

**Appendix M**  
**Clipper® Mobile Card Fare Media Equity Analysis**



**Metropolitan Transportation Commission**  
**Clipper® Mobile Card Fare Equity Analysis**  
December 2022



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## Background

### Clipper Program

The Clipper program is a fare payment system initially based on smart card technology that is used to pay fares on transit systems throughout the San Francisco Bay Area. Transit customers can load cash value or passes onto a plastic or mobile card which they can use to ride the 22 Bay Area transit operators shown in Figure 1. The first seven bolded agencies (“Big Seven”) in the table have the most Clipper customers and present over 96% of Clipper card transactions based on data from early 2022.

The Metropolitan Transportation Commission (MTC) is authorized by [Section 66516](#) of the Government Code of California to “adopt rules and regulations to promote the coordination of fares and schedules for all public transit systems within its jurisdiction” and to “require every system to enter into a joint fare revenue sharing agreement with connecting systems”. Under this authority, the MTC adopted [MTC Resolution 3866](#) which requires Bay Area transit operators to implement, operate and promote the Clipper fare payment program as their primary fare payment system.

*Figure 1: Transit Operators Accepting the Clipper Card*

<b>Alameda-Contra Costa Transit District (AC Transit)</b>	Livermore/Amador Valley Transit Authority
<b>Golden Gate Bridge Highway and Transp. District (GGBHTD)</b>	Marin County Transit District
<b>San Francisco Bay Area Rapid Transit District (BART)</b>	Napa County Transportation and Planning Agency
<b>San Francisco Municipal Transportation Agency (SFMTA)</b>	Solano County Transit
<b>San Mateo County Transit District (SamTrans)</b>	Sonoma County Transit
<b>Santa Clara Valley Transportation Authority (VTA)</b>	Vacaville City Coach
<b>Peninsula Corridor Joint Powers Board (Caltrain)</b>	Western Contra Costa Transit Authority
Central Contra Costa Transit Authority	SF Bay Area Water Emergency Transportation Authority
City of Fairfield (Fairfield and Suisun Transit)	City of Santa Rosa
City of Petaluma	City of Union City
Eastern Contra Costa Transit Authority	Sonoma Marin Area Rail Transit System

### Reason for Fare Equity Analysis

This report analyzes the fare equity impacts of setting the card acquisition fee for the new Clipper mobile card. The Clipper Executive Board has directed MTC staff to analyze the potential impact of not charging a fee for mobile cards and keeping the plastic card fee at \$3.00. The main question is whether the fee differential will disproportionately impact minority and low-income Clipper card customers. The basis for the analysis will be the 2022 MTC Clipper Customer Address-Based Sampling (ABS) Survey conducted by MTC in early 2022.

### Federal Fare Equity Analysis Requirements

In compliance with Title VI of the Civil Rights Act of 1964, the Federal Transit Administration (FTA) requires all transit agencies that receive federal funding to monitor the performance of their systems, ensuring

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services are made available and/or distributed equitably. One component of ensuring compliance is performing an equity analysis for all fare changes and any major service changes to determine its impact on minority (race, color, or national origin) and low-income populations. These requirements are outlined in FTA [Circular 4702.1B](#), "Title VI Requirements and Guidelines for Federal Transit Administration Recipients".

The circular requires that there be a fare equity analysis completed for any change in fares or in fare media to ensure or minimize any disparate impact on minority populations or disproportionate burden on low-income populations as defined in Figure 2.

*Figure 2: Disparate Impact and Disproportionate Burden Definitions*

Disparate Impact (Minority)	Disproportionate Burden (Low-Income)
Refers to a facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the recipient's policy or practice lacks a substantial legitimate justification and where there exists one or more alternatives that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin.	Refers to a neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of disproportionate burden requires the recipient to evaluate alternatives and mitigate burdens where practicable.

The analysis examples in the Circular and FTA training materials focus on measuring the impacts of fare increases/decreases. There is no specific guidance for evaluating the introduction of new fare media types and fees. The FTA does note in their "[Title VI – Frequently Asked Questions](#)" that an equity analysis of some form is required for introduction of new fare media.

