

To: Helena Kennedy Smith, Director of Tolling Finance
Washington State Department of Transportation

From: Brent Baker
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Date: October 5, 2012

Subject: SR 520 Net Revenue Forecast – September 2012 Update

PURPOSE OF THE SEPTEMBER 2012 UPDATE

In September of 2011, Parsons Brinckerhoff—in collaboration with the SR 520 General Engineering Consultant (GEC) Team and the Washington State Department of Transportation (WSDOT)—published the *SR 520 Bridge Net Toll Revenue Report* to support the initial bond sale and overall financial planning process for the SR 520 Bridge Replacement and HOV Program. The report, which supplemented the *SR 520 Bridge Investment Grade Traffic and Revenue Study* prepared in August 2011 by CDM Smith (formerly known as Wilbur Smith Associates), provided documentation of the assumptions, inputs, and methodologies used to forecast net revenues over a 45-year horizon.

Since publication of the September 2011 net revenue report one year ago, the first series of SR 520 bonds was issued in October of 2011, followed by the formal commencement of tolling on December 29, 2011. As prescribed by the Master Bond Resolution (MBR), the State of Washington will provide—through a Traffic Consultant—annual updates to the gross traffic and revenue (T&R) forecasts, as well as official certification of those forecasts.

Similarly, the State of Washington is also required to have a Consulting Engineer review the State’s operating and maintenance (O&M) cost projections, and certify them as reasonable and customary. This memorandum documents the September 2012 updated net revenue projections, covering the changes from September 2011 that result from changes in the traffic and revenue projections, changes in O&M expenses, or other factors.

<p><i>The reader may find it useful to refer to the traffic and revenue (T&R) table included as Appendix A. This memorandum makes references to this table by its column numbers.</i></p>
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SUMMARY OF FINDINGS

Over the forecast horizon, total net toll revenues from FY 2013 through FY 2056 are projected to be approximately 1.1 percent higher than previously estimated in September 2011. Actual net revenues for FY 2012 were approximately 52 percent (\$7 million) higher than originally projected, due primarily to the transfer of certain toll operations expenditures to a non-toll funding source. Additional explanation regarding this transfer is provided in the “Operations and Maintenance Costs” section on pages 9-10.

Forecasted net revenues are estimated to be higher in each year through FY 2030—with the exception of FY 2014—and slightly lower thereafter, relative to the previous forecast. As explained in the sections below, many factors collectively contribute to this result. However, a downward revision to the projected toll collection O&M costs is the single largest contributing factor.

COMPONENTS OF THE NET REVENUE FORECAST

Net toll revenues represent the revenue stream available for debt service on toll bonds, deposits to required reserves, and other uses after accounting for revenue deductions and adjustments, and expenditures for all of the routine costs of operating and maintaining the SR 520 Bridge as a toll facility.

Included in the deductions and adjustments category are customer discounts/incentives, revenue leakage, and revenue from various customer fees. These amounts are shown in columns 12-17 of the T&R table in Appendix A.

Within the expenditures category are all costs associated with toll collection and facility O&M, including credit card fees, customer service center (CSC) vendor costs, toll collection systems (TCS) vendor costs, and WSDOT maintenance expenditures. These amounts are shown in columns 19-24 of the T&R table in Appendix A.

The subsequent text describes all updates related to these cost components, as well as the key drivers of these changes and the overall impact on net revenues, followed by a summary of the revised SR 520 net revenue projections.

CHANGES SINCE 2011

Initial Tolling Experience (Fiscal Year 2012)

SR 520 tolling operations formally commenced on December 29, 2011. Over the past nine months, WSDOT has closely monitored all aspects of SR 520 tolling operations, traffic data collection, toll collection costs, and revenue generated. Because of a lag between traffic occurring and transaction processing, WSDOT currently has available eight months of traffic data and six months of revenue.

For fiscal year (FY) 2012, which ended June 30, 2012, the performance of traffic on SR 520 has exceeded projections, while gross revenue has remained at or slightly above forecast values. Furthermore, net revenues are currently outperforming projections due to lower than projected operating costs as well as a contribution from the Lake Washington Urban Partnership Agreement (UPA) grant applied to initial operating costs.

The following is a summary of the FY 2012 performance highlights.

- Average daily traffic exceeded forecasts by 18 percent¹
- Adjusted gross revenue exceeded forecasts by 8 percent²
- Operations expenditures were below budget by 25 percent³
- Total net toll revenue exceeded forecasts by 52 percent⁴

Note that the gross toll revenues reported for FY 2012 (column 11) include a few miscellaneous revenue items that are not part of the forecasting process. Specifically, these miscellaneous revenues include liquidated damages, interest earnings on toll receipts, and proceeds from the sale of surplus property, among others. Overall, the FY 2012 miscellaneous toll revenues amount to nearly \$ 2.1 million, or 7.1 percent of total revenue. These items are included in the FY 2012 revenue to conform with the MBR definition of “Toll Revenue” that contributes to the net revenues available for financing.

In addition to traffic and revenue, WSDOT is also tracking the methods by which customers are choosing to pay their tolls (i.e., *Good To Go!* account or Pay By Mail). This information provides important insight regarding future operations costs, and allows WSDOT to plan accordingly. During the first six months of operations, *Good To Go!* customers accounted for nearly 80 percent of all toll transactions, while Pay By Mail customers accounted for the remaining 20 percent. *Good To Go!* customers are those that have established a pre-paid account. When these customers travel, their account can be recognized by the toll collection system via a transponder (also referred to as a “toll tag”) or using “Pay By Plate” in which the customer’s account is identified via their vehicle’s license plate number.

