

# **Washington State Transportation Commission**

## **I-405 express toll lanes**

Patty Rubstello, Assistant Secretary of Tolling

May 17, 2016

# Agenda

- I-405 Six Month Update
  - Key Takeaways
  - Performance update
  - Impact to local streets
  - Toll rates
  - *Good To Go!* customer survey results
  - Peak period sample commutes
  - Operational adjustments

# Key takeaways – Early successes

First six months  
(Sept. 27, 2015 - March 31, 2016)

## EXPRESS TOLL LANES

**7.5 MILLION**  
TOTAL TRIPS



**5.1 MILLION**  
TOLLED TRIPS


**2.4 MILLION**  
FREE HOV TRIPS

**782,000**  
DIFFERENT VEHICLES  
HAVE USED THE EXPRESS TOLL LANES

EQUIVALENT TO  
**1 IN 10 VEHICLES**  
IN  
WASHINGTON STATE




**10 MINUTES** southbound | **13 MINUTES** northbound  
TRAVEL TIME SAVINGS  
in EXPRESS TOLL LANE  
compared to the GP lanes during the same time frame Jan-March 2016



**48,000**  
DAILY TRIPS  
have a faster and  
more reliable trip

  
**TOLL PAYERS**  
34,000 vehicles  
per day

  
**CARPOOL**  
14,000 vehicles  
per day

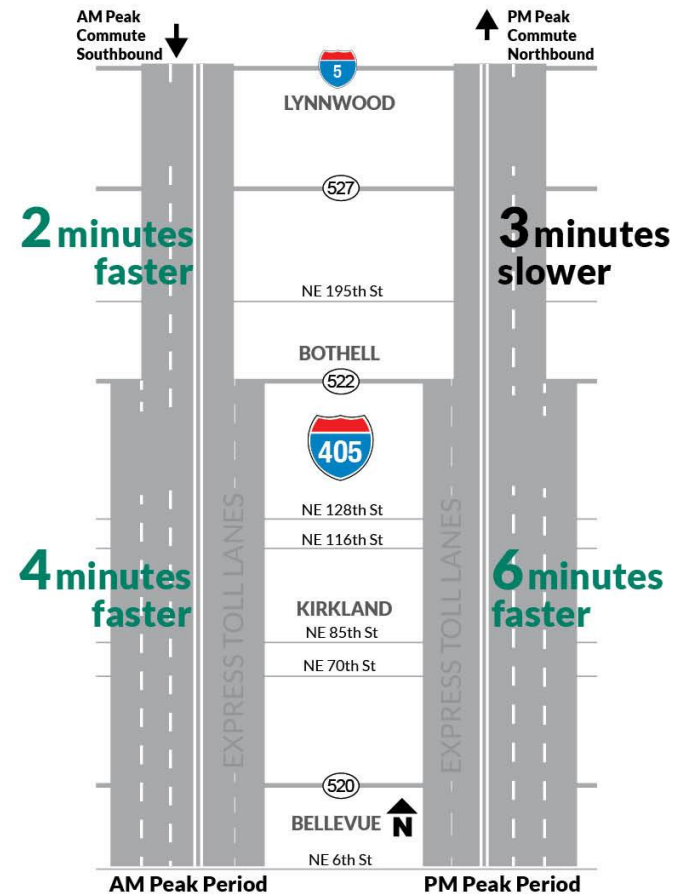
  
**VANPOOL**  
350 vans  
3,300 riders  
per day

  
**TRANSIT**  
7,800 riders  
per day

Last three months  
(Jan. 1 - March 31, 2016)

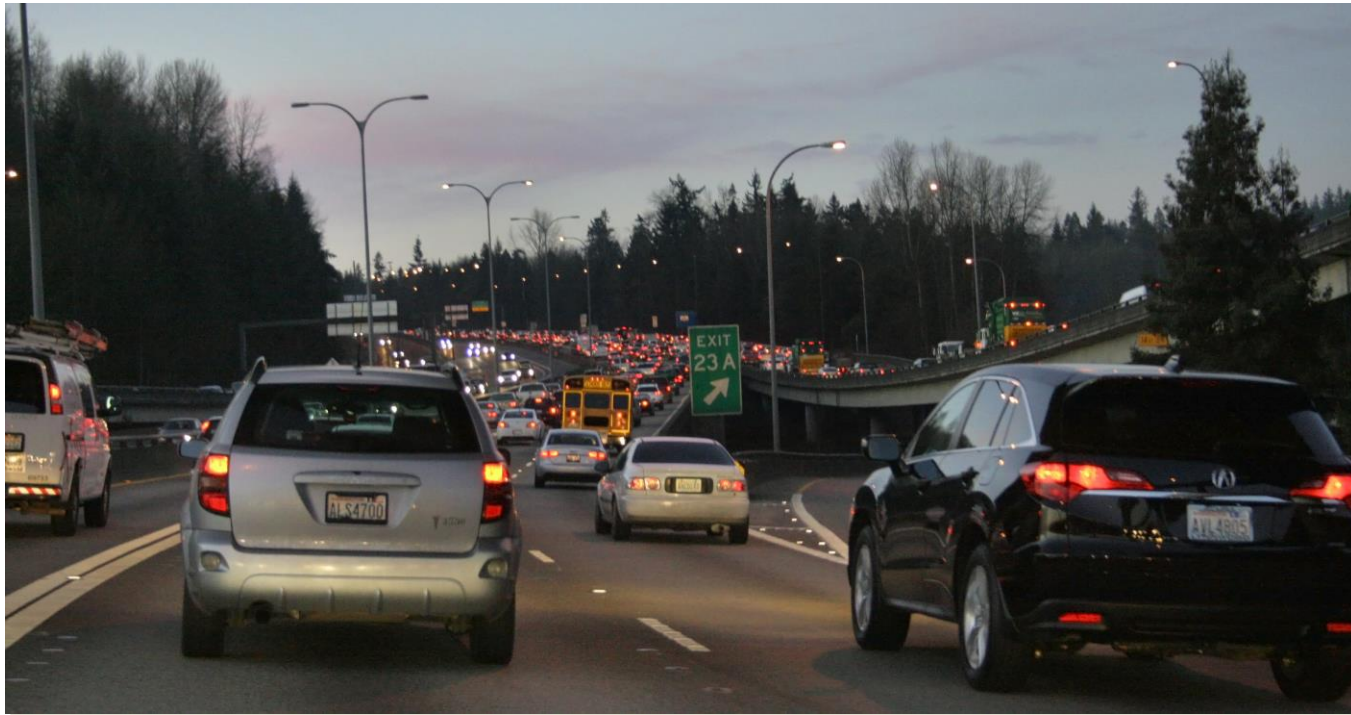
## GENERAL PURPOSE LANES

How are the general purpose lanes working compared to last year?



