



OFF THE RAILS

A Technical Assessment of SPUR's Bumper to Bumper Report

Unjustified Assumptions • Unreproducible Results • Unsupported Conclusions
and the Relevant Measure RTM Alternatives Never Analyzed

Committee for Affordable Bay Area Transit

October 14, 2026

Executive Summary

“Overall, the SPUR analysis is an agenda-driven static analysis filled with advocacy and exaggerations. There are critical omissions – most notably a lack of sensitivity and alternatives analysis. It is unhelpful and misleading in predicting the impacts from the potential service cuts, and thus doesn’t make a good case in favor of the transit tax. Rather, the conclusion was already known at the outset.”¹

- Professor Damian Park, Santa Clara University, Economics Dept.

In September 2026 SPUR, with traffic analysis by Jacobs Engineering, released [Bumper to Bumper](#) (“the Report”), projecting that transit service cuts would cause massive delays in Bay Bridge commutes, an extra 498 million vehicle-miles of driving per year, and \$174 million in annual costs to riders who shift to driving. The Report concludes that Measure RTM and Proposition H annual taxes of \$1,370 million are the only realistic and timely way to avoid severe cuts. This paper reconstructs the Report’s calculations from its published appendix and from BART’s October 2025 ridership data, and tests its assumptions, its sponsorship, and the scope and validity of its conclusions.

1. **The scope of the Report’s conclusion exceeds the scope of the analysis.** The service reduction scenarios came from the agencies seeking the tax, and the Report tests none of these alternatives: cost restructuring, fare changes, bus rapid transit, congestion pricing, employer or payroll funding, interagency use of existing cash, and adaptive commuter behavior. The 2013 BART strike suggests the region can adapt to service disruption.[20] Cost per passenger-mile has risen about 159%, and the Report does not examine that. BART itself says service cuts will not solve its shortfall, and SPUR agrees, so the real counterfactual remains unanalyzed.
2. **Sponsorship and inadequate disclosure suggest bias.** The Report raises serious questions about independence and potential bias. SPUR co-leads the Measure RTM campaign, while report author Laura Tolkoff held leadership and treasurer roles in the Connect Bay Area Transit Committee through April 2026. Technical consultant Jacobs contributed \$150,000 to the campaign and holds approximately \$122 million in authorized contracts and assigned work with Bay Area transit agencies. These political and financial ties raise material concerns about the report’s credibility and impartiality.
3. **The Report presents a static scenario, not a reliable forecast.** The analysis applies assumed service cuts to October 2025 ridership. BART’s own statements undermine the validity of the scenario chosen. SPUR does not model how riders, businesses, transit competitors, destinations or agencies would respond. Further, worse traffic would make remaining transit more attractive, an effect that works in the opposite direction from the Report’s scenario and is unquantified either way.
4. **The key assumptions are asserted, not justified, and the results cannot be reproduced.** The 56%, 30% and 25% shifts from transit to driving drive every downstream number, yet the Report provides no data, calibration or sensitivity test to justify those assumptions. The station-by-hour diversion matrix and the StreetLight traffic data were not published.
5. **There are errors and omissions which undermine claims.** The stations documented for cuts are not the lowest-ridership stations, as claimed, resulting in figures which are 13.7% higher and

¹ Email from Professor Damian Park, Oct. 3, 2026
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worth roughly 25–35% more diverted trips. The 430,000 population figure counts all nearby residents, not impacted riders. The CO₂ estimate also depends on a vehicle mix that is not disclosed.

6. **The fiscal comparison is incomplete.** The reported annual cash flows are \$174 million in added driver costs, about \$300 million in Muni savings while reducing service, and taxes averaging about \$1.2 billion (RTM) plus \$170 million (Prop H) per year. No other financial impacts are presented. **On a cash-flow basis, the increased sales taxes cost residents roughly \$1.2 billion more per year than not adopting them.** That is unlikely to be the conclusion the Report's authors desired, but without extensive cost/benefit analysis, that is the evidence they present.

This paper concludes that the Report does not justify the conclusion it reaches, and that its undisclosed financial relationships and unpublished inputs make independent verification essential. However, even with verification of the SPUR/Jacobs methodology, a tax of roughly \$1.2 billion a year, plus \$170 million for San Francisco, cannot responsibly be justified by a study of what happens if the agencies cut services and no one else adapts. Before voters are asked to approve a tax of this size, the region needs analysis the Report does not attempt: why cost per passenger-mile has risen about 159% since 2019 and what it would take to reverse that; what cost restructuring, fare changes, bus rapid transit, new service technologies and use of existing agency reserves could achieve; how commuters, employers and destinations would actually adapt, as they did during the 2013 BART strike [20]; and what alternative revenue sources could be developed and when they could be in place. Until that work is done, the Report supports no conclusion about whether, whom, or how much, to tax. Voters and journalists should treat the Report's delay and mileage figures as one unverified scenario, not a forecast, and not a justification for more taxes.

Abstract

In September 2026 the San Francisco Bay Area Planning and Urban Research Association (SPUR), with analysis by the firm Jacobs Engineering Group (hereinafter "Jacobs"), released *Bumper to Bumper* [1] (hereinafter the Report), a research brief projecting that [transit service cuts](#) would worsen Bay Area traffic if voters do not approve the Regional Transit Measure (RTM, approximately \$1.2 billion per year on average) and San Francisco's Proposition H (approximately \$170 million per year). Headline outputs include added Bay Bridge delays of 33 minutes (morning) and 43 minutes (evening), 498 million additional vehicle-miles traveled (VMT) per year, and \$3,280 in added annual costs per rider who shifts to driving (about \$174 million per year in aggregate).

This paper reconstructs the Report's analytical chain from its published appendix and from BART's October 2025 ridership data and reaches the following findings. **(1)** The study is a static, scenario-based diversion analysis built on observed 2025 data; it is not a ridership forecast. **(2)** The mode-shift inputs (56%, 30% and 25%) are stated but not derived, and the station-by-hour-by-origin-destination diversion matrix is not published, so the principal outputs cannot be independently reproduced. **(3)** The 15 BART stations assumed closed are not the 15 lowest-ridership stations: they total 24,456 weekday boardings against 21,513 for the lowest 15, a difference of 13.7%. **(4)** Under the stated assumptions the 15 closures generate roughly 8,900 added automobile trips per weekday, so the 498-million-VMT and Bay Bridge results depend principally on the assumed shift from frequency reductions and on other agencies. **(5)** Order-of-magnitude checks show the Bay Bridge result to be borderline-plausible but sensitive to two unpublished parameters. **(6)** The Report's conclusion that the measures are the only realistic and timely way to avoid severe cuts extends beyond what its analysis tests. **(7)** SPUR's sponsorship of the measure and Jacobs' campaign and contract relationships bear on how the Report should be considered.

