



SR 99 PERFORMANCE MONITORING

TOLLING THREE MONTH REVIEW NOVEMBER 2019 - JANUARY 2020



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Introduction

1.1 Background and purpose

In close coordination with the City of Seattle, the Port of Seattle, King County Metro and others, WSDOT replaced the Alaskan Way Viaduct with the State Route (SR) 99 tunnel in a multiphase project. The project corridor has undergone many changes in the last 10 years and will continue to change as Alaskan Way re-opens to traffic with the completion of the Central Waterfront and Colman Dock Replacement projects.

WSDOT monitors how traffic patterns change when a new roadway opens or significant changes are made to its operations, and how they change once that facility is tolled. Given the existing traffic congestion and constraints in downtown Seattle, WSDOT and the partner agencies staffed and supported a team of traffic analysts to monitor and assess the changes. This interagency technical team was essential to collect, review, analyze, and share the data to tell a comprehensive story.

Data collection milestones

Traffic, transit, and other mobility data was collected, analyzed and reported to capture the changes to traffic and mobility at key milestones. Data collection milestones include:

- Permanent closure of the Alaskan Way Viaduct on January 11, 2019.
- Opening of the SR 99 tunnel on February 4, 2019 to replace the aging Viaduct. The tunnel changed the overall access to and through downtown Seattle.
- Commencement of tolling on the SR 99 tunnel began Nov. 9, 2019 after eight months of operating as a toll-free tunnel.

For consistency in reporting, the same baseline reference period months of September and October were used in all reports. For pre-tolling reports, we used a September and October 2018 baseline. For post-tolling reports we used a September and October 2019 baseline. Exceptions to the baseline reference period are indicated throughout the report.



King County



Reports

Data was collected, analyzed, and compiled into performance reports that align with the milestones outlined above and compared to the baseline reference period noted above. The reports illustrate trends regarding how the SR 99 milestones impacted the overall downtown Seattle transportation network. The following reports were (or will be) developed:

- Quarterly Update (Jan. – Mar. 2019) highlighting the Alaskan Way Viaduct permanent closure and opening of the SR 99 tunnel. (*published*)
- Toll-Free Tunnel Period Summary (Jan. – Aug. 2019) for the SR 99 tunnel during its eight months of operating as a toll-free facility. (*published*)
- **Three Month Review (Nov. 2019 – Jan. 2020) discussing the immediate impact after tolling began on the SR 99 tunnel.** (*this report*)
- Operational Changes; From the Toll-free Viaduct to the Tolloed Tunnel (Sep. 2018 – Nov. 2020) which will be developed following one-year of tolling, and will include a comprehensive look at the changes to the transportation network from the baseline period through the first year of toll operations. (*future*)

The reports listed above are available upon request.

1.2 Overview of tolling period¹

The analysis period covered in this report includes roughly the first three months of tolling from Nov. 9, 2019 to Jan. 31, 2020. Data collected and analyzed within the study area for the three months were compared to the September and October 2019 baseline dataset. This will allow for seasonal continuity in trend comparisons and support trend analysis in future years.

An exception to this is the ridership baseline for King County Water Taxi, King County Metro buses, Sound Transit Sounder and Link, Washington State Ferries, and bicycles, which are compared to a shifting baseline of the equivalent month, year over year, to account for seasonality in ridership trends.

¹ NOTED EXCEPTIONS TO PERIOD RANGES

Tolling Period date ranges excluded holidays on Nov. 11, 2019, Nov. 28, 2019, Dec. 25, 2019, Jan. 1, 2020, and Jan. 20, 2020. SDOT volumes and travel times, and KCM bus ridership also excluded Nov. 29, 2019. KCM Water Taxi did not operate on Nov. 27, 2019 due to high winds.

Many seasonal factors and events impacted trends

Tolling began on Nov. 9, 2019, just before the Veteran's Day holiday. The day after tolling began, the Sounders Major League Soccer Cup Final was held on Nov. 10, 2019 and drew thousands of people into the Pioneer Square area and closed city streets for pre-game events. The Sounders won and held their victory parade and rally on Nov. 12, 2019.

Three Seahawks home games occurred during the analysis period on December 2, 22, and 29, which drew large crowds to the stadium.

In addition to the events noted above, many seasonal factors also occurred during the first three months of tolling, including:

- Regional schools closed for winter break the last half of December
- Expected lighter-than-average travel on holiday eves
- Sound Transit's Connect 2020 kicked off on Jan. 2, 2020 and disrupted ridership with different access to trains, increased headways between trains, and lowered Link transit ridership
- Snow event during the week of Jan. 13, 2020 resulted in school districts implementing a delayed start or school cancellation

All of the factors above and others contributed to the difficulty in identifying clear trends and conclusions about traffic patterns during the first three months of tolling.

Traffic volumes largely unchanged for most routes

For most routes, traffic volumes continued to fluctuate within the typical ranges after tolling began. Typical ranges for each of the following facilities are as follows.

- Up to +/- five percent on Interstate 5 (I-5)
- Up to +/- 10 percent along city street corridors
- Up to +/- 20 percent at monitored city intersections

While daily volumes indicated that drivers experimented with alternative routes and modes, most changes were temporary and remained close to baseline averages. Anecdotal evidence suggests that individual drivers adjusted their routes and modes on an as needed basis during this period.

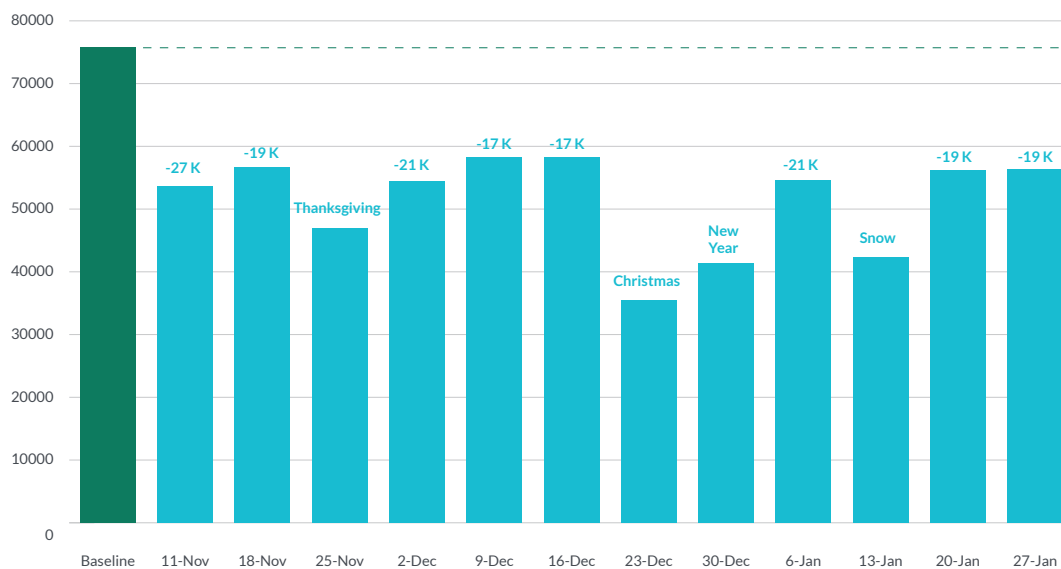
Similar to volumes, average travel times on most routes remained largely unchanged.

SR 99 drivers explore other routes and modes

Prior to tolling roughly 75,000 vehicles used the SR 99 tunnel daily. Once tolling began that number dropped to 55,000 vehicles, a smaller drop than anticipated in the forecast. Peak period travel remained similar to baseline (see Figure 1 below), while the off-peak periods experienced most of the decline, likely because alternate routes were less congested during off-peak travel times allowing for a toll-free trip.

Of the 20,000 trips² that diverted from the tunnel after tolling began, data indicates that roughly 10,000 trips used other routes (primarily Alaskan Way, Elliott Avenue, and I-5) or switched from driving to riding transit. Ferries and water taxi ridership were largely unchanged. The remaining 10,000 trips are not accounted for using existing roadway sensors and automated passenger counters on buses, however, anecdotal data suggests that some trips were discontinued as people embraced teleworking, bicycling and other active forms of transportation, or by using an unmonitored route.

FIGURE 1
SR 99 AVERAGE WEEKDAY VOLUMES, SOURCE TOLL DIVISION
(MONDAY-FRIDAY, NORTHBOUND AND SOUTHBOUND COMBINED)



The volume data included in this section of the report and graph below was collected, analyzed, and reported by the same team for use in a WSDOT blog post. We do not use explicit volumes throughout the rest of this report because percent change is a more accurate way to convey changes in traffic volumes over time.

At the time of publishing, COVID-19 has significantly disrupted traffic patterns in the months following the timeframe covered in this review. Impacts will be discussed in the One Year of Toll Operations (Nov. 2019 - Nov. 2020) report.

