CITY OF PALO ALTO
MEMORANDUM

DATE: October 6, 2008

TO: City Council Colleagues

FROM: Mayor Larry Klein and Council Member and VTA Board Member Yoriko Kishimoto

SUBJECT: Request to adopt resolution opposing Measure B enacting a one-eighth cent sales tax increase over 30 years in the November 2008 Santa Clara County Election

Last month, we wrote a colleagues memo that outlined some of the reasons we oppose Measure B, which would enact an additional 1/8th sales tax to be paid to Valley Transportation Authority (VTA) for the operation and maintenance of the proposed BART to San Jose and Santa Clara. That Colleagues Memo and the response from VTA General Manager are enclosed for your reference.

The Santa Clara county-wide plan and accompanying revenue and expenditure plan must be a truly county-wide plan. BART has already taken away funding from the Dumbarton Corridor which serves the Peninsula and will certainly take away from timely Caltrain, ACE and Capitol Corridor improvements and other cost-effective alternatives.

We believe VTA is improving, especially with the recent Comprehensive Operations Analysis (COA), the new rapid buses such as the 522 and community buses such as line 88. But we must make the right regional decision today so that future county taxpayers are not burdened by the wrong 30-year investment. The economic vitality and quality of life for our Valley and our city is at stake. Please join us in adopting the resolution in opposition to 2008 Measure B.

The following attachments provide documentation to oppose Measure B:

1. Resolution Opposing Measure B, November 2008

2. Colleagues Memo dated September 15, 2008 to Request to agendize discussion of Measure B, BART Sales Tax Measure.

3a. Then-Supervisor Joe Simitian’s 7/28/2000 San Jose Mercury guest opinion “Transportation tax must help us all”

3b. February 27 2004 VTA Board workshop staff recommendation: “The 25-year million Measure A revenue projection is $3.8 billion. This amount would cover DTEV (Downtown East Valley light rail), BART, and the operating assistance. An additional $97 million would be remaining during this time period for allocation to other Measure A projects.” This assumes no addition bonding of Measure A funds.
3c. June 2006 VTA Project Advisory Committee recommendations that assumed additional ¼ cent sales tax.

4. April 2005 VTA PAC (Policy Advisory Committee) rankings for 2000 Measure A projects after workshops and debates on all projects, as presented to the VTA Board of Directors. Each of 15 cities was represented by an elected official. Note Caltrain service upgrades, Bus Rapid Transit (BRT) and airport people mover rank at top after operating assistance to support current services.

5. “Table 2.2.1 from VTP 2030”. This shows that after a $20 billion investment program including BART completed by 2016, there will still be an increase of more than 500,000 drive-alone car trips and only 100,000 more transit trips. We need a more cost-effective and comprehensive transit plan for the entire county.

Finally, we enclose two longer documents for our debate on Measure B.

6. One is a think piece from Peter Lyndon, visiting scholar with the Institute of Governmental Studies at UC Berkeley, “Losing our way to the airport: comments on a big and disastrous public transportation investment”. Second is a recent Declaration made by Thomas A Rubin, expert witness, on VTA.
RESOLUTION NO.
RESOLUTION OF THE COUNCIL OF THE CITY OF PALO ALTO
OPPOSING MEASURE B ENACTING A ONE-EIGHTH CENT
SALES TAX INCREASE OVER 30 YEARS IN THE NOVEMBER
2008 SANTA CLARA COUNTY ELECTION

WHEREAS, Measure B would enact a 1/8th cent sales tax increase for the purpose of
operating and maintaining the proposed BART extension from Warm Springs to Santa Clara; and

WHEREAS, the costs for the BART extension have dramatically escalated since the $4.1
billion cost estimated in 2000 significantly reducing resources for much needed transportation
improvements elsewhere in the County; and

WHEREAS, since 2000, costs have increased by over a half billion dollars which would
have paid for Measure A commitments to Caltrain electrification and the Palo Alto Intermodal
Transit Center; and

WHEREAS, timely implementation of Dumbarton Rail and Caltrain electrification, both
projects that will greatly benefit north Santa Clara County, will be sacrificed to pay for the
runaway BART and bonding costs; and

WHEREAS, serious questions have consistently been raised by the Federal Transit
Administration regarding BART’s operational and capital financial plans as well as the cost
effectiveness and ridership projections.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Palo Alto,
opposes the one-eighth cent sales tax increase proposed by Measure B on the November 4, 2008
Santa Clara County election.

INTRODUCED AND PASSED: October 6, 2008

AYES:

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:

City Clerk

Mayor
APPROVED AS TO FORM:  

City Attorney  

APPROVED:  

City Manager  

Director of Planning & Community Environment
CITY OF PALO ALTO
MEMORANDUM

DATE: September 15, 2008
TO: Our Council Colleagues
FROM: Mayor Larry Klein and Council Member Yoriko Kishimoto

SUBJECT: Request to agendize discussion of Measure B, BART Sales Tax Measure

On August 5, 2008, Valley Transportation Authority (VTA) Board of Directors voted to put a ballot measure at the November 4th General Election this fall. Measure B would enact a 1/8th cent sales tax for 30 years for Bay Area Rapid Transit (BART) to operate and maintain the 16 mile proposed extension from Warm Springs to San Jose and Santa Clara. We oppose this ballot measure and request your support to place a proposed resolution on our agenda in early October.

BART was one of the projects proposed in the 2000 Measure A which was overwhelming passed by county voters. At the time, there were no timelines or bonding costs included. BART was estimated to cost $4.1 billion (2000 dollars). Since then, it has become apparent that supplemental vehicles and parking added an additional $562 million (in 2003 dollars) -- an incremental increase equivalent to the entire amount estimated for our county's share of Caltrain electrification costs plus Measure A allocation to Caltrain upgrades over 30 years, $171 million! In addition, bonding costs, largely to accelerate BART construction to 2016, would cost $3.8 billion (2003 dollars). In contrast, the Palo Alto Intermodal Transit Center project ($50 million to come from Measure A) is not slated to complete funding until 2025 although we have benefited from some early funding of small improvements to bus bays and access.

VTA’s representatives to Metropolitan Transportation Commission (MTC) are recommending that $91 million be diverted from the Dumbarton rail corridor to complete the BART to Warm Springs. Ironically, BART to Warm Springs is short of funding since it had “lent” $145 million in funding to BART to SFO which has not been
able to repay it. For the Peninsula, this has been a double take-away since there is no longer a convenient transit option to the San Francisco airport because the new BART link from the Caltrain station at Millbrae to SFO has been closed due to operating deficits.

The Federal Transit Administration (FTA) has consistently given the BART extension a “not recommended” rating due to concerns about the operating and capital financial plans and also questions about the project’s ridership and travel-time benefits. According to MTC, Measure B, if successful, will move the project “closer” to a full funding plan. VTA has advanced $400 million so far to take BART to 65% engineering design. Updated construction estimates are due this fall or winter and expected to raise current estimates. More than 94% of the cost is yet to be incurred – the key decisions are still in front of us.

Dumbarton Rail is the latest project to be sacrificed to pay for BART. Caltrain reports that electrification cost estimates have also risen and a funding agreement has not been reached among the three agencies. With daily ridership having risen to 46,000, electrification and modernization is key to increasing capacity, restoring service to more stations, reducing fuel consumption and costs, and improving energy efficiency. This may be the topic of a different agenda item or study session. These are some of the reasons we oppose Measure B.

Please join us in placing a resolution to oppose Measure B on the council agenda for full discussion.
TO: Councilmember Sid Espinosa
FROM: Michael T. Burns, General Manager
DATE: September 15, 2008
SUBJECT: Memo Re: BART Sales Tax Measure

This memo is in response to your request for a review and clarification of the colleagues’ memo from Mayor Klein and Councilmember Kishimoto entitled “Request to agendize discussion of Measure B, BART Sales Tax Measure”.

As you know Measure B is designed to provide the operating and maintenance funding for the BART extension to Santa Clara County. This 1/8 Cent sales tax will be collected only if funding is secured from federal and state sources to help fund construction of the project. Federal funding must be secured in the amount of at least $750 million and state funding in the amount of at least $240 million.

While there are many reasons to support and oppose construction of the BART Extension, the purpose of this memo is not to advocate for a position but to clarify some of the information presented to your colleagues.

Construction and financing costs of any major civil engineering project cannot be determined with reasonable specificity until engineering is well advanced. At this point we are completing 65% design which should give a reasonably accurate cost basis. Additional vehicles and parking were included when the planning horizon increased from 2020 to 2030 to reflect additional ridership.

The Metropolitan Transportation Commission’s (MTC) Programming and Allocation Committee unanimously approved staff’s recommended transferring $91 million from the Dumbarton Rail project to the Warm Springs extension project. This transfer was recommended by MTC staff to resolve issues around Resolution 3434 where several projects have partial funding. This recommendation provides funding to move projects forward, such as Warm Springs ready to begin in 2009, which are in a more advanced state of readiness.

The Dumbarton Rail project was the subject of a recent Santa Clara County Civil Grand Jury inquiry that recommended no more funds be expended on the project until a method was found to close the substantial funding gap of approximately $300 million this project faces. The project faces a significant difference between identified funds and the amounts necessary to complete the project primarily, but not exclusively, because of the challenges presented by the age and condition of the existing railroad bridge. Also, it should be noted that the Dumbarton Rail project would receive $91 million in future year Alameda County RTIP funds to replace the $91 million transferred to Warm Springs.
The Federal Transit Administration has indicated their concern with the project funding several times over the years. Their primary concern is with the operating and maintenance costs for the extension. They want VTA to show a source for this purpose that will not come out of existing transit service. That is precisely the area the proposed 1/8 Cent Sales Tax is designed to address. Additionally, differing criteria have been used by FTA to evaluate ridership and travel time benefits and this has led to recalculations of the modeling. No reputable group seriously questions the ridership benefits of the BART Extension.

While it is accurate to state that the cost estimates for proposed Caltrain electrification have increased, it is inaccurate to state that “...a funding agreement has not been reached among the three agencies.” The funding agreement for capital projects on Caltrain requires a 1/3 contribution from each of the funding partners (Santa Clara Valley Transportation Authority, San Mateo County Transit Authority and the City and County of San Francisco). It is also important to note that Baby Bullet (express) service will continue to be provided by diesel locomotives under the current electrification plan. This is the service used by the vast majority of Santa Clara County residents.

On September 4, 2008 Caltrain staff presented information to their Board stating that the complete project cost of electrification, including vehicle costs, is estimated at $1.54 billion. Staff also reported that they are seeking regional, state and federal funds for this project. Once these funds have been secured, Caltrain will provide the partners with a timetable regarding when they will need a commitment of local dollars.

It is unclear from the memo what benefit will accrue to Caltrain, the Dumbarton Rail project or the Palo Alto Intermodal station by voting against Measure B. Measure B is designed solely to provide the operating and maintenance revenue stream for the BART Extension Project and the tax will be collected only if funding is secured from federal and state sources to help fund construction of the project.