1. Introduction and Scope

This paper examines the logic behind the impacts described in SPUR's September 2026 report *Bumper to Bumper* [1]: the reconstruction of BART station ridership impacts, the mode-shift assumptions, the annual 498-million-VMT result, the Bay Bridge congestion methodology, the population and fiscal figures cited, and the sponsorship and consultant relationships surrounding the Report. It also considers how far the Report's conclusions extend beyond the question its analysis addresses.

Conventions. Bracketed numerals refer to the Notes and Sources at the end of the paper. Figures described as a "reconstruction" are computed here from published inputs and are not SPUR figures. Unless noted, "trips" are one-way automobile trips per weekday.

2. Credibility: Sponsorship, Disclosure, and Consultant Relationships

SPUR's Bumper to Bumper (the Report) presents traffic projections relevant to the November 2026 regional transit tax, Proposition RTM. The Report's author, sponsoring organization and technical consultant have documented political and financial relationships with the campaign or with transportation agencies that could receive its revenues.

The existence of these relationships is documented. Whether they influenced the research is a separate question. This section examines the potential conflicts of interest and risks of bias arising from those relationships. The Report's methodology, assumptions and projections are evaluated separately in other sections.

2.1 Sponsorship and Campaign Leadership

Documented facts

The Report acknowledges that SPUR sponsored Proposition RTM. In a September 18, 2026 publication, SPUR stated that it is "co-leading the Connect Bay Area campaign supporting Prop. RTM." SPUR also acknowledges participating in the development of SB 63 through legislative testimony, stakeholder negotiations and advocacy.

The Report's author, SPUR Transportation Policy Director Laura Tolkoff, signed a January 2026 letter to the Public Transit Revenue Measure District identifying herself as "Director/Principal Officer" of the Connect Bay Area Transit Committee. She also signed campaign finance disclosures as treasurer through April 2026. SPUR reported more than \$63,000 in in-kind campaign contributions over the last 7 months.

SPUR's annual materials identify BART, SFMTA, AC Transit, VTA, SamTrans, MTC, SFCTA and the Transbay Joint Powers Authority among its financial supporters.

Analysis and potential bias

SPUR was not merely studying a public policy proposal; it was actively participating in the campaign to enact it. Tolkoff's documented campaign leadership establishes a direct relationship between the Report's author and the political organization promoting the tax.

These roles create a potential conflict between SPUR's political objective and the independence expected of objective research. Funding relationships with transportation agencies add another potential institutional interest. None of these relationships establishes that the research was manipulated, but they are material considerations when evaluating the Report's independence and potential for confirmation bias.

2.2 Disclosure in News Coverage

Documented facts

Following the Report's September 22 release, news outlets varied in how they identified SPUR's political involvement:

- ABC7 characterized the study as an “independent report” without explaining SPUR's campaign leadership.
- USA Today reported the findings without identifying SPUR's sponsorship or campaign leadership.
- Bay Area News Group, through the Mercury News and East Bay Times, disclosed SPUR's campaign role in its opening paragraph.
- KQED and KRON4 disclosed SPUR's relationship to the campaign farther into their coverage.

The Society of Professional Journalists' Code of Ethics calls for identifying sources clearly so audiences can evaluate their reliability and motivations.

Analysis and disclosure concerns

SPUR's acknowledgment that it “sponsored” RTM is factually accurate, but that single description does not fully convey its co-leadership of the political campaign or Tolkoﬀ's documented campaign officer roles.

For readers evaluating the credibility of the traffic projections, these are material affiliations. News coverage describing the study as independent, or presenting it without sufficient context about its political sponsorship, risks creating an incomplete impression of the research's institutional independence.

This is a criticism of transparency and attribution, not proof that reporters intentionally concealed information or that the study's findings are incorrect.

2.3 Jacobs: Financial Interests and Consultant Independence

Documented facts

Jacobs provided the technical traffic analysis for Bumper to Bumper. Jacobs is also an engineering and program-management contractor for several Bay Area transportation agencies.

Our research identified approximately \$121.9 million in authorized contract ceilings and assigned work associated with Jacobs across BART, MTC, SFMTA, SamTrans, Golden Gate and Caltrain, or approximately \$122.4 million including a conditional MTC amendment [2d]. These figures represent contract authority and assigned work, not necessarily amounts paid, and some contract ceilings are shared with other firms.

Jacobs Engineering contributed \$150,000 directly to the Connect Bay Area Transit campaign through three \$50,000 contributions in March, May and July 2026. Jacobs is listed among SPUR's business donors in the \$5,000–\$9,999 tier. A Jacobs executive also holds a policy leadership position with the Bay Area Council, another campaign co-leader.

StreetLight Data, the transportation data provider used in the Report, is a wholly owned subsidiary of Jacobs.

The Report does not disclose Jacobs' campaign contributions or transit-agency contract relationships, nor does it specify whether Jacobs was compensated for the analysis.

Jacobs was also involved in BART's Inspector General investigation of billing and verification deficiencies on the Transbay Tube seismic retrofit project, where Jacobs served as construction manager. The

investigation identified approximately \$1.7 million in inadequately verified billings and potential damages and penalties of up to \$8.3 million under the California False Claims Act [5]. BART subsequently entered into a \$1 million settlement agreement with Jacobs concerning the matter.

Analysis and potential bias

Jacobs' relationships are relevant for two distinct reasons. First, its existing transit-agency business creates a commercial interest in the continued financial capacity of agencies that purchase engineering and consulting services. Second, its direct contributions to the campaign demonstrate financial support for passage of the measure.

Passage of RTM would not automatically result in new Jacobs contracts, and the identified contract values do not establish how much future revenue the company might receive. Nevertheless, the combination of its campaign contributions, relationships with SPUR and the Bay Area Council, and substantial transit-agency contracting activity creates a reasonable concern about financial independence.

These facts support an appearance-of-conflict concern; they do not establish that Jacobs altered its analysis to favor the campaign. The absence of these disclosures in the Report limits readers' ability to evaluate the consultant's financial interests when assessing its independence.

2.4 Implications for Report Credibility

The documented record establishes that SPUR and Laura Tolkoff participated directly in the campaign supporting Proposition RTM, while Jacobs provided technical analysis despite having financial relationships with the campaign and transit agencies.

These facts do not prove that Bumper to Bumper contains inaccurate projections, deliberate manipulation or actual analytical bias. They do establish material political and financial interests that create a credible risk of bias and an appearance of conflicts of interest.

Accordingly, the Report should be evaluated as research produced within an active policy advocacy environment, rather than presumed independent solely because it contains technical analysis. Its conclusions require assessment on their own merits, including the separate methodological review presented elsewhere in this paper.