Overall, the picture of the transportation network during the first three months of SR 99 tolling is still adjusting. Clear trends may emerge as traffic settles out into a new normal through the first year of tolling. While we acknowledge that some trips may experience significant changes, overall, the start of SR 99 tolling did not cause major disruption on adjacent routes or impacts outside of typical fluctuations.

² WSDOT Blog. (2019, December 9). What's happened to traffic since SR 99 tunnel tolling started [Blog post]. Retrieved from www.wsdotblog.blogspot.com/2019/12/traffic-since-sr-99-tolling-started.html

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Tolling period trend summary analyses by mode

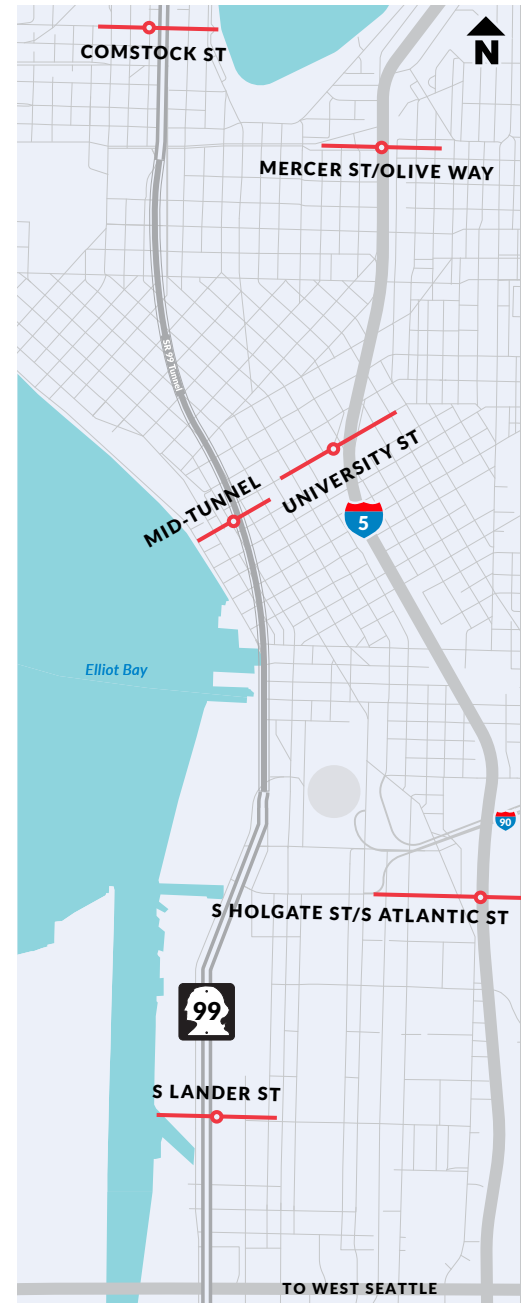
2.1 Volume trends

Volumes generally remained consistent through the three month period and trended toward baseline averages. Routes adjacent to the waterfront saw a trend of increased volumes along Elliott Ave and Alaskan Way.

State route screenline locations remained consistent with the previous reporting periods. The following screenlines were used to monitor northbound and southbound volume changes on I-5 and SR 99 in the downtown Seattle area:

- I-5 at:
 - Mercer St. (northbound screenline), Olive Way (southbound screenline)
 - University St. (northbound and southbound)
 - S Holgate St (southbound screenline), S. Atlantic St. (northbound screenline)
- SR 99 at:
 - Comstock St. (northbound and southbound)
 - Mid-tunnel
 - S. Lander St. (northbound and southbound)

FIGURE 2
WSDOT SCREENLINE MAP



Average Weekday Daily Totals by Period

I-5 Trends

Average weekday total screenline volumes on I-5 trended towards baseline averages.

In the northbound direction, average morning peak volumes decreased by three percent to six percent at all screenlines, and three percent to nine percent during the afternoon peak as compared to the baseline. Southbound volumes also stayed close to the baseline during the peak periods, with a decrease of two percent to four percent in the morning peak and five percent to six percent in the afternoon peak.

SR 99 trends

Average weekday total screenline volumes on SR 99 decreased by 31 percent when compared to baseline averages.

During the first three months of tolling, total average daily volume in the tunnel was below baseline averages, however volumes were higher than expected. A combination of factors contributed to the 31 percent reduction from baseline and cannot be attributable only to diversion by drivers avoiding the toll. For example, traffic volumes during November and December tends to be lighter than the baseline months.

Lower traffic volumes were also observed north and south of the tunnel, with combined average daily volumes near Lander Street and Comstock Street decreasing an average of 15 percent from baseline.

The AM peak period combined tunnel volumes experienced the greatest decrease, by 31 percent, whereas PM peak period combined volumes experienced decreases to a lesser degree, down 22 percent compared to baseline.

Representative regional routes

Average daily volumes around the region showed minor decreases from baseline, in line with expected seasonal changes.

Across the region, average daily volumes declined five percent to six percent in the first quarter of tolling. The trend was uniform across the region, and mostly attributable to the seasonal change in travel behavior between the fall (baseline) months and the winter months.

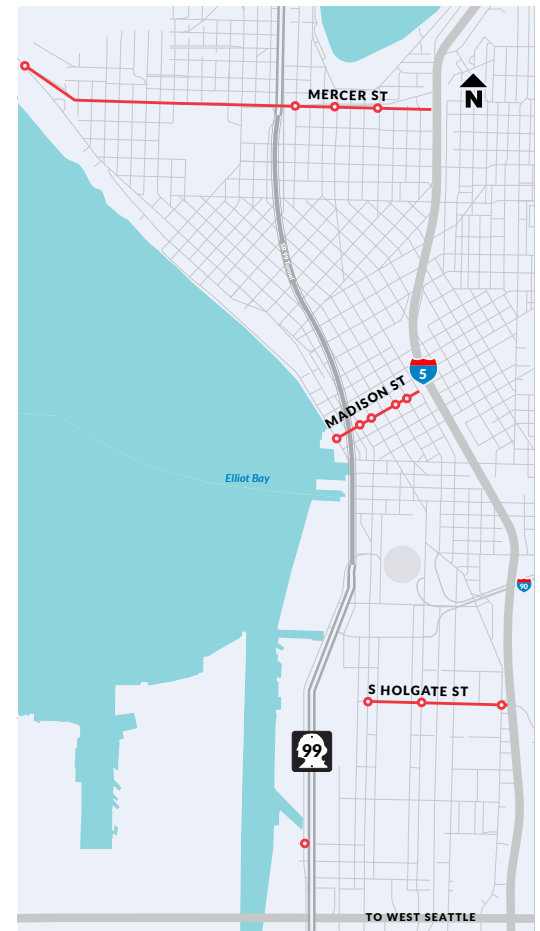
City street trends

Volumes generally remained consistent month over month, but December saw decreased volumes at certain locations as compared to November and January.

City street screenline locations include northbound and southbound volumes at the following surface streets:

- Mercer at:
 - Elliott Avenue West
 - Dexter Avenue North
 - Westlake Avenue North
 - Fairview Avenue North
- Madison at:
 - Alaskan Way
 - First Avenue
 - Second Avenue
 - Fourth Avenue
 - Fifth Avenue
- Holgate at:
 - East Marginal Way
 - First Ave South
 - Fourth Ave South
 - Airport Way South

FIGURE 3
SDOT SCREENLINE MAP



Average weekday volume trends

The Mercer and Madison screenline average weekday volumes remained consistent with baseline averages, within a five percent increase or decrease. Holgate screenline average weekday volumes decreased relative to baseline, by about eight percent. The monthly average weekday screenline volumes are shown in FIGURE 4 below.

Within each screenline, some locations saw increases, most notably in the northbound direction.

Mercer screenline

- In December, the Mercer screenline saw average weekday northbound volumes decrease by nine percent in the afternoon peak as compared to baseline averages. Then in January, the northbound direction saw an increase by 10 percent in the morning peak as compared to baseline averages.

Madison screenline

- In November, immediately following toll commencement, the Madison screenline saw average weekday northbound volumes increase by nine percent during the afternoon peak, compared to baseline averages. Then in December, the mid-day time period saw the increase, up to 10 percent.

