
Draft Final

Regional Means-Based Transit Fare Pricing Study

Project Overview Report

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Prepared for



METROPOLITAN
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Introduction

The goal of the Metropolitan Transportation Commission’s Regional Means-Based Transit Fare Pricing Study is to answer three interrelated questions:

- Is there a way to make transit more **affordable** for the Bay Area’s low income residents?
- How can the region best move towards a more **consistent regional standard** for fare discount policies?
- Is there a transit affordability solution that is **financially viable and administratively feasible**, and does not adversely affect the transit system’s service levels and performance?

In pursuit of these goals, this study has developed a range of scenarios for implementing a regional means-based transit fare program in the nine-county San Francisco Bay Area. This study considered the feasibility of implementing and funding these scenarios.

MTC has been involved in identifying affordability barriers to transit and promoting solutions through regional policy initiatives for more than ten years. These include the Coordinated Public Transit-Human Services Transportation Plan, the Lifeline Transportation Program, and the 2012 means-based fare discount funding requests, the Regional Transportation Plan, the Transit Sustainability Project, and the Community Based Transportation Planning Program. Although MTC does not determine specific fare policies for individual transit operators, MTC does have statutory authority to promote regional transit and fare coordination.

Study Methodology and Stakeholder Involvement

MTC staff established the study goals as part of the RFP process initiated in the second half of 2014. In March 2015, MTC retained the CH2M team as lead technical consultant to conduct research, provide quantitative and qualitative analysis, support community outreach, and document findings in accordance with the defined scope and work plan.

The questions posed in the study goals have been addressed in a series of four technical memorandums, each with a distinct focus:

- Technical Memorandum #1: Existing Policies and Conditions
- Technical Memorandum #2: Alternative Fare Scenarios
- Technical Memorandum #3: Evaluation of Alternative Fare Scenarios
- Technical Memorandum #4: Preferred Alternative Fare Scenarios

A Technical Advisory Committee (TAC) was established early in the study to provide initial input and subsequent feedback on each of the technical memorandums. The TAC consists of a broad-based group of stakeholders including representatives from the Alameda-Contra Costa Transit District (AC Transit), the Alameda County Social Services Agency Workforce and Benefits Administration, Bay Area Rapid Transit District (BART), the Contra Costa County Employment and Human Services Department, Marin Transit, Petaluma Transit, San Francisco Municipal Transportation Agency (SFMTA), San Jose State University’s Mineta Transportation Institute, Urban Habitat, and the Santa Clara Valley Transportation Authority (VTA).

The TAC met four times over the course of the study, between May 2015 and December 2016, to review each of the four technical memorandums. TAC members also provided assistance with data collection.

Early in the study, meetings and telephone interviews were also conducted with representatives of health and human service agencies serving Bay Area low income communities, as part of the process for understanding current needs and structuring low income program alternatives. Later, two community focus groups were assembled as part of the Evaluation of Alternative Fare Scenarios – one in San Jose and one in Vallejo. Low income riders were asked to articulate their needs for discount transit fare products, and their opinions regarding the products and policies being considered. In addition, MTC staff conducted interviews with low-income residents of San Francisco and the East Bay to help identify transit-affordability barriers for low-income residents of these communities.

Research on peer low income programs was conducted early in the study and the results are summarized in **Technical Memorandum #1, Policies and Conditions**. This report provided a summary of low-income discount programs in the Bay Area, including the SFMTA Lifeline program and VTA's Uplift program. It looked further at 21 peer agencies and identified six agencies with specific low-income programs, located in Chicago, Dallas, Los Angeles, Portland, Salt Lake City, and Seattle.

For technical analysis, the ridership and revenue impacts of each affordability and revenue-generating scenario were evaluated using FARES, CH2M's fare analysis model, as described in **Technical Memorandum #3, Evaluation of Alternative Means-Based Transit Fare Scenarios**. Key assumptions and data sources used in quantitatively evaluating ridership and revenue impacts include:

- Ridership and fare revenue impacts were analyzed by market segment, i.e., rider groups characterized by rider category (adult, senior/disabled, youth, etc.) and income (e.g., low income adult, non-low income senior) for AC Transit, BART, Caltrain, Golden Gate, SFMTA, SamTrans, and VTA and Marin Transit.¹ For the remaining 16 agencies, ridership and fare revenue impacts were estimated only for "low income" and "non-low income" rider groups and not distinguished by rider category.

On-board survey results provided by MTC were used to estimate the percentage of low income riders by transit operator. For the purposes of this study, and consistent with previous MTC studies, **a low-income Bay Area resident is defined as having a household income less than 200% of the Federal Poverty Level (FPL)**. In the absence of consistent household size data in transit operator surveys needed to determine an individual's income in relation to the Federal Poverty Level, **an annual household income of \$35,000** (which approximates 200% of the Federal Poverty Level for an average Bay Area household size, which is between two and three persons) was generally used as the low-income-fare eligibility threshold.

- The FARES model uses elasticities to estimate the impact of a fare change on ridership. For example, if a fare elasticity is assumed to be -0.33 , a 10% increase in fare price will result in a 3.3% decrease in ridership, and vice versa — a 10% decrease in price will result in a 3.3% increase in ridership. It is generally assumed that lower-income riders are more sensitive to price and therefore their price elasticities are higher, while higher income riders tend to be less sensitive to price and exhibit lower price elasticities.
- The CH2M FARES model was used to calculate **maximum** potential program adoption and resulting program cost (revenue loss). Using local survey data and statistics on qualified riders, the study has established an upper limit on potential cost based on 100% adoption rates. However, in practical terms, the SFMTA estimates that only 40.5% of eligible riders have

¹ In the past, Golden Gate Transit provided much of Marin Transit's service and performance data reported by MTC combined the two agencies. As a result, Marin Transit was included with Golden Gate among the transit providers that were analyzed at the market segment level.

enrolled in its Lifeline program, while only 20.7% actively purchase Lifeline monthly passes. So it is reasonable to assume that not every qualified rider will take advantage of a low income fare program (and thus that actual costs would be lower than the maximum), but there is no firm basis to estimate how much below the maximum costs might be at the regional scale.

Existing Policies and Conditions

Technical Memorandum #1: Existing Policies and Conditions provides the results of the first phase of the study, an existing conditions analysis that included:

- Discussions with Bay Area social service agencies
- Review of existing means-based fare discounts offered by Bay Area transit providers
- Research into other means-based pricing and transit affordability programs in the Bay Area and North America.

Technical Memorandum #1 also includes a statement of the project goals and the results of discussions of project objectives with study stakeholders and potential performance measures for use in assessing how well proposed policy changes meet study goals and objectives.

The key findings of this Policies and Conditions background review served as the foundation for crafting preliminary means-based transit fare scenarios for the Bay Area in the next task of this study. High-level findings from the existing conditions research include:

- **The region's four largest transit agencies (SFMTA, AC Transit, BART, and VTA) account for 90% of the region's transit trips.**
- **Transportation is the third-largest budget item for low income households in California's metropolitan areas.** For low income households, only housing and food expenditures constitute larger budget shares than transportation expenditures, on average.
- **A majority of transit riders are low income.** Approximately half of Bay Area transit riders have a household income under \$25,000, and three-quarters have a household income under \$50,000. While three-quarters of disabled passengers have household incomes below \$25,000, only about half of seniors do.
- **Among Bay Area transit riders, the lowest income riders make shorter trips than higher income riders, traveling less than one-third the distance of the highest income riders.** Low income riders generally use local bus systems at higher rates while upper-income riders use the region's long-distance transit modes at higher rates.
- **Low income transit discount programs have evolved over time.** The broad variety of the programs that have been developed reflect the diversity of needs that transit operators have chosen to address. Transit agencies generally offer two categories of low income transit discount programs: bulk ticket sales programs and other low income programs. The programs are targeted at different populations. Bulk sales are generally not intended to address on-going needs, but rather are designed to meet immediate needs of specific users. Other low income programs (e.g., Free Muni, ORCA LIFT in the Seattle region) are intended to meet longer-term, ongoing needs of more general groups.

- **Health and social service organizations can be key partners in low income transit discount programs.** In the Bay Area, these organizations are key partners in both SFMTA’s Lifeline and VTA’s UPLIFT and TAP programs. School districts are also partners with transit operators in low income discount programs targeting Bay Area students (SFMTA, Marin Transit, and SolTrans). In addition, using social service agencies provides potential opportunities to help enroll participants into other programs, such as Medi-Cal and CalFresh. Opportunities also exist to streamline means testing by linking eligibility to existing programs, such as Medi-Cal or PG&E’s CARE program for home energy costs.

MTC presented these findings to the Technical Advisory Committee (TAC) on May 28, 2015. In response to the findings in the memorandum, the TAC wanted to ensure that the study would also:

- Create a fare pricing and/or payment structure that is convenient and compliant with applicable regulations, including Title VI.
- Establish clear and consistent definitions of “low income” and “resident.”
- Support transit operator farebox recovery and financial objectives to ensure the program can be successful and sustainable – and if needed, identify funding source(s) to offset revenue and cost impacts.
- Build consensus for a shared regional approach across Bay Area transit operators, social service agencies, community organizations, and external stakeholders.
- Ensure program scenarios are appropriate for the region’s four largest transit agencies (SFMTA, BART, AC Transit, and VTA) that account for 90% of the region’s transit trips.
- Support low income individuals who make up the majority of Bay Area transit riders and whose households rank transportation as their third largest expense, behind housing and food.²
- Establish a well administered means-based testing process to verify eligibility for low income programs, if required.
- Review existing discount programs to see how they currently support low income riders, whether their policy objectives are being met, or if those programs could be adjusted to better serve low income riders.
- Consider how to partner with Bay Area health and human services agencies.

