

March
2020-2021

Emergency Fare Change Equity Analysis



Detroit Department of Transportation
Emergency Fare Change Equity Analysis
September 2022

Approval Signature Page

Fare Change Equity Analysis Approval Signature Page

I have received, considered, and approve the Detroit Department of Transportation March 2021 Fare Change Equity Analysis.

C. Mikel Oglesby, Executive Director of Transit

9/22/22

Date

March 2020 - March 2021 Emergency Fare Change Equity Analysis

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Executive Summary

“Under [FTA’s Title VI Circular](#) 4702.1B, transit providers that operate 50-or-more fixed route vehicles in peak service and are located in an urbanized area (UZA) with a population of 200,000 or more, must perform a service equity analysis whenever they make a major service change. The service equity analysis evaluates the impacts of the proposed service changes on Title VI-protected populations and low-income populations. Temporary service changes in response to an emergency do not rise to the level of a major service change, so a service equity analysis is not required.

Similarly, FTA exempts all temporary fare changes enacted as a result of an emergency from the fare equity analysis requirement. However, if a transit agency chooses to make permanent any changes made during an emergency, or if changes last longer than 12 months (service) or 6 months (fare), then the transit agency must perform a service or fare equity analysis.” (*FTA, May 2022*)

DDOT suspended fare collection for 362 days as a response to the Covid-19 pandemic, from March 18, 2020 to March 15th, 2021. As DDOT exceeded the FTA’s emergency fare change six-month exemption, a fare equity analysis must be performed to discern if there were any disparate impacts or disproportionate burdens on FTA specified population for Title VI.

While a suspension of fare collection and subsequent resumption of fare collection is a 100% decrease and increase in fare, the policy and fare structure remained the same and affected all riders across the system. As there was no difference in impact or burden between FTA Title VI specified populations and non-specified populations, no adverse impacts were found.

Background

Covid-19

Covid-19 made national news in the Winter of 2020 as an encroaching public health crisis, prompting the state of Michigan to activate its emergency operations center and prepare for potential spread. The first cases in Michigan were confirmed on March 10th, 2020. In the following week, the case count rose dramatically, schools went virtual, restaurants, salons, gyms, and automotive factories shut down, and restrictions on public gatherings were established. Less than 2 weeks after the first reported case, the Governor issued a statewide stay-at-home order, excepting essential workers.

On March 18th, after several bus drivers tested positive for Covid-19, DDOT temporarily suspended fares and began enforcing masks and backdoor boardings. DDOT safety personnel identified the farebox as a major risk factor for the spread of Covid-19. Sanitizing the farebox in-between each use was operationally impractical, and the protection shields for the drivers were on back-order as demand suddenly rose across the country. Limiting access to the rear door limited points of contact and potential contagion between riders, drivers, and those who sat in the front seats.

Initial projections of the Covid-19 pandemic, and the fare suspension, predicted a nation-wide quarantine lasting a few weeks to a month, however, most pandemic related restrictions were still in place a year later. In January of 2021, the city of Detroit began rolling out vaccines for medical workers and high risk populations, and relaxing restrictions on public gatherings and business operations. By March, vaccines were available to the public. As businesses began to reopen and people began returning to work, DDOT reinstated fare collection on March 15th, 2021, slightly less than a year later.

DDOT's Fare Structure

In 2019, DDOT restructured the fare system from seventeen pass types with three distinct reduced types per pass, to six passes with one reduced type, along with a new mobile ticketing app. Before and after the fare change, cash-based fare remained the most popular method of payment, constituting half of all transactions.

Table 1 DDOT's fare structure as of 2019 to the present.

DDOT Fare Options	Standard Price	Reduced Price
4 Hour Ticket	\$2.00	\$0.50
24 Hour Ticket	\$5.00	\$2.00
7 Day DDOT Only Pass	\$17.00	\$8.00
7 Day Regional Pass	\$22.00	\$10.00
31 Day DDOT Only Pass	\$50.00	\$17.00
31 Day Regional Pass	\$70.00	\$29.00

The preference for cash-based fare, even with no-contact payment options, and the back-door boarding policy created a scenario where collecting fare was physically impossible and unsafe, leading DDOT to the decision to put fare collection on hiatus until it was deemed safe for riders and drivers.