**Question:** *If a new fare media such as a "smart card" is introduced, should a fare equity analysis be conducted, even if the existing fares remain the same and the cost of transfers may be eliminated, depending on the type of card purchase?*

**Answer:** *Yes, because new fare media may have an adverse impact on minority and low-income populations, depending on where it can be obtained by the public. An analysis of who is using current fare media and projecting who would use the new fare media is required so the transit agency can determine whether there are adverse or disproportionate burdens on minority or low-income populations*

## Previous Clipper Fare Payment Equity Analysis

As outlined in the previous section, transit operators are responsible for conducting equity analysis when making changes to their fares. Since the Clipper card is operated by MTC and they require transit agencies to accept the card, MTC performed one analysis for the region on behalf of the transit operators when proposing changes to regional fees and policies. MTC conducted a fare [equity analysis](#) in 2012 to cover the regionwide launch of Clipper when transit agencies were required to move passes over to the card. The card acquisition fee for the plastic card was included in the 2012 analysis.

Since the Clipper card acquisition fee is charged by MTC and is the same across all operators, MTC conducted this analysis using regional data on behalf of all the operators. The analysis in this report follows the plastic card precedent as MTC will be implementing a regional card acquisition fee for mobile cards which impacts all operators.



## Clipper Card Types and Fees

### Plastic Card

The genesis of the Clipper plastic card goes back to the TransLink program, which started in the early 2000s. The plastic “Smart Card” (see Figure 3) was a relatively new concept and was the most viable alternative for a durable stored-value transit card at the time. The project was piloted and grew to include all of the major transit agencies in the Bay Area. In 2010, TransLink was rebranded as “Clipper” and the card was officially launched as the primary fare media for the region.

The Clipper plastic card contains a chip that stores cash, tickets, or passes. The card is intended to be reused and reloaded by customers for many years. Value can be loaded online, over the phone, at ticket vending machines, and at retail outlets. Clipper plastic cards are expensive to produce relative to other fare media due to the integrated technology and durability. During a recent procurement, the cost of each plastic card was approximately \$1.50.

To create an incentive for customers to keep the plastic card and recover some of the program’s costs, a \$5 card acquisition fee was implemented for the TransLink card. This fee was waived with the rebranding to “Clipper” in 2010 to encourage adoption. When the card fee was reinstated in 2012, it was lowered to \$3 based on community feedback and an equity analysis. There is no fee for card setup with the “auto-load” feature, which is where the card is automatically reloaded with cash value or passes via a stored credit or debit card. Special fare media programs for youth, seniors, and disabled residents also do not have a fee because these cards are registered to an individual person, which creates an incentive for these customers to keep the cards. If these customers lose their card, they would need to pay a \$3 replacement fee and go to an in-person location or wait to receive the replacement by mail to continue to receive a discount fare. MTC considered a minimum load value for all plastic cards in 2012, but decided against it because of equity concerns and ease of use for customers. Currently minimum loads are required for plastic cards purchased at Clipper ticket vending machines (TVMs).

*Figure 3: Plastic Clipper Card*



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#### Mobile Card

In recent years, a similar chip as is contained in the Clipper plastic card has been integrated into most smartphones and smartwatches. This allows transit agencies to create “mobile” cards which can be read by the same card readers as the plastic cards. MTC has partnered with their fare integrator along with Google and Apple to allow customers to create Clipper mobile cards which are contained in the “wallet” of a customer’s smartphone or smartwatch (see Figure 4).

The mobile cards have some benefits over the plastic cards. First is that the mobile cards cost less to issue than the plastic cards and do not need to be physically distributed to ticket machines or sales outlets. Another benefit is that the mobile card is integrated into a device customers tend to keep for several years, and they are difficult to share with other customers which is a fare evasion concern.

MTC introduced the mobile card in early 2021 with no card acquisition fee as a promotion for the first six months. The same \$3 fee as the plastic card started to be charged in October 2021. The fee was again waived as a promotion in March 2022 because of supply-chain issues causing delays in shipments of plastic cards.