Thank you for the opportunity to comment on this memo. I hope the information provided is helpful in your decision making process.
BART is not the only question
Transportation tax must help us all

BY JOE SIMITIAN

O BART or not to BART? That is not the question. At least, that's not the only question.

As Santa Clara County debates the merits of a $3.8 billion sales tax and transportation package, there are other important questions to be asked as well. What constitutes a truly regional plan? What about need? What about tax equity and fairness? And perhaps most importantly, what's the right mix of projects to provide congestion relief throughout the county?

To be truly regional, a countywide tax ought to yield countywide benefits. But the plans proposed to date fail that test. Large chunks of the county, including the North County area I represent, have been offered precious little in the way of congestion relief.

Advocates for BART to San Jose, of course, suggest the spirit of regionalism obliges us to consider the almost 98,000 daily commuters travelling to and from Alameda and Contra Costa counties. I agree. But doesn't that same spirit of regionalism oblige us to consider the more than 100,000 commuters crawling along as they travel to and from San Mateo and San Francisco counties? I think it does.

And frankly, while it's easy to blame out-of-county commuters for all of our traffic, nearly 4 out of 5 commute trips to Santa Clara County employers are made by Santa Clara County residents, a challenge any truly regional plan simply must address.

Because current proposals commit every available dollar of local sales tax money for the next 10 years, developing the right transportation package now is absolutely essential. Voters who support BART to San Jose in concept may change their view when they discover that an incomplete package precludes meaningful congestion relief in their area for the next quarter of a century.

Which brings us to the question of need. Obviously, limited funds should provide congestion relief where it's needed most. It's important to note that North County communities, slated to receive just 6 percent of the relief, are home to 25 percent of the county's jobs.

Palo Alto, Mountain View, Cupertino, and Sunnyvale each has a higher per capita ratio of jobs than San Jose. They are commute destinations in their own right. And their need for congestion relief grows greater every day.

Indeed, the Metropolitan Transportation Commission recently reported that seven of the 15 fastest-growing travel markets in the entire Bay Area are North County commute routes. Clearly, the people who live and work in the North County desire and require congestion relief as fervently and legitimately as their counterparts elsewhere in the county.

Then there's the issue of equity — simple tax fairness. The 340,000 folks living in the North County make up about 20 percent of the county's population. And they'll end up paying roughly 23 percent of the proposed sales tax, more than $850 million. But only 6 percent of the congestion relief, about $250 million, is slated to come their way.

This inequity follows the passage of the 1996 sales tax and transportation Measures A and B, with only 11 percent of those funds going to traffic relief for the North County, and Governor Davis' recent pledge of $923 million in transportation funding for Santa Clara County, with virtually nothing for our part of the county.

In fact, current proposals would leave North County residents and commuters with little to show for almost 30 years (1997-2026) of sales tax payments.

The question we'll face when the Board of Supervisors meets on Aug. 8 is this: How can we best ensure that regional congestion relief, already begun through Measures A and B, continues seamlessly and effectively after the current sales tax expires in 2006?
TRANSIT PROGRAM

Program Area Description

The Transit Program addresses transit capital, operations, and maintenance needs for the existing and future bus and rail transit system. It identifies specific projects to be implemented during the timeframe of the plan. The current list of Measure A transit projects totals about $8 billion dollars.

Project List Status
Previous Board actions, the Short Range Transportation Plan (SRTP), and the ranking of Measure A projects presented in a memorandum to the VTA Board October 2003, were used as the basis for staff’s recommended project priority list. The ranking reflects the application of the Board-adopted project evaluation criteria (attached). The Downtown East Valley project, BART, and the Measure A operating assistance have priority in the plan. The remaining projects are shown in order based on the ranking criteria.

At the February 27, 2004 Workshop, the Board will discuss priorities for the remaining projects on the Measure A list. The complete list is attached.

Program Allocation

$5.017 billion of Measure A funds; and $107 million of future Proposition 42 funds

Staff Recommendations

- Based on the projected Measure A funds for the MTC’s Regional Transportation Plan (T2030) 25-year time period, Downtown East Valley, BART and the operating assistance are the recommended priorities for the T2030 plan.
- For the VTP 2030 project list, staff recommends including all Measure A projects except the new rail corridors and Caltrain Electrification. Further study is required to determine whether any of the new corridors are funded with Measure A.

Board Discussion Issues

- The 25-year Measure A revenue projection is $3.881 billion. This amount would cover DTEV, BART and the operating assistance, and is consistent with the SRTP. An additional $97 million would be remaining during this time period for allocation to other Measure A projects.
- Measure A allocates $550 to DTEV. DTEV includes Enhanced Bus or LRT in the Santa Clara Alum Rock Corridor plus LRT on Capitol Expressway to Eastridge with an extension to Nieman Boulevard. A specific strategy to be developed as EIS and PE are completed on both portions.
- The Measure A revenue projections for the life of the measure (2006-2036) is $5.017 billion. This amount would cover all projects except for fully covering the new rail corridors and Caltrain electrification based on the prioritization criteria. Approximately $145 million would be remaining to allocate towards these projects. This assumes no additional bonding of Measure A funds.
- The Board could choose to not allocate the funds based on the criteria or allocate more or fewer funds to the Measure A projects.
# VTP 2030 MEASURE A TRANSIT PROGRAM

<table>
<thead>
<tr>
<th></th>
<th>T2030 Period (2005 - 2030)</th>
<th>Add'l VTP 2030 Period (2030 -2036)</th>
<th>Total</th>
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<td><strong>Base Measure A Fund Estimate</strong></td>
<td>$4,232</td>
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<td><strong>Existing Commitments</strong></td>
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<tr>
<td>(1) LRV Bond Payments</td>
<td>-$191</td>
<td>$0</td>
<td>-$191</td>
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<td>(2) 2003 Bond Payments</td>
<td>-$435</td>
<td>-$63</td>
<td>-$498</td>
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<td>(3) 2003 Bond Proceeds</td>
<td>$275</td>
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<td><strong>2000 Measure A Projects</strong></td>
<td>$3,881</td>
<td>$1,136</td>
<td>$5,017</td>
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<table>
<thead>
<tr>
<th>Project Name</th>
<th>Total Estimated Cost ($ Millions)</th>
<th>VTP 2020 Measure A Allocation ($ Millions)</th>
<th>Cumulative Meas A.Total ($ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4) Operating Assistance 2006 - 2030</td>
<td>$781</td>
<td>$781</td>
<td>$781</td>
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<tr>
<td>(5) Downtown East Valley (DTEV)</td>
<td>$550</td>
<td>$550</td>
<td>$1,331</td>
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<tr>
<td>(6) BART to Milpitas, San Jose and Santa Clara</td>
<td>$4,112</td>
<td>$2,453</td>
<td>$3,784</td>
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**25-YEAR (MTC T2030 Plan) PROPOSED ALLOCATION** above the line: $97M available for the projects below

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Total Estimated Cost ($ Millions)</th>
<th>VTP 2020 Measure A Allocation ($ Millions)</th>
<th>Cumulative Meas A.Total ($ Millions)</th>
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</thead>
<tbody>
<tr>
<td>(7) Bus Rapid Transit (Line 22, Monterey, Stevens Creek)</td>
<td>$50</td>
<td>$33</td>
<td>$3,817</td>
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<tr>
<td>(8) Caltrain Service Upgrades (VTA Share)</td>
<td>$171</td>
<td>$155</td>
<td>$3,972</td>
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<td>(9) Zero Emission Buses and Facilities</td>
<td>$277</td>
<td>$277</td>
<td>$4,249</td>
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<td>(10) Mineta San Jose International Airport APM Connector</td>
<td>$400</td>
<td>$222</td>
<td>$4,471</td>
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<td>(11) Caltrain - South County</td>
<td>$100</td>
<td>$61</td>
<td>$4,532</td>
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<td>(12) Highway 17 Bus Service Improvements</td>
<td>$2</td>
<td>$2</td>
<td>$4,534</td>
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<td>(13) Dumbarton Rail</td>
<td>$278</td>
<td>$44</td>
<td>$4,578</td>
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<td>(14) Palo Alto Intermodal Center</td>
<td>$200</td>
<td>$50</td>
<td>$4,628</td>
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<td>(15) ACE Upgrade</td>
<td>$22</td>
<td>$22</td>
<td>$4,650</td>
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<tr>
<td>(4) Operating Assistance 2031 - 2036</td>
<td>$222</td>
<td>$222</td>
<td>$4,872</td>
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**30-YEAR (Measure A) PROPOSED ALLOCATION** above the line: $143M available for the projects below

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<th>Project Name</th>
<th>Total Estimated Cost ($ Millions)</th>
<th>VTP 2020 Measure A Allocation ($ Millions)</th>
<th>Cumulative Meas A.Total ($ Millions)</th>
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<tr>
<td>(16) New Rail Corridors (Other Corridors)</td>
<td>$1,220</td>
<td>$776</td>
<td>$5,426</td>
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<tr>
<td>(17) Caltrain Electrification</td>
<td>$650</td>
<td>$233</td>
<td>$5,659</td>
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Notes: Projects ranked using prioritization criteria, approved by the Board June 2001.

The available Measure A revenues do not assume any additional bonding for operations, design or construction.