On February 24th 2021, DDOT announced it would resume pass sales in March, with a soft resumption of fare collection starting Monday March 15th, and a hard resumption the next Monday, giving riders three weeks' notice and a one-week grace period before pre-pandemic fare collection policy officially resumed on March 22nd.

Community Engagement

The emergent emergency conditions of the pandemic allowed little room for a traditional community engagement strategy, which often takes at least two months. On March 17 2020, DDOT released two press statements. The first warned passengers to find alternative transportation options as there was a sudden driver shortage. Later in the day, after an agreement over driver safety was reached, another press release explained the new fare and back door boarding policy. As the pandemic wore on, DDOT staff adopted virtual strategies to engage with riders and the public. Monthly community meetings took place over Zoom and DDOT began relying more on social media. Between February 24th 2021 and March 21stth 2021, DDOT made four Instagram posts, fourteen Facebook posts, and twenty-two tweets.

On February 24th and March 12th, DDOT released press statements announcing the resumption of fare collection along with new safety measures. Two local newspapers released articles based on the press releases and interviews, allowing the announcement to reach a broader audience. Staff discussed the policy in the monthly community meetings immediately before and after resuming the fare collection.

DDOT staff consolidated all social media comments for review as a substitute for the pre-pandemic public commenting process. Of the thirty-eight posts across Facebook, Instagram, and Twitter, DDOT received a total of thirty comments, which staff then categorized into five categories: compliments (4), service concerns (4), safety concerns (5), fare comments (12), and other/memes (5). Below are examples of comments.

- 1.) "So is the bus fare still the same?" – Facebook 2/24
- 2.) "Bus fare should continue to be free or at least reduced back to \$1.50... matter of fact, take it back to how it was in the 70s & 80s people should pay based off where they get on the bus vs distance from end of the line." – Twitter 3/3
- 3.) "Should definitely stay free or at least back down to \$1.50" – Instagram 3/9
- 4.) "Can we still use cash or we have to use the dart app/buy a bus pass?" – Facebook 3/14
- 5.) "Bring back all of the service first!" - Facebook 3/15

No actions were taken, or changes made to the fare structure based on the public comment received.

Figure 1 Facebook post from April 18th 2020 explaining fare and boarding policy.



Figure 2 Facebook post from March 3rd 2021 announcing the resumption of Fare collection and front door boarding.



Analysis

DDOT conducted an on-board rider survey in August 2018. 1602 respondents created a dataset that included how they paid for their bus trip, income, household size, and race. Data from the on-board survey gives a snapshot of DDOT rider's preferred fare usage and groups all respondents into minority/non-minority and low-income/higher-income groups. Between 50% and 55% of each population type relies on base cash fare and transfers. Null responses were not counted.

Definitions

Minority Population – Minority counts are based on all individuals who self-classified as anything other than or in addition to white/Caucasian for race in the on-board rider survey.

Low-Income population – Low-income classification is based on the self-reported income and household size questions in the ridership survey and compared to the federal poverty thresholds also based on income and household size.

Disparate Impact – A facially neutral policy or practice that affects members of a group identified by race, color, or national origin. The impact on vulnerable populations should be no more than 25% of the impact on non-vulnerable populations. This number is the result of multiplying the percentage of change for non-vulnerable populations by 75 and dividing by 100. If the percentage of change for vulnerable populations is less than the resulting threshold, there may be a disparate impact. If there is a disparate impact, DDOT must present legitimate justification and discuss alternatives that were not pursued.

Disproportionate Burden – A neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. In DDOT's standards, disparate impact and disproportional burden have the same threshold, calculation method, and outcome.

DDOT's Riders

Data from the 2018 on-board survey gives a snapshot of DDOT rider's transit usage and personal traits. Three quarters of riders use DDOT service three to seven days per week, ninety-two percent report identities that align with FTA's classification of minority population, sixty-nine percent report income that falls at or under the low-income threshold, and fifty-five percent prefer paying standard cash-based fare.