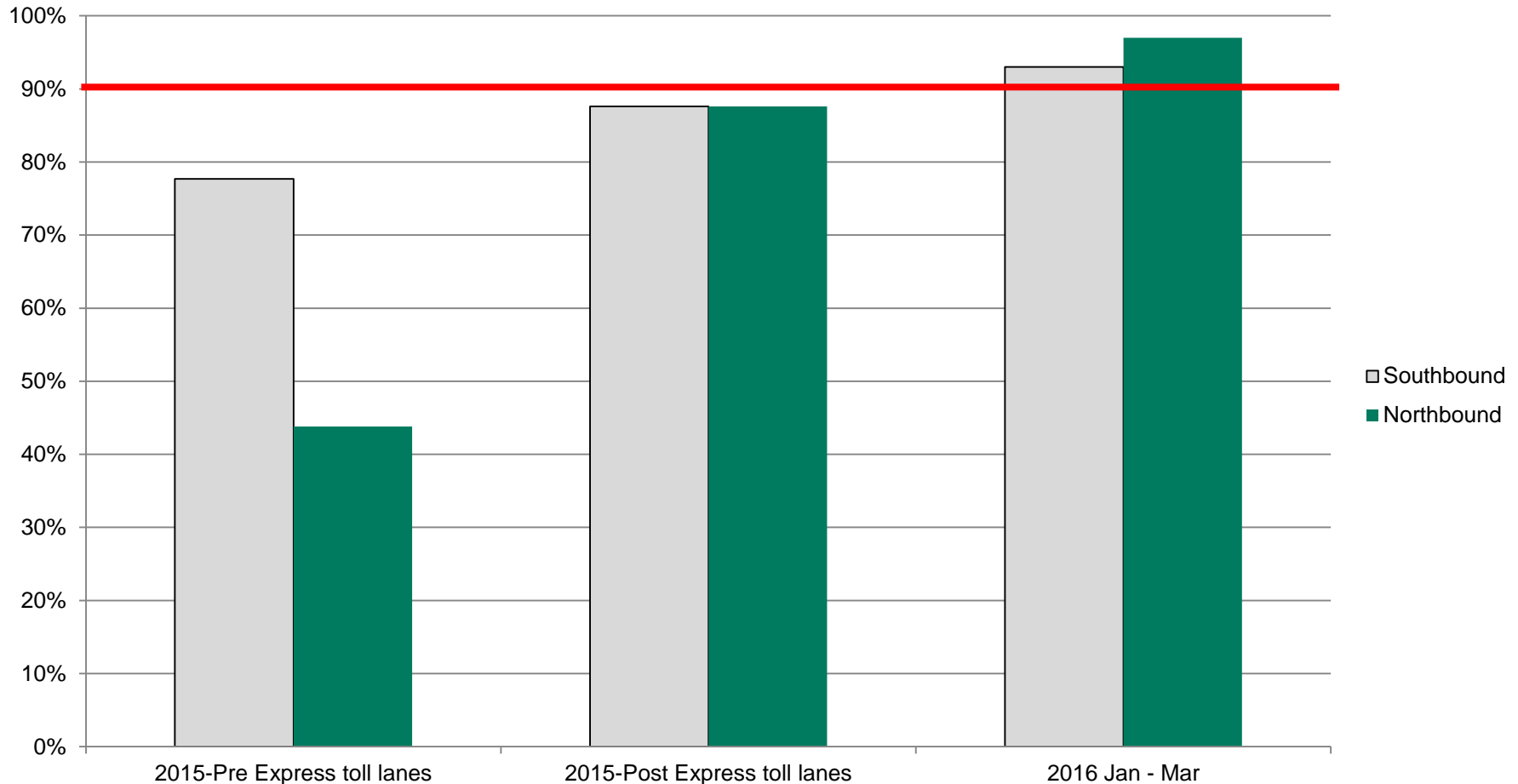
# Key takeaways – Early challenges

- Capacity challenges between Bothell and Lynnwood in both directions - we are evaluating long-term projects to address the needed capacity
- Access challenges throughout the corridor in both directions - we've been making changes to improve access



# Six month performance update – Speeds

**I-405 HOV Performance**  
Percentage of Peak Period  
When Speeds Are >45 MPH



# Six month performance update - Speeds

## Southbound morning peak period average speed (mph)

|                       | Winter 2015 | Winter 2016 |
|-----------------------|-------------|-------------|
| General purpose lanes | 28          | <b>34</b>   |
| Express toll lanes    | 50          | <b>56</b>   |

## Northbound evening peak period average speed (mph)

|                       | Winter 2015 | Winter 2016 |
|-----------------------|-------------|-------------|
| General purpose lanes | 28          | <b>32</b>   |
| Express toll lanes    | 43          | <b>57</b>   |

# Six month performance update - Volumes

## Southbound I-405

SR 527



| Peak Period | Peak Hour  |
|-------------|------------|
| +7 percent  | +7 percent |

SR 522



| Peak Period | Peak Hour   |
|-------------|-------------|
| +8 percent  | +14 percent |

NE 100th St

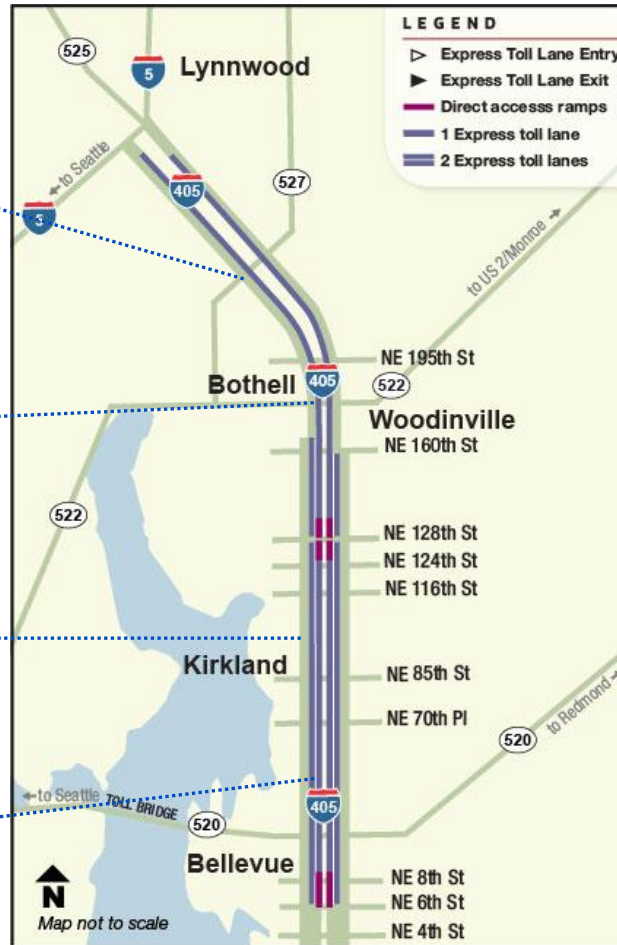


| Peak Period | Peak Hour   |
|-------------|-------------|
| +15 percent | +25 percent |

NE 53rd St



| Peak Period | Peak Hour   |
|-------------|-------------|
| +15 percent | +22 percent |



\* **Note:** Added capacity on southbound I-405 was 7.5 lane miles for a 12% increase in lane miles.