Developing Low-Income Fare Affordability Scenarios

Technical Memorandum #1, Policies and Conditions, established the existing conditions and demographics of low income transit riders. Informed by that memo and feedback from the TAC, the CH2M study team with MTC staff developed a wide-ranging set of preliminary low-income fare affordability scenarios for consideration by the TAC. Those draft scenarios were documented in **Technical Memorandum #2, Alternative Fare Scenarios**.

Eight different fare affordability scenarios were proposed, based on the overall program objectives, national peer examples, local expertise in Bay Area transit fare policy, and findings of the previous task.

² As discussed in Regional Means-Based Transit Fare Pricing Study Technical Memorandum #1: Policies and Conditions, Section 1.1.2 Literature Review.

Developing and reviewing these draft scenarios exposed three key requirements for a successful low income program:

- A clear and consistent definition of “low income” and “resident.”
- A fair means-based testing program to verify eligibility for low income programs.
- Pricing and payment that is convenient and compliant with applicable regulations (e.g., Title VI).

The second technical memo explores these challenges and considers the following “building blocks” for the alternative fare scenarios proposed:

- **Discount Structure:** What discount and/or other policy tool will be implemented?
- **Geographic Scope:** Which operators will participate? Will it be an opt-in program? Will there be a limited demonstration project? Will there be regional consistency in discounts offered?
- **Target Population & Income Threshold:** Who is the target market? What income threshold will be used to determine eligibility?
- **Means-Testing:** Who will conduct the means-testing if eligibility assessments are required?
- **Distribution:** How will the benefits or discounts be distributed?
- **Fare Media:** What media will be used to distribute the discounts (e.g., Clipper, paper)?

Proposed Fare Affordability Scenarios

Seven scenarios were defined for making transit fares more affordable for low income riders in the Bay Area. An eighth scenario combined several of the affordability scenarios into a multi-pronged, high-impact “Big Idea” scenario. Key features of each preliminary scenario are described below.

1. The Big Idea

Combining several different approaches (of those described below in scenarios 2-8) into one “Big Idea” could result in a multi-pronged, high-impact scenario. One example of how several different approaches might be combined include:

- Discounted low Income fares and/or pass program (see scenario #2)
- Peak/off-peak pricing (see scenario #3)
- Fare accumulators (see scenario #6)
- Eliminate non-mandated cash discounts (see Revenue Generating opportunity ‘A’)

2. Discounted Low Income Fares and/or Pass Program

Offering low income riders a region-wide discount (potentially 50%) on all fares and passes, whether paid by cash or Clipper®.

3. Discounted Off-Peak Fares

Offering all riders, regardless of income, a fare discount during off-peak hours. Two-thirds of low income riders travel during the off-peak while only half of higher income riders travel during the off-peak. This option minimizes program administration by offering discounts to all riders and eliminating the need for means-testing.

4. Regional Interagency Pass

Similar to the BART/Muni Adult “A” Fast Pass, this scenario would establish a regional pass that would allow unlimited rides on multiple operators within a defined geographic area. An interagency pass provides the flexibility for riders to use multiple operators, facilitating interagency transfers while minimizing the cost to transfer. Based on rider survey data, low income riders are more likely to transfer to reach their final destinations. However, introducing a pass to facilitate interagency travel will not necessarily address the high upfront cost that may not be affordable for low income riders.

5. Make Transfers More Affordable

Offering free, discounted, or time-extended interagency transfers would increase affordability of trips that require use of multiple operators in the absence of an interagency or regional pass. While offering a small discount on interagency transfers (e.g., \$0.50) does improve affordability, the fare for the entire trip may still create a financial burden to low income riders. Offering a day pass in lieu of intra-agency transfers would further increase affordability, especially on transit systems designed to require transferring to complete a trip.

6. Monthly Fare or Trip Accumulators

Also referred to as fare capping, best fares, or “fair fares,” this scenario establishes a mechanism that allows low income riders to pay individual fares for each boarding up to a “cap,” at which time the rider automatically earns a monthly pass so that future rides during that month are free.

7. Add Cash to Clipper Card for Low Income Riders

This scenario would provide a cash value, transit-only subsidy to low income riders who qualify. Transit agencies would not be required to make changes to their established fares.

8. Increase Use of Existing Discounts/Reduce Barriers to Existing Discounts

Several transit operators offer discounted fares and/or passes (e.g., youth passes, senior/disabled passes, monthly passes) that are sometimes underutilized due to a variety of barriers. This scenario would identify those barriers and implement strategies to mitigate them.

Proposed Revenue Generating Scenarios

The Affordability Scenarios outlined above are all intended to reduce fares paid by low income riders. Therefore, they are expected to reduce overall fare revenue for the transit agencies. While scenarios selected for further evaluation are not required to be revenue neutral, each scenario should be consistent with the study goal to be “administratively viable and financially feasible, and not adversely affect the transit system’s service levels and performance.” Therefore, complementary revenue generation strategies were developed to consider how lost revenue might be replaced.

In developing the revenue generating scenarios, the study team tried to identify new, non-traditional revenue opportunities that might make sense only once the region is committed to fully implementing a low income fare program.

A. Eliminate Non-Mandated Cash Discounts/Eliminate Proxies for Low Income

Consistent with federal law, the Federal Transit Administration requires its grantees to provide half-fare discounts for seniors, persons with disabilities, and Medicare cardholders on one-way fares during off-peak periods. Eliminating the discounts that transit agencies choose to offer that exceed these requirements could generate additional revenue. However, a low income program that ensured all low

income riders, regardless of rider category, had access to discounts might eliminate the need for these non-mandated discounts.

B. Eliminate Discounted Fare Products (e.g., Monthly Passes)

Additional revenue could be generated by eliminating fare products, such as monthly passes, that provide discounts to all riders, regardless of financial need. Transit operators have traditionally offered passes to provide discounts to their most frequent and loyal riders, and to simplify fare payment and fare collection. However, with Clipper, passes are no longer needed to simplify fare collection and eliminating these discounts could generate additional fare revenue.

C. Implement Fare Increases for Non-Low Income Riders

Additional revenue could be generated by implementing fare increases. Revenue increases from non-low income riders can help offset revenue losses from offering a low income program.

Quantitative and Qualitative Evaluation

The TAC met with MTC staff and the CH2M study team on August 3, 2015, to review and provide feedback on the alternative fare and revenue scenarios. That feedback was considered in staff's decision to narrow and refine the alternatives, which were reviewed by MTC's Programming and Allocations Committee in December 2015. From the preliminary affordability and revenue generating scenarios outlined in Technical Memorandum #2, three fare affordability scenarios and two revenue generating scenarios were selected for further definition and analysis, and re-numbered as follows:

Affordability Scenarios

- A1 – Discounted Fares and Passes for Low Income Riders
- A2 – Accumulator with Monthly Cap for Low Income Riders
- A3 – Cash on Clipper® for Low Income Riders

Revenue Generating Scenarios

- R1 – Eliminate Non-Mandated Cash Discounts
- R2 – Implement Fare Increases

Evaluation Results

Each of the five scenarios is described here in greater detail, including program-specific parameters as well as the results of qualitative and quantitative evaluations, which were provided in **Technical Memorandum #3, Quantitative and Qualitative Evaluation**.

Agency-specific and region-wide ridership and fare revenue impacts were developed for each scenario. Region-wide impacts are summarized below, under each scenario description. Agency-specific ridership and fare revenue forecasts assume full implementation and utilization of each low income program in Year 1 – in effect, defining the maximum potential impacts and exposure of each scenario. In actually implementing low income programs, other agencies have found that uptake is more gradual and their experiences as well the results of any pilot program could help scale a Bay Area program. This independent analysis conducted by CH2M was a sketch-level planning analysis based on publicly reported 2014 regional ridership and revenue data, published agency survey information, and some broad assumptions across all agencies. These “rough order of magnitude” estimates were intended to support early policy-level conversations. Thus, this fiscal impact analysis is not a program cost estimate,

which would require more detailed program definition and agency specific data inputs. Specifically, SFMTA and BART staff working with the TAC have stated that the scenario analysis from Technical Memorandum #3 does not reconcile with their ridership and revenue numbers. For example:

- SFMTA has conducted detailed analysis of its existing Lifeline program (which makes a discounted monthly pass available to low-income riders) and noted that their estimated annual fiscal impact is roughly \$8 million. In contrast, the three scenarios analyzed in this study (which differ significantly from the Lifeline pass) have fiscal impacts ranging from \$12-14 million annually.
- BART staff has stated that they believe the fiscal impact estimated to BART may be *understated* by \$3-7 million. They note that their revenue has increased significantly since 2014 (the most recent year data was available when the technical analysis was performed) and the impact to BART would be magnified accordingly.

