

Nomination of Sound Transit Central Link Light Rail in Seattle
as the Worst Transportation Project in the U.S.A.

Submitted by:

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Note: Prepared with the assistance of friends who are environmental advocates and transportation professionals living in my former home town region.

General Information:

Project Name: Sound Transit Central Link Light Rail

Type of project: Worst

City/State: Seattle, Tukwila, and SeaTac Washington

Transportation Mode: light rail transit

Project Description: A 25 mile light rail line running north-south through Seattle from the Northgate regional urban shopping center to a future park and ride lot about a mile south of SeaTac International Airport. The line is a combination of at-grade, elevated and tunneled segments. The project was approved by voters in 1996 with performance and cost claims that have not been realized. The first 15.6 miles opened for service in 2009 at a cost of \$2.6 billion. An additional 3.15 miles are under construction and 5.9 more miles are in design. Federal approvals are incomplete on further extensions, and these additional miles of light rail into less dense parts of the region are not considered in this nomination even though they make the project worse. See the *Link Light Rail Progress Report* at http://www.soundtransit.org/Documents/pdf/news/reports/apr/201112_LinkLightRail.pdf for further official description.

Reason for Nomination:

How does this project influence how much people drive or use oil on an everyday basis?

The project is touted by governments as a centerpiece of regional development, but all evidence of ridership to date as well as official projections for the future indicates a minimal influence on either regional or corridor driving. Despite the enormous cost of the project it has failed to generate many new riders. The supposedly "conservative" forecasts to justify public support in the tax funding campaign of 1996 claimed ridership of 107,000 per weekday by 2010. Because of construction lags, actual ridership in 2011 came to only 24,000 per day. This number is way below a growth curve that would reach the post-2001 forecast of 45,000 per day by 2020 on the rail line that was actually built.

To make matters worse, research by King County Metro Transit, a separate operating agency that operate the light rail under contract to the Sound Transit

planning and construction agency, indicates that about 60% of the initial light rail ridership is by existing transit patrons who shifted from bus routes that formerly served the same area, some of which have been eliminated. Thus the number of car drivers attracted to transit by the light rail is small. Because the light rail line serves locations that already had good transit service, and because it offers little advantage in terms of door-to-door speed or convenience, the unfortunate outcome has been a negligible change in overall King County transit ridership – 370,000 per day currently -- and no resulting reduction in automobile traffic in the corridor.

Long range official forecasts by the Puget Sound Regional Council out to 2040 with light rail coverage expanded to over 100 miles of two-way track show buses and cars still carrying 99% of regional travelers.

1996 Sound Move Plan projecting 107,000 riders by 2010:

<http://www.bettertransport.info/pitf/SoundTransit1996SoundMovePlan.pdf>

1999 EIS showed that even with 107,000 riders, traffic volumes would not change parallel to the route: <http://www.globaltelematics.com/pitf/link.htm>

4th Quarter Light Rail Ridership Report counted 23,617 daily passengers in 2011: http://www.soundtransit.org/Documents/pdf/riders_news/ridership/2011_Q4.pdf

Recent forecasts of 45,000 light rail riders by 2020:

<http://www.soundtransit.org/About-Sound-Transit/News-and-events/News-releases/News-release-archive/RV-Paving.xml>

Short-term forecasts showing light rail ridership trend not reaching 45,000 by 2020, first graphic at: <http://www.bettertransport.info/pitf/Linkpassengercount.htm>

Current King County transit ridership:

http://www.kingcounty.gov/transportation/kcdot/NewsCenter/NewsReleases/2012/February/nr022412_Ridership.aspx

Long range forecast and cost data from the Puget Sound Regional Council:

<http://www.bettertransport.info/pitf/PSRC-2040-spending-modesplit.pdf>

What kinds of environmental impacts does this project have? (e.g. pollution, development of natural areas, etc.)

The light rail project Environmental Impact Statements (EIS) cover both the construction energy consumption and the energy saved by people riding the train after it is in operation. There is high energy consumption from excavating subway tunnels, as well as from manufacturing all the steel, cement and other energy intensive materials that go into such a massive construction project. In all cases for every segment, the energy consumed in construction of the rail line would not be offset by energy savings until the line had been in operation for decades.

