

# **Title VI Evaluation of Fare Proposals May 2011**

## **Submitted by**

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## I. INTRODUCTION

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In December 2009, the District Board of Directors directed staff to begin developing a District fare policy and fare structure. In July and August 2010, staff reported to the Board on the policies and fare structures of other transit systems, along with working goals for the development of future policy. Throughout the planning process, staff consistently considered the consequences of fare proposals on the District's low income and minority populations.

In January 2011, the Board referred the fare policy and various elements of it for public input, with a public hearing to receive comments on the proposed fare structure, a schedule of fare increases, and other fare changes on April 27, 2011. Part of the decision making process includes a Title VI analysis to assess how each proposal will affect different rider populations, as well as determine if any of the fare proposals result in disproportionately high and adverse effects on minority populations and low-income populations within the District.

## II. TITLE VI BACKGROUND

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Title VI of the Civil Rights Act of 1964, Section 601 states:

“No persons in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”

It is AC Transit's responsibility to ensure that all transit service, and access to its facilities, is equitably distributed and provided without regard to race, color, or national origin. It is also the goal of AC Transit to ensure equal opportunities to all persons without regard to race, color, or national origin to participate in all local, subregional and regional transit planning and decision-making processes under the District's control.

According to the Federal Department of Transportation, equity in the provision of transit service is described as "providing equal levels of service to minority and non-minority residents of the urbanized area. Levels of service, in turn, are defined in terms of capital allocation and accessibility."<sup>1</sup> The indices of discrimination that could be monitored for disparate treatment include fare structures that could consistently cause minority-group riders to bear a higher average fare burden than non-minority group riders.

Title VI along with Executive Order 12898, requires agencies to develop and implement an integrated approach to achieving Environmental Justice. This approach includes the collection, analysis and dissemination of understandable and useable information on the adverse environmental and health impacts on protected populations. This information should enrich the decision-making process for projects and proposals affecting the social and physical environment to the benefit of both decision-makers and the public.

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<sup>1</sup> Transit Cooperative Research Program, Legal Research Digest: "The Impact of Civil Rights Litigation Under Title VI and Related Laws on Transit Decision Making", TCRP Project J-5, Washington, D.C. June 1997

To assess Title VI issues, an analysis should be conducted that uses data and other information to:

- Determine benefits to and potential negative impacts on minority populations and low-income populations from proposed investments or actions
- Quantify expected effects (total, positive and negative) and disproportionately high and adverse effects on minority populations and low-income populations
- Determine the appropriate course of action, whether avoidance, minimization, or mitigation

### III. METHODOLOGY AND DATA SOURCES

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In order to conduct the Title VI equity analysis for the fare proposals, District staff used data derived from the 2008/09 On-Board Rider Profile (weighted to reflect District ridership).

The 2008/09 On-board Rider Profile represents the most current data that the District has regarding our passengers. While the data is a few years old and ridership has changed since the study was conducted, we have assumed that passengers' trip characteristics, demographics, income, and travel behavior have remained essentially the same. While we are assuming that fare payment methods will remain the same regardless of the fare proposal, there is care needed in the interpretation of this data. The survey was conducted before the District's or the Region's full implementation of Translink (now Clipper) and e-cash. Consequently, there may have been a shift in Clipper and e-cash users since 2008, now that the vendor network is wider and public acceptance of the technology is increasing. However, while the fare payment data is not entirely accurate, staff believes it is accurate in assessing the major elements of the fare proposal associated with pass use and pass prices.

The cornerstone used to identify the equity impacts of the two fare proposals is the **Average Fare** analysis for local service, which presents the average costs of **linked** one-way trips for the fare category and type of payment used. The Average Fare was then calculated for each of the two fare proposals, and stratified by income and ethnicity to determine the economic impacts upon classes of riders protected under Title VI.

To develop the "Average Fare", staff used the 2008/2009 On-board Rider Profile data set, which includes approximately 23,000 surveys that have responses for 27 questions—making approximately 620,000 "survey records". This rich data set allowed staff to obtain very detailed information through cross-tabulation.

Staff first sorted each survey record between local and Transbay. After the data was sorted into Local and Transbay, the data was further sorted by the four fare categories: youth, senior, disabled and adult (Question 11); as well as by three primary fare media: cash, 10-ride ticket and monthly pass (Question 12). Because the fare proposals do not affect the City of Berkeley ECO Pass and the University of California Student Class Pass, data reflecting these programs were excluded from the analysis.

The data was then sorted using Question 1, which asks the number of buses that respondents took in order to complete their one-way trip. Because this is also sorted by Cash and Pass, the impacts by fare category could be quantified for each fare proposal. For purposes of estimating average cash fares for the proposals, it was assumed that the existing

fare policies were used to represent the existing average fare; and the proposed fare policies were applied to determine the average fare by proposal. For instance, in the existing fare structure, those using one bus would be charged a full cash fare; those transferring once would be charged a full cash fare and a transfer charge; and those transferring twice would be charged a full cash fare, a transfer charge and an additional full cash fare. For the proposed fare structures, changes to the appropriate rules would apply, such as those involving free multi-use transfers for Clipper users.

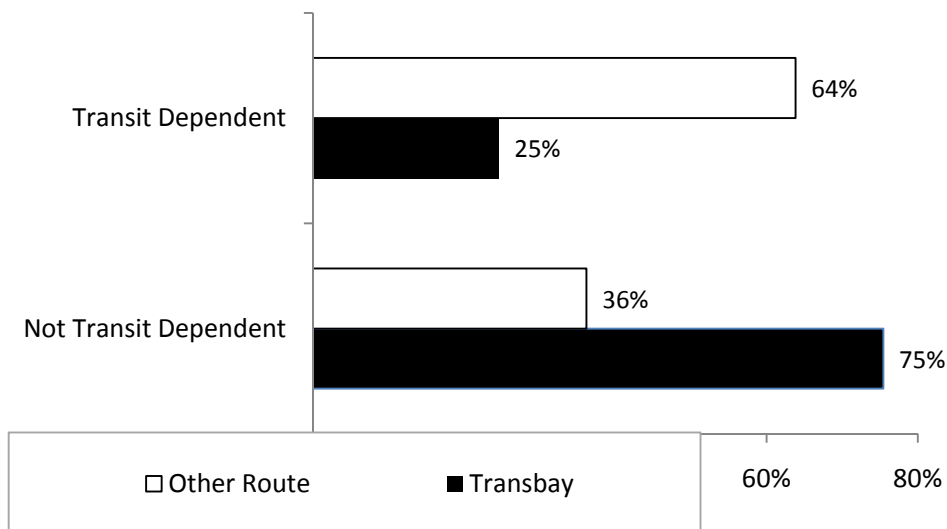
To quantify the average cost per trip for pass riders, staff made assumptions that were fairly conservative in estimating impacts. The analysis in the text of this report assumes that local pass riders use the 31-day pass 60 times per month; while Transbay riders use the 31-day pass 40 times per month. However, staff also conducted the Average Fare analysis using the following two scenarios to test the impacts of the fare proposals:

- 60 uses per month
- 40 uses per month

For the first scenario, staff assumed that pass riders would use the pass 60 times per month. The assumption is based upon using the pass for 40 round trips using one bus, and an additional 10 round trips that require 2 buses. Given the fact that about 64% of local riders consider themselves Transit Dependent (Table 1)<sup>2</sup>, staff believes that this is an appropriate estimate that lies between using the pass only to commute to work and using the pass for other trip purposes. However, staff believes that this may still be too high for Transbay pass users.

For the second scenario, staff assumed that pass users would use the pass at least 20 days per month for one round trip, equaling 40 times per month. This is the “break even” point that many people use to gauge whether they will purchase a pass or not. Staff believes that this usage rate is probably too low to represent the way the average rider uses a 31 day pass for local service. However, it would be appropriate for the Transbay rider.

**Table 1: Transit Dependency Rates for Transbay and Local Routes**

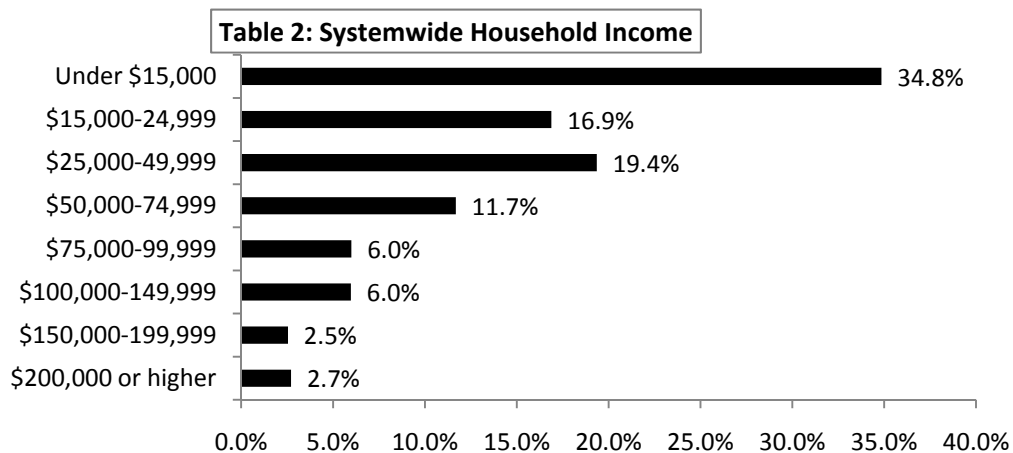


<sup>2</sup> Transit Dependent is defined as being without car in household, without driver's license, or indicated that they “don't drive”.