Beyond specifics of individual operators, the “maximum impact” of a regionwide program can be a useful starting point for an initial policy discussion, but it is important to emphasize to policy makers that the likely future impact will be significantly less than this maximum (because a significant percentage of qualified riders will not take advantage of the program), or participation could be capped to any amount deemed feasible for any of the affordability scenarios.

The qualitative and quantitative analysis findings of each of the scenarios are as follows. For each scenario, the qualitative analysis examines the scenario outcomes to the three key study goals described in the Introduction.

A1 – Discounted Fares and Passes for Low Income Riders

Most transit operators currently offer discounted cash fares or pass products to seniors, persons with disabilities, and youth. This scenario would create an additional discount category for low income persons, which would allow individuals below a certain income threshold to pay fares or purchase passes at a discount.

Parameters

- 50% discount on all agency-specific cash fares and Clipper® stored value fares.

Advantages

- Offering specialized low income fares and passes and requiring eligibility assessments, similar to the Seattle region’s ORCA LIFT program, provides a way to offer discounted fares to a specific target population without requiring discounted fares for those who do not qualify.
- Clipper® cards would be issued as IDs to individuals who qualify for means-based fare discounts. The cards could be used only as proof of eligibility or for both identification and fare payment.
- Can be implemented by all Bay Area operators, regardless of fare structure, including those that do not offer pass products and those that are not yet on the Clipper® system.
- Extending the discount to cash and stored value fares as well as to monthly passes makes the discount affordable to as many riders as possible. Offering only a discounted pass (and not a trip-based cash or stored value discount) would not address the high up-front cost that may make monthly passes unaffordable for low income riders.

Disadvantages

- Riders who wish to use a Clipper® card to store value or discounted passes would need to be able to load value or products onto their cards in advance of use.
- It may be necessary to issue the Clipper® card with a photo if it is used to allow riders to obtain discounts on cash fares. While some programs, including Seattle’s ORCA LIFT, have avoided using distinguishing IDs (such as photo IDs or differently colored cards), other agencies do require photos (e.g., Tucson’s SunGo ID & Card).
- Bay Area transit operators have different base fares, pass multiples, and transfer policies. Implementation on a regional basis will require handling multiple price points, different service types/distances traveled (e.g., local bus vs. regional rail), and other different fare policies, making it difficult to implement across operators.

Quantitative Analysis

Maximum region-wide impacts were estimated as follows:

A1 (Cash/Pass Discounts)	Annual Ridership Impact (millions)	Annual Fare Revenue Impact (millions)
Low Income Riders	24.7	-\$79.6
Non-Low Income Riders	0.0	\$0.0
Total	24.7	-\$79.6

Note: Ridership and fare revenue forecasts assume unconstrained, full implementation and utilization in Year 1.

Qualitative Analysis

- Transit would become more affordable for the Bay Area’s low income residents under this scenario. Based on these eligibility thresholds, this alternative is estimated to increase transit trips among low income riders by 24.7 million (4.7%) to 544.4 million annually, if fully implemented and utilized.
- This approach would achieve a more consistent regional standard of 50% discount on fares in the Bay Area, if it were adopted by all operators.
- The financial viability of this alternative will depend on the ability to cover fare revenue losses of up to \$79.6 million plus implementation costs.

A2 – Accumulator with Monthly Cap for Low Income Riders

Accumulators are alternatives to pass products that cap fares or provide bonus trips based on a threshold (number of boardings or value of fares paid) within a defined period of time. Accumulators with monthly caps would allow riders to purchase pass products (e.g., monthly passes) in small increments rather than paying the full price of the pass up-front. For example, if the fare is \$2.50 and the monthly pass price is \$100, \$2.50 would be deducted from the rider’s Clipper® card on each boarding until the \$100 "cap" is reached (with the 40th boarding). After that, all trips would be free for the rest of the month. In this scenario, fares would be capped on a monthly basis, and the cap would be set lower for low income riders than for the general population.

Parameters

- 50% discount on fare caps for low income riders on agency-specific fare accumulators.

- Separate fare caps for low income riders and all other riders.
- Accumulators are agency-specific; inter-agency transfer and monthly pass agreements are not included.

Advantages

- Clipper® business rules would provide low income riders the best fare possible. Frequent riders have the ability to obtain unlimited travel advantages of a monthly pass even if they are unable to afford the upfront cost of a monthly pass.
- Even riders who do not qualify as low income may find an accumulator program beneficial because they are able to spread the cost of a monthly pass over the course of many boardings.
- While infrequent riders may not travel enough to reach the monthly cap, they also would not need to purchase a monthly product in advance and risk underutilizing it.

Disadvantages

- Fare capping primarily benefits those riders who travel frequently enough to reach the cap. Alternatively, instead of capping low income fares at half the cap for general public users, the per-trip fare could also be discounted by 50%.
- Fare capping would require a Clipper® card to pay fares using stored value, track fares paid toward the cap, and provide free trips once the cap is reached. Fare capping could not be provided to riders paying cash fares. Focus group participants observed that it would be a burden to access the discounts if they were limited to Clipper®.
- With accumulators and fare capping, agencies may lose revenue associated with riders who previously purchased monthly passes but underused them.
- Implementation of a monthly fare cap is not possible with the current generation of Clipper® due to memory limitations with the current Clipper® card. This scenario therefore is not viable until the roll-out of the next generation Clipper® system that is anticipated to start in 2019 at the earliest.
- The Bay Area transit agencies have different base fares, pass multiples, and transfer policies. Implementation of accumulators throughout the region will require handling multiple price points, different service types/distances traveled (e.g., local bus vs. regional rail), and other different fare policies, making it difficult to implement a single regional accumulator across all operators.
- Agencies that do not currently offer pass products may not wish to develop a low income pass product.

Quantitative Analysis

Maximum region-wide impacts were estimated as follows:

A2 (Fare Capping)	Annual Ridership Impact (millions)	Annual Fare Revenue Impact (millions)
Low Income Riders	23.3	-\$64.2
Non-Low Income Riders	0.0	\$0.0
Total	23.3	-\$64.2

Note: Ridership and fare revenue forecasts assume unconstrained, full implementation and utilization in Year 1.

Qualitative Analysis

- Transit would become more affordable for the Bay Area’s low income residents. Based on these eligibility thresholds, this alternative is estimated to increase transit trips among low income riders by 23.3 million to 252.1 million annually, if fully implemented and utilized.
- This approach would achieve the goal of a more consistent regional standard for discounting fares in the Bay Area, if it was adopted by all operators. It would provide a consistent 50% discount on the price of a monthly pass to all eligible riders paying fares from Clipper® stored value, as well as the advantages of fare capping, which would provide the benefit of a monthly pass to riders who currently may be unable to afford one.
- The financial viability of this alternative will depend on the ability to cover fare revenue losses of up to \$64.2 million plus development and implementation costs.

A3 – Cash on Clipper® for Low Income Riders

The Cash on Clipper® scenario would provide a transit-only “cash” subsidy to eligible low income riders by adding funds to the stored value on a Clipper® card, to match funds added by the rider, effectively providing a 50% fare discount on fares paid with stored value. The subsidy could take the form of a stored value credit to eligible riders’ Clipper® cards, similar to a pre-tax transit benefit. Other methods of value distribution besides Clipper®, such as paper-based commuter checks or benefits cards, could be developed but are not recommended.

Parameters

The scenario evaluated here assumes that stored value added by eligible riders would be matched dollar-for-dollar, with no cap on the bonus that could be added, effectively providing a 50% discount on pay-per-trip stored value usage. Under this scenario, subsidies would be provided by MTC from a regional pool of funds, not by individual transit agencies.

Advantages

- Riders are able to spend their Cash on Clipper® transit dollars on any/all transit agencies that accept Clipper®, thereby providing access to the entire regional transit system.
- This option accommodates established transit fares and fare structures. It requires no changes to transit agencies’ established fares and therefore may be more feasible to implement.
- Transit agencies could gain fare revenue from additional trips induced by the program (discounted fares would be paid by riders and matched by the regional funding pool).
- Implementation on Clipper® speeds the distribution of value, minimizes the transferability of value, and reduces the potential for fraud, but enables and requires tracking and monitoring to minimize fraudulent use.

Disadvantages

- There is a potential for fraud associated with the use of alternative methods of transit value distribution, such as more readily transferrable paper-based commuter checks or benefits cards, if the program is made available outside of Clipper®.

Quantitative Analysis

Maximum region-wide impacts were estimated as follows:

A3 (Cash on Clipper®)	Annual Ridership Impact (millions)	Annual Fare Revenue Impact (millions)
Low Income Riders	26.1	-\$75.5
Non-Low Income Riders	0.0	\$0.0
Total	26.1	-\$75.5

Note: Ridership and fare revenue forecasts assume unconstrained, full implementation and utilization in Year 1.

For each operator, it is assumed that 70% of low income riders not currently using Clipper® would migrate to Clipper® to take advantage of the Cash on Clipper® program.