**Changes in volume include all lanes**

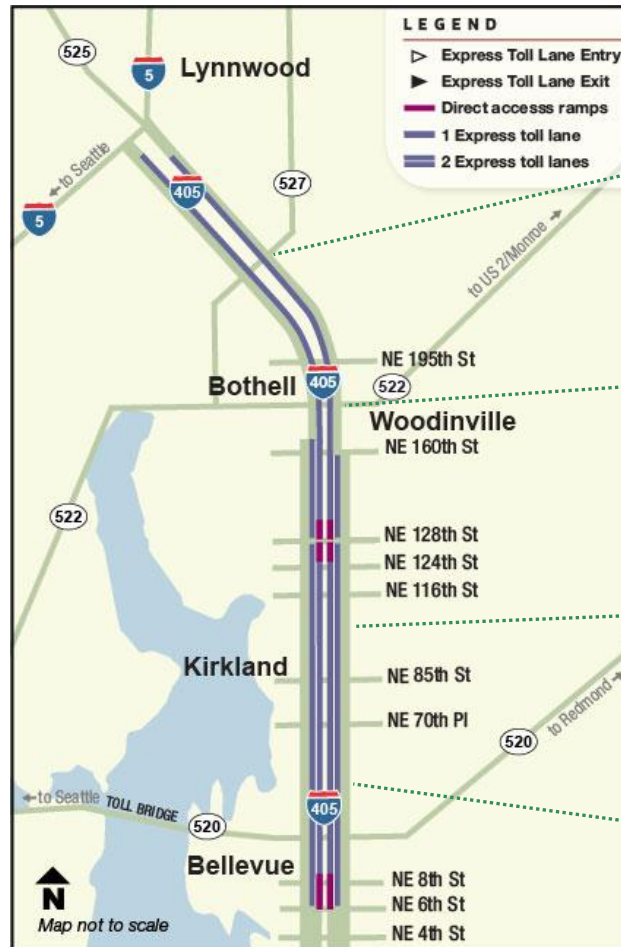
Peak period: 5-9 a.m.

Peak hour: 7:15-8:15 a.m.



# Six month performance update - Volumes

\* **Note:** Added capacity on northbound I-405 was 3.5 lane miles for a 5% increase in lane miles.



## Northbound I-405

### SR 527

| Peak Period | Peak Hour |
|-------------|-----------|
| 0 percent   | 0 percent |

### SR 522

| Peak Period | Peak Hour  |
|-------------|------------|
| +2 percent  | +1 percent |

### NE 100th St

| Peak Period | Peak Hour   |
|-------------|-------------|
| +17 percent | +24 percent |

### NE 53rd St

| Peak Period | Peak Hour   |
|-------------|-------------|
| +12 percent | +22 percent |

**Changes in volume include all lanes**

Peak period: 3-7 p.m.

Peak hour: 4:25-5:25 p.m.

