

I-405 Express Toll Lanes

Performance Update

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Joint Transportation Committee

December 15, 2016

Roger Millar, Secretary of Transportation

Keith Metcalf, Deputy Secretary of Transportation

Agenda

- Review express toll lane goals
- Provide data and observations from first year of operations
- Discuss upcoming projects and future improvements



I-405 express toll lanes

Quick facts

- Opened Sept. 27, 2015
- 17 miles of express toll lanes
- Operation hours: **5 a.m. to 7 p.m. Mon – Fri**
- Toll Rates
 - Minimum Toll Rate \$ 0.75
 - Maximum Toll Rate \$ 10.00
- Carpool Policy
 - 3+ carpools with Flex Pass exempt at all times
 - 2+ carpools exempt except 5-9 a.m. and 3-7 p.m. on weekdays



Goal #1: Offer drivers a choice

What we anticipated

- **Ramp-up:** Total trips projected at 12.1 million in the first year.
 - National experience shows it takes up to a year for drivers to adjust.
- **Choice:** Drivers may not use the express toll lanes everyday, but they offer drivers a choice when they need it most.
- **Toll rates:** Typical rates would range between 75 cents and \$4.

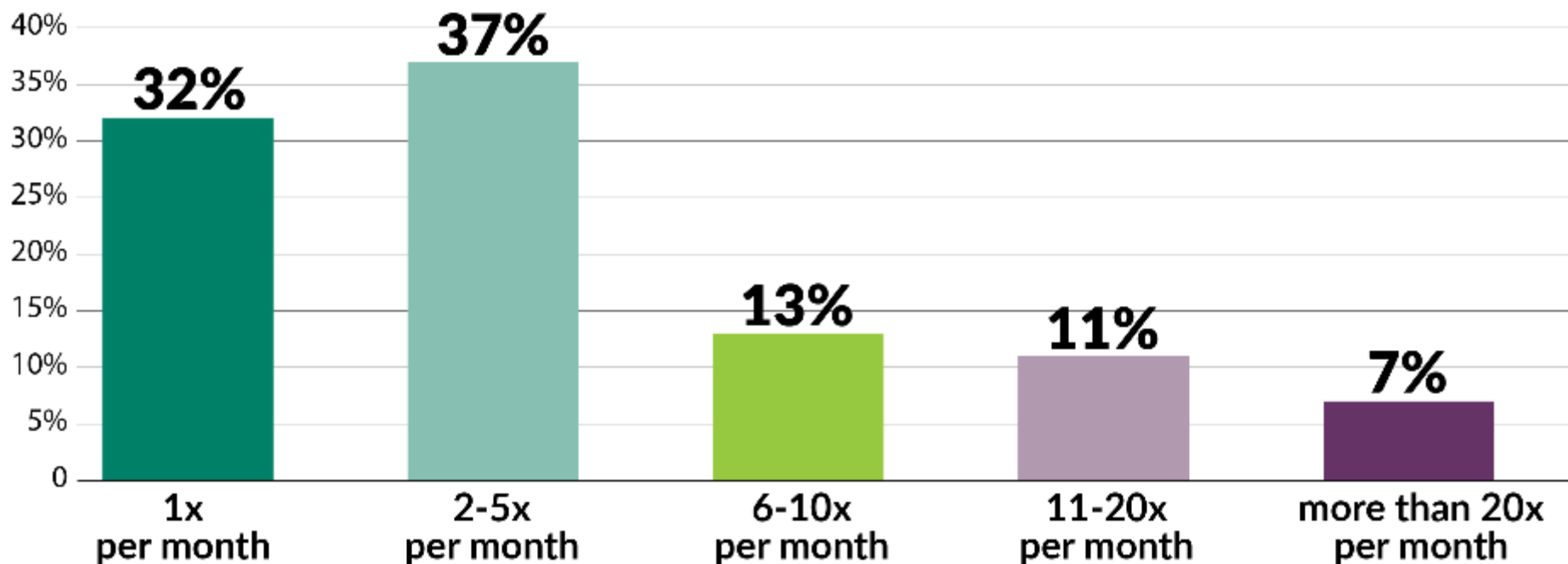
What we're seeing

- **Ramp-up:** Drivers made a total of 14.5 million trips in the first year.
 - Drivers adjusted much faster than anticipated.
- **Choice:**
 - 70 percent of express toll lane commuters use the lanes between 1 and 5 times a month.
 - Drivers value this choice. Even after one year, 50,000 new vehicles used the express toll lanes for the first time September 2016.
- **Toll rates:** Average peak period, peak direction toll rate is \$2.50.

What we're seeing:

Drivers use the lanes when they need them

Average monthly express toll lane travel frequency for
Good To Go! pass users
(Oct. 2015 – Sept. 2016)

