

West Seattle Light Rail Environmental Impact Statement-Conclusion (EIS-C)

An independent assessment of the environmental impact
of the Sound Transit West Seattle-Link Extension (WSLE) light rail proposal

Submitted by Rethink The Link (RTTL) and Regional Transit Colleagues

Revision 4.3 October 4, 2024

Comments or Questions? Contact RTTL at email contact@rethinkthelink.org

Section 1: Executive Summary

The Ballard-West Seattle light rail discussion started from the premise that roadway-based modes could not handle peak period passenger demand in that corridor. Thus, in 2016, Sound Transit presented a Ballard-West Seattle link extension (WSBLE) light rail proposal in its ST3 transportation package. It offered simple criteria for voters to consider:

- improve public transit,
- encourage economic development, equity, community-building and social justice,
- protect the environment.

Sound Transit's January 2022 WSBLE Draft Environmental Impact Statement (DEIS) was designed to show that:

- these simple criteria would be satisfied, and
- WSBLE's proposed advantages would outweigh its disadvantages.

The DEIS combined both West Seattle and Ballard light rail segments into one project routed through downtown Seattle. But changes to the Ballard portion required additional work. So Sound Transit and the USDOT Federal Transit Administration decided to separate them into two projects, move forward with a separate environmental review for the West Seattle (WSLE) portion, and delay review for the Ballard portion.

Since then, independent transit experts have researched and analyzed information from the West Seattle sections of the WSBLE DEIS, public comments submitted about the DEIS, the Final EIS released September 20th, and additional public transit research findings. **Since the 2016 ST3 vote, Sound Transit's environmental review process has revealed more disadvantages than advantages with the WSLE.** With its overwhelmingly negative social, economic and environmental impacts, the West Seattle Link Extension (WSLE) does not satisfy the ST3 and DEIS criteria, and should not be built. The experts found that:

- WSLE transit times and therefore ridership will degrade, not improve West Seattle transit service after the WSLE and Ballard LE open in 2032 and 2042 respectively
- The construction generation of carbon will be more than carbon-reducing impacts of WSLE trains can mitigate over five future decades of WSLE operation.
- Acres of forest and habitat will be eliminated, and much more of it irreparably damaged
- Choosing the light rail investment over more effective transit modes presents opportunity costs for the City of Seattle, and the regional transit network:

- Economic development in West Seattle and Chinatown-International District will be set back for at least a decade
- Equity, community-building and social justice will be set back at least a decade,
- And raising the question, based upon the newest, September 2024 WSLE cost estimate: “How can six to seven billion dollars be better spent to improve public transit?”

The Sound Transit Board can and should choose the No Build option for the WSLE.

- [Section 2, Paragraph 3 of the ST3 ballot proposition that voters approved in 2016](#), allows the board to reconsider and make adjustments to projects that are unaffordable, infeasible, or impracticable for any reason. The WSLE is all three. This action does not require a public vote.
- ST Executive Corridor Director Cahill Ridge’s told the November 2017 West Seattle Transportation Coalition public meeting that ST “has no Plan B” for WSLE if financial, disruptive technology or other factors arise. He was incorrect. ST has several Plan B options available.
- Lower carbon, less expensive and less destructive public transit options than WSLE are available and serving West Seattle riders better now than rail will in the future.
- No Build is a legitimate, legal, and responsible choice, included under federal and state law in all environmental reviews of large, disruptive transit construction projects. ST3 project sponsors can and should consider this option and should note that the facts overall point to selection of No Build.

This document addresses the West Seattle link extension specifically, and the WSBLE generally. It contributes summary information to the decision-making processes for:

- a. local and state government officials who regulate and influence Sound Transit decision making, and
- b. citizens who pay significant taxes (see “revenues vs. costs” below) to fund Sound Transit, in the expectation that their government will provide improved mobility services.
- c. Government decision makers who have to decide what the WSLE Record of Decision (ROD) will finally state as the result of the environmental process for WSLE.

Section 2: Current Transit Ridership and Forecasts for West Seattle-Downtown Corridor, and Region

- 1. The WSLE light rail plan will not improve transit or rider experience on the Downtown-West Seattle corridor. It will make them worse.**
 - a. RapidRide buses deliver passengers between downtown and West Seattle on a one seat, no-transfer ride, in about 20 minutes, though heavy traffic may cause it to take longer.
 - b. A WSLE light rail + bus ride over the same route may take up to 35 minutes, depending on-transfers in West Seattle and SODO (see “transfer penalty” in Equity 1.b. below). Traffic may still be a factor causing bus rides to take longer.
 - c. Travel between West Seattle and Downtown, and points north and east will require two, possibly three transfers.
- 2. Whether the WSLE gets built (Build option) or not (No Build option), the same number of people will be riding West Seattle public transit.**