Of the remaining Pay By Mail customers, which comprise 20 percent of all transactions, very few are taking advantage of a \$0.50 discount by initiating a toll payment within 72 hours of traveling on SR 520. This payment method is referred to as a “Short Term Account” and eliminates the need to mail an invoice.

The overall share of *Good To Go!* transactions is significantly higher than CDM Smith’s original August 2011 forecast, which estimated that the market shares for *Good To Go!* and Pay By Mail transactions in FY 2012 would be 72 and 28 percent, respectively. A comparison of forecast to actual payment splits is provided in Exhibit 1.

1 Source: WSDOT, 2012

2 Ibid

3 Ibid. Note that operations expenditures exclude facility O&M costs, as these costs are assumed to be paid from other, non-toll sources until mid FY 2016.

4 UPA funding grant used to offset certain toll operations expenditures, resulting in higher-than-projected net revenues.

Exhibit 1: SR 520 Payment Method Distribution, FY 2012 Forecast and Actual Comparison

Payment Category	FY 2012 Forecast	FY 2012 Performance ⁵
Good To Go!	72%	80%
<i>Transponder</i>	61%	72%
<i>Pay By Plate</i>	11%	8%
Pay By Mail	28%	20%
<i>Short Term Account</i>	3%	<1%
<i>Toll Bill</i>	25%	19%

While the high market share of *Good To Go!* transactions in FY 2012 lowered gross toll revenues because fewer tolls were collected at the higher Pay By Mail rate, from a net revenue perspective, this outcome is a positive sign that will ultimately provide a more reliable revenue stream and lower operating costs over time. Additional explanation of these benefits is provided in the “Revenue Adjustments” and “Operations and Maintenance” costs sections below.

Limited Operations Experience

While the first six months of tolling operations have provided useful information regarding transactions, revenues, and costs, trends observed in the operating data are still preliminary and will continue to evolve and mature with additional experience. Given the limited experience thus far, substantial revisions to future projections solely on the basis of initial operating experience may not yet be warranted in some cases. Ongoing performance monitoring of SR 520 operations will continue to inform the projections for revenues and expenditures.

Gross Traffic and Revenue Projections [Columns 8 and 11]

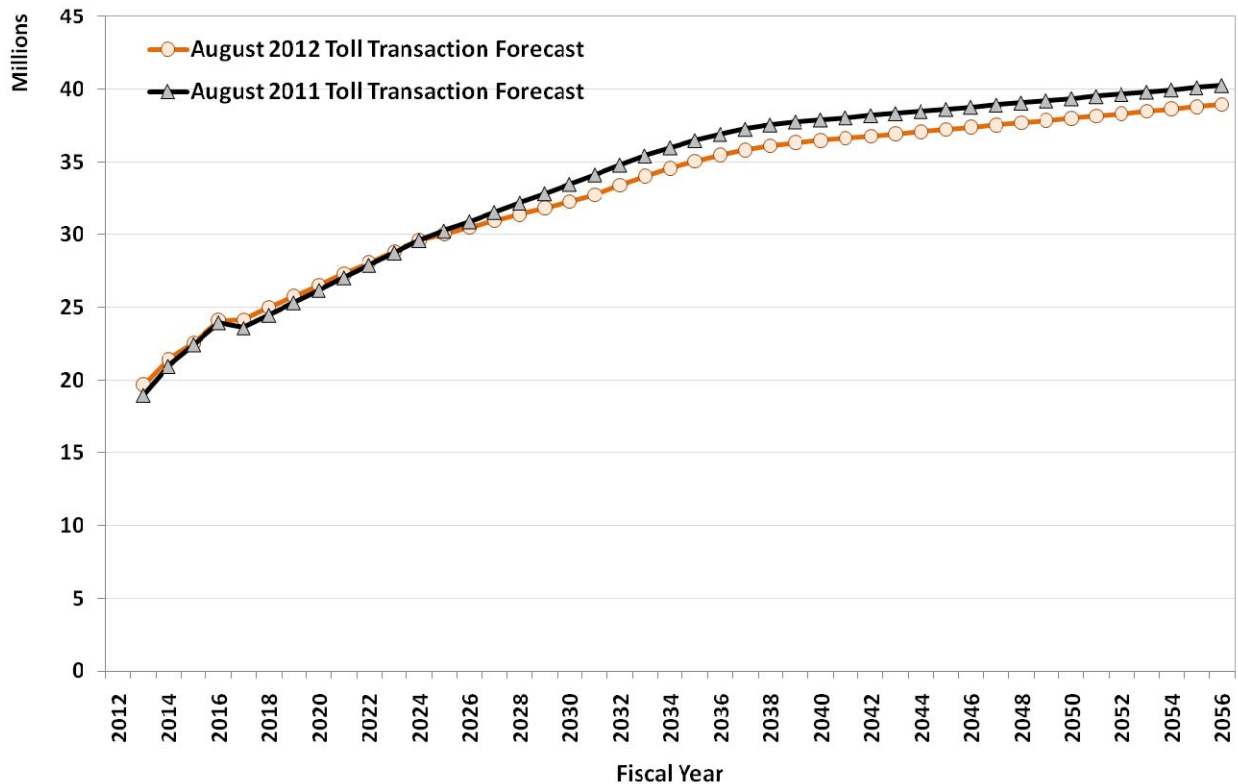
An updated forecast of gross traffic and revenue was provided to WSDOT by CDM Smith on August 31, 2012. This update, which serves as a basis for the revised net revenue forecast, indicates that both toll revenue and transactions are expected to be slightly higher than originally projected during the early years of the forecast period through FY 2021, but lower overall throughout the forecast horizon. According to CDM Smith, the traffic and revenue revisions are based on revised socioeconomic forecasts for population and employment, as well as information learned from the first six months of toll operations, such as the share of transactions by payment type, vehicle classifications, time-shifting, weekend bridge usage, and the pace of ramp-up effects.

