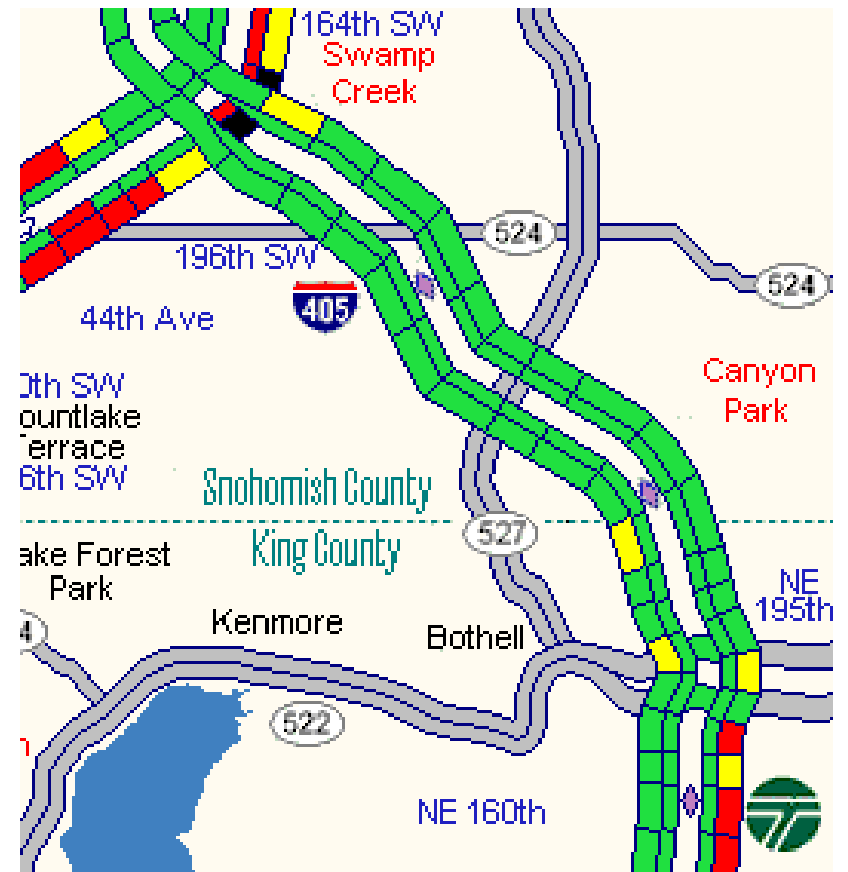
Peak-Use Shoulder Lane Northbound I-405 from SR 527 to I-5

Before



March 9, 2017 5:00 p.m.

After



April 27, 2017 5:00 p.m.

Express toll lane access changes improve access for drivers

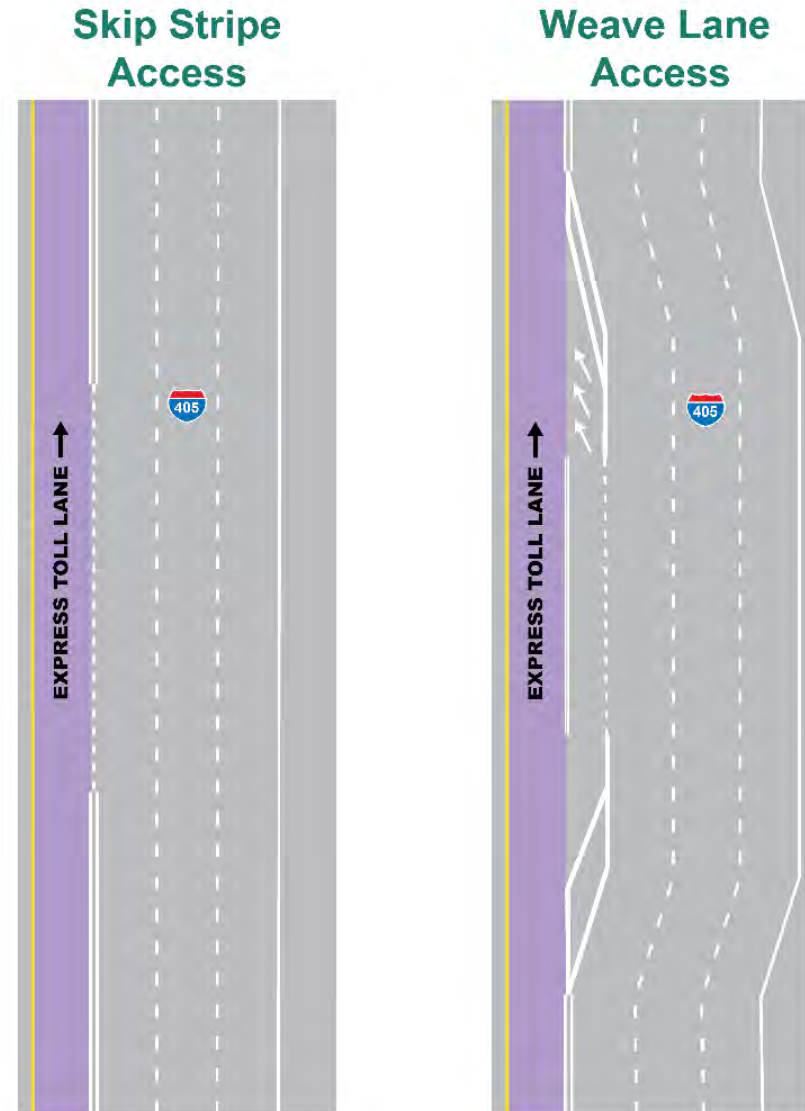
Improving access to northbound express toll lane

NE 195th St to SR 527

- New half-mile access lane will give drivers dedicated space to move in and out of express toll lane
- Access lane will reduce congestion for the 5,000 vehicles that merge there every weekday

NE 85th Street

- Lengthens access point to allow drivers to enter the express toll lane sooner



Express toll lane access change NE 195th St and SR 527



I-405 express toll lanes
Access change in Bothell (May 2017)

Upcoming express toll lane studies

Joint Transportation Committee

Provides \$160,000 in funding for a I-405 tolling traffic study, conducted by the University of Minnesota and overseen by the JTC:

- Assess traffic performance measures in the corridor
- Recommend strategies for improving traffic performance

WSDOT

- Survey of express toll lane customers
- Research to understand drivers attitudes and perceptions about express toll lanes

CONTACT

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