## IV. AC TRANSIT RIDERSHIP PROFILE

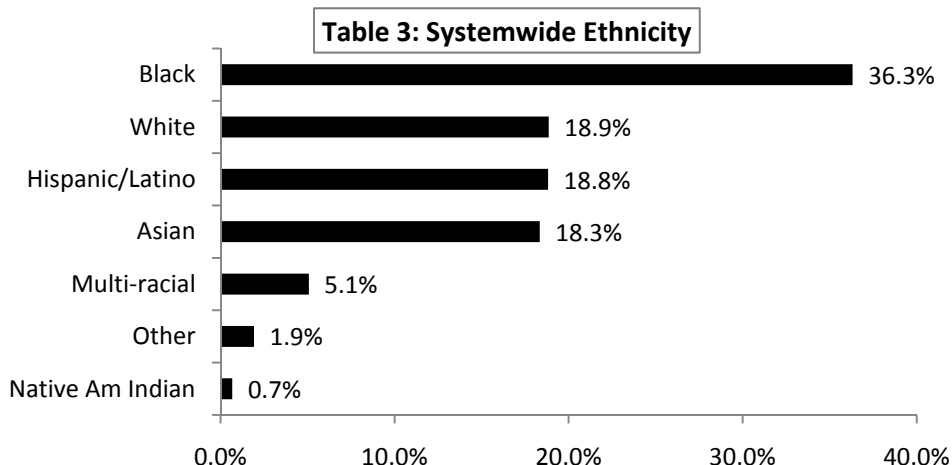
Using data derived from the 2008/09 On-Board Rider Profile, the District has been able to discover much about the general demographics of its ridership in addition to their trip making characteristics and fare payment methods. This information was used early in the planning stage of the fare policy development to ensure that impacts to minority and low income populations were considered early in the process. Using the data to perform a number of cross tabulations, the following provides a picture of who is using the system and in what manner.

### a. Income and Ethnicity



Approximately half of adult AC Transit riders reported a household income (in 2008) of less than \$25,000 per year (51.7%), while close to three-quarters of the ridership reported a household income of less than \$50,000 per year (71.1%). Less than \$50,000 is considered “low income”.

Table 3 presents the systemwide ethnicity of the District’s Riders. More than one-third of AC Transit riders were Black/African-American (36.3%), while White, Hispanic/Latino, and Asian riders each comprised close to one-fifth of the ridership (18.9%, 18.8%, and 18.3% respectively). About 5% of riders indicated they were of Multi-racial descent, while 1.9% of riders indicated ‘other’ ethnicity. Less than 1% of riders were of Native American Indian descent.



Tables 4 and 5 present a cross-tabulation of income and ethnicity which shows that in general, White riders comprise both a greater share of higher income riders as well as comprising the lowest percentage of low income riders. At income levels above \$100,000, almost half are White. Asians accounted for almost 30% of riders earning above \$100,000, dropping to 17% for incomes above \$200,000. This compares to 12.5% Black for incomes above \$100,000, slightly increasing to 17.6% for incomes above \$200,000. Among Hispanic/Latino riders, 8.6% had incomes above \$100,000, dropping to 7.6% for incomes above \$200,000. When compared by ethnicity (Table 5), 21% of White riders have incomes above \$100,000, 15.9% Asian, 6.1% Latino, and 4.4% Black.

**Table 4: Ethnicity by Income**

Q.12 Race/Ethnicity	14. What is your total household income?							
	Under \$15,000	\$15,000- 24,999	\$25,000- 49,999	\$50,000- 74,999	\$75,000- 99,999	\$100,000- 149,999	\$150,000- 199,999	\$200,000 or higher
Black	38.6%	37.2%	41.7%	31.3%	19.8%	12.5%	11.2%	17.6%
White	16.8%	20.2%	23.7%	29.0%	39.3%	44.0%	48.0%	49.9%
Hispanic/Latino	20.2%	20.4%	14.2%	13.2%	11.7%	8.6%	10.6%	7.6%
Asian	17.1%	15.6%	14.7%	20.8%	22.4%	29.7%	24.9%	17.3%
Other	2.0%	1.5%	2.1%	1.9%	1.1%	1.1%	0.9%	1.8%
Native Am Indian	0.9%	1.2%	0.5%	0.5%	1.5%	0.5%	0.3%	0.3%
Multi-racial	4.5%	4.0%	3.1%	3.2%	4.3%	3.6%	4.0%	5.6%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table 5: Income by Ethnicity**

Q14. What is your total household income?	Race/Ethnicity						
	Black	White	Hispanic/ Latino	Asian	Other	Native Am Indian	Multi- racial
Under \$15,000	39.3%	23.5%	42.6%	32.9%	39.1%	37.4%	39.8%
\$15,000-24,999	18.3%	13.7%	20.8%	14.5%	14.1%	25.3%	17.0%
\$25,000-49,999	23.7%	18.5%	16.8%	15.7%	22.7%	12.1%	15.2%
\$50,000-74,999	10.8%	13.8%	9.5%	13.6%	12.7%	8.1%	9.5%
\$75,000-99,999	3.5%	9.5%	4.3%	7.4%	3.6%	11.1%	6.5%
\$100,000-149,999	2.2%	10.5%	3.1%	9.8%	3.6%	4.0%	5.5%
\$150,000-199,999	0.8%	5.0%	1.7%	3.5%	1.4%	1.0%	2.6%
\$200,000 or higher	1.4%	5.5%	1.3%	2.6%	2.7%	1.0%	3.9%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**b. Frequency of Use**

AC Transit riders use the system often, with a large majority (68.5% systemwide) indicating that they ride 5 to 7 days per week. Table 6, below, provides the breakdown by service type. Generally, frequency of use is fairly consistent between local and Transbay service. Additionally, frequent users of the system are much more likely to be minority than non-minority (Table 7a and 7b).

**Table 6: Frequency of Use for Local and Transbay Riders**

		Service Type		Systemwide
		Local	Transbay	
19. How often do you ride AC Transit buses?	5-7 days a week	68.3%	70.5%	68.5%
	3-4 days a week	17.8%	19.5%	18.0%
	1-2 days a week	8.7%	6.7%	8.5%
	Once a month or less	4.3%	2.8%	4.2%
	First time riding	0.8%	0.4%	0.8%
<b>Total</b>		100.0%	100.0%	100.0%

**Table 7a: Race/Ethnicity by Frequency of Use**

19. How often do you ride AC Transit buses?	Q12. Race/Ethnicity							Row Total	System Total
	Black	White	Hispanic/Latino	Asian	Other	Native Am Indian	Multi-racial		
5-7 days a week	38.8%	18.7%	18.1%	16.3%	1.9%	0.7%	5.4%	100.0%	68.5%
3-4 days a week	29.4%	22.4%	17.3%	23.3%	2.5%	0.6%	4.4%	100.0%	18.0%
1-2 days a week	24.3%	27.7%	18.2%	22.8%	1.2%	0.7%	5.1%	100.0%	8.5%
Once a month or less	32.3%	20.4%	14.2%	22.6%	1.0%	1.5%	8.0%	100.0%	4.2%
First time riding	33.6%	15.8%	23.3%	19.2%	4.8%	0.7%	2.7%	100.0%	0.8%
<b>Total</b>	35.6%	20.2%	17.9%	18.4%	1.9%	0.7%	5.3%	100.0%	100.0%

**Table 7b: Frequency of Use by Race/Ethnicity**

	12. Race/ethnicity							System Total
	Black	White	Hispanic/Latino	Asian	Other	Native Am Indian	Multi-racial	
5-7 days a week	74.7%	63.5%	69.5%	60.6%	67.1%	65.4%	70.0%	68.5%
3-4 days a week	14.9%	20.0%	17.5%	22.8%	23.6%	15.8%	15.0%	18.0%
1-2 days a week	5.8%	11.7%	8.7%	10.6%	5.2%	9.0%	8.2%	8.5%
Once a month or less	3.8%	4.3%	3.3%	5.2%	2.2%	9.0%	6.4%	4.2%
First time riding	0.7%	0.6%	1.0%	0.8%	1.9%	0.8%	0.4%	0.8%
<b>Total</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**c. Number of Buses per Trip**

A plurality of the system-wide ridership use only one bus to complete their one-way trip (53.7%). Among local riders, 51% need only one bus to complete their trip, 37% need 2 buses, and another 12% require 3 or more buses. Among Transbay riders, approximately 82% of riders need only one bus to complete their trip, 13% need 2 buses, and another 5% require 3 or more buses.

**Table 8: Number of Buses by Service Type**

		Service Type		Total
		Transbay	Local	
<b>1. How many AC buses will it take to complete this one-way trip today?</b>	<b>1 bus</b>	81.6%	50.9%	53.7%
	<b>2 buses</b>	13.0%	36.9%	34.7%
	<b>3 buses</b>	2.2%	7.5%	7.0%
	<b>4+ buses</b>	3.2%	4.7%	4.6%
<b>Total</b>		100.0%	100.0%	100.0%
<b>Average Number of Buses</b>		1.27	1.66	1.62

As indicated on Table 8 above, the “Average Number of Buses on a One-Way Trip” is 1.66 for local service, meaning that on average, a rider needs 1.66 buses to complete their one-way trip. This provides an understanding of the impact that costs of transferring might have on their fares.