One example is the subway tunnel segment planned and partially under construction from downtown Seattle to Northgate, covered in an EIS issued in 2006 with a subsequent Record of Decision. The EIS data show that the amount of energy consumed would not be compensated by energy saved until 90 years had passed. However, these estimates are based on an average automobile fuel efficiency of only twenty two miles per gallon, and rail ridership well in excess of

100,000 per day. Updating that estimate with new automobile fuel efficiency standards and realistic ridership forecasts mean the project will never achieve energy break-even. Worse, even considering that the tunnel boring machines are powered by zero-carbon hydro power, the diesel trucks hauling tunnel spoils in addition to the commuting by construction workers will send more greenhouse gas permanently into the global atmosphere than will be compensated later by people riding the train instead of driving. Rail supporters note that highways consume massive energy in construction, but highways also carry the vast majority of people and freight in cars, buses, and trucks, while Seattle's light rail as discussed above is a very marginal addition to transportation usage in the region.

In addition to all the energy consumed in building light rail, construction also involves displacing many small businesses, disruptive excavation in neighborhoods, and many thousands of dump-truck loads of dirt and debris hauled through city neighborhoods. Extensive tunneling in the Puget Sound area necessitates "de-watering", or pumping out the natural underground reservoirs to allow digging and construction. This has resulted in subsidence up on the surface, with cracking of home foundations and even the condemnation of one home above a tunnel.

The light rail line in operation has also proven to be noisier than promised. Readings of decibel levels in a residential area along the Duwamish River verified complaints from residents. There and in other places along the line, Sound Transit has been forced to undertake costly and not very effective mitigation, including solar-powered lubricant squirting devices along the tracks.

As much as friends and I enjoy riding on trains, we don't know how to make a case that this particular costly project, for all its good intentions, has resulted in environmental betterment. Results after more than thirteen years of construction and two years of operation suggest the net impact will be negative. Ten more years of construction beyond the present day are now required to complete the original plan promised back in 1996 to be in full operation by 2006, a delay pushing the cost to more than twice what was planned and sucking public resources from more environmentally sound alternatives.

Independent analysis of the energy costs of North Link:

<http://crosscut.com/2007/07/25/sound-transit/5555/The-carbon-cost-of-building-and-operating-light-rail/>

Recognition of the energy costs in the Federal Record of Decision for North Link:

<http://www.bettertransport.info/pitf/NorthLinkROD.htm>

2009, "Sound Transit calls light-rail noise a public-health problem"

http://seattletimes.nwsourc.com/html/localnews/2009938600_trainnoise25m.html

2010, "Some Sound Transit light-rail screeches just won't stop"

http://seattletimes.nwsourc.com/html/localnews/2012048950_trainnoise07m.html

2011, "Sound Transit spending millions more to muffle rail noise"

http://seattletimes.nwsourc.com/html/localnews/2014461157_railnoise11m.html

Home damaged by tunnel:

http://seattletimes.nwsourc.com/html/localnews/2011322648_void12m.html

<http://www.prweb.com/releases/2010/10/prweb4619764.htm>

How does this project impact land use and development? (e.g. Does it encourage sprawl or high-density, mixed-use and transit oriented communities? Does it retrofit existing development? etc.)

The light rail project was predicated in part on the belief that it would generate attractive mixed-use development along the line. Results have been disappointing. During the years of construction so far, a tremendous amount of real estate development did occur, but very little of that has been in close proximity to stations other than in downtown Seattle. That's not to say there has been no development near light rail (see below for references to the leading apartment house project), but the vast majority of development around the Puget Sound region -- where the fastest growth in population and employment has occurred -- is in areas not served by the light rail line.

In light of low ridership and the failure to attract development, the City has reversed its policy prohibiting commuter parking at light rail stations. This has enabled the owners of vacant lots along the line in the Rainier Valley to convert their properties into commuter parking.