- a. ST’s 2013 study estimated a daily ridership of up to 58,000 riders per day for the West Seattle Link Extension (WSLE). The 2016 ST3 plan reduced daily ridership to approximately 37,000 riders by 2042, and the WSLE DEIS reduced ridership estimates again to 27,000 for this segment.
 - b. The September 2024 Final EIS estimates 26,000-28,000 riders per day, (Appendix 3, Transportation Environment And Consequences)
 - i. The FEIS sorts ridership forecasts based on several options:
 - (a) M.O.S. (Minimum Operable Service), in which only the Delridge station (minimum rail line extension) is built
 - (b) Two station scenario, without Avalon station
 - (c) Three station scenario with Delridge, Avalon and Junction stations
 - ii. Appendix 2 of [Sound Transit’s Transportation Technical Report](#) shows virtually no difference between Build vs. No Build options in Downtown-West Seattle peak hour ridership and mode shares.
 - c. The only way WSLE can reach 27,000 riders per day is by taking bus riders from Metro, whose 2020 West Seattle-Downtown corridor count is 27,000 riders per day.
 - d. Non-rail transit modes serving the downtown-West Seattle corridor now deliver more passengers than the proposed WSLE will in 20 years. They deliver more efficiently, with lower carbon footprint and fewer environmental, economic and residential impacts.
 - i. The steady reduction of Sound Transit ridership estimates is due to work from home (WFH) + hybrid office arrangements, COVID, and movement of employment and commerce centers elsewhere than downtown Seattle (see Appendix, **Per Capita Transit Ridership Is Declining**).
3. **Sound Transit is not building what voters approved as ST3 in 2016:**
- a. Voters are getting a different rail plan than Sound Transit presented as ST3 in 2016:
 - i. The original Ballard-West Seattle line (WSBLE) is now two separate lines – BLE and WSLE
 - ii. **The \$1.7 billion ST3 budget for WSLE is now \$6-\$7 billion.** Listed Rapid Ride corridor improvements have not been made, and its 2030 delivery date will not be met.
 - iii. The ST3 proposal did not describe Pigeon Point deforestation, “irreparable” habitat damage, or any notice of a large carbon footprint from construction as documented in earlier Sound Transit projects.
 - iv. Additional carbon and pollution generated from 5-8 years of traffic congestion is not specified in the DEIS but may be tallied in SDOT’s (Seattle Dept. of Transportation) annual carbon assessment.
 - b. Since 2016, ST has altered proposed routes, plans, and station configurations without filing any DEIS amendments, or providing public notices as changes are made.
 - c. Though the Sound Transit Board of Directors has not approved a West Seattle route, Sound Transit is delivering notices of potential buyouts and teardowns to property owners along a “placeholder” route.

4. **Few people who voted for ST3 in 2016 understood the significant negative impacts of WSLE.**
 - a. Until 2015, Sound Transit’s ST3 plans only included a light rail connection to Ballard.
 - b. Changing course in 2016, Sound Transit included a short light rail line to West Seattle in ST3. It promised that if voters approved ST3, bus and rapid transit service would be improved, and detailed light rail planning and public outreach would follow.
 - c. Few voters understood the negative impacts WSLE would have on their transit experiences, on the environment, and in losses of homes, businesses and jobs.

5. **Puget Sound Regional Council (PSRC) and Sound Transit data show that by 2050, light rail will only carry 3% of all regional trips, and buses only about 5% -- despite PSRC expecting 1.8 million more residents living in the Snohomish-King-Pierce region.**
 - a. PSRC expects buses and trains together will carry just 15% of trips in Seattle.
 - b. A government rationale for supporting WSLE is that transferring passengers onto the four-mile rail line will free buses it can redeploy for more frequent local service.
 - i. Data and experience, including “transfer penalty” and truncated bus routes, do not appear to support this rationale.
 - ii. Metro Transit stated to the West Seattle Transportation Coalition in 2014 that it will cancel a bus route costing more than \$7 per rider (about \$10 in 2024 dollars). The September 2024 WSLE cost estimate of \$6-\$7 billion to serve 27,000 riders, puts its per rider expenditure on 2032 opening day at \$222,000-\$260,000 per rider (see Economics 3.2.a. below).
 1. Using ST estimates of 4 million WSLE riders per year and adding \$40 million per year cost for operations and maintenance, reduces per rider cost to \$1500 for the first year, eventually plateauing at \$600 per rider in perpetuity.
 2. If rail does not replace bus, and per-trip cost from point A to point B is not reduced, moving riders from bus to rail is not beneficial. If only the rider's trip is measured, without including distance, the result may be misleading. For example:
 - a. Neither Metro Transit nor Sound Transit appear to have made cost-benefit calculations to assess the transit cost effectiveness of WSLE.
 - b. Metro’s plan for WSLE to replace four miles of bus corridor means it will deliver \$10 /rider passengers to one station of a \$1500 /rider rail line, then use another \$10 /rider bus to pick up the portion of those riders who don’t continue on rail.
 - c. Passengers who ride further on rail may also transfer to bus at the end of their rail segment.
 - iii. Electrification of the Metro bus fleet, and expansion of flexibly routed bus service that would connect riders more efficiently to destinations within and beyond West Seattle, would yield a far better cost-benefit ratio. It could be funded with a fraction of the \$6-\$7 billion estimated for a single, four-station WSLE route.