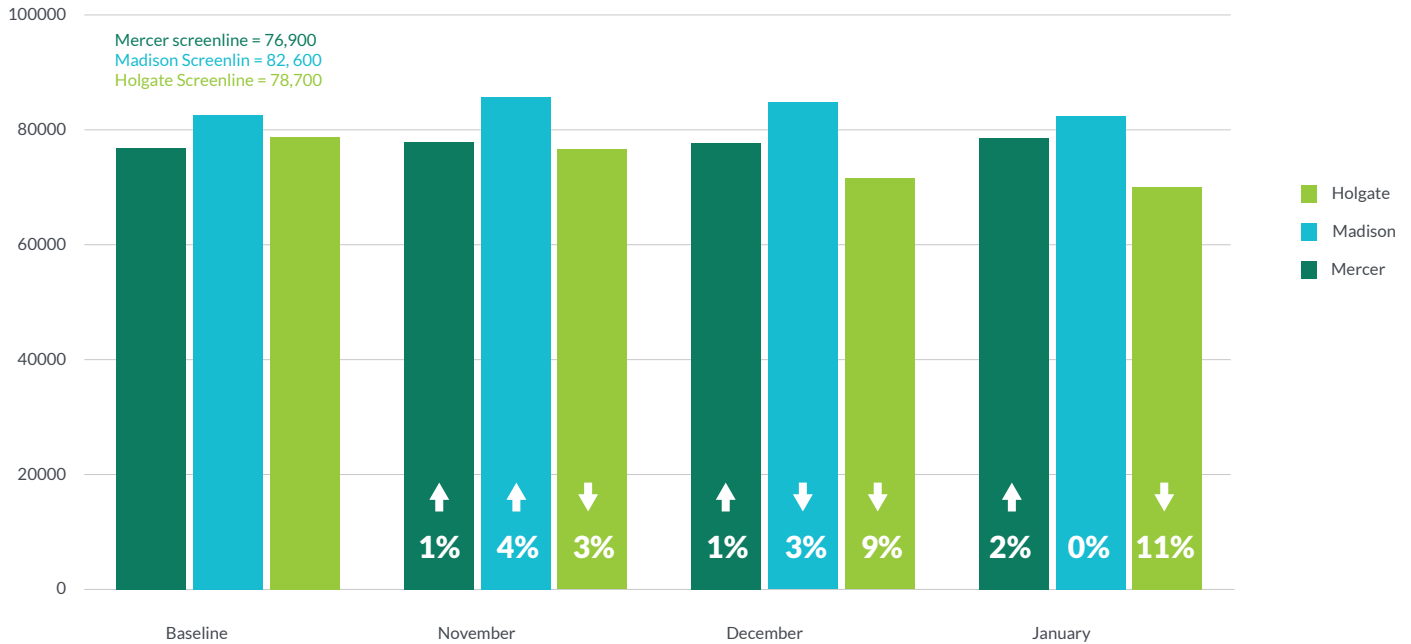
Holgate screenline

- Average weekday volumes decreased by three percent in November, and by 11 percent in January, compared to baseline averages.
- Average weekday northbound volumes decreased by eight percent, with a 10 percent decrease in the morning peak.

Following toll commencement, routes adjacent to the waterfront saw a trend of increased volumes along Elliott Avenue and Alaskan Way.

- Elliott Avenue experienced increases in average weekday volumes in the northbound direction primarily in the morning peak, up by 19 percent, while southbound volumes showed minor change from baseline averages.
- Alaskan Way also saw increases in average weekday volumes for both peak periods, with the northbound direction experiencing a greater increase (17 percent for the morning peak and 30 percent for the afternoon peak) above baseline than the southbound direction (14 percent for the morning peak and nine percent for the afternoon peak). More notably at this location, the mid-day period experienced higher volumes in both directions, 18 percent in the northbound direction and 22 percent in the southbound direction.

FIGURE 4
AVERAGE WEEKDAY TOTAL SCREENLINE VOLUMES



Average weekend volume trends

Average weekend volumes across the Mercer and Madison screenlines remained consistent with baseline averages, with some variability at specific locations and by direction.

Mercer screenline

- Average Saturday northbound volumes decreased by 20 percent on Dexter Avenue North at Mercer Street mid-day.
- Average Saturday northbound volumes across the Mercer screenline decreased by 12 percent in the morning peak, with the location showing the biggest decrease of 24 percent at Fairview Avenue North and Mercer Street. Average Sunday northbound volumes decreased by 20 percent on Elliott Avenue West at West Mercer Place in the morning peak.

Madison screenline

- In the morning peak, average northbound volumes across the Madison screenline decreased by 16 percent on both Saturday and Sunday. Saturday southbound average volumes decreased by 10 percent in the morning peak. Northbound volumes on Alaskan Way decreased by 21 percent on Saturday in the morning peak and by 27 percent on Sunday. Sunday saw average northbound volumes decrease by 14 percent in the afternoon peak. southbound volumes on Alaskan Way at Madison Street increased by 29 percent on Saturday during mid-day.

Holgate screenline

- The decrease in volumes across the Holgate screenline was more noticeable on the weekends, than during the week. Average daily northbound volumes decreased between 18 percent and 25 percent on Saturdays, and by 15 percent on Sundays. Southbound volumes decreased by 16 percent on Sundays, with the afternoon peak experiencing a 33 percent decrease in volume.
- Northbound volumes on East Marginal Way saw a higher decrease than the volumes in the southbound direction, along with northbound volumes on the parallel First Avenue which also experienced a decrease in the northbound direction.

2.2 Travel time trends

Travel times generally trended toward baseline averages.

The routes monitored are shown in FIGURE 5. The green highlighted routes represent segments with SDOT travel times and the purple highlighted routes represent segments supplemented with INRIX data. Representative regional routes monitored include the I-5 and I-405 corridors spanning from Federal Way to Everett.

Average weekday totals

I-5 trends

Travel times on I-5 were consistent with baseline averages.

Travel times on northbound I-5 between Spokane Street to north Mercer Street trended toward baseline averages during both the morning and afternoon peak periods. One exception is northbound travel times from Spokane Street to just north of the I-90 interchange, which increased by 40 percent (two minutes) over baseline during the afternoon peak period. This could possibly be attributed to some slowdowns introduced by the November 2019 reconfiguration of the SR 520 eastbound lanes approaching the floating bridge.

SR 99 trends

Travel times on SR 99 generally showed a decrease from baseline averages.

Most notably, SR 99 travel times approaching downtown during the morning peak decreased by 18 percent (30 seconds) in the northbound direction and increased by 11 percent (30 seconds) in the southbound direction. A potential reason for the increase in travel times in the southbound direction could be the added congestion on the off-ramp caused by vehicles exiting SR 99 prior to entering the tunnel. Afternoon peak travel times in the southbound direction decreased by 22 percent (one minute).

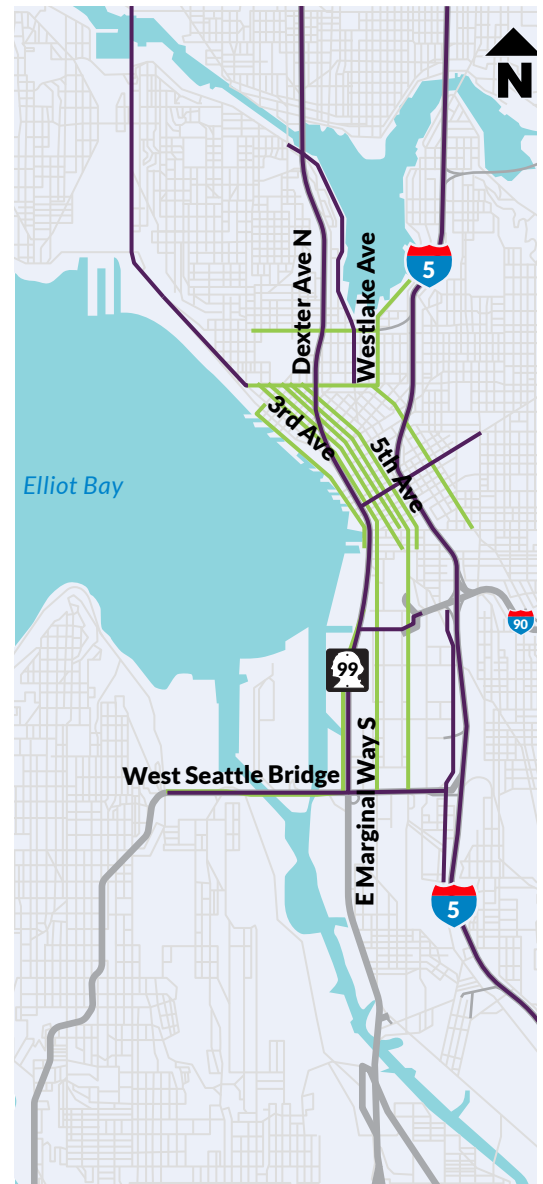
Representative Regional Routes

Regional travel times into the downtown core remained close to baseline averages, with reduced peak period duration.

Average travel times on sampled regional routes remained near baseline levels during the morning peak period. Travel times were slightly lower than baseline (from five percent to 10 percent) on these routes with a reduced peak period duration compared to baseline.

- Southbound from Everett to Seattle and Lynnwood to Bellevue
- Northbound from Renton to Bellevue

FIGURE 5
TRAVEL TIME ROUTE SEGMENTS



Travel times into Seattle increased on both floating bridges, and peak periods started about 15 minutes earlier than baseline.