(1) Bonds issued in 2001 against 2000 Measure A for purchase of low-floor LRV vehicles
(2) Bonds to be issued in 2003 for Operating Assistance, BART Right-of-Way and BART/DTEV Preliminary Engineering
(3) Projected proceeds from 2003 bonds sold for the BART and DTEV projects
(4) Remaining 2000 Measure A funds dedicated to future transit operations get 18.45% of Measure A revenues
(5) DTEV includes Enhanced Bus or LRT in the Santa Clara Alum Rock Corridor plus LRT on Capitol Expressway to Eastridge with an extension to Nisman Boulevard. A specific strategy to be developed as EIS and PE are completed on both portions.
(6) Measure A need for BART project is net of $649 M in TCRF funds, $834 Federal New Starts, $107 Prop. 42 STIP and $69M in other funds. Does not assume additional bonding for construction.
(7) Measure A need for Rapid Bus is net of TFCA 40% and Federal Earmarks
(8) Caltrain Service upgrades include track and facility improvements and additional service
(9) Short-range Transit Plan (SRTP) assumes 15% Zero Emission Buses (ZEBs)
(10) City is contributing capital funding to the Airport Connector and will be responsible for operations
(11) Caltrain upgrades in South County include double-tracking and station improvements
(12) Funds increase service frequency in Hwy 17 Service
(13) Dumbarton Rail project is dependent on passage of Regional Measure 2 (RM 2) in 2004
(14) Palo Alto Intermodal Transit Center requires additional funds not identified at this time
(15) Measure A funds VTA's support of ACE Service
(16) New rail corridors to be considered include DTEV Eastridge Area to Hwy 87, extension to Coyote Valley, and others
(17) Caltrain electrification does not have fund sources identified to fully fund the project
## VTA 2000 Measure A Transit Program

### PROJECT ADVISORY COMMITTEE RECOMMENDATIONS - JUNE 2006

### $ YOE

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Measure A Program</th>
<th>Other</th>
<th>Total</th>
<th>Initial Program: Decision Pending</th>
<th>Initial Program Scheduled Finish</th>
<th>Completion Program Scheduled Finish</th>
<th>Notes</th>
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<tr>
<td>Line 11</td>
<td>Operating Assistance @ 18.457%</td>
<td>$1,953,171</td>
<td>$ -</td>
<td>$1,953,171</td>
<td>$1,953,171</td>
<td>2016</td>
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<td>Line 12</td>
<td>Bond Payment &amp; Costs</td>
<td>$7,466,757</td>
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<td>$7,466,757</td>
<td>$7,466,757</td>
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<tr>
<td>Line 13a</td>
<td>BART-SVSRP w/Initial Car Purchase (Dec 2016)</td>
<td>$3,514,586</td>
<td>$1,548,652</td>
<td>$5,063,238</td>
<td>$5,063,238</td>
<td>2016</td>
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<tr>
<td>Line 13b</td>
<td>BART-SVSRP Supplemental Car Purchase</td>
<td>$261,154</td>
<td>$ -</td>
<td>$261,154</td>
<td>$261,154</td>
<td>2016</td>
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<tr>
<td>Line 13c</td>
<td>BART-SVSRP Additional Vehicles &amp; Parking by 2030</td>
<td>$840,039</td>
<td>$ -</td>
<td>$840,039</td>
<td>$840,039</td>
<td>2030</td>
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<td>Line 14a</td>
<td>DTEV - LRT To Eastridge</td>
<td>$334,257</td>
<td>$ -</td>
<td>$334,257</td>
<td>$334,257</td>
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<td>Line 14b &amp; c</td>
<td>DTEV - Santa Clara/Alum Rock Corridor</td>
<td>$200,501</td>
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<td>$236,000</td>
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<td>2024</td>
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<td>Line 15</td>
<td>Coltrain Service Upgrades (VTA Share)</td>
<td>$200,501</td>
<td>$35,499</td>
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<td>Line 16</td>
<td>Coltrain South County</td>
<td>$85,070</td>
<td>$35,000</td>
<td>$120,070</td>
<td>$120,070</td>
<td>2015 &amp; 2033</td>
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<td>Line 18b</td>
<td>Coltrain Improvements/Refurbishment: SF to Tamien</td>
<td>$203,587</td>
<td>$650,059</td>
<td>$853,646</td>
<td>$853,646</td>
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<td>Line 19</td>
<td>Dumbarton Rail</td>
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<td>$33,862</td>
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<td>2036</td>
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<td>Line 20</td>
<td>ACE Upgrade</td>
<td>$44,000</td>
<td>$255,709</td>
<td>$299,709</td>
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<td>2011</td>
<td></td>
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<td>Line 21</td>
<td>New RTP Corridors Study</td>
<td>$33,008</td>
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<td>2014 &amp; 2025</td>
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<td>Line 22</td>
<td>LRT Extension to Vasona Junction</td>
<td>$100,076</td>
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<td>$100,076</td>
<td>$100,076</td>
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<td>Line 23</td>
<td>BRT: Line 22, Monterey, Stevens Creek &amp; West/South, Cupertino</td>
<td>$145,352</td>
<td>$21,270</td>
<td>$166,622</td>
<td>$166,621</td>
<td>2012</td>
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<td>Line 24ab</td>
<td>Mineta San Jose Airport Parking</td>
<td>$384,881</td>
<td>$279,441</td>
<td>$664,322</td>
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<td>Line 25</td>
<td>Palo Alto Intermodal Center</td>
<td>$97,600</td>
<td>$292,950</td>
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<td>Line 26</td>
<td>Highway 17 Bus Service Improvements</td>
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<td>$2,335</td>
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<td>Zero Emission Buses (ZEBS &amp; Facilities)</td>
<td>$6,019</td>
<td>$131,740</td>
<td>$137,759</td>
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<td>ZEB Demonstration Program</td>
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<td>Increase Service from 12.4% to 24%</td>
<td>$731,317</td>
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<td>Line 31</td>
<td>Increase Senior/Disabled Programs</td>
<td>$97,652</td>
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<td>$97,652</td>
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| Total Expenditures | $18,277,400 | $3,297,011 | $21,574,410 | $21,574,410 |

**Initial Program Ending Balance** $346,418

**Notes:**
1. A decision on the transit mode for the Santa Clara/Alum Rock Corridor has not yet been made, pending completion of the environmental process and adoption of a preferred alternative.
### PAC Rankings for 2000 Measure A Projects

(April 2005)

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<tr>
<th>Rank</th>
<th>Projects</th>
<th>Campbell</th>
<th>Cupertino</th>
<th>Gilroy</th>
<th>Los Altos</th>
<th>Los Altos Hills</th>
<th>Los Gatos</th>
<th>Milpitas</th>
<th>Monte Sereno</th>
<th>Morgan Hill</th>
<th>Mountain View</th>
<th>Palo Alto</th>
<th>San Jose</th>
<th>Santa Clara</th>
<th>Saratoga</th>
<th>Santa Clara County</th>
<th>Sunnyvale</th>
<th>Total</th>
<th>Max</th>
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<td>1</td>
<td>Operating Assistance (at 18.457%)</td>
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<td>Caltrain Service Upgrades (VTA Share)</td>
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<td>3</td>
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<td>3</td>
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<td>Bus Rapid Transit Corridors</td>
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<td>3</td>
<td>3</td>
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<td>3</td>
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<td>Mineta San Jose Inter. Airport People Mover</td>
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<td>Caltrain Electrification</td>
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<td>Dumbarton Rail Corridor Project</td>
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<td>2</td>
<td>33</td>
<td>48</td>
<td>69%</td>
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<td>ACE Service Upgrades</td>
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<td>Downtown East Valley Transit Improvement Plan</td>
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<td>58%</td>
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<td>Zero-Emission Buses (Vehicles and Facilities)</td>
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<td>21</td>
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### PAC Project Ranking Exercise

Each project is ranked: 1 = Would Like to Provide; 2 = Should Provide; 3 = Must Provide.
A percentage value has been calculated for each project based on all participating votes.

### Special Notes on Voting Results

- Monte Sereno: Vasona Corridor for New Rail Corridors Phases 1 & 2
- Palo Alto: (1) explore eBART; (2) VTA to pay for transportation part; (3) Develop other revenue for undergrounding or other amenities.
- Morgan Hill: Most direct routing for Mineta APM
- Cupertino: wants BRT service instead of Downtown East Valley and New Rail Corridors projects.
<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2030</th>
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<tr>
<td></td>
<td>Drive Alone</td>
<td>HOV2</td>
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<td>Percent of 2000</td>
<td>78.88%</td>
<td>11.85%</td>
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<td>1,304,872</td>
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<tr>
<td>Percent of 2030</td>
<td>75.0%</td>
<td>15.73%</td>
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<td>1,832,353</td>
<td>302,604</td>
</tr>
<tr>
<td>Percent change 2000-2030</td>
<td>40.42%</td>
<td>54.34%</td>
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</table>
PETER LYDON'S WEB LOG
I'm using this blog to publish, and also to gather archivally in one place, various papers and drafts. Eventually, I expect it to hold both ones currently being worked on, and others from past years. The main current item is some thinking on climate change policy.

SUNDAY, MAY 14, 2006

LOSING OUR WAY TO THE AIRPORT--Comments on a big and disastrous public transportation investment.

PUBLIC AFFAIRS REPORT--NEWSLETTER OF THE UC BERKELEY INSTITUTE OF GOVERNMENTAL STUDIES

Vol. 40, No. 4, July 1999

LOSING OUR WAY TO THE AIRPORT

Peter Lydon, IGS Associate

In both their political and administrative functions, governments sustain themselves in relation to their societies by making correct decisions and undermine themselves by making wrong ones. What "correct" and "incorrect" mean, of course, is subject to infinite debate, but Barbara Tuchman's five cases in her marvelous "March of Folly" are rough and ready examples of getting things wrong. Enough bad decisions eventually produce a situation like that of 1991 when the Soviet government really didn't exist anymore. The moral is that every government has to earn its living every day. The Great Accountant doesn't, of course, come every day to settle the balance, but too many bad days in a stretch are still not good.

This old civil servant, who shudders at the facile anti-government sentiment of recent years, hates to see large-scale blunders by
governments. But right now we are in the latter stages of a dramatic case in
the Bay Area: BART's extension from Daly City to the San Francisco
Airport, a $1.5 billion (of which half is federal) infrastructure investment
involving local, regional, state, and federal levels.

The mistake consists in building a new BART special-gauge line on the
western side of the San Bruno mountain rather than upgrading the existing
Bayshore standard-gauge rail line, now used by Caltrain. This line already
passes the airport and, northbound, ends at Fourth and Townsend Streets,
a little over a mile short of downtown San Francisco. For roughly the cost
of the eight-mile BART extension from Colma to SFO, Caltrain could be
extended to the Transbay Terminal in full downtown San Francisco and be
connected by a moving sidewalk to the BART and Muni lines under Market
Street. Its diesel engines could be replaced with electric motive power, and
there would be new lighter, modernized rolling stock, probably on
European models.

An upgraded Caltrain, whose trains would look and feel much more like
BART, or like Paris' RER, than like its present Iron Age equipment, would
reach the airport from downtown in 15-20 minutes, rather than BART's
expected 35 minutes. Part of the gain would come from a direct rather than
a circuitous route, and part from Caltrain's capacity to run express trains,
which BART cannot do.

However, the capacity to mix expresses and locals takes on its real value
south of the airport, an area entirely unbefriended by the BART project,
where most airport staff live and where Caltrain continues about 40 miles
through Silicon Valley to San Jose, the region's largest city. Within the
$1.5B investment figure, a Caltrain upgrade would automatically serve
about 20 town centers that cluster around the stations of the historical
Southern Pacific line. A reasonable initial service level would be about 200
trains a day, which may be compared with Caltrain's present 60 trains, or
with the 168 of BART's Concord line. The first upgrading could serve as the foundation for future cost-effective improvements, such as the complete elimination of grade-level crossings, investments in stations (including underground parking), and the construction of energy-efficient transit-linked communities around the stations, a form of city layout that many see as the future of urban development in the United States and even the world. Unlike the BART extension project, improving Caltrain is also complementary with bringing the proposed $20 billion California High Speed Rail into San Francisco from Los Angeles via the Central Valley.

In a nutshell, that's the prosecution's case that the region is making a huge blunder by building BART to SFO. But how did the Bay Area do it?

