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17
18 UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
19 SAN FRANCISCO DIVISION

20 BAYVIEW HUNTERS POINT COMMUNITY) Case No. C-01-0750 TEH
ADVOCATES, COMMUNITIES FOR A BETTER)
21 ENVIRONMENT, LATINO ISSUES FORUM,)
OUR CHILDREN'S EARTH FOUNDATION,)
22 SIERRA CLUB, TRANSPORTATION) **DECLARATION OF THOMAS**
SOLUTIONS DEFENSE AND EDUCATION) **A. RUBIN IN SUPPORT OF**
23 FUND, and URBAN HABITAT PROGRAM, a) **PLAINTIFFS' MOTION FOR**
project of the TIDES CENTER,) **SUMMARY JUDGMENT ON**
24 Plaintiffs, vs.) **REMEDIES**
METROPOLITAN TRANSPORTATION)
25 COMMISSION, SAN FRANCISCO)
26 MUNICIPAL RAILWAY, and ALAMEDA-)
CONTRA COSTA TRANSIT DISTRICT,)
27 Defendants.)

28
Declaration of Thomas A. Rubin in Support of Plaintiffs' Motion for Summary Judgment on Remedies
(C-01-0750 TEH)

1 **SUMMARY OF KEY POINTS**

- 2 ■ MTC’s representation of its emphasis on transit funding is misleading. MTC has little or no
3 discretionary power to allocate funds to transit or non-transit purposes for most of the
4 funding sources in the RTP, including a significant portion of the Track 1 funding sources.
5 95% of all funds dedicated to transit are non-discretionary, i.e., they are allocated directly to
6 transit by voter mandate, statute, or other formula. This means that while 77% of the total
7 RTP is spending on transit, MTC had no discretion over 73%. ¶¶14-32.
- 8 ■ In its calculations of spending on transit, MTC includes transit fares, essentially taking credit
9 for “allocating” funding to transit that it has absolutely no control over. Transit fares are
10 generated by each operator and returned to each operator without passing through MTC’s
11 discretion. Fares account for about 19% of all the transit funding in the RTP. ¶20.
- 12 ■ Track 1 funds, about 10% of the RTP are mostly, but not all, discretionary. A majority (58%)
13 of the truly discretionary Track 1 funding is allocated to highways, roads and HOV lanes.
14 ¶¶33-43
- 15 ■ MTC documents show that improvements to bus systems generally cost a total subsidy of
16 about \$7.09 per new rider. MTC is spending about half of its Track 1 transit spending on
17 two sets of projects: the BART extension to San Jose via Warm Springs, which is currently
18 projected to cost somewhere between \$22 and slightly over \$100 per new rider, and the
19 Electrification of Caltrain and its extension to downtown San Francisco to a rebuilt
20 Transbay terminal at a cost of \$26.17 per new rider. ¶¶44-59.
- 21 ■ There is between one and two billion dollars that MTC could shift to operating purposes over
22 the 25-year term of the RTP. The San Francisco Bay Area is one of very few in the nation
23 that does not allow the larger transit operators to use part of the § 5307 formula grants for
24 operating purposes. ¶¶60-66.
- 25 ■ Many factors, not just the economy; affect transit ridership. It *is* possible for a transit agency
26 to cause increases in transit ridership by factors that *are* within the agency’s control, e.g.,
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1 reducing fares. In the early 1980s, ridership in Los Angeles increased at a rate 454% above
2 the national ridership growth rate due to a fare reduction from \$0.85 to \$0.50. ¶¶67-74.

- 3
4 ■ Improving transit for the “transit dependent” – and inner-city/ urban dwellers – can be a very
5 effective means of improving air quality by removing some of the dirtiest vehicles off the
6 road and by substantially reducing overall VMT in the region. Since the same transit
7 improvement strategy also puts transit where it most needed (i.e., high-ridership corridors),
8 and where the cost per new trip is the lowest, this strategy is a winner in all ways. ¶¶76-85.
- 9 ■ MUNI reported no ridership data at all for fiscal year 1978/79. ¶89.
- 10 ■ In 1983, ridership data reported to UMTA was reviewed for reasonableness and, if it did not
11 appear valid, UMTA contractors would initiate inquiries. No such indication was given for
12 MUNI ridership data for that year, indicating that it met UMTA reasonableness review. ¶93.
- 13 ■ If the unlinked trip data reported by MUNI for fiscal year 1982/83 was overstated, then the
14 passenger-mile statistic generated by the same passenger sampling technique must also be
15 overstated. This means the formula allocation would improperly be impacted to increase the
16 allocation to the San Francisco-Oakland Urbanized Area at the expense of other areas. ¶95.
- 17 ■ For many of the changes that might be proposed to implement the increase in transit ridership
18 as required by TCM 2, most or all of the necessary preliminary work has already been
19 performed. If the currently adopted RTP can, in fact, ensure that the TCM 2 target can be
20 ensured by 2006, amending a chapter into the RTP detailing the specific projects’ ridership
21 increases and timelines would be very straightforward. If MTC cannot make such a
22 straightforward demonstration, then the RTP amendment would take slightly longer, but the
23 process by no means would be as cumbersome as MTC represents. ¶¶97-103.
- 24 ■ With the exception of MUNI, all of the major Bay Area transit operators already participate
25 in a voluntary APTA monthly ridership reporting program, and it would be relatively simple
26 to require these operators to provide the data to MTC on a monthly or quarterly basis.
27 ¶¶104-109.

1 I, Thomas A. Rubin, declare as follows:

2 1. My business address is 2007 Bywood Drive, Oakland, California, 94602.

3 2. I submit this declaration in support of Plaintiffs' *Bayview Hunters Point Community*
4 *Advocates et al* Motion for Permanent Injunction and Declaratory Relief Re: Penalties.

5 3. I have over twenty-five years of governmental transportation and finance and related
6 experience, including approximately four years as Controller-Treasurer (chief financial officer) of
7 the Southern California Rapid Transit District in Los Angeles, California, then the third largest
8 public transit agency in the United States; over twelve years as founder of the transit practice of
9 Deloitte Haskins & Sells (now Deloitte & Touche LLP) and service as a Partner and National Transit
10 Director; and over six years as an independent governmental transportation and financial consultant
11 and expert/expert witness.

12 4. I have served over 100 transit operators, metropolitan planning organizations, state
13 departments of transportation, the U.S. Department of Transportation, transportation industry trade
14 organizations, labor unions, and other governmental, private, and not-for-profit transportation
15 entities with a wide variety of audit and consulting projects.

16 5. I have directed major projects for virtually all of the major transit operators in the San
17 Francisco Bay Area and the Metropolitan Transportation Commission (MTC).

18 6. Since October 1996, I have been engaged as an expert to the NAACP Legal Defense
19 and Education Fund, Inc., plaintiff and class counsel in the Federal Title VI, discrimination in the
20 utilization of Federal financial assistance lawsuit *Labor/Community Strategy Center et al v. MTA et*
21 *al* (Central District of California, No. 94-5936 TJH [MCX]) and have been extensively involved in
22 monitoring MTA's compliance with the Consent Decree that settled *L/CSC v. MTA*.
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1 7. I have also served as an expert/expert witness in several other lawsuits and
2 arbitrations. My professional presentations, oral and written, number well over 100.

3 8. My resume is submitted herewith as Attachment 1.

4 9. The opinions stated in this declaration are based on my training, education, and
5 experience in the fields of public sector finance and policy, transportation/public transit finance and
6 operations, and public entity operations and policy, including my knowledge and experience
7 regarding MTC and transportation planning and air quality issues in the San Francisco Bay Area,
8 and are based upon information of a kind that I and other professionals in these fields consider to be
9 reliable.
10

11 10. In specific situations identified below, I have personal knowledge of the matters set
12 forth.

13 11. In the course of preparing this declaration, I have reviewed most of the briefs and
14 declarations (but not all of the exhibits) filed in the action in connection with the liability summary
15 judgment proceedings in 2001, the Court's Order of November 9, 2001, and Plaintiffs' Motion for
16 Permanent Injunction and Declaratory Relief re: Civil Penalties. I have also reviewed many of the
17 documents that were part of the development of the Regional Transportation Plan or are now part of
18 the final plan. Other documents that I have reviewed in the course of preparing this declaration are
19 specifically referred to herein.
20

21 12. Whenever possible, I have relied on MTC's Regional Transportation Plan (RTP) and
22 its source and supporting documents, most of which are available on the Internet, as indicated herein.
23 In some cases, however, I have relied on data sources other than the RTP, as indicated below. In
24 several cases, I have prepared and attached schedules utilizing both MTC documents and external
25 sources.
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1 13. The lack of adequate information in all MTC’s publications to complete a detailed
2 funding analysis has struck me in this process; this lack of clear information is unique in my
3 experience in using, assisting in the preparation of, and reviewing such documents.
4

5 **MTC HAS NO CHOICE BUT TO ALLOCATE THE MAJORITY OF ITS**
6 **“COMMITTED” FUNDS, AND PART OF ITS “TRACK 1” FUNDS, TO TRANSIT**

7 14. MTC’s representation of its emphasis on transit funding is misleading. MTC has
8 little or no discretionary power to allocate funds to transit or non-transit purposes for most of the
9 funding sources in the RTP, including a significant portion of the Track 1 funding sources. Below, I
10 discuss several major funding sources included in the RTP and show the extent – if any – of MTC’s
11 role in decisions to spend funds on transit or not.