- Westbound SR 520 and I-90 bridges into Seattle increased by 10 percent (one minute 30 seconds)
- Eastbound SR 520 and I-90 bridges travel times into Bellevue decreased by seven percent (one minute)

During the afternoon peak period, travel times generally increased under five percent (between one to two minutes) on most routes, with more notable increases on I-5 and SR 520 floating bridge.

- Southbound I-405 from Lynnwood to Bellevue by 15 percent (three minutes), southbound I-5 from Seattle to Federal Way by 25 percent (seven minutes)
- Northbound I-5 from Federal Way to Seattle 16 percent (four minutes), Seattle to Everett 13 percent (four minutes)
- I-90 bridge (both directions) by five percent (one minute)
- Westbound SR 520 bridge travel times into Seattle by eight percent and eastbound travel times into Bellevue by three percent

City street trends

Although travel times experienced some variation month over month, they generally remained consistent with baseline averages.

Average weekday travel times on city streets generally remained consistent with baseline averages. Some of the more notable changes occurred on Mercer Street. On Mercer Street between Fairview Avenue and Queen Anne Avenue, travel times in both directions increased by approximately one minute 30 seconds compared to baseline averages.

Average weekday travel times on Saturdays and Sundays generally stayed near baseline averages, but weekends saw slightly more fluctuation than weekdays. Average weekend travel on Mercer Street between Fairview Avenue to Queen Anne Avenue increased in both directions soon after tolling but approached baseline averages further into the period. Weekend travel times on Alaskan Way between King Street and Western Avenue decreased as compared to baseline averages. Saturday travel times on northbound Fourth Avenue between Spokane Street and South Jackson Street saw increases steady throughout the period, while the southbound weekend travel times on First Ave and Fourth Ave decreased in November but increased in December.

2.3 Multimodal trends

The routes monitored are shown in **FIGURE 6**. The purple highlighted routes represent King County Metro route segments approaching the north and south SR 99 tunnel portal areas. The green highlighted routes represent segments analyzed through the Downtown Transit Pathways supplemental work.

Transit trends

King County Metro Water Taxi ridership

Water Taxi average weekday daily ridership showed minor increases from baseline for Vashon and large decreases for West Seattle.

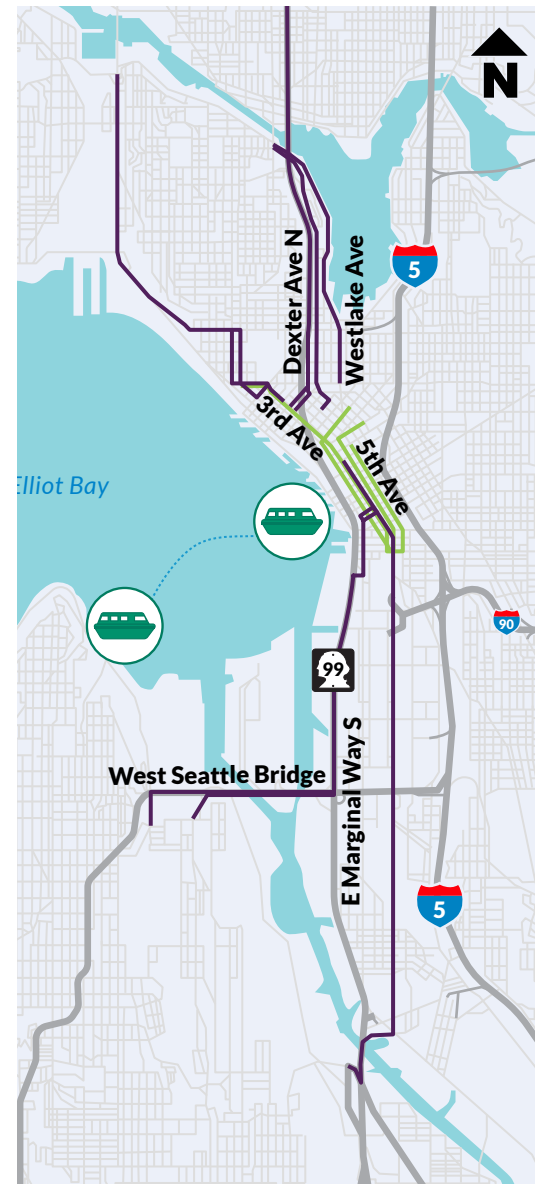
Water Taxi average weekday daily ridership was similar to the prior year for the Vashon sailings. The Vashon sailing had a 4 percent increase in ridership over the first three months of tolling. West Seattle experienced a large decrease in daily ridership compared to the prior year. The West Seattle sailing had a 31 percent decrease in ridership over the first three months of tolling. The largest contributor to this was the January 2019 baseline month, which had a non-typical high ridership of 1,660. When comparing January 2020 to January 2019, this is approximately a 56 percent decrease in ridership. January 2019 had higher than average ridership due to the two-boat service and expanded midday sailing schedule to meet the demand during the three-week viaduct closure period. When comparing January 2020 numbers to January 2018, the ridership only decreased by three percent.

King County Metro bus speeds

Most routes experienced slight decreases in speed; average speed on the West Seattle routes decreased by 17 percent.

During the tolling period, KCM generally experienced decreases in speeds across the seven bidirectional routes analyzed compared to the baseline. The routes that were most negatively impacted during this period were C Line and Route 120, originating in West Seattle, which experienced the most significant decreases in the southbound direction heading out of the city. C Line and Route 120 speeds decreased by about 35 percent (seven mph) and 28 percent (four mph) respectively during the afternoon peak. In the southbound direction during the morning peak, C Line and Route 120 speeds decreased by about 33 percent (eight mph) and 28 percent (five mph) respectively. On average, these routes decreased by 17 percent from the baseline. These two routes were rerouted a few times from the baseline period. The first phase of the interim pathway was in

FIGURE 6
TRANSIT ROUTE SEGMENTS



place until the Dearborn ramp opened, then the buses moved to the second phase of the interim pathway in March 2019, that used First Avenue through Pioneer Square with additional stops added. These route changes are a likely contributor to the decreases in speed. Most other routes experienced minor changes from the baseline averages.

King County Metro bus ridership

Bus ridership remained consistent with baseline averages.

Daily weekday ridership was compared to the month-to-month and year-over-year baseline for seven bidirectional routes analyzed³. During the tolling period (November 2019 to January 2020), ridership remained consistent with the November 2018 to January 2019 baseline. When comparing the individual months within this period, ridership numbers remained close to the baseline months (within 1,000 in terms of ridership). January 2019 was the month of the permanent viaduct closure, however ridership remained consistent with January 2018, which had the same overall ridership numbers compared to 2019.

Downtown transit pathways trends

Downtown transit vehicle speeds slightly decreased compared to the toll-free period, mostly during the month of January.

Downtown transit pathway travel speeds varied from six mph to eight mph during the first three months of tolling. Compared to the toll-free period months, the lowest average speed was six mph. During the first three months of tolling, January experienced the lowest overall average downtown transit speeds, with seven mph during the morning peak and six mph during the afternoon peak.

In November during the morning peak period, downtown transit vehicles traveled at an average speed of eight mph. Average speeds increased in the Downtown Seattle Transit Tunnel (DSTT) and on the Fifth and Sixth Avenue Pathway, while average speeds decreased on Second Avenue during the AM peak period. During the PM peak period, transit vehicles traveled at an average speed of 6.6 mph. Average speeds increased in the DSTT, while decreased on Fifth Avenue during the afternoon peak hour in November. One thing to note is that buses were still using the DSTT in the November baseline period and didn't come out of the tunnel until March 2019.

For the month of November, overall Link ridership in the downtown tunnel experienced slight increases during both the morning (8 a.m.) and afternoon (5 p.m.) peak hour. November morning peak hour (8 a.m.) Link ridership increased in November by less than 100 passengers per hour. Afternoon peak hour (5 p.m.) Link ridership increased in November by less than 100 passengers per hour. No Link ridership data was available for December and January due to agency challenges around collecting and reporting data during the Connect 2020 work.

³Ridership data is provided as weekly averages, which is the lowest resolution available via King County Metro (KCM). While most holidays were able to be excluded from the averages, the Jan. 20, 2020 holiday was not, as KCM operated on a weekday schedule that day.

