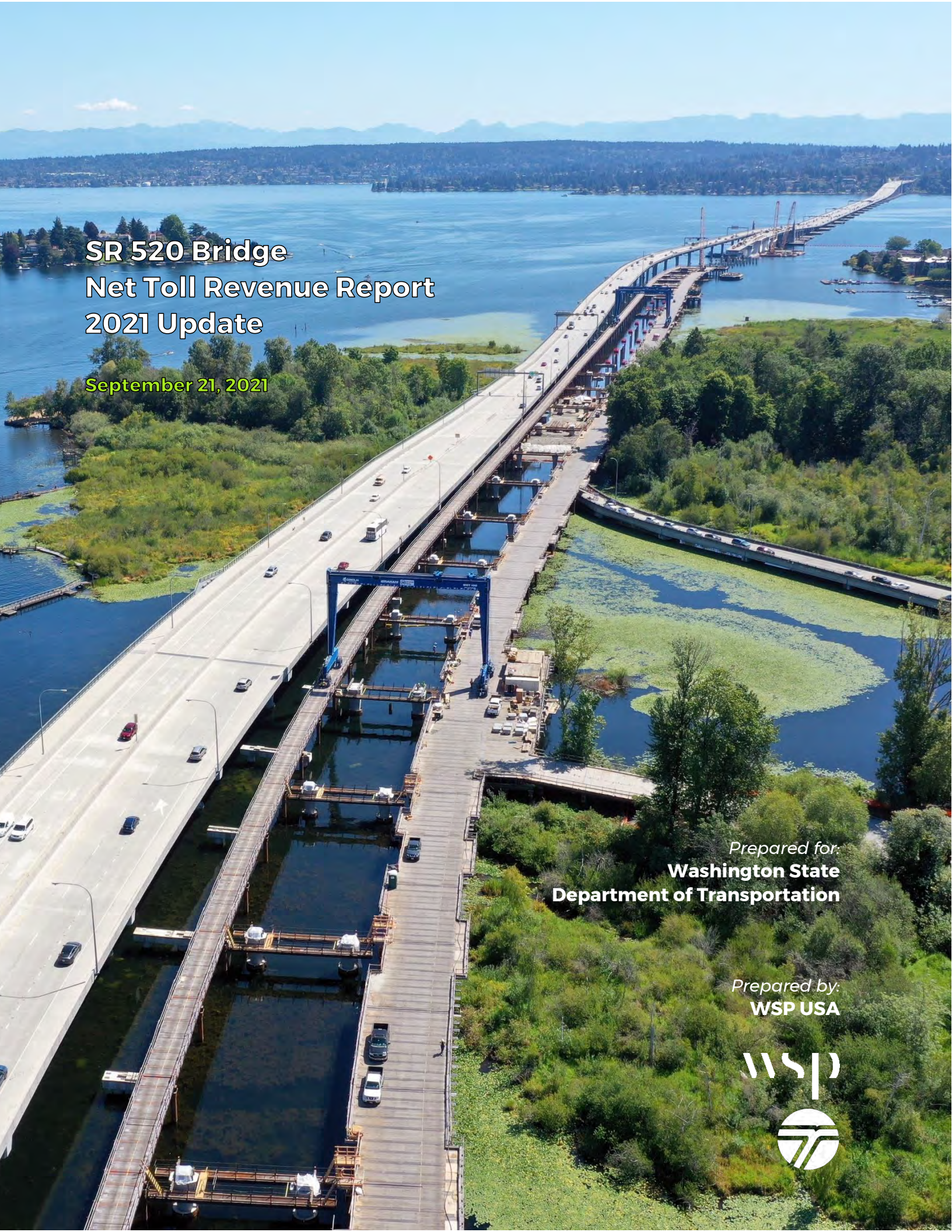

# SR 520 Bridge
# Net Toll Revenue Report
# 2021 Update

September 21, 2021

*Prepared for:*
**Washington State Department of Transportation**

*Prepared by:*
**WSP USA**

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# Acronyms and Abbreviations

| | |
|---|---|
| ACH | Automated Clearing House |
| ADA | Americans with Disabilities Act |
| AFS | Accounting and Financial Services |
| BOS | Back Office System (software) |
| CPR | Customer Program for Resolution |
| CSC | Customer Service Center (operations) |

| | |
|---|---|
| DES | Department of Enterprise Services Office of Risk Management |
| DOL | Department of Licensing |
| ESHB | Engrossed Substitute House Bill |
| ETL | Express Toll Lane |
| FTE | Full Time Equivalent |
| GTC | General Toll Consultant |
| HOV | High Occupancy Vehicle |
| HOT | High Occupancy Toll (lane) |
| IT | Information Technology |
| LES | Law Enforcement Systems |
| NOCP | Notice of Civil Penalty |
| NWR | Northwest Region (division of WSDOT) |
| OEO | Office of Equal Opportunity |
| ORM | Office of Risk Management |
| PBM | Pay By Mail |
| PBP | Pay By Plate |
| RSA | Revenue Stabilization Account (reserves) |
| RTS | Roadway Toll System |
| SOC-1 | Service Organization Control One |
| SR | State Route |
| STA | Short Term Account |
| T&R | Traffic and Revenue |
| TEF | Transportation Equipment Fund |
| TNB | Tacoma Narrows Bridge |
| WSDOT | Washington State Department of Transportation |
| WSF | Washington State Ferries (WSDOT Marine Division) |
| WSTC | Washington State Transportation Commission |
| YOE | Year of Expenditure |

# 1 | Introduction and Key Forecast Changes

## Background and Purpose

This report documents the preparation of the "June 2021 forecast" of net toll revenues for the State Route (SR) 520 Bridge across Lake Washington. The forecasts presented herein reflect the toll rates and policies adopted by the Washington State Transportation Commission (WSTC) on August 24, 2021, with the planned changes taking effect on July 1, 2023 (FY 2024). This *SR 520 Net Toll Revenue Report—2021 Update* builds upon previous annual forecasts, including the most recent "November 2019 forecast" and accompanying *SR 520 Bridge Net Toll Revenue Report—2019 Update*, dated April 24, 2020. As in the past years, WSDOT's statewide traffic and revenue consultant, Stantec, prepared the traffic and gross toll revenue potential (T&R) forecasts for the SR 520 Bridge that serve as the basis for the net toll revenue projections. Stantec's forecasts consider the potential impacts to traffic and revenue related to the continually evolving COVID-19 pandemic health crisis. Similarly, the June 2021 forecast of net toll revenue projections are based upon the latest available information about future toll collection and facility maintenance expenditures and revenue adjustments. This report documents the updated projections, describing the changes in key assumptions, inputs, and influences of operating experience compared to the previous November 2019 forecast, with select comparisons back to the initial projections from September 2011.

The net toll revenue projections are used to update the project's financial plan and represent the operating cash flow that would be available to pay debt service on toll financing, pay deferred sales tax on construction, and contribute to other reserve accounts, including one for periodic capital repair and replacement of facility and toll collection components. Specifically, the projections are used to demonstrate that tolls on the SR 520 Bridge are predicted to produce revenues in each fiscal year of the forecast in amounts sufficient for the state to meet its financial obligations in compliance with the bond covenants in Section 7.02(a) of Master Resolution number 1117 (MBR), and to support the WSTC as they opt to revise any toll rates or policies to be effective from July 1, 2023 (FY 2024).

All annual amounts in this document are expressed in terms of the state fiscal year (FY), which runs from July 1 to June 30. The SR 520 forecast horizon currently covers 36 years, extending from FY 2021 through FY 2056.

### September 2011 Forecast

For purposes of this document and related materials, the initial CDM Smith investment-grade traffic and gross toll revenue potential forecasts and accompanying net toll revenue projections that were used to support the initial October 2011 bond financing are collectively referred to as the "September 2011 forecast."

### September 2012 Forecast

In September 2012, as part of ongoing financial planning and the negotiation of a loan from the United States Department of Transportation (USDOT) through the Transportation Infrastructure Finance and Innovation Act (TIFIA), CDM Smith completed a revised traffic and gross toll revenue potential forecast. Accompanying net revenue projections were also prepared, along with memoranda covering these revisions. During their subsequent toll rate setting process, the WSTC opted to round toll rates to the nearest nickel ($0.05) for the July 1, 2013 (FY 2014) and future planned toll increases.

For purposes of this document and related materials, the traffic and gross toll revenue potential forecasts, along with the accompanying net toll revenue projections—inclusive of the minor revision for nickel rounding—are collectively referred to as the "September 2012 forecast."

### October 2013 Forecast

CDM Smith performed a comprehensive traffic and gross toll revenue forecast update in 2013. Detailed updates to the facility operations and maintenance (O&M) costs, toll collection O&M costs, and revenue adjustments were also prepared in late summer 2013 to yield updated net revenue projections. Collectively, these traffic and gross toll revenue forecasts, along with the net toll revenue projections, are referred to as the "October 2013 forecast."

### November 2014 Forecast

CDM Smith performed another comprehensive traffic and gross toll revenue forecast update in 2014. As in 2013, a detailed review of the facility O&M costs, toll collection O&M costs, and revenue adjustments were made in the summer and fall of 2014, ultimately leading to revised inputs and assumptions to select forecast components. Collectively, these current traffic and gross toll revenue forecasts, along with the accompanying net toll revenue projections, are referred to as the "November 2014 forecast."

### November 2015 Forecast

In preparation for the September 2016 final bond sale, another comprehensive traffic and gross toll revenue forecast update was prepared by CDM Smith in 2015. Their update incorporates new socio-economic forecasts, additional model years, traffic and tolling performance trends to date, and a revised construction closure schedule and roadway configuration related to the newly funded SR 520 "Rest of the West" improvements.

In the same manner as in previous forecasts, a detailed review of revenue adjustments, facility O&M and repair and replacement (R&R) costs, and toll collection O&M and R&R costs were made in the latter half of 2015, resulting in revised inputs, assumptions and net toll revenue projections.

Subsequent amendments to the 2015 traffic and revenue forecasts were completed in March 2016 to capture revised future toll rates and policies proposed and subsequently adopted by the WSTC. Specifically, previously planned step increases in weekday toll rates ranging from 12 to 18 percent by time of day plus a 2.5 percent increase on weekends was replaced with two 5 percent toll increases in FY 2017 and FY 2018, covering both weekdays and weekends. In addition, the night tolling from 11 PM to 5 AM was deferred one year from FY 2017 to FY 2018. Finally, the WSTC opted to maintain the current transit and registered vanpool exemptions, but not extend a toll exemption to carpools with three or more occupants, as originally assumed when the new floating bridge with HOV lanes opened in April 2016. The net revenue projections were similarly amended on March 25, 2016 and provided in support of toll rate setting activities and an update to the SR 520 financial plan.

### November 2016 Forecast

CDM Smith's 2016 traffic and gross toll revenue projections capture a number of minor refinements, including updated population and employment forecasts, actual patterns that reflect slight shifts in traffic by time of day and day of week, updated construction closure assumptions for FY 2017, the addition of impacts due to construction closures on the parallel I-90 bridge, and a slight reduction in the *Good To Go!* account share of total transactions. Overall, these changes result in lower traffic and revenue through FY 2025, and slightly higher values thereafter.

### November 2017 Forecast

In early 2017, the State contracted with Stantec to provide the November 2017 SR 520 traffic and revenue forecast. Stantec provided the updated traffic and revenue forecasts in late October 2017, and these forecasts form the basis for the net revenue projections documented in the *SR 520 Bridge Net Toll Revenue Report—2017 Update*. Stantec's traffic and gross toll revenue potential forecasts are based on their proprietary traffic and revenue forecasting tools and processes and reflect different sources of information and assumptions for population and employment forecasts, users' values of time, and toll payment method shares for *Good To Go!* account transponder pass and Pay By Plate transactions as well as Pay By Mail transactions. Compared to the previous November 2016 forecast prepared by CDM Smith, Stantec's November 2017 forecast had slightly lower toll transactions over the full forecast horizon and lower gross toll revenue potential estimates in most years, with the exceptions of FY 2019 where the number of construction closure days was revised downward, and the four years at the end of the horizon, FYs 2053-56.

### November 2018 Forecast

Stantec's 2018 traffic and gross toll revenue projections reflect revised socioeconomic and demographic projections and model adjustments to more accurately align with recent actual experience, including a revised distribution of payment methods and differentials in average toll rates between payment methods. Projected revenue gains due to both higher average toll rates and toll traffic forecasts are partially offset by the change in payment split assumptions and revisions to the construction schedule, the latter which reflects an additional year of restricted capacity in FY 2027 due to the revised timing for completion of the Portage Bay Bridge and I-5 Connector. Overall, these changes resulted in higher traffic and gross toll revenue potential in all years of the forecast period.

### November 2019 Forecast

Stantec's 2019 traffic and gross toll revenue projections reflect updated socioeconomic and demographic projections for the region, and this body of work represents the final pre-pandemic T&R forecast as a basis of comparison for future forecasts. Additional model adjustments were made to more accurately align with recent refinements on how tolls by payment method are categorized in reported data and differentials in average toll rates between payment methods. Further revisions to the construction schedule were incorporated to reflect the latest information available at the time of the forecast in mid-2019. Construction revisions were due to changes in the schedule for the Portage Bay Bridge and I-5 Connector. Overall, these changes resulted in minor changes to traffic and a half a percent reduction in gross toll revenue potential over the forecast horizon, primarily due to the shift of Pay By Mail trips to *Good To Go!* trips, which forgo the Pay By Mail incremental $2.00 toll rate.

### June 2021 Forecast

Stantec's 2021 traffic and gross toll revenue projections comprise refinements and adjustments to the previous pre-pandemic forecast to capture both the impacts of COVID-19 pandemic and beyond. Specifically, the June 2021 forecast incorporates the likely perpetuating effects of the pandemic on changing work patterns resulting in a future "new normal" in which there are fewer work-based trips in the regional network. Also, the forecast accommodates the revised toll schedule which includes a one-time tailored set of toll increases by time of day averaging 15 percent overall in FY 2024, and its impact on SR 520 bridge use. Overall, these changes resulted in a 10.2 percent decrease in forecast horizon toll

transactions while the forecast for gross toll revenue potential slightly increased by 0.6 percent over the forecast horizon, compared to the previous November 2019 forecast.

## Project Description

The SR 520 corridor stretches nearly 13 miles between I-5 in Seattle to the west and SR 202 to the east, crossing I-405 at about the halfway point, and serving various Eastside communities, including Bellevue, Kirkland and Redmond. The SR 520 Bridge Replacement and HOV Program includes the portion of the corridor between I-5 and I-405, and is comprised of five major components, the first four of which include construction funding supported by tolls:

1) Pontoon Construction;
2) Eastside Transit and HOV Project;
3) Floating Bridge and West Connection Bridge Project;
4) West Approach Bridge North; and
5) I-5 to Lake Washington (Rest of the West), which includes the West Approach Bridge South.

The total program cost is currently estimated at $4.51 billion, all of which is now funded. The final element of the $2.87 billion portion of the program that includes toll funding — the West Approach Bridge North — was completed in late summer of 2017, and with the bike/pedestrian connection completed in December 2017. Essentially, these program components with toll funding have replaced the existing four-lane floating bridge and upgraded the corridor to six lanes (two general purpose lanes and one high occupancy vehicle lane in each direction) between the west approach to the floating bridge in Seattle and the I-405 interchange on the Eastside.

In mid-2015, the State Legislature passed legislation establishing new transportation revenue (the Connecting Washington account) and included $1.64 billion in funding to complete SR 520's planned improvements between I-5 and the western shore of Lake Washington, referred to as the Rest of the West.[1] Additionally, the SR 520 Corridor Program received the $24 million balance of needed funding as $14 million authorized in 2015 and $10 million in existing agency resources authorized in 2014.[2] The Rest of the West improvements are not assumed to include any toll funding; however, construction activity associated with these improvements will lead to additional lane and full bridge closures, primarily during weekend and night periods between 11:00 PM and 5:00 AM through operational completion.

[1] See Chapter 44, Washington Laws of 2015 (2ESSB 5987) and Chapter 43, Washington Laws of 2015 (2ESSB 5988). Annual appropriated amounts can be found here: http://leap.leg.wa.gov/leap/Budget/Detail/2015/cTLEAPDoc2015NL-1_0629.pdf, project M00400R on page 8.

[2] See Chapter 10, Washington Laws of 2015 (2ESHB 1299) and Chapter 222, Washington Laws of 2014 (ESSB 6001)

**Exhibit 1: SR 520 Bridge Replacement and HOV Program Map**


*Note: this Project Map does not identify the cities of Aberdeen, Kenmore, and Tacoma elsewhere in the state where pontoon development and construction previously occurred under the SR 520 Floating Bridge design-build contract.*

WSDOT began tolling the existing SR 520 Bridge across Lake Washington in late December 2011 to help pay for a replacement floating bridge across the lake and other corridor improvements. Time of day variable tolling was implemented to manage congestion on the corridor, using all-electronic tolling with no toll booths.

More information including costs, benefits, maps, and photos can be found on the SR 520 Bridge Replacement and HOV Program website: http://www.wsdot.wa.gov/Projects/SR520Bridge/.

## Key Changes in the June 2021 Net Revenue Projections

This section highlights the key changes to the June 2021 net revenue forecast results compared with the previous November 2019 and initial September 2011 projections, measured over a common forecast horizon from FY 2021 through FY 2056. Exhibit 2 compares the primary components of the June 2021 forecast with the initial September 2011 forecast.

**Exhibit 2: Gross to Net Revenue Comparison—September 2011 and June 2021 (FY 2021-56)**

| Forecast Category (#) = T&R table column reference | Sep 2011 Forecast ($ millions) | June 2021 Forecast ($ millions) | Variance ($ millions) | Variance (%)* |
|---|---|---|---|---|
| **Total Toll Transactions (8)** | **1,295.1** | **1,227.7** | **(67.4)** | **–5.2%** |
| **Gross Toll Revenue Potential (11)** | **4,543.9** | **4,717.7** | **173.7** | **+3.8%** |
| Subtotal: Revenue Adjustments | (63.9) | (48.5) | 15.4 | –24.1% |
| Subtotal: O&M Costs | (1,362.1) | (1,419.1) | (57.0) | +4.2% |
| **Net Toll Revenue (30)** | **3,118.0** | **3,250.1** | **132.1** | **+4.2%** |
| Subtotal: R&R Costs + Deferred Sales Tax | (357.6) | (635.3) | (277.7) | +77.7% |
| Total after Deferred Sales Tax and R&R | 2,760.4 | 2,614.8 | (145.6) | –5.3% |

* A positive dollar variance on negative forecast values represents a cost (loss) reduction, with the negative percentage (%) variance representing percentage reduction in the cost (loss). The percentage change going from a negative value to a positive value or vice versa doesn't compute, and is only shown as a "+" or "–" based on the sign of the variance.

Exhibit 3 compares the primary components of the June 2021 forecast with the prior November 2019 forecast.

**Exhibit 3: Gross to Net Revenue Comparison—November 2019 and June 2021 (FY 2021-56)**

| Forecast Category<br>(#) = T&R table column reference | Nov 2019 Forecast ($ millions) | June 2021 Forecast ($ millions) | Variance ($ millions) | Variance (%)* |
|---|---|---|---|---|
| **Total Toll Transactions (8)** | **1,367.7** | **1,227.7** | **(140.1)** | **–10.2%** |
| **Gross Toll Revenue Potential (11)** | **4,690.9** | **4,717.7** | **26.8** | **+0.6%** |
| Subtotal: Revenue Adjustments | 31.4 | (48.5) | (79.9) | – |
| Subtotal: O&M Costs | (1,372.9) | (1,419.1) | (46.2) | +3.4% |
| **Net Toll Revenue (30)** | **3,349.4** | **3,250.1** | **(99.4)** | **–3.0%** |
| Subtotal: R&R Costs + Deferred Sales Tax | (603.8) | (635.3) | (31.5) | +5.2% |
| Total after Deferred Sales Tax and R&R | 2,745.6 | 2,614.8 | (130.8) | –4.8% |

* A positive dollar variance on negative forecast values represents a cost (loss) reduction, with the negative percentage (**%**) variance representing percentage reduction in the cost (loss). The percentage change going from a negative value to a positive value or vice versa doesn't compute, and is only shown as a "+" or "–" based on the sign of the variance.

## Traffic and Gross Revenues

- Total toll transactions for Stantec's June 2021 forecast over a comparable FY 2021-56 forecast horizon are 5.2 percent lower than the CDM Smith forecast projected in September 2011 and 10.2 percent lower than the previous Stantec November 2019 forecast.
    - Over the forecast horizon, Pay By Mail transactions are 10.5 percent lower, while *Good To Go!* transactions are 10.2 percent lower, than the November 2019 forecast.
- Over the near-term (FY 2021-30), the current toll transaction forecast is 16.4 percent below the November 2019 forecast and gross toll revenue potential is 8.7 percent lower, compared with 13.2 percent lower transactions and 6.7 percent lower gross toll revenue potential compared to the September 2011 forecast.
- Additional information regarding the changes in the June 2021 traffic and gross toll revenue potential forecasts can be found in Stantec's report, *SR 520 Bridge Traffic and Revenue Study 2021 Report*, dated August 13, 2021.

## Revenue Adjustments

- Revenue adjustments in the June 2021 forecast total a deduction of $48.5 million, which is $15.4 million lower than the $63.9 million deduction over the forecast horizon in the initial September 2011 forecast.
- Also, while the November 2019 forecast had revenue adjustments totaling a contribution of $31.4 million in revenue, on the contrary, the June 2021 forecast has revenue adjustments totaling a deduction of $48.5 million, thus resulting in a net reduction of $79.9 million compared to the prior forecast.
    - The primary reasons for the above decreases can be attributed to lower miscellaneous pledged revenues, decreased transponder sales and lower Pay By Mail rebilling fees.
- The June 2021 forecast extends the assumption of higher uncollectible revenue (leakage) in the near term due to delays in the recently completed transition to the new Back Office System (BOS) software and Customer Service Center (CSC) operations vendors which are anticipated to reduce leakage, and from revenue not recognized (unbillable) due to unreadable license plates and the assumed rate of unidentified owners/addresses.

  - The share of unreadable license plates is assumed to be 7.0 percent in FY 2021, 6.5 percent in FY 2022, and 6.0 percent in FY 2023 and beyond with full transition to the new BOS and CSC vendors. The previous November 2019 forecast assumed similar levels of leakage but with the reductions occurring one year earlier.
  - In working with the Roadway Toll System (RTS) equipment vendor, WSDOT has seen recent improvements in plate image readability that would indicate leakage rates are slightly lower than prior forecast assumptions. However, the prior plate image readability leakage rates are being retained as a conservative approach until there is more operational experience with integration of the RTS with the new back office system.
  - The percentage share of unidentified owners/addresses is assumed to be 10.5 percent in FY 2021, 7.5 percent in FY 2022, and 4.5 percent in FY 2023 and beyond with the full transition to the new CSC vendors. The previous November 2019 forecast assumed similar levels of leakage but with the reductions occurring one year earlier, thus reaching steady state in FY 2022. The current assumptions remain below the uniform 15 percent unidentified owners/addresses rate assumed in the September 2011 forecast.

- Miscellaneous pledged revenues, which primarily consist of interest earnings on account balances and revenue from property sales, are $58.2 million lower than the November 2019 forecast value.
- Transponder sales revenues are $12.4 million lower than the November 2019 forecast, and down by $23.3 million compared to the September 2011 forecast. The overall decrease in forecasted transactions due to anticipated behavioral changes resulting from the COVID-19 pandemic, which are linked to a lower projection for sales volumes, is the primary cause of the change.

### Operating and Maintenance Costs

- Compared to the September 2011 forecast, overall O&M costs in the June 2021 forecast are $57 million higher (4.2 percent) over the forecast horizon. Key changes increases and decreases include:
  - Higher bridge insurance premiums
  - Higher credit card fees
  - Lower transponder purchase and inventory costs
  - Lower state and consultant operations costs
  - Lower BOS and CSC vendor costs
- Compared to the November 2019 forecast, overall O&M costs for the June 2021 forecast including the roadway facility, toll collection, insurance and credit card fees, are $46.2 million (3.4 percent) higher over the forecast horizon.
  - The increase in estimated toll collection O&M costs can be primarily attributed to higher insurance premiums which are partially offset by both the effects of lower transaction estimates and the reduced share of systemwide costs allocated to SR 520 as follows:
    - Insurance premium costs were forecasted to be 68.5 percent ($122.5 million) higher over the forecast horizon. The increase can be primarily attributed to the persistence of challenging market conditions over the past few years, with key

drivers such as catastrophic events (hurricanes, wildfires, winter storms) and the COVID-19 pandemic resulting in increased property risk exposure, potential threat to business continuity and loss of operational revenue. Furthermore, on the back of attritional losses and unprofitability over the past 18 months, many insurance underwriters have re-evaluated and increased their pricing.

- Transponder purchase and inventory costs were forecasted to be 19.3 percent ($12.3 million) lower over the forecast horizon. The primary driver is the decreased transponder sales volumes, which is a result of lower *Good To Go!* transaction estimates due to the long-term negative impact on mobility of the COVID-19 pandemic.
- The total BOS and CSC O&M costs were 13.1 percent ($63.9 million) lower over the forecast horizon. For FY 2021, BOS and CSC O&M costs are higher due to a longer than previously anticipated transition period extending the previous vendor contract to provide operational overlap while the new BOS and CSC vendors and systems became fully operational, which occurred in July 2021 (FY 2022). From FY 2022 forward, decreases in BOS costs can be attributed to the smaller share of SR 520 transactions relative to systemwide levels compared to the 2019 update. The primary reason for lower CSC costs is the lower forecast for SR 520 toll transactions due to the anticipated permanent decrease in trip-making as a result of the COVID-19 pandemic. Additionally, a decreased systemwide cost per transaction, based on preliminary budget values provided by the new CSC vendor, also contributes to CSC cost reductions.
- State O&M costs were forecasted to be 0.5 percent ($1.7 million) lower over the forecast horizon. The higher state fixed costs are offset by lower passthrough toll bill printing and postage costs, due to the decrease in transactions over the long-term horizon, from the longer term anticipated behavioral impacts on travel partially due to the anticipated permanent decrease in trip-making as a result of the COVID-19 pandemic creating increased remote work and education options.
- Credit card fee projections were revised upward by 1.7 percent ($1.9 million) over the forecast horizon, primarily due to higher assumed credit card fee rates, to account for the new "Pay As You Go" customer account options. The new account option, versus the required minimum $30 account replenishment when a prepaid account hit the minimum balance, will likely result in more frequent bank card processing of lower dollar amounts versus less frequent account replenishments of larger values as some existing and new customers choose Pay As You Go accounts, thus increasing the processing costs.
- RTS O&M costs over the forecast horizon were $0.18 million (0.44 percent) higher, due to the reallocation of systemwide communication services costs based on facility toll transactions instead of number of active toll facilities.

- The June 2021 update of the facility O&M cost estimate reflects a $0.4 million decrease (0.2 percent) in comparison to the November 2019 update. The decreased facility O&M cost estimate is entirely due to the reduced 2019-21 biennium appropriation budget which is a result of reduction in Transportation Equipment Fund (TEF) rental costs.

### Net Revenues

- As a result of changes to the traffic and gross toll revenue potential forecasts as well as revisions to the revenue adjustments and O&M costs, the June 2021 forecast for net toll revenues totals $3.25 billion over the forecast horizon. This is 4.2 percent ($132.1 million) higher than the original September 2011 forecast, and 3.0 percent ($99.4 million) lower than the November 2019 forecast over the forecast horizon.

