2010-11 Transit On-Board Survey Final Report

Developed by:

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EXECUTIVE SUMMARY

Valley Metro conducted a transit on-board survey between October 2010 and February 2011. The purpose of the survey was to better understand the travel pattern of transit users in the metropolitan Phoenix area, particularly the impact that light rail has had on regional travel patterns. The primary objectives for the survey were to:

1. Collect data on transit ridership as part of the "Before and After Assessment of Light Rail" as required by the Federal Transit Administration (FTA) Final Rule on Major Capital Investment Projects. The "Before Survey" was conducted in 2007. This survey provided the "After" data.

2. Update travel pattern data for the region's travel demand computer model to reflect current transit system ridership.

The survey, which included nearly 100 bus routes and all light rail stations, was the largest and most comprehensive origin and destination survey ever conducted by Valley Metro. The goal was to obtain useable surveys from approximately 13,750 passengers. The actual number of usable surveys was 14,665. Of the useable surveys, 4,213 were completed with light rail passengers and 10,442 were completed with bus passengers.

The magnitude of the survey will allow regional planners to better understand the needs and travel patterns of many specialized populations. For example, the final database contains responses from:

- more than 6,200 people who do not have cars
- more than 1,500 people under age 18
- more than 800 people age 60 or older
- nearly 6,000 students, including more than 3,900 college/university students
- nearly 1,800 students in grades K-12
- more than 3,100 people living in households with incomes of less than $10,000 per year
- more than 8,600 people who were employed full or part time
- nearly 2,800 people who were not employed but were seeking work

Major Findings

Ridership reports show that there are approximately 250,000 transit boardings per day or 1.25 million boardings during a typical 5-day work week. By providing residents with a reliable mode of transportation, the region's transit system is having a positive impact on traffic flow and air quality by reducing the number of trips that would have otherwise been completed by car. Some of the major findings from the survey are described below:

- **Transit Users Are Using Public Transit More Often.** Among those who had been using public transit in the metropolitan Phoenix area at least two years, sixty-one percent (61%) reported that they were using public transportation more often than they did two years ago. Among light rail users, 80% reported that they were using public transit more often than they were two years ago before light rail began operations. The high percentage of light rail users who reported using public transit more often suggests that light rail has significantly enhanced the attractiveness of public transportation in the region.

- **Public Transit Is Important to the Region's Economy.** More than one-third (35%) of all transit trips represented in the survey either began or ended at work. When asked to report their employment status, more than three-fourths (79%) of those surveyed indicated that they were currently employed or seeking work. Among those seeking work, one-third (33%) indicated that they could not have completed their trip if public transportation were not available. Another 11% indicated that they did not know how they would have completed their trip if public transit had not been available.

- **Public Transit Is Important to Education in the Region.** Thirty-eight percent (38%) of those surveyed identified themselves as students, which explains the reason that twenty-nine percent (29%) of all transit trips represented in the survey either began or ended at a college/university or a grade school. On a typical weekday, more than 70,000 school-related trips are completed on public transportation in the metropolitan Phoenix area. If public transportation were not available, 23% of the students surveyed indicated that they would not have been able to get to school. Another 10% did not know how they would have gotten to school if public transit had not been available.

- **The Demographic Profile of Public Transit Riders Has Changed Since the Introduction of Light Rail.**

    - Transit users are more likely to live in households earning $50,000 or more per year. Before light rail service began, one in seven transit users (14%) had an annual household income of $50,000 or more. After light rail service began, nearly one in five (19%) transit users had an annual household income of $50,000 or more.

    - Transit users are more likely to own a vehicle. Before light rail service began, 49% of transit users had at least one vehicle in their household. After light rail service began, 53% had at least one vehicle.

    - Transit users are more likely to be students. Before light rail service began, 27% of the region's transit users were students. After light rail service began, 38% of the region's transit users were students.

SECTION 1: SURVEY DESIGN

Survey Development Process

Valley Metro assembled a technical advisors committee (TAC) to help guide the project to ensure that the survey design would meet a wide range of regional data needs. The TAC included representatives of the following organizations: Valley Metro, the Maricopa County Association of Governments, Metro Light Rail, the City of Phoenix, the City of Tempe, the City of Glendale, the City of Scottsdale, and others.

The survey development process began by having members of the TAC review the content of Valley Metro's 2007 Transit On-Board Survey. Since one of the objectives for the 2011 survey was to assess changes in ridership patterns as a result of the introduction of light rail service, many of the questions from the 2007 survey were included on the 2011 survey.

After four iterations of input from members of the TAC, all members of the committee were comfortable with the content of the survey. At that point the survey instrument was shared with representatives of the Federal Transit Administration (FTA) to ensure all Federal requirements and expectations for the design of the survey were met. All of the suggestions from the FTA staff were incorporated into the final version of the survey.

Types of Data Collected

The final version of the survey was slightly longer than was originally anticipated. To ensure the length of the survey did not negatively affect the response rate, the survey questions were divided into two categories: "required" and "desired" data as described below.

Required data involved questions for which a response from a respondent was required in order for the survey to be considered complete. The data that were "required" to fulfill the contractual requirements of the project are listed below:

- Type of place where the trip began
- Address where the trip began
- Mode of access to the transit system
- Boarding location
- Alighting location
- Transfers used to get to and from the route/station where the survey was administered

- Mode of egress from the transit system
- Destination address
- Type of place where the trip ended
- The respondent's home address
- Number of operational vehicles available in the household
- Number of occupants in the respondent's household
- Number of adults in the respondent's household
- Number of workers (employed persons) in the respondent's household
- Respondent's employment status
- Respondent's student status
- Respondent's driver's license status
- Age of the respondent
- Annual household income
- Time of day the survey was completed

Desired data involved questions for which a response from a respondent was desired, but was not required in order for the survey to be considered complete. "Desired" questions were to be asked of all respondents who had time to complete the full survey. Although these questions could be skipped if a respondent did not have time to complete the full survey, more than 90% of the respondents completed all of the "desired" questions. The data that were considered to be "desired" are listed below:

- Distance walked from the origin to the transit system (if applicable)
- Distance walked from the transit system to the destination (if applicable)
- Park and ride location (if applicable) on either end of the trip
- Carpool size (if applicable) on either end of the trip
- How long the respondent had been using public transportation
- How the frequency of transit use has changed over the past two years
- Why respondents started using public transit
- How respondents get transit schedule information
- Fare payment method
- How the respondent would make the trip if public transit were not available
- The respondent's race/ethnicity
- Gender of the respondent
- Name of the school where the respondent attends college or school (if applicable)

Other data was added after the survey was administered. The most important type of data that was added following the administration of the survey involved the purpose of the respondent's trip. The purpose of the trip was determined by the types of destinations that were visited by the respondent. The purpose of the trip was classified as one of eight trip purposes that are used by the region's travel demand model:

- **Home-Based Work (HBW)**: trips that began at home and ended at work or began at work and ended at home.

- **Home-Based Shopping (HBS)**: trips that began at home and ended at a shopping area or began at a shopping area and ended at home. If the respondent worked at a shopping area, the trip was classified as a HBW trip.

- **Home-Based College (HBC)**: trips that began at home and ended at a college/university or began at a college/university and ended at home. If the respondent worked at a college/university, the trip was classified as a HBW trip

- **Home-Based School (HSL)** trips that began at home and ended at a K-12 school or began at a K-12 school and ended at home. If the respondent worked at a K-12 school, the trip was classified as a HBW trip

- **Home-Based Medical (HBM)**: trips that began at home and ended at a medical facility (hospital/doctor's office) or began at a medical facility and ended at home. If the respondent worked at a medical facility, the trip was classified as a HBW trip

- **Home-Based Airport (HBA)**: trips that began at home and ended at an airport or began at an airport and ended at home. If the respondent worked at an airport, the trip was classified as a HBW trip

- **Home-Based Other (HBO)**: trips that began at home and ended at any other location not previously listed or began at any location not previously listed and ended at home.

- **Non-Home-Based (NHB)**: trips that did not begin or end at home.

Descriptions of the Survey Instruments

The survey instrument was designed to be administered as a face-to-face interview using tablet PC's and printed surveys.

Printed surveys were printed on heavy card stock for easy distribution and completion. The printed surveys were available in both English and Spanish. Bilingual surveyors were also hired to administer the surveys on tablet PC's in Spanish.

While most respondents completed the survey during their trip, postage-paid return reply envelopes were available for riders who did not have time to complete the survey during their trip. Riders could return the survey by mail or complete the survey on the Internet by going to a website that was printed on the envelope. Each survey contained a serial number that was used by ETC Institute to track the route and sequence in which surveys were completed.

Copies of the printed survey materials are provided in Appendix C of this report.

Screen shots that show how the survey questions appeared on the tablet PCs are provided in Appendix D of this report.

SECTION 2: SAMPLING PROCEDURES

Sampling Goals

In order to ensure that the distribution of completed surveys mirrored the actual distribution of riders who use the region's transit system, Valley Metro established proportional sampling goals for each bus route and light rail station as shown below.

Table 2.1

Type of Route	% of Riders to Be Surveyed
Local Routes	4.75%
Neighborhood Circulators/Collector Routes	4.75%
Rural Routes	4.75%
Express Routes	15%
Rapid Routes	15%
Rail Stations	10%

The sampling goals for the survey were set by applying the sampling rates shown in the table above to the August 2010 average weekday ridership for each bus route/light rail station. The goals and the actual number of "complete and useable surveys" are provided in Table 2.2 (see below and on the following pages).

Table 2.2

Goal vs. Actual Number of Completed Surveys By Route/Station

Route/Station Name	Goal for Completed Surveys	Actual Number of Complete & Useable Surveys	Within 10 or 10% of the Goal
LOCAL ROUTES			
0 - Central Avenue	249	251	YES
1 - Washington Street	28	29	YES
3 - Van Buren Street	249	248	YES
7 - 7th Street	219	213	YES
8 - 7th Avenue	121	131	YES
10 - Roosevelt Street/Grant Street	140	150	YES
12 - 12th Street	100	174	YES
13 - Buckeye Road	44	46	YES
15 - 15th Avenue	150	151	YES
16 - 16th Street	188	188	YES
17 - McDowell Road	358	361	YES
17A - McDowell Road/Avondale Boulevard	25	40	YES
19 - 19th Avenue	429	411	YES
27 - 27th Avenue	206	214	YES
29 - Thomas Road	502	510	YES
30 - University Drive	130	131	YES
35 - 35th Avenue	302	358	YES
39 - 40th Street	44	69	YES

Table 2.2 (continued)

Goal vs. Actual Number of Completed Surveys By Route/Station			
Route/Station Name	Goal for Completed Surveys	Actual Number of Complete & Useable Surveys	Within 10 or 10% of the Goal
LOCAL ROUTES (continued)			
40 - Main Street	99	160	YES
41 - Indian School Road	423	399	YES
43 - 43rd Avenue	127	132	YES
44 - 44th Street/Tatum Road	92	92	YES
45 - Broadway Road	218	219	YES
48 - 48th Street/Rio Salado Parkway	30	58	YES
50 - Camelback Road	286	289	YES
51 - 51st Avenue	53	58	YES
52 - Roeser Road	38	59	YES
56 - Priest Drive	100	103	YES
59 - 59th Avenue	128	139	YES
60 - Bethany Home Road	128	149	YES
61 - Southern Avenue	277	283	YES
62 - Hardy Drive/Guadalupe Road	77	103	YES
65 - Mill Road/Kyrene Road	54	55	YES
66 - Mill Road/68th Street	52	77	YES
67 - 67th Avenue	117	142	YES
70 - Glendale Avenue/24th Street	341	357	YES
72 - Scottsdale Road/Rural Road	234	247	YES
76 - Miller Road	25	33	YES
77 - Baseline Road	124	124	YES
80 - Northern Avenue	75	75	YES
81 - Hayden Boulevard/McClintock Drive	140	150	YES
90 - Dunlap Avenue/Cave Creek Road	145	181	YES
96 - Dobson Road	107	106	YES
104 - Alma School Road	72	63	YES
106 - Peoria Avenue/Shea Boulevard	169	189	YES
108 - Elliot Road	34	38	YES
112 - Country Club Drive/Arizona Avenue	68	68	YES
120 - Mesa Drive	25	22	YES
122 - Cactus Road	25	25	YES
128 - Stapley Drive	25	30	YES
131 - START	25	27	YES
136 - Gilbert Road	35	35	YES
138 - Thunderbird Road	68	68	YES
154 - Greenway Road	48	48	YES
156 - Chandler Boulevard/Williams Field Road	52	58	YES
170 - Bell Road	124	127	YES
186 - Union Hills Drive	81	79	YES

Table 2.2 (continued)

Goal vs. Actual Number of Completed Surveys By Route/Station			
Route/Station Name	Goal for Completed Surveys	Actual Number of Complete & Useable Surveys	Within 10 or 10% of the Goal
EXPRESS ROUTES			
510 - Scottsdale Express	12	35	YES
511 - Tempe/Scottsdale Airpark Express	8	8	YES
512 - Scottsdale Express	11	22	YES
520 - Tempe Express	13	28	YES
521 - Tempe Express	29	32	YES
531 - Mesa/Gilbert Express	45	56	YES
532 - Mesa Express	21	26	YES
533 - Mesa Express	45	74	YES
535 - Northeast Mesa/Downtown Express	10	12	YES
540 - Chandler Express	25	26	YES
541 - Chandler Express	33	65	YES
542 - Chandler/Downtown Express	32	59	YES
560 - Avondale Express	8	9	YES
562 - Goodyear/Downtown Express	19	19	YES
571 - Surprise Express	20	27	YES
573 - Northwest Valley/Downtown Express	26	29	YES
575 - Northwest Valley Downtown Express	23	28	YES
581 - North Mountain Express	14	14	YES
NEIGHBORHOOD CIRCULATORS/COLLECTOR ROUTES			
Phoenix ALEX	49	49	YES
Phoenix DASH	105	110	YES
Tempe FLASH McCallister	132	130	YES
Glendale Urban Shuttle (GUS) 1, 2, & 3	25	27	YES
Grand Ave Limited	max possible	44	YES
Phoenix MARY	144	148	YES
Mesa Downtown BUZZ	34	35	YES
Tempe Orbit Earth EW Circulator	80	95	YES
Tempe Orbit Jupiter	90	105	YES
Tempe Orbit Mars	88	88	YES
Tempe Orbit Mercury	112	113	YES
Tempe Orbit Venus	87	85	YES
Phoenix Free Airport Shuttle	25	36	YES
SMART Circulator	105	110	YES
Scottsdale Downtown Trolley	25	23	YES
Scottsdale Neighborhood Trolley	82	82	YES
OTHER BUS ROUTES (RURAL, RAPID AND LINK ROUTES)			
660 - Wickenburg Connector	max possible	6	YES
685 - Phoenix/Gila Bend Regional Connector	max possible	8	YES
I-10 East RAPID	113	113	YES
I-17 RAPID	50	53	YES
LINK-Main Street	71	71	YES

Table 2.2 (continued)

Goal vs. Actual Number of Completed Surveys By Route/Station			
Route/Station Name	Goal for Completed Surveys	Actual Number of Complete & Useable Surveys	Within 10 or 10% of the Goal
RAIL STATIONS			
1 - Montebello Avenue & 19th Avenue	323	304	YES
2 - 19th Avenue & Camelback Road	134	122	YES
3 - 7th Avenue & Camelback Road	80	78	YES
4 - Central Avenue & Camelback Road	48	54	YES
5 - Campbell Avenue & Central Avenue	135	136	YES
6 - Indian School Road & Central Avenue	144	146	YES
7 - Osborne Road & Central Avenue	87	83	YES
8 - Thomas Road & Central Avenue	161	175	YES
9 - Encanto Boulevard & Central Avenue	52	52	YES
10 - McDowell Road & Central Avenue	167	182	YES
11 - Roosevelt Street & Central Avenue	205	187	YES
12a - Van Buren Street & Central Avenue	117	132	YES
12b - Van Buren Street & 1st Avenue	88	122	YES
13a - Jefferson Street & 1st Avenue	173	156	YES
13b - Washington Street & Central Avenue	51	72	YES
14A - 3rd Street & Washington Street	86	83	YES
14B - 3rd Street & Jefferson Street	89	93	YES
15a - 12th Street & Washington Street	38	42	YES
15b - 12th Street & Jefferson Street	22	20	YES
16a - 24th Street & Jefferson Street	43	51	YES
16b - 24th Street & Washington Street	38	36	YES
17 - 38th Street & Washington Street	28	41	YES
18 - 44th Street & Washington Street	172	160	YES
19 - Priest Drive & Washington Street	121	123	YES
20 - Center Parkway & Washington Street	34	40	YES
21 - Mill Avenue & Third Street	119	107	YES
22- Veterans Way & College Avenue	211	226	YES
23 - University Drive & Rural Road	310	334	YES
24 - Dorsey Lane & Apache Boulevard	93	100	YES
25 - McClintock Drive & Apache Boulevard	151	179	YES
26 - Smith-Martin Lane & Apache Boulevard	34	30	YES
27 - Price-101 Freeway & Apache Boulevard	153	162	YES
28 - Sycamore & Main Street	386	385	YES
TOTAL	**13727**	**14655**	**YES**

Sampling Goals Were Met On All Routes. The number of complete and useable surveys was within 10% of the goal (or 10 if the sampling goal was less than 100) on all bus routes and all light rail stations that were included in the survey. A survey was considered "complete" if all of the contractually required information was collected. A survey was considered "useable" if it met 100% of the quality assurance and quality control tests that were applied to each record. Overall, the total number of "complete and useable surveys" exceeded the contractual requirements by more than 900 surveys.

Methods for Selecting Survey Participants

In addition to setting specific goals for the number of surveys that were completed on each route/station, the consultant, in coordination with Valley Metro developed specific guidelines for selecting survey participants to ensure that the participants would be randomly selected. The processes for selecting survey participants at light rail stations and on bus routes are described below:

- **Light Rail System.** Interviewers were positioned at the entry areas to the fare zones of the light rail stations. As passengers approached the entry areas, every third person was asked to participate in the survey. This was done to ensure that participants were selected at random. If a passenger agreed to participate in the survey, the interviewer would administer the survey. When needed, the interviewer would walk with the passenger and even board the train until the survey was completed. If the survey was not completed before the train departed, the interviewer would ride the train with the passenger until the survey was completed.

- **Bus System.** A random number generator was used to determine which passengers were asked to participate in the survey after boarding a bus. If four people boarded a bus, the tablet PC randomly generated a number from 1 to 4. If the answer was 2, the second person who boarded the bus was asked to participate in the survey. If the answer was 1, the first person was asked to participate in the survey, and so forth. The selection was limited to the first four people who boarded a bus at any given stop to ensure the interviewer could keep track of the passengers as they boarded. For example, if 20 people boarded a bus, the tablet PC program would randomly pick one of the first four people for the survey.

Other Techniques that Were Used to Manage the Sample

Some of the other techniques that were used to manage the sample are described below and on the following page:

- **Daily Reviews of Interviewer Performance.** At the end of each day, the research team evaluated the performance of each interviewer. This included a review of the characteristics of the passengers that were interviewed with regard to age, gender, race, the number of reported transfers, the number of "required data" fields that were completed, the number of "desired data" fields that were completed, and the average length of each interview. These daily reviews allowed the research team to provide immediate feedback to interviewers to improve their overall performance. It also allowed the research team to quickly identify and remove interviewers who were not conducting the survey properly.

- **Oversampling of High Volume Bus Stops.** Valley Metro identified high volume boarding locations along each route (such as schools and major employment centers) prior to conducting the survey on each route. To ensure that these locations were not under-represented during the on-board survey, the Valley Metro consultant had interviewers conduct surveys at these stops while passengers were waiting to board the bus. The sample selection procedures that were used for surveys that were conducted at bus stops were the same as those used at rail stations.

- **Management of the Sample by Time of Day.** In addition to managing the total number of surveys that were completed for each route/station, the Valley Metro consultant also managed the number of surveys that were completed during each of the following four time periods: AM Peak (6am-10am), Midday (10am-2pm), PM Peak (2pm-6pm), and all other hours (before 6am and after 6pm). These four time periods correspond to time periods that are used for regional travel demand forecasting. This was done to ensure that the number of completed surveys for each time period would adequately support data expansion requirements for travel demand modeling. The data expansion process is described in Section 7 of this report.

SECTION 3: PILOT TEST

ETC Institute conducted a pilot test of the Valley Metro Regional On-Board Transit Survey in late September 2010. The purpose of the pilot test was to assess all aspects of the survey including: survey design, sampling methodology, survey implementation, and data processing tasks.

Routes/Stations Involved

The pilot test was administered on eight bus routes and at two light rail stations from 7am to 5pm. The routes and stations that were included in the pilot test are listed below:

Bus Routes
- Route 0 (Central)
- Route 3 (Van Buren)
- Route 40 (Apache-Main)
- Route 62 (Hardy-Guadalupe)
- Route 72 (Scottsdale-Rural)
- DASH Circulator
- Orbit Earth Circulator
- Route 521 (Tempe Express)

Light Rail Stations
- Central Station
- Tempe Transit Center

Personnel and Training

A team of 16 personnel administered the Pilot Test. This included three senior managers: the Project Manager (Chris Tatham) and two field supervisors (Aaron Hekele and Andrew Kolcz). The other positions and number of personnel that were included on the survey team during the pilot test are listed below:

Position	Number of Personnel
Project Team Leader	1
Assistant Team Leader	1
Team Data Specialist	1
Interviewers/Counters	10
Total Personnel	13

Training

All interviewers who conducted the pilot test participated in two days of training prior to the pilot test. The training activities that were covered included:

- An introduction to the project (purpose, scope, etc.).
- Training to use the tablet PCs.
- On-site reconnaissance of the routes and stations that were included in the pilot test. Team members rode each bus route that was included in the pilot test multiple times. Team members recorded all possible stops for each route and developed/tested templates for collecting ridership data.
- Survey administration and sampling procedures.
- Practical exercises to ensure that all interviewers were technically competent to perform all tasks that would be required in the field.

Results of the Pilot Test

The pilot test was administered to a total of 410 riders. Of these 322 completed the survey on tablet PCs. The remaining 88 surveys were completed on paper surveys. Each of the aspects of the pilot test that were assessed is described below.

Assessment of Staff

The overall quality of the staff for the pilot test was excellent. Approximately half of the people who participated in the pilot test had prior experience with the administration of on-board surveys. Of the 17 interviewers who were initially recruited for the pilot test, only one was dismissed for not being technically competent. The remaining 16 people were able to quickly understand and demonstrate the ability to perform the tasks required.

Assessment of Survey Design

Based on the results of the pilot test, a few revisions to the survey instrument were recommended. The most significant revisions are listed below and on the following page:

1) The questions to capture the respondents name and phone number were moved to the end of the survey on the tablet PC version of the survey. This information was initially captured at the beginning of the survey, but interviewers found themselves spending too much time explaining the reason they needed the person's name and phone number, which reduced the amount of time available to administer the survey.

2) The questions about the person's usage of transit in the Phoenix area were reworded. The original question asked if the respondent had started using transit during the past two years. Since many people (especially students) were new to the area, this question was confusing since they had not lived in the area at least two years. The question was changed to "how many years have you been using transit in the Phoenix area?" to improve the quality of the responses to the question.

3) Response choices for the reason riders started using public transit during the past two years were added to the survey because some of the reasons that were mentioned during the pilot test were not originally included on the survey. The reasons that were added included:

   - Started going to school
   - Lost my job
   - Lost my car

4) A question was added to the end of the survey to see if the person had made or will make the same trip in exactly the opposite direction at another time during the day. Respondents who had completed the survey previously in the day did not want to complete the survey again during their return trip, so this question was added to capture trips that would otherwise not be reported.

Assessment of Sampling Procedures
There were no problems with the sampling procedures. The process for randomly selecting riders on buses and at light rail stations as described in Section 2 worked very well.

Assessment of Ridership Counts
As part of the pilot test, ETC Institute tested the manual counting units that were to be used on buses to count boardings and alightings along each route. GPS enabled tablet PCs were used to record the following information each time a bus stopped: the location (latitude/longitude coordinates), time of day, number of boardings, and number of alightings. The accuracy of the counts by location was very good based on a review of the locations that were plotted on maps at the completion of the pilot test. Based on the results of the pilot test, the research team concluded that the GPS enabled tablet PCs would be an accurate method of tracking boarding and alighting counts for the main survey.

Assessment of Survey Length
The survey length was assessed for both the tablet PC and printed versions of the survey. The findings for each version are described below:

- **Tablet PC.** The time it took survey participants to fully complete the survey on a tablet PC ranged from a minimum of 2 minutes and 47 seconds to a maximum of 12 minutes and 16 seconds. The average time was 4 minutes and 38 seconds.

- **Printed Survey.** Two versions of the printed surveys were developed. A four-page version that had more white space and a two-page version printed on legal-sized paper.

    - Of the 50 persons who were given the **four-page** printed version of the survey, only 2 people completed the survey in less than 5 minutes. The average respondent completed the survey in 10 minutes and 21 seconds.

    - Of the 50 persons who were given the **two-page** printed version of the survey, five people completed the survey in less than 5 minutes. The average respondent completed the survey in 8 minutes and 17 seconds.

    The two-page version seemed to work better because it appeared to be shorter to respondents. For this reason, Valley Metro decided to use the two-page version of the survey.

Assessment of Survey Participation.
Overall, 85% of the riders who were asked to complete a survey agreed to participate. Among those who agreed to complete the survey, 92% indicated they had time to complete the full version of the survey; 8% indicated that they did not have time to complete the full version of the survey.

Assessment of Survey Quality
The survey database from the pilot test contained a total of 410 records that were substantially completed and geocoded to X, Y coordinates. The quality of survey data obtained through different methods is compared in Table 3.1 below.

Table 3.1

Method of Administration	# Who Started the Survey	# Who Had Time to Complete the Survey	# Surveys that were Fully Useable	% of Complete Surveys that Were Fully Useable
Tablet PC	372	344	322	94%
Paper (administered on board)	100	86	79	92%
Paper (returned by mail)	43	10	9	90%

SECTION 4: SURVEY ADMINISTRATION

Recruiting and Training Interviewers

Assembling a team of high quality interviewers was one of the most important steps in the survey administration process. For this project, ETC Institute complemented its team of professional interviewers with temporary interviewers who were recruited by a local staffing agency in the Phoenix area.

Surveyors were required to have a familiarity with the service area, a solid work history, ability to work with the public, a professional attitude and appearance, and an ability to operate a tablet PC. Each surveyor was required to attend ETC Institute's two-day training session. During these training sessions, surveyors were taught how to operate the tablet PCs and GPS-based ridership counters, how to approach riders, sampling procedures, survey etiquette, and how to deal with various situations that could be encountered during a survey. The training included role-playing and one-on-one tutoring with ETC Institute team leaders. Once the initial training was complete, surveyors spent several days under the supervision of a team leader, who assessed each surveyor's ability to properly conduct surveys. Surveyors who did not demonstrate proficiency in all of the required tasks were released.

Organization of the Survey Team

The survey was administered by five teams who were directly supervised by the project manager. The key individuals who oversaw data collection in the field are listed below. All of these people had at least three years of experience managing on-board surveys in the field.

- Leadership Team:
  - Project Manager – Chris Tatham
  - Assistant Project Manager – Andrew Kolcz
- Team Leader (Bus) – Grace Grimm
- Team Leader (Bus) – MG Casey
- Team Leader (Bus) – Laurel Vine
- Team Leader (Rail) – Aaron Hekele

The organizational structure of each team is described below.

Leadership Team. The leadership team consisted of the project manager, assistant project manager, and 2-3 support personnel. The leadership group was responsible for reviewing the performance of each team and ensuring that the sampling goals for each route/station were met. The leadership team operated from centralized locations, such as a rail station or transit center, so that the performance of all teams could be evaluated.

The selection of bus routes and rail stations to be surveyed each week was carefully planned to ensure the leadership group could directly interface with all routes as they were being surveyed.

Bus Teams. Teams 1, 2, and 3 focused their efforts on the administration of surveys on an average of two bus routes per day.

Each of the bus team leaders supervised a group of approximately 10 surveyors per day. Interviewers were typically deployed on at least two buses running in opposite directions as shown in Table 4.1 below.

Table 4.1

Typical Deployment of Bus Survey Teams

Route 1

Bus 1 (Northbound then Southbound):
- Lead interviewer
- Support interviewer
- Boarding/alighting counter

Bus 2 (Southbound then Northbound):
- Lead interviewer
- Support interviewer

Route 2

Bus 1 (Eastbound then Westbound):
- Lead interviewer
- Support interviewer
- Boarding/alighting counter

Bus 2 (Westbound then Eastbound):
- Lead interviewer
- Support interviewer

On high volume routes, interviewers may have been deployed on up to four buses on a route. On low volume routes, interviewers may have been deployed on just one bus serving the route. One person on each route was assigned to record boarding and alighting data.

The responsibilities for each of the positions on the bus team are described below.

- The **team leader** was responsible for ensuring that interviewers were properly trained, equipping interviewers to conduct surveys, scheduling interviewers, inspecting work, and reviewing the data collected before submitting the data to the leadership team at the end of the day.

- The **lead interviewer** was responsible for administering surveys and overseeing survey operations on his/her assigned bus. This included downloading the data from tablet PCs and submitting the data to the Team Leader.

- The **support interviewer** was responsible for conducting interviews. Most of the support interviewers spoke both English and Spanish.

- One person was assigned to conduct boarding and alighting counts on each route. The **boarding / alighting counter** used a GPS equipped tablet PC to record the number of riders who boarded and alighted the bus at each stop. A screen shot of the tablet PC program that was used to record the information is shown in Figure 4.1 to the right. The results of the boarding and alighting counts were used to support the expansion of the data as described in Section 7 of this report.

Figure 4.1

Light Rail Team. The rail team leader supervised a group of approximately 12 surveyors per day. The rail team typically administered the survey to passengers traveling in both directions at two stations per day as shown in Table 4.2 below.

