

# DDOT 2023 Title VI Onboard Survey Report

DDOT

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Prepared for:

DDOT

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# 1. Introduction

This report includes the results of the 2023 Detroit Department of Transportation (DDOT) Title VI Onboard Survey. AECOM designed, developed, and analyzed a 23-question onboard, self-administered survey that was fielded from January 20, 2023, through February 11, 2023. The goal of the project was to address the nine areas prescribed in the FTA Title VI circular (race, color, language spoken at home, household income, travel patterns, fare usage, national origin, and English proficiency). Additional customer information was gathered including trip purpose, trip frequency, internet accessibility, residency, and other demographics. A total of 1,018 surveys were collected.

The overall goals of the project were to measure the following:

- Obtain a demographic snapshot view of DDOT riders.
- Better understand the fares and passes that riders in different demographic subsets use each day.
- Learn DDOT rider habits including how often they ride, how they travel to a bus stop, destinations, and more.
- Gather core demographic data about riders, including gender, age, ethnicity, residency, employment status, and household income.
- Learn if riders have access to the internet, and the type of cell phone they use.
- Specifically address the Title VI objectives noted above.

This report includes percentage responses for each question and category of response based on all valid surveys collected. An in-depth analysis of results, all open-ended responses, and cross-tabulations of selected survey questions is also included in the Appendix.

Please note that conventional rounding rules (.5 or above is rounded up to the next whole number, and .4 or below is rounded down to the previous number) have been applied to the percentages in the report tables. As a result, the percentages below may not always add up to 100 percent. Several questions allowed for multiple responses as well, and in those cases the results might be more than 100 percent.

## 2. Methodology

A summary of the target audience and survey details are below. This project was undisguised—in other words, it was disclosed to participants that DDOT was sponsoring the research.

### Training and Data Collection Process

Prior to data collection, a training session was held with all data collection staff. Eight surveyors were trained for the data collection responsibilities. The training covered the purpose of the survey, survey goals, process for data collection, incentives, and overall protocol. Once trained, the data collection team was deployed. Team members were assigned specific daily quotas for each route during different times of the day and days of the week (see Appendices for detailed route assignments). Survey quotas for each route were determined based on that route's percentage of the total DDOT ridership. The survey was administered during weekdays (Monday-Friday) and on weekends (Saturday-Sunday). Working in teams of two, staff boarded the DDOT buses and handed out the survey instrument. Once surveys were complete, the instrument was collected. Members of the data collection team wore a DDOT badge (that had bus pass access) identify themselves.

To ensure that the survey process was as inclusive as possible, the surveys were made available in Spanish and Arabic. In total, three Spanish surveys and one Arabic survey were filled out.

### The Sampling Plan

The overall goal of the project was to obtain an adequate number of survey responses to be able to complete a snapshot analysis of DDOT riders. A sampling plan was developed that reflected this goal and ensured that there was a representative sample based on route. The population ridership data was used to create the sampling plan and a final goal of 1,066 completed surveys was set. This reflects a slight weighting based on more frequently used routes. Additional Title VI weighting was included and is noted below. The margin of error for the entire DDOT system is for a confidence level of 95% with a margin of error of  $\pm 3\%$  for the entire system. The sampling plan ensures that high-ridership limited-English proficiency (LEP) population routes are oversampled so an analysis with the same confidence level and margin of error can be performed on this subset of data. The Title VI-focused routes and topics were reviewed for any significant results and are cited where appropriate.

### Survey Instrument Preparation

A survey instrument was provided to AECOM by DDOT staff. The finished product consisted of 30 questions (See Appendix A.4).

### Title VI Considerations

The survey sample plan was formulated with oversampling on specific bus routes that have stronger minority ridership according to previous DDOT data as well as Census tract data. These routes are referred to as *Low-English Proficiency* route (“LEP” routes) and are highlighted on the spreadsheet of routes and quotas in Appendix A.5.

### 3. Executive Summary

Below please find a table outlining the key results from the survey.

<i>Question</i>	<i>Response Rate</i>	<i>Results</i>	
<i>On which day(s) do you usually ride the bus?</i>	97%	Weekdays	30%
		Weekends	7%
		Both	63%
<i>When do you usually ride the bus?</i>	95%	6AM – 3PM	62%
		After 3PM	32%
		Special Events	6%
<i>How many days a week do you ride the bus?</i>	95%	Less than 1	3%
		1 – 2	13%
		3 – 5	40%
		6 – 7	44%
<i>How did you get to the stop where you boarded this bus?</i>  <i>Other Includes: "Flex," Other (not specified)</i>	97%	Walked	51%
		Dropped off	27%
		Transferred from DDOT	13%
		Bicycled	5%
		Transferred from SMART	2%
		Park and Ride	2%
		Other	1%
		Drive	0.1%
<i>How will you get from this bus to your destination?</i>  <i>Other Includes: "Uber," "D2A2 Bus," "QLine," Other (not specified)</i>	97%	Walk	45%
		Will be picked up	26%
		Transfer to DDOT	21%
		Bicycle	4%
		Transfer to SMART	2%
		Drive	1%
		Other	1%

<b>Question</b>	<b>Response Rate</b>	<b>Results</b>
<i>Where are you coming from? (Choose One)</i>  <i>Other Includes: "Church," "Downtown," "Family," "Shelter," "Transit Center," Other (not specified)</i>	99%	Home 58%
		Work 21%
		Shopping / Errands 6%
		Doctor / Dentist 6%
		Other 5%
		Entertainment 2%
		School 2%
<i>Where are you going? (Choose One)</i>  <i>Other Includes: "Church," "Court," "Food Pantry," "Friend/s," "Gym," "Hospital," "Library," "Monastery," "Police Station," "Rehab," "St. John Mission," and Other (not specified)</i>	96%	Work 39%
		Home 20%
		Shopping / Errands 16%
		Doctor / Dentist 9%
		School 5%
		Other 6%
		Entertainment 4%
<i>Did you pay a reduced fare today?</i>	77%	No 64%
		Yes 36%
<i>How did you pay for your fare today?</i>	90%	Cash 65%
		Purchased a pass 27%
		Used the Dart App 8%
<i>If you purchased a pass or used the Dart app, which did you use for today's trip?</i>	90%	No pass, paid in cash 45%
		DDOT Student Card 4%
		DDOT, 7-day 12%
		DDOT, 31-day 18%
		Regional, 4-hour 13%
		Regional, 24-hour 2%
		Regional, 7-day 1%
		Regional, 31-day 5%
<i>Do you use a credit or debit card?</i>	69%	Yes 57%
		No 43%



<i>Question</i>	<i>Response Rate</i>	<i>Results</i>	
<i>Do you use a smartphone?</i>	81%	Yes	82%
		No	18%
<i>How do you access the internet?</i>	95%	Smartphone	53%
		At home	23%
		Library	14%
		Non-smart cell phone	5%
		Internet café	3%
		Do not have internet	3%
<i>Describe your living status:</i> <i>Other includes: "Mission," "Homeless," "Dorm," Other (not specified)</i>	87%	Renter	58%
		Other	31%
		Homeowner	11%
<i>What is your employment status?</i>	89%	Full-time	45%
		Part-time	20%
		Unemployed	15%
		Retired	10%
		Student	8%
		Homemaker	2%
<i>What is your annual income?</i>	79%	Under \$32,468	64%
		\$32,498 – \$50,000	25%
		\$50,000 – \$75,000	10%
		Over \$75,000	1%
<i>How many people currently live in your household?</i>	89%	1 – 2	46%
		3 – 4	39%
		5 – 6	12%
		7 or more	3%
<i>What is your educational status?</i>	88%	Some High School	14%
		High School / GED	75%
		Trade	4%
		Bachelor's degree	4%
		Master's Degree	2%