### Other Project Uses of Toll Revenues

- The original projection for total deferred sales tax to be repaid with toll revenues was $124.2 million in the September 2011 forecast, to be paid in 10 equal installments starting with FY 2022. This value was subsequently revised to reflect changes in the project scope due to addition of a new West Approach Bridge North for westbound traffic in 2012 and additional pontoon costs in 2013, bringing the total to $159.4 million for the November 2013 and 2014 forecasts. The November 2015 forecast revised the 10-year payment schedule for deferred sales tax payments, deferring the first payment by one additional year to FY 2023. This change accounts for a revised completion schedule for the toll-funded West Approach Bridge North, with no change in the amount (deferred sales tax payments begin in the fifth full year following operational completion). There were no further changes for the subsequent forecasts.
- Periodic facility repair and replacement (R&R) costs for the items specifically identified to be paid from toll revenues in the June 2021 forecast total $401.5 million over the forecast horizon. This represents an increase of 85.6 percent ($185.1 million) from the original September 2011 forecast, and an increase of 6.7 percent ($25.1 million) compared to the November 2019 forecast.
    - Changes in facility R&R estimates from the September 2011 forecast to subsequent forecasts are due to updates to required standard bridge inspections, higher projected estimates for bridge surface grinding, bridge deck sealer, strip seal expansion joints, and replacement of anchor cables, and added costs for the aforementioned increase in project scope adding the West Approach Bridge North structure.
    - The increase in facility R&R costs from November 2019 forecast to the June 2021 update are largely due to reevaluated unit costs, updated project markup percentages, and additional programmed deck sealing project costs.
- The June 2021 forecast for toll collection R&R costs totals $74.4 million, which is $57.4 million higher than the original September 2011 forecast, and about 6.4 million (9.4 percent) higher than the November 2019 forecast. The increase in toll collection R&R costs can be attributed to higher CSC vendor procurement costs and increases in RTS network equipment R&R costs as follows:
    - CSC R&R costs were forecasted to be 12.5 percent ($5 million) higher than the 2019 update. The primary drivers for the variance was the delay in the vendor transition resulting in costs being deferred into FYs 2021-22 and inclusion of costs for the final CSC procurement cycle in FYs 2054-55, based on guidance from WSDOT. These increases overshadow the decrease in costs due to SR 520's lower allocation share of thes systemwide costs.
    - RTS R&R costs over the forecast horizon were 4.4 percent ($1.2 million) higher than the November 2019 forecast. The primary driver was based on WSDOT guidance to include the costs related to the final vendor procurement cycle commencing in FY 2056 (previously

not considered), and the costs for facility and TMC network equipment incurred every 10 years with the first replacement anticipated in FY 2023.

## Summary of Changes in Projected Net Revenue

Exhibit 4 below compares the June 2021 forecast, item by item, with the November 2019 forecast over the forecast horizon. Starting with gross toll revenue potential, the table lists the period totals for each revenue adjustment and expenditure deduction that collectively yield net toll revenue. Each component in the table includes its column number reference (#) in the June 2021 T&R table located in Appendix A as Exhibit 29. Negative values in parentheses refer to costs or revenue deductions, both of which have the effect of lowering net revenues.

**Exhibit 4: Net Revenue Component Comparison—November 2019 / June 2021 (FY 2021-56)**

| Forecast Category<br>(#) = T&R table column reference | Nov 2019 Forecast ($ millions) | June 2021 Forecast ($ millions) | Variance ($ millions) | Variance (%)* |
|---|---|---|---|---|
| **Gross Toll Revenue Potential (11)** | **4,690.9** | **4,717.7** | **26.8** | **+0.6%** |
| Toll Payment Discounts and Fees (12) | 86.0 | 77.4 | (8.6) | –10.0% |
| Revenue Not Recognized (13) | (163.5) | (161.9) | 1.6 | –1.0% |
| Unpaid Toll Revenue (14) | (201.6) | (195.1) | 6.6 | –3.3% |
| Recaptured Tolls at *Good To Go!* Rates (15) | 20.8 | 20.9 | 0.0 | +0.2% |
| Miscellaneous Pledged Revenues (17) | 122.4 | 64.2 | (58.2) | –47.6% |
| Transponder Sales Revenue (18) | 64.6 | 52.2 | (12.4) | –19.2% |
| Pay By Mail Rebilling Fees (19) | 69.9 | 62.5 | (7.4) | –10.6% |
| Tolls Recovered at Pay By Mail Rates (20) | 32.8 | 31.3 | (1.5) | –4.4% |
| Subtotal: Revenue Adjustments | 31.4 | (48.5) | (79.9) | – |
| Credit Card Fees (22) | (115.4) | (117.4) | (1.9) | +1.7% |
| Toll Collection O&M | (918.9) | (841.1) | 77.8 | –8.5% |
| *Transponder Purchase & Inventory Costs (23)* | *(64.0)* | *(51.6)* | *12.3* | *–19.3%* |
| *State and Consultant Operations Costs (24)* | *(325.1)* | *(323.4)* | *1.7* | *–0.5%* |
| *Roadway Toll Systems (RTS) O&M Costs (25)* | *(41.8)* | *(41.9)* | *(0.2)* | *+0.4%* |
| *CSC Operations Vendor O&M Costs (26)* | *(447.1)* | *(390.7)* | *56.5* | *–12.6%* |
| *BOS Software Vendor O&M Costs (27)* | *(40.9)* | *(33.4)* | *7.5* | *–18.2%* |
| Routine Facility O&M Costs (28) | (159.7) | (159.4) | 0.4 | –0.2% |
| Bridge Insurance Premiums (29) | (178.9) | (301.3) | (122.5) | +68.5% |
| Subtotal: O&M Costs | (1,372.9) | (1,419.1) | (46.2) | +3.4% |
| **Net Toll Revenue (30)** | **3,349.4** | **3,250.1** | **(99.4)** | **–3.0%** |
| Deferred Sales Tax (31) | (159.4) | (159.4) | - | - |
| Periodic Facility R&R (32) | (376.4) | (401.5) | (25.1) | +6.7% |
| Periodic Toll Equipment and CSC R&R (33) | (68.0) | (74.4) | (6.4) | +9.4% |
| **Total after Deferred Sales Tax and R&R** | **2,745.6** | **2,614.8** | **(130.8)** | **–4.8%** |

* A positive dollar variance on negative forecast values represents a cost (loss) reduction, with the negative percentage (**%**) variance representing percentage reduction in the cost (loss). The percentage change going from a negative value to a positive value or vice versa doesn't compute, and is only shown as a "+" or "–" based on the sign of the variance.

Over the forecast horizon, the current net revenue projections — which are inclusive of the planned FY 2024 toll increase averaging 15 percent — are 3.0 percent lower than the previous forecast. Downstream uses of net revenue are $31.5 million higher, with an increase in periodic toll equipment and CSC R&R costs as well as an increase in periodic facility R&R costs.

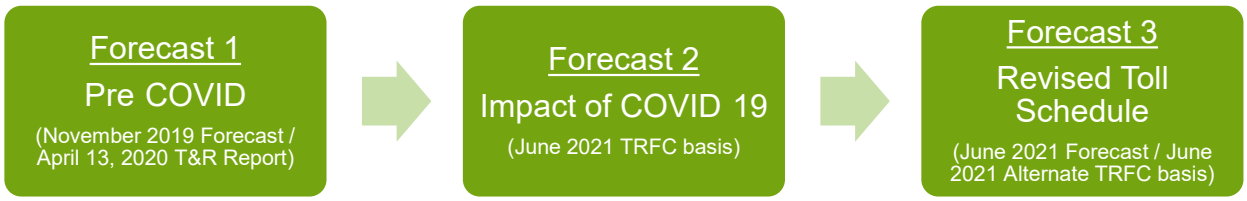
# 2 | Traffic and Revenue Overview

## Toll Traffic and Gross Toll Revenue Potential

Annual toll traffic and gross toll revenue potential projections were prepared by Stantec based on the completed floating bridge and Eastside projects with six lanes (one HOV and two general purpose lanes in each direction) plus a phased schedule for constructing the Rest of the West, which would complete six lanes from the floating bridge through the Montlake interchange and west to I-5.

Stantec's November 2019 forecasts did not consider the impacts to traffic and revenue related to the COVID-19 pandemic crisis; rather, they represented a scenario where the pandemic did not occur. Subsequent to this forecast being developed in November 2019 (Forecast 1), several factors have caused the forecast to require adjustments, including incorporating the anticipated long-term impacts of the pandemic in reducing commute trips (Forecast 2), and a planned increase to the toll schedule averaging 15 percent (Forecast 3). These changes are presented in Exhibit 5.

**Exhibit 5: Stantec Traffic and Revenue Forecast Refinement**




* TRFC stands for Washington State Transportation Revenue Forecast Council

- Forecast 1 — the November 2019 Forecast — was finalized in April 2020 and is a *pro forma* forecast through the year 2056 that does not include the effects of the COVID-19 pandemic. This forecast is documented in the November 2019 T&R Report dated April 13, 2020.

- Forecast 2 was finalized in June 2021 to incorporate the near-term and anticipated long-term effects of the pandemic on trip making and travel behavior, assuming the existing toll schedule. This analysis included revised travel demand modeling with reductions in future work-based trips on the transportation network estimating a new normal for the post-pandemic environment.

- Forecast 3 (June 2021 Forecast), prepared in June 2021, modified Forecast 2 to accommodate the proposed (now adopted) new toll schedule. The travel demand modeling tools were used to assess additional toll diversion by time of day as a function of the revised toll schedule.

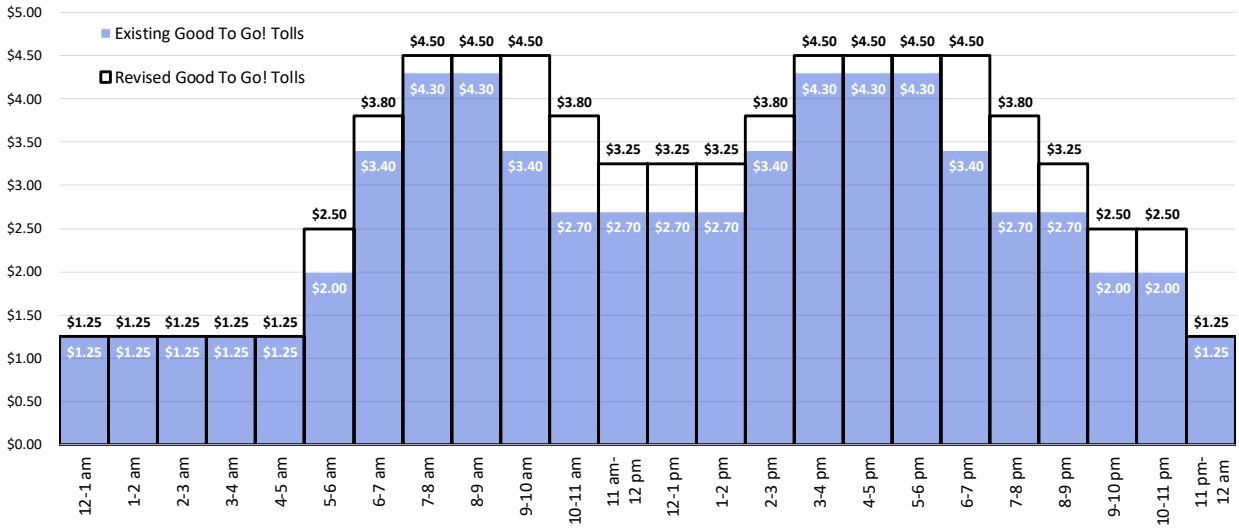
As described earlier, the June 2021 forecast incorporates the adopted revisions to the toll schedule planned to go into effect on July 1, 2023 (FY 2024). Time-of-day tailored toll rate increases averaging 15 percent are set to occur at that time. The term "tailored" acknowledges different percentage increases by time of day, and includes a minimal percentage increase in the morning and afternoon peak periods but expands those peak periods by one hour, no increase to the overnight tolls, and somewhat higher midday and evening tolls. Additionally, the following rules that apply to the current toll rates will continue with the FY 2024 toll increases.

- The pay by mail surcharge remains at $2 for 2-axles, $3 for 3-axles, $4 for 4-axles, $5 for 5-axles, and $6 for 6+-axles.

- The Pay by Plate toll rate is the *Good To Go!* pass toll rate plus a $0.25 photo enforced fee.
- Weekend rates are assessed for the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

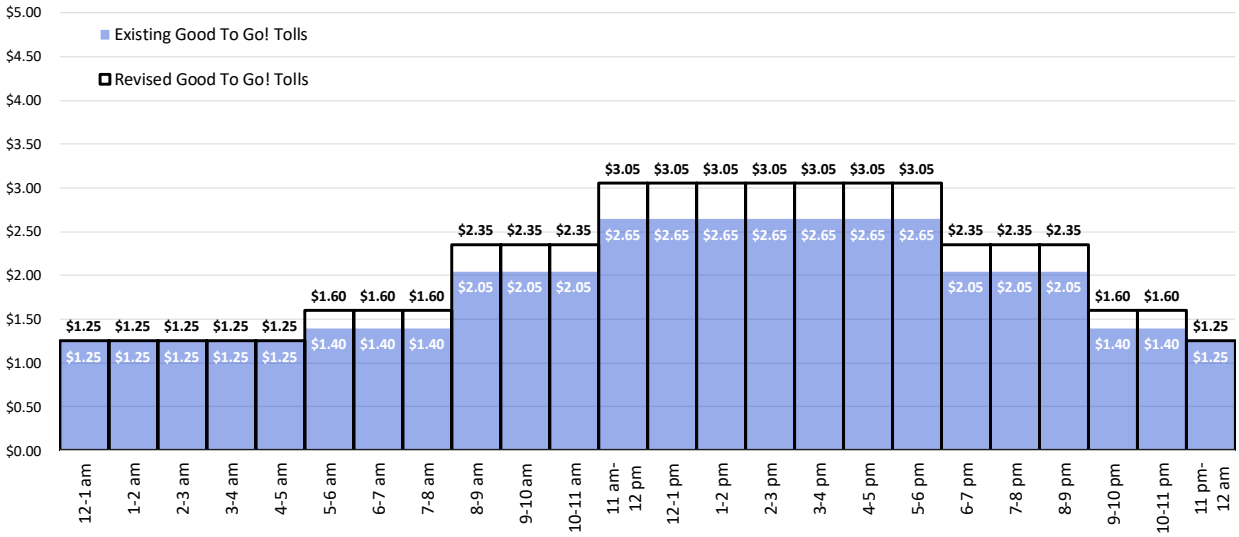
The current and revised weekday toll rate schedules are presented below in Exhibit 6. The white space above the shaded bars shows the difference between the existing and new weekday toll rates by each hour. The new tolls take effect on July 1, 2023 (FY 2024).

**Exhibit 6: Weekday Toll Rate Schedule Changes in FY 2024**




The current and revised weekend toll rate schedules are presented below in Exhibit 7. As above, the white space above the shaded bars shows the difference between the existing and new weekend toll rates by each hour.

**Exhibit 7: Weekend Toll Rate Schedule Changes in FY 2024**




The June 2021 annual traffic and gross toll revenue potential forecasts extend out through FY 2056 and serve as inputs to the estimation of net toll revenues.

As documented herein, both the volume of toll transactions and amount of gross toll revenue potential impact certain cost estimates, and thus, the net revenue projections. Exhibit 8 illustrates Stantec's projected toll transactions for the June 2021 forecast, compared to the previous November 2019 forecast. Exhibit **9** illustrates the corresponding gross toll revenue potential comparisons through FY 2056, noting that the June 2021 forecast includes the adopted toll increase in FY 2024, but excludes the impact of a withdrawal of funds from the SR 520 Revenue Stabilization Account (RSA) in FY 2021 to augment toll revenues in that year. The annual forecast detail for the June 2021 traffic and gross toll revenue potential by fiscal year can be found in columns 2-11 of the Exhibit 29 T&R table in Appendix A.

**Exhibit 8: Stantec Toll Transaction Forecast Comparison (FYs 2021-56)**

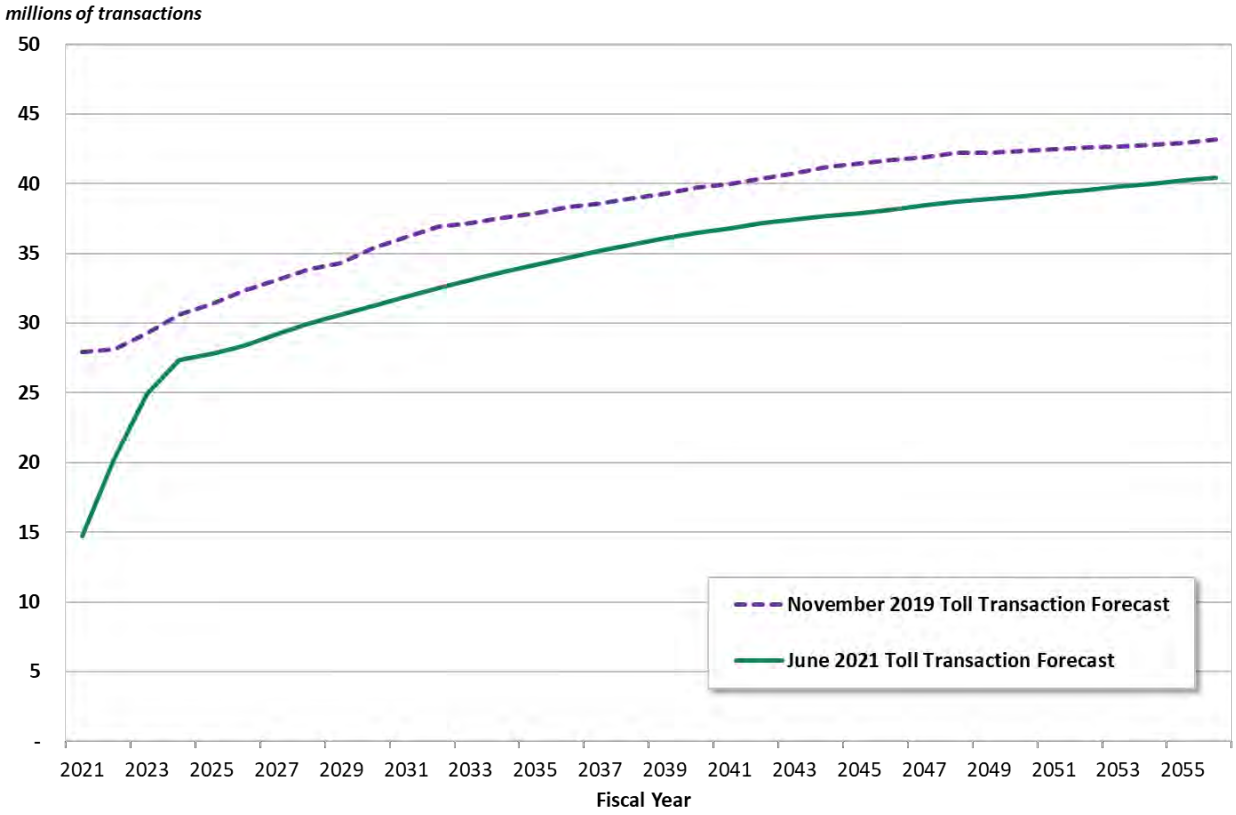
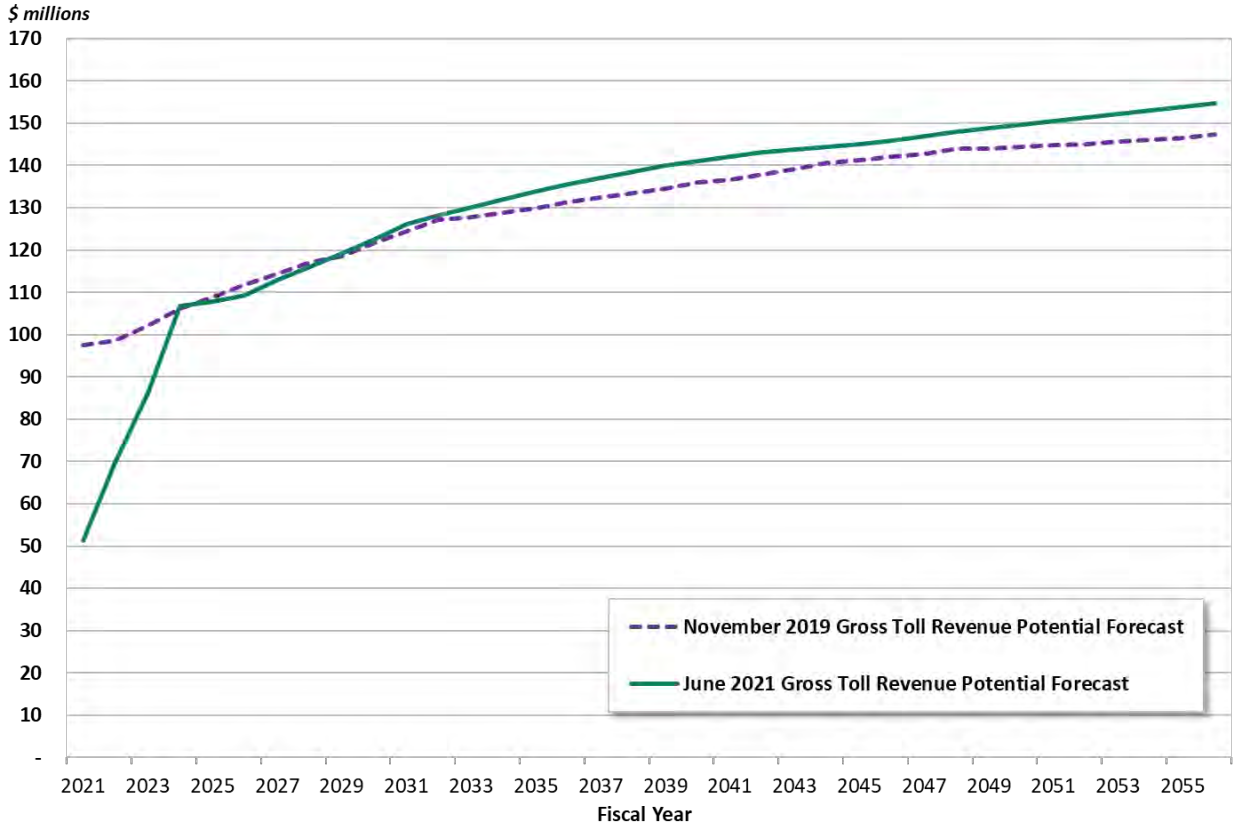


**Exhibit 9: Stantec Gross Toll Revenue Potential Forecast Comparison (FYs 2021-56)**




## Payment and Toll Transaction Types

The second key input received from Stantec is the output distribution of traffic (toll transactions) and revenue by toll payment method. This information is used to estimate the costs of collection that differ between user types, as described later in this report. Stantec prepares forecasts for two main categories of customers: prepaid *Good To Go!* registered account-holders, using either transponder passes or license plates (Pay By Plate), and unregistered (non-account) Pay By Mail customers.

### *Good To Go!* Account Transactions

When *Good To Go!* customers register for and set up a prepaid account, they have two options for how their vehicle may be identified for toll payment: they can purchase a pass (transponder) for their vehicle(s), and/or they can register for "Pay By Plate" in which a picture of the vehicle's license plate is captured and linked to their account for payment, with an additional $0.25 processing fee.

Previously, a *Good To Go!* account required a minimum opening deposit of $30. All accounts established on-line were automatically enrolled in auto-charge account replenishment. Replenishment could either be tied to a credit or debit card, or direct withdrawal from a checking or savings account. When an account reached a minimum balance threshold (e.g., $6), the account would be replenished by a pre-selected amount of at least $30, typically using automatic replenishment. Alternatively, a customer could contact the CSC and arrange for manual replenishment, though this is not common.

With the recent transition to new BOS and CSC vendors, WSDOT will give customers the option of having a "zero balance account". This "Pay As You Go" option will still require an automatic method to collect toll payment, but rather than maintaining a prepaid balance, toll charges will be allowed to accrue until a certain dollar amount threshold is reached or an interval of time has elapsed, at which point the credit/debit card or bank account will be debited for the outstanding tolls.

### Pay By Mail / Non-Account Transactions

Customers who do not have a *Good To Go!* account (unregistered users) will be billed for their toll using a photo tolling system and Pay By Mail billing process. Vehicles passing through the toll facility that are not registered via a transponder pass or license plate number to a *Good To Go!* account will trigger the Pay By Mail billing process. Using a photo of the license plate, the plate number will be read and matched with vehicle registration data to obtain the owner's name and mailing address from the Washington State Department of Licensing (DOL) or from a contracted vendor in the case of other states. A bill will then be mailed to the registered owner for the applicable Pay By Mail toll rate (plus any additional fees that may incurred for late payment). Pay By Mail customers will have 80 days and two invoice cycles from the time of travel to pay their toll before the transaction is considered unpaid and becomes subject to a civil penalty. The Pay By Mail toll rate for two axle vehicles was initially $1.50 higher than the applicable *Good To Go!* rate for each time of day. The Washington State Transportation Commission gradually increased this increment, and in 2016, adopted a step up to a $2.00 increment for two axle vehicles, consistent with the previous forecast assumption. Like the base *Good To Go!* toll, the Pay By Mail increment increases for vehicles with three or more axles, with the increment equal to $1.00 per axle up to a maximum of $6.00. The Pay By Mail toll increments are assumed to remain unchanged for the rest of the forecast period.

Although the incidence of use is very low, it is possible for customers without a *Good To Go!* account to self-initiate toll payment before or after travel via opening a Short-Term Account prior to receiving a bill in the mail. This process effectively allows the user to establish a 14-day temporary account linked to a credit or debit card, which may be opened up to 10 days prior, or up to three days after, the first travel day.

Virtually all of the toll trips by customers without a *Good To Go!* account are projected to be processed as Pay By Mail transactions in which the customer responds to a toll bill received in the mail, with less than one percent initiating payment via a Short-Term Account. At the beginning of FY 2020, the $0.50 discount for the Short-Term Account payment method was discontinued. In its place, a new option allows a customer to pre-register their vehicles' license plates to a *Good To Go!* account without requiring an initial deposit or maintaining a minimum account balance — the aforementioned zero balance account — which will became available with the recent transition to new vendor. It is unknown at this time what the incremental cost of collection or leakage rates will be for this option. Once sufficient data from actual experience is available, adjustments in projected payment method splits and associated leakage assumptions may be required.

### Projected Gross Toll Revenue and Transactions by Payment Type

Projections for the percentage shares of *Good To Go!* and non-account toll transactions provided in Stantec's forecast are shown for representative years in Exhibit 14 in the next section. Over time, it is estimated that the share of *Good To Go!* account customers will increase to an assumed ceiling of 90.5 percent, while the share of non-account (Pay By Mail) customers will decrease. Marketing efforts, the expansion of tolling to other WSDOT facilities, technology advancements, and customer incentives (the lower toll rate for account-based toll payments) are among the factors that will influence the market share distribution between account and non-account customers.

As part of the estimation of toll payment fees and discounts described later in this report, the Stantec estimated market shares by payment method include several sub-categories. *Good To Go!* transactions are subdivided into transponder pass transactions and Pay By Plate transactions, as shown in Exhibit 14 in the next section, with their percentage shares relative to total transactions.

## Gross to Net Toll Revenue

Toll transactions and gross toll revenue potential forecast values by payment type are provided by Stantec as the initial inputs used in the net revenue forecasts.

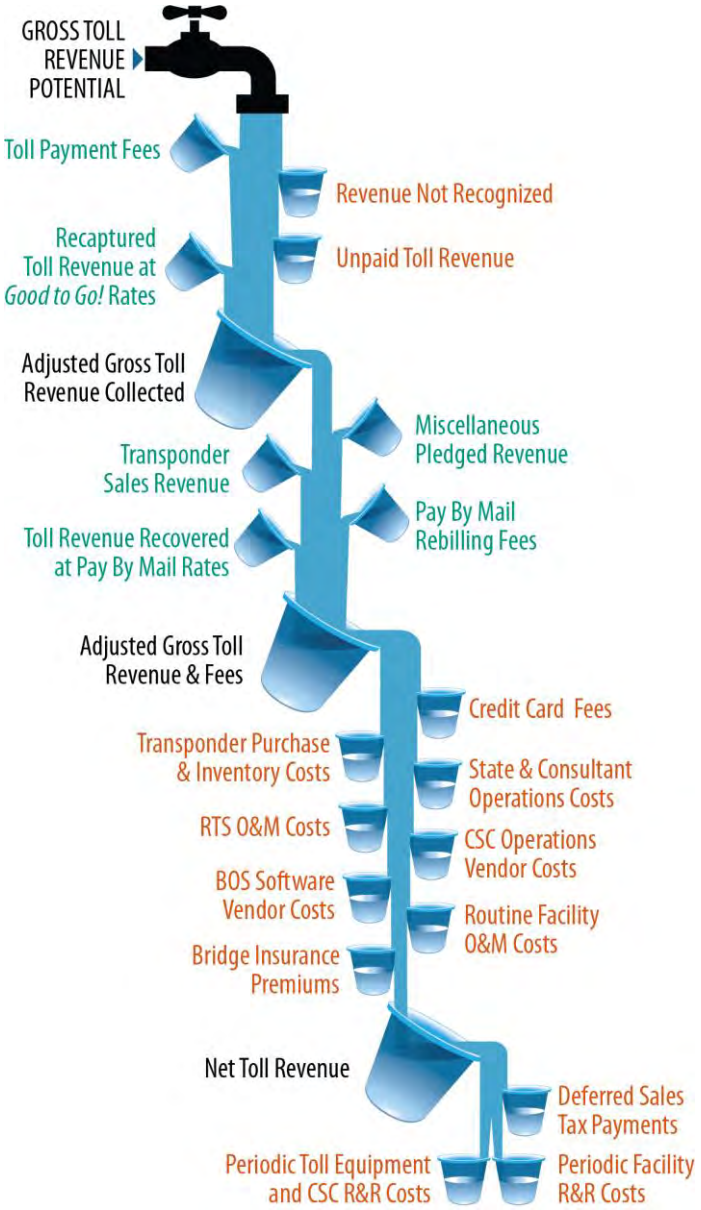
Exhibit 10 to the right illustrates the flow of funds or "waterfall" of revenue adjustments and expenditures that are projected to occur in transitioning from gross toll revenue potential to the net revenues available to support project financing.