Table 4.2

Typical Deployment of Rail Survey Team

Station 1

Eastbound:
- Lead interviewer
- Support interviewer
- Support interviewer

Westbound:
- Lead interviewer
- Support interviewer
- Support interviewer

Station 1

Eastbound:
- Lead interviewer
- Support interviewer
- Support interviewer

Westbound:
- Lead interviewer
- Support interviewer
- Support interviewer

At high volume stations, as many as 12 interviewers may have been used. At low volume stations as few as 3 interviewers may have been used. The responsibilities for each of the positions on the rail team are described below and on the following page:

- The **team leader** was responsible for ensuring that interviewers were properly trained, equipping interviewers to conduct surveys, scheduling interviewers, inspecting work, and reviewing the data collected before submitting the data to the leadership team at the end of the day.

- The **lead interviewer** was responsible for administering surveys and overseeing survey operations at his/her her assigned location. This included downloading the data from tablet PCs and submitting the data to the Team Leader.

- The **support interviewer** was responsible for conducting interviews. Most of the support interviewers spoke both English and Spanish.

Survey Administration Procedures

Timing of the Survey. The survey was administered during weekdays (Tuesday-Thursday) from October 4, 2010 thru February 17, 2011 with the exception of Veterans Day, Thanksgiving, and winter breaks for colleges/schools from December 15, 2010 - January 24, 2011.

The survey was administered at the time of day that coincided with the hours that each route was operational. This was to ensure that the administration of the survey began prior to peak ridership levels in the morning and continued after peak ridership levels in the evening. Although the administration of the survey began as early as 5am and continued as late as 9pm on some routes, most surveys were administered between the hours of 6:00am – 7:00pm.

The project manager coordinated with each transit agency to verify the hours of operation for each route. One week before the survey was scheduled to be conducted, the number of buses to be ridden were assigned to each route. Final staffing assignments were made at that time to ensure that an adequate number of interviewers were assigned.

The procedures for administering the survey are listed below:

- **Prior to the Administration of the Survey**:

  Route Reconnaissance. The team leader for each route conducted a physical reconnaissance of the route. This review included:

  - Ensuring that the stops previously identified matched the route actually being driven. This was done to ensure boarding and alighting data at each stop along the route were being recorded correctly.
  - Identifying large employers and schools along the route, which may have impacted ridership patterns at certain times of the day.
  - Assessing whether a high percentage of the riders did not speak English; if more than 10% of the riders did not speak English, provisions were made to have bilingual interviewers on the route.

  Education/Public Awareness. In order to increase participation in the survey, Valley Metro posted signs and recorded announcements on buses and at rail stations that explained the importance of the survey. The signs were posted on buses, and at light rail stations one week before the survey was conducted. A website was also created to provide riders with more information about the survey.

- **During the Administration of the Survey.** Interviewers selected people for the survey in accordance with the sampling procedures that are described in Section 2 of this report. Once a surveyor had selected a person for the survey, the surveyor did the following:

  - Approached the person who was selected and asked him or her to participate in the survey.

  - If the person refused, the interviewer ended the survey, but the refusal was recorded on the tablet PC so Valley Metro could assess the overall response rate to the survey**.**

  - If the person agreed to participate, the interviewer asked the respondent if he/she had at least five minutes to complete the survey.

    - **If the person did NOT have at least five minutes,** the surveyor asked the person to provide his/her boarding location, alighting location, name, and phone number. The surveyor then gave the respondent a printed copy of the survey with a return reply envelope. The interviewer told the respondent to return the survey by mail or on-line at the survey website within the next two days. A serial number that was printed on the survey was entered into the tablet PC to allow the research team to track whether or not the respondent completed the survey. If the survey was not returned to ETC Institute by mail or on-line within five days, a phone interviewer from ETC Institute's call center contacted the respondent and asked him/her to provide the information by phone. This methodology ensured that people who completed "short-trips" on public transit were well represented.

    - **If the person had at least five minutes,** the surveyor began administering the survey to the respondent as a face-to-face interview using a tablet PC. After all of the "required" questions had been answered, the interviewer asked the respondent if he or she had 2-3 more minutes to complete the "desired" questions. If the respondent agreed, the surveyor then asked the remaining questions on the survey. In situations where the administration of the survey by tablet PC was not practicable, a printed copy of the survey was used. When a printed copy of the survey was completed, the interviewer still conducted a face-to-face interview with the respondent after the respondent had filled out the questionnaire. During the interview, the surveyor reviewed all answers that were provided by the respondent to ensure the information was legible, accurate, and complete. If the surveyor noticed that the respondent did not properly complete one or more questions, the interviewer made the appropriate corrections to the survey. The completed survey was then entered into the tablet PC later that day.

- **After the Administration of the Survey.** After the surveys were administered, the team leaders for each team consolidated the survey data that was collected by their team and forwarded the data to the Leadership Team. The Leadership Team then reviewed each survey record to ensure that the following information had been provided.

    - Type of place where the trip began
    - Complete address where the trip began
    - Mode of access to the transit system
    - Boarding location
    - Alighting location
    - Mode of egress from the transit system
    - Complete destination address
    - Type of place where the trip ended
    - The respondent's home address
    - Number of operational vehicles available in the household
    - Number of occupants in the respondent's household
    - Number of adults in the respondent's household
    - Number of workers (employed persons) in the respondent's household
    - Respondent's employment status
    - Respondent's student status
    - Respondent's driver's license status
    - Age of the respondent
    - Annual household income
    - Time of day the survey was completed

  If any of the information listed above was missing or incomplete, the Leadership Team forwarded the survey record and corresponding name and phone number of the survey respondent to ETC Institute's call center. Interviewers working in ETC Institute's call center then called respondents who had provided their name and phone number to retrieve the missing information by phone.

  Once survey records were classified as "complete" meaning all of the "required" information had been collected, the records were forwarded to ETC Institute's geocoding manager, who then geocoded the home, origin, boarding, alighting, and destination addresses. The geocoding process is described in detail in the following section (Section 5) of this report.

Survey Response Rate

The overall response rate to the survey was very high (90.1%). Eighty-five percent (85%) of the passengers who were asked to participate in the pilot survey agreed to participate and ninety percent (90%) of the passengers who were asked to participate in the final survey agreed to participate. Table 4.3 (top of the following page) shows the overall response rate, the response rate for the pilot survey and the response rate for the final survey.

Table 4.3

Overall Response Rate			
	Total Number of People Who Were Asked to Participate in the Survey	Number Who Participated in the Survey	Response Rate
Pilot Survey	515	440	85%
Final Survey	18462	16652	90%
TOTAL	**18977**	**17092**	**90.1%**

Factors that may have contributed to the high response rate included:

- **Use of Bi-lingual Interviewers**. More than 1,000 surveys were completed in Spanish.

- **Use of Incentives**. A total of $5000 worth of incentives were given to nearly 200 people who were randomly selected from all participants in the survey. The incentives included cash awards of $100 and gift certificates to restaurants and retail stores valued at $10, $25, and $50.

- **Use of Tablet PCs**. Unlike paper surveys which require the respondent to fill out a form, tablet PCs do not require the respondent to do anything other than respond to the question. By reducing the burden on the respondent to participate in the survey, more people were willing to participate. The tablet PCs also caused some passengers to be more curious about the survey, which may have aided the response rate.

- **Effective Pre-Survey Communication By Transit Agencies**. All of the participating transit operators did a good job of informing passengers about the survey. Since most passengers were aware of the survey before they were asked to participate, the overall response rate was probably higher because passengers understood the importance of the survey.

Table 4.4 (below and on the following pages) shows the final survey response rates for each route/station.

Table 4.4

Response Rate By Route/Station			
Route/Station Name	Total Number of People Who Were Asked to Participate in the Survey	Number Who Participated in the Survey	Response Rate
LOCAL ROUTES			
0 - Central	328	299	91%
1 - Washington	36	33	92%
3 - Van Buren	272	253	93%
7 - 7th Street	292	276	95%
8 - 7th Avenue	160	144	90%
10 - Roosevelt/Grant	181	161	89%

Table 4.4 (continued)

Response Rate By Route/Station			
Route/Station Name	Total Number of People Who Were Asked to Participate in the Survey	Number Who Participated in the Survey	Response Rate
LOCAL ROUTES (continued)			
12 - 12th Street	249	237	95%
13 - Buckeye	52	48	92%
15 - 15th Avenue	232	217	94%
16 - 16th Street	225	198	88%
17 - McDowell	376	361	96%
17A - McDowell/Avondale	49	43	88%
19 - 19th Avenue	490	422	86%
27 - 27th Avenue	232	214	92%
29 - Thomas Road	574	522	91%
30 - University	160	141	88%
35 - 35th Avenue	462	409	89%
39 - 40th Street	84	79	94%
40 - Main Street	246	227	92%
41 - Indian School	543	512	94%
43 - 43rd Avenue	151	135	89%
44 - 44th Street/Tatum	114	101	89%
45 - Broadway	272	234	86%
48 - 48th Street/Rio Salado	101	94	93%
50 - Camelback	327	291	89%
51 - 51st Avenue	71	62	87%
52 - Roeser	77	72	94%
56 - Priest Drive	111	103	93%
59 - 59th Avenue	181	157	87%
60 - Bethany Home	194	166	86%
61 - Southern	331	291	88%
62 - Hardy/Guadalupe	145	133	92%
65 - Mill/Kyrene	77	74	96%
66 - Mill/68th Street	117	110	94%
67 - 67th Avenue	187	163	87%
70 - Glendale/24th Street	416	369	89%
72 - Scottsdale/Rural	333	310	93%
76 - Miller	43	37	86%
77 - Baseline	149	131	88%
80 - Northern	93	80	86%
81 - Hayden/McClintock	168	155	92%
90 - Dunlap/Cave Creek	263	245	93%
96 - Dobson	186	173	93%
104 - Alma School	108	102	94%
106 - Peoria/Shea	226	198	88%
108 - Elliot	51	47	92%
112 - Country Club/Arizona Ave	91	78	86%

Table 4.4 (continued)

Response Rate By Route/Station			
Route/Station Name	Total Number of People Who Were Asked to Participate in the Survey	Number Who Participated in the Survey	Response Rate
LOCAL ROUTES (continued)			
120 - Mesa Drive	30	27	90%
122 - Cactus	27	25	93%
128 - Stapley	39	35	90%
131 - START	29	27	93%
136 - Gilbert Road	44	38	86%
138 - Thunderbird	81	71	88%
154 - Greenway	60	52	87%
156 - Chandler Blvd/Williams Field Rd	65	60	92%
170 - Bell	145	128	88%
186 - Union Hills	108	97	90%
EXPRESS ROUTES			
510 - Scottsdale Express	39	37	95%
511 - Tempe/Scottsdale Airpark Express	8	8	100%
512 - Scottsdale Express	26	24	92%
520 - Tempe Express	31	29	94%
521 - Tempe Express	35	34	97%
531 - Mesa/Gilbert Express	68	61	90%
532 - Mesa Express	38	37	97%
533 - Mesa Express	87	77	89%
535 - Northeast Mesa/Downtown Express	14	14	100%
540 - Chandler Express	33	30	91%
541 - Chandler Express	74	67	91%
542 - Chandler/Downtown Express	64	60	94%
560 - Avondale Express	10	10	100%
562 - Goodyear/Downtown Express	21	20	95%
571 - Surprise Express	33	30	91%
573 - Northwest Valley/Downtown Express	31	29	94%
575 - Northwest Valley Downtown Express	29	28	97%
581 - North Mountain Express	15	14	93%
NEIGHBORHOOD CIRCULATORS/COLLECTOR ROUTES			
Phoenix ALEX	57	51	89%
Phoenix DASH	151	135	89%
Tempe FLASH McCallister	154	131	85%
Glendale Urban Shuttle (GUS) 1, 2, & 3	34	29	85%
Grand Ave Limited	51	46	90%
Phoenix MARY	173	149	86%
Mesa Downtown BUZZ	38	35	92%
Tempe Orbit Earth EW Circulator	112	99	88%
Tempe Orbit Jupiter	138	127	92%
Tempe Orbit Mars	105	92	88%
Tempe Orbit Mercury	161	139	86%
Tempe Orbit Venus	113	103	91%
Phoenix Free Airport Shuttle	63	58	92%
SMART Circulator	127	111	87%

Table 4.4 (continued)

Response Rate By Route/Station			
Route/Station Name	Total Number of People Who Were Asked to Participate in the Survey	Number Who Participated in the Survey	Response Rate
NEIGHBORHOOD CIRCULATORS/COLLECTOR ROUTES (continued)			
Scottsdale Downtown Trolley	32	28	88%
Scottsdale Neighborhood Trolley	103	93	90%
OTHER BUS ROUTES (RURAL, RAPID AND LINK ROUTES)			
660 - Wickenburg Connector	6	6	100%
685 - Phoenix/Gila Bend Regional Connector	8	8	100%
I-10 East RAPID	127	113	89%
I-17 RAPID	59	55	93%
LINK-Main Street	81	71	88%
RAIL STATIONS			
1 - Montebello & 19th Avenue	386	353	91%
2 - 19th Avenue & Camelback	214	172	80%
3 - 7th Ave & Camelback	99	89	90%
4 - Central Avenue & Camelback	69	60	87%
5 - Campbell & Central Avenue	163	142	87%
6 - Indian School & Central Avenue	174	164	94%
7 - Osborne & Central Avenue	92	84	91%
8 - Thomas & Central Avenue	205	181	88%
9 - Encanto & Central Avenue	67	63	94%
10 - McDowell & Central Avenue	214	189	88%
11 - Roosevelt & Central Avenue	221	197	89%
12a - Van Buren & Central Avenue	174	164	94%
12b - Van Buren & 1st Avenue	171	158	92%
13a - Jefferson & 1st Avenue	192	167	87%
13b - Washington & Central Avenue	100	84	84%
14a - 3rd Street & Washington	101	87	86%
14b - 3rd Street & Jefferson	111	97	87%
15a - 12th Street & Washington	46	43	93%
15b - 12th Street & Jefferson	23	21	91%
16a - 24th Street & Jefferson	65	62	95%
16b - 24th Street & Washington	59	55	93%
17 - 38th Street & Washington	54	50	93%
18 - 44th Street & Washington	197	168	85%
19 - Priest Drive & Washington	143	132	92%
20 - Center Parkway & Washington	49	45	92%
21 - Mill Avenue & Third Street	151	126	83%
22- Veterans Way & College Avenue	365	335	92%
23 - University Drive & Rural	398	355	89%
24 - Dorsey & Apache Blvd	118	108	92%
25 - McClintock & Apache Boulevard	264	243	92%
26 - Smith-Martin & Apache Blvd	39	35	90%
27 - Price-101 Fwy & Apache Blvd	259	225	87%
28 - Sycamore & Main Street	476	443	93%
TOTAL	**18462**	**16652**	**90.2%**

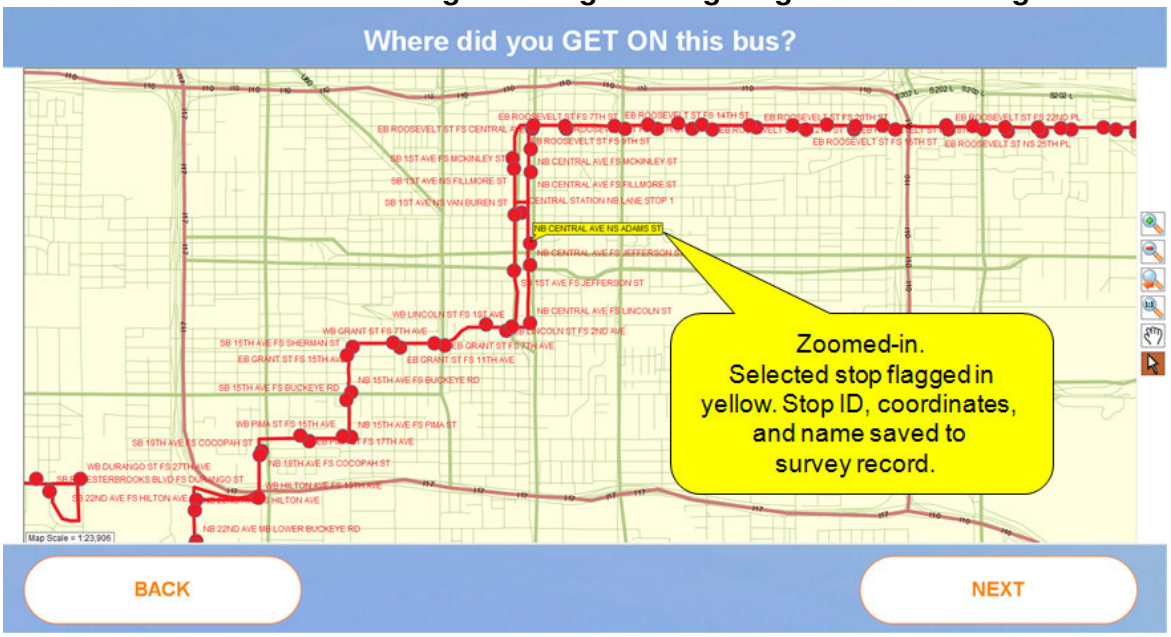
SECTION 5: GEOCODING PROCESS

Process for Geocoding Address Records

Each Valley Metro transit survey record attempted to descriptively convey information about five physical locations: trip origin, trip destination, where the transit user boarded the transit vehicle, where he or she exited the bus or train, and the home/residence location of the transit user. Where locations were reported as intersections, the intersection corner associated with the reported location was also recorded. For the survey to be of use to the underlying transit system modeling effort, the geographic coordinates of all five locations were determined through geocoding.

Effective geocoding depends mainly on the initial quality of the location data. Opportunities for spelling errors in field-recorded addresses were minimized in order to achieve high hit rates and credible geocoding results. The survey instrument, which was set up on a portable tablet PC, was configured with lists of place names relevant to the study area, which were instantly accessible during survey acquisition. These pre-configured lists contained city names, street names, bus route numbers, bus stop names, and train station names. Figure 5.1 (below) shows a screen shot from the tablet PC that allowed interviewers to precisely record boarding and alighting locations while the survey was being administered.

Figure 5.1
Tablet PC Screen Shot Showing Boarding and Alighting Locations Along a Route

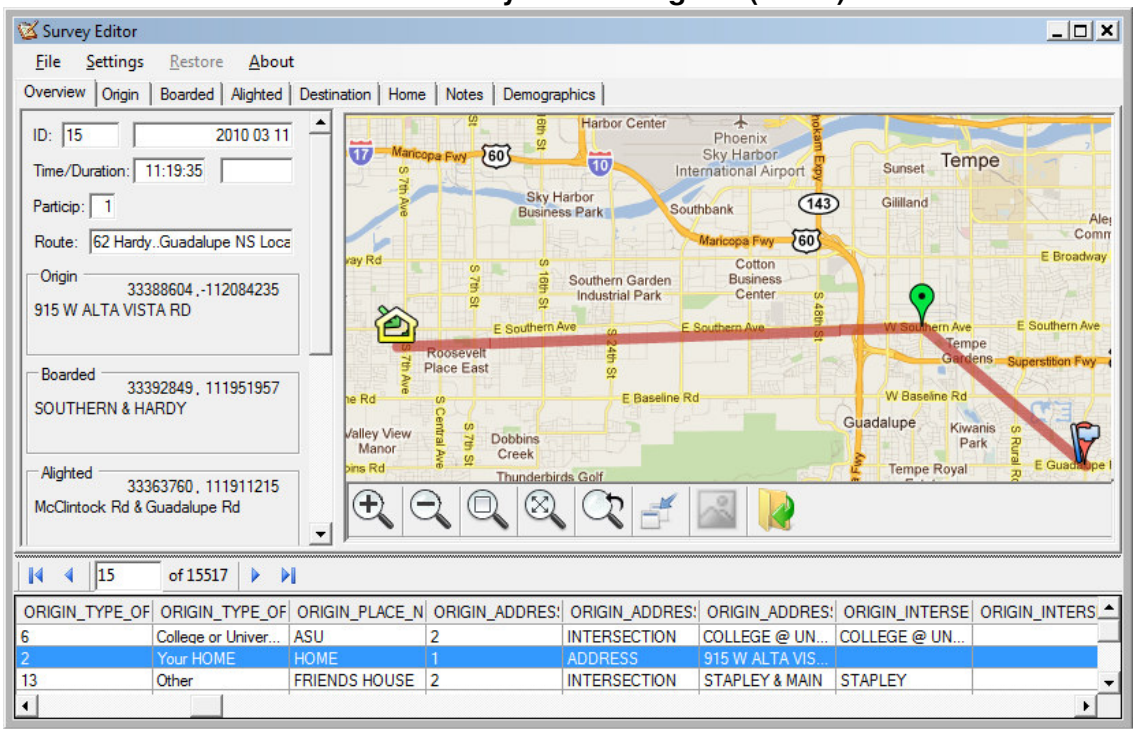


Each inventoried stop on the list was linked to its own unique System ID number which was captured automatically during the survey. The System ID was subsequently used in post-processing to automatically retrieve pre-recorded geographic coordinates of the stop. The coordinates of intersection-based locations were shifted in post-processing approximately 300 feet in the direction of the reported intersection corner to ensure correct TAZ assignment of the reported locations.

Survey records were geocoded in batches as they arrived from the field, after initial high-level cleanup and file formatting. The geocoding process was comprised of several steps which were followed both sequentially and iteratively, based on quality checks. Both automated and manual processes were used to identify the coordinates of reported locations. After the initial cleanup of location data, addresses were geocoded using the TransCAD GIS geocoding routines and Caliper's latest available nationwide street centerlines. Addresses which failed to geocode in this step were subsequently processed inside a geocoding utility published by a commercial mapping provider, using their up-to-date street centerlines.

The remaining non-decodable addresses were then manually corrected and geocoded using ETC Institute's Visual Survey Editor Program (VSEP), depicted in Figure 5.2. This program connects in real-time to an online mapping system and provides address auto-complete and instant map preview of candidate locations to help identify and fix addresses. VSEP allows the editor to view all five points concurrently and to manually adjust point positions on the map to better match their physical locations. This program helps to significantly speed up the survey record review and editing process and helps reduce error rates.

Figure 5.2
Visual Survey Editor Program (VSEP)



Other online mapping resources that were used to edit survey records when the locations could not be found using VSEP included:

- MapQuest
- Yahoo Maps
- Bing Maps
- the United States Geological Survey Geographic Names Information System (USGS GNIS)
- custom web-based geocoding routines such as GetLatLon.com or Geocode.com

The geocoded results were checked for errors recursively, until all five locations within a record were completely geocoded or until a record was declared unfit for further processing. Error checks included comparing attributes derived from the geocoded coordinates to those recorded during the field survey, e.g. city name. Quality checks also comprised proximity tests between the geocoded boarding or alighting locations and the known bus stop locations or line segment representing the bus route. Some of the proximity tests and corrections were performed within TransCAD using custom scripts developed for this project in Geographic Information System Developer's Kit (GISDK). Distances between each consecutive pair of trip points were also computed as a basis of logic checks used to flag records for further (typically manual) verification and correction.

All recorded geographic coordinates were converted to the State Plane Coordinate System (NAD83, AZ Central, feet, HARN datum), before submitting to Valley Metro.

Results of Geocoding Efforts

Table 5.1 (below) shows that 100% of the records in the final survey database were geocoded to each of the five critical address locations: home, origin, boarding, alighting, and destination.

Table 5.1

Type of Address	Number of Addresses	Addresses Geocoded to X,Y Coordinates	Percentage of Addresses Ending Inside the Metropolitan Phoenix Area that Were Geocoded to X, Y Coordinates
Home Address	14655	14655	100%
Origin Address	14655	14655	100%
Boarding Address	14655	14655	100%
Alighting Address	14655	14655	100%
Destination Address	14655	14655	100%
Percentage of All Addresses	14655	14655	100%

SECTION 6: DATA REVIEW PROCESS (QA/QC)

Many of the processes that were described in the first five sections of this report were essential elements of the overall quality assurance/quality control (QA/QC) process that was implemented throughout the survey administration process. The involvement of the Technical Advisory Committee (TAC) and the FTA in the development of survey questions contributed to the quality of the survey instrument. The establishment of specific sampling goals and the procedures for managing these goals ensured that a representative sample was obtained from each bus route and light rail station. The training of surveyors and the high levels of oversight provided by team leaders and the project manager ensured that the survey was administered properly. Also, the use of the latest geocoding tools contributed to the high quality of geocoding accuracy that was achieved.

This section of the report describes the QA/QC processes that were implemented after the data was collected.

Process for Identifying "Complete and Useable" Surveys

Once a survey had been classified as being "complete", meaning all of the "required data" were provided, the next phase of the QA/QC process was designed to determine the usability of each survey record. The term "useable" was used to identify records that passed all of the QA/QC tests that were applied to a record after it was classified as being "complete." [Note: a list of "required" data that were needed to meet the contractual requirements for completeness is provided in Section 1.]

Pre-Processing Tests

The first step in this process involved the application of a series of QA/QC tests that were conducted before the address fields were processed for geocoding. Some of the specific checks that were conducted during the pre-processing phase included:

- Checking for valid home street names, city names, and zip codes.
- Checking for valid origin street names, city names, and zip codes.
- Checking for valid destination street names, city names, and zip codes.
- Checking for origin place names that could be matched to a pre-existing list of major destinations that had been previously geocoded.
- Checking for destination place names that could be matched to a pre-existing list of major destinations that had been previously geocoded.

- Ensuring the number of household occupants was greater than or equal to the number of employed members of the household.
- Ensuring the number of household occupants was greater than or equal to number of adults in the household.
- Ensuring the respondents who indicated that they were employed also reported that at least one member of their household was employed.
- Ensuring that bus route names and rail station names were consistently spelled and coded correctly.
- Ensuring that the report dates on which the survey was administered were on a Tuesday, Wednesday, or Thursday.
- Ensuring that transfers to a bus route or rail station were possible.
- Ensuring that transfers from a bus route or rail station were possible.
- Ensuring that the number of vehicles available to a respondent's household were consistent with the respondent's reported annual household income.
- Ensuring the time of day a survey was completed was reasonable given the published operating schedule for the route.
- Ensuring the origin type of place code matched the type of place reported by the respondent.
- Ensuring the destination type of place code matched the type of place reported by the respondent.
- Ensuring the station name for the rail station matched the place where the respondent indicated he/she boarded the train.

Records that passed all of the QA/QC tests described above were forwarded to ETC Institute's geocoding section. Records that did not pass all of the tests were sent to ETC Institute's Survey Records Review Team (SRRT) for further review. The SRRT then took one of the following actions:

- They corrected the deficiency in record.
- They directed ETC Institute's call center to contact the respondent by phone (if a phone number were available) to retrieve additional information.
- They reclassified the record as "incomplete" by assigning a value of "3" for the record's Quality Control Flag. This assignment removed the record from further consideration for the final survey database.

Post-Processing Tests

The next step in this process involved the application of a series of QA/QC tests that were conducted after all five addresses were successfully geocoded.

Once all five addresses had been geocoded, the following QA/QC checks were performed to assess the logic and other attributes of the reported trip.

- Ensuring the origin and destination addresses were not the same.
- Ensuring that the boarding and alighting addresses were not the same.
- Ensuring that the respondent did not list the same route as both a "transfer from" and a "transfer to" during their one-way trip.
- Checking to be sure the access mode was appropriate given the distance of travel from the trip origin to place where the respondent initially accessed transit. For example, if a passenger reported that they accessed transit by car but the distance from their origin to the entry point for transit was less than 0.25 miles, the record would have been flagged for further review. Similarly, if a respondent reported that they walked to transit but the distance from the origin to transit was more than 2 miles, the record would have been flagged to check for a missing transfer.
- Checking to be sure the egress mode was appropriate given the distance of travel from place where the respondent exited the transit system to his/her destination.
- Reviewing the total distance the respondent traveled on transit compared to the distance the respondent traveled from the origin to the destination for their trip. For example, if a respondent reported traveling six miles on transit in order to travel 0.5 miles from the origin to the destination for their trip, the record would have been flagged for further review. Similarly, if a respondent reported traveling just 1 mile on transit to complete a 10 mile trip, the records would have been flagged to check for a missing transfer.
- Checking the station where rail passengers boarded the train to see if the direction of travel was possible from the reported boarding location.

Records that passed all of the QA/QC tests described above were forwarded to ETC Institute's Survey Records Review Team (SRRT) for a final visual review of the trip using Visual Survey Editor Program (VSEP), which was described on page 28 in Section 5.

Records that were flagged for further review were forwarded to the appropriate section based on the nature of the flag.

- Issues that involved address geocoding assignments were referred to ETC Institute's geocoding section.
- Issues that needed clarification of data were directed to ETC Institute's call center (if a phone number was available). The call center then contacted the respondent to retrieve additional information as needed.
- All other issues were directed to the ETC Institute's Survey Records Review Team (SRRT).

Records that were corrected were then forwarded to the SRRT for a final visual inspection using the Visual Survey Editor Program (VSEP).

Records that were complete but could have problems with the trip logic or other attributes of the trip were reclassified as "problematic" by assigning a value of "2" as the record's Quality Control Flag. This assignment removed the record from further consideration for the final survey database.

Visual Inspection

The final step of the QA/QC data review process involved a visual inspection of the trip record using the Visual Survey Editor Program (VSEP). The key tasks that were conducted as part of this visual inspection included the following:

- Visually inspecting and examining key variables of survey trips with very short distances (less than 1.0 miles for local bus and light rail trips and less than 4 miles for express and rapid bus trips).
- Visually inspecting the sensibility of trips with zero transfers given the relative location of the boarding and alighting locations relative to the origin and destination.
- Visually inspecting the sensibility of trips that reported three or more transfers.
- Visually inspecting the sensibility of drive access/egress trips given the distance traveled by car relative to the distance traveled by bus or light rail.
- Visually inspecting the sensibility of drive access/egress trips with more than one transfer.
- Visually inspecting sensibility of the origin-to-destination path with respect to the survey route that was used for the trip.

If a record passed all of the visual checks listed above, the record was classified as "useable" and tagged for inclusion in the final survey database by assigning a value of "1" for the records Quality Control Flag.

If a record did not pass all of the visual checks, the record was sent back to the SRRT for further review. If the SRRT was not able to resolve the problem that was identified, the record was reclassified as "problematic" by assigning a value of "2" as the record's Quality Control Flag. This assignment removed the record from further consideration for the final survey database.