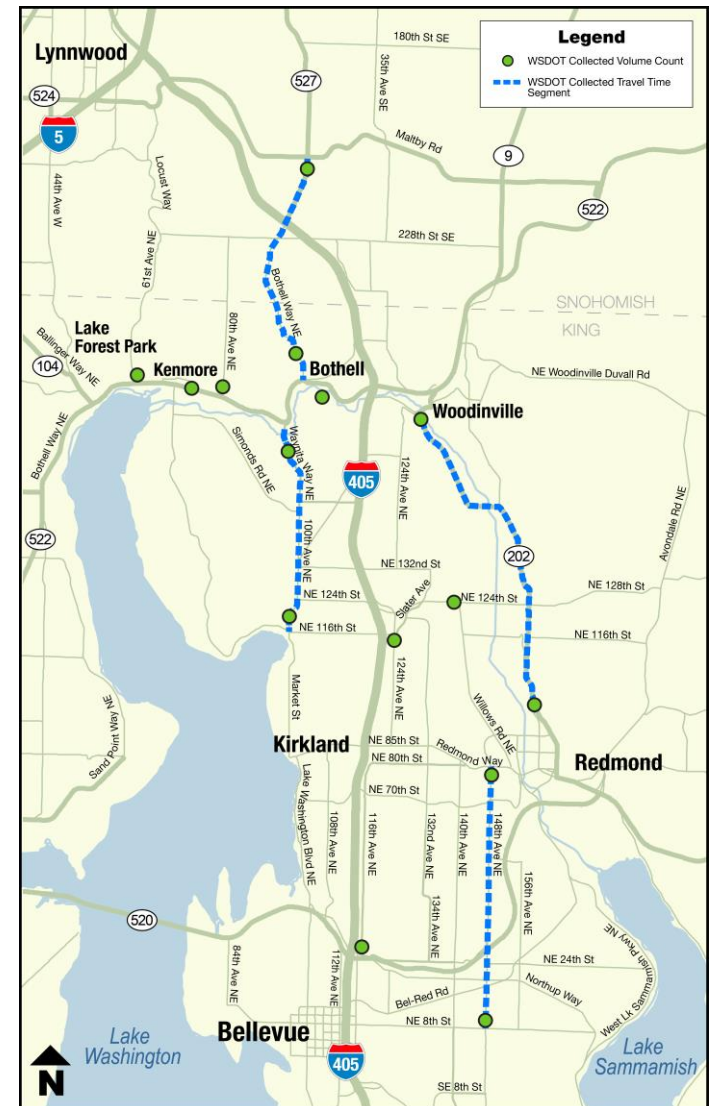


# I-405 operations – Local streets

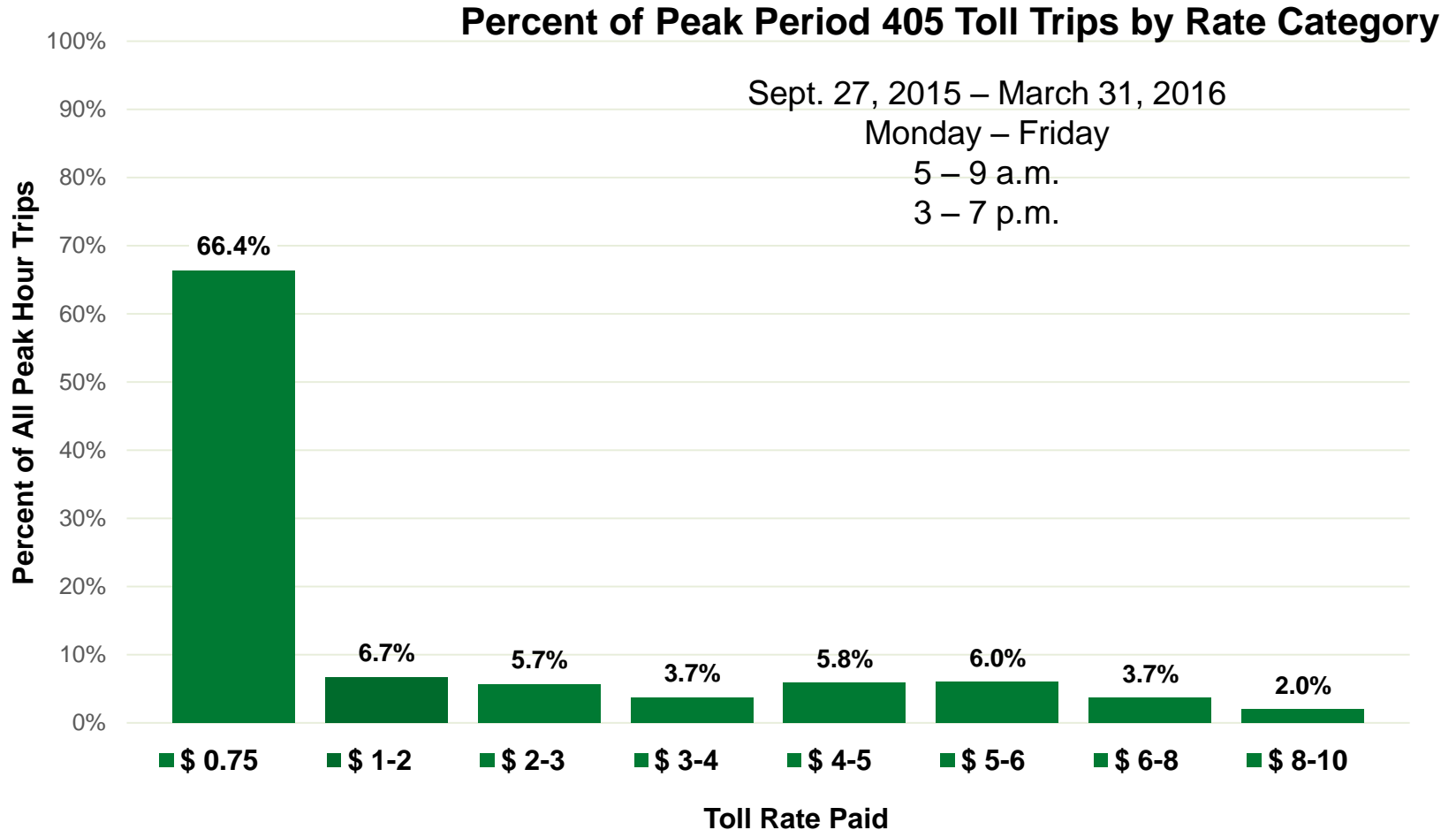
- Ongoing traffic monitoring

“In six out of the seven spots, **daily traffic volumes dropped significantly**, anywhere from 6 to 40 percent. The one street it did go up on was 195<sup>th</sup> by the high school.” – Woodinville Public Works Director Tom Hansen, March 21, 2016.

“The direct effects of I-405 express lane tolling on Kenmore have been **minimal, if any**...only expected fluctuations in volumes and travel times.” – Kenmore Traffic Engineer Brett Schock, April 28, 2016.



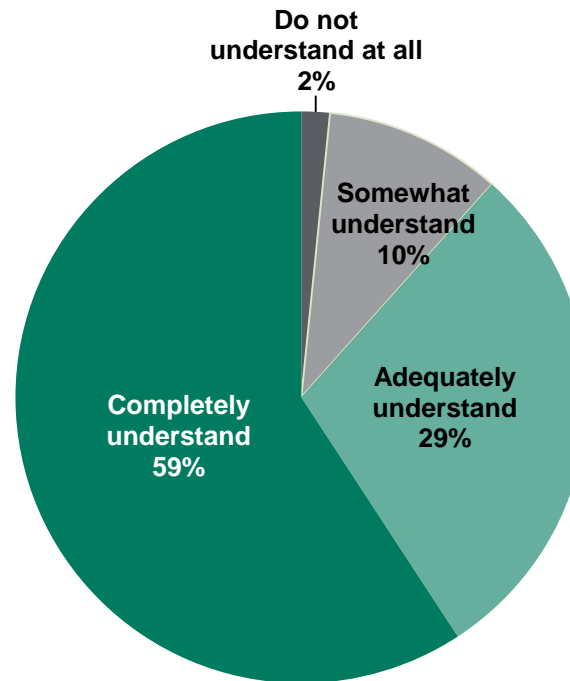
# Six month performance update – Toll Rates



# Six month performance update

## Good To Go! Customer Survey

### Overall understanding of how to use the express toll lanes

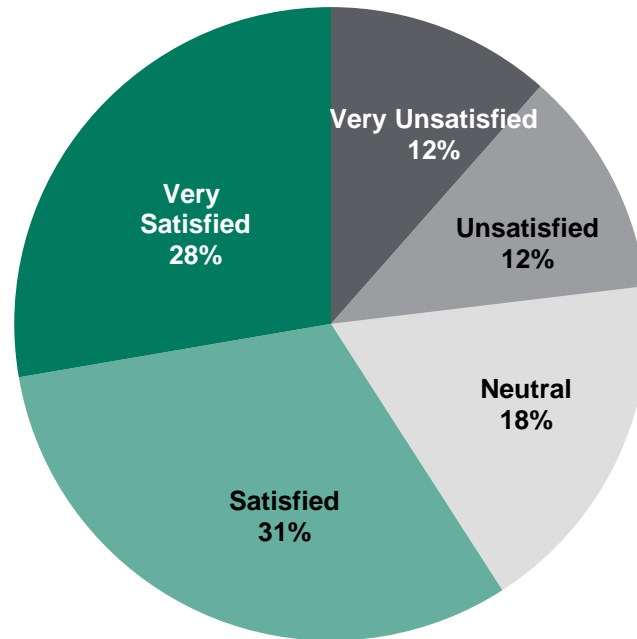


Source: WSDOT Good To Go! Customer Survey, April 2016, surveyed only customers who have used the Express Toll Lanes since opening.