3. The Report's Analytical Methodology

3.1 Data and method

The Report does not provide a station-by-station projection of ridership losses, nor a conventional transit demand model of the form “service falls 50%, ridership falls X%.” Its chain of reasoning is instead:

October 2025 boardings (BART by hour; Caltrain weekend by station; Muni by route) → assumed service cuts and 15 BART and 10 Caltrain station closures → an assumed share of affected riders who drive (56% / 30% / 25%) → trip assignment using StreetLight origin-destination data → vehicles added to Caltrans PeMS 2025 counts at eight bottlenecks → delay computed by the Moskowitz method → annualization (250 days, with Monday and Friday delays at 50% of midweek values) [1, pp. 26-30].

SPUR states explicitly that it used September/October 2025 actual ridership rather than forecasting future ridership: October 2025 hourly ridership by line for BART, September/October 2025 weekend ridership by origin station for Caltrain, and October 2025 route-level boardings for Muni [1, pp. 26, 28]. The BART system total used is consistent with BART's own October 2025 snapshot of 199,151 average weekday boardings [2b]. The analysis therefore **does not forecast how ridership itself would evolve in response**

to service cuts; it applies the proposed disruption to current travel behavior. The result is a static, scenario-based planning estimate rather than a behavioral forecast or equilibrium model.

The Report identifies the assumed closed stations but does not publish the underlying 2025 boardings by station, nor a table of projected lost transit trips and resulting automobile trips. The assumed BART closures are Dublin/Pleasanton, West Dublin/Pleasanton, Castro Valley, Antioch, Pittsburg/Bay Point, Pittsburg Center, North Concord/Martinez, Orinda, Colma, South San Francisco, San Bruno, Millbrae, South Hayward, Oakland Airport, and Warm Springs/South Fremont. For Caltrain the Report identifies San Bruno, South San Francisco, Bayshore, Gilroy, San Martin, Morgan Hill, Blossom Hill, Capitol, College Park and Tamien [1, p. 10]. The Report notes that BART and Caltrain have not yet specified which stations would close [1, p. 10].

The traffic-impact chain is approximately: 2025 transit boardings → assumed service disruption → assumed percentage shifting to cars → assignment of those trips to routes → addition to existing traffic → Moskowitz bottleneck calculation → delay. The +33 minute (AM) and +43 minute (PM) Bay Bridge results are therefore downstream of an assumed diversion of existing transit trips into cars rather than of an independently forecast change in ridership.

3.2 Stated SPUR report limitations

The Report acknowledges that it includes no dynamic behavioral response, no change in origins or destinations, no fare changes, incomplete transfer effects between operators (Muni-related results are likely understated for lack of transfer data), and no AC Transit in the bottleneck results; it states that its forecasts “cannot fully account for many dynamic factors” [1, pp. 28-30]. Its approach includes the use of observed 2025 data (BART ridership, Caltrans PeMS) rather than projections; reliance on the agencies’ own published contingency plans [7]; restriction of its claims to eight bottlenecks, with a statement that its findings “represent a fraction” of total delay [1]; the exclusion of fare effects and ride-hail; and a Monday/Friday adjustment that sets delays at 50% of midweek values [1, p. 29].

4. Behavioral Assumptions: The Mode-Shift Inputs

The critical mode-shift assumptions are: **56%** of riders at an end-of-line station that is closed shift from transit to driving; **30%** at any other station that is completely eliminated; and **25%** at a station that remains open but has reduced service [1, pp. 16, 28]. For an end-of-line closure the next open station is 13-16 miles away [1, p. 16], so some riders would be expected to shift; the open question is the magnitude of the rate.

These percentages are the linkage between the transit-service scenario and the automobile-congestion results, and they drive every downstream calculation. The Report states that they reflect station service, distance to the next station and transit alternatives, but **it publishes no justification for those assumptions**: no data, calibration or sensitivity range for them [1, pp. 16, 28]. The behavioral inputs are asserted rather than derived. It has been suggested by one independent reviewer that the percentages were selected because they yielded results desired by the Report’s sponsor.

The meaning of “shift to driving” is also not fully specified. The parking analysis treats some shifted riders as continuing to ride BART by driving to a farther station [1, p. 31], whereas the bottleneck analysis implies cars entering a highway corridor. The two behaviors place very different loads on, for example, the Bay Bridge, and the Report does not state how the 56/30/25% shares were divided between them.

The direction of any bias in the outcomes is not determinable from the published material. Where BART’s transbay capacity falls sharply (three lines at 30-minute headways, with Red and Green lines only in the peak direction at peak, frequency unstated [1, p. 11]), capacity rather than preference may limit who can

ride, and the share pushed to other modes could exceed 25%. Conversely, SPUR states that it adjusted for origin-destination patterns, noting that riders crossing the bridge in the morning may keep riding BART because it is more reliable than driving [1, p. 29], which would push the effective transbay shift below 25%. Without the origin-destination matrix neither direction can be asserted.

5. Reconstruction of the BART Station Calculation

BART's October 2025 data show approximately 199,151 average weekday boardings systemwide [2b]. The 15 stations selected by SPUR account for 24,456 weekday boardings, or approximately 12.28% of the system total. Applying SPUR's stated shift rates yields the reconstruction in Table 2.

Table 2. Reconstruction of added automobile trips from the 15 assumed BART station closures

Station	Oct. 2025 weekday boardings	Category used in reconstruction	Shift	Implied auto trips/day
Dublin/Pleasanton	3,434	End-of-line	56%	1,923
West Dublin/Pleasanton	1,432	Other closed	30%	430
Castro Valley	1,419	Other closed	30%	426
Antioch	2,041	End-of-line	56%	1,143
Pittsburg/Bay Point	2,594	Other closed	30%	778
Pittsburg Center	581	Other closed	30%	174
North Concord/Martinez	698	Other closed	30%	209
Orinda	1,478	Other closed	30%	443
Colma	1,764	Other closed	30%	529
South San Francisco	1,596	Other closed	30%	479
San Bruno	1,724	Other closed	30%	517
Millbrae	2,164	Other closed	30%	649
South Hayward	1,617	Other closed	30%	485
Oakland International Airport	558	End-of-line	56%	312
Warm Springs/South Fremont	1,356	Other closed	30%	407
TOTAL	24,456			8,905

Sources: BART October 2025 Monthly Ridership Snapshot [2b]; shift rates from [1, pp. 16, 28]; computation by the author. Categories are assumed because SPUR does not publish its classification.

Under this reconstruction the 15 closures generate approximately 8,905 additional automobile trips per weekday, about 4.47% of all BART weekday boardings. The figure is a reconstruction, not a SPUR number, and it depends on how stations are classified. SPUR's Exhibit 2 legend shows Millbrae as the terminus of the Red and Yellow lines, yet the reconstruction treats it as an ordinary 30% closure; at 56% the closure component rises from about 8,905 to about 9,470 trips per day, so 8,905 is probably a slight underestimate.