Summary of the Data Review QA/QC Process

Among the 16,652 surveys that were originally administered, 15,767 met the contractual requirements for completeness. Of those that were classified as "complete", 14,665 passed all of the QA/QC tests and were subsequently classified as "useable" records. Only the "useable" records (those with a Quality Control Flag of "1") were included in the final survey database that was expanded and used for the analysis in this report. The results of the QA/QC review are shown in Table 6.1 below.

Table 6.1

Data Review QA/QC Summary

Classification	Quality Control Flag Value	Description	# of Surveys	% of All Surveys Administered
Not Complete	3	Missing one or more pieces of required data	885	5%
Problematic	2	All required data was provided but there was a problem with the trip logic or other attribute of the trip	1112	7%
Useable	1	Record passed all QA/QC tests	14665	88%
Total			**16652**	**100%**

SECTION 7: DATA EXPANSION PROCESS

This section describes the process for developing the weighting factors that were used to expand the survey database to the total transit ridership in the region. Two types of expansion factors were developed.

- **Unlinked trip weighting factors** were developed to expand the total number of completed surveys to the actual number of transit boardings in the region.

- **Linked trip weighting factors** were developed to adjust the total number of boardings to one-way trips. The linked trip weighting factor accounts for multiple boardings that would occur when a passenger transfers during his/her one-way trip.

Unlinked Trip Weighting Factors for Light Rail

A total of 4,213 surveys were completed with light rail passengers. The number of completed surveys represented 9.5% of the average weekday boardings on METRO Light Rail during the month of April 2011 (44,394 boardings). In order to ensure that the survey data accurately represented the travel patterns of the 44,394 passengers who use light rail service in the region on a typical weekday, weighting factors for unlinked trips were prepared for each survey record based on the direction of travel, time of day, and the path of the trip between the boarding and alighting station.

Estimating Ridership Between Stations

Although METRO Light Rail maintains daily ridership by direction and time of day, METRO Light Rail does not currently maintain data tracking the number of light rail trips that begin and end at each station. The Metro maintains boarding and/or alighting information.

In order to estimate actual ridership between stations, at least one interviewer was assigned the responsibility of administering a boarding/alighting survey to as many light rail passengers as possible at each station. The boarding/alighting survey was administered in conjunction with the main surveying effort, but the survey only included a single question: "At which station will you be getting off the train?" A total of 8,212 light rail passengers completed the boarding/alighting survey.

The station-to-station flows that were captured in the boarding/alighting survey were applied to the actual number of boardings at each station to provide an estimate of the station-to-station ridership in each direction for each of four time periods: AM Peak (6am-9:59am), Midday (10am-1:59pm), PM Peak (2pm-5:59pm), and All Other Hours (6pm-5:59am).

The research team then compared the estimated number of alightings at each station to the actual number of alightings at each station. The actual alighting data was used as a control total to ensure that the estimated ridership between stations was reasonable. If the difference between the estimated number of alightings and the actual number of alightings for any station was more than 10%, the research team applied an iterative balancing process that adjusted the distribution of trips between stations until the difference between the estimated number of boardings and alightings and the actual number of boardings and alightings was nearly zero.

Calculating the Weighting Factors

Once the research team had estimated the actual ridership between stations, the next step was to calculate weighting factors for unlinked trips. This was done by developing three sets of matrices that showed boardings for all 28 light rail stations on one axis and alightings for all 28 stations on the other axis. An example of this process for just three stations is shown in Table 7.1 below (and at the top of the following page). The first matrix (Step 1) shows the estimated ridership between stations ("NA" indicates that the trip was not possible since table shows eastbound ridership). The second matrix (Step 2) shows the number of completed surveys for each boarding/alighting combination in the matrix. The third matrix (Step 3 – on the following page) shows the weighting factors for unlinked trips which were calculated by dividing the estimated ridership in Step 1 by the number of completed surveys in Step 2.

Table 7.1

EXAMPLE OF THE METHODOLOGY FOR GENERATING UNLINKED TRIP WEIGHTING FACTORS FOR LIGHT RAIL

EASTBOUND MIDDAY

Step 1: Estimated Ridership

	ALIGHTING STATION		
BOARDING STATION	Montebello & 19th Avenue	19th Avenue & Camelback	7th Ave & Camelback
Montebello & 19th Avenue	NA	64	51
19th Avenue & Camelback	NA	NA	29
7th Ave & Camelback	NA	NA	NA

Step 2: Number of Completed Surveys

	ALIGHTING STATION		
BOARDING STATION	Montebello & 19th Avenue	19th Avenue & Camelback	7th Ave & Camelback
Montebello & 19th Avenue	NA	9	9
19th Avenue & Camelback	NA	NA	3
7th Ave & Camelback	NA	NA	NA

Step 3: Unlinked Trip Weighting Factors

BOARDING STATION	ALIGHTING STATION: Montebello & 19th Avenue	19th Avenue & Camelback	7th Ave & Camelback
Montebello & 19th Avenue	NA	7.1	5.7
19th Avenue & Camelback	NA	NA	9.7
7th Ave & Camelback	NA	NA	NA

Note: The weighting factors shown in Step 3 were calculated by dividing the estimated ridership in Step 1 by the actual number of completed surveys in Step 2.

The process shown in Table 7.1 was completed for each of the following eight types of trips:

- Eastbound Trips during the AM Peak (6am-9:59am)
- Eastbound Trips during the Midday (10am-1:59pm)
- Eastbound Trips during the PM Peak (2pm-5:59pm)
- Eastbound Trips during All Other Hours (6pm-5:59am)
- Westbound Trips during the AM Peak (6am-9:59am)
- Westbound Trips during the Midday (10am-1:59pm)
- Westbound Trips during the PM Peak (2pm-5:59pm)
- Westbound Trips during All Other Hours (6pm-5:59am)

Unlinked Trip Weighting Factors for Bus Routes

A total of 10,442 surveys were completed with bus passengers. The number of completed bus surveys represented 5.2% of the average weekday boardings on the region's bus system during the month of April 2011 (198,947 boardings). In order to ensure that the survey data accurately represented the travel patterns of the 198,947 passengers who use bus service in the region on a typical weekday, unlinked trip weighting factors were prepared for each bus survey record in one of the following two ways:

- **High Volume Routes.** Bus routes with average weekday boardings of 4,000 passengers or more were expanded by direction, time of day, and boarding location. There were a total of 15 routes in this category. The total boardings on these routes was 100,015, which was 50.3% of the region's average weekday bus ridership

- **All Other Routes.** Bus routes with average weekday boardings of less than 4,000 passengers were expanded by direction and time of day. There were a total of 83 routes in this category. The total boardings on these routes was 98,932, which was 49.7% of the region's average weekday bus ridership.

Each of these two methods is described in more detail on the following pages.

Calculating Unlinked Trip Weighting Factors for High Volume Bus Routes

The process for calculating unlinked trip weighting factors for high volume bus routes involved several activities that are described below and on the following pages.

- **Collecting Boarding/Alighting Counts.** Since ridership data at the stop level was not available, the research team conducting boarding and alighting counts on at least one bus that was operating on each route while the survey was being administered.

- **Segmenting Routes Based on the Observed Distribution of Boardings and Alightings.** The boarding and alighting data from the on-board counts were reviewed in GIS to assess the general distribution of ridership along each route by time of day. Based on the observed distribution, the research team divided each route into at least three but no more than six segments. The purpose of the segmentation was to control the expansion of the sample with regard to the location of boardings along a route. The number of segments per route was related to the number of completed surveys along the route and the presence of major ridership generators, such as light rail stations and park and ride lots. Since the sample size was limited to approximately 5% of the total ridership on each route, the number of segments was limited to ensure that most expansion factors would have a value of 40 or less, which was double the value of the average weighting factor. [Note the average weighting factor was 20 since 1 in 20 (or 5%) of the ridership was surveyed]. A list routes that were expanded using this method is provided in Appendix G.

- **Estimating the Total Number of Boardings for Each Segment.** Once each route had been segmented, the percentage of all boardings that were observed in each segment (based on the results of the boarding/alighting counts) was multiplied by the total number of boardings on the route in each direction for each of four time periods: AM Peak (6am-9:59am), Midday (10am-1:59pm), PM Peak (2pm-5:59pm), and All Other Hours (6pm-5:59am). The result of this process was an estimate for the total number of boardings within each segment by direction and time of day.

- **Calculating the Weighting Factors.** Once the total boardings for each segment had been estimated by time of day and direction, weighting factors for each segment were calculated by dividing the estimated number of boardings on each segment by the total number of completed surveys for each segment. A unique set of weighting factors was created for each segment on a route for each of the following types of trips.

    - East or Northbound Trips during the AM Peak (6am-9:59am)
    - East or Northbound Trips during the Midday (10am-1:59pm)
    - East or Northbound Trips during the PM Peak (2pm-5:59pm)
    - East or Northbound Trips during All Other Hours (6pm-5:59am)
    - West or Southbound Trips during the AM Peak (6am-9:59am)

- West or Southbound Trips during the Midday (10am-1:59pm)
- West or Southbound Trips during the PM Peak (2pm-5:59pm)
- West or Southbound Trips during All Other Hours (6pm-5:59am)

A route with three segments would have had 24 unique weighting factors. While a route with five segments would have had 40 unique weighting factors.

Calculating Unlinked Trip Weighting Factors for All Other Bus Routes

The process for calculating unlinked trip weighting factors for other bus routes simply involved dividing the number of boardings in each direction by time of day on each route by the number of surveys that were completed. For most routes, expansion factors were developed for the following eight types of trips. An example of the calculation from Route 62 is shown in Table 7.2 below:

- East or Northbound Trips during the AM Peak (6am-9:59am)
- East or Northbound Trips during the Midday (10am-1:59pm)
- East or Northbound Trips during the PM Peak (2pm-5:59pm)
- East or Northbound Trips during All Other Hours (6pm-5:59am)
- West or Southbound Trips during the AM Peak (6am-9:59am)
- West or Southbound Trips during the Midday (10am-1:59pm)
- West or Southbound Trips during the PM Peak (2pm-5:59pm)
- West or Southbound Trips during All Other Hours (6pm-5:59am)

Table 7.2

Unlinked Trip Weighting Factors for Route 62

Direction	Time of Day	Actual Boardings	# Completed Surveys	Expansion Factor
North	AM	216	11	19.61
North	Midday	181	17	10.64
North	PM	291	18	16.15
North	Other	129	6	21.48
South	AM	194	18	10.75
South	Midday	103	8	12.83
South	PM	215	17	12.62
South	Other	175	8	21.87

Linked Trip Weighting Factors for All Records

The linked trip weighting factor adjusts the total number of boardings to one-way trips by accounting for the number of transfers that were completed by each passenger.

The equation that was used to calculate the linked trip weighting factor is shown below:

Linked Trip Weighting Factor = [1 / (1 + # of transfers)]

If a passenger did not make a transfer, the linked trip weighting factor would be 1.0 because the person would have only boarded one vehicle. If a person made two transfers, the linked trip weighting factor would be 0.33 because the person would have boarded three transit vehicle during his/her one-way trip. An example of how the linked trip weighting were calculated is provided in Table 7.3 below.

Table 7.3
Sample Calculations of Linked Trip Weighting Factors
+[1/(1+# of transfers)]

Number of Transfers	Calculation	Linked Trip Weighting Factor
None	[1/(1+**0**)]	1.00
One	[1/(1+**1**)]	0.50
Two	[1/(1+**2**)]	0.33
Thee	[1/(1+**3**)]	0.25

Use of "Dummy" Variables

The final database contains 13 "dummy" variables. These "dummy" variables account for 387 trips that occurred between two rails stations for which no corresponding survey data was collected. For example, ridership data shows that 3 trips per day involve a boarding at Priest Drive & Washington and a alighting at Indian School & Central during the hours of 2pm-6pm on an average weekday. Since none of the completed surveys involved a boarding at Priest Drive & Washington and a alighting at Indian School & Central during the hours of 2pm-6pm, a "dummy" variable was create to capture this trip. Dummy variables account for fewer than 1% of all rail trips, and they are identified with "2011Dummy" in the YEAR field of the database.

Routes that Were Not Included in the 2010-11 Survey

Given the limitation on resources for the project, two rapid routes were not included in the 2011 survey: SR-51 and I-10W. These two routes were not included because ridership levels on these routes have changed by less than 10% since 2007 and there was no reason to suspect that these routes were significantly affected by the introduction of light rail to the region. Although data from these routes was not included in the analysis provided in this report, the 2007 survey data for these routes was added to 2010-11 survey database to ensure that these routes would be accounted for in the database that will be used for regional travel demand modeling,. These records are identified with "2007" in the YEAR field of the database.

SECTION 8: SELECTED FINDINGS

This section highlights selected demographic and trip-related findings from the survey. The results for all questions on the survey based on the mode of travel (bus only vs. light rail only vs. bus/light rail) are provided in Appendix A. The results for all questions on the survey based on the type of service (local, express, circulator, etc.) are provided in Appendix B.

Vehicle Availability

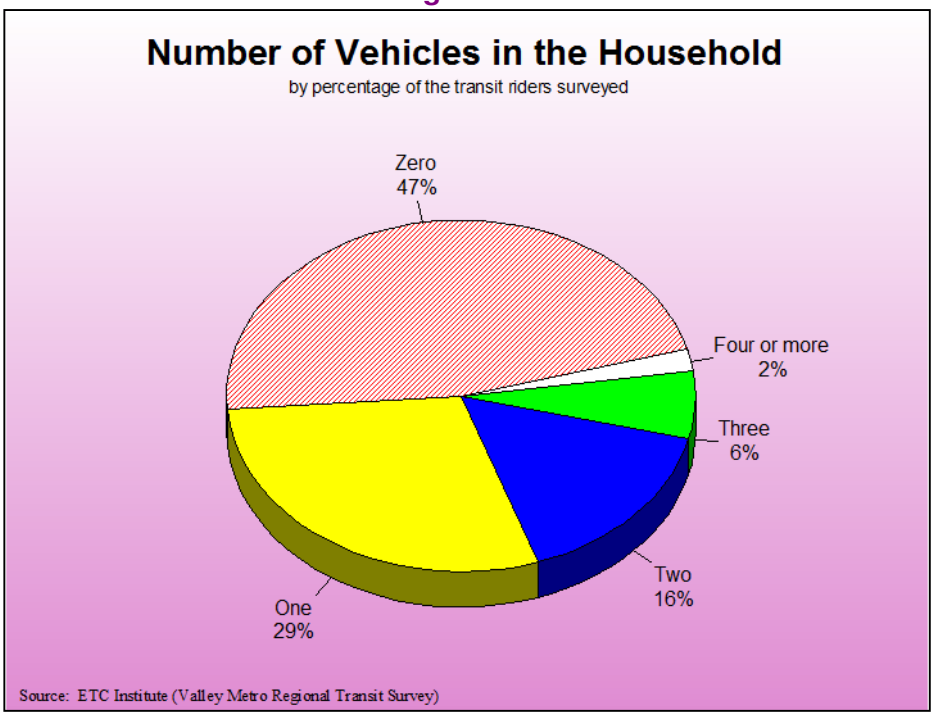
Forty-seven percent (47%) of all transit passengers indicated that they do not have a vehicle available to their household. Light rail passengers were significantly more likely to have at least one vehicle available to their household than bus passengers (70% light rail only vs. 52% bus only). Light rail passengers were also more than twice as likely to have three or more vehicles available to their household (16% light rail only vs. 7% bus only).

Table 8.1

Number of Vehicles in the Household

Vehicles	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Zero	48%	30%	52%	47%
One	29%	33%	27%	29%
Two	16%	21%	13%	16%
Three	5%	11%	6%	6%
Four or more	2%	5%	2%	2%

Figure 8.1



Household Size

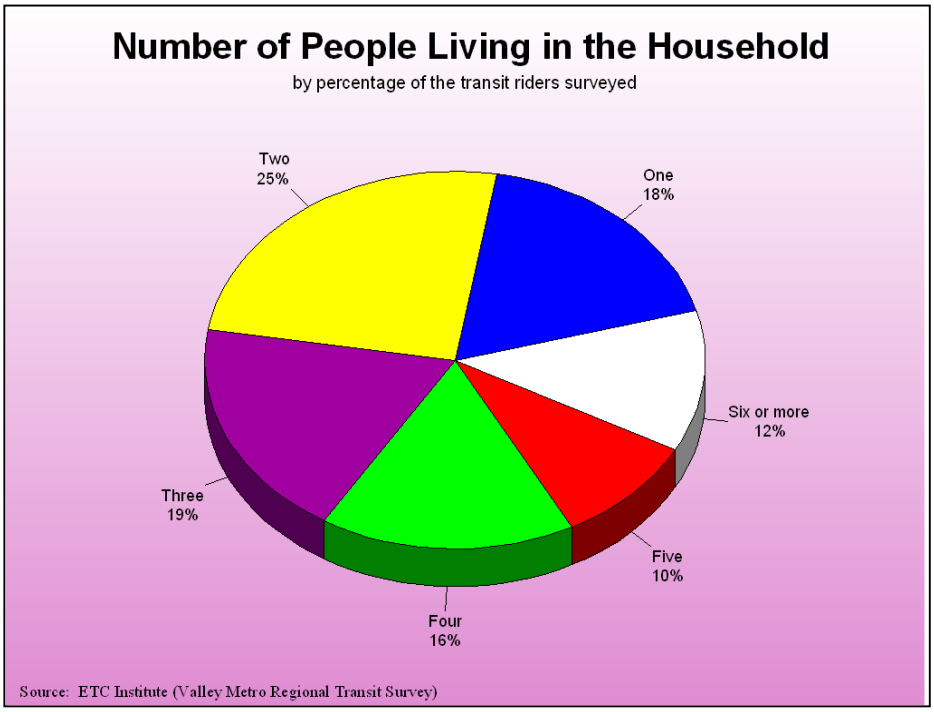
Twenty-two percent (22%) of all transit passengers indicated that they live in households with at least five occupants; 18% reported that they live alone. Bus passengers were significantly more likely to live in households with five or more occupants than light rail passengers (24% bus only vs. 13% light rail only).

Table 8.2

Number of People Living in the Household

Persons	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
One	17%	20%	21%	18%
Two	24%	30%	26%	25%
Three	19%	20%	18%	19%
Four	16%	18%	15%	16%
Five	11%	5%	8%	10%
Six or more	13%	8%	12%	12%

Figure 8.2



Employed Persons per Household

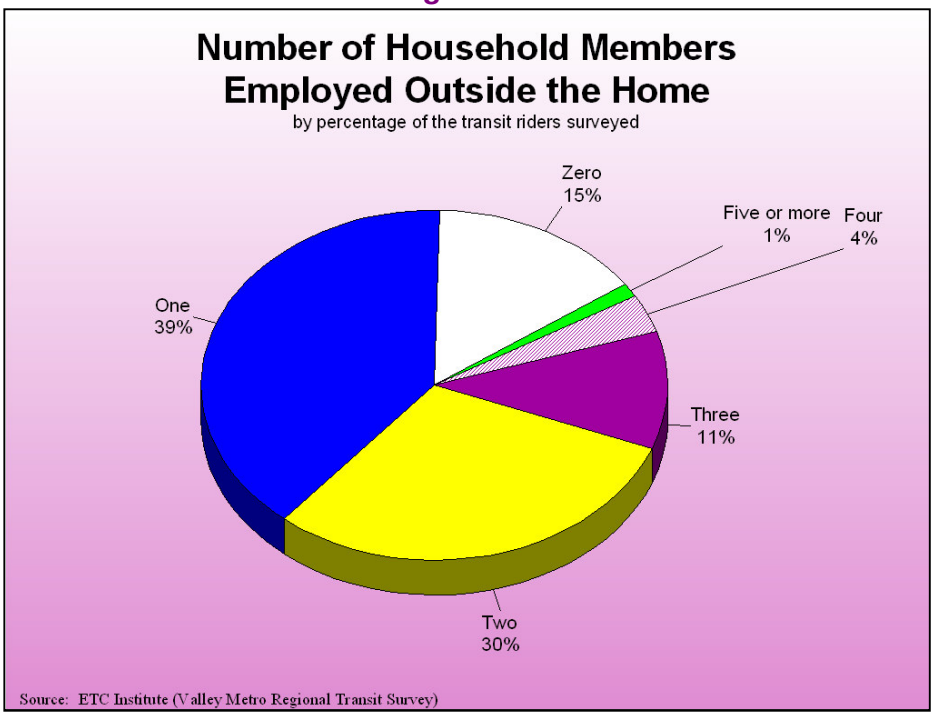
Most (85%) transit passengers reported that they live in households where at least one person is employed. There were no significant differences in the number of employed persons per household based on the mode of travel as shown in Table 8.3 below.

Table 8.3

Number of Employed Persons in the Home

Employed Persons	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Zero	15%	14%	15%	15%
One	39%	37%	43%	39%
Two	30%	35%	27%	30%
Three	11%	10%	11%	11%
Four	4%	3%	3%	4%
Five or more	1%	1%	1%	1%

Figure 8.3



Student Status

Thirty-eight percent (38%) of all transit passengers indicated that they were students. Light rail passengers were more likely to be enrolled in a college or university than bus passengers (48% light rail only vs. 21% bus only). Bus passengers were twice as likely to be students in grades K-12 than light rail passengers (14% bus only vs. 7% light rail only).

Table 8.4

Student Status

Student Status	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Not a Student	63%	45%	66%	62%
Yes-student thru 12th grade	14%	7%	10%	13%
Yes-college/university	21%	48%	22%	24%
Yes-other	1%	0%	2%	1%

Employment Status

More than three-fourths (79%) of all transit passengers indicated that they were employed or seeking work. Bus passengers were more likely to be employed full time than light rail only passengers (38% bus only vs. 34% light rail only). Light rail passengers were more likely to be employed part-time (25% light rail only vs. 20% bus only). The higher percentage of part-time employment among light rail passengers may be related to the fact that a higher percentage of light rail users are college students (as shown in Table 8.5 below).

Table 8.5

Employment Status

Employment Status	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Employed full-time	38%	34%	41%	38%
Employed part time	20%	25%	17%	20%
Not currently employed but seeking work	22%	12%	22%	21%
Not currently employed and NOT seeking work	17%	26%	18%	18%
Not employed – retired	3%	3%	3%	3%
Not provided	0%	0%	0%	0%

Driver's License

More than half (53%) of all transit passengers indicated that they do not have a driver's license. Light rail passengers were significantly more likely to have a driver's license than bus passengers (72% light rail only vs. 44% bus only) as shown in Table 8.6 below.

Table 8.6

Driver's License Status

Driver's License Status	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Yes	44%	72%	47%	48%
No	56%	28%	53%	53%

Age

Nearly two-thirds (65%) of all transit riders indicated that they were between the ages of 18 and 44; 11% were under age 18, and 23% were age 45 or older. Bus passengers were more likely to be under age 18 than light rail passengers (12% bus only vs. 7% light rail only). Bus passengers were also more likely to be age 45 or older (25% bus only vs. 15% light rail only). Light rail users were more likely to be between the ages of 18-24 than bus passengers (41% light rail only vs. 28% bus only).

Table 8.7

Ages of Transit Users

Age Range	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Under 18	12%	7%	9%	11%
18-24	28%	41%	25%	29%
25-34	20%	26%	21%	21%
35-44	15%	11%	18%	15%
45-54	15%	7%	17%	14%
55-64	7%	6%	8%	7%
65 or older	3%	2%	2%	2%

Income

More than one-third (34%) of all transit passengers reported annual household incomes below $15,000. Less than one-fifth (19%) indicated they had an annual household income of $50,000 or more, and only 4% reported an annual household income of $100,000 or more. Light rail passengers were more likely to report annual household incomes above $50,000 than bus passengers (28% light rail only vs. 17% bus only) as shown in Table 8.8 below.

Table 8.8

Annual Household Income

Annual Income Range	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Below $5,000	16%	9%	15%	15%
$5,000-$9,999	9%	7%	9%	9%
$10,000-$14,999	10%	8%	9%	10%
$15,000-$19,999	8%	6%	8%	8%
$20,000-$24,999	10%	7%	9%	10%
$25,000-$29,999	9%	8%	10%	9%
$30,000-$34,999	7%	9%	9%	8%
$35,000-$39,999	6%	10%	5%	6%
$40,000-$49,999	7%	9%	8%	7%
$50,000-$59,999	5%	7%	6%	6%
$60,000-$69,999	4%	5%	4%	4%
$70,000-$79,999	2%	4%	2%	2%
$80,000-$89,999	2%	3%	2%	2%
$90,000-$99,999	1%	3%	1%	1%
$100,000-$119,999	1%	3%	2%	2%
$120,000 or more	2%	3%	2%	2%
Don't Know	0%	1%	0%	0%

Gender

Fifty two percent (52%) of all transit passengers were male; 48% were female. There were no significant differences with regard to gender based on the mode of travel as shown in Table 8.9 below.

Table 8.9

Gender

Gender	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Male	51%	51%	55%	52%
Female	49%	49%	45%	48%

Race/Ethnicity

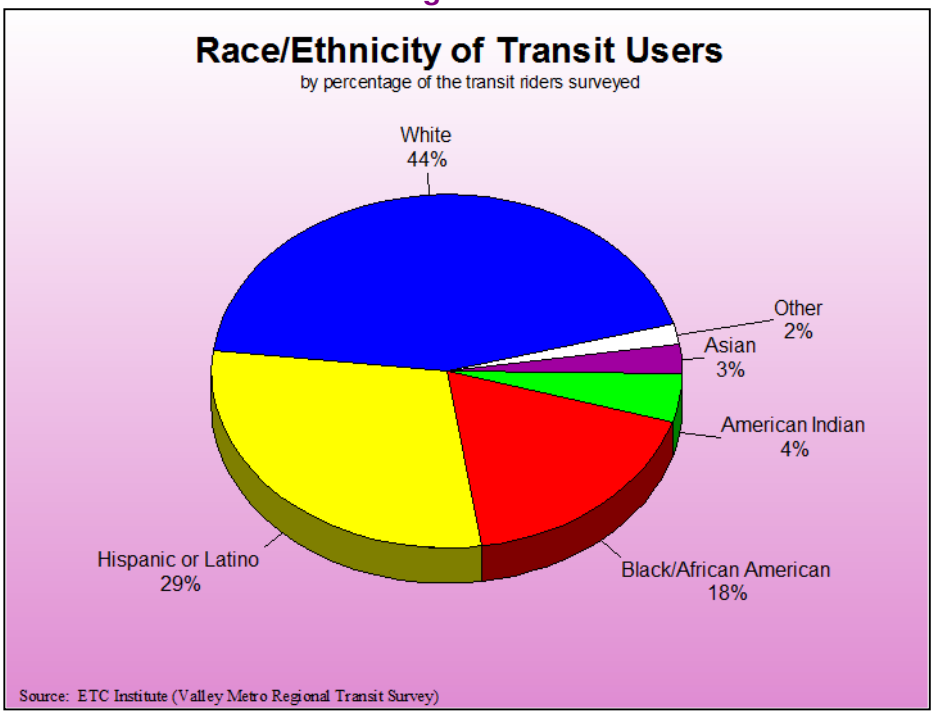
More than 40% of transit riders identified themselves as White; 29% identified themselves as Hispanic or Latino, and 18% identified themselves as Black or African American. Bus passengers were more likely to be Hispanic than light rail passengers (31% bus only vs. 22% light rail only) as shown in Table 8.10 below.

Table 8.10

Race/Ethnicity

Race/Ethnicity	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
White	44%	49%	40%	44%
Hispanic or Latino	31%	22%	28%	29%
Black or African American	18%	15%	22%	18%
American Indian	4%	5%	7%	4%
Asian	2%	6%	2%	3%
Other	2%	3%	2%	2%

Figure 8.4



Necessity of Transit Service

More than one-fourth (26%) of all transit passengers reported that they would not have been able to make their trip if public transit were not available. Another ten percent (10%) did not know how they would have made their trip without public transit.

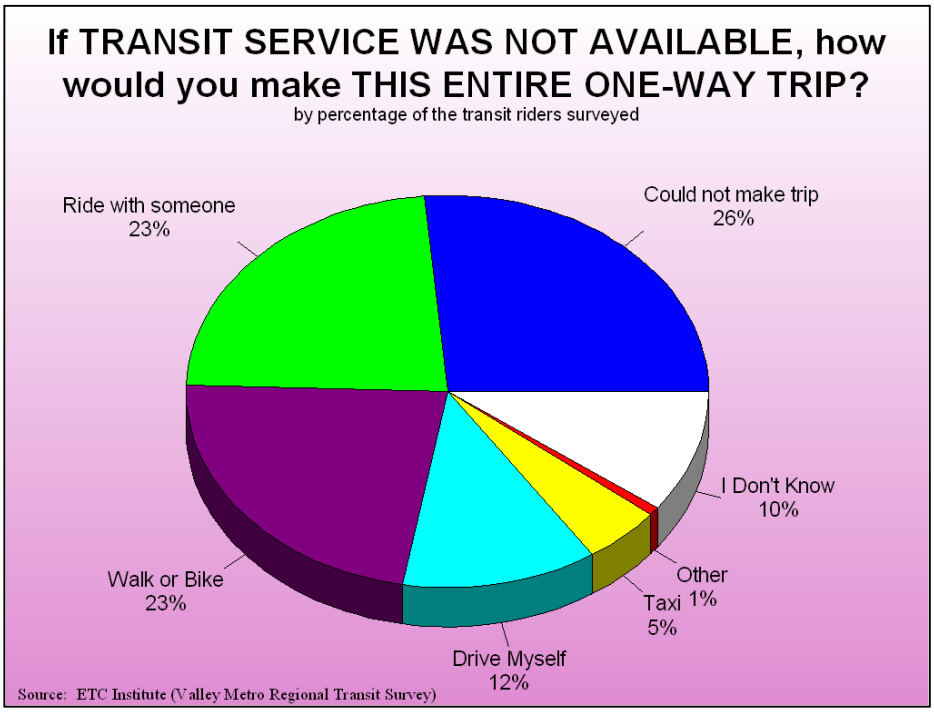
Bus passengers were significantly more likely to be dependent on public transit than light rail passengers. Twenty-nine percent (29%) of bus passengers indicated that they would not have been able to make their trip compared to just 8% of light rail passengers. Light rail passengers were more than four times as likely as bus passengers to report that they would have driven themselves if public transit had not been available (33% light rail only vs. 8% bus only).