- iv. Improving bus service should also include City of Seattle exercising its municipal authority to eliminate road bottlenecks to give buses more priority in traffic.
6. **The ST3 package included funding to improve bus rapid transit (BRT) services during the light rail planning phase. But the City of Seattle, King County Metro and Sound Transit now focus only on building light rail, not on improving West Seattle bus and BRT routes for the West Seattle corridor.**
- a. ST’s WSBLE DEIS outlined non-rail improvements that could be made in West Seattle, such as roadway upgrades, and bus, van and other transit service additions to increase service.
 - b. Presently, public and private roadway buses, vanpools and ride-share services can be programmed to carry more riders than light rail, often faster and less expensively. And their routes can be modified – unlike light rail -- as conditions change.
 - 1. As the Seattle area grows, transit alternatives other than light rail can provide better rider experiences, including more direct service, shorter wait times, and fewer transfers
 - 2. King County Metro:
 - a. is planning to transition its entire fleet of buses to electric power.
 - b. has committed to serving all West Seattle neighborhoods with public transit after WSLE is built in 2040-42. Until then, Metro is deploying on-demand Metro Flex van service in some, but not all underserved WS areas.
7. **The light rail bridge – that has not yet been designed – would extend two miles from SODO over the Duwamish River. This presents the risks of rising expenses and construction delays, including:**
- a. No passenger railroad bridge of this length and height (160 feet) has ever been built.
 - b. The bridge will run over the [Seattle Fault earthquake and liquefaction zone](#).

Section 3: Economics

- 1. **At \$6-\$7 billion (\$1.5 billion-\$1.75 billion per mile) for 4 miles (Seattle Transit Blog), WSLE is the world’s second-most expensive urban rail project**, behind NYC’s subway upgrade (\$2.8 billion /mile), but a ahead of San Francisco’s subway (\$920 million /mile)
- 2. **On opening day, WSLE will have cost up to \$260,000 per rider** (including construction, operations, and maintenance costs).
 - a. Depending on Sound Transit’s amortization schedule for the \$6-\$7 billion WSLE construction expenditure plus interest payments, plus \$40 million estimated annual WSLE operations & maintenance cost, overlaying annual ridership estimates of 4 million, yields per rider cost ranging between \$600-\$1500 in perpetuity.
 - b. In advocating for WSLE, Metro Transit is advocating to deliver \$10 per rider passengers to a \$1500 per rider WSLE train station, for a four-mile rail ride to Seattle, where another \$10 per rider Metro bus will pick them up.
 - c. The non-profit Transportation Choices Coalition testified at Sound Transit’s September 26, 2024, board meeting that price should be no object. Between Washington’s

powerful Congressional delegation able to funnel debt-relief capital to Sound Transit, and the perpetual \$1780 per year in Sound Transit taxes that every Pierce, King and Snohomish county household has been paying since 2017, TCC believes money will be perpetually available for light rail projects.

- d. In 2022, Sound Transit reported a \$12 billion budget shortfall, then recast its accounting to appear \$6 billion in debt. At ST's September 19, 2024, board meeting, ST CEO Goran Sparrman and Deputy CEO of Megaproject Delivery Terri Mestas asserted that the \$6-\$7 billion cost for WSLE can be managed.
- e. It would appear that, if cost is no object, Sound Transit could spend any amount required to tunnel from SODO to the east bank of the Duwamish, use an immersed tube or other tunnel to cross beneath the Duwamish, then tunnel from the west bank to the West Seattle Junction, reducing most impacts listed here. This project would require Sound Transit to generate a separate EIS.

3. WSLE may present revenue losses and opportunity costs for transit across the region (Snohomish, King, and Pierce counties), and for the key light rail city of Seattle.

- a. While city and county revenues have decreased, Sound Transit will eliminate businesses, services and properties that pay into municipal tax rolls.
 - i. Neither ST, Seattle nor King County has run cost-benefit analyses to judge whether trading a decade's worth of WSLE-caused tax revenue losses for anticipated future revenue will pencil out – given that:
 - 1. Neither ST nor the City of Seattle has calculated what net economic benefits WSLE will create for West Seattle, the CID and SODO, and
 - 2. While light rail creates benefits in some areas, West Seattle commerce and real estate markets up to now have not significantly suffered, even during the pandemic.
- b. **At least 70 West Seattle businesses and services will be forced to move or close, but the final number can't be determined until ST chooses a WSLE alignment.**
 - i. In West Seattle, 500-1000 jobs connected to displaced businesses and services will be lost. In SODO and Chinatown-International District areas, additional businesses will be displaced or close, and more jobs lost.
 - ii. The number of businesses displaced will depend on the WSLE alignment ST finally chooses. [West Seattle blogger Marie McKinsey](#) offered this list of possible business displacements, extending from Jefferson Square (37 closures) to Delridge (West Seattle Athletic Club, Uptown Espresso, Skylark Cafe), to West Marginal Way.
 - iii. Patronage estimates by affected businesses (e.g., 7-11, Taco Time, Starbucks) average 1000 customers per day, with more for larger enterprises (e.g., Trader Joe's, Safeway).
 - iv. Businesses forcibly relocated have low survival rates, particularly in minority and low-to-middle income neighborhoods: 1974 Urban Renewal study: (<https://www.kcdc.org/wp-content/uploads/2022/10/A-Case-Study-of-the-Consequences-of-Displacement-Caused-by-Urban.pdf>). "The non-survival rate

was highest among the small eating and drinking, food stores, and miscellaneous retail and services.”