12 15. MTC states: “While currently about 6% of all trips and 10% of all trips (*sic*) are taken
13 on transit, MTC devotes 77% of the RTP’s total funding package to transit operations, rehabilitation,
14 and expansion, and only about 20% to roadways.” MTC Opp. at 3.

15 16. In order to break down the 77% transit funding, I reviewed MTC documents on
16 transit capital, operating and maintenance funding allocations as well as one other source of transit
17 funding in the RTP.
18

19 17. In order to demonstrate the rather small amount of discretion between transit and non-
20 transit uses that MTC has, I reviewed two schedules entitled “Baseline Transit Capital Funds By
21 Operator” and “Baseline Operating and Maintenance Funds By Operator,” from MTC’s *Final 2001*
22 *RTP Project Notebook* (“*RTP Project Notebook*”), available at
23 http://www.mtc.ca.gov/projects/rtp/project_notebook.htm. *RTP Project Notebook* at 1-6 and 1-7. A
24 true and correct copy of pages 1-6 and 1-7 are submitted herewith as Attachment 2. The funds on
25 these schedules represent all the funding allocated in the RTP for Baseline Transit Capital,
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1 Operating, and Maintenance, or 73% of the total RTP funds (\$63.9 billion out of the RTP's total
2 funds of \$87.4 billion).

3 18. To summarize and combine the information on these two schedules, I prepared a
4 schedule entitled, "Baseline Transit Capital, Operating, and Maintenance Funds By Operator,"
5 which adds two columns to the MTC format for these reports, the "Totals" and "Percentage"
6 columns at the far right. A true and correct copy my summary table is submitted herewith as
7 Attachment 3.
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9 19. An analysis of these schedules demonstrates that there are actually rather few funds
10 that allow MTC any discretion between transit and non-transit uses. In reviewing these schedules, I
11 found that of the 77% of the total RTP spending that MTC plans on spending on transit, 73% was
12 not controllable by MTC, as detailed below.
13

14 20. First, it is crucial to note that in its calculations of spending on transit, MTC includes
15 transit fares, which is an egregious example of MTC taking credit for "allocating" funding to transit
16 that it has absolutely no control over. Transit fares are generated by each operator and returned to
17 each operator without ever passing through MTC's discretion. Fares ultimately account for about
18 19%¹ of all the transit funding in the RTP.
19

20 21. A detailed description of my analysis supporting my conclusions follows, beginning
21 at the top of the list of funds. The first, and largest dollar value, line is "Local Funds (e.g.,
22 district/property taxes, general fund, fares)," which are 57.0% of all funds in this schedule. These
23 are funds that MTC never even sees, handled by the transit operator, County Transportation
24

25 ¹ See MTC, *Draft Regional Transportation Plan for the San Francisco Bay Area*, August 2001, "Committed Funds
26 Spending Breakdown" at page 49, which shows \$35.0 billion for "Transit Operations," and a note, "36% fare
27 revenues/64% subsidy." MTC, *Final RTP EIR*, December 2001, Figure 1.2-5, "2001 Regional Transportation Plan –
28 Total RTP Expenditures," shows \$35.4 billion for "Transit Operations." Assuming that the 36% farebox recovery ratio
is still valid, this would produce \$12.7 billion in fares, which is 19% of the total transit expenditures of \$67.8 billion

1 Commission, City, or other agency. As the layout of this schedule clearly shows, MTC has virtually
2 nothing at all to do with these funds, other than to coordinate their use with other funding sources.

3 The next three line items are collectively labeled “Statutory,” and combined are 28.1% of all funding
4 in this schedule:

- 5 • TDA (Transportation Development Act, a State Statutory $\frac{1}{4}\text{¢}$ sales tax that was
6 enacted in 1971, before MTC came into existence, which is returned for use solely to
7 the county from which it was collected);
- 8 • STA² Revenue Based (State Transit Assistance, funded by state motor vehicle fuel
9 taxes); and
- 10 • AB 1107 (75% BART) (the state enacted $\frac{1}{2}\text{¢}$ sales tax in the “original” three “BART
11 Counties,” Alameda, Contra Costa, and San Francisco, 75% of which, by statute,
12 must be allocated to BART).

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15 22. That the above three funding sources are labeled “statutory” clearly indicates that the
16 enabling legislation that created these funding sources gives little for MTC to do with them other
17 than to decide *what types* of transit projects they will be used to fund – and not even that for the AB
18 1107 funds. (There is one exception: if a county has no “unmet transit needs,” it can elect to utilize
19 certain TDA funds for street and road purposes. While this is not uncommon for the smaller
20 population counties with limited urbanized areas to make such findings – MTC has done it for Napa,
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26 shown in this schedule (\$35.4 billion for Transit Operations + \$16.0 billion for Transit Rehabilitation + \$16.4 billion for
27 Transit Expansion).

28 ² STA funds can be utilized by MTC for “regional transit coordination,” which, in practice, means various types of
planning, including the planning activities of County Transportation Commissions.

1 Sonoma, and Solano Counties in recent years³– it is unheard of in the larger, more urbanized
2 counties.)

3 23. Under the general label “MTC” – evidently meant to imply that MTC had a major
4 role in decisions regarding these funds—there are the following:

- 5 • FTA 5307 – These funds *can only be utilized for public transit purposes* and are
6 5.4% of the total funding in this schedule. This refers to Federal Transit
7 Administration-administered 49 USC §5307 grants, a formula grant program where
8 the funds are primarily utilized for routine transit capital renewal and replacement and
9 transit operating subsidies.
- 10 • FTA 5309 Fixed Guideway [Modernization] – This is another Federal formula
11 funding program, 2.8% of the total funds on this schedule, with the use of the funds
12 again *limited to public transit purposes*.
- 13 • TDA Article 4.5 – This is the Community Transit Services portion of TDA, and 0.6%
14 of all funds on this schedule, which is used for services to the transportation-
15 disadvantaged. These funds *must be used for transit purposes*.
- 16 • STA Population – These funds are 0.3% of all funds on this schedule. As with the
17 STA Revenue Based funds above, this is distributed based on a formula and the funds
18 *can only be utilized for transit purposes*.
- 19 • AB 1107 (25% MUNI/AC Transit) – This is the “rest” of the AB 1107 funds, those
20 that do not automatically go to BART. This is 3.7% of all funds on this schedule. By
21 statute, MTC may allocate these funds between AC Transit, BART, and MUNI—
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27 ³ In its 2001 Annual Report, “Allocations for Fiscal year 2000-01,” pp. 18-19, MTC shows a total of \$7.99 million for
28 TDA Streets and Roads, compared to almost \$260 million for TDA Transit Operations and Capital.

1 obviously all transit operators. In practice, BART does not participate in this “25%”
2 share of AB 1107 funds.

- 3 • Bridge Tolls (AB 664 and 5%) – These funds are 0.4% of all funds on this schedule
4 After the costs of operations and maintenance of the State-owned bridges in the San
5 Francisco Bay Area are covered by tolls, the remaining funds can be utilized for
6 transit purposes.
7

8 24. The following two lines are transit funding sources that *can* be utilized for non-transit
9 purposes. First, the “STP/CMAQ Programmed” line item is 0.03% of all transit funds on this
10 schedule. STP is the federal Surface Transportation Program and CMAQ is Congestion
11 Management Air Quality. Together, they are the main “flexible” transportation formula federal
12 funds, so named because they are funded from what was “originally” a federal highway funding
13 source, and these grants are administered by the Federal Highway Administration, rather than FTA,
14 and because they can be utilized for either road or transit purposes, at the option of the metropolitan
15 planning organization (“MPO”). As to transit uses, both can be used as capital grants and CMAQ
16 can be utilized for up to three years of operating subsidies for new transit services.
17

18 25. Second, RTP Track 1 Funds are 1.7% of all transit funds on this schedule. These are
19 other funds over which MTC largely has discretionary decision power. The funds consist chiefly of
20 STP, CMAQ, state Regional Improvement Program (“RIP”), Interregional Improvement Program
21 (“ITIP”), and regional revenue sources, primarily rail extension reserves from bridge tolls. *See RTP*
22 *Draft Environmental Impact Report (EIR)*, page 1-18, available at
23 <http://www.mtc.ca.gov/projects/rtp/eir.htm>. These are funds that allow, at least in some ways, for
24 MTC to decide to use them for transit *or* roads, as discussed below.
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1 26. Therefore, out of a total of \$63.85 billion allocated in the RTP for Baseline Transit
2 Capital, Operating, and Maintenance, only \$1.11 billion, or 1.74%, were funds where MTC could
3 decide to utilize these funds for non-transit purposes, such as roads.