Additionally, when cross tabulating *Frequency of Use* by the *Number of Buses to Complete a One-way Trip* (Table 9) it is evident that less frequent riders generally need only one bus to complete their one-way trip, whereas more frequent riders reflect the local service averages.

**Table 9: Number of Buses by Frequency of Use Systemwide**

		Q19. How often do you ride AC Transit Buses?					System Total
		5-7 days a week	3-4 days a week	1-2 days a week	Once a month or less	First time riding	
<b>1. How many AC buses will it take to complete this one-way trip today?</b>	<b>1 bus</b>	51.3%	62.2%	69.4%	69.4%	63.8%	55.6%
	<b>2 buses</b>	36.3%	30.4%	26.2%	23.5%	26.3%	33.7%
	<b>3 buses</b>	7.7%	5.0%	2.5%	3.2%	5.9%	6.6%
	<b>4+ buses</b>	4.7%	2.4%	1.9%	4.0%	3.9%	4.0%
<b>Total</b>		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Further cross-tabulations for ethnicity and income for both *Frequency of Use* and *Number of Buses to Complete a One-way Trip* are shown in Table 10 and Table 11. These also reveal that riders that use the bus most frequently with the greatest number of buses per trip are much more likely to be a minority than non-minority. Additionally, cross-tabulations for *Household Income* and *Number of Buses to Complete a One-way Trip* also show that as income increases the number of buses needed for a one-way trip *decreases*. This highlights the greater use of multiple buses of lower income riders.



**Table 10: Number of Buses by Ethnicity**

For Local Service		Race/Ethnicity							Total
		Black	White	Hispanic/ Latino	Asian	Other	Native Am Indian	Multi- racial	
1. How many AC buses will it take to complete this one-way trip today?	1 bus	44.1%	64.8%	46.0%	61.9%	53.8%	50.0%	52.2%	51.7%
	2 buses	41.5%	29.1%	39.0%	30.3%	26.3%	36.0%	36.0%	36.4%
	3 buses	9.4%	4.1%	8.4%	4.0%	12.6%	8.1%	7.4%	7.3%
	4+ buses	5.0%	2.0%	6.7%	3.8%	7.3%	5.9%	4.4%	4.6%
<b>Total</b>		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Average # of buses per one-way trip</b>		1.75	1.43	1.76	1.50	1.73	1.70	1.64	1.65

**Table 11: Number of Buses by Income**

		1. How many AC buses will it take to complete this one-way trip today?				Row Total
		1 bus	2 buses	3 buses	4+ buses	
14. What is your total household income?	Under \$15,000	46.2%	38.6%	9.3%	5.8%	100.0%
	\$15,000-24,999	47.6%	40.7%	8.2%	3.5%	100.0%
	\$25,000-49,999	54.9%	35.3%	6.2%	3.6%	100.0%
	\$50,000-74,999	69.5%	24.3%	5.1%	1.1%	100.0%
	\$75,000-99,999	75.7%	19.1%	2.7%	2.5%	100.0%
	\$100,000-149,999	75.3%	18.7%	1.7%	4.4%	100.0%
	\$150,000-199,999	76.2%	22.2%	0.3%	1.2%	100.0%
	\$200,000 or higher	82.4%	11.6%	2.6%	3.5%	100.0%
<b>Total</b>		56.1%	33.1%	6.8%	4.0%	100.0%

**d. Fare Media Use**

A little over a third (35%) of systemwide riders indicated that they use a pass (31-day ticket or Senior/Disabled Monthly), which is a few percentage points less than those that indicated that they use cash (38%). However, a cross tabulation of *Frequency of Use* with *Fare media* highlights that pass riders are significantly more likely to take the bus frequently than cash riders. Of the pass riders, 86% indicated that they took the bus 5 to 7 days per week, compared with the 56% of cash riders. This indicates that pass riders are more likely to use the bus everyday than cash riders.

**Table 12a: Fare Media by Frequency of Use**

		How did you pay your fare today?					Row Total
		Cash	Ticket	Pass	AC Transfer	Other Payment	
19. How often do you ride AC Transit buses?	5-7 days a week	31.1%	3.9%	43.9%	2.6%	18.5%	100.0%
	3-4 days a week	45.5%	7.0%	19.4%	3.5%	24.6%	100.0%
	1-2 days a week	58.9%	5.0%	10.3%	3.2%	22.6%	100.0%
	Once a month or less	69.6%	3.7%	9.5%	2.7%	14.4%	100.0%
	First time riding	67.6%	0.7%	22.8%	0.7%	8.3%	100.0%
<b>Total</b>		37.9%	4.6%	35.0%	2.8%	19.7%	100.0%

**Table 12b: Frequency of Use by Fare Media**

		How did you pay your fare today?					System Total
		Cash	Ticket	Pass	AC Transfer	Other Payment	
<b>19. How often do you ride AC Transit buses?</b>	5-7 days a week	56.1%	59.3%	85.9%	63.5%	64.3%	68.5%
	3-4 days a week	21.6%	27.7%	10.0%	22.6%	22.5%	18.0%
	1-2 days a week	13.3%	9.5%	2.5%	9.6%	9.8%	8.6%
	Once a month or less	7.7%	3.4%	1.1%	4.1%	3.1%	4.2%
	First time riding	1.3%	0.1%	0.5%	0.2%	0.3%	0.8%
<b>Total</b>		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Further, a cross-tabulation of *Fare Payment Media* by *Race/Ethnicity*, below in Table 13a and 13b, highlight that ethnicity among pass users is generally similar to the ethnic pattern of system riders, except for Latino riders who are more than twice as likely to use cash than a pass or ticket. Also, African American riders are the greatest users of passes at 37%, compared to 24% Asian, 21% White, and 18% Latino (49% of Native American Indian riders are pass users but reflect less than 1% of overall systemwide riders).

Additionally, cross-tabulations of Fare Payment Media by Income, below in Table 14, show that in most of the income categories, pass use is almost equal to cash use. However, in the higher income categories, there is a preference to use pass over cash. In the highest income category, pass use is almost double the use of cash. Ticket use is also significantly greater in the higher income categories, which may reflect the benefit of a convenient fare payment method because tickets do not really represent a cost savings to the rider. Tickets are no longer sold to the general rider population. 10-ride, one-ride and 31-day magnetic strip passes are only available to Social Agencies and Schools through mutual agreement.

**Table 13a: Ethnicity by Fare Payment Media**

		Payment method					Total
		Cash	Ticket	Pass	AC Transfer	Other Payment	
<b>Race/Ethnicity</b>	<b>Black</b>	38.6%	18.5%	45.9%	39.0%	16.4%	34.1%
	<b>White</b>	18.3%	43.9%	19.6%	21.3%	38.2%	24.9%
	<b>Hispanic/Latino</b>	22.8%	10.1%	11.1%	17.3%	13.0%	16.4%
	<b>Asian</b>	13.6%	23.2%	16.2%	15.2%	26.8%	18.0%
	<b>Other</b>	1.9%	0.8%	1.5%	2.9%	2.0%	1.8%
	<b>Native Am Indian</b>	0.7%	0.3%	1.4%	0.7%	0.4%	0.8%
	<b>Multi-racial</b>	4.2%	3.1%	4.3%	3.6%	3.2%	3.9%
<b>Total</b>		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table 13b: Fare Payment Media by Ethnicity**

		Payment method					Row Total	System Total
		Cash	Ticket	Pass	AC Transfer	Other Payment		
Race/ Ethnicity	Black	46.2%	2.8%	36.6%	2.6%	11.7%	100.0%	34.1%
	White	30.0%	9.2%	21.4%	1.9%	37.4%	100.0%	24.9%
	Hispanic/Latino	56.8%	3.2%	18.3%	2.4%	19.3%	100.0%	16.4%
	Asian	30.7%	6.7%	24.4%	1.9%	36.2%	100.0%	18.0%
	Other	43.8%	2.3%	22.4%	3.7%	27.9%	100.0%	1.8%
	Native Am Indian	33.7%	2.0%	49.0%	2.0%	13.3%	100.0%	0.8%
	Multi-racial	43.5%	4.2%	30.1%	2.1%	20.2%	100.0%	3.9%
<b>System Total</b>		40.9%	5.2%	27.2%	2.3%	24.4%	100.0%	

**Table 14: Fare Payment by Income**

		Fare Payment Method					Row Total
		Cash	Ticket	Pass	AC Transfer	Other Payment	
14. What is your total household income?	Under \$15,000	38.7%	2.5%	35.1%	2.6%	21.0%	100.0%
	\$15,000-24,999	46.0%	2.6%	29.5%	2.7%	19.2%	100.0%
	\$25,000-49,999	47.1%	3.2%	26.6%	2.3%	20.7%	100.0%
	\$50,000-74,999	43.9%	7.1%	20.1%	2.4%	26.5%	100.0%
	\$75,000-99,999	39.4%	7.7%	18.0%	1.3%	33.7%	100.0%
	\$100,000-149,999	25.7%	15.6%	15.6%	1.3%	41.9%	100.0%
	\$150,000-199,999	32.2%	16.7%	10.5%	1.2%	39.3%	100.0%
	\$200,000 or higher	24.3%	22.6%	15.7%	0.9%	36.5%	100.0%
<b>Total</b>		40.9%	5.2%	27.4%	2.3%	24.2%	100.0%