Table 8.11

How Would You Make This Trip If Public Transit Was Not Available?

Mode of Travel Without Transit	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
I could not make this trip	29%	8%	28%	26%
Drive with someone else	23%	23%	24%	23%
Walk or Bike	24%	22%	17%	23%
Drive Myself	8%	33%	14%	12%
Taxi	6%	3%	4%	5%
Other	1%	0%	1%	1%
I Don't Know	10%	10%	12%	10%

Figure 8.5



How Long Passengers Have Been Using Public Transit in the Phoenix Area

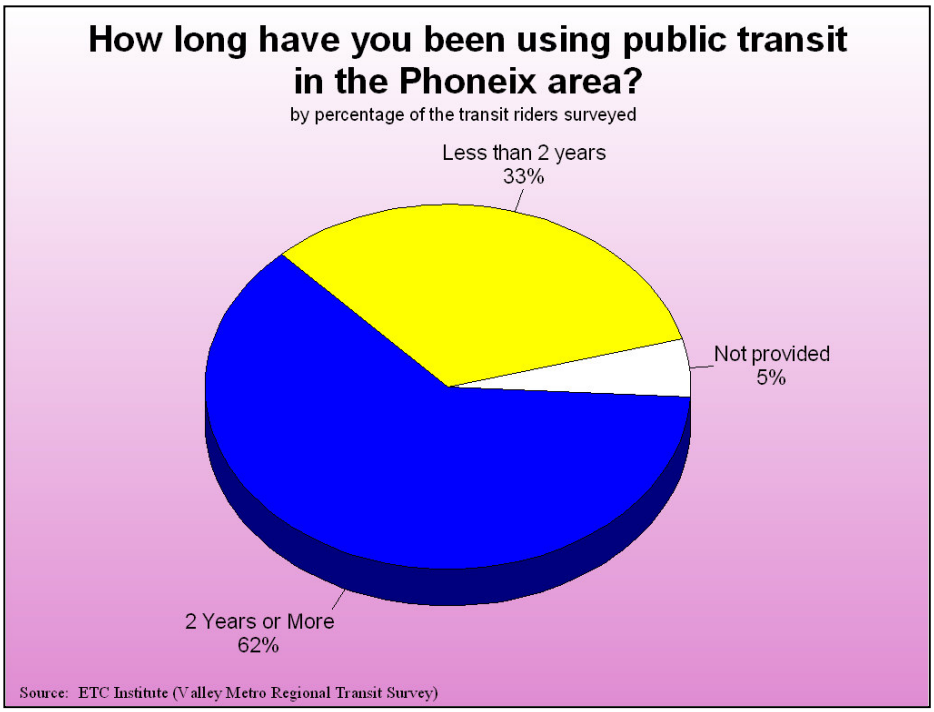
Nearly two-thirds (62%) of all transit passengers indicated that they have been using public transit in the Phoenix area for at least two years. Bus passengers were more likely to have been using public transit for at least two years than light rail passengers (63% bus only vs. 53% light rail only).

Table 8.12

Length of Time Using Public Transit

Answer	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Less than 2 years	31%	44%	34%	33%
2 Years or More	63%	53%	61%	62%
Don't Know	6%	3%	5%	5%

Figure 8.6



Reasons Passengers Started Using Public Transit During the Past 2 Years

The major reasons that transit passengers started using public transit in the Phoenix area during the past 2 years were: 1) to save money (21%), 2) because they had moved to the area within the last 2 years (16%) and 3) because they had lost their car (16%).

Light rail passengers were nearly four times as likely as bus passengers to report they started using public transit in the last 2 years to save money (44% light rail only vs. 12% bus only). Light rail passengers were also significantly more likely than bus passengers to report that they started using public transit because light rail service began (16% light rail only vs. 1% bus only). Bus passengers were seven times as likely as rail passengers to report they started using public transit because they had lost their car (21% bus only vs. 3% light rail only). Bus passengers were also significantly more likely to report they started using public transit because they had moved to the area within the last 2 years (19% bus only vs. 7% light rail only).

Table 8.13

Why New Passengers Started Using Public Transit

Answer	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
To save money	12%	44%	29%	21%
Moved to the area within the last 2 years	19%	7%	17%	16%
Lost my car	21%	3%	12%	16%
Started going to school	13%	17%	10%	13%
Do not have a car	14%	5%	13%	12%
Other	9%	4%	7%	8%
Light rail service began	1%	16%	6%	5%
Started a new job	5%	1%	4%	4%
No reason	4%	1%	2%	3%
Employer offered incentives	1%	2%	1%	1%
Lost my job	1%	0%	0%	1%

Frequency of Transit Use Compared to Two Years Ago

Compared to two years ago, sixty-one percent (61%) of riders reported using public transit "much more often" or "more often"; 24% reported using it about the same, 7% were using it less often and 8% did not know how their usage had changed.

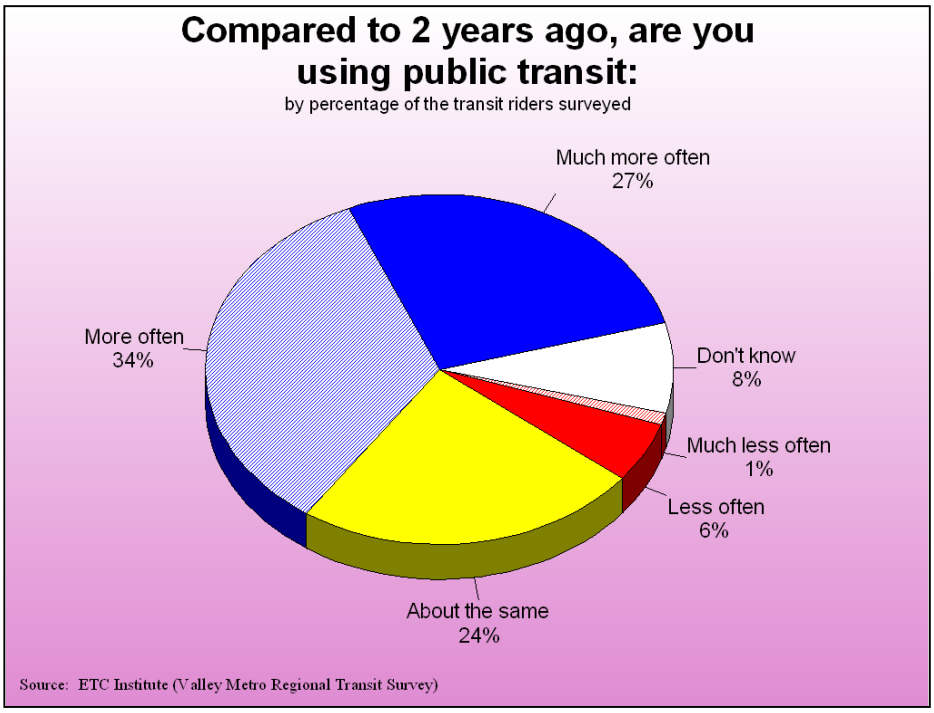
Light rail users were significantly more likely to report that they were using public transit more often than bus passengers. Eighty percent (80%) of light rail only users indicated that they were using public transit "much more often" or "more often" than they were two years ago compared to 57% of bus only users.

Table 8.14

Frequency of Transit Use Compared to 2 Years Ago

Change in Frequency	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Much more often	24%	38%	31%	27%
More often	33%	42%	38%	34%
About the same	26%	14%	20%	24%
Less often	7%	2%	3%	6%
Much less often	1%	0%	1%	1%
Don't know	9%	4%	7%	8%

Figure 8.7



How Transit Riders Typically Get Transit Schedule Information

The most common ways that all transit riders indicated that they get transit schedule information were: the transit schedule book (32%), the Valley Metro Website (30%) and the customer service telephone number (16%).

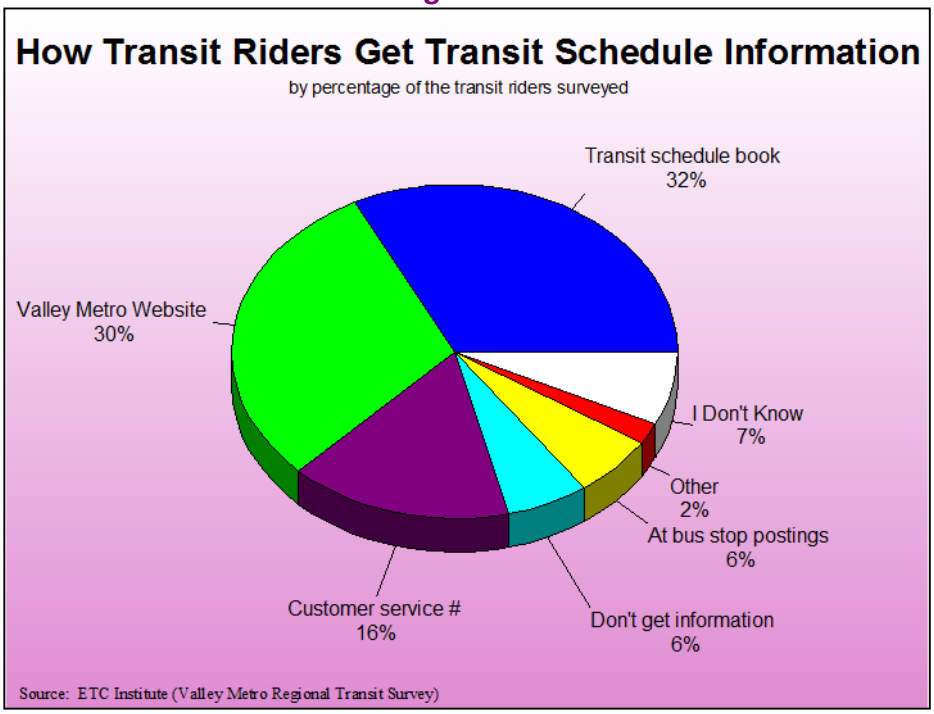
Bus passengers were significantly more likely to use the transit schedule book than light rail passengers (33% bus only vs. 22% light rail only). Light rail passengers were significantly more likely to use the Valley Metro website (51% light rail only vs. 27% bus only).

Table 8.15

How Transit Riders Get Transit Schedule Information

Source of Information	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Transit schedule book	33%	20%	32%	32%
Valley Metro Website	27%	51%	31%	30%
Customer service telephone number	18%	3%	16%	16%
I Don't get schedule information	5%	16%	7%	6%
Posted schedule at bus stop	7%	4%	6%	6%
Other	3%	2%	2%	2%
I Don't Know	8%	4%	6%	7%

Figure 8.8



Travel Characteristics

Trip Purpose

Home-based work trips accounted for nearly one-third (31%) of all trips completed on public transit. Fifteen percent (15%) of all trips were home-based college trips, 13% were non-home based trips, and 10% were home based-school trips.

Light rail passengers were significantly more likely to complete home-based college trips than bus passengers (34% light rail only vs. 12% bus only). Bus passengers were significantly more likely to use public transit to complete home-based work trips (33% bus only vs. 17% light rail only).

Table 8.16

Trip Purpose

Trip Purpose	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Home-Based Work Trip (HBW)	33%	17%	33%	31%
Home-Based Other Trip (HBO)	19%	18%	24%	19%
Home-Based College Trip (HBC)	12%	34%	11%	15%
Non-Home Based (NHB)	12%	17%	14%	13%
Home-Based School Trip (HSL)	11%	6%	8%	10%
Home-Based Shopping Trip (HBS)	8%	6%	5%	8%
Home-Based Medical Trip (HBM)	5%	1%	4%	4%
Home-Based Airport Trip (HBA)	0%	1%	1%	0%

Types of Destinations Visited By Transit Users

Forty percent (40%) of all transit trips ended at a person's home. Nearly one in five trips (19%) ended at a passenger's workplace, 10% ended at a social/personal location and 9% ended at college/university.

Light rail passengers were three times more likely than bus passengers to end their trip at a college or university (23% light rail only vs. 8% bus only). Bus passengers were nearly twice as likely as light rail passengers to end their trip at work (20% bus only vs. 11% light rail only).

Table 8.17

Types of Destinations Visited By Transit Users

Type of Destination	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Home	40%	38%	42%	40%
Workplace	20%	11%	18%	19%
Social/Church/Personal/Friend's House	11%	4%	11%	10%
College/University (Students Only)	8%	23%	7%	9%
Shopping	7%	5%	5%	6%
High School (grades 9-12)	5%	4%	4%	5%
Medical Appointment/Doctor's Visit	3%	1%	3%	3%
Recreation/Sightseeing	1%	3%	2%	1%
Elementary School (grades K-5)	0%	0%	0%	0%
Middle School (grades 6-8)	0%	0%	0%	0%
Hotel	0%	0%	0%	0%
Airport (Air Passengers Only)	0%	1%	1%	0%
Other	5%	11%	8%	6%

How Passengers Access Public Transit

Most (89%) transit passengers indicated that they accessed public transit by walking. Bus passengers were significantly more likely to report walking to public transit than light rail passengers (91% bus only vs. 70% light rail only). Light rail passengers were nearly six times more likely than bus passengers to access public transit by driving alone (11% light rail only vs. 2% bus only). Light rail passengers were also significantly more likely to access public transit by being dropped off by someone else (10% light rail only vs. 3% bus only).

Table 8.18

Access Mode to Transit System

Access Mode	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Walk	91%	70%	89%	89%
Dropped off by someone else	3%	10%	5%	4%
Bike	3%	8%	4%	4%
Drove alone	2%	11%	2%	3%
Other	0%	1%	1%	1%
Carpooled or vanpooled with others	0%	0%	0%	0%

Riders who indicated that they had walked to the transit system were asked how far they had to walk. More than three-fourths (77%) of those who walked indicated that they walked up to a one-quarter mile. Fourteen percent (14%) reported that they walked between one-quarter and one-half mile. Only 10% indicated that they walked more than one-half mile. Light rail passengers were significantly more likely to report walking between one-fourth and one-half a mile to access transit compared to bus passengers (20% light rail only vs. 13% bus only).

Among those who carpooled/vanpooled to access transit, more than half (59%) indicated there were two people in the carpool/vanpool; 41% reported that there were three or more people in the carpool/vanpool. Rail passengers were significantly more likely to carpool/vanpool in groups of three or more (58% light rail only vs. 35% bus only).

Table 8.19

Number of People in Carpool/Vanpool (TO TRANSIT)

Carpool Size	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Two	65%	42%	48%	59%
Three or More	35%	58%	52%	41%

How Passengers Traveled From Transit to Their Final Destination

The majority of transit passengers (91%) indicated that they walk to their final destination after using public transit. Bus passengers were more likely to walk than light rail passengers (93% bus only vs. 77% light rail only). Light rail passengers were more than four times as likely as bus passengers to drive to their destination (9% light rail only vs. 2% bus only). Light rail passengers were also three times as likely to be picked up by someone else (6% light rail only vs. 2% bus only).

Table 8.20

Egress Mode to Destination

Egress Mode	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Walk	93%	77%	92%	91%
Bike	3%	7%	4%	4%
Picked up by someone	2%	6%	3%	3%
Drive alone	2%	9%	1%	2%
Other	0%	0%	1%	0%
Carpool/Vanpool	0%	0%	0%	0%

Riders who indicated that they would walk to their destination were asked how far they would walk. More than three-fourths (77%) of those who would walk to their destination indicated that they would walk up to a one-quarter mile. Fifteen percent (15%) reported that they would walk between one-quarter and one-half mile. Only 10% indicated that they would walk more than one-half mile. There were no significant differences in the distances reported based on the mode of travel (bus only vs. light rail only).

Among those who indicated they would carpool/vanpool to their destination, most (73%) indicated there would be two people in the carpool/vanpool. Twenty-eight percent (27%) indicated there would be three or more. Light rail passengers were significantly more likely to carpool/vanpool in groups of three or more (49% light rail only vs. 15% bus only).

Table 8.21

Number of People in Carpool/Vanpool (FROM Transit)

Carpool Size	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
Two	85%	51%	52%	73%
Three or More	15%	49%	48%	27%

Transfers

More than half (52%) of public transit users made at least one transfer during their trip. Thirteen percent (13%) made two or more transfers. Passengers who used both a bus and light rail were more likely to make three or more transfers during their trip compared to bus only users (6% bus/light rail vs. 1% bus only).

Table 8.22

Total Transfers

# of Transfers	Bus Only	Lt. Rail Only	Bus/Lt. Rail	Overall
None	49%	100%	0%	48%
One	42%	0%	61%	39%
Two	9%	0%	33%	11%
Three or more	1%	0%	6%	2%

Trip Distance by Trip Purpose

The mean trip distance (in miles) was calculated in GIS using the straight line distance between the trip origin and destination. Nearly half (49%) of all transit trips were less than five miles. One third (33%) of all trips were between five and ten miles.

Table 8.23 shows the trip distances by trip purpose. The types of trips with the longest trip distance were: home-based work trips and home-based airport trips. Home-based shopping trips and home-based school trips had the shortest trip distances.

Table 8.23

Trip Distance by Purpose

Distance	HBW	HBS	HBC	HSL	HBM	HBA	HBO	NHB	Overall
<.5 Mile	0%	1%	1%	1%	0%	0%	2%	2%	1%
0.50-0.99	1%	10%	3%	5%	3%	0%	4%	6%	4%
1.00-4.99	31%	60%	45%	64%	53%	33%	47%	46%	44%
5.00-9.99	38%	22%	33%	26%	35%	41%	31%	33%	33%
10.00-15.99	20%	5%	14%	3%	6%	20%	12%	10%	13%
16.00-19.99	5%	1%	2%	1%	2%	7%	4%	2%	3%
20.00-24.99	3%	0%	1%	0%	1%	0%	1%	1%	1%
> 24.99 Miles	1%	0%	0%	0%	1%	0%	1%	0%	1%
Mean Trip Distance (miles)	8.11	4.05	6.34	4.22	5.65	7.58	6.22	5.54	6.38

Notes: HBW=Home-Based Work Trip; HBS=Home-Based Shopping Trip; HBC=Home-Based College Trip; HSL=Home-Based School Trip; HBM=Home-Based Medical Trip; HBA=Home-Based Airport Trip; HBO=Home-Based Other Trip; NHB= Non-Home Based Trip.

Where Transit Users Live

Table 8.24 (below) shows the zip codes where the greatest number of surveyed transit users live. Zip codes 85281, 85015 and 85008 were home to the greatest number of transit users in the region. Eight percent (8%) of all transit users in the region live in zip code 85281, 4% of all transit users in the region live in zip code 85015 and 4% live in zip code 85008.

The map in Figure 8.9 (page 59) shows where transit users in the region live. The home addresses are plotted as black dots on the map.

The map in Figure 8.10 (page 60), shows the density of home address by zip code. Zip codes that are home to the most transit users are shaded in dark blue.

Table 8.24

Where Transit Users Live

Home Zip Code	% of all Home Addresses in Zip Code
85281	8%
85015	4%
85008	4%
85282	3%
85013	2%
85007	2%
85202	2%
85021	2%
85014	2%
85201	2%
85041	2%
85301	2%
85006	2%
85017	2%
85033	2%
85009	2%
85016	2%

Figure 8.9

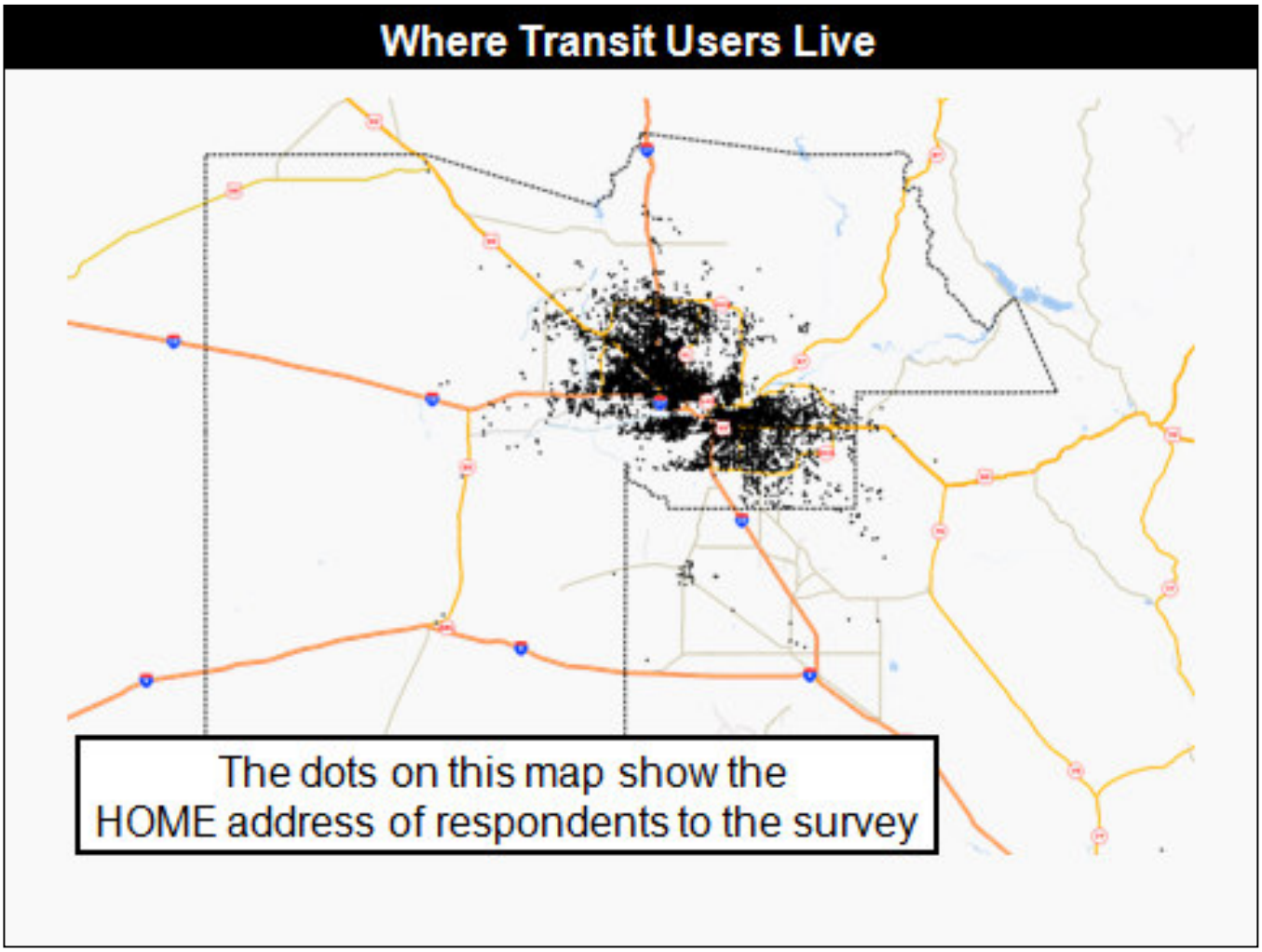
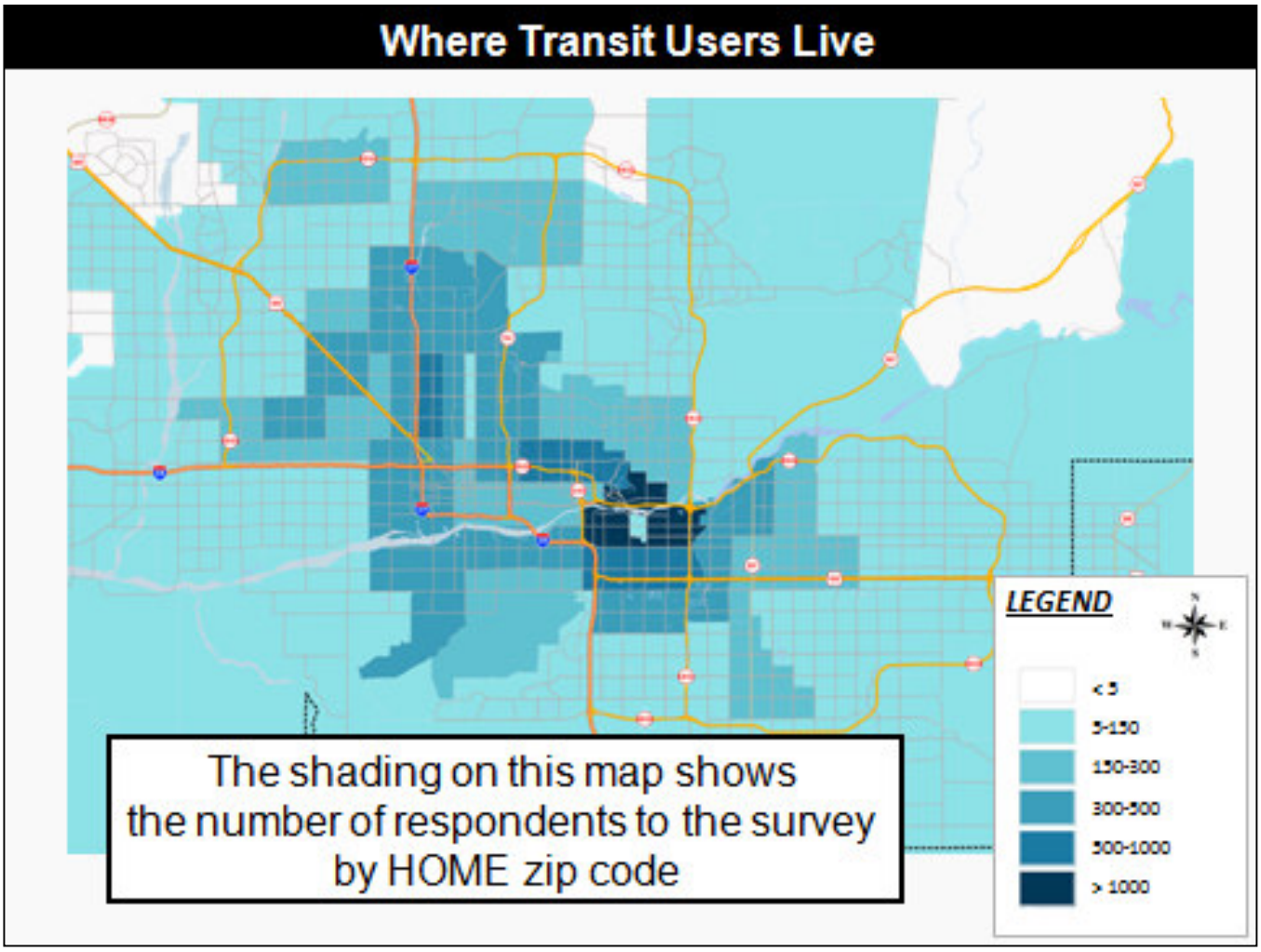

Where Transit Users Live
The dots on this map show the
HOME address of respondents to the survey

Figure 8.10


Where Transit Users Live
LEGEND
< 5
5-150
150-300
300-500
500-1000
> 1000
The shading on this map shows the number of respondents to the survey by HOME zip code

Where Transit Trips Began

Table 8.25 (below) shows the zip codes where the greatest number of transit trips began. Zip code 85281 had the most trip origins for transit in the region. Eight percent (8%) of all transit trips in the region began in zip code 85281. Some of the other prominent zip codes were transit trips began were: 85004 (4%), 85015 (4%), 85003 (4%) and 85287 (4%).

The map in Figure 8.11 (page 62) shows where all transit trips in the region began. The origin addresses are plotted as black dots on the map.

The map in Figure 8.12 (page 63), shows the density of trip origins by zip code. Zip codes with the most trip origins are shaded in dark blue.