Cross-check against BART's origin-destination file. BART's October 2025 station-to-station workbook [16] (average weekday, entry station by exit station; no hourly detail) confirms the station inputs. Weekday entries total 199,276 against the snapshot's 199,151, and individual stations match within about 0.5% (Dublin/Pleasanton 3,436 vs. 3,434; Pittsburg/Bay Point 2,594 vs. 2,594; Millbrae 2,170 vs. 2,164). Applying SPUR's rates to the origin-destination entries gives 8,934 auto trips per day (9,498 with Millbrae at 56%). Weighted by SPUR's shift rates, about 3,840 of the roughly 8,930 diverted closure trips (43%) are westbound transbay trips. The share of each closed East Bay station's riders bound for San Francisco or the Peninsula is: Orinda 73%, Dublin/Pleasanton 66%, Pittsburg/Bay Point 63%, West Dublin/Pleasanton 62%,

Castro Valley 61%, North Concord/Martinez 59%, Antioch 56%, South Hayward 39%, Pittsburg Center 38%, and Warm Springs/South Fremont and Oakland Airport 30% each [16].

6. Station Selection Misstatements & Impact

SPUR states that it assumed “the lowest-ridership BART and Caltrain stations” would close and that its results are therefore “intrinsically conservative” [1, p. 10]. The 15 stations SPUR selected are not the 15 lowest October 2025 average-weekday-boarding stations (Table 3). The lowest 15 total **21,513** weekday boardings, while SPUR’s 15 total **24,456**, which is **13.7% higher** (12.3% of systemwide weekday boardings, against 10.8% for the lowest 15). SPUR’s list omits Milpitas (1,453), Lafayette (1,860), Berryessa/North San Jose (1,940) and North Berkeley (2,037), and includes Dublin/Pleasanton (3,434), Antioch (2,041), Pittsburg/Bay Point (2,594) and Millbrae (2,164). Re-testing against BART’s origin-destination file gives 24,540 for SPUR’s 15 against 21,605 for the true lowest 15 (13.6% more), with the same stations in and out [16].

Table 3. The 15 lowest-ridership BART stations, October 2025, and whether SPUR included them

Rank	Station	Oct. 2025 avg. weekday boardings	In SPUR’s 15?
1	Oakland International Airport	558	Yes
2	Pittsburg Center	581	Yes
3	North Concord/Martinez	698	Yes
4	Warm Springs/South Fremont	1,356	Yes
5	Castro Valley	1,419	Yes
6	West Dublin/Pleasanton	1,432	Yes
7	Milpitas	1,453	No
8	Orinda	1,478	Yes
9	South San Francisco	1,596	Yes
10	South Hayward	1,617	Yes
11	San Bruno	1,724	Yes
12	Colma	1,764	Yes
13	Lafayette	1,860	No
14	Berryessa/North San Jose	1,940	No
15	North Berkeley	2,037	No
	Total, lowest 15	21,513	
	Total, SPUR’s 15	24,456	13.7% higher

Source: BART October 2025 Monthly Ridership Snapshot [2b]; computation by the author.

Context. SPUR also stated that closing these stations would allow BART to take trackway out of service [1, p. 11], which suggests a segment-based logic (closing contiguous line ends) rather than a pure ranking. That is a legitimate modeling choice, but the accurate description in the Report would be “low-ridership stations grouped by track segment.” The segment rationale fits the Contra Costa, Dublin and Peninsula clusters but does not obviously explain a closure such as Warm Springs, which sits between open stations. Antioch is within about five weekday entries of the 15th-lowest station and Millbrae is 17th-lowest, so those two are marginal departures; the substantial departures are Dublin/Pleasanton (3,434) and Pittsburg/Bay Point (2,594), each at the end of a contiguous closure cluster. In system terms the difference is modest: about 2,900 boardings, under 1.5% of BART weekday boardings.

Effect on diverted trips. Using SPUR's shift rates, the literal bottom 15 would generate about 6,600 auto trips per day if only Oakland Airport is treated as end-of-line, so SPUR's set yields about 35% more. If Berryessa/North San Jose (the Orange/Green terminus) is also treated as end-of-line at 56%, the bottom-15 figure is about 7,100 and SPUR's set yields about 25% more. The discrepancy is therefore worth roughly 25-35% more diverted closure trips, depending on classification. Exactly how to adjust the Jacobs impacts cannot be determined, because the riders per station used in the impact analysis were not disclosed.

Caltrain. A supplementary reconstruction [13] estimates October 2025 Caltrain boardings at the ten assumed closure stations at 56,721 in total (about 5.3% of roughly 1.07 million system boardings); closure stations are a small share of Caltrain use, as with BART. South San Francisco, at 24,320 monthly boardings, is nearly seven times the average of the other nine (about 3,600), and SPUR's Caltrain selection has not been tested against the full system ranking.

7. Sensitivity Analysis

The validity of the impact analysis is dependent upon the mode shift assumptions employed in the calculations. Holding the three stations treated as end-of-line at a 56% shift and varying the shift assumed for the other closed stations produces the station-closure-only sensitivity in Table 4. The 15-station closure component moves between about 5,200 and 12,600 automobile trips per day across a 10%-50% range [2a]. SPUR itself presents no such test.

Table 4. Sensitivity of closure-only auto trips to the shift rate at other closed stations

Other closed-station shift	Implied auto trips/day	Comment
10%	5,221	End-of-line stations fixed at 56%
15%	6,142	End-of-line stations fixed at 56%
20%	7,063	End-of-line stations fixed at 56%
25%	7,984	End-of-line stations fixed at 56%
30% (SPUR's stated rate)	8,905	End-of-line stations fixed at 56%
40%	10,748	End-of-line stations fixed at 56%
50%	12,590	End-of-line stations fixed at 56%

Source: computation by the author from Table 2 inputs; see Appendix A.

At the stated 30% assumption the closures generate about 8,905 trips per day; even at 50% the result is about 12,590. The 15 BART station closures alone therefore cannot account for the 498-million-VMT result as we show in the following section.

8. Implausible 498-Million-VMT Result

SPUR reports 498 million additional vehicle-miles of travel annually. Using its 250-working-day framework, this is approximately 1.992 million additional VMT on a typical weekday. At 10, 15 or 20 miles per one-way trip that implies roughly 200,000, 133,000 or 100,000 diverted trips per day, far above the roughly 8,900-9,500 trips from BART closures.

The 8,905 daily trips from the 15 closures would generate about 33.4 million annual VMT at 15 miles per trip, 44.5 million at 20 miles, or 66.8 million at 30 miles. For 8,905 trips alone to produce 498 million VMT, trips would have to average about 224 miles. The large missing amount of VMT must therefore come from broader frequency reductions across BART, Caltrain, Muni and AC Transit, together with trip-length assumptions and the undisclosed origin-destination assignment.