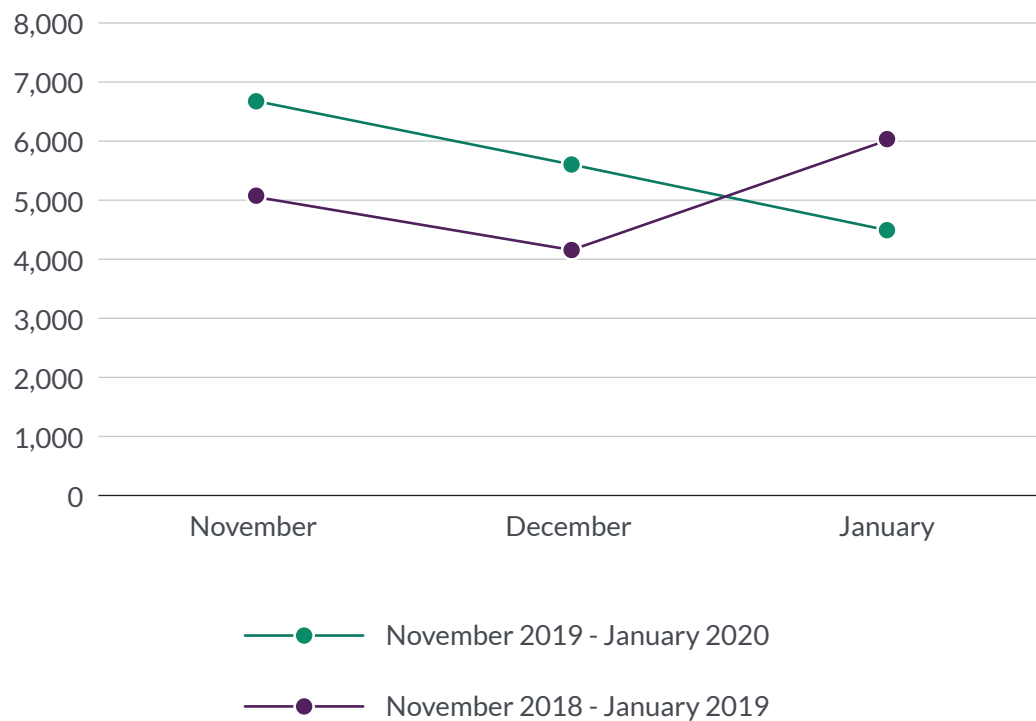
Bike trends

Bike ridership increased after the start of tolling but decreased in January, partially due to the snowy, wintry weather.

During the tolling period, the Seattle Department of Transportation observed mixed trends in bicycle trips on all major routes with bicycle counters into downtown. The routes monitored include Second Avenue, Fremont Bridge, Spokane Street Bridge, and the Elliott Bay Trail.

Total ridership increased by 10 percent in November 2019 - January 2020 when compared to November 2018 - January 2019. November bike ridership increased by 32 percent and December ridership increased by 35 percent when compared to the same months, one year prior. However, in January, bike ridership decreased by 25 percent in 2020 when compared with 2019, potential factors influencing this could be the snow event reducing ridership compared against the viaduct closure in 2019 which saw a significant increase in bike ridership.

FIGURE 7
AVERAGE WEEKDAY TOTAL BIKE RIDERSHIP

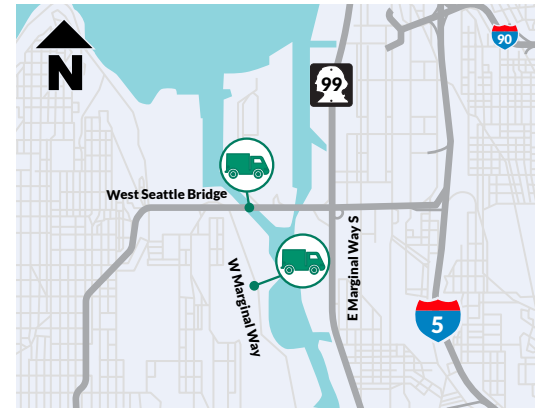


Freight vehicle classification

Freight volumes decreased along West Marginal Way, with mixed trends at the lower Spokane Street Bridge.

Vehicle classification, speed, and volume counts were performed for a single week each in May and June 2019 to comprise the baseline reference period and were performed once again post-tolling for a single week in December 2019. The two locations where counts were performed, at Southwest Spokane Street Bridge and on West Marginal Way, were selected based on the locations being on key freight corridors. Vehicle classification volumes were analyzed to provide additional awareness around freight operations as drivers adjusted their travel behavior between the toll-free tunnel period and the tolled tunnel period.

FIGURE 8
FREIGHT VEHICLE CLASSIFICATION LOCATIONS



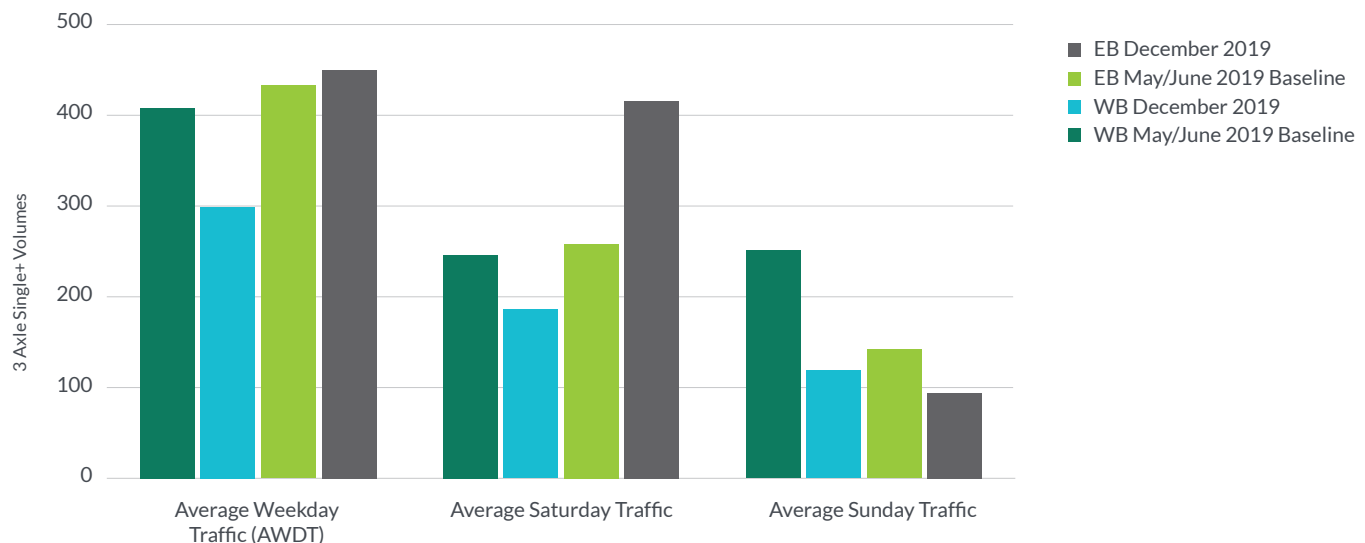
Southwest Spokane Bridge

Average weekday volumes of vehicles with three or more axles in the westbound direction decreased by 27 percent (109 vehicles) while the eastbound direction showed minor change when compared to baseline averages.

Average weekend three plus axle volumes generally decreased except for in the eastbound direction on Saturday.

- Westbound volumes decreased by 25 percent (60 vehicles) on Saturday and by 53 percent (132 vehicles) on Sunday
- Eastbound volumes increased by 62 percent (158 vehicles) on Saturday and decreased by 34 percent (48 vehicles) on Sunday.

FIGURE 9
FREIGHT VOLUMES AT SOUTHWEST SPOKANE STREET BRIDGE

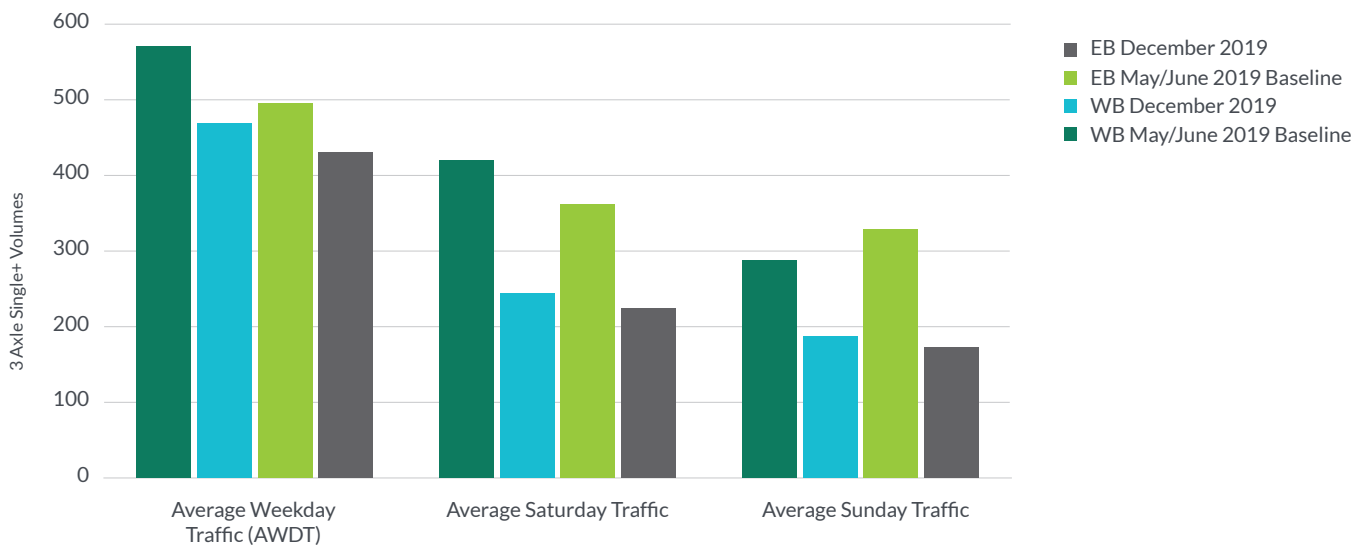


West Marginal Way Southwest and Southwest Idaho Street

Average weekday volumes of vehicles with three or more axles in the westbound direction decreased by 18 percent (101 vehicles) while the eastbound direction showed minor change when compared to baseline averages.