The 2021 net toll revenue report is organized around this waterfall by presenting the revisions to assumptions and values for each "bucket." Consistent with the toll traffic and gross revenue forecasts, the projections for the revenue adjustments and O&M expenditure items that yield net revenues were prepared for the FY 2021-56 forecast horizon.

A detailed T&R table provided as Exhibit 29 in Appendix A provides the annual toll transactions and the annual dollar projections for each of the waterfall elements listed in Exhibit 10, shown in numbered columns. As the sections of this report cover the net revenue components in the waterfall diagram, reference is made to annual values for each component in the Appendix A, Exhibit 29 T&R table by their column number.

Note that while the waterfall follows the structure of the T&R table, the subsequent uses of the net toll revenues in the bottom three buckets actually follow a separate flow of funds in the financial plan that account for annual contributions to debt service and various reserve accounts.

**Exhibit 10: Net Revenue Waterfall**



# 3 | Net Toll Revenue Performance in Fiscal Years 2020-21

Exhibit 11 compares the actual performance in FY 2020, the eighth full fiscal year of operations, with the comparable projections from the previous November 2019 forecast. Exhibit 12 on page 19 provides a similar comparison of the preliminary performance in FY 2021 to that year's projections from the November 2019 forecast.

**Exhibit 11: FY 2020 Actual Revenue and November 2019 Forecast Comparison**

| FY 2020 Category | Forecast vs. Actual Comparison for Net Revenue Items ($ millions) | | | % Variance from Forecast[1] |
|---|---|---|---|---|
| | Nov 2019 Forecast | Actual Values[0] | Variance from Forecast | |
| **Gross Toll Revenue Potential** | **95.7** | **72.1** | **(23.6)** | **–24.7%** |
| Toll Payment Discounts and Fees | 1.5 | 1.3 | (0.2) | –14.0% |
| Revenue Not Recognized | (5.3) | (2.9) | 2.5 | –46.4% |
| Unpaid Toll Revenue | (4.5) | (4.9) | (0.3) | +7.7% |
| Recaptured Toll Revenue at Good To Go! Rates | 0.4 | 0.9 | 0.5 | +104.7% |
| **Subtotal: Adjusted Gross Toll Revenue Collected** | **87.8** | **66.6** | **(21.2)** | **–24.2%** |
| Miscellaneous Pledged Revenues | 2.3 | 7.0 | 4.7 | +201.9% |
| Transponder Sales Revenue | 1.0 | 0.7 | (0.3) | –26.8% |
| Pay By Mail Rebilling Fees & Miscellaneous Fees[2] | 1.5 | 1.1 | (0.4) | –28.1% |
| Recovered Toll Revenue | 0.7 | 1.4 | 0.7 | +91.9% |
| Credit Card Fees | (2.2) | (1.5) | 0.7 | –31.8% |
| Toll Collection O&M Costs[3] | (19.2) | (14.5) | 4.6 | –24.1% |
| Routine Facility O&M Costs | (2.7) | (2.0) | 0.7 | –25.4% |
| Bridge Insurance Premiums | (3.4) | (3.4) | 0.0 | - |
| **Net Toll Revenue** | **66.0** | **55.4** | **(10.5)** | **–16.0%** |

[0] Actual values calculated from CSC Data, the Unbilled Transaction Report, and Monthly Toll Business Report.

[1] A positive dollar variance on negative forecast values represents a cost (loss) reduction, with the negative percentage (%) variance representing percentage reduction in the cost (loss), a "positive" outcome.

[2] Miscellaneous fees include NSF, account statement, and bank transaction fees, and are not forecasted.

[3] Toll Collection O&M costs includes Transponder Purchase and Inventory costs, RTS, CSC/BOS vendor costs, and State and Consultant Operations costs.

The following summarize the key differences between actual FY 2021 performance and the November 2019 forecast.

- **Actual Toll transactions** were 24.0 percent lower while **gross toll revenue potential** was 24.7 percent lower than Stantec's pre-pandemic November 2019 forecast for FY 2020, as a result of the pandemic's severe negative impacts on travel in the final four months of FY 2020.

  *The reported FY 2020 value for the forecast metric of gross toll revenue potential is not actually observed; rather it is estimated from adjusted gross toll revenues collected along with actual discounts, fees and unpaid tolls, plus estimates of revenue not recognized.*

- **Adjusted gross toll revenue collected** was 24.2 percent below the pre-pandemic November 2019 forecast for FY 2020. Variances in **toll payment discounts and fees** and **revenue not**

**recognized** were commensurate with and primarily the result of the drop in traffic as opposed to changes in other factors. **Unpaid toll revenue** after 80 days and two invoices was slightly higher than forecasts despite materially fewer actual Pay By Mail transactions and may reflect changes in payment compliance by those whose who found themselves un- or underemployed when the economy nose-dived early in the pandemic.

- Since the November 2016 forecast, unpaid tolls after 80 days and two invoices that are subsequently collected from mailing a notice of civil penalty (NOCP) are categorized and accounted for in two different ways as follows:
  - **Recaptured toll revenue at *Good To Go!* rates** accounts for toll revenue eventually collected from a NOCP transaction at the appropriate *Good To Go!* toll rate as a result of the Customer Program for Resolution (CPR), with the $40 civil penalty either waived or not applicable. These revenues are associated with toll payment resolution whereby a new *Good To Go!* account is opened for the customer or a payment issue for an existing account is rectified. The revenue recovered through the CPR program is assumed to flow directly into the SR 520 Toll Account (16J) and is reported in the "Tolling Revenue" line within the SR 520 financial statements.
  - **Toll revenue recovered at Pay By Mail rates** accounts for toll revenue recovered from NOCPs at the Pay By Mail rates, with or without an adjudication hearing or payment of the accompanying $40 civil penalty. These recovered revenues flow into the Civil Penalty Account (17P) and are assumed to be legislatively transferred to the SR 520 Toll and Fee Account (16J) in the subsequent biennium, where they are reported as an "Operating Transfer In" within the SR 520 financial statements.
  - Both collection measures of delinquent toll bill payments were approximately double their forecasted values despite the toll traffic forecast coming in 24 percent below projections. This is likely reflect ongoing recovery efforts including the CPR incentive for Pay By Mail customer to migrate to *Good To Go!* accounts.
- **Miscellaneous pledged revenue** were materially higher as a result of the state receiving a lump sum payment in lieu of installments for the sale of the Grays Harbor casting basin property where the largest bridge pontoons were constructed.
- **Credit card fees** were lower than projected due to lower gross toll revenues than forecasted.
- **Toll collection O&M costs** were lower than forecasted, primarily due to lower toll transactions than forecasted which reduced SR 520's share of systemwide costs and lower systemwide costs as a result of lower than anticipated toll division operating costs.
- **Routine facility O&M costs** were 25.4 percent lower than forecasted as less actual maintenance was required, though the savings are only marginally attributed to the lower traffic volumes.
- **Net toll revenue** ended up 16 percent lower than projected in the November 2019 forecast due to COVID-19 pandemic induced drop in traffic and gross toll revenue in the final four months of FY 2020.

Preliminary gross-to-net toll revenue performance figures for FY 2021 are compared to the November 2019 projections in Exhibit 12. The values shown are preliminary as of 8/17/2021 and are subject to change with the forthcoming financial close of FY 2021.

Given the preliminary status of these values, FY 2021 revenues and costs elsewhere throughout the rest of this report remain and are labeled as forecast values as of the 8/5/2021 date when the June 2021 forecast net toll revenue projections were finalized. FY 2021 traffic and revenue forecasts include nine months of actual data through March 2021.

**Exhibit 12: Preliminary FY 2021 Actual Revenue and November 2019 Forecast Comparison**

| FY 2021 Category | Forecast vs. Actual Comparison for Net Revenue Items ($ millions) | | | % Variance from Forecast[1] |
|---|---|---|---|---|
| | Nov 2019 Forecast | Preliminary Actual Values[0] | Variance from Forecast | |
| **Gross Toll Revenue Potential** | **97.6** | **52.1** | **(45.5)** | **–46.6%** |
| Toll Payment Discounts and Fees | 1.6 | 0.9 | (0.6) | –40.1% |
| Revenue Not Recognized | (4.3) | (2.5) | 1.8 | –41.0% |
| Unpaid Toll Revenue | (4.7) | (4.4) | 0.3 | –5.7% |
| Recaptured Toll Revenue at Good To Go! Rates | 0.5 | 0.6 | 0.1 | +25.6% |
| **Subtotal: Adjusted Gross Toll Revenue Collected** | **90.6** | **46.6** | **(44.0)** | **–48.6%** |
| Miscellaneous Pledged Revenues | 2.5 | 1.0 | (1.5) | –59.1% |
| Transponder Sales Revenue | 0.9 | 0.5 | (0.4) | –46.8% |
| Pay By Mail Rebilling Fees & Miscellaneous Fees[2] | 1.6 | 0.7 | (0.9) | –54.1% |
| Recovered Toll Revenue | 0.7 | 1.0 | 0.3 | +33.9% |
| Credit Card Fees | (2.4) | (1.0) | 1.4 | –58.0% |
| Toll Collection O&M Costs[3] | (15.9) | (14.1) | 1.9 | –11.7% |
| Routine Facility O&M Costs | (2.8) | (1.6) | 1.2 | –43.4% |
| Bridge Insurance Premiums | (3.9) | (4.1) | (0.2) | +5.2% |
| **Net Toll Revenue** | **71.4** | **29.1** | **(42.3)** | **–59.2%** |

[0] Values are preliminary as of 8/17/2021 and subject to change with the financial close of FY 2021.

[1] A positive dollar variance on negative forecast values represents a cost (loss) reduction, with the negative percentage (%) variance representing percentage reduction in the cost (loss), a "positive" outcome.

[2] Miscellaneous fees include NSF, account statement, and bank transaction fees, and are not forecasted.

[3] Toll Collection O&M costs includes Transponder Purchase and Inventory costs, RTS, CSC/BOS vendor costs, and State and Consultant Operations costs.

FY 2021 actual toll transactions were 47.3% below their November 2019 forecast levels. Similarly, actual gross toll revenue potential, adjusted gross toll revenue collected, and net toll revenues were 46.6, 48.6, and 59.2 percent below their November 2019 forecast values, respectively. The percentage decrease in net toll revenue is higher than those for the gross toll revenue measures because many components of the O&M costs are relatively fixed with respect to the number of toll transactions.

Exhibit 13 compares the actual performance of the net revenue components in FY 2020 with the initial September 2011 forecast. While there have been many refinements to the inputs, assumptions, and underlying costs since the initial net revenue projections were prepared in September 2011 that have resulted in various puts and takes, the impacts of the COVID-19 pandemic on travel during the final four months of FY 2020 overshadow all other factors that contribute to the differences in gross toll revenue potential, adjusted gross toll revenue collected, and net toll revenues.

## Exhibit 13: FY 2020 Actual Revenue and September 2011 Forecast Comparison

| FY 2020 Category | Forecast vs. Actual Comparison for Net Revenue Items ($ millions) | | | % Variance from Forecast[1] |
|---|---|---|---|---|
| | Sep 2011 Forecast | Actual Values[0] | Variance from Forecast | |
| **Gross Toll Revenue Potential** | **94.4** | **72.1** | **(22.3)** | **–23.6%** |
| Toll Payment Discounts and Fees | 0.2 | 1.3 | 1.1 | +427.8% |
| Revenue Not Recognized | (3.7) | (2.9) | 0.9 | –23.1% |
| Unpaid Toll Revenue | (1.5) | (4.9) | (3.4) | +220.8% |
| Recaptured Toll Revenue at Good To Go! Rates | - | 0.9 | 0.9 | - |
| **Subtotal: Adjusted Gross Toll Revenue Collected** | **89.4** | **66.6** | **(22.8)** | **–25.5%** |
| Miscellaneous Pledged Revenues | - | 7.0 | 7.0 | - |
| Transponder Sales Revenue | 1.3 | 0.7 | (0.6) | –43.0% |
| Pay By Mail Rebilling Fees & Miscellaneous Fees[2] | 1.1 | 1.1 | 0.1 | +5.6% |
| Recovered Toll Revenue | 0.3 | 1.4 | 1.1 | +345.1% |
| Credit Card Fees | (2.1) | (1.5) | 0.6 | –28.4% |
| Toll Collection O&M Costs[3] | (16.8) | (14.5) | 2.3 | –13.6% |
| Routine Facility O&M Costs | (3.0) | (2.0) | 1.0 | –33.1% |
| Bridge Insurance Premiums | (2.7) | (3.4) | (0.7) | +25.6% |
| **Net Toll Revenue before R&R** | **67.4** | **55.4** | **(11.9)** | **–17.7%** |

[0] Actual values calculated from CSC Data, the Unbilled Transaction Report, and Monthly Toll Business Report.

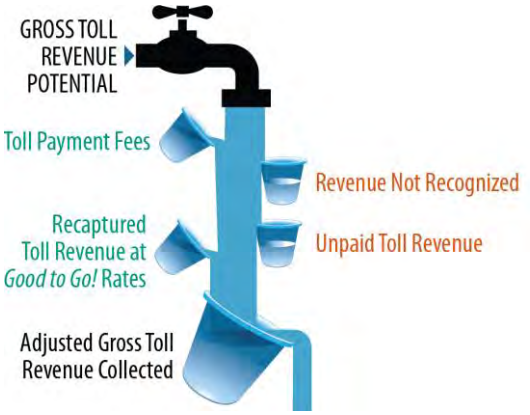
[1] A positive dollar variance on negative forecast values represents a cost (loss) reduction, with the negative percentage (%) variance representing percentage reduction in the cost (loss), a "positive" outcome.

[2] Miscellaneous fees include NSF, account statement, and bank transaction fees, and are not forecasted.

[3] Toll Collection O&M costs includes Transponder Purchase and Inventory costs, RTS, CSC/BOS vendor costs, and State and Consultant Operations costs.

# 4 | Changes to Revenue Adjustments

Exhibit 4 on page 10 summarizes the June 2021 forecast period totals for each element of the gross-to-net revenue projections, the prior November 2019 forecast values, and the forecast variances. This chapter provides detail on the changes to the individual revenue adjustment items, and the following chapter covers the changes in the projections for operations and maintenance expenses.




Revenue adjustments for toll payment discounts and fees, revenue not recognized, unpaid toll revenue, and recaptured toll revenue at *Good To Go!* toll rates can be found in columns 12-15 of the Exhibit 29 T&R table in Appendix A.

These items have been updated to reflect actual data from FY 2012 through FY 2020 as well as a forecast for FY 2021 that includes actual data through March 2021, with changes made to key forecast assumptions noted in the following descriptions.

## Toll Payment Fees and Discounts (Column 12)

### Pay By Plate Fee

WSDOT applies a $0.25 fee per transaction for *Good To Go!* customers who choose to pay via a pre-registered license plate (Pay By Plate) rather than with a transponder pass. This fee is not assumed to escalate with inflation.

The June 2021 forecast for Pay By Plate fees was revised $8.6 million or 10 percent lower than the November 2019 forecast, primarily due to 10.2 percent lower overall toll transactions as a result of the anticipated long-term changes in travel patterns arising from the COVID-19 pandemic.

- Recent data shows that among *Good To Go!* account transactions, there continues to be a higher rate of growth in those using the Pay By Plate payment method than those using a transponder pass, with Pay By Plate use in the first nine months of FY 2021 through March comprising 29.1 percent of all *Good To Go!* transactions or 24.8 percent of total transactions compared with the November 2019 forecast value of 22 percent. There are several contributing factors to this trend.
    - The Customer Program for Resolution (CPR), discussed in more detail on page 26, allows for non-account customers to resolve a notice of civil penalty without payment of the penalty if they open a *Good To Go!* account or resolve insufficient funds with an existing account. Since these transactions are typically handled over the phone, transponder passes are not always sold with these new accounts and toll bills are resolved at the *Good To Go!* toll rate plus the Pay By Plate $0.25 fee.
    - With tolls on SR 520 having been in operation for more than nine years, many customers have likely acquired new vehicles (or new windshields on existing vehicles). In these cases, the $0.25 incremental fee may not be enough of a financial deterrent for customers to purchase and register a new transponder for their new vehicle, or the attempted transfer of

a sticker tag pass to a new vehicle rendered the tag non-functional, inadvertently changing the method of payment to Pay By Plate.

- The option of having a Pay As You Go *Good To Go!* account starting in FY 2022 may also encourage more infrequent users to establish an account in the future without acquiring a transponder pass. When actual data becomes available on transponder penetration rates for Pay As You Go *Good To Go!* accounts, the payment shares and corresponding leakage rates will be adjusted accordingly.

- Exhibit 14 shows that Stantec's projections for the share of customers using Pay By Plate is expected to grow over the forecast period, moving from 23.4 percent in FY 2021 to 23.8 percent by FY 2025, and eventually to 27.8 percent of total transactions by FY 2050. Reported values in FY 2020 of 24.5 percent are slightly lower than the FY 2019 value of 25.1 percent but higher than the prior forecast assumption, indicating a slight near term reduction in the shares of Pay By Plate trips before recovering by FY 2029.
  - A lower registered *Good To Go!* account share of transactions for FY 2021 in comparison to FY 2020 actual and FY 2022 forecast values is the result of nine months of actual data for FY 2021 during which there were diminished commuters/frequent users. After FY 2021, payment method shares are expected to revert back toward pre-pandemic patterns.

- Continued demand for switchable Flex Pass transponders required to receive a carpool exemption on the I-405 Express Toll Lanes, combined with the commencement of tolling in the SR 99 Tunnel in November 2019 and the anticipated recovery in toll trips from the downturn due to pandemic are anticipated to increase overall pass usage in the region and potentially slow or reverse the projected decline in the overall *Good To Go!* share shown in Exhibit 14.

**Exhibit 14: Annual Shares of Total Transactions by Payment method (Selected Fiscal Years)**

| Fiscal Year | Registered *Good To Go!* Account Transactions | | | | | | Unregistered (Non-Account) Pay By Mail Transactions[2] | |
|---|---|---|---|---|---|---|---|---|
| | Transponder (Pass) | | Pay By Plate [1] | | Total | | | |
| | Nov 2019 Forecast | June 2021 Forecast | Nov 2019 Forecast | June 2021 Forecast | Nov 2019 Forecast | June 2021 Forecast | Nov 2019 Forecast | June 2021 Forecast |
| **2012** | **70.8%[3]** | | **11.9%[3]** | | **82.7%[3]** | | **17.3%[3]** | |
| **2013** | **68.9%[3]** | | **14.8%[3]** | | **83.7%[3]** | | **16.3%[3]** | |
| **2014** | **66.9%[3]** | | **17.6%[3]** | | **84.5%[3]** | | **15.5%[3]** | |
| **2015** | **63.6%[3]** | | **20.1%[3]** | | **83.7%[3]** | | **16.3%[3]** | |
| **2016** | **62.9%[3]** | | **21.1%[3]** | | **84.0%[3]** | | **16.0%[3]** | |
| **2017** | **62.9%[3]** | | **21.6%[3]** | | **84.5%[3]** | | **15.5%[3]** | |
| **2018** | **63.0%[3]** | | **22.4%[3]** | | **85.4%[3]** | | **14.6%[3]** | |
| **2019** | **62.5%[3]** | | **25.1%[3]** | | **87.6%[3]** | | **12.4%[3]** | |
| **2020** | 63.9% | **62.9%[3]** | 23.0% | **24.5%[3]** | 86.9% | **87.4%[3]** | 13.1% | **12.6%[3]** |
| 2021 | 63.8% | 62.0% | 23.2% | 23.4% | 87.0% | 85.5% | 13.0% | 14.5% |
| 2025 | 63.8% | 63.8% | 23.8% | 23.8% | 87.6% | 87.6% | 12.4% | 12.4% |
| 2030 | 63.6% | 63.6% | 24.6% | 24.6% | 88.2% | 88.2% | 11.8% | 11.8% |
| 2035 | 63.5% | 63.5% | 25.5% | 25.5% | 89.0% | 89.0% | 11.0% | 11.0% |
| 2040 | 63.4% | 63.4% | 26.3% | 26.3% | 89.8% | 89.8% | 10.2% | 10.2% |
| 2045 | 63.3% | 63.3% | 27.2% | 27.2% | 90.5% | 90.5% | 9.5% | 9.5% |
| 2050 | 62.7% | 62.7% | 27.8% | 27.8% | 90.5% | 90.5% | 9.5% | 9.5% |

[1] Pay By Plate percentage shares are modeled by Stantec starting with the Nov 2017 Forecast.

[2] Values through FY 2019 include short term account transactions where customers initiate payment before receiving a bill; represents approximately 0.03% of total transactions.

[3] Actual values for the *Good To Go!* / Non-Account Transaction split are calculated from CSC data analysis for calendar years 2012-20 and Toll Business Report data fiscl years 2017-2020. Actual values for the *Good To Go!* Transponder and Pay By Plate percentages are calculated using 16J-TRAINS Pay By Plate fee revenue divided by the $0.25 fee to yield the number of transactions, adjusted for license plate leakage.

Pay By Plate fee revenue estimates are provided in column 12 of the Exhibit 29 T&R table provided in Appendix A. The $8.6 million forecast period decrease in toll payment fees shown in Exhibit 4 on page 10 is attributed to overall decreases in forecasted toll transactions of 10 percent and a slightly lower Pay By Plate share of toll transactions in FY 2021.

### Short-Term Accounts

Non-account customers may set up a Short-Term Account (STA) by self-initiating payment provisions prior to or within 72 hours of traveling on SR 520. WSDOT previously offered a $0.50 discount per transaction from the higher Pay By Mail toll rate to incentivize prompt payment, thereby reducing the number of Pay By Mail transactions and the delay in receiving revenue. However, this option was not widely used and in 2018, the WSTC decided to remove the $0.50 STA discount while leaving this self-initiated payment option in place, effective for FY 2020. With the transition to the new CSC and BOS vendors, customers will have a new Pay As You Go *Good To Go!* account payment option that charge tolls to a credit/debit card after travel rather than requiring the customer to use a prepaid account where a minimum balance is maintained. With no incremental or account maintenance fees associated with this new account type, it is anticipated that Pay As You Go accounts will be the primary choice for new *Good To Go!* account registrations going forward.

### Other Fees and Discounts

In addition to the fees described above, WSDOT is authorized to charge miscellaneous customer fees that are not included in the net revenue projections herein, including inactive account and paper statement/reprinting fees.

Prior to transition to the new back office system and customer service center vendors in 2021, a $5 closure fee for inactive accounts had not been collected. Concurrent with the transition in FY 2021, the new vendors have reviewed and closed inactive accounts, administering the $5 fees. Total fees collected in FY 2021 amounted to $286,504 with the share allocated to SR 520 amounting to $100,706 as of early August 2021. With the backlog of historically inactive accounts since the start of tolling now closed, administration fees from future closures are not anticipated to amount to much annually, and it has not yet been determined how frequently accounts will be reviewed and closed due to inactivity going forward.

Revenues from these items are not expected to be routine, have a material impact on future net revenues and are simply intended to offset administration and processing costs incurred by the state. As such these revenues are not currently included in the future year net toll revenue projections.

## Uncollectible Revenue (Columns 13 & 14)

Uncollectible revenue, or "gross" revenue leakage before any overdue toll bill recovery, is divided into two T&R table categories: Revenue Not Recognized (unbillable) and Unpaid Toll Revenue. Revenue not recognized is un-pursuable revenue that occurs when a license plate is unreadable, or when the vehicle owner and address from a readable license plate cannot be identified. Unpaid Toll Revenue results from customer non-payment of toll bills after two invoices within 80 days of travel. Note that uncollectible revenue effectively gets reduced to a "net" revenue leakage measure in the overall net revenue projections after accounting for the portion of unpaid toll revenue recaptured at *Good To Go!* toll rates or recovered at Pay By Mail rates after a notice of civil penalty is mailed to customers with toll bills more than 80 days past due (see columns 15 and 19 of Exhibit 29).

Forecasts for uncollectible revenue are based on a toll collection activity workflow model which is refined annually based upon the accumulation of new data. This model estimates the probability that a toll transaction will become uncollectible under a variety of scenarios and points in the toll transaction workflow process. Exhibit 30 in Appendix B illustrates this workflow and the points in the process where leakage occurs. Other refinements made as part of the November 2016 forecast resulted in higher rates of unidentified vehicle owners and addresses from readable plates and adjustments to the payment rates of first and second invoices; these refinements have been maintained through the June 2021 forecast, including ramping down to industry standard rates of leakage with the transition to the new CSC and BOS vendors, although delayed due to the revised transition dates.

## Revenue Not Recognized (Column 13)

### *Unreadable License Plates*

Notwithstanding recent improvements in license plate image readability, the June 2021 forecast maintains the same assumptions for the readable share of license plate images, which is a function of the in-lane cameras, interfacing issues between the RTS lane system vendor, the BOS software, and the integration with CSC operating procedures for reviewing license plate images. These assumptions include the following.

- The assumed share of total image-based (non-account plus *Good To Go!* Pay By Plate) transactions with readable license plates after manual review is 93 percent in FY 2021, 93.5 percent in FY 2022 following the transition to the new vendor, and 94 percent under steady state operations from FY 2023 onward.
    - The 94 percent plate readability / 6 percent unreadable assumptions take into account that the new CSC and BOS vendor contracts will include more specific requirements and performance indicators to better align with industry best practices to improve plate image review productivity and accuracy.
    - Since March 2019, RTS hardware-related improvements have shown improved image readability, overcoming some of the sun glare and shadow issues associated with the east-west orientation of the roadway. However, the readability assumptions do not account for these RTS-related improvements. Readability assumptions may be revised upward in future forecasts pending additional experience confirming recent RTS-related trends.
- The higher short-term rates of unreadable plates was shifted out an extra year due to the delayed CSC/BOS vendor transition. Nonetheless, the total dollar value for unreadable plate leakage over the forecast horizon is slightly lower in the July 2021 forecast by about $500,000 due to a combination of the pandemic-induced lower forecast for overall toll trips in the near term combined with higher leakage dollar values due to the planned FY 2024 toll rate increases.

### *Unidentified Owner/Address*

After a license plate is read, the system checks to see if the customer has a *Good To Go!* account, and if so, the account is debited for the toll plus an additional $0.25 administrative fee as a Pay By Plate transaction. If the plate number is not associated with a *Good To Go!* account, then further processing is initiated to obtain a valid owner name and address for the vehicle from the Department of Licensing (DOL) for in-state plates. For out-of-state plates, a contracted vendor provides license plate lookup services to provide the vehicle's owner name and address. The lookup costs are embedded within the vendor contract starting in FY 2020 with the extension of the current vendor contract.

Pay By Mail transactions for which the owner cannot be identified from the license plate are deemed as revenue not recognized, and include Canadian and all other out of country license plates (British Columbia, from where most Canadian plates on SR 520 originate, stopped providing vehicle owner information as part of their response to the U.S. Patriot Act in 2001).

The expected rate of unidentified owners/addresses from readable license plates is assumed to be higher than typical industry experience as the result of challenges in the current CSC back office, where the tools to properly process license plates may be lacking. This has led to transactions being left in an "in-process" holding pattern until they are ultimately dismissed with the passage of time. While efforts to improve both the rates of license plate image readability and successful processing for owner identification continue, the June 2021 forecast does not account for any improvement until new BOS systems software and CSC operations vendor contracts are fully executed in FY 2022, instead maintaining the assumptions of the November 2019 forecast with a one year delays as follows.

- An unidentified owner rate of 10.5 percent of image-based transactions with readable license plates will be maintained until the end of FY 2021 with the new CSC vendor contracts assumed to be in place at the start of FY 2022. With the vendor transition, the unidentified owner rate is assumed to decrease to 7.5 percent for FY 2022, and then level off at 4.5 percent for FY 2023 and beyond. This steady-state rate matches the November 2019 forecast and provides a contingency above industry norms to account for potential local issues related to the inability to identify owners from temporary licenses as well as from Canadian plates.
- The dollar value for unidentified owner leakage is $658,000 lower in the June 2021 forecast due to a combination of pandemic-induced lower near term toll transactions, offset by higher leakage per transaction in the long term with recovery, due to the higher toll rates starting in FY 2024.
    - Transactions are lower for the entire forecast horizon by 10.2 percent, with decreases compared to the November 2019 forecast of 47.3, 27.9 and 14.8 percent in FYs 2021-23, respectively (an average reduction of 30 percent over the three years).
    - Offsetting lower transactions are higher revenues per transaction due to the higher toll rates planned to take effect at the start of FY 2024. Between FY 2024 and the end of the forecast horizon, gross toll revenue potential increased by $118 million resulting in an increase in the value of leakage transactions with the same assumptions applied in the June 2021 forecast, with the exception of the lag in ramp-up for the new vendor.