*Figure 4: Mobile Clipper Card*





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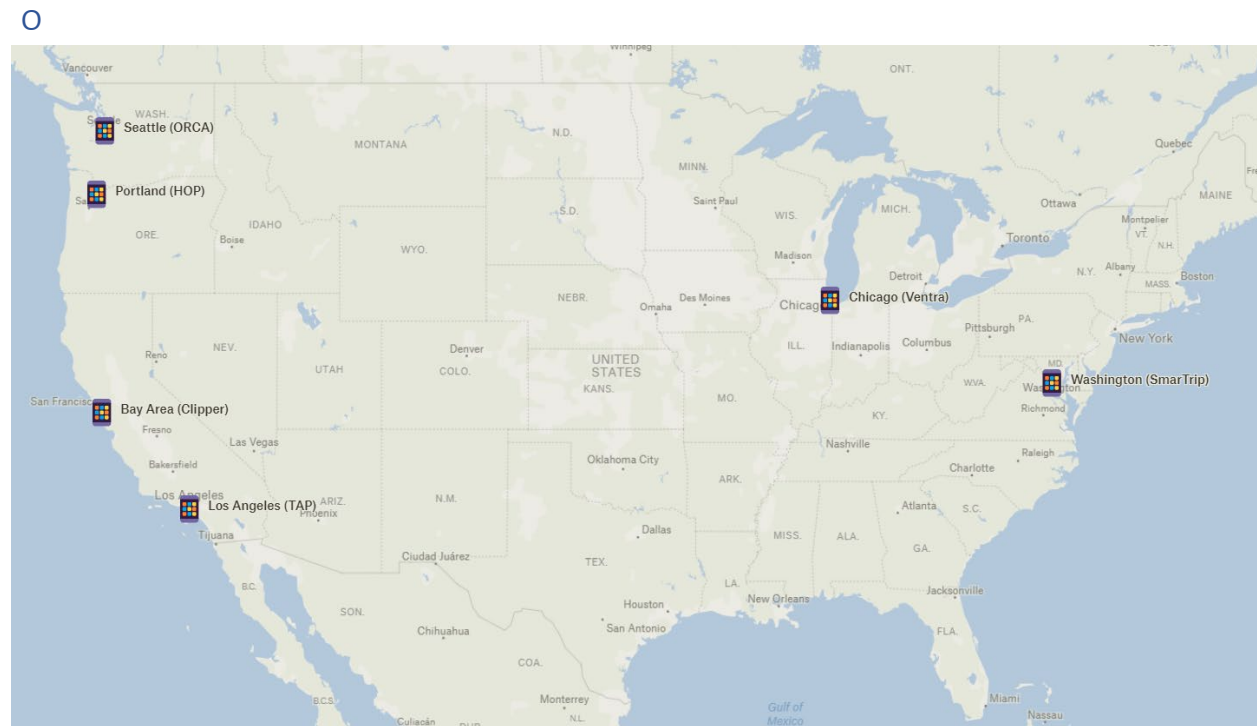
### Peer Agency Review

Five transit agencies throughout the country have completed, or will soon complete, the same mobile card wallet integration as MTC. We conducted an analysis of the five agencies shown in Figure 5 to determine how they set their card acquisition fees for plastic and mobile cards and whether they conducted an equity analysis. The New York OMNY card has a slightly different integration than the rest of the agencies and was not included in this analysis.

Figure 5: United States Transit Agencies with Apple/Google Wallet Integration

City/Region	Product	Plastic Card Implementation Year	Mobile Card Implementation Year
Chicago	Ventra	2013	2020 (Apple) 2021 (Google)
Los Angeles	TAP	2011	2020
Portland	HOP	2017	2019
Washington DC	SmarTrip	2012 (2 <sup>nd</sup> Version)	2020 (Apple) 2021 (Google)
Seattle	ORCA	2009	2023 (TBD)

Figure 6: Map of Peer Agencies



### Card Acquisition Fee Comparison

Figure 7 is a comparison of the card acquisition fees across the agencies which have both plastic and mobile cards. Most of the peer agencies charge the same amount for mobile and plastic cards. The exception is Los Angeles, which charges \$2 for a plastic card and has no charge for the mobile card. Chicago does not charge for the mobile card but requires that at least \$5 be loaded onto a new card which is the same amount as the plastic card fee. They also rebate the \$5 plastic card acquisition fee as stored

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value if the customer registers their card. Based on these policies, the Chicago card fees are generally equitable.