Question	Response Rate	Results
		Ph.D. 0.2%
<i>What gender do you identify as?</i>	95%	Male 54% Female 35% Non-Binary / Self-Describe 11%
<i>How old are you?</i>	94%	12 – 17 6% 18 – 25 22% 26 – 41 29% 42 – 57 25% 59 and older 19%
<i>What is your race? Check all that apply.</i>  <i>*Native American and Alaska Native was written as NA/AN on the survey and was believed to have been confused with the abbreviation N.A., resulting in an inaccurate result</i>	91%	Black 77% Native American and Alaska Native* 9% White 6% Multiracial 5% Hispanic 1% Other (not specified) 1% Native Hawaiian / Pacific Islander 0.3% Asian 0.1%
<i>What city do you live in?</i>  <i>"Other: Southeast Michigan" Includes: Ann Arbor, Grosse Pointe, Hamtramck, Livonia, Macomb, Mount Clemens, Oak Park, Redford, Southfield, Taylor, Wayne, Canton, Center Line, Ecorse, Ferndale, Fraser, Grosse Pointe Woods, Hazel Park, Inkster, Lincoln Park, Macomb County, Melvindale, Pleasant Ridge, Redford Township, Riverview, Royal Oak, St. Clair Shores, Sterling Heights, West Bloomfield, Ypsilanti, Dearborn Heights, Roseville</i>  <i>"Other: Out of State" Includes: California, Chicago</i>	81%	Detroit 87% Other: Southeast Michigan 6% Warren 2% Dearborn 2% Highland Park 1% Eastpointe 1% Harper Woods 1% Other: Out of State 0.2%
<i>Do you have a driver's license?</i>	86%	No 55% Yes 45%
<i>Are you disabled?</i>	93%	No 84% Yes 16%

<i>Question</i>	<i>Response Rate</i>	<i>Results</i>	
<i>What is the primary language spoken in your home?</i>  <i>Other Includes: Bengali, Dari, French, German, Japanese, Other (not specified)</i>	94%	English	94%
		Spanish	3%
		Arabic	2%
		Other	1%
<i>Do you speak English?</i>	92%	Very well	98%
		Less than very well	2%
		Not at all	1%
<i>Are you married?</i>	92%	No	91%
		Yes	9%
<i>Are you a Veteran?</i>	93%	No	94%
		Yes	6%

## 4. Additional Findings

### Key findings from the survey are highlighted below:

*Bulleted items make comparisons between 2018 and 2023 survey results.*

**City of Residence:** 87% of respondents live in Detroit and 13% live within Southeast Michigan (2 respondents were from outside the State).

- 2018 results were similar, with 86% of respondents living in Detroit.

**Travel Patterns:** Most riders ride the bus on both weekdays and weekends (60%). Most riders ride the bus between 6AM - 3PM (63%). The greatest share of riders rides the bus 6-7 days a week (44%).

- There was a slight decrease in weekend ridership between 2018 (12%) and 2023 (7%).
- There was a slight decrease in ridership for special events between 2018 (12%) and 2023 (6%).
- The number of days respondents rode the bus per week was very similar between 2018 and 2023.

**Travel purpose and method:** Most respondents use DDOT to travel to (59%) and from (79%) home or work. Most respondents walk to the bus stop (51%) and the greatest share of respondents walk once getting off the bus (45%).

- There were no notable differences in ingress/egress methods and origin/destination patterns between 2018 and 2023.

**Payment Methods:** Most respondents pay the normal fare rate (64%) and most pay in cash (65%). Besides cash, the greatest share of respondents uses the DDOT 31-day pass (18%), closely followed by the Regional 4-hour pass (13%), and the DDOT 7-day pass (12%). A slim majority of respondents use a credit or debit card (57%).

- It is difficult to compare payment method results in 2018 to 2023 due to differences in the payment systems, however usage of cash seems to be similar in 2018 (63%) and 2023 (65%).
- Slightly more respondents used a debit card in 2018 (58%) compared to 2023 (57%).

**Technology:** A vast majority of respondents use a smartphone (82%). Smartphones were also the most common method of accessing the internet (53%). 3% of respondents do not access the internet.

- More respondents use a smartphone in 2023 (82%) than in 2018 (77%)
- More respondents accessed the internet through a smartphone in 2023 (53%) than in 2018 (34%). Less accessed the internet at home in 2023 (23%) than in 2018 (47%). In 2023, 3% of respondents do not have access to the internet, compared with 5% lacking regular access in 2018.

**Income and education:** Most respondents (64%) have an annual household income under \$32,498. Most respondents have more than 2 people living in their household (54%). The vast majority of respondents have an education level at high school graduate or below (89%).

- Income levels (*not* adjusted for inflation) have increased slightly since 2018. In 2023, 64% of respondents make under \$32,688, compared with 89% of respondents making under \$34,999 in 2018. In 2023, 35% of respondents make between \$32,498 - \$75,000 compared with 10% of respondents making between \$35,000 - \$75,000 in 2018.

**Demographics:** The greatest share of respondents are 26-41 years old (29%). Most respondents are Black (77%). 35% of respondents identify as female, the minority of respondents identify as non-binary/self-describe (11%).

- Breakdowns of race and age are similar between 2018 and 2023 results. More respondents identified as female in 2018 (48%).

**Vulnerable groups:** Most respondents do not have a driver's license (55%). 16% of respondents are disabled. 3% of respondents do not speak English well or do not speak English at all. 6% of respondents do not primarily speak English at home. Spanish and Arabic are the other predominant languages.

- Disability and Driver's License breakdowns are similar between 2018 and 2023. Less respondents did not primarily speak English at home in 2018 (3%). Spanish speakers increased from 2% in 2018 to 3% in 2023 and Arabic speakers increased from 0% in 2018 to 2% in 2023. Farsi speakers decreased from 1% in 2018 to 0% in 2023.

## Key findings from cross-tabulation analysis

Several cross-tabulation analyses were completed to better understand the survey results. Notable results from these analyses are included below. Full results can be seen in the tables in Appendix A.2.

### Household income level by how many days a week respondent rides the bus

- In general, respondents who have an income level under \$32,498 ride the bus more frequently. Respondents who have an income level above \$50,000 ride the bus less frequently (Table 2).

### Payment type and payment method by how many days a week respondent rides the bus

- Respondents paying a reduced fare ride the bus less frequently than respondents paying a normal fare (Table 3).
- Respondents who ride the bus 3 days or more per week were more likely to purchase a pass or use the Dart App; Compared with respondents who ride the bus 2 days or less per week, who were more likely to pay in cash (Table 5).

### Payment method by variety of variables including race/ethnicity, city of residence, household income level, use of debit/credit card, and English proficiency (Tables 6-10)

- Respondents who use a debit or credit card were less likely to use cash and more likely to purchase a pass or use the Dart App compared with respondents who do not use a debit or credit card (Table 9).

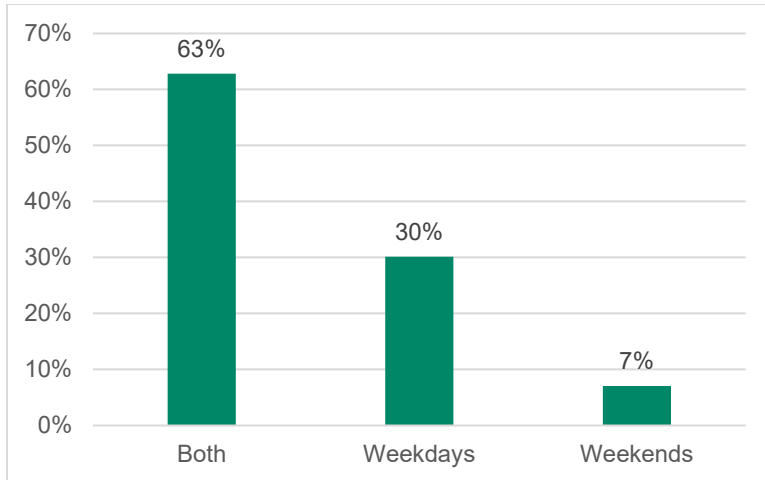
### Respondent age by variety of variables including employment status, debit/credit card usage, and smartphone usage

- Respondents who are 58 and older are more likely to be unemployed or retired compared to younger respondents (Table 11).
- Most residents between 18 and 57 years old are working full-time (Table 11).
- 48% of respondents who are 12 to 17 years old were students (Table 11).
- On average, younger respondents are more likely to use a smart phone than older respondents (Table 12).

# Appendix A

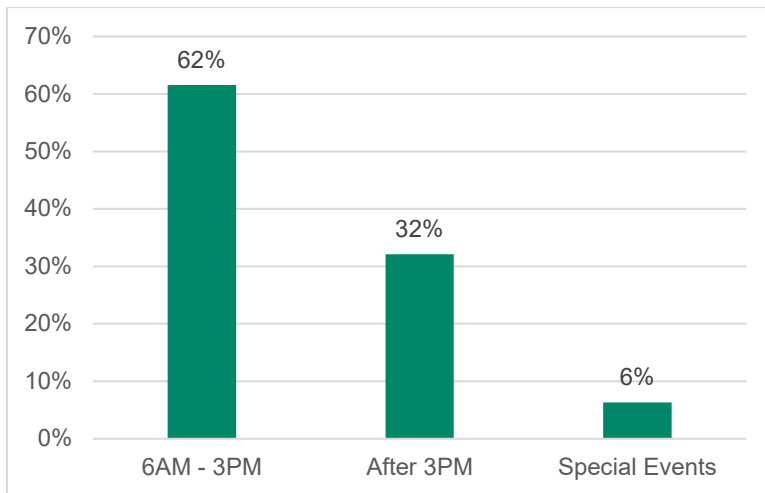
## A.1 Results Graphs

Figure 1: On which day(s) do you usually ride the bus?