Applying SPUR's own 25% shift to the remaining roughly 174,700 BART weekday boardings adds about 43,700 trips, so BART alone yields about 52,600 auto trips per day, of which the closures are about 17%. The remaining 50,000-150,000 trips would come from Muni, Caltrain and AC Transit, which the Report does not break out; this is plausible (Muni route eliminations alone touch 55,300 weekday boardings [1]) but not shown. In addition, $\$174 \text{ million} \div \$3,280$ implies roughly 53,000 shifted drivers, and $498 \text{ million miles} \div 53,000$ is about 9,400 miles per driver per year (about 38 miles per workday, or roughly 19 each way), which is consistent with the Report's assumption of 10 additional miles each way plus the original trip length. The headline figures are therefore mutually consistent at an order-of-magnitude level if we assume Jacobs did the (undisclosed) calculations as we describe.

The CO2 impact of those additional miles is dependent upon the nature of the vehicles used, which is also not disclosed. Hybrids and EV's pollute much less than traditional ICE vehicles, but without more disclosure of assumptions and calculations we cannot validate the Report's claims.

Units. The Report defines a trip as one boarding and assumes two boardings equal one passenger [1, pp. 28, 35]. Figures such as 8,905 are one-way auto trips, derived from boardings. Because SPUR treats two boardings as one passenger, they correspond to roughly 4,450 commuters driving round trips. The $\$174 \text{ million} \div \$3,280 \approx 53,000$ shifted drivers correspond to about 106,000 one-way trips per day, and $498 \text{ million VMT} \div 250 \text{ days} \div 106,000$ is about 19 miles per one-way trip, in line with average BART and Caltrain trip lengths (about 13.7 and 19.5 miles in the supplementary file [13]; the Caltrain figure is arithmetic from NTD inputs, $144.2 \text{ million} \div 7.405 \text{ million}$, and has not been verified at source). There is no unit inconsistency in SPUR's headline numbers.

The VMT figure is not independently reproducible, because the cross-agency factor and the trip lengths are not shown. **The SPUR/Jacobs VMT estimate can be characterized as at least unjustified, however it is also minor.** For perspective, the total daily VMT in the RTM region in was 135.2 million in 2024², and that number has since grown. The impact of the unsubstantiated VMT claims in the SPUR report would thus be no more than 1.4%. That impact could be easily offset by an increase in work from home.³

9. Traffic Delays Lack Substantiation

9.1 What is published and what is missing

The Bay Bridge delay is the most difficult part of the Report to audit. SPUR reports approximately +33 minutes in the morning and +43 minutes in the evening. The Report states that it used October 2025 hourly BART ridership by line and station [1, pp. 26, 28], StreetLight origin-destination data for trip lengths [1, p. 30], and adjustments for origin-destination patterns and congestion conditions [1, p. 29], rather than simply multiplying total BART ridership by 25%. The missing information is the number of additional automobiles assigned to the bottleneck in each peak hour and where they come from. Without the hourly diversion matrix the delay figures cannot be reproduced from the public tables. The relevant question is not how many BART riders shift to automobiles, but how many of those shifted trips enter the Bay Bridge bottleneck in the modeled peak hour and direction. No hourly October 2025 origin-destination file was located on BART's website; the monthly BART workbook lacks hourly detail [16]. Similarly, the StreetLight data was not provided for validation.

² Go to [Table HM-71 - Highway Statistics 2024 - Policy | Federal Highway Administration](#); review the 8 tables and total the dozen relevant to RTM counties and the total was 135,201,000 daily VMT for 2024.

³ [A study of remote work's effect on traffic found](#) that vanished trips accounted for about 65% of the 2019-2021 traffic drop in Bay Area ZIP codes. A MTC's Vital Signs showed Bay Area driving declining about 28 million miles per day from 2019 to 2024. At 65% that's up to about 18 million miles per day saved from remote work in 5 years.

9.2 Order-of-magnitude check

BART's 2024 *Role in the Region* study reports that if all BART riders shifted to driving, morning-peak-hour Bay Bridge traffic would rise about 73% (Caldecott Tunnel: 22%) [14]. The *Chronicle* summarizes the same study as up to 5,400 additional cars on the Bay Bridge [15]. As an illustrative approximation (not SPUR's method), if N extra vehicles per hour arrive over a three-hour peak (SPUR defines the peak as 6-9 a.m.) at a bottleneck with throughput C , the last vehicle through waits about $3N/C$ hours longer. With C of 7,000-9,000 vehicles per hour (assumed; $5,400 \div 0.73 \approx 7,400$ is the base implied by BART's figures) and +33 minutes, N is about 1,300-1,700 per hour; if the delay is an average over the peak rather than the end-of-peak value, N roughly doubles to about 2,600-3,300. That is roughly a quarter to three-fifths of the 5,400 "all riders drive" figure, which brackets SPUR's 25%-56% assumptions. The +33-minute result is therefore not implausible on its face, but it cannot be confirmed from published information, because the answer is highly sensitive to capacity, occupancy and peak duration. A supplementary reconstruction cited approximately 21,000 pre-COVID transbay riders in the AM peak hour and about +2,000 westbound AM bridge trips relative to 2019.

9.3 Test with BART's origin-destination workbook

BART's October 2025 workbook [16] shows about 51,900 weekday East-to-West and 53,100 West-to-East transbay trips (105,000, or 53% of all BART weekday trips). Applying SPUR's 25% rule mechanically to every open East Bay station's westbound transbay trips, plus the closure shifts, gives an upper bound of about 14,400 diverted westbound trips per day (28% of the base). If origin-destination adjustments lower the effective shift at open stations, the figure falls to about 10,200 (15%), 8,100 (10%) or 6,000 (5%). A second computation restricted to East Bay-origin trips with San Francisco destinations (average weekday, all day) gives 49,841 transbay trips, of which 9,063 originate at SPUR-closed East Bay stations (18.2%); applying 56%/30% to those yields 3,606 diverted trips, and applying 25% to the remaining 40,778 yields 10,195, for a total of 13,801 additional East Bay→San Francisco auto trips per day (27.7% of the base) [16][18]. The two computations differ in geographic definition and are consistent with each other.

The missing parameter is s , the share of daily westbound trips falling in the single peak hour, which only hourly data can supply. Table 5 shows illustrative cars per hour (one rider per car; divide by about 1.2 for carpooling).

Table 5. Illustrative added westbound cars per hour by peak-hour share (s) of daily diverted trips

Peak-hour share s	Closures only	10% open-station shift	Mechanical 25% rule
10%	~380	~810	~1,440
15%	~580	~1,210	~2,160
20%	~770	~1,610	~2,880
25%	~960	~2,020	~3,600
30%	~1,150	~2,420	~4,320

Source: computation by the author from BART's October 2025 origin-destination workbook [16]. The workbook has no hourly dimension; values are sensitivity cases, not estimates of the actual peak share.

