

Late last month, the Department of Transportation signed a full-funding grant agreement with Seattle's Sound Transit to partly fund a 7.8-mile light-rail extension to Federal Way, a community midway between Seattle and Tacoma. While the Trump administration has resisted signing any new full-funding grant agreements, insiders say that the department has had to a sign a few because Congress has appropriated the funds, so it is trying to pick the least offensive projects before Congress forces it to spend the money on even worse projects.

While there are truly no light-rail projects that are inoffensive, the Federal Way project is worse than most. With a total cost of nearly \$3.2 billion, the line is projected to cost more than \$400 million per mile, which is absurdly expensive for a low-capacity transit project. Of course, there have been even worse ones, such as the Honolulu rail project, which will cost at least \$450 million per mile, and Seattle's own University line, which cost \$626 million per mile. But the average light-rail project now in planning or under construction is "only" \$200 million a mile, which itself is outrageous considering the first light-rail projects built in this country cost (in today's dollars) under \$40 million per mile.

Yet this is par for the course for Sound Transit, which has managed to convince voters to fund something like \$70 billion worth of rail projects (well over \$100 billion once finance charges and cost overruns are added). Among the least-expensive of those projects are commuter rail lines from Everett on the north and Tacoma on the south to downtown Seattle. These 80 miles of lines have so far cost a mere \$2.4 billion in today's dollars, which almost sounds cheap compared with light rail. Yet they carried only 9,000 round-trip riders per weekday in 2018, which (considering annual operating losses of \$35 million a year) would be pathetic even if the capital costs had been zero.

Can Sound Transit Be Stopped?

Rail skeptics still have hopes that they may be able to stop some of Sound Transit's light-rail projects. In 2017, many of the region's auto owners were stunned to learn that the light-rail measure they voted for in 2016 added hundreds of dollars to their annual vehicle-registration fees. The new fees were supposed to be 1.1 percent of a car's value, and Sound Transit chose to interpret that to mean the manufacturer's suggested retail price (which is usually more than people actually pay) minus a nearly straight-line depreciation of about 5 percent per year. This meant that the owner of a two-year-old car valued by Kelly Blue Book at \$20,000 might get charged taxes on \$30,000, which would be \$330 a year.

To counter this, tax watchdog Tim Eyman put a measure on the 2019 ballot to limit Sound Transit's power to collect vehicle fees. While the measure won, implementation has been held up by the courts. Challenges to Sound Transit's valuation formula have also been delayed by Sound Transit's legal tactics.

Flush with cash, Sound Transit appears to be an unstoppable juggernaut. Among other things, it has hired almost every law firm in the Seattle urban area in some capacity or another, making it difficult for people to file legal challenges of its taxing authority or projects. It also spends a million dollars a month—a total of around \$360 million to date—on "public education" propaganda campaigns aimed at persuading the public that rail transit is a vital part of the region's economy.

56% of Spending on 4.5% of Travel

It is not. According to the National Transit Database, Seattle-area transit carried 740,000 rides per weekday in 2018. Light rail and commuter rail combined carried only 96,000 of them, or about 13 percent. According to the American Community Survey table B08301, about 185,000 people in the region commuted by bus in 2018, while fewer than 27,500 commuted by rail, which is also 13 percent of all transit commuters.

Of course, that number will increase as new light-rail lines open. But the 2040 transportation plan prepared by the Puget Sound Regional Council (PSRC) projects that, in 2040, rail will carry only about 1 percent of the region's travel. "That's less than a rounding error in PSRC's mod-

el," one local transportation expert notes.

The plan would spend 56 percent of the region's transportation funds on a transit system that, planners optimistically predict, will carry just 4.5 percent of passenger travel (and, of course, virtually no freight). Transit is so insignificant that the plan's "performance report" combines it with school bus trips to make it appear more important.

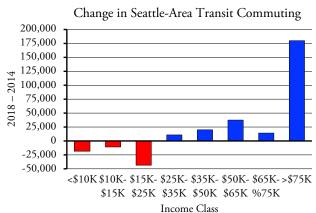
The Seattle urban area's transit ridership has bucked the national trend, growing by 9 percent between 2014 and 2018. However, that growth may have come to an end, as ridership declined by half a percent in 2019. As I've noted before, the region's ridership growth is mainly due to downtown jobs growing from 216,000 in 2010 to 301,000 in 2018.



Growing steadily—until 2019. Years shown are October 1 to September 30

Future downtown growth may be limited. The Seattle city council shot itself in the foot when it decided to impose an employee tax in order to fund shelters for people who have been rendered homeless by the region's high housing prices. In protest, Amazon, the most important new downtown employer, temporarily halted construction of its latest office building. The city council backed off, but Amazon, which got its start in Seattle's suburbs, probably will not bring any more employees downtown.

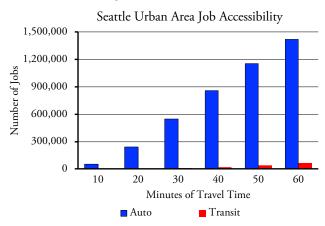
Driving Away Low-Income Commuters



As in the case of other major urban areas, transit's real growth market in the Seattle area is among people who earn more than \$75,000 a year.