**Table 15: Fare Payment by Fare Type**

		3. What kind of fare did you pay on this bus trip today?					Total
		Youth	Senior	Adult	Disabled	S/D Combined	
4. How did you pay your fare on this bus trip today? (recoded)	Cash	29.6%	28.2%	45.1%	14.4%	19.9%	38.4%
	10-Ride ticket	1.8%	8.1%	5.0%	2.6%	4.8%	4.2%
	31-Day ticket	60.5%	6.4%	19.6%	2.6%	4.1%	27.0%
	AC Transfer	4.3%	2.0%	2.9%	1.1%	1.5%	3.0%
	BART Transfer	0.4%	1.7%	1.3%	0.2%	0.8%	1.1%
	UC Bear or Class Pass	0.5%	1.3%	13.7%	0.2%	0.6%	9.1%
	Senior/Disabled monthly		48.9%	0.9%	75.0%	64.5%	8.6%
	Translink EasyPass	0.5%	1.8%	6.2%	1.8%	1.8%	4.3%
	Translink e-cash	0.2%	0.5%	3.5%	0.5%	0.5%	2.4%
	City of Berkeley Ecopass	0.1%		0.2%	0.0%	0.0%	0.2%
Other:	2.1%	1.1%	1.7%	1.6%	1.4%	1.7%	
<b>Total</b>		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Additionally, cross-tabulations of Fare Payment Media by Fare Type, above in Table 15, show that the prevalence of pass use is more significant in certain fare types than is cash use. Specifically, pass use among both Youth Fare riders and senior/disabled riders is much greater than cash use for those fare categories—probably the result of the highly discounted pass price. For Youth Fare riders, the amount is twice that of cash use (60% pass versus 30% cash). For senior/disabled, pass use is more than three times higher than cash use (65% pass versus 20% cash). Consequently, if the fare proposals were to change the pass costs at a higher percentage than cash fares at full implementation, there may be significant impacts between cash riders and Youth or Senior/Disabled Pass holders.

Table 16 is a cross-tabulation of Ethnicity by Frequency of Use by Fare Payment Media, which provides a very comprehensive snap-shot of our rider population. Among the most frequent riders (5-7 days/week) by ethnic group, pass use is higher than cash use among African American riders (53% vs. 32%), White (33% vs. 23%) and Asian (40% vs. 24%). Native American Indian, Multi-racial, and other ethnic groups also had higher pass use than cash use for the most frequent riders. However, among Hispanic/Latino riders, cash use (44%) was higher than pass use (35%) for the most frequent riders. Overall, Hispanic/Latino riders prefer to use cash over pass use (52.5% vs. 28%).

**Table 16: Ethnicity by Frequency of Use by Fare Payment**

12. Race/ethnicity			Fare Payment					Row Total
			Cash	Ticket	Pass	AC Transfer	Other Payment	
<b>Black</b>	19. How often do you ride AC	5-7 days a week	32.4%	2.7%	52.8%	2.3%	9.9%	100.0%
		3-4 days a week	54.1%	2.7%	29.3%	4.7%	9.2%	100.0%
	Transit buses?	1-2 days a week	65.5%	2.6%	19.9%	6.7%	5.2%	100.0%
		Once a month or less	68.8%	4.0%	17.0%	4.5%	5.7%	100.0%
		First time riding	51.2%		37.2%		11.6%	100.0%
	<b>Total</b>		<b>39.0%</b>	<b>2.7%</b>	<b>45.9%</b>	<b>3.0%</b>	<b>9.4%</b>	<b>100.0%</b>
<b>White</b>	19. How often do you ride AC	5-7 days a week	22.9%	8.0%	32.8%	1.8%	34.4%	100.0%
		3-4 days a week	31.4%	13.4%	11.8%	2.6%	40.7%	100.0%
	Transit buses?	1-2 days a week	50.1%	7.2%	4.3%	2.9%	35.5%	100.0%
		Once a month or less	72.0%	7.5%	2.5%	0.0%	18.0%	100.0%
		First time riding	78.3%	4.3%	0.0%	4.3%	13.0%	100.0%
	<b>Total</b>		<b>30.2%</b>	<b>9.0%</b>	<b>23.8%</b>	<b>2.0%</b>	<b>35.0%</b>	<b>100.0%</b>
<b>Hispanic/Latino</b>	19. How often do you ride AC	5-7 days a week	44.8%	2.0%	35.4%	4.3%	13.4%	100.0%
		3-4 days a week	62.3%	5.6%	12.4%	3.1%	16.6%	100.0%
	Transit buses?	1-2 days a week	78.8%	1.4%	7.9%	1.0%	11.0%	100.0%
		Once a month or less	86.6%	0.9%	3.6%	1.8%	7.1%	100.0%
		First time riding	61.8%		32.4%	0.0%	5.9%	100.0%
	<b>Total</b>		<b>52.5%</b>	<b>2.5%</b>	<b>27.8%</b>	<b>3.7%</b>	<b>13.5%</b>	<b>100.0%</b>
<b>Asian</b>	19. How often do you ride AC	5-7 days a week	23.6%	4.9%	40.2%	2.0%	29.2%	100.0%
		3-4 days a week	36.4%	7.9%	16.1%	3.6%	36.1%	100.0%
	Transit buses?	1-2 days a week	47.7%	5.8%	8.8%	1.4%	36.4%	100.0%
		Once a month or less	62.0%	3.9%	5.0%	1.1%	27.9%	100.0%
		First time riding	82.1%		10.7%		7.1%	100.0%
	<b>Total</b>		<b>31.6%</b>	<b>5.6%</b>	<b>29.3%</b>	<b>2.2%</b>	<b>31.3%</b>	<b>100.0%</b>
<b>Other</b>	19. How often do you ride AC	5-7 days a week	30.8%	3.2%	44.1%	2.4%	19.4%	100.0%
		3-4 days a week	45.3%	4.7%	30.2%	1.2%	18.6%	100.0%
	Transit buses?	1-2 days a week	31.6%		10.5%	5.3%	52.6%	100.0%
		Once a month or less	100.0%					100.0%
		First time riding	85.7%		14.3%		0.0%	100.0%
	<b>Total</b>		<b>36.6%</b>	<b>3.3%</b>	<b>37.7%</b>	<b>2.2%</b>	<b>20.2%</b>	<b>100.0%</b>
<b>Native Am Indian</b>	19. How often do you ride AC	5-7 days a week	25.9%	4.7%	60.0%	1.2%	8.2%	100.0%
		3-4 days a week	38.1%		52.4%		9.5%	100.0%
	Transit buses?	1-2 days a week	33.3%	8.3%	8.3%	25.0%	25.0%	100.0%
		Once a month or less	50.0%		41.7%		8.3%	100.0%
		First time riding					.%	.%
	<b>Total</b>		<b>30.8%</b>	<b>3.8%</b>	<b>52.3%</b>	<b>3.1%</b>	<b>10.0%</b>	<b>100.0%</b>
<b>Multi-racial</b>	19. How often do you ride AC	5-7 days a week	27.1%	2.3%	54.3%	3.2%	13.2%	100.0%
		3-4 days a week	44.2%	3.4%	25.9%	4.1%	22.4%	100.0%
	Transit buses?	1-2 days a week	66.3%	15.7%	4.8%	1.2%	12.0%	100.0%
		Once a month or less	58.7%		14.3%	11.1%	15.9%	100.0%
		First time riding	75.0%		25.0%			100.0%
	<b>Total</b>		<b>35.1%</b>	<b>3.4%</b>	<b>43.2%</b>	<b>3.6%</b>	<b>14.6%</b>	<b>100.0%</b>

## V. DESCRIPTION OF FARE PROPOSALS

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On March 9, 2011, the Board of Directors approved the Fare Policy Goals, shown below in Table 1, and set a public hearing to receive testimony on the following proposed fare policy and fare structure shown below. All of these concepts were the subject of a public input process that included public meetings, on-line surveys and targeted information dissemination:

**Table 1: Goals for Fare Policy**

Goal 1—Simplicity: Fares and the fare structure should be easy to use for passengers, and easy to operate for the District.

Goal 2—Appropriateness: Fares and the fare structure should provide a good value for passengers.

Goal 3—Equity: Fares and the fare structure should be fair for all passengers.

Goal 4—Transparency: Fares and the fare structure should result in predictable costs and cost increases for passengers; and predictable revenue increases for the District.

Goal 5—Policy Supportiveness: Fares and the fare structure should be supportive of other District goals—service, land use, and social goals—and compliant with other regulatory mandates.

Goal 6—Affordability: Fares should be affordable to all passengers to ensure their full access to bus service and to prevent adverse impacts on socially vulnerable populations.

Using the fare policy goals, staff then developed a fare structure and 10 year implementation schedule that includes the following assumptions:

### **Proposed Fare Structure**

- Establish the local adult cash fare as the “base fare.”
- Set monthly pass prices at 36 times the relevant cash fare for adult, youth, and senior/disabled.
- Set Transbay fares at 2 times the local fare (cash and pass).
- Set discount fares (youth, senior/disabled) at 50 percent of the adult fare (cash and pass).