4 27. To search for additional “flexible” funding sources, I reviewed MTC’s *RTP Final*
5 *EIR*, December 2001, available at <http://www.mtc.ca.gov/projects/rtp/eir.htm>. I focused on Figure
6 1.2-5, entitled “2001 Regional Transportation Plan – Total RTP Expenditures,” which shows the
7 following transit categories:
8

- 9 • Transit Operations, \$35.4 billion;
- 10 • Transit Rehabilitation, \$16.0 billion; and
- 11 • Transit Expansion, \$16.4 billion.

12 28. This summary of transit expenditures thus adds up to a total of \$67.8 billion –
13 approximately \$3.9 billion more than was detailed in the two MTC schedules (Attachment 2) cited
14 above from the *RTP Project Notebook*.

15 29. By adding this \$3.9 billion to the \$1.1 billion in “discretionary” or “flexible” funds
16 from the above computation, there is a total of \$5.0 billion in funds allocated to transit in the RTP
17 not discussed above. In order to determine and verify whether this \$5.0 billion represents
18 discretionary funds, I looked at some additional funding sources.
19

20 30. AB 2928 is one source of funding that accounts for some of these funds. Using data
21 from the Act at http://www.leginfo.ca.gov/pub/99-00/bill/asm/ab_2901-
22 [2950/ab_2928_bill_20000707_chaptered.html](http://www.leginfo.ca.gov/pub/99-00/bill/asm/ab_2901-2950/ab_2928_bill_20000707_chaptered.html), I prepared a schedule entitled, “A.B. 2928 (2000
23 Session) – ‘Transportation Congestion Relief Fund’ – San Francisco Bay Area Transit Projects,” and
24 it is submitted as Attachment 4 herewith. On this schedule, the California Legislature earmarked a
25 total of \$1.25 billion of funds for specific transit projects. Since MTC has essentially no decision
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27

1 power over these funds⁴, I subtracted this \$1.3 billion from the \$5.0 billion from above, leaving \$3.7
2 billion of transit funding where MTC did evidently exercise some decision power to designate these
3 funds for transit purposes.

4 31. Compared to the total RTP transit budget of \$67.8 billion from above, this \$3.7
5 billion of flexible funding is 5.5% of the total RTP spending on transit and 4.2% of the total RTP
6 projected spending of \$87.4 billion. A table that summarizes my calculations, entitled “MTC Final
7 2001 RTP Percentage of Total Transit Spending from non-Discretionary Funds” is submitted
8 herewith as Attachment 5. My calculations in this table show that 95% of transit funds are non-
9 discretionary, i.e., they are allocated directly to transit by voter mandate, statute, or other formula..
10 This sheds a different light on defendant MTC’s representation that: “MTC devotes 77% of the
11 RTP’s total funding package to transit operations, rehabilitation, and expansion.” Indeed, while 77%
12 of the total RTP is spending on transit, MTC had no discretion over 73%.
13
14

15 32. Just as MTC’s statement regarding its 77% allocation of funds to transit describes the
16 RTP funding picture as a whole, the above analysis similarly does not distinguish between
17 “committed” and “Track 1” funds. I will discuss the specific allocation of Track 1 funding in more
18 detail in the following section.
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21 **MTC ALLOCATES THE MAJORITY OF DISCRETIONARY TRACK 1 FUNDS TO**
22 **HIGHWAYS, ROADS, AND HOV LANES**

23 33. I now turn my analysis to Track 1 in the RTP, which contains mostly funding sources
24 over which MTC has a major degree of direct control. MTC defines Track 1 as follows: “Of the
25 total \$81.6 billion in revenues over the next 25 years, \$73.9 billion is committed to specific uses.
26

27 ⁴ There is a provision in A.B. 2928, §14556.12 (b)(1), that allows the “designated lead applicant agency” to submit an
28 application for an alternative or substitute project under certain conditions, but since MTC is not the “designated lead

1 The remaining \$7.7 billion in uncommitted funds is referred to as ‘Track 1,’ and is the focus of the
2 2001 RTP decisions for the current update.” *Draft 2001 RTP* (Heminger Opp. Exh. B) at page 1-16.

3 34. The data and Figure referred to above were revised and replaced in the Final RTP
4 EIR *See RTP FEIR* at 2-2 and 2-3. The revised data for the above are \$87.4 billion in Total RTP
5 Expenditures (Figure 1.2-5) and \$8.6 billion in “Track 1” funds (Figure 1.2-6). Subtracting the latter
6 from the former produces “committed” funds of \$79.8 billion in the Final RTP.
7

8 35. First, I note that of the total Track 1 funds, 48% (\$4.1 billion) are allocated to transit.
9 Heminger Decl. ¶17. Track 1 includes some funding that is discretionary in terms of transit vs.
10 highways, and some over which MTC has no discretionary control.

11 36. My analysis, presented below, shows that (1) of \$8.6 billion in Track 1 funds, \$5.3
12 billion is flexible between roads/highways and transit, while the rest are allocated to specific
13 purposes by statute, and (2) a majority of the truly discretionary funding is allocated to
14 roads/highways as opposed to transit.
15

16 37. To begin my analysis of MTC’s Track 1 funding priorities, I used MTC’s *Final 2001*
17 *RTP Project Notebook*. A true and correct copy of *RTP Project Notebook* table 1.1, “Financial
18 Summary of Regional Priorities,” is submitted herewith as Attachment 6.

19 38. On this table, I looked at MTC’s Track 1 Revenues to analyze how “flexible” they are
20 and how they are allocated. The first row shows \$8.628 billion in “Total Track 1 Revenues.” Of
21 these, several funding sources *can only* be utilized for transit purposes, being so designed at their
22 source, or are not controlled by MTC, including:
23

- 24 • “Federal New Starts Program” – 49 USC 5309, specifically the portion
25 dedicated for new guideway transit. This cannot be utilized for any purpose
26

27 applicant agency” for any of the A.B. 2928-funded projects in the Bay Area, it could not directly exercise this change
28

1 other than transit (although certain joint uses, such as combined Busway/HOV
2 lanes, may be allowable) – \$1,266.0 million.

- 3 • “Federal Bus Program” – I presume that this refers to the portion of 49 USC
4 5309 funding that is dedicated for bus purposes – \$227.0 million.
- 5 • Regional Measure 1 Extension Reserve – “The Rail Extension Reserves are
6 made up of 90 percent of the 25-cent RM 1 toll increase for two-axle vehicles
7 the San Francisco-Oakland Bay Bridge. MTC must allocate these funds
8 exclusively for rail transit capital improvement projects that are designed to
9 reduce vehicular traffic congestion on the Bay Bridge.” MTC/Bay Area Toll
10 Authority⁵, *Toll Bridge Report to the California Legislature – FY 2001-02*,
11 January 2002, available at
12 <http://www.mtc.ca.gov/publications/tollbridge/tollbridge.htm> – \$176.0
13 million.
- 14 • AB1171 – (I assume that this refers to A.B. 1171 [Dutra] of the 2001 session)
15 – These funds are dedicated to toll bridge seismic retrofit – \$360.0 million.
- 16 • Interregional Improvement Program (ITIP) – These funds can be utilized for
17 “(i)ntercity rail, interregional road or rail expansion projects outside urban
18 areas or projects of statewide significance. Decisions on project funding and
19 approval are made by Caltrans/California Transportation Commission.”
20
21

22 MTC, *Moving Costs – A Transportation Funding Guide for the San Francisco*
23
24

25 over any project.

26 ⁵“The Bay Area Toll Authority (BATA) was created by the California Legislature in 1997 to administer the base \$1 toll
27 on the San Francisco Bay Area’s seven state-owned toll bridges. On Jan. 1, 1998, the Metropolitan Transportation
28 Commission (MTC) -- the transportation planning, financing and coordinating agency for the nine-county region --
began operations as BATA.” (MTC, “About BATA, http://www.mtc.ca.gov/about_mtc/bata.htm)

1 Bay Area, Spring 2000, “State Funding Categories” available at
2 [http://www.mtc.ca.gov/publications/funding_guide/fund_guide-
4 htm/funding_guide01.htm](http://www.mtc.ca.gov/publications/funding_guide/fund_guide-
3 htm/funding_guide01.htm);– \$1,263.0 million.