# Six month performance update

## Good To Go! Customer Survey

The option to use the express toll lanes  
when I need them

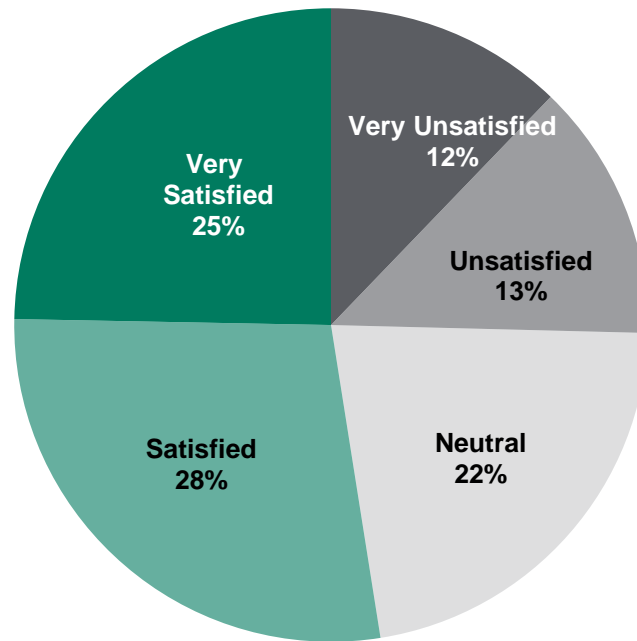


Source: WSDOT Good To Go! Customer Survey, April 2016, surveyed only customers who have used the Express Toll Lanes since opening.

# Six month performance update

## Good To Go! Customer Survey

The value of time saved relative to the tolls I paid



Source: WSDOT Good To Go! Customer Survey, April 2016, surveyed only customers who have used the Express Toll Lanes since opening.

# How express toll lanes are measuring up

The Legislature directed WSDOT to monitor and report on performance metrics, six month observational updates are included below.

## IMPROVE SPEED AND RELIABILITY

- ✓ Express toll lane speeds >45 mph 90 percent of the time
- ✓ Travel times improved in both general purpose and express toll lanes for full length trip more reliable



## DEMONSTRATED ABILITY TO COVER OPERATING EXPENSES

- ✓ Express toll lanes on track to generate revenue to cover operating costs
- ✓ Express toll lane usage is well above projected use with 48,000+ daily trips



## LOCAL STREETS BENEFIT

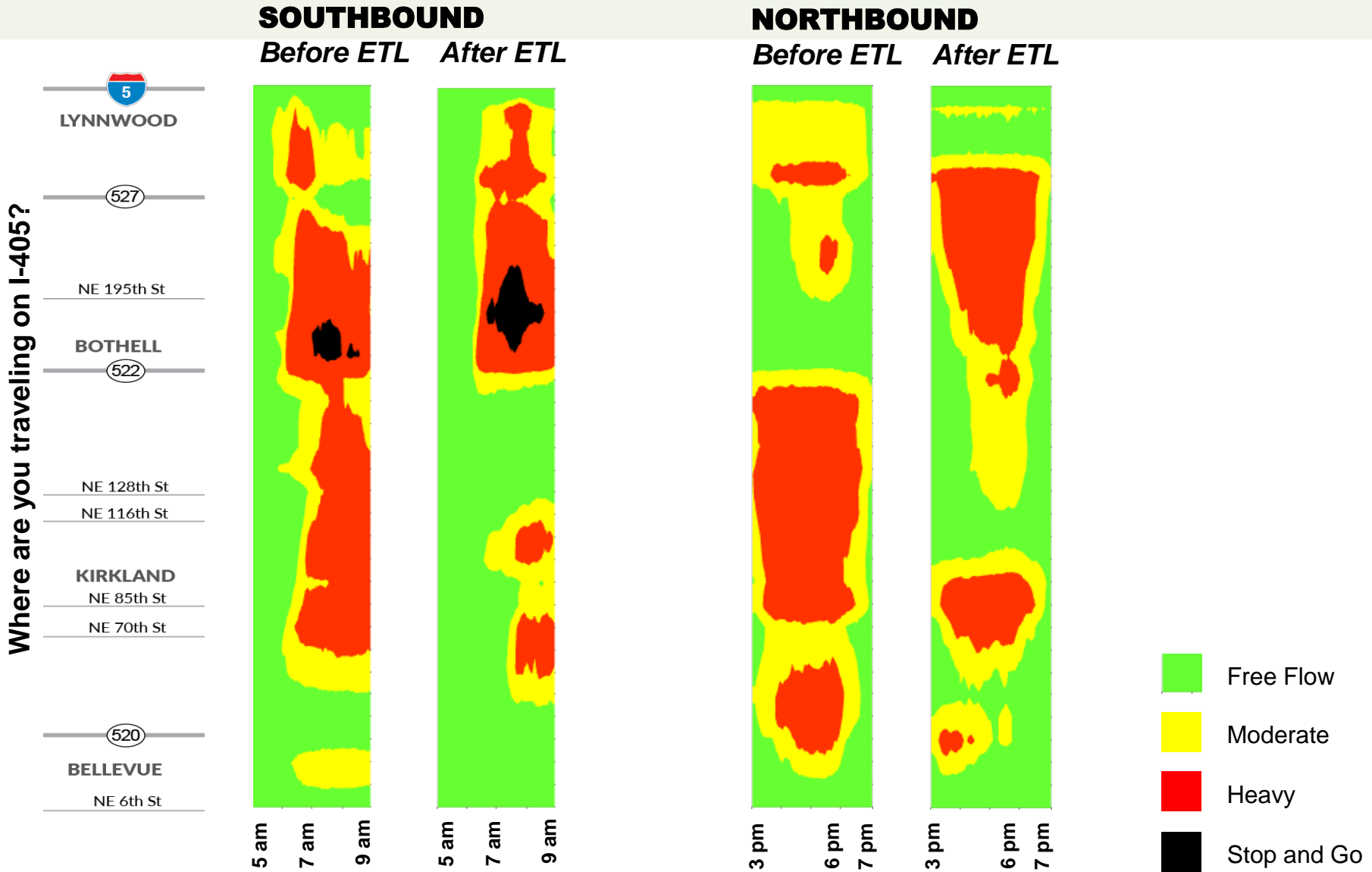
- ✓ Adjacent local streets and state highways travel times and volumes have not changed much since before tolling, monitoring is on-going

## INCREASE TRANSIT AND VANPOOL RIDERSHIP

- ✓ Ridership has increased for King County Metro (+10 percent) and Community Transit (+3 percent)
- ✓ Vanpools ridership remains strong for both King County Metro and Community Transit with 350+ vans and 3,300+ riders per day



# Peak Period Congestion in the General Purpose Lanes

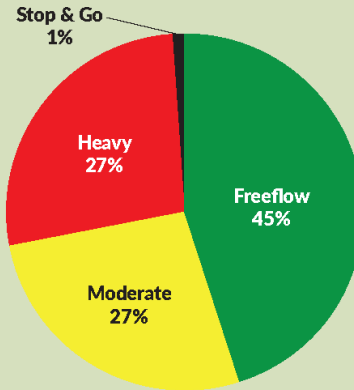




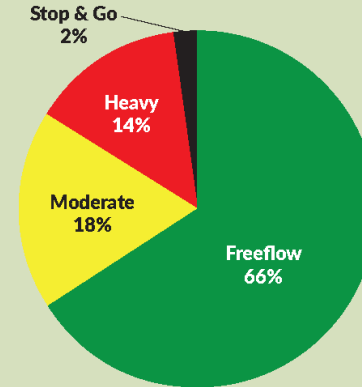
# Changes in Corridor General Purpose Congestion January-March 2015 vs. January-March 2016 (Peak Periods)