The effect of these revisions on net toll revenue projections is mixed, with some direct and indirect impacts. For example, the higher share of *Good To Go!* (account-based) toll transactions will result in lower gross toll revenues due to fewer customers paying the higher Pay By Mail toll rate. This reduction in gross revenue, however, is expected to be largely offset by reduced toll collection costs.

⁵ Source: WSDOT, 2012

CDM Smith’s updated forecast shows approximately 1.6 percent more transactions during the pre-completion period through FY 2016, and 2.7 percent fewer transactions during post-completion from FY 2017 to FY 2056. Because some costs are driven by transaction volumes, this change results in a reduction to toll O&M expenses and thus an increase in net revenue, all else equal. Exhibit 2 provides a comparison of the August 2011 and August 2012 CDM Smith toll transaction forecasts.

Exhibit 2: Comparison of August 2011 and August 2012 Toll Transaction Forecasts (FY 2013-56)⁶

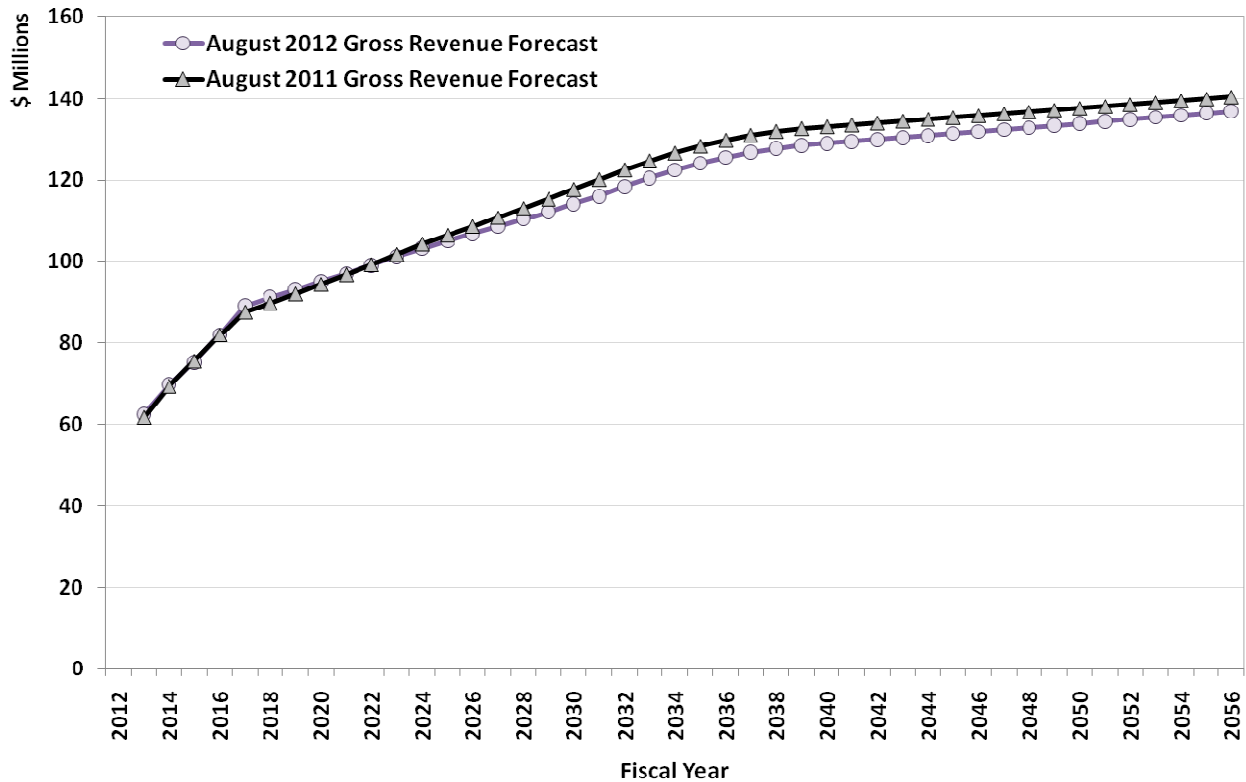


Excluding actual results from FY 2012, CDM Smith’s previous forecast, gross toll revenues are projected to be 0.3 percent higher over the remainder of the “pre-completion” period from FY 2013 through FY 2016, and 2.3 percent lower over the subsequent 40 years from FY 2017-56.

Exhibit 3 provides a comparison of the original and updated gross revenue forecasts illustrating these differences.