Qualitative Analysis

- Transit would become more affordable for the Bay Area’s low income residents. Based on these eligibility thresholds, this alternative is estimated to increase transit trips among low income riders by 26.1 million to 254.9 million annually, if fully implemented and utilized.
- Although Cash on Clipper® is designed to provide a consistent 50% discount to all eligible riders paying fare using Clipper® stored value, this approach would neither provide regional fare policy coordination nor simplify riders’ fare payment experiences.
- The financial viability of the Cash on Clipper® alternative will depend on the ability to cover revenue fare losses of up to \$75.5 million plus implementation costs

R1 – Eliminate Non-Mandated Cash Discounts

This scenario would generate revenue to help fund a low income transit fare program by eliminating all fare discounts beyond those that comply with Federal requirements. Federal regulations require transit systems that use FTA formula funds, which includes virtually all Bay Area transit operators, to provide half-fare discounts to seniors (at a minimum, those riders who are age 65 and older), persons with disabilities, and Medicare recipients, but only during off-peak hours and on cash fares. There are currently no federal requirements for fare discounts for youth or low income persons.

Under this scenario, discounts beyond those that are federally mandated would be eliminated. However, many of those customers would become eligible for the low income program, thereby directing subsidies to those who need a discount – and collecting full fares from those that are not low-income.

Parameters

- Federally-mandated half fare discounts available only on cash and Clipper® stored value fares and only during off-peak.
- Retain free/reduced fixed route fares for ADA paratransit eligible riders.
- No discounted passes for youth, seniors, persons with disabilities, Medicare recipients; other (full fare) passes and pass programs retained.

Advantages

- Reducing the number and variety of discounts offered provides funding for a low income program designed to address the needs of those who are financially most in need of transit fare discounts.
- Eliminating the variety of reduced fare programs simplifies fare policies, makes fare policies more consistent across the region in keeping with the overall goal of this study, and reduces administrative costs of managing several different discount fare programs.
- Retaining mandated discounts on fares paid using Clipper® stored value reinforces the use of Clipper® regionally as well as the use of a specially programmed low income Clipper® card to support a Bay Area low income program.
- Retaining free/reduced fares on fixed route services for riders who are eligible for ADA paratransit services encourages the use of lower cost fixed route services.

Disadvantages

- Requires action by each transit agency’s policy board and may be extremely difficult to accomplish consistently on a regional basis.
- Limiting discounts to off-peak periods would require time-sensitive (peak/off-peak) pricing, which is currently neither part of the Clipper® functionality nor of many operators’ fare-collection mechanisms, such as on-board fareboxes.
- May have a negative impact on transit ridership throughout the Bay Area.

Quantitative Analysis

Region-wide impacts were estimated as follows:

R1 (Eliminate Discounts)	Annual Ridership Impact (millions)	Annual Fare Revenue Impact (millions)
Low Income Riders	-13.0	\$30.4
Non-Low Income Riders	-7.5	\$22.9
Total	-20.5	\$53.2

Note: Ridership and fare revenue forecasts assume unconstrained, full implementation and utilization in Year 1.

Qualitative Analysis

- By providing revenue that would help to offset the fare revenue reductions that would occur with the implementation of a low income transit fare program, this approach would help to assure that transit would become more affordable and sustainable for low income Bay Area residents.
- By eliminating the many agency-specific discounts, this approach would assist in coordinating and simplifying the fare options offered across Bay Area transit agencies.
- Eliminating these discounts would increase fares for many transit users, thereby reducing transit use by nearly 21 million trips (approximately 4.1%).

R2 – Implement Fare Increases

This scenario would consider the revenue generating effects of raising fares on all fare products throughout the region by 10%. It would always be paired with one of the Affordability Scenarios so the net impact would be to decrease fares for low income riders.

Parameters

- Increase all cash and non-cash fares by 10%
- Retain existing discounted fare options and products

Advantages

- Provides funding for a low income program designed to address the needs of those who are most in need of transit fare discounts.
- Maintains each agency’s existing fare policies and structures.

Disadvantages

- Increases fares by 10% for all riders on all Bay Area transit systems, modes and routes.
- Increasing all fares by 10% will require action by each transit agency’s policy board and may be difficult to accomplish on a regional basis.
- Increasing all fares by 10% may negatively impact Bay Area transit ridership.

Quantitative Analysis

Region-wide impacts were estimated as follows:

R2 (10% Fare Increase)	Annual Ridership Impact (millions)	Annual Fare Revenue Impact (millions)
Low Income Riders	-6.7	\$20.9
Non-Low Income Riders	-7.2	\$45.5
Total	-13.9	\$66.3

Note: Ridership and fare revenue forecasts assume unconstrained, full implementation and utilization in Year 1.

Qualitative Analysis

- Increasing fares would increase fares for all transit users and potentially reduce transit use by nearly 14 million trips (approximately 2.7%).
- This approach would not change the fare options offered by Bay Area transit agencies and would neither improve fare coordination and simplification nor make fares more consistent across the agencies that provide transit services.
- The financial viability of any low income program depends on the ability to cover the fare revenue losses that the transit operators will experience. This revenue scenario has the potential to recapture most of the revenues lost by implementing a low income program.

Means Testing

Despite efforts earlier in the study to identify scenarios that do not rely on means-testing, all three Affordability Scenarios analyzed include formalized means testing. The study accepts that means testing is a critical aspect of implementing and managing a low income program, even though it may limit the reach of the program and would not benefit those that do not meet the criteria. As noted in Next Steps, it may be preferable to reduce the complexities of means testing by on the qualifications of existing means-tested programs, such as CalFresh. However, relying on existing low-income program verification could limit the reach of a transit discount program.

Regardless of how means testing is conducted, an ID providing evidence of eligibility must be issued to serve as proof of low income qualification. A specially programmed low income Clipper® card could be created to serve this purpose, as well as a convenient way for riders to pay fares.

Means testing involves two steps:

- **Income Verification:** Establishing an income verification process will require agreement on forms of documentation that are acceptable for confirming income.
- **Eligibility Determination:** Eligibility determination involves reviewing income verification documentation, providing eligibility determinations, and distributing low income transit fare program identification cards.

The eligibility determination function could be managed in-house by one or more (or all) transit agencies and/or MTC, or outsourced to social service agencies or to a contractor similar to the Bay Area’s RTC program contractor. Outsourcing would require MTC or a designated lead transit agency partner to manage the contract(s).

The following table provides rough order of magnitude estimates for program startup costs and ongoing operations costs required to develop and manage a regional means testing function, based on the study’s analysis:

	In-House Low	In-House High	Outsourced Low	Outsourced High
1-Time Startup Costs	\$600,000	\$1,000,000	\$550,000	\$800,000
Total Annual Operations	\$1,350,000	\$1,650,000	\$1,020,000	\$1,520,000
1st Year Startup + Ops	\$1,950,000	\$2,650,000	\$1,570,000	\$2,320,000

Because the scenarios are only minimally defined, a range of implementation variables are likely to affect both the program cost and the cost of means testing. The future products offered, the number of riders targeted, the promotional goals of the program, and the number of staff dedicated to the program will determine the full range of eventual costs.

Alternatives Evaluation and Recommended Actions

Throughout the study, MTC staff provided policy direction and guidance for a low income fare program. The TAC also served as a resource, providing feedback on the structures and assumptions behind the Affordability and Revenue Generating scenarios and the resulting ridership and fare revenue

projections. The TAC met on August 4, 2016, to review the ridership and fare revenue analysis and also provided the following broad-based input on policy direction for a Bay Area means-based fare pricing program:

- Affordability was further defined as helping all qualifying riders similarly every month up to the budgetary limits of the program. It does not necessarily favor certain subgroups of low income riders over others. While improving affordability is considered to be the primary policy objective, it can be relative:
 - A 50% discount is comparable to FTA’s mandated discounts for seniors and persons with disabilities, and is an appropriate level of discount to provide a meaningful benefit to users.
 - Any discount would be viewed as helpful, as long as program qualification, enrollment, and participation is simple, straightforward, and streamlined for agencies and users alike.
- Feasibility was further defined to include nearer-term implementation that does not rely on the next generation of Clipper technology, which may still be years away from full implementation.
- Accessibility also refers to “easy to participate,” meaning users don’t need to come up with a lot of money up-front to enroll or buy a high-priced product.
- Centralized administration is essential for multi-county transit operators like BART and AC Transit; the RTC model was noted as a good example of centralized administration.
- Accessibility to Clipper® is neither a key concern nor a major potential barrier with using Clipper® to distribute subsidies; having a cash-paying option is not essential to a low income program.
- Limiting participation to a specific geographic area of the region was seen by some members of the TAC as potentially troublesome, unless the geographic limitation is part of a phased implementation or a pilot program.

With the analysis complete and TAC and MTC feedback received, CH2M conducted a weighting and prioritization analysis to determine the final set of preferred scenarios, using the following criteria:

1. **Rider Affordability:** This goal is weighted as a top priority for the program. This goal is defined by financial affordability and ease of access through objectives such as easy enrollment and participation, provision of the same discount to all eligible individuals, and means testing based on eligibility for another social program such as CalFresh.
2. **Administrative Feasibility & Financial Viability:** Along with Rider Affordability, this goal is weighted as a top priority. This goal is defined by objectives such as scalability to available funding, central and electronic management, implementability under the current Clipper system, and Clipper-only payment to minimize agency overhead.
3. **Consistent Regional Standard:** This goal is weighted as a secondary priority. This goal is defined by objectives that emphasize consistent eligibility requirements and the use of Clipper, but do not depend upon implementation of new region-wide fare policy or products. This reflects a recognition that a implementing regional fare policy could become a barrier to timely implementation of a low-income program.