## Southbound

General Purpose  
Before

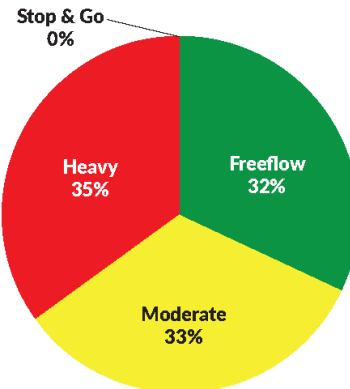


General Purpose  
After

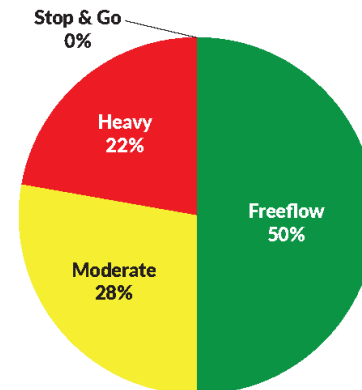


## Northbound

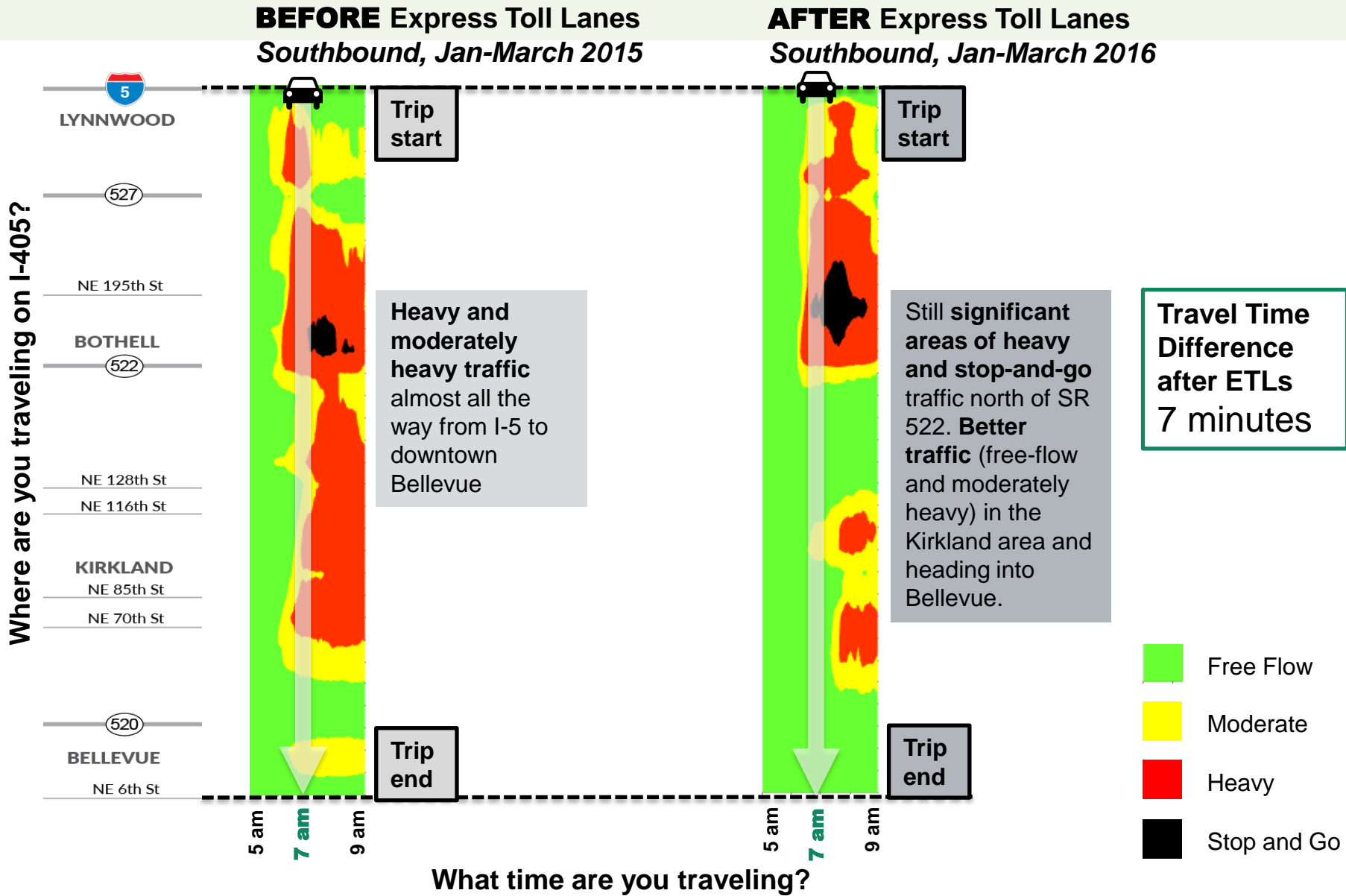