⁶ Source: CDM Smith, 2012

Exhibit 3: Comparison of August 2011 and August 2012 Gross Revenue Forecasts (FY 2013-56)⁷



Revenue Adjustments [Columns 12-18]

In estimating net revenues, several adjustments are first made to the gross revenue stream to account for customer fees, incentives, and uncollectible accounts. These adjustments are not included in CDM Smith’s gross traffic and revenue forecasts; rather they are estimated as part of the net revenue analysis. A summary of the actual revenue adjustments relative to original projections is provided below for FY 2012 (a “+” indicates positive impact on net revenues, while a “-” indicates a negative impact):

- One time free trip incentives in FY 2012 were approximately 70 percent lower than projected (+)
- Self-initiated payment incentives were roughly 99 percent lower than originally projected (+)
- Pay By Plate fees were approximately 3 percent lower than originally projected (-)
- Late payment fees were nearly twice as high as originally projected (+)

Free Trip Incentives

The first adjustment category shown in the T&R table is “Free Trip Incentives” [column 12], which was a one-time marketing promotion that offered customers up to \$10 in free travel with the purchase and

⁷ Source: CDM Smith, 2012

registration of a *Good To Go!* transponder by April 15, 2011. These incentives were only valid within the first three months of tolling operations and expired on March 31, 2012. It was originally projected that free trip incentives would amount to \$1.5 million in FY 2012; however, the actual utilization of incentives amounted to just under \$0.5 million, which represented a savings (increase in net revenue) of about \$1 million.

Self-Initiated Payment Incentives

The next adjustment categories—self-initiated payment incentives, Pay By Plate fees, and late payment fees—are shown in columns 13-15 of the T&R table. The primary cost driver and common denominator for these adjustment categories is the underlying toll payment type (i.e., *Good To Go!* account or Pay By Mail). In the case of self-initiated (short term account) payment incentives, fewer customers took advantage of the option to save \$0.50 off of the Pay By Mail toll rate by contacting the customer service center and arranging for payment in advance of receiving a toll bill in the mail. As a result, fewer toll discounts were issued. Based on trends in Pay By Mail and short term account transactions, the forecast for self-initiated discounts has been revised downward by as much as 47 percent through FY 2056.

Pay By Plate Fee Revenue

Unlike the trend of Pay By Mail and short term account transactions, the overall share and volume of *Good To Go!* Pay By Plate transactions was higher than originally projected. However, due to technical challenges in the first several months of operation, the toll collection software inadvertently charged some customers an erroneous Pay By Plate fee, even if a transponder was present. As a result, WSDOT dismissed many of the fees (both correctly and incorrectly charged), which reduced FY 2012 Pay By Plate fee revenue. Despite these initial start up issues, Pay By Plate revenues remained within 3 percent of the original forecast. With toll collection system refinements complete, it is anticipated that the previously projected Pay By Plate transaction shares of all *Good To Go!* transactions will be slightly higher than previously estimated. When combined with a higher forecast for overall *Good To Go!* transactions by CDM Smith, Pay By Plate fees are projected to be higher throughout the forecast period.

Late Payment Fees

The last fee category applies to Pay By Mail customers (and *Good To Go!* customers with delinquent accounts whose transactions end up getting billed) who fail to make payment during the first billing cycle, requiring a second invoice to be generated. To account for this additional effort, a \$5.00 late fee (or “rebilling fee”) is applied to the second invoice. During FY 2012, nearly twice as much revenue was generated from late payment fees than originally projected, suggesting that the original forecast overestimated the share of Pay By Mail customers who would pay during the first billing cycle. As a result, the incidence of first bill payment has been revised modestly downward, which has the effect of increasing the projection for late payment fee revenues over the forecast horizon. While there may be improvement in the first bill payment rate over time due to customers becoming more accustomed to toll bills, there could also be an offsetting effect. With *Good To Go!* accounts projected to become more prevalent, out-of-region or out-of-state users will likely represent a larger share of Pay By Mail customers, which could have the effect of reducing the first bill payment rate.

Uncollectible Transactions / Revenue Leakage

Uncollectible transactions, or revenue leakage, are losses attributable to unreadable license plates (unidentified vehicles), insufficient vehicle registration information, toll evasion, and non-payment civil penalty dismissals. The forecast for uncollectible accounts is largely driven by the distribution of payment methods, and the share of expected *Good To Go!* transactions that are ultimately processed as Pay By Mail transactions for various reasons. All else equal, actual leakage for FY 2012 and future projections should be lower than previously projected due to the higher actual and revised forecast share of *Good To Go!* transactions. However, other offsetting factors and changes in uncollectible transaction assumptions based on initial operating experience have resulted in an upward revision to the forecast for uncollectible revenue.

From an accounting perspective, only two forms of revenue leakage are officially recognized in the SR 520 financial statements: toll evasion and dismissals. This leakage is referred to as the “allowance for doubtful accounts,” and is estimated as 10 percent of the toll bills (Pay By Mail transactions) receivable each month. This amount, however, is only a fraction of total revenue leakage considered in the forecasting process.

Additional forms of revenue leakage beyond the accounting practice are reflected in the net revenue projections, including uncollectible revenue resulting from unreadable license plates or the inability to identify the vehicle owner (e.g., invalid or inaccessible registration information from foreign or diplomatic license plates). These forms of leakage are not included in the “allowance for doubtful accounts,” since revenue associated with these transactions is never recognized in the accounting procedures. However, because CDM Smith’s gross toll traffic and revenue forecasts assume revenue is collected from all eligible vehicles in the corridor, adjustments must be made in preparing the net revenue projections to account for these losses in addition to those recognized in the accounting procedures.

The following summarizes the FY 2012 “allowance for doubtful accounts” measure of revenue leakage, and how it compares with the broader measure of uncollectible revenue in the forecast period.