Affordability Scenarios: Recommendations

Based on the weighting of these goals and objectives listed above, two preferred Affordability fare scenarios emerged as the preferred choices: A1, Discounted Fares and Passes for Low Income Riders and A3, Cash on Clipper. (*Technical Memorandum #4: Alternatives Evaluation and Recommended Actions* is dedicated to the detailed evaluation of scenarios against the study goals and objectives.)

Revenue Generating Scenarios: Recommendations

Revenue generating scenarios may be considered at the agency level if agencies are to help fund and implement a low income program. We recommend that MTC provide regional policy support to agencies for fare increases (R2) as a partial long-term program funding strategy, while also recognizing that the timing of, and revenue from, individual agency fare increases may be inconsistent from agency to agency. Consequently, additional non-agency funding and implementation resources may need to be identified. Transit agencies participating in the TAC expressed concern that no sustained funding source has been identified, and that in any event fund sources beyond fare revenues should be considered as part of a comprehensive funding strategy.

Next Steps

If MTC chooses to advance the concept of a regional means-based transit pricing program for the Bay Area, there are many policy and technical decisions that need to be made. A next step will be to share the study's findings and recommendations with all Bay Area transit agencies and set initial direction through a plan to pilot one or both of the top-ranked alternatives. Further program definition required for a pilot would also set the stage for development of a more precise cost estimate. This cost estimate should be a collaborative effort, built up with each transit agency applying individualized cost approaches based on each agency's unique ridership and available data.

Technical Implementation Timeline

Based on CH2M's experience with similar projects in the Bay Area, program definition activities could take two to four months. Contracting activities could take four to six months. Start-up of non-technical services (such as means-testing) could take four to eight months (depending on staffing). And technical systems implementation could take four to eight months (but could be conducted concurrently with start-up activities). Overall, technical implementation could take 10 to 18 months. However, this estimate could vary significantly depending on how Clipper system integration is managed and whether the current Clipper vendor is required to make changes to the current Clipper system.

Pilot Program

A limited pilot program could be a near-term alternative to full-scale implementation. A useful pilot program would test rider demand, uptake rate, behavior change, and establish likely costs of a full-scale implementation (due to lost revenues and implementation and ongoing costs), and identify any problems with the proposed implementation.

Two pilot program options have been put forward as a result of the study's analysis.

- Pilot Option #1 is to temporarily issue RTC Discount Clipper Cards to individuals who have already qualified for one or more means-tested programs, such as CalFresh. This program would be most similar to A1, Discounted Fares and Passes. The pilot program could be created quickly by issuing the policy directive to allow CalFresh cardholders to qualify for an RTC discount card. The pilot would track the uptake and usage of such cards for the duration of the pilot, after

which time the pilot cards would be deactivated. RTC card issuance centers would need to be prepared for a surge in applications, but no other technical preparation would be required. Program enrollment could be restricted or expanded depending on the number of means-based programs (in addition to CalFresh) accepted as verification of low income status under the pilot program.

- Pilot Option #2 would test scenario A3, Cash on Clipper, using a well-defined sub-target population. For example, local clients of existing social service programs could be offered the benefits of the pilot program. Those willing to participate could be given pilot Clipper® accounts. Using current Clipper® functionality, monthly cash subsidies could be added electronically to those pilot accounts.

Each of these pilot options (explored in more detail in Technical Memorandum #4) provide a contained and straightforward way to test and document demand, uptake rate, and behavior change. This is the key information needed to define a means-testing process that reaches the target population, and to establish a solid multi-year budget that meets the needs of both low income riders and transit agencies.

Appendix A: Technical Notes

The following two appendices of detailed analysis results are reprinted in their entirety from Technical Memorandum #3, Evaluation of Alternatives. They have retained their original titles of Appendix B and C to avoid confusion.

Appendix B: Quantitative Analysis Results

Current Ridership and Fare Revenue

	Current Ridership			Current Fare Revenue		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	35,225,000	20,270,000	55,495,000	\$36,126,800	\$22,473,200	\$58,600,000
ACE (Altamont Commuter Express)	130,000	946,000	1,076,000	\$831,700	\$6,053,300	\$6,885,000
BART	36,226,900	95,507,200	131,734,000	\$103,510,600	\$311,480,400	\$414,991,000
Caltrain	1,873,200	15,155,800	17,029,000	\$7,452,300	\$67,388,700	\$74,841,000
County Connection (CCCTA)	1,645,900	1,713,100	3,359,000	\$2,238,300	\$2,329,700	\$4,568,000
City of Dixon	34,600	17,400	52,000	\$61,900	\$31,100	\$93,000
ECCTA (Tridelta)	1,275,800	1,559,300	2,835,000	\$1,307,700	\$1,598,300	\$2,906,000
FAST (Fairfield and Suisun Transit)	778,700	298,300	1,077,000	\$1,517,600	\$581,400	\$2,099,000
Golden Gate (GGBHTD)	1,290,100	5,359,500	6,649,600	\$4,299,500	\$19,789,800	\$24,089,300
LAVTA (Wheels)	925,100	726,900	1,652,000	\$1,089,800	\$856,200	\$1,946,000
Marin Transit	563,500	2,340,900	2,904,400	\$1,877,900	\$8,643,800	\$10,521,700
Vine (NCTPA)	419,200	371,800	791,000	\$519,400	\$460,600	\$980,000
Petaluma Transit	237,600	122,400	360,000	\$143,900	\$74,100	\$218,000
Rio Vista Delta Breeze	6,900	5,100	12,000	\$11,500	\$8,600	\$20,000
SamTrans	7,304,500	5,479,500	12,784,000	\$9,684,200	\$7,471,800	\$17,156,000
Santa Rosa CityBus	1,817,400	512,600	2,330,000	\$1,741,000	\$491,000	\$2,232,000
VTA	28,228,900	15,200,200	43,429,000	\$24,512,000	\$13,148,000	\$37,660,000
San Francisco MTA	107,708,500	121,458,500	229,167,000	\$94,418,100	\$116,668,900	\$211,087,000
SolTrans (Solano County Transit)	999,500	434,500	1,434,000	\$2,340,500	\$1,017,500	\$3,358,000
Sonoma County	934,400	381,600	1,316,000	\$1,415,700	\$578,300	\$1,994,000
Union City	221,100	180,900	402,000	\$204,100	\$167,000	\$371,000
Vacaville City Coach	445,300	65,700	511,000	\$317,200	\$46,800	\$364,000
West CAT	415,800	940,300	1,356,000	\$565,400	\$1,278,600	\$1,844,000
San Francisco Bay Ferry (WETA)	79,200	1,901,800	1,981,000	\$524,700	\$12,593,300	\$13,118,000
Total	228,787,100	290,949,300	519,736,000	\$296,711,800	\$595,230,400	\$891,942,200

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario A1 - 50% Discount for Low Income Cash, E-Purse, and Monthly Pass: Change in Ridership

	Change in Ridership, #			Change in Ridership, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	4,569,000	0	4,569,000	13.0%	0.0%	8.2%
ACE (Altamont Commuter Express)	18,700	0	18,700	14.4%	0.0%	1.7%
BART	4,410,000	0	4,410,000	12.2%	0.0%	3.3%
Caltrain	197,100	0	197,100	10.5%	0.0%	1.2%
County Connection (CCCTA)	325,000	0	325,000	19.7%	0.0%	9.7%
City of Dixon	6,800	0	6,800	19.7%	0.0%	13.1%
ECCTA (Tridelta)	277,300	0	277,300	21.7%	0.0%	9.8%
FAST (Fairfield and Suisun Transit)	186,800	0	186,800	24.0%	0.0%	17.3%
Golden Gate (GGBHTD)	236,600	0	236,600	18.3%	0.0%	3.6%
LAVTA (Wheels)	202,300	0	202,300	21.9%	0.0%	12.2%
Marin Transit	103,300	0	103,300	18.3%	0.0%	3.6%
Vine (NCTPA)	97,200	0	97,200	23.2%	0.0%	12.3%
Petaluma Transit	47,700	0	47,700	20.1%	0.0%	13.3%
Rio Vista Delta Breeze	1,300	0	1,300	18.8%	0.0%	10.8%
SamTrans	1,289,300	0	1,289,300	17.7%	0.0%	10.1%
Santa Rosa CityBus	371,900	0	371,900	20.5%	0.0%	16.0%
VTA	5,170,700	0	5,170,700	18.3%	0.0%	11.9%
San Francisco MTA	6,467,500	0	6,467,500	6.0%	0.0%	2.8%
SolTrans (Solano County Transit)	215,200	0	215,200	21.5%	0.0%	15.0%
Sonoma County	191,200	0	191,200	20.5%	0.0%	14.5%
Union City	50,200	0	50,200	22.7%	0.0%	12.5%
Vacaville City Coach	103,000	0	103,000	23.1%	0.0%	20.2%
West CAT	101,800	0	101,800	24.5%	0.0%	7.5%
San Francisco Bay Ferry (WETA)	17,900	0	17,900	22.6%	0.0%	0.9%
Total	24,657,800	0	24,657,800	10.8%	0.0%	4.7%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario A1 - 50% Discount for Low Income Cash, E-Purse, and Monthly Pass: Change in Fare Revenue