1. This was an extended drama of time and of changing circumstances. When BART was originally drawn on the map by the famous transportation consultants Parsons, Brinkerhoff in the 1950s, the Bayshore line was an active working railroad. It was busy with freight trains for the then-active Port of San Francisco and the city, and it carried long-distance passengers from Los Angeles, as well as Peninsula commuters, to San Francisco. Parsons legitimately saw that in the '50s BART could not be piggy-backed onto a fully employed right of way, and so its alignment was drawn west and south to Daly City. However, with the withering of the Port of San Francisco and the shrinkage of rail operations nationwide under the onslaught of the car and the truck, the Bayshore line was used less and less every decade thereafter. But the regional transportation authorities never perceived the opportunities presented by this gradual freeing up of the Bayshore route for new uses.

2. As freight dried up, Southern Pacific came to see the Bayshore line as a money-losing albatross, and after an extended and acrimonious struggle managed to get the state of California take it over in 1980. The state completed devolution of it to a three-county local board in 1992. Composed
of representatives of San Francisco, San Mateo, and Santa Clara counties, the Peninsula Transit Joint Powers Board (JPB) purchased the physical right of way from SP for a bargain $220 million, with a substantial financial contribution from the state. The JPB hired Amtrak to run about 60 diesel passengers trains a day, primarily to serve commuters, with offpeak service of only one train per hour. The farebox now covers about 43 percent of operating expenses, which run at about $42 million per year, the balance being made up by the three county governments. It was this latter expense to the counties that has dominated the outlook of the JPB's board. When they weren't squabbling over cost-sharing and other conflicts of interest among the three counties, the JPB commissioners saw their old-fashioned railway as a burden and struggled to minimize its expense, rather than seeing its right of way it as a golden opportunity to bring major relief to tightening auto congestion on the Peninsula.

All this, of course, took place in the Age of the Automobile, whose culture and sunk investment grip us all. The county supervisors who served on the JPB apparently thought, and still think despite Caltrain patronage now rising back up to 1950s levels, that nothing really existed except the automobile, nor that other kinds of transportation were worth a serious public effort.

3. On the other hand, the East Bay-dominated, directly elected nine-person board of BART, which included San Franciscans but had no participation from San Mateo or Santa Clara counties, was imbued with self-confidence and expansionism. It has pushed hard since the early eighties for both local and federal funding for extensions of the original 78-mile system. Aspiring to ring the bay via San Jose, BART thought of itself as the regional rail system as well as the leading transportation innovation and most visible collective achievement of the Bay Area since the great bridges were built before World War II. Based on that thriving sense of itself and its role, BART pushed hard and steadily to extend southward from west-lying Daly
City to the airport (in addition to its substantial expansion in the East Bay). It achieved the intermediate steps of heavy investment in a train handling facility at Daly City, and a one-station expansion to Colma in the early and middle nineties. Both steps involved complicated contractual arrangements with SamTrans, the transportation agency of San Mateo County, since San Mateo had declined in 1961 to become a part of the BART District, and therefore had to be dealt with as an outsider even as BART's lines pushed into the county.

When the Bay Area, largely through Congressman Norman Mineta, a former San Jose mayor who chaired the House Transportation Committee, began to have assurances of receiving a large federal transit grant in the nineties, BART immediately laid siege to a large part of the prospective money for its extension from Colma to the airport. SFO itself was embarking on a $2+ billion strategic expansion to make itself a principal West Coast hub for the burgeoning long-haul Pacific Rim traffic. Although the airport belongs to the city of San Francisco and is located in San Mateo county, SFO is dominated by the airlines, especially United Airlines, and by the airline-influenced Federal Aviation Administration. It appears to be remarkably uninterested in its ground connections. The airport seemed happy to continue to be reached by the private cars that filled its lucrative parking garages, and determined to spend a minimum of its or the airlines' resources on transit connections to the Bay Area region. In this it was supported by both FAA legislation and rules, and current FAA policy.

4. Under the innovative ISTEA legislation of 1991, the federal government decentralized transportation planning to the states and metropolitan regions. Although the money was heavily federal, this change left the sorting out of transportation investments in the Bay Area to the Metropolitan Transportation Commission (MTC), without major substantive or technical input from the feds, evidently on the theory that the regional people know their own region best. The MTC, with 16 voting
members, is largely composed of persons elected to serve as county supervisors or city council members. Thereafter, they are nominated by their localities for the additional duty of serving on a specialized regional body, such as the MTC. The MTC had a large full-time professional staff, headed by two engineers, Lawrence Dahms and his deputy, William Hein. By the late nineties, Dahms and Hein had been in their jobs for about 20 years each, a much longer tenure than any of the members of the constantly turning-over commission to which they reported.

The MTC's approach to the management of regional private and public transportation, notably in a major 1988 intra-regional sharing out of capital funding known as Resolution 1876, was predominantly a negotiating and coordinative one: the MTC mediated expressed interests of Bay Area localities and other entities, largely on the basis of the vigor and persistence of those representations. Although its staff was nominally crammed with experts, in its task of gatekeeping federal, and to some extent state, funds, many observers believe that the MTC did not aspire to develop a fresh conceptual view of the region, or take the initiative and form its own pro-active independent judgment about what were the important transportation problems, and what were the needed transportation solutions. Rather, the MTC primarily saw itself as disposing among the proposals that were pressed upon it by cities and counties, road interests and transit operators, and overseeing the implementation of a backlog of past commitments.

In this case, the MTC found BART persistently politicking to extend its line from first Daly City, and then Colma, to the airport. The commission found no equivalent comprehensive proposal coming from the JPB to make the connection from San Francisco to the airport, nor for a general upgrade of its line to San Jose. The JPB did propose a downtown extension, but not vigorously, and it accepted meekly being consigned by MTC and the Federal Transit Administration (formerly the Urban Mass Transit Administration—UMTA) to a longer and less lucrative federal funds
queue—the Rail Improvements program, rather than New Rail Starts. The process of passing Resolution 1876 in 1988, and then dispensing ISTEA funds was so long and detailed as to make it hard for any participant to stay focused on the main points, but from 1988 onward, BART's SFO extension was officially the region's first priority. The decisive consideration is that at no point in the extended decision making did MTC perceive or decide (1) that an alternative project to BART's west-wandering extension could be put together on the direct Bayshore line, and (2) that the MTC should invest in airport service on cost-effectiveness grounds rather on grounds of the aggressiveness of the proposing organizations. If the MTC had done so, it would have denied the BART pressures and called explicitly upon the JPB, which had the far superior route, to make the comprehensive proposal that the JPB was incapable of initiating on its own.

It is quite possible that the MTC would have had to take initiatives to have the JPB reorganized and to have more dynamic and positive board and staff members brought in, as the Pentagon might reform "by the scruff of the neck" a lagging defense contractor on which it relied, or as General Motors might "shape up" a parts supplier. MTC was so far from being ready to undertake such an intervention that it never explicitly recognized even the need or the possibility of such action. Rather, it became locally, and in relation to Washington, an apologist for the BART extension.

With the MTC's stamp of approval, essentially given on political grounds, but interpreted by others as representing a technical as well as a coordinative judgment, BART to SFO became the region's solution to the problem of linking the airport to the city and the transit network. Under ISTEA, Washington did not feel itself entitled to look seriously behind the regional choice, once it could be given passing marks on certain minimum-standard check-off tests, although even that, in this case, took considerable contrivance. Nor did members of the regional congressional delegation, who collectively became key players in advocating actual authorization and appropriation of the funds, review the project substantively. Once BART's
extension got the regional seal of approval from MTC, the entire congressional delegation fell in behind it, despite the fact that the members elected from districts to the south of the airport would have been far better served by a Bayshore/Caltrain solution. As one congressional aide put it, "our job is not to design these projects; our job is to get them funded."

So although the Federal Transit Administration and the congressional delegation can perhaps be faulted for sins of omission, the locus of the breakdown in decision making in this case is at MTC, and the nature of the fault is inadequate definition and analysis of the problem to be solved, leading to inadequate scoping of alternative solutions. Both were based on a reactive and passive pattern not of seeking out the best proposal, but of being ready to endorse the one that was most vigorously and persistently urged. Various forms of politics got more than their due; physical and technical realities got far less analysis and weight than they should have. We started by talking about the kinds of mistakes that undermine governments. In many countries these can include financial corruption. That is not the case here. There is no imputation of venality, or even of significant processual lapse or abuse; indeed "procedures" were followed almost lovingly and compulsively, at the expense of substance. But did BART have a less than explicit advantage from the fact that the two senior staffers of the MTC were former BART engineers, who had worked on the original building of the BART system in their formative years? One, late in the process, stated his conviction that BART had to go to the airport because, "BART is the regional rail system, period." For him, this doctrinal point, which was really an articulation of BART's own view of itself, evidently had survived the many years since he had left BART, and was impervious to more empirical, on-the-ground cost-benefit realities, even at a strategic level.

5. A major background contributor to BART's costly triumph was the misleading plausibility of its proposal for the general public. To most Bay
Area residents, not closely or professionally involved in regional transportation but increasingly irritated at traffic congestion, it seemed as right as rain, and even long overdue, to extend regional rail to the airport as a major new destination. All the more so since BART still benefits from wide civic pride in its sleek, silver-clad image of modernity. The passivity and narrowed vision at the MTC's institutional and professional level were sheltered because BART's airport extension enjoyed the superficial approval of the residents of the region, for whom neither Caltrain nor any other alternative was ever raised in a plausible form. Although most citizens were not BART or even transit riders, the general tax-paying public assumed that since futuristic-flavored BART was good, more BART must be better--and better yet if the feds would pay for most of it.

With no public awareness that Caltrain could go to the airport from downtown in about half the travel time, BART's extension has had general, and even impatient, public support as the region's next big infrastructural step forward. This uninformed popular sentiment was picked up and articulated insistently by state Senator Quentin Kopp, who chaired the Senate Transportation Committee in Sacramento, and by significant regional voices such as the San Francisco Chronicle and Examiner newspapers.

So, that is how a big governmental blunder occurred, in our own time and place--right under our noses, so to speak. Without benefit of malice or corruption or oppression, we in the Bay Area have just thrown away a billion dollars of public funds. PAR readers will naturally ask, was it a problem of politics, or political structures? As a regionalist, I'd love to say the error was due to the lack of a metropolitan decision-making forum, since such a forum is undoubtedly both lacking and needed. But in this case a regional transportation institution was in place in the form of the MTC, but just did not do its job. Was the gap at the commission or the staff level? The commission and the commissioners are doubtless the formally
responsible parties, but in this case I would say they were let down by their staff, and the key failure was a technical/professional one. The concept of their job among the senior appointed officials was too feeble and vacillating, and the vision of the mandarins was narrow and out of date. As the BART to the airport extension is being dug in the spring of 1999, their complacency remains impregnable. The Bay Area's task of continually remaking itself as a modern, productive, and livable metropolitan city is being worked at far more by its cultural and economic institutions than by its political ones. The perennial uphill job of keeping our region of 6.4 million people up to date and well organized is made considerably steeper by nonperformances from the governmental side such as this one on BART's extension to SFO.
COURT OF CALIFORNIA
COUNTY OF SANTA CLARA

BENA CHANG,                     CASE NO. 1-08-CV-121333

Petitioner,

vs.

