

# Transportation in Seattle: Where Does the Money Come From, Where Does the Money Go and What's Heading for Taxpayers in Big New Tax Packages.

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## The Purpose of this Study

This study looks in a new way at public money for transportation systems used by Seattle's citizens. *It focuses inquiry from the vantage point of the consumer.* That is, *the taxpayer* – the sole source of the myriad revenue streams (taxes, fees and various user charges like fares and tolls) that flow into the coffers in the several silos of transportation system decision-making and systems.

If you are a *taxpayer*, how much are *you* paying, how is it taken from your wallet, and where does it go. This view sharply focuses questions such as *who* is deciding how to spend *your* money, *what* are the spenders choosing to do with *your* money, (with or without coordination with one another), and *whether* the results are making sense for *you* as *the user* of transportation systems of which *you are funding*.

This is different from the usual way of looking at the money. Not all the attention first on one agency, then another, each with “decision-makers” and “stakeholders” largely acting in silos to work out *their* agendas with *your* money. It sets aside the questions that too long have fragmented the transportation discussion, such as: what is the federal government doing with *its* transportation money, or the state government with *its* transportation money, or the city with *its* transportation money, or the county with *its* transportation money, or Sound Transit with *its* transportation money. The new question is: What are they all doing with *your* money.

The consumer-focused vantage point for this study is the *Typical Seattle Household*.

Now is a particularly important time to look at transportation funding and the typical Seattle household because Seattle households either very recently or in the very near future face big run-ups, over a **40% increase** all-in-all, in the typical Seattle household's transportation taxes, fees, and user charges. Revenues for transportation sometimes pour

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and sometimes trickle out of taxpayers' wallets, often with their hardly knowing it. These big increases at hand arrive from the following:

**2015 Enacted State Transportation Revenue/Spending Package.** Fashioned by the state Legislature in Olympia in 2015, the program includes a gas tax increase and increases in other licenses, permits, fees and user charges paid by taxpayers to the state in the expectation of supporting investment of billions of dollars stretching out to 2031 for new road projects around the state, ferry system investment, and about 8% of expected spending for preservation and maintenance of existing transportation assets.<sup>1</sup>

**2015 Proposed City of Seattle Move Seattle Transportation Levy.** Replacing and expanding upon the 2006 *Bridging the Gap* levy that expires in 2015 and has over the last eight years provided about 25% of funding for the Seattle Department of Transportation (SDOT). *Move Seattle*, if approved by voters, will rely on a significant property tax increase beyond the level of *Bridging the Gap* adding up to a total about \$930 million in taxes over the ten years. Funds will be spent for safety and corridor modernization improvements and (to the extent of about 45% of the funding) maintenance and repair of existing assets including streets and bridges.<sup>2</sup>

**2016 Proposed Sound Transit 3 Revenue/Spending Proposal** chiefly relying on pushing Seattle's sales tax rate over 10% together with property tax (increase of up to \$.25 for \$1000 assessed value) and car tab increases.<sup>3</sup> The sum of the taxes collected over the years to 2031 would be up to \$15 billion and continuing thereafter. The largest of the projects now under consideration for inclusion in the proposal are light rail extensions to Tacoma and Everett and light rail additions in Seattle to Ballard and West Seattle, all probably to go into service no sooner than 2031.<sup>4</sup> Virtually no investment in preservation or maintenance of existing transportation infrastructure is included in these Sound Transit program proposals.

**2014 Seattle Proposition 1** adopted by voters in November 2014 raised an existing \$20 annual car tab (already was just a small piece of the cost of licensing a car when state and Sound Transit car tabs and other fees are also included) to \$80 – and lifted sales tax rates by .1% (1 cent on a ten dollar purchase) raising

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<sup>1</sup> Mike Lindblom, "Lawmakers release \$16 billion transportation plan with 11.9-cent gas tax," *Seattle Times*, June 29, 2015 <http://www.seattletimes.com/seattle-news/transportation/lawmakers-release-16-billion-transportation-plan-has-119-cent-gas-tax/>

<sup>2</sup> City of Seattle, "Transportation Levy to Move Seattle, June 3 2015 Fact Sheet," accessed at <http://www.seattle.gov/transportation/docs/LevyFactSheet62915.pdf>

<sup>3</sup> Sound Transit, "Sound Transit 3 funding," accessed at [http://www.soundtransit.org/sites/default/files/2015\\_0810\\_ST3\\_funding\\_FS\\_0.pdf](http://www.soundtransit.org/sites/default/files/2015_0810_ST3_funding_FS_0.pdf)

<sup>4</sup> Mike Lindblom, Sound Transit planning heats up for light-rail expansion and public vote," *Seattle Times*, July 4, 2015, <http://www.seattletimes.com/seattle-news/transportation/sound-transit-boosts-light-rail-expansion-plans/>

approximately \$35 million annually for investment in Metro transit services. The money is intended almost entirely to be used to support transit services.<sup>5</sup>

## What This Study Tells Us

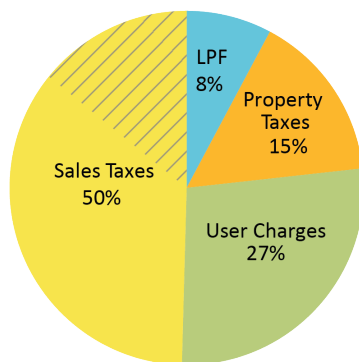
This study describes the situation of the typical Seattle household *before* (2014) and *after* (2016-17) given the foregoing transportation funding measures.<sup>6</sup> There are two simple scenarios cumulating the effects of 28 discrete revenue streams to which taxpayers contribute:

First: “*What Was?*” In other words, *before* the four revenue/spending measures above would have taken effect. Basically this is presented as year 2014 dollar amounts.

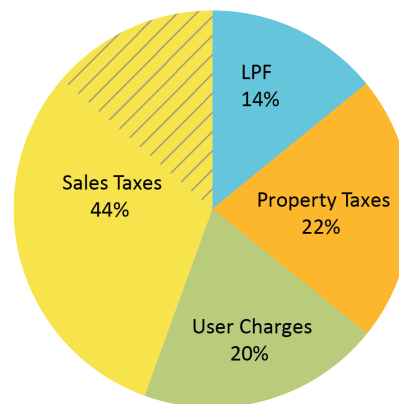
Second, “*What Will [Would] Be.*” In other words *after* the four new revenue steps above have added new tax burdens to those that already existed. This condition (assuming both *Move Seattle* and *Sound Transit 3* are approved by voters as currently proposed or publicly under review by the officials responsible for putting those proposals to voters) is represented as dollar levels that will be seen in 2016/7.

**Figure 1** summarizes the comparison from *before* to *after*. The typical Seattle household’s burden (or contribution, if one prefers) will rise from approximately **\$1975 in 2014** to approximately **\$2762 in 2016/17**. It shows this in *aggregate* the types of taxes that are broadly involved and the shares they take of the overall revenue sums. A **40% increase**.

**What was | \$1975 per household**  
Current Taxes by Revenue Type



**What will be | \$2762 per household**  
Future Taxes by Revenue Type

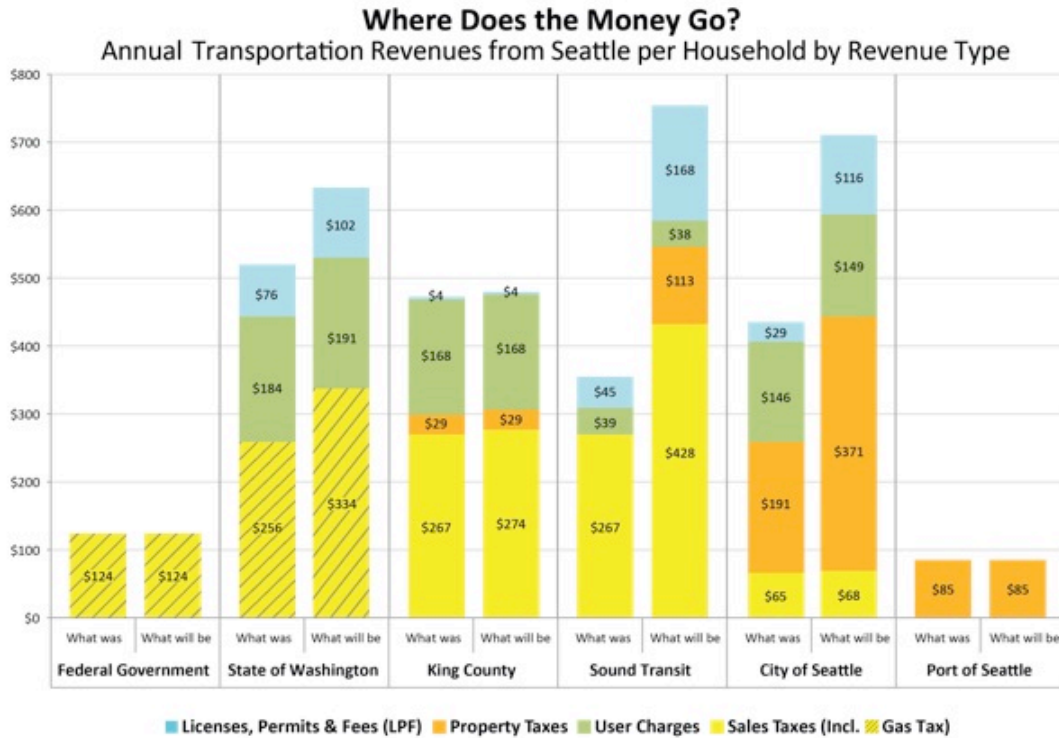


■ Licenses, Permits & Fees (LPF) ■ Property Taxes ■ User Charges ■ Sales Taxes (Incl. ■ Gas Tax)

<sup>5</sup> Mike Lndblom, “Metro bus service to get boost with passage of Prop. 1,” *Seattle Times*, Nov. 4, 2014 accessed at <http://www.seattletimes.com/seattle-news/metro-bus-service-to-get-boost-with-passage-of-prop-1/>

<sup>6</sup> In the following tables, there are a few instances in which minor adjustments other than from the four measures described above are also made to reflect, for example, small toll increases over the span of the two scenarios. These are noted where applicable.