- Westbound volumes decreased by 42 percent (176 vehicles) on Saturday and 35 percent (101 vehicles) on Sunday
- Eastbound volumes decreased by 62 percent (158 vehicles) on Saturday and by 48 percent (156 vehicles) on Sunday.

FIGURE 10
FREIGHT VEHICLE VOLUMES AT WEST MARGINAL WAY



2.4 Tolling trends

Customer service center trends

Call volumes

Number of calls increased prior to tolling commencement; customer service representatives managed higher demand.

In the weeks leading up to toll commencement, during the second half of October and first week of November, call volumes increased by 30 percent – 60 percent compared to early October. **Good To Go!** customer service accommodated this higher demand by adding additional resources to respond to peak demand for new accounts and passes in the period surrounding when a new facility opens. The added customer service representatives responded to the increase in the number of calls while keeping waiting times low. Average call wait times during the first few weeks of tolling was under five minutes.

FIGURE 11
AVERAGE WEEKDAY CALL VOLUME BEFORE/AFTER TOLL COMMENCEMENT

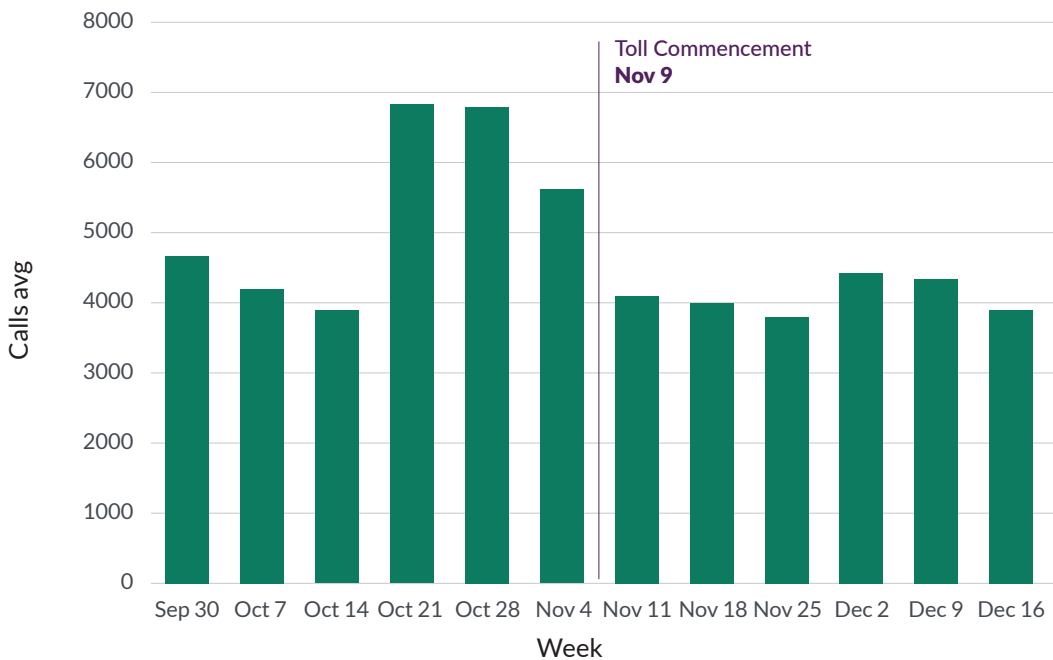
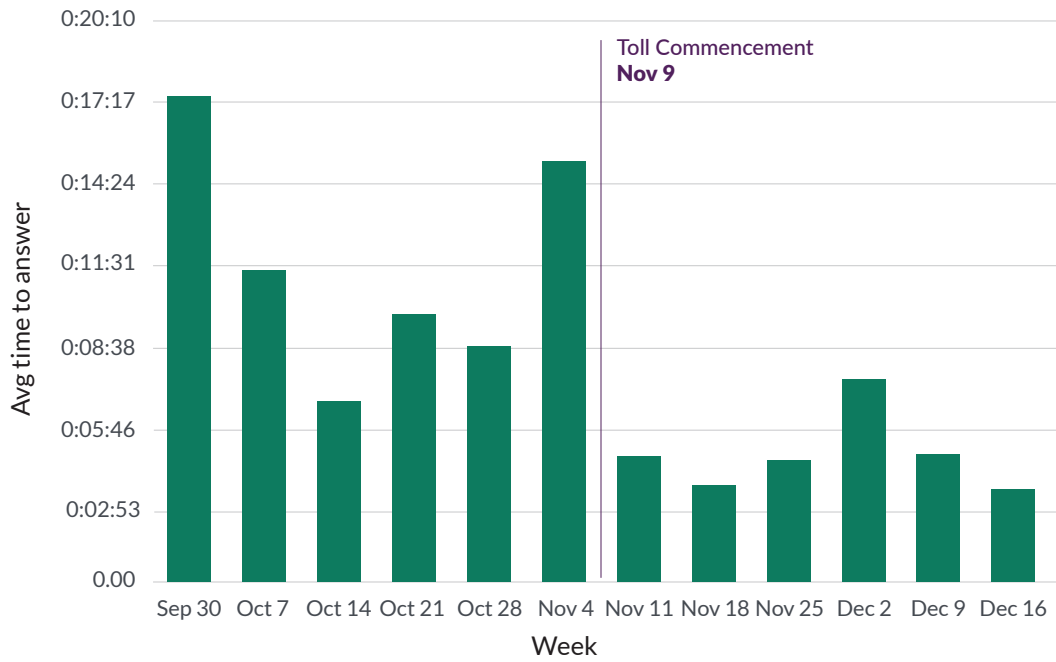


FIGURE 12

AVERAGE TIME TO ANSWER CALLS BEFORE/AFTER TOLL COMMENCEMENT (IN MIN:SEC, WEEKDAYS)

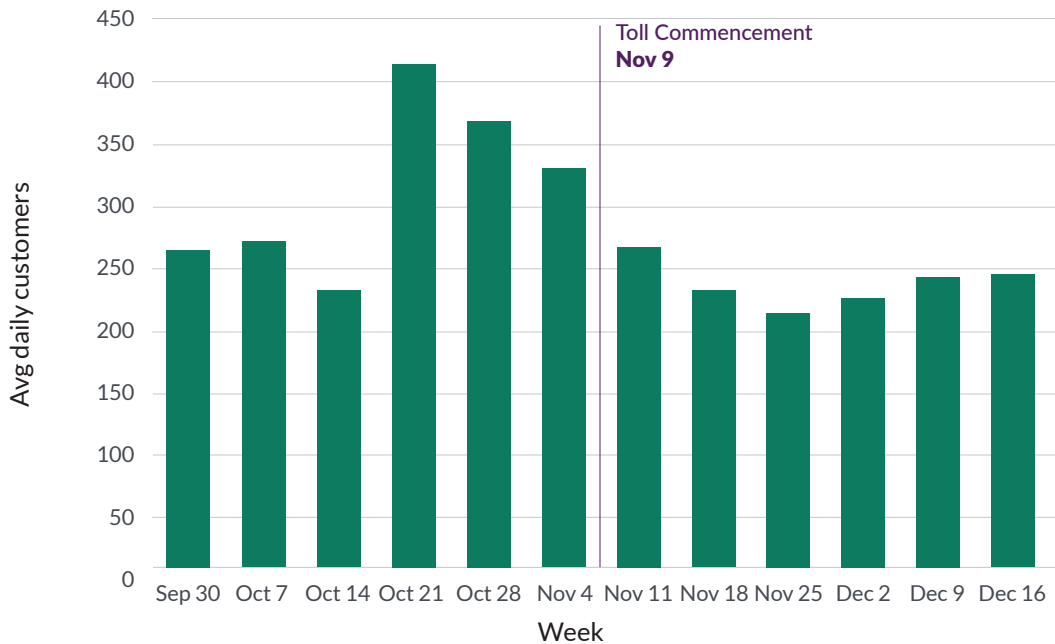


Walk-in centers

In-person visits increased to the walk-in centers prior to toll commencement.