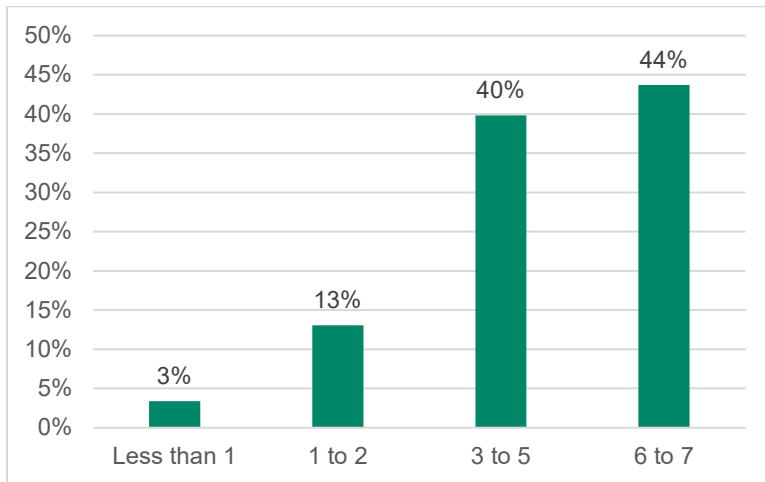
Response Rate: 97%

Figure 2: When do you usually ride the bus?



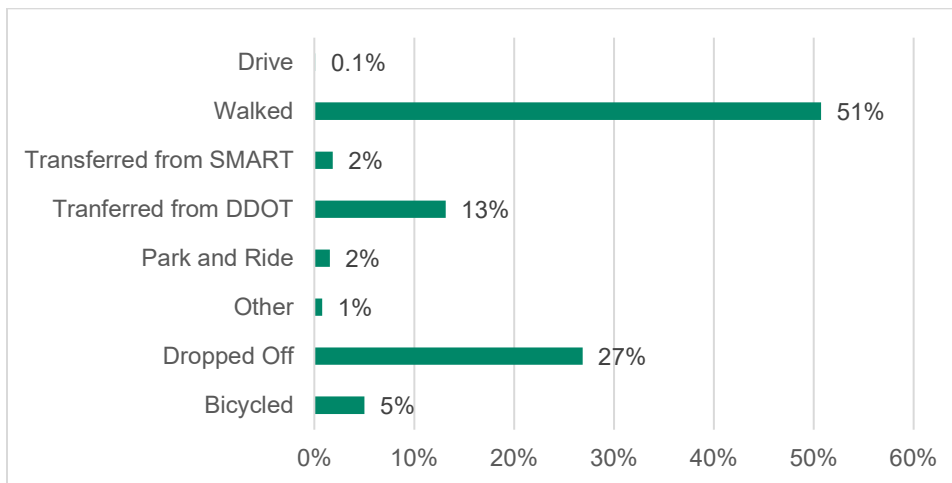
Response Rate: 95%

**Figure 3: How many days a week do you ride the bus?**



Response Rate: 95%

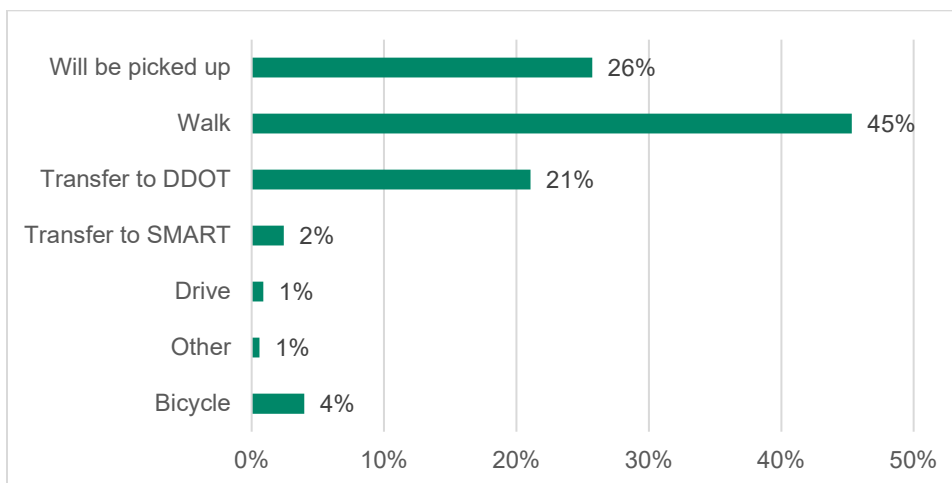
**Figure 4: How did you get to the stop where you boarded this bus?**



Response Rate: 97%

Other includes: Other (not specified), "Flex"

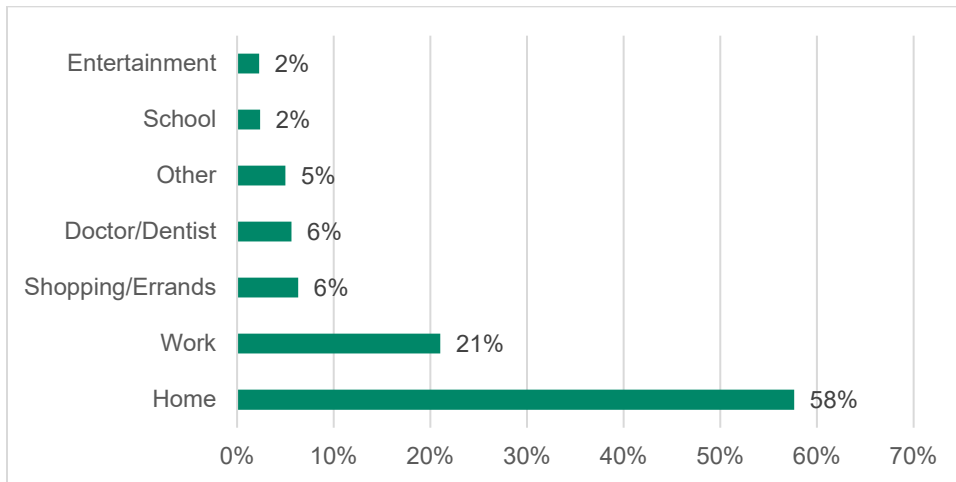
**Figure 5: How will you get from this bus to your destination?**



Response Rate: 97%

Other includes: Other (not specified), Uber, D2A2 Bus, QLine

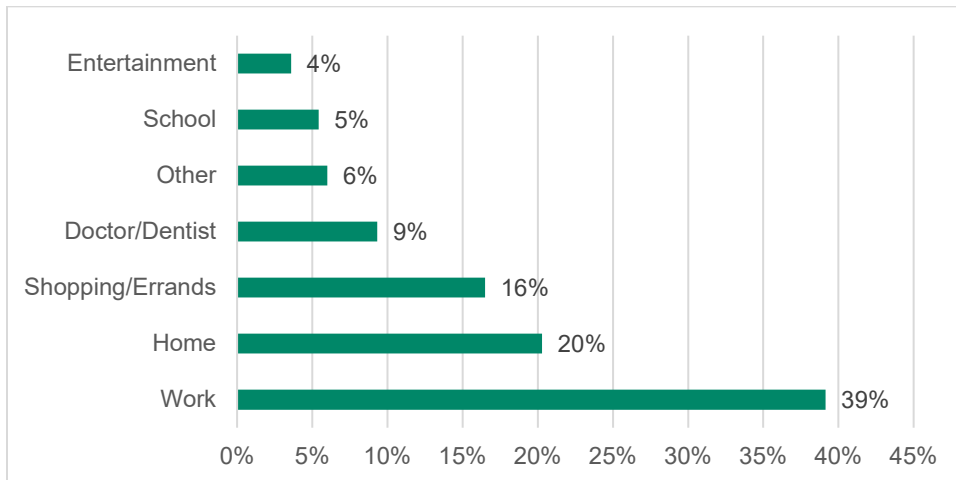
**Figure 6: Where are you coming from? (Choose one)**