Table 8.25
Where Transit Trips Began

ORIGIN Zip Code	% of all ORIGIN Addresses in Zip Code
85281	8%
85004	4%
85015	4%
85003	4%
85287	4%
85008	3%
85013	3%
85282	3%
85034	2%
85007	2%
85201	2%
85202	2%
85006	2%
85021	2%
85009	2%
85283	2%
85012	2%
85301	2%
85016	2%

Figure 8.11

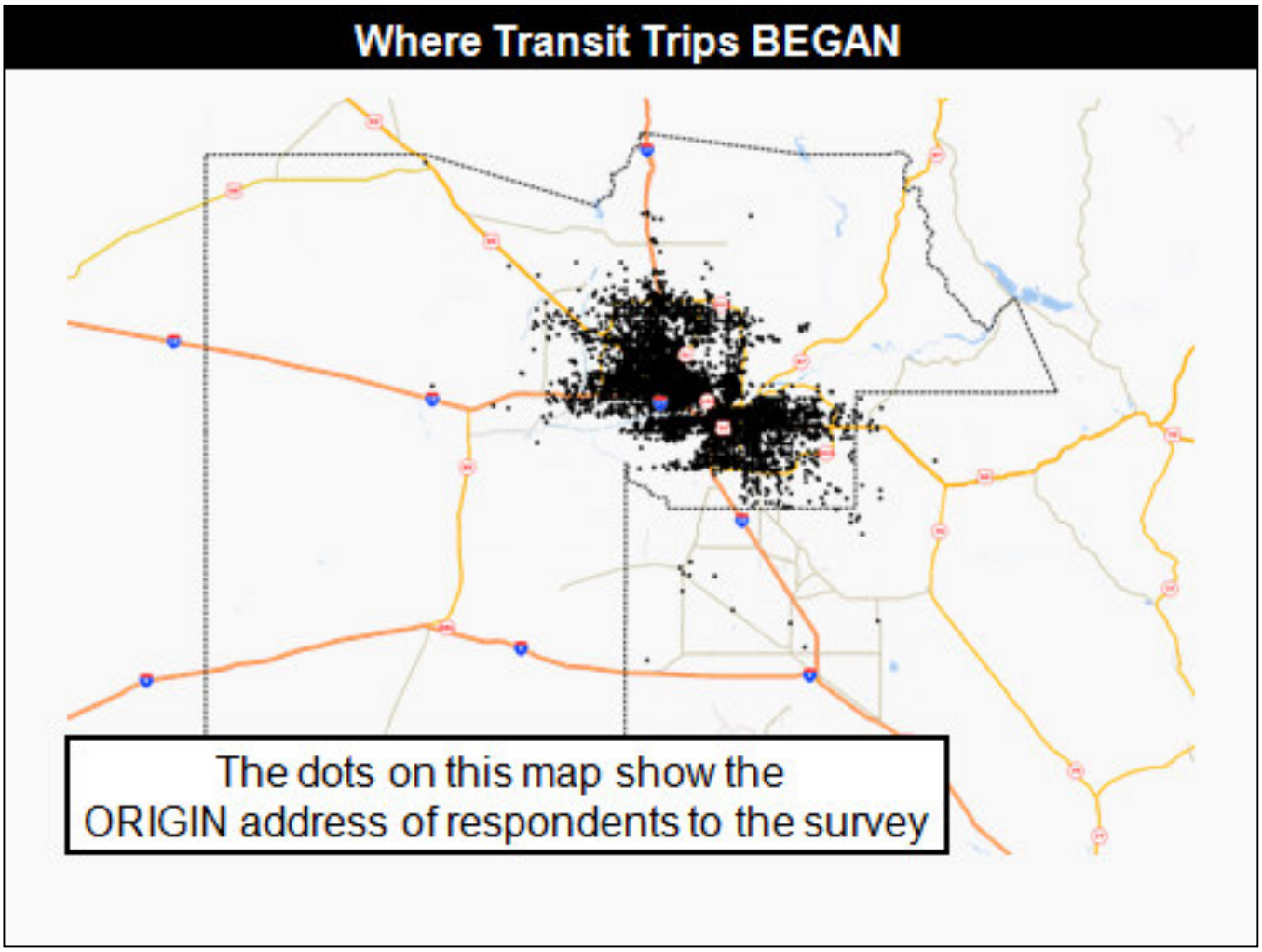
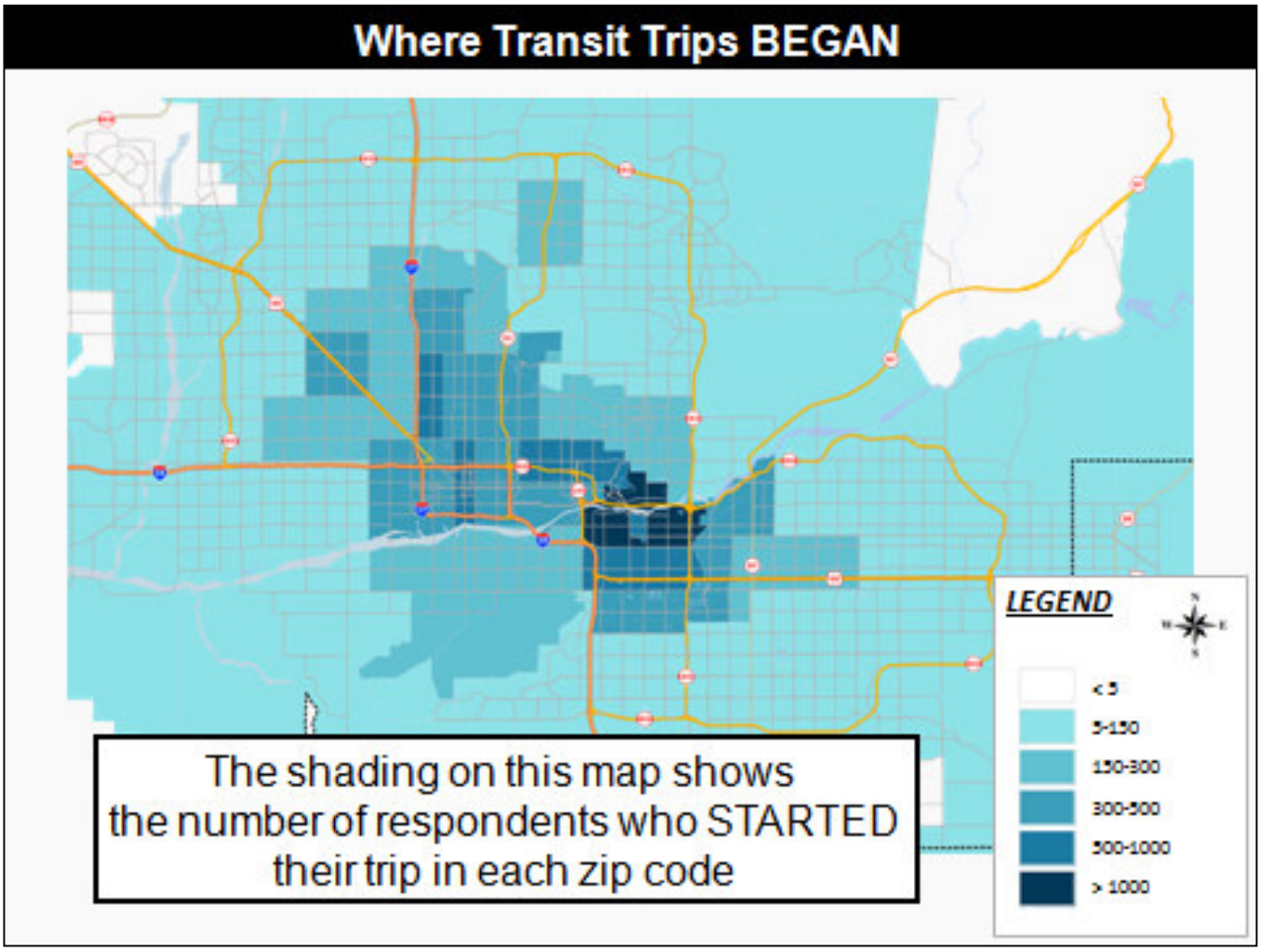

Where Transit Trips BEGAN
The dots on this map show the
ORIGIN address of respondents to the survey

Figure 8.12


Where Transit Trips BEGAN
The shading on this map shows the number of respondents who STARTED their trip in each zip code
LEGEND
< 5
5-150
150-300
300-500
500-1000
> 1000

Where Transit Trips Ended

Table 8.26 (below) shows the zip codes where the greatest number of transit trips ended. Zip codes 85281, 85004 and 85287 had the most trip destinations for transit in the region. Eight percent (8%) of all transit trips in the region ended in zip code 85281. Six percent (6%) of all transit trips in the region ended in zip code 85004 and 5% ended in zip code 85287.

The map in Figure 8.13 (page 65) shows where all transit trips in the region ended. The destination addresses are plotted as black dots on the map.

The map in Figure 8.14 (page 66), shows the density of trip destinations by zip code. Zip codes with the most trip destinations are shaded in dark blue.

Table 8.26

Where Transit Trips Ended

Destination Zip Code	% of all Destination Addresses in Zip Code
85281	8%
85004	6%
85287	5%
85003	4%
85015	4%
85013	3%
85282	3%
85007	3%
85034	3%
85008	2%
85202	2%
85021	2%
85014	2%
85016	2%
85006	2%
85009	2%
85012	2%

Figure 8.13

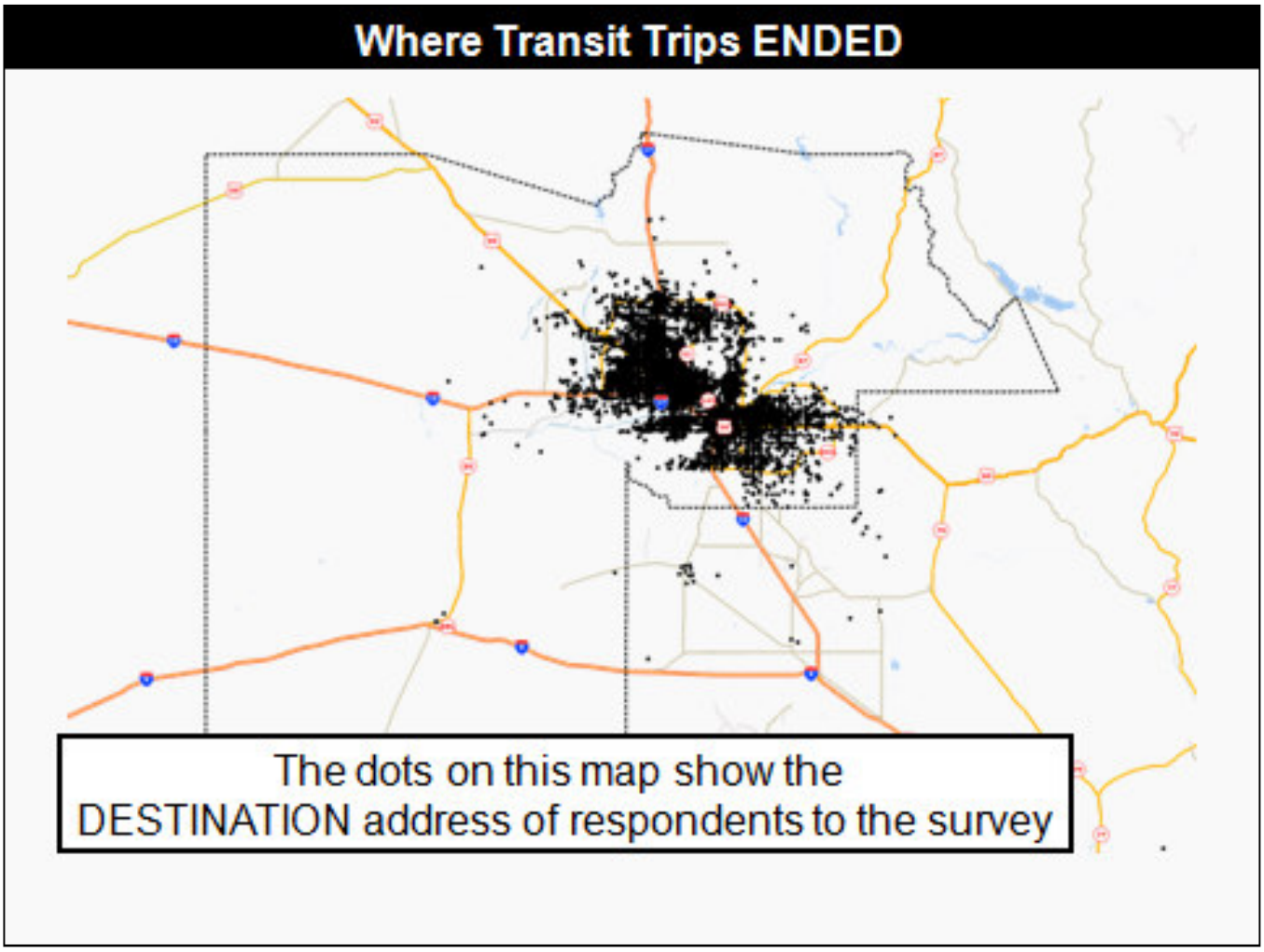
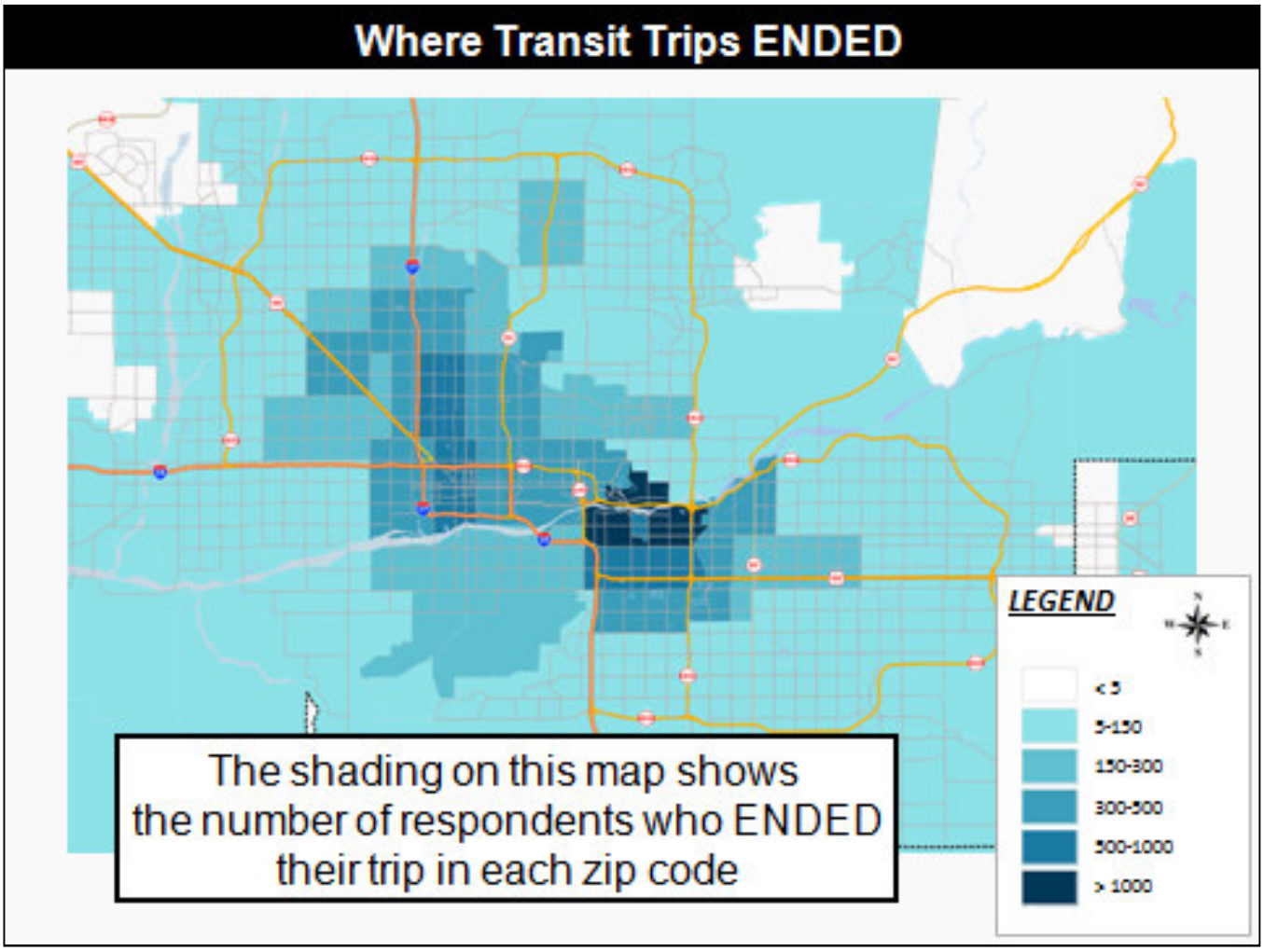

Where Transit Trips ENDED
The dots on this map show the
DESTINATION address of respondents to the survey

Figure 8.14


Where Transit Trips ENDED
The shading on this map shows the number of respondents who ENDED their trip in each zip code
LEGEND
< 5
5-150
150-300
300-500
500-1000
> 1000

Where Transit Riders Boarded

Table 8.27 (below) shows the zip codes where the greatest number of transit boardings occurred. Zip codes 85281, 85003 and 85287 had the most transit boardings in the region. Nine percent (9%) of all transit boardings in the region occurred in zip code 85281. Eight percent (8%) of all transit boardings in the region occurred in zip code 85003 and 6% of all transit boardings occurred in zip code 85287.

The map in Figure 8.15 (page 68) shows where all transit boardings in the region occurred. The boarding locations are plotted as black dots on the map.

The map in Figure 8.16 (page 69), shows the density of trip boardings by zip code. Zip codes with the most boardings are shaded in dark blue.

Table 8.27

Where Transit Riders Boarded

ON Zip Code	% of all ON Addresses in Zip Code
85281	9%
85003	8%
85287	6%
85015	5%
85202	4%
85013	4%
85034	4%
85004	3%
85009	2%
85282	2%
85021	2%
85051	2%
85020	2%

Figure 8.15

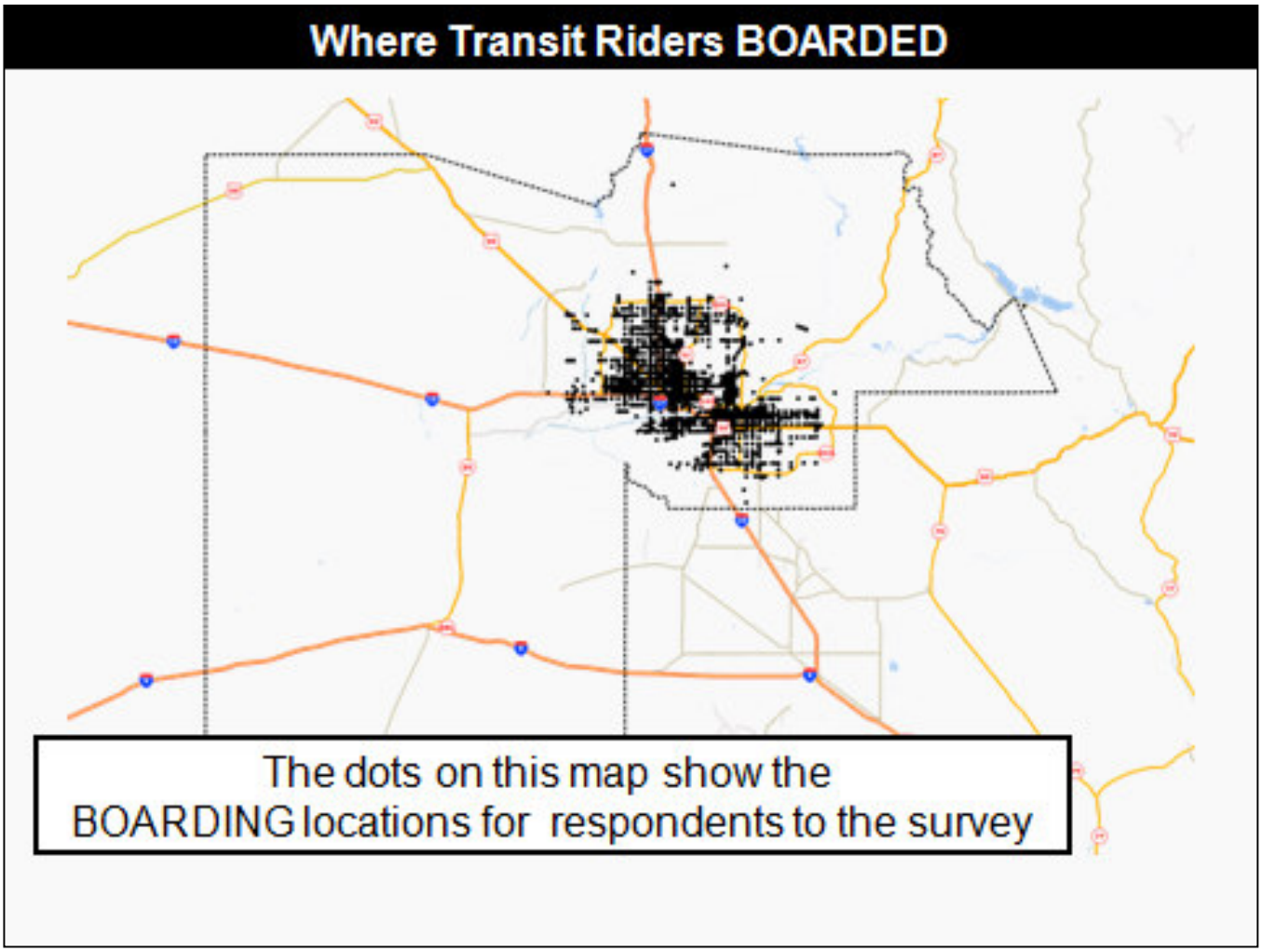
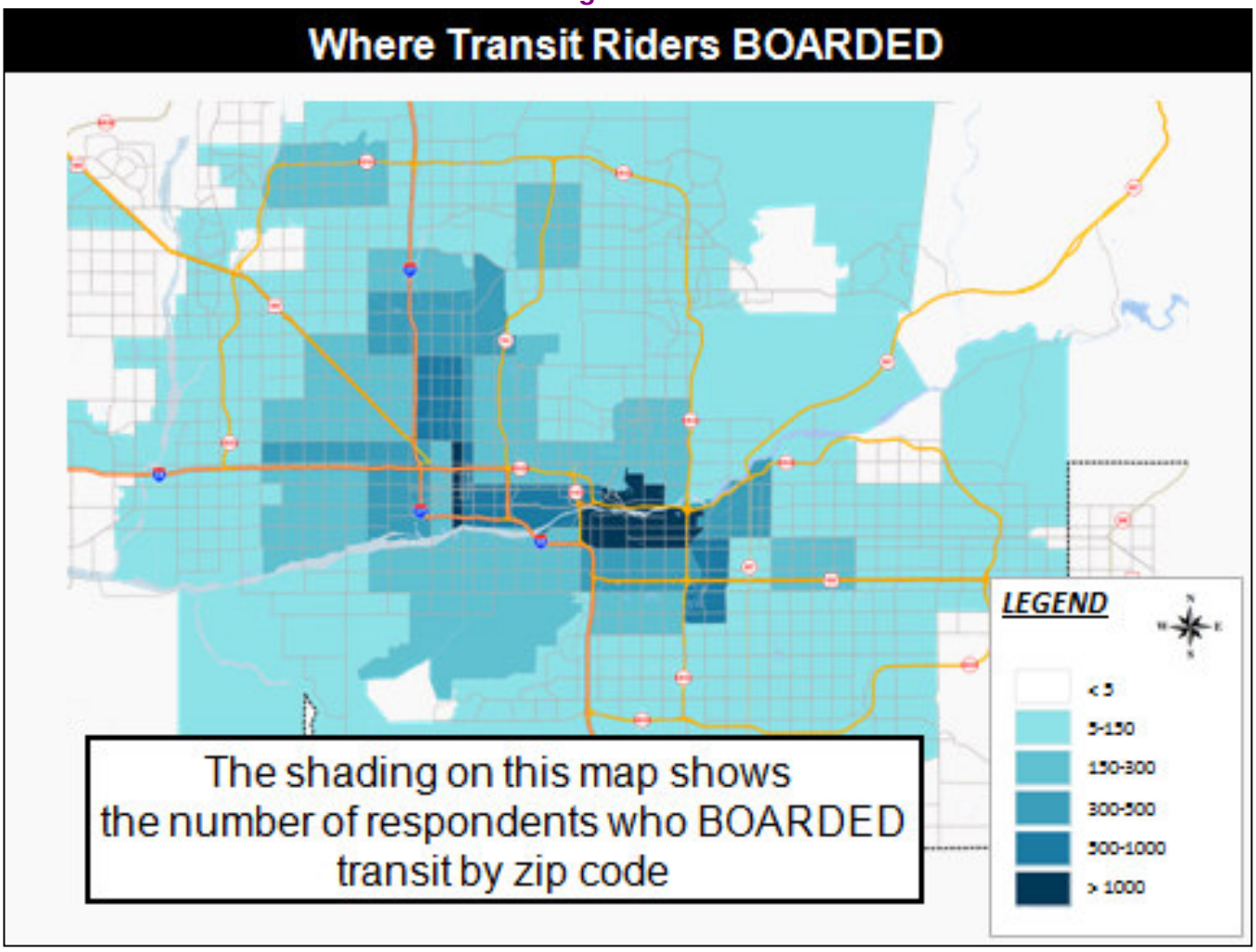

Where Transit Riders BOARDED
The dots on this map show the
BOARDING locations for respondents to the survey

Figure 8.16


Where Transit Riders BOARDED
The shading on this map shows the number of respondents who BOARDED transit by zip code
LEGEND
< 5
5-150
150-300
300-500
500-1000
> 1000

Where Transit Riders Alighted

Table 8.28 (below) shows the zip codes where the greatest number of transit alightings occurred. Zip codes 85003, 85287 and 85281 had the most alightings in the region. Ten percent (10%) of all transit alightings in the region occurred in zip code 85003. Nine percent (9%) of all transit alightings in the region occurred in zip code 85287 and 7% of all transit alightings occurred in zip code 85281.

The map in Figure 8.17 (page 71) shows where all transit alightings in the region occurred. The alighting locations are plotted as black dots on the map.

The map in Figure 8.18 (page 72) shows the density of trip alightings by zip code. Zip codes with the most alighting are shaded in dark blue.

Table 8.28
Where Transit Riders Alighted

OFF Zip Code	% of all OFF Addresses in Zip Code
85003	10%
85287	9%
85281	7%
85015	5%
85013	5%
85034	4%
85202	3%
85004	3%
85282	2%
85009	2%
85021	2%
85051	2%
85006	2%
85007	2%

Figure 8.17

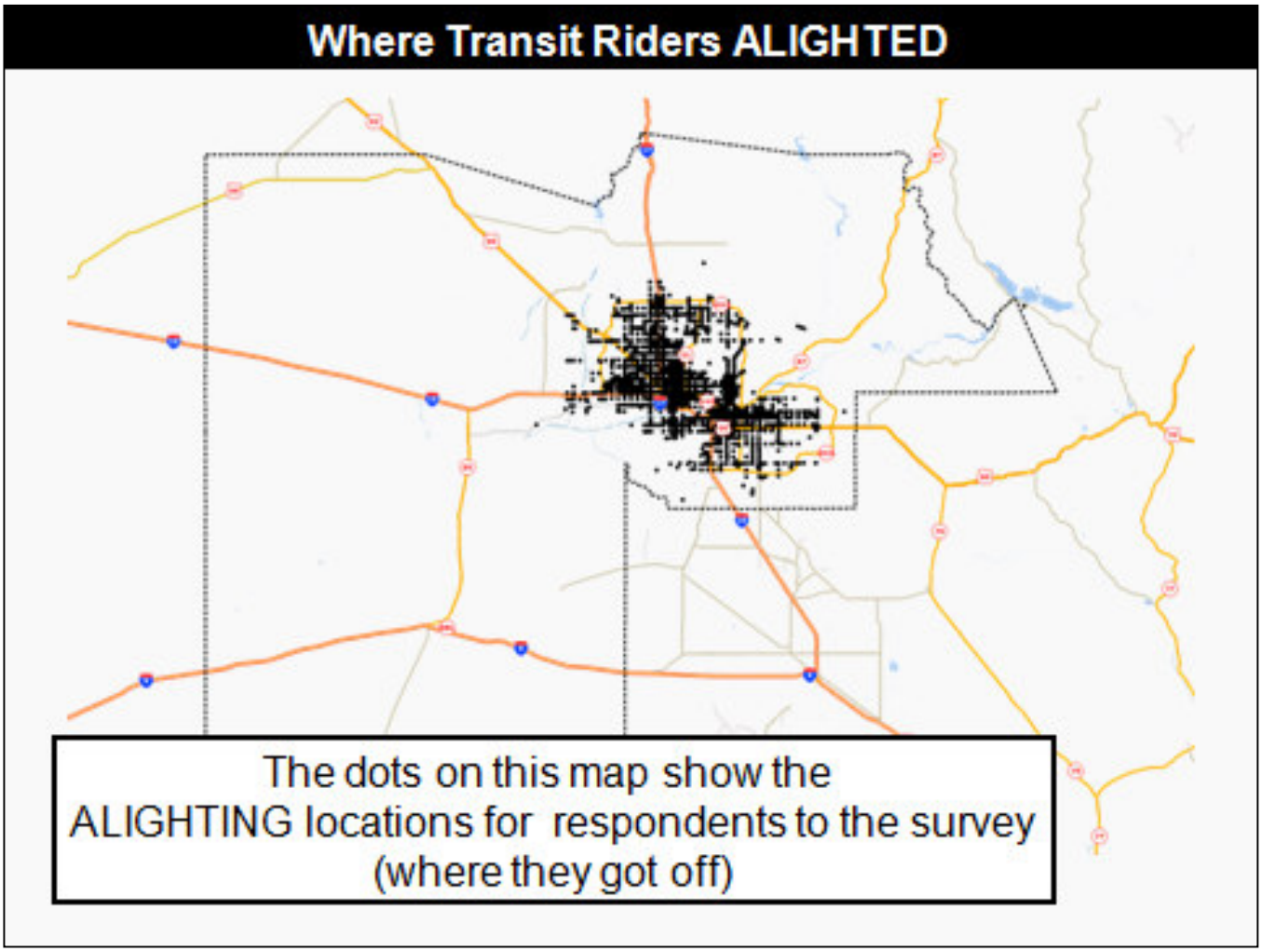
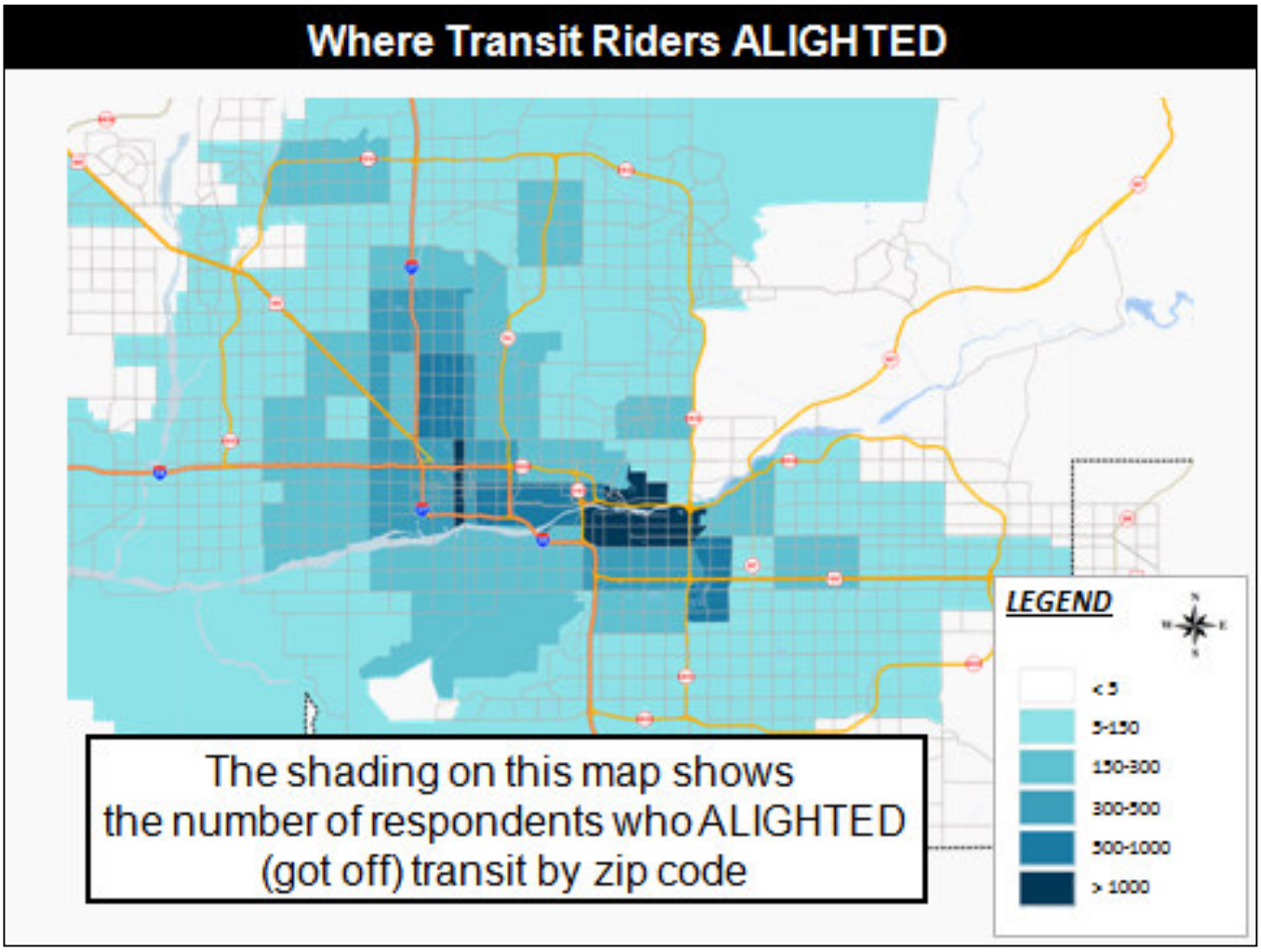

Where Transit Riders ALIGHTED
The dots on this map show the
ALIGHTING locations for respondents to the survey
(where they got off)

Figure 8.18


Where Transit Riders ALIGHTED
The shading on this map shows the number of respondents who ALIGHTED (got off) transit by zip code
LEGEND
< 5
5-150
150-300
300-500
500-1000
> 1000

SECTION 9: ANALYSIS OF TRENDS (2007-2011)

This section of the report presents a comparative analysis of the data collected in the 2010-2011 on-board transit survey with the data collected in the 2007 on-board transit survey.