***Total Revenue Not Recognized***

Incorporating the lower June 2021 forecast traffic values used as the basis for leakage calculations, combined with the higher revenue per transaction as result of increased toll rates, yields a slight decrease in forecast period revenue not recognized of $1.56 million, a 1.0 percent decrease from the previous forecast.

The combined revenues not recognized from unreadable plates and from readable plates with unidentified owners are shown in column 13 of Exhibit 29 in Appendix A.

### Unpaid Toll Revenue (Column 14)

Unpaid toll revenue is a measure of the Pay By Mail revenues from toll transactions with readable license plates, identified owners, and thus toll bills mailed that are not collected within two billing cycles or 80 days. This measure excludes the benefits of any recovery efforts after 80 days, which are covered in subsequent sections.

The June 2021 forecast maintains payment rate assumptions used in the November 2019 forecast, with first toll bill payment rates of 58 percent and second toll bill payment rates of 39 percent, with a cumulative toll bill payment rate of 74.4 percent.

Despite no changes to the toll bill payment rates, the June 2021 forecast for unpaid toll revenue was revised down by $6.56 million or 3.3 percent over the 36-year forecast horizon in comparison to the November 2019 forecast.

- The primary reason for the decrease in leakage is the June 2021 forecast 3.8 percent decrease in gross revenue potential generated from Pay By Mail customers over the forecast horizon.
    - The decrease in Pay By Mail revenue results in fewer transactions going through license plate image review and subsequent owner and address lookup, with fewer overall transactions requiring toll bills.

Unpaid toll revenue is shown in column 14 of Exhibit 29 in Appendix A. The Toll Payment Activity Workflow and percentages are shown in Exhibit 30 in Appendix B.

### Overall Changes in Uncollectible Revenue (Columns 13 & 14)

Total gross leakage attributed to revenue not recognized and unpaid toll revenue is 2.2 percent ($8.1 million) lower over the forecast horizon in the June 2021 forecast than projected in the November 2019 forecast.

For the 36-year period of the June 2021 forecast, the overall rate of gross leakage on a transaction basis is projected to be 5.9 percent, with net leakage after recaptured and recovered tolls, projected at 4.9 percent. On a revenue basis, gross leakage is projected 7.6 percent, with net leakage at 6.4 percent after tolls recaptured or recovered via the NOCP process. Revenue leakage is higher than transaction leakage because the vast majority of leakage is linked to Pay By Mail transactions, which pay a $2.00 higher toll rate that is charged, in part, to offset potential leakage and the additional costs of collection for processing Pay By Mail transactions.

## Recaptured Toll Revenue at *Good To Go!* Rates (Column 15)

As with the previous forecast, the June 2021 forecast for revenue recovered in the notice of civil penalty (NOCP) process has been subdivided into two categories as a result of different accounting treatment in the SR 520 financial statements:

- "Recaptured Toll Revenue at *Good To Go!* Rates" (column 15); and
- "Toll Revenue Recovered at Pay By Mail Rates" (column 20), discussed in a later section.

In both cases, most customers who fail to pay their tolls during the regular two invoice / 80-day billing cycle will receive a notice of civil penalty (NOCP) equal to $40 for each overdue toll owed. Specifically, by FY 2025, 88 percent of invoiced transactions unpaid after 80 days are assumed to be certified for a notice of civil penalty by a WSDOT toll enforcement officer, with the remaining 12 percent dismissed, consistent with the prior forecast. The $40 NOCP fees are not considered "pledged revenue" in Master Resolution number 1117, and thus, are not captured within the net revenue forecast values.

A policy implemented at the beginning of FY 2016, and assumed to continue indefinitely in the July 2021 forecast, allows for more leniency in the handling of customer who are repeatedly failing to pay their toll bills. Referred to as the Customer Program for Resolution, this policy allows customers to open a new *Good To Go!* account by phone (or in person at the CSC) and resolve their unpaid tolls at the appropriate

*Good To Go!* rate without payment of one or more civil penalties. Similarly, customers with existing *Good To Go!* accounts with an insufficient account balance for reason of an expired or changed credit card who end up receiving a NOCP are offered the opportunity to rectify their account and make payment, again without civil penalty.

- The toll revenue recovered through the CPR is assumed to stay in the SR 520 Toll and Fee Account (16J) and is reported as "Tolling Revenue" within the SR 520 financial statements.
- Recaptured toll revenue at *Good To Go!* rates is estimated to be 50 percent of transactions for which the customers received an NOCP in the mail and took some kind of action, consistent with the November 2019 forecast.
- Toll revenues recaptured at *Good To Go!* rates from the civil penalty process are assumed to be collected partially in the fiscal year of travel and partially in the following fiscal year to account for an average six month lag from the date of travel for toll bill processing, first and second invoice notification, NOCP notification, and subsequent resolution of payment.

Annual revenue projections for recaptured toll revenues are provided in column 15 of Exhibit 29 in Appendix A. The transaction workflow diagram shown in Exhibit 30 in Appendix B also illustrates the process by which toll bills go unpaid after two invoices and 80 days.

## Miscellaneous Pledged Revenues (Column 17)


Column 17 of the June 2021 forecast T&R table in Appendix A provides actual "Miscellaneous Pledged Revenues" received in FYs 2012-20 as well as forecast period projections (that began with the November 2015 forecast). Miscellaneous revenues pledged towards debt service, as defined in Master Resolution number 1117, include interest earnings on subaccount balances within the SR 520 Toll and Fee Account (16J); SR 520's share of interest earned on the Toll Facilities Account (495) where prepaid *Good To Go!* customer funds are held, contract liquidated damages, sales of surplus property, and cash over and short.

Miscellaneous Pledged Revenues total $64.2 million over the forecast horizon in the June 2021 forecast, which is $58.2 million lower than what was projected in the November 2019 forecast. The decrease is primarily due to the lower assumed account balances serving as the basis for account interest revenue as a result of the combined impact of a lower interest earnings rate assumption and lower near term account balances, in part due to withdrawals from the RSA reserves used to meet financial obligations in light of lower toll revenue collections in FYs 2020-21 due to the COVID-19 pandemic.

For the SR 520 Toll and Fee Account (16J), interest earning projections are calculated using an annual earnings interest rate of 0.9 percent as applied to average annual account balances, excluding miscellaneous revenues (which are primarily interest earnings), from the draft 2021 financial plan orignially developed from the November 2019 forecast, and updated by the current revenue and expenditure projections. The 0.9 percent interest rate assumed for the November 2019 forecast and carried forward in the June 2021 forecast, is considered conservative in comparison to the actual interest rate yields in excess of 1.3 percent. In addition, annual interest earnings are conservatively constrained to their FY 2032 levels in subsequent years, despite more rapid growth in account balances once the deferred sales tax is fully paid in FY 2032.

## Transponder Sales Revenue (Column 18)

WSDOT purchases, retains, and sells *Good To Go!* transponders directly to customers and through third-party retailers and walk-in centers. Transponder sales revenues are initially assumed to exceed total transponder purchase and inventory costs through FY 2029, after which point transponder costs, escalating at a higher rate than revenue, result in costs exceeding revenue. Beginning with FY 2030, it is assumed the retail and wholesale prices would be adjusted to align transponder pass sales with costs, such that the transponder distribution process has a net neutral impact on net revenue.

- The November 2019 forecast, similar to prior recent forecasts, places transponder sales revenue in column 18, upstream of the "Adjusted Gross Toll Revenue & Fees" subtotal in column 21, whereas transponder purchase and inventory costs are in column 23, "Transponder Purchase and Inventory Costs."
- Starting with the November 2018 forecast, projections for systemwide transponder sales were set equal to transponder costs which reflected a lower cost per unit as recently negotiated with Neology, Inc. the transponder technology vendor starting in FY 2020, with the full cost of $2.22 per sticker tag transponder and $15.56 per Flex Pass transponder.
- Starting with the November 2019 forecast, annual projections for systemwide transponder sales revenue in the near term were set equal to a weighted-average direct retail and wholesale price for transponder purchases multiplied by the estimated sales volume.
    - Flex-Pass transponder revenue per unit is based on the assumption of 86 percent sales through direct retail at $15.00 per transponder and 14 percent sold at wholesale to third party distributers at $12.00 per transponder
    - Sticker tag revenue per transponder is based on the assumption of 88 percent sales through direct retail at $5.00 per tag and 12 percent sold at wholesale at $4.00 per tag.
    - License plate mounted transponders and motorcycle transponders are assumed to be sold through direct retail at $12.00 and $8.00 per transponder respectively.
    - Transponder retail prices are not assumed to increase until the point at which costs exceed revenue, occurring in FY 2030 for the June 2021 forecast.
- SR 520 is allocated a share of the systemwide transponder sales revenue (and costs) on a proportional transaction basis.
    - The June 2021 forecast allocates systemwide transponder revenue across five facilities through FY 2024, plus the I-405 Express Toll Lanes from Renton to Bellevue in FY 2025. The Tacoma Narrows Bridge (TNB) is removed from the allocation after FY 2032 when tolls are assumed to end.
- The overall June 2021 forecast for transponder sales is $12.4 million or 19 percent lower over the forecast horizon compared with the November 2019 forecast (see Exhibit 4). The reduction is primarily due to lower revenue allocation to SR 520 as a result of fewer SR 520 transactions and a lower SR 520 share of systemwide transactions, combined with lower overall systemwide transponder sales. Sales volumes are lower because they are tied to decreases in projected toll transactions across all of the facilities resulting from the longer-term anticipated permanent decrease in commute trips as a result of the COVID-19 pandemic creating increased remote work and education options.
- Annual projections of transponder sales revenue are in column 18 of Exhibit 29 in Appendix A.

## Pay By Mail Rebilling Fees (Column 19)

Pay By Mail customers who do not pay their first invoice are subject to a rebilling fee of $5.00 with the second invoice. The fee is applied on a per invoice basis when an invoice includes any toll transactions being billed for a second time. The $5.00 fee amount does not escalate over time with inflation. Rebilling fee revenues are primarily driven by the forecasted volume of Pay By Mail transactions and assumed number of transactions per invoice, with secondary effects coming from potential changes in the rate of payment of first and second toll invoices.

The projections for Pay By Mail rebilling fees include the $5.00 fee per unpaid first invoice that is successfully collected on the second invoice before 80 days have elapsed plus a portion of the overdue rebilling fees on the unpaid second invoices that are later assumed to be recovered from the civil penalty adjudication process with an assumed six month average lag.

- Compared to the November 2019 values, the June 2021 forecast for Pay By Mail transactions has been revised downward by 10.5 percent over the forecast horizon, decreasing the total number of potential unpaid first invoices for Pay By Mail.
- The June 2021 forecast applies an assumption of 2.10 toll transactions per mailed invoice, consistent with the November 2019 forecast. The 2.10 transactions per mailed invoice is maintained throughout the forecast horizon.
- The June 2021 forecast assumptions regarding first and second toll bill payment rates were updated from the prior forecast, supported by actual data through FY 2020, as follows:
    - A 58 percent first toll invoice payment rate assumption means that 42 percent of first invoices will go unpaid and thus be subject to a rebilling fee on the second invoice.
    - 39 percent of the above unpaid first invoices are assumed to be paid on the second invoice inside of 80 days from the date of travel contributing to rebilling fee revenue.
    - The overall rate of payment for both invoices is assumed to be 74.4 percent in the current forecast.
- Of the 25.6 percent of all toll invoices that go unpaid after 80 days, 88 percent are assumed to be certified for a notice of civil penalty by a WSDOT toll enforcement officer, with the remaining 12 percent dismissed, primarily due to incorrect customer or vehicle identification.
- The portion of NOCP transactions from which the toll is assumed to be recovered through the CPR or the normal civil penalty adjudication process and subsequent collection efforts are 35 percent.
- For the 50 percent of such transactions for which tolls are recovered at the Pay By Mail rate, the $5 rebilling fee is also assumed to be recovered 55 percent of the time, with the remaining 45 percent are dismissed.
    - For the remaining 50 percent of transactions for which the toll revenue is recaptured at the *Good To Go!* rate via the CPR program, no rebilling fees are assumed to be collected.

Annual projections of late payment fees are provided in column 19 of Exhibit 29 in Appendix A, and the toll bill payment process is illustrated in the transaction workflow diagram as Exhibit 30 in Appendix B.

## Toll Revenue Recovered at Pay By Mail Rates via NOCP (Column 20)

As noted earlier for "Recaptured Toll Revenue at Good To Go! Rates", "Toll Revenue Recovered at Pay By Mail Rates" represents a subset of the category formerly referred to as "Recovered Toll Revenue". This change was made starting in the November 2016 forecast as a result of different accounting treatments in the SR 520 financial statements.

In both cases, most customers who fail to pay their tolls during the regular two invoice / 80-day billing cycle will receive a notice of civil penalty (NOCP) equal to $40 for each overdue toll owed. Specifically, 88 percent of overdue toll transactions are assumed to be certified for a notice of civil penalty by a WSDOT toll enforcement officer, with the remaining 12 percent dismissed.

Customers receiving a NOCP will have the opportunity to remit payment for tolls and fees or request a hearing to avoid having their motor vehicle registration withheld from renewal and/or have the amount due sent to collections. The June 2021 forecast assumes that 35 percent will take action, and that 65 percent will ignore the NOCP altogether, and will ultimately be subject to hold on the renewal of their vehicle registration. Revenue attributed to the $40 NOCP fee is not considered pledged revenue under Master Resolution number 1117, and thus is not captured within the net revenue forecast values.

- For those customers that take action as a result of a NOCP, 50 percent are assumed to remit the toll due at the Pay By Mail rate, consistent with the November 2019 forecast.
  - 55 percent of those are assumed make a payment for the civil penalty as well.
  - 45 percent are assumed to only pay the toll and ignore the civil penalty due.
- Among the 35 percent above that take action, the forecast assumes that $0.80 will be collected for every dollar owed, consistent with the November 2019 forecast. This assumption captures the possibility that an administrative law judge through the civil penalty adjudication process may reduce or forgive some of the civil penalties due.

Toll revenues and their associated civil penalties recovered in this manner flow into the Civil Penalty Account (17P). The toll portion of these revenues must be legislatively transferred to the SR 520 Toll Account (16J), which is assumed to occur in the subsequent biennium. Once transferred, the toll revenues are reported as an "Operating Transfer In" within the SR 520 financial statements.

# 5 | Changes to Operating and Maintenance Costs

This section documents the anticipated uses of Adjusted Gross Toll Revenues & Fees, which are those operating expenses that would be paid from toll revenues upstream of debt service and contributions to various reserve accounts, including those for deferred sales taxes and periodic repair and rehabilitation costs. As shown in the waterfall below, the SR 520 operational expenditures include: credit card fees, several categories of toll collection O&M costs, facility O&M costs, and bridge insurance premiums. Additional details regarding each of these deductions are provided below, with the annual projections provided in columns 22-29 of the T&R table, Exhibit 29 in Appendix A.


Some of the assumptions have been updated to reflect actual experience through FY 2021 and contracted values with vendors. Changes to these assumptions are noted in the descriptions of each cost category below. All costs are expressed in year of expenditure dollars (YOE $) except where noted otherwise.

The WSDOT Toll Division provided near term, current 2019/21 biennium (FY 2021) toll collection cost values based on the agency's Decision Package budget request, with adjustments for cost escalation and certain calculated cost values. The State Legislature's transportation budget, Engrossed Substitute House Bill (ESHB) 2322 (March 11, 2020) added a few one-time additional items to be paid from tolls in the current 2019/21 biennium.

The assumptions and methods underlying the toll collection and facility O&M are documented in a consolidated report entitled: *Facility and Toll Collection O&M and R&R Assumptions and Costs for the SR 520 Bridge Replacement and HOV Program: 2021 Update.* A description of each of cost item is provided below.

## Credit Card / Banking Fees (Column 22)

As a convenience to customers and to facilitate electronic toll collection, WSDOT accepts credit and debit (bank) cards for the payment of tolls as well as for the purchase of transponders. Credit card fees are provided in Exhibit 29, column 22. Bank card processing fees related to transponder sales are embedded in transponder purchase and inventory cost estimates in column 23 of Exhibit 29, and thus excluded from the separate calculation of bank card fees associated with the payment of tolls in column 22. For *Good To Go!* accounts, credit card fees have historically been tied to periodic account replenishment payments rather than individual toll transactions. However, with the new "Pay As You Go" account option available to *Good To Go!* customers starting in FY 2022 does not require maintaining a prepaid account balance; rather the bank card registered to the account will be directly debited on a frequent basis. This new Pay As You Go account option will likely increase fixed transaction costs due to more frequent bank card transactions of lower dollar amounts, versus less frequent account replenishments at or above the $30 minimum value.

Credit card transactions are processed by a third-party vendor which charges set fees for the service. These banking fees typically involve a fixed amount per transaction and a variable component as a percentage of the transaction amount. Since customers can use any Washington State toll facility with the same *Good To Go!* account, actual total credit card receipts resulting in bank fees paid by the state are allocated back to the individual toll facilities based on their shares of systemwide toll revenues. In contrast, future bank card fees for SR 520 and the other state toll facilities are most accurately forecasted on the basis of each facility's revenue projections.

The assumed credit card fee rate applied to 92 percent of toll revenue collected via bank cards has decreased in the near-term (FYs 2021-24) and has increased slightly longer-term (FYs 2025-56). Specifically, the FY 2021 credit card fee rate decreased from 2.75 percent in the prior forecast to 2.35 percent for this June 2021 update. However, this rate is estimated to gradually increase to 2.68 percent by FY 2024, and to 2.80 percent thereafter, making the FYs 2025-56 fee rate assumption slightly higher than the 2.75 percent factored into the previous forecast.

These credit card fee rates are based on negotiations with credit card companies and also account for increased transaction costs associated with the new Pay As You Go customer account options. In addition to the credit card fee rate, an adjustment factor of 1.02 (102 percent) is applied to the total fee amount to allow for fees paid on customer account balance refunds (credit transactions) when pre-paid accounts are closed; this assumption remains unchanged from previous forecasts, but may be subject to revision once there is more actual data on the share of customers opting for Pay As You Go versus pre-paid accounts.

The credit card fees in Exhibit 29, column 22 are calculated from the total gross toll revenue potential projections (column 11), adjusted for the tolls actually received after factoring in *Good To Go!* Pay By Plate fees, total leakage, and rebilling fees recovered within 80 days (before the Civil Penalty process). Of the applicable revenue collected, 92 percent is assumed to be tied to a credit or debit card and thus subject to the bank card fee rate, unchanged from the prior forecast and confirmed by recent historical data through FY 2021. Similar to the prior forecast, the June 2021 forecast also assumes credit card fees associated with payments made in the civil penalty process will remain in the civil penalty account (17P) and are not transferred to the SR 520 Toll and Fee Account (16J); this includes the category for recaptured toll revenue at the *Good To Go!* rates via CPR. The assumption is based on actual practice to date in which credit card fees related to all payments in the civil penalty adjudication process were not transferred to the toll account.

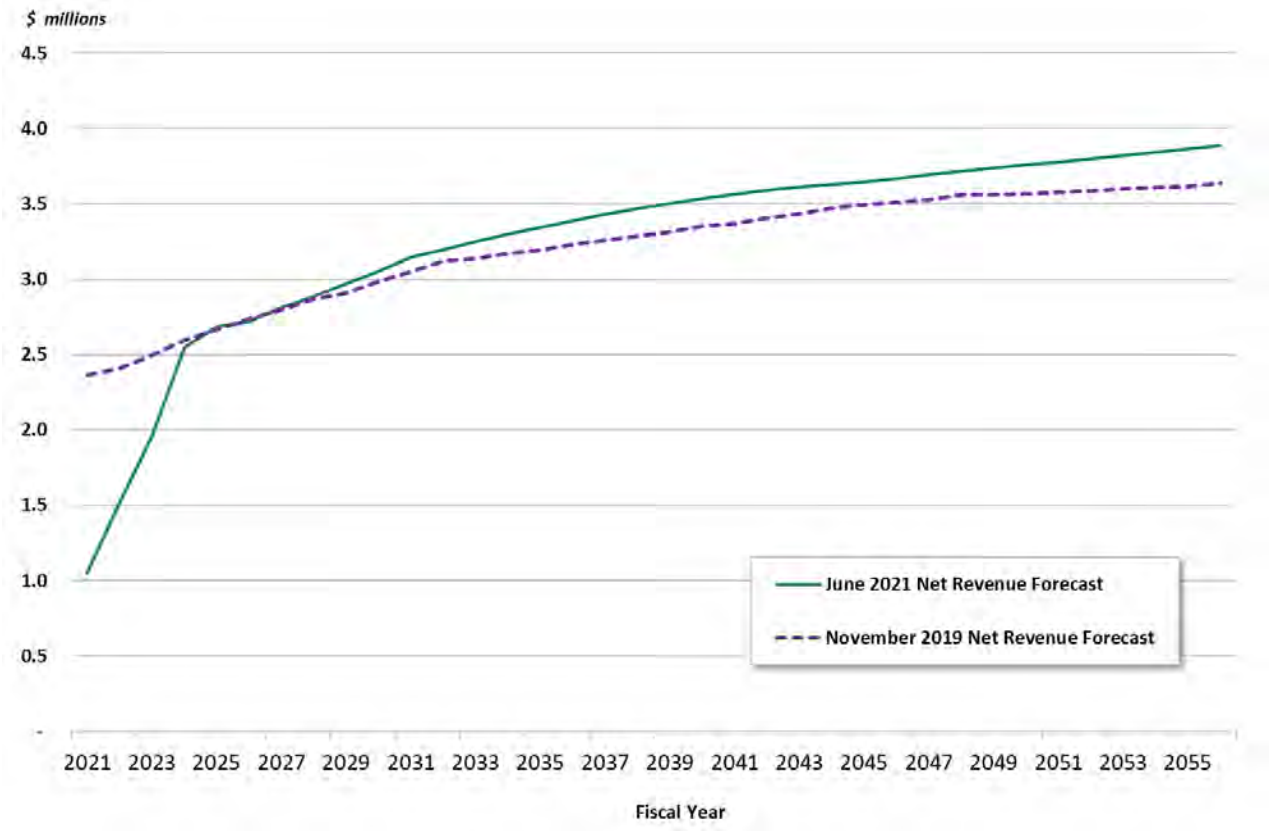
WSDOT also accepts automated clearing house (ACH) payments directly from a customer bank account as an alternative means of account replenishment that does not carry the credit card fee. Pay By Mail customers also have the option of paying their invoices by check, or even cash in-person at one of the *Good To Go!* customer retail locations. These alternatives account for the approximately 8 percent of revenues collected that are not subject to bank card processing fees. However, with the transition to a new BOS vendor, and their use of a new external vendor providing data security, a security fee of $0.12 per ACH transaction is now assumed, consistent with the security fee component on bank card transactions.

Credit card fees increased by $1.9 million or 1.7 percent over the forecast horizon from the November 2019 to June 2021 forecasts. In the near-term (FYs 2021-24), costs associated with credit card fees decreased by $2.8 million, 28.3 percent lower than as estimated in the 2019 update. The primary reasons for decreased costs are the lower transaction and revenue volumes in the near-term as result of the COVID-19 pandemic. Partially offsetting the reduction in overall transaction revenue are changes in fee assumptions. The increase in costs is also offset in the near term through lower average credit card fee rates as compared with the previous update, which assumed the vendor transition would occur earlier with a gradual ramp-up of Pay As You Go accounts with their assumed higher credit card fees.

In the longer-term (FYs 2025-56), costs associated with credit card fees have increased by $4.7 million, 4.5 percent higher than estimated in the 2019 update. With the longer-term traffic projections exceeding 90 percent of their pre-pandemic November 2019 forecast levels, the net increase in bank card processing costs is attributed to the higher credit card fee rates and greater transaction frequency resulting from higher assumptions for customer adoption of the Pay As You Go account option relative to the prior forecast.

Exhibit 15 illustrates the projected credit card fees by fiscal year over the forecast horizon for the two forecasts, with the June 2021 amounts corresponding to column 22 of Exhibit 29 in Appendix A.

**Exhibit 15: Projected Credit Card Fees in YOE $ (FYs 2021-56)**




## Toll Collection Operations and Maintenance (Columns 23-27)

Toll collection O&M expenditures include all administrative and technical functions required for processing toll transactions and collecting revenue from customers. Beginning with the task of identifying a transaction, to recording the transaction, to ultimately collecting payment, the toll collection process requires involvement and coordination by various distinct parties across multiple functions:

- Transponder purchase, inventory, and sales, including the coordination with transponder pass manufacturers and third party (non-CSC) resellers;
- State and Consultant Operations costs (includes WSDOT Toll Division, WSDOT Accounting and Financial Services, and consultants;
- Roadway Toll System (RTS) vendor costs and associated WSDOT Toll Division staff support; and

- Customer Service Center (CSC) Operations and Back Office System (BOS) Software vendors

Costs associated with the operating functions noted above are depicted in columns 23-27 of Exhibit 29 in Appendix A. As previously mentioned, credit card fees associated with direct transponder sales to customers using a credit/debit bank card are included in the transponder purchase and inventory costs in column 23 rather than in column 22.

Specific details regarding the toll collection cost activities and changes in the cost assumptions included in the annual total toll O&M cost forecast values (columns 23-27 of Exhibit 29) are provided below by cost subcategory.

### Transponder Purchase and Inventory Costs (Column 23)

WSDOT purchases, retains, and sells *Good To Go!* transponders directly to customers via online/mail orders, at CSC retail locations, and through third-party retailers. These costs are provided in column 23 of the Exhibit 29 T&R table as a component of overall toll collection costs. As noted in the previous chapter, these projected costs are fully offset by expected transponder sales revenues forecast provided in column 18 from FY 2029 forward, with revenues projected to slightly exceed costs prior to FY 2029.

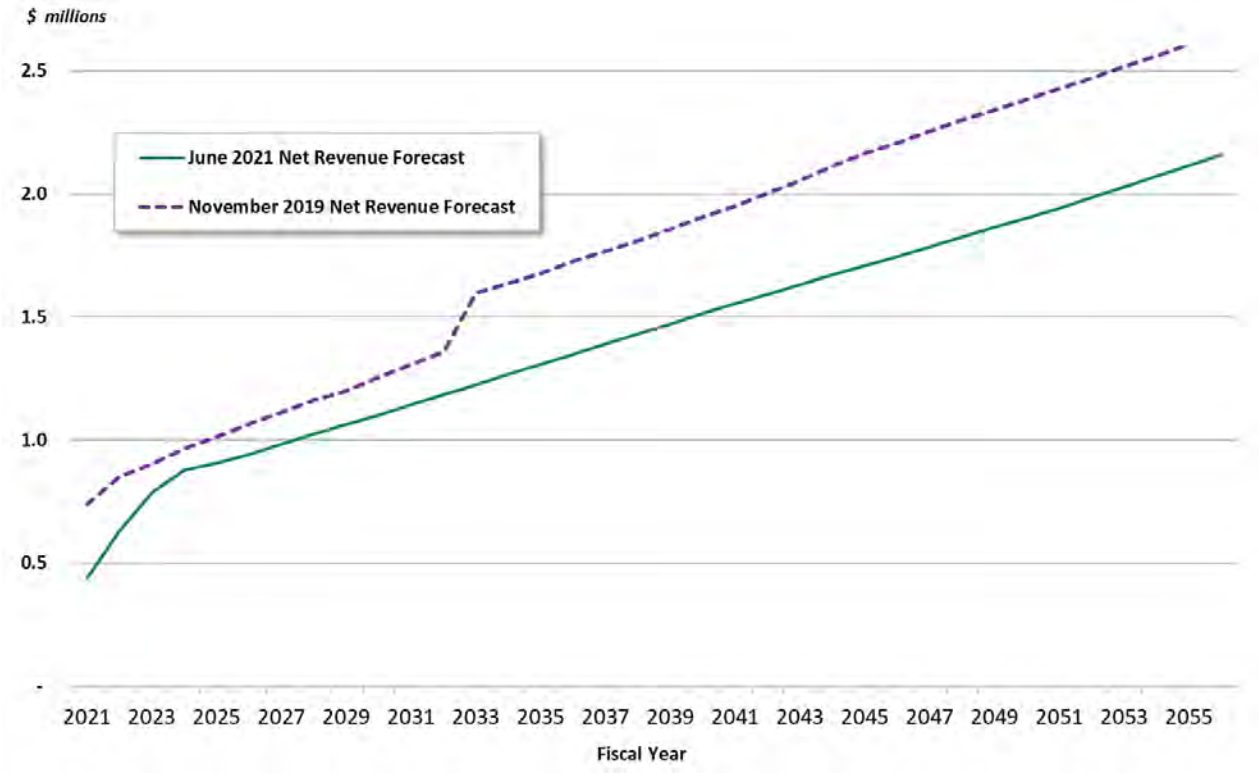
Transponder purchase, inventory and sales costs are determined by trends in the *Good To Go!* customer account base as well as the purchase of new or replacement transponders occurring with changes in the vehicle fleet and their owners as well as with the availability of new transponder technology.