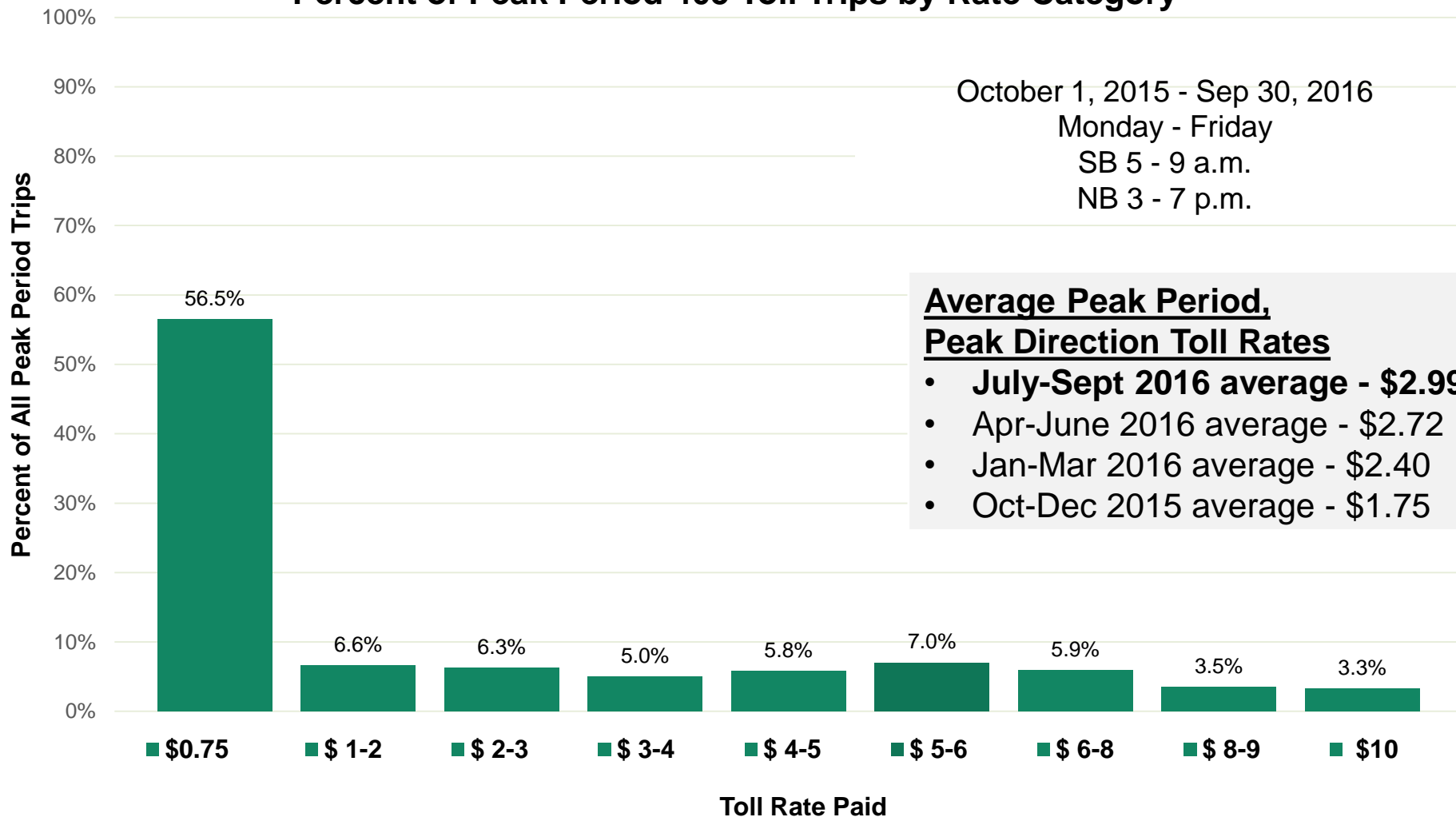


Source: Unique *Good To Go!* passes on I-405
Weekdays from 5 a.m. to 7 p.m.

What we're seeing:

What drivers are choosing to pay

Percent of Peak Period 405 Toll Trips by Rate Category



Goal #2: Provide a faster and more predictable trip

What we anticipated

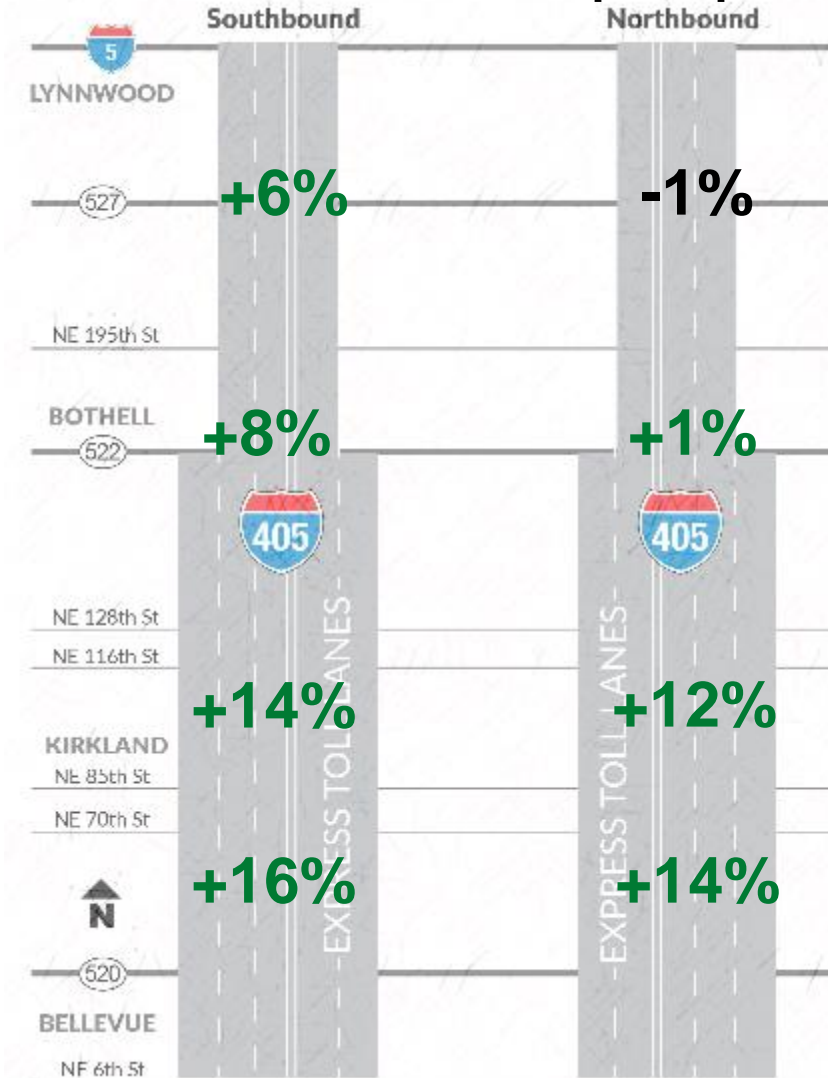
- **Faster Trip:** Express toll lanes will provide a faster trip.
- **Move More Vehicles and People:** By moving traffic more efficiently, we'll also move people.
- **More Predictable:** The previous HOV lane moved traffic at 45 mph on average 60 percent of the time.