- 5 • Federal Public Lands Highway – \$60.0 million. These funds are dedicated to
6 highway and related uses. See Federal Highway Administration, “Public
7 Lands Highways Discretionary Program – Public Information,” April 2002,
8 available at <http://www.fhwa.dot.gov/////discretionary/pipl0204.htm>. (check
9 website)

10 39. After deducting the total expected revenues from these six programs – \$3,352.0
11 million – from the original \$8.628 billion in Track 1 funds, there is \$5.276 billion left for MTC to
12 utilize where MTC actually can make a choice as to usage. On the same schedule (Attachment 6),
13 the following non- or quasi-transit uses of these funds are given:
14

15 Freeway/Roads Uses:

- 16 □ Freeway Operations Strategies/Traffic Operations System– \$45.5 million from
17 STP/CMAQ funds.
- 18 □ Freeway Service Patrol/Callboxes – \$39.6 million from STP/CMAQ funds.
- 19 □ Traffic Engineering and Technical Assistance Program (TETAP)/Arterial Signal
20 Re-timing – \$31.9 million from STP/CMAQ funds.
- 21 □ Pavement Management Technical Assistance (PMTA) – \$15.4 million from
22 STP/CMAQ funding
- 23 □ Fully fund Metropolitan Transportation System (MTS) Streets and Roads
24 Pavement Shortfall – \$129.0 million from STP/CMAQ funds.

25 Quasi-Transit Uses:

- 26 □ Ridesharing Program – \$55.9 million from STP/CMAQ funds.
- 27 □ TravInfo – \$126.0 million from STP/CMAQ funds.

- 1 □ Spare the Air Campaign – \$25.0 million from STP/CMAQ funds.
- 2 □ Performance Monitoring – \$2.8 million from STP/CMAQ funds.
- 3 □ Transportation for Livable Communities/Housing Incentive Program (TLC/HIP)
- 4 – \$189.2 million from STP/CMAQ funds.
- 5 □ Transportation for Livable Communities (TLC) – \$137.5 million from
- 6 STP/CMAQ funds.
- 7 □ Congestion Management Agencies (CMA) Planning Funds – \$50.1 million from
- 8 STP/CMAQ funds.

9

10 40. There is a total of \$2.081 billion programmed for transportation purposes on this

11 schedule. Of these, \$1.233 billion (59.2%) is for transit purposes, \$261.4 million (12.6%) is for

12 street/highway purposes, and \$586.5 million (28.2%) is for items that have varying levels of direct

13 involvement with public transit and/or share ride transportation.

14

15 41. For the next part of my analysis, I referred to Chapter 6, “Track 1 Investments for

16 Roadways”, from MTC’s *RTP Project Notebook*. In Table 1 below, “Track 1 highway, roads, and

17 HOV” is a summary of the highway projects (other than “Regional” and “County-Wide” ones

18 already included in the above calculations, if applicable) that receive Track 1 funding, out of a total

19 of 164 projects. I created a schedule of these projects, submitted herewith as Attachment 7, entitled

20 “Final 2001 RTP Project Notebook Track 1 Investments (Chapter 6) for Roadways.”

21

22 **Table 1. Track 1 funding of highways, streets, and HOV lanes**

	Number of Projects	Total Cost	Track 1 Funding
Total Track 1 highway, roads and HOV	113	\$4,564,800,000	\$2,784,700,000
Freeway/Roads Work in “Summary of Regional Priorities”			\$261,400,000
Grand Total Streets, Roads and Quasi- Streets and Roads Work Track 1 Funding			\$3,046,100,000

1 42. Table 1 adds the Highways, Streets, and HOV projects from the “Summary of
2 Regional Priorities” (Attachment 6) to those from Chapter 6 of the *RTP Project Notebook*. Without a
3 great deal of detailed analysis, it would not be possible to allocate the costs for those “Quasi-transit”
4 projects, such as TravInfo and the Spare the Air Campaign, listed in MTC’s “Summary of Regional
5 Priorities,” between transit and non-transit use, so these were not included in the “highways”
6 category. There is a total of \$3.046 billion (\$2,784,700,000 + \$261,400,000) of Track 1 funding
7 allocated to highways, roads, and HOV projects. – or 35 % of the total Track 1 funding of \$8.628
8 billion
9

10 43. Of the \$5.276 billion of Track 1 funds that MTC claims and holds some degree of
11 control over, the portion allocated to highways, streets and HOV lanes is 58%.

12
13
14 **EVEN WHEN MTC DOES ALLOCATE FUNDING TO TRANSIT, IT FUNDS HIGHLY
15 COST-INEFFECTIVE PROJECTS**

16 44. Before I discuss some of the specific transit projects included in Track 1, I will
17 describe the extent to which productivity and cost-effectiveness were analyzed by MTC at the time it
18 made its Track 1 funding decisions. My analysis is that despite the fact that MTC’s own figures
19 showed that the body of investments in Bus transit, as a whole, are 750% as productive as the body
20 of Rail investments, as a whole, in converting tax dollars into new transit riders, MTC nevertheless
21 devoted the overwhelming majority of its Track 1 Project transit dollars to Rail.

22 45. Submitted herewith as Attachment 8 are true and correct copies of the following four
23 sections of the MTC *Blueprint Briefing Book* that I downloaded from

24 http://www.mtc.ca.gov/projects/blueprint/bp_briefing.htm:

- 25 • Comparison of Blueprint Packages
- 26 • Blueprint Projects with the Lowest Capital and Operating Costs
- 27

- Blue Projects with the Most New Daily Transit Riders
- Blueprint Projects by Cost Per New Rider

46. The “Comparison of Blueprint Packages” is an analysis of three sets of packages of transit improvements that were proposed to be added to the existing base transit network, one each for Rail, Bus, and Ferry. Each of these three packages includes multiple projects in that particular mode. This schedule shows the costs, capacity, utilization, and various performance statistics. My analysis of these packages is intended to be useful as an indicator of the types of projects that are likely to be most productive in converting taxpayer dollars into transit trips

47. Beginning with the costs and subsidies at the top of the schedule, the Capital Costs for Rail are \$8.543 billion, approximately *twenty times* either the \$484 million for Bus or the \$373 million for Ferry Capital Costs. The Annual Net Operating Cost for Rail, Bus, and Ferry are in a far tighter range, \$196 million for Rail, \$145 million for Bus, and \$81 million for Ferry. This relative mix of capital and operating costs/subsidies between these modes is consistent with industry experience – the up-front capital costs for Rail, and to a lesser extent, Ferry, tend to be far higher multiples of operating costs than those for Bus. This is chiefly because Rail requires its own, generally new and unique, operating right-of-way, while Bus operates chiefly on existing road structures.

48. The next line, “20 Year Operating Subsidy,” appears to contain errors. For Rail, the value displayed, \$3,920 million, is 20 times the (annual) “Net Operating Cost” of \$196 million. However, for Bus and Ferry, the values shown *are* the “Net Operating Costs.” Noting this apparent error, I multiplied the Net Operating Costs for Bus and Ferry by 20 to be comparable to what was done for Rail to produce the following total subsidies for these three packages:

	Blueprint Package (\$ Millions)		
	Rail	Bus	Ferry
Capital Cost	\$8,543	\$ 484	\$ 373
20-Year Operating Subsidy	\$3,920	\$2,900	\$1,620
Total 20-Year Capital and Operating Subsidy	\$12,463	\$3,384	\$1,993

49. Obviously, the Rail package is the largest in terms of taxpayer investment; over three-and-one-half times the total spending on Bus and over six times the spending on Ferry⁶. This is very important, but is not the complete picture. This is a measure of “input” only; we need to also focus on “output” to get the big picture. The key output measure of transit is ridership⁷.

50. The fifth line gives “Daily Transit Riders.” While the above analysis of dollars is for the cost of *additions* to the existing transit network, the data for “Daily Transit Riders” is focused on the total, which includes the *existing* transit riders. To do an “apples to apples” comparison, I subtracted the existing riders to focus on the riders that will be *added*. Taking out the pre-existing ridership produces the following increases in Daily Transit Riders for each of the three modal packages:

⁶ This ignores the “time value of money,” where economic/financial theory and practice holds that a dollar spent today is worth more than a dollar spent in five years, which is worth more than a dollar spent in ten years. Since a far greater share of the Bus and Ferry costs would be spent in the future years, the single methodology utilized above tends to make Rail “look better,” relative to Bus and Ferry. However, as the results utilizing this simplified methodology will be such clear indicators in forming investment decisions, there is little need to get into a more complex discounted cash flow or similar analysis. Also, the next analysis, performed by MTC, does factor in the time value of money.

⁷There is another commonly utilized measure of transit output, that of passenger-miles. However, while passenger-miles is valuable for many purposes, for the instant analysis, ridership is the more important.

Added Daily Transit Riders		
Rail	Bus	Ferry
3,200	94,500	6,700

51. Looking at both input and output, compared to Rail, Bus produces 78% more new riders for 27% of the cost. Bus’ productivity – measured as the taxpayer cost per new rider – is 654% of Rail’s.

52. Using MTC’s data from the last two lines of this page, and summing them, we have the following total annualized subsidy per new rider:

	Rail	Bus	Ferry
Annualized Capital Cost/New Rider	\$41.39	\$1.59	\$15.50
Operating Subsidy/New Rider	\$11.77	\$5.50	\$41.71
Total Subsidy/New Rider	\$53.16	\$7.09	\$57.21

53. MTC’s calculations show Bus as 750% as productive as Rail in converting tax dollars into new transit riders.

54. While the above analysis is *not* a proper methodology for prioritization and/or selection of individual transportation projects for implementation, it *is* extremely useful as an indicator of the types of projects that are likely to be most productive in converting taxpayer dollars into transit trips.