General Purpose  
Before



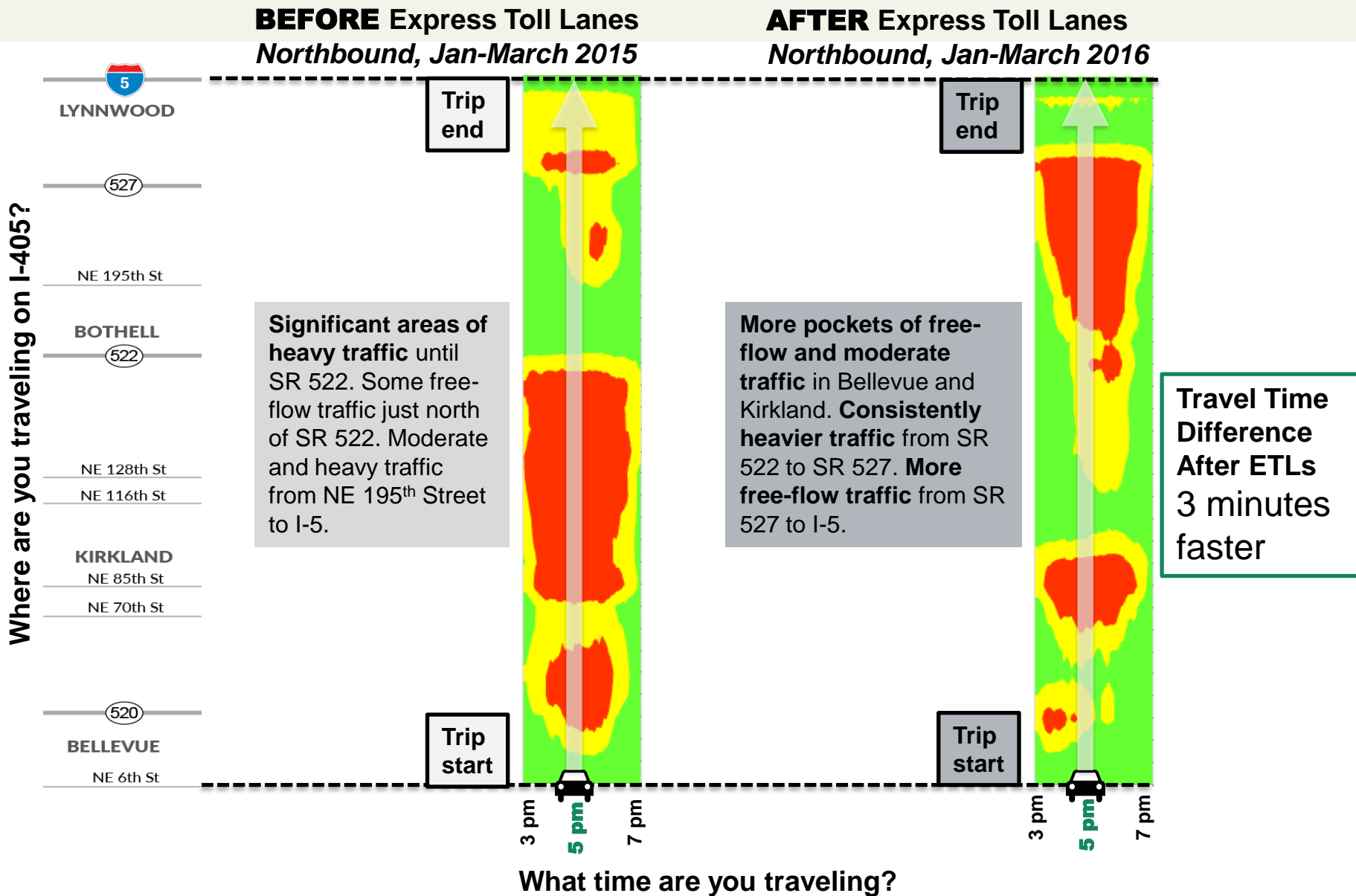
General Purpose  
After



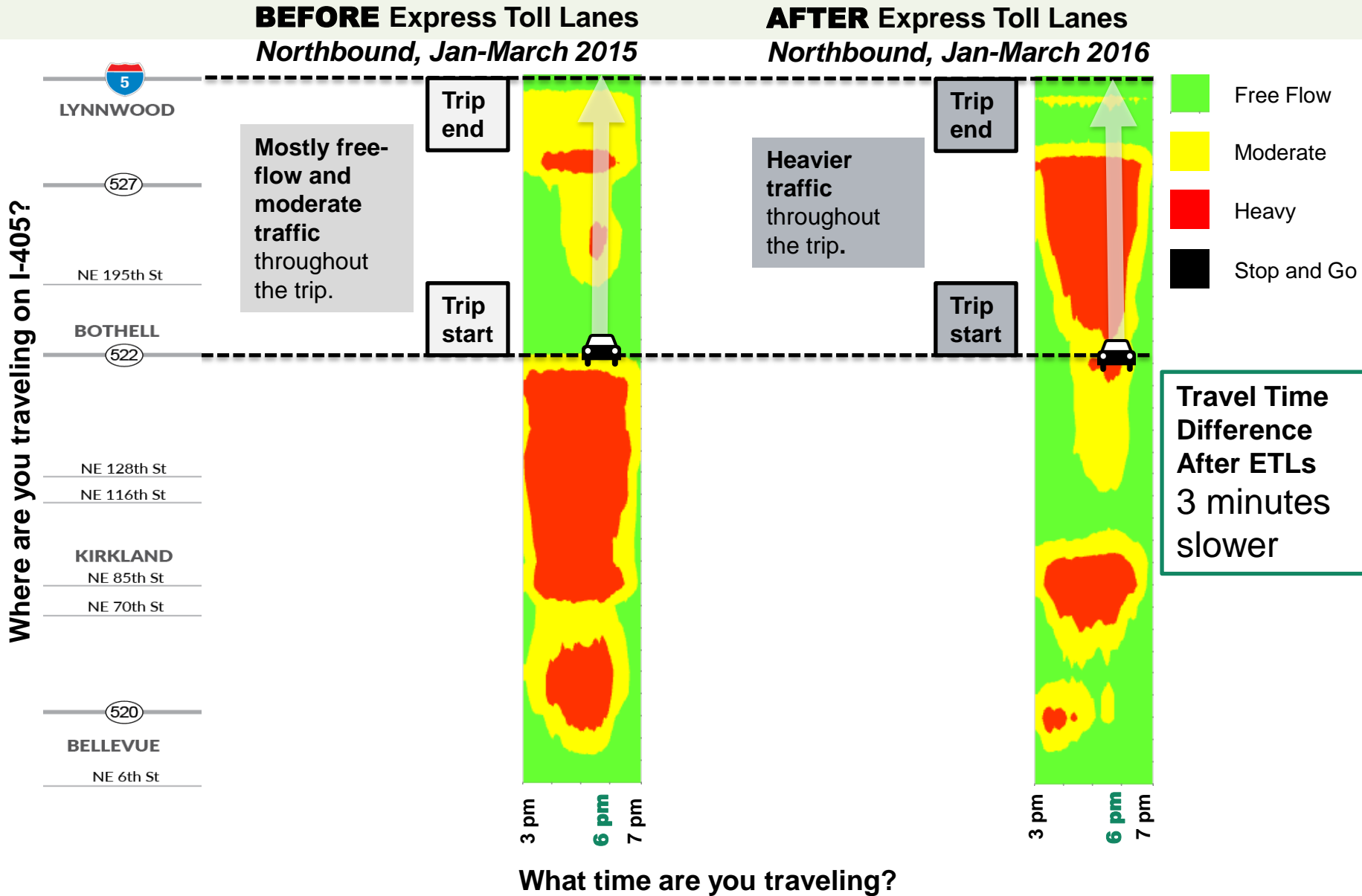
# Sample Commute: Regular Lanes, Lynnwood to Bellevue, 7 a.m.