	Change in Fare Revenue, \$			Change in Fare Revenue, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	-\$9,229,300	\$0	-\$9,229,300	-25.5%	0.0%	-15.7%
ACE (Altamont Commuter Express)	-\$309,600	\$0	-\$309,600	-37.2%	0.0%	-4.5%
BART	-\$38,023,800	\$0	-\$38,023,800	-36.7%	0.0%	-9.2%
Caltrain	-\$2,374,600	\$0	-\$2,374,600	-31.9%	0.0%	-3.2%
County Connection (CCCTA)	-\$705,200	\$0	-\$705,200	-31.5%	0.0%	-15.4%
City of Dixon	-\$19,500	\$0	-\$19,500	-31.5%	0.0%	-21.0%
ECCTA (Tridelta)	-\$444,900	\$0	-\$444,900	-34.0%	0.0%	-15.3%
FAST (Fairfield and Suisun Transit)	-\$558,000	\$0	-\$558,000	-36.8%	0.0%	-26.6%
Golden Gate (GGBHTD)	-\$1,381,300	\$0	-\$1,381,300	-32.1%	0.0%	-5.7%
LAVTA (Wheels)	-\$372,600	\$0	-\$372,600	-34.2%	0.0%	-19.1%
Marin Transit	-\$603,300	\$0	-\$603,300	-32.1%	0.0%	-5.7%
Vine (NCTPA)	-\$186,000	\$0	-\$186,000	-35.8%	0.0%	-19.0%
Petaluma Transit	-\$45,900	\$0	-\$45,900	-31.9%	0.0%	-21.1%
Rio Vista Delta Breeze	-\$3,500	\$0	-\$3,500	-30.4%	0.0%	-17.5%
SamTrans	-\$2,979,600	\$0	-\$2,979,600	-30.8%	0.0%	-17.4%
Santa Rosa CityBus	-\$564,500	\$0	-\$564,500	-32.4%	0.0%	-25.3%
VTA	-\$7,521,100	\$0	-\$7,521,100	-30.7%	0.0%	-20.0%
San Francisco MTA	-\$12,603,000	\$0	-\$12,603,000	-13.3%	0.0%	-6.0%
SolTrans (Solano County Transit)	-\$790,300	\$0	-\$790,300	-33.8%	0.0%	-23.5%
Sonoma County	-\$459,000	\$0	-\$459,000	-32.4%	0.0%	-23.0%
Union City	-\$71,900	\$0	-\$71,900	-35.2%	0.0%	-19.4%
Vacaville City Coach	-\$113,300	\$0	-\$113,300	-35.7%	0.0%	-31.1%
West CAT	-\$211,300	\$0	-\$211,300	-37.4%	0.0%	-11.5%
San Francisco Bay Ferry (WETA)	-\$183,900	\$0	-\$183,900	-35.0%	0.0%	-1.4%
Total	-\$79,755,600	\$0	-\$79,755,600	-26.9%	0.0%	-8.9%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario A2 - Low Income Monthly Accumulator, Cap at 50% of Monthly Pass: Change in Ridership

	Change in Ridership, #			Change in Ridership, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	4,822,500	0	4,822,500	13.7%	0.0%	8.7%
ACE (Altamont Commuter Express)	9,700	0	9,700	7.5%	0.0%	0.9%
BART	3,432,300	0	3,432,300	9.5%	0.0%	2.6%
Caltrain	183,000	0	183,000	9.8%	0.0%	1.1%
County Connection (CCCTA)	196,800	0	196,800	12.0%	0.0%	5.9%
City of Dixon	3,800	0	3,800	11.0%	0.0%	7.3%
ECCTA (Tridelta)	155,000	0	155,000	12.1%	0.0%	5.5%
FAST (Fairfield and Suisun Transit)	103,700	0	103,700	13.3%	0.0%	9.6%
Golden Gate (GGBHTD)	202,300	0	202,300	15.7%	0.0%	3.0%
LAVTA (Wheels)	121,400	0	121,400	13.1%	0.0%	7.3%
Marin Transit	88,400	0	88,400	15.7%	0.0%	3.0%
Vine (NCTPA)	53,800	0	53,800	12.8%	0.0%	6.8%
Petaluma Transit	25,900	0	25,900	10.9%	0.0%	7.2%
Rio Vista Delta Breeze	700	0	700	10.1%	0.0%	5.8%
SamTrans	991,100	0	991,100	13.6%	0.0%	7.8%
Santa Rosa CityBus	197,900	0	197,900	10.9%	0.0%	8.5%
VTA	3,651,200	0	3,651,200	12.9%	0.0%	8.4%
San Francisco MTA	8,685,300	0	8,685,300	8.1%	0.0%	3.8%
SolTrans (Solano County Transit)	132,600	0	132,600	13.3%	0.0%	9.2%
Sonoma County	101,800	0	101,800	10.9%	0.0%	7.7%
Union City	24,100	0	24,100	10.9%	0.0%	6.0%
Vacaville City Coach	60,400	0	60,400	13.6%	0.0%	11.8%
West CAT	65,200	0	65,200	15.7%	0.0%	4.8%
San Francisco Bay Ferry (WETA)	11,600	0	11,600	14.6%	0.0%	0.6%
Total	23,320,400	0	23,320,400	10.2%	0.0%	4.5%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario A2 - Low Income Monthly Accumulator, Cap at 50% of Monthly Pass: Change in Fare Revenue

	Change in Fare Revenue, \$			Change in Fare Revenue, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	-\$8,409,700	\$0	-\$8,409,700	-23.3%	0.0%	-14.4%
ACE (Altamont Commuter Express)	-\$179,800	\$0	-\$179,800	-21.6%	0.0%	-2.6%
BART	-\$27,436,700	\$0	-\$27,436,700	-26.5%	0.0%	-6.6%
Caltrain	-\$2,027,000	\$0	-\$2,027,000	-27.2%	0.0%	-2.7%
County Connection (CCCTA)	-\$464,100	\$0	-\$464,100	-20.7%	0.0%	-10.2%
City of Dixon	-\$11,800	\$0	-\$11,800	-19.1%	0.0%	-12.7%
ECCTA (Tridelta)	-\$274,800	\$0	-\$274,800	-21.0%	0.0%	-9.5%
FAST (Fairfield and Suisun Transit)	-\$345,100	\$0	-\$345,100	-22.7%	0.0%	-16.4%
Golden Gate (GGBHTD)	-\$1,121,800	\$0	-\$1,121,800	-26.1%	0.0%	-4.7%
LAVTA (Wheels)	-\$244,700	\$0	-\$244,700	-22.5%	0.0%	-12.6%
Marin Transit	-\$490,000	\$0	-\$490,000	-26.1%	0.0%	-4.7%
Vine (NCTPA)	-\$114,500	\$0	-\$114,500	-22.0%	0.0%	-11.7%
Petaluma Transit	-\$27,500	\$0	-\$27,500	-19.1%	0.0%	-12.6%
Rio Vista Delta Breeze	-\$2,200	\$0	-\$2,200	-19.1%	0.0%	-11.0%
SamTrans	-\$2,237,000	\$0	-\$2,237,000	-23.1%	0.0%	-13.0%
Santa Rosa CityBus	-\$332,800	\$0	-\$332,800	-19.1%	0.0%	-14.9%
VTA	-\$5,443,700	\$0	-\$5,443,700	-22.2%	0.0%	-14.5%
San Francisco MTA	-\$13,834,700	\$0	-\$13,834,700	-14.7%	0.0%	-6.6%
SolTrans (Solano County Transit)	-\$530,400	\$0	-\$530,400	-22.7%	0.0%	-15.8%
Sonoma County	-\$270,700	\$0	-\$270,700	-19.1%	0.0%	-13.6%
Union City	-\$39,000	\$0	-\$39,000	-19.1%	0.0%	-10.5%
Vacaville City Coach	-\$73,200	\$0	-\$73,200	-23.1%	0.0%	-20.1%
West CAT	-\$147,500	\$0	-\$147,500	-26.1%	0.0%	-8.0%
San Francisco Bay Ferry (WETA)	-\$128,800	\$0	-\$128,800	-24.5%	0.0%	-1.0%
Total	-\$64,187,700	\$0	-\$64,187,700	-21.6%	0.0%	-7.2%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario A3 - Low Income Clipper E-Purse with Bonus Value, at 1 to 1 Match: Change in Ridership