55. As shown below, MTC produced a 2001 RTP that devotes the vast majority of “Track 1” funds to transit modes that are far less productive than identified superior options. In its RTP, MTC has not identified other Bus projects that can be as productive, as the ones in the *Blueprint*.

1 MTC has not taken a lead role in identifying funding sources that can be utilized for more productive
2 projects. MTC has not sufficiently educated the public, elected decision-makers, interest groups,
3 etc., on the productivity and cost-effectiveness of the various transit options. MTC has not made
4 deliberate and meaningful efforts to direct the funds that it *does* control to the more productive
5 projects.
6

7 56. Of all Track 1 funding for transit projects, 48% – \$2,295.5 million out of \$4,790.7
8 million– are allocated to two projects: (1) BART to San Jose via Warm Springs, and (2) the
9 electrification of Caltrain and its expansion into downtown San Francisco to a new Transbay
10 Terminal. *See* my calculations, submitted herewith as Attachment 9, “MTC Final 2001 Regional
11 Transportation Plan – Percentage of Track 1 Transit Funds Spent on BART to San Jose Via Warm
12 Springs and Electrification and Caltrain and Extension to New Transbay Terminal.”
13

14 57. Indeed, MTC is investing almost half of its “uncommitted funds” into two large
15 capital projects that are far less productive than many other types of projects. For this analysis, I
16 referred to MTC’s *Draft 2001 RTP for the San Francisco Bay Area – Regional Transit Expansion*
17 *Policy: Initial Assessment*, August 2001, Appendix B, “Potential Rail Expansion Candidate
18 Projects,” available at <http://www.mtc.ca.gov/projects/rtp/rtep.htm>. The following information is
19 given under the section entitled “Rail Criteria – Cost-Effectiveness” for the projects listed below:
20

- 21 • BART to San Jose via Warm Springs: “MTC’s Blueprint for the 21st Century
22 calculated cost per new rider for the entire length of the BART extension from
23 Fremont to San José to equal \$100.49. A subsequent study prepared for the
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1 corridor calculated a substantially lower figure (\$22), assuming significantly
2 more dense development around transit stations.”⁸ *Id.* at 41

- 3 • Caltrain Electrification: “MTC’s Bay Area Transportation Blueprint for the
4 21st Century Evaluation Report identified the Caltrain improvement projects,
5 including electrification, as the highest ranked of rail projects evaluated for
6 new daily riders. The estimated \$20.88 figure, however, includes a package
7 of improvements significantly more extensive than this project as proposed
8 (e.g., grade separations).” *Id.* at 51.

10 58. Caltrain Extension to Downtown San Francisco and Transbay Terminal Replacement:

11 “Information provided for a joint Transbay Terminal and Downtown Extension project. Follow-up
12 discussions will be necessary to distinguish between the two projects. Based on the expected
13 construction and operating costs, the annualized cost per new rider provided by the SFCTA [San
14 Francisco County Transportation Authority, the sponsoring entity for the project] is estimated at
15 \$11.02. MTC’s analysis for the Bay Area Blueprint for the 21st Century included the Downtown
16 Extension as part of a package of necessary ancillary improvements, including the cost of
17 electrifying the Caltrain line; the resulting cost-per-new-rider estimate equaled \$26.17. The rebuilt
18 Transbay Terminal will increase to 50 the number of bus bays for AC Transit. This will support an
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23 ⁸ See Attachment 10 hereto, *Overextended*, an analysis of the BART to San Jose extension by Stuart Cohen of the Bay
24 Area Transportation and Land Use Coalition. In *Overextended*, page 2, Cohen comments on the “significantly more
25 dense development.” “VTA released a scenario based on unplanned and unrealistically high levels of growth in
26 downtown San Jose: 180,000 new residents and 176,000 new workers (which would require about 400 new 17-story
27 high rise buildings) was developed.” If this level of new residents and jobs were to exist in downtown San Jose, the
28 result would be extreme increases in traffic congestion, perhaps even to levels previously unknown in the United States.
BART and the other elements of the South Bay and intra-regional transit system would be completely overwhelmed by
the levels of new trips that would be generated. As a result, the overwhelming majority of the trips generated by these
new residents and jobs would be taken by private automobiles on city streets and freeways system, which is already well
beyond its design capacity, with only relatively minor additions to it comprehended in the RTP.

1 increase of up to 75% in transbay bus service, should that service be financially supportable in the
2 future.” Id. at 55.

3 59. “Cost per new rider” is a cost-effectiveness criterion originally developed by what is
4 now the Federal Transit Administration. It is the total cost, including both annual operating costs
5 and the annualized portion of capital costs, to carry one passenger one-way on a single day, from trip
6 origin to trip destination. To summarize the above, MTC is spending about half of its spending on
7 Track 1 transit funds on two sets of projects, (1) The BART extension to San Jose via Warm
8 Springs, which is currently projected to cost somewhere between \$22 and slightly over \$100 per new
9 rider, and (2) Electrification of Caltrain and its extension to downtown San Francisco to a rebuilt
10 Transbay terminal at a cost of \$26.17 per new rider.
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14 **MTC’S EXCUSES FOR WHY IT HAS NOT MET TCM 2 ARE INACCURATE**

15 60. MTC has access to additional sources of operating funds, but it chooses not to utilize
16 them. In his declaration, Mr. Heminger claims that MTC’s lack of operating funds prohibits it from
17 being able to increase ridership as Plaintiffs suggest. Heminger Decl. ¶52, MTC Opp. at 9. My
18 analysis shows, however, that MTC has access to additional operating funds that it chooses either
19 not to use or to devote to other purposes. In transit, one common “truism” is that operating funds are
20 scarcer than capital funds. Mr. Heminger alludes to this in his declaration:
21

22 “Generating additional capital funds is problematic at this stage because, as noted
23 above, MTC has already ensured in the 2001 RTP, as it did in the 1998 RTP, that
24 virtually the entire existing shortfall in transit rehabilitation needs would be
covered by discretionary Track 1 funds, thus rendering the competition for
additional capital funds for new transit projects more acute.

25 “Generating new operating funds is even more difficult, because of limitations
26 on the use of these funds for transit operations that are built into the transportation
27 funding system.” Heminger Decl. ¶¶ 51.-52
28

1 61. While there is basis for statements such as these in most cases, there are several
2 different ways to shift funding around in order to increase funding for transit operations. Federal
3 Section 5307 “Associated Capital Maintenance” (sometimes called “preventive maintenance”)
4 grants are one example. 49 USC §5307(a)(1) established a new definition of “capital” – known as
5 “associated capital maintenance items.” This new definition allows transit agencies to elect to use
6 some of their annual §5307 formula grant funds for certain on-going high-dollar maintenance costs,
7 such as engine overhauls. For every purpose except the federal statutory definition of “capital,”
8 these “Associated Capital Maintenance” grants *are* federal transit operating grants.
9

10 62. The San Francisco Bay Area is one of the very few in the nation that does not allow
11 the larger transit operators to use part of the § 5307 formula grants for operating purposes⁹. *See*
12 *FTA, The Urbanized Area Formula Program and the Needs of Small Transit Intensive Cities*,
13 September 2000, Exhibit 2: “FTA Formula Apportionments by Urbanized Area Size, 1998-2000,”
14 available at <http://www.fta.dot.gov/library/policy/rtc/5ftalsn.html>. For federal FY02, the §5307
15 allocation to the San Francisco-Oakland Urbanized Area (UZA) was \$126.7 million *See* FTA,
16 “Section 5307 Urbanized Formula Area Formula Apportionments – Areas With Population 200,000
17 And Over,” available at <http://www.fta.dot.gov/office/program/2002/s5307.html>. If MTC were to
18 use these funds for transit operating subsidies at the national average rate for large UZA’s of 19.5%,
19 then an additional \$24.7 million would be available for transit operations subsidies. If we assume
20 that this would produce ridership increases sufficient to provide a 10% farebox recovery ratio (a
21 rather low assumption that was deliberately chosen to be conservative), an additional \$2.75 million
22 would be generated to cover operating expenses, bringing the annual total to approximately \$27.4
23
24

25
26
27 ⁹ There are different rules for different size UZA’s; this discussion is limited to the largest class, those with populations
28 over 1,000,000, which includes most of the MTC coverage area.

1 million. In addition, the additional service operated and passengers carried would increase the Bay
2 Area's share of Federal and State formula funds in later years.

