

# Port Authority

---

Port Authority

## Title VI Fare Equity Analysis

Delivered on: June 11, 2021

---

DRAFT

Prepared by Four Nines Technologies



# Table of Contents

I.	Executive Summary	3
II.	Overview of the Proposed Fare Structure Changes	3
III.	Title VI Overview	4
IV.	Port Authority Service and Fare Equity Policy	4
V.	Fare Equity Analysis Methodology	6
	Average Fare Analysis Methodology	7
	Data Use	7
	Fare Media Access Analysis	8
	Data Use	9
VI.	Ridership Demographics Overview	9
	Ethnicity Assumptions	9
	Income Assumptions	10
	Ridership Demographics	11
VII.	Fare Study Proposal Summary	13
VIII.	Fare Proposal Outreach	15
	Public Outreach Overview	15
	Incorporation of Feedback into Final Recommendation	17
IX.	Average Fare Analysis Findings	18
	Analysis Results	18
X.	Fare Media Access Analysis Findings	19
	Fare Choices Working Group	20
XI.	Cumulative Findings	21
	Appendix A: Port Authority Disparate Impact and Disproportionate Burden Policy	22
	DISPARATE IMPACT POLICY	24
	DISPROPORTIONATE BURDEN POLICY	25
	Appendix B-1 through B-2: Detailed Average Fare Analysis Tables	26

## I. Executive Summary

In order to comply with guidance associated with the federal Civil Rights Act of 1964 and Port Authority's Title VI Program adopted in accordance with FTA Circular 4702.1B, Port Authority must conduct a Fare Equity Analysis when contemplating fare policy and/or fare structure changes to ensure that the proposed changes would not result in either Disparate Impacts to minority riders or a Disproportionate Burden to low-income riders. The fare structure change recommendations being presented to Port Authority's Board by Port Authority management are the basis of this Fare Equity Analysis.

The Average Fare Analysis and Fare Media Access Analysis did not find that the proposed fare structure changes would result in a Disparate Impact on minority riders or Disproportionate Burden on low-income riders. While the Fare Media Access Analysis did not find a Disparate Impact or Disproportionate Burden, it did highlight the importance for Port Authority to continue to improve access to ConnectCard locations. It will be important for the Port Authority to continue to strive to improve access to fare media not only for all riders but in particular minority and low-income riders. Efforts by Port Authority's multi-department Fare Choices Working Group will be integral to this effort to improve access.

Given that there were no findings of Disparate Impact or Disproportionate Burden, no mitigations are needed to proceed with implementation of the proposed fare structure changes.

## II. Overview of the Proposed Fare Structure Changes

In 2019, Port Authority began a comprehensive review of Port Authority's fare policy and fare structure. The study is being conducted in three phases: fare structure review, fare strategy alternatives, and recommendation.

Based on Four Nines' analysis, Port Authority management presented recommendations for proposed fare structure changes to Port Authority's Board and received authorization to proceed through a formal public comment period concerning the proposed changes. The public comments received and this Title VI analysis report were used to inform management on the recommendations to be presented to the Board at the Board's June 2021 meeting to implement final recommended fare structure changes as soon as technically and administratively feasible in fiscal year 2022 (FY 2022) that begins on July 1, 2021 and ends on June 30, 2022.

If the current recommendations remain unmodified, which are referred to in this report as the FY 2022 Proposed Fare Structure Changes, the changes will include:

- Create a 3-hour pass priced at \$2.75 by eliminating the \$1 transfer charge and \$0.25 ConnectCard stored value discount; and
- Introduce rolling weekly and monthly passes (i.e., 7-day and 31-day passes) in place of calendar passes (except preserving calendar passes for Job Perks program participants).

Port Authority is guided by its Board Fare Adjustment Policy. While Port Authority's Fare Adjustment Policy does not establish a set frequency for fare reviews, it does establish the Authority's goals, objectives, and methodology. Port Authority's goals and objectives are as followed:

- Provide a framework for determining the need for an increase in fares
- Offer increased transparency regarding decisions related to our fare structure

- Communicate any fare increase needed to maintain current service levels with customers and the general public
- Assist in providing greater financial stability
- Ensure fare equity is recognized
- Maintain a satisfactory fare recovery level
- Ensure fares keep pace with inflation by systematically and periodically reviewing fares and adjusting them in accordance to the methodology

Specifically, for this study, Port Authority would also like to ensure that changes made emphasize simplicity and ease of use, fairness, reflection of value of service, competitive rates for choice riders, as well as equitable and efficient use of public resources.

### III. Title VI Overview

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 Port Authority’s objective to avoid, minimize, or mitigate disproportionately high and adverse impacts on minority and low-income populations. As a recipient of financial assistance from the Federal Transit Administration (FTA), Port Authority is required to comply with Title VI of the Civil Rights Act of 1964 and its own Title VI Program adopted in accordance with same by evaluating major service and fare changes at the planning and programming stages to determine whether those changes have discriminatory impacts, including Disparate Impacts on minority populations and/or Disproportionate Burdens on low-income populations.

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 metrics of discrimination that could be monitored for disparate treatment include fare structures that could consistently cause minority-group riders to bear a higher fare burden than the overall riding public, access to specialized fare media, or methods of communication to populations with Limited English Proficiency. However, a Title VI Equity Analysis should not replace good program planning, which should be an on-going process that considers equity among other factors when designing fare changes, service changes, or discretionary policies and programs.

### IV. Port Authority Service and Fare Equity Policy

The Federal Transit Administration (FTA) requires that transit agencies assess whether a proposed fare change or major service change would have a “Disparate Impact” on minority populations, or “Disproportionate Burden” on low-income populations, under Title VI of the Civil Rights Act of 1964, Title 49 C.F.R. Section

---

<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

21.5(b)(2) and (b)(7), and Appendix C to Title 49 C.F.R. part 21. Pursuant to FTA Circular 4702.1B, FTA requires fixed route public transit agencies to clearly establish, with input through a public engagement process, threshold definitions for measuring Disparate Impacts and Disproportionate Burdens.

To comply with FTA Circular 4702.1B, on November 20, 2015, Port Authority Board adopted the Disparate Impact and Disproportionate Burden Analysis Policy for Major Service Changes or Fare Changes. The latest amendment was implemented December 8, 2017 and incorporated into Port Authority's Title VI Program. Port Authority's Policy is included as Appendix A.

This Policy is to be used by the Port Authority of Allegheny County (Authority) for analysis of proposed fare changes and major service changes. It establishes threshold standards for evaluating the equity impacts and the distribution of benefits and burdens caused by any fare change or major service change.

The Policy establishes a statistical threshold to determine whether minority and low-income riders would be disproportionately impacted by the adverse effects of a change between an existing fare and a proposed fare. The threshold is defined as the impact of any change that results in a minority population bearing adverse effects that are 20 percent more than the adverse effects borne by the non-minority population. For low-income populations, the Disproportionate Burden threshold is defined as the impact of any change that results in a low-income population bearing adverse effects that are 20 percent more than the adverse effects borne by the non-low-income population. The thresholds also apply if the gain (benefit) among non-minority or non-low-income populations is 20 percent more than the benefits for minority or low-income populations. When these conditions are established, a Disparate Impact or Disproportionate Burden exists. This threshold is based on the cumulative impact of the proposed service or fare change.

Port Authority defines a Fare Change as any increase or decrease of fares, whether applicable to the entire transit system, or on certain transit modes, or by fare payment type or fare media. The definition of Fare Change does not include instances where all passengers ride free, or to temporary fare reductions that are mitigating measures for other activities such as construction, or to promotional fare reductions, so long as the temporary fare reduction or promotional reduction does not last longer than six months.

Prior to adopting a fare structure or price change, Port Authority must conduct a fare equity analysis and analyze specific elements of the proposed structure, along with the recommended pricing schema, to determine whether the changes would result in impacts that exceed the threshold established by the Policies. For fare changes, adverse effects could include an increase in cost or a reduction in accessibility of fare media. The analysis contained within this report uses Port Authority's adopted thresholds for determining Disproportionate Burden and Disparate Impacts.

Should the fare equity analysis show that the proposed fare structure change results in a Disparate Impact or Disproportionate Burden, alternatives should be considered to avoid, minimize, and mitigate the discriminatory results of the proposed fare change. However, if the mitigations do not minimize adverse effects, the equity analysis must demonstrate a substantial legitimate justification or must be demonstrated that there were no comparably effective alternatives that would result in fewer adverse impacts.