- v. Demographic trends show movement of upscale, primarily White workers moving back to urban centers of employment and commerce, and non-White workers and businesses moving or (immigrants) taking up residence in suburban areas (see Appendix 5. ‘Great Inversion’)
 1. As these trends continue, it is even less likely minority businesses will be able to successfully relocate, and even less likely the employees of these businesses will find places they can afford to live.
 2. While light rail helps move people to areas of the city where they can recreate and consume, it does not support people who are providing the businesses and jobs for the more metropolitan population.
- c. Rather than create an estimated \$6-\$7 billion in lost WSLE opportunity costs for Seattle and the region, the money could be better invested in other transit options within the WSLE corridor and beyond, yielding a lower carbon footprint, and fewer environmental, social and economic impacts.

4. **Freight, public transit, emergency services and commuters will be disrupted, and productivity impacted as West Seattle’s main roads north and south of the WS high bridge are blocked during construction.**

Section 4: Local Environment and Global Climate

1. As climate change worsens, Sound Transit forecasts in the FEIS that WSLE preferred alignment construction will generate more carbon (greenhouse gas / GHG) emissions than it can mitigate by:

- **attracting new riders, and**
- **expanding walkable, car-free urbanism near three new West Seattle light rail stations.**
 - a. The original 614,000 metric tons of greenhouse gas output (MT CO₂e) forecast in the DEIS (Table 4.2.6-3), has now been re-stated as 140,952 MT CO₂e (FEIS Table 4.6-3), which is reduced from a newly-stated 380,181 MT CO₂e (FEIS Appendix L4.6E Greenhouse Gas Emissions Summary / Scenario: “WSLE Build Alternative: Preferred Total Construction Emissions”) and now called “Total Adjusted Construction Emissions.”
 1. The restatement is used to extend the mitigation period by at least 50 years – to 2080, or later.
 2. The FEIS offers no information on where these tons of emissions will go, over what period, or how ecosystems will absorb and/or dissipate them.
 3. The recalculation method is not transparent. It apparently assigns major carbon output to concrete manufacturers, and only assigns a small percentage of total industrial output to Sound Transit.
 4. Sound Transit has zeroed-out energy required for station operations (including heating, ventilation and air conditioning (HVAC)) because the 60 metric tons of carbon it will annually consume, will be supplied by 100% renewable energy

- i. ST will displace 3,001 metric tons of emissions, resulting from people riding light rail and not driving 5.6 million vehicle miles per year in their petroleum fueled cars for the 50 years following WSLE opening in 2032.
 - ii. **Sound Transit’s carbon reduction strategy can only succeed by assuming that gasoline fueled cars will outnumber electric cars through 2080.**
 - iii. Subtracting 60 tons of carbon generated from 3,001 tons displaced yields a net annual carbon reductio of 2,941 tons.
 - 1. Dividing the re-calculated, annualized 140,952 construction tons generated by 2,941 tons per year reduced, yields a payback period of 48 years – until the year 2080, to mitigate WSLE construction carbon.
- b. **The Build option will only reduce car and light truck miles traveled by 0.02%** compared to the No Build option (reduction of 15,400 from 85,366,700 vehicles total – Table 4.6-1, “Regional Vehicle Miles Traveled and Average Daily Traffic Change”). The Table shows no reductions in heavy duty truck miles, and 1.3% reduction in bus traffic.
- c. **Sound Transit has not done a proper impact evaluation of light rail alignments vs. other possible modes.** This would involve using tools such as the Embodied Carbon in Construction Calculator (EC3) (developed by the nonprofit, Building Transparency) and be conducted in close consultation with objective environmental science organizations like the Carbon Leadership Forum (CLF), a nonprofit, industry- academic organization at the University of Washington.
- d. **The WSLE becomes even less attractive from a carbon reduction perspective when Sound Transit’s construction carbon output is recalculated using the 2021 Transit Cooperative Research Program (TCRP) Report 226 (“An Update on Public Transportation’s Impacts on Greenhouse Gas Emissions.”)**
 - TCRP 226 outlines a “land use effect” of carbon reduction from people driving less because of (1) walkability in the higher density areas that would presumably develop around WSLE train stations, and as before, (2) the impact of new train riders. (See also Equity below, and Appendix 2. “Station Development...”)
 - The WSLE FEIS references compact development and TCRP 226 on page 4.6.10. Applying TCRP 226 GHG impact methodology to the 2,000 daily additional transit riders that result from the WSLE preferred alignment yields only 1,930 tons per year of carbon reduction benefit, vs. the 2.941 tons generated by the methodology Sound Transit uses in the WSLE FEIS.
 - This lower carbon reduction number raises the years of payback on the construction carbon from 48 years (2032 to 2080) to 73 (extending out to 2105). Again to mitigate its construction carbon footprint this quickly, ST assumes electric cars will be adopted very slowly.
 - While the DEIS Appendix L4.6 states that “general FTA estimates” have been applied, no federal project the size of WSLE’s 2+ mile,-160 foot-tall, elevated light rail bridge has ever been built or fully calculated.
- e. DEIS Chapter 4.2.6.3 and Table 2-9 cite a daily reduction of 117,000 miles of vehicular use per day for the region. This figure is re-stated in FEIS Chapter 4, but it is not clear how this figure was computed, nor how accurate it is.