JESSE DURAZO, REGISTRAR OF
VOTERS, SANTA CLARA COUNTY

Respondent.

v.

KAREN MAKI, YORIKO KISHIMOTO,
JOHN MCLEMORE, GREG PERRY, PETE
CONSTANT,

Real Parties In Interest.

I, THOMAS A. RUBIN, declare as follows:

1. I am a Certified Public Accountant in the State California and have been a self-
employed Financial Consultant, specializing in governmental surface transportation,
finance, operations, and construction, since June of 1996. I hold professional certifications
as a Certified Government Financial Manager, Certified Internal Auditor, Certified
Management Accountant, Certified Management Consultant, and Certified in Financial Management.

2. I served as Controller-Treasurer (Chief Financial Officer) of the Southern California Rapid Transit District (SCRTD) from June, 1989, until April of 1993 when the district merged into the entity now known as The Los Angeles County Metropolitan Transit Authority (MTA). I continued as an MTA employee until June of 1994. As a Board-appointed and Board-accountable officer of SCRTD, my duties included responsibility for almost two hundred million dollars ($200,000,000) a year in expenditures, responsibility for the accounting and finance, human resources, management information systems, office of management and budget, risk management, and treasury activities, with a staff of over three hundred (300) managers, professionals, and support staff.

3. The financial and planning activities of the District that I managed or had a major role in included and preparation of the District’s short and long range operating, capital, and financial plans and budgets.

4. From July of 1995 to June 1996 I was Assistant General Manager – Finance of the Alameda-Contra Costa Transit District (AC Transit). In this position I directed a staff of over one hundred (100) professional and clerical staff members responsible for all financial and accounting activities of the district, financial elements of short-range financial plans, plus monitoring of performance measures, as well as budgeting, employee benefits and pensions, information technology, procurement and stores, risk management, and treasury functions. The district – as well as SCRTD – was one of a handful of transit operators to receive the Government Finance Officers Association (GFOA) award for distinguished budget presentation.

5. From 1976 to 1989, I founded and directed the mass transit industry practice of what was then Deloitte Haskins & Sells (now Deloitte & Touche, LLP), which I grew to the largest consulting and auditing practice of its type, including personally selling over $100 million of professional services and directing projects for well over 100 transit and transportation agencies. Among many other projects, I have prepared financial forecasts for the official statement for seven hundred and seven million dollar ($707,000,000) bond issue for the Los Angeles County Transportation Commission. This was the second largest bond issue in the history of the United States’ mass transit industry at the time.

6. I have prepared a long-term capital/operating/finance model and study for the Metropolitan Transportation Commission (MTC).
7. I have developed a manual for the National League of Cities on applying financial capacity analysis to city-owned and operated transit systems.

8. I have prepared a financing study on methods of financing rail system expansions through non-traditional ventures for the San Francisco Bay Area Rapid Transit District (BART).

9. I have prepared a long-term capital/operating financial analysis and modeling sales tax forecast for the placement of fifty-eight million seven hundred thousand dollars ($58,700,000) of equipment trust certificates to help finance a light rail project for the Santa Clara County Transit District, the predecessor of the Santa Clara Valley Transportation Authority (VTA).

10. I prepared a study of surface transportation financing for the Transportation 2000 Project for the Santa Clara County Transportation Authority, another predecessor agency of VTA.

11. I have managed or had a major role in performance audits of several major transit systems and planning organizations, including the Chicago Transit Authority, Los Angeles County Transportation Commission, Metra (commuter rail transit operator for greater Chicago area), Metropolitan Transportation Commission (transportation planning/funding agency for nine-county San Francisco Bay Area), Miami-Dade Transportation Authority, Pace (transit operator for Chicago suburbs), Regional Transportation Authority (transit planning/funding agency for greater Chicago area), San Francisco Municipal Railway, Southern California Association of Governments, and TheBus (transit operator for Honolulu).

12. I have served as an expert witness in the case of Raymond Veltman v. State of California. This lawsuit was brought to require a return of fifty million dollars ($50,000,000) of Transportation Development Act Sales Tax Funds that were transferred from the Los Angeles County Metropolitan Transportation Authority to the County of Los Angeles.

13. I served as an expert witness in the case of Rex Foreman v. City of Los Angeles. That case involved a claim that the City of Los Angeles had improperly utilized special parking revenue fund monies for purposes not allowed by the city ordinance that authorized creation of the fund.
14. I have assisted the cities of Fremont and Newark in analyzing the allocation of revenues, cost, and transit services to their cities over a multi-year period by the Alameda-Contra Costa Transit District in accordance with an annexation agreement.

15. In over 25 years as an auditor and consultant, specializing in the governmental surface transportation, I have served over 100 transit operators of all types, modes, and sizes throughout North America with a wide variety of projects. These clients include virtually all of the major transit operators and many of the smaller ones in the Bay Area.

16. I have reviewed the “no on Measure B” argument at issue in this case and the specific statements regarding the issues of VTA ridership change and the relative costs of VTA bus and rail operations vs. those of AC Transit, the San Francisco Municipal Railway (MUNI), and the San Mateo County Transit District (Samtrans), and have made findings and conclusions as I have set forth below. I have prepared a presentation entitled, “A Short History of San Francisco Bay Area Transit: Is Valley Transit the Worst Transit Agency in the U.S.?” which is attached here as exhibit A and incorporated by this reference.

**VTA Ridership Change, 2001-2006**

17. The standard data source for most public transit agency financial and operating data in the United States, particularly ridership data, is the National Transit Database, maintained by the Federal Transit Administration (FTA), a unit within the U.S. Department of Transportation, in accordance with what was originally Section 15 of the Urban Mass Transportation Act of 1964, as Amended, and now has been recodified as 49 USC 5335.

18. The main advantage of the use of this data is that the NTD system has been in place for almost three decades, there is a detailed set of requirements, including both specific Code of Federal Regulations (CFR) and FTA “Circulars” (administration guidance for matters that do not rise to the level of CFR publication) to further detail the statutory requirements, and there are specific requirements for the involvement of independent experts, including independent public accountants and statisticians, as well as detailed reviews performed by the Federal Transit Administration and/or its contractors, both as part as the “desk audit” of the annual reports submitted by individual reporting transit operators and on-site reviews as part of the FTA Triennial Review program.
19. Researchers have found these data — while certain not without fault — have a far higher degree of accuracy and year-to-year consistency for each reporting transit agency and agency-to-agency comparisons than data maintained independently by individual transit operators.

20. In my thirty years in the transit industry, I have frequently been unable to reconcile data, most specifically including ridership data, reported by certain transit agencies to their NTD reported data. In such situations, in almost every case, I have gone with the NTD data, as this had to have originated with the reporting agency and been reviewed by at least two other entities before being placed in the actual NTD data available to the public. In those few situations where I believed the reporting agency had good reason for providing me data other than what was available through NTD, I advised them to notify FTA and propose changes in what is posted to NTD, if possible.

21. I have frequently had difficulties in reconciling ridership data for VTA on the NTD to ridership data that VTA posts on its website. In my opinion, where there is a difference, the NTD data is the national standard and should be utilized unless there is a very specific and valid reason why it should not be.

22. In order to obtain the necessary data to perform an analysis of the change in ridership for VTA, I went to the FTA’s NTD web site and navigated to the “Profiles,” which are summary-level, all-inclusive reports for each reporting agency for a single year.

23. I reviewed the “Profiles” for the Santa Clara County Transportation Authority for every year from 1996 through 2006, concentrating on the 2001 and 2006 reports in order to make a comparison between VTA’s 2001 ridership, which was its peak year, to 2006, the most recent year where this independent data is available for VTA.

24. There were also two other agencies listed for “San Jose” for 2001, Outreach & Escort, Inc. and Laidlaw Transit Services, Inc. In reviewing the 2001 “Profiles” for these two, I found that they were operating demand-responsible (smaller “rubber tire” transit vehicles that provide “curb-to-curb” transit service, particularly for patrons comprehended by the transit provisions of the Americans with Disabilities Act) for VTA as purchased transportation services contractors.
25. Reviewing the 2006 “Profile” for VTA, there is “Demand Responsive” transit service reported as a separate “mode” on that schedule, with 981,098 unlinked passenger trips. Under the methodology for NTD “Profiles” that has been in place for the past few years, most ridership that is under the control of a transit operator, including service provided by contractors, is shown on the “Profile” and included in the total ridership for that transit operator for that year.

26. Checking the 2001 “Profile” for VTA, we see nothing for “Demand Responsive,” there is no demand responsive service listed, certainly no ridership information, on the “Profile.” Nationally, under the NTD process that was then in place for that reporting year, there were more contract operators that carried riders under contract to transit agencies that had their own, separate and independent “Profiles.” Therefore, for a proper and fair comparison, we need to compare the unlinked passenger trips for all three of these operators from their “Profiles” for 2001 to what was shown on the VTA “Profile” for 2001. The result is:

VTA 2001 Unlinked Passenger Trips:

<table>
<thead>
<tr>
<th></th>
<th>Number of Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total per VTA “Profile”</td>
<td>57,300,412</td>
</tr>
<tr>
<td>Laidlaw “Profile”</td>
<td>471,138</td>
</tr>
<tr>
<td>Outreach &amp; Escort, Inc. “Profile”</td>
<td>860,159</td>
</tr>
</tbody>
</table>

Total VTA 2001 Unlinked Passenger Trips 58,631,709

Less: VTA 2006 Unlinked Passenger Trip from “Profile” 40,934,975

Decrease in VTA Unlinked Passenger Trips from 2001 to 2006 17,696,734

27. Therefore, on a comparable basis, VTA ridership decreased approximately 17.7 million – 30% – between 2001 and 2006.

28. Since the most recent available NTD data is for 2006, this is the best available data to utilize for the calculation of the change in VTA ridership from its peak in 2001 to most recently on a consistently reported basis. The statement at issue in the ballot argument, “Annual transit ridership fell by 17 million trips,” is factually correct, except

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1 In the transit industry and NTD, “mode” means, “A system for carrying transit passengers described by specific right-of-way (ROW), technology and operational features.” (NTD, “Glossary”) Examples include “motor bus,” “light rail,” “ferry boat,” “commuter rail,” “cable car,” and “electric bus.”
that, using standard “round-up/round-down” rounding methodology, 17.7 million trips should be rounded up to 18 million, not down to 17 million.