**Figure 2** shows for each of the tax recipient jurisdictions its respective positions *before* (left bar in each pair) and *after* (right bar in each pair) and each jurisdiction’s bars in relation to the bars for the others (each pair of bars compared to the other pairs).



The study also touches on two other topics.

First, the *further* burdens borne by taxpayers (based on two useful studies) of the direct costs on private automobile wear and tear from bad pavements as experienced in Seattle as a result of long neglect of pavement maintenance and replacement – for the typical Seattle household, probably in the range of \$500 - \$900 annually. (Pages 15-16).

Second, short comments on the need for *performance measures* for how new spending from *several* agencies can be evaluated for what it is intended to achieve as a whole and whether it will do so. The topics discussed are congestion, greenhouse gas emissions, asset stewardship and affordability and equity. This, unfortunately, is a bleak area of this study. In transportation metaphor, we truly must ask while engaged in billions of dollars of revenue-raising, why the roads have no stripes, the traffic signals aren’t synchronized, the crosswalks are invisible, the bus schedules are unprinted, the modes are not “seamlessly integrated,” and only Siri is there to ask questions but she answers only with static, shrugs or riddles. This must change. (Pages 16 - 24).

## **What are the Characteristics of the Typical Seattle Household?**

From generally available demographic and economic data and extrapolation from available data and averaging across *all* households, we can postulate that in 2014 the typical Seattle household operated 1.47 passenger or other light duty motor vehicles, had a median annual household income of \$72,277, paid property taxes on a residence with an assessed value of \$451,000, paid annual aggregate retail sales tax of about \$2,746, and consumed about 650 gallons of gasoline to fuel its passenger vehicles. In 2014 we find there were about 298,000 households in Seattle and they accounted for about 95% of Seattle's total population.

These characteristics are drawn from the analysis described in text and tables in the Appendix beginning on page 24.

## **Twenty-eight Revenue Streams and Their Before and After Scenarios.**

This study identifies and assesses 28 separate taxes, fee and user charges through which Seattle taxpayers support the public costs of the transportation systems they use. The smallest may hit a typical household only as a dollar a year. The larger run to hundreds of dollars a year. Some, like the gas tax, are frequently discussed and commented upon. Others, including some of the largest, are little known, poorly understood, and obscurely (if ever) presented. This study seeks to put them all equally in plain view. Here they are grouped in five categories regardless of the agency or jurisdiction that collects or receives the revenue from the taxpayer.

- *Motor Vehicle Fuel Excise Taxes (Gas Taxes) and General and Special Sales Taxes.*

Gas taxes and general sales taxes often are discussed separately, but they are very similar in generating revenue from the taxpayer at the point of purchase of a commodity or good. They also should be shown together because high gas taxes and high sales taxes share the feature (a troubling and distinguishing mark of taxation in Washington State) of being the most regressive arrows in the tax options quiver.

- *Licenses, Permits and Fee*

This is a bit of a catchall, including everything from car tabs in multiple forms (the largest items in the category), to vehicle weight fees, to drivers' license fees and many other transportation related charges

- *Property Taxes*

Levy of property taxes by household assessed value are important sources of transportation funding received by some of the jurisdictions covered in the study.

- *Fares, Tolls and Other User Charges*

When the typical household is defined as the average of *all* households, user charges become an important transportation funding mechanism that can

be presented in terms of a *typical* household, even though incidence will vary from household to household from differing usage patterns. This includes transit fares, tolls, and even parking meter revenues that actually represent short-term rents for occupancy of prime street space for short-term automobile storage.

Revenue (annual estimates) from taxpayers in the typical Seattle household, grouped into the foregoing categories and labeled by jurisdiction, are discussed in the 28 boxes that follow -- each with its *before* and *after* impacts in the right-hand cells of each box:

***Sales Taxes Including Motor Vehicle Fuel Excise Taxes (“Gas Tax”)***

<b>Federal Gas Tax</b>	<b>What Was</b>	<b>What Will Be</b>
Current federal excise tax on gasoline is 18.4 cents/gallon (24.4 cents on diesel, but for sake of simplicity and conservatism, we treat all fuel as gasoline). Consumption is assumed to remain steady at the level at 650 gallons (Table 5):	<b>\$124</b>	<b>\$124</b>

<b>State Gas Tax</b>	<b>What Was</b>	<b>What Will Be</b>
The state gas tax in 2014 was 37.5 cents per gallon.* The 2015 State Transportation Package increased the rate in two steps. First, in July 2015, to 44.5 cents/gallon and then again in 2016 to 49.4 cents/gallon. At 650 gallons (Table 5):	<b>\$244</b>	<b>\$321</b>
*A detail of the state gas tax is that of the 37.5 cents collected by the state in 2014 (and earlier), by statute 3 cents has mandatorily been returned to cities (and thus is eventually shown as a revenue in SDOT’s budget) for transportation purposes. In 2015 and thereafter the arrangement for the 3 cents will remain. From “new” money otherwise raised in transportation charges by the state, an additional state distribution stream, not set by formula, constituting a small portion of the 2015 State Revenue Package increase will be distributed to cities and counties. These details are <i>not</i> reflected in Figures 1 and 2 above. If they were, the state government’s “What Was” bar would be shortened by about \$20 and the SDOT bar would be commensurately higher. The same effect would pertain to the “What Will Be” bars, but the amount to which the effect is greater than about \$20 is not calculable until the legislature makes distributions.		

<b>Sound Transit Sales Tax</b>	<b>What Was</b>	<b>What Would Be</b>
The general retail sales tax in the City of Seattle in 2014 was 9.5% (95 cents on a ten-dollar purchase). This would significantly increase under the Sound Transit 3 (ST3) proposal.	<b>\$267</b>	<b>\$428</b>
Sound Transit received in 2014 a portion of the tax at 0.9% (9 cents on a ten dollar purchase), which was 9.47% of the total taxes collected. Effective April 1, 2015, 0.1% was added to the sales tax rate in Seattle by approval of the new tax for the Seattle Transportation Benefit District (see below), raising the total rate to 9.6%. The ST3 ballot measure in 2016 would propose to increase the tax for Sound Transit by up to .5% to a total of 1.4% (increasing the total sales tax rate to 10.1% or \$1.01 on a ten-dollar purchase, of which 14 cents or 13.9% of the total taxes collected would go		

to Sound Transit. Applying these percentages to aggregate typical Seattle household general sales taxes collected in the years 2014 and 2017 (Table 7) yields the results shown:

<b>King County Metro Sales Tax</b>	<b>What Was</b>	<b>What Would Be</b>
King County Metro receives a portion of the sales tax at .9% (9 cents on a ten dollar purchase which is 9.47% of the total taxes collected as of 2014 (see discussion above and below), and if ST 3 (see above) increases the overall tax rate, will be 8.91% of tax collections in 2017 (see Table 7):	<b>\$267</b>	<b>\$274</b>

<b>Seattle Sales Tax</b>	<b>What Was</b>	<b>What Would Be</b>
Approved by votes in Proposition 1 in November 2014, effective April 1, 2015 Seattle began to collect a new local sales tax at .1% (one cent on a ten dollar purchase) which increased the aggregate sales tax rate in Seattle from 9.5% in 2014 to 9.6% in 2015. If the sales tax increase for ST 3 raises the aggregate sales tax rate to 10.1% by 2017, the Seattle tax will claim .96% of the typical Seattle household aggregate sales taxes paid (Table 7):		<b>\$30</b>

<b>State Sales Tax on Retail Car Sales</b>	<b>What Was</b>	<b>What Will Be</b>
The State collects a .3% Sales Tax on Retail Car Sales ( <i>i.e.</i> , purchases) of new and used vehicles; also leases; and also use tax on vehicles purchased out-of-state).	<b>\$12</b>	<b>\$13</b>
There has been no change in the rate since the tax was imposed some years ago. The tax amount collected statewide in 2014 is \$36.9 million expected to increase to \$40.4 million in 2016. Assuming that Seattle residents pay an amount of this total that is proportional to population (probably buying fewer cars per person than the statewide number but more expensive vehicles), Seattle households would pay about 10% of the total, which distributed to the typical Seattle household for 2014 and 2016 (see Table 2) is:		

<b>City of Seattle Real Estate Excise Tax</b>	<b>What Was</b>	<b>What Will Be</b>
Seattle collects Real Estate Excise Tax on residential, condo and commercial real estate sales.	<b>\$65</b>	<b>\$38</b>
Receipts are distributed to a variety of City purposes. Amounts that the SDOT budget shows will be revenues to SDOT are about \$26 million in 2014 and expected to be \$16 million in 2016. About 75% of REET receipts are expected to derive from residential and condo sales, adjusting the household derived amounts above to \$19 million in 2014 and \$12 million in 2016, averaged to typical Seattle households as shown:		

**Licenses, Permits and Certain Fees**

<b>State Vehicle License Fee (“Car Tab”)</b>	<b>What Was</b>	<b>What Will Be</b>
The state vehicle license fee (“car tab”) was set by the state legislature in 2000 (following Initiative 695) at \$30 per vehicle and has been unchanged since that time. For the typical Seattle household registering 1.47 vehicles, the amount is:	<b>\$44</b>	<b>\$44</b>

<b>State Vehicle Weight Fee</b>	<b>What Was</b>	<b>What Will Be</b>
The state has through 2015 collected this fee (at vehicle license renewal) at the rates of \$10, \$20 or \$30 depending on weight class. Under the 2015 State Transportation Package, the rates in 2016 will increase to \$25, \$45 and \$65. Statewide in 2013 the weighted average fee was \$11.36. Assuming the same distribution of vehicles by weight class for Seattle both in 2014 and in 2016/7, at 1.47 vehicles per typical household, this fee burden is:	<b>\$17</b>	<b>\$42</b>

<b>State Special Fee for Certain Electric and Plug-in Hybrid Vehicles</b>	<b>What Was</b>	<b>What Will Be</b>
The state for some years has charged a special annual \$100 fee for all-electric vehicles. The 2015 State Transportation Package raised the annual fee to \$150 and expanded its coverage to a class of “plug-in” hybrid vehicles such as the Chevy Volt capable of traveling 30 miles between charges.		<b>\$1</b>
With expanded coverage but yet only about 2500 eligible vehicles in Seattle, only a few taxpayers will see a big jump in this fee at the new \$150 level. Across all households the tax is virtually <i>de minimis</i> , but state policies encouraging electric vehicles will cause the tax to grow in future importance.		