- f. The DEIS Chapter 1.2.2.6 states the need to reduce vehicle miles by 30% by 2035, and the City of Seattle’s and King County’s goals are to achieve carbon neutrality by 2050.
 - However, light rail will not connect West Seattle to the SODO light rail station until 2032, and won’t be extended farther until 2042. The 8 to 18 years of construction period for the full ST3 light rail project delays the WSLE opportunity for drivers to reduce their personal vehicle use.
 - As Table 4.6-1 of the FEIS notes, the forecast volume of car and light truck vehicle travel in 2042 without light rail is 11,994,200 daily trips, and with light rail, 11,991,900 trips. The ST forecast regional difference between the No Build and Build options is a relatively small 2,300 trips per day.
 - Given likely imprecision, or margin of error in the calculations, these numbers signify virtually no change in driving volumes, and insignificant reductions in carbon, whether light rail is built or not.
- g. **The FEIS does not calculate the quantity of carbon absorption lost as forest and green space areas are eliminated.** Sound Transit has already cut about 16,000 trees (apx. 140 acres) for its north-south line, according to a count from [TreePAC.org](https://www.treepac.org/). Those trees would have absorbed an estimated 64,000 tons of carbon a year ([City of Seattle & One tree Planted](#)) – nearly half the carbon output from WSLE construction.

The City of Seattle can ill afford to lose tree canopy. Seattle has lost 255 acres of trees since 2017 (acreage cut by Sound Transit within city limits may be included in the Seattle count). Globally [in 2023, forests and other land ecosystems emitted almost as much carbon dioxide as they absorbed](#), due to fires, deforestation, and other factors.

- a. Eliminating acres of forest will exacerbate Seattle’s heat islands, which are worst around light rail stations, areas where the city’s commerce and employment are concentrated, and within its low income and of-color communities, which Lower economic areas are more prone to heat adverse conditions, fewer parks and tree cover. They are less economically able to afford air conditioning or other means to keep cool.
 - Heat sink areas, King County Executive (& ST Chair) Dow Constantine’s "Three Million Trees Initiative", City of Seattle’s Trees for Neighborhoods program, KC Land Conservation Initiative: <https://kingcounty.gov/en/legacy/elected/executive/constantine/news/release/2021/june/23-heat-mapping-results> (June 23, 2021)
- b. The WSLE will eliminate three acres of north Pigeon Point Forest, plus 1-3 more acres of West Seattle green space, and beaver, salmon, heron and other species habitats there and on the Duwamish River and Longfellow Creek.
 - Sound Transit has not calculated costs for man-made elements to replace erosion control, storm water management, oxygen production, carbon sink, shade, and other ecosystem services provided by green infrastructure.
- c. As Sound Transit runs its modest program to replace trees it has eliminated, and Seattle’s recent \$13 million in federal grants will fund planting trees in Delridge and the Chinatown International District , the two entities will simply be working back from the deficit ST will cause with WSLE.
- d. Replacing mature trees with saplings is what Nature does after a natural disaster. ST is imitating a natural disaster.

2. Under Washington’s Climate Commitment Act (CCA), Sound Transit’s claimed level of carbon emissions in the FEIS – 141,000 metric tons over five to six years of construction – qualify it as a “large quantity carbon emissions generator” (LQG). The LQG threshold is 25,000 metric tons of carbon per year.

- a. The best way to avoid emission is not to generate them (see **Minnesota** below).
- b. The WSLE DEIS does not address purchases of carbon offsets, or other high-quantity mitigation plans for this massive output.
- c. The Puget Sound Clean Air Agency’s (PSCAA) analysis finds “. the Chinatown International District and Duwamish Valley neighborhoods facing disproportionate air pollution impacts, impacts from WSLE construction, and more sensitive health outcomes in the form of higher air quality-related hospitalizations.”
- d. PSCAA AQ Director Kathy Strange commented in 2022 on Sound Transit’s WSLE DEIS, that “...transportation emissions will be improved in the long-term because of light rail...” The data prove otherwise.
- e. Currently, [Minnesota is the only U.S. state holding its agencies accountable to its climate goals](#). A provision in its 2024 transportation law requires both state and municipal transportation planning agencies to take the state’s climate goals into account when assessing new projects.