FY 2012 Performance

- The allowance for doubtful accounts totaled \$447,430 and equates to:
 - 10 percent of toll bill receivables, which amounted to \$4,474,300 at the end of FY 2012
 - 1.5 percent of reported gross revenues
- Leakage estimates resulting from unreadable license plates and invalid registration information are not currently available

Uncollectible Revenue / Leakage Forecast

- The revenue collection rate is projected to be highest during the initial years of operation, declining through FY 2024, then level to slightly increasing thereafter:
 - FY 2013 revenue collection rate projected at 91 percent (9 percent leakage)
 - FY 2024 revenue collection rate projected at 94 percent (6 percent leakage)
 - FY 2056 revenue collection rate projected at 93 percent (7 percent leakage)
-

Due to limited leakage data associated with unreadable license plates and unidentifiable owners, a final estimate of total uncollectibles from all sources for FY 2012 is not yet available; however, based on early performance trends in the allowance for doubtful accounts, toll bill payments, and customer payment types, the forecasts of revenue leakage for all years beyond FY 2012 have been revised upward. This change represents the second largest revision to the various deductions made in calculating net revenues, behind the downward revision to toll collection operations and maintenance costs described in the next section.

The primary driver behind this revision is the lower-than-projected invoice payment rate during both the first and second billing cycles. In the prior forecast, it was projected that 87 percent of invoices would be paid within the regular, two-notice billing cycle over an 80-day period. Preliminary data through June indicates an actual payment rate of approximately 74 percent. However, there are several thousand transactions that remain in “pending” status and have not yet been processed, creating further uncertainty regarding the true unpaid revenue leakage rate for FY 2012.

After adjusting for fewer on-time payments and incorporating other performance metrics into the leakage calculations, the effect of this revision on the forecast is an increase in uncollectible transactions/ revenue leakage of approximately \$105 million from FY 2013 through the end of the forecast horizon. It is projected that WSDOT will collect revenue from 91 percent of transactions in FY 2013, while the remaining 9 percent is projected as uncollectible for purposes of the net revenue projections.⁸ The collection rate is projected to increase steadily to 94 percent by FY 2024, with uncollectible revenue totaling 6 percent. Beyond FY 2024, CDM Smith predicts that the share of Pay By Mail transactions will increase marginally; however, the share of uncollectible revenue is projected to remain below 7 percent through FY 2056.

Operations and Maintenance (O&M) Costs [Columns 19-24]

Operational expenditures typically paid from adjusted gross toll revenues include: transponder inventory costs, credit card fees, toll collection operations and maintenance costs, and insurance premiums. In addition, facility operations and maintenance costs are assumed to be paid from tolls starting in mid FY 2016 once portions of the project are operationally complete.⁹ Relative to prior estimates, most cost categories have been revised downward to account for better information and actual operating experience, while some costs have increased. Overall, O&M costs have declined since the September 2011 net revenue forecast, thus increasing net revenues. Actual experience for FY 2012 indicates that O&M expenditures were below budgeted amounts by 27 percent, with various components up or down as noted below.

- Transponder purchase and inventory costs were below the FY 2012 budget by 53 percent
- Credit card fees were below budget by 75 percent
- Toll collection O&M costs funded by toll revenue were lower than budget by 25 percent
- Bridge insurance premiums exceeded budget by 162 percent

⁸ Prior to civil penalty process, during which a fraction of outstanding revenues are expected to be recovered with a lag of 6-12 months.

⁹ The September 2011 forecast assumed the beginning of FY 2017; however, this date has been advanced to mid FY 2016.

The lower than projected toll collection O&M costs in FY 2012 were due, in part, to a transfer of certain expenditures to the Lake Washington Urban Partnership Agreement (UPA). The UPA includes a series of projects to help address congestion and increase safety on SR 520 in the Seattle area. These projects are designed to work together to improve traffic flow within the SR 520 corridor by implementing tolling on the existing bridge, purchase of additional transit vehicles, applying active traffic management technology (Smarter Highways), and promoting transportation demand management (TDM e.g. carpool, vanpool and telework) programs. In 2007, the Federal Highway Administration awarded a \$154.5 million-dollar grant to support this effort via a partnership between the Washington State Department of Transportation, King County Metro and Puget Sound Regional Council.

Much of the funding provided through the grant was used for transit improvements and the purchase of toll equipment, among other technology improvements in the corridor. However, in addition to these capital project uses, the grant also allowed for the use of UPA funding to cover initial operations costs during the first year of tolling. As such, approximately \$1.5 million of the FY 2012 SR 520 toll operating costs, which would have otherwise been paid from toll revenues, were paid from available UPA grant funds. These costs include CSC vendor costs, accounting support, and personal services contracts.

In effect, the contribution of UPA funding to SR 520 toll collection O&M expenditures reduced the amount that needed to be paid from tolls (a reduction to the FY 2012 actual amount shown in column 22), thus increasing FY 2012 net revenues by \$1.5 million. It is possible that further UPA grant contributions toward operating expenditures may be made in FY 2013; however, those have not been included in the FY 2013 projections.

The toll collection O&M costs for all forecast years (FY 2013 forward) discussed herein represent the full amount of expected SR 520 expenditures, and are assumed to be paid solely with tolls.

The changes to cost estimates by category documented below match WSDOT's legislative budget request through FY 2019, with the exception that inflation factored into the O&M expenditure forecasts must be omitted for certain state costs in the budget request. The costs underlying the net revenue projections have also been reviewed and verified for reasonableness by HDR Engineering Inc., serving as the Consulting Engineer required under the Master Bond Resolution. The following expenditures, with additional explanation below, were included in that review.