29. In reviewing the results reported for other Bay Area transit operators on the NTD web site on August 26, 2006, I noted that several of them, including the Alameda-Contra Costa Transit District (AC Transit), the Golden Gate Bridge, Highway and Transportation District (Golden Gate), the San Mateo County Transit District (Samtrans), the San Francisco Bay Area Rapid Transit District (BART), and San Francisco Paratransit have 2007 “Profiles” available. From my years of working with the NTD and the personnel who manage the process and the database, I know that it is the practice to post such “Profiles” on the NTD web site as soon as the data is received and clears all of the checks. Since all of the Bay Area transit operators have the same fiscal year end (June 30) and, therefore, the same date for submitting NTD reports to FTA, I can only assume that several of the other Bay Area transit operators were able to present their reports and receive a “clean bill of health” from FTA, as evidenced by the posting of this data in the 2007 “Profiles” on the FTA NTD web site, but that VTA report has not yet cleared this process, at least not in time for it to be posted on the FTA NTD web site.

VTA vs. AC Transit/MUNI/Samtrans Costs

30. There appears to be a dispute between the parties regarding the comparative costs of bus and light rail service operated by VTA and other San Francisco Bay Area transit agencies.

31. The actual statement at issue in the ballot argument appears to be, “VTA spends more to operate one bus for one hour than nearly every other transit agency.”

32. I very frequently do extensive analysis of this exact data and I have a very detailed spreadsheet for the FTA “Top 50” transit operators from the NTD database for the 2005 reporting year. 43 of these “Top 50” operate motor bus service. For the 2005

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It is my experience that, in the transit industry, it is rather rare for there to be major changes in values from one year to the next; therefore, if I had utilized 2006 data rather than 2005, there would be no significant changes in the data, findings, or conclusions. Where there are major changes, there is usually an identifiable reason which can be adjusted for, as may be needed. In my analysis of the 2005 data, there were only a few such events (such as the light rail system in Baltimore undergoing the reconstruction of a large segment of its track from “single-track” to “double-track,” which allows trains to pass each other, and had the impact of significant increasing operating costs per hour and significantly reducing ridership) and I made no modifications to the data or the derived statistics. There was no such significant event impacting VTA operations.

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reporting year, VTA reported an operating cost per revenue vehicle hour of $151.99. For the 43 transit agencies reporting, this was the second highest, exceeded only by the service operated for the New York City Department of Transportation. Since, as a general rule, costs for transit tend to be higher, on a per revenue vehicle hour basis, in larger cities than in smaller communities, and since the FTA "Top 50" transit operators are all from major cities, it is a very reasonable conclusion that very few, if any, of the other 433 transit operators that reported motor bus service to the FTA in the 2005 NTD reporting year had costs per revenue vehicle hour in excess of VTA’s $151.99.

33. Therefore, the statement in the ballot argument that is at issue, “VTA spends more to operate one bus for one hour than nearly every other transit agency,” appears to be factually correct.

34. VTA has presented its own analysis that shows VTA’s costs of bus, as well as light rail, operations in a somewhat different light. The difference appears to be due to the two sides choosing different bases of comparison and, not unexpectedly, each side using a metric that best supports its position. Specifically, the Real Parties at Interest are using cost per vehicle revenue hour as theirs, while VTA is using cost per vehicle revenue mile. Let us example what the results are, using data obtained from the 2006 NTD “Profiles” for AC Transit, MUNI, Samtrans, VTA. All four agencies operate bus service; only MUNI and VTA operate light rail service.

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3 Besides what NTD terms as “motor bus” transit service, which actually refers to service operated with internal combustion engine vehicles, there is also “electric bus” service, where the (primary) means of propulsion is electric motors powered from overhead catenary wires. Since VTA operates motor bus transit service, but does not operate electric bus transit service (there are only five such operations in the U.S.), I will also note that motor bus transit is the mode being discussed.

4 MUNI operates “electric bus,” as well as “motor bus,” transit service. For the current purposes, only MUNI’s “motor bus” type of operation is comprehended, as the other three bus operators do not have such service.
<table>
<thead>
<tr>
<th>MODE/Operator</th>
<th>Operating Costs</th>
<th>Revenue Vehicle Hours</th>
<th>Revenue Vehicle Miles</th>
<th>Cost Per Hour</th>
<th>Cost Per Mile</th>
<th>Ave. Op Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC Transit</td>
<td>$253,303,404</td>
<td>1,817,463</td>
<td>21,198,605</td>
<td>$139.37</td>
<td>$11.95</td>
<td>11.7</td>
</tr>
<tr>
<td>MUNI</td>
<td>$188,460,807</td>
<td>1,393,740</td>
<td>12,356,068</td>
<td>$135.22</td>
<td>$15.25</td>
<td>8.9</td>
</tr>
<tr>
<td>Samtrans</td>
<td>$88,008,909</td>
<td>669,978</td>
<td>7,293,648</td>
<td>$132.03</td>
<td>$12.07</td>
<td>10.9</td>
</tr>
<tr>
<td>VTA</td>
<td>$196,554,296</td>
<td>1,282,710</td>
<td>16,138,308</td>
<td>$152.45</td>
<td>$12.18</td>
<td>12.6</td>
</tr>
<tr>
<td>LIGHT RAIL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUNI</td>
<td>$106,708,304</td>
<td>558,178</td>
<td>5,358,252</td>
<td>$191.17</td>
<td>$19.91</td>
<td>9.6</td>
</tr>
<tr>
<td>VTA</td>
<td>$53,866,962</td>
<td>170,453</td>
<td>2,810,403</td>
<td>$316.02</td>
<td>$19.17</td>
<td>16.5</td>
</tr>
</tbody>
</table>

35. The above makes it very clear what is going on: VTA bus are somewhat “faster” than the buses of the other bus operators and VTA light rail is far faster than MUNI light rail vehicles. Because VTA vehicles are covering more miles in an hour of operation than the vehicles in the same modes from the other agencies, VTA show up much better, relative to the others, on cost per revenue vehicle mile than it does on cost per revenue vehicle hour.

36. So, how to reconcile these two dissimilar sets of statistics? How can we know, for example, what it would cost to operate VTA’s “faster” bus service with Samtrans' cost structure, or what it would cost to operate VTA’s “faster” light rail service with MUNI's light rail cost structure? Without doing extensive cost allocation and related studies, I cannot provide precise data, but there is a large body of knowledge of transit agency cost accounting relating to hours and miles of service than can be of assistance.

37. The so-called “three-factor” costing model is very well known in the transit industry, the three factors being revenue vehicle hours, revenue vehicle miles, and peak vehicles, in declining order of importance to overall cost. When I was the chief financial officer of the Southern California Rapid Transit District in Los Angeles, we had a well-refined “four-factor’ model, the added factor being unlinked passenger trips. The industry

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3 Technically, this is not quite “average operating speed.” Under NTD reporting rules, Revenue Vehicle Hours include what is known as “layover” or “recovery” time at the end of a run, where the buses and trains are stationary for a few minutes before the bus or the train starts back in the other direction, in order to allow the vehicle operators to take care of “important personal business” and to build in a schedule cushion to prevent the late completion of the previous one-way trip from negatively impacting the start of the return trip. Therefore, the actual vehicle speed in operation is slightly faster than the values shown, but this is a relatively minor adjustment in most cases.


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experience with such models, and my personnel experience with applying them, can be very useful in this regard.

38. There are some cost elements that are directly proportional, or almost directly proportional, to hours of service, most notably transit operator pay. Other factors are more closely tied to revenue vehicle miles, such as most maintenance and fuel costs. In the three-factor model, other costs are assigned to the number of peak vehicles required to operate the service, such as the costs of cleaning and maintenance of the maintenance facility (as opposed to the cleaning and maintenance of the transit vehicles). Adding passengers as a separate factor is a methodology for segregating out the costs of advertising, customer information, personal liability damages, and related costs.

39. In constructing such models, the “per hour” costs for a timer period, such as the preceding year, are totaled and this number is divided by the number of vehicle revenue hours operated that year, producing a “cost per hour” factor. A similar process is then utilized to produce “cost per mile,” “cost per peak vehicle,” and whatever other “cost drivers” are utilized in the particular model being constructed.

40. From my extensive experience in constructing and using such cost models, I will make a projection that, for common speed bus travel in this situation, two-thirds weight should be given to hours and one-third to miles. I am deliberately biasing my judgment away from where I believe it to be in order to err in factor of the VTA position.

41. There are some factors unique to VTA’s bus and light rail operations that assist it in keeping costs down — with the most important one being their extremely low ridership. The following is documentation of how VTA bus and light rail ridership compares to the other three Bay Area systems and national peer groups in this regard, using the two most commonly utilized transit ridership productivity performance measures:
<table>
<thead>
<tr>
<th>MODE/Operator</th>
<th>Average Passenger Load</th>
<th>Boardings Per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC Transit</td>
<td>9.5</td>
<td>35.9</td>
</tr>
<tr>
<td>MUNI</td>
<td>14.8</td>
<td>60.1</td>
</tr>
<tr>
<td>Samtrans</td>
<td>10.8</td>
<td>21.9</td>
</tr>
<tr>
<td>VTA</td>
<td>8.1</td>
<td>25.0</td>
</tr>
<tr>
<td>BUS Peer Group</td>
<td>11.9</td>
<td>42.4</td>
</tr>
<tr>
<td>LIGHT RAIL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUNI</td>
<td>21.9</td>
<td>81.4</td>
</tr>
<tr>
<td>VTA</td>
<td>13.1</td>
<td>45.9</td>
</tr>
<tr>
<td>LIGHT RAIL Peer Group</td>
<td>25.2</td>
<td>84.8</td>
</tr>
</tbody>
</table>

42. VTA’s extremely low ridership on both bus and light rail\(^{11}\) gives it significant speed and cost advantages over the other three agencies above. This means that VTA, compared to the three agencies, saves significantly sums of money because, for example, the buses don’t have to stop as often because there are simply a lot fewer people waiting at fewer bus stops – and, when the buses do stop, the lesser number of people getting on and off reduces the “dwell time,” allowing the buses to get on their way faster. The public liability costs of operating a transit system are hugely reduced because there are just few

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\(^7\) "Average Passenger Load" is calculated by dividing annual passenger-miles by annual revenue vehicle miles; it is the overall annual average number of occupants on a transit vehicle.

\(^8\) "Boardings per Hour" is calculated by dividing annual unlinked passenger trips ("boardings") by annual revenue vehicle hours.

\(^9\) The Bus peer group are the 43 of the FTA’s "Top 50" transit operators in the 2005 NTD database that operate bus transit service; VTA is approximately the 26\(^{th}\) largest of this group, AC Transit and MUNI are both in this group, Santrans is not.

\(^10\) The Light Rail peer group is all 19 U.S. light rail operators comprehended by the 2005 NTD; note that "streetcar" operations, which is similar to light rail in many regards, but generally consists of single-car trains, operated with smaller vehicles, on short routes operating in general purpose traffic lanes at slow speeds ("true" light rail is generally operated with larger vehicles in multi-car trains at higher speeds with extensive exclusive right-of-way which is not shared with "rubber tire" vehicles), is excluded where possible. There are a small number of light rail operators – including MUNI – that operate both "true" light rail and streetcars; for them, the data includes both the "true" light rail and the streetcar operations.