## V. Fare Equity Analysis Methodology

The typical measure of Disparate Impact or Disproportionate Burden involves a comparison between the proportion of persons in the protected class (i.e., minority or low income populations) who are adversely affected by the service or fare change and the proportion of persons not in the protected class (i.e., non-minority or non-low income) who are adversely affected.<sup>2</sup>

Based on the Federal Guidance, the transit provider shall—

- (i) Determine the number and percent of users of each fare media being changed;
- (ii) Review fares before the change and after the change;
- (iii) Compare the differences for each particular fare media between minority users and overall users;  
and
- (iv) Compare the differences for each particular fare media between low-income users and overall users.<sup>3</sup>

Depending upon the nature of the Major Service Change or Fare Change, the Authority may elect to establish comparison populations based upon either ridership data or the population data of a service area. Justification for selection of a ridership data comparison or a service area population comparison must be documented. When utilizing population data of a service area, the choice of a dataset shall be the smallest geographic area that reasonably has access to a transit stop or station. The Authority will document the techniques and technologies utilized to collect the ridership or population data utilized for the service equity analysis. For determining the impacts of fare changes, the Federal Guidance states that the use of census data is not effective as it is impossible to determine the fare payment method. For this Title VI report, the Average Fare Analysis relies on fiscal year 2019 farebox data by fare payment method and the 2014 Rider Profile/Satisfaction Survey. The Fare Media Access Analysis uses American Community Survey (ACS) data at the block group level.

The equity analysis compares the existing service or fare to proposed changes and calculates the absolute change as well as the percent change. Utilizing the Disparate Impact Threshold, a determination will be made as to whether the Major Service Change or Fare Change will result in Adverse Effects that are disproportionately borne by the Minority Population.

For purposes of this analysis, Four Nines have assumed that the difference in the adverse effects absorbed by minority and low-income persons as a result of any fare change shall not be greater than 20% when compared to non-minority and non-low-income groups.

For the fare equity analysis, adverse effects include an increase in cost or a reduction in accessibility of fare media. The analysis contained within this report uses these thresholds for determining Disproportionate Burden and Disparate Impacts.

---

<sup>2</sup> Federal Circular: C4702.1B Chap IV-10

<sup>3</sup> Federal Circular C4702.1B Chap. IV-19

## Average Fare Analysis Methodology

For the Average Fare Analysis, the effects of a fare structure change are examined for Disparate Impact by comparing average weighted fares, calculated by combining the number of minority and non-minority riders using each fare option and the per ride change in that fare. Any difference in the percent change of the average fare of +/-20% between the two groups will signal a Disparate Impact. Likewise, the Authority tests potential fare changes for a Disproportionate Burden on low-income riders. Once again, the effects of a fare structure are examined by comparing the average weighted fare, calculated by combining the number of low-income and non-low-income riders using each fare option and the per ride change in that fare. Any difference in the percent change of the average weighted fare of +/-20% between these two groups will likewise signal a Disproportionate Burden.

The Average Fare Analysis uses the Four Nines Fare Model baseline data in order to forecast specific revenue impacts associated with changes in each fare category. Combined with the data contained in the 2014 Rider Profile/Satisfaction Survey, the information generated by the Four Nines Fare Model is further disaggregated by low-income/non-low-income and minority/non-minority within each fare category. This produces an “Average Fare” on a systemwide level as well as for each fare payment method — both existing and proposed.

The Average Fare Analysis also provides the percentage change between the existing and proposed fare structures by fare type, and by low-income/non-low-income and minority/non-minority, to assess whether the proposed fare changes will fall within the thresholds established by Port Authority for a Disproportionate Burden and Disparate Impact.

### Data Use

The Four Nines Fare Model, which was calibrated by using Port Authority’s ridership data recorded by the farebox and estimated average fare per boarding, has been used for the Average Fare Analysis. The model assesses the ridership and revenue impacts of a fare change based on projected ridership and payment methods. While the Average Fare Analysis includes the estimated boardings in the Rail Free Zone, the manual adjustment to the farebox data to align with reported ridership based on Automatic Passenger Counters (APCs) installed on buses is excluded from the analysis.

Four Nines used Port Authority’s 2014 Rider Profile/Satisfaction Survey to examine demographic data and fare payment behavior. Although Port Authority is required under C4702.1B to conduct a survey every five years, the 2014 Rider Profile/Satisfaction Survey represents the most current rider survey available, as the COVID-19 pandemic and necessary safety protocols adopted in response to same had delayed conducting a new survey. For purposes of the Fare Equity Analysis, ethnicity and income characteristics for the average fare change analysis are based upon the survey results disaggregated by fare payment method and transfer behavior, and then applied to ridership data.

The onboard survey data has some limitations due to low response rates for some fare payment methods. Given the multitude of fare payment methods, data for some of the less frequently used fare payment methods is limited. The sample is not large enough to provide confidence at a fare payment method level. Further, some fare payment methods, such as day pass, were not included on the survey, while others were grouped, such as “disability or half-fare pass.” The Average Fare Analysis attempts to address the limitation of the data by using demographics for similar fare payment methods.

In addition to limited data on some fare payment methods, the survey was conducted prior to the 2017 fare change, which eliminated the Zone 2 fare, discontinued paper transfers, and introduced a stored value discount by raising the Zone 1 cash fare. Given the changes, the survey overstates cash usage, and it is expected that the fare payment method for riders may have changed following the 2017 fare change.

As a result, the following demographic assumptions were used in the fare equity analysis:

- Demographics for Half Fare payment methods followed the demographics for “Disability or half-fare pass,” which does not differentiate based on the specific fare payment method (e.g., cash, stored value, weekly pass, monthly pass).
- Demographics for Day Pass followed the demographics for “Tickets,” as the access to the fare media is similar in nature to the Day Pass.
- Demographics for the category “Short Fare” in which riders do not pay their entire cash fare followed the demographics for “cash,” as that is the fare payment method in which riders did not pay the entire fare.

## Fare Media Access Analysis

The proposed fare structure changes would require riders to have access to obtain and reload a ConnectCard, or purchase a Connectix to be able to access the advantages of the proposed fare structure changes. Cash riders would not be impacted by the proposed changes, and they would continue to have the option to pay cash.

To determine whether equity issues exist related to the existing ConnectCard vendor and ticket vending machine (TVM) network, a Geographic Information System (GIS) map-based analysis was completed to assess low-income and minority riders’ access to a ConnectCard vendor.

Port Authority conducted the Fare Media Access Analysis by mapping the locations of the vendors and TVMs, overlaid on the minority and low-income populations within the service-walkshed. Port Authority compared the percentages of minority/low-income populations with access to a ConnectCard location to the percentages of non-minority/non-low-income populations with access. Access to a ConnectCard location was defined as a half-mile buffer around a ConnectCard location.

The following are the steps undertaken by Port Authority in determining population within the service walkshed with and without access to a ConnectCard location:

1. Created map using Census block group level data from the American Community Survey (ACS)
2. Mapped Port Authority’s bus, busway, and light rail stop locations.
3. Created a buffer around the stops to designate the service walkshed (¼ mile buffer for fixed route bus stops; ½ mile buffer for busway and light rail stops).
4. Selected the Census block groups where the centroid of the block group falls within the buffer to determine block groups within the service walkshed. The populations in these block groups are deemed to be within the service walkshed.
5. Mapped ConnectCard locations, including vendor locations, TVMs, and Port Authority Service Center.
6. Created a ½ mile buffer around the ConnectCard locations.

7. Selected the Census block groups where the centroid of the block group falls within the buffer to determine block groups with access to ConnectCard location within  $\frac{1}{2}$  of a mile. The populations in these block groups are deemed to have access to a ConnectCard location.
8. In the selected Census block groups for the service walkshed and the selected Census block groups with access to a ConnectCard location, identified the total overall, minority, non-minority, low-income, and non-low-income populations.
9. Calculated the percentage of minorities with access to a ConnectCard location by dividing the minority population with access by the total minority population in the service-walkshed and did the same for the non-minority, low-income, non-low-income, and overall populations.
10. Compared the difference (percentage points) in the percentage of minorities with access to the percentage of non-minorities with access and did the same for the low-income and non-low income populations.
11. Compared the difference to the 20% threshold for adverse effects established in Port Authority's Disparate Impact and Disproportionate Burden Policy.

## Data Use

The Fare Media Access Analysis relies on use of the American Community Survey (ACS) 2018 5-year dataset from the U.S. Census to assess minority and low-income status. ACS data was used at the block group level.