What we're seeing

- **Faster Trip:**
 - For a full corridor trip during the peak period, the express toll lanes are saving drivers time over the general purpose lanes
 - Average ETL saves 13 minutes
 - Speeds in the general purpose lanes have improved in most areas.
- **Move More Vehicles and People:**
 - At NE 100th St, I-405 is moving 16 percent more people in the peak direction during the peak period based on sample data from August 2016.
- **More Predictable:** Express toll lanes keep traffic moving at 45 mph on average 85 percent of the time.

What we're seeing: I-405 is moving more vehicles at peak periods

Combined volume increase for all lanes for peak period, peak direction trips



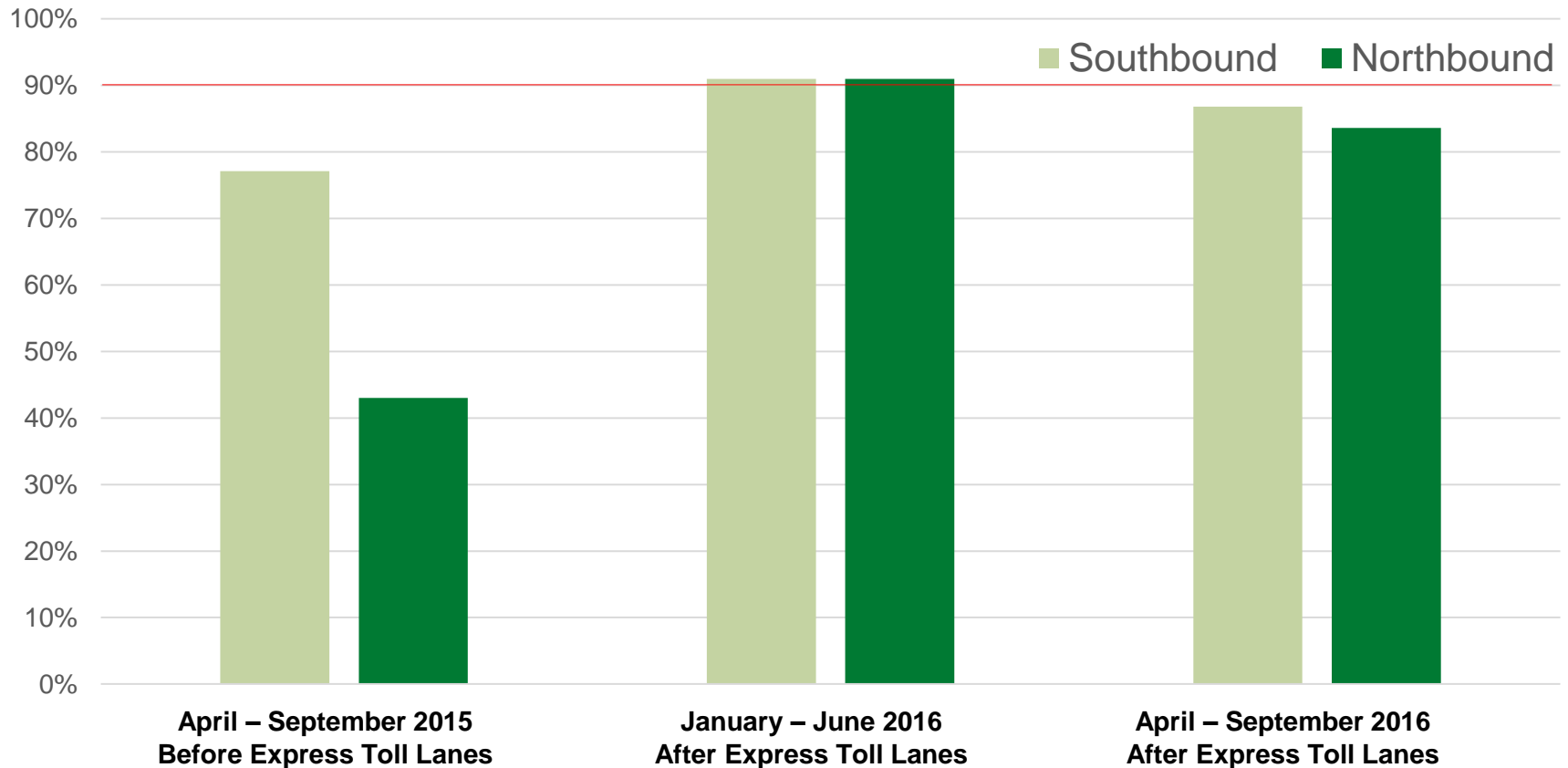
WSDOT added 7.5 lane miles of new capacity southbound for a **12% increase** in all lane miles.

WSDOT added 3.5 lane miles of new capacity northbound for a **5% increase** in all lane miles.

What we're seeing: Speeds and predictability have improved with express toll lanes

I-405 Performance – Full Corridor

Percentage of Peak Periods and Peak Direction When Speeds are Greater Than 45 Miles Per Hour