	Change in Ridership, #			Change in Ridership, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	5,849,500	0	5,849,500	16.6%	0.0%	10.5%
ACE (Altamont Commuter Express)	13,300	0	13,300	10.2%	0.0%	1.2%
BART	4,794,200	0	4,794,200	13.2%	0.0%	3.6%
Caltrain	209,300	0	209,300	11.2%	0.0%	1.2%
County Connection (CCCTA)	259,500	0	259,500	15.8%	0.0%	7.7%
City of Dixon	5,200	0	5,200	15.0%	0.0%	10.0%
ECCTA (Tridelta)	205,800	0	205,800	16.1%	0.0%	7.3%
FAST (Fairfield and Suisun Transit)	125,900	0	125,900	16.2%	0.0%	11.7%
Golden Gate (GGBHTD)	262,200	0	262,200	20.3%	0.0%	3.9%
LAVTA (Wheels)	146,200	0	146,200	15.8%	0.0%	8.8%
Marin Transit	114,500	0	114,500	20.3%	0.0%	3.9%
Vine (NCTPA)	67,800	0	67,800	16.2%	0.0%	8.6%
Petaluma Transit	35,800	0	35,800	15.1%	0.0%	9.9%
Rio Vista Delta Breeze	1,000	0	1,000	14.5%	0.0%	8.3%
SamTrans	1,161,900	0	1,161,900	15.9%	0.0%	9.1%
Santa Rosa CityBus	273,500	0	273,500	15.0%	0.0%	11.7%
VTA	4,507,600	0	4,507,600	16.0%	0.0%	10.4%
San Francisco MTA	7,554,100	0	7,554,100	7.0%	0.0%	3.3%
SolTrans (Solano County Transit)	161,700	0	161,700	16.2%	0.0%	11.3%
Sonoma County	140,600	0	140,600	15.0%	0.0%	10.7%
Union City	33,300	0	33,300	15.1%	0.0%	8.3%
Vacaville City Coach	70,800	0	70,800	15.9%	0.0%	13.9%
West CAT	84,500	0	84,500	20.3%	0.0%	6.2%
San Francisco Bay Ferry (WETA)	14,400	0	14,400	18.2%	0.0%	0.7%
Total	26,092,900	0	26,092,900	11.4%	0.0%	5.0%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario A3 - Low Income Clipper E-Purse with Bonus Value, at 1 to 1 Match: Change in Fare Revenue

	Change in Fare Revenue, \$			Change in Fare Revenue, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	-\$9,884,100	\$0	-\$9,884,100	-27.4%	0.0%	-16.9%
ACE (Altamont Commuter Express)	-\$235,600	\$0	-\$235,600	-28.3%	0.0%	-3.4%
BART	-\$36,115,200	\$0	-\$36,115,200	-34.9%	0.0%	-8.7%
Caltrain	-\$2,266,000	\$0	-\$2,266,000	-30.4%	0.0%	-3.0%
County Connection (CCCTA)	-\$586,600	\$0	-\$586,600	-26.2%	0.0%	-12.8%
City of Dixon	-\$15,600	\$0	-\$15,600	-25.2%	0.0%	-16.8%
ECCTA (Tridelta)	-\$349,200	\$0	-\$349,200	-26.7%	0.0%	-12.0%
FAST (Fairfield and Suisun Transit)	-\$406,000	\$0	-\$406,000	-26.8%	0.0%	-19.3%
Golden Gate (GGBHTD)	-\$1,386,800	\$0	-\$1,386,800	-32.3%	0.0%	-5.8%
LAVTA (Wheels)	-\$286,200	\$0	-\$286,200	-26.3%	0.0%	-14.7%
Marin Transit	-\$605,700	\$0	-\$605,700	-32.3%	0.0%	-5.8%
Vine (NCTPA)	-\$139,100	\$0	-\$139,100	-26.8%	0.0%	-14.2%
Petaluma Transit	-\$36,300	\$0	-\$36,300	-25.2%	0.0%	-16.7%
Rio Vista Delta Breeze	-\$2,900	\$0	-\$2,900	-25.2%	0.0%	-14.5%
SamTrans	-\$2,556,700	\$0	-\$2,556,700	-26.4%	0.0%	-14.9%
Santa Rosa CityBus	-\$438,900	\$0	-\$438,900	-25.2%	0.0%	-19.7%
VTA	-\$6,500,400	\$0	-\$6,500,400	-26.5%	0.0%	-17.3%
San Francisco MTA	-\$12,194,400	\$0	-\$12,194,400	-12.9%	0.0%	-5.8%
SolTrans (Solano County Transit)	-\$626,600	\$0	-\$626,600	-26.8%	0.0%	-18.7%
Sonoma County	-\$357,000	\$0	-\$357,000	-25.2%	0.0%	-17.9%
Union City	-\$51,400	\$0	-\$51,400	-25.2%	0.0%	-13.9%
Vacaville City Coach	-\$83,700	\$0	-\$83,700	-26.4%	0.0%	-23.0%
West CAT	-\$182,400	\$0	-\$182,400	-32.3%	0.0%	-9.9%
San Francisco Bay Ferry (WETA)	-\$155,000	\$0	-\$155,000	-29.5%	0.0%	-1.2%
Total	-\$75,462,000	\$0	-\$75,462,000	-25.4%	0.0%	-8.5%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario R1 - Eliminate Non-Mandated Discounts (Retain Only 50% Senior/Disabled Discount on Cash Fares During Off-Peak Periods): Change in Ridership

	Change in Ridership, #			Change in Ridership, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	-2,502,200	-972,700	-3,474,900	-7.1%	-4.8%	-6.3%
ACE (Altamont Commuter Express)	-1,700	-11,000	-12,800	-1.3%	-1.2%	-1.2%
BART	-1,529,400	-1,037,400	-2,566,800	-4.2%	-1.1%	-1.9%
Caltrain	-62,600	-129,500	-192,200	-3.3%	-0.9%	-1.1%
County Connection (CCCTA)	-43,200	-40,900	-84,100	-2.6%	-2.4%	-2.5%
City of Dixon	-900	-400	-1,300	-2.6%	-2.3%	-2.5%
ECCTA (Tridelta)	-34,600	-38,500	-73,100	-2.7%	-2.5%	-2.6%
FAST (Fairfield and Suisun Transit)	-33,200	-11,600	-44,800	-4.3%	-3.9%	-4.2%
Golden Gate (GGBHTD)	-52,500	-57,900	-110,300	-4.1%	-1.1%	-1.7%
LAVTA (Wheels)	-39,200	-28,100	-67,300	-4.2%	-3.9%	-4.1%
Marin Transit	-22,900	-25,300	-48,200	-4.1%	-1.1%	-1.7%
Vine (NCTPA)	-31,100	-25,100	-56,200	-7.4%	-6.8%	-7.1%
Petaluma Transit	-13,900	-6,500	-20,400	-5.9%	-5.3%	-5.7%
Rio Vista Delta Breeze	-800	-500	-1,300	-11.6%	-9.8%	-10.8%
SamTrans	-261,200	-148,800	-410,000	-3.6%	-2.7%	-3.2%
Santa Rosa CityBus	-84,500	-21,700	-106,300	-4.6%	-4.2%	-4.6%
VTA	-567,400	-261,400	-828,800	-2.0%	-1.7%	-1.9%
San Francisco MTA	-7,563,800	-4,611,400	-12,175,200	-7.0%	-3.8%	-5.3%
SolTrans (Solano County Transit)	-63,300	-25,100	-88,400	-6.3%	-5.8%	-6.2%
Sonoma County	-52,100	-19,400	-71,500	-5.6%	-5.1%	-5.4%
Union City	-11,500	-8,500	-20,000	-5.2%	-4.7%	-5.0%
Vacaville City Coach	-18,000	-2,400	-20,400	-4.0%	-3.7%	-4.0%
West CAT	-7,300	-15,000	-22,300	-1.8%	-1.6%	-1.6%
San Francisco Bay Ferry (WETA)	-1,400	-29,500	-30,900	-1.8%	-1.6%	-1.6%
Total	-12,998,600	-7,528,900	-20,527,500	-5.7%	-2.6%	-3.9%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario R1 - Eliminate Non-Mandated Discounts (Retain Only 50% Senior/Disabled Discount on Cash Fares During Off-Peak Periods): Change in Fare Revenue

	Change in Fare Revenue, \$			Change in Fare Revenue, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	\$4,662,200	\$2,132,500	\$6,794,700	12.9%	9.5%	11.6%
ACE (Altamont Commuter Express)	\$38,500	\$291,000	\$329,500	4.6%	4.8%	4.8%
BART	\$10,615,400	\$8,442,100	\$19,057,500	10.3%	2.7%	4.6%
Caltrain	\$638,300	\$1,553,600	\$2,191,900	8.6%	2.3%	2.9%
County Connection (CCCTA)	\$124,300	\$135,300	\$259,600	5.6%	5.8%	5.7%
City of Dixon	\$3,500	\$1,800	\$5,300	5.7%	5.8%	5.7%
ECCTA (Tridelta)	\$75,100	\$96,100	\$171,200	5.7%	6.0%	5.9%
FAST (Fairfield and Suisun Transit)	\$140,600	\$56,400	\$196,900	9.3%	9.7%	9.4%
Golden Gate (GGBHTD)	\$275,600	\$343,700	\$619,200	6.4%	1.7%	2.6%
LAVTA (Wheels)	\$100,500	\$82,600	\$183,100	9.2%	9.6%	9.4%
Marin Transit	\$120,400	\$150,100	\$270,500	6.4%	1.7%	2.6%
Vine (NCTPA)	\$88,500	\$82,300	\$170,800	17.0%	17.9%	17.4%
Petaluma Transit	\$18,800	\$10,100	\$28,900	13.1%	13.6%	13.3%
Rio Vista Delta Breeze	\$3,200	\$2,500	\$5,700	27.8%	29.1%	28.5%
SamTrans	\$552,500	\$377,300	\$929,700	5.7%	5.0%	5.4%
Santa Rosa CityBus	\$177,200	\$52,300	\$229,500	10.2%	10.7%	10.3%
VTA	\$747,200	\$388,700	\$1,135,900	3.0%	3.0%	3.0%
San Francisco MTA	\$11,401,600	\$7,888,600	\$19,290,300	12.1%	6.8%	9.1%
SolTrans (Solano County Transit)	\$334,100	\$152,200	\$486,300	14.3%	15.0%	14.5%
Sonoma County	\$175,600	\$75,100	\$250,700	12.4%	13.0%	12.6%
Union City	\$23,300	\$20,000	\$43,300	11.4%	12.0%	11.7%
Vacaville City Coach	\$27,700	\$4,300	\$32,000	8.7%	9.2%	8.8%
West CAT	\$20,700	\$49,000	\$69,700	3.7%	3.8%	3.8%
San Francisco Bay Ferry (WETA)	\$18,700	\$468,000	\$486,600	3.6%	3.7%	3.7%
Total	\$30,383,300	\$22,855,500	\$53,238,800	10.2%	3.8%	6.0%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario R2 - 10% Across-the-Board Fare Increase: Change in Ridership