The analysis also used bus, busway, and light rail stops to determine block groups within Port Authority's service walkshed and used vendor and TVM locations to identify block groups with access to ConnectCard locations.

## VI. Ridership Demographics Overview

The following provides an overview of Port Authority's systemwide ridership taken from the 2014 Rider Profile/Satisfaction Survey, which is the most recent onboard survey.

These demographic statistics have been considered in the development of the proposed fare structure changes in order to minimize or avoid the potential for changes to result in a Disproportionate Burden on low-income riders or Disparate Impacts on minority riders.

### Ethnicity Assumptions

For purposes of the Fare Equity Analysis, minority populations are those who have not identified themselves as only "White/Caucasian" on the 2014 Rider Profile/Satisfaction Survey. These categories include:

- (1) Black/African American, which refers to people having origins in any of the Black racial groups of Africa.
- (2) Hispanic/Latino, which includes persons of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
- (3) East Asian/Chinese/Japanese, which refers to people having origins in any of the original peoples of the Far East or Southeast Asia, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, the Philippine Islands, Thailand, and Vietnam.
- (4) West Asian/Indian/Egyptian, which refers to people having origins in any of the original peoples of the Middle East or the Indian subcontinent, including, for example, Turkey, Pakistan, and Egypt.

- (5) Native American/American Indian/Alaska Native, which refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
- (6) Native Hawaiian/Pacific Islander, which refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- (7) Other, not included above.

## Income Assumptions

Port Authority does not have a specific income threshold to define low income. In the 2016 Title VI Fare Equity Analysis for the 2017 fare change, Port Authority defined a low-income person as any person living in a household making less than \$25,000 per year. This equates to just over 100% of the 2014 federal poverty guidelines as defined by the U.S. Department of Health and Human Services (HHS), shown in Table 1, and corresponds to two income categories in the Onboard Survey, as indicated in Table 2.

**Table 1: 2014 HHS Poverty Guidelines**

Persons in Family/Household	Poverty Guideline
1	\$11,670
2	\$15,730
3	\$19,790
4	\$23,850
5	\$27,910
6	\$31,970
7	\$36,030
8	\$40,090

For families/households with more than 8 persons, add \$4,060 for each additional person.

**Table 2: 2014 Rider Profile/Satisfaction Survey Income Categories**

2014 Rider Profile/Satisfaction Survey
Under \$15,000
\$15,000 - \$24,999
\$25,000 - \$34,999
\$35,000 - \$49,999
\$50,000 - \$74,999
\$75,000 - \$99,999
\$100,000 or more

Where Census data is used for determining low-income status, such as for the Fare Media Access Analysis, a low-income household is defined as a household whose median household income is at or below the HHS poverty guidelines.

## Ridership Demographics

To support the Fare Equity analysis, we performed cross-tabulations of the survey data to develop a breakdown of fare payment by minority and low-income riders, versus non-minority and non-low-income riders, as shown in the figures below.

Figures 1 and 2 provide a systemwide overview on ethnicity and income. For purposes of the analysis, and in this review, minority status is characterized as anyone who responded to anything other than “White/Caucasian.” Low income status includes those making below \$25,000. The proportion of low-income riders is notable - almost one third of Port Authority’s riders are considered low income.

Figure 1: Ridership Income

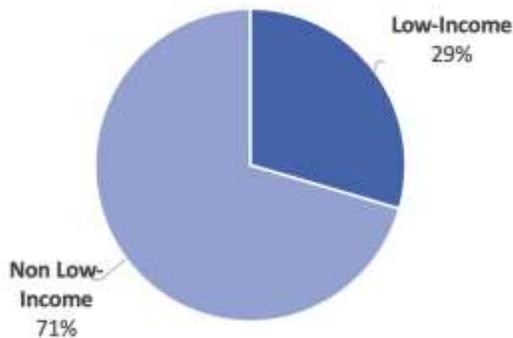
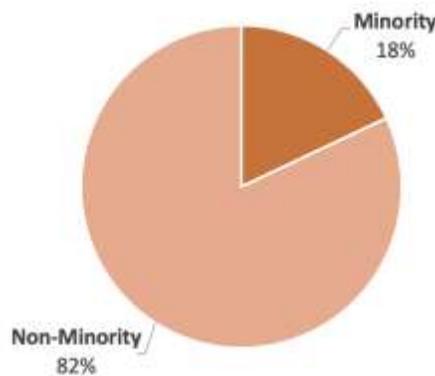


Figure 2: Ridership Minority Status



Source: 2014 Rider Profile/Satisfaction Survey

We also reviewed the relationship between fare payment method and income and ethnicity as we recognize that various fare changes may impact some protected groups more than others. Table 3 presents the fare payment method by minority and income status, while Table 4 presents the percentage of minority and low-income ridership by fare payment method.

Table 3: Fare Payment Method

Fare Product	Overall	Minority	Non-Minority	Low-Income	Non-Low-Income
Cash	14%	17%	13%	18%	12%
Stored Value	23%	16%	24%	12%	27%
Tickets	3%	3%	3%	2%	3%
Weekly Pass	9%	17%	7%	15%	6%
10-Trip Pass	1%	0%	1%	1%	1%
Monthly Pass	28%	23%	29%	22%	30%
Annual Pass	2%	2%	2%	1%	2%
Senior Pass	2%	1%	2%	2%	1%
Disability and Half-Fare Pass	2%	4%	1%	5%	1%
Student ID	14%	14%	13%	21%	11%
Other	5%	3%	5%	1%	6%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Note: columns may not sum to 100% due to rounding

**Table 4: Minority and Income Status by Fare Payment Method**

Fare Type	Minority	Non-Minority	Total	Low-Income	Non- Low-Income	Total
Cash	23%	77%	<b>100%</b>	39%	61%	<b>100%</b>
Stored Value	13%	87%	<b>100%</b>	15%	85%	<b>100%</b>
Tickets	20%	80%	<b>100%</b>	23%	77%	<b>100%</b>
Weekly Pass	37%	63%	<b>100%</b>	50%	50%	<b>100%</b>
10-trip Pass	6%	94%	<b>100%</b>	20%	80%	<b>100%</b>
Monthly Pass	15%	85%	<b>100%</b>	24%	76%	<b>100%</b>
Annual Pass	19%	81%	<b>100%</b>	23%	77%	<b>100%</b>
Senior Pass	12.5%	87.5%	<b>100%</b>	41%	59%	<b>100%</b>
Disability and Half-Fare Pass	41%	59%	<b>100%</b>	76%	24%	<b>100%</b>
Student ID	19%	81%	<b>100%</b>	45%	55%	<b>100%</b>
Other	10%	90%	<b>100%</b>	7%	93%	<b>100%</b>
<b>Overall</b>	<b>18%</b>	<b>82%</b>	<b>100%</b>	<b>29%</b>	<b>71%</b>	<b>100%</b>

Given the replacement of paid transfers with a 3-hour pass, we analyzed transfer behavior by minority and income status. The analysis revealed that minority riders and low-income riders are more likely to transfer to complete a trip (31% of minority riders versus 18% of non-minority riders and 35% of low-income riders versus 14% of non-low-income riders). Consequently, the proposed change to replace paid transfers with a 3-hour pass would benefit low-income and minority riders more. Table 5 presents the proportion of riders who transfer and those who don't transfer by minority and income status.

**Table 5: Transfer/No Transfer by Minority and Income Status**

Transferring	Overall	Minority	Non-Minority	Low-Income	Non-Low-Income
% riders who do transfer	20%	31%	18%	35%	14%
% riders who do not transfer	80%	69%	82%	65%	86%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

## VII. Fare Study Proposal Summary

Port Authority contracted Four Nines Technologies to conduct a review of Port Authority's fare policy and fare structure in February 2019. The project was initiated in the summer of 2019 with a review of Port Authority's fare system and a comparison to peer agencies. In the fall of 2019, a fare strategies workshop was conducted with staff to explore potential fare strategies for further evaluation. The Four Nines Fare Model was calibrated in the winter of 2019-2020 with fiscal year 2019 (FY 2019) ridership and fare revenue data.

The COVID-19 pandemic impacted the timeline for evaluation of fare strategies. The evaluation of fare strategies was deferred until summer of 2020 to gain a better understanding of the impacts of COVID-19 on Port Authority's ridership and fare revenue. Due to the impacts of COVID-19 and uncertainty of post-pandemic travel patterns, the analysis of certain fare strategies has been postponed until there is more certainty about how ridership will return and the ability to attract new riders. At the same time, the pandemic has elevated the importance of certain fare strategies that had been identified for further evaluation prior to the pandemic.