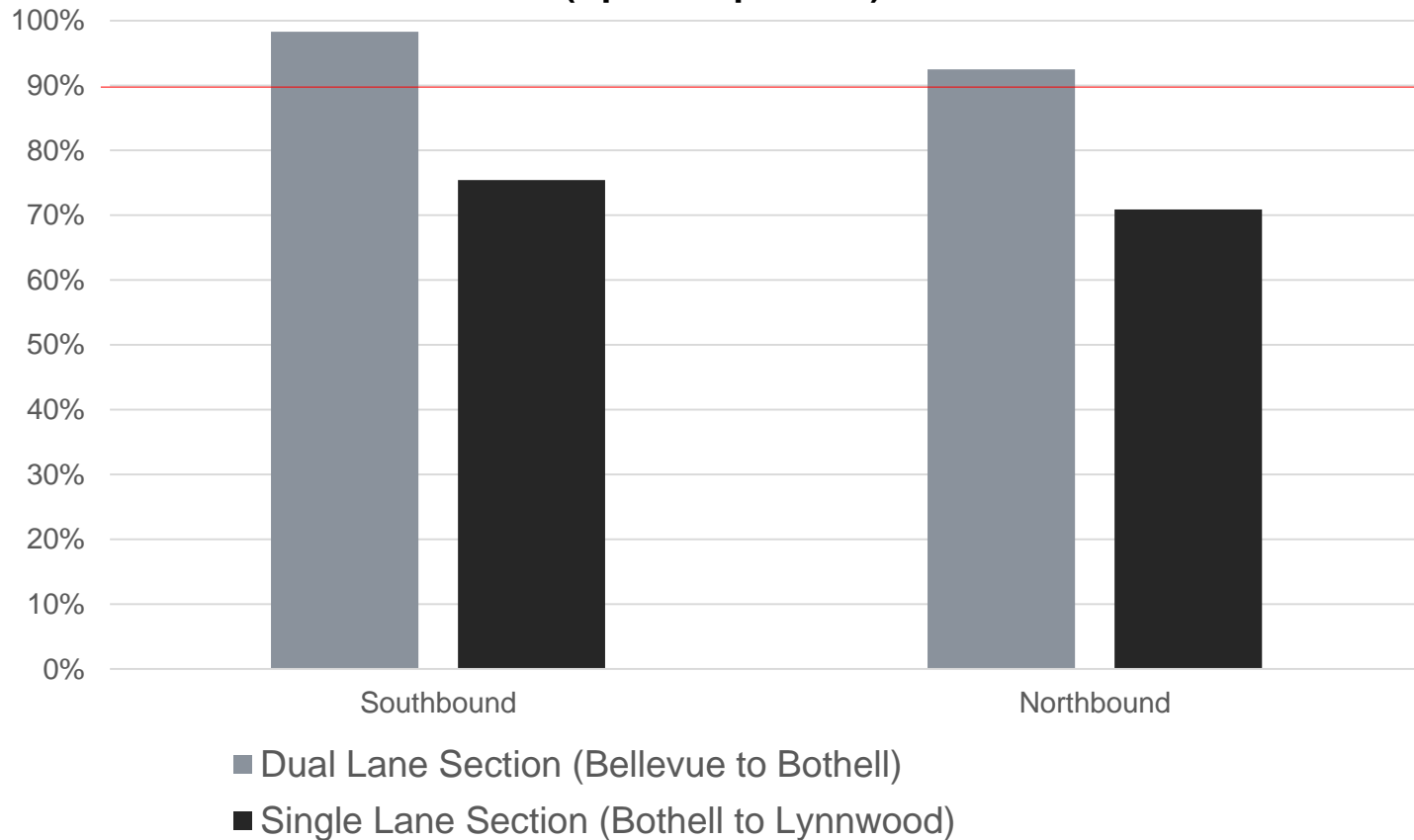
What we're seeing:

Many factors impact the 45 mph metric

I-405 Performance

Single-Lane Section / Dual-Lane Section

Percentage of Peak Periods and Peak Direction When Speeds are Greater Than 45 Miles Per Hour
(Apr. – Sept. 2016)



Goal #3: Fund future corridor improvements

What we anticipated

- **Fund future projects:** Generate enough revenue to cover operating expenses and fund other future I-405 improvements. The Connecting Washington transportation package identified \$215 million in toll revenue for funding I-405 Widening and Express Toll Lanes between Bellevue and Renton.

What we're seeing

- **Fund future projects:** Higher utilization during first year of operation provided sufficient revenue to fund the Peak Use Shoulder Lane project. Toll revenue from entire corridor anticipated to support Connecting Washington funding for I-405 Widening and Express Toll Lanes between Bellevue and Renton.

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

Scope

- Convert right shoulder to general purpose peak-use shoulder lane on northbound I-405 between SR 527 and I-5
- Build new noise wall for area residents
- Complete improvements to express toll lane signage and access

What is a peak-use shoulder lane?

- Traffic management strategy that uses a shoulder as a general purpose lane to provide additional capacity when needed (peak periods)
- Shoulder is preserved when traffic volumes are lower
- Dynamically controlled using overhead electronic signs



Timeline

- **November 2016:** Design-build contractor selected
 - Graham Contracting Ltd.
 - *Funded with I-405 express toll lane revenue*
- **Winter 2017:** Construction start
- **Spring 2017:** Open to traffic