Comparison of the 2007 Survey to the 2011 Survey

While most of the survey questions were the same in 2007 and 2011, there were some differences in the sample size and survey administration methodology. Some of these differences are noted below:

- **Sample Size.** In 2007, the survey goal was to obtain 9,700 completed surveys. The actual number of completed surveys was 7,600. In 2011, the survey goal was to obtain 13,750 completed surveys. Of these, 9,635 were to be completed with bus passengers and 4,115 were to be completed with rail passengers. The actual number of completed surveys was 14,655. Of these, 10,422 were completed with bus passengers and 4,213 were completed with rail passengers.

- **Method of Administration**. In 2007, surveys were self-administered. Respondents were given paper surveys and asked to complete them while they were on the bus. In 2011, the survey was conducted as a face-to-face interview, and tablet PCs were the primary method of collecting the data.

- **Timing of Survey Administration.** Both the 2007 and 2011 surveys were administered in the fall season. In addition, both the 2007 and 2011 surveys were not administered on weekends and holidays.

- **Participant Selection**. In 2007, all boarding passengers were asked to participate in the survey. Those that agreed to participate were given a paper copy of the survey as described above. In 2011, riders were selected at random to participate using the sampling procedure described in Section 2.

- **Incentives**. In 2007, each rider who completed a survey was given a free-ride ticket. There was also small drawing to encourage participation. In 2011, transit riders were not given tickets for a free ride, but the amount of the incentives was substantially greater. In 2011, $5000 worth of incentives were distributed to survey participants in the form of cash, Visa gift cards, and gift cards to retail stores and restaurants.

- **Response Rate.** In 2007, the response rate to the survey was 17%. In 2011, the response rate to the survey was 90%.

Demographic Characteristics

Household Size

Household size among transit users has generally stayed the same since 2007 as shown in Table 9.1 (below). Transit users tend to live in larger households than the typical resident of Maricopa County. Thirty-eight percent (38%) of the transit users in the 2011 survey lived in households with four or more occupants compared to 25% of all households in Maricopa County.

Table 9.1
Household Size

Persons	2011	2007	2009 U.S. Census Estimate Maricopa County (American Community Survey)
One	18%	18%	27%
Two or Three	44%	45%	48%
Four or more	38%	37%	25%

Vehicle Availability

The percentage of transit users that reported having at least one vehicle available to their household increased from 2007 to 2011 as shown in Table 9.2 below. In 2007, 49% of transit users indicated that they had one or more vehicles in their household. In 2011, 53% indicated that they had one or more vehicles. The percentage with zero vehicles decreased from 51% in 2007 to 47% in 2011.

Table 9.2
Vehicle Availability

Vehicles	2011	2007
Zero	47%	51%
One	29%	27%
Two	16%	15%
Three	6%	5%
Four or more	2%	2%

Household Income

The percentage of transit users living in households earning $50,000 or more per year increased from 2007 to 2011. In 2007, one in seven transit users (14%) had an annual household income of $50,000 or more. In 2011, nearly one in five (19%) transit users had an annual household income of $50,000 or more. The percentage of transit users earning less than $10,000 per year declined from 27% in 2007 to 24% in 2011.

Table 9.3
Annual Household Income

Annual Income Range	2011	2007
Less than $10,000	24%	27%
$10,000–$19,999	18%	19%
$20,000–$34,999	27%	24%
$35,000–$49,999	13%	15%
$50,000 or more	19%	14%

Transit users were significantly more likely to live in low income households than the typical resident of Maricopa County. Transit users were four times as likely as the typical resident in Maricopa County to have an annual household income of less than $10,000 (24% transit users vs. 6% Maricopa County). Transit users were nearly three times less likely than the typical resident of Maricopa County to have an annual household income of $50,000 or more (19% transit users vs. 55% Maricopa County).

Table 9.4
Annual Household Income

Annual Income Range	2011	2009 U.S. Census Estimate Maricopa County (American Community Survey)
Less than $10,000	24%	6%
$10,000–$14,999	10%	4%
$15,000–$34,999	35%	20%
$35,000–$49,999	13%	15%
$50,000 or more	19%	55%

Age

The percentage of transit users who are under age 25 increased from 2007 to 2011. In 2007, 33% of transit users were under age 25. In 2011, 40% were under age 25. Transit users were also typically younger than the general population. Only 2% of transit users were age 65 or older compared to 14% of all residents of Maricopa County. The percentage of transit users who were age 65 and older did not change from 2007 to 2011.

Table 9.5
Age of Transit Users

Age Range	2011	2007	2009 U.S. Census Estimate Maricopa County (American Community Survey)
Under 25 Years	40%	33%	25%
25-54 Years	50%	57%	51%
55-64 Years	7%	8%	11%
65+ Years	2%	2%	14%

Travel Characteristics

In addition to reviewing changes in demographics, changes in travel characteristics from 2007 to 2011 were also assessed, including the types of places where trips began, trip purpose, modes of access and egress, and sources of bus schedule information.

Types of Places Where Transit Trips Began

Although the percentage of trips that began at home did not change from 2007 to 2011, the percentage of trips that began at work declined from 25% in 2007 to 17% in 2011. The decrease in the percentage of trips that began at work was offset by an increase in the percentage of trips that began at all other types of places. The increase in the percentage of trips that began at non-work locations and the high number of light rail boarding during hours other than the a.m. and p.m. peak travel periods may suggest that transit users are more likely to use transit for non-work trips as a result of the introduction of light rail service to the region.

Table 9.6
Where Transit Trips Began

	2011	2007
Home	47%	47%
Work	17%	25%
Recreation/Sightseeing/Social /Personal places/Church	9%	7%
College/University (Students Only)	8%	6%
School (K-12) (Student Only)	6%	5%
Shopping Places	5%	4%
Medical Appointment/Doctor's Visit	3%	2%
Other	5%	4%

Trip Purpose

As table 9.7 shows, there was a significant decrease in the percent of passengers who used public transit to make home-based work trips from 44% in 2007 to 31% in 2011. There was a significant increase in the percent of passengers who used public transit to make home-based other trips from 33% in 2007 to 41% in 2011 and an increase in the percent of passengers making home-based college trips from 7% in 2007 to 15% in 2011. Much like the above findings, these results suggest that the introduction of light rail increased the use of public transit to make trips outside of just work.

Table 9.7
Trip Purpose

Trip Purpose	2011	2007
Home-Based Other Trip (HBO)	41%	33%
Home-Based Work Trip (HBW)	31%	44%
Home-Based College Trip (HBC)	15%	7%
Non-Home Based (NHB)	13%	16%

Mode of Access to Transit

There were no significant differences in the modes of access to transit from 2007 to 2011. In 2007, 85% of transit users accessed transit by walking. In 2011, 89% indicated that they accessed transit by walking. The percentage who drove alone or biked did not change. The change in the percentage of transit users who used all other modes of access was 2% or less.

Table 9.8
Access Mode to Transit System

Access Mode	2011	2007
Walk	89%	85%
Dropped off by someone else	4%	6%
Bike	4%	4%
Drove alone	3%	3%
Other	1%	0%
Carpooled or vanpooled with others	0%	2%

Mode of Egress from Transit

There were no significant differences in the modes of egress from 2007 to 2011. In 2007, 90% of transit users egressed transit by walking to their destination. In 2011, 91% indicated that they egressed transit by walking to their destination. The changes in the percentage of transit users who used all other modes of egress was 2% or less.

Table 9.9
Egress Mode to Transit System

Egress Mode	2011	2007
Walk	91%	90%
Bike	4%	3%
Picked up by someone	3%	4%
Drive alone	2%	1%
Other	0%	0%
Carpool/Vanpool	0%	2%

Dependence on Public Transit

The percentage of transit users who would not have been able to complete their trip if public transit were not available did not change significantly from 2007 to 2011. In 2007, 30% of transit users reported that they would not have been able to complete their trip if transit were not available. In 2011, 29% reported that they could not complete their trip if transit were not available.

Although most of the responses to this question did not change significantly, there was a notable increase in the percentage of transit users who indicated that they would drive themselves to their destination if transit were not available. In 2007, one in twelve (8%) transit users indicated that they would drive themself. In 2011, one in eight (13%) indicated they would drive themself.

Table 9.10
How Transit Users Would Complete Their Trip
If Transit Were Not Available

How Would You Make the Trip	2011	2007
I could not make this trip	29%	30%
Drive with someone else	26%	26%
Walk or Bike	26%	25%
Taxi	6%	9%
Drive Myself	13%	8%
Other	1%	2%

Source of Bus Schedule Information

The percentage of transit users who rely on the Valley Metro schedule book has declined significantly since 2007. In 2007, 65% of transit users relied on the transit book as their primary source of schedule information. In 2011, 37% indicated that they relied on the transit schedule book.

Transit users were significantly more likely to rely on the Valley Metro website in 2011 than in 2007. The percentage of transit users who reported using the website as their primary source of schedule information more than doubled from 17% in 2007 to 35% in 2011.

Table 9.11
Where Transit Users Get Schedule Information

Source of Information	2011	2007
Transit schedule book	37%	65%
Valley Metro Website	35%	17%
Customer service telephone number	19%	13%
Posted schedule at bus stop	7%	3%
Other	2%	2%

SECTION 10: LESSONS LEARNED AND OPPORTUNITIES FOR IMPROVEMENT

Although the number of completed surveys and the quality of the survey data exceeded the contractual requirements for the project, the research team identified a few opportunities for improvement to enhance the quality of future surveys based on lessons learned from the 2010-11 On-Board Survey. The opportunities are briefly described below and on the following page.

1) **If resources are available, a full stop inventory should be conducted before the administration of future surveys.** During the administration of the 2010-11 survey, it became apparent that the list of bus stops along some routes was not complete. In order to ensure that the list of stops on each route was as complete as possible, the research team had interviewers ride each route and mark the location of bus stops using GPS devices. Since this issue was not identified until after the administration of the survey began, manual geocoding of some bus stops was required on routes for which the stop inventory was not completed prior to the start of survey. If a stop inventory had been completed before the survey began, the location of all bus stops on each route could have been included in the tablet PC survey program, which would have minimized the number of boarding and alighting locations that had to be manually geocoded after the survey was administered.

2) **If resources are available, the sample size for future surveys should be increased.** Although nearly twice as many surveys were collected in 2011 as 2007, the sample was still not large enough to conduct data expansion for all bus routes by direction, time of day, and boarding location. For example, nearly half of the bus routes included in the survey had an average daily ridership of less than 1,000 riders per day. Given the sampling rate of 4.75%, fewer than 50 surveys were collected on routes with an average ridership of less than 1,000 per day. When a sample of fewer than 50 completed surveys was divided in half (to account for the direction of travel), there were typically fewer than 25 surveys available in each direction. When the sample was further divided by four (to account for the four time of day periods), there were typically fewer than 7 surveys available in a given direction for a specific time period, which was not adequate to perform data expansion by boarding location. For this reason, data expansion by boarding location was only performed on 15 routes with an average ridership of at least 4,000 per day. The good news is that these 15 routes accounted for more than 50% of the overall bus ridership in the region, so the majority of the survey records from the 2010-11 survey were expanded by boarding location. If the sample size for bus routes had been increased to 10% of the average daily ridership, data expansion by boarding location could have been completed on nearly three times as many routes.

3) **If resources are available, the sample size for future surveys should be increased to include weekend riders.** One of the original goals for the survey was to gather data about weekend ridership in the region. Unfortunately, the sample size was not sufficient to adequately capture data for weekend ridership without compromising the quality of the data collected on weekdays. In order to ensure that the sample for weekday ridership was sufficient, the resources that were originally allocated for weekend surveys were shifted to weekday surveys to increase the number of surveys that were completed on weekdays. As a result, no weekend ridership data was collected during this survey.

4) **If resources are available, a boarding and alighting count should be completed on all bus routes prior to the administration of future surveys.** Although ridership data for most bus routes was available by direction and time of day, stop level ridership data was limited to the data collected by the survey team. The survey team conducted boarding/alighting counts on at least one bus on each route, but the overall quality of the ridership data to which the survey was expanded would have been improved if boarding and alighting data were available for all buses operating on each route.

5) **A question asking whether or not the respondent has a disability should be included on future surveys.** Since there were concerns that respondents would not have time to finish the survey, the research team eliminated a question that asked the respondent if he/she had a physical disability. Instead of directly asking this question, the research team had planned to identify persons with disabilities based on the fare category selected. Unfortunately, most of the respondents to the survey who had disabilities did not select "person with disability fare." Instead, most persons with disabilities simply reported their general fare category (e.g., day pass or 31-day pass). As a result, the ability to perform analysis of the 2010-11 survey data for persons with disabilities will be limited.

APPENDIX A: RESULTS BY MODE

Q1. What type of place are you COMING FROM now? What was the starting place of this one-way trip?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
ORIGIN TYPE OF PLACE				
1=Workplace	17.0%	11.4%	20.2%	16.7%
2=Home	47.9%	45.7%	44.6%	47.2%
3=Elementary School (grades K-5)	0.3%	0.0%	0.1%	0.2%
4=Middle School (grades 6-8)	0.2%	0.0%	0.0%	0.1%
5=High School (grades 9-12)	6.5%	3.2%	5.1%	5.9%
6=College/University (Students Only)	6.9%	19.9%	6.8%	8.4%
7=Shopping	5.8%	4.4%	3.9%	5.4%
8=Hotel	0.1%	0.4%	0.3%	0.2%
9=Recreation/Sightseeing	1.1%	1.6%	1.2%	1.2%

Q1. What type of place are you COMING FROM now? What was the starting place of this one-way trip?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
ORIGIN TYPE OF PLACE (Cont.)				
10=Medical Appointment/ Doctor's Visit	2.9%	1.0%	3.1%	2.7%
11=Social/Church/Personal/ Friend's House	7.9%	3.6%	7.3%	7.3%
12=Airport (Air Passengers Only)	0.0%	0.4%	0.4%	0.1%
13=Other	3.5%	8.3%	7.1%	4.5%

Q4. How did you get from the place where you started this one-way trip (in Question 2) to the very FIRST bus/train you used for this trip?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
ACCESS MODE				
1=Bike	3.2%	8.1%	3.6%	3.8%
2=Walk	91.3%	69.9%	88.7%	88.5%
3=Was dropped off by someone going someplace else	2.9%	10.0%	4.6%	4.0%
4=Drove alone	2.0%	11.1%	1.6%	3.0%
5=Carpooled or vanpooled with others	0.2%	0.4%	0.2%	0.2%
6=Other	0.3%	0.5%	1.3%	0.5%

Q4a. IF WALKED: How far did you walk?

N=213199	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
ACCESS WALK DISTANCE				
1= up to 1/4 mile (0-2 blocks)	77.8%	73.3%	77.6%	77.4%
2=1/4 - 1/2 mile (3-4 blocks)	13.2%	19.7%	13.6%	13.9%
3=1/2 - 3/4 mile (5-6 blocks)	3.5%	3.0%	4.0%	3.5%
4=3/4 - 1 mile (7-8 blocks)	2.8%	2.6%	2.1%	2.7%
5=1 - 2 miles (9-16 blocks)	2.1%	0.9%	1.9%	2.0%
6= more than 2 miles (17+ blocks)	0.5%	0.6%	0.7%	0.5%

Q4b1. IF CARPOOLED/VANPOOLED: How many people, including you rode in the car/van?

N=568	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
ACCESS CARPOOL SIZE				
2 people	65.4%	42.0%	47.9%	59.3%
3+ people	34.6%	58.0%	52.1%	40.7%

Q5. Did you transfer FROM a bus or use the train since you left the place where you started this one-way trip (in Question 1)?

N=240 868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
FROM TRANSFER				
1=Yes	26.5%	0.0%	53.6%	26.9%
2=No	73.5%	100.0%	46.4%	73.1%

Q9. Will you transfer TO a bus or train AFTER you get off this bus/train on the way to your destination for this one-way trip?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
TO TRANSFER				
1=-Yes	29.4%	0.0%	61.1%	30.1%
2=-No	70.6%	100.0%	38.9%	69.9%

Total Transfers

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
TOTAL TRANSFERS				
0=None	48.8%	100.0%	0.0%	48.5%
1=1	41.7%	0.0%	61.1%	39.3%
2=2	8.5%	0.0%	32.9%	10.7%
3=3	1.0%	0.0%	6.0%	1.5%

Q10. How did you get from the last bus or train you will use for this one-way trip to get to your destination?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
EGRESS MODE				
1=Bike	3.0%	7.4%	3.8%	3.6%
2=Walk	93.3%	76.8%	92.0%	91.2%
3=Was dropped off by someone going someplace else	1.9%	6.3%	2.5%	2.5%
4=Drove alone	1.4%	8.9%	0.8%	2.2%
5=Carpooled or vanpooled with others	0.1%	0.3%	0.1%	0.1%
6=Other	0.2%	0.4%	0.8%	0.3%

Q10a. IF WALKED: How far did you walk?

N=219736	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
EGRESS WALK DISTANCE				
1= up to 1/4 mile (0-2 blocks)	76.9%	72.7%	77.1%	76.5%
2=1/4 - 1/2 mile (3-4 blocks)	14.6%	19.3%	13.9%	15.0%
3=1/2 - 3/4 mile (5-6 blocks)	4.0%	3.4%	4.1%	3.9%
4=3/4 - 1 mile (7-8 blocks)	2.3%	3.7%	2.3%	2.5%
5=1 - 2 miles (9-16 blocks)	1.7%	0.7%	2.1%	1.7%
6= more than 2 miles (17+ blocks)	0.5%	0.3%	0.6%	0.5%

Q10b1. IF CARPOOLED/VANPOOLED: How many people, including you rode in the car/van?

N=299	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
EGRESS CARPOOL SIZE				
2 people	85.3%	50.7%	51.7%	72.6%
3+ people	14.7%	49.3%	48.3%	27.4%

Q11. What type of place are you GOING TO now? What is the ending place for this one-way trip?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
DESTINATION TYPE OF PLACE				
1=Workplace	20.4%	11.3%	18.1%	19.0%
2=Home	39.9%	37.5%	41.6%	39.8%
3=Elementary School (grades K-5)	0.4%	0.1%	0.3%	0.4%
4=Middle School (grades 6-8)	0.2%	0.0%	0.1%	0.2%
5=High School (grades 9-12)	5.0%	3.8%	3.5%	4.6%
6=College/University (Students Only)	7.7%	23.3%	6.6%	9.4%
7=Shopping	6.6%	5.0%	4.8%	6.2%
8=Hotel	0.2%	0.1%	0.4%	0.2%
9=Recreation/Sightseeing	1.0%	2.7%	2.0%	1.3%

Q11. What type of place are you GOING TO now? What is the ending place for this one-way trip?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
DESTINATION TYPE OF PLACE (Cont.)				
10=Medical Appointment/ Doctor's Visit	3.0%	0.6%	2.6%	2.7%
11=Social/Church/Personal/Friend's House	11.0%	3.9%	10.9%	10.2%
12=Airport (Air Passengers Only)	0.0%	0.6%	1.0%	0.2%
13=Other	4.7%	10.9%	8.2%	5.8%

Trip Purpose

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
TRIP PURPOSE				
Home-Based Other Trip (HBO)	18.6%	18.1%	24.4%	19.3%
Home-Based Shopping Trip (HBS)	8.3%	6.2%	5.1%	7.7%
Home-Based Work Trip (HBW)	33.2%	17.3%	33.2%	31.3%
Home-Based College Trip (HBC)	12.3%	33.8%	10.6%	14.6%
Non-Home Based (NHB)	12.4%	17.2%	14.2%	13.2%
Home-Based School Trip (NHB)	10.5%	5.9%	8.0%	9.7%
Home-Based Medical Trip (HBM)	4.7%	1.0%	3.6%	4.1%
Home-Based Airport Trip (HBA)	0.0%	0.5%	0.7%	0.2%

Q14. How did you pay for your trip today?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
PAYMENT METHOD				
1=Day Pass	23.5%	19.8%	28.7%	23.8%
2=3-Day Pass	0.4%	0.7%	1.3%	0.5%
3=7-Day Pass	3.1%	2.6%	5.4%	3.3%
4=31-Day Pass	24.8%	18.6%	24.9%	24.1%
5=FREE	9.5%	0.7%	3.5%	7.7%
6=U-Pass	3.2%	43.0%	10.3%	8.7%
7=Employer Subsidized Pass	6.8%	6.8%	6.3%	6.7%
8=Semester Pass	3.2%	2.8%	4.2%	3.3%
9=Courtesy Pass	0.3%	0.3%	0.3%	0.3%
10=Full Fare	11.4%	1.5%	4.5%	9.3%
11=Youth Fare	1.7%	0.3%	0.9%	1.4%
12=Senior Fare	0.5%	0.1%	0.4%	0.5%

Q14. How did you pay for your trip today?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
PAYMENT METHOD (Cont.)				
13=Person with Disability Fare	0.8%	0.6%	0.9%	0.8%
14=Field Trip Pass	0.0%	0.0%	0.0%	0.0%
15=Year Round Pass	0.0%	0.0%	0.0%	0.0%
16=Reduced Fare ID Card	4.4%	0.3%	3.5%	3.8%
17=Cash	1.1%	0.0%	0.5%	0.9%
19=Other	1.5%	0.6%	1.7%	1.4%
99=Not Provided	3.7%	1.3%	2.6%	3.3%

Q15. If transit service had not been available today, how would you have made this ENTIRE ONE-WAY trip? (check only one)

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
IF NO TRANSIT HOW MAKE TRIP				
1= I could not make this trip	28.7%	8.3%	28.1%	26.2%
2= Drive with someone else	23.1%	23.1%	24.2%	23.2%
3=Taxi	5.5%	3.3%	3.8%	5.0%
4= Walk or Bike	24.1%	21.6%	17.3%	22.9%
5= Drive Myself	8.1%	33.2%	13.7%	11.7%
6= I Don't Know	9.7%	10.0%	12.1%	10.1%
7= Other	0.8%	0.4%	0.6%	0.8%

Q16. How many years have you been using public transit in the Phoenix area?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
YEARS USING TRANSIT IN PHOENIX				
1= Less than 2 years	30.5%	44.4%	33.6%	32.5%
2=2 years or more	63.3%	52.4%	61.4%	61.8%
9= Don't know	6.2%	3.2%	5.0%	5.7%

Q16a. IF LESS THAN 2 YEARS: Why did you start using public transit in the Phoenix area?

N=78302	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
WHY START USE PHX TRANSIT				
1=Moved to the area within last 2 years	18.9%	7.2%	16.6%	16.4%
2=To save money	12.4%	44.4%	29.0%	20.7%
3=Lost my job	1.2%	0.2%	0.3%	0.9%
4=Light rail service began	1.0%	15.9%	5.9%	4.5%
5=Employer offered incentives	1.1%	1.7%	0.9%	1.2%
6=Lost my car	20.7%	2.5%	12.3%	16.1%
7=Started a new job	5.1%	1.2%	4.0%	4.2%
8=Started going to school	13.0%	17.4%	9.6%	13.3%
9=Do not have a car	14.1%	4.9%	12.6%	12.2%
10=No reason	3.5%	1.1%	1.8%	2.8%
11=Other	9.2%	3.5%	7.0%	7.8%

Q17. Compared to 2 years ago, how often do you use public transit?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
COMPARED TO 2 YEARS AGO USE				
1= Much more often	24.3%	38.2%	31.1%	26.8%
2= More often	32.6%	41.6%	38.0%	34.4%
3= About the same	26.2%	13.5%	20.1%	23.9%
4= Less often	6.7%	2.4%	3.4%	5.8%
5= Much less often	1.4%	0.4%	0.5%	1.1%
6= I Don't Know	8.9%	4.0%	6.9%	8.0%

Q18. How do you usually get transit schedule information? (select the ONE you use most often)

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
HOW GET SCHEDULE				
1= Transit schedule book	33.3%	20.1%	31.5%	31.5%
2= Valley Metro Website	26.5%	51.2%	31.0%	30.0%
3= Customer service telephone number	18.3%	3.3%	16.5%	16.3%
4= Posted schedule at bus stop	6.7%	3.9%	6.0%	6.3%
5= I Don't Know	7.8%	3.5%	6.0%	7.0%
6= I Don't get schedule info	4.7%	16.5%	7.0%	6.4%
7= Other	2.6%	1.6%	2.0%	2.4%

Q19. How many registered CARS, TRUCKS OR MOTORCYLES are in running condition and available to your household?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
VEHICLES IN HOUSEHOLD				
0=0	48.2%	29.5%	51.6%	46.5%
1=1	28.7%	33.1%	27.0%	29.0%
2=2	16.0%	21.4%	13.5%	16.3%
3=3	5.1%	10.7%	5.7%	5.9%
4=4 or more	2.0%	5.2%	2.1%	2.4%

Q20. Including YOU, how many people live in your household?

N=2408 68	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
HOUSEHOLD SIZE				
1=1	17.4%	19.6%	21.5%	18.2%
2=2	24.2%	30.4%	26.0%	25.2%
3=3	19.0%	19.6%	17.8%	18.9%
4=4	16.1%	17.7%	15.1%	16.2%
5=5	10.6%	4.8%	7.8%	9.6%
6=6+	12.6%	8.0%	11.9%	-12.0%

Q18. Including YOU, how many people in your household are employed outside the home?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
NUMBER EMPLOYED IN THE HOUSEHOLD				
0=0	14.9%	14.1%	14.9%	14.8%
1=1	39.1%	37.5%	43.1%	39.4%
2=2	30.0%	34.5%	27.4%	30.2%
3=3	10.9%	9.5%	10.5%	10.7%
4=4	3.7%	3.2%	3.0%	3.6%
5=5+	1.4%	1.1%	1.0%	1.3%

Q22. Including YOU, how many adults (age 18 and older) live in your household?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
ADULTS IN HOUSEHOLD				
0=0	0.1%	0.0%	0.0%	0.1%
1=1	26.3%	24.7%	29.1%	26.5%
2=2	39.1%	41.6%	38.8%	39.4%
3=3	20.7%	20.5%	18.7%	20.4%
4=4	9.4%	10.4%	8.8%	9.4%
5=5	3.0%	1.8%	1.9%	2.7%
6=6 +	1.5%	0.8%	2.7%	1.6%
88= I Don't Know	0.0%	0.2%	0.0%	0.0%
99= Refused	0.0%	0.0%	0.0%	0.0%

Q23. What is your AGE:

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
AGE				
1=Under 18	11.9%	6.7%	9.4%	11.0%
2=18-24 years	27.9%	41.0%	25.1%	29.1%
3=25-34 years	20.4%	26.4%	21.3%	21.2%
4=35-44 years	14.8%	11.2%	18.0%	14.8%
5=45-54 years	15.1%	7.3%	16.7%	14.4%
6=55-64 years	7.2%	5.6%	7.5%	7.0%
7=65+	2.6%	1.8%	1.9%	2.4%

Q24. Do you have a valid driver's license?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
DRIVERS LICENSE				
1=Yes	43.7%	72.2%	47.3%	47.5%
2=No	56.3%	27.8%	52.7%	52.5%

Q25. Are you: (check the response that BEST describes you)

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
EMPLOYMENT STATUS				
1= Employed full-time i.e. at least 35 hrs per week	37.6%	33.9%	41.0%	37.6%
2= Employed part time i.e. less than 35 hrs per week	19.6%	25.4%	17.0%	19.9%
3= Not currently employed but seeking work	22.0%	12.1%	21.7%	20.8%
4= Not currently employed and NOT seeking work	17.5%	25.5%	17.5%	18.4%
5= Not employed - retired	3.4%	2.8%	2.8%	3.2%
99=Not provided	0.0%	0.2%	0.0%	0.0%

Q26. Are you a student? (check the one response that BEST describes you)

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
STUDENT STATUS				
1= Not a student	63.4%	45.2%	65.6%	61.5%
2= Yes - student through 12th grade	14.2%	7.0%	10.2%	12.9%
3= Yes - college or university	21.0%	47.5%	22.5%	24.3%
4= Yes - other	1.3%	0.4%	1.7%	1.3%

Q27. How would you describe your race/ethnicity?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
RACE ETHNICITY				
1= White	43.6%	49.1%	39.9%	43.8%
2= Black or African American	18.2%	14.5%	21.6%	18.2%
3= Asian	2.0%	6.2%	2.1%	2.5%
4= American Indian	3.8%	5.4%	7.0%	4.4%
5= Hispanic or Latino	30.7%	21.8%	27.8%	29.3%
6= Other	1.6%	3.0%	1.7%	1.8%

Q28. Your Gender:

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
GENDER				
1=Male	51.4%	51.3%	54.9%	51.8%
2=Female	48.6%	48.7%	45.1%	48.2%

Q29. Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
HH INCOME				
1= Below $5,000	15.6%	8.8%	14.5%	14.7%
2=$5,000-$9,999	8.9%	6.7%	9.0%	8.6%
3=$10,000-$14,999	10.2%	8.0%	9.3%	9.8%
4=$15,000-$19,999	8.0%	5.8%	7.8%	7.7%
5=$20,000-$24,999	10.4%	6.7%	9.0%	9.8%
6=$25,000-$29,999	8.7%	8.3%	10.0%	8.8%
7=$30,000-$34,999	7.4%	9.3%	8.9%	7.8%
8=$35,000-$39,999	5.7%	10.2%	5.4%	6.2%
9=$40,000-$49,999	6.8%	9.3%	7.6%	7.2%
10=$50,000-$59,999	5.4%	6.9%	6.2%	5.7%
11=$60,000-$69,999	3.7%	5.2%	3.5%	3.9%
12=$70,000-$79,000	2.4%	3.6%	1.6%	2.4%

Q29. Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME?