In developing the recommendations, Port Authority staff sought changes to the fare structure to provide meaningful benefits to riders, especially as riders may be facing financial hardships caused by the ongoing COVID-19 pandemic.

The proposed fare structure change recommendations include:

- Create a 3-hour pass priced at \$2.75 by eliminating the \$1 transfer charge and \$0.25 ConnectCard stored value discount; and
- Introduce rolling weekly and monthly passes (i.e., 7-day and 31-day passes) in place of calendar passes (except preserving calendar passes for Job Perks program participants).

The 3-hour pass and rolling weekly and monthly passes (i.e., 7-day and 31-day passes) are intended to provide additional flexibility to riders while removing financial penalties associated with needing to transfer to complete a one-way trip. These fare structure changes will have minimal financial impact today and into the future, while providing riders with usable fare products to respond to their immediate needs and helping to recapture and attract new ridership post-pandemic. Removing the financial penalty associated with paid transfers also presents new opportunities as Port Authority seeks to improve the transfer experience for riders as well as its service design to be more responsive to travel demands while managing operating costs and increasing operational efficiencies. The elimination of the stored value discount also enables the Port Authority to establish a more equitable fare system by aligning the cash and stored value fares as well as minimize fare revenue loss.

Table 6 lists the proposed fare structure changes by fare payment method.

Table 6: Fare Structure Changes Proposed

Current Product	Price	Proposed Product	Price
Stored Value Full Fare	\$2.50	Stored Value Full Fare	\$2.75
Stored Value Half Fare	\$1.25	Stored Value Half Fare	\$1.35
Single Trip	\$2.50	Eliminated	N/A
Single Trip w/Transfer	\$3.50	Eliminated	N/A
	Currently not available	3 Hour Pass Full Fare	\$2.75
	Currently not available	3 Hour Pass Half Fare	\$1.35
Day Pass	\$7	Day Pass	\$7
10 Trip Full Fare Pass	\$25.00	Eliminated	N/A
10 Trip Half Fare Pass	\$12.50	Eliminated	N/A
Electronic Transfers	\$1.00	Eliminated	N/A
Calendar Weekly Full Fare	\$25	Calendar Weekly Full Fare*	\$25
Calendar Weekly Half Fare	\$12.50	Calendar Weekly Half Fare*	\$12.50
	Currently not available	7 Day Pass Full Fare	\$25
	Currently not available	7 Day Pass Half Fare	\$12.50
Calendar Monthly Full Fare	\$97.50	Calendar Monthly Full Fare*	\$97.50
Calendar Monthly Half Fare	\$48.75	Calendar Monthly Half Fare*	\$48.75
	Currently not available	31 Day Pass Full Fare	\$97.50
	Currently not available	31 Day Pass Half Fare	\$48.75
Annual Pass	\$1,072.50	Annual Pass	\$1,072.50
Connect Card Fee	\$1	Connect Card Fee	\$1

**Incline Tickets:**

Single Trip Full Fare	\$2.50	Eliminated	N/A
Kids Single Trip	\$1.25	Eliminated	N/A
3 Hour Round Trip Full Fare	\$3.50	3 Hour Round Trip Full Fare	\$2.75
3 Hour Round Trip Kids Fare	\$1.75	3 Hour Round Trip Kids Fare	\$1.35
Transit Day Round Trip Full Fare	\$5	Eliminated	N/A
Kids Transit Day Round Trip	\$2.50	Eliminated	N/A

**Notes:** \* Available via corporate web portal only

## VIII. Fare Proposal Outreach

### Public Outreach Overview

As required by board and federal policies for adjusting fares, public engagement opportunities must be provided in advance of a final recommendation to the Board in accordance with Port Authority's Communication and Public Participation Plan. Port Authority must provide adequate opportunities for users, residents, and other stakeholders to provide feedback on the proposed adjustment. Port Authority's staff received authorization from the Board to initiate public comment at Port Authority's Board meeting on March 26, 2021. The public comment process was open from March 26 to May 5, 2021.

Port Authority held a Question and Answer session and a series of three (3) online public hearings to inform the Authority's riders of the proposed fare structure changes and solicit feedback on the proposal. The Question and Answer session and the public hearings were conducted online through Microsoft Teams with a phone dial-in option to assist those without reliable internet connections. Public comments and testimonies were collected. Oral testimonies were limited to three minutes per speaker. All hearings were recorded and were transcribed by a court reporter and made part of Port Authority's official records. The Questions and Answer session was conducted on Thursday, April 15 from 6:00 PM to 7:30 PM. The dates and times for the hearings held are as followed:

1. Thursday, April 22 from 1:00 PM to 4:00 PM
2. Friday, April 30 from 9:00 AM to 12:00 PM
3. Tuesday, May 4 from 4:00 PM to 7:00 PM

In addition to the online public hearings, public comments were also accepted by mail at Port Authority's Administrative Office (Heinz 57 Center, 345 Sixth Avenue, Third Floor, Pittsburgh, PA 15222), by phone with a message on a recorded line, or through Port Authority's dedicated page at [www.portauthority.org/fares2021](http://www.portauthority.org/fares2021) from March 26 to May 5, 2021. The deadline for receipt of comments was on May 5 at 4:00 PM.

During the public outreach process, Port Authority received a total of 112 comments from the various outreach mediums. The majority of the comments, as shown in Table 7, were provided using the online form. The comments received were categorized based on one of the three proposal items: introduction of 3-hour pass, stored value fare increase/elimination of paid transfers, and introduction of rolling 7-day and 31-day passes. A breakdown of the number of comments by proposal and positive/negative is provided in Table 8.

**Table 7: Comment Tally**

Medium	Commenters
Online	72
Fare Hearing 1	16
Fare Hearing 2	6
Fare Hearing 3	11
Letters	4
Voicemail	3
<b>Total</b>	<b>112</b>

**Table 8: Comment Tally by Proposal and Positive/Negative**

Comment Medium	Introduction of 3-Hour Pass		Stored Value Fare Increase/ Elimination of Paid Transfers		Introduction of Rolling Passes	
	Positive	Negative	Positive	Negative	Positive	Negative
Online	8	3	4	36	11	0
Fare Hearing 1	1	0	2	5	2	0
Fare Hearing 2	1	0	1	3	1	0
Fare Hearing 3	1	0	0	7	0	0
Letters	2	0	0	0	1	0
Voicemail	1	0	0	1	1	0
<b>Total</b>	<b>14</b>	<b>3</b>	<b>7</b>	<b>52</b>	<b>16</b>	<b>0</b>

For each fare proposal, participants provided supplementary feedback on why they regarded the proposal as a positive or negative change. The comments are summarized below:

#### **Introduce a 3-hour pass available only on ConnectCard, replacing ConnectCard paid transfers**

##### Positive

- This change is very helpful, although limited to ConnectCard customers

##### Negative

- This change does not benefit cash customers who may transfer
- Customers may not be able to take advantage of 3-hour pass because travel and wait time between buses could take longer than 3 hours
- Penalizes customers who do not transfer to subsidize costs for customers who do transfer

#### **Increase stored value fare by \$0.25, eliminating the \$1 transfer charge and \$0.25 stored value discount**

##### Positive

- Supportive of free transfers on ConnectCard

##### Negative

- Concern about the economic hardship of a fare increase, particularly during a pandemic
- Concern about the affordability of Port Authority fares as its fares are already among the highest in the country
- Concern that the impact is more pronounced on immigrant, low-income, and disadvantaged communities
- Eliminating the stored value fare eliminates incentive for customers to switch to ConnectCard payment. Cash fares should be disincentivized since cash payments hinder efficiency; consider no change to stored value fare or increase cash fare to \$3.00
- Loss of ridership due to fare increase

- Instead of increasing stored value fare to align with cash fare for parity, decrease the cash fare to align with the stored value fare

### Introduce rolling weekly and monthly passes in place of calendar passes

#### Positive

- This change is very helpful, although limited to ConnectCard customers
- Rolling validity offers flexibility and benefits individuals who are not paid on the first of the month

Additionally, respondents provided other general fare-related comments. The themes, arranged by recurrence, are summarized below:

- **Support for Pittsburgh for Public Transit's Fair Fares initiative.** Respondents advocated for fare reduction and/or a low-income fare program targeted to accommodate the mobility needs of disadvantaged communities. EBT cards could be used as a temporary eligibility measure. This could be introduced as a pilot program to shape a more permanent program.
- **Need for increased access to fare products.** Respondents highlighted the challenge of purchasing a ConnectCard, citing gaps in Port Authority's ConnectCard retail network and TVM locations. There was a suggestion for the regular deployment of mobile retail units, and another suggestion for passes to be sold on buses
- **Explore fare-free for all riders.**
- **Interest in partnerships with local organizations and employers.** Respondents suggested Port Authority explore bulk pricing for employers and potential partnership with University of Pittsburgh Medical Center. Additionally, the Pittsburgh Food Policy Council expressed interest in working with Port Authority to develop solutions to alleviate food insecurity.
- **Reduce the cost of the monthly pass.**
- **Availability of a 2-week pass** that serves as an option that is more affordable than a monthly pass.
- **Increase the cost of the annual pass**, as individuals who can afford the upfront cost are less likely to be impacted by a cost increase.
- **Charge for parking at park-and-rides.**
- **Decriminalize fare evasion.**
- **The recommendation does not provide significant improvements for individuals who pay with cash or cannot afford the upfront cost of a pass.**

## Incorporation of Feedback into Final Recommendation

Port Authority does not propose any modifications to the proposed fare structure changes. Port Authority plans to continue to increase access to ConnectCard through the efforts of the multi-department Fare Choices Working Group, as further described within this report.