Response Rate: 99%

Other includes: Other (not specified), church, downtown, family, shelter, transit center

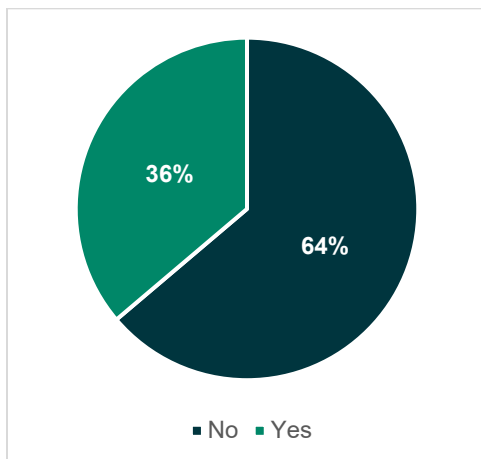
**Figure 7: Where are you going on this trip? (Choose One)**



Response Rate: 96%

Other includes: Other (not specified), church, court, food pantry, fried(s), gym, library, monastery, police station, rehab, St. John Mission

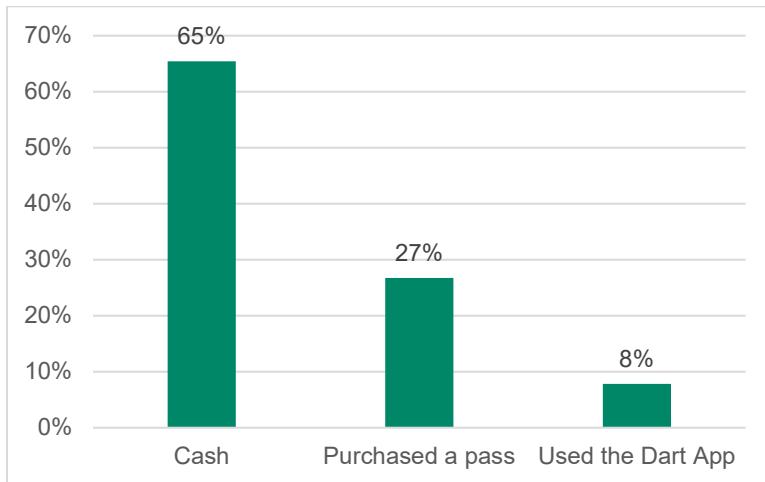
**Figure 8: Did you pay a reduced fare today?**



Response Rate: 77%

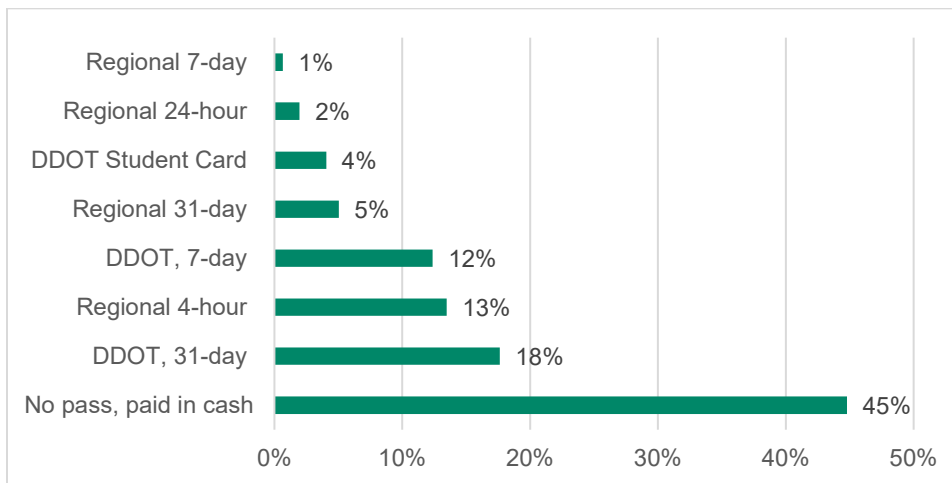


**Figure 9: How did you pay for your fare today?**



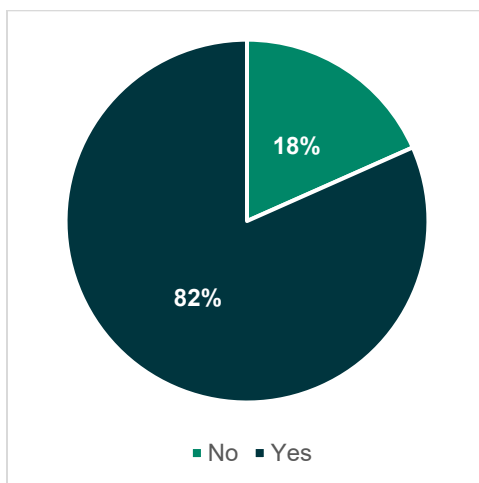
Response Rate: 90%

**Figure 10: If you purchased a pass or used the Dart app, which did you use for today's trip?**



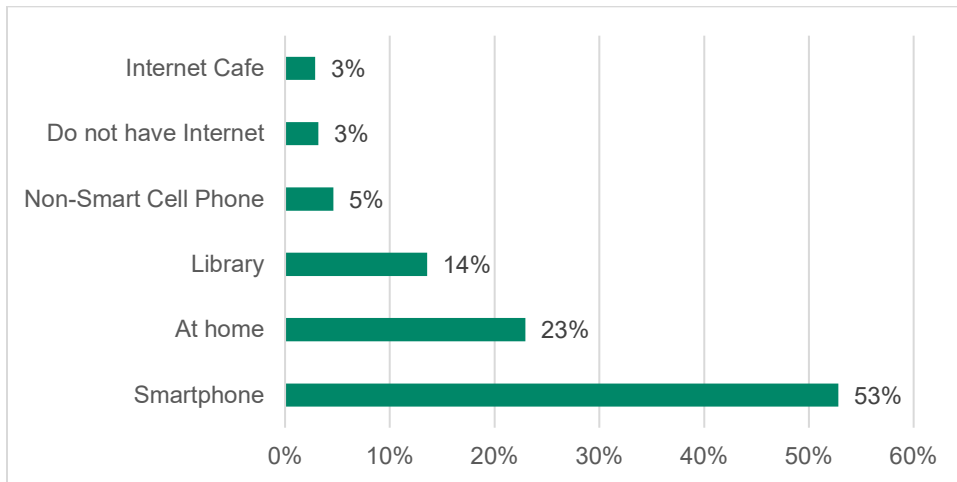
Response Rate: 90%

**Figure 11: Do you use a smartphone?**



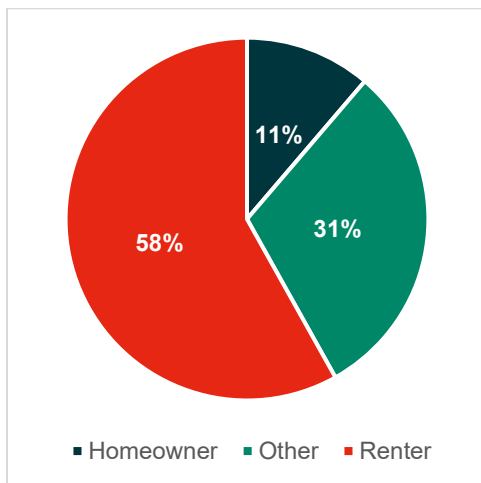
Response Rate: 81%

**Figure 12: How do you access the internet?**



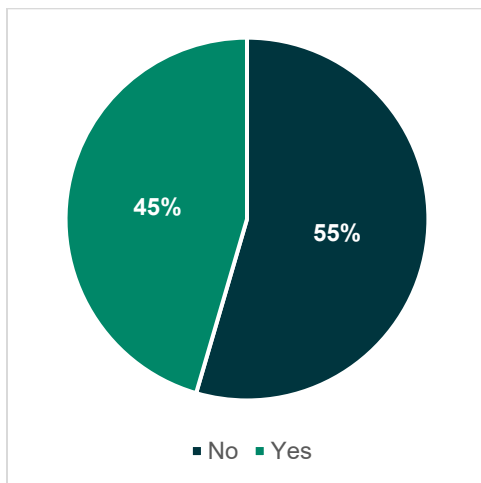
Response Rate: 95%

**Figure 13: Describe your living status**



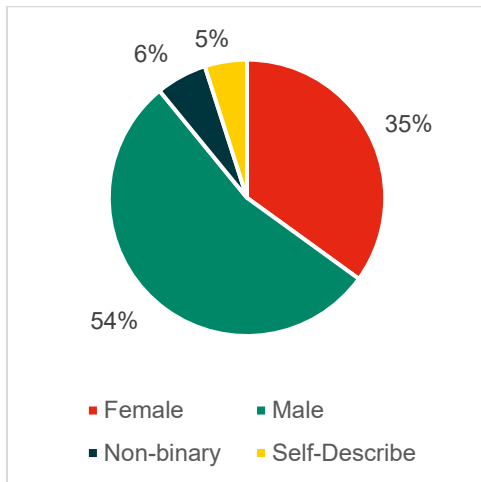
Other includes: Other (not specified), mission, homeless, dorm  
Response Rate: 87%