<b>State License Service Fee</b>	<b>What Was</b>	<b>What Will Be</b>
The state collects an annual License Service Fee of 75 cents/vehicle. There is no change in the fee level between the two scenarios. The result shown is for a typical Seattle household with 1.47 vehicles.	<b>\$1</b>	<b>\$1</b>



<b>King County Vehicle Filing Fee</b>	<b>What Was</b>	<b>What Will Be</b>
King County collects an annual Vehicle Filing Fee of \$3 per vehicle. For the typical Seattle household with 1.47 vehicles:	<b>\$4</b>	<b>\$4</b>

<b>Sound Transit Motor Vehicle Excise tax (“MVET” or “Car Tab”)</b>	<b>What Was</b>	<b>What Would Be</b>
Sound Transit currently each year collects (at license renewal) an MVET at 0.3% of vehicle value (\$30 on value of \$10,000). The ST3 ballot measure would increase this by .8% (\$80 on value of \$10,000) to a total of 1.1% (\$110 on value of \$10,000).	<b>\$45</b>	<b>\$168</b>
Sound Transit data on its total MVET receipts district-wide and the total number of vehicles for which receipts are collected suggests that the average fee per vehicle (at \$30 on \$10,000) in 2014 was \$31.61 (compared to \$29.40 in 2013 and \$29.75 in 2012). We use the value \$31 as the average and assume proportionate increase to \$114 under ST3, and then apply that to 1.47 vehicles per typical Seattle household:		

<b>Seattle Car Tab (Seattle Transportation Benefit District)</b>	<b>What Was</b>	<b>What Will Be</b>
The Seattle car tab of \$20 per vehicle was imposed in 2011. It was raised by an additional \$60 by passage of Proposition 1 for Seattle in November 2014 effective 2015, for a total of \$80. For 1.47 vehicles per typical Seattle household:	<b>\$29</b>	<b>\$116</b>
A \$20 low-income rebate is available for households with income below 45% of area median income, or for a 2-person household, \$32,265. About 12,000 people in Seattle avail themselves of the low-income discount. If each discount were to be treated as representing a single household, then the number of discounts would align very approximately with about 4% of Seattle households. Because the rebate is only for a quarter of the fee, the effect of the rebate averaged across all households is virtually <i>de minimis</i> .		

<b>State Driver’s License Fee</b>	<b>What Was</b>	<b>What Will Be</b>
The state issues a six-year driver’s license for \$54, extendable at \$9 per year for periods of less than the full term. Assuming that there are little over two persons per household in Seattle and the typical household has 1.6 drivers for its 1.47 vehicles:	<b>\$14</b>	<b>\$14</b>

## Property Taxes

<b>Seattle Move Seattle Property Tax Levy</b>	<b>What Was</b>	<b>What Would Be</b>
The proposed <i>Move Seattle Transportation Levy</i> on the November 2015 ballot is for a property tax levy designed for 2016 to levy on a median value property of \$451,000* a property tax of \$275. According to SDOT this compares with the comparable levy under the predecessor <i>Bridging the Gap Levy</i> (passed by Seattle voters in 2006) of \$130:	\$130  (Under <i>Bridging the Gap</i> )	\$275
* The value very conveniently supplied by SDOT on its website for this calculation, and adopted for uniformity throughout this study.		

<b>Sound Transit Property Tax Levy</b>	<b>What Was</b>	<b>What Will Be</b>
<b>Sound Transit</b> is considering for ST3 a new property tax levy of \$.25 per \$1,000 assessed valuation. If enacted in 2016, the impact in 2017 on a household with a median assessed value home of \$451,000:*		\$113
* Using the value supplied on the SDOT website (see above) for median household value and holding it steady for the future year calculation – probably a very conservative assumption given recent and perhaps continuing trends in rising Seattle housing values		

<b>Seattle Property Tax Levy – Seawall Bonds</b>	<b>What Was</b>	<b>What Will Be</b>
Seattle voters in 2012 approved the Central Waterfront and Seawall Improvement Levy to support a \$290 million bond measure for this SDOT project.		\$36
Bonds have been and in coming years and will continue to be issued to finance project costs as they are incurred. Debt service is funded via an excess property tax that for 2015 will be about \$0.027 per \$1000 Assessed Valuation and by 2016 is expected to rise to about \$0.08 per \$1000 Assessed Valuation. Assuming a \$451,000 median household value, this portion of the tax levy was <i>de minimis</i> in 2014 and grows to \$36 in 2016. Depending on the schedule and terms of further bond financings, this amount may further increase in later years or bonding and debt service may be also provided from other sources.		

<b>Seattle General Property Tax</b>	<b>What Was</b>	<b>What Will Be</b>
The source of a transfer from the General Fund supports SDOT's budget. For discussion of the derivation of burden on the typical Seattle household, see below	\$52	\$60

This requires a bit of constructive accounting that the City does not actually (*cont. next page*) perform and cannot be adduced from City budget documents. The City provides for the SDOT budget in part from its General Fund. The level of that support in 2014 was \$41.3 million in 2014 and is expected to be \$45.2 million in 2016. Mingled as *revenue* in the General Fund are both parking meter revenues (see below; distinctly a transportation user charge that is used from the General Fund for a broad spectrum of street related purposes in and out of SDOT's budget including traffic enforcement budget at the Seattle Police Department. For purposes in this study of showing that *both parking meter revenues and levy funded amounts* hit taxpayers wallets for transportation purposes, we *deem* that half the parking meter revenues end up in the SDOT budget while the other half goes to transportation-related purposes outside the SDOT budget) and that the other half of the General Fund contribution to SDOT is sourced to the property tax. The consequence of this revenue attribution is to assume property tax revenues to SDOT from the General Fund in 2014 of \$21.8 million and in 2016 of \$25.2 million. This is adjusted to \$16.4 million and \$18.9 million on account of the fact that a percentage of *ad valorem* property taxes are levied on commercial rather than residential property. The approximate levy rate to raise \$16.4 million is approximately \$.115 per \$1000 assessed value and for \$19.9 million is \$.133 per \$1000 assessed value, resulting in the results shown for a \$451,000 median house value.

<b>King County Property Tax Levy - Metro</b>	<b>What Was</b>	<b>What Will Be</b>
In 2010, the King County Council shifted existing levy dedications from the West Seattle Ferry district to King County Metro, for a levy that for 2014 and out years varies quite closely around \$.065 per \$1000 assessed value, a slightly simplified picture of the levy rate but used here for both scenarios, also assuming median household value of \$451,000.	<b>\$29</b>	<b>\$29</b>

<b>Port of Seattle Property Tax Levy</b>	<b>What Was</b>	<b>What Will Be</b>
The Port of Seattle is recipient of a portion of the property tax levy collected by King County at a levy rate (2015) of \$0.189 for \$1,000 assessed value. For purposes of this analysis we assume this as a constant both looking backward and forward and a constant median household value of \$451,000:	<b>\$85</b>	<b>\$85</b>

### ***Fares, Tolls and Other User Charges***

<b>King County Metro - Fares</b>	<b>What Was</b>	<b>What Will Be</b>
Seattle residents make heavy use of King County Metro bus services. The calculation of household fare contribution is somewhat complicated.	<b>\$168</b>	<b>\$168</b>
The calculation of this amount is problematic and inextricably bound up with the complexity of Metro's countywide route structure and ridership patterns, its intricate multi-layered fare structure, and the importance of employer-subsidy in supporting riders' own out-of-pocket costs. Metro understandably does not account for fare revenue on a geographic or wallet-of-origin basis. We therefore arrive at a very rough number for the typical Seattle household as follows: Annual total "fare revenue" for Metro is taken as \$150 million. Metro's <i>2014 Rider Survey</i> * suggests that Seattle (with about 33% of the county's population) has about <i>double</i> the level of regular riders as other areas - translating into the very broad conclusion that two-thirds of fare revenue (say \$100		

million) is allocable to Seattle riders, overlooking offsetting but difficult to quantify refinements to bump up that share up for higher frequency use in Seattle among the frequency cohorts, used in the *Rider/Non-rider Survey* and bump it down for high ratio for Seattle riders of one-zone to two-zone fares). But to convert this to the typical Seattle household we must first “buy down” the total by the substantial amount that Seattle and other regional employers contribute to fare revenue by subsidizing riders’ own out-of-pocket costs through participating in the *ORCA Passport* employer purchase program (yielding about \$58 million to Metro’s fare revenue in 2014) and the *ORCA Business Choice* employer support program that offers employees discounted fare costs (yielding about \$33 million in fare revenue to Metro in 2014 that might arbitrarily be assigned a 50/50 split (variable and not visible to Metro) between employer and employee in the underlying origination of the revenue; thus achieving an aggregate employer contribution [\$58 m + \$17 m.] of \$75 million, of which two-thirds (\$50 million) would be allocable to Seattle riders.\*\* This brings the out-of-pocket Metro fare costs cost to Seattle residents from \$100 million to \$50 million. Averaged across 298,000 typical Seattle households.