Figure 7: Card Acquisition Fees for Peer Agencies

City/Region	Plastic Card	Mobile Card
Chicago (Ventra)	\$5 fee in person - refunded to card with registration <u>or</u> Free online with \$5 minimum load or pass	Free but requires \$5 minimum load or pass purchase
Los Angeles (TAP)	\$2 fee with \$1 minimum load or transit pass	Free with \$1 minimum load or transit pass
Portland (HOP)	\$3 fee with \$5 minimum load	\$3 fee with \$5 minimum load
Washington DC (SmarTrip)	\$2 fee with no minimum load	\$2 fee with no minimum load
Seattle (ORCA) <i>Coming Soon</i>	\$3 fee with \$5 minimum load	\$3 fee (minimum load TBD)
SF Bay Area (Clipper) <i>Proposed</i>	\$3 fee with no minimum load	Free with \$3.00 minimum load on Apple and \$3.00 minimum load on Google

### Peer Agency Equity Analysis

During our review of peer agencies, we tried to determine what type of equity analysis, if any, was done with the introduction of mobile cards. This information was collected via a survey and a review of the agency websites. Below is a summary of what we found from each agency:

- **Chicago (Ventra):** An equity analysis was completed before the Ventra plastic card was introduced in 2013. We did not hear back from CTA, and a review of their website did not find a subsequent analysis for the mobile card introduction.
- **Los Angeles (TAP):** The free mobile TAP card was introduced during the COVID-19 pandemic as a pilot. The staff interviewed did not think that an equity analysis was completed specifically for the mobile card. Staff did indicate that LA Metro completes any necessary equity analysis for TAP program changes, which are then approved by the governing board of each transit operator.
- **Portland (HOP):** As noted earlier, the plastic and mobile HOP cards have the same card acquisition fee. TriMet did an analysis for the introduction of the HOP plastic card but does not appear to have done one for the mobile card based on a review of their website. Because the fees were equitable, they may have decided that an analysis was not necessary.
- **Washington DC (SmarTrip):** WMATA did not conduct an equity analysis for the introduction of the mobile card. As noted, they charge the same fee for plastic and mobile cards.

- **Seattle (ORCA):** ORCA staff is not planning on conducting an equity analysis since they will be charging the same fee for mobile cards as plastic.

## Analysis of Clipper Card Acquisition Fees

### Who is Impacted by the Fee?

The card acquisition fee is paid when a customer needs to obtain a new Clipper card. The types of customers that will be subject to the fee include:

- A portion of new Bay Area residents who want to use transit
- All new BART customers
- Visitors to the Bay Area who use transit
- Existing Clipper cardholders who lose their card

The fee does not impact Bay Area transit customers who do not currently use or plan to use the Clipper card. Typically, these customers prefer to use cash or non-Clipper fare media issued by individual transit agencies (based on non-customer survey responses).

### 2022 MTC Clipper Customer ABS Survey

MTC regularly conducts surveys of Clipper customers and non-customers. The latest survey was conducted between March and May 2022. A survey postcard was sent to a random sample of mailing addresses throughout the nine-county Bay Area region. In addition to completing the survey online, respondents could take it over the phone and in the four predominant languages. The new mail survey methodology used for the 2022 survey should yield more accurate results compared to the previous intercept surveys conducted at stops and stations.

The survey included responses from 1,932 Clipper card customers with a margin of error of  $\pm 2\%$ . Of the 1,932 surveys, 20% were mobile card customers and 80% were plastic card customers. The survey also included the key demographics questions which are needed to determine the equity of the card acquisition fee.

The non-customer survey determined that most respondents do not use Clipper because they are infrequent customers of transit and pay mostly using ticket vending machines. When asked if they are interested in using the Clipper card in the future, non-minority respondents were less likely than minority respondents to be interested. There was little difference between low-income and non-low-income respondents (see Figure 8). The definition of “Low-Income” used for the ABS survey was 200% of the national poverty level, consistent with past equity work at MTC and ABAG.

Figure 8: Interest in using the Clipper Card in the future (non-customers)

Summary	Interested	Not-Interested	All Riders
Non-Minority	35%	53%	42%
Minority	62%	44%	56%
Low-Income	30%	28%	29%
Non-Low-Income	70%	72%	71%

## Fare Equity Impact Thresholds

Each transit agency is responsible for establishing what differential is considered a disparate impact or disproportionate burden. As MTC is not a transit operator, they are not required to develop thresholds and we must rely on the Clipper agency thresholds for this analysis as was done in 2012. As there are 22 Clipper agencies, it is not feasible to conduct a separate analysis based on each agency's specific thresholds. We have collected the thresholds for the "Big Seven" agencies with the largest share of customers based on the 2022 Clipper survey; these are shown in Figure 9. We propose to calculate the Disparate Impact and Disproportionate Burden for these agencies for this initial analysis and compare it to their thresholds. For the purposes of this analysis the universe of potentially impacted customers will be existing Clipper customers.