Transponder Sales Revenue and Purchase Costs

Transponder sales revenue [column 19], as well as transponder purchase and inventory costs [column 20], were lower in FY 2012 than originally projected, despite the high penetration of *Good To Go!* transponders in the SR 520 corridor. Based upon recent WSDOT budget analysis, the forecast for transponder sales revenue and purchase costs has been revised downward for the remainder of the forecast, representing a decrease of approximately 12 percent.

In addition, it was expected that transponder inventory costs would be approximately offset by transponder sales revenue. Over the course of FY 2012, sales revenue exceeded the cost of those transponders, generating a small net gain from transponder sales. This trend is not anticipated to perpetuate, as WSDOT may revise its pricing and distribution strategy, especially as new transponder

technologies become available. Therefore, the net revenue forecast continues to assume an equal offset between transponder sales revenue and purchase costs.

Credit Card Fees

The methodology for estimating credit card fees remains unchanged since the previous forecast; however, the value of credit card fees, which is estimated as a percentage of adjusted gross toll revenue, has increased in the near-term but decreased overall, closely following the gross revenue forecast trends. The projected trend of higher adjusted gross toll revenues through FY 2021—and lower thereafter—is primarily due to the revised gross toll revenue forecasts provided by CDM Smith, as well as other refinements to the forecast for fee revenues, customer discounts, and revenue leakage.

Toll Collection O&M Costs

There are multiple categories of costs within toll collection O&M, including customer service center (CSC) operations, toll collection system (TCS) maintenance, and state (WSDOT) operations. Several recent developments in the forecasting methodology for these costs have been revised, resulting in a lower overall estimate for toll collection O&M costs throughout the forecast horizon.

The most significant changes since September 2011 are separate refinements to both the near-term and the long-term CSC cost forecasts for SR 520. During recent negotiations with Electronic Transaction Consultants Corporation (ETCC), the current CSC vendor, a settlement was reached in which WSDOT will reduce its fixed monthly payments to ETCC, and will also have the option to extend ETCC's operations contract through FY 2018 at current pricing levels.¹⁰ Prior to receiving a contract extension, ETCC must first meet certain operations requirements and key performance metrics. For the purpose of the net revenue forecast, it has been assumed that ETCC's contract will be extended through FY 2018, replacing an existing transaction-based cost forecast that began in FY 2015. Because a final contract extension agreement has not yet been executed, an additional allowance for potential cost increases has been included in the assumed CSC vendor pricing through FY 2018. As a result of this update, the net reduction in CSC costs from FY 2013 through FY 2018 totals approximately \$27 million.

Beyond the current vendor contract period, a transaction-based cost model is used to forecast future CSC costs. In this model, projected toll transactions provided by CDM Smith are multiplied by a projected all-in collection cost per transaction, resulting in the estimated CSC vendor contract value for each forecast year, starting with FY 2019. As an example, the projected volume of toll transactions in FY 2019 is 25.77 million, with an estimated CSC processing cost per transaction of \$0.21. Multiplying 25.77 million by \$0.21 results in a total future estimated vendor cost of \$5.42 million in year of expenditure (YOE) dollars. This methodology is consistent with the previous CSC estimates. However, the per-transaction cost has been revised downward as a result of a detailed bottom-up cost estimate refinement prepared by the WSDOT General Tolling Consultant (GTC) team. As a result of this update, the net reduction in CSC costs from FY 2019 through FY 2056 is approximately \$81 million, or 17 percent lower than forecast in September 2011.

Similar to CSC costs, WSDOT operating expenses are projected to be substantially lower throughout the forecast horizon. Components of state operations include accounting, marketing, information

¹⁰ Plus annual CPI inflation adjustments.

technology (IT), and management staff, as well as printing and postage associated with Pay By Mail transactions, general office supplies, and consultant support. Overall, state operations are projected to be \$95 million lower throughout the forecast horizon, a decrease of about 24 percent. The primary driver for this reduction is a revised forecast for Pay By Mail toll bill printing and postage costs, which accounts for nearly half of all state operations expenditures. The reduction in printing and postage costs are the result of several refinements: (1) a reduction in the unit cost per invoice to be more consistent with actual, more favorable experience, including a bulk mailing rate; (2) a lower forecast of Pay By Mail transactions (and thus invoices) throughout the forecast horizon; and (3) a modest increase in the assumed number of transactions per bill. With regard to the latter, the assumed average number of transactions per toll bill mailed has been revised upward to 3.26 based upon WSDOT's actual experience on SR 520 during FY 2012. Overall, the revisions to the toll collection O&M costs represent the largest change in the various components used in calculating net toll revenues for this September 2012 update.

Facility Operations and Maintenance Costs

The forecasts for routine facility operations and maintenance costs to be paid by tolls [Column 23] remain unchanged from the previous forecast, with the exception of advancing the date by which tolls begin to cover these costs by six months. The change in date is due to when portions of the project are expected to be operationally complete, and adds \$1.3 million, or one half of one year's expenditures to FY 2016.

A panel of maintenance staff, project office staff, and consulting engineers conducted a review of the prior estimates and concluded that no changes to previous cost estimates would be required.