Against the rough requirement of about 1,300-3,300 extra vehicles per hour for +33 minutes, three observations follow. First, the closures alone (about 400-1,150 cars per hour) cannot produce the result; the frequency-cut assumption does the work. Second, BART's reported 5,400-car figure would imply s of roughly 10%-12.5% of daily westbound trips, which puts the mechanical 25% rule at about 1,400-1,800 cars per hour, inside the required range but near its low end, while a 10% effective shift (about 800-1,000)

would fall short. Third, if s is 20%-25%, the 25% rule overshoots the requirement and a lower effective shift suffices. The test does not cover the evening (+43) direction or the other seven bottlenecks.

A parallel sensitivity analysis using the 13,801 daily East Bay→San Francisco figure and the 2025 SFCTA westbound AM peak-period volume of about 15,400 vehicles (7-9 a.m., April-May 2025) [17][18] indicates that if 20%-50% of daily diverted transbay trips occurred in the 7-9 a.m. window, added Bay Bridge volume would be roughly 1,380-3,450 vehicles per hour (Table 6), against an average baseline of about 7,700 vehicles per hour over that period.

Table 6. Added Bay Bridge vehicles by assumed share of daily diverted trips falling in 7-9 a.m.

Share of daily diverted trips in 7-9 a.m.	Added vehicles per hour	Increase vs. 15,400 two-hour baseline
20%	1,380	17.9%
25%	1,725	22.4%
30%	2,070	26.9%
35%	2,415	31.4%
40%	2,760	35.8%
45%	3,105	40.3%
50%	3,450	44.8%

Source: SPUR Jacobs Bay Bridge numerical audit workbook [18], using SFCTA 2025 volumes [17]. Sensitivity cases only; the BART file has no hourly field.

9.4 Implication as to Validity

The +33-minute figure is borderline-plausible and highly sensitive to two unpublished numbers: the effective transbay shift and the peak-hour share of trips. It is neither demonstrated nor refuted by the published materials. Reproducing it requires an undisclosed hourly BART origin-destination matrix or Jacobs’ assigned peak-hour diversion table.

10. Populations and Boardings Affected

SPUR states that nearly 430,000 people live within one mile of a BART or Caltrain station assumed to be closed [1]. This is a measure of the population losing convenient access, not a count of lost transit riders. Critics’ characterization of the 430,000 figure as a “gross overstatement” because less than 4% of Bay Area trips are on public transit⁴, a figure closer to 17,000 might be justified, seems too low. The fact that only 8% of commuters used public transit may provide a better impact estimate.⁵ A region-wide transit share does not apply directly to near-station residents, who ride at far higher rates (SPUR cites a factor of five) [1, p. 15]. A better-grounded bound is that the 15 impacted BART stations carry 24,456 weekday boardings, about 12,000 round-trip riders [2a][2b]. That would appear to be the maximum potential BART population impact.

Similarly, Muni’s 55,300 weekday boardings plus 37,870 weekend boardings [1] are boardings exposed to route elimination, not a forecast that Muni will lose that many unique riders.

⁴ [MTC/ABAG's Plan Bay Area 2050+ Draft EIR](#), Table 2-12 pg. 2-27; underlying 2023 figures are approximately 906,900 transit trips out of 24.864 million total daily trips, or 3.65%, rounded to 4%.

⁵ [MTC's Vital Signs - Commute Mode Choice](#), “8% of Bay Area commuters took public transit on a typical workday in 2024”

On balance, the impacted population is not 430,000 residents, but closer to 12 to 25,000 riders, depending upon Caltrain ridership and work from home accommodations.

11. Fiscal Impact

11.1 SPUR's cost estimates

SPUR estimates that transit cuts could cost riders who shift to driving an additional \$3,280 per year in transportation expenses, a figure it compares with a sales-tax cost of “less than \$7 per person per month, or \$82 annually” for households up to 80% of median income, concluding that the tax is less than 3% of the cost ($82 \div 3,280 \approx 2.5\%$) [1]. Several features of the comparison bear on its interpretation. The \$82 is a per-person estimate from 2022-23 consumer-spending data for lower-income households [1, fn. 10]. The half-percent rate applies in four counties, but San Francisco's rate is double (the footnote gives \$36.10 versus \$18.05 per household per month), before Proposition H's parcel tax is added. The comparison sets a tax paid by everyone against a cost borne only by riders who shift. The \$3,280 includes an assumed \$10 per day in parking for all shifted drivers and \$5 per day in transit-fare savings credits, which are rough straight-line estimates [1, p. 33]. The comparison is not a net-benefit analysis, merely a cash flow estimate.

SPUR's Report describes RTM as about \$1 billion a year in taxes; however, MTC's own projection is \$16.93 billion over 14 years (about \$1.21 billion per year on average), rising from about \$980 million in the second year to \$1.48 billion in 2041 [2c].

11.2 The compiled cash-flow comparison

If the measures do not pass, the Muni service cuts documented on page 13 of the Report [1, p. 13] would reduce Muni spending by approximately \$300 million (the midpoints of SPUR's ranges: \$110 million for cutting 20 routes, \$55 million for doubling wait times, \$30 million for ending service at 9 p.m., and \$105 million for reducing historic service). Those are the only cash flows documented in the report; **none are provided for the service cuts at other agencies.**

For the regional population, the documented cash flows are an increase in commute costs of \$174 million annually to affected drivers, and the costs of the increased sales and parcel taxes to all residents. Measure H is estimated to cost San Francisco residents \$170 million annually. Measure RTM taxes would average \$1.2 billion annually. Thus, **the adoption of the two taxes is approximately \$1.2 billion per year more expensive to residents than NOT adopting them.**

Note that this is an accounting of cash flows, not a net-welfare estimate. The No Tax cost includes \$174 million for shifted drivers but omits delay costs to all drivers, emissions, parking spillover, forgone trips, and the welfare loss of riders who cannot drive; SPUR did not monetize these. A valid net-welfare comparison would require valuing the lost service and the time costs, which the Report does not provide.

11.3 Other quantified impacts and BART's own conflicting statements

While SPUR cites operating expense deficits at other agencies, no quantified cuts are documented. The Report does quantify BART's phase 1/2 plan as a reduction of more than 60% in train hours and describes a phase 3 full shutdown that it does not model [1, p. 11]; Muni cuts are quantified on page 13 [1, p. 13]. BART has also stated in a recent presentation that “Service cuts won't solve BART's budget shortfall” (Figure 1). SPUR makes the same point in its Exhibit 10 (“cuts won't save transit”) [1, p. 25], so the two are in agreement. This observation raises a different question: if cuts cannot close the gap, what is the real scenario that requires analysis? (See Section 12.)

14 of 25 Automatic Zoom

- Since 2020, BART has balanced demands for service restoration and cleaner, safer trains with the need to reduce costs.
- But, as an asset-intensive heavy rail operator, only about 40% of BART's operating cost scales with service.
 - In 2020, a 40% service reduction reduced operating cost by approximately 12%
- **Service cuts won't solve BART's budget shortfall.**
- Instead, BART is focused on strategic cost reductions, increasing revenue, and maximizing resources, while maintaining service quality.