**Figure 14: Do you have a driver's license?**



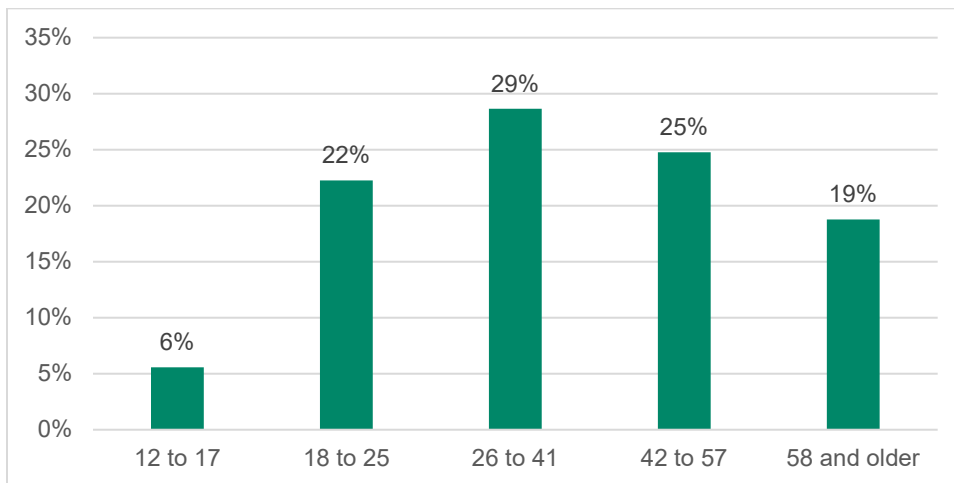
Response Rate: 86%

**Figure 15: What gender do you identify as?**



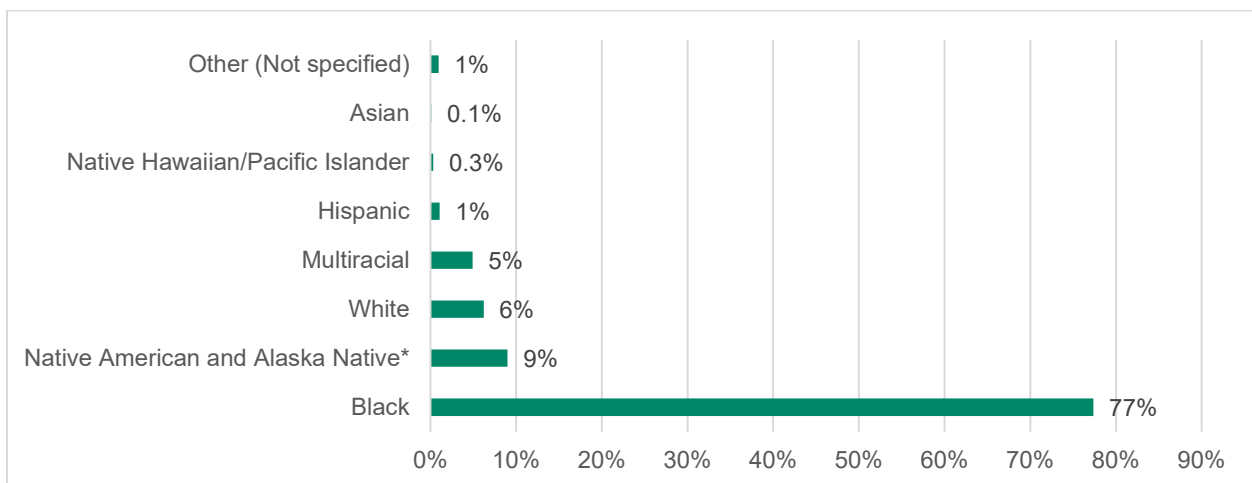
Response Rate: 95%

**Figure 16: How old are you?**



Response Rate: 94%

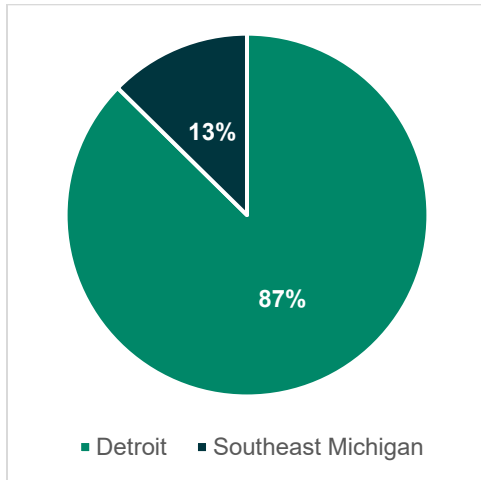
**Figure 17: What is your race? Check all that apply.**



*\*Native American and Alaska Native was written as NA/AN on the survey and was believed to have been confused with the abbreviation N.A., resulting in an inaccurate result*

Response Rate: 91%

Figure 18: What city do you live in?



**Southeast Michigan Includes:** Warren, Dearborn, Highland Park, Eastpointe, Harper Woods, Ann Arbor, Grosse Pointe, Hamtramck, Livonia, Macomb, Mount Clemens, Oak Park, Redford, Southfield, Taylor, Wayne, Canton, Center Line, Ecorse, Ferndale, Fraser, Grosse Pointe Woods, Hazel Park, Inkster, Lincoln Park, Macomb County, Melvindale, Pleasant Ridge, Redford Township, Riverview, Royal Oak, St. Clair Shores, Sterling Heights, West Bloomfield, Ypsilanti, Dearborn Heights, Roseville

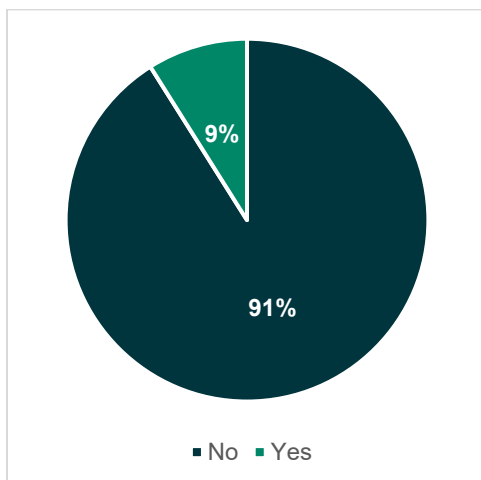
**Out of State (0.2% of respondents, not shown on chart) Includes:** California, Chicago  
Response Rate: 81%

**Table 1: What is your zip code?**

Zipcode	Number of Respondents	Zipcode	Number of Respondents	Zipcode	Number of Respondents	Zipcode	Number of Respondents
48228	66	48127	6	48513	1	48030	1
48214	54	48209	6	48292	1	48244	1
48227	51	48217	6	48123	1	48130	1
48215	46	48236	5	48884	1	48310	1
48205	38	48216	5	48088	1	48267	1
48213	35	48015	5	48824	1	48002	1
48235	26	48211	4	48230	1	48090	1
48207	22	48125	4	48036	1	48424	1
48204	19	48120	3	48112	1	48104	1
48234	19	48126	3	48093	1	48042	1
48206	18	48066	3	48081	1	33579	1
48219	17	48243	3	48046	1	48197	1
48238	17	48122	3	48278	1	48028	1
48221	17	48277	3	48101	1	48222	1
48201	16	48180	3	48128	1	48287	1
48203	16	48229	3	48044	1	48232	1
48225	16	48220	3	48727	1	48240	1
48202	15	48089	2	48237	1	48135	1
48224	15	48324	2	47311	1	48038	1
48223	14	48233	2	40204	1	48239	1
48226	11	48313	2	48067	1	48300	1
48208	9	48279	2	48150	1	48246	1
48021	9	48124	2	48275	1	48514	1
48091	8	48105	2	48269	1	48358	1
48212	7	48121	2	48069	1		
48210	7	48325	2	60612	1		