Bridge Insurance Premiums

Bridge insurance premium estimates are provided by WSDOT as an input to the net revenue analysis. For the period from October 2011 through June 2012, actual bridge insurance premiums for physical damage and business interruption (revenue loss) amounted to \$1.6 million, an increase in WSDOT's original premium estimate of about \$1 million. The FY 2012 premium and projections through FY 2016 provide business interruption insurance and physical damage coverage, the latter of which includes the existing floating bridge during construction. The initial post-completion insurance premium estimate provided by WSDOT has not been changed; however, because the premiums are assumed to escalate with the growth in gross revenues, the forecast values have generally exhibited small downward revisions to correspond with lower projected gross revenue growth rates in CDM Smith's updated gross revenue forecast. In addition, the first few years of post-completion premiums were elevated slightly to avoid an expenditure decrease in FY 2017. From FY 2013 through FY 2056, the sum of bridge insurance premiums are projected to be two percent higher than previously projected.

NET REVENUE PROJECTIONS

The combined effect of the change to the various deductions described in this memorandum is a projected increase in total net toll revenues of approximately 1.1 percent over the forecast horizon. Of note is that net revenues are projected to be higher in every year from FY 2013 through FY 2030, but slightly lower thereafter. Exhibit 4 provides a comparison of the previous and updated net revenue streams, illustrating that the greatest difference occurs prior to FY 2030, with a much closer alignment

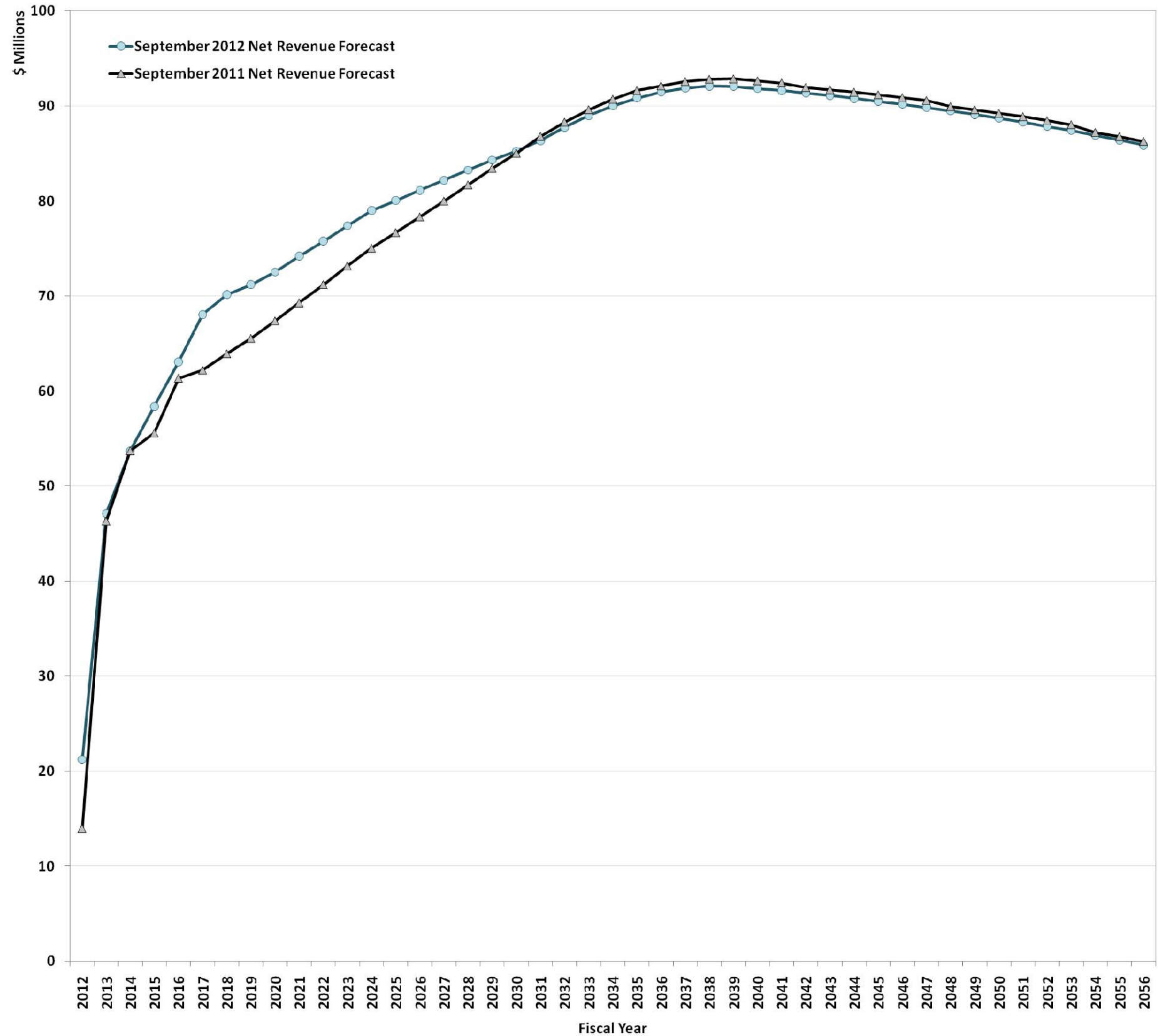
of minimal change thereafter. Detailed net revenue projections by revenue and cost category are shown in the T&R table provided as Appendix A.

As tolling operations continue to mature, close monitoring of SR 520 traffic, revenue, and cost performance will be crucial to the development of future forecasts and WSDOT business rules, particularly in the area of uncollectible accounts. Despite a higher than projected share *Good To Go!* account-based transactions thus far, WSDOT should continue to explore opportunities to increase prepaid transactions, as this will have a direct impact on both operating costs and revenue leakage.