Transponder costs, as well as associated revenues, are tallied at a system level and allocated to the individual facilities based on the number of *Good To Go!* account transponder toll transactions generated by each facility; this amount excludes toll exempt HOV carpool travel on the I-405 Express Toll Lanes between Bellevue and Lynnwood, which requires a Flex Pass transponder (declarable tag) that allow users to switch the transponder to HOV exemption status.

SR 520 was exempted from bearing any costs associated with the initial surge in transponders sold and/or distributed during the first-year ramp-up periods for the I-405 Express Toll Lanes in FY 2016 and SR 99 in FY 2019. The June 2021 forecast continues with the November 2019 forecast assumptions, reflecting a lower cost per unit as negotiated with transponder vendor Neology, Inc. starting at $0.78 per sticker tag transponder and $10.30 per Flex Pass transponder, with the full cost of $2.22 per sticker tag transponder and $15.56 per Flex Pass transponder when including inventory, packaging and mailing. The costs related to packaging, mailing, and inventory management are assumed to escalate by 2.5 percent per year, consistent with other cost escalation assumptions. The portion of the retail price that represents the unit cost from the manufacturer is assumed to increase by 1.0 percent per year. The declining real cost of transponder technology is the result of improvements in technology and reductions in production costs as the volume of production increases with the growth in toll facilities worldwide.

Transponder purchase, inventory and sales costs are projected to be $12.3 million or 19.3 percent lower over the forecast horizon than in the November 2019 forecast. The primary driver for the decrease in costs, is a material decrease in overall transponder sales volumes, especially in the near-term. The lower sales volumes over the forecast horizon are a result of lower *Good To Go!* transaction estimates due to the long-term negative impact on travel of the COVID-19 pandemic. There is also an additional factor contributing to cost decreases in the near-term (FYs 2021-2024) attributed to a lower credit card fee rate of 2.35 percent in FY 2021, with the rate gradually increasing to 2.68 percent by FY 2024, and 2.80 percent through the remainder of the forecast horizon, which is slightly above the prior long-term rate.

**Exhibit 16: Transponder Sales and Inventory Costs in YOE $ (Fys 2021-56)**




## State and Consultant Operations (WSDOT Toll Division / Accounting and Financial Services) (Column 24)

State and Consultant Operations costs include the activities of the WSDOT Toll Division, their consultants, and the WSDOT Accounting and Financial Services (AFS) Division. The Toll Division currently operates five toll facilities: the SR 520 Bridge; the SR 16 Tacoma Narrows Bridge (TNB); the SR 167 High Occupancy Toll (HOT) lanes; the I-405 Express Toll Lanes (ETLs) between Bellevue and Lynnwood and the SR 99 Tunnel. The Toll Division is responsible for general management, vendor oversight, marketing, information technology (IT), and printing and postage costs associated with Pay By Mail transactions, which are handled by the Washington Department of Enterprise Services (DES).

Normal salary and benefits associated with state full time equivalent employee (FTE) include those working in finance and program management, government relations, CSC and BOS operations, RTS operations, and WSDOT AFS group support. Near term budget period FTEs are based on actual experience and WSDOT Toll Division budgetary requests, using the percentage share of time each employee charges to the toll program, the total of which is then allocated based on each facility's share of total transactions. The June 2021 forecast assumes a cost for benefits at the rate of 27 percent of salaries, unchanged from the previous forecast. The percentage is based on a weighted average of base salaries, the basis of which was maintained in the June 2021 forecast.

Longer-term forecast projections start with the FY 2021 budgeted staff levels with future changes in staffing levels primarily driven by the addition or removal of toll facilities from the system. Increased staffing levels are only assumed for facilities that have received legislative toll authorization, including the I-405 ETLs between Renton and Bellevue and the Gateway Program's SR 509 and SR 167 completion projects. A decrease in staffing is assumed for the planned removal of tolls from the Tacoma Narrows Bridge after

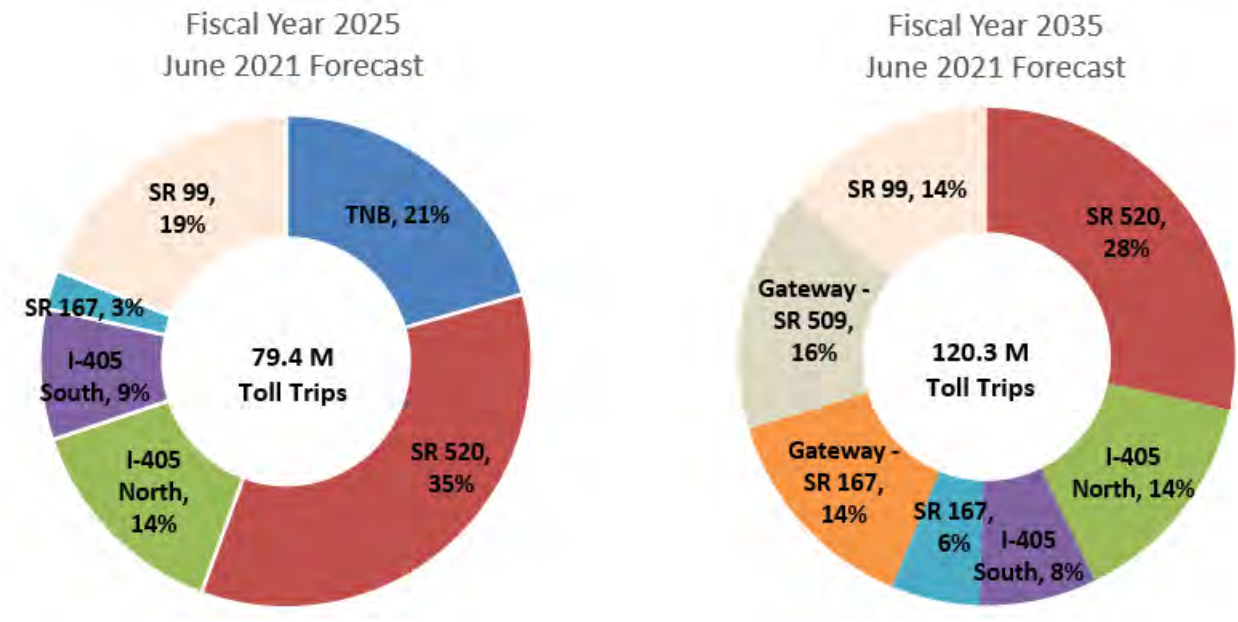
FY 2032 when the project's debt and deferred sales taxes are repaid. The long-term forecast also assumes that state salaries and wages will escalate by 2.5 percent per year for general inflation.

As part of the above salaries and benefits, the forecast includes centralized toll operation, management, and administrative expenses (i.e., the Toll Division assistant secretary, executive assistant, and staff supporting strategic direction and planning, additional government relations, traffic and revenue analysis, toll rate setting, and payroll and human resource management). The capital programs for the toll facilities in development or under construction share the costs for the general management and administrative items. However, as these projects begin to transition to operations, the management and administration costs are assumed to be paid by toll revenues, with these systemwide costs allocated to each individual toll facility based on transaction levels.

Because these collective state operations services are provided on a systemwide basis, costs are allocated according to the projected share of total toll transactions for each facility, which varies slightly year to year due to differences in each facility's traffic forecasts. The cost allocations in the June 2021 forecast include the transactions for the existing five facilities — SR 520, Tacoma Narrows Bridge, I-405 Express Toll Lanes between Bellevue and Lynnwood, SR 167 HOT Lanes and the SR 99 Tunnel — plus the addition of the I-405 Express Toll Lanes between Renton and Bellevue in FY 2025 and the Gateway Program projects starting in FY 2026, which received toll authorization in 2019. The forecast allocates systemwide Toll Division staff and related costs by each facility's percentage share of the total number of toll paying transactions.

Exhibit 17 shows the systemwide annual transaction forecasts and the respective cost allocation shares by toll facility in the June 2021 forecast for FY 2025 and FY 2035 as representative years. As seen in Exhibit 17, SR 520's share of 2021 systemwide costs decreases with the addition of the new toll facilities. With the full implementation of the Gateway program (by FY 2028) SR 520's share of systemwide costs decreases from 35 percent in FY 2025 to 28 percent in FY 2035 for the June 2021 forecast, despite that the FY 2035 allocations shares exclude the Tacoma Narrows Bridge. The current assumption is that the Tacoma Narrows Bridge will not be part of the toll network after FY 2032 when tolls are likely to be removed following the repayment of outstanding debt and deferred sales taxes.

**Exhibit 17: Transaction-based Cost Allocation Shares for WSDOT Toll Facilities**




Under the prior CSC operations vendor agreement, the state was responsible for reimbursing the (outgoing) CSC vendor for the actual printing and postage costs related to mailing Pay By Mail customer toll bills as well as for customers opting to receive *Good To Go!* account statements by mail. In 2016, the prior agreement was amended, transferring the role of printing and postage for Pay By Mail customer toll bills as well as providing customer opt-in *Good To Go!* account statements by mail to the Washington State Department of Enterprise Services. The June 2021 forecast continues with this approach with DES responsible for the processing of Pay By Mail invoices. The following presents the printing and postage assumptions:

- The June 2021 forecast base assumptions capture actual experience in which the average cost to process and mail an invoice is assumed to be $0.76 in 2020 dollars, inflated by 2.5 percent per year.
- The June 2021 forecast assumes an average of 2.10 transactions per invoice for SR 520, aligned with actual systemwide data. This assumption is unchanged from the previous forecast.

In addition to printing and postage, license plate lookups are generally required for out-of-state license plates to acquire the vehicle owner's name and address for mailing toll bills to non-account customers. The CSC vendor has a contract for this service with a separate vendor, Law Enforcement Systems (LES), which administers a fixed cost per out-of-state plate inquiry.

The June 2021 forecast for state and consultant operations costs decreased by 1.7 million (0.5 percent) over the forecast horizon compared to the November 2019 forecast. Within the state O&M cost category, fixed state costs increased by $8.4 million, or 3.9 percent, whereas printing, & postage costs decreased by $10.1 million or 8.9 percent. The primary factor for the increased state costs is the inclusion of new fixed operational costs which were not part of the 2019 estimate. These costs relate to non-labor costs and are budgeted to be approximately $50,000 per month in FY 2021, escalating by 2.5 percent annually. The primary reason for the lower printing and postage costs is the decrease in SR 520 transaction forecasts over

the long-term horizon due to the anticipated permanent downward shift in commute travel as a result of the COVID-19 pandemic.

In the 2019-2021 biennium budget, additional systemwide costs of approximately $2.9 million, a portion of which were allocated to SR 520, were specified by legislative direction to be toll-funded and are included in FY 2021 projections. These costs are primarily attributed to Washington State Patrol (WSP) enforcement, Transportation Commission allocated costs, noise study and other miscellaneous program costs. These costs were assumed to be a one-time legislative budget event, and thus, were not included in subsequent year projections. Continued legislative direction to include these additional costs as toll-funded going forward would affect future forecasts.

The June 2021 forecast for State and Consultant Operations toll collection costs, including those activities performed or overseen by the Toll Division, are provided in Exhibit 18 with escalation assumptions listed in Exhibit 19.

**Exhibit 18: State Operations Assumptions in the June 2021 forecast**

| Cost Item | Key Assumptions |
|---|---|
| Salaries & Wages[1] | SR 520's share includes the standard cost for 24 FTEs by job classification in FY 2021 |
| Benefits | Assumed to be approximately 27% of Salaries & Wages, based on a staff calculation tool using current Washington State employee benefit calculations. |
| Technical Oversight | Toll consultants support CSC operations, RTS operations, and operational results analysis and reporting. Tolling consulting costs allocated to SR 520 are assumed to be over $695k in FY 2021 escalating by 2.5% per year thereafter. An additional $715k is assumed for forecasting related activities for FY 2021 with forecasting costs also escalating by 2.5% per year. |
| Office Supplies / Materials | Standard cost of $513 (FY 2016$) per year, per FTE with a 2.5% escalation per annum |
| Rent | Fixed cost of $180,000 per year (FY 2021$) with 10% escalation every 5 years. |
| Printing and Postage | Cost of $0.55 per mailing in FY 2020$ (includes cost of $0.068 per envelope, printing costs of $0.084 per mailing, bulk postage rate of $0.363 per mailing, and presort processing of $0.043 per mailing) with a 2.5% escalation per annum.<br>Consumable and other mailing costs account for mailings not associated with toll bills. Cost per mailing of $0.76 (FY 2020$) assumed with an additional cost of $0.0044 (FY 2020$) per mailing for consumables with a 2.5% escalation per annum. |
| Out of State License Plate Lookup Cost | Starting from the November 2019 update, these costs are not assumed in the state costs but rather included in the vendor contract costs. |
| Computers and Equipment | Standard cost of $5,125 (FY 2016$) per year, per FTE, in addition to facility specific equipment costs as provided by WSDOT. The standard cost is escalated at 2.5% per annum. |
| Phone and Communications | Standard cost of $10,250 (FY 2016$) per year, per FTE with a 2.5% escalation per annum |
| Vehicles Operations | Standard cost of $539 (FY 2016$) per year, per FTE with a 2.5% escalation per annum |
| Record Retention[2] | Standard cost of $574 (FY 2016$) per year, per FTE with a 2.5% escalation per annum |
| Fixed State Operational Cost | Standard cost of $50,000 per month (FY 2022$) with a 2.5% escalation per annum |

Note: FTE = full time equivalent employee

1 State salaries and benefits align with modification to salaries and benefits as stated in the January 2017 Governor's Budget that correspond to an agreement between the Washington Federation of State Employees bargaining unit and the State of Washington covering General Government on September 13, 2016. The agreement calls for a 6% increase over the life of the two-year contract, comprising of one 2% increase in FY 2018 and two 2% increases in the beginning and middle of FY 2019.

2 Includes WSDOT time to copy, catalog and prepare documents for archiving, coordination with staff to get files, organization of files once received, paper and organizational supplies, etc.

**Exhibit 19: State Operations Escalation Assumptions in the June 2021 Forecast**

| Cost Item | Escalation per Period | Period in Years |
|---|---|---|
| Salaries and Benefits | 2.5% | 1 |
| Rent | 10.0% | 5 |
| Telephone | 2.5% | 1 |
| Printing/Postage/Office Supplies/Computers | 2.5% | 1 |
| Technical Oversight/Contracted Services | 2.5% | 1 |
| Vehicles + Operations + Parking | 2.5% | 1 |
| Records Retention | 2.5% | 1 |
| Fixed State Operational Cost | 2.5% | 1 |

State toll collection costs are included in column 24 in Exhibit 29 within Appendix A.

### Roadway Toll Systems (Column 25)

Roadway Toll Systems (RTS) include all equipment and software required to identify a toll transaction and transmit data about that transaction to the customer service center for processing. Sometimes referred to as "lane systems," this equipment includes transponder readers, cameras, and other communication devices that need regular maintenance to ensure that the system is functioning properly.

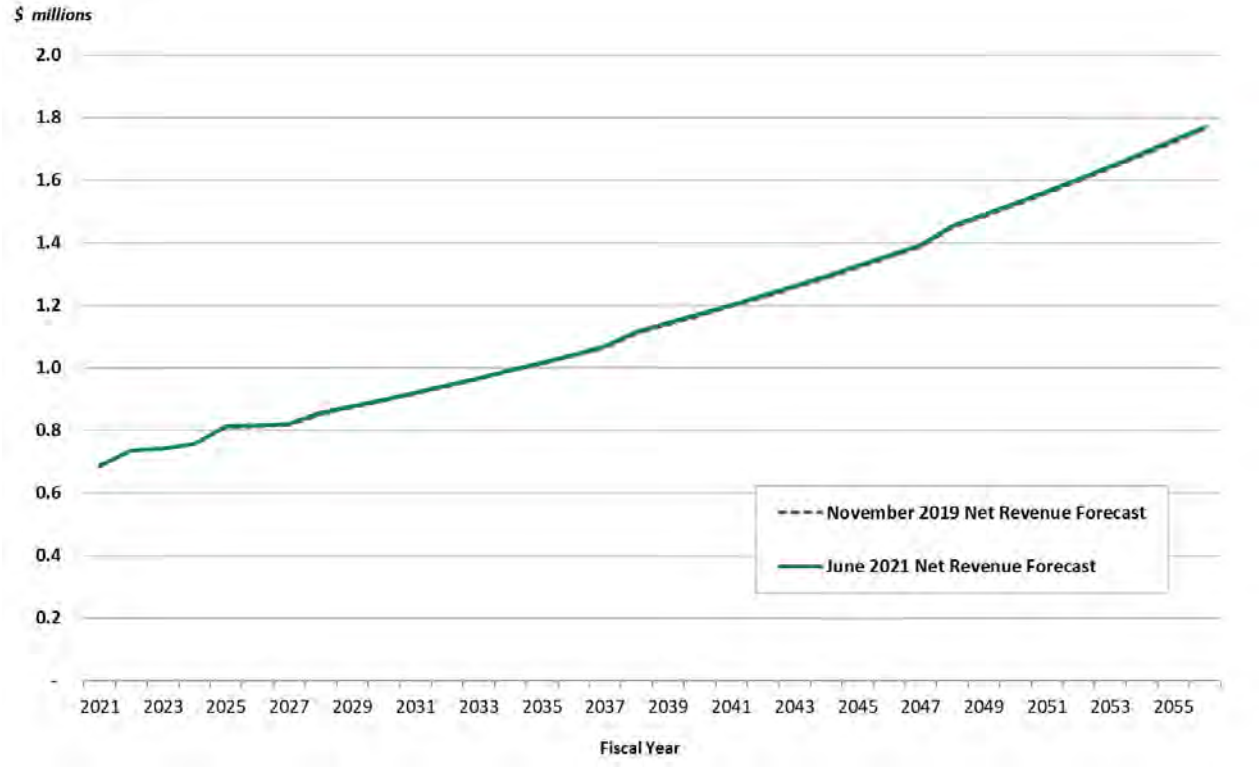
RTS operations and maintenance activities are performed by a private contractor, Kapsch (formerly Schneider Electric), in conjunction with WSDOT maintenance staff. The vendor contract specifies that Kapsch will provide ongoing maintenance of the toll collection equipment through the contract period. The 10-year systemwide RTS vendor contract for all facilities began in FY 2017 with the installation of the permanent toll collection system on SR 520. WSDOT will perform any necessary maintenance to equipment gantries or other ancillary roadside equipment. After the RTS systemwide vendor contract expires, the state will have the option to re-bid the contract or assume responsibility for all RTS maintenance functions (the forecast assumes the equipment and services vendor contract is rebid). Examples of these duties include:

- Realigning / recalibrating cameras and transponder readers;
- Cleaning camera lenses;
- Maintaining equipment data connections; and
- Monitoring / auditing equipment performance.

Roadway Toll System (RTS) O&M costs over the forecast horizon were $0.18 million (0.4 percent) higher for this update, compared to the November 2019 forecast. The minor increase is due to the reallocation of systemwide communication services costs based on facility toll transactions instead of number of active toll facilities.

Exhibit 20 illustrates the RTS cost projections for the current and prior forecasts. The current June 2021 forecast values can be found in column 25 of the Exhibit 29 T&R table. In addition to routine maintenance, periodic capital repair and replacement of RTS equipment will be required. These costs are detailed in a later section.

**Exhibit 20: Roadway Toll Systems O&M Costs in YOE $ (FYs 2021-56)**




## Customer Service Center Operations and Back Office System Software (Columns 26 & 27)

The Back Office System (BOS) software and Customer Service Center (CSC) operations vendors are responsible for processing and billing toll transactions, collecting toll revenue, maintaining customer accounts, interfacing with customers via telephone and at *Good To Go!* retail walk-in centers and providing software applications to enable these functions. The outgoing vendor was responsible for providing both the BOS and CSC functions. As of July 2021, WSDOT has fully transitioned to new, separate BOS software and CSC operations vendors. Expenditures for BOS and CSC vendor services are incurred on a systemwide basis, with the total costs allocated back to each facility based on the number of electronic (non-cash) toll transactions.

The previous vendor contract had been extended through 2020 with the option to carry it through the end of FY 2021 to allow for overlap with the transition to the new BOS and CSC vendor contracts. The new BOS (ETAN) and CSC (Shimmick) vendors went live and operational recently in early July 2021 (FY 2022). The previous single BOS/CSC vendor's contract extension through the transition increased SR 520's combined BOS and CSC costs by approximately $1.4 million in FY 2021.

After the period of overlap between the previous vendor and new vendors in FY 2021, the cost estimates for FY 2022 reflect the first full fiscal year under the two new separate long-term contracts for BOS and CSC. The systemwide BOS vendor costs reflect the ETAN contract values and are allocated to SR 520 based on SR 520's share of the systemwide transactions. Following the end of the new BOS vendor contract in FY 2030, BOS O&M costs for the rest of the operational term are calculated by suitably escalating the final year (FY 2030) contract value.

The SR 520 CSC costs up to FY 2023 are based on the estimated CSC budget values negotiated with the vendor. From FY 2024 onwards and for the rest of the operational term, the systemwide cost projections use estimated pass-through operations costs for the CSC vendor, based on a conservative, bottom-up, activity-based approach which evaluates all costs on a per unit cost and volume basis. The systemwide costs are comprised of transaction dependent and fixed costs (non-transaction dependent). Furthermore, the systemwide CSC costs are escalated to account for inflation over each fiscal year of the forecast horizon. Each year's forecasted value is then divided by the total number of forecasted electronic toll transactions to yield annual values for the average unit cost per transaction, which are then applied to the transaction forecast values for SR 520 by year to determine the SR 520 CSC O&M costs. The costs were preliminarily adjusted and are in alignment with the latest operational budgets developed by Shimmick. It is worth noting that, once the new CSC vendor has been operational for a few months, there may be further refinements to projected costs on the basis of actual operational data, which will be captured in the next update. The CSC vendor costs are also inclusive of out-of-state license plate lookup costs.

The previous dual BOS and CSC vendor was contracted to provide hosted software capable of account management, transponder inventory management, website administration, image reviews, adjudication management, pay-by-mail invoice generation and distribution, collection oversight and accounting. The deployed system was considered the first phase in customer toll transactions processing for WSDOT.

As WSDOT transitioned to separate BOS and CSC vendors, the new BOS software will provide the full functionality of the outgoing system, plus address functional deficiencies identified by the State Auditor's Office, address key limitations with the outgoing system, and support several key enhancements to program functionality, including the concept of a single customer account for both prepaid and Pay As You Go payment provisions. It will also provide for the option to integrate with Washington State Ferries (WSF) to allow *Good To Go!* passes to be utilized in the future as a payment option for ferry fares. The requirements for the new systems software contract include two distinct, yet tightly integrated components: the operational back office component, and the commercial back office component. Although the forecast assumes a second phase and system that will allow for back office integration with WSF, WSF is not yet assumed to be part of the operations, and thus does not contribute to periodic procurement or annual operational costs.

The CSC operations vendor is primarily responsible for the staff performing the customer service and back office operations tasks. Operations tasks include call center operation, back office processing, image review including out-of-state license plate lookups, toll bill printing and mailing, transponder inventory management, civil penalty adjudication processing, collection oversight, and retail front office services. In addition, WSDOT retains the option to evaluate what services may remain with the operator or brought in-house on a task by task basis in order to optimally leverage each groups areas of expertise (e.g. accounting).

One of the added benefits of separating the BOS vendor from the CSC vendor is the flexibility for WSDOT to keep the systems software in place longer than the CSC vendor if this operator does not meet pre-determined key performance indicators yet the system meets and/or exceeds expectations and is dynamic enough to grow with additional toll facilities or other services. This flexibility also includes the ability for WSDOT to shorten the operations contract for a vendor who may underperform on customer service tasks as the contract is assumed to be six years with two optional two-year extensions. As a conservative approach, the forecast assumes procurement of a new vendor at the end of each six year contract but allows for one year for vendor transition or a seven year effective contract period.

Two financial accounts are maintained to keep the costs and revenues separate for the civil penalty process. Delinquent toll bills that are subsequently recovered via the adjudication process are deposited into the Civil Penalty Account (17P), are and typically transferred from there to the SR 520 Toll and Fee Revenue

(16J) Account through legislative authorization at the end of each fiscal year. The amount of time the CSC vendor spends supporting the two activities determines how the costs are allocated between the two accounts.

The aforementioned Customer Program for Resolution (CPR) alternative payment option, implemented in mid-2015, allows customers who receive a notice of civil penalty but call or visit a customer service center to receive a waiver of the $40 civil penalty fee, up to two times. When the CPR process is used to recapture toll revenue, the amount recaptured is automatically transferred into the SR 520 Toll and Fee Revenue Account, denoting the CSC vendor activities as toll collection related. The first customer-initiated request typically results in both fees and penalties being waved, the second request requires *Good To Go!* account holders to bring their account back to good standing and non-account holders to open a *Good To Go!* account. Further requests for civil penalty fees to be waved requires a hearing with an Administrative Law Judge. While helping to improve the rate of toll collection in the NOCP process, the waiver of $40 fees payable has resulted in a noticeable decrease in civil penalty fee revenue.

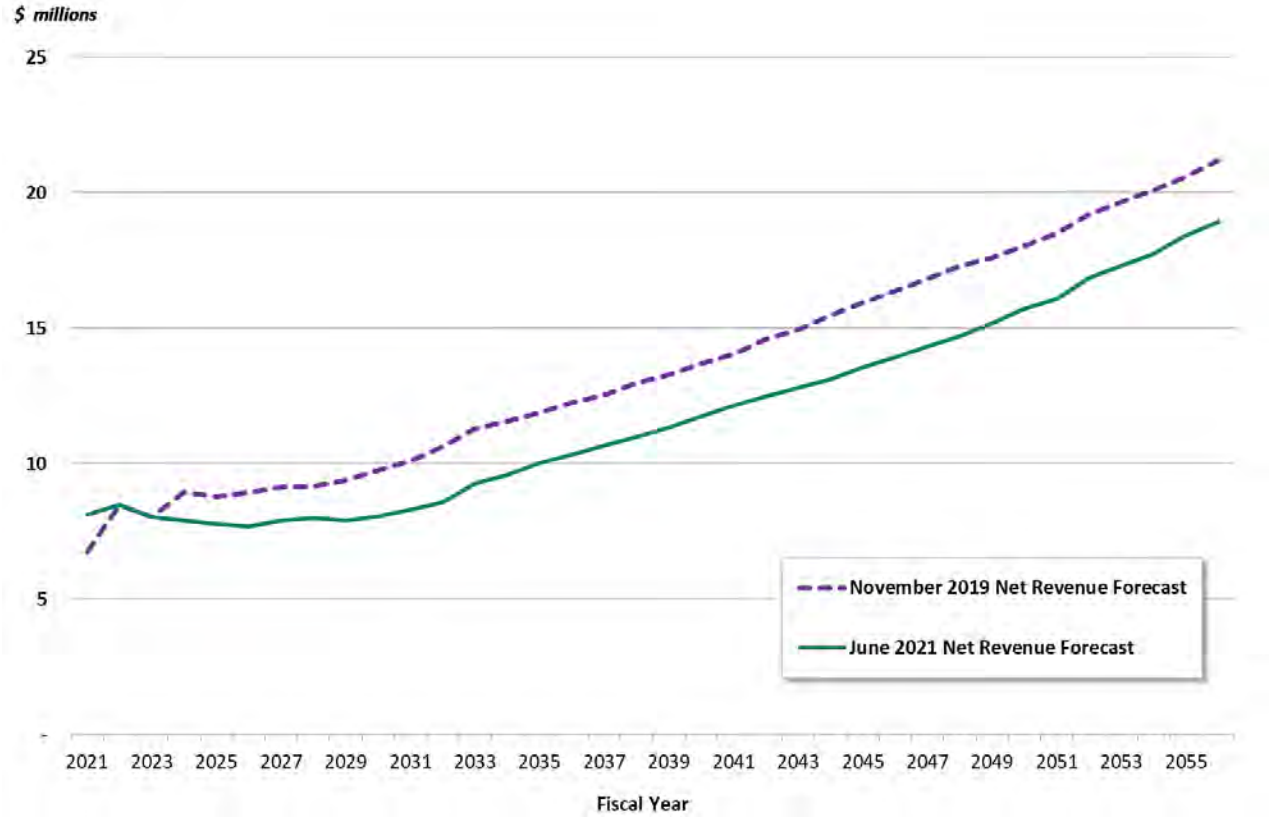
For the overall forecast horizon (FYs 2021-56), the SR 520 total BOS and CSC O&M costs are 63.9 million (13.1 percent) lower than in the November 2019 forecast. In the near term, the primary variance between the 2019 and 2021 estimated costs can be attributed to the $1.4 million increase in FY 2021 primarily associated with the extension of the previous vendor contract, providing operational overlap as the new BOS and CSC vendors and systems became fully operational, in July 2021 (FY 2022). For the FYs 2022-23, the SR 520 total BOS and CSC O&M costs remain unchanged from the 2019 update.