*Figure 9: Major Clipper Agency Disparate Impact and Disproportionate Burden Thresholds*

Agency	Disparate Impact Threshold (Minority)	Disproportionate Burden Threshold (Low-Income)	Source
<b>AC Transit</b>	15% or more comparing people of color riders versus non-people of color riders	15% comparing low-income riders versus non-low-income riders	<a href="#">AC Transit Board Policy No. 518</a>
<b>BART</b>	10% or more comparing protected riders versus non-protected riders (New Fare Media)	10% or more comparing protected riders versus non-protected riders (New Fare Media)	<a href="#">Title VI Program 2019 Triennial Update</a>
<b>Caltrain</b>	10% or more comparing minority population versus non-minority populations	10% or more comparing low-income population versus non-low-income populations	<a href="#">Title VI Adopted Policies and Standards</a>
<b>Golden Gate Bridge, Highway and Transportation District</b>	10% or more comparing minority population versus non-minority populations	10% or more comparing low-income population versus non-low-income populations	<a href="#">2018 Title VI Plan Appendices</a>
<b>SamTrans</b>	20% or more comparing minority population versus non-minority populations	20% or more comparing low-income population versus non-low-income populations	<a href="#">SamTrans Title VI Adopted Policies and Standards</a>
<b>SF Muni</b>	8% or more comparing impacted minority populations versus system-wide minority populations	8% or more comparing impacted low-income populations versus system-wide low-income populations	<a href="#">Resolution No. 13-192</a>
<b>VTA</b>	10% or more comparing minority population versus non-minority populations	10% or more comparing low-income population versus non-low-income populations	<a href="#">2019 Title VI Program</a>

## Public Engagement Process for Disparate Impact and Disproportionate Burden Thresholds

The FTA requires that transit agencies engage the public in the decision-making process when developing their Major Service Change, Disparate Impact and Disproportionate Burden policies. We reviewed the most recent Title VI triennial plans for the “Big Seven” agencies to determine the process followed and when the policies were approved by their governing boards. Figure 10 summarizes the public involvement process for each agency. Based on our review, we have determined that these agencies have thresholds which were properly vetted with the public and meet the FTA requirements.

*Figure 10: Public Engagement Process for Setting Thresholds*

Agency	Threshold Outreach Process
<b>AC Transit</b>	The AC Transit Board of Directors approved updated Board Policies 110 and 518 on August 13, 2014, which contain their current thresholds. Staff made presentations at over 25 community events and included several traditional and non-traditional methods of soliciting input, including the use of social media, notices in English, Spanish, Chinese, and Korean newspapers, press releases, and presentations to community-based organizations and schools to publicize the proposed changes.
<b>BART</b>	The BART Board of Directors approved their current thresholds at their July 11, 2013, meeting. BART conducted eight outreach meetings: one meeting with the Advisory Committee, two meetings with transportation equity advocacy groups and five meetings with interested Board of Directors members. A webinar was also made available on BART TV via YouTube. The public was also able to provide written comments via mail, fax, phone or email. The policy was also translated into Chinese and Spanish and available in additional languages upon request.
<b>Caltrain</b>	The Caltrain Service Standards and Policies were adopted by the Joint Powers Board on April 4, 2013, and contain their current thresholds. Staff developed draft policies and requested public input through four community meetings throughout the Caltrain service area. Comments were also accepted via mail, telephone, and a dedicated email address.
<b>Golden Gate Bridge, Highway and Transportation District</b>	The District’s Board of Directors adopted their current thresholds at their meeting on August 9, 2013. Outreach included three informational meetings throughout the service area. Legal notices were published in the <i>Marin Independent Journal</i> , the <i>San Francisco Examiner</i> and the <i>Santa Rosa Press Democrat</i> . Signage was posted onboard the ferry boats, at the ferry terminals, at transit hubs in Marin and Sonoma counties, at major bus stops and at the Customer Service Center at the San Rafael Transit Center. Display boards, staff report and comment forms were translated into Spanish for affected communities. The agency also issues a press release, sent emails to bus and ferry riders, and posted to social media channels.