14 San Francisco Bay Area Rapid Transit District

Controlling Costs and Growing Revenue

BART

Advance Revenue

Figure 1. BART presentation slide (slide 14): “Service cuts won’t solve BART’s budget shortfall.” Source: BART presentation [CCTA Authority Board Meeting 9/16/26. [Agenda Item 4.A, slide 14](#)].

Note on the above slide that BART cites the lack of savings from a 40% service reduction in 2020. At that time employees were sent home with full pay, and the system incurred additional costs for Pandemic prevention (e.g. cleaning protocols, hand sanitizer stations, COVID testing of employees) on the 60% of service being provided. Thus, 2020 was not a relevant example for how much could be saved by cutting service now, if one included layoffs, reduced overtime, and no Pandemic costs. The Report should have fully analyzed the cost impacts of service reductions in today’s commute environment.

12. Scope of the Analysis Versus Scope of the Conclusion

12.1 What the analysis tests

A crucial point is that the Report analysis does not attempt to forecast how ridership itself will evolve in response to the proposed service cuts. It takes current travel behavior and applies the proposed service disruption to it. A research brief that models one question is not obliged to model every alternative. However, the overarching flaw is that the Report’s conclusion extends well beyond the question it analyzes. After modeling the agencies’ contingency plans, it asserts that passing both measures is “the only realistic and timely way to avoid severe service cuts” [1, p. 25] and that “if these measures do not pass, the consequences will be dire” [1, p. 24]. Those are policy claims about the counterfactual space, which the analysis does not test. The Report shows only what happens if the assumed cuts occur, not that they are inevitable, optimal, or the only response [2a].

12.2 The counterfactual analysis is itself flawed

- **The cuts are sourced from the transit agencies.** The Report states that the analysis “reflects the projected cuts the agencies would likely make” and that BART and Caltrain “have not yet specified which stations” [1, p. 10]. The Voice of San Francisco notes that no independent financial analysis

showing the cuts to be necessary has been published [3]. The agencies seeking the tax supplied the cut scenarios. **They are not “forced” to adopt those actions, they are choosing them.**

- **The scenario is not a stable equilibrium by SPUR’s own account.** The Report argues that cuts cannot balance budgets and would trigger a “death spiral” [1, p. 25], and BART’s phase 3 contemplates full shutdown, which the Report does not model [1, p. 11]. If cuts cannot close the gap, the real alternatives to the tax are some mix of fare increases, cost restructuring, new modes of service delivery, other revenue sources, or collapse. None is analyzed.
- **Cost-structure data are not part of the Report.** Since a primary claim of the Report is that transit agency finances are under severe stress, more presentation and analysis of the financial dynamics of service, operational, and cost changes is merited. A SHIFT analysis of seven agencies using NTD data shows passenger-miles down about 51% (2019-24) and operating expenses up about 27%, so cost per passenger-mile is up about 159% ($1.27 \div 0.49 = 2.59$) [2a]. **Whether that dramatic growth in the cost per passenger mile reflects an inability or an unwillingness to scale costs to match new demand levels is not analyzed, and that insight is essential to designing alternative strategies.**

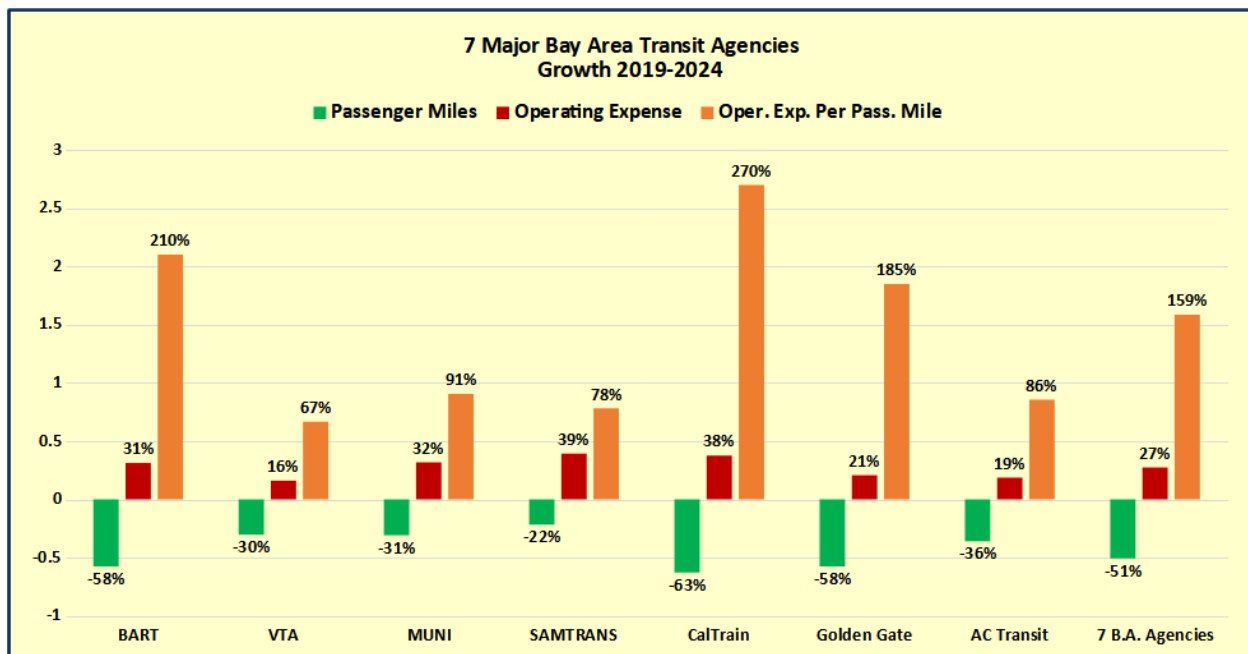


Figure 2. NTD data - Major Bay Area Transit Agencies

12.3 Alternatives not considered

The omissions in the Report go beyond the missing data, unjustified assumptions, and incomplete derivation of impacts. The following alternatives were not considered: express buses and bus rapid transit (BRT), vanpools and employer shuttles, demand-responsive service, additional remote work, staggered work hours, relocation of offices, congestion pricing, employer- or payroll-based funding, and corporate contributions [2a]. The SPUR report touches on the bus alternative only incidentally and incompletely (*matching BART’s Orinda-Rockridge capacity would take 120 buses and a dedicated lane* [1, p. 19]) and does not model any of these [*Note: buses need not match BART capacity, only carry proven ridership*].