\* King County Metro Transit, “2014 Rider Survey Final Report Summary” (April 2015)  
<http://metro.kingcounty.gov/am/reports/2014/2014-rider-survey-summary.pdf>

\*\* A further complexity omitted here is the opportunity for income tax deductibility that may effectively somewhat lowers *both* employer and employee true effective after-tax costs of their participation in these *ORCA* programs.

<b>Sound Transit - Fares</b>	<b>What Was</b>	<b>What Will Be</b>
For Sound Transit, Seattle residents pay <i>Link Light Rail</i> fares. <i>Regional Express Bus</i> fares and <i>Sounder Commuter Rail</i> fares. See discussion.	<b>\$39</b>	<b>\$39</b>
<p>Sound Transit has a lower proportion of Seattle riders than King County Metro. Using 2014 fare revenues by line-of-business and applying judgment-based percentages to roughly describe the volume of Seattle riders in relation to total riders, the fare revenues attributable to Seattle residents seem to be approximately: <i>Sounder</i> 5% of \$10.6 million = \$.5 million; <i>Regional Express Bus</i> 30% of \$33.8 million = \$10.1 million; <i>Link Light Rail</i> 55% of \$15.8 million = \$8.7 million. Total is \$19.3 million. To this the employer “buy down” (described above for Metro) is applied. Percentage of fare revenue to Sound Transit from the <i>ORCA</i> employer-subsidized fare products appears to be slightly lower than for Metro, such that the rough estimate of the “employer buy-down” is taken to be 40%. This yields a total of \$11.6 million to be distributed by averaging across 298,000 typical Seattle households. The value has <i>not</i> been adjusted for the still speculative ridership/fare revenue increases of the expected opening of Capital Hill and Husky Stadium stations.</p> <p>* This information is drawn (and sometimes extended by judgment) chiefly from Sound Transit, <i>2024 Fare Report</i> (July 2015)</p>		

<b>Seattle Streetcars - Fares</b>	<b>What Was</b>	<b>What Will Be</b>
Seattle operates (through contract with Metro) the South Lake Union Trolley. The fare revenue picture is complex, based on <i>ORCA</i> products to some extent and also on on-board ticket vending with receipts paid directly to the City. Ridership is modest. It appears that a fair approximation of annual revenue would be \$1 million to which, if 80% were attributable to Seattle residents, the annual burden would roughly be:	\$3	\$3

This South Lake Union Trolley revenue consideration is so small and derived so loosely that it hardly seems worth including except for the fact that by 2016 the streetcar system of the City of Seattle will significantly expand (not counted here, but discussed below). This will, therefore, come to be an increasing, significant and one hopes easier-to-document revenue element.

<b>State Ferry System (Washington State Ferries) - Fares</b>	<b>What Was</b>	<b>What Will Be</b>
Seattle riders on the Washington State Ferries pay fares for regular weekday travel as well as weekend or vacation travel.	<b>\$84</b>	<b>\$88</b>
<p>Approximately 12.5% of surveyed ferry riders* have Seattle zip codes but their ridership is probably somewhat disproportionately focused on higher fare routes than, for example, the Bainbridge or Whidbey Island routes with heavy patronage from non-Seattle riders. This leads to the rough assessment that 15% of aggregate WSF fares (approximately \$167 million in 2014), or \$25 million is paid by Seattle residents, which distributed among 298,000 households is about \$84 paid by the typical Seattle household. Vehicle fare increases of 2.5% in October 2011 and 2.5 % in May 2016 have been approved showing an impact of 2.5% compounded out two years to "What Will Be" in 2016.</p> <p>* From 2013 Origin/Destination Survey as relayed by WSF. Aggregate fare is from June 2015 State Transportation Revenue Forecast cited in Appendix B.</p>		

<b>State SR 520 Bridge -- Tolls</b>	<b>What Was</b>	<b>What Will Be</b>
Seattle residents traveling to and from the eastside pay the state <i>SR 520 Bridge Tolls</i> on a variable scale based on time of day. Total toll revenue in 2014 was approximately \$62 million.	<b>\$100</b>	<b>\$103</b>
<p>Traffic analysis (comparing at peak a.m. and p.m. periods to determine the balance between eastbound and westbound originating traffic) generally suggests that about 55% of users originate and end their trips on the Westside. Adjusting roughly for the fact that a small portion of this Westside patronage probably comes from outside Seattle, it is a reasonable assumption that 50% of the toll revenue on the bridge originates with Seattle residents. Distributing \$31 million of revenue across 298,000 households supports the conclusion that the typical Seattle household pays \$104 each year in SR 520 bridge tolls, say \$100 per year to account for the degree of extrapolation supporting the estimate. Bridge tolls increased 2.5% in July 2015.</p>		

<b>City of Seattle Parking Meters</b>	<b>What Was</b>	<b>What Will Be</b>
Seattle deposits parking meter revenues to the General Fund for use covering costs of operating, maintaining and regulating streets in Seattle, in part through SDOT but also through other City departments including the Seattle Police Department.	<b>\$78</b>	<b>\$81</b>
<p>The level of such revenue was \$39.0 million in 2014 and is estimated at approximately \$ 40.1 million for 2016. There is no record-keeping or survey mechanism at the City to determine the extent that parking revenues originate from Seattle residents as contrasted with out-of-city visitors.*. Therefore, for purposes of this study, the somewhat arbitrary assumption is made that 60% of revenues originate with Seattle residents so that the amounts (\$23.4 million and \$24.1</p>		

million) distributed across typical Seattle households would be approximately as shown:

\*One could examine the zip codes of parking violation notices as a survey proxy, but apparently this has not been done and understandably at the City this question does not take a priority in relation to a myriad of other issues that the City proactively manages in parking meter rate, hour and location policies.

<b>City of Seattle Commercial Parking Excise Tax</b>	<b>What Was</b>	<b>What Will Be</b>
Seattle collects an excise tax categorized here as a user charge) of 12.5% on charges at commercial parking facilities.	<b>\$65</b>	<b>\$65</b>
Revenue generated was \$39 million in 2014 and is estimated at \$40 million for 2015 and 2016 (City Budget accounting divides these numbers between the tax generally and a portion of the tax expected to be made available for the Viaduct Replacement and Waterfront projects). It seems likely (though not demonstrable from available data) that out-of-city visitors more than Seattle residents might patronize commercial parking facilities; so (somewhat arbitrarily) only 50% of these revenues are ascribed to Seattle residents (say \$20 million). Accordingly, distributed across 298,000 households:		

### ***Taxes, Fees and Charges Not Included in the Study***

**Federal Taxation Other Than the Gas Tax.** Federal taxes that support the general fund contribute to making up of the big deficits in the federal Highway Trust Fund including the Mass Transit Account over and above what is funded by federal motor vehicle fuel excise taxes. Significant highway and transit and other transportation funding comes to Washington State and the Seattle area from these trust fund sources. In 2015, the Highway Trust Fund (including the Mass Transit Account) revenue and interest are expected to take in about \$42 billion and require deficit funding from the general fund in the amount of about \$13 billion to meet expenditures. By 2025 the deficit is expected to grow to \$22 billion.

This suggests that through some complicated mix of mechanisms including but not limited to individual federal income taxes, taxpayers are actually incurring impacts about 24% higher than shown above (for the typical Seattle household) from the federal gas tax. It would be exceedingly complicated to make a meaningful approach to bringing this back to a typical Seattle household. But the amount would not be insubstantial.

**Highway Tolling Other than on the SR 520 Bridge.** Seattle residents, probably in small numbers, undoubtedly sometimes pay tolls on the Tacoma Narrows Bridge and the SR 167 Express Toll Lanes. With the opening of I-405 Express Toll Lanes, there will undoubtedly be a few Seattle residents who have occasion also to use that system. For now, however, these situations are either too remote, too speculative or likely too small to merit recognizing in this study.

**Rental Car Sales Tax.** Rental car patrons pay regular Seattle sales taxes plus special sales taxes to state and local government. The total tax on a Seattle car rental is about 18%. Rental car sales taxes have been widely adopted on the theory that they derive revenue from *non-residents*. Increasingly, though, as Seattle residents opt not to own their own cars, their sometime car rental practices (whether at Hertz, Avis or Zipcar) expose them to this tax even though they live in the city. The size of this tax burden today on the typical Seattle household would be hard to determine, but it is likely that it will come to be an appreciable tax amount in future for many Seattle households.

**License, Permit and Fees Related to Motorcycles, Trailers and Motor Homes.** There are about 14,000 motorcycles registered in Seattle, about one motorcycle for every 15 passenger cars. Also a number of trailers and motor homes. Vehicle license tabs and other expenses for motorcycles and these other vehicles have not been included in the calculations for this study. If included (averaged across all households) they would probably lead to small but noticeable increases in several of the categories.

**Licenses, Permits and Fees for Special Driving Classifications.** There are additional fees that are disregarded for this study because of their very limited incidence (except perhaps for the Commercial Driver's License endorsement that is required for many residents' jobs) and the difficulty of gathering or extrapolating data for Seattle. These include the Driver Instruction Permit (\$35), the Driver's License Examination Fee (\$35), and the Commercial Drivers License endorsement required for many jobs (\$85 every five years and \$17.00 per year for extension).