3 63. Mr. Heminger states:

4
5 "Under federal law MTC is also authorized to convert certain "committed"
6 federal transit funds intended for capital programs, such as badly needed transit
7 vehicle replacement and other pressing capital needs, into so-called 'preventive
8 maintenance' funds. MTC has discouraged the practice of converting either
9 CMAQ Track 1 or these committed funds into operating (preventive maintenance)
10 funds because doing so has the practical effect of 'cannibalizing' the capital
11 program in order to cover short term operating needs." Heminger Decl. at ¶ 52

12 64. The above is an excellent illustration of the essence of the problem. As cited in his ¶¶
13 51-52, Mr. Heminger admits that it is more difficult for transit operators and transit planning
14 agencies to find operating funds than to find capital funds. It would make sense, therefore, that
15 when there are opportunities to shift funds from capital to operations without any loss of dollars in
16 the process, these would be carefully investigated. Although the use of § 5307 funds for operations
17 is authorized by the MPOs in such major cities such as Atlanta, Cincinnati, Columbus, Detroit,
18 Honolulu, Houston, Indianapolis, Los Angeles, Miami, Minneapolis/Saint Paul, Phoenix,
19 Philadelphia, Pittsburgh, Sacramento, Saint Louis, Salt Lake City, San Diego, and Washington, D.C.
20 MTC virtually never has allowed the other major Bay Area transit operators to use these funds for
21 operating purposes¹⁰.

22 65. There are other funding sources under MTC's control that can also be used for transit
23 operations, including:

- 24 □ Congestion Management Air Quality – Federal CMAQ can be utilized to pay for
25 up to the first three years of operations of new transit services, such as new light

26 ¹⁰ MTC has only allowed the use of §5307 funds for these purposes in Santa Clara County because by operation of
27 federal law, it is a separate Urbanized Area which receives a separate allocation of § 5307 funds, allowing the local
28 agency a greater degree of control over how such funds will be utilized.

1 rail or bus lines. The amount of these funds that could be used for operations
2 would be determined by the amount of new service to be operated. For purposes
3 of the 25-year RTP, these funds could easily be well into tens of millions of
4 dollars.

- 5 □ STA – \$48.7 million of STA Revenue-based allocated to Caltrain, and \$9.6
6 million of STA Population allocated to the Small Operators for capital purposes
7 could be utilized for funding transit operations (*See RTP Project Notebook at 1-*
8 *6*).
- 9 □ TDA –\$1.8 billion is allocated to capital projects for CCCTA, LAVTA,
10 SamTrans, Vallejo, VTA, and the Bay Area small operators. A significant portion
11 of these funds could be utilized for transit operations.

12
13 66. ***From the above sources, there is between one and two billion dollars that MTC***
14 ***could shift to operating purposes over the 25-year term of the RTP.*** This would require a shifting
15 of regional priorities away from expensive, low-productivity projects to less-expensive, high-
16 productivity projects that can show results within a few years.

17
18 **MANY FACTORS AFFECT TRANSIT RIDERSHIP**

19 67. Many factors, not just the economy; can affect transit ridership. It *is* possible for a
20 transit agency to cause transit ridership to increase by very large amounts by factors that *are* within
21 the agency’s control.

22
23 68. In ¶ 15(a) of his declaration, Professor Wachs references a paper by Professor John
24 Pucher that sets forth the decline in United States transit ridership between 1990 and 1995 and its
25 growth from 1995 to 2000 and relates this data time series to the increase in unemployment in the
26 former period and the decrease during the later period. Professor Wachs then states, “It is reasonable
27

1 to interpret these findings to mean that economic conditions, specifically the extent of employment,
2 influence transit patronage more than any other variables. Clearly, the MTC can do little to directly
3 influence such trends.” In the remainder of ¶ 15, Professor Wachs cites other factors that he
4 presents as limiting the ability of MPOs like MTC to increase transit ridership.

5
6 69. While I agree with Professor Wachs that economic conditions, including the extent of
7 employment, are important factors in transit ridership trends, they are certainly not the only factors.
8 For example, the American Public Transportation Association (“APTA”) found that “in 2001,
9 nationally, public transportation ridership went up by 2 percent, compared to the previous year.”
10 APTA, “Growth in Public Transportation Ridership Sets Record for Sixth Straight Year,” April 17,
11 2002, available at <http://www.apta.com/news/releases/2001ridership.htm>. However, during the same
12 time period, the U.S. unemployment rate *increased* 20% – from 4.0% to 4.8%. U.S. Department of
13 Labor, Bureau of Labor Statistics (“BLS”), Table A-1, “Employment status of the civilian non-
14 institutional population 16 years and older, 1969 to date,” available at
15 <ftp://ftp.bls.gov/pub/suppl/EMPSIT.CPSEEAI.TXT>. Clearly, while unemployment rates can
16 influence transit ridership, there are other factors at work as well.

17
18 70. From 1982 to 1985¹¹, transit passenger trips rose by 7.3% nationwide. APTA, *Transit*
19 *Fact Book 1998*, Table 32, “Passenger Trips by Mode”. In compliance with Professor Wachs’
20 Unemployment Rate-Transit Ridership hypothesis, the U.S. unemployment rate declined from 9.7%
21 to 7.2%. *See* US Department of Labor, Bureau of Labor Statistics. However, during the same time
22 period, the passenger trips carried by the Southern California Rapid Transit District (“SCRTD”) in
23 Los Angeles increased *over 40%*. *See* SCRTD, Section 15 reports to the U.S. Department of
24

25
26
27 ¹¹There are some differences in timing in the data time series presented. For example, SCRTD ridership is presented on
28 a fiscal year (July to June) basis, while unemployment data is presented on a calendar year basis. The impacts of these
differences are not significant to the main point of this paragraph.

1 Transportation/Urban Mass Transportation Administration, 1982 and 1985. The change in
2 unemployment rates in California was slightly (6%) greater than in the rest of the U.S. Bureau of
3 Labor Statistics, “Local Area Unemployment Statistics – California – Annual Average Estimates
4 From the Current Population Survey,” February 2002, available at
5 http://www.bls.gov/lau/staa_7001.pdf. However, the greater rate of decline in unemployment is
6 hardly sufficient to explain the 454% greater rate of increase in SCRTD ridership growth over the
7 national ridership growth rate¹².

9 71. This increase was not due to increased levels of transit service provided or to greater
10 passenger comfort. Almost every expert who has examined this outcome has concluded that the
11 major factor explaining the SCRTD ridership increase was a reduction in transit fares, from 85¢ full
12 adult cash fare in 1982 to 50¢ for fiscal years 1983 through 1985. This fare reduction was
13 authorized by the passage of a ½¢ sales tax¹³ in Los Angeles County, placed on the November 1980
14 ballot for the approval of the voters by the Los Angeles County Transportation Commission.
15

16 72. Thus, as this example shows, it *is* possible for a transit agency to cause transit
17 ridership to increase by very large amounts by factors that *are* within the agency’s control.

18 73. In his ¶ 17., Professor Wachs states, “The most powerful tool the MTC has – control
19 over certain funding sources – does not enable MTC to ensure that transit ridership will increase.
20 The proof lies in the lack of correlation between the rates of transit funding increases and the rate of
21 transit ridership increases.” I concur with Professor Wachs that the connection between the *level* of
22 funding on transit, or *changes* in the level of funding, often does not have great statistical
23

24
25 ¹²Actually, the difference in growth rates between SCRTD and the rest of the U.S. transit industry was even larger.
26 SCRTD, with approximately 4.4% of the total U.S. transit ridership in 1982, accounted for almost 25% of the *total*
27 national increase in ridership from 1982 to 1985.

1 significance in explaining changes in the level of transit usage. Indeed, in the years after the end of
2 the 50¢ fare program in Los Angeles in 1985, spending on transit increased very significantly, but
3 ridership actually *declined* by a huge amount – from the all-time high SCRTD ridership of 497.2
4 million in 1985 to less than 375 million¹⁴ by 1995.

5
6 74. What can be far more important than the *level* of spending on transit is what the
7 spending is used for. In the Los Angeles case, spending on fare reduction proved to be extremely
8 productive in increasing transit usage.

9
10 **MTC FAILS TO ADVANCE REGIONAL GOALS IN RTP PROCESS**

11 75. The central failure of the RTP process is that MTC does not step in to advance
12 overarching, regional goals such as increasing regional ridership in the near-term in making its
13 funding decisions. As a result, MTC has funded multiple projects with extraordinarily high cost-per-
14 rider estimates. The RTP process is based on political tradeoffs, not regional planning. Allocation of
15 transit funding is highly political. As I discussed earlier in this declaration, one simple, easy strategy
16 to increase transit ridership in a short timeline is to encourage transit usage by fare reductions. Not
17 only is it simple and easy; it can be done quickly, it is very low cost compared to the alternatives,
18 and, in the right circumstances, it can work extremely well – and yet I can find no evidence that fare
19 reductions were ever considered as an option at any time in the RTP process.
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24 ¹³ The cost of the fare subsidy program was slightly less than 20% of the total sales tax revenues during the three-year
25 fare reduction period, or slightly under what would be raised by a .1% sales tax (author’s calculation while SCRTD
CFO).