## IX. Average Fare Analysis Findings

The Average Fare Analysis uncovered no Title VI equity concerns using Port Authority’s Board adopted Disparate Impact and Disproportionate Burden Policy that is incorporated into Port Authority’s Title VI Program. While changes to some fare payment methods would result in a higher percentage change for some rider populations, the systemwide change resulted in a less than significant difference between minority/non-minority and low-income/non low income groups, which was within 20% of the policy threshold. As such, no mitigations are recommended to proceed with the implementation of the fare structure change recommendations based on the Average Fare Analysis.

### Analysis Results

The Average Fare Analysis provides a robust overview of the proposed fare structure changes. Appendix B provides the detailed tables that provide the average fare change by minority/non-minority and low-income/non low-income status. The tables include the absolute and percentage change between existing and proposed fares, and the proportion of minority and low income riders that would be affected by each fare change.

Table 7 shows the changes between existing and proposed fares. Full fare and half fare riders paying with a Connect Card Single Trip with 2+ Transfers would see the biggest change in fares, at a 56% and 58% decrease, respectively. Riders who make 1 transfer and monthly pass users would also see a decrease in fares. Due to the elimination of the stored value discount, riders who take Single Trips on the Connect Card and ConnectTix as well as 10-Trip Pass users would see a slight increase, at 10% and 8% for full fare and half fare riders, respectively. No changes would apply to cash, day pass, weekly pass, annual pass riders, as well as riders categorized as “Other”, including U-Pass, Senior Citizens, and etc.

**Table 7: Average Fare and Change**

Port Authority Fares	Average Fare		Change	
	Existing	Proposed	Absolute	Percentage
<b>Full Fare</b>				
Cash	\$2.750	\$2.750	\$0.000	0%
Connect Card Single Trip	\$2.500	\$2.750	\$0.250	10%
Connect Card Single Trip with 1 Transfer	\$1.750	\$1.375	-\$0.375	-21%
Connect Card Single Trip with 2+ Transfers	\$1.933	\$0.841	-\$1.092	-56%
ConnectTix Single Trip	\$2.500	\$2.750	\$0.250	10%
ConnectTix Single Trip with Transfer	\$1.750	\$1.375	-\$0.375	-21%
ConnectTix 10-Trip Pass	\$2.500	\$2.750	\$0.250	10%
Day Pass	\$1.939	\$1.939	\$0.000	0%
Weekly Pass	\$1.622	\$1.622	\$0.000	0%
Monthly Pass	\$2.095	\$2.056	-\$0.039	-2%
Annual Pass	\$1.906	\$1.906	\$0.000	0%
<b>Half Fare</b>				
Cash	\$1.350	\$1.350	\$0.000	0%
Connect Card Single Trip	\$1.250	\$1.350	\$0.100	8%
Connect Card Single Trip with 1 Transfer	\$0.875	\$0.675	-\$0.200	-23%
Connect Card Single Trip with 2+ Transfers	\$0.958	\$0.403	-\$0.555	-58%
Connect Card 10-Trip Pass	\$1.250	\$1.350	\$0.100	8%
ConnectTix Single Trip	\$1.250	\$1.350	\$0.100	8%

Port Authority Fares	Average Fare		Change	
	Existing	Proposed	Absolute	Percentage
Connectix Single Trip with Transfer	\$0.875	\$0.675	-\$0.200	-23%
Weekly Pass	\$0.700	\$0.700	\$0.000	0%
Monthly Pass	\$0.759	\$0.745	-\$0.014	-2%
<b>Other</b>				
U-Pass	\$1.250	\$1.250	\$0.000	0%
College Off-Peak	\$1.000	\$1.000	\$0.000	0%
Pittsburgh Public Schools on ConnectCard*	\$1.809	\$1.809	\$0.000	0%
Short Fare	\$1.980	\$1.980	\$0.000	0%
Senior Citizen - Free	\$0.000	\$0.000	\$0.000	0%
Other - Free	\$0.000	\$0.000	\$0.000	0%

Table 8 provides a systemwide view of the analysis comparing the average fare for minority riders to non-minority riders. Table C-1 provides the detailed analysis by fare payment method. Overall, for all riders, the average fare is expected to increase from \$1.555 to \$1.557, a 0.1% increase from the current average fare. For minority riders, the average fare would decrease from \$1.600 to \$1.578, a -1.4% decrease. Meanwhile, for non-minority riders, the average fare would increase from \$1.543 to \$1.551, a 0.5% increase. Using Port Authority’s Disparate Impact threshold, the fare structure changes would not represent a Disparate Impact on minority riders as the proposed fare structure changes would result in a benefit to minority riders.

**Table 8: Average Fare for Minority Riders**

Port Authority Fares	All Riders			Minority Riders				Non-Minority Riders			
	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue	% of Riders	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue	% of Riders	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue
<b>Total</b>	55,213,807	\$85,848,466	\$85,949,230	<b>Total</b>	11,414,973	\$18,258,804	\$18,008,252	<b>Total</b>	43,798,834	\$67,589,662	\$67,940,979
<b>Average Fare All Riders</b>		\$1.555	\$1.557		<b>Minority Riders</b>	\$1.600	\$1.578		<b>Non-Minority Riders</b>	\$1.543	\$1.551
		% Change All Riders	0.1%		<b>Minority Riders</b>		-1.4%		<b>Non-Minority Riders</b>		0.5%

Table 9 presents the systemwide analysis comparing the average fare for low-income riders to non-low-income riders. Table C-1 provides the detailed analysis by fare payment method. For low-income riders, the average fare would decrease from \$1.498 to \$1.461, a 2.5% decrease. Non-low-income riders would increase from \$1.586 to \$1.609, a 1.5% increase. Using Port Authority’s Disproportionate Burden threshold, the fare structure changes would not represent a Disproportionate Burden on low-income riders as the proposed fare structure changes would result in a benefit to low-income riders.

**Table 9: Average Fare for Low Income Riders**

Port Authority Fares	All Riders			Low-Income Riders				Non-Low-Income Riders			
	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue	% of Riders	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue	% of Riders	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue
<b>Total</b>	55,213,807	\$85,848,466	\$85,949,230	<b>Total</b>	19,445,011	\$29,130,789	\$28,407,891	<b>Total</b>	35,768,796	\$56,717,677	\$57,541,339
<b>Average Fare All Riders</b>		\$1.555	\$1.557		<b>Low-Income Riders</b>	\$1.498	\$1.461		<b>Non-Low-Income Riders</b>	\$1.586	\$1.609
		% Change All Riders	0.1%		<b>Low-Income Riders</b>		-2.5%		<b>Non-Low-Income Riders</b>		1.5%

## X. Fare Media Access Analysis Findings

The proposed fare structure changes would require a rider to have access to obtain and reload a ConnectCard or purchase a Connectix to be able to access the advantages of the changes. Cash customers would not be impacted by the proposed changes, and they would continue to have the option to pay cash.

To assess access to obtain and reload a ConnectCard/Connectix for different populations, the Fare Media Access Analysis determined the percentage of minority, non-minority, low-income, non-low-income, and overall

population within Port Authority's service- walkshed and a half-mile of a ConnectCard location. The following tables provide comparisons of income and minority status on access to ConnectCard locations. The analysis indicates that approximately a quarter of the population within the service walkshed have access to a ConnectCard location near where they live. Riders may have additional access to a ConnectCard location at other points along their journey or near their destination.