**Parking Violation Citations, Traffic Citations and School Zone Camera Enforcement Citations.** These revenue sources actually provide support for transportation programs and in that regard are not fiscally insignificant. They have been excluded from this study, however, because as *penalties* they are distinct from revenue generation tools of a taxing character.

**Street Use and Curb Permits.** Another not insubstantial revenue source for transportation, but hard to determine how to split out a relatively small burden on individuals as compared to a larger share borne by business.

**Additional Transit Fare Revenues.** Sound Transit expects to open University Link light rail in 2016/7 and Seattle residents will contribute new Link patronage that will grow their contribution to *Link Light Rail* fares. Also, sometime soon an announcement is expected as to when the City of Seattle will begin operation of the First Hill streetcar. Until ridership and revenue experience is gained, fare impacts for Seattle residents are a speculative matter not included in the study although certainly not unimportant as a future funding source and a future impact on taxpayers.

## **The Hidden Tax Not Paid Any Government, but Poor Transportation Facilities Still Take From Taxpayers' Wallet**

The City of Seattle has long had a policy of underfunding road and bridge maintenance with the well-documented effect that Seattle's roadway conditions are not very good and probably (considering arterials and non-arterials together) getting worse. Neither the *Bridging the Gap* levy successfully put to voters in 2006 or the *Move Seattle* levy that will go to voters in 2015 denies the fact of or promises significantly to improve on the inadequacy of funding for street maintenance and repairs in Seattle to keep pace with deterioration of streets and roadways from ordinary aging, wear and tear.

In Seattle, both the total lane miles of bad roads and the total unmet funding needs to set things right significantly exceed those of other West Coast cities, San Francisco, San Jose, San Diego and Portland. Only Los Angeles, a much larger system, exceeds Seattle in the size of the road repair and preservation problems it faces.<sup>7</sup>

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<sup>7</sup> Mike Fong and Dan Elder (Council Central Staff) "*Seattle Department of Transportation, Funding Challenges and priorities July 25, 2011*", Slides 24, accessed at [http://clerk.seattle.gov/~public/meetingrecords/2011/stbd20110725\\_1.pdf](http://clerk.seattle.gov/~public/meetingrecords/2011/stbd20110725_1.pdf), Slide 24

Bad roads with potholes and cracked and crumbling pavements damage tires, rims, suspension systems and windshields. (Not to mention fraying nerves, slowing traffic and lowering fuel economy). There is solid research support to set the high cost of this effect on taxpayers as even simply regards damages to their vehicles:

<b>“Hidden Tax” of Vehicle Repair and Maintenance Costs and Lower Fuel Economy from Serious Bad Roads</b>	<b>What Was</b>	<b>What Will Be</b>
Oregon estimate at \$380 for a medium weight sedan per year – but higher in Portland.* AASHTO estimate of \$325 per car per year up to \$746 in urban areas with high concentrations of bad roads.** At 1.47 vehicles and range for \$350 - \$600 per vehicle, ballpark estimate for Typical Seattle Household:	<b>\$515 - \$882</b>	<b>Getting Worse</b>
<p>* Oregon Department of Transportation, “Rough Roads Ahead: The Cost of Poor highway Conditions To Oregon’s Economy (2014) accessed at <a href="http://www.oregon.gov/ODOT/COMM/Documents/RoughRoads2014.pdf">http://www.oregon.gov/ODOT/COMM/Documents/RoughRoads2014.pdf</a></p> <p>**AASHTO, “Rough Roads Ahead: Fix Them Now or Pay for It Later,” (2010 , accessed at <a href="http://www.ceaccounties.org/resources/1/Policy%20Areas/Transportation/Resources/AASHTO%20Rough%20Roads%205-6.pdf">http://www.ceaccounties.org/resources/1/Policy%20Areas/Transportation/Resources/AASHTO%20Rough%20Roads%205-6.pdf</a> and <a href="http://www.aashtojournal.org/Pages/092410highways.aspx/">http://www.aashtojournal.org/Pages/092410highways.aspx/</a> See also TRIP, Hold the Wheel Steady: American’s Roughest Rides and Strategies to Make our Roads Smoother,” accessed at <a href="http://tripnet.org">tripnet.org</a></p>		

## **Fundamental Metrics For Taxpayers’ Evaluation of their Transportation Systems’ Funding and Performance**

### **Mode Split: Drive-Along Driving is the Single Best Indicator of Traffic Congestion, Gridlock and Whether Conditions Will Get Better or Worse:**

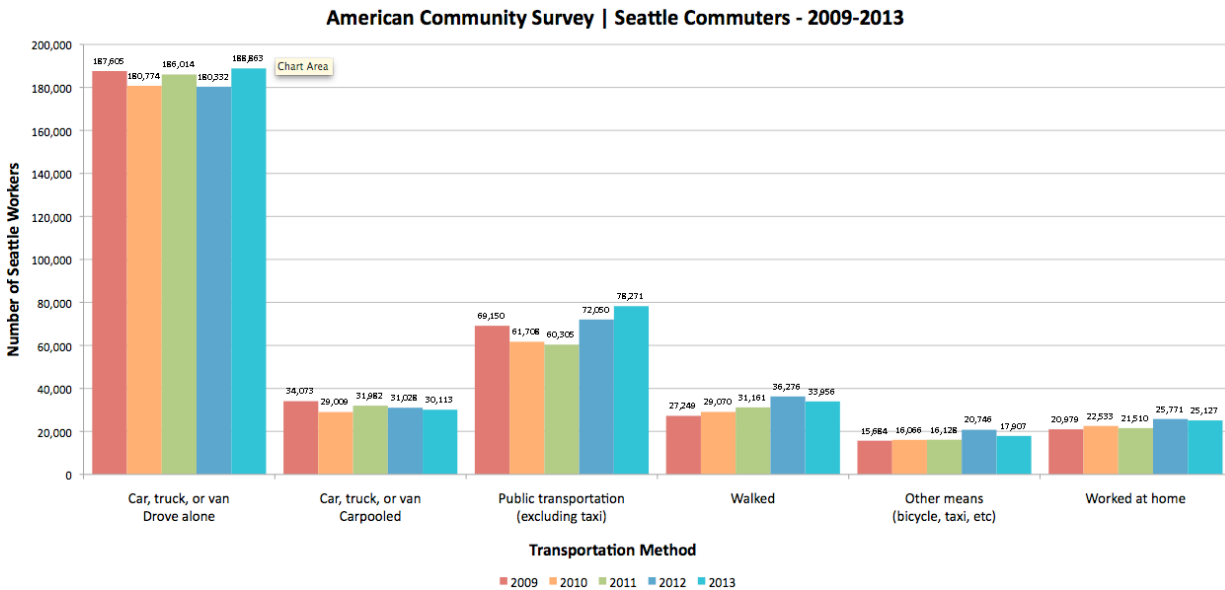
At root, traffic congestion is a disarmingly simple problem. Commute hours with peaking traffic demand and too many cars carrying too few people for the pavement bandwidth they occupy (sometimes that bandwidth – in other words, lane capacity—is inefficiently used; sometimes there simply is not enough of it).

The cheapest, most productive and quickest solutions lie in reducing the number of people driving alone in their cars and better managing the use of roads and transit systems we already have for everyone’s benefit. Usually that will hew to the simple rule of providing the greatest good for the greatest number for which the use of market pricing is a prime approach.

Trends in mode split – how people are traveling -- illustrate how difficult a problem this presents, especially in a *growing* city like Seattle, even where the predominant drive-alone share of commuting is *very slightly* dropping, more commuters trying to get to jobs has actually *increased* the absolute number of drive-alone drivers (shown in the chart below) on city roadways already hugely overburdened at peak traffic times. Public transit is making visible gains in numbers and an increase in share – the chief opportunity for further progress. Walking and “Work at Home” also show positive direction, but very



slowly. “Other” (including cycling) is so small a share that even a healthy percentage gain offers very little change to the big picture.



This graphic is the critical outcome measure that must be monitored and, more importantly, changed. The key to change is to increase transit share – probably with a much more flexible understanding of transit (including, for example, the Microsoft Connector and its current and future clones and variants). And the key to tallying and growing transit share is to count *trips* (not the separate and misleading counting up of boardings, since a single trip on transit might involve one, two or even three boardings).

Hand in hand with vastly expanding transit trips goes scarcity roadway and parking pricing to shift demand and promote efficiency and rapid adoption of technology to expand the horizons of transportation practices, choices, safety and convenience. Performance targets and measures in relation to new revenue must be at hand on these topics. Currently, they are not.

**Pavement Condition is the Most Direct Performance Indicator of Transportation Asset Stewardship on Behalf of Current and Future System Users and Taxpayers**

Over decades taxpayers have made a huge investment in the City of Seattle’s street, sidewalk and bridge assets. There are almost 4000 lane miles of pavement (1540 lane miles of arterials and 2412 lane miles of non-arterials). According to SDOT asset management inventory (2013) pavements represent 48% of SDOT’s assets by value, with an estimated replacement cost of \$5.85 billion. Sidewalks are the second largest asset category, at 22% of asset value and an estimated replacement value of \$2.65 billion.<sup>8</sup>

<sup>8</sup> Talbot, Korvola, and Warwick LLP, “Seattle Department of Transportation Operational, Management and Efficiency Analysis Phase I (Sept. 2013)(Office of City Auditor), 19-21.

Despite spending under *Bridging the Gap* and other funding, we are way behind in keeping basic transportation infrastructure from falling apart. In July 2011, City Council staff reported to the Council that 2010 spending for annual maintenance of streets was \$22.3 million versus a *Bridging the Gap* estimate of \$47.3 million and a current estimate of \$94.7 million. From 2003-04, to the best estimates available in 2011, the *repair and replacement backlog* for streets – not including non-arterial streets – grew from \$235 million to \$575 million. Over the same period, the backlog for repair and replacement for bridges and structures grew five-fold – not including the Magnolia Bridge and other “major” bridge replacements – to over a billion dollars. In every other category – traffic facilities, pedestrian and bicycle facilities, trees and landscapes and transit facilities, there were equally dramatic shortfalls between 2010 spending and current estimates of annual spending needs.<sup>9</sup> Updated estimates and new forecasts have not been made readily available to taxpayers.