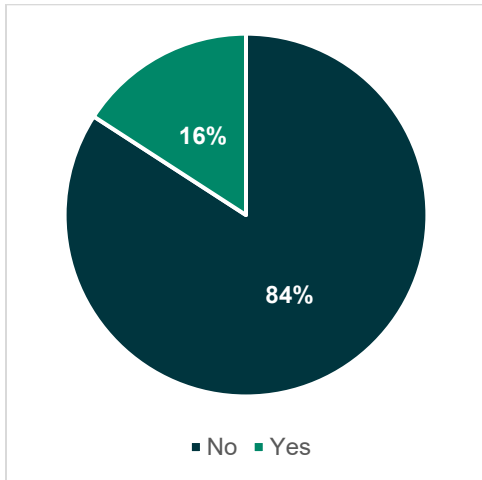
Response Rate: 71%

**Figure 19: Are you married?**



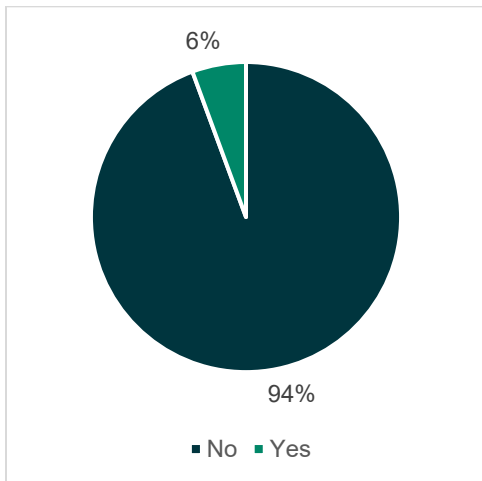
Response Rate: 92%

**Figure 20: Are you disabled?**



Response Rate: 93%

**Figure 21: Are you a veteran?**



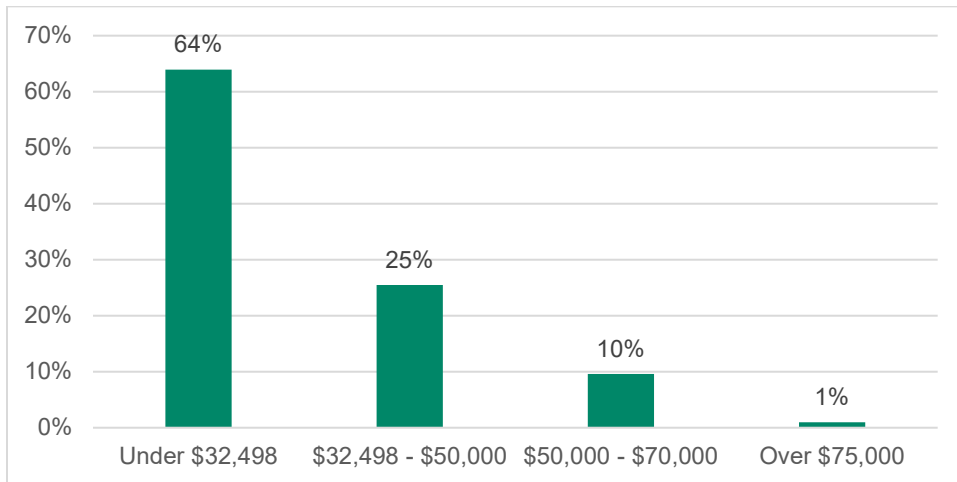
Response Rate: 93%

**Figure 22: What is your employment status?**



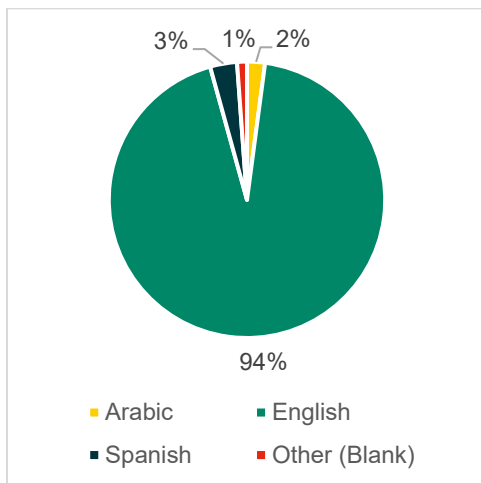
Response Rate 89%

**Figure 23: What is your total household income?**



Response Rate: 79%

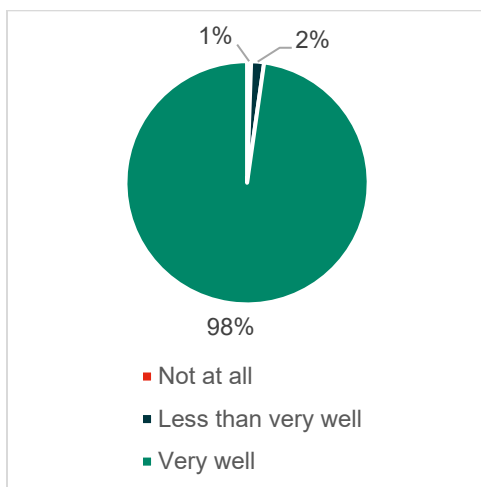
**Figure 24: What is the primary language spoken in your home?**



Response Rate: 94%

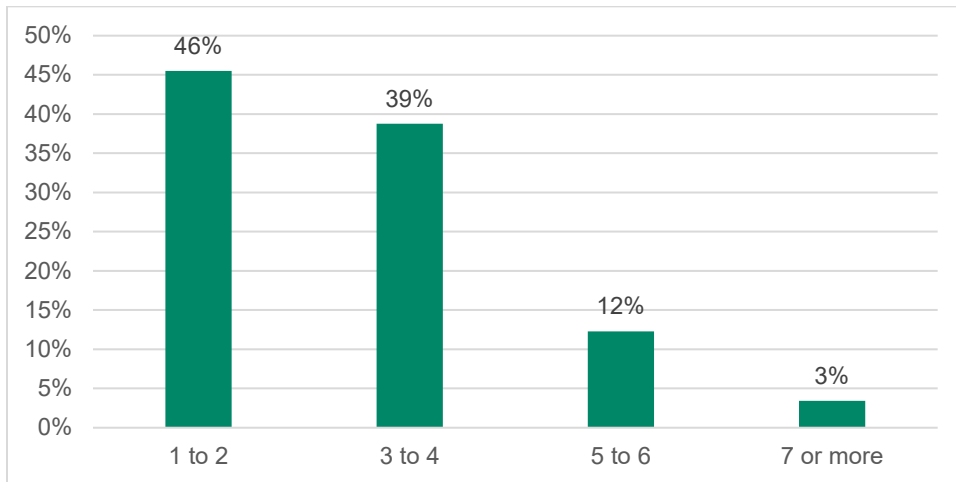
Other includes: Bengali, Dari, French, German, Japanese, Other (not specified)