N=240868	TRIP TYPE			Total
	Bus Only	Light Rail Only	Bus/Light Rail	
HH INCOME (Cont.)				
13=$80,000-$89,999	2.0%	2.5%	1.7%	2.0%
14=$90,000-$99,999	1.3%	2.6%	1.3%	1.4%
15=$100,000-$119,999	1.4%	2.6%	1.9%	1.6%
16=$120,000 or more	1.9%	2.5%	2.1%	2.0%
17= I Don't Know	0.3%	0.7%	0.3%	0.4%

APPENDIX B: RESULTS BY TYPE OF SERVICE

Q1. What type of place are you COMING FROM now? What was the starting place of this one-way trip?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
ORIGIN_TYPE_OF_PLACE									
1=Workplace	17.4%	45.0%	8.7%	36.0%	36.8%	19.7%	27.7%	14.8%	16.7%
2=Home	47.7%	53.9%	47.0%	59.2%	62.3%	49.4%	50.1%	44.1%	47.2%
3=Elementary School (grades K-5)	0.2%	0.3%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
4=Middle School (grades 6-8)	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
5=High School (grades 9-12)	6.7%	0.2%	4.6%	0.0%	0.9%	1.4%	0.0%	4.2%	5.9%
6=College/University (Students Only)	6.2%	0.2%	13.4%	4.8%	0.0%	1.4%	2.8%	16.0%	8.4%
7=Shopping	5.7%	0.1%	6.5%	0.0%	0.0%	7.0%	0.0%	4.4%	5.4%
8=Hotel	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	2.8%	0.4%	0.2%
9=Recreation/Sightseeing	0.9%	0.0%	3.6%	0.0%	0.0%	8.5%	0.0%	1.4%	1.2%

Q1. What type of place are you COMING FROM now? What was the starting place of this one-way trip?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
ORIGIN_TYPE_OF_PLACE (Cont.)									
10=Medical Appointment/ Doctor's Visit	3.2%	0.0%	1.3%	0.0%	0.0%	1.4%	0.0%	1.5%	2.7%
11=Social/Church/Personal/ Friend's House	8.2%	0.0%	9.1%	0.0%	0.0%	7.0%	2.8%	3.7%	7.3%
12=Airport (Air Passengers Only)	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	11.1%	0.4%	0.1%
13=Other	3.5%	0.4%	4.4%	0.0%	0.0%	4.2%	2.8%	9.2%	4.5%

Q4. How did you get from the place where you started this one-way trip (in Question 2) to the very FIRST bus/train you used for this trip?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
ACCESS_MODE									
1=Bike	3.3%	3.8%	2.2%	2.4%	1.1%	5.6%	5.5%	6.4%	3.8%
2=Walk	93.0%	54.7%	87.2%	50.4%	37.4%	80.4%	72.3%	75.9%	88.5%
3=Was dropped off by someone going someplace else	3.0%	8.1%	1.0%	19.2%	10.5%	12.6%	11.1%	8.5%	4.0%
4=Drove alone	0.2%	32.8%	8.7%	28.0%	49.7%	1.4%	2.8%	7.6%	3.0%
5=Carpooled or vanpooled with others	0.2%	0.6%	0.5%	0.0%	1.3%	0.0%	5.5%	0.3%	0.2%
6=Other	0.3%	0.0%	0.4%	0.0%	0.0%	0.0%	2.8%	1.2%	0.5%

Q4a. IF WALKED: How far did you walk?

N=213199	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
ACCESS_WALK_DISTANCE									
1= up to 1/4 mile (0-2 blocks)	77.3%	73.5%	81.7%	63.5%	73.7%	84.2%	84.7%	75.5%	77.4%
2=1/4 - 1/2 mile (3-4 blocks)	13.5%	17.4%	10.4%	17.5%	23.5%	10.5%	7.7%	17.5%	13.9%
3=1/2 - 3/4 mile (5-6 blocks)	3.6%	2.9%	4.4%	4.8%	1.8%	0.0%	0.0%	3.1%	3.5%
4=3/4 - 1 mile (7-8 blocks)	2.9%	4.2%	1.5%	11.1%	0.0%	1.7%	3.8%	2.5%	2.7%
5=1 - 2 miles (9-16 blocks)	2.3%	1.5%	1.4%	3.2%	0.9%	1.8%	3.8%	0.8%	2.0%
6= more than 2 miles (17+blocks)	0.5%	0.4%	0.6%	0.0%	0.0%	1.8%	0.0%	0.6%	0.5%

Q4b1. IF CARPOOLED/VANPOOLED: How many people, including you rode in the car/van?

N=568	ROUTE TYPE						Total
	Local	Express	Circulator	Rapid	Shuttle	Rail	
ACCESS_CARPOOL_SIZE							
2 people	57.9%	94.1%	63.0%	100.0%	50.0%	50.0%	59.3%
3+ people	42.1%	5.9%	37.0%	0.0%	50.0%	50.0%	40.7%

Q5. Did you transfer FROM a bus or use the train since you left the place where you started this one-way trip (in Question 1)?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
FROM_TRANSFER									
1=Yes	31.3%	4.2%	14.8%	4.8%	5.7%	42.3%	30.7%	16.8%	26.9%
2=-No	68.7%	95.8%	85.2%	95.2%	94.3%	57.7%	69.3%	83.2%	73.1%

Q9. Will you transfer TO a bus or train AFTER you get off this bus/train on the way to your destination for this one-way trip?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
TO_TRANSFER									
1=Yes	34.3%	7.3%	14.3%	24.0%	12.6%	50.7%	19.4%	22.2%	30.1%
2=No	65.7%	92.7%	85.7%	76.0%	87.4%	49.3%	80.6%	77.8%	69.9%

Total Transfers

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
Total Transfers									
0=0	40.4%	88.7%	72.2%	73.6%	81.7%	21.4%	49.9%	66.6%	48.5%
1=1	45.9%	9.7%	21.4%	16.0%	18.1%	44.3%	13.9%	24.3%	39.3%
2=2	12.0%	1.6%	5.4%	6.4%	0.2%	25.7%	36.2%	8.0%	10.7%
3=3	1.7%	0.0%	1.0%	4.0%	0.0%	8.7%	0.0%	1.1%	1.5%

Q10. How did you get from the last bus or train you will use for this one-way trip to get to your destination?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
EGRESS_MODE									
1=Bike	3.2%	2.3%	2.9%	2.4%	0.8%	2.8%	5.5%	5.8%	3.6%
2=Walk	94.1%	67.8%	92.0%	80.0%	62.6%	92.9%	75.0%	82.1%	91.2%
3=Was dropped off by someone going someplace else	2.0%	5.8%	0.5%	7.2%	5.0%	2.8%	11.1%	5.0%	2.5%
4=Drove alone	0.4%	23.5%	4.3%	10.4%	29.9%	1.4%	5.5%	6.1%	2.2%
5=Carpooled or vanpooled with others	0.1%	0.6%	0.0%	0.0%	1.7%	0.0%	2.8%	0.2%	0.1%
6=Other	0.2%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.7%	0.3%

Q10a. IF WALKED: How far did you walk?

N=219736	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
EGRESS_WALK_DISTANCE									
1= up to 1/4 mile (0-2 blocks)	75.9%	77.7%	83.6%	65.0%	82.0%	83.4%	88.9%	74.6%	76.5%
2=1/4 - 1/2 mile (3-4 blocks)	15.0%	16.3%	10.4%	19.0%	11.1%	15.1%	3.7%	17.4%	15.0%
3=1/2 - 3/4 mile (5-6 blocks)	4.1%	3.8%	3.6%	3.0%	3.3%	1.5%	3.7%	3.3%	3.9%
4=3/4 - 1 mile (7-8 blocks)	2.5%	1.9%	0.7%	7.0%	0.0%	0.0%	3.7%	3.4%	2.5%
5=1 - 2 miles (9-16 blocks)	1.9%	0.3%	1.4%	6.0%	0.8%	0.0%	0.0%	0.8%	1.7%
6= more than 2 miles (17+blocks)	0.5%	0.0%	0.3%	0.0%	2.7%	0.0%	0.0%	0.4%	0.5%

Q10b1. IF CARPOOLED/VANPOOLED: How many people, including you rode in the car/van?

N=299	ROUTE TYPE						Total
	Local	Express	Circulator	Rapid	Shuttle	Rail	
EGRESS_CARPOOL_SIZE							
2 people	93.9%	75.0%	100.0%	51.7%	0.0%	59.8%	72.6%
3+ people	6.1%	25.0%	0.0%	48.3%	100.0%	40.2%	27.4%

Q11. What type of place are you GOING TO now? What is the ending place for this one-way trip?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
DESTINATION_TYPE_OF_PLACE_									
1=Workplace	20.5%	53.4%	10.1%	52.8%	59.8%	19.8%	27.9%	12.9%	19.0%
2=Home	39.8%	44.4%	39.0%	40.8%	37.4%	29.4%	36.0%	40.4%	39.8%
3=Elementary School (grades K-5)	0.3%	0.0%	1.0%	0.0%	0.3%	0.0%	0.0%	0.1%	0.4%
4=Middle School (grades 6-8)	0.2%	0.0%	0.2%	0.0%	0.4%	0.0%	0.0%	0.1%	0.2%
5=High School (grades 9-12)	5.1%	0.4%	3.4%	2.4%	0.0%	0.0%	2.8%	4.2%	4.6%
6=College/University (Students Only)	6.6%	0.4%	18.0%	2.4%	0.0%	12.7%	2.8%	17.6%	9.4%
7=Shopping	6.5%	0.0%	6.8%	0.0%	0.0%	12.7%	0.0%	4.9%	6.2%
8=Hotel	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.2%	0.2%
9=Recreation/Sightseeing	1.0%	0.2%	3.0%	0.0%	0.0%	5.6%	0.0%	2.1%	1.3%

Q11. What type of place are you GOING TO now? What is the ending place for this one-way trip?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
DESTINATION_TYPE_OF_PLACE (Cont.)									
10=Medical Appointment/ Doctor's Visit	3.3%	0.0%	1.9%	0.0%	1.7%	4.2%	0.0%	1.0%	2.7%
11=Social/Church/Personal/ Friend's House	11.8%	0.4%	10.1%	0.0%	0.3%	8.5%	5.5%	4.7%	10.2%
12=Airport (Air Passengers Only)	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	22.2%	0.8%	0.2%
13=Other	4.6%	0.9%	6.5%	1.6%	0.0%	7.1%	0.0%	11.1%	5.8%

Trip Purpose

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
TRIP_PURPOSE									
Home-Based Other Trip (HBO)	19.6%	0.6%	20.6%	1.6%	0.8%	23.9%	2.8%	19.4%	19.3%
Home-Based Shopping Trip (HBS)	8.0%	0.0%	10.0%	0.0%	0.0%	4.2%	0.0%	6.3%	7.7%
Home-Based Work Trip (HBW)	33.4%	96.6%	16.1%	88.8%	95.9%	32.4%	55.6%	22.5%	31.3%
Home-Based College Trip (HBC)	10.6%	0.4%	27.9%	7.2%	0.0%	14.1%	5.5%	26.3%	14.6%
Non-Home Based (NHB)	12.6%	1.7%	14.2%	0.0%	0.7%	21.1%	13.9%	16.0%	13.2%
Home-Based School Trip (HSL)	10.7%	0.5%	8.7%	2.4%	0.9%	1.4%	2.8%	7.4%	9.7%
Home-Based Medical Trip (HBM)	5.0%	0.0%	2.4%	0.0%	1.7%	2.8%	0.0%	1.6%	4.1%
Home-Based Airport Trip (HBA)	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	19.4%	0.7%	0.2%

Q14. How did you pay for your trip today?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
PAYMENT_METHOD									
1=Day Pass	26.6%	3.3%	3.8%	8.8%	1.3%	32.4%	11.1%	24.1%	23.8%
2=3-Day Pass	0.5%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.7%	0.5%
3=7-Day Pass	3.7%	0.0%	0.9%	0.0%	0.0%	5.7%	2.8%	3.4%	3.3%
4=31-Day Pass	27.6%	12.9%	3.4%	11.2%	14.5%	28.2%	11.1%	21.0%	24.1%
5=FREE	1.3%	0.6%	77.7%	0.0%	3.4%	0.0%	33.3%	0.8%	7.7%
6=U-Pass	3.6%	1.5%	2.0%	2.4%	5.7%	8.4%	2.8%	33.7%	8.7%
7=Employer Subsidized Pass	5.6%	75.6%	1.2%	65.6%	72.1%	4.3%	19.6%	6.3%	6.7%
8=Semester Pass	3.7%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	3.8%	3.3%
9=Courtesy Pass	0.2%	0.0%	0.7%	0.0%	0.0%	1.4%	2.8%	0.2%	0.3%
10=Full Fare	12.2%	1.6%	2.7%	2.4%	2.6%	8.5%	5.5%	1.8%	9.3%
11=Youth Fare	1.9%	0.2%	0.3%	2.4%	0.5%	0.0%	0.0%	0.5%	1.4%
12=Senior Fare	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.5%

Q14. How did you pay for your trip today?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
PAYMENT_METHOD_ (Cont.)									
13=Person with Disability Fare	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.8%
14=Field Trip Pass	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15=Year Round Pass	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
16=Reduced Fare ID Card	5.0%	2.4%	1.6%	7.2%	0.0%	6.9%	0.0%	0.5%	3.8%
17=CASH	1.2%	0.0%	0.1%	0.0%	0.0%	0.0%	8.3%	0.2%	0.9%
19=Other	1.7%	0.9%	0.3%	0.0%	0.0%	2.8%	2.8%	0.7%	1.4%
99=Not Provided	3.7%	0.2%	4.7%	0.0%	0.0%	1.4%	0.0%	1.3%	3.3%

Q15. If transit service had not been available today, how would you have made this ENTIRE ONE-WAY trip? (check only one)

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
IF_NO_TRANSIT_HOW_MAKE_TRIP									
1= I could not make this trip	31.7%	6.9%	16.2%	28.0%	2.9%	39.5%	19.4%	11.0%	26.2%
2= Drive with someone else	24.3%	13.1%	12.6%	12.0%	10.4%	26.8%	27.9%	25.0%	23.2%
3=Taxi	5.8%	0.0%	3.6%	4.0%	0.0%	4.1%	13.9%	3.3%	5.0%
4= Walk or Bike	21.3%	0.9%	46.7%	1.6%	0.4%	22.5%	13.9%	20.6%	22.9%
5= Drive Myself	6.4%	76.3%	8.9%	52.0%	85.8%	7.1%	16.6%	27.3%	11.7%
6= I Don't Know	9.7%	2.4%	11.5%	2.4%	0.5%	0.0%	2.8%	12.4%	10.1%
7= Other	0.8%	0.3%	0.6%	0.0%	0.0%	0.0%	5.5%	0.6%	0.8%

Q16. How many years have you been using public transit in the Phoenix area?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
YEARS_USING_TRANSIT IN PHOENIX									
1= Less than 2 years	29.9%	23.8%	36.9%	32.0%	24.3%	32.4%	33.3%	41.9%	32.5%
2=2 years or more	64.1%	76.0%	53.8%	68.0%	75.7%	67.6%	66.7%	54.5%	61.8%
9= Don't know	6.0%	0.2%	9.2%	0.0%	0.0%	0.0%	0.0%	3.6%	5.7%

Q16a. IF LESS THAN 2 YEARS: Why did you start using public transit in the Phoenix area?

N=78302	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
WHY_USE_PHOENIX_TRANSIT									
1=Moved to the area within last 2 years	18.4%	16.3%	27.9%	0.0%	9.7%	26.5%	33.3%	7.5%	16.4%
2=To save money	11.3%	29.6%	19.4%	22.4%	37.7%	13.4%	0.0%	43.0%	20.7%
3=Lost my job	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.9%
4=Light rail service began	1.2%	5.2%	0.8%	0.0%	0.0%	0.0%	8.3%	13.6%	4.5%
5=Employer offered incentives	0.6%	15.7%	0.2%	16.3%	22.6%	0.0%	0.0%	1.6%	1.2%
6=Lost my car	23.0%	3.8%	6.4%	6.1%	0.0%	20.0%	0.0%	3.7%	16.1%
7=Started a new job	5.0%	17.9%	1.6%	12.2%	25.5%	0.0%	16.7%	1.9%	4.2%
8=Started going to school	12.0%	0.5%	20.0%	24.5%	0.0%	9.9%	0.0%	15.5%	13.3%
9=Do not have a car	14.8%	2.3%	8.7%	6.1%	0.5%	6.7%	0.0%	7.9%	12.2%
10=No reason	3.3%	1.1%	4.8%	0.0%	1.0%	0.0%	0.0%	1.2%	2.8%
11=Other	9.0%	7.5%	10.2%	12.2%	3.1%	23.5%	41.7%	3.7%	7.8%

Q17. Compared to 2 years ago, how often do you use public transit?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
COMPARED_TO_2_YEARS_AGO USE									
1= Much more often	23.2%	36.1%	32.5%	21.6%	40.6%	55.1%	30.5%	36.3%	26.8%
2= More often	33.9%	13.9%	30.6%	25.6%	18.1%	15.4%	27.7%	41.2%	34.4%
3= About the same	26.2%	44.8%	18.5%	52.8%	33.1%	25.2%	33.5%	14.9%	23.9%
4= Less often	6.8%	1.9%	5.0%	0.0%	1.7%	0.0%	8.3%	2.5%	5.8%
5= Much less often	1.2%	1.3%	1.8%	0.0%	0.7%	0.0%	0.0%	0.5%	1.1%
6= I Don't Know	8.6%	2.0%	11.6%	0.0%	5.8%	4.2%	0.0%	4.7%	8.0%

Q18. How do you usually get transit schedule information? (select the ONE you use most often)

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
HOW_GET_SCHEDULE									
1= Transit schedule book	34.8%	21.8%	24.1%	27.2%	11.8%	29.6%	22.2%	23.3%	31.5%
2= Valley Metro Website	25.5%	72.5%	24.5%	64.8%	76.3%	33.9%	22.2%	45.6%	30.0%
3= Customer service telephone number	20.1%	1.8%	8.7%	1.6%	2.1%	14.2%	33.5%	6.2%	16.3%
4= Posted schedule at bus stop	5.6%	0.2%	17.1%	0.0%	5.7%	12.7%	5.5%	4.2%	6.3%
5= I Don't Know	7.5%	1.3%	11.4%	4.0%	1.4%	1.4%	0.0%	4.0%	7.0%
6= I Don't get schedule info	4.0%	0.3%	9.9%	2.4%	0.7%	8.3%	0.0%	15.0%	6.4%
7= Other	2.4%	2.1%	4.3%	0.0%	2.1%	0.0%	16.6%	1.7%	2.4%

Q19. How many registered CARS, TRUCKS OR MOTORCYLES are in running condition and available to your household?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
VEHICLES_IN_HOUSEHOLD									
0=0	50.9%	2.3%	41.5%	9.6%	0.7%	53.6%	41.6%	35.8%	46.5%
1=1	28.1%	34.1%	29.8%	37.6%	27.8%	30.9%	36.2%	31.9%	29.0%
2=2	14.8%	41.4%	16.1%	48.0%	53.6%	11.3%	13.9%	19.3%	16.3%
3=3	4.5%	16.0%	9.3%	4.8%	14.8%	4.2%	5.5%	8.7%	5.9%
4=4 or more	1.7%	6.1%	3.3%	0.0%	3.1%	0.0%	2.8%	4.4%	2.4%

Q20. Including YOU, how many people live in your household?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
HOUSEHOLD_SIZE									
1=1	17.6%	16.8%	19.5%	23.2%	16.1%	14.0%	22.2%	20.2%	18.2%
2=2	23.9%	34.0%	26.6%	36.0%	36.3%	26.7%	27.9%	28.4%	25.2%
3=3	19.0%	19.8%	18.4%	19.2%	16.0%	18.2%	16.6%	19.0%	18.9%
4=4	15.7%	15.7%	18.1%	9.6%	25.8%	17.1%	13.9%	16.6%	16.2%
5=5	10.4%	8.6%	9.5%	9.6%	4.3%	17.0%	5.5%	6.3%	9.6%
6=6+	13.3%	5.0%	8.0%	2.4%	1.5%	7.0%	13.9%	9.5%	12.0%

Q18. Including YOU, how many people in your household are employed outside the home?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
NUMBER_EMPLOYED_IN_HOUSEHOLD									
0=0	14.8%	0.2%	18.5%	0.0%	0.0%	22.3%	11.1%	14.5%	14.8%
1=1	39.5%	48.1%	36.9%	57.6%	51.0%	39.5%	27.7%	39.2%	39.4%
2=2	29.6%	38.9%	28.9%	28.0%	41.0%	29.7%	36.2%	32.1%	30.2%
3=3	11.0%	9.9%	10.0%	7.2%	6.7%	4.2%	22.2%	9.9%	10.7%
4=4	3.6%	1.3%	4.9%	4.8%	1.3%	0.0%	2.8%	3.3%	3.6%
5=5+	1.4%	1.6%	0.8%	2.4%	0.0%	4.2%	0.0%	1.1%	1.3%

Q22. Including YOU, how many adults (age 18 and older) live in your household?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
ADULTS_IN_HOUSEHOLD									
0=0	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
1=1	26.5%	23.8%	28.0%	36.8%	22.3%	28.1%	25.0%	26.0%	26.5%
2=2	39.0%	53.9%	37.4%	44.0%	58.3%	39.5%	39.0%	40.1%	39.4%
3=3	20.9%	14.5%	18.2%	9.6%	13.9%	25.4%	19.4%	20.1%	20.4%
4=4	9.0%	5.2%	12.8%	4.8%	4.9%	1.4%	5.5%	10.3%	9.4%
5=5	2.9%	2.5%	2.8%	2.4%	0.5%	1.4%	2.8%	2.0%	2.7%
6=6 +	1.7%	0.0%	0.8%	2.4%	0.0%	4.2%	8.3%	1.2%	1.6%

Q23. What is your AGE:

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
AGE									
1=Under 18	12.0%	0.6%	10.7%	4.8%	0.0%	4.3%	0.0%	8.2%	11.0%
2=18-24 years	26.9%	2.3%	40.4%	12.8%	6.2%	19.7%	19.6%	35.7%	29.1%
3=25-34 years	21.0%	12.2%	18.3%	5.6%	17.4%	15.4%	27.7%	24.7%	21.2%
4=35-44 years	15.4%	22.6%	10.7%	13.6%	22.6%	28.3%	25.0%	12.9%	14.8%
5=45-54 years	15.3%	28.9%	12.2%	28.0%	25.4%	14.1%	19.4%	10.3%	14.4%
6=55-64 years	6.8%	29.5%	4.5%	35.2%	26.6%	11.3%	8.3%	6.5%	7.0%
7=65+	2.5%	3.9%	3.2%	0.0%	1.8%	6.9%	0.0%	1.7%	2.4%

Q24. Do you have a valid driver's license?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
DRIVERS_LICENSE									
1=Yes	41.2%	95.3%	54.9%	82.4%	97.6%	48.0%	55.4%	63.8%	47.5%
2=No	58.8%	4.7%	45.1%	17.6%	2.4%	52.0%	44.6%	36.2%	52.5%

Q25. Are you: (check the response that BEST describes you)

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
EMPLOYMENT_STATUS									
1= Employed full-time i.e. at least 35 hrs per week	37.5%	97.4%	26.9%	90.4%	96.2%	35.4%	72.3%	35.8%	37.6%
2= Employed part time i.e. less than 35 hrs per week	19.2%	1.8%	24.7%	0.0%	3.4%	25.2%	11.1%	22.6%	19.9%
3= Not currently employed but seeking work	22.4%	0.1%	25.6%	2.4%	0.5%	16.9%	13.9%	14.9%	20.8%
4= Not currently employed and NOT seeking work	17.7%	0.7%	19.0%	4.8%	0.0%	15.5%	2.8%	23.4%	18.4%
5= Not employed - retired	3.2%	0.0%	3.7%	2.4%	0.0%	7.0%	0.0%	3.1%	3.2%
99=Not provided	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%

Q26. Are you a student? (check the one response that BEST describes you)

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
STUDENT_STATUS									
1= Not a student	64.7%	93.3%	46.9%	81.6%	97.7%	70.4%	85.9%	51.4%	61.5%
2= Yes - student through 12th grade	14.4%	0.8%	12.3%	2.4%	0.5%	4.3%	5.5%	8.8%	12.9%
3= Yes - college or university	19.5%	5.5%	40.1%	16.0%	1.8%	21.1%	8.5%	38.8%	24.3%
4= Yes - other	1.4%	0.4%	0.7%	0.0%	0.0%	4.2%	0.0%	0.9%	1.3%

Q27. How would you describe your race/ethnicity?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
RACE_ETHNICITY									
1= White	41.7%	70.8%	51.4%	62.4%	75.3%	60.5%	33.3%	44.8%	43.8%
2= Black or African American	19.4%	6.2%	14.5%	12.0%	5.3%	5.7%	22.2%	16.8%	18.2%
3= Asian	1.6%	3.6%	4.6%	0.0%	6.5%	1.4%	8.3%	5.2%	2.5%
4= American Indian	4.1%	3.4%	3.6%	0.0%	0.3%	11.4%	5.7%	6.1%	4.4%
5= Hispanic or Latino	31.8%	14.0%	24.1%	23.2%	11.5%	19.6%	27.7%	24.0%	29.3%
6= Other	1.4%	2.0%	1.8%	2.4%	1.1%	1.4%	2.8%	3.0%	1.8%

Q28. Your Gender:

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
GENDER									
1=Male	52.2%	42.3%	52.8%	36.0%	35.3%	45.0%	52.7%	51.5%	51.8%
2=Female	47.8%	57.7%	47.2%	64.0%	64.7%	55.0%	47.3%	48.5%	48.2%

Q29. Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
HH_INCOME									
1= Below $5,000	15.7%	2.1%	19.6%	5.6%	1.5%	14.2%	16.6%	9.6%	14.7%
2=$5,000-$9,999	8.9%	2.1%	9.8%	9.6%	4.1%	11.2%	8.3%	7.7%	8.6%
3=$10,000-$14,999	10.4%	0.6%	8.8%	2.4%	0.4%	7.1%	2.8%	9.0%	9.8%
4=$15,000-$19,999	8.1%	1.4%	8.5%	4.8%	3.7%	10.0%	11.1%	6.4%	7.7%
5=$20,000-$24,999	10.6%	3.5%	10.6%	4.8%	1.7%	13.8%	8.5%	6.9%	9.8%
6=$25,000-$29,999	8.9%	5.0%	7.2%	9.6%	3.7%	9.9%	11.1%	9.6%	8.8%
7=$30,000-$34,999	7.8%	2.4%	5.7%	1.6%	0.5%	8.5%	0.0%	9.7%	7.8%
8=$35,000-$39,999	5.9%	4.6%	4.8%	2.4%	8.8%	2.8%	5.5%	8.5%	6.2%
9=$40,000-$49,999	6.8%	11.0%	6.0%	12.0%	14.8%	6.9%	5.5%	8.8%	7.2%
10=$50,000-$59,999	5.4%	10.6%	5.4%	12.0%	6.9%	2.8%	2.8%	6.8%	5.7%
11=$60,000-$69,999	3.6%	11.0%	3.5%	11.2%	2.3%	2.8%	13.9%	4.7%	3.9%
12=$70,000-$79,000	2.2%	9.2%	1.5%	11.2%	12.2%	0.0%	2.8%	2.9%	2.4%
13=$80,000-$89,999	1.8%	7.8%	2.6%	5.6%	6.5%	1.4%	5.5%	2.2%	2.0%

Q29. Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME?

N=240868	ROUTE TYPE								Total
	Local	Express	Circulator	Limited	Rapid	BRT	Shuttle	Rail	
HH_INCOME (Cont.)									
14=$90,000-$99,999	1.1%	6.4%	1.3%	2.4%	6.1%	2.8%	5.5%	2.1%	1.4%
15=$100,000-$119,999	1.0%	10.8%	2.1%	4.8%	9.9%	4.3%	0.0%	2.5%	1.6%
16=$120,000 or more	1.6%	11.4%	2.6%	0.0%	15.1%	1.4%	0.0%	2.0%	2.0%
17= I Don't Know	0.3%	0.0%	0.1%	0.0%	1.7%	0.0%	0.0%	0.6%	0.4%

APPENDIX C: SURVEY INSTRUMENTS

Valley Metro Regional Transit Survey

Bus Version Route Code: _____ Serial #: _____ Time: _____am/pm Interviewer Initials: _____

Please take a few moments to complete this important survey. Your input will be used to plan transportation improvements in the Phoenix area. If you have questions, please call Valley Metro's Customer Service Number: 602-253-5000.