Tables 10 and 11 provide comparisons based on minority and income status that indicate that the percentage of minority and low-income populations with access to a ConnectCard location is similar to the overall, non-minority, and non-low-income populations. The percentage point difference between minority and non-minority populations is 6%, and the percentage point difference between low-income and non-low-income populations is 3%. Both percentage point differences are within the 20% threshold established by Port Authority's Disparate Impact and Disproportionate Burden Policy. While the Fare Media Access Analysis does not find that the proposed fare structure changes would result in a Disparate Impact or Disproportionate Burden, the analysis confirmed the importance for Port Authority to improve access to ConnectCard locations. It will be important for the Port Authority to continue to strive to improve access to fare media not only for all riders but for minority and low-income riders in particular. Efforts by the multi-department Fare Choices Working Group will be integral to this effort to improve access.

It should be noted that "total population" may vary between data sets, as ACS data represents a sample with a fairly high margin of error for income designations. Percentages were based on the relative data sets and are appropriate.

**Table 10: Access to ConnectCard Vendor or TVM by Minority Status**

Population	Total Population in Service Walkshed	Population within ½ Mile of Vendor or TVM	% of Population within ½ Mile of Vendor or TVM
Minority	169,605	34,585	20%
Non-Minority	394,872	103,670	26%
<b>Overall</b>	<b>564,477</b>	<b>138,255</b>	<b>24%</b>

**Table 11: Access to ConnectCard Vendor or TVM by Income Status**

Population	Total Population in Service Walkshed	Population within ½ Mile of Vendor or TVM	% of Population within ½ Mile of Vendor or TVM
Low-Income	97,313	20,841	21%
Non-Low-Income	444,132	106,158	24%
<b>Overall</b>	<b>541,445</b>	<b>126,999</b>	<b>23%</b>

## Fare Choices Working Group

In formulating the proposed fare structure change recommendations, Port Authority identified the need to increase access to ConnectCard locations to obtain and reload a ConnectCard or purchase a Connectix. Port Authority formed the cross-functional Fare Choices Working Group, comprised of members from Planning and Service Development, Finance, IT, Business Development, Marketing, and Communications Departments. The purpose of the group is to identify communities most in need of a ConnectCard location, determine potential sites in each community, and ultimately secure agreements for the installation of TVMs or Sales Outlet Terminals (SOTs) in these areas.

Using GIS technology, the group first identified census block groups with both minority and low-income populations over 150% of the Allegheny County average. That list was narrowed to communities within the Port Authority service walkshed, but not within ½ mile of any current ConnectCard location. The resulting analysis identified seven priority communities: the Hill District (City of Pittsburgh), McKeesport, McKees Rocks, North Side/Spring Garden (City of Pittsburgh), Lincoln/Lemington (City of Pittsburgh), East Wilksburg, and Braddock.

The group has already secured sites in the Hill District and McKeesport and is actively working on the remaining five priority communities. To aid in identifying potential sites, the group identified the locations of public buildings, such as municipal offices, libraries, and post offices. A stable, publicly-accessible government building is considered the ideal location for a TVM.

For communities with no public buildings, Port Authority is actively working to find retail partners. Group members researched retail partners of other transit agencies nationally and noted that many other agencies have partnered with Family Dollar, 7-11, and Walgreens to sell fare products. These stores all have a strong local presence in the Pittsburgh area, and a partnership with any one of these chains would dramatically expand access to Port Authority fare products.

Finally, Port Authority is concurrently launching a Mobile Ticketing Services platform. This project will extend fare product access to anyone with access to a smartphone and electronic banking services. A spring 2021 rider survey found that about 95% of riders own a smartphone and 97% have access to electronic banking services. The platform also provides a vendor web portal to allow any retailer to sell Port Authority fare products. This web portal is a much more infrastructure-light solution than installing SOTs and would allow for smaller “mom and pop” type stores to join the agency’s retail network. These options can cover any remaining outlying areas not able to be served with a TVM or SOT.

The efforts being undertaken by the Fare Choices Working Group should have meaningful impacts to increasing access to ConnectCard vendors and TVMs.

## XI. Cumulative Findings

A Fare Equity Analysis should not take the place of thoughtful planning at the earliest stages of project development. Considering the impacts that plans, programs or projects have on minority and low-income communities has been part of the early planning and development process for the study to review Port Authority’s fare policy and fare structure. The needs of the Authority have been matched with the needs of the low-income and minority communities throughout the study process to develop a balanced fare structure with equitable pricing.

While the Average Fare Analysis and Fare Media Access Analysis did not find that the proposed fare structure changes would result in a Disparate Impact on minority riders or Disproportionate Burden on low-income riders, the Fare Media Access Analysis confirmed that access to ConnectCard locations remains a challenge for Port Authority riders. Port Authority should strive to improve access to fare media not only for all riders but in particular minority and low-income riders. Efforts by the multi-department Fare Choices Working Group will be integral to this effort to improve access.

# Appendix A: Port Authority Disparate Impact and Disproportionate Burden Policy

The following is Port Authority's Disparate Impact and Disproportionate Burden Analysis Policy for Major Service Changes or Fare Changes last amended December 8, 2017 and included in Port Authority's 2019 Title VI Program.

## PURPOSE

The Federal Transit Administration (FTA) requires that transit agencies assess whether a proposed "fare change" or "major service change" would have a "Disparate Impact" on "minority populations," or "Disproportionate Burden" on "low-income populations," under Title VI of the Civil Rights Act of 1964, Title 49 C.F.R. Section 21.5(b)(2) and (b)(7), and Appendix C to Title 49 C.F.R. part 21. Pursuant to FTA Circular 4702.1B, FTA requires fixed route public transit agencies to clearly establish, with input through a public engagement process, threshold definitions for measuring Disparate Impacts and Disproportionate Burdens.

This policy will be utilized by Port Authority of Allegheny County (Authority) for analysis of proposed fare changes and major service changes. It establishes threshold standards for evaluating the equity impacts and the distribution of benefits and burdens caused by any fare change or major service change. The Authority reserves the right to amend this policy to the extent required by future changes in the law and/or at the discretion of its Board.

## DEFINITIONS

### Adverse Effects

A transit provider is required to define and analyze adverse effects related to major changes in transit service. Adverse Effects may include Fare Changes, reductions in service (e.g., elimination of a route, shortlining a route, rerouting an existing route, increase in headways) or even additions to service, especially if they come at the expense of reductions in service on other routes. Transit providers are required to consider the degree of Adverse Effects, and analyze those effects, when planning service changes. The Authority will define and analyze Adverse Effects related to proposed Fare Changes or Major Service Changes. The Authority will measure the loss (the adverse impact), or the gain (benefit), among Minority Populations and nonminority populations and among Low-Income Populations and non-low-income populations when conducting a service equity analysis of a proposed Major Service Change, and among minority and overall users and among low-income and overall users when conducting a fare equity analysis for any Fare Changes.

### Disparate Impact

FTA Circular 4702.1B defines Disparate Impact as 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 effects on the basis of race, color, or national origin.

### Disparate Impact Threshold

The Disparate Impact Threshold is defined as the impact of any Major Service Change or Fare Change that results in a Minority Population bearing Adverse Effects which are 20 percent more than the Adverse Effects borne by the non-minority population.

### Disproportionate Burden

FTA Circular 4702.1B defines Disproportionate Burden as a facially 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.

### Disproportionate Burden Threshold

The Disparate Impact Threshold is defined as the impact of any Major Service Change or Fare Change that results in a Low-Income Population bearing Adverse Effects which are 20 percent more than the Adverse Effects borne by the non-low income population.

### Fare Change

A Fare Change is defined as any increase or decrease of fares, whether applicable to the entire transit system, or on certain transit modes, or by fare payment type or fare media. The definition of Fare Change does not include instances where all passengers ride free, or to temporary fare reductions that are mitigating measures for other activities such as construction, or to promotional fare reductions, so long as the temporary fare reduction or promotional reduction does not last longer than six months. A Fare Change also does not include the introduction of new fare products or fare media where those new fare products or fare media are only being added to the Authority's existing fare products or fare media versus replacing existing fare products or fare media.

### Low-Income Person/Population

FTA Circular 4702.1B defines low-income person as a person whose median household income is at or below the US Department of Health and Human Services poverty guidelines, and defines low-income population as any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed FTA program, policy, or activity.