\(^{11}\) For bus, VTA’s average passenger load value was seventh lowest of the 42 operators with data available and its boardings per hour value was the fourth lowest of the full 43; for rail, VTA’s average passenger load was the second lowest and its boardings per hour the absolute lowest of the 19 light rail operators. Many of the bus operators that VTA "beat" operate different types of service, such as exclusively suburban service, where there is less ridership than the usual downtown-centric transit systems.

(Note: In attachment A, I performed analyzes of the "light rail" operations of the FTA’s "Top 50" transit operators, which collectively included 19 different systems. However, the "light rail" operations reported by King County DOT (Seattle) consisted of a small streetcar line, not a true "light rail" line. For the calculation above, I deleted the KC-DOT streetcar and added in the light rail system operated by the Niagara Frontier Transportation Authority in Buffalo, which was not included in FTA’s "Top 50" list. This produced the "full and complete" list of 19 "true" light rail agencies in the United States.)
fewer people on board VTA buses and trains that might be on a vehicle in a safety incident that will have standing to bring a claim. In other words, if VTA had ridership comparable to the other three operators\textsuperscript{12}, it would have had higher costs and slower operating speeds.

43. In the table following, I convert the costs per hour and per mile to indices, where the simple average of the members of the group is given a value of 100 and the members’ statistics are given a relative value. I then multiply the cost per hour index by two, add the cost per hour index, and divide by three to produced the Weighted Index values shown below.

<table>
<thead>
<tr>
<th>MODE/Operator</th>
<th>Cost Per</th>
<th>Original Index</th>
<th>Weighted Index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hour</td>
<td>Mile</td>
<td>Hour</td>
</tr>
<tr>
<td>BUS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC Transit</td>
<td>$139.37</td>
<td>$11.95</td>
<td>99.7</td>
</tr>
<tr>
<td>MUNI</td>
<td>$135.22</td>
<td>$15.25</td>
<td>96.7</td>
</tr>
<tr>
<td>Samtrans</td>
<td>$132.03</td>
<td>$12.07</td>
<td>94.5</td>
</tr>
<tr>
<td>VTA</td>
<td>$152.45</td>
<td>$12.18</td>
<td>109.1</td>
</tr>
<tr>
<td>Averages</td>
<td>$139.77</td>
<td>$12.86</td>
<td>100.0</td>
</tr>
<tr>
<td>LIGHT RAIL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MUNI</td>
<td>$191.17</td>
<td>$19.91</td>
<td>75.4</td>
</tr>
<tr>
<td>VTA</td>
<td>$316.02</td>
<td>$19.17</td>
<td>124.6</td>
</tr>
<tr>
<td>Averages</td>
<td>$253.60</td>
<td>$19.54</td>
<td>100.0</td>
</tr>
</tbody>
</table>

44. If we use the Cost Per Hour metric of the Real Parties at Interest, then VTA’s Bus Cost Per Hour ($152.45) is 12.4% higher than the simple average of the other three bus transit operators ($135.54) and its Light Rail Cost Per Hour ($316.02) is 65.3% higher than that of MUNI ($191.17). If we use VTA’s Cost Per Mile metric, VTA’s bus Cost Per Mile ($12.18) is 7.0% lower than the simple average of the other three bus transit operators ($13.09) and the VTA value ($19.17) is 3.7% lower than MUNI’s ($19.91).

\textsuperscript{12} Note that the VTA ridership values are the lowest of the four Bay Area peers in this comparison in every case but one; VTA bus does have a higher boarding per hour value than Samtrans. However, even this is more of difference in what service is provided than anything else. Samtrans’ service area is largely suburban; with the exception of its express service to downtown San Francisco, there is not really a traditional major “downtown” or “central business district,” like the vast majority of other transit operators have. As a result, Samtrans riders tend to take longer trips to get where they are going; the average Samtrans bus unlinked passenger trip is 5.4 miles, which would be high for a non-suburban commuter express type of bus operator like MUNI – and VTA’s is 3.9 miles. So, Samtrans has fewer riders per hour, but they stay on the bus longer, which is why Samtrans “beats” VTA in average passenger load.

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45. Using my calculation methodology above, VTA’s bus index value (104.3) is 5.8% higher than the simple average of the index scores of the three other bus transit operators (98.6); for Light Rail, VTA’s 115.8 is 37.5% higher than MUNI’s 84.2 index value.

46. In reviewing these costs comparisons, it should be noted that, as a group, the Bay Area transit operators have very high costs and low productivity compared to peer group norms, and my analysis above shows that VTA is a high cost operator of transit service compared to the other Bay Area transit operators.

47. Therefore, I find that both the specific factual statement in the ballot argument discussed above — “VTA spends more to operate one bus for one hour than nearly every other transit agency” — to be factually correct and, also, that what I believe to be the intend of that statement — to characterize VTA as a very high cost operator of transit service compared to all other U.S. transit operators — to be very soundly based in fact and reality.

**IS THE VALLEY TRANSPORTATION AUTHORITY THE WORST TRANSIT AGENCY IN THE U.S.**?

48. Yes, the Santa Clara Valley Transportation Authority is the worst transit agency in the United States.

49. I attach a print-out of a PowerPoint™ presentation, with my speaker notes, that I presented at the American Dream Coalition Annual Conference in San Jose on November 10, 2007, entitled, “A Short History of San Francisco Bay Area Transit: Is Valley Transit the Worst Transit Agency in the U.S.?”

50. In this paper, I review the performance of VTA in a number of ways:

a. I performed evaluations of the VTA light rail and bus operations, using a variety of standard transit industry performance measurement metrics, such as subsidy per passenger, cost per revenue vehicle hour, and average passenger load. When compared to its peers — the largest transit agencies in the U.S., selected from the FTA’s “Top 50” report — both VTA’s bus and light rail operations were clearly the worst. In fact, in what are the most important metrics for the VTA’s most important transit mode, bus subsidy per passenger and per passenger-mile — VTA’s performance was so poor that it was, quite literally, “off the scale.” When I first attempted to add VTA to the graphic (slide 33), it did not appear when I reviewed the slide. It was not until I extended both the X- and Y-scales significantly that VTA
made an appearance. In all my years of transit agency performance measurement work, I have never seen such an extreme “outlier” in such an important statistic.

b. The VTA planning process for rail extensions is so poor that the U.S. Secretary of Transportation had to inform the VTA decision-makers that its plan for BART to San Jose had no chance of being approved in its then-current form and advised that the only possibility was to do significant changes – and the Secretary of Transportation informing VTA of this was Norman Mineta, the former Mayor of San Jose and long-term Congressman, who, as a key member and later Chair of the House Public Works and Transportation Committee, pushed through earmarked funds for the construction of VTA’s first light rail line, over the strong objections of U.S. DOT staff.

c. VTA’s reaction to the down-turn in its sales tax revenues following the “Dot-Com” bust was to significantly increase fares and to cut back on service, while continuing to do all it could do to further the construction of its rail projects, producing a 30% decline in transit ridership from 2001 to 2006, the largest I have ever seen for a major transit agency in the absence of events such as hurricanes and long-term labor actions. Without doubt, a significant part of this ridership loss was due to the economy, but the 59% increase in the base cash fare, the 86% increase in the monthly pass price, and the 139% increase in the price of a day pass, combined with a 20% reduction in service, had a huge impact on the many VTA riders who had little or no transportation alternatives for home-to-work, home-to-school, shopping, medical, and other important trips – and little in way of deposable income.

51. I have reviewed “V. Argument,” in “Ben Chang’s Petition of a Writ of Mandate Requiring Santa Clara County’s Registrar of Voters to Delete or Amend Certain language Contained The (sic) Rebuttal To The Argument in Favor of measure B ...” and have the following comments:

a. The language that Mr. Chang appears to be taking exception to is, “VTA’s light rail system ... (is) the worst-performing light rail in the county.” First, as a general comment, to achieve this status, it is not necessary for
VTA to have the absolute worst statistic on each and every possible statistic that anyone can come up with. VTA light rail can achieve this distinction—and has—by scoring consistently poorly on a variety of key statistics and having no other agency performing worse.

b. On page 5, we have the presentation of a statistic, “Operating Expense per Vehicle Revenue Hour,” which shows four transit agencies that with higher cost per vehicle revenue hour than VTA. On this particular statistic, VTA had one of its better performances, coming in at the fifteenth highest of the nineteen “true” light rail lines in the U.S. On this one, VTA is just bad, not the absolute worst.

c. On page 6, we have “Unlinked Passenger Trips Per Vehicle Revenue Hour. There are three operators shown here as performing worse than VTA, Denver, New Orleans, and Memphis. The latter two, New Orleans and Memphis, are not light rail systems, but, instead, streetcar systems—and it make no sense to compare “true” light rail systems to streetcar systems. The key differences are found in the following table: (Note: There are many similarities between light rail and streetcar and, in fact, modern light rail is an outgrowth of streetcars. There are even light rail systems that, for some portions of their alignments, are similar to streetcars. There is even some trading of certain features back and forth. However, with compensation for the few “borderline” situations, there are too many differences to make treating light rail and streetcar13 as identical stand as valid.)

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13 Almost all “streetcar” systems in the U.S. are fairly recent additions to the transportation scene. One of the few exceptions is that of New Orleans, which has a history going back many decades, back to the days when streetcars were real, main-line transit systems and, when it is fully operational, the New Orleans streetcar systems has more similarities to “true” light rail systems in its method of operations and how it is used by its riders than any other streetcar line.

The other major exception is San Francisco, which has, to a great degree, converted was started out as a streetcar system to a light rail system, although one with limitations due to the left-over characteristics of the original streetcar design. However, in some parts of the system, chiefly the Market Street surface system where MUNI runs its famous old-time streetcars from around the world, it is still a true streetcar. The MUNI statistics are for both “true” light rail and streetcar, but the light rail operations dominate because there is far more light rail service and riders.