I-405 Master Plan

Regional Consensus

- EIS Record of Decision, 2002

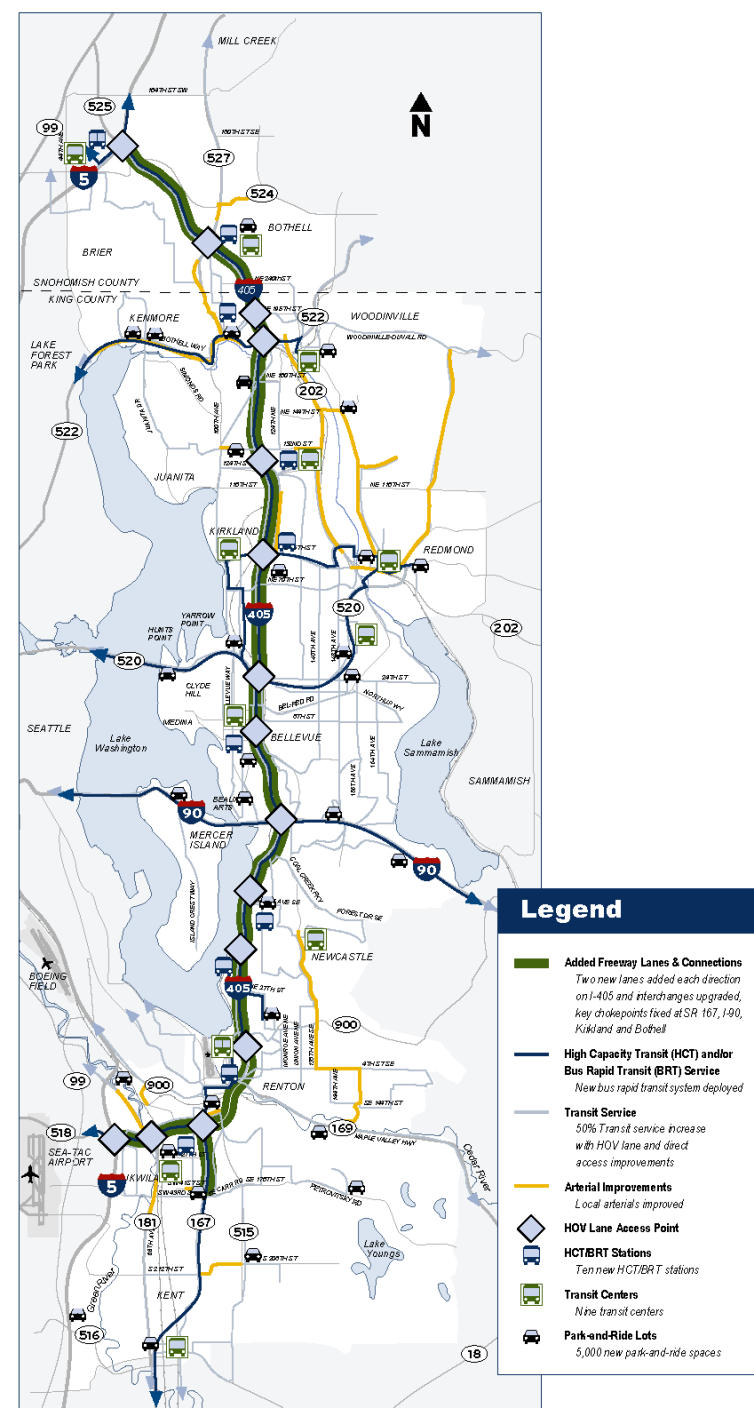
Roadways

- 2 new lanes in each direction
- Local arterial improvements

Transit & Transportation Choices

- Bus Rapid Transit system
- New transit centers
- 50% transit service increase
- HOV direct access ramps and flyer stops
- Potential managed lanes system
- 5000 new Park & Ride spaces
- 1700 new vanpools

Environmental Enhancements



I-405 Master Plan: Multimodal and making progress

Park and Ride expansions
80% complete or funded



Transit center expansions
70% complete



Bus Rapid Transit stations
70% complete



Local arterial improvements
50% complete



Add 2 lanes in each direction
45% complete or funded



Transit service increase
40% complete



Direct Access
12% complete



Vanpool service increase
30% complete



Pedestrian/bicycle improvements
25% complete



Legislative Direction

The **2016 Supplemental Transportation Budget** directed WSDOT to study the north end of I-405, specifically:

“the identification and prioritization of projects that will help reduce congestion and provide added capacity on the Interstate 405 tolling corridor between state route number 522 and Interstate 5.”



I-405 Master Plan Elements Under Evaluation



Master Plan elements currently being considered for next steps include:

Direct Access Ramps at:

- SR 527
- NE 195th Street
- SR 522
- NE 160th Street

Direct Connector Ramps (HOV to ETL) at:

- I-5/I-405 interchange

Lanes

- Two express toll lanes in each direction

Transit

- I-405 Bus Rapid Transit (inside operations)

I-405 North End Projects Charrette

Two-day workshop

Nov. 16 and 29, 2016

Interagency participation:

- Cities of Bothell and Woodinville
- Community Transit
- Federal Highway Administration
- King County Metro
- Snohomish County
- Sound Transit
- WSDOT



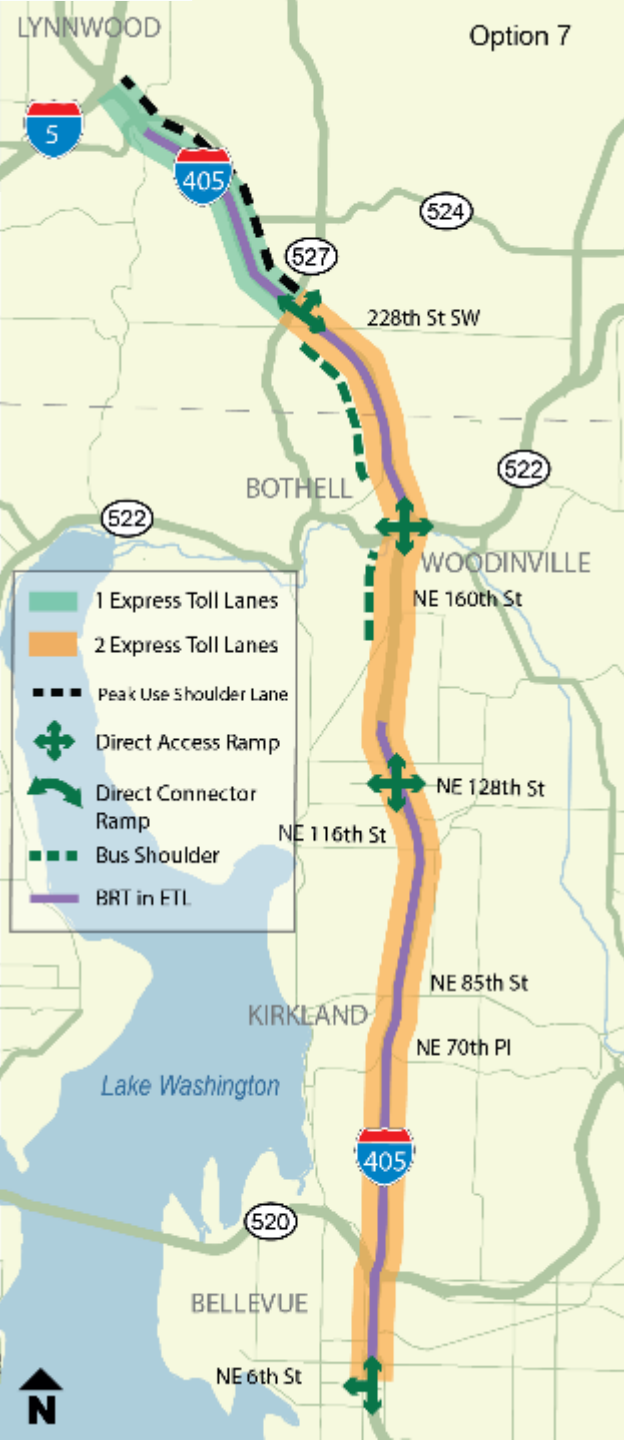
Objectives:

- Review WSDOT I-405 north end phasing concepts, brainstorm alternative solutions
- Gather input on challenges and considerations for improvements
- Develop recommendation for next priority improvements from Master Plan

Summary of Challenges Identified

- Express toll lanes not meeting performance standard in single-lane section (45 mph, 90 percent of the time during peak periods)
- General purpose lane congestion
- Equity and distribution of high toll rates
- Infrastructure needed to support Bus Rapid Transit operations
- Current land use policies and congestion management





Potential Phase 1 (~\$450M)*

Base + Enhanced SR 527 DA

Lanes

- One new express toll lane in each direction from SR 522 to SR 527

Ramps

- SR 522 direct access ramps
- SR 527 inline station direct access ramp (to east, north and south)

BRT

- In ETL from I-5 to south of SR 527

Benefits

- **Reduces southbound congestion from SR 527 to SR 522**
- Provides limited northbound congestion relief SR 522 to SR 527
- 2 minute travel time savings for transit at SR 527 direct access
- Improved BRT travel times
- Reduces frequency of high tolls

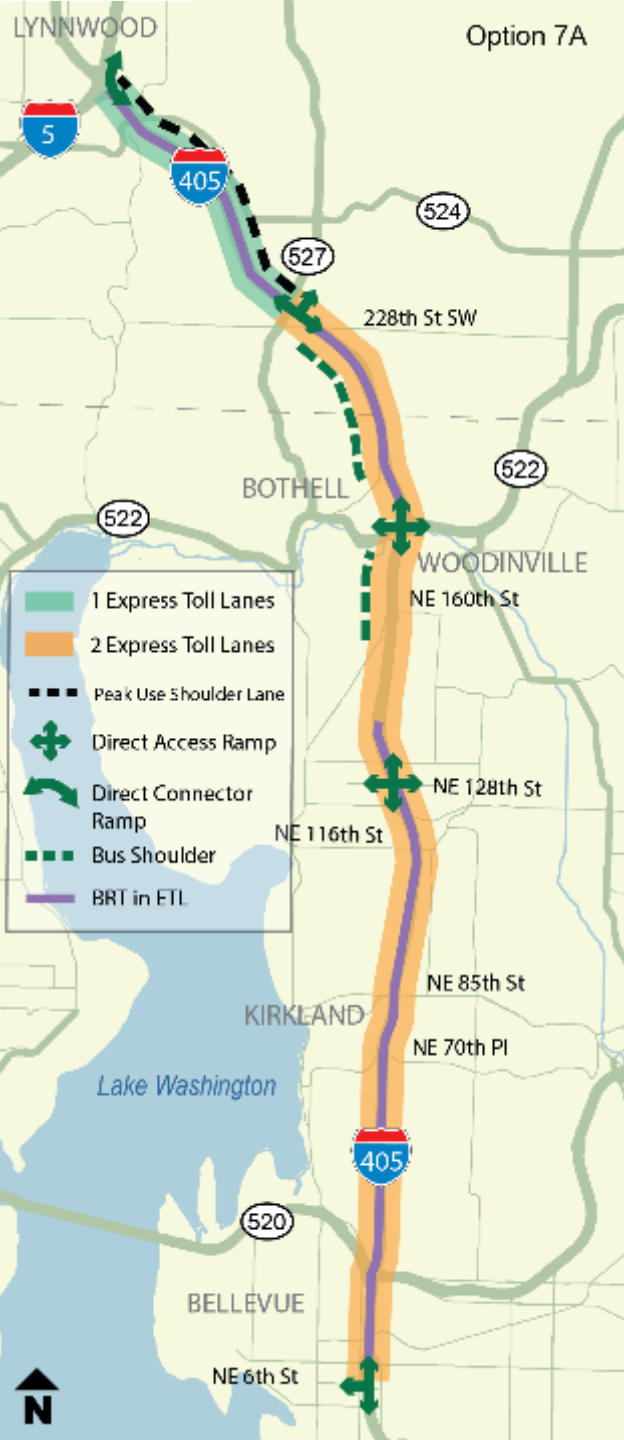
Action Items

- Evaluate potential for new general purpose capacity
- Continue discussions on I-405/SR 522 BRT connectivity at NE 195th Street
- Evaluate adding I-5 Direct Connector from NB I-405 to NB I-5

Estimated schedule

- 7 year project

*Order of magnitude cost for comparison purposes



Potential Phase 2 (+\$150M)*

Adds I-5 Direct Connector (North)

Ramps

- I-5 Direct Connector (to and from north only)