3. Overall, from a carbon reduction standpoint, Sound Transit itself makes the case for choosing the No Build option for WSLE.

Section 5: Equity

1. Sound Transit’s WSLE proposal does not prioritize equity.

- a. The WSLE will serve the more affluent parts of West Seattle, while travel from less affluent, more diverse areas with more mobility disadvantaged citizens will require more transfers and take longer
- b. A “transfer penalty” will affect riders arriving at stations by bus at ground level. They must either ride or climb multiple levels up or down to reach a train. At the Junction station, walk time may add five minutes to the transfer, and the wait time for the next train may add another 10.
- c. Light rail will not improve access for residents who live in West Seattle’s transit deserts (those lacking convenient access to transit within ¼ mile walk).
 - i. Metro buses re-deployed after the 2042 opening of WS-CID service will not deliver residents remaining in West Seattle to new locations of businesses and services WSLE will have displaced.
 - ii. WSLE will instead encourage more use of private vehicles to reach these locations.
- d. Elimination of the Frye Business Center and commercial properties to the north and south for construction of the Delridge and Avalon light rail stations will:
 - i. exacerbate the “food desert” of grocery and prepared food providers between North Delridge and California Ave SW, for the area’s mixed demographic communities

- ii. eliminate the walkable/15-minute Delridge-Avalon neighborhood, and deprive these communities of gathering places, and medical, social, business and recreational services

2. To make way for light rail, WSLE will eliminate over one hundred houses and apartments.

- a. The full number of residential buildings to be razed cannot be estimated, as Sound Transit has not chosen a final route. It will bulldoze everything from single houses in Delridge to 92 apartments in Jefferson Square. The Executive Summary of the WSLE FEIS indicates that the Preferred Alternative will require displacing 165 to 173 residential properties, and 132 to 133 businesses employing 1,230 people.
- b. Despite large numbers of new housing units and apartments built in West Seattle since 2014, rent and purchase costs have increased, not decreased. That has pushed out less wealthy residents (see *Seattle Times* May 12, 2024) and increased their needs to travel longer distances for work, shopping and entertainment, most often by car. Many have moved to other cities.
- c. Transit-oriented development (TOD -- dense housing, such as apartments, multiplexes, and ADUs) has been built along the Delridge, Avalon and East Junction bus routes of Rapid Ride H and C, and 21 and 128. Sound Transit will bulldoze a significant portion for the rail line, and not replace it for up to 10 years, further depriving West Seattle of affordable housing, while wasting public resources.

3. The Sound Transit Board has the authority to choose the No Build option for WSLE.

- a. Under Section 2 of the ST3 package that voters approved in 2016, the board must reconsider projects that are infeasible, unaffordable and/or unbuildable. WSLE is all three.
- b. Contrary to what regional and city leaders are saying, the WSBLE and WSLE light rail proposals can be re-considered, and better transit options can be chosen – under the No Build option
- c. No Build is a legitimate, legal, and responsible choice, which is included, under federal and state law, in all environmental reviews of large, disruptive transit construction projects. Based on the findings of the environmental process through this date, project sponsors should adopt the No Build option.
- d. The No Build option for WSLE will only affect the West Seattle corridor:
 - i. other ST3 projects could continue to be studied and implemented, as they are subject to a separate environmental process, and
 - ii. Sound Transit will still be able to get [Federal Capital Investment Grants](#) for non-light rail transit, and for expansion of high-capacity fixed-route bus transit.

Concluding Summary:

- 1. The Downtown-West Seattle (WSLE) light rail line should not be built (No Build option). Within the No Build option, the Ballard-Downtown segment should also be reconsidered.
- 2. Sound Transit's WSLE presents more disadvantages than advantages, including overwhelmingly negative social, economic and environmental impacts. As such, it fails to satisfy basic criteria set forth by ST3 and its FEIS for improving corridor transit. The costs,

and negative environmental, economic and residential impacts of WSLE outweigh the benefits of building it

3. Current transit modes carry more passengers now, without transfers and wait times, than light rail promises to carry when completed. WSLE will degrade rather than improve the ridership experience.
4. The 146,000 tons of carbon that WSLE construction will generate – reduced from 614,000 tons in the Draft EIS -- plus elimination of and damage to acres of forest and habitat, will be more than the benefits of a short light rail line can mitigate through year 2105.
5. Choosing the light rail investment over more flexible, effective and cheaper transit modes presents opportunity costs for the City of Seattle, and the regional transit network.
6. Sound Transit can achieve better ridership by continuing to expand and electrify King County Metro and ST Regional Express bus services, on the West Seattle peninsula, W. Seattle-Downtown corridor, and beyond.