The Tri-County Metropolitan Transportation District of Oregon also operates both its own extensive light rail system and the small modern streetcar system constructed by the City of Portland and its statistics are also primarily light rail with a relatively small amount of streetcar.
<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>LIGHT RAIL</th>
<th>STREETCAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Common Utilizations</td>
<td>“Main Line” transit service generally from inner- to medium-distance suburbs plus core downtown local service</td>
<td>Downtown circulators, service to tourist/recreation areas, downtown redevelopment agent</td>
</tr>
<tr>
<td>Line Length and Type</td>
<td>Generally 15 mile minimum, two-way operations on double track alignments</td>
<td>Generally under five miles (bi-directional), often operated as one-way loop</td>
</tr>
<tr>
<td>Track Separation</td>
<td>All or most of track is physically separated from “rubber tire” traffic lanes, either in dedicated lanes on streets or highways or separate rail alignments</td>
<td>Generally run in “rubber tire” traffic lanes with streetcars, cars, trucks all using the same lanes, with some exceptions</td>
</tr>
<tr>
<td>Car Size</td>
<td>Generally 90 feet long or more, almost all “articulated” (bend in middle)</td>
<td>Generally no longer than approximately 65 feet, many cars far smaller</td>
</tr>
<tr>
<td>Train Consist</td>
<td>Generally two-car trains, three-car trains not uncommon, some four-car</td>
<td>Generally single-car only</td>
</tr>
<tr>
<td>Operating Speed</td>
<td>Generally 15-25 mph average</td>
<td>Rarely exceed ten mph, some at five mph</td>
</tr>
<tr>
<td>Annual Ridership</td>
<td>Highest is Boston, &gt;80 million; lowest, Cleveland, at 3.7 million in 2006; most &gt;ten million</td>
<td>Highest is Portland, with ~3.5 million for FY07-08, many do not reach one million</td>
</tr>
</tbody>
</table>

Comparing light rail and streetcar operations is like comparing the operations of a major airline that flies 747's, 737's, and 767's with one that operates regional commuter jets; in both cases, there are certain similarities, but these are really different types of transportation systems for different transportation trips and there is no validity in comparing this particular ridership statistics when the vehicles sizes and purposes are so different.

It should also be noted that, for the 2006 NTD reported data, which is what we are dealing with here, New Orleans Regional Transit Authority (NORTA) was still recovering from the impacts of Hurricane Katrina, which struck on August 29th, 2005 and totally shut down transit in that City for an extended period. Compared to 2004, NORTA operated only 26% as many revenue vehicle hours and carried under 7% of the passengers; in
fact, in 2004, NORTA reported streetcar Unlinked Passenger Trips per Vehicle Revenue Hour of 73.4 – significantly above VTA’s 43.3 for light rail for the same year. Therefore, in the absence of an Act of God of close to Biblical proportions, New Orleans significantly outpaces VTA in this regard. Evidently Mr. Chang’s did not recognize that this extremely important factor should have been noted in his selection of peers for this evaluation.

This leaves Denver and, yes, when the performance of the 19 “true” light rail systems in 2006 is considered, VTA light rail was *not* the absolute worst in this statistic, it was the second worse.

d. Turning now to “Percentage of Scheduled Service operated, here VTA reports a *very* high value, with only .04% of scheduled service not operated. While few transit performance specialists would rate this as one of the most top, most important metrics, it is a valid measure of service quality and reliability and is something that good transit managers do watch carefully. A “missed run” – a scheduled transit pull-out or individual one-way trip that is part of a daily work assignment – can be caused by a number of things, most commonly, unavailability of vehicles. Transit vehicles receive a lot of hard use and require a significant amount of regularly scheduled and breakdown repair maintenance. It is a constant balancing act to be able to bring vehicles in for service when it must be done without having to procure and pay for an excessively large fleet of vehicles. The Federal Transit Administration has established a standard of a 20% spare ratio, that is, if 100 vehicles are required for peak service during the busiest part of the day, then the general rule is, the agency is authorized to have a fleet of 120 vehicles “available for maximum service.” Checking the fleet statistics for VTA in its 2006 “Profile,” we find 100 light rail “Vehicles Available for Maximum Service” and 39 “Vehicles Operated in Maximum Service,” which produces a spare ratio of 156%, or slightly under eight times the FTA rule of thumb. What has happened is that VTA bought vehicles for service that it does not operate because of the cutbacks and for many other reasons. So, the good news is, VTA has one of the lowest missed runs statistics in the industry. The bad news is, the VTA,
California, and American taxpayers have enabled VTA to achieve this impressive result by purchasing approximately $159 million\textsuperscript{14} worth of vehicles more than would appear to be required, which is approximately three times the $53.9 million VTA annual light rail operating expense for 2006. Overall, even assuming that the data is accurate and comparable—which may be issues, because this is not from NTD data and there are no universal standards for reporting, nor any independent audit or review—it is difficult to consider this result as an good example of the right way to manage a light rail operator.

e. The next statistic on page 6 is “Miles Between Mechanical Schedule Loss,” commonly known as, “mile between roadcalls.” While this is a NTD-reported statistic, it is not audited or reviewed in any way by any external body. Those with experience in transit performance measurement generally regard this statistic as one of, if not the, least accurate and least consistent and reliable of all transit operating statistics; there is widespread “creative” interpretation of what a “Mechanical Schedule Loss” is by the managers who are responsible for and evaluated on this statistic to the extent that statistics from different operating garages in the same agency cannot be compared. Also, for VTA light rail, when you have far more vehicles available than are required on any particular day, it is far less likely that a vehicle with any questionable maintenance issues would ever get out on the street.

f. The next statistic on page 6 is “On-time Performance,” where VTA is compared only to MUNI\textsuperscript{15}. We see that VTA has a higher level of performance, but there are some interesting factors that should be brought into consideration:

\textsuperscript{14} Calculated as follows: A 20% spare factor on a peak requirement of 39 vehicles is 7.8 vehicles. Rounding this up to 8, the total fleet size would be 47, leaving 53 vehicles in excess of the 20% rule. 53 light rail vehicles @ $3 million/vehicle = $159 million.

\textsuperscript{15} Mr. Chang’s Petition refers to “SFMTA,” for “San Francisco Municipal Transportation Agency,” which was formed in 2002, as the result of a 1999 local ballot measure, as part of the restructuring of San Francisco’s governance of transit and transportation operations. While the use of SFMTA is not technically wrong, SFMTA is an umbrella organization, responsible for both the San Francisco Municipal Railway—which continues to exist—and Parking and Traffic, which manages the City parking garages, parking meters, traffic engineering, and other non-transit transportation functions. As the data in NTD is still under the name, “San Francisco Municipal Railway,” I will continue to use that name it here, and use the familiar “MUNI” short name.
i. We do not know what this means; there is no NTD standard and each operator sets its own rules – and then keeps track of it without any outside audit or review. One common definition for local transit service is that a bus or train is on time if it is no more than five minutes late or one minute early at a scheduled time point, but there are many other definitions and we do not know if VTA and MUNI even started with the same one.

ii. We do not know how compliance is tested; some systems have the capability of doing this automatically through Automatic Transit Control and/or Global Positioning Systems, others keep track manually – and, again, is there any external review of the data?

iii. The most important difference, however, relates to the types of services that are operated by these two agencies. VTA has a relatively modern light rail system that began service in the late 1980's and all of its trackage is totally separated, generally in unique light rail lanes, from “rubber tire” vehicles. The area where VTA light rail operates is somewhat easier for schedule adherence, with far less surface traffic and pedestrian crush than San Francisco. MUNI light rail is the conversion of the streetcar system that dates back over 100 years and, in many cases, does not have the advantages of modern traffic signal progression capabilities, or better designed street crossings that were incorporated into VTA’s light rail system when it was first designed. In fact, some of MUNI’s “light rail” system is actually still streetcar, such as the very popular Market Street surface operations, where the streetcars and the cars, trucks, and buses, are all sharing the same lane and where the streetcars are very frequently held up by traffic problems. It is interesting that VTA does beat MUNI in this regard, but this result is about as surprising as the winning weightlifting effort in the 105 kilogram class being greater than that for the 56 kilogram class.

g. The final factor on page 6 is “Operator Personal Time-off,” again, VTA is compared only to MUNI. I am not exactly sure how “operator personal time-off” – which is not a transit industry standard term – is defined, nor
do I know if VTA and MUNI are using the same definition. While I will not dispute the numbers, this is getting down to the macro level and picking and choosing a specific indicator where VTA does significantly better than a single other operator. In this particular, it is also “counting the same trick twice,” as the major negative impacts of excess “operator personal time-off” are higher operating costs (to hire more employees/pay more overtime to be able to cover more scheduled time off and to employ more transit operators than would otherwise be required for the “extra board” to be available to fill in for unscheduled absences) and the unexpected unavailability of operators when they are needed, which leads to missed trips. Mr. Chang has already introduced a cost metric – Operating Expense per Vehicle Revenue Hour – which comprehends the higher cost factor and another metric – Percent of Scheduled Service Operated – which comprehends the missed trip factor. This “Time-off” metric, used in this fashion, is of questionable comparability and, even if the numbers reported are accurate and comparable, covers nothing that was not already covered by previous metrics already introduced by Mr. Chang.

h. Like the curious incident of the dog that did not bark in the night in Sir Arthur Conan Doyle’s Sherlock Holmes classic, Silver Blaze, what is not on Mr. Chang’s list of performance measure is far more interesting than what is. While I do not find his six indicators totally useless – indeed, I very frequently use his first two myself and have used his other four, or variations thereof, more than once – the last four are either difficult to use on a fair and consistent basis, redundant, or simply not all that important in the overall evaluation of transit operator performance. What I find particularly troubling as an omission is the complete lack of any statistic that goes directly to what, in my opinion, is the single most important family of transit performance indicators, those relating to cost-efficiency: what it costs the taxpayers and/or riders to actually move people. The most important of these are cost and subsidy (total cost less operating expenses generated, primarily passenger fares), measured on a per passenger and a per passenger mile bases. After all, the prime objective of transit is to move people, all other benefits of transit are either directly or indirectly related
to the number of people moved (for example, to the extent that transit has
utility in improving air quality, the more people riding on transit, the more
people who are not driving cars) – and the key factor in determining how
many people are moved on transit is the wise and effective use of limited
tax dollars. If one will refer to my slides 29 and 34, Subsidy/Passenger &
Subsidy/Passenger Mile for light rail and for bus, respectively, one sees that
VTA is the worst one both of these by significant margins and these results
are key to VTA being the worst transit operator in the U.S.

52. VTA is not the absolute worst on every single transit performance measure –
although it is the worst on many, more than any other agency – and is the worst on the
most important indicators. However, even in the major indicators where it is not the worst,
it is still very bad, and in the few cases where VTA performs very well – such as Percent of
Scheduled Service Operated – it turns out that the high performance on this indicator is
causely by almost unimaginably poor performance on another metric, in this case, spare
ratio.

53. In my over three decades in the governmental surface transportation
industry, with direct experience with well over 100 transit operators, MPO’s, state DOT’s,
and other organizations, and knowledge of virtually every significant transit agency in the
U.S., I have never encountered any transit agency that has consistently taken so much
money from the taxpayers and produced so little in the way of transit ridership.

* * * * * * * * * * * * * * * * * * * * * *

I declare under penalty of perjury under the laws of the State of California that this
declaration is true and correct and is executed on the date set forth below in the City of Los
Angeles, California.


THOMAS A. RUBIN

DECLARATION OF THOMAS A. RUBIN
Chang v. Jesse Durazo, et al.  Case No. 1-08-CV 121333