Table 2 Rider profiles from DDOT's 2018 on-board survey

Category	Percent
Minority	92.07%
Low-Income	68.85%
Frequent Use	74.71%
Prefer Cash Fare	54.68%

Measuring Impact

Suspending fare collection results in a 100% change of fare policy and resuming fare collection results in another 100% change.

Suspending fare collection affected all riders, at all times, on all routes, regardless of race, color, national origin, or income. All populations experienced a 100% fare decrease on March 18, 2020, and a 100% increase on March 15, 2021, after the vaccine program began. However, within a year, the net increase or decrease was 0%. The reinstated fare was the same fare structure in place before the emergency response.

Table 3 Changes to base cash fare before, during, and after the emergency fare suspension.

Population Type	Cost of base cash fare			Percent Change within 6 months	Percent Change within 1 year
	3/15/2020	3/18/2020	3/15/2021		
Minority	\$2	\$0	\$2	100%	0%
Non-Minority	\$2	\$0	\$2	100%	0%
Low-Income	\$2	\$0	\$2	100%	0%
Higher-Income	\$2	\$0	\$2	100%	0%

DDOT's Title VI policy does not limit fare increases but it does limit the disparity between low-income or minority riders and higher-income and non-minority riders. There should be no more than a 25% difference of the impact and cost associated burden between Title VI specified riders and non-specified riders, making the difference between them 0%. Since all riders, regardless of identity or pass preference, experienced the same fluctuation in the cost of accessing transit within that year of fare suspension, there is no disparate impact or disproportionate burden found in the temporary fare suspension policy.

Mitigation and Alternative Considerations

The intention to suspend fare was to preserve the safety of everyone on the bus. Alternatives to maintain fare collection included relying on no-contact fare collection, sanitizing the farebox after each use, and providing personal protective equipment (PPE) to drivers and riders. DDOT decided to provide PPE on board, however sanitizing the farebox after each rider paid fare was not feasible and the reliance on cash-based fare could create equity concerns. The decision to suspend fare was the only sustainable and equitable way to provide safe service during the Covid-19 global pandemic.

Conclusion

Ensuring safety on public transit during a global health and economic crisis required a rapid response with little time for planning. After considering alternatives, DDOT staff decided that suspending fare until the crisis abated was the best method of action. Suspending fare lessened points of contact between drivers and riders, gave a small bit of economic relief to essential workers using public transit, and was the simplest solution to communicate to riders to continue delivering effective and necessary services.

The six month difference in cost to the rider after fare suspension was 100% while the twelve month difference was 0%, however in either calculation, the difference between FTA specified populations and others was 0%. DDOT's Title VI standards state that the difference must be less than 25% to avoid a disparate impact or disproportionate burden, thus no adverse impacts were found in the emergency fare change.

While it is true that no adverse impacts were found, DDOT understands that a 100% fare resumption may cause hardship to individual riders, therefore DDOT gave three weeks advance notice, a one-week grace period, and still offers reduced fare to any qualified rider.

Appendix

FTA language on fare change during the Covid Pandemic:

Federal Transit Administration (2022 May 18) “Frequently Asked Questions from FTA Grantees Regarding Coronavirus Disease 2019 (COVID-19)”

<https://www.transit.dot.gov/frequently-asked-questions-fta-grantees-regarding-coronavirus-disease-2019-covid-19>

Press releases for fare suspension (March 2020) and resumption (March 2021):

City of Detroit (2020 March 17) “PUBLIC ADVISORY: Due to driver shortage there will be no bus service today, passengers advised to seek other forms of transportation.”

<https://detroitmi.gov/news/public-advisory-due-driver-shortage-there-will-be-no-bus-service-today-passengers-advised-seek-other>

City of Detroit (2020 March 17) “Bus service to resume at 3:00 AM, Wednesday after Mayor and DDOT unions agree to new sanitization and safety protocols”.