**Figure 25: Do you speak English?**



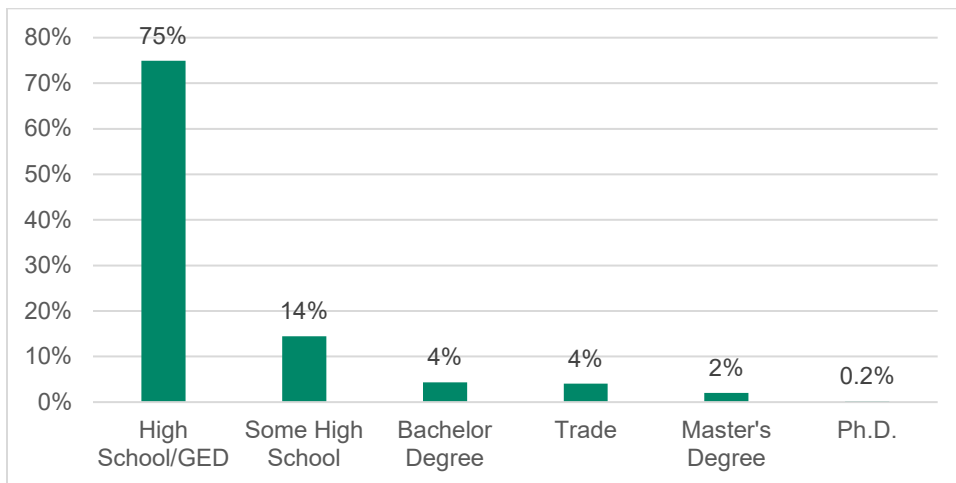
Response Rate: 92%

**Figure 26: How many people currently live in your household?**



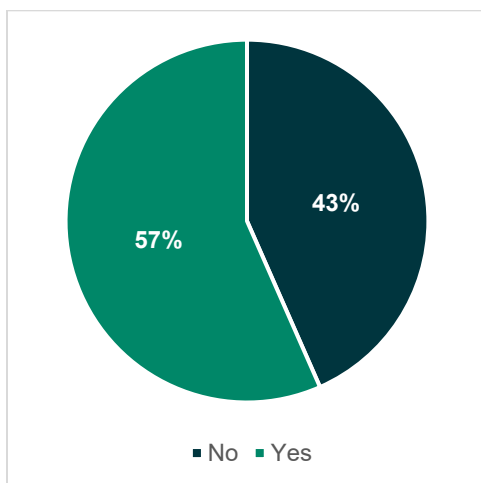
Response Rate: 93%

**Figure 27: What is your education status?**



Response Rate: 88%

**Figure 28: Do you use a debit or credit card?**



Response Rate: 69%



## A.2 Cross Tabulations

**Table 2: Income level by how many days a week respondent rides the bus**

Income Level	How many days a week do you ride the bus?				Grand Total
	Less than 1	1 to 2	3 to 5	6 to 7	
Under \$32,498	38%	59%	64%	69%	64%
\$32,498 - \$50,000	31%	32%	25%	23%	25%
\$50,000 - \$70,000	27%	9%	10%	7%	9%
Over \$75,000	4%	0%	1%	1%	1%
<b>Grand Total</b>	100%	100%	100%	100%	100%

*Response Rate: 76%*

**Table 3: Normal or reduced fare by how many days respondent rides the bus**

Reduced Fare?	How many days a week do you ride the bus?				Grand Total
	Less than 1	1 to 2	3 to 5	6 to 7	
No	32%	52%	62%	72%	64%
Yes	68%	48%	38%	28%	36%
<b>Grand Total</b>	100%	100%	100%	100%	100%

*Response Rate: 78%*

**Table 4: Pass type by how many days a week respondent rides the bus**

Pass Type	How many days a week do you ride the bus?				Grand Total
	Less than 1	1 to 2	3 to 5	6 to 7	
No pass, paid in cash	66%	55%	39%	45%	45%
DDOT Student Card	0%	1%	5%	5%	4%
DDOT, 7-day	9%	12%	13%	12%	12%
DDOT, 31-day	9%	11%	21%	17%	17%
Regional 4-hour	0%	16%	16%	12%	14%
Regional 24-hour	6%	0%	2%	2%	2%
Regional 7-day	3%	1%	1%	1%	1%
Regional 31-day	6%	3%	4%	6%	5%
<b>Grand Total</b>	100%	100%	100%	100%	100%

*Response Rate: 87%*

**Table 5: Payment method by how many days a week respondent rides the bus**

Payment Method	How many days a week do you ride the bus?				Grand Total
	Less than 1	1 to 2	3 to 5	6 to 7	
Cash	84%	74%	62%	66%	66%
Purchased a pass	13%	21%	30%	26%	26%
Used the Dart App	3%	5%	9%	8%	8%
<b>Grand Total</b>	100%	100%	100%	100%	100%

*Response Rate: 87%*

**Table 6: Race / ethnicity by payment method**

Race/Ethnicity (Total Respondents)	Payment Method			Grand Total
	Cash	Purchased a pass	Used the Dart App	
<b>Black (653)</b>	70%	21%	9%	100%
<b>Native American/Alaska Native* (80)</b>	45%	53%	3%	100%
<b>White (56)</b>	73%	21%	5%	100%
<b>Multiracial (43)</b>	37%	53%	9%	100%
<b>Hispanic (10)</b>	50%	50%	0%	100%
<b>Native Hawaiian/Pacific Islander (3)</b>	0%	0%	100%	100%
<b>Asian (2)</b>	100%	0%	0%	100%
<b>Grand Total (846)</b>	66%	26%	8%	100%

*Response Rate: 83%*  
*\*Native American and Alaska Native was written as NA/AN on the survey and was believed to have been confused with the abbreviation N.A., resulting in an inaccurate result*

**Table 7: City of residence by payment method**

City of Residence (Total Respondents)	Payment Method			Grand Total
	Cash	Purchased a pass	Used the Dart App	
<b>Detroit (653)</b>	66%	26%	8%	100%
<b>Other: Southeast Michigan (42)</b>	71%	17%	12%	100%
<b>Warren (17)</b>	65%	18%	18%	100%
<b>Dearborn (12)</b>	58%	25%	17%	100%
<b>Highland Park (9)</b>	67%	22%	11%	100%
<b>Eastpointe (6)</b>	67%	17%	17%	100%
<b>Harper Woods (6)</b>	50%	33%	17%	100%
<b>Other: Out of State (2)</b>	50%	50%	0%	100%
<b>Grand Total (747)</b>	66%	25%	8%	100%

*Response Rate: 73%*

**Table 8: Household income level by payment method**

Household Income Level (Respondents)	Payment Method			Grand Total
	Cash	Purchased a pass	Used the Dart App	
<b>Under \$32,498 (485)</b>	69%	21%	10%	100%
<b>\$32,498 - \$50,000 (190)</b>	57%	35%	8%	100%
<b>\$50,000 - \$70,000 (73)</b>	55%	38%	7%	100%
<b>Over \$75,000 (7)</b>	86%	14%	0%	100%
<b>Grand Total (755)</b>	65%	26%	9%	100%

*Response Rate: 74%*

**Table 9: Usage of debit/credit card by payment method**

Payment Method	Do you use a debit/credit card?		Grand Total
	No	Yes	
Cash	76%	61%	68%
Purchased a pass	20%	26%	23%
Used the Dart App	4%	13%	9%
<b>Grand Total</b>	100%	100%	100%

*Response Rate: 63%*

**Table 10: English proficiency by payment method**

Payment Method	How well can you speak English? (Number of Respondents)			Grand Total (849)
	Not at all (5)	Less than very well (15)	Very well (829)	
Cash	40%	53%	67%	67%
Purchased a pass	60%	33%	25%	25%
Used the Dart App	0%	13%	8%	8%
<b>Grand Total</b>	100%	100%	100%	100%

*Response Rate: 83%*

**Table 11: Age by employment status**

Employment Status	Age					Grand Total
	12 to 17	18 to 25	26 to 41	42 to 57	58 and older	
Full-time	12%	52%	52%	56%	19%	45%
Part-time	22%	20%	26%	17%	12%	20%
Student	58%	14%	6%	0%	0%	8%
Homemaker	0%	2%	1%	1%	3%	2%
Unemployed	6%	9%	14%	19%	23%	15%
Retired	2%	3%	1%	7%	42%	11%
<b>Grand Total</b>	100%	100%	100%	100%	100%	100%

*Response Rate: 85%*

**Table 12: Age by debit/credit card usage**

Age	Do you use a credit/debit card?		Grand Total
	No	Yes	
12 to 17	47%	53%	100%
18 to 25	39%	61%	100%
26 to 41	38%	62%	100%
42 to 57	55%	45%	100%
58 and older	35%	65%	100%
<b>Grand Total</b>	43%	57%	100%

*Response Rate: 67%*

**Table 13: Age by smartphone usage**

Age	Do you use a smartphone?		Grand Total
	No	Yes	
<b>12 to 17</b>	10%	90%	100%
<b>18 to 25</b>	8%	92%	100%
<b>26 to 41</b>	18%	82%	100%
<b>42 to 57</b>	22%	78%	100%
<b>58 and older</b>	31%	69%	100%
<b>Grand Total</b>	19%	81%	100%
<i>Response Rate: 77%</i>			

## A.3 Data Collection Plan

### 2023 DDOT TITLE VI SURVEY

#### DATA COLLECTION PLAN

Target Audience: DDOT Riders

Total Number of Completed Surveys: 1,066

This document outlines the data collection plan and procedures for the 2023 DDOT Title VI Survey. The goal of the project is to address the nine areas prescribed in the FTA Title VI circular (Race, Color, Language spoken at home, Household income, Travel patterns, Fare usage, National origin, and English proficiency) and to obtain an adequate number of survey responses to be able to complete a snapshot analysis of DDOT riders. A sampling plan was developed that reflected this goal and also ensured that there was a representative sample based on route, day of the week. The population ridership data was used to create the sampling plan and a final goal of 1,066 completed surveys was set. This reflects proportional weighting based on ridership and on day of the week. The margin of error for the entire DDOT system is for a confidence level of 95% with a margin of error of  $\pm 3\%$  for the entire system.