Meanwhile the very high transit taxes levied in the urbanized areas have created an incentive for developers (and citizens) to move to the suburban fringe where taxes are lower and there is less traffic congestion. Ineffective and expensive rail transit past, present, and future is one more incentive for growth to occur on the urban fringe, a contextual condition illustrated by the Census data on the changes in the Seattle region between 2000 and 2010.

Leading example of Transit Oriented Development in the Rainier Valley

<http://www.seattlepi.com/local/article/Light-Rail-in-Rainier-Valley-What-s-the-verdict-899351.php>

<http://www.rainiervalleypost.com/is-othellos-new-luxury-apartment-building-a-glimpse-of-the-rainier-valleys-future/>

<http://www.apartmentratings.com/rate/WA-Seattle-The-Station-at-Othello-Park.html>

http://seattletimes.nwsourc.com/html/business/technology/2015109817_othello21.html

Latest: <http://craighillteam.wordpress.com/2012/03/16/seattle-commercial-real-estate-news-of-the-day-88/>

Transit Oriented Development in Seattle's Ballard neighborhood served by buses, not light rail:

<http://www.flickr.com/photos/51332149@N02/4950127998/in/photostream>

Parking now authorized near Seattle light rail stations:

<http://www.rainiervalleypost.com/park-and-ride-lots-ok%E2%80%99d-near-rainier-valley-light-rail-stations/>

Census data, Seattle, 2000 to 2010

<http://www.newgeography.com/content/002312-the-evolving-urban-area-seattle>

<http://www.washingtonpolicy.org/blog/post/wendell-cox-responds-environmental-group-population-dispersion-seattle>

What kinds of economic impacts will this project have? (e.g. cost of the project, taxpayer subsidies vs. private investment, number of businesses attracted to the area, job opportunities, increase/decrease in tax base, etc.)

The Puget Sound Regional Council (PSRC, which is the Metropolitan Planning Organization or MPO) required a benefit/cost analysis for the Phase 2 expansion of the entire Sound Move program, of which light rail is the largest portion, joined by smaller portions for commuter rail and express buses. The analysis was not examined closely by PSRC, and independent review indicated questionable assumptions. Furthermore, that analysis was done before the disappointing ridership level had been revealed in operation of the first line. Updating the benefit/cost analysis with more reasonable assumptions would show the project cannot be justified on economic grounds, because costs exceed benefits. The price of light rail in Seattle includes miles of subway tunnels that cost far too much and accomplish far too little.

Even if the Sound Transit analysis were correct, showing 26 years to achieve a beneficial return raises new questions about alternative transit investments that would work more quickly to get people out of cars and cost far less. See the reference at the end of this submission to the regional HOV network around Seattle already carrying 200,000 transit passengers per day.

The economic problems of the project do not end with costs exceeding benefits. Cost overruns and higher than assumed operating costs are forcing Sound Transit to borrow hundreds of millions of dollars more than originally planned. This debt overhang will be a drag on the agency's budget for decades and limit their ability to expand bus service to fast-growing areas, an element of the long-range plan from the PSRC MPO.

A further unfortunate consequence of the project's financing mechanism is the highly regressive sales taxes that constitute the majority of the agencies revenue. These taxes fall disproportionately on lower income and working poor families. During the planning phases of the project Sound Transit claimed that spending billions of dollars in the region would surely stimulate the local economy. The project has certainly generated large profits for the well-placed consultants, large contractors, and fifty law firms that Sound Transit has retained. However, the average resident has seen little or no benefit in return for the taxes they have paid – and will pay in perpetuity. Sound Transit may also attempt to make up for the revenue shortfall by raising fares, which further penalizes lower income residents and transit dependent customers.

If those economic problems weren't enough, the extra 9/10 of one percent additional sales tax rate now prevailing in the Sound Transit taxing district (urban

portions of King, Pierce, and Snohomish Counties) make the region less attractive to businesses which are inclined to locate where the economic climate is conducive to business owners and where public agencies make more cost-effective transportation investments.