The increased activity observed in **Good To Go!** operations was also observed in walk-in visitors to the customer service centers in Bellevue and the University District. Walk-in centers expanded their hours of operation to accommodate in-person visits. Following the first week of tolling, hours of operation returned to normal and walk-in visitors held steady through early December.

FIGURE 13
AVERAGE NUMBER OF WALK-IN VISITORS BEFORE/AFTER TOLL COMMENCEMENT (WEEKDAYS)

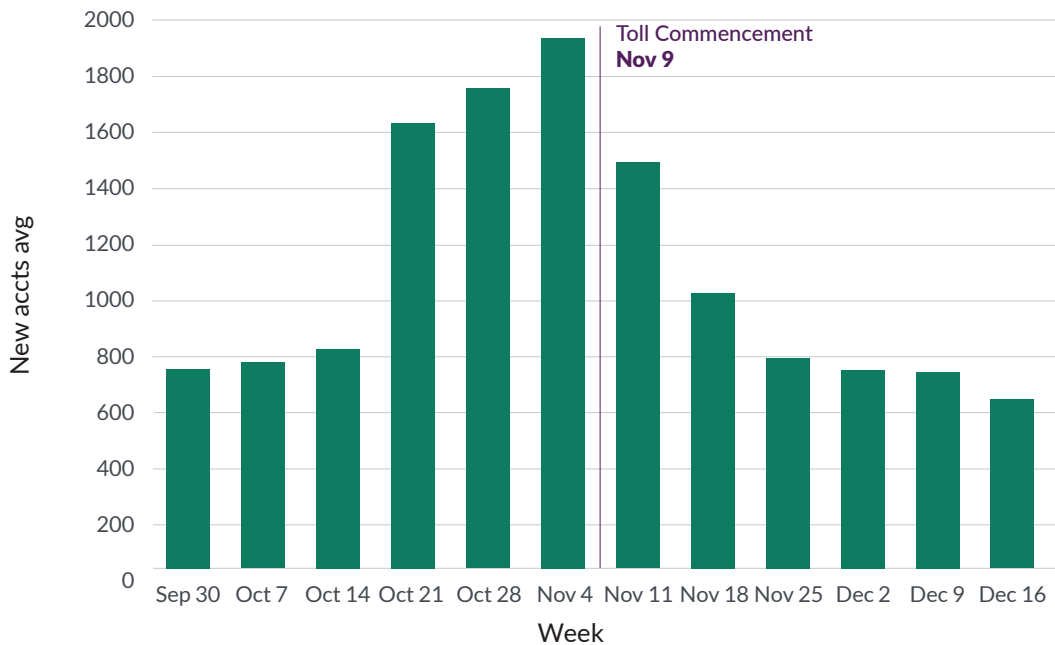


New accounts

Average number of new Good To Go! accounts increased prior to toll commencement, then tapered off by December.

During the second half of October and around toll commencement, opening of new **Good To Go!** accounts increased when compared to the first half of October. Drivers who used the SR 99 tunnel prior to toll commencement had the opportunity to receive a free **Good To Go!** sticker pass to add to their accounts, to avoid the extra cost for non-pass holders.

FIGURE 14
AVERAGE WEEKDAY NEW **GOOD TO GO!** ACCOUNTS BEFORE/AFTER TOLL COMMENCEMENT

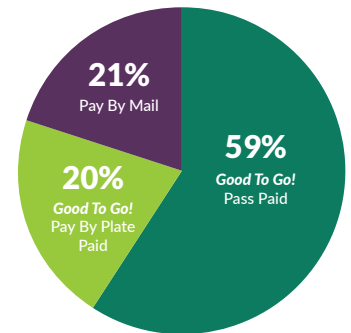


Good To Go! pass usage

Strong customer outreach led to a positive start with approximately 60 percent of tunnel users having a Good To Go! pass in their vehicles.

In the first three months of tolling, the proportion of transactions paid through a **Good To Go!** pass in the SR 99 Tunnel increased steadily from 56 percent to 64 percent. This proportion has been four percent to five percent higher during the peaks.

FIGURE 15
SR 99 AVERAGE WEEKDAY GOOD TO GO! PASS USAGE, SOURCE TOLL DIVISION



2.5 SR 99 Attitudes and Awareness Survey key takeaways

The most common expected alternatives to downtown include Interstate 5, First Avenue, Fourth Avenue, and Alaskan Way.

WSDOT conducted a series of surveys of drivers who travel in downtown Seattle to measure how commute patterns changed with the closure of the viaduct and opening of the SR 99 tunnel, as well as attitudes and awareness of SR 99 tunnel tolling. Three surveys were completed. The first took place in November 2017 to capture a baseline measurement before any major changes were made. The second survey was conducted in March 2019, after the tunnel opened. The third and final survey took place in December 2019, after tolling started in the tunnel. All surveys have been conducted online with a sample of 1,000+ downtown Seattle drivers.

Below are summarized results relevant to performance monitoring.

Tunnel usage has dropped slightly since tolling began, trips include even mix of daily commuting and leisure

Since tolling began, most survey respondents (77 percent) have traveled in the tunnel. The average number of reported trips per month in the tunnel has dropped from 9.3 to 7.4 since tolling started. Heavy tunnel users show a higher percentage of commuting, versus light users. I-5 remains the top reported alternative route to downtown.

Among survey respondents who use the tunnel monthly or more often reported:

- Weekday usage had a slight increase since the previous survey while weekend usage had a slight dip. Weekday usage (82 percent) is higher than weekend (47 percent), with Friday being the most popular day.
- During weekdays, 6 a.m. to 7 a.m. had the most northbound drivers compared to the later peak time. In the afternoon, peak driving time is 3 p.m. to 6 p.m.

- The tunnel has an almost even mix of leisure trips (48 percent) and non-leisure. Commuting (38 percent) and traveling for business (14 percent) compose a slight majority of drivers when added together.
- The majority (65 percent) drive the tunnel as a single occupancy vehicle, which has increased 8 percent since the second survey.

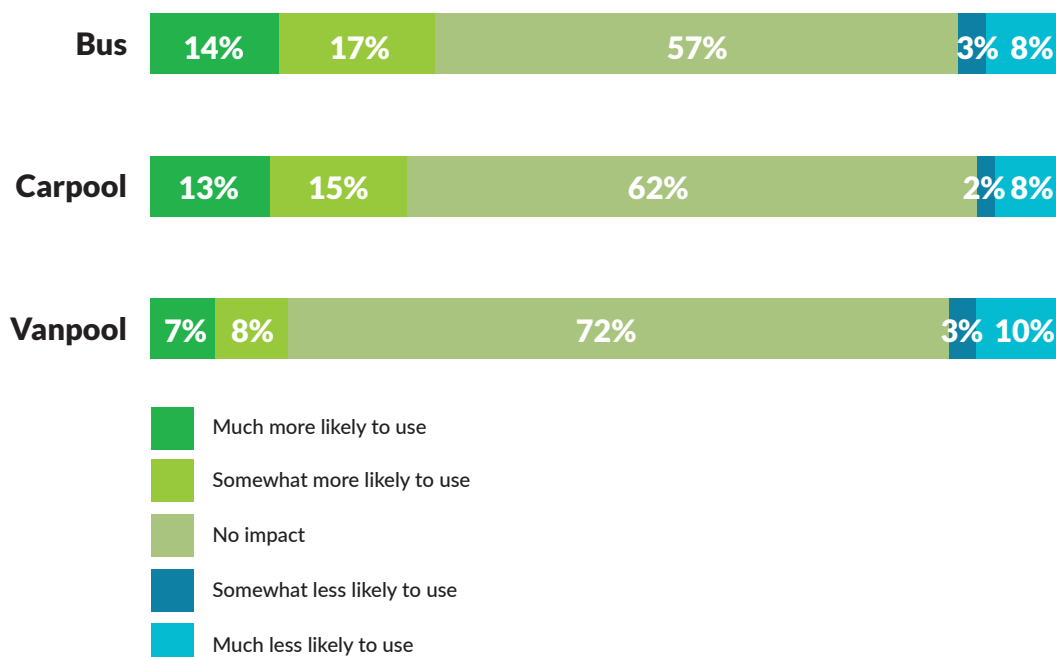
Tunnel use dropped notably among those who previously used the viaduct more frequently. Only 18 percent reported using the tunnel much more often, while 28 percent use it much less often.

- The top reason for increased usage of the tunnel over the viaduct remains the convenience of the tunnel, which includes being faster, better routes, and less traffic. More mentioned the faster travel this wave, perhaps due to the experience after trying the tunnel.
- The major reason for using the tunnel less often is the dislike of tolls, which increased to over 50 percent.

Many drivers report tolling does not persuade them to consider alternative travel methods

As seen in the third and final survey, the tolled tunnel doesn't persuade a majority of users to consider using other transportation options. Many drivers made transportation mode changes when the viaduct closed and the final survey reported that many maintained those commute habits.