### **Description of Proposed Fare Increase Schedule**

- Maintain relationships among different fare types when fares increase. Set cash prices for easy coinage.
- Establish a 10-year cycle of gradual increases, raising the base fare 25 cents every 5 years.
- Schedule increases in a 2-year/3-year cycle, with the base fare increasing by 10 cents in Year 1 (for Years 1 and 2) and by 15 cents in Year 3 (for Years 3, 4 and 5), etc.
- Increase youth and senior/disabled pass prices gradually to reach alignment with the proposed 36-ride rate in Year 8.
- Retain the local adult 31-day pass price at \$80 until it is aligned with the proposed 36-ride rate in Year 3.

## Proposed Fares and Pass Prices

Cash Fare	Current	Proposed Year 1	Proposed Year 3	Proposed Year 6	Proposed Year 8
Local Adult	\$2.00	\$2.10	\$2.25	\$2.35	\$2.50
Local Youth	\$1.00	\$1.05	\$1.10	\$1.15	\$1.25
Local Senior/Disabled	\$1.00	\$1.05	\$1.10	\$1.15	\$1.25
Transbay Adult	\$4.00	\$4.20	\$4.50	\$4.70	\$5.00
Transbay Youth	\$2.00	\$2.10	\$2.20	\$2.30	\$2.50
Transbay Senior/Disabled	\$2.00	\$2.10	\$2.20	\$2.30	\$2.50

31-Day/Monthly Pass	Current	Proposed Year 1	Proposed Year 3	Proposed Year 6	Proposed Year 8
Local Adult	\$80.00	\$80.00	\$81.00	\$84.60	\$90.00
Local Youth	\$15.00	\$20.00	\$26.50	\$34.50	\$45.00
Local Senior/Disabled	\$20.00	\$20.00	\$26.50	\$34.50	\$45.00
Transbay Adult	\$132.50	\$151.20	\$162.00	\$169.20	\$180.00

### Options for Modifications to Transfer Policy

Providing free, multiple-use, and/or extended-time transfers when using Clipper card as fare payment were considered. Retain \$0.25 charge and two-hour/one-use policy for fares paid with cash. Proposal 2 in the analysis reflects free multi-use transfers for Clipper users, but is otherwise the same as Proposal 1.

### New Fare Media: Seven-Day Pass

Institute a new pass type, available as a Clipper product only, good for unlimited travel for seven (7) consecutive days, to be priced at ten times the relevant cash fare.

## VI. DETERMINING IMPACTS OF FARE PROPOSALS

The Rider Profile described in Section IV provided a background of AC Transit ridership that staff used to confirm the assumptions in the Average Fare Analysis. In fact, the Average Fare Analysis is derived from the same data that was presented in the Section IV cross-tabulations. For the Average Fare Analysis, the analysis is based on when the fare proposal is at full alignment (FY 18/19).

In order to array the data to arrive at an Average Fare for demographic and income groups, each survey “record” was sorted into a variety of categories that would be used to determine the average fare. The On-board Rider Profile data set includes approximately 23,000 surveys that have responses for 27 questions—making approximately 620,000 “survey records”. These records can be sorted and cross-tabulated in any number of ways, as evidenced by the previous section. Table 17 presents a rudimentary depiction of the sorting

process that was used to quantify the Average Fare. Each row represents a completed On-Board survey, and each column represents how the rider answered the question.

**Table 17: Sorting of Survey Cross-tabulation for Average Fare Analysis**

Completed survey	Adult	Youth	Senior	Dis-abled	Cash	Pass	Transfer	Ticket	1 bus	2 bus	3 bus	4+ bus	Other indicators—income, ethnicity, etc.
1		X				X			X				→
2			X		X				X				→
3	X					X				X			→
4	X					X				X			→
5		X					X		X				→
5-14095	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	→
14,096		X						X		X			→

In reality, the cross-tabulation was considerably more elaborate, using software designed for handling the volume and complexity of the On-Board Rider Profile. Using the Statistical Package for the Social Sciences software (SPSS), staff created a detailed sorting of each survey record so that averages could be derived for every major category, including:

- Service type—Transbay or Local
- Fare Type—Adult, Youth, Senior or Disabled
- Fare Payment Method—Cash, Pass, Ticket or Transfer
- Number of buses for a one-way trip—1 bus, 2 buses, 3 buses or 4+ buses
- Income
- Race/ethnicity

Table 18 provides a “screen capture” of the software in use, with the data files from the On-Board Rider profile populating the various categories. As in the previous chart, each row is equal to a completed On-Board survey instrument, and every column represents how the rider answered the survey question.



**Table 18: Screen Capture of SPSS manipulating On-Board Rider Records**

	q1	q2a	q2b	q3	q4	q5	q6	q7	q8	q9	q10	ethrace
1	2 buses	Medical	Other	5-7 days a week	Yes	Female	50 - 64	F	T	F	F	African Americ
2	3 buses	Medical	Home	5-7 days a week	Yes	Female	50 - 64	F	T	F	F	African Americ
3	2 buses	Home	Work	5-7 days a week	No	Female	18 - 24	F	F	T	F	Native America
4	3 buses	School	Multiple	5-7 days a week	Yes	Female	25 - 34	F	T	F	F	Latino/Hispani
5	1 bus	Work	Work	5-7 days a week	Yes	Female	Missing	F	T	F	F	African Americ
6	2 buses	Work	Missing	5-7 days a week	Yes	Female	35 - 49	F	T	F	F	African Americ
7	1 bus	Work	Home	5-7 days a week	Yes	Female	18 - 24	F	F	F	T	White
8	1 bus	Work	Missing	3-4 days a week	Yes	Female	18 - 24	F	T	F	F	African Americ
9	3 buses	Multiple	Other	5-7 days a week	Don't kn	Female	13 - 17	F	T	F	F	African Americ
10	1 bus	Work	Work	Once a month or	Yes	Female	35 - 49	F	F	F	T	Latino/Hispani
11	3 buses	Home	Other	5-7 days a week	Yes	Male	50 - 64	F	T	F	F	African Americ
12	1 bus	Shoppin	Home	1-2 days a week	Yes	Female	35 - 49	F	F	F	T	Latino/Hispani
13	2 buses	School	Missing	5-7 days a week	Yes	Male	18 - 24	F	T	F	F	African Americ
14	1 bus	Work	Home	5-7 days a week	Yes	Female	35 - 49	F	T	F	F	African Americ
15	2 buses	Work	Home	5-7 days a week	Yes	Female	18 - 24	F	T	F	F	African Americ
16	1 bus	Shoppin	Home	1-2 days a week	Yes	Female	35 - 49	F	F	F	T	Latino/Hispani
17	2 buses	Work	Home	5-7 days a week	Missing	Female	25 - 34	F	F	F	T	Latino/Hispani
18	2 buses	Home	Work	5-7 days a week	Yes	Male	25 - 34	F	F	F	T	Latino/Hispani
19	1 bus	Missing	Missing	5-7 days a week	Yes	Male	Missing	F	F	F	T	Latino/Hispani
20	2 buses	Home	School	5-7 days a week	Yes	Male	18 - 24	F	F	F	T	White
21	Missing	Home	Missing	5-7 days a week	Yes	Male	65 and o	F	F	F	T	White
22	3 buses	Home	Work	5-7 days a week	Yes	Female	50 - 64	F	F	F	T	White

\*SFSU\_survey\_for\_fare\_analysis\_2011.sav [DataSet1] - PASW Statistics Data Editor