Over the same period, the SR 520 BOS O&M costs alone are $7.5 million (18.2 percent) lower than the 2019 estimates. This can be primarily attributed to the smaller share of SR 520 transactions relative to the overall systemwide transactions, in this update, as compared to the 2019 update. Systemwide BOS costs used in this 2021 update reflect the ETAN contract costs, which also form the basis for extrapolating future BOS vendor costs. Whereas CSC vendor costs are allocated by toll trips, the BOS cost allocation also includes non-revenue trips. The revision to the allocation method for BOS vendor costs results in a higher allocation of costs to I-405 and SR 167 as a result of toll-free carpool trips, which results in a smaller cost allocation share for SR 520.

The SR 520 forecast horizon CSC O&M costs are $56.5 million (12.6 percent) lower than the 2019 estimates. The primary reason for the lower costs is the decrease in SR 520 transaction forecasts over the long-term horizon due to the permanent downward shift in travel predicted as an outcome the COVID-19 pandemic. Also, the decreased systemwide cost per transaction further lowers the CSC costs.

Exhibit 21 illustrates the forecast horizon CSC and BOS costs for the June 2021 and November 2019 forecasts. CSC Operations Vendor O&M costs are included in column 26 and BOS Software Vendor O&M costs in column 27 of Exhibit 29 in Appendix A.

**Exhibit 21: SR 520 Share of System-wide CSC and BOS Cost Projection in YOE $ (FYs 2021-56)**




## Routine Facility Operations and Maintenance (Column 28)

Routine operation and maintenance of the SR 520 physical assets are critical to providing continuous, uninterrupted toll revenue generation. Proper maintenance of the facility also ensures that the expected level of service is provided to motorists. Typically, facility O&M activities include lane restriping, lighting maintenance, routine bridge repairs, pothole and pavement repair, traffic operations, signage, litter pickup, etc. These activities help to preserve safety and travel reliability along the corridor. A more detailed list of facility maintenance activities is provided in Appendix C as Exhibit 31.

As described in section 1 | Introduction and Key Forecast Changes, the SR 520 corridor program is comprised of five major components, the first four of which include construction funding supported by tolls. The facility O&M costs for these four components with toll funding are assumed to be paid from future tolls in the current and previous forecasts. The capital costs for the fifth component — the section from I-5 to Lake Washington, including the West Approach Bridge South (referred to as the "Rest of the West") — are funded solely from the Connecting Washington transportation revenue package as passed by the legislature in 2015 and funded with motor vehicle fuel taxes. Because the Rest of the West does not include any toll funding, WSDOT assumes that the O&M costs for the existing and reconstructed roadway and structures comprising this fifth component will continue to be paid from motor vehicle revenues other than tolls.

After the selection of a preferred design alternative in 2010, WSDOT's SR 520 project office established a maintenance task force of engineering, maintenance, and design staff to conduct a full review of the Program's projected facility O&M costs. Responsibility of updating costs transferred from the SR 520

Project office to the Northwest Region (NWR) office in 2018. No update was made to the facility O&M (and R&R) cost estimates for the November 2018 update over what was projected in 2017 to allow the NWR office sufficient time to prepare a comprehensive update. In 2019, the NWR program management and maintenance staff reassessed and updated the O&M (and R&R) estimates based on most up-to-date information available. As a result of the COVID-19 pandemic, what would have been a November 2020 update was deferred until June 2021, and WSDOT NWR region office and HQ staff opted to refine only the R&R estimate based upon more accurate major maintenance pricing details. No major revisions were made to the facility O&M estimate for the June 2021 update.

For this June 2021 facility O&M cost estimate update, the following approach was followed:

- FY 2021: Costs indicate the remaining 2019-21 biennium budget appropriation and were calculated by subtracting the FY 2020 actuals from the budget appropriation.
- FY 2022 through FY 2056: Costs are the same as the 2019 update and are provided in year of expenditure dollars.

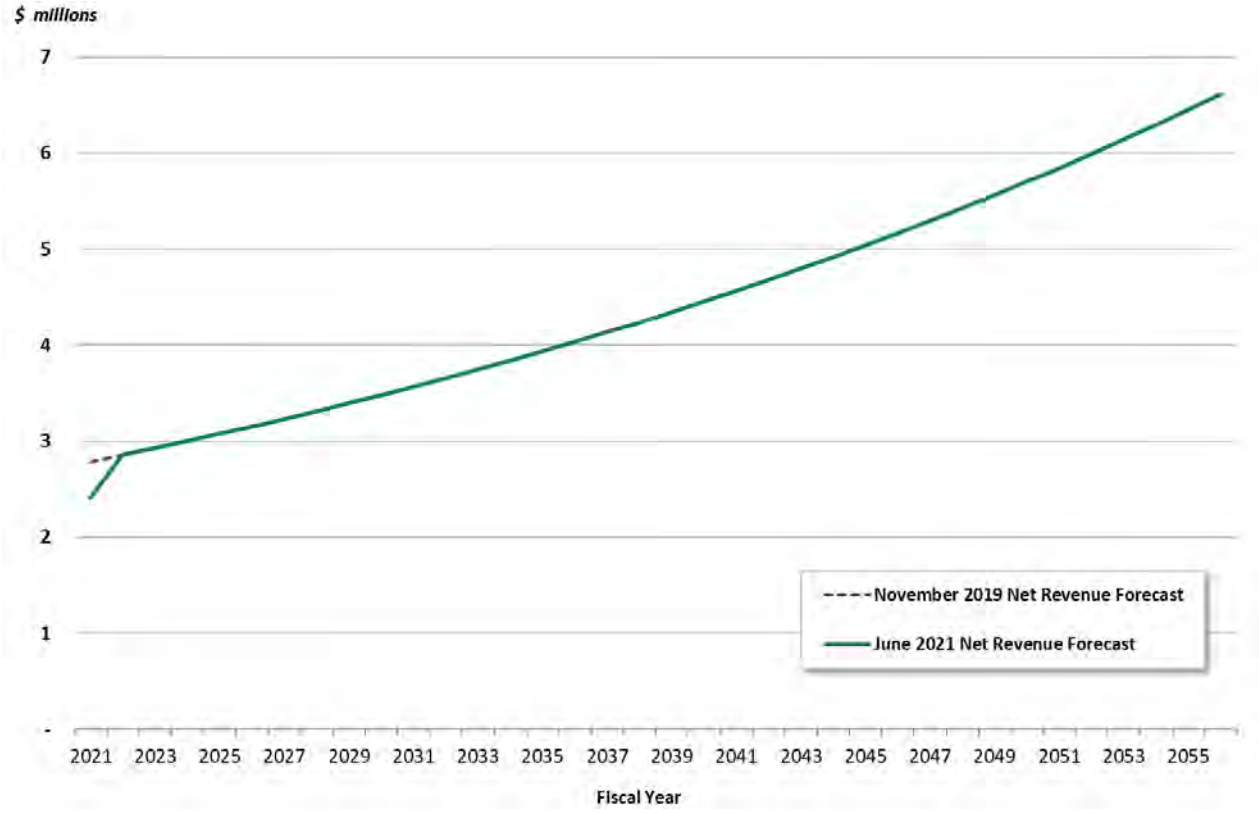
The facility O&M cost assumptions for the June 2021 update were essentially unchanged from the November 2019 update, except for the small decrease in 2019-21 biennium budget appropriation from $4.45 million to $4.42 million due to TEF rental costs reduction.

A 2.5 percent annual inflation factor was used to estimate future costs. This inflation factor is consistent with prior assumptions and other O&M related costs.

For the FY 2021-56 forecast horizon, the June 2021 update reflects an $0.4 million decrease (0.2 percent) in comparison to the November 2019 update. The decreased facility O&M cost estimate is largely due to the reduced 2019-21 appropriation budget which is a result of reduction in TEF rental costs.

The current and prior annual facility O&M cost projections are illustrated in Exhibit 22, with forecast values provided in column 28 of Exhibit 29 in Appendix A.

**Exhibit 22: Projected Facility O&M Costs for the toll funded segments in YOE $ (FYs 2021-56)**




## Bridge Insurance Premium (Column 29)

Annual insurance costs for the SR 520 Bridge comprise bridge insurance premium payments and brokerage fees. Current insurance premium and coverage levels are provided by the Office of Risk Management (ORM) within the Department of Enterprise Services. Insurance coverage on the bridge and approach structures includes property damage on the Portage Bay Bridge, West Approach, Floating Bridge, and East Approach, as well as business interruption coverage for a total insured value of $1.53 billion with a $400 million all-risk policy limit.

Coverage is provided for property damage losses caused by forces of nature, component failure, or acts of terrorism with the $400 million limit for all risk loss protection, except for losses caused by earthquake or flood, which have $100 million limits. There is a $10 million deductible that applies to all property damage losses. In addition, coverage includes business interruption insurance with a $100 million limit for revenue due to a covered loss and there is a $100 million limit for boiler & machinery equipment breakdown risk, with an applicable $10 million deductible. Overall, the current asset value increased from $1.49 billion as the basis for the FY 2020 premium to $1.53 billion for the FY 2022 premium.

Brokerage fees are paid on a monthly basis. The fees are determined at a statewide level including SR 520 and TNB bridges and then allocated to individual facility, with a 2.5 percent annual escalation factor applied to account for inflation purposes. Also, starting FY 2032, with tolls likely to be discontinued on TNB, the insurance costs calculation assumes a higher share of statewide brokerages fees to be allocated to SR 520.

Bridge insurance premium costs over the forecast horizon increased by $122.5 million or 68.5 percent in comparison to the November 2019 forecast. The significant increase can be attributed to the following:

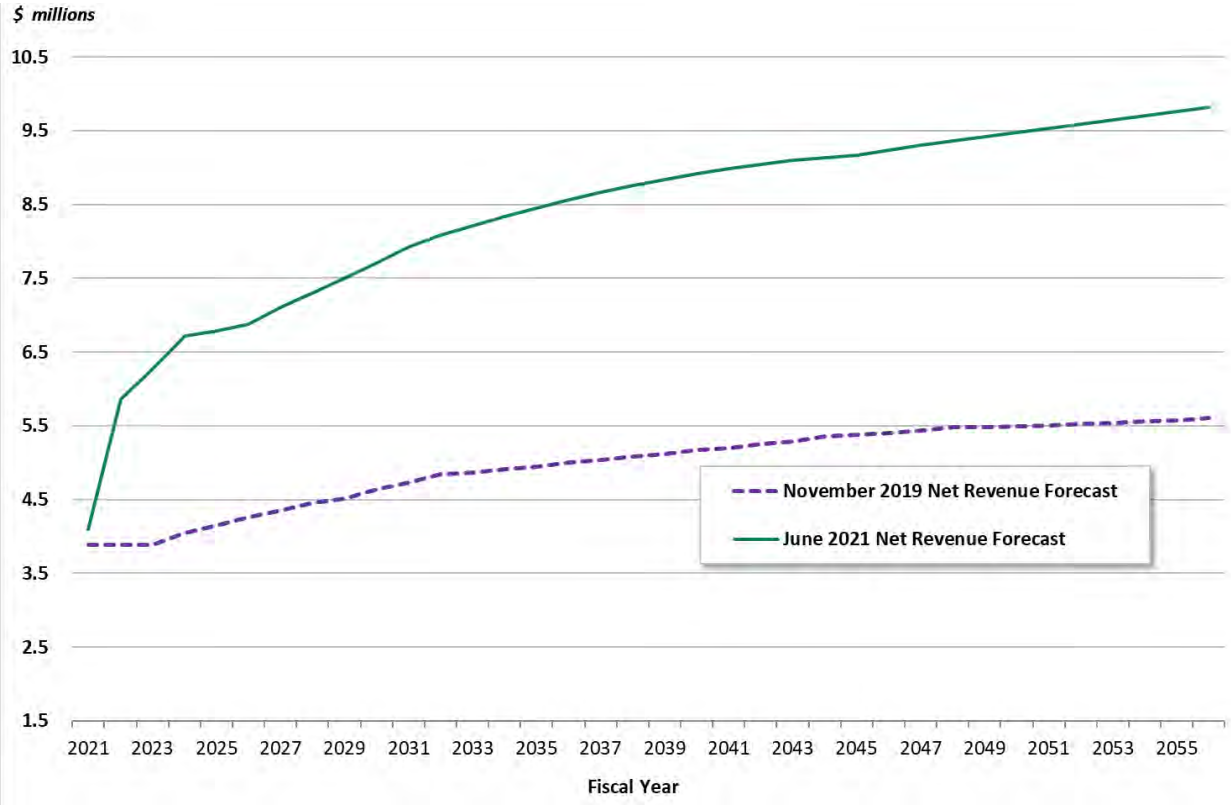
- In the near-term, higher premium costs are based on the most recent quote and historical average increases in insurance premium rates over the past seven years. The challenging market conditions over the past few years continue to persist and key drivers for the higher rates include catastrophic losses such as hurricanes Harvey, Irma and Maria in 2017, California wildfires in 2018/19/20, winter storms in 2021 as well as impacts of the COVID-19 pandemic. The catastrophic events and the pandemic have increased the property risk exposure, potential threat to business continuity and loss of operational revenue.
- Also, most insurers have suffered attritional losses and unprofitability over the past 18 months, resulting in re-evaluation and further increases in their pricing.
- Higher near-term premiums provide a higher basis upon which more modest longer-term premium growth rates are derived from the rates of revenue growth, which are similar to the past years.

DES is performing a study of insurance options anticipated to be completed in December 2021, which could result in opportunities for some degree of self-insurance for the agency, reducing their annual insurance premium payments.

The COVID-19 pandemic has had a severe impact on the insurance market resulting in substantially higher premiums. However, as the pandemic subsides and operations stabilize, market forces could result in a correction that could also bring down the premiums in the medium- or long-term.

The current and prior annual insurance premium projections are illustrated in Exhibit 22, with forecast values provided in column 29 of Exhibit 29 in Appendix A.

**Exhibit 23: Projected Insurance Costs in YOE $ (FYs 2021-56)**



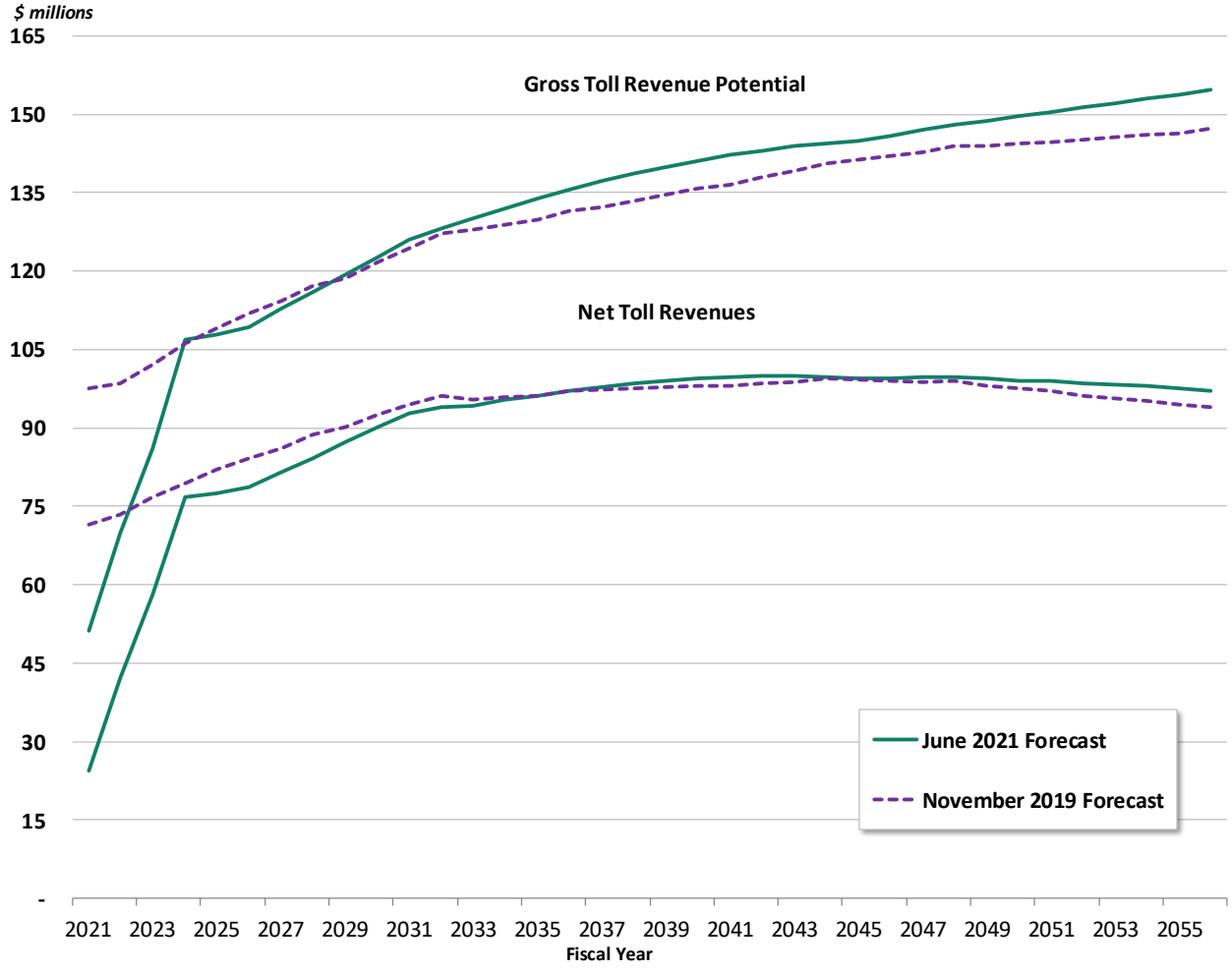
# 6 | Changes to Other Project Uses of Toll Revenues

## Total Net Revenue (Column 30)

Starting with Gross Toll Revenue Potential in column 11 of Appendix A Exhibit 29, the addition and subtraction of the various revenue adjustments in columns 12-21 and the O&M expenditures in columns 22-29 result in the total projected net toll revenue in column 30 available to support financing, contribute to required reserves, and provide for other project uses.


Exhibit 24 illustrates the spreads between the gross and net revenue over the forecast horizon for the prior November 2019 and current June 2021 forecasts. The differences in the sums of the annual values over the forecast horizon are shown in Exhibit 4 on page 10.

**Exhibit 24: Projected Gross and Net Toll Revenues (FYs 2021-56)**



Other downstream uses of net toll revenues include deferred sales tax, periodic facility R&R costs, and periodic toll-related R&R costs as shown in the waterfall on the previous page. In accordance with the SR 520 financial plan flow of funds, net revenues are used to pay debt service first, with annual reserve account contributions for deferred sales tax and R&R coming downstream from coverage revenues. Descriptions for these other uses of tolls are provided below.

## Deferred Sales Tax on Construction (Column 31)

The 2008 Washington State Legislature, through ESHB 3096 codified as RCW 47.01.412, granted the SR 520 Program the ability to defer a portion of the state and local sales tax payable on construction until five years after the replacement bridge is constructed and open to traffic. Specifically, the first of 10 equal annual installments are due on December 31st of the fifth calendar year after the certified date by which the program components with toll funding are operationally complete.

The final program component with toll funding, the West Approach Bridge North, was completed in mid-2017, which would make the first deferred sales tax payment due on December 31, 2022, midway through FY 2023. Toll revenues are assumed to be the source of funding used to make the 10 annual payments through FY 2032.

The State is deferring sales tax on almost all of the corridor program components with toll funding support, with the exception of sales tax paid in Grays Harbor County that applied to the floating bridge pontoon construction site development. The June 2021 forecast values, shown in column 31 of Exhibit 29 in Appendix A, are unchanged from the November 2019 forecast of $159.4 million over the forecast horizon.

## Toll-Related Repair and Replacement Costs (Column 32)

Toll-related R&R costs include the periodic repair, rehabilitation, and replacement of the RTS hardware and equipment. In addition to hardware and equipment, the R&R cost forecast includes SR 520's share of the systemwide administrative and technical-related costs incurred by WSDOT to periodically procure both the RTS and CSC vendor contracts as well as implement and test new systems software and toll collection equipment hardware.

Additional detail on toll-related R&R and vendor procurement costs is provided below, and the annual cost projections in year of expenditure dollars are provided in column 32 of Exhibit 29 in Appendix A.

### Roadway Toll Systems Repair and Replacement Costs

RTS vendor R&R costs include upgrades to, or replacement of, cameras and transponder readers, networking equipment, and fiber optic communication lines. While it may be possible to get more than 10 years out of some hardware components and/or for WSDOT to extend the contract for an established RTS vendor, the cost projections conservatively assume that the RTS vendor and entire RTS system will be replaced every 10 years. This periodic procurement is next scheduled to commence in FY 2026 and conclude in FY 2027, which includes up to one year for procurement of a state-wide vendor to provide the entire roadway toll system, followed by implementation and testing of each facility to allow for a smooth transition to a new vendor and/or new equipment.

Allocation of systemwide RTS procurement costs are calculated using the total number of active toll facilities rather than the number of toll points to avoid concerns of over-allocation of primarily fixed costs to the I-405 Express Toll Lanes and the SR 167 HOT lanes with their multiple toll points. The June 2021

R&R costs forecast is $1.2 million (4.4 percent) higher over the forecast horizon than the November 2019 update. The increase can be attributed to the following factors:

- The WSDOT and Consultant costs related to the final RTS Vendor Procurement cycle commencing in FY 2056 are included in this forecast update, while in the November 2019 update, these costs were excluded considering it was the last year of the forecast horizon.
- This forecast update includes revised WSDOT and Vendor R&R costs for facility and TMC network equipment incurred every 10 years with first replacement anticipated in FY 2023.
- Also, this forecast utilizes the latest available information for BOS Vendor Integration occurrence schedule. Considering the effective timing of the recent BOS Vendor Procurement & Integration, the next occurrence for integration costs was moved from FYs 2029-30 to FYs 2030-31 and repeating every 10 years thereafter.

### CSC and BOS Repair and Replacement Costs

In addition to costs related to RTS vendor procurement, implementation, and testing, the periodic costs to procure the BOS software and CSC operations vendor contracts along with implementation and testing are also included in the Periodic Toll Equipment and CSC R&R column in the net revenue table as provided in Exhibit 29. A USDOT Urban Partnership Agreement grant covering SR 520 paid for the initial procurement of the current Customer Service Center vendor, including implementation, and testing. Going forward, future costs associated with procuring one or more CSC and BOS vendors will be allocated across all the authorized toll facilities based on each facility's share of total system wide transactions.

Similar to BOS O&M costs, systemwide BOS vendor procurement (R&R) costs are allocated based on both toll transactions and toll-free or non-revenue transactions. The revision in methodology decreases SR 520's share of total systemwide procurement costs as the I-405 and SR 167 express toll lanes account for a higher share of total trips, due to including toll-free HOV carpools. Procurement costs also use the full forecasted transactions for each toll facility over the anticipated length of the vendor contract to establish each facility's share of the total systemwide costs. Using an extended 10-year horizon helps to even out ramp-up factors for new facilities just starting operations and ensures that future facilities that benefit from vendor operations are contributing to the procurement of the vendor. Costs are assumed to escalate by 2.5 percent per year to account for inflation.

Similar to BOS procurement costs, CSC costs use the full forecasted transactions for each toll facility over the anticipated length of the vendor contract to establish facility shares of the total systemwide costs. The current forecast values assume that the operations vendor contract will be procured for a base period of six years, with two optional two-year contract extensions. As a conservative approach, the forecast assumes only one two-year contract extension will be administered per procurement cycle, resulting in an eight-year effective contract period, with seven years between vendors after accounting for a one-year overlap period. Using an extended eight-year horizon helps to even out ramp-up factors for new facilities just starting operations and ensures that future facilities that benefit from vendor operations are contributing to the procurement of the vendor. Costs are assumed to escalate by 2.5 percent per year to account for inflation.

The previous CSC/BOS vendor was contracted to provide hosted software capable of account management, transponder inventory management, website administration, image reviews, adjudication management, pay-by-mail invoice generation and distribution (transferred to WA Department of Enterprise Services in 2016), collection oversight and accounting. The deployed software was referred to as a first generation (Gen 1) system in customer toll transactions processing for WSDOT. The newly procured BOS vendor is providing a second generation (Gen 2) system software solution. The (Gen 2) BOS software for toll

transaction processing and customer account management would provide the capability to integrate of *Good To Go!* toll technology as an alternative payment method for Washington State Ferries (WSF). In addition, the Gen 2 system would address other concerns with the existing system by allowing for the following improvements:

- Enhancing key performance indicators (KPIs) to better measure things which would add immediate value to the customer service delivery, such as the customer website for account management, the CSC phone system, and support for routine and ad hoc reporting;
- Reduce the frequency of changes to operating rules, which can create an unstable environment where operational consistency is difficult to achieve;
- Facilitate training that better prepares customer-facing staff to deliver consistent information and service to customers;
- Provide a better path toward compliance with established policies and procedures required for good customer service; and
- Expedite recognition and resolution of transaction processing and customer service issues.

Following the recently completed vendor procurement, the WSDOT Toll Division will likely allow for a separate BOS and CSC vendor procurement model going forward. However, separate BOS and CSC vendor RFPs do not preclude the selection of the same vendor for both contracts.

- BOS Software — The back office system software is integrated with the RTS (lane system) equipment, the CSC vendor (if different), WSDOT's accounting system (TRAINS), the Washington State Department of Licensing (DOL), and a third party out-of-state license plate look-up vendor. The latter two parties are required for identifying Pay By Mail customer names and addresses for mailing toll bills.
    - The existing and future BOS vendor contracts are assumed to be 10 years in duration, with the procurement, transition, and replacement of the systems software and vendor spread across up to two fiscal years. RFP development will occur with a vendor solicitation in year 9, concurrent with two years of development, design, testing, and installation in years 9 and 10. In addition, transition support will occur during the last year of the outgoing vendor's contract as a reimbursable expense included in the overall procurement R&R cost.
- CSC Operations — The customer service center operations vendor is primarily responsible for the staff performing the front and back office customer service operations tasks. These would include call center operations, back office transaction processing, license plate image review, transponder inventory management and distribution, adjudication management, collection oversight, and retail front office services. Toll bill printing and mailing, recently transferred from the CSC back office vendor to the state Department of Enterprise Services, could potentially be added back to the scope of work for a future CSC operations vendor procurement.
    - The current forecast values assume that the operations vendor contract will be procured for a base period of six years, with two optional two-year contract extensions. As a conservative approach, the forecast assumes only one two-year contract extension will be administered per procurement cycle, resulting in an eight-year effective contract period, with seven years between vendors after accounting for a one-year overlap period. The revised assumption was made to better reflect the recent vendor transition experience and account for more conservatism in the cost estimates for future procurement cycles.

- In addition, WSDOT can evaluate what services may remain with the CSC operator or be brought in-house on a task by task basis in order to optimally leverage each group's areas of expertise.

In addition to the initial development costs for software and hardware, maintenance and technical support are included in the routine WSDOT and Consultant Operations staff costs and vendor contract costs discussed in their respective sections.

The Gen 2 BOS software is designed to be capable of adding new toll facilities as such facilities are authorized for tolling by the state legislature. Although the forecast assumes the Gen 2 system is capable of back office integration with WSF, this is not yet assumed to be part of the operations, and thus, costs for that customization are excluded since WSF doesn't contribute to procurement or operational costs.

In the near term, the variance between the November 2019 and the June 2021 estimated costs can be attributed to the delay in vendor procurement resulting in existing vendor costs being extended through FY 2021. The new BOS and CSC vendors are now operational as of FY 2022 (mid-2021). In addition, the June 2021 update includes CSC procurement costs for the final procurement cycle in FYs 2054-55, while the November 2019 update excluded these costs considering their proximity to the last year of the forecast horizon.

These additional BOS and CSC costs are partially offset by the decrease in costs due to the lower cost share allocated to SR 520. The inclusion of non-revenue vehicles for BOS vendor cost allocations results in a higher allocation of costs to I-405 and SR 167 as a result of toll-free HOV carpool trips, thus deceasing the cost allocation share for SR 520. Noting the recently completed transition, the June 2021 forecast uses FY 2022 as the first full operational year for the recently procured BOS and CSC vendors.