FIGURE 16
DECEMBER 2019 SURVEY RESULTS, SOURCE TOLL DIVISION



3

Conclusion and next steps

The first three months of tolling on SR 99 was a success. SR 99 tunnel volumes remained higher than expected, partly due to the fact that many tunnel users prepared in advance by obtaining a **Good To Go!** pass prior to the start of tolling. Traffic volumes on I-5 remained close to baseline averages, as did transit ridership. Volumes increased on city streets parallel to the SR 99 tunnel, but travel times were not significantly impacted.

Data will continue to be collected from our agency data partners on a monthly basis. Following the one-year anniversary, the first 12 months of data will be analyzed, taking into consideration external impacts stemming from other regional and global issues, and included in an annual report to capture the trends reflecting the first full year of tolling on SR 99.

FIGURE 17
TOLLING PERIOD VOLUME AND TRANSIT RIDERSHIP TREND SUMMARIES BY SCREENLINE

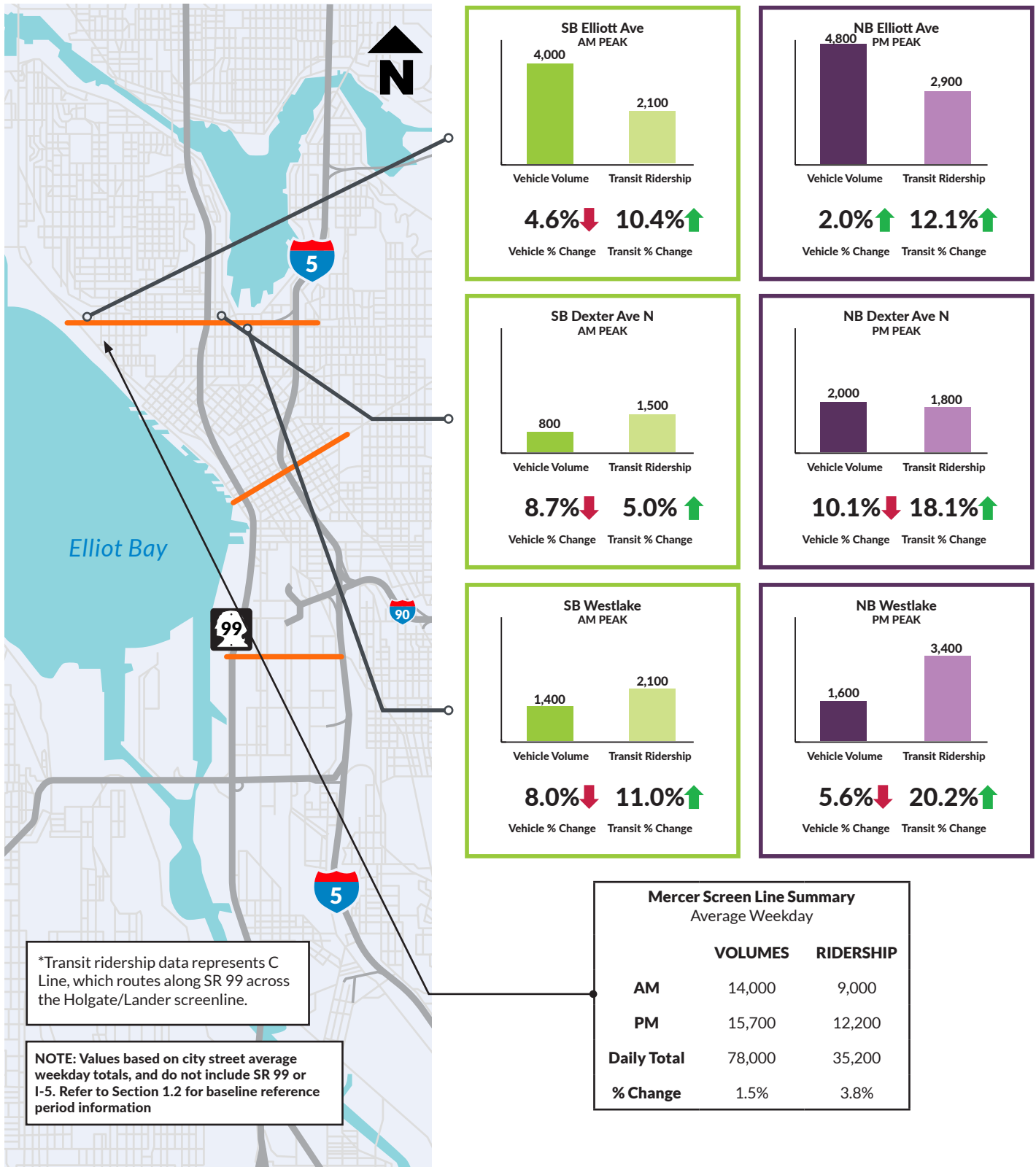


FIGURE 17 (CONT.)
TOLLING PERIOD VOLUME AND TRANSIT RIDERSHIP TREND SUMMARIES BY SCREENLINE

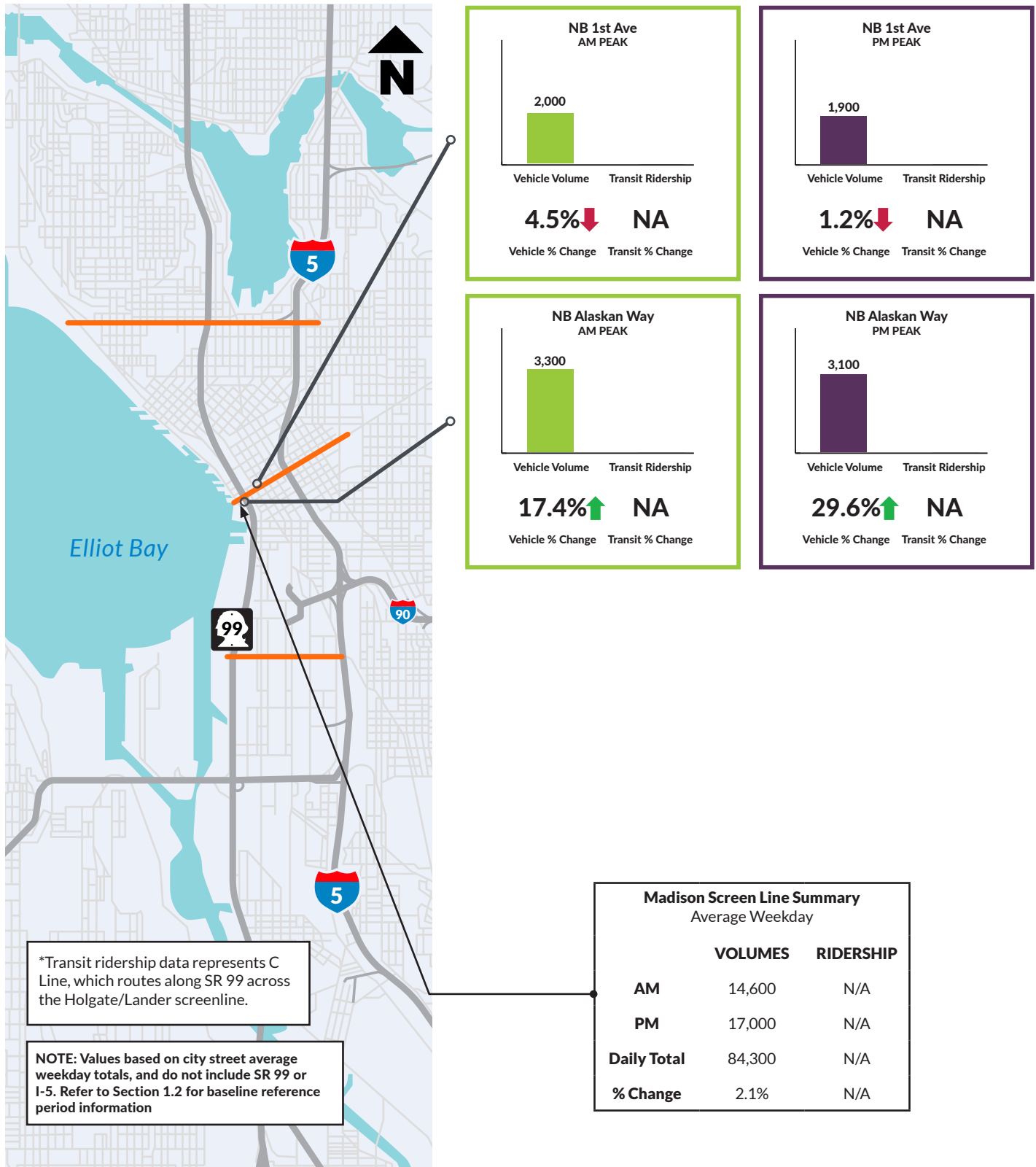


FIGURE 17 (CONT.)
TOLLING PERIOD VOLUME AND TRANSIT RIDERSHIP TREND SUMMARIES BY SCREENLINE