Visible: 161 of 161 Variables

	Svc_Type	stratanum	type1	type2	q1	q2	q3	q4	q5	q6_v2	q7_1	q7_2	q7_3	q7_4
264	Local	Midday	Onboard Complete	English	1	11-15 minutes	Adult	Other	Yes	Home	false	false	false	false
265	Local	Midday	Onboard Complete	English	2	11-15 minutes	Adult	31-Day ticket	Missing	BART Station/Bus stop	true	false	false	false
266	Local	Midday	Onboard Complete	English	2	11-15 minutes	Adult	AC Transfer	Don t know	School	true	false	false	false
267	Local	Midday	Onboard Complete	English	1	11-15 minutes	Adult	Cash	No	BART Station/Bus stop	false	false	false	false
268	Local	Midday	Onboard Complete	English	2	5-10 minutes	Adult	Cash	Yes	Shopping/Errands	false	false	false	false
269	Local	Midday	Onboard Complete	English	2	5-10 minutes	Adult	Cash	Yes	Home	true	false	false	false
270	Local	Midday	Onboard Complete	English	2	More than 20 minutes	Adult	Other	Yes	Home	true	false	false	false
271	Local	Midday	Onboard Complete	English	1	5-10 minutes	Missing	31-Day ticket	Don t know	School	true	false	false	false
272	Local	Midday	Onboard Complete	English	2	16-20 minutes	Senior	Cash	Yes	School	true	false	false	false
273	Local	PM Peak	Onboard Complete	English	1	Less than 5 minutes	Youth	31-Day ticket	Yes	Missing	true	false	false	false
274	Transbay	AM Peak	Onboard Complete	English	1	5-10 minutes	Adult	Translink E-Cash	Missing	Home	true	false	false	false
275	Local	Sunday	Onboard Complete	English	2	5-10 minutes	Adult	Cash	Yes	Home	true	false	false	false
276	Local	AM Peak	Onboard Complete	English	1	5-10 minutes	Adult	UC Bear or Class Pass	Don t know	Home	false	false	false	true
277	Local	AM Peak	Onboard Complete	English	2	Less than 5 minutes	Adult	Cash	Missing	Home	true	false	false	false
278	Local	AM Peak	Onboard Complete	English	1	Less than 5 minutes	Adult	31-Day ticket	Yes	Work	false	false	false	false
279	Local	AM Peak	Onboard Complete	English	1	Less than 5 minutes	Youth	Cash	Missing	Medical Appointment	true	false	false	false
280	Local	AM Peak	Onboard Complete	English	1	Less than 5 minutes	Adult	Cash	No	Home	true	false	false	false
281	Local	AM Peak	Onboard Complete	English	2	Less than 5 minutes	Youth	31-Day ticket	Yes	Home	true	false	false	false
282	Local	PM Peak	Onboard Complete	English	4+	16-20 minutes	Adult	Cash	No	Other	true	false	false	false
283	Local	AM Peak	Onboard Complete	English	2	5-10 minutes	Youth	31-Day ticket	Missing	School	true	false	false	false
284	Local	AM Peak	Onboard Complete	English	2	Less than 5 minutes	Senior	Cash	Missing	Home	true	false	false	false
285	Local	AM Peak	Onboard Complete	English	2	Less than 5 minutes	Youth	31-Day ticket	Yes	Home	true	false	false	false
286	Local	AM Peak	Onboard Complete	English	3	Less than 5 minutes	Youth	31-Day ticket	Don t know	Home	true	false	false	false
287	Local	AM Peak	Onboard Complete	English	2	Less than 5 minutes	Youth	31-Day ticket	Don t know	Home	true	false	false	false
288	Local	AM Peak	Onboard Complete	English	1	11-15 minutes	Adult	Cash	No	Home	true	false	false	false
288	Local	AM Peak	Onboard Complete	English	2	11-15 minutes	Adult	Cash	Don t know	Home	true	false	false	false
290	Local	AM Peak	Onboard Complete	English	1	More than 20 minutes	Youth	31-Day ticket	No	Home	true	false	false	false
291	Local	AM Peak	Onboard Complete	English	1	16-20 minutes	Adult	Translink E-Cash	Missing	Home	false	false	true	false
292	Local	AM Peak	Onboard Complete	English	1	5-10 minutes	Adult	31-Day ticket	Yes	Home	true	false	false	false
293	Local	PM Peak	Onboard Complete	English	3	Less than 5 minutes	Adult	Other	Yes	Shopping/Errands	true	false	false	false
294	Local	AM Peak	Onboard Complete	English	1	5-10 minutes	Adult	Cash	No	Home	false	false	false	false

Data View Variable View

PASW Statistics Processor is ready

Start Inboxes - Microsoft Outlook http://www.actransit.or... \*SFSU\_survey\_for\_fa... 9:43 AM

For purposes of estimating cash fares for the proposed fare structure, it was assumed that both the existing and proposed fare policies would be applied unless changed by the fare policy. For instance, in the existing fare structure, those using one bus would be charged a full cash fare; those transferring once would be charged a full cash fare and a transfer charge; and those transferring twice would be charged a full cash fare, a transfer charge and an additional full cash fare. For any proposed fare structures, the appropriate rules would apply. The Average Fare Analysis compares the proposed fare policy at full implementation to the current fare structure and price. This way, the analysis represents the highest level of impact.

For purposes of estimating the cost of those using a pass, the “pass-use scenarios” described in Section III: Data and Methodology (Scenario 1: pass rate at 60 uses; and Scenario 2: 40 uses per 31-day period) were used. Also, the Average Fare analysis does not include the proposed 7-day pass proposal. There was not an accurate way to predict future use of the new media, and because it is not a current pass option, there is no on-board survey data to support an average fare analysis.

Staff prepared Average Fare analyses for each pass use scenario, reflected in Appendix tables, A-1 through A-8. These analyses compare the current fares by income and ethnicity to the two fare proposals. The analyses provide the basis for comparing the distribution of impacts among Title VI communities and the general population. These tables reflect:

- a. The average cost of a one-way linked trip
- b. Percentage change of the average cost of one-way linked trip

After analyzing the various scenarios, staff selected Scenario 1 (60 uses per 31-day pass) as the one that was most appropriate for purposes of assessing impacts for local trips, although

the other pass use scenario (40 uses per 31 day period) can be reviewed for comparison purposes. For purposes of assessing impacts on Transbay trips, staff selected Scenario 2 (40 uses per 31-day period). Table 19 presents a summary of impacts of affected local riders, including those in Title VI groups. Table 20 presents the summary of impacts for Transbay trips.

**Table 19:  
Percentage Changes in One-Way Fares for Title VI Groups (Local Trips)  
Pass Use at 60 uses per 31-day period**

	Fare Change (Percent)	
	Proposal 1	Proposal 2
<b>General:</b>		
All affected patrons	30.5%	30.5%
<b>Fare Class:</b>		
Cash All	23.6%	23.6%
Adult	22.0%	21.5%
Youth	73.7%	73.7%
Senior	59.7%	59.7%
Disabled	83.7%	81.6%
31-Day Ticket/Monthly Pass	55.4%	55.4%
Translink (Clipper) e-cash	23.7%	11.6%
<b>Income:</b>		
Under \$15,000	29.1%	28.4%
\$15,000 - \$24,999	28.2%	27.6%
\$25,000 - \$49,999	26.3%	26.3%
\$50,000 - \$74,999	26.4%	26.4%
\$75,000 - \$99,999	26.9%	26.3%
\$100,000 - \$149,999	29.6%	28.9%
\$150,000 - \$199,999	27.9%	27.9%
Over \$200,000	30.8%	30.8%
<b>Race:</b>		
Asian	31.3%	31.3%
Black/African American	32.3%	31.6%
Native American/Alaska Native	39.6%	39.6%
White	30.4%	30.4%
Hispanic/Latino	28.0%	27.4%
Native Hawaiian/Pacific Islander	29.9%	29.9%
Other	33.1%	33.1%

**NOTES:**

All figures presented reflect AC Transit analysis results.

For all scenarios, 31-day/monthly pass usage is assumed to be 60 trips per 31-day period.

**Table 20:  
Percentage Changes in One-Way Fares for Title VI Categories (Transbay Trips)  
Pass Use at 40 uses per 31-day period**

	Fare Change (Percent)	
	Proposal 1	Proposal 2
<b>General:</b>		
All affected patrons	28.8%	28.8%
<b>Fare Class:</b>		
Cash All	24.9%	24.9%
Adult	28.2%	28.2%
Youth	33.6%	33.6%
Senior	30.2%	30.2%
Disabled	33.2%	33.2%
31-Day Ticket/Monthly Pass	36.0%	36.0%
Translink (Clipper) e-cash	24.9%	24.9%
<b>Income:</b>		
Under \$15,000	30.8%	30.8%
\$15,000 - \$24,999	29.4%	29.4%
\$25,000 - \$49,999	28.3%	28.3%
\$50,000 - \$74,999	28.4%	28.4%
\$75,000 - \$99,999	28.8%	28.8%
\$100,000 - \$149,999	28.2%	28.2%
\$150,000 - \$199,999	27.7%	27.7%
Over \$200,000	27.3%	27.3%
<b>Race:</b>		
Asian	28.4%	28.4%
Black/African American	29.8%	29.8%
Native American/Alaska Native	29.5%	29.5%
White	28.2%	28.2%
Hispanic/Latino	29.6%	29.6%
Native Hawaiian/Pacific Islander	30.7%	30.7%
Other	29.6%	29.6%

**NOTES:**

All figures presented reflect AC Transit analysis results.  
For all scenarios, 31-day/monthly pass usage is assumed to be 40 trips per 31-day period.

## VI. IMPACTS OF FARE PROPOSALS

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### Summary and Conclusions

In general, both proposals reflect very little difference between the systemwide average and ethnicity or income. Again, this is based on the analysis for when the fare proposal is at full alignment (i.e. in FY 18/19). The only difference between the proposals is the potential for free unlimited transfers using Clipper (Proposal 2); which reflects a difference for e-cash users.

- The systemwide average increase for local passenger is 30.5%. This is compared with a range of 26% to 32% increase for non-white populations, with a 30.4% increase for white populations.
- For Transbay, the systemwide average increase is 28.8%, with a range of 28.4% to 29.6% for non-white populations and 28.2% for white populations.

For income groups, the results were similar:

- For low income groups (under \$50,000) the percentage change was a range from 26.3% to 29.1%, with a systemwide average of 30.5%.
- For Transbay, low income populations would experience a change from 28.4% to 30.8%, with a systemwide average of 28.8%.

Both of these results represent an insignificant difference when analyzing for ethnicity and income.

### New Fare Media

While there was no way to analyze the impacts of the new fare media, there may be positive impacts associated with introducing a lower cost discounted fare instrument for low-income populations that may not have access to the large up-front costs of a monthly pass.