### Major Service Change

A Major Service Change is defined by the Authority as:

- addition or removal of a route;
- addition or removal of a service day for a route;

- Service changes that constitute an addition or reduction of more than 30% of the weekly trips, service hours, or service miles on a given route; or
- adding or removing more than 2,500 annual hours of service on a given route.

Any service reduction necessitated by an emergency situation or construction activity expected to last less than one year in duration is excluded from the definition of a Major Service Change.

## Minority Persons

FTA Circular 4702.1B defines minority persons to include the following five groups: 1) American Indian and Alaskan Native, 2) Asian, 3) Black or African-American, 4) Hispanic or Latino, and 5) Native Hawaiian and Other Pacific Islander.

## Minority Population

FTA Circular 4702.1B defines a Minority Population as any readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient populations who will be similarly affected by a proposed DOT program, policy, or activity.

## DISPARATE IMPACT POLICY

The purpose of this policy is to establish protocols for determining whether a Major Service Change or Fare Change is borne disproportionately by Minority Populations. The Authority seeks to eliminate or minimize Disparate Impact upon a Minority Population as a result of a Major Service Change or Fare Change.

When a Major Service Change or Fare Change is proposed, the Authority will first define and analyze the Adverse Effects that may result from the proposed change. Upon identification of Adverse Effects, the Authority will prepare and submit a service equity analysis and/or fare equity analysis in accordance with the guidance set forth in FTA Circular 4702.1B as may be amended, for the purpose of determining whether the Major Service Change or Fare Change will have a Disparate Impact on the Minority Population. The analysis requires, utilizing the Disparate Impact Threshold, a comparison of Adverse Effects resulting from a Major Service or Fare Change as between the Minority Population and the non-minority population.

Depending upon the nature of the Major Service Change or Fare Change, the Authority may elect to establish comparison populations based upon either ridership data or the population data of a service area. Justification for selection of a ridership data comparison or a service area population comparison must be documented. When utilizing population data of a service area, the choice of a dataset shall be the smallest geographic area that reasonably has access to a transit stop or station. The Authority will document the techniques and technologies utilized to collect the ridership or population data utilized for the service equity analysis.

The equity or fare equity analysis will compare the existing service or fare to proposed changes and calculate the absolute change as well as the percent change. Utilizing the Disparate Impact Threshold, a determination will be made as to whether the Major Service Change or Fare Change will result in Adverse Effects that are disproportionately borne by the Minority Population.

If the analysis concludes that Disparate Impact will occur as a result of a Major Service Change or Fare Change, the change may be implemented only if (1) there exists a substantial legitimate justification for the proposed

service change; and (2) there exists no alternatives that would have a less Disparate Impact on the Minority Population that would still accomplish the Authority's legitimate program goals.

Should any proposed Major Service Change or Fare Change result in Disparate Impact, the Authority will consider modification of the proposed change to avoid, minimize or mitigate the Disparate Impact of such change. Once a modification has occurred to avoid, minimize or mitigate potential Disparate Impacts, the Authority will conduct an additional analysis to determine whether the modifications successfully corrected the potential Disparate Impact resulting from the changes. The Authority shall provide a meaningful opportunity for public comment on any proposed mitigation measures, including available less discriminatory alternatives, and Senior Management and Board of the Authority shall be briefed as to the outcome of the service equity analysis and/or fare equity analysis.

## DISPROPORTIONATE BURDEN POLICY

The purpose of this policy is to determine whether or not Low-Income Populations will bear a Disproportionate Burden of a Major Service Change or Fare Change. While Low-Income Populations are not a protected class under Title VI, the analysis established under this policy is recognized as valuable for planning purposes.

When a Major Service Change or Fare Change is proposed, the Authority will first define and analyze the Adverse Effects that may result from the proposed change. Upon identification of Adverse Effects, the Authority will prepare and submit a service equity analysis and/or fare equity analysis in accordance with the guidance set forth in FTA Circular 4702.1B as may be amended, for the purpose of determining whether such planned changes will have a Disproportionate Burden on a Low-Income Population. The analysis, utilizing the Disproportionate Burden Threshold, requires a comparison of Adverse Effects resulting from a Major Service Change or Fare Change as between the Low Income Population and the non-low income population.

The equity or fare service analysis will compare the existing service or fare to proposed changes and calculate the absolute change as well as the percent change. Utilizing the Disproportionate Burden Threshold, a determination will be made as to whether the Major Service Change or Fare Change will result in Adverse Effects that are disproportionately borne by the Low-Income Population.

If the analysis concludes that Disproportionate Burden will occur as a result of a Major Service Change or Fare Change, the Authority will consider modification of the proposed change to avoid, minimize or mitigate Disproportionate Burden where practical, and the Authority should describe alternatives available to Low-Income Populations affected by the Major Service Change or Fare Change. The Authority shall provide a meaningful opportunity for public comment on any proposed mitigation measures, including available less discriminatory alternatives, and Senior Management and Board of the Authority shall be briefed as to the outcome of the service equity analysis and/or fare equity analysis.

*Adopted via Board Resolution: 11/20/2015*

*Amended via Board Resolution: 12/8/2017*

# Appendix B-1 through B-2: Detailed Average Fare Analysis Tables

## Appendix B-1: Average Fare Analysis – Minority

Port Authority Fares	Average Fare		Change		Minority Riders				Non-Minority Riders			
	Existing	Proposed	Absolute	Percentage	% of Riders	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue	% of Riders	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue
<b>Full Fare</b>												
Cash	\$2.750	\$2.750	\$0.000	0%	23%	573,482	\$1,577,076	\$1,577,076	77%	1,946,079	\$5,351,717	\$5,351,717
Connect Card Single Trip	\$2.500	\$2.750	\$0.250	10%	12%	862,193	\$2,155,483	\$2,371,031	88%	6,087,082	\$15,217,705	\$16,739,476
Connect Card Single Trip with 1 Transfer	\$1.750	\$1.375	-\$0.375	-21%	21%	324,641	\$568,122	\$446,381	79%	1,252,186	\$2,191,326	\$1,721,756
Connect Card Single Trip with 2+ Transfers	\$1.933	\$0.841	-\$1.092	-56%	21%	65,527	\$126,664	\$55,108	79%	252,745	\$488,556	\$212,559
ConnectTix Single Trip	\$2.500	\$2.750	\$0.250	10%	13%	80,884	\$202,210	\$222,431	87%	550,009	\$1,375,023	\$1,512,525
ConnectTix Single Trip with Transfer	\$1.750	\$1.375	-\$0.375	-21%	45%	456,496	\$798,868	\$627,682	55%	547,795	\$958,641	\$753,218
ConnectTix 10-Trip Pass	\$2.500	\$2.750	\$0.250	10%	6%	10,020	\$25,050	\$27,555	94%	150,299	\$375,748	\$413,322
Day Pass	\$1.939	\$1.939	\$0.000	0%	45%	217,407	\$421,552	\$421,552	55%	260,888	\$505,862	\$505,862
Weekly Pass	\$1.622	\$1.622	\$0.000	0%	37%	3,296,046	\$5,346,187	\$5,346,187	63%	5,727,554	\$9,290,093	\$9,290,093
Monthly Pass	\$2.095	\$2.056	-\$0.039	-2%	15%	1,444,568	\$3,026,370	\$2,969,422	85%	8,179,869	\$17,136,826	\$16,814,358
Annual Pass	\$1.906	\$1.906	\$0.000	0%	19%	79,110	\$150,784	\$150,784	81%	346,107	\$659,680	\$659,680
<b>Half Fare</b>												
Cash	\$1.350	\$1.350	\$0.000	0%	41%	104,162	\$140,619	\$140,619	59%	148,802	\$200,883	\$200,883
Connect Card Single Trip	\$1.250	\$1.350	\$0.100	8%	30%	71,594	\$89,493	\$96,652	70%	167,052	\$208,815	\$225,520
Connect Card Single Trip with 1 Transfer	\$0.875	\$0.675	-\$0.200	-23%	46%	155,722	\$136,257	\$105,112	54%	184,035	\$161,031	\$124,224
Connect Card Single Trip with 2+ Transfers	\$0.958	\$0.403	-\$0.555	-58%	46%	69,218	\$66,311	\$27,895	54%	81,803	\$78,367	\$32,967
Connect Card 10-Trip Pass	\$1.250	\$1.350	\$0.100	8%	30%	286	\$358	\$386	70%	666	\$833	\$899
ConnectTix Single Trip	\$1.250	\$1.350	\$0.100	8%	30%	1,596	\$1,995	\$2,155	70%	3,723	\$4,654	\$5,026
ConnectTix Single Trip with Transfer	\$0.875	\$0.675	-\$0.200	-23%	46%	8,016	\$7,014	\$5,411	54%	9,473	\$8,289	\$6,394
Weekly Pass	\$0.700	\$0.700	\$0.000	0%	41%	101,493	\$71,045	\$71,045	59%	144,989	\$101,492	\$101,492
Monthly Pass	\$0.759	\$0.745	-\$0.014	-2%	41%	250,708	\$190,287	\$186,707	59%	358,154	\$271,839	\$266,724
<b>Other</b>												
U-Pass	\$1.250	\$1.250	\$0.000	0%	19%	1,674,256	\$2,092,820	\$2,092,820	81%	7,289,991	\$9,112,489	\$9,112,489
College Off-Peak	\$1.000	\$1.000	\$0.000	0%	19%	9,316	\$9,316	\$9,316	81%	40,566	\$40,566	\$40,566
Pittsburgh Public Schools on ConnectCard*	\$1.809	\$1.809	\$0.000	0%	19%	155,007	\$280,408	\$280,408	81%	674,928	\$1,220,945	\$1,220,945
Short Fare	\$1.980	\$1.980	\$0.000	0%	23%	391,171	\$774,519	\$774,519	77%	1,327,417	\$2,628,286	\$2,628,286
Senior Citizen - Free	\$0.000	\$0.000	\$0.000	0%	13%	570,045	\$0	\$0	88%	3,990,316	\$0	\$0
Other - Free	\$0.000	\$0.000	\$0.000	0%	10%	442,009	\$0	\$0	90%	4,076,306	\$0	\$0
<b>Total</b>					<b>Total</b>	<b>11,414,973</b>	<b>\$18,258,804</b>	<b>\$18,008,252</b>	<b>Total</b>	<b>43,798,834</b>	<b>\$67,589,662</b>	<b>\$67,940,979</b>
<b>Average Fare All Riders</b>						<b>Minority Riders</b>	<b>\$1.600</b>	<b>\$1.578</b>	<b>Non-Minority Riders</b>	<b>\$1.543</b>	<b>\$1.551</b>	
<b>% Change All Riders</b>						<b>Minority Riders</b>		<b>-1.4%</b>	<b>Non-Minority Riders</b>		<b>0.5%</b>	