<https://detroitmi.gov/news/bus-service-resume-300-am-wednesday-after-mayor-and-ddot-unions-agree-new-sanitization-and-safety>

City of Detroit (2021 February 24) “DDOT, SMART to resume fare collection, additional safety measures implemented to protect riders and operators.”

<https://detroitmi.gov/news/ddot-smart-resume-fare-collection-additional-safety-measures-implemented-protect-riders-and>

City of Detroit (2021 March 12) “REMINDER: DDOT and SMART to resume fare collection Monday, March 15.” <https://detroitmi.gov/news/reminder-ddot-and-smart-resume-fare-collection-monday-march-15>

Press coverage for fare suspension (March 2020) and resumption (March 2021):

Bisma Parvez, “Detroit buses running again, passengers ride free after changes in protocols for coronavirus,” *Detroit Free Press* March 18 2020

<https://www.freep.com/story/news/local/michigan/wayne/2020/03/18/passengers-ride-free-detroit-ddot-buses-back-schedule-wednesday/2862877001/>

Ken Haddad & Dave Bartkowiak, “Mayor Duggan: DDOT bus rides resume today and are free,” *Click on Detroit* March 18 2020

<https://www.clickondetroit.com/news/local/2020/03/17/mayor-duggan-ddot-bus-rides-will-be-free-service-to-resume-wednesday/>

Eli Newman, “Detroit Buses Ride Again With Free Fare After COVID-19 Suspension,” *WDET* March 18 2020 <https://wdet.org/2020/03/18/detroit-buses-ride-again-with-free-fare-after-covid-19-suspension/>

Eric Lawrence, "DDOT, SMART prepare to resume fare collection after installing COVID-19 safety features," *Detroit Free Press* February 24 2021
<https://www.freep.com/story/news/local/michigan/detroit/2021/02/24/ddot-smart-free-bus-fare-collection-covid-19/4575365001/>

"DDOT, Smart to resume collecting fares, increase bus capacity starting March 15," *WXYZ* February 24 2021 <https://www.wxyz.com/news/coronavirus/ddot-smart-to-resume-collecting-fares-increase-bus-capacity-starting-march-15>

Twitter posts from @RideDDOT for resuming fare:

1. (2021 February 24) <https://twitter.com/RideDDOT/status/1364668479748636675>
2. (2021 February 25) <https://twitter.com/RideDDOT/status/1364960848385429504>
3. (2021 February 26) <https://twitter.com/RideDDOT/status/1365315686143156229>
4. (2021 February 28) <https://twitter.com/RideDDOT/status/1366140230965821440>
5. (2021 March 1) <https://twitter.com/RideDDOT/status/1366406623263002627>
6. (2021 March 2) <https://twitter.com/RideDDOT/status/1366802987289485313>
7. (2021 March 3) <https://twitter.com/RideDDOT/status/1367117312197804038>
8. (2021 March 3) <https://twitter.com/RideDDOT/status/1367219842366009359>
9. (2021 March 5) <https://twitter.com/RideDDOT/status/1367920348101042176>
10. (2021 March 6) <https://twitter.com/RideDDOT/status/1368328222144872454>
11. (2021 March 7) <https://twitter.com/RideDDOT/status/1368677228108775432>
12. (2021 March 8) <https://twitter.com/RideDDOT/status/1368924465107771395>
13. (2021 March 9) <https://twitter.com/RideDDOT/status/1369351871677280259>
14. (2021 March 10) <https://twitter.com/RideDDOT/status/1369720962271223813>
15. (2021 March 14) <https://twitter.com/RideDDOT/status/1371128995736064005>
16. (2021 March 15) <https://twitter.com/RideDDOT/status/1371424147599921153>
17. (2021 March 15) <https://twitter.com/RideDDOT/status/1371427205125967875>
18. (2021 March 15) <https://twitter.com/RideDDOT/status/1371481690871304194>
19. (2021 March 15) <https://twitter.com/RideDDOT/status/1371514862585647106>
20. (2021 March 16) <https://twitter.com/RideDDOT/status/1371861317309579266>
21. (2021 March 19) <https://twitter.com/RideDDOT/status/1372956050962452486>
22. (2021 March 21) <https://twitter.com/RideDDOT/status/1373733816066523144>