The sampling plan ensures that high-ridership limited-English proficiency (LEP) population routes are oversampled so an analysis with the same confidence level and margin of error can be performed on this subset of data.

#### Survey Team

The survey team will consist of the Project Manager (AECOM) and the Data Collection Team (Green Arrow). The role of the Project Manager will be to respond to any direct questions from staff in the field. The role of the Data Collection Team will be to administer all surveys to DDOT riders 13 and older. If a rider does not speak English and wants to participate, the staff member will hand the rider a card with a phone number to use to collect their responses (calling rider will use DDOT's 3<sup>rd</sup> party translation service via the phone). Green Arrow will also provide Spanish speaking/bilingual staff while riding buses with Spanish speaking population. Staff will also have a card with general contact information (phone and email) if a rider has additional comments to share.

DDOT operators will be notified of the presence of surveyors on the buses during the days designated for data collection. Members of the Data Collection Team will all wear a DDOT badge (that has bus pass access) and a vest to identify themselves. Data collection will occur in teams of two. A small incentive will be given to the rider after the rider turns in the survey.

#### Training Briefing

The DDOT, the Project Manager, and Power Marketing Research will conduct a brief training with the Data Collection Team members. The purpose of the training will be to brief staff on the purpose of the project, review the data collection process, review safety protocols, on board bus etiquette and protocols, and respond to any questions.

#### Data Collection Process

Members of the Data Collection Team will board buses at the start of a route, ride it through the end of the route, and then back to the start of the route. Each shift involves 2-3 bus route round trips. The goal will be to hand out surveys to all riders and gather completed survey instruments back from them.

The survey will be administered during weekdays (Monday-Friday) and on weekends (Saturday-Sunday) during January 2022. Surveys will be administered on all routes with goals for the number of completes per route to be determined. The goal will be to complete the data collection by February 2, 2022.

The process for administering the survey is:

1. Staff member of the Data Collection team boards bus and introduces themselves to the bus operator, and their purpose.
2. Staff hands out survey instrument and pencils to everyone on board 13 and older who agrees to participate.
3. Staff politely asks riders to fill out the survey. Staff informs riders that upon completion of survey they will receive incentive.
4. Staff assists anyone having problems reading/filling out the survey.
5. Staff gathers all surveys from riders as they complete the survey, or as they exit the bus.
6. When the survey is collected the rider receives the incentive.
7. Staff member departs bus at end of route.
8. All surveys will be administered and collected on board the bus.

# A.4 On-Board Survey



## Detroit Department of Transportation On-board Rider Survey Questions

1. On which day(s) do you usually ride the bus?

- Weekdays  Weekends  Both

2. When do you usually ride the bus?

- 6AM – 3PM  After 3PM  Special Events

3. How many days a week do you ride the bus?

- 6 – 7  3 – 5  1 – 2  Less than 1

4. How did you get to the stop where you boarded this bus?

- Walked  Bicycled  Dropped Off  
 Transferred from DDOT  Transferred from SMART  
 Park and Ride  Other: \_\_\_\_\_

5. How will you get from this bus to your destination?

- Walk  Bicycle  Will be Picked Up  
 Transfer to DDOT  Transfer to SMART  
 Drive  Other : \_\_\_\_\_

6. Where are you coming from? (Choose One)

- Home  Work  School  
 Doctor/Dentist  Shopping/Errands  
 Entertainment  Other: \_\_\_\_\_

7. Where are you going on this trip? (Choose One)

- Home  Work  School  
 Doctor/Dentist  Shopping/Errands  
 Entertainment  Other: \_\_\_\_\_

8. Did you pay a reduced fare today?  Yes  No

9. How did you pay for your fare today?

- Cash  Purchased a pass  Used the Dart App

10. If you purchased a pass or used the Dart app, which did you use for today's trip?

- DDOT, 7-day  DDOT, 31-day  DDOT, Student Card  
 Regional, 4 hour  Regional, 24 hour  Regional, 7 Day  Regional, 31 Day

11. Do you use a smartphone?  Yes  No

12. How do you access the Internet?

- At Home  Library  Internet Café  
 Cell Phone  Smartphone  Do not have Internet

13. Describe your living status:

- Homeowner  Renter  Other

14. Do you have a driver's license?  Yes  No

15. What gender do you identify as?

- Male  Non-binary  
 Female  Self-Describe

16. How old are you?

- 12-18  18-25  26-41  
 42-57  58 and older

17. What is your race? Check all that apply.

- Black  White  Hispanic  
 Asian  NA/AN  NH/PI  
 Other: \_\_\_\_\_

18. What city do you live in? \_\_\_\_\_

19. What is your zip code? \_\_\_\_\_

20. Are you married?  Yes  No

21. Are you disabled?  Yes  No

22. Are you a Veteran?  Yes  No

23. What is your employment status?

- Full-time  Unemployed  Homemaker  
 Part-time  Student  Retired

24. What is your total household income?

- Under \$32,498  \$32,498 - \$50,000  
 \$50,000 – \$70,000  Over \$75,000

25. What is the primary language spoken in your home?

- English  Arabic  Spanish  Bengali  
 Other: \_\_\_\_\_

26. Do you speak English?

- Very well  Less than very well  Not at all

27. How many people currently live in your household?

- 1-2  3-4  5-6  7 or more

28. What is your educational status?

- Some High School  High School/GED  Trade  
 Bachelor Degree  Master's Degree  Ph.D.

29. Do you use a debit or credit card?  Yes  No

30. Optional. Provide your contact information to be entered into a drawing for a free 30-day bus pass.

Phone # or Email: \_\_\_\_\_

Name: \_\_\_\_\_

**For Office Use Only**

Route#	Day on Bus:	Time on Bus:
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 19 <input type="checkbox"/> 10	<input type="checkbox"/> Weekday	<input type="checkbox"/> 12:00 am – 6:00 am
<input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 23	<input type="checkbox"/> Saturday	<input type="checkbox"/> 6:00 am – 12:00 pm
<input type="checkbox"/> 27 <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/> 31 <input type="checkbox"/> 32 <input type="checkbox"/> 38 <input type="checkbox"/> 39 <input type="checkbox"/> 40 <input type="checkbox"/> 41	<input type="checkbox"/> Sunday	<input type="checkbox"/> 12:00 pm – 6:00 pm
<input type="checkbox"/> 42 <input type="checkbox"/> 43 <input type="checkbox"/> 47 <input type="checkbox"/> 52 <input type="checkbox"/> 54 <input type="checkbox"/> 60 <input type="checkbox"/> 67 <input type="checkbox"/> 68		<input type="checkbox"/> 6:00 pm – 12:00 pm

## A.5 Low-English Proficiency Routes with Survey Targets and Surveys Collected

LEP Routes	Route Name	Route No.	Survey Target	Surveys Collected
LEP	Vernor	1	69	76
LEP	Michigan	2	84	82
	Grand River	3	61	70
	Woodward	4	66	70
	Van Dyke/Lafayette	5	25	20
	Gratiot	6	50	27
	Seven Mile	7	61	41
	Warren	8	34	6
LEP	Jefferson	9	125	129
	Greenfield	10	47	79
	Clairmount	11	1	4
LEP	Conant	12	24	15
	Conner	13	4	10
	Chicago/Davison	15	8	1
	Dexter	16	52	29
	Eight Mile	17	59	53
	Fenkell	18	15	14
	Fort	19	8	8
	Hamilton	23	7	6
	Joy	27	13	16
	Linwood	29	7	7
	Livernois	30	7	0
	Mack	31	19	16
	McNichols	32	21	15
	Plymouth	38	18	23
	Puritan	39	4	11
LEP	Russell	40	14	5
LEP	Schaefer	41	48	47
	Mid-City Loop	42	2	8
	Schoolcraft	43	8	14
	Southfield	46	2	0
	Tireman	47	1	0
LEP	Chene	52	31	37
LEP	Wyoming	54	41	42
	Evergreen	60	18	15
	Cadillac/Harper	67	8	10
	Chalmers	68	3	12
		<b>Total:</b>	<b>1066</b>	<b>1018</b>