BRT

- Reduces northbound congestion impacts on BRT

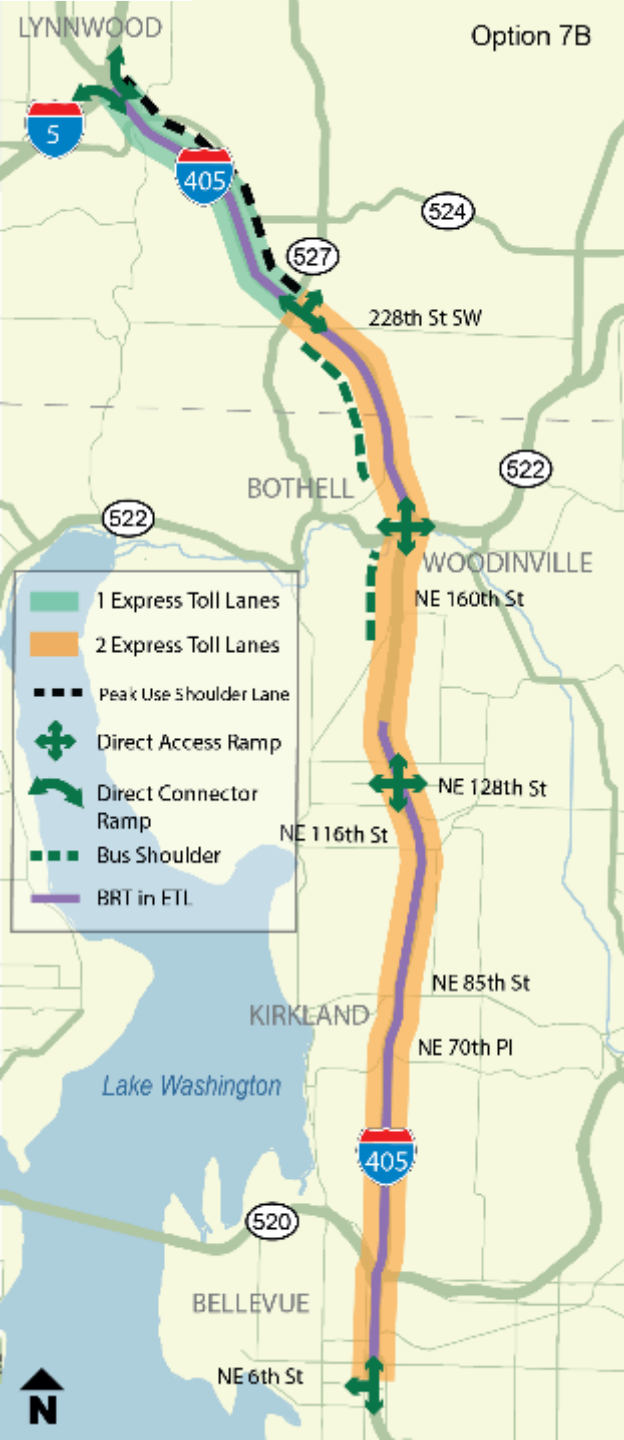
Benefits

- **Reduces northbound general purpose congestion**
- **Improves express bus service from Everett**
- Improves northbound express toll lane performance
- Improves transit speed and reliability to and from north
- Reduces frequency of high tolls

Action items

- Evaluate effects of building Phase 2 before Phase 1
- Evaluate combining Phases 1 and 2

*Order of magnitude cost for comparison purposes



Potential Phase 3 (+\$100M)*

Adds I-5 Direct Connector (south)

Ramps

- I-5 Direct Connector (to and from south only)

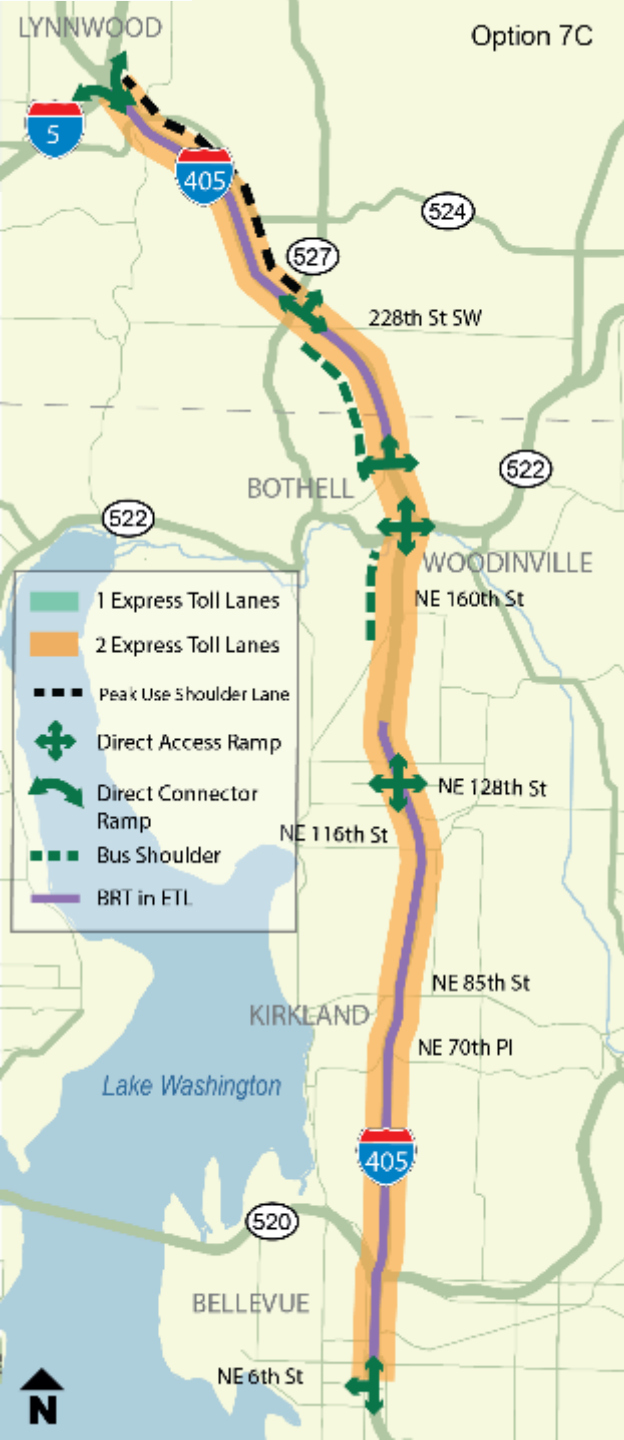
BRT

- Allows use of I-5 HOV lane, direct access ramp at Lynnwood Transit Center and I-405/I-5 direct connector ramps instead of city streets

Benefits

- Improves transit speed and reliability to and from south
- **8-10 minute travel time savings for ST3 BRT plan**

*Order of magnitude cost for comparison purposes



Potential Phase 4 (+\$125-250M)*

Dual ETLs to I-5, adds 195th St direct access

Lanes

- Complete dual express toll lane system between SR 527 and I-5

Ramps

- NE 195th Street partial direct access ramp or inline station (based on earlier evaluation)

BRT

- In ETL from Lynnwood Transit Center to NE 195th Street

Benefits

- Reduces general purpose congestion between SR 527 and I-5
- Improves express toll lane performance between SR 527 and I-5
- Further reduces frequency of high tolls
- Further improves speed and reliability of BRT and transit

I-405 North End: Next Steps

Potential initial \$5 million investment to continue to preliminary engineering (from Bellevue to Lynnwood project risk reserve savings):

- Planning-level traffic and revenue study
- Design refinements to better define costs
- Initial environmental investigation to identify risks and estimate costs