In aggregate, over the FY 2021-56 forecast horizon, the SR 520 total BOS and CSC R&R costs have increased by $5.2 million or 12.9 percent compared to the 2019 forecast. The BOS costs have increased by $2.2 million (or 6.7 percent) while the CSC costs are higher by $3 million (or 43.2 percent) over the forecast horizon.

Exhibit 25 illustrates the total SR 520 toll-related R&R costs for the June 2021 and previous November 2019 forecasts. Exhibit 26 further illustrates the composition of the June 2021 forecast values by the main sub-components of toll-related R&R costs.

**Exhibit 25: Toll Collection Repair and Replacement Cost Estimate Forecast Comparison in YOE $ (FYs 2021-56)**

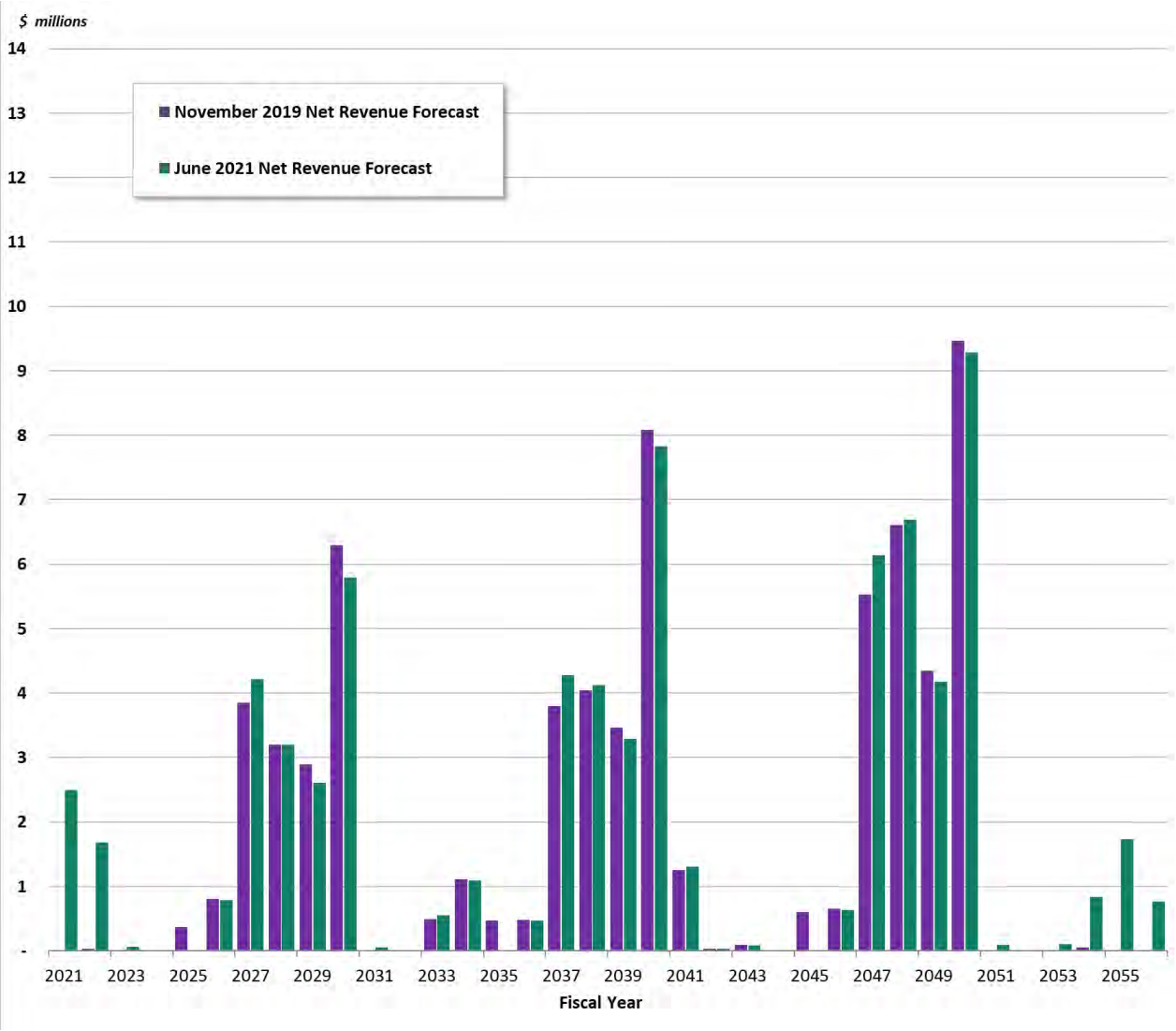
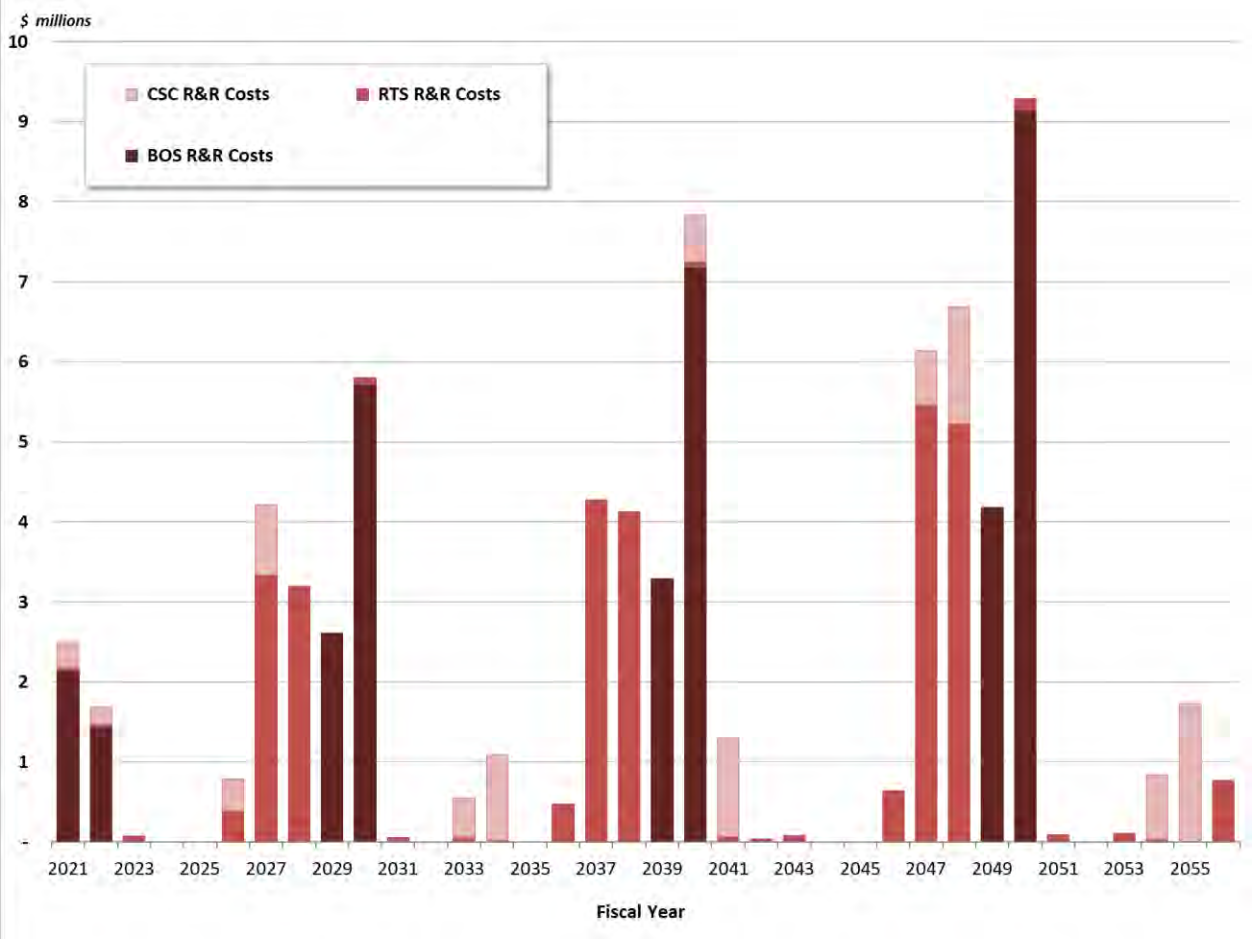


**Exhibit 26: June 2021 Forecast for Toll Collection Repair & Replacement Costs by Component in YOE $ (FYs 2021-56)**




## Periodic Facility Repair and Replacement Costs (Column 33)

Costs associated with periodic facility R&R activities are assumed to be funded from the WSDOT preservation program ("P program") using toll revenues and other non-toll sources. Periodic facility costs typically involve major capital upgrades, renewal, and improvements, including replacement of anchor cables, replacement of strip seal expansion joints, surface rehabilitation, painting, and related capital rehabilitation. Cost estimates for periodic R&R items are dependent upon several design characteristics of the facility, including the type of construction materials and structural attributes.

As with facility O&M costs, WSDOT's NWR maintenance staff has responsibility for reviewing, revising, preparing, and documenting the costs for R&R activities. Like the O&M costs, R&R projections were prepared by roadway segment and cost category. In 2019, the NWR program management and maintenance staff reassessed and updated the O&M and R&R estimates based on most up-to-date information available. As a result of the COVID-19 pandemic, what would have been a November 2020 update was deferred until June 2021, and WSDOT NWR region office and HQ staff opted to refine only the R&R estimate based upon more accurate major maintenance pricing details.

A map illustrating the roadway segments in the SR 520 corridor is provided as Exhibit 1 in the Introduction on page 5. For the purpose of these projections, it was previously determined that toll revenues would be used to fund all facility R&R expenditures for the bridge structures and related components with toll funding, such as replacement of expansion joints, bridge decking, and anchor cables. In addition, toll revenues would pay for the traffic management and data systems R&R costs throughout the SR 520 corridor. In contrast, WSDOT's non-toll funding from the Preservation Program would be used for non-bridge program components with toll capital funding, primarily the at-grade highway section between the floating bridge and I-405. R&R costs not paid from tolls in this section would include pavement grinding and resurfacing, and roadway lighting.

Watertight, electrical and mechanical systems are required to maintain the safe operation of the floating portion of the bridge. The Washington State Transportation Commission Resolution No. 398[3] directs WSDOT to conduct these inspections on all floating bridges in Washington State on an annual basis. Therefore, the SR 520 floating bridge will receive these essential inspections, designated "Blue Ribbon" inspection as directed by the Governor[4] and the Washington State Transportation Commission.

The 2015 Legislature authorized $1.64 billion in funding for the Rest of the West improvements between I-5 to Lake Washington via the Connecting Washington transportation revenue package. As a result of this action taken by the State Legislature to construct the fifth and final component of the SR 520 corridor program using only motor vehicle tax revenues other than tolls, WSDOT assumes that the R&R costs for the Rest of the West will continue to be funded from non-toll motor vehicle revenues sources within the Preservation Program.

The June 2021 facility R&R estimate update builds on estimates from 2019 facility R&R update and previous years. For this 2021 update, the following approach was followed.

- FY 2021: Costs reflect the remaining 2019-21 biennium budget appropriation and were calculated by subtracting the FY 2020 actuals from the December 2020 Governor's biennium budget appropriation.
- FYs 2022-56: Costs are updated based on reevaluated pricing and updated inputs from NWR maintenance team and reflect dollars of the appropriate year of expenditure.

The June 2021 update aligns with standard WSDOT project scoping practices. This included a detailed review performed by subject matter experts to analyze the maintenance activities and work quantities for appropriateness, leveraging their experience and industry standards to determine the optimal asset replacement cycles, and assessing the recently awarded contract prices as well as historical bids to recommend suitable unit costs.

Traffic control activities are included within the R&R unit costs on relevant items. Other markups (miscellaneous, mobilization, tax, construction, contingencies, preliminary engineering) are applied based on the total estimated cost in the year of expenditure dollars and on the type of work (i.e. preliminary and

[3] Resolution 398 of the Washington State Transportation Commission, dated May 16, 1991

[4] Report of the Governor's Blue Ribbon Panel, dated May 2, 1991, "Investigation into the Sinking of the I-90 Lacey V. Murrow Bridge"

construction engineering). The percentages for "other markups" are in accordance with the WSDOT Cost Estimating Manual[5], Plans Preparation Manual[6] and Ebase User's Guide[7].

For the FY 2021-56 forecast horizon, the June 2021 update reflects a $25.1 million increase (6.7 percent) in comparison to the November 2019 update. The changes to facility R&R cost estimate can be primarily attributed to the following factors.

- Higher costs for bridge inspections, based on most up-to-date information available.
- Refinements to the unit prices for non-bridge items based on recommendations from NWR Design and Safety Office, which are higher than in the 2019 update.
- Updated preliminary engineering and construction project markup percentages to reflect changes in project cost estimating manual, Ebase user's guide and observed market rates. The markup percentages are higher compared to the 2019 update.
- Planning level estimates for bridge deck sealing have been updated based upon recent expenditure experience and are scheduled for FYs 2028-29

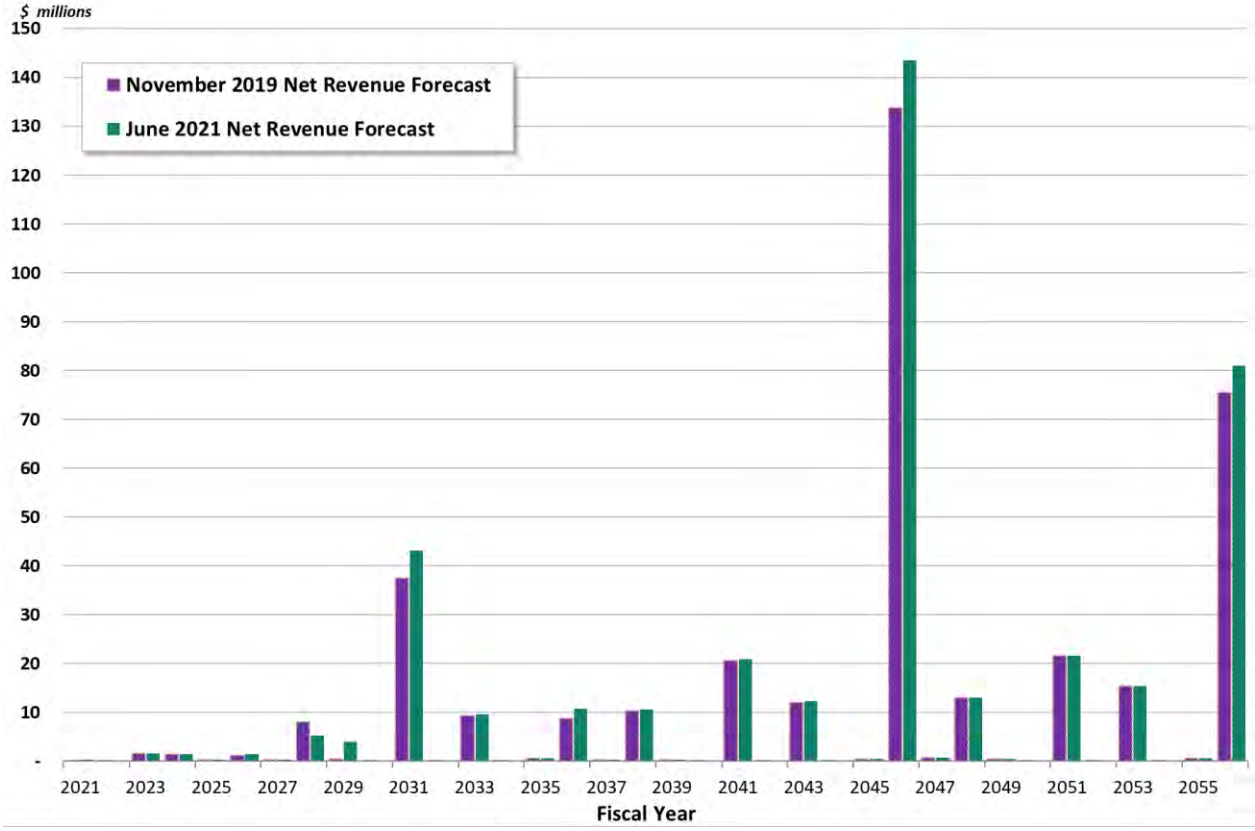
Facility R&R costs funded by toll revenues are shown in column 33 of the Exhibit 29 T&R table for the June 2021 forecast. Annual amounts for current and previous forecasts are depicted in Exhibit 27 on the following page.

[5] Cost Estimating Manual for Projects, WSDOT, December 2020

[6] Plans Preparation Manual, WSDOT, November 2018

[7] Ebase User's Guide, August 2019

**Exhibit 27: Toll-Funded Facility Repair & Replacement Costs by Forecast in YOE $ (FYs 2021-56)**



# Appendix A: Annual Toll Traffic & Revenue Projections

The T&R table provided on the following page as Exhibit 29 shows the adjustments, additions, and reductions to Stantec's Gross Toll Revenue Potential forecast that yield the net toll revenue cash flow available for debt service and other downstream uses.

Key changes and additions to T&R table columns by forecast are shown in Exhibit 28 below, with (#) representing the table column number.

## Exhibit 28: Changes in the T&R Table Format across the Annual Net Revenue Forecasts

| SEPTEMBER 2011 | SEPTEMBER 2012* | OCTOBER 2013 & NOVEMBER 2014 | NOVEMBER 2015 | NOVEMBER 2016 18 | NOVEMBER 2019 & JUNE 2021 |
|---|---|---|---|---|---|
| Gross Toll Revenue (11) | Gross Toll Revenue Potential (11) | No change | No change | No change | No change |
| Free Trip Incentive (12) | No Change | Included in actuals for Toll Payment Discounts & Fees (12) | No change | No change | No change |
| Self-Initiated Payment Incentives (13) | No Change | Included in Toll Payment Discounts & Fees (12) | No change | No change | No change |
| Good To Go! Pay By Plate Fees (14) | Good To Go! Pay By Plate Surcharge (14) | Included in Toll Payment Discounts & Fees (12) | No change | No change | No change |
| Late Payment Fees (15) | No change | Pay By Mail (PBM) Rebilling Fees (18) | No change | No change | No change |
| N/A | N/A | N/A | N/A | Recaptured Toll Revenue at Good to Go! Rates via CPR (15) | No change |
| N/A | N/A | Gross Toll Revenue Collected (15) | No change | Gross Toll Revenue Collected (16) | No change |
| Uncollectible Transactions/Leakage (16) | Uncollectible Accounts (16) | Revenue Not Recognized (13), Unpaid Toll Revenue (14) | No change | No change | No change |
| N/A | N/A | Misc. Pledged Revenues (16) | No change | Misc. Pledged Revenues (17) | No change |
| Recovered Toll & Fee Revenue (17) | No change | Recovered Toll Revenue (19), recovered fees included in PBM Rebilling Fees (18) | No change | Toll Revenue Recovered at PBM Rates via NOCP (20), recovered fees included in PBM Rebilling Fees (19) | No change |
| Adjusted Gross Toll Revenues (18) | No change | Adjusted Gross Toll Revenue & Fees (20) | No change | Adjusted Gross Toll Revenue & Fees (21) | No change |
| Transponder Sales Revenue (19) | No change | Transponder Sales Revenue (17) | No change | Transponder Sales Revenue (18) | No change |
| Credit Card Fees (21) | Credit Card Fees (22) | Credit Card Fees (21) | Credit Card Fees (21): now excludes fees from tag sales | Credit Card Fees (22) | No change |
| Transponder Purchase & Inventory Cost (20) | No change | Included in Toll Collection O&M (22) | Included in Toll Collection O&M (22); now includes credit card fees on tag sales | Included in Toll Collection O&M (23) | No change |
| Routine Toll Collection O&M Costs (22) | Toll Collection O&M Costs (22) | Toll Collection O&M Costs (22), costs now include Transponder Purchase & Inventory | No change | Toll Collection O&M Costs (23) | Toll Collection CSC O&M Costs split up: CSC Ops Vendor O&M (26), BOS Software Vendor O&M (27) |
| N/A | N/A | Periodic Toll Equipment and CSC R&R Costs (28) | No change) | Periodic Toll Equipment and CSC R&R Costs (29) | No change |
| Remaining Net Toll Revenues After R&R/ Deferred Sales Tax (28) | Net Toll Revenue After Deferred Sales Tax and Periodic R&R (28) | Total Net Toll Revenue After Deferred Sales Tax and Periodic R&R (29) | No change | Removed | No change |

** Forecast values correspond to the September 2012 Net Revenue forecast update, modified to incorporate nickel rounding of toll rates in fiscal years 2014-16, as adopted by the Washington State Transportation Commission in May 2013.*

## Exhibit 29: SR 520 Traffic and Revenue Table – June 2021 Forecast

## Annual Transactions, Gross Revenue, and Net Revenue | FY 2012-56 | June 2021 TRFC Post-Pandemic Projections | Tailored +15% Toll Increase in FY 2024