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Agency	Threshold Outreach Process
<b>SamTrans</b>	The SamTrans Board approved the current thresholds at their March 13, 2013, meeting. Staff developed draft policies and received public input through four community meetings throughout the county. Comments were also accepted through the mail, telephone, and the dedicated email address. Staff revised the proposals for its standards and policies and submitted them for Board approval.
<b>SF Muni</b>	The SFMTA Board of Directors approved their current thresholds at their August 20, 2013, meeting. SFMTA conducted a multilingual stakeholder outreach campaign to receive input on the proposed policies. The effort included presentations to the SFMTA Citizens Advisory Council (CAC) and Muni Accessible Advisory Committee (MAAC), as well as two public workshops. The workshops were promoted through email, telephone calls to community groups and on the SFMTA website in nine languages. Outreach was also targeted to approximately 30 community-based organizations and transportation advocates with broad representation among low-income and minority communities.
<b>VTA</b>	The VTA Board of Directors approved their current thresholds at their November 7, 2013, meeting. VTA emailed the proposed major service change, disparate impact and disproportionate burden policies to approximately 30 representatives from community-based organizations (CBOs) and transit advocates for their review and comment. Staff also gave presentations and teleconferenced with members of several organizations. The draft documents were also posted on the VTA website for review and public comment.



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**Disparate Impact (Minority Customers)**

To measure if there is a disparate impact of card acquisition fees, we need to determine at what rate minority and non-minority customers use different card types using data from the 2022 Clipper Customer ABS Survey. Question 12 on the survey asks is they customer is a “plastic” or “mobile” card customer. Questions 82 and 83 ask about race and ethnicity.

Figure 11 calculates the average card fee for comparing to the AC Transit, BART and Caltrain disparate impact thresholds. Figure 12 shows the results of cross tabulating these questions for use with the SF Muni threshold.

*Figure 11: Proposed Clipper Card Fee Impact on Minority / Non-Minority Customers*

	Proposed Mobile Card Fee	Mobile Customer Percent	Proposed Plastic Card Fee	Plastic Customer Percent	Proposed Average Fee	Current Fee	Fee Change	Percent Fee Change
<b>Minority</b>	\$0.00	22%	\$3.00	78%	\$2.35	\$3.00	\$(0.65)	-21.69%
<b>Non-Minority</b>	\$0.00	18%	\$3.00	82%	\$2.45	\$3.00	\$(0.55)	-18.25%

*Figure 12: Clipper Card Type by Minority / Non-Minority Customers*

	Mobile	Plastic	All Clipper
<b>Minority</b>	58%	52%	54%
<b>Non-Minority</b>	41%	46%	45%
<b>Prefer Not to Respond</b>	1%	2%	2%

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Figure 13 compares the measured differences to the disparate impact thresholds for the seven largest Clipper agencies. **Based on this comparison, the difference in card acquisition fee does not rise to the level of a disparate impact for any of the agencies. In all cases the benefit is greater for minority customers since they are using the mobile card at a higher rate.**

*Figure 13: Disparate Impact Calculation*

Agency	Disparate Impact Threshold (Minority)	Measurement	Disparate Impact
<b>AC Transit</b>	<b>15%</b> or more comparing people of color riders versus non-people of color riders	-18.25% average non-minority fee change vs -21.69% minority fee change = <b>3.44%</b> difference	No
<b>BART</b>	<b>10%</b> or more comparing protected riders versus non-protected riders (New Fare Media)	-18.25% average non-minority fee change vs -21.69% minority fee change = <b>3.44%</b> difference	No
<b>Caltrain</b>	<b>10%</b> or more comparing minority population versus non-minority populations	-18.25% average non-minority fee change vs -21.69% minority fee change = <b>3.44%</b> difference	No
<b>Golden Gate Bridge, Highway and Transportation District</b>	<b>10%</b> or more comparing minority population versus non-minority populations	-18.25% average non-minority fee change vs -21.69% minority fee change = <b>3.44%</b> difference	No
<b>SamTrans</b>	<b>20%</b> or more comparing minority population versus non-minority populations	-18.25% average non-minority fee change vs -21.69% minority fee change = <b>3.44%</b> difference	No
<b>SF Muni</b>	<b>8%</b> or more comparing impacted minority populations versus system-wide minority populations	52% minority plastic card vs 54% minority all customers = <b>2%</b> difference	No
<b>VTA</b>	<b>10%</b> or more comparing minority population versus non-minority populations	-18.25% average non-minority fee change vs -21.69% minority fee change = <b>3.44%</b> difference	No

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**Disproportionate Burden (Low-Income Customers)**

To measure if there is a disproportionate burden of card acquisition fees, we need to determine at what rate low-income and non-low-income customers use different card types using data from the 2022 Clipper Customer ABS Survey. Question 12 on the survey asks is the customer is a “plastic” or “mobile” card customers, and Question 84 ask about income.