Even the growth that Seattle transit has experienced has been only in the higher income classes. Between 2014 and 2018, transit commuting declined in every income class below \$25,000 and grew in every income class above that amount. People who earn less than \$25,000 a year were 8 percent less likely to ride transit to work in 2018 than they were in 2014, while people who earn more than \$50,000 a year were 22 percent more likely to commute by transit in 2018 than 2014.

The growth of high-income commuters, who probably make up most of the region's rail riders, has significantly increased the median incomes of transit commuters. In 2014, transit commuter median incomes were 7 percent less than those of people who drove alone to work and 3 percent less than the median of all workers in the region. By 2018, transit median incomes were 5 percent greater than people who drove alone and 6 percent greater than all workers in the region.

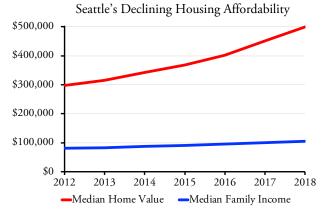


For any given travel time, autos can access 22 to 148 times as many jobs as transit, ratios that will not be significantly improved by light rail.

One reason for this change is that most of the new downtown jobs are high-income jobs. While downtown may have nearly half the jobs in the city of Seattle, it only has 16 percent of jobs in the entire region, and low-income jobs tend to be more scattered around.

The University of Minnesota's Accessibility Observatory calculates that the typical Seattle resident can reach almost four times as many jobs in a 20-minute auto drive as a 60-minute transit trip, and it is especially difficult for transit riders to reach jobs that aren't downtown. This suggests that increasing auto ownership, not expensive light rail, is the best way to reduce poverty by giving unemployed people access to more jobs.

When combined with the region's growth-management policies that have made housing increasingly unaffordable, Seattle's planning is profoundly anti-low-income people. Between 2012 and 2018 alone, median housing prices increased by 68 percent while median family incomes grew by just 30 percent—and part of that increase is because some low-income people have been forced to leave the region.



In just six years, the Seattle urban area's home price-to-income ratio increased from 3.7 to 4.8 and by 2020 it is probably above 5.0. Ratios above 5 indicate seriously unaffordable housing markets.

Transit: The Brown Form of Travel

Nor is Seattle's transit particularly green. Although nearly all of the electricity that powers the region's light-rail transit comes from sources that don't emit greenhouse gases, the same isn't true for the Diesel motors that power the commuter trains and buses. As described in policy brief 33, based on the National Transit Database, Seattle transit as a whole used an average of 4,100 British thermal units (BTUs) and emitted 280 grams of greenhouse gases per passenger mile in 2018. This compares with an average of 2,900 BTUs and 209 grams of greenhouse gases for the average car and 3,800 BTUs and 254 grams for the average light truck—and those are 2016 numbers, the latest available; numbers for 2018 are likely to be even lower.

Any light-rail rider smug enough to think they are helping the environment fails to consider the energy used and greenhouse gases released during light-rail construction. Considering that automobiles are getting more efficient each year, it would take many decades of operational savings to pay for the greenhouse-gas construction cost. But they don't have that much time: concrete ties, steel rails, and other infrastructure and equipment must be replaced about every 30 years, resulting in new carbon dioxide releases, so light rail achieves no net savings over driving.

Electric Cars Better Than Electric Transit

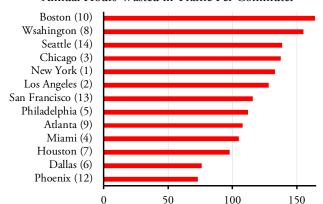
Worse for light rail, the Seattle area may be the nation's largest market for Teslas outside of California. When Tesla opened its dealership in Bellevue in 2016, Microsoft millionaires and other high-income workers formed a line more than ten blocks long to be among the first to order one. In a state like Washington that gets most of electricity from non-fossil fuels, someone who buys a Tesla or another electric car does much more to reduce greenhouse gas emissions than someone riding light rail. Even plug-in hybrids do far better than Seattle's transit system.

Yet this is ignored by state laws and policies that presume the only way to reduce greenhouse gas emissions is to reduce driving. The legislature passed a law in 2008 ordering state and local governments to take actions reducing per capita driving to half of 1990 levels by 2050. Washingtonians drove 44.7 billion miles in 1990 and 62.4 billion in 2017, so half of 1990 levels is little more than a third of today's driving. The state Department of Transportation has embraced this policy, and many if not most of its programs are aimed at reducing driving. While existing law makes congestion relief equal in priority to environmental quality, lawmakers even want to eliminate that.

The state has experimented with high-occupancy lanes and express-toll lanes in the Seattle area, but those experiments seem designed to penalize driving by increasing congestion, not reducing it. Many of the high-occupancy lanes are only open to vehicles with three or more occupants, which means most of them typically move fewer people per hour than the general-purpose lanes. Similarly, the tolls on the express lanes are so high that they, too, move fewer people than the general lanes.