Tools we have should be better used for helping the public track the problem. The *StreetSaver* pavement management software system used by SDOT supposedly supports the capture of SDOT’s physical tracking of arterial pavement conditions and the calculation of the Pavement Condition Index (PCI). PCI is a standardized system that linked with *StreetSaver* and other pavement management information can help prioritize cost-effective pavement repair and rehabilitation strategies. It can also forecast how investment levels and strategies will roll forward into the future to either improve or worsen the huge cost cornices that hang over future taxpayers who will have to rescue ruined pavements from effects of deferred maintenance and rehabilitation. Others are doing better at daylighting this dark information corner. The work over many years of the Metropolitan Transportation Commission in the Bay Area to develop and implement these tools now should provide both an asset management model *and* a framework for systematic benchmarking of Seattle (and the region’s) pavement management programming,<sup>10</sup> and even the development of an FHWA promoted performance measurement and management tool, the Pavement Sustainability Index.<sup>11</sup>

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<sup>9</sup> Mike Fong and Dan Elder (Council Central Staff) “*Seattle Department of Transportation, Funding Challenges and priorities July 25, 2011*”, Slides 22 and 23, accessed at [http://clerk.seattle.gov/~public/meetingrecords/2011/stbd20110725\\_1.pdf](http://clerk.seattle.gov/~public/meetingrecords/2011/stbd20110725_1.pdf)

<sup>10</sup> See Puget Sound Regional Council, “Regional Asset Management Programming Peer Review” (May 2014) 4-7 and Fig. 2 (an excellent illustration of scenario assessment modeling) accessed at <http://www.psrc.org/assets/11807/AssetManagementPeerReviewSummary2014May.pdf?processed=true> Cost effective pavement stewardship includes the need to use very careful approaches to pavement rehabilitation investment in order to avoid the huge run-up in rehabilitation costs that occur when pavements pass mild deterioration that can be addressed with routine resurfacings to extreme deterioration requiring entire roadbed reconstruction. Pavement is the living embodiment on the old maxim, “A stitch in time saves nine.”

<sup>11</sup> U.S. Department of Transportation/Federal Highway Administration, “Asset Sustainability Index, A Proposed Measure for Long-Term Performance” (2012) accessed at [https://www.planning.dot.gov/documents/ASI\\_report/ASI\\_July9\\_FINAL\\_web.pdf](https://www.planning.dot.gov/documents/ASI_report/ASI_July9_FINAL_web.pdf)

If these approaches to performance metrics in asset management could be better employed in Seattle, taxpayers would be on much firmer ground both for appreciating past progress or supporting future investment than can be gleaned from the kind of data now available. Especially as to the enormous backlog in Seattle of deferred maintenance and rehabilitation of pavements, an issue that equally extends to even larger numbers of bridges as well as other transportation assets. Decision-making by public officials or taxpayers without such tools is no more than faith-based management that can never be either transparent or accountable.

Pavement Condition Index (PCI) Ratings and Characterizations	0 - 25	26-40	41-55	56-70	71-85	85-100
	Serious/Failed	Very Poor	Poor	Fair	Satisfactory	Good
2010 PCI Category Shares for Seattle (arterials only)	3.7%	9.0%	13.3%	21.2%	28.4%	24.4%

	2007	2008	2009	2010
Seattle Pavement Condition Index Rating: Four Year Trend to 2010	67.5	66.5	68.3	68.8

**Vehicle Miles Traveled Reductions Linked to and Achieved By Congestion Pricing Will Be Critical to Greenhouse Gas Emission Reductions Called For By Seattle’s Climate Action Plan.**

Transportation is inextricably related to climate action because the transportation sector, especially in Washington State and equally in Seattle, is responsible for such a large portion of overall greenhouse gas emissions.

Objectives and metrics for measuring progress towards greenhouse gas emission reductions and related transportation goals must be a part of the evaluation and prioritization framework for major programs of transportation investment. Not only are we not using such measures in seeking new revenues and selecting investments, we can’t even tell if year-to-year we are making the problem bigger or smaller.

The City began to enter into the targeting process when in 2010 the City Council undertook to develop specific milestones and steps toward Seattle’s “carbon neutral” goals, including promoting VMT reduction in the City’s Comprehensive Plan.<sup>12</sup> Eventually,

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<sup>12</sup> Seattle City Council 2011 Priorities, accessed at [http://www.seattle.gov/council/issues/council\\_priorities.htm](http://www.seattle.gov/council/issues/council_priorities.htm)

preliminary targets were established of achieving a 14% reduction in VMT by 2020 and a 20% reduction by 2030, each linked to significant payoffs in reducing greenhouse gas emissions.<sup>13</sup>

As the City worked to update its full Climate Action Plan, it gained the benefit of a work program culminating in Technical Advisory Group Recommendations delivered in 2012.<sup>14</sup> That report laid out the huge challenges in making greenhouse gas emissions reductions and created an evaluative framework for determining among various strategies their likely relative importance in attaining big goals.<sup>15</sup>

<b>Categories of 50 Recommended Strategies and Their Estimated Potential to Reduce GHG Emissions from Passenger Transportation by 2050</b>	
<b>Pedestrian Facilities and Services.</b> Increase Completeness and Quality of Pedestrian Network	≈ 1 – 2%
<b>Bicycle Facilities and Services.</b> Increase the extent, completeness, quality and priority of citywide bicycle networks, parking and supportive services to provide safe and direct bicycle access and mobility for users of all ages and abilities.	≈ 4% - 6%
<b>Transit Facilities and Services.</b> Invest in transit facilities and new service to improve frequency, reliability, and user experience Investments in a comprehensive citywide network	≈ 2 – 5%
<b>Transportation Demand Management, Marketing &amp; Education.</b> Use pricing, policies, outreach, and incentives to shift trips to walking, cycling, transit, and other shared transport modes	≈10 – 15%
<b>Parking Pricing and Management.</b> Manage parking to maximize access and reduce unnecessary travel The most important use of on-street and public off-street.	≈ 20 – 25%
<b>Congestion Pricing and other Auto User Fees</b> Advocate for regional authority to implement variable congestion pricing and other road user fees with a portion of revenue dedicated to multimodal transportation. Variable pricing of all limited-access highways	≈15 – 30%
<b>Transitioning to Clean and Efficient Vehicle Fuels and Technologies.</b> Transition to Clean Vehicle Fuels and Technologies; Emissions-Free Electric Power	≈ 50%

<sup>13</sup> For a short chronology of the development of climate strategy in Seattle (with helpful links), see *Seattle Climate Action Plan Development* at the Seattle Climate Action Plan website at <http://www.seattle.gov/environment/climate-change/climate-action-plan> . But some early stage thinking in retrospect today seems deeply out of touch with reality then or now. See, for example, the mode share discussion in *Getting to Zero: A Pathway to a Carbon Free Seattle* (May/June 2011), 20-23, accessed at [http://www.seattle.gov/Documents/Departments/OSE/CN\\_Seattle\\_Report\\_May\\_2011.pdf](http://www.seattle.gov/Documents/Departments/OSE/CN_Seattle_Report_May_2011.pdf)

<sup>14</sup> Nelson Nygard, “Technical Advisory Group Recommendations for the Seattle Climate Action Plan Update, Transportation & Land Use Sectors Final Summary Report” (City of Seattle Office of Sustainability & Environment (April 2012), accessed at [http://www.seattle.gov/Documents/Departments/OSE/TAG\\_Transp&LandUse\\_Report.pdf](http://www.seattle.gov/Documents/Departments/OSE/TAG_Transp&LandUse_Report.pdf)

<sup>15</sup> *Id.*, 4-6 to 4-21.

All in all, the report concluded:

“Implemented together, the full package of recommended transportation and land use strategies would allow the City to make substantial progress towards its adopted targets, reducing GHG emissions from on-road passenger transportation from the 2008 baseline by up to 35% by 2020, 76% by 2030, and 96% by 2050.”<sup>16</sup>

Critical to strategic assessment, however, was that

“[T]he best strategies for the City and its regional partners to directly reduce GHG emissions passenger transportation and achieve other benefits are to 1. Implement congestion pricing and management . . . [and] 3. Implement aggressive transportation demand management programs tat can provide substantial near-term VMT and GHG reductions”.<sup>17</sup>

To repeat and underscore: “Congestion pricing is the most essential strategy over the long-term . . .” But the report also cautioned:

“Many of these strategies will cost several orders of magnitude more than the public resources currently available. Achieving the GHG emissions reduction potential of these straggles will only be possible with substantial new funding strategies at the local and regional levels. Of particular importance are . . .funding and financing strategies such as congestion pricing, Vehicle Miles Traveled (VMT) fees and non-residential parking taxes . . .”<sup>18</sup>

In 2013, the Seattle City Council adopted the updated *Seattle Climate Action Plan*, including a target indicator that there would be a 30% reduction in VMT by 2030. On the matter of money, compare the admonition of the adopted plan with the TAG caution above, an almost *verbatim* adoption (minus, curiously, the most salient specific recommendations made by the Technical Advisory Group):

“Additionally, many of these strategies, most notably in the transportation sector, will require several orders of magnitude more public resources than are currently available. Realizing the full GHG emissions reduction potential of these strategies will only be possible with new and sustained funding sources at the local, regional, and state levels.”<sup>19</sup>

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<sup>16</sup> *Id.*, ES-4.