Figure 14 calculates the average card fee for comparing to the AC Transit, BART and Caltrain disproportionate burden thresholds. It is important to note that for this analysis we assumed that low-income customers would pay \$3.00 for the plastic card. We know that some portion of low-income customers receive their cards free through the Clipper START program, but that the ratio would be similar under either card acquisition fee structure. Figure 15 shows the results of cross tabulating these question for use with the SF Muni threshold.

*Figure 14: Proposed Clipper Card Fee Impact on Low-Income / Non-Low-Income Customers*

	Proposed Mobile Card Fee	Mobile Customer Percent	Proposed Plastic Card Fee	Plastic Customer Percent	Proposed Average Fee	Current Fee	Fee Change	Percent Fee Change
<b>Low-Income</b>	\$0.00	15%	\$3.00	85%	\$2.55	\$3.00	\$(0.45)	-14.87%
<b>Non-Low-Income</b>	\$0.00	22%	\$3.00	78%	\$2.35	\$3.00	\$(0.65)	-21.54%

*Figure 15: Clipper Card Type by Low-Income / Non-Low-Income Customers*

	Mobile	Plastic	All Clipper
<b>Low-Income</b>	19%	28%	26%
<b>Non-Low-Income</b>	81%	72%	74%

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Figure 16 compares the measured differences to the disproportionate burden thresholds for the seven largest Clipper agencies. **Based on this comparison, the difference in card acquisition fee does not rise to the level of a disproportionate burden for any of the agencies. There is a higher benefit to non-low-income customers, but it remains within all of the thresholds.**

Figure 16: Disproportionate Burden Calculation

Agency	Disproportionate Burden Threshold (Low-Income)	Measurement	Disproportionate Burden
<b>AC Transit</b>	<b>15%</b> comparing low-income riders versus non-low-income riders	-14.87% average low-income fee change vs -21.54% non-low-income fee change = <b>-6.67%</b> difference	No
<b>BART</b>	<b>10%</b> or more comparing protected riders versus non-protected riders (New Fare Media)	-14.87% average low-income fee change vs -21.54% non-low-income fee change = <b>-6.67%</b> difference	No
<b>Caltrain</b>	<b>10%</b> or more comparing low-income population versus non-low-income populations	-14.87% average low-income fee change vs -21.54% non-low-income fee change = <b>-6.67%</b> difference	No
<b>Golden Gate Bridge, Highway and Transportation District</b>	<b>10%</b> or more comparing low-income population versus non-low-income populations	-14.87% average low-income fee change vs -21.54% non-low-income fee change = <b>-6.67%</b> difference	No
<b>SamTrans</b>	<b>20%</b> or more comparing low-income population versus non-low-income populations	-14.87% average low-income fee change vs -21.54% non-low-income fee change = <b>-6.67%</b> difference	No
<b>SF Muni</b>	<b>8%</b> or more comparing impacted low-income populations versus system-wide low-income populations	28% minority plastic card vs 26% all low-income all customers = <b>-2%</b> difference	No
<b>VTA</b>	<b>10%</b> or more comparing low-income population versus non-low-income populations	-14.87% average low-income fee change vs -21.54% non-low-income fee change = <b>-6.67%</b> difference	No

## Summary

Based on the results of this analysis, the reduced cost of the mobile Clipper card compared to the plastic card does not cause a disparate impact or disproportionate burden for Clipper customers protected under Federal Title VI and Environmental Justice regulations. Overall, the benefits for minority customers are higher based on their higher usage of the mobile card. Low-income customers will be paying higher overall card acquisition fees if they continue to acquire more plastic than mobile cards, however the fee difference does not exceed the transit agency adopted thresholds.

To close the gap for low-income customers, MTC may consider the continuation of programs which provide plastic Clipper cards to low-income customers at no cost. The Clipper START pilot-program is one effective way to distribute more free plastic cards since the program is targeted to low-income customers. MTC also has a program to provide free cards to community-based organizations whose primary mission is serving low-income individuals.