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Exhibit 4: Comparison of September 2011 and September 2012 Net Revenue Projections (FY 2012-56)

	State Fiscal Year	Original Forecast September 2011 (\$ millions) ¹	Updated Forecast September 2012 (\$ millions) ^{1,2}	% Delta Increase (+) / Decrease (-)
Pre-Completion	2012	13.99	21.22	+51.6%
	2013	46.31	47.12	+1.8%
	2014	53.72	53.71	-0.0%
	2015	55.56	58.37	+5.1%
	2016	61.35	63.06	+2.8%
	Post-Completion — Full Revenue Operations	2017	62.20	68.04
2018		63.92	70.14	+9.7%
2019		65.54	71.20	+8.6%
2020		67.38	72.53	+7.6%
2021		69.28	74.19	+7.1%
2022		71.19	75.77	+6.4%
2023		73.16	77.39	+5.8%
2024		75.02	78.99	+5.3%
2025		76.66	80.04	+4.4%
2026		78.31	81.11	+3.6%
2027		79.98	82.17	+2.7%
2028		81.69	83.25	+1.9%
2029		83.42	84.30	+1.0%
2030		85.01	85.24	+0.3%
2031		86.80	86.33	-0.5%
2032		88.29	87.74	-0.6%
2033		89.60	88.97	-0.7%
2034		90.70	90.00	-0.8%
2035		91.61	90.83	-0.8%
2036		92.10	91.45	-0.7%
2037		92.56	91.88	-0.7%
2038		92.80	92.08	-0.8%
2039		92.84	92.07	-0.8%
2040		92.63	91.84	-0.9%
2041		92.42	91.61	-0.9%
2042		91.93	91.36	-0.6%
2043		91.70	91.09	-0.7%
2044		91.43	90.78	-0.7%
2045		91.16	90.49	-0.7%
2046		90.87	90.17	-0.8%
2047	90.56	89.83	-0.8%	
2048	89.91	89.48	-0.5%	
2049	89.59	89.09	-0.6%	
2050	89.22	88.70	-0.6%	
2051	88.86	88.29	-0.6%	
2052	88.44	87.84	-0.7%	
2053	88.02	87.40	-0.7%	
2054	87.20	86.90	-0.3%	
2055	86.75	86.40	-0.4%	
2056	86.27	85.88	-0.5%	
Totals FY 2012-16		230.93	244.26	+5.4%
Totals FY 2017-46		2492.19	2533.05	+1.6%
Totals FY 2017-56		3377.02	3412.86	+1.1%



¹Based on gross traffic and revenue projections prepared by CDM Smith, fka Wilbur Smith Associates.
²Updated net revenue forecast inclusive of actual revenues / expenditures for FY 2012; subject to change.

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Costs Downstream of Net Revenues [Columns 26-27]

Two types of expenditures are placed downstream of the reported net revenues due to their payment after debt service in the project's flow of funds. They are deferred sales tax payments and rehabilitation and replacement costs. Since September 2011, both expenditure categories have been revised upward to account for changes in the capital program (funded projects), as well as updates to unit costs.

Payment of Deferred Sales Tax

Deferred sales tax is calculated as a percentage of the SR 520's eligible construction expenditures, which have recently increased due to an expansion of the funded program to include the construction of a new, West Approach Bridge to serve westbound traffic to the north of the existing west approach bridge (which would be repurposed to serve eastbound traffic until the rest of the program is funded to allow its replacement). The increased construction expenditures of this project raise the total value of the deferred sales tax by \$20 million, or from \$124 to 144 million.

Rehabilitation and Replacement (R&R)

Recent changes by WSDOT to future facility R&R activities have increased projected costs by approximately \$40 million, or about 17 percent over the forecast horizon. These changes include a placeholder increase of \$100,000 per year starting in FY 2017 to cover standard bridge inspections, higher projected unit costs for anchor cable replacement on a 25-year frequency, and the added costs for the West Approach Bridge structure, which is an expansion of the funded project relative to 2011.

DISCLAIMER

This memorandum was prepared by Parsons Brinckerhoff (PB) as a subcontractor to HDR Engineering Inc. (HDR), in accordance with the SR 520 General Engineering Consultant (GEC) agreement with the Washington State Department of Transportation (WSDOT). It is subject to the terms and conditions of that agreement, and is meant to be read as a whole and in conjunction with this disclaimer.

The contents of this memorandum, including the net revenue projections and associated expenditure forecasts, are the product of collaboration between WSDOT, the GEC team supporting the SR 520 Corridor Project, and other consultant firms providing support to the WSDOT Toll Division. The traffic and gross revenue projections were provided by CDM Smith in their role as the Traffic Consultant, and the facility and toll collection O&M costs were reviewed by HDR in their role as the Consulting Engineer. WSDOT has been actively engaged throughout the process, and the contents reflect the collective input and views of many different engineering, finance, and other professionals. In the preparation of this memorandum the authors and contributors make certain assumptions with respect to such conditions that may exist or events that may occur in the future that are subject to change.

PB and WSDOT believe that the work has been properly summarized and that the projections and other forward-looking statements contained within the memorandum are based on reasonable assumptions as of the date of the report. Such forward looking statements involve risks and uncertainties that may cause actual results to differ materially from the results predicted. Any entities using this memorandum and the data presented herein are hereby advised that the use of these materials shall be at their own risk, and no guarantee or warranty as to the actual outcome of any projection herein is being offered.

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APPENDIX A:

**SR 520 Traffic and Revenue Table
September 2012 Update**

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