Any Sound Transit taxing district resident opposed to the construction of the West Seattle light rail extension has three paths of action:

1. Use emailtheboard@soundtransit.org to contact all board members. As 17 of its 18 members are elected officials, and accountable to voters, [each can be contacted directly](#) by their own constituents.
 - The Seattle members include City Council Member [Daniel Strauss](#), Mayor [Bruce Harrell](#), Council Member [Rob Saka](#) **, ST Board Chair [Dow Constantine](#) **, and King County Council Member [Girmay Zahilay](#). (** indicates lives in West Seattle). City Council Member Rob Saka chairs the City Council's Transportation Committee. [King County Council Member Teresa Mosqueda](#) also lives in West Seattle.
 - Include specific information from this document in messages to officials
 - Contact board and council members by letter, phone and email, and urge (or demand) that they:
 - Stand up for businesses, jobs, housing, communities, and the environment in Seattle.
 - Call for adopting the **No Build Option** still listed in the FEIS for WSLE and visible for years in the DEIS for WSBLE.
 - Require Sound Transit to consider cheaper, less destructive, lower carbon transit options for the Downtown-West Seattle corridor than rail.
 - Support using other modes, including buses, bus rapid transit, and other transit service connections to the regional rail network
2. Contact Port of Seattle Commissioners [Fred Felleman](#), Commissioner-Secretary [Ryan Calkins](#), Commissioner-Vice President [Toshiko Hasegawa](#), Commissioner-President [Hamdi Mohamed](#), Regional Transportation Manager [Geraldine Poor](#), Chief of Staff [Aaron Pritchard](#), and management staff [LeeAnne Schirato](#), [Kathy Roeder](#) and [Sabrina Bolieu](#).
 - Ask them to object vigorously and officially to impacts the WSLE bridge will cause, and that the Port of Seattle has opposed, including obstruction of the East and West Duwamish waterways, impairment of maritime traffic and businesses, damage to the Duwamish River and Longfellow Creek ecosystems, and a huge carbon footprint.
3. Email local business organizations that will be affected:

- * [West Seattle Chamber of Commerce](#)
- * [West Seattle Junction Association](#)

Appendix
Additional Considerations from Research Literature

1. Consumer willingness to fund light rail development decreases as cost increases

[Economists at the Federal Reserve Bank of St Louis](#) showed that when consumers understand the actual costs of getting light-rail services, the amount is generally more than they are willing to pay.

Nationwide, annual light-rail operating costs (\$778.3 million) far exceed fare revenue (\$226.1 million). The balance (\$552.2 million) is paid for with tax dollars. Examples (see also Snohomish-King-Pierce below): Fare revenues cover only 28.2% of system operating costs for St. Louis, 19.4% for Baltimore and 21.4% for Buffalo. If construction costs are added, losses become so large, no light-rail system can possibly recoup its costs.

Based solely on dollar cost, economists at the Federal Reserve Bank of St. Louis suggest that annual light-rail subsidies in St. Louis could instead be used more efficiently to buy a hybrid Toyota Prius every five years and pay annual maintenance costs of \$6,000 for 7700 low-income transit riders – with minimal pollution increases, and only a 0.5 percent increase in traffic congestion. Funds would still be left for all other MetroLink riders to pay for ride-share and bus fares.

Houston: When [Houston Metro proposed the Purple line in 2008](#), it estimated a \$591 million cost, and 28,750 weekday riders. By September 2020, costs reached \$822 million, with daily expected ridership decreased to 5,230, meaning a per rider cost of about \$150,000 to build the Purple Line.

Snohomish-King-Pierce Counties:

1. [Sound Transit revenues do not cover its operating expenses](#)
 - a. Sound Transit farebox revenues in 2023 covered only 16% of Link light rail operating costs (lower than the 40% minimum policy threshold), 9% of ST Express bus operating costs (below the 20% threshold), and 7% of Sounder costs (below the 23% threshold).
 - b. Revenue vs. cost gaps widen more when construction costs are added. Examples:
 - i. Adding together operations, maintenance and construction costs, light rail fare revenues cover less than 3%.
 - ii. For Sounder North commuter rail, ST over-estimated ridership by 90%, and underestimated total costs vs. farebox revenue by 95%.
 - c. As regional revenues will never cover or recoup its full costs, Sound Transit must add millions of dollars in federal grants and borrowed money to cover them.

2. Station development does not generally benefit low-income transit users

A [2019 University of Houston study](#) finds mixed effects on the welfare of neighborhoods after light rail construction. Researchers estimated an \$11,000 average increase in median income for neighborhoods near the new rail line development; but most gains go to high-income neighborhoods, while low-income neighborhoods see their income decline. The observed income polarization may be explained by poverty magnet and gentrification effects occurring simultaneously across the treated neighborhoods.

Light Rail Transit (LRT) does not appear to consistently deliver on its progressive policy goals of alleviating labor-skill mismatch, creating time cost savings, and increasing income mobility.

3. Light rail development does not reduce congestion

[Los Angeles: While light rail investments may increase transit accessibility and ridership within high-demand corridors, it does not reduce congestion.](#)

4. Per Capita Transit Ridership Is Declining

[Since 2013, U.S. transit ridership has declined, despite continued growth in population.](#)

Ridership has peaked and decreased seven different times since 1980, but overall, transit ridership per capita has decreased by nearly 15%. Researchers are evaluating economic considerations, fuel price, changing modal choices, and other areas as possible causes for the decline.