Next Funded Construction Projects

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

- Construction start in late 2016
- Open to traffic by spring 2017

Renton to Bellevue Widening and Express Toll Lanes

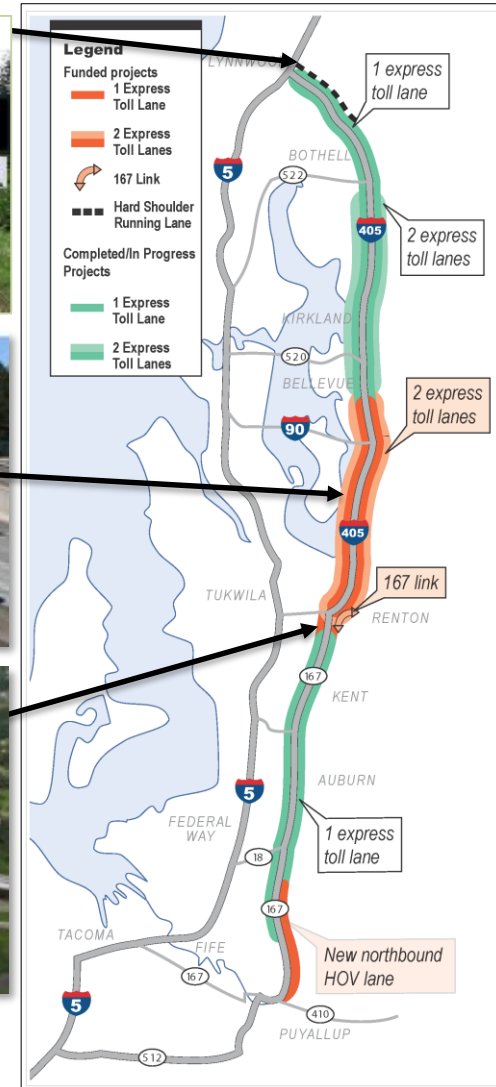
- Construction start in 2019
- Open in 2024

I-405/SR 167 Direct Connector

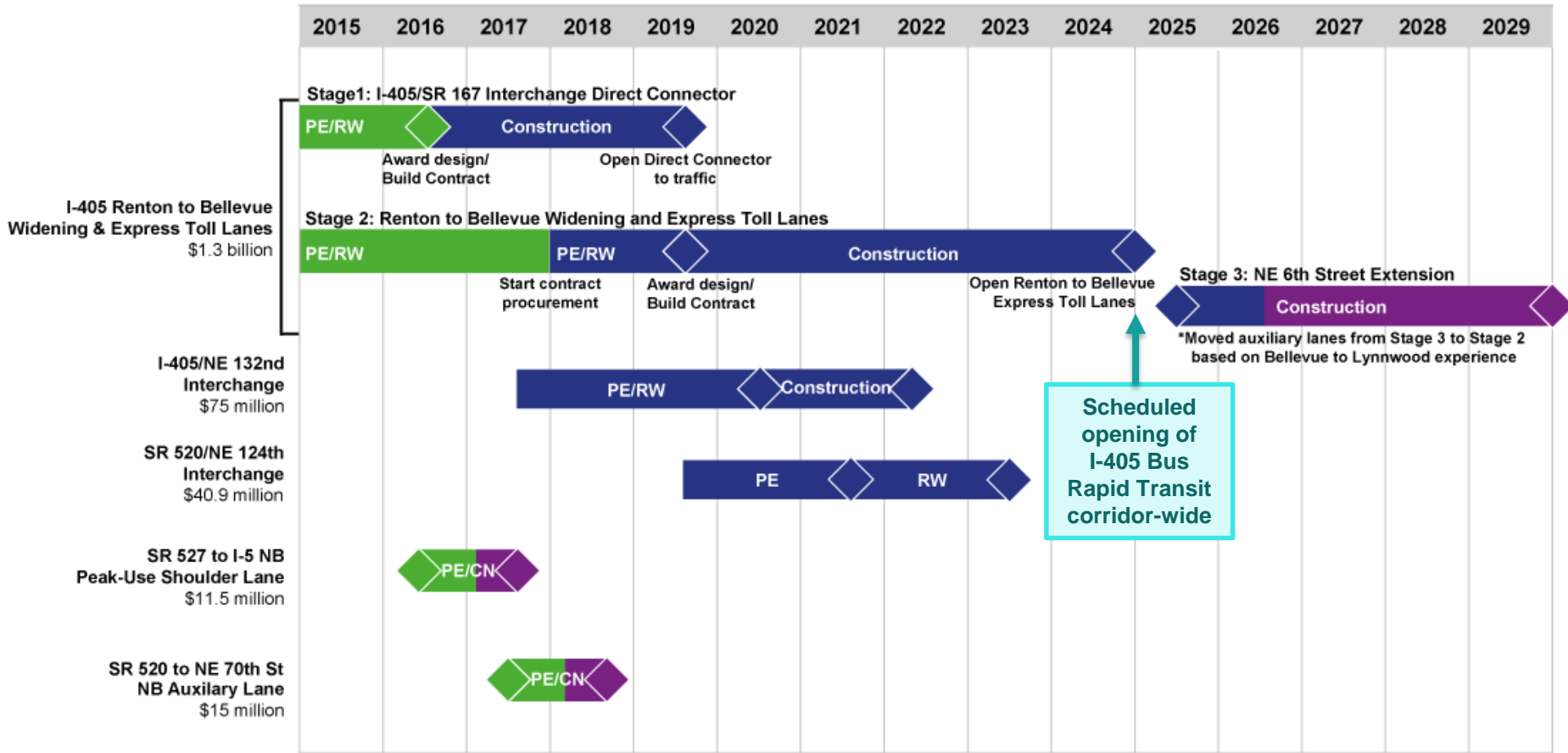
- Contract awarded in 2016
- Open in 2019

I-405 Bus Rapid Transit (Sound Transit 3)

- Coordinate with Sound Transit on implementation of ST3 in the I-405 corridor



I-405 Delivery Schedule: Current Funding



- Program savings (Nickel/TPA)
- Connecting Washington funding
- Funded by toll revenue (anticipated by Connecting WA)

CONTACT

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