**Updated: 9/21/2021**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *Good To Go!* Accounts | | | Pay By Mail / No Account | | | | Toll Revenue Potential | | | Plus (Less): | Less: | Less: | Plus: | | Plus: | Plus: | Plus: | Plus: | | Less: | Less: | Less: | Less: | Less: | Less: | Less: | Less: | | | | |
| | Fiscal Year | Wtd. Average Toll per PCE Transaction (one-way)[1] | Annual Bridge Toll Transactions (millions)[2] | PCE Bridge Volumes (millions)[3] | Wtd. Average Toll per PCE Transaction (one-way)[1] | Annual Bridge Toll Transactions (millions)[2] | PCE Bridge Volumes (millions)[3] | **Total Toll Transactions (millions)[4]** | *Good To Go!* Pre-Paid Accounts ($ millions)[5] | Pay By Mail / No Account ($ millions)[6] | **Total Gross Toll Revenue Potential ($ millions)[4]** | Toll Payment Discounts and Fees ($ millions) [7, 8, 9] | Revenue Not Recognized ($ millions) [10, 11] | Unpaid Toll Revenue ($ millions) [10, 12] | Recaptured Toll Revenue at Good To Go! Rates via CPR ($ millions) [13] | **Subtotal: Adjusted Gross Toll Revenue Collected ($ millions)** | Misc. Pledged Revenues ($ millions) [14] | Transponder Sales Revenue ($ millions) [15] | Pay By Mail Rebilling Fees (2nd Invoice & Later Recovery) ($ millions) [16, 17] | Toll Revenue Recovered at Pay By Mail Rates via NOCP ($ millions) [18] | **Subtotal: Adjusted Gross Toll Revenue & Fees ($ millions)** | Credit Card Fees ($ millions) [19] | Transponder Purchase and Inventory Costs ($ millions) [20] | State and Consultant Operations Costs ($ millions) [21] | Roadway Toll Systems (RTS) O&M Costs ($ millions) [22] | CSC Operations Vendor O&M Costs ($ millions) [23] | BOS Software Vendor O&M Costs ($ millions) [23] | Routine Facility O&M Costs ($ millions) [24] | Bridge Insurance Premiums ($ millions) [25] | **Total Net Toll Revenue ($ millions)** | Deferred Sales Tax Payments ($ millions) [26] | Periodic Toll Equipment and CSC Repair & Replacement (R&R) Costs ($ millions)[27] | Periodic Facility Repair & Replacement (R&R) Costs ($ millions)[28] |
| Reported Data | 2012 | $2.66 | 7.95 | 8.05 | $3.96 | 1.66 | 1.69 | **9.61** | 21.39 | 6.67 | **28.06** | (0.21) | (0.69) | (1.05) | - | **26.10** | 2.00 | 1.32 | 0.83 | - | **30.25** | (0.43) | (0.93) | (3.53) | (0.32) | (2.18) | - | - | (1.64) | **21.22** | - | - | - |
| | 2013 | $2.78 | 16.92 | 17.01 | $4.19 | 3.30 | 3.35 | **20.22** | 47.28 | 14.02 | **61.30** | 0.67 | (1.52) | (5.01) | 0.00 | **55.44** | 0.24 | 0.47 | 1.38 | - | **57.53** | (0.91) | (0.33) | (1.94) | (0.29) | (4.60) | - | - | (2.43) | **47.02** | - | - | - |
| | 2014 | $2.85 | 17.69 | 17.77 | $4.23 | 3.27 | 3.31 | **20.96** | 50.57 | 14.02 | **64.59** | 0.86 | (1.68) | (3.28) | 0.01 | **60.50** | 0.21 | 0.50 | 1.51 | - | **62.72** | (1.08) | (0.35) | (3.40) | (0.36) | (3.87) | - | - | (2.52) | **51.14** | - | - | - |
| | 2015 | $2.93 | 18.43 | 18.52 | $4.19 | 3.59 | 3.62 | **22.02** | 54.21 | 15.17 | **69.38** | 1.02 | (3.82) | (2.69) | 0.06 | **63.95** | 0.51 | 0.55 | 1.60 | 0.89 | **67.49** | (1.20) | (0.34) | (3.67) | (0.37) | (4.78) | - | - | (2.22) | **54.91** | - | (0.35) | - |
| | 2016 | $2.93 | 19.77 | 19.86 | $4.79 | 3.45 | 3.48 | **23.22** | 58.13 | 16.67 | **74.80** | 1.20 | (3.70) | (3.73) | 0.79 | **69.35** | 0.70 | 0.83 | 1.40 | 0.82 | **73.09** | (1.31) | (0.55) | (4.36) | (0.27) | (4.75) | - | (0.81) | (2.26) | **58.77** | - | (0.48) | - |
| | 2017 | $3.08 | 20.26 | 20.36 | $5.10 | 3.72 | 3.75 | **23.97** | 62.79 | 19.13 | **81.91** | 1.26 | (4.54) | (4.29) | 0.63 | **74.98** | 3.77 | 0.85 | 1.14 | 0.82 | **81.55** | (1.56) | (0.59) | (4.90) | (0.41) | (5.62) | - | (2.36) | (2.24) | **63.87** | - | (0.80) | (0.21) |
| | 2018 | $3.11 | 22.59 | 22.70 | $6.15 | 3.19 | 3.22 | **25.79** | 70.52 | 19.83 | **90.35** | 1.47 | (4.40) | (4.85) | 0.62 | **83.18** | 0.98 | 0.87 | 1.31 | 1.00 | **87.35** | (1.73) | (0.59) | (4.88) | (0.52) | (5.92) | - | (1.76) | (2.48) | **69.46** | - | (2.56) | (0.28) |
| | 2019 | $3.18 | 23.17 | 23.28 | $5.36 | 3.35 | 3.38 | **26.52** | 74.06 | 18.13 | **92.19** | 1.58 | (4.36) | (4.53) | 0.79 | **85.68** | 2.14 | 0.91 | 1.64 | 1.00 | **91.36** | (1.85) | (0.65) | (4.93) | (0.37) | (8.02) | - | (2.23) | (2.83) | **70.49** | - | (4.04) | (0.06) |
| | 2020 | $3.17 | 18.25 | 18.34 | $5.29 | 2.64 | 2.66 | **20.89** | 58.05 | 14.07 | **72.12** | 1.30 | (2.86) | (4.90) | 0.91 | **66.57** | 7.05 | 0.73 | 1.11 | 1.43 | **76.89** | (1.50) | (0.48) | (4.34) | (0.46) | (9.26) | - | (2.03) | (3.38) | **55.44** | - | (2.02) | (0.11) |
| New Floating Bridge Operations | 2021 | $3.18 | 12.60 | 12.73 | $5.00 | 2.14 | 2.16 | **14.74** | 40.49 | 10.82 | **51.31** | 0.82 | (2.82) | (2.60) | 0.30 | **47.01** | 1.15 | 0.52 | 0.92 | 0.75 | **50.36** | (1.05) | (0.44) | (9.03) | (0.69) | (8.13) | - | (2.41) | (4.10) | **24.52** | - | (2.50) | (0.29) |
| | 2022 | $3.15 | 17.66 | 17.87 | $5.17 | 2.60 | 2.63 | **20.26** | 56.22 | 13.59 | **69.80** | 1.13 | (3.08) | (3.29) | 0.31 | **64.87** | 1.15 | 0.74 | 1.15 | 0.55 | **68.46** | (1.51) | (0.63) | (6.26) | (0.74) | (7.52) | (0.96) | (2.86) | (5.86) | **42.12** | - | (1.68) | (0.18) |
| | 2023 | $3.16 | 21.76 | 22.02 | $5.19 | 3.16 | 3.20 | **24.92** | 69.59 | 16.59 | **86.18** | 1.41 | (3.08) | (4.23) | 0.39 | **80.67** | 1.28 | 0.89 | 1.45 | 0.55 | **84.84** | (1.96) | (0.79) | (5.96) | (0.74) | (7.02) | (1.01) | (2.93) | (6.27) | **58.15** | (15.94) | (0.07) | (1.62) |
| | 2024 | $3.61 | 23.91 | 24.20 | $5.64 | 3.42 | 3.46 | **27.34** | 87.27 | 19.54 | **106.81** | 1.56 | (3.73) | (4.82) | 0.49 | **100.31** | 1.38 | 0.98 | 1.59 | 0.55 | **104.81** | (2.55) | (0.88) | (6.25) | (0.76) | (6.93) | (0.96) | (3.00) | (6.72) | **76.75** | (15.94) | - | (1.48) |
| | 2025 | $3.59 | 24.34 | 24.63 | $5.62 | 3.43 | 3.48 | **27.77** | 88.39 | 19.53 | **107.91** | 1.59 | (3.76) | (5.05) | 0.54 | **101.25** | 1.45 | 0.97 | 1.61 | 0.55 | **105.82** | (2.68) | (0.91) | (6.27) | (0.81) | (6.97) | (0.82) | (3.08) | (6.79) | **77.49** | (15.94) | - | (0.27) |
| | 2026 | $3.56 | 24.91 | 25.21 | $5.58 | 3.47 | 3.51 | **28.38** | 89.75 | 19.58 | **109.33** | 1.64 | (3.80) | (5.07) | 0.54 | **102.64** | 1.53 | 0.99 | 1.63 | 0.79 | **107.57** | (2.72) | (0.94) | (6.63) | (0.82) | (6.91) | (0.77) | (3.15) | (6.88) | **78.75** | (15.94) | (0.79) | (1.47) |
| | 2027 | $3.58 | 25.69 | 25.99 | $5.60 | 3.53 | 3.57 | **29.22** | 92.94 | 20.02 | **112.96** | 1.70 | (3.91) | (5.17) | 0.55 | **106.13** | 1.60 | 1.02 | 1.66 | 0.79 | **111.19** | (2.81) | (0.98) | (6.71) | (0.82) | (7.15) | (0.76) | (3.23) | (7.11) | **81.61** | (15.94) | (4.21) | (0.28) |
| | 2028 | $3.58 | 26.39 | 26.71 | $5.62 | 3.58 | 3.62 | **29.97** | 95.63 | 20.34 | **115.97** | 1.75 | (4.01) | (5.26) | 0.56 | **109.02** | 1.68 | 1.04 | 1.69 | 0.83 | **114.25** | (2.89) | (1.02) | (6.67) | (0.86) | (7.32) | (0.69) | (3.31) | (7.30) | **84.19** | (15.94) | (3.20) | (5.23) |
| | 2029 | $3.61 | 26.99 | 27.32 | $5.66 | 3.61 | 3.65 | **30.60** | 98.55 | 20.69 | **119.24** | 1.80 | (4.11) | (5.35) | 0.57 | **112.16** | 1.76 | 1.06 | 1.71 | 0.83 | **117.52** | (2.97) | (1.06) | (6.49) | (0.88) | (7.26) | (0.64) | (3.40) | (7.50) | **87.32** | (15.94) | (2.61) | (4.04) |
| | 2030 | $3.63 | 27.57 | 27.90 | $5.70 | 3.69 | 3.73 | **31.25** | 101.30 | 21.28 | **122.59** | 1.85 | (4.24) | (5.50) | 0.59 | **115.29** | 1.89 | 1.10 | 1.74 | 0.86 | **120.88** | (3.05) | (1.10) | (6.46) | (0.90) | (7.43) | (0.62) | (3.48) | (7.71) | **90.12** | (15.94) | (5.80) | (0.10) |
| | 2031 | $3.66 | 28.24 | 28.58 | $5.75 | 3.68 | 3.72 | **31.92** | 104.65 | 21.41 | **126.06** | 1.91 | (4.33) | (5.55) | 0.60 | **118.68** | 1.87 | 1.14 | 1.75 | 0.86 | **124.30** | (3.14) | (1.14) | (6.58) | (0.92) | (7.68) | (0.63) | (3.57) | (7.93) | **92.71** | (15.94) | (0.06) | (43.20) |
| | 2032 | $3.66 | 28.81 | 29.16 | $5.75 | 3.70 | 3.74 | **32.51** | 106.60 | 21.52 | **128.13** | 1.95 | (4.39) | (5.61) | 0.60 | **120.68** | 1.90 | 1.18 | 1.76 | 0.90 | **126.42** | (3.20) | (1.18) | (6.78) | (0.94) | (7.94) | (0.65) | (3.66) | (8.09) | **93.98** | (15.94) | - | (0.11) |
| | 2033 | $3.65 | 29.38 | 29.73 | $5.74 | 3.72 | 3.76 | **33.10** | 108.53 | 21.61 | **130.14** | 2.00 | (4.45) | (5.65) | 0.61 | **122.65** | 1.90 | 1.23 | 1.77 | 0.90 | **128.45** | (3.25) | (1.23) | (7.48) | (0.97) | (8.53) | (0.74) | (3.75) | (8.21) | **94.29** | - | (0.55) | (9.63) |
| | 2034 | $3.64 | 29.93 | 30.28 | $5.74 | 3.73 | 3.78 | **33.66** | 110.37 | 21.68 | **132.06** | 2.05 | (4.50) | (5.68) | 0.61 | **124.54** | 1.90 | 1.27 | 1.79 | 0.92 | **130.41** | (3.30) | (1.27) | (7.70) | (0.99) | (8.83) | (0.76) | (3.84) | (8.34) | **95.38** | - | (1.09) | (0.11) |
| | 2035 | $3.64 | 30.45 | 30.82 | $5.73 | 3.75 | 3.79 | **34.20** | 112.14 | 21.73 | **133.87** | 2.10 | (4.55) | (5.70) | 0.61 | **126.32** | 1.90 | 1.31 | 1.80 | 0.92 | **132.24** | (3.34) | (1.31) | (7.92) | (1.02) | (9.24) | (0.79) | (3.94) | (8.45) | **96.24** | - | - | (0.59) |
| | 2036 | $3.63 | 30.96 | 31.33 | $5.73 | 3.75 | 3.80 | **34.71** | 113.82 | 21.75 | **135.56** | 2.14 | (4.60) | (5.71) | 0.61 | **128.00** | 1.90 | 1.35 | 1.81 | 0.93 | **133.99** | (3.39) | (1.35) | (8.13) | (1.04) | (9.51) | (0.81) | (4.04) | (8.56) | **97.15** | - | (0.47) | (10.69) |
| | 2037 | $3.63 | 31.44 | 31.82 | $5.72 | 3.75 | 3.80 | **35.20** | 115.41 | 21.74 | **137.15** | 2.18 | (4.64) | (5.72) | 0.62 | **129.58** | 1.90 | 1.39 | 1.81 | 0.93 | **135.61** | (3.43) | (1.39) | (8.34) | (1.07) | (9.86) | (0.83) | (4.14) | (8.66) | **97.89** | - | (4.27) | (0.36) |
| | 2038 | $3.62 | 31.90 | 32.28 | $5.72 | 3.75 | 3.80 | **35.65** | 116.90 | 21.71 | **138.61** | 2.23 | (4.68) | (5.73) | 0.62 | **131.04** | 1.90 | 1.43 | 1.82 | 0.94 | **137.13** | (3.47) | (1.43) | (8.55) | (1.12) | (10.15) | (0.86) | (4.24) | (8.76) | **98.55** | - | (4.12) | (10.65) |
| | 2039 | $3.61 | 32.34 | 32.72 | $5.71 | 3.75 | 3.79 | **36.08** | 118.30 | 21.65 | **139.95** | 2.27 | (4.72) | (5.72) | 0.62 | **132.39** | 1.90 | 1.47 | 1.82 | 0.94 | **138.52** | (3.50) | (1.47) | (8.76) | (1.14) | (10.46) | (0.88) | (4.35) | (8.84) | **99.10** | - | (3.29) | (0.38) |
| | 2040 | $3.61 | 32.74 | 33.13 | $5.71 | 3.74 | 3.78 | **36.48** | 119.58 | 21.57 | **141.14** | 2.31 | (4.75) | (5.71) | 0.62 | **133.61** | 1.90 | 1.51 | 1.82 | 0.94 | **139.78** | (3.54) | (1.51) | (8.98) | (1.17) | (10.83) | (0.91) | (4.46) | (8.92) | **99.47** | - | (7.83) | (0.13) |
| | 2041 | $3.60 | 33.11 | 33.51 | $5.70 | 3.72 | 3.76 | **36.83** | 120.73 | 21.45 | **142.19** | 2.34 | (4.77) | (5.70) | 0.62 | **134.68** | 1.90 | 1.55 | 1.82 | 0.94 | **140.89** | (3.56) | (1.55) | (9.18) | (1.20) | (11.22) | (0.93) | (4.57) | (8.99) | **99.69** | - | (1.30) | (20.86) |
| | 2042 | $3.60 | 33.45 | 33.86 | $5.69 | 3.70 | 3.74 | **37.15** | 121.77 | 21.32 | **143.09** | 2.38 | (4.79) | (5.67) | 0.61 | **135.62** | 1.90 | 1.59 | 1.81 | 0.94 | **141.86** | (3.59) | (1.59) | (9.38) | (1.23) | (11.53) | (0.95) | (4.68) | (9.05) | **99.85** | - | (0.04) | (0.14) |
| | 2043 | $3.59 | 33.76 | 34.17 | $5.69 | 3.67 | 3.72 | **37.44** | 122.68 | 21.15 | **143.83** | 2.41 | (4.80) | (5.64) | 0.61 | **136.41** | 1.90 | 1.63 | 1.81 | 0.94 | **142.69** | (3.61) | (1.63) | (9.58) | (1.26) | (11.84) | (0.98) | (4.80) | (9.10) | **99.89** | - | (0.08) | (12.33) |
| | 2044 | $3.58 | 34.04 | 34.44 | $5.68 | 3.64 | 3.69 | **37.68** | 123.46 | 20.96 | **144.42** | 2.44 | (4.81) | (5.60) | 0.61 | **137.05** | 1.90 | 1.67 | 1.80 | 0.94 | **143.36** | (3.63) | (1.67) | (9.78) | (1.29) | (12.12) | (1.00) | (4.92) | (9.14) | **99.81** | - | - | (0.14) |
| | 2045 | $3.58 | 34.30 | 34.72 | $5.68 | 3.61 | 3.66 | **37.92** | 124.21 | 20.76 | **144.97** | 2.47 | (4.82) | (5.56) | 0.60 | **137.67** | 1.90 | 1.71 | 1.79 | 0.94 | **144.00** | (3.64) | (1.71) | (9.98) | (1.33) | (12.54) | (1.02) | (5.04) | (9.17) | **99.56** | - | - | (0.44) |
| | 2046 | $3.58 | 34.53 | 34.95 | $5.68 | 3.64 | 3.68 | **38.17** | 125.02 | 20.92 | **145.94** | 2.50 | (4.86) | (5.60) | 0.60 | **138.58** | 1.90 | 1.75 | 1.80 | 0.93 | **144.95** | (3.67) | (1.75) | (10.25) | (1.36) | (12.88) | (1.05) | (5.17) | (9.24) | **99.58** | - | (0.64) | (143.45) |
| | 2047 | $3.58 | 34.78 | 35.19 | $5.69 | 3.66 | 3.71 | **38.44** | 125.89 | 21.08 | **146.97** | 2.53 | (4.91) | (5.64) | 0.61 | **139.55** | 1.90 | 1.79 | 1.81 | 0.93 | **145.98** | (3.69) | (1.79) | (10.54) | (1.39) | (13.24) | (1.08) | (5.30) | (9.30) | **99.64** | - | (6.13) | (0.80) |
| | 2048 | $3.58 | 35.00 | 35.42 | $5.69 | 3.69 | 3.73 | **38.69** | 126.70 | 21.24 | **147.94** | 2.56 | (4.95) | (5.69) | 0.61 | **140.47** | 1.90 | 1.83 | 1.83 | 0.93 | **146.94** | (3.72) | (1.83) | (10.83) | (1.45) | (13.60) | (1.12) | (5.43) | (9.37) | **99.60** | - | (6.69) | (12.95) |
| | 2049 | $3.58 | 35.20 | 35.62 | $5.70 | 3.71 | 3.75 | **38.91** | 127.38 | 21.38 | **148.76** | 2.58 | (4.99) | (5.72) | 0.62 | **141.24** | 1.90 | 1.86 | 1.84 | 0.93 | **147.77** | (3.74) | (1.86) | (11.12) | (1.49) | (14.04) | (1.15) | (5.57) | (9.42) | **99.38** | - | (4.18) | (0.48) |
| | 2050 | $3.58 | 35.40 | 35.82 | $5.70 | 3.73 | 3.78 | **39.13** | 128.07 | 21.52 | **149.59** | 2.61 | (5.03) | (5.76) | 0.62 | **142.02** | 1.90 | 1.90 | 1.85 | 0.94 | **148.62** | (3.76) | (1.90) | (11.43) | (1.53) | (14.52) | (1.18) | (5.71) | (9.48) | **99.11** | - | (9.28) | (0.16) |
| | 2051 | $3.57 | 35.59 | 36.02 | $5.70 | 3.75 | 3.80 | **39.34** | 128.77 | 21.66 | **150.42** | 2.63 | (5.08) | (5.80) | 0.62 | **142.81** | 1.90 | 1.94 | 1.86 | 0.94 | **149.45** | (3.78) | (1.94) | (11.74) | (1.57) | (14.87) | (1.22) | (5.85) | (9.53) | **98.96** | - | (0.09) | (21.63) |
| | 2052 | $3.57 | 35.79 | 36.22 | $5.71 | 3.77 | 3.82 | **39.56** | 129.46 | 21.80 | **151.26** | 2.66 | (5.12) | (5.84) | 0.63 | **143.60** | 1.90 | 1.99 | 1.87 | 0.96 | **150.31** | (3.80) | (1.99) | (12.05) | (1.61) | (15.60) | (1.25) | (5.99) | (9.59) | **98.43** | - | - | (0.17) |
| | 2053 | $3.57 | 35.99 | 36.42 | $5.71 | 3.79 | 3.84 | **39.78** | 130.16 | 21.94 | **152.11** | 2.69 | (5.16) | (5.87) | 0.63 | **144.39** | 1.90 | 2.03 | 1.88 | 0.96 | **151.15** | (3.82) | (2.03) | (12.38) | (1.65) | (16.03) | (1.29) | (6.14) | (9.65) | **98.18** | - | (0.10) | (15.40) |
| | 2054 | $3.57 | 36.19 | 36.62 | $5.72 | 3.82 | 3.86 | **40.01** | 130.87 | 22.09 | **152.95** | 2.71 | (5.20) | (5.91) | 0.63 | **145.19** | 1.90 | 2.07 | 1.89 | 0.97 | **152.02** | (3.84) | (2.07) | (12.71) | (1.69) | (16.41) | (1.33) | (6.30) | (9.70) | **97.97** | - | (0.84) | (0.18) |
| | 2055 | $3.57 | 36.39 | 36.83 | $5.72 | 3.84 | 3.88 | **40.23** | 131.57 | 22.23 | **153.81** | 2.74 | (5.24) | (5.95) | 0.64 | **145.99** | 1.90 | 2.12 | 1.90 | 0.97 | **152.87** | (3.86) | (2.12) | (13.06) | (1.73) | (17.07) | (1.37) | (6.45) | (9.76) | **97.46** | - | (1.73) | (0.56) |
| | 2056 | $3.57 | 36.59 | 37.03 | $5.72 | 3.86 | 3.91 | **40.46** | 132.30 | 22.36 | **154.66** | 2.77 | (5.28) | (5.99) | 0.64 | **146.80** | 1.90 | 2.16 | 1.91 | 0.98 | **153.76** | (3.88) | (2.16) | (13.42) | (1.77) | (17.53) | (1.41) | (6.62) | (9.82) | **97.15** | - | (0.77) | (81.01) |
| **Totals FY 2012-20** | | | 165.03 | 165.89 | | 28.16 | 28.47 | **193.20** | 497.00 | 137.71 | **634.70** | 9.15 | (27.57) | (34.33) | 3.80 | **585.76** | 17.57 | 7.03 | 11.92 | 5.95 | **628.23** | (11.58) | (4.82) | (35.96) | (3.37) | (49.01) | - | (9.19) | (22.00) | **492.31** | - | (10.25) | (0.65) |
| **Totals FY 2021-56** | | | 1,098.13 | 1,111.28 | | 129.56 | 131.11 | **1,227.69** | 3,975.47 | 742.20 | **4,717.67** | 77.41 | (161.95) | (195.07) | 20.85 | **4,458.92** | 64.18 | 52.17 | 62.54 | 31.34 | **4,669.16** | (117.36) | (51.62) | (323.39) | (41.94) | (390.70) | (33.43) | (159.37) | (301.30) | **3,250.05** | (159.40) | (74.40) | (401.50) |
| **Totals FY 2012-56** | | | 1,263.16 | 1,277.17 | | 157.73 | 159.58 | **1,420.88** | 4,472.47 | 879.91 | **5,352.38** | 86.57 | (189.52) | (229.40) | 24.66 | **5,044.68** | 81.76 | 59.21 | 74.46 | 37.29 | **5,297.39** | (128.94) | (56.44) | (359.35) | (45.30) | (439.71) | (33.43) | (168.56) | (323.30) | **3,742.36** | (159.40) | (84.65) | (402.16) |

***Footnotes***

[1] Reflects the average revenue per passenger car equivalent (PCE) based on time-of-day variable weekday and weekend toll structures.

[2] Annual volume of vehicles subject to tolls in each travel direction; includes autos and trucks; prepared by Stantec Consulting.

[3] Converts trucks with 3+ axles and vehicles with trailers to their passenger car equivalent (PCE) based on an axle number multipliers of the auto toll.

[4] Total toll traffic and gross toll revenue potential projections (and subtotals by payment method) are inclusive of proposed closures for construction and toll equipment installation in the corridor.

[5] Gross toll revenue potential from pre-paid Good To Go! accounts before any adjustments for fees, uncollectible revenue, and recapture / recovery efforts.

[6] Gross toll revenue potential from Pay By Mail customers (no established accounts) before adjustments for fees, uncollectible revenue, and recapture / recovery efforts. Forecasts assume an additional toll increment of $2.00 per transaction for Pay By Mail customer transactions.

[7] Includes the $0.25 per transaction fee charged for pre-paid *Good To Go!* Pay By Plate transactions; fee assumed to be constant with no annual escalation.

[8] Includes a $0.50 short-term account discount for non-*Good To Go!* account customers who self-initiate payment. Discount discontinued in FY 2020.

[9] Actual values include one-time toll incentive credits for FY 2012 with a carry-over amount into FY 2013.

[10] Actual leakage refLects classification methods in place at the time of reporting, with *Good To Go!* leakage transactions valued at the Pay By Mail rate.

[11] Inability to read the vehicle license plate due to equipment failure/image obstruction <or> inability to identify the vehicle owner's name and address from a readable license plate both result in unbillable transactions, classified as revenue not recognized.

[12] Recognized but unpaid toll revenue after 80 days (2 billing cycles) from date of travel; excludes tolls later recovered from a Notice of Civil Penalty (NOCP).

[13] Initially unpaid toll revenue from a toll bill that is later recaptured after 80 days and linked to an account at the Good To Go! toll rate without civil penalty.

[14] Miscellaneous pledged revenues include contractual liquidated damages, interest earnings, and surplus property sales. Only interest earnings are forecasted, and only Account 16J interest earnings are projected to exhibit annual growth through FY 2032 based upon expected ending account balances for WSTC Toll Rate Option 1 (zero growth thereafter).

[15] Anticipated revenues from transponder sales initially exceed transponder costs in column 23 until cost escalation erodes that margin; thereafter, transponder sales revenue assumed to equal costs.

[16] Late payment rebilling fee of $5 per invoice (no escalation) assessed to Pay By Mail customers who don't pay first invoice; includes fees recovered from a NOCP (6 month lag).

[17] Actual values also include statement and $30 NSF fees (not forecasted), and exclude misc. pledged revenues, which are shown in column 17.

[18] Initially unpaid toll revenue from a toll bill that is later recovered after 79 days from a NOCP at the Pay By Mail toll rate, with or without the $40 civil penalty. Amount recovered within a biennium are appropriated back to SR 520 account in the following biennium, equally distributed over 2 years. FYs 2015-17 include transfers of accumulated recovered tolls from FYs 2012-15.

[19] Credit card fees estimated at 2.35% of applicable gross toll revenues collected via bank card in FY 2021, ramping up to 2.80% by FY 2025; additional factor included for fees related to account refunds.

[20] Includes transponder purchase and inventory costs plus associated credit card fees on purchases; cost escalation eventually erodes the sales revenue margin initially exhibited in column 18.

[21] Includes State operations costs for toll bill processing and postage, accounting, marketing, forecasting, enforcement, vendor oversight and consultant services.

[22] Includes Roadway Toll Systems (RTS) vendor O&M and associated non-Toll Division State ITS and TMC costs.

[23] Starting FY 2022, toll O&M costs previously labeled as Customer Service Center (CSC) in column 26 are segregated into CSC Operations Vendor costs and Back Office System (BOS) Software Vendor costs.

[24] Only Facility O&M costs paid for by tolls are shown in this table. Facility O&M costs were partialy paid from tolls in FY 2016 and assumed to be fully paid from tolls thereafter.

[25] Insurance coverage includes property damage on all bridge structures and business interruption coverage (for lost revenues), plus SR 520's share of statewide brokerage fees.

[26] Reflects the payment of construction sales tax on the Floating Bridge and Eastside plus West Approach Bridge projects deferred during construction.

[27] Includes periodic BOS, CSC and RTS vendor re-procurement, system testing and acceptance, and RTS toll equipment replacement costs; amounts assumed to be fully funded by tolls.

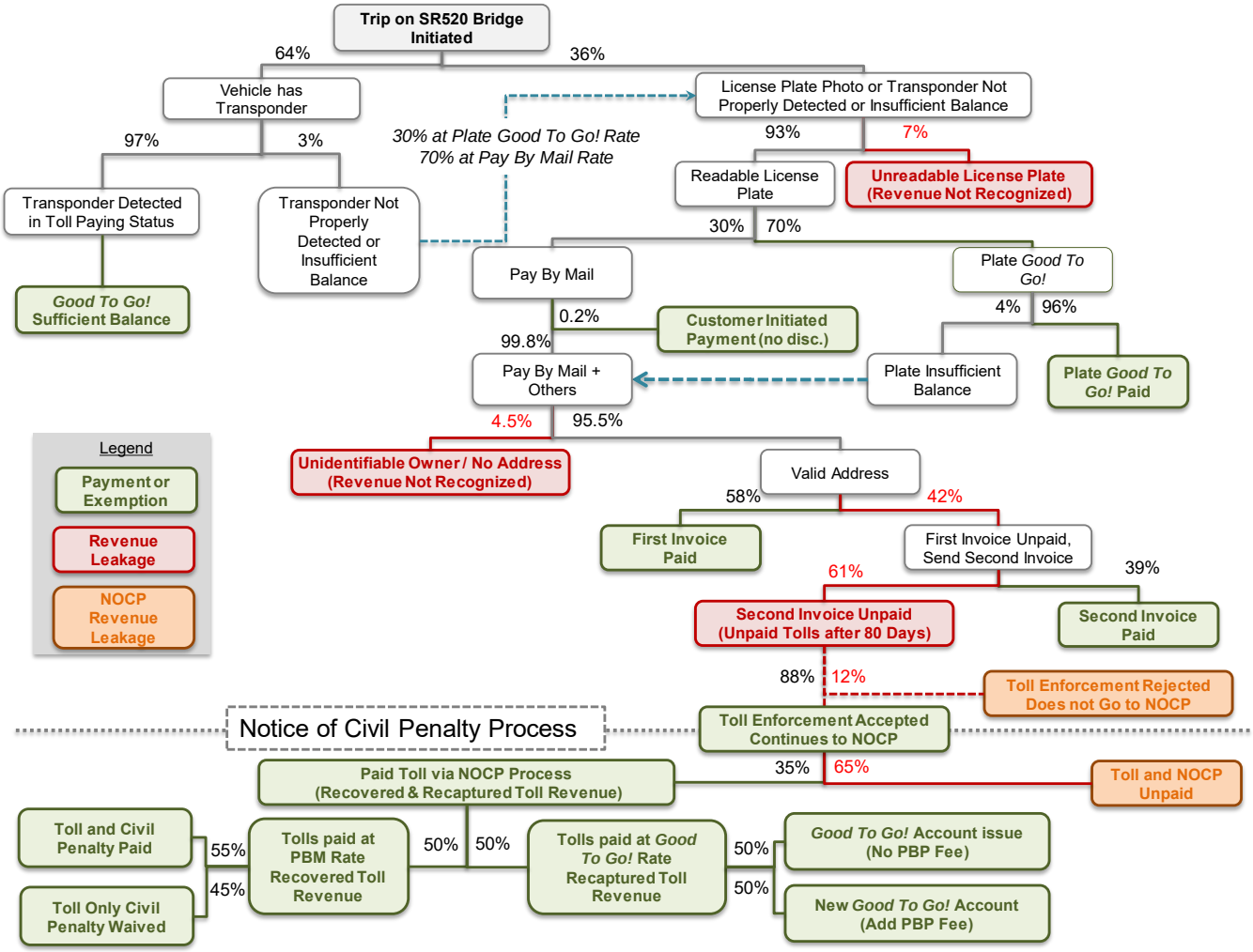
[28] Includes facility R&R costs for the floating bridge structures, ATM equipment, federal required bridge inspections, and other periodic activities and excludes amounts for typical highway costs on the at-grade portion of the corridor from the east bridge landing to I-405 (i.e., roadway repaving), which would be funded from the WSDOT Preservation ("P") Program.

***General Notes***

– Traffic and gross toll revenue forecasts prepared by Stantec, dated 6/22/2021.
– Tolling started December 29, 2011 (mid FY 2012).
– Weekday and weekend toll rates were escalated at 2.5% per year through FY 2016, including nickel rounding of all toll rates starting with FY 2014.
– A 5% toll increase occurred in FY 2017, followed by another 5% plus night tolling in FY 2018.
– WSTC Option 1 adds a tailored +15% toll increase in FY 2024.
– O&M cost estimates for FYs 2022-23 are based on the 2021 Legistlative Transportation Budget (5/18/2021). FY 2021 values include one-time items related to Washington State Patrol and Washington State Transportation Commission activities and other contributions to State programs.
– System-wide costs in columns 23-24 and 27-28 assume tolling on the Tacoma Narrows Bridge ends in FY 2032.
– Table values include more precision than displayed.

# Appendix B: Toll Payment Activity Workflow

**Exhibit 30: SR 520 Toll Transaction Activity Workflow—June 2021 Forecast (FY 2025)**



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# Appendix C: List of Facility Maintenance Activities

**Exhibit 31: SR 520 Maintenance Categories and Activities**

| Maintenance Activity | Unit of Measure |
|---|---|
| Pavement Patching, Repair & Crack Sealing | Lane Mile |
| Shoulder Maintenance | Shoulder Mile |
| Sweeping and Cleaning | Shoulder Mile |
| Maintain Ditches | Linear Feet of Ditch |
| Maintain Culverts | Each |
| Maintain Catch Basins and Inlets | Each |
| Maintain Detention/Retention Basins | Storm water Treatment Facility (Each) |
| Litter Pickup | Shoulder mile |
| Landscape Maintenance (3 yr plant establish) | Acres |
| Bridge Deck Repair | Square Feet of Bridge Deck |
| Structural Bridge Repair | Square Feet of Bridge Deck |
| Bridge Cleaning | Square Feet of Bridge Deck |
| Movable and Floating Bridge Operations | Bridges (Each) |
| Urban Tunnel Systems Operations | Urban Tunnel Systems (Each) |
| Snow and Ice Control Operations | Lane Mile |
| Pavement Striping Maintenance | Lane Mile |
| Raised/Recessed Pavement Marker Maintenance | |
| *Raised* | *Each* |
| Pavement Marking Maintenance | Each |
| Regulatory Sign Maintenance | Each |
| Guide Sign Maintenance | Each |
| Guardrail Maintenance | |
| *Concrete Barrier* | *Linear Feet of Concrete Barrier* |
| Highway Lighting Systems Operations | Each |
| Toll Equipment Power | Annual Lump Sum |
| Under-Lid Lighting Operations | Annual Lump Sum |
| Intelligent Transportation Systems Operations | |
| *Closed Circuit Television* | *Each* |
| *Variable Message/Changeable Sign* | *Each* |
| *Data Station System* | *Each* |
| 3rd Party (unknown) Damages | Lane Mile |
| Wetland Mitigation Sites | Acres |
| ATM Sign Structures | Each |
| Static Sign Structures | Each |
| Noise Walls | Linear Feet |
| Fish Culverts | Each |
| Sidewalk | Linear Feet |
| Locates (all disciplines) | Each |
| Retaining Wall | Linear Feet |