### Free Transfers on Clipper

Staff believes that providing free transfers on Clipper is a good incentive to increase Clipper usage and provides a benefit to riders that must transfer to reach their destination. It also may help move populations to fare instruments that provide an overall benefit. As such, it should be included in the fare policy, but with a delayed implementation.

Staff does not recommend implementing free transfers on Clipper immediately until we can ensure that providing this benefit will not result in disparate impacts. Associating benefits to Clipper users that are not available to other cash riders may represent an unequal distribution of impacts if those cash riders are largely low-income and/or minority. As noted in Table 13b, the Hispanic population is almost twice as likely to pay cash as use a pass, versus the White population (57% Hispanic; 30% White). In addition, as Table 10 reveals, the Hispanic population is also more likely to need 2 or more buses to complete their one-way trip (54% Hispanic; 35% White). Policies that exclude them from participation may represent the distribution of disparate impacts.

The Title VI analysis was based on the 2008/09 On-Board Rider Profile, conducted when Clipper technology was not in full use by AC Transit or other regional operators. As such, it

may not reflect the current Clipper and e-cash use that resulted from our recent transition to the new media. Some groups may have successfully accepted the new fare media but are not fully reflected in the On-Board survey data. As a result, staff recommends that the District conduct a small fare-related rider survey to better reflect the fare media in use today. This would help ensure that providing a benefit to only Clipper users would not result in disparate impacts. Staff estimates that such a survey would cost about \$35,000 for a valid sample size. Subsequent to this study, by 2013, the District could then act on this issue.

## Appendix Table A-1:

### Average Local Fare Analysis (pass rate at 60 uses per 31 day period)

	Sample Size	Mean Cost of One-Way Linked Trip By Fare Change Policies (Dollars)		
		Current	Proposal 1	Proposal 2
<b>Q14 -- By Income Category</b>				
Under \$15,000	3,922	1.48	1.91	1.90
\$15,000 - \$24,999	1,877	1.56	2.00	1.99
\$25,000 - \$49,999	1,981	1.67	2.11	2.11
\$50,000 - \$74,999	1,061	1.63	2.06	2.06
\$75,000 - \$99,999	500	1.67	2.12	2.11
\$100,000 - \$149,999	337	1.52	1.97	1.96
\$150,000 - \$199,999	151	1.65	2.11	2.11
Over \$200,000	203	1.43	1.87	1.87
Do Not Know	3,401	1.03	1.45	1.45
<b>Q12 -- By Race</b>				
Hispanic/Latino	3,211	1.64	2.10	2.09
Black/African American	7,000	1.33	1.76	1.75
White	2,599	1.38	1.80	1.80
Asian	2,159	1.31	1.72	1.72
Native Hawaiian/Pacific Islander	381	1.37	1.78	1.78
Native American/Alaska Native	473	1.06	1.48	1.48
Other	665	1.36	1.81	1.81
<b>Q3 -- By Fare Type</b>				
Youth	4,465	0.57	0.99	0.99
Senior	831	0.62	0.99	0.99
Disabled	1,478	0.49	0.90	0.89
Adult	8,963	2.05	2.50	2.49
All	15,737	1.41	1.84	1.84
<b>Q4 -- By Type of Payment</b>				
Cash	8,054	2.08	2.57	2.57
31-Day Ticket/Monthly Pass	7,408	0.65	1.01	1.01
Translink (Clipper) e-cash	275	2.15	2.66	2.40
Total	15,737	1.41	1.84	1.84

#### NOTES:

All figures presented reflect AC Transit analysis results.

For all proposals, 31-day/monthly pass usage is assumed to be 60 trips per 31-day period.



## Appendix Table A-2:

### Percentage Change to Cost of One-Way Linked Trip by Income and Ethnicity (pass rate at 60 uses per 31-day period) for Local Service

	Sample Size	Change to Mean Cost of One-Way Linked Trip By Fare Change Policies (Dollars)		
		Current Cost	Proposal 1	Proposal 2
<b>Q14 -- By Income Category</b>				
Under \$15,000	3,922	1.48	29.1%	28.4%
\$15,000 - \$24,999	1,877	1.56	28.2%	27.6%
\$25,000 - \$49,999	1,981	1.67	26.3%	26.3%
\$50,000 - \$74,999	1,061	1.63	26.4%	26.4%
\$75,000 - \$99,999	500	1.67	26.9%	26.3%
\$100,000 - \$149,999	337	1.52	29.6%	28.9%
\$150,000 - \$199,999	151	1.65	27.9%	27.9%
Over \$200,000	203	1.43	30.8%	30.8%
Do Not Know	3,401	1.03	40.8%	40.8%
<b>Q12 -- By Race</b>				
Hispanic/Latino	3,211	1.64	28.0%	27.4%
Black/African American	7,000	1.33	32.3%	31.6%
White	2,599	1.38	30.4%	30.4%
Asian	2,159	1.31	31.3%	31.3%
Native Hawaiian/Pacific Islander	381	1.37	29.9%	29.9%
Native American/Alaska Native	473	1.06	39.6%	39.6%
Other	665	1.36	33.1%	33.1%
<b>Q3 -- By Fare Type</b>				
Youth	4,465	0.57	73.7%	73.7%
Senior	831	0.62	59.7%	59.7%
Disabled	1,478	0.49	83.7%	81.6%
Adult	8,963	2.05	22.0%	21.5%
All	15,737	1.41	30.5%	30.5%
<b>Q4 -- By Type of Payment</b>				
Cash	8,054	2.08	23.6%	23.6%
31-Day Ticket/Monthly Pass	7,408	0.65	55.4%	55.4%
Translink (Clipper) e-cash	275	2.15	23.7%	11.6%
Total	15,737	1.41	30.5%	30.5%

#### NOTES:

All figures presented reflect AC Transit analysis results.

For all proposals, 31-day/monthly pass usage is assumed to be 60 trips per 31-day period.

## Appendix Table A-3:

### Average Local Fare Analysis (pass rate at 40 uses per 31- day period)

	Sample Size	Mean Cost of One-Way Linked Trip By Fare Change Policies (Dollars)		
		Current	Proposal 1	Proposal 2
<b>Q14 -- By Income Category</b>				
Under \$15,000	3,922	1.67	2.18	2.17
\$15,000 - \$24,999	1,877	1.72	2.23	2.22
\$25,000 - \$49,999	1,981	1.84	2.34	2.33
\$50,000 - \$74,999	1,061	1.77	2.25	2.25
\$75,000 - \$99,999	500	1.80	2.31	2.31
\$100,000 - \$149,999	337	1.66	2.17	2.16
\$150,000 - \$199,999	151	1.72	2.24	2.24
Over \$200,000	203	1.56	2.09	2.08
Do Not Know	3,401	1.17	1.71	1.70
<b>Q12 -- By Race</b>				
Hispanic/Latino	3,211	1.75	2.27	2.26
Black/African American	7,000	1.50	2.03	2.03
White	2,599	1.53	2.03	2.02
Asian	2,159	1.48	1.98	1.97
Native Hawaiian/Pacific Islander	381	1.49	1.97	1.97
Native American/Alaska Native	473	1.25	1.79	1.79
Other	665	1.50	2.05	2.05
<b>Q3 -- By Fare Type</b>				
Youth	4,465	0.65	1.25	1.25
Senior	831	0.73	1.25	1.25
Disabled	1,478	0.64	1.22	1.21
Adult	8,963	2.25	2.72	2.71
All	15,737	1.57	2.08	2.08
<b>Q4 -- By Type of Payment</b>				
Cash	8,054	2.08	2.57	2.57
31-Day Ticket/Monthly Pass	7,408	0.98	1.52	1.52
Translink (Clipper) e-cash	275	2.15	2.66	2.40
Total	15,737	1.57	2.08	2.08

#### NOTES:

All figures presented reflect AC Transit analysis results.

For all proposals, 31-day/monthly pass usage is assumed to be 40 trips per 31-day period.

**Appendix Table A-4:**

**Percentage Change to Cost of One-Way Linked Trip by Income and Ethnicity (pass rate at 40 uses per 31-day period) for Local Service**

	Sample Size	Change to Mean Cost of One-Way Linked Trip By Fare Change Policies (Dollars)		
		Current Cost	Proposal 1	Proposal 2
<b>Q14 -- By Income Category</b>				
Under \$15,000	3,922	1.67	30.5%	29.9%
\$15,000 - \$24,999	1,877	1.72	29.7%	29.1%
\$25,000 - \$49,999	1,981	1.84	27.2%	26.6%
\$50,000 - \$74,999	1,061	1.77	27.1%	27.1%
\$75,000 - \$99,999	500	1.80	28.3%	28.3%
\$100,000 - \$149,999	337	1.66	30.7%	30.1%
\$150,000 - \$199,999	151	1.72	30.2%	30.2%
Over \$200,000	203	1.56	34.0%	33.3%
Do Not Know	3,401	1.17	46.2%	45.3%
<b>Q12 -- By Race</b>				
Hispanic/Latino	3,211	1.75	29.7%	29.1%
Black/African American	7,000	1.50	35.3%	35.3%
White	2,599	1.53	32.7%	32.0%
Asian	2,159	1.48	33.8%	33.1%
Native Hawaiian/Pacific Islander	381	1.49	32.2%	32.2%
Native American/Alaska Native	473	1.25	43.2%	43.2%
Other	665	1.50	36.7%	36.7%
<b>Q3 -- By Fare Type</b>				
Youth	4,465	0.65	92.3%	92.3%
Senior	831	0.73	71.2%	71.2%
Disabled	1,478	0.64	90.6%	89.1%
Adult	8,963	2.25	20.9%	20.4%
All	15,737	1.57	32.5%	32.5%
<b>Q4 -- By Type of Payment</b>				
Cash	8,054	2.08	23.6%	23.6%
31-Day Ticket/Monthly Pass	7,408	0.98	55.1%	55.1%
Translink (Clipper) e-cash	275	2.15	23.7%	11.6%
<b>Total</b>	<b>15,737</b>	<b>1.57</b>	<b>32.5%</b>	<b>32.5%</b>

**NOTES:**

All figures presented reflect AC Transit analysis results.