26 ¹⁴In 1993, SCRTD and LACTC merged to form the Los Angeles County Metropolitan Transportation Authority
27 (“MTA”). The actual unlinked passenger trips reported by MTA in the 1995 National Transit Database reporting year
was 362.3 million, but I have increased the data to be comparable to the 1985 value by adding back approximately ten
28 million annual trips that were carried on bus lines that were transferred from SCRTD/MTA to other local transit
operators after 1985.

1 **PUBLIC TRANSIT IMPROVEMENTS IN INNER CITIES AND URBAN CORE AREAS**
2 **CAN INCREASE RIDERSHIP AND SIGNIFICANTLY IMPROVE AIR QUALITY**

3 76. Improving public transit service to inner-city (i.e., urban) and so-called “transit
4 dependent” areas can both increase ridership and improve air quality, contrary to MTC’s claims.

5 77. Professor Martin Wachs claims, “It is widely understood and accepted among
6 transportation planning professionals that improving service to transit dependent individuals – who
7 often have lower incomes, who typically live in urban core areas, and who do not drive or would not
8 otherwise make the transit trip by automobile – will not reduce emissions.” Wachs Decl. ¶ 18.

9 78. Based on my years of transportation planning experience, I find this statement to be
10 an oversimplification that is often incorrect. First, Dr. Wachs’ statement is based on an assumption
11 that there are only two types of transit riders, “pure” transit-dependant and “pure” choice. In
12 actuality, there is a very wide continuum between the two extremes that represent the strictest – and
13 often, least useful – definitions of these terms. For example, in a household that has two adult
14 workers and one automobile, and one adult may use the car for the Monday-Friday, home-to-work
15 trip, while the other adult may be transit-dependent for his/her home-to-work trip. However, the
16 “other” adult may be a “choice” rider for work trips at other times or on other days, or for evening
17 and weekend trips, because there is an automobile available to him/her at these times. Even a
18 “choice” rider by the strictest definition could become transit dependent when his/her automobile is
19 in the shop for repairs. There are almost as many points on the continuum from “pure” transit-
20 dependant to “pure” choice transit rider as there are people in the Bay Area.

21 79. Second, if a low-income resident drives little or not at all, this does *not* mean that
22 (s)he does not generate automotive trips. Indeed, in many communities, family and friends provide
23 rides to non-drivers and/or non-automobile owners, or drive their automobiles to run errands for
24 them.
25 26
27

1 80. In many areas, including the field of air quality, there exists a phenomenon known as
2 the “80:20 rule” – that, in many situations, 20% of the transactions account for 80% of the business.
3 Applied to automobile-generated emissions, this means that 80% of the emissions are generated by
4 20% of the automobiles (in fact, in California, 90:10 may be closer to the current status). Today’s
5 cars, even internal-combustion cars, are relatively clean by pre-emission control standards, with over
6 95% fewer emissions than the pre-emission control vehicles of the late 1960's. A significant portion
7 of the progress in reducing mobile source emissions has come from replacing older, dirtier cars with
8 newer, cleaner ones.

10 81. The problem is that many low-income people who reside on the “transit- dependent”
11 side of the spectrum cannot afford the current generation of newer, cleaner automobiles. Often,
12 when these people do purchase automobiles, they buy what they can afford. And the “affordable”
13 cars are often the older, higher polluting models that are known in the trade as “gross polluters,”
14 which can be 100 or even 1,000 times dirtier than the latest models. If these communities have
15 inadequate transit service, the marginally transit dependent will generally purchase the least
16 expensive cars and perform the minimum amount of maintenance. Indeed, some of these cars are
17 not even registered, much less smog-checked.

19 82. Additionally, Professor Wachs discusses the automotive catalytic converter/“cold
20 start” issue, stating, “Depending upon the particular vehicles, up to half the pollution produced by a
21 twenty-mile automotive trip can be emitted during the first five miles of driving.” Wachs Decl. ¶ 21.
22 The key phrase here is, “Depending upon the particular vehicles.” While “cold starts” are an
23 important issue in looking at automotive emissions, for a specific vehicle, its significance is less with
24 (1) vehicles that are not equipped with catalytic converters, (2) vehicles where the engine is not in
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1 good tune, (3) vehicles where the catalytic converter has lost much of its effectiveness, and (4)
2 vehicles where the catalytic converter has been removed or its function deliberately eliminated.

3 83. For these reasons, if transportation planning provides improved transit service to low-
4 income, “transit-dependent” communities, ridership will increase, but also the air quality benefits
5 will be significant. Indeed, improved public transit, especially to the inner cities, where people tend
6 to be more “transit-dependent,” *can* make a positive contribution to air quality by eliminating the
7 necessity among those who are marginally transit dependent to drive high-polluting vehicles.
8

9 84. I have read and reviewed a US Department of Transportation/FTA study by Fred
10 Williams, entitled “Transit, Auto Ownership, and Sustainable Transportation: Recent
11 Measurements.” A true and correct copy of this study, acquired from the Bay Area Air Quality
12 Management District Library, is submitted herewith as Attachment 11. The conclusions of this
13 study include a finding that focusing public transit improvements to generate “basic mobility,” i.e.,
14 to transit-dependent individuals and communities, has a substantial impact on reducing overall
15 vehicle miles traveled (“VMT”) in the region. The study also finds that improving public transit to
16 “location efficient” communities—i.e., urban core areas—has a stronger influence on reducing VMT
17 than improving transit to any other areas. The findings of this study confirm my discussion above
18 and add further support to the theory that improving public transit service to inner-city and so-called
19 “transit dependent” areas can both increase ridership and improve air quality.
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22 85. Therefore, it is my opinion based on extensive study and experience in the field, that
23 improving transit for the “transit dependent” – and inner-city/ urban dwellers – can be a very
24 effective means of improving air quality by removing some of the dirtiest vehicles off the road and
25 by substantially reducing overall VMT in the region. Since the same transit improvement strategy
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1 also puts transit where it most needed (i.e., high-ridership corridors), and where the cost per new trip
2 is the lowest, this strategy is a winner in all ways.

4 **MUNI'S ESTIMATED 1983 RIDERSHIP IS QUESTIONABLE**

5 86. There is reason to question MTC's estimate of 264 million annual boardings as
6 MUNI's 1983 ridership level. In its brief and supporting declarations from Peter Straus and Bonnie
7 Nelson, MTC disputes the unlinked passenger trips reported by the San Francisco Municipal
8 Railway for the 1982/83 reporting year, asking to substitute a figure of 264 million, in place of the
9 293.3 million it reported to the Federal government for that year. *See* Urban Mass Transit
10 Administration (UMTA -- now Federal Transit Administration), 1983 Section 15 Annual Report,
11 Table 3.16, "Transit Operating Statistics: Service Supplied and Service Consumed -- Details by
12 Transit System -- Directly Operated and Purchased Service," page 3-276.

13
14 87. MTC cites the declaration of Peter Straus, MUNI Manager of Service Planning/
15 Director of Planning as support for its position. While Mr. Straus discusses a number of problems
16 with the ridership data collection for this period, there are several contravening points that are not
17 discussed.
18

19 88. First, Mr. Straus, in his ¶18, states, that, "To obtain an accurate estimate of the actual
20 number of boardings for the system for FY 1982/83, one could interpolate between 1978/79, the last
21 year for which credible ridership estimates are available, and 1984/85, the first year when reasonably
22 accurate estimates based on statistical sampling are available."
23

24 89. However, in checking the data that MUNI reported to UMTA under the Section 15
25 system, I found that MUNI reported ***no ridership data at all*** for fiscal year 1978/79 *See* UMTA,
26 1979 Section 15 Annual Report, "Transit Operating Statistics: Service Supplied and Service
27

1 Consumed -- Details by Transit System – Directly Operated and Purchased Service,” page 2-168),
2 submitted herewith as Attachment 12.

3 90. From the fact that MUNI did not report any data at all, data that was required to be
4 reported by federal regulation, for fiscal year 1978/79, but *did* report data for fiscal year 1982/83, I
5 can only conclude that the MUNI personnel responsible for submitting the data for ridership in fiscal
6 year 1978/79 did not have confidence in the data they had for that year, while those who filed the
7 report for Fiscal year 1982/83 did have confidence in the data that they submitted.
8

9 91. Second, perhaps the most important change to MUNI service in recent decades was
10 the implementation of MUNI Metro service, converting the streetcars that formerly ran on the
11 surface down Market Street to a “pre-metro” subway operation, using the upper level BART tube
12 that was originally designed for a line that was not built. This service greatly sped up travel along
13 Market Street and converted what was formerly the slowest section of the streetcar trip to one of the
14 fastest. This type of service improvement can generally be expected to produce very significant
15 increases in ridership over the first two or three years of operation. The start-up of MUNI Metro
16 service occurred in 1980-1982, just before the year in question. *See* San Francisco Municipal
17 Railway, “*About Muni: Inside Information* – “The History of Muni”, available at
18 <http://www.sfmuni.com/aboutmun/geninfo.htm>.
19

20 92. Third, for the Section 15 reporting years prior to fiscal year 1983/84, MUNI reported
21 no Cable Car ridership at all. This is understandable for the period between September 22, 1982 and
22 June 21, 1984, when the Cable Car system was shut down for system rehabilitation. *See* San
23 Francisco Cable Car Museum, “San Francisco Cable Car Time line,” available at
24 <http://www.cablecarmuseum.com/Time.htm>. But this is not readily understandable for the period
25 when there was service. The time period from July 1 to September 22, 1982 falls within the
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1 MUNI1982/83 fiscal year, and the passengers carried by MUNI on Cable Cars during this period
2 should have been included in the MUNI total ridership. Given that the Cable Cars generally carry
3 between 18 and 20 million riders per full year, this could mean MUNI's 1983 ridership count in fact
4 *underestimates* ridership by over four million riders.