Demographic trends help to explain declining transit usage:

a. The U.S. [population is aging](#). While young age cohorts have a higher propensity for transit use, they represent a lower share of the population.

b. Simultaneously, significant population declines in some of the counties with high-quality transit service and use is being mirrored by population growth in counties with lower levels of transit service and use. Rapidly growing counties had half the rate of commuting to work by transit as did rapidly declining counties.

c. [Over 90% of U.S. population growth in 2023 occurred outside of its 124 largest cities.](#) Among the 124 cities that the U.S. Census Bureau reports with populations over 200,000, about a third have lost population except 14 over 200,000 populations cities in Texas, and nine in Florida. Medium-sized cities in Florida, the Carolinas, and Las Vegas suburbs also added to the population. Americans are presently trading dense, urban, transit-oriented cities for less expensive, more spacious living elsewhere. How this will play out in transit development and politics are key questions.

5. Great Inversion

Suburbia increasingly sorted on bases of socio-economic status and race ([Nijman, 2020](#); [Nijman & Clery, 2015](#)). As suburbs continue growing:

- a. based on economic affordability ([Kolko, 2017](#)),
- b. central-cities appear to revive and renew growth, as city as “the office,” especially for growing numbers of self-employed and freelancers, in the new urban, knowledge transfer and networking economy, that thrives in a high density and high circulation environment ([Carlino, 2015](#); [Kloosterman, 2020](#); [Scott, 2017](#)).

Cities and city centers as preeminent sites of consumption, consumer services, and amenities: [Glaeser, Kolko, and Saiz \(2000\)](#). Also, rise of cities as sites of *consumption* ([Jayne, 2005](#))

Significance of actual vs. relative numbers of workers, types of workers, incomes, and vulnerabilities of ‘gig economy’ and ‘sharing/platform economy’: ([Graham, Hjorth, & Ledonvirta, 2017](#); [Davidson & Infranca, 2016](#); [Shambaugh, Nunn, & Bauer, 2018](#)).

6. Public transit is losing its customer base

During the pandemic, people formed new mobility habits, and most are not returning to regular use of urban buses and trains. In a 2022 survey of 38 transit agencies worldwide, researchers found a 10% loss in the transit customer base, as reported by the [International Association of Public Transit](#).

As of spring 2024, Sound Transit has not yet consistently reached its original 2010 light rail ridership target to the University District, even including the extension to Northgate, according to the U.S. Federal Transit Administration’s National Transit Database (NTD). ST’s original goal was an average of 2.7 million boardings per month. While it has touched that level in a few months since 2018, such as for Taylor Swift events in SODO, this ridership level has not been reached on average in 2024. Across all central Puget Sound transit agencies, NTD reports transit ridership as of April 2024 was 30% lower than in pre-pandemic 2019.

6. City of Seattle critique of ST3 DEIS (quote of excerpts):

- Sound Transit is considering cost savings refinements in response to its 2021 ST3 Realignment. Some of these proposed strategies are drastic.
 - We discourage scope reductions that do not bring commensurate benefit to the system and its riders, and that are not consistent with what was committed to voters.
 - We do not support strategies that would reduce access to the system.
- The City supports studying refinements that help control costs and provide meaningful benefits to local communities and the broader transit system and its riders, including:
 - Mix-and-match refinements for flexibility to choose segment alternatives that provide greatest benefit or fewest impacts;
 - Refinements to stations that would improve safe, non-motorized access;
 - Refinements that would avoid, minimize, or mitigate adverse project impacts.

7. Pandemic-caused vacancy rate increases in downtown areas

Between April 2019 and January 2023, [Seattle had the second-highest downtown commercial vacancy rate in the U.S. \(14.2%\)](#). [“Seattle’s office vacancy rate reached 23.2% in July 2024](#), according to [a recent report by Commercial Edge Research](#), highlighting the city’s struggle to adapt to post-pandemic market conditions,”

While Metro Transit ridership in 2024 has recovered to 75% of pre-COVID levels, full ridership recovery is questionable as work from home + hybrid structures continue, and central employment and commerce locations diversify from downtown Seattle.

8. Three factors drive excessive U.S. transit project costs

As Sound Transit cost overruns have been chronic, the [New York experience provides a cautionary tale](#) about how to structure transit projects, and how to avoid pitfalls.

Factors that add approximately 85% to costs include extra money going to red tape, wasted contingencies, paying workers during delays, defensive design, and profit. Specifically, the factors include:

- Lack of design standardization: this leads to fewer economies of scale, the inability to replicate station designs quickly without incurring more design costs, and difficulty in applying lessons learned from one station to another during the construction process.
- Labor: 40-60% of the project's hard costs in the U.S. Labor costs in low-cost cases: Turkey, Italy, and Sweden are in the 19-30% range; Sweden, the highest-wage case among them, is 23%.
- U.S. procurement norms: pervasive culture of secrecy and adversarialism between agencies and contractors; lack of agency internal capacity to manage contractors; insufficient competition; a desire to privatize risk that leads private contractors to bid higher.