Benefit-cost analysis and critique

http://www.soundtransit.org/Documents/pdf/st2/B-C_ReportMethods8-07.pdf

<http://www.washingtonpolicy.org/sites/default/files/PN2007-10%20with%20logo.pdf>

Washington State's regressive taxation

<http://blog.seattlepi.com/seattlepolitics/2009/11/18/study-washington-state-has-usas-most-regressive-taxes/>

In what way does your project affect public health in the area? (Will it increase or decrease air pollution? Will it encourage healthy lifestyles by making walking or biking to everyday destinations easier? Will it decrease crashes or their consequences? Will it affect road safety for cars, pedestrians or bikes? etc.)

Other than one accidental fatality during construction and a few injuries from accidents during the early years of operation, it isn't obvious the light rail line will have any significant impact on public health. As noted above, the light rail line has attracted few new riders following billions in spending, and some of them were people who used to walk to destinations along the line. Because the rail line draws most of its riders from existing transit riders, many of whom rode the electric trolley bus routes, it is hard to make a case for public health improvements as a result of air quality improvements. There just isn't enough of a change anywhere along the line to be significant, though risks to non-alert pedestrians and bicyclists have increased slightly.

Anything else we should know about your project?

In addition to the problems described above, the Sound Transit light rail project has other adverse impacts. A particularly unfortunate consequence of the project is that it has made bus service through downtown Seattle slower and less convenient. To accommodate both trains and buses in the Downtown Seattle Transit Tunnel under Third Avenue, it was necessary to shift many bus routes up to surface streets where they are slower and travel time is less predictable.

The light rail project has also suffered from severe procedural shortcomings. A particularly unfortunate aspect has been Sound Transit's refusal to consider more cost-effective and environmentally beneficial alternatives. The Puget Sound region is a national leader in vanpooling, transportation demand management (TDM) programs and low-emission bus service (electric trolley buses, hybrids, and natural gas powered, we have them all). The refusal to consider superior alternatives has made a mockery of State and Federal environmental policy, and undermines public confidence in public agencies to honestly address very real environmental concerns.

This distrust is amplified by the false assumptions and unrealistic forecasts used to justify a multi-billion dollar construction project that has failed to address the region's serious transportation and land use problems.

As already noted, the region's recently adopted 2040 Metropolitan Transportation Plan gives us a pretty good idea how ineffective this rail investment will be. **The MPO's 2040 forecast for rail ridership after expanded road pricing goes into effect shows rail ridership at one half the Sound Transit self-serving forecast for 2030.** Regional forecasts show that despite the billions spent on the rail line very little improvement in transit mode share can be expected and the region will become ever more dependent on the private automobile. We could have done much better.

Some might argue that even if the light rail line doesn't do much to improve transit ridership at least it prevented billions from being spent on highways. **The problem is that Sound Transit's light rail project didn't take one penny of gas tax away from highway projects.** Instead it took billions of dollars of local transit taxes and Federal transit funds away from more effective transit projects. Billions in gas tax dollars will still go to highways – which by policy all have HOV lanes for buses and vanpools – but we won't have the transit funds when we need them.

The Sierra Club of California has recently published a letter in which it expresses opposition to the plan for the proposed California High Speed Rail project. Concerns are that the project "exaggerates ridership, revenue, and investment" and closes by making the point that "The...plan presents the risk that a single transportation project could absorb all public funding at the expense of a robust [transportation] system". All of the concerns about HSR are just as applicable to the Sound Transit light rail project.

In summary, Seattle's Sound Transit Central Link project was arrived at through a process that misled the public and elected officials. Benefits were greatly exaggerated while the costs, risks, and impacts were all deliberately understated. The project that now results is contrary to everything the Sierra Club stands for. **I'm sure you will receive nominations for many bad projects, but by any meaningful measure an urban transportation project can't get much worse than this.**

Recent briefing from King County Metro Transit on the success of HOV lane network supporting bus transit and vanpools

http://www.bettertransport.info/pitf/PugetSoundHOV_030812.pdf

Citizen comment to MPO on rail ridership forecast falling from 2030 to 2040

http://www.effectivevtransportation.org/Niles_PSRC_10-5.pdf

Sierra Club California letter on California High Speed Rail

http://sierraclubcalifornia.org/Documents/SCC_Comments_on_HSR_Business_Plan_1-13-12.pdf