# Sample Commute: Regular Lanes, Bellevue to Lynnwood, 5 p.m.



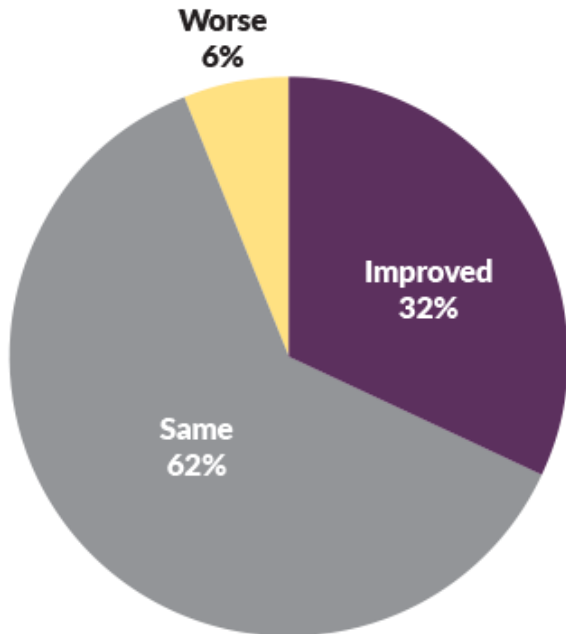
# Sample Commute: Regular Lanes, Bothell to Lynnwood, 6 p.m.



# How did regular lane commutes change?

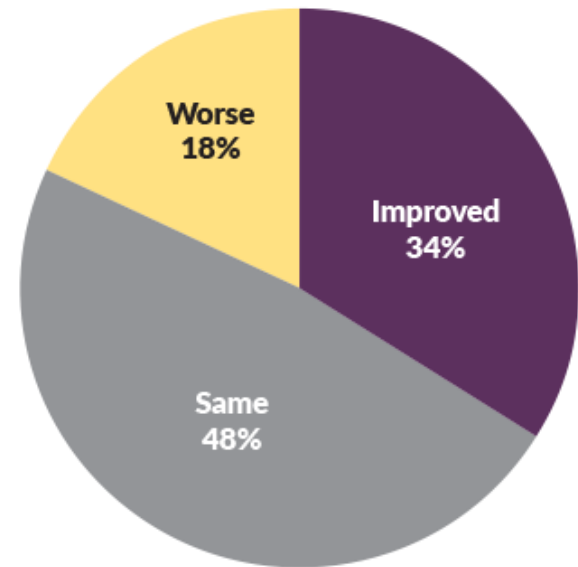
January-March 2015 vs. January-March 2016 (Peak Periods)

## Southbound General Purpose Lane Trips Morning Peak Period 5 to 9 a.m.



Added 7.5 southbound lane miles for a 12% increase  
(61 to 68.5 total miles)

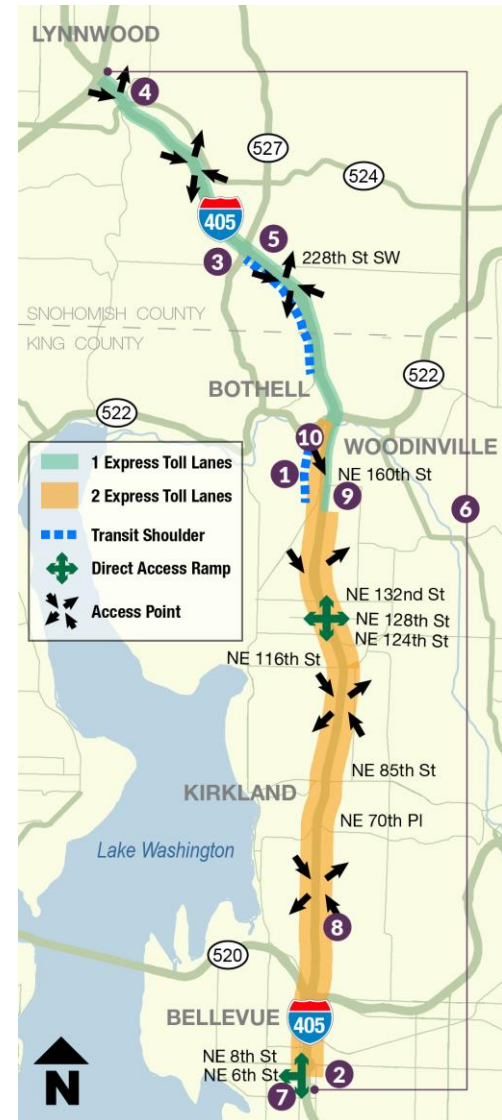
## Northbound General Purpose Lane Trips Afternoon Peak Period 3 to 7 p.m.



Added 3.5 northbound lane miles for a 5% increase  
(65 to 68.5 total miles)

# I-405 operations – Adjustments

- **Completed Adjustments**
  - Operational hours
    - Mon-Fri 5 a.m. to 7 p.m.
  - Toll rate algorithm adjustments
  - Striping and access adjustments at 10 locations
  - Additional pavement markings and signage at 3 locations



# I-405 operations – Adjustments

## Planned Adjustments

- 3** Southbound I-405 at SR 527: Lengthen access point to the north to allow drivers more time to merge.
- 11** Northbound I-405 near NE 85th Street: Adjust the access length to provide more open access to the express toll lane.

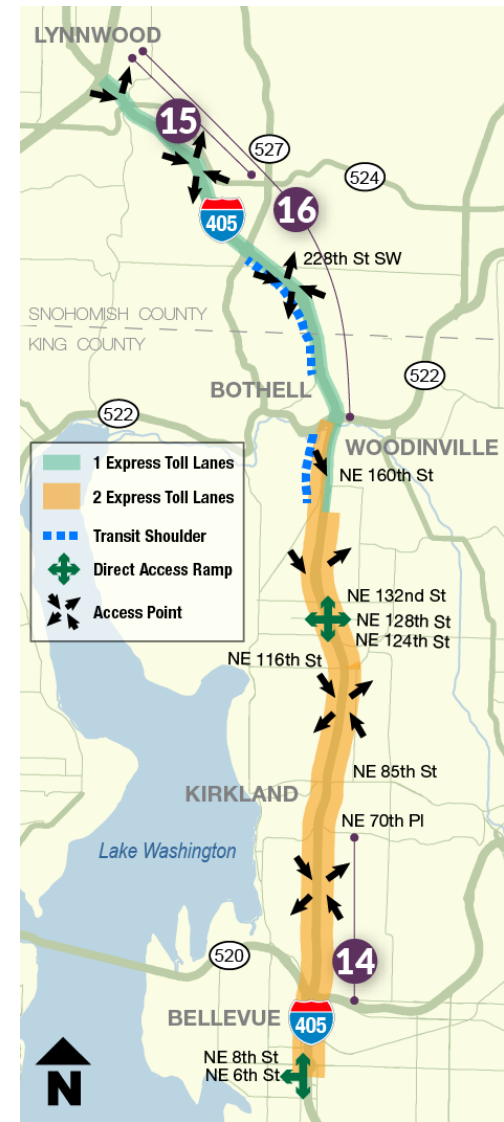




# I-405 operations – Adjustments

## Future Projects Under Evaluation

- 14** Northbound auxiliary lane between SR 520 and NE 70th Place
- 15** General purpose hard shoulder running on northbound I-405 from SR 527 to I-5
- 16** Address limited capacity in single express toll lane section (SR 522 to I-5)



# For questions or further information

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