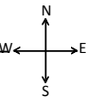
REGISTER TO WIN $100, A FREE-MONTHLY PASS, OR GIFT CERTIFICATE People who submit an accurately completed survey will be entered in a random drawing for one of the following: $100 CASH (5 prizes); FREE MONTHLY PASS (20 Prizes), GIFT CERTIFICATE to local stores/restaurants (175 prizes).

Please provide your name, phone number, and complete home address (or the address of the place you are staying in the Phoenix area if you are visiting the area). ***All information will be kept strictly confidential***

Your Name: _____ Phone Number: (_____) _____

HOME Address: (please be specific, e.g., 123 W. Main Street):_____

ONLY if street address is not known: _____ & _____
Nearest Intersecting Streets (NW 7th Street & Main Street)



City:_____ County:_____ State:___ Zip Code:_____

TRIP SUMMARY

Please list all of the bus routes and train stations you used during this one-way trip in order below. If you are using the train, please list the name of the station where you GOT ON and GOT OFF the train in the sequence they were used.

STARTING PLACE → _____ (1st Bus Route or Train Station) → _____ (2nd Bus Route or Train Station) → _____ (3rd Bus Route or Train Station) → _____ (4th Bus Route or Train Station) → ENDING PLACE

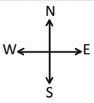
1. What type of place are you COMING FROM now? What was the starting place of this one-way trip? (check one)
   - ☐ Your WORKPLACE
   - ☐ Elementary school (grades K-5)
   - ☐ Middle school (grades 6-8)
   - ☐ High school (grades 9-12)
   - ☐ Your HOME: If you gave your home address above: GO TO QUESTION 4 – below
   - ☐ Recreation/Sightseeing
   - ☐ Social visit/church/personal/friend's house
   - ☐ Medical appointment/doctor's visit
   - ☐ College/University (students only)
   - ☐ Shopping
   - ☐ Hotel
   - ☐ Airport (air passengers only)
   - ☐ Other: _____

IF YOU ARE NOT COMING FROM HOME RIGHT NOW:

2. What is the NAME of the place you are coming from now (in Question 1)? _____
   (examples of names include: McDonalds, Wal-Mart, the name of your employer, Sky Harbor Airport, etc.)
3. What is the EXACT STREET ADDRESS of the place you are coming from (in Question 1)? (please be as specific as possible)

   Exact Street Address (example: 123 W. Main Street):_____

   ONLY if street address is not known: _____ & _____
   Nearest Intersecting Streets (NW 7th Street & Main Street)



   City:_____ County:_____ State:___ Zip Code:_____

BEFORE GETTING TO THE BUS

4. How did you get from the place where you started this one-way trip (in Question 2) to the very FIRST bus/train you used for this trip?
   - ☐ Biked
   - ☐ Walked: how far did you walk? (circle one): ☐ up to ¼ mile (0-2 blocks) ☐ ¼ -½ mile (3-4 blocks) ☐ ½ - ¾ mile (5-6 blocks) ☐ ¾ - 1 mile (7-8 blocks) ☐ 1-2 miles (9-16 blocks) ☐ more than 2 miles (17+ blocks)
   - ☐ Was dropped off by someone going someplace else
   - ☐ Carpooled/vanpooled with others: How many people, including you, rode with you in the car/van? _____ people
   - ☐ Drove alone ☐ Other: _____

   If you drove alone or carpooled/vanpooled, please answer 4a:

   4a. What is name of the park/ride location or nearest intersection where you parked? _____
5. Did you transfer from another bus or use the train since you left the place where you started this one-way trip (in Question 1)? ☐ YES ☐ NO – go to #6

   Please list the bus routes used and train stations where you got on and off the train **before** you got to this bus in sequence.

   → 1st BUS/Station_____ → 2nd BUS/Station _____ → 3rd BUS/Station _____ If you made more than 3 transfers, check here: ☐

GETTING ON THIS BUS

6. Approximately what time did you initially get on this bus? Hour/Minute: _____ am / pm
7. What is the nearest intersection where you GOT ON this bus: street 1:_____ & street 2:_____

GETTING OFF THIS BUS

8. At which intersection will you GET OFF this bus: street 1:_____ & street 2:_____
9. Will you transfer to a bus or train after you get off this bus on the way to your destination for this one-way trip?
   - ☐ YES ☐ NO – go to #10

   Please list the bus routes you will use and train stations where you will get on and off the train **after** you get off this bus:

   → 1st BUS/Station_____ → 2nd BUS/Station _____ → 3rd BUS/Station _____ If you will make more than 3 transfers: ☐

PLEASE COMPLETE INFORMATION ON BACK

10. How will you get from the last bus or train you will use for this one-way trip to get to your destination?
- ☐ Bike
- ☐ Walk: how far will you walk? (circle one): ☐ up to ¼ mile (0-2 blocks) ☐ ¼ -½ mile (3-4 blocks) ☐ ½ - ¾ mile (5-6 blocks) ☐ ¾ - 1 mile (7-8 blocks) ☐ 1-2 miles (9-16 blocks) ☐ more than 2 miles (17+ blocks)
- ☐ Be picked up by someone
- ☐ Carpool/vanpool with others: How many people, including you, will ride with you in the car/van? _____ people
- ☐ Drive alone ☐ Other: _____

If you will drive alone or carpool/vanpool, please answer 10a:

10a. What is name of the park/ride location or nearest intersection where your car is parked? _____

YOUR DESTINATION FOR THIS ONE-WAY TRIP

11. What type of place are you GOING TO now? What is the ending place for this one-way trip? (check one)

☐ Your WORKPLACE	☐ Recreation/Sightseeing	☐ Shopping
☐ Elementary school (grades K-5)	☐ Social visit/church/personal/friend's house	☐ Hotel
☐ Middle school (grades 6-8)	☐ Medical appointment/doctor's visit	☐ Airport (air passengers only)
☐ High school (grades 9-12)	☐ College/University (students only)	☐ Other: _____
☐ Your Home: If you gave your home address at the beginning of the survey: GO TO QUESTION 14		

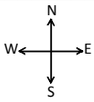
IF YOU ARE NOT GOING HOME RIGHT NOW:

12. What is the NAME of the place you are going to now (in Question 11)? _____
(example: McDonalds, Wal-Mart, the name of your employer, Sky Harbor Airport, etc.)

13. What is the EXACT STREET ADDRESS of the place you are going to (in Question 11)? (please be as specific as possible)

Exact Street Address (example: 123 W. Main Street):_____

ONLY if street address is not known: _____ & _____
Nearest Intersecting Streets (NW 7th Street & Main Street)



City:_____ County:_____ State:___ Zip Code:_____

OTHER IMPORTANT ITEMS

14. How did you pay for your trip today?

☐ Day Pass	☐ 3-Day Pass	☐ 7-Day Pass	☐ 31-Day Pass	☐ FREE
☐ U-Pass	☐ Employer Subsidized Pass	☐ Semester Pass	☐ Courtesy Pass	
☐ Full Fare	☐ Youth Fare	☐ Senior Fare	☐ Person with Disability Fare	
☐ Field Trip Pass	☐ Dial A Ride ID Card	☐ Reduced Fare Card ID	☐ Other: _____	

15. If TRANSIT SERVICE WAS NOT AVAILABLE, how would you make THIS ENTIRE ONE-WAY TRIP? (check only one)

☐ I could not make this trip	☐ Taxi	☐ Drive myself
☐ Drive with someone else	☐ Walk/Bike	☐ Other (specify): _____

16. How many years have you been using public transit in the Phoenix area?
- ☐ Less than 2 years – answer #16a ☐ 2 Years or more

16a. IF LESS THAN 2 YEARS: Why did you start using public transit in the Phoenix area? (check all that apply)

☐ Moved to the area within last 2 years	☐ Light rail service began	☐ Started a new job
☐ To save money	☐ Employer offered incentives	☐ Started going to school
☐ Lost my job	☐ Lost my car/Do not have a car	☐ Other (specify): _____

17. Compared to 2 years ago, are you using public transit:
- ☐ much more often ☐ more often ☐ about the same ☐ less often ☐ much less often

18. How do you USUALLY get Transit SCHEDULE information? (select the ONE you use most often.)

☐ Transit schedule book	☐ Valley Metro website	☐ Other (specify)_____
☐ Customer service telephone number	☐ Posted schedule at bus stop	

19. How many registered CARS, TRUCKS, or MOTORCYCLES are in running condition and available to your household?
- ☐ None ☐ One ☐ Two ☐ Three ☐ Four or more

20. Including YOU, how many people live in your household? _____ people

21. Including YOU, how many people in your household are employed outside the home? _____ people

22. Including YOU, how many adults (age 18 and older) live in your household? _____ adults

23. What is your AGE: _____ years

24. Do you have a valid driver's license? ☐ Yes ☐ No

25. Are you: (check the response that BEST describes you)
- ☐ Employed full-time (at least 35 hours per week) ☐ Employed part-time (less than 35 hours per week)
- ☐ Not currently employed but seeking work ☐ Retired
- ☐ Not currently employed and not seeking work

26. Are you a student? (check the response that BEST describes you)
- ☐ Not a student ☐ Yes – college/university (specify institution's name): _____
- ☐ Yes – student thru 12th grade ☐ Yes – other (specify institution's name): _____

27. How would you describe your race/ethnicity? (check all that apply)
- ☐ White ☐ Black/African American ☐ Asian ☐ American Indian ☐ Hispanic/Latino ☐ Other

28. Your Gender: ☐ Male ☐ Female

29. Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME? (this will remain confidential, but it is an important part of our transit planning model because transit usage and travel patterns are strongly related to income.)

☐ Below $5,000	☐ $20,000 - $24,999	☐ $40,000 - $49,999	☐ $80,000 - $89,999
☐ $5,000-$9,999	☐ $25,000 - $29,999	☐ $50,000 - $59,999	☐ $90,000 - $99,999
☐ $10,000-$14,999	☐ $30,000 - $34,999	☐ $60,000 - $69,999	☐ $100,000 - $119,999
☐ $15,000-$19,999	☐ $35,000 - $39,999	☐ $70,000 - $79,999	☐ 120,000 or more

30. Did you or will you make this trip in EXACTLY the opposite direction today? ☐ NO ☐ YES - what time? _____am/pm

THANK YOU FOR YOUR HELP!

If you completed this survey before getting off the bus, please return this survey to the survey staff.

PLEASE COMPLETE INFORMATION ON BACK

Encuesta Regional de Transito del Valle Metro

Versión de Autobús Route Code: _____ Serial #: _____ Time: _____am/pm Interviewer Initials: _____

Favor de tomar unos momentos para completar esta importante encuesta. Su aportación sera usada para planificar mejoras al transporte en el área de Phoenix. Si tiene alguna pregunta, favor llamar al: 602-253-5000.

INSCRÍBASE PARA GANAR $100, UN PASE GRATUITO MENSUAL, O UN CERTIFICADO DE REGALO

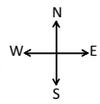
Las personas que sometan una encuesta correctamente completada serán incluidas en un sorteo al azar para uno de los siguientes: $100 EN EFECTIVO (5 premios); PASE GRATUITO MENSUAL (20 Premios), CERTIFICADO DE REGALO a tiendas/restaurantes locales (175 premios). *Toda la información se mantendrá en la más estricta confidencialidad.*

Favor de proveer su nombre, número de teléfono, y dirección de domicilio completa (o la dirección del lugar donde se esté quedando en el área de Phoenix si esta visitando el área).

Su Nombre: _____ Número de Teléfono: (_____) _____

Dirección de domicilio: (Por favor sea específico, Ej, 123 W. Main Street):_____

Si no conoce su dirección de domicilio: _____ & _____
Intersección de calles más cercanas (NW 7th Street & Main Street)



Ciudad:_____ Condado:_____ Estado:___ Código Postal:_____

RESUMEN DE VIAJE

Favor enumerar abajó las rutas de autobús usadas y estaciones de tren en las cuales usted abordó o se bajó del tren durante este viaje de un solo sentido. Si abordó el tren, favor de listar las estación donde abordó y se bajó del tren en la secuencia en que fueron usadas.

LUGAR DE INICIO → _____ (1ra Ruta de Autobús o Estación de Tren) → _____ (2da Ruta de Autobús o Estación de Tren) → _____ (3ra Ruta de Autobús o Estación de Tren) → _____ (4ta Ruta de Autobús o Estación de Tren) → DESTINO FINAL

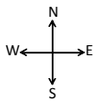
1. ¿De que tipo de lugar esta usted viniendo ahora? Cuál fue el lugar de inicio de este viaje de un solo sentido? (marque uno)
   - ☐ Su LUGAR DE EMPLEO
   - ☐ Escuela Elemental (grados K-5)
   - ☐ Colegio para niños (grados 6-8)
   - ☐ Escuela Secundaria(grados 9-12)
   - ☐ Su HOGAR: Si dió su dirección de domicilio arriba: PROCEDA A LA PREGUNTA 4 – próxima página
   - ☐ Recreación/Turismo
   - ☐ Visita Social / Iglesia / personal
   - ☐ Cita Médica / visita a doctor
   - ☐ Colegio/Universidad (solo estudiantes)
   - ☐ Compras
   - ☐ Hotel
   - ☐ Aeropuerto (Solo pasajeros)
   - ☐ Otro: _____

Si usted NO está viniendo de su hogar ahora mismo;

2. ¿Cúal es el Nombre del lugar de donde usted viene ahora(en la Pregunta 1)? _____
3. ¿Cúal es la DIRECCIÓN FÍSICA EXACTA DEL LUGAR DE DONDE USTED ESTA VINIENDO (en la Pregunta 1)? (favor de ser tan específico como le sea posible)

   Dirección Física Exacta (ejemplo: 123 W. Main Street):_____

   Si no sabe la dirección de su hogar: _____ & _____
   Intersección de calles más cercanas (NW 7th Street & Main Street)



   Ciudad:_____ Condado:_____ Estado:___ Código Postal:_____

ANTES DE SUBIR AL AUTOBUS

4. ¿Cómo llegó usted del lugar en el que empezó este viaje de un solo sentido (en la Pregunta 2) al PRIMER autobús/tren que usó para este viaje?
   - ☐ Bicicleta
   - ☐ Caminando: ¿Cuán lejos caminó? (marque uno): hasta ¼ de milla ¼ -½ milla ½ - ¾ milla ¾ - 1 milla 1-2 milla mas de 2 millas
   - ☐ Lo llevó alguien que iba a otro lugar
   - ☐ Fuí con otros que también se subieron en un autobús/tren – ¿Cuántas personas, incluyendo a usted, fueron con usted? _____
   - ☐ Conduje solo ☐ Otro: _____

   Si usted condujo solo o en vehículo compartido, favor contestar 4a:

   4a. ¿Cuál es el nombre del lugar de aparcamiento disuasorio (park/ride) ? _____
5. ¿Trasbordó usted de otro autobús o usó el tren desde que partió del lugar del cual comenzó este viaje de un solo sentido (en la Pregunta 1)? ☐ SI ☐ NO – proceda a #6

   Favor enumerar las rutas de autobús usadas estaciones de tren en las cuales usted abordó o se bajó del tren antes de usted abordar este autobús en secuencia.

   → 1er AUTOBÚS/Estación_____ → 2do AUTOBÚS/Estación _____ → 3er AUTOBÚS/Estación _____ Si hizo mas de 3 trasbordos, marque aqui: ☐

ABORDANDO ESTE AUTOBUS

6. ¿Aproximadamentea que hora inicialmente abordó este autobús? Hora/Minuto: _____ am / pm
7. ¿Cuál es la intersección más cercana a donde usted abordó este autobus?: calle 1:_____ & calle 2:_____

BAJANDOSE DE ESTE AUTOBUS

8. ¿En cuál intersección se BAJARÁ de este autobús?: calle 1:_____ & calle 2:_____
9. ¿Trasbordará usted a un autobús o tren una vez se haya bajado de este autobús en camino a su destino para este viaje deun solo sentido? ☐ SI ☐ NO – proceda a #10

   Favor de enumerar las rutas de autobús que usted usará y las estaciones de tren en las cuales usted abordará o se bajará del tren una vez se baje de este autobús:

   → 1er AUTOBÚS/Estación_____ → 2do AUTOBÚS/Estación _____ → 3er AUTOBÚS/Estación _____ Si hizo mas de 3 trasbordos, marque aqui: ☐

Favor de completetar la informacion atras

10. ¿Cómo llegará usted de el último autoús o tren que utilice para este viaje de un solo sentido a su destino?
    - ☐ Bicicleta
    - ☐ Caminando: ¿Cuán lejos caminará? (marque uno): hasta ¼ de milla ¼ -½ milla ½ - ¾ milla ¾ - 1 milla 1-2 milla mas de 2 millas
    - ☐ Lo llevará alguien que vá a otro lugar
    - ☐ irá con otros que también se subieron en un autobús/tren – ¿Cuántas personas, incluyendo a usted, fueron con usted? _____
    - ☐ Conducirá solo ☐ Otro: _____

    Si usted condujo solo o en vehículo compartido, favor contestar 10a:

    10a. Cuál es el nombre del lugar de aparcamiento disuasorio (park/ride? _____

SU DESTINO PARA ESTE VIAJE DE UN SOLO SENTIDO

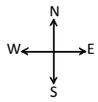
11. ¿A qué tipo de lugar ESTA YENDO usted ahora? ¿Cual es el lugar final para este viaje de un solo sentido? (marquee uno)
    - ☐ Su LUGAR DE EMPLEO
    - ☐ Escuela Elemental (grados K-5)
    - ☐ Colegio para niños (grados 6-8)
    - ☐ Escuela Secundaria(grados 9-12)
    - ☐ Recreación/Turismo
    - ☐ Visita Social / Iglesia / personal
    - ☐ Cita Médica / visita a doctor
    - ☐ Colegio/Universidad (solo estudiantes)
    - ☐ Compras
    - ☐ Hotel
    - ☐ Aeropuerto (Solo pasajeros)
    - ☐ Otro: _____
    - ☐ Su HOGAR: Si dió su dirección de domicilio arriba: PROCEDA A LA PREGUNTA 14

Si usted NO está yendo a su casa ahora;

12. ¿Cuál es el NOMBRE del lugar al cual usted esta yendo ahora (en la Pregunta 11)? _____
13. ¿Cuál es la DIRECCIÓN FÍSICA EXACTA DEL LUGAR A DONDE USTED ESTA YENDO (En PREGUNTA 11)? (favor de ser tan específico como le sea posible)

    Dirección Física Exacta (ejemplo: 123 W. Main Street):_____

    Si no sabe la dirección de su hogar: _____ & _____
    Intersección de calles más cercanas (NW 7th Street & Main Street)

    Ciudad:_____ Condado:_____ Estado:___ Código Postal:_____

OTROS DATOS IMPORTANTES

14. ¿Cómo pagó por su viaje de hoy?
    - ☐ Day Pass ☐ Pase de 3-Días ☐ Pase de 7- Días ☐ Pase de 31-Días ☐ Gratis
    - ☐ U-Pass ☐ Pase subsidiado por empleador ☐ Pase de Semestre ☐ Pase de Cortesia
    - ☐ Tarifa Completa ☐ Tarifa Juvenil ☐ Tarifa para personas mayores ☐ Tarifa para Discapacitado
    - ☐ Pase de Viaje de Campo ☐ Tarjeta de Identidad "Dial A Ride" ☐ Tarjeta de ID de Tarifa Reducida ☐ Otro: _____
15. ¿Si NO ESTABA DISPONIBLE EL SERVICIO DE TRANSITO, como haría usted este viaje de un solo sentido completo?
    - ☐ No podría hacer este viaje ☐ Taxi ☐ Conduciría yo
    - ☐ iría en coche con otra persona ☐ a Pie/ en Bicicleta ☐ Otro (especifique): _____
16. ¿Por cuántos años ha estado usando el transporte público en el área de Phoenix?
    - ☐ Menos de 2 años – proceda a #16a ☐ 2 Años o más

    16a. ¿Si es menos de 2 AÑOS: Porqué empezó a usar el transporte público en el área de Phoenix?
    - ☐ Me mudé al área en los últimos 2 años ☐ Inicio el servicio de tren ligero ☐ Comencé un nuevo trabajo
    - ☐ Para ahorrar dinero ☐ Empleador ofreció incentivos ☐ Empecé a asistir a la escuela
    - ☐ Perdí mi empleo ☐ Perdí mi coche ☐ Otro (especifique): _____
17. ¿Comparado a hace 2 años, está usando el transporte público?
    - ☐ Mucho más a menudo ☐ más a menudo ☐ Más o menos igual ☐ Menos a menudo ☐ mucho menos a menudo
18. ¿Cómo es que USUALMENTE obtiene su información de ITINERARIO DE TRANNSPORTE? (seleccione la que usa más a menudo.)
    - ☐Libreta de itinerario de Transporte ☐ Portal en Red del Valle Metro ☐ Otro (especifique)_____
    - ☐ Número de teléfono de Servicio a Clientes ☐ Itinerario anunciado en parada de autobús
19. ¿Cuántos COCHES, CAMIONES, o MOTOCICLETAS Registrados están en condiciones de buen funcionamiento y disponibles en su hogar?
    - ☐ Ninguno ☐ Uno ☐ Dos ☐ Trés ☐ Cuatro o más
20. ¿Incluyéndolo a USTED, cuántas personas viven en su hogar? _____ personas
21. ¿Incluyéndolo a USTED, cuántas personas trabajan fuera del hogar? _____ personas
22. ¿Incluyéndolo a USTED, cuántos adultos (de 18 años o mayores) viven en su hogar? _____ adultos
23. Cuál es su EDAD: _____ años
25. ¿Tiene usted una licencia de conducir vigente? ☐ Si ☐ No
24. Es usted: (marque la respuesta que MEJOR lo describa)
    - ☐ Empleado tiempo-completo (al menos 35 horas por semana) ☐ Empleado a tiempo parcial (menos de 35 horas por semana)
    - ☐ No empleado actualmente pero buscando trabajo ☐ Jubilado
    - ☐ No empleado actualmente y tampoco buscando trabajo
26. ¿Es usted un estudiante? (marque la respuesta que MEJOR lo describa)
    - ☐ No soy estudiante ☐ Si – colegio/universidad (especifique el nombre de la institución): _____
    - ☐ Si – estudiante hasta el 12 grado ☐ Si – otro (especifique el nombre de la institución): _____
27. ¿Cómo describiría su raza /étnia? (marque todas las que apliquen)
    - ☐ Blanco ☐ Negro/Africano Americano ☐ Asíatico ☐ Indígena Americano ☐ Hispano/Latino ☐ Otro
28. Su Sexo: ☐ Varón ☐ Hembra
29. ¿Cuál de las siguientes categorías MEJOR describe el INGRESO TOTAL ANUAL DE SU HOGAR? (esto permanecerá confidencial, pero es una importante parte de nuestro modelo de planificación de tránsito debido a que el uso de transporte y patrones de viaje estan estrechamente relacionados al ingreso.)
    - ☐ Menor a $5,000 ☐ $20,000 - $24,999 ☐ $40,000 - $49,999 ☐ $80,000 - $89,999
    - ☐ $5,000-$9,999 ☐ $25,000 - $29,999 ☐ $50,000 - $59,999 ☐ $90,000 - $99,999
    - ☐ $10,000-$14,999 ☐ $30,000 - $34,999 ☐ $60,000 - $69,999 ☐ $100,000 - $119,999
    - ☐ $15,000-$19,999 ☐ $35,000 - $39,999 ☐ $70,000 - $79,999 ☐ 120,000 o más
30. ¿Hizo usted o irá a hacer este viaje en EXACTAMENTE la dirección opuesta hoy?
    - ☐ NO ☐ SI - ¿a qué hora? _____am/pm

GRACIAS POS SU AYUDA!

Si usted ha completado esta encuesta antes de bajarse del autobús, favor de entregarle la encuesta al personal de la encuesta.

Favor de completetar la informacion atras

Valley Metro Regional Transit Survey

Rail Version Station Code: _____ Serial #: _____ Time: _____am/pm Interviewer Initials: _____

Please take a few moments to complete this important survey. Your input will be used to plan transportation improvements in the Phoenix area. If you have questions, please call Valley Metro's Customer Service Number: 602-253-5000.

REGISTER TO WIN $100, A FREE-MONTHLY PASS, OR GIFT CERTIFICATE People who submit an accurately completed survey will be entered in a random drawing for one of the following: $100 CASH (5 prizes); FREE MONTHLY PASS (20 Prizes), GIFT CERTIFICATE to local stores/restaurants (175 prizes).

Please provide your name, phone number, and complete home address (or the address of the place you are staying in the Phoenix area if you are visiting the area). ***All information will be kept strictly confidential***

Your Name: _____ Phone Number: (_____) _____

HOME Address: (please be specific, e.g., 123 W. Main Street):_____

ONLY if street address is not known: _____ & _____ N W E S
Nearest Intersecting Streets (NW 7th Street & Main Street)

City:_____ County:_____ State:___ Zip Code:_____

TRIP SUMMARY

Please list all of the bus routes and train stations you used during this one-way trip in order below. If you are using the train, please list the name of the station where you GOT ON and GOT OFF the train in the sequence they were used.

STARTING PLACE → _____ (1st Bus Route or Train Station) → _____ (2nd Bus Route or Train Station) → _____ (3rd Bus Route or Train Station) → _____ (4th Bus Route or Train Station) → ENDING PLACE

1. What type of place are you COMING FROM now? What was the starting place of this one-way trip? (check one)
   - ☐ Your WORKPLACE
   - ☐ Elementary school (grades K-5)
   - ☐ Middle school (grades 6-8)
   - ☐ High school (grades 9-12)
   - ☐ Your HOME: If you gave your home address above: GO TO QUESTION 4 – below
   - ☐ Recreation/Sightseeing
   - ☐ Social visit/church/personal/friend's house
   - ☐ Medical appointment/doctor's visit
   - ☐ College/University (students only)
   - ☐ Shopping
   - ☐ Hotel
   - ☐ Airport (air passengers only)
   - ☐ Other: _____

IF YOU ARE NOT COMING FROM HOME RIGHT NOW:

2. What is the NAME of the place you are coming from now (in Question 1)? _____
   (example of names include: McDonalds, Wal-Mart, the name of your employer, Sky Harbor Airport, etc.)
3. What is the EXACT STREET ADDRESS of the place you are coming from (in Question 1)? (please be as specific as possible)

   Exact Street Address (example: 123 W. Main Street):_____

   ONLY if street address is not known: _____ & _____ N W E S
   Nearest Intersecting Streets (NW 7th Street & Main Street)

   City:_____ County:_____ State:___ Zip Code:_____

BEFORE GETTING TO THE TRAIN

4. How did you get from the place where you started this one-way trip (in Question 2) to the very FIRST bus/train you used for this trip?
   - ☐ Biked
   - ☐ Walked: how far did you walk? (circle one): ☐ up to ¼ mile (0-2 blocks) ☐ ¼ -½ mile (3-4 blocks) ☐ ½ - ¾ mile (5-6 blocks) ☐ ¾ - 1 mile (7-8 blocks) ☐ 1-2 miles (9-16 blocks) ☐ more than 2 miles (17+ blocks)
   - ☐ Was dropped off by someone
   - ☐ Carpool/vanpool with others: How many people, including you, rode with you in the car/van? _____ people
   - ☐ Drove alone ☐ Other: _____

   If you drove alone or carpooled/vanpooled, please answer 4a:

   4a. What is name of the park/ride location or nearest intersection where you parked? _____
5. Did you transfer from another bus since you left the place where you started this one-way trip (in Question 1)?
   ☐ YES ☐ NO – go to #6

   Please list the bus routes you used before you got to this train.

   → 1st BUS _____ → 2nd BUS _____ → 3rd BUS _____ If you made more than 3 transfers, check here: ☐

GETTING ON THE TRAIN

6. Approximately what time did you initially get on the train for this one-way trip? Hour/Minute: _____ am / pm
7. At which station did you initially GET ON the train for this one-way trip: _____

AFTER GETTING OFF THE TRAIN

8. At which station will you GET OFF the train for this one-way trip: _____
9. Will you transfer to a bus after you get off the train on the way to your destination for this one-way trip?
   ☐ YES ☐ NO – go to #10

   IF YES to #9: Please list the bus routes you will use after you get off this train.

   → 1st BUS _____ → 2nd BUS _____ → 3rd BUS _____ If you made more than 3 transfers, check here:

PLEASE COMPLETE INFORMATION ON BACK

10. How will you get from the last bus or train you will use for this one-way trip to get to your destination?
□ Bike
□ Walk: how far will you walk? (circle one): □ up to ¼ mile (0-2 blocks) □ ¼ -½ mile (3-4 blocks) □ ½ - ¾ mile (5-6 blocks) □ ¾ - 1 mile (7-8 blocks) □ 1-2 miles (9-16 blocks) □ more than 2 miles (17+ blocks)
□ Be picked up by someone
□ Carpool/vanpool with others: How many people, including you, will ride with you in the car/van? _____ people
□ Drive alone □ Other: _____
If you will drive alone or carpool/vanpool, please answer 10a:
10a. What is name of the park/ride location or nearest intersection where your car is parked? _____

YOUR DESTINATION FOR THIS ONE-WAY TRIP

11. What type of place are you GOING TO now? What is the ending place for this one-way trip? (check one)
□ Your WORKPLACE □ Recreation/Sightseeing □ Shopping
□ Elementary school (grades K-5) □ Social visit/church/personal/friend's house □ Hotel
□ Middle school (grades 6-8) □ Medical appointment/doctor's visit □ Airport (air passengers only)
□ High school (grades 9-12) □ College/University (students only) □ Other: _____
□ Your Home: If you gave your home address at the beginning of the survey: GO TO QUESTION 14

IF YOU ARE NOT GOING HOME RIGHT NOW:

12. What is the NAME of the place you are going to now (in Question 11)