Notes: Average fare analysis based on ridership recorded by the farebox and estimated average fare per boarding

\* Pittsburgh Public Schools began transition to ConnectCard in FY2019. Only a subset of these students could be separated from other passholders.

Appendix B-2: Average Fare Analysis – Low Income

Port Authority Fares	Average Fare		Change		Low-Income Riders				Non Low-Income Riders					
	Existing	Proposed	Absolute	Percentage	% of Riders	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue	% of Riders	Number of Riders	Existing Fare Revenue	Proposed Fare Revenue		
<b>Full Fare</b>														
Cash	\$2.750	\$2.750	\$0.000	0%	39%	973,695	\$2,677,661	\$2,677,661	61%	1,545,866	\$4,251,132	\$4,251,132		
Connect Card Single Trip	\$2.500	\$2.750	\$0.250	10%	12%	819,754	\$2,049,385	\$2,254,324	88%	6,129,521	\$15,323,803	\$16,856,183		
Connect Card Single Trip with 1 Transfer	\$1.750	\$1.375	-\$0.375	-21%	55%	860,087	\$1,505,152	\$1,182,620	45%	716,740	\$1,254,295	\$985,518		
Connect Card Single Trip with 2+ Transfers	\$1.933	\$0.841	-\$1.092	-56%	55%	173,603	\$335,575	\$146,000	45%	144,669	\$279,645	\$121,667		
ConnectTix Single Trip	\$2.500	\$2.750	\$0.250	10%	11%	70,099	\$175,248	\$192,772	89%	560,794	\$1,401,985	\$1,542,184		
ConnectTix Single Trip with Transfer	\$1.750	\$1.375	-\$0.375	-21%	64%	639,094	\$1,118,415	\$878,754	36%	365,197	\$639,095	\$502,146		
ConnectTix 10-Trip Pass	\$2.500	\$2.750	\$0.250	10%	20%	32,064	\$80,160	\$88,176	80%	128,255	\$320,638	\$352,701		
Day Pass	\$1.939	\$1.939	\$0.000	0%	64%	304,370	\$590,173	\$590,173	36%	173,925	\$337,241	\$337,241		
Weekly Pass	\$1.622	\$1.622	\$0.000	0%	50%	4,483,776	\$7,272,685	\$7,272,685	50%	4,539,824	\$7,363,595	\$7,363,595		
Monthly Pass	\$2.095	\$2.056	-\$0.039	-2%	24%	2,262,318	\$4,739,556	\$4,650,371	76%	7,362,119	\$15,423,639	\$15,133,410		
Annual Pass	\$1.906	\$1.906	\$0.000	0%	23%	96,017	\$183,008	\$183,008	77%	329,200	\$627,455	\$627,455		
<b>Half Fare</b>														
Cash	\$1.350	\$1.350	\$0.000	0%	76%	193,443	\$261,148	\$261,148	24%	59,521	\$80,353	\$80,353		
Connect Card Single Trip	\$1.250	\$1.350	\$0.100	8%	70%	167,052	\$208,815	\$225,520	30%	71,594	\$89,493	\$96,652		
Connect Card Single Trip with 1 Transfer	\$0.875	\$0.675	-\$0.200	-23%	79%	268,974	\$235,352	\$181,557	21%	70,783	\$61,935	\$47,779		
Connect Card Single Trip with 2+ Transfers	\$0.958	\$0.403	-\$0.555	-58%	79%	119,558	\$114,537	\$48,182	21%	31,463	\$30,142	\$12,680		
Connect Card 10-Trip Pass	\$1.250	\$1.350	\$0.100	8%	70%	666	\$833	\$899	30%	286	\$358	\$386		
ConnectTix Single Trip	\$1.250	\$1.350	\$0.100	8%	70%	3,723	\$4,654	\$5,026	30%	1,596	\$1,995	\$2,155		
ConnectTix Single Trip with Transfer	\$0.875	\$0.675	-\$0.200	-23%	79%	13,845	\$12,114	\$9,345	21%	3,644	\$3,189	\$2,460		
Weekly Pass	\$0.700	\$0.700	\$0.000	0%	76%	188,486	\$131,940	\$131,940	24%	57,996	\$40,597	\$40,597		
Monthly Pass	\$0.759	\$0.745	-\$0.014	-2%	76%	465,600	\$353,390	\$346,741	24%	143,262	\$108,736	\$106,690		
<b>Other</b>														
U-Pass	\$1.250	\$1.250	\$0.000	0%	45%	4,051,840	\$5,064,800	\$5,064,800	55%	4,912,407	\$6,140,509	\$6,140,509		
College Off-Peak	\$1.000	\$1.000	\$0.000	0%	45%	22,547	\$22,547	\$22,547	55%	27,335	\$27,335	\$27,335		
Pittsburgh Public Schools on ConnectCard*	\$1.809	\$1.809	\$0.000	0%	45%	375,131	\$678,612	\$678,612	55%	454,804	\$822,740	\$822,740		
Short Fare	\$1.980	\$1.980	\$0.000	0%	39%	664,156	\$1,315,029	\$1,315,029	61%	1,054,432	\$2,087,775	\$2,087,775		
Senior Citizen - Free	\$0.000	\$0.000	\$0.000	0%	41%	1,887,046	\$0	\$0	59%	2,673,315	\$0	\$0		
Other - Free	\$0.000	\$0.000	\$0.000	0%	7%	308,067	\$0	\$0	93%	4,210,248	\$0	\$0		
<b>Total</b>					<b>Total</b>	<b>19,445,011</b>	<b>\$29,130,789</b>	<b>\$28,407,891</b>	<b>Total</b>	<b>35,768,796</b>	<b>\$56,717,677</b>	<b>\$57,541,339</b>		
<b>Average Fare All Riders</b>					<b>Low-Income Riders</b>			<b>\$1.498</b>	<b>\$1.461</b>	<b>Non Low-Income Riders</b>			<b>\$1.586</b>	<b>\$1.609</b>
<b>% Change All Riders</b>					<b>Low-Income Riders</b>			<b>-2.5%</b>	<b>Non Low-Income Riders</b>			<b>1.5%</b>		

Notes: Average fare analysis based on ridership recorded by the farebox and estimated average fare per boarding

\* Pittsburgh Public Schools began transition to ConnectCard in FY2019. Only a subset of these students could be separated from other passholders.