Since the original purpose of high-occupancy and express-toll lanes was to reduce congestion by increasing throughput, local drivers can't help believing that the state is deliberately sabotaging such programs in order to increase congestion instead. State transportation planners reportedly admit that, to them, tolls should be a "penalty" on driving, not a way of relieving congestion.

Annual Hours Wasted in Traffic Per Commuter



Though Seattle is the nation's 14th largest urban area, it is the third-most congested, according to INRIX. Bigger and faster-growing regions that have actually tried to do something about congestion, including Dallas, Houston, and Phoenix, waste far less of their residents' time in traffic. Numbers in parentheses are each region's population rank.

If the state's goal is to increase congestion, it has been highly successful. According to INRIX's latest report on traffic congestion, the Seattle area had the nation's thirdworst congestion in 2017 when measured in hours of delay per commuter. That's a notable achievement for the nation's fourteenth-largest urban area. The Texas Transportation Institute estimates that in 1982 32 urban areas had worse congestion than Seattle; by 2010 Seattle had climbed to be the tenth worst. INRIX says that Seattle's congestion today is much worse than in Atlanta, Dallas, Houston, Miami, Philadelphia, and Phoenix, all areas

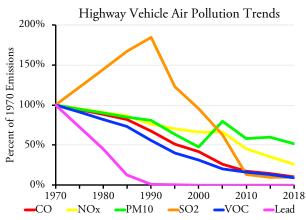
more heavily populated than Seattle. It's even worse than in Los Angeles, New York, and San Francisco, which are often considered the standards against which other congestion is judged.

Fixing the Problems with Driving

The United States has fifty years of experience with efforts to solve problems by getting people out of their cars, and they have never worked. Instead, we've saved energy, reduced air pollution, improved safety, and solved other problems with automobiles by making cars that are more energy efficient, cleaner, and safer.

Automobiles produced so much toxic air pollution in 1970 that Seattleites were unable to see Mt. Rainier on a sunny day. In that year, Congress created the Environmental Protection Agency to administer a strict new Clean Air Act. The EPA encouraged cities to try to reduce auto driving while it also imposed increasingly strict emissions limits on auto manufacturers. The first effort failed miserably; Americans drove almost four times as many miles in urban areas in 2018 as they did in 1970. But didn't matter because the second was a wonderful success: despite the increase in driving, total motor vehicle emissions of carbon monoxide, nitrogen oxides, particulates, sulfur dioxide, volatile organic compounds (hydrocarbons), and lead declined by 89 percent.

If anything, efforts to reduce driving made pollution worse, not better. This is because regions that aimed to reduce driving did so partly by making little or no effort to relieve congestion, putting their transportation dollars into transit instead. Automobiles use more energy and pollute more in congestion. As one transportation engineer says, the emissions controls were responsible for at least 105 percent of the reductions in emissions since 1970s, while efforts to reduce driving made them 5 percent worse.



Depending on the pollutant, toxic air pollution has declined by 50 to 99 percent since 1970.

Despite the failure of previous efforts to reduce driv-

ing, the EPA created a "transportation partners" program in the 1990s that gave millions of dollars to state and local agencies as well as local anti-automobile activist groups. According to the program's 1997 annual report, the goal of these grants was to meet greenhouse gas reduction targets by "reducing the growth of vehicle miles traveled." Recipients included the Washington Department of Transportation, Puget Sound Regional Council, and city of Seattle, as well as non-profit groups that used the funds to lobby Washington local governments to adopt anti-auto policies.

There is no reason to think that efforts to curtail driving will do any better at reducing greenhouse gas emissions than they did at reducing toxic air pollutants. Forcing cars to sit in traffic wastes fuel, and greenhouse gas emissions are proportional to fuel use. Encouraging people to drive more fuel-efficient cars will do more to reduce carbon dioxide emissions than attempting to reduce vehicle-miles traveled.

Such anti-auto policies particularly hurt the poor and working class. Many middle- and upper-middle-class workers can work at home (work-at-home incomes are higher than any category of commuters) or work flexible hours to avoid congestion. They can also afford to live in expensive housing nearer to where they work. These options aren't available to working-class employees, who usually have to work on site and whose hours tend to be inflexible.

Fixing Seattle

Seattle's transportation plans were written by upper-middle-class planners, signed off by upper-middle-class elected officials, and received approval from upper-middle-class voters. The needs of the working class are entirely ignored. The plans also ignore Seattle's key role as a trade center: any imports that aren't carried away by freight rail are going to spend hours stuck in traffic as they try to move away from the port.

Instead of building high-cost, low-capacity rail lines, the state and region should be fixing the region's congestion problems. This doesn't mean building lots of new freeways; mainly what is needed is to treat a number of bottlenecks scattered around the region. This won't necessarily be cheap, but it will cost less than a fifth as much as the light-rail lines and do far more to promote mobility for people of all incomes. For this to happen, however, state, regional, and local officials will have to accept that mobility is superior to immobility.

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