For all proposals, 31-day/monthly pass usage is assumed to be 40 trips per 31-day period.

## Appendix Table A-5:

### Average Transbay Fare Analysis (pass rate at 60 uses per 31 day period)

	Sample Size	Mean Cost of One-Way Linked Trip By Fare Change Policies (Dollars)		
		Current	Proposal 1	Proposal 2
<b>Q14 -- By Income Category</b>				
Under \$15,000	107	2.85	3.69	3.69
\$15,000 - \$24,999	82	3.14	4.03	4.03
\$25,000 - \$49,999	124	3.30	4.21	4.21
\$50,000 - \$74,999	143	3.13	3.99	3.99
\$75,000 - \$99,999	110	3.26	4.16	4.16
\$100,000 - \$149,999	125	3.66	4.66	4.66
\$150,000 - \$199,999	65	3.45	4.38	4.38
Over \$200,000	54	3.53	4.47	4.47
Do Not Know	119	2.92	3.75	3.75
<b>Q12 -- By Race</b>				
Hispanic/Latino	112	3.03	3.89	3.89
Black/African American	276	3.01	3.87	3.87
White	364	3.35	4.26	4.26
Asian	244	3.34	4.25	4.25
Native Hawaiian/Pacific Islander	20	2.76	3.57	3.57
Native American/Alaska Native	15	3.37	4.32	4.32
Other	48	3.12	4.00	4.00
<b>Q3 -- By Fare Type</b>				
Youth	122	2.16	2.86	2.86
Senior	58	2.16	2.78	2.78
Disabled	36	2.19	2.88	2.88
Adult	821	3.49	4.44	4.44
All	1,037	3.21	4.11	4.11
<b>Q4 -- By Type of Payment</b>				
Cash	389	3.78	4.72	4.72
31-Day Ticket/Monthly Pass	404	2.21	3.00	3.00
Translink (Clipper) e-cash	244	3.98	4.97	4.97
Total	1,037	3.21	4.11	4.11

#### NOTES:

All figures presented reflect AC Transit analysis results.

For all proposals, 31-day/monthly pass usage is assumed to be 60 trips per 31-day period.

**Appendix Table A-6:**

**Percentage Change to Cost of One-Way Linked Trip by Income and Ethnicity (pass rate at 60 uses per 31-day period) for Transbay**

	Sample Size	Change to Mean Cost of One-Way Linked Trip By Fare Change Policies (Dollars)		
		Current Cost	Proposal 1	Proposal 2
<b>Q14 -- By Income Category</b>				
Under \$15,000	107	2.85	29.5%	29.5%
\$15,000 - \$24,999	82	3.14	28.3%	28.3%
\$25,000 - \$49,999	124	3.30	27.6%	27.6%
\$50,000 - \$74,999	143	3.13	27.5%	27.5%
\$75,000 - \$99,999	110	3.26	27.6%	27.6%
\$100,000 - \$149,999	125	3.66	27.3%	27.3%
\$150,000 - \$199,999	65	3.45	27.0%	27.0%
Over \$200,000	54	3.53	26.6%	26.6%
Do Not Know	119	2.92	28.4%	28.4%
<b>Q12 -- By Race</b>				
Hispanic/Latino	112	3.03	28.4%	28.4%
Black/African American	276	3.01	28.6%	28.6%
White	364	3.35	27.2%	27.2%
Asian	244	3.34	27.2%	27.2%
Native Hawaiian/Pacific Islander	20	2.76	29.3%	29.3%
Native American/Alaska Native	15	3.37	28.2%	28.2%
Other	48	3.12	28.2%	28.2%
<b>Q3 -- By Fare Type</b>				
Youth	122	2.16	32.4%	32.4%
Senior	58	2.16	28.7%	28.7%
Disabled	36	2.19	31.5%	31.5%
Adult	821	3.49	27.2%	27.2%
All	1,037	3.21	28.0%	28.0%
<b>Q4 -- By Type of Payment</b>				
Cash	389	3.78	24.9%	24.9%
31-Day Ticket/Monthly Pass	404	2.21	35.7%	35.7%
Translink (Clipper) e-cash	244	3.98	24.9%	24.9%
Total	1,037	3.21	28.0%	28.0%

**NOTES:**

All figures presented reflect AC Transit analysis results.

For all proposals, 31-day/monthly pass usage is assumed to be 60 trips per 31-day period.

**Appendix Table A-7:**

**Average Transbay Fare Analysis (pass rate at 40 uses per 31 day period)**

	Sample Size	Mean Cost of One-Way Linked Trip By Fare Change Policies (Dollars)		
		Current	Proposal 1	Proposal 2
<b>Q14 -- By Income Category</b>				
Under \$15,000	107	3.47	4.54	4.54
\$15,000 - \$24,999	82	3.64	4.71	4.71
\$25,000 - \$49,999	124	3.68	4.72	4.72
\$50,000 - \$74,999	143	3.48	4.47	4.47
\$75,000 - \$99,999	110	3.68	4.74	4.74
\$100,000 - \$149,999	125	4.08	5.23	5.23
\$150,000 - \$199,999	65	3.76	4.80	4.80
Over \$200,000	54	3.81	4.85	4.85
Do Not Know	119	3.38	4.38	4.38
<b>Q12 -- By Race</b>				
Hispanic/Latino	112	3.51	4.55	4.55
Black/African American	276	3.52	4.57	4.57
White	364	3.72	4.77	4.77
Asian	244	3.73	4.79	4.79
Native Hawaiian/Pacific Islander	20	3.32	4.34	4.34
Native American/Alaska Native	15	3.87	5.01	5.01
Other	48	3.61	4.68	4.68
<b>Q3 -- By Fare Type</b>				
Youth	122	2.89	3.86	3.86
Senior	58	2.55	3.32	3.32
Disabled	36	2.89	3.85	3.85
Adult	821	3.86	4.95	4.95
All	1,037	3.64	4.69	4.69
<b>Q4 -- By Type of Payment</b>				
Cash	389	3.78	4.72	4.72
31-Day Ticket/Monthly Pass	404	3.31	4.50	4.50
Translink (Clipper) e-cash	244	3.98	4.97	4.97
Total	1,037	3.64	4.69	4.69

**NOTES:**

All figures presented reflect AC Transit analysis results.

For all proposals, 31-day/monthly pass usage is assumed to be 40 trips per 31-day period.

**Appendix Table A-8:**

**Percentage Change to Cost of One-Way Linked Trip by Income and Ethnicity (pass rate at 40 uses per 31-day period) for Transbay**

	Sample Size	Change to Mean Cost of One-Way Linked Trip By Fare Change Policies (Dollars)		
		Current Cost	Proposal 1	Proposal 2
<b>Q14 -- By Income Category</b>				
Under \$15,000	107	3.47	30.8%	30.8%
\$15,000 - \$24,999	82	3.64	29.4%	29.4%
\$25,000 - \$49,999	124	3.68	28.3%	28.3%
\$50,000 - \$74,999	143	3.48	28.4%	28.4%
\$75,000 - \$99,999	110	3.68	28.8%	28.8%
\$100,000 - \$149,999	125	4.08	28.2%	28.2%
\$150,000 - \$199,999	65	3.76	27.7%	27.7%
Over \$200,000	54	3.81	27.3%	27.3%
Do Not Know	119	3.38	29.6%	29.6%
<b>Q12 -- By Race</b>				
Hispanic/Latino	112	3.51	29.6%	29.6%
Black/African American	276	3.52	29.8%	29.8%
White	364	3.72	28.2%	28.2%
Asian	244	3.73	28.4%	28.4%
Native Hawaiian/Pacific Islander	20	3.32	30.7%	30.7%
Native American/Alaska Native	15	3.87	29.5%	29.5%
Other	48	3.61	29.6%	29.6%
<b>Q3 -- By Fare Type</b>				
Youth	122	2.89	33.6%	33.6%
Senior	58	2.55	30.2%	30.2%
Disabled	36	2.89	33.2%	33.2%
Adult	821	3.86	28.2%	28.2%
All	1,037	3.64	28.8%	28.8%
<b>Q4 -- By Type of Payment</b>				
Cash	389	3.78	24.9%	24.9%
31-Day Ticket/Monthly Pass	404	3.31	36.0%	36.0%
Translink (Clipper) e-cash	244	3.98	24.9%	24.9%
Total	1,037	3.64	28.8%	28.8%

**NOTES:**

All figures presented reflect AC Transit analysis results.

For all proposals, 31-day/monthly pass usage is assumed to be 40 trips per 31-day period.