5
6 93. Fourth, at the time period in question, data reported to UMTA was reviewed for
7 reasonableness and, if it did not appear valid, UMTA contractors would initiate inquiries. Where
8 issues could not be resolved to the satisfaction of UMTA and his contractors, the questioned data
9 would be marked with a "Q" in the published reports to alert users to the possibility of inaccuracy.
10 No "Q" was attached to any MUNI ridership data for the year at issue, indicating that it had passed
11 the UMTA reasonableness review.

12
13 94. Finally, beginning with the Section 15 data reported by transit operators in the 1983
14 Section 15 reporting year, the data for unlinked passenger trips was utilized to determine allocation
15 of Federal formula transit funds. In the overwhelming majority of the well over 100 transit operators
16 I have served in my career, the procedure for producing passenger miles data for Section 15
17 reporting is essentially the same system as that utilized to produce unlinked passenger trips, the
18 ridership statistic reported to UMTA/FTA that is at question here. In comparing the passenger-mile
19 data that was utilized for purpose of grant funding determination for the 1982/83 reporting year
20 (UMTA, 1983 Section 15 Annual Report, Table 4.01, "Data Used for Section 9 Apportionments,"
21 page 4-13), the passenger mile data for MUNI is actually slightly higher, overall, than the passenger
22 mile data in Table 3.16 for that year.

23
24 95. If the unlinked trip data reported by MUNI for fiscal year 1982/83 was overstated,
25 then it follows that the passenger-mile statistic generated by the same passenger sampling technique
26 must also be overstated. If this is correct, then the formula allocation would improperly and illegally
27

1 be impacted to increase the allocation to the San Francisco-Oakland UZA, at the expense of the
2 nation's other UZA's. Distributing these formula funds in the San Francisco Bay Area is the
3 responsibility of MTC.

4 96. If MTC is concerned that MUNI improperly increased ridership – and logically,
5 passenger-mile – data reported to UMTA in 1982/83, and that the formula funding allocation was
6 improperly increased for the Bay Area transit operators as a result, did MUNI or MTC take any
7 action to resolve this issue and alert UMTA of this problem? Or did the significance of this error in
8 reporting – if there is an error in reporting – only occur to MTC when it determined that it might be
9 able to get out of part of the commitment it made in 1982 to increase transit ridership?
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11

12 **AMENDING RTPS AND TIPS IS A COMMON PRACTICE**

13 97. Creating amendments to RTPs and/or TIPS is a relatively common and frequent event
14 for transportation planning agencies, particularly MTC.
15

16 98. In his declaration in general, Mr. Brittle discusses the process and procedures to
17 prepare the Regional Transportation Plan (RTP) and Transportation Improvement Plan (TIP) in the
18 MTC region. He describes the resources and complications involved in this process, in general
19 painting a very complex, difficult to change, process.
20

21 99. First, it is not at all unusual to amend TIPS – in larger urbanized areas, it is probably
22 more common to have TIPS *with* amendments prior to their expiration than without. Indeed, Exhibit
23 B to Mr. Brittle's declaration *is* a TIP amendment with no less than 32 separate additions, transfers
24 in funding, and the like.

25 100. Similarly, RTPs are often changed. Indeed, the 1998 RTP was amended three times
26 after its initial adoption—in October 1998, May 1999, and May 2000. *See 2001 Draft RTP EIR at*
27 *page 1-1.*
28

1 101. For many of the types of changes that might be proposed to implement the increase in
2 transit ridership as required by TCM 2, most or all of the necessary preliminary work has already
3 been performed – project definition and scope, capital and operating cost projections, revenue
4 estimates, ridership, etc. Also, I am familiar with many of the projects proposed in AC Transit’s
5 “Strategic Vision” and in MUNI’s “Vision” plan, and my review shows that these projects are no
6 more “conceptual” than several of the projects that are included in the 2001 RTP, including the
7 BART extension to San Jose discussed herein.
8

9 102. If the currently adopted RTP can, in fact, ensure that the TCM 2 target as proposed by
10 Plaintiffs can be met by 2006, amending the RTP to include an addendum detailing the specific
11 projects’ ridership increases and timelines would be very straightforward.
12

13 103. If MTC cannot make such a straightforward demonstration, then the RTP amendment
14 would take slightly longer, but the process by no means would be as cumbersome as MTC
15 represents. What the plaintiffs are proposing is, essentially, that the criteria that drive the decisions
16 that produced the existing RTP and TIP be modified to cause change to the results of the
17 prioritization of projects. This modification could be as simple as substituting one or more ridership
18 increasing projects for one or more less productive projects. This process is certainly not something
19 that is beyond the capabilities of MTC and the other governmental transportation entities in the Bay
20 Area – if they are sufficiently motivated to comply.
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23 **RIDERSHIP IS OFTEN REPORTED ON A MONTHLY BASIS**

24 104. In his ¶ 12. Mr. Brittle states, “There is no system in place that would enable MTC to
25 receive or compile Bay Area transit boardings in, for example, November of any year, as plaintiffs
26 propose.” However, MTC, as well as the transit operators, have the ability to count ridership at the
27 end of any month or quarter, not just at the end of the fiscal year.
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1 105. Submitted herewith as Attachment 13 to this declaration is a true and correct copy of
2 the American Public Transportation Association (“APTA”) “APTA Transit Ridership Report” for
3 the Fourth Quarter, 2001 (calendar year), which I downloaded from the APTA web site at
4 <http://www.apta.com/stats/ridershp/riderep/01q4cvr.pdf>, (the second to last element in the URL
5 specifies the year and quarter). This report summarizes quarterly ridership –by month, so “fourth
6 quarter” includes October, November, and December– for virtually every major and many smaller
7 transit operators in the U.S. This includes ridership from the Alameda-Contra Costa Transit District
8 (“AC Transit”); the Central Contra Costa Transit Authority (“CCCTA”); the Golden Gate Bridge,
9 Highway and Transportation District (“Golden Gate”); the Livermore/Amador Valley Transit
10 Authority (“LAVTA”); the Peninsula Corridor Joint Powers Board (dba “Caltrain”); the San
11 Francisco Bay Area Rapid Transit District (“BART”); the San Mateo County Transit District
12 (“samTrans”); Altamont Commuter Express (“ACE”); and the Santa Clara Valley Transportation
13 Authority (“VTA”) report to APTA every quarter.
14
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16 106. The APTA report is complete with data currently maintained back to 1999. The data
17 is generally available from APTA in this form approximately three-and-one-half months after the
18 end of each quarter. From my experience as CFO of SCRTD, the data that is submitted to APTA
19 was generally available for internal management purposes within a few weeks after the end of each
20 month (SCRTD’s successor, MTA, now posts monthly ridership for its various transit modes and
21 lines on its web site, generally within approximately three to four weeks after the end of each month.
22
23 *See* http://www.mta.net/metro_transit/ridership/rdrshpavg.htm).

24 107. With the exception of MUNI, all of the major Bay Area transit operators already
25 participate in the voluntary APTA statistics program, and it would be relatively simple to require
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1 these operators to provide the data to MTC in the same manner that they do to APTA, or quicker if
2 desired or required.

3 108. As to MUNI, as well as to other smaller operators that do not currently participate in
4 the APTA program, it is not difficult to establish such programs. All transit operators are required to
5 use approved, statistically valid sampling or other accepted procedures for gathering ridership data to
6 report annually to the Federal Transit Administration’s National Transit Database. In my
7 experience, which includes working with almost all of the major and many of the smaller operators
8 in the Bay Area, it would not be difficult to make minor adjustments to such procedures to produce
9 monthly reports of useful accuracy and reliability.
10

11 109. There are also other, simple methodologies, such as basing ridership estimates on fare
12 receipts, to produce quick, relatively accurate ridership data that is usable for most transit
13 management purposes. While such systems generally are not *as* accurate as the annual reporting
14 systems, they do produce valuable information. I note that in his ¶ 6, Mr. Brittle makes reference to
15 using “unofficial reports from various transit operators” to determine the impact of such recent
16 events as the economic downturn, and September 11, on their ridership base. I would not be at all
17 surprised to discover that the same process that produces the APTA data generated some or all of the
18 “unofficial reports” that he references.
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