<sup>17</sup> *Id.*, ES-5

<sup>18</sup> *Id.*, ES-5

<sup>19</sup> Seattle Climate Action Plan (June 2013), 6, accessed at [http://www.seattle.gov/Documents/Departments/OSE/2013\\_CAP\\_20130612.pdf](http://www.seattle.gov/Documents/Departments/OSE/2013_CAP_20130612.pdf)

The Climate Action Plan adopted by the Council also noted another big hurdle – this specifically to the question of assessing data and measuring progress either in yearly reporting “or as data is available.”

“There are several challenging gaps in data. Specifically, the lack of a City of Transportation model providing city-specific travel data is significant barrier to accessing transportation related Climate Action Outcome indicators and GHG information.”<sup>20</sup>

None of this stood in the way, however, of the Council’s adoption of specific implementation actions *by 2015*. These prominently included:

“Work with regional and state partners to adopt a funding strategy to meet current and future transportation needs.”<sup>21</sup>

Where is that funding strategy called for by 2015 that is absolutely central to the climate action program?

The answer is that it is mired in process pronouncements and unanswered rhetorical questions in a 2013 implementation strategy document with no normative outcome expectations outlined.<sup>22</sup> A 2015 implementation “progress report” states that this strategy is “on track,” with the key update that the Mayor is invited to participate in the PSRC Transportation Futures Task Force looking at long range regional transportation and policy issues.<sup>23</sup> A highly unlikely vehicle for focusing attention of the funding and needs issues as legislators, local officials and voters are *now* considering the tens of billions of dollars heading into the pipeline as new revenue for new spending. “On track” (maybe) is not good enough and (maybe) not even accurate.

As for the critical issue of developing better data resources to understand and mark progress on transportation issues in Seattle, as related to climate action or otherwise?

The current status (February 2015) is “Not Initiated.”<sup>24</sup>

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<sup>20</sup> *Id.*, 7.

<sup>21</sup> *Id.*, 9.

<sup>22</sup> Seattle Climate Action Plan, *Implementation Strategy* (October 2013) – see section headed “Council Identified Priority Items,” 5-6, accessed at <http://www.seattle.gov/Documents/Departments/OSE/FinalCAPImplementationStrategy.pdf5>

<sup>23</sup> Seattle Climate Action Plan, *Implementation Strategy Progress Report* (Feb. 2015), 26 of 28 [unnumbered] accessed at <http://www.seattle.gov/Documents/Departments/OSE/CAPDetailedStatusReportFeb2015.pdf>

<sup>24</sup> *Id.* 11 of 28. There is some discussion that the need may be met by consultants engaged for the on-going Comprehensive Plan update although review of work in that venue does *not* bring to light travel and transportation modeling that would serve to illuminate the key topics and targets identified in the Climate Action Plan.

Frankly, there is in 2015 a major breakdown in Seattle (and the region) between climate action planning and transportation new revenue/spending planning that seeks tens of billions of new dollars from taxpayers. There has not been meaningful work among city, regional and state partners for a “funding strategy” that is other than *ad hoc* and that would seem to address such prominently identified climate action imperatives as congestion pricing. Or furthers technology or other strategies significantly aimed at reducing Vehicle Miles Traveled, never mind meeting head-on such pressing transportation needs as asset preservation and rehabilitation. Drive-along commuting is rising, not falling. Financing is totally inadequate and unaddressed for near-term major expansions in transit trip-making. Data collection and reporting deficiencies are as glaring now as they were in 2012 and 2013. These are vey troubling facts at the hugely important intersections where climate planning and transportation planning must meet.

### **Equity and Affordability Questions Can Be Tracked Against Peer Cities – But This Study Does Not Reach That Information**

Affordability judgments about public utility costs are often informed by measuring their scale in relation to a community’s median household income. This is also frequently a useful metric for comparing such costs from city or city.

This study suggests that for Seattle in 2014, the sum of taxes, fees and user charges for the transportation system borne by the typical Seattle household for the *before* scenarios in 2014 was \$1975 or 2.7% of median household income of \$72,277. In the *after* scenarios looking at a time frame 2016/17 the total for a typical Seattle household will be \$2762 or approximately 3.5% of a median household income roughly in the range of \$77,500 (based on recent income growth trends).<sup>25</sup>

Peer comparisons have not been developed for this study. Some cities from which useful peer comparisons might be drawn would include the following, all with median household income in the range roughly \$50,000 to \$80,000 (Seattle is the 3<sup>rd</sup> highest ranking city in the country in median household income, trailing only San Jose CA and San Francisco CA) and population in roughly the range 500,000 to 1,000,000 population.

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<sup>25</sup> This is, of course, only a small fraction of *total* household transportation costs when the expense of depreciation and operating expense of one or more private automobiles enters the picture.

San Diego, CA  
San Jose, CA,  
Austin, TX  
San Francisco, CA  
Fort Worth, TX  
Denver, CO

Boston, MA  
Portland, OR  
Colorado Springs, CO  
Sacramento, CA  
Minneapolis, MN

On the issue of equity, questions must focus of course, as is generally the case in tax policy matters in Washington State, on the very high reliance on sales taxes. Tax *structure* is as important an issue as overall tax *burden* when, as so often is the case in Washington State, the structure of taxation so focused on the sales tax disproportionately places tax burden down the scale of personal or household income.<sup>26</sup>

We need better measures and broader discussion of affordability and fairness and more information on how our situation, our efforts and our expected results compare with other cities.

\* \* \* \* \*

## Appendices

### A. Background Tables Supporting Various Calculations

#### Population of Seattle:

The 2010 U.S. Decennial Census tallied the population of Seattle as 608,660.

The 2015 estimated population is 662,440.

The City of Seattle estimate is drawn from the estimated populations for cities and counties prepared by the Washington State Office of Financial Management. (OFM).<sup>27</sup> The City does not publish estimates for 2016 and 2017 but a straight-line extrapolation from 2010 to 2015 trend estimated by OFM yields the results for 2026 and 2017 shown in the table below.

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<sup>26</sup> Institute of Taxation and Economic Policy, “Who Pays: A 50-State Report: Washington State & Local Taxes in 2015”, accessed at <http://www.itep.org/whopays/states/washington.php>. An imponderable contingency that could affects some of the results in this study is that voters would adopt Initiative 732 that would restructure some elements of the sales tax (though not the gas tax).

<sup>27</sup> City of Seattle Department of Planning and Development, “About Seattle, Population and Households Quick Statistics,” accessed at <http://www.seattle.gov/DPD/cityplanning/populationdemographics/aboutseattle/population/default.htm>



<b>Table 1. Seattle Population 2010 - 2017</b>							
<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Census	OFM Estimates					Extension for study	
608,660	612,100	616,500	626,600	640,500	662,400	675,734	686,934
100	100.56	101.28	102.94	105.23	109.18	111.12	112.96

### Households in Seattle

The 2020 Decennial Census tallied the population of Seattle living in households as 583,735 (96% of the population). The number of households was 283,510. The average household size was 2.06.<sup>28</sup>

The City does not publish household estimates subsequent to the 2010 Census. Assuming that the number of households has grown proportionately to the OFM estimates of population growth through 2015 and its extension (Table 1) the number of households in Seattle can be taken by a straight-line extrapolation from the 2010 to 2015 trend population estimated by OFM to yields the results for 2026 and 2017 shown in the table below.

<b>Table 2. Seattle Population in Households and Number of Households 2010 - 2017</b>							
<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Census	Extrapolation from OFM Population Estimates (thru 2015) and Extension						
100	100.56	101.28	102.94	105.23	109.18	111.12	112.96
583,735	587,003	591,207	600,897	614,264	637,322	648,646	659,385
283,510	285,098	287,139	294,933*	298,338	309,536	315,836	320,253
* This estimate by extrapolation for 2013 correlates within 1% of the result reported for 2013 by the American Community Survey (297,920, margin of error +/- 5253), <a href="http://www.seattle.gov/DPD/cityplanning/populationdemographics/acs/1year/default.htm">http://www.seattle.gov/DPD/cityplanning/populationdemographics/acs/1year/default.htm</a>							

<sup>28</sup> *Id.*

### Non commercial vehicles (except motorcycles) owned by the typical Seattle household

Drawing on information provided to it by the state Department of Licensing, SDOT has provided the following information regarding the number of non-commercial vehicles registered to Seattle residents. That information taken together with the estimate of the number of households in Seattle allows the number of vehicles owned by the typical household to be derived as shown in the following table. Over the last couple of years, the trend has been that vehicle registrations in Seattle have grown slightly faster than population. From the following table it appears that a conservative constant across the time span under consideration will be to treat the typical Seattle household as owning 1.47 non-commercial light duty vehicles.

2010	2011	2012	2013	2014	2015	2016	2017
417,748	420,096	417,101	427,398	445,060	227,294 <i>(to June 30)</i>		
<b>1.47</b>	<b>1.47</b>	<b>1.45</b>	<b>1.45</b>	<b>1.49</b>	<b>Use 1.47 as constant all years</b>		

It is interesting to contrast this constant (1.47 vehicles per typical household) with the U.S. DOT/FHWA, Summary of Travel Trends, 2009 National Household Travel survey, showing that for the U.S. Western region as a whole in 2009, average family size is about 26% larger than family size in Seattle (2.65 for the west region compared to 2.1 for Seattle) and the number of vehicles per household was commensurately larger (1.96 for the west region as contrasted with 1.47 for Seattle). Thus the use of 1.47 vehicles per typical household is consistent with the picture of Seattle as less car-centric community than the West as a whole, and also gives support to the conservatism of the financial estimates that follow based on the foregoing picture of typical Seattle household car ownership.