Instagram posts from @RideDDOT for resuming fare:

1. (2021 February 24) <https://www.instagram.com/p/CLsCjUQD5rF/>
2. (2021 February 26) https://www.instagram.com/p/CLxU5etDb_S/
3. (2021 March 1) <https://www.instagram.com/p/CL4mGFvDD3m/>
4. (2021 March 9) <https://www.instagram.com/p/CMNWKUqsmPi/>

Facebook posts from @RideDDOT for resuming fare:

1. (February 24, 2021)
<https://www.facebook.com/RideDDOT/posts/pfbid024jn1j7jF7UNeeJ282FuesU2K4QnA2f69axEMqEJpdUg2ezAvGUnvRFsiJDr1T6yAI>
2. (2021 February 25)
<https://www.facebook.com/RideDDOT/posts/pfbid08Jd2EC6YsuDVpWvgK2Vn2DggjAsoX7VeqxHFdEp9qQxDvGFfQfpMa6BqqSNcEAI>
3. (2021 February 26)
<https://www.facebook.com/RideDDOT/posts/pfbid02rrzEufiWTEdUQpGA9VNGFb7yfwM6hdoJsZbtJbmcwnZyHqYbFqXLuvWTRUsRLGA2I>
4. (2021 March 1)
<https://www.facebook.com/RideDDOT/posts/pfbid0Qc45AqqVmpkzrEbMooxK84cAf7LTzHiApQ6Er61sC9YDyvA4P2ftizNrG8X9g8nl>
5. (2021 March 2)
<https://www.facebook.com/RideDDOT/posts/pfbid02c4GZMKsiXLW5gXS2wP6zDMmaPowhd8Ci7PnQdLY2LpemZQeR4syXBPrFgcjLwrCRI>
6. (2021 March 3)
<https://www.facebook.com/RideDDOT/posts/pfbid02U8vwqfpXxixC7eoWbHBcKp6NqZSpW6DVYnpxQAaPvzeigNtVwXJdRwQ9QdsKW8bl>
7. (2021 March 5)
<https://www.facebook.com/RideDDOT/posts/pfbid02tMotoZ6Efo4JyvbT3N3ipHpkbrQwW9VaVJshgicFM2Wd6KyxFxxVK9VrFJDKj3dQI>
8. (2021 March 7)
<https://www.facebook.com/RideDDOT/posts/pfbid02nnsjHVymKUAiM4CegHbvnmhcEWMMs8fqemB3t166QQ4BCZDd1rTXDQmYYMi1VT9LI>
9. (2021 March 8)
<https://www.facebook.com/RideDDOT/posts/pfbid024apcLVqizFRmChR9mTq6A6w2EtbnfLogHmKZRus6N34U8hN4xK26iyexyVJdbixNI>
10. (2021 March 9)
<https://www.facebook.com/RideDDOT/posts/pfbid0LPCpvJinNJ77xoUzHAqCP4Lzvyc14UgqoqGF33pdvGAxDUgARJ4qD75KSjtJ9er9I>
11. (2021 March 10)
<https://www.facebook.com/RideDDOT/posts/pfbid0261AayJunyjSEyN3GtqVPEY65qFNjuFheVVN5RYL2mMDR8TgGXsNXV5fxSZqjXGPBI>
12. (2021 March 14)
<https://www.facebook.com/RideDDOT/posts/pfbid02WkWoAyPiYAHpmCynno7qBB1rBKZr38ojHvZAx2n1vh6YcP6tJz1MfZAk6RFW8GnGI>
13. 2021 (March 15)
<https://www.facebook.com/RideDDOT/posts/pfbid0UeraCRWwmRFsC9qbKzsTKcNy2LznTod88hS6LYgwAVV4BsPHcHbjcPjsbDX5EGeLI>
14. (2021 March 15)
<https://www.facebook.com/RideDDOT/posts/pfbid023JFeWdUemaThBo5nQsCUnLRtGnRqhCrz2Ym9f6jXQY9pAfR2dqCyeevDLD6vVv7KI>