“During the 2013 BART strike, when there were more total riders on BART compared to today, traffic congestion did generally increase, but the effects were small on average, concentrated at peak times and

on BART corridors.[20] However, the strike was a complete shutdown in October 2013, whereas BART will still run trains, just not as frequently, and will prioritize peak service. The SPUR report should cite and expand upon what actually happened in 2013 rather than using unsupported scenarios.⁶

There are several classes of alternative scenarios worthy of analysis. Several (congestion pricing, payroll taxes, high-speed-rail fund reallocation) require legislation and time, whereas agency cuts are proposed as early as 2027, which supports SPUR's "timely" point. Using available cash and investments at the regional agencies, whether by interagency loans or direct expenditure until costs can be reduced was not considered.⁷ Some alternatives (more remote work, staggered hours) are themselves behavioral responses that would reduce traffic impacts, while SPUR's model holds travel behavior fixed. A simulation of adaptive commuter behavior is required to determine the real impact of reduced ridership. All these alternatives should have been costed and compared over the prior years.

12.4 Other omissions

Not covered by the Report [1][2a]: AC Transit missing in the bottleneck results⁸; transfers among operators; fare increases (which agencies say they would impose); freight and bus delay costs beyond a qualitative mention; ride-hail costs; cumulative regional delay (only eight bottlenecks are analyzed); the value of time; and any statement of the tax's incidence beyond the lowest-income-household figure. The regressivity of the sales tax is not examined in SPUR's report.

13. Methodological Limitations of the Report

- The analysis is a point-in-time static scenario, not a long-run equilibrium forecast produced by dynamic simulation.
- Origin and destination behavior is held largely constant; people changing jobs, homes, destinations or travel times are not modeled.
- Fare changes are not incorporated, and transfers among operators are not fully incorporated; SPUR itself notes this can affect Muni-related results [1].
- The Moskowitz method is a deterministic hour-by-hour queueing calculation, common in planning-level bottleneck studies, with no feedback from congestion to future mode choice. Worse traffic would make remaining transit more attractive, an effect that works in the opposite direction from the Report's scenario and is unquantified either way.
- No justification is disclosed for the 25%, 30% and 56% assumptions, and the station/hour/origin-destination-level application of those assumptions is not published.
- The traffic model can be audited mathematically if its incremental vehicle inputs are supplied; the principal transparency gap is the missing transit-to-auto assignment. The intermediate results - a station-by-station table of lost transit trips, an origin-destination diversion matrix, and counts of added vehicles per bottleneck-hour – are also absent [2a]. The Report gives the beginning and end of its impact calculation but not the essential middle.

⁶ Email from Professor Damian Park, Oct. 3, 2026

⁷ For example the SMCTA had [\\$973 million in cash and investments as of August, 2026 \(FY26 Investment Portfolio Allocation - slide 6\)](#).

⁸ BUMPER TO BUMPER, pg. 10 "(Note: We generally focused on the three largest agencies because AC Transit had not adopted its service contingency plans at the time of this study.)"

14. Conclusions

1. **Sourcing and Credibility.** *Bumper to Bumper* is advocacy-adjacent research produced by an organization that sponsored one measure and helped shape the other, using a consultant that is reported to have given to the campaign and to hold large contracts with prospective beneficiaries. The Report discloses SPUR's sponsorship but not Jacobs' campaign or contract ties nor whether Jacobs was paid. These are legitimate grounds for discounting the Report's conclusions and for seeking independent review.
2. **Methodology and results.** The Report's numbers are plausible in direction and mutually consistent, but not reproducible, and they rest on unsupported 56/30/25% shift assumptions. The "lowest-ridership stations" statement is inaccurate by 13.7% in boardings, worth roughly 25%-35% more diverted closure trips than a literal bottom-15 list, depending on classification. BART's own origin-destination workbook confirms the station inputs and shows that the Bay Bridge result depends on two unpublished parameters (the effective transbay shift and the peak-hour share of trips), making it borderline-plausible rather than demonstrated or refuted. The Report is, at best, unjustified in its claims and, at worst, an intentional fabrication.
3. **Inadequate Scope.** The analysis establishes a conditional consequence, but the Report presents it as proof that the added taxes are the only realistic path. Counterfactuals - what the agencies would do, what else could be done, and what alternatives cost - are not examined. The Report therefore provides no basis for new taxes. Whether a tax is warranted, on whom, and in what amount, depends on analysis that has not been done.
4. **Bottom line.** Severe cuts would probably worsen traffic, by an amount and duration not yet independently verified; whether more taxes is the best response remains an open policy question. The 2013 BART strike shows that the region was able to adapt to service closures without "catastrophic" impacts [20]. With modern technologies and work/shop from home, the Bay Area is much more able to adapt than 13 years ago. **The Report does not support the conclusions it reaches.**

Recommendations

- **For SPUR and Jacobs:** publish the station/hour/origin-destination diversion matrix and the cross-agency factor; add sensitivity ranges for the shift assumptions; correct the station-selection language; disclose Jacobs' compensation, campaign giving and agency contracts; and commission an independent technical review (independent of the current Bay Area transit establishment). However, such a review would test the arithmetic only. It could not supply the missing analysis of alternatives, behavioral adaptation and cost control, which is a prerequisite for any tax proposal.
- **For the agencies and MTC:** publish a restructuring and alternatives analysis (fares, network redesign, labor and capital costs, non-tax revenue) and an analysis of what happens without the tax, including the Phase 3 case - full shutdown of BART. Presumably that last case would include transition to Bus Rapid Transit and a cost/benefit assessment thereof.
- **For independent analysts:** obtain BART's hourly origin-destination records to estimate how many shifted trips reach the Bay Bridge, Caldecott and I-680 bottlenecks under SPUR's stated 56/30/25% rules; test the Caltrain selection against full station rankings; and publish the assumptions, including end-of-line classification and bottleneck capacity. Any such estimate is a bound, not a replication.

- **For voters and journalists:** treat the delay figures as an unproven scenario rather than a forecast, and consider who benefits from the framing on each side.

Limitations of this paper

This analysis relies on the file submitted for analysis and public sources through October 7, 2026. The supplementary file [13] is an AI-assisted reconstruction; it is used here only for arithmetic analysis re-verified from stated inputs. The origin-destination workbook has no hourly detail, so the Bay Bridge tests in Section 9 are bounded scenario analyses with assumed peak-hour shares, not replications.

Appendix A. Data Files Supporting This Analysis

Two companion Excel workbooks contain the calculations summarized above [18]:

- *SPUR_Bumper_to_Bumper_BART_reconstruction.xlsx* - station-level BART reconstruction (Table 2); comparison with the lowest-ridership stations (Table 3); sensitivity analysis (Table 4); fiscal impact table (Table 7); VMT back-check (Section 8); and source and caveat notes.
- *SPUR_Jacobs_Bay_Bridge_Numerical_Audit.xlsx* - Bay Bridge audit using BART's October 2025 average-weekday origin-destination matrix (Section 9.3); closed-station origin-destination detail; peak-share sensitivity (Table 6); and matrix checks. The matrix has no hourly dimension, so the results are sensitivity cases.

Notes and Sources

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