### Motor Vehicle Fuel Consumption for the Typical Seattle Household

Federal and state excise tax is paid on purchases of gasoline or other motor vehicle fuel *by the gallon*. So the question is, how many gallons of motor vehicle fuel does the typical Seattle household purchase?

This is a surprisingly elusive number. Direct measures of consumption that reach the state as a supporting function of the collection of motor fuel vehicle excise receipts are *not* tracked geographically and *not* tracked by vehicle type or purpose. What can be learned from the state *Transportation Revenue Forecast* is that annual *per capita* motor vehicle fuel consumption around the state is about 456 gallons, but about 20% of that amount is

diesel that one reasonably would assume is heavily directed toward commercial rather than personal vehicles. If one therefore took 75% of the total consumption as passenger/light duty fuel (removing, in other words, all the diesel and about 6.25% of the remainder) and assumed consistent levels of consumption around the state, the *per household* consumption in Seattle would be about **705** gallons (456 gallons x .75 x 2.06 persons per household; at fuel efficiency of 23.4<sup>29</sup> miles per gallon), this would suggest an annual household VMT of about 16,500 miles.

Alternatively, national data for 2013 (earlier years' data is generally very consistent) provided by the U.S. Energy Information Administration suggests that Light Duty/Short Wheelbase Vehicles *per vehicle* VMT of 11,247 miles with 480 gallons of fuel consumed which, for Seattle at 1.47 vehicles per household and 23.4 mpg fuel efficiency would indicate a household annual VMT of about 16,500 and total household consumption of **706** gallons – remarkably close to the rough approximation based on *per capita* usage derived from the state *Transportation Revenue Forecast*.

Alternatively, using the Bureau of Transportation Statistics 2009 *National Transportation Survey* figure for Average Household VMT of 19,850 (probably high for Seattle) and a fuel efficiency of 23.4 mpg, fuel consumption would be **848** gallons.

By contrast, the 2013 Seattle Climate Action Plan uses a PSRC travel model that calculates *per capita* VMT of about 6500, yielding a household VMT of about 13,400 VMT which at a fuel efficiency of 20.9 mpg used in the PSRC/Climate Action Plan model would translate to typical household consumption of about **641** gallons, which seems quite low by reference to any of the other three approaches to establishing a consumption level, reflecting also a lower fuel efficiency factor than the other approaches although there may be sense in that inasmuch as driving in Seattle is predominantly urban driving and much of it in conditions of congestion and poor streets, major factors in reducing fuel efficiency.

Faced with this data array, there is a measure of arbitrariness in adopting a fuel consumption factor for this study, the consumption level has been *conservatively* adopted as 650 gallons for the typical Seattle household and has been used for simplicity's sake for all years examined.<sup>30</sup>

Table 4. Motor Vehicle Fuel Consumption for the Typical Seattle Household							
2010	2011	2012	2013	2014	2015	2016	2017
<b>650 gallons -- All Years</b>							

<sup>29</sup> This seems the most reliable current fuel efficiency constant. It is taken from: U.S. Energy Information Administration, Monthly Energy Review July 2015, Motor Vehicle Mileage, Fuel Consumption and Fuel Economy (Table 1.8), accessed at <http://www.eia.gov/totalenergy/data/monthly/archive/00351507.pdf>

<sup>30</sup> There has been widespread discussion about recent trends from national and state data leading to new restraint in historic estimations of the growth of VMT. The trend lines suggest different answers depending on the trend periods examined. Under all understandings, however, change in VMT from year-to-year has historically been quite small and the same is predicted for at least the near term future.

## House value for a typical Seattle household

For several years house values have risen sharply in King County generally and in Seattle. Information from real estate listing services looking at sales transactions indicates *median sale prices* for single-family houses in mid-2015 have topped \$500,000.<sup>31</sup> The view from that particular escalation, however, is difficult to translate into the relevant metric for this study, which turns on *Assessed Value* as the critical driver of property taxes – the issue at hand.

The City of Seattle has used the benchmark of median Seattle homeowner’s assessed value of \$451,000 to calculate the likely early year burden of the *Move Seattle* proposed levy.<sup>32</sup> There is simplicity and consistency in adopting that reference of value as the assessed value attributable to a typical Seattle household for all the purposes in calculating the burden of the specific property tax amounts (not just for the *Move Seattle* levy) described in this document.

2010	2011	2012	2013	2014	2015	2016	2017
				Constant	\$451,000	Constant for conservatism	

## Annual Median Household Income in Seattle

The City of Seattle currently reports annual household median income in Seattle as \$67,100.<sup>33</sup> However, the *American Community Survey* reports that the 2013 median household income in Seattle is \$70,172<sup>34</sup> and also shows four-year history with an average of 5% year over year growth. The extrapolation below assumes a cautious 3%

<sup>31</sup> Sanjay Bhatt, “Median price for single-family homes hits \$500,000 in King County,,” *Seattle Times*, July 6, 2015 accessed on line at <http://www.seattletimes.com/business/real-estate/median-price-for-single-family-homes-pushes-past-500000-in-king-county/>

Hui-YongmYU, “Seattle’s Tech boom is Driving Up Housing Prices,,” *Bloomberg Business*, July 8, 2014 accessed on line at <http://www.seattletimes.com/business/real-estate/median-price-for-single-family-homes-pushes-past-500000-in-king-county/>

<sup>32</sup> About half of the housing units in Seattle are owner-occupied. This study assumes that non-owner occupied housing absorbs through rent that cost of property taxes to the same level as the median household value. An improvement in the methodology of this study would probably alter that assumption, but might also an offset in higher house values for typical owner occupied housing.

<sup>33</sup> See <http://www.seattle.gov/dpd/cityplanning/populationdemographics/aboutseattle/prosperity/default.htm> This is considerably lower than annual *family* income in Seattle, which is reported to be \$90. 279.

<sup>34</sup> American Community Survey [www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web\\_informational/dpdd017164.pdf](http://www.seattle.gov/dpd/cs/groups/pan/@pan/documents/web_informational/dpdd017164.pdf)

year over year growth to reflect what appears to be a vibrant Seattle economy that will carry through the relatively short time frame to the *after* scenarios.

<b>Table 6. Annual median income of the typical Seattle household</b>							
<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
\$60,212	\$61,037	\$64,073	\$70,172	\$72,277	\$74,445	\$76,679	\$78,879

### **Annual All-in Typical Seattle Household General Sales Tax**

An aggregate sales tax estimate can be prepared based on the Department of Revenue 2002 *Tax Structure Study Report* that calculated state retail sales tax burden for the household income bracket \$60,000 - \$70,000 as 3.5% and bracket \$70,000 - \$80,000 at 3.3% at a time (1999) when the average sales tax rate across the state (including local rates where applicable) ranged from 7% to 8.9%.<sup>35</sup> The sales tax rate in Seattle (9.6% as of 2014) is now approximately 8% higher than the rate when the *Tax Structure Study Report* was dated, and accordingly the bracket values have been adjusted to 3.6% and 3.8%. If ST 3 adds a further .5%, by 2017 the rate will be approximately 13% higher than the rate when the *Tax Structure Study Report* was dated and accordingly the 2017 rate has been adjusted to 3.9%. Applying these burden percentages to the median income values in Table 6 yields typical Seattle household overall retail sales tax burdens as shown for the respective years below.

<b>Table 7. Annual aggregate sales tax burden for the typical Seattle Household (see Table 6 for applicable median household income levels*)</b>							
<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
\$2228	\$2,258	\$2,370	\$2,737	\$2,746	\$2,829	\$2,913	\$3076
<small>* See median household income levels for 2014 and thereafter from Table 6. All are over \$70,000 so only the higher of the parentage rates apply from extending the values in the <i>Tax Structure Report</i>. An assumption here suggested from the Carbon Washington review is that the 2012 update of the 2002 study by the state Department of Revenue does not materially alter the base percentage rates other than to adjust for intervening sales tax rate increases.</small>							

<sup>35</sup> Washington State Tax Structure Study Committee (William H. Gates, Sr., Chair), *Tax Alternatives for Washington State* (2002), at 12 and Tables 9-1 and 9-2 at 100, accessed at [http://dor.wa.gov/content/aboutus/statisticsandreports/wataxstudy/Volume\\_1.pdf](http://dor.wa.gov/content/aboutus/statisticsandreports/wataxstudy/Volume_1.pdf). Appreciation to Yoram Baumann of Carbon Washington for providing this excellent resource that is used as the basis for the household tax calculator found at <http://carbon.cs.washington.edu>

## B. Useful General References

U.S. Census Bureau, 2013 American Community Survey *Selected Economic Characteristics, 2013 American Community Survey 1-year Estimates – Seattle*. See <https://www.census.gov/programs-surveys/acs/data.html>

Data for Seattle is conveniently accessed from the website of the Seattle Department of Planning and Development <http://www.seattle.gov/DPD/cityplanning/populationdemographics/acs/intro/default.htm>

U.S. Energy Information Administration, Monthly Energy Review July 2015), Motor Vehicle Mileage, Fuel Consumption and Fuel Economy (Table 1.8), accessed at <http://www.eia.gov/totalenergy/data/monthly/archive/00351507.pdf>

U.S. DOT/FHWA, Summary of Travel Trends, 2009 National Household Travel Survey, accessed at: <http://nhts.ornl.gov/2009/pub/stt.pdf>

Washington State Office of Financial Management, June 2015 Transportation Revenue Forecasts, Summary (Vol. 1), accessed at <http://www.ofm.wa.gov/budget/info/june15transposummary.pdf> and “Detailed Forecast Tables (Vol. 2)” accessed at <http://www.ofm.wa.gov/budget/info/june15transpovol2.pdf>. The September update was released on September 17 and can be accessed at the Revenue Information – Transportation website at <http://www.ofm.wa.gov/budget/info/transportationrevenue.asp>

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