	Change in Ridership, #			Change in Ridership, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	-1,090,100	-571,100	-1,661,100	-3.1%	-2.8%	-3.0%
ACE (Altamont Commuter Express)	-2,800	-17,900	-20,700	-2.2%	-1.9%	-1.9%
BART	-785,000	-1,802,100	-2,587,100	-2.2%	-1.9%	-2.0%
Caltrain	-40,600	-286,000	-326,500	-2.2%	-1.9%	-1.9%
County Connection (CCCTA)	-50,900	-48,200	-99,200	-3.1%	-2.8%	-3.0%
City of Dixon	-1,100	-500	-1,600	-3.2%	-2.9%	-3.1%
ECCTA (Tridelta)	-39,500	-43,900	-83,400	-3.1%	-2.8%	-2.9%
FAST (Fairfield and Suisun Transit)	-24,100	-8,400	-32,500	-3.1%	-2.8%	-3.0%
Golden Gate (GGBHTD)	-39,900	-151,000	-190,900	-3.1%	-2.8%	-2.9%
LAVTA (Wheels)	-28,600	-20,500	-49,100	-3.1%	-2.8%	-3.0%
Marin Transit	-17,400	-65,900	-83,400	-3.1%	-2.8%	-2.9%
Vine (NCTPA)	-13,000	-10,500	-23,400	-3.1%	-2.8%	-3.0%
Petaluma Transit	-7,400	-3,400	-10,800	-3.1%	-2.8%	-3.0%
Rio Vista Delta Breeze	-200	-100	-400	-2.9%	-2.0%	-3.3%
SamTrans	-226,000	-154,400	-380,400	-3.1%	-2.8%	-3.0%
Santa Rosa CityBus	-56,200	-14,400	-70,700	-3.1%	-2.8%	-3.0%
VTA	-872,100	-428,100	-1,300,200	-3.1%	-2.8%	-3.0%
San Francisco MTA	-3,332,000	-3,420,600	-6,752,600	-3.1%	-2.8%	-2.9%
SolTrans (Solano County Transit)	-30,900	-12,200	-43,200	-3.1%	-2.8%	-3.0%
Sonoma County	-28,900	-10,700	-39,700	-3.1%	-2.8%	-3.0%
Union City	-6,800	-5,100	-11,900	-3.1%	-2.8%	-3.0%
Vacaville City Coach	-13,800	-1,900	-15,600	-3.1%	-2.9%	-3.1%
West CAT	-12,900	-26,500	-39,400	-3.1%	-2.8%	-2.9%
San Francisco Bay Ferry (WETA)	-2,500	-53,600	-56,000	-3.2%	-2.8%	-2.8%
Total	-6,722,700	-7,156,900	-13,879,600	-2.9%	-2.5%	-2.7%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Scenario R2 - 10% Across-the-Board Fare Increase: Change in Fare Revenue

	Change in Fare Revenue, \$			Change in Fare Revenue, %		
	Low Income	Non-Low Income	Total	Low Income	Non-Low Income	Total
AC Transit	\$2,383,300	\$1,551,200	\$3,934,500	6.6%	6.9%	6.7%
ACE (Altamont Commuter Express)	\$63,400	\$479,700	\$543,100	7.6%	7.9%	7.9%
BART	\$8,035,000	\$25,156,200	\$33,191,200	7.8%	8.1%	8.0%
Caltrain	\$567,600	\$5,340,200	\$5,907,800	7.6%	7.9%	7.9%
County Connection (CCCTA)	\$147,600	\$160,800	\$308,400	6.6%	6.9%	6.8%
City of Dixon	\$4,100	\$2,100	\$6,200	6.6%	6.8%	6.7%
ECCTA (Tridelta)	\$86,200	\$110,300	\$196,500	6.6%	6.9%	6.8%
FAST (Fairfield and Suisun Transit)	\$100,100	\$40,100	\$140,200	6.6%	6.9%	6.7%
Golden Gate (GGBHTD)	\$282,800	\$1,361,800	\$1,644,600	6.6%	6.9%	6.8%
LAVTA (Wheels)	\$71,900	\$59,100	\$131,000	6.6%	6.9%	6.7%
Marin Transit	\$123,900	\$596,500	\$720,400	6.6%	6.9%	6.8%
Vine (NCTPA)	\$34,300	\$31,800	\$66,000	6.6%	6.9%	6.7%
Petaluma Transit	\$9,500	\$5,100	\$14,600	6.6%	6.9%	6.7%
Rio Vista Delta Breeze	\$800	\$600	\$1,300	7.0%	7.0%	6.5%
SamTrans	\$638,900	\$515,700	\$1,154,600	6.6%	6.9%	6.7%
Santa Rosa CityBus	\$114,800	\$33,900	\$148,700	6.6%	6.9%	6.7%
VTA	\$1,616,600	\$907,200	\$2,523,800	6.6%	6.9%	6.7%
San Francisco MTA	\$6,226,700	\$8,050,000	\$14,276,700	6.6%	6.9%	6.8%
SolTrans (Solano County Transit)	\$154,400	\$70,200	\$224,600	6.6%	6.9%	6.7%
Sonoma County	\$93,400	\$39,900	\$133,300	6.6%	6.9%	6.7%
Union City	\$13,500	\$11,500	\$25,000	6.6%	6.9%	6.7%
Vacaville City Coach	\$20,900	\$3,200	\$24,200	6.6%	6.8%	6.6%
West CAT	\$37,300	\$88,300	\$125,600	6.6%	6.9%	6.8%
San Francisco Bay Ferry (WETA)	\$34,600	\$869,100	\$903,700	6.6%	6.9%	6.9%
Total	\$20,861,600	\$45,484,400	\$66,346,000	7.0%	7.6%	7.4%

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.

Appendix C: Impacts on Farebox Recovery

	Farebox Recovery					
	Current	A1	A2	A3	R1	R2
AC Transit	18.8%	15.9%	16.1%	15.7%	21.0%	20.1%
ACE (Altamont Commuter Express)	45.2%	43.2%	44.0%	43.7%	47.4%	48.8%
BART	73.1%	66.4%	68.3%	66.7%	76.5%	79.0%
Caltrain	62.7%	60.7%	61.0%	60.8%	64.5%	67.6%
County Connection (CCCTA)	16.5%	14.0%	14.8%	14.4%	17.4%	17.6%
City of Dixon	15.6%	12.4%	13.6%	13.0%	16.5%	16.7%
ECCTA (Tridelta)	18.4%	15.6%	16.7%	16.2%	19.5%	19.7%
FAST (Fairfield and Suisun Transit)	24.8%	18.2%	20.7%	20.0%	27.2%	26.5%
Golden Gate (GGBHTD) / Marin Transit	23.1%	21.8%	22.1%	21.8%	23.7%	24.7%
LAVTA (Wheels)	13.8%	11.2%	12.1%	11.8%	15.1%	14.7%
Vine (NCTPA)	14.6%	11.8%	12.9%	12.5%	17.1%	15.6%
Petaluma Transit	16.4%	12.9%	14.3%	13.7%	18.6%	17.5%
Rio Vista Delta Breeze	5.6%	4.6%	4.9%	4.8%	7.1%	5.9%
SamTrans	16.8%	13.9%	14.6%	14.3%	17.7%	17.9%
Santa Rosa CityBus	21.5%	16.0%	18.3%	17.3%	23.7%	22.9%
VTA	11.8%	9.4%	10.1%	9.8%	12.2%	12.6%
San Francisco MTA	30.4%	28.5%	28.4%	28.6%	33.1%	32.4%
SolTrans (Solano County Transit)	34.6%	26.5%	29.2%	28.2%	39.6%	36.9%
Sonoma County	17.2%	13.3%	14.9%	14.2%	19.4%	18.4%
Union City	11.3%	9.1%	10.1%	9.8%	12.7%	12.1%
Vacaville City Coach	20.3%	14.0%	16.2%	15.6%	22.1%	21.7%
West CAT	23.8%	21.1%	21.9%	21.5%	24.7%	25.5%
San Francisco Bay Ferry (WETA)	50.7%	50.0%	50.2%	50.1%	52.6%	54.2%
Total	37.5%	34.1%	34.8%	34.3%	39.7%	40.3%

NOTE: Operating costs for Golden Gate and Marin Transit are currently available only as a combined total for both agencies, so it has not been possible to calculate separate farebox recovery ratios for those two agencies.

Source: CH2M analysis based on 2015 MTC Statistical Summary of Bay Area Operators, MTC Transit Passenger Demographic Surveys, and BART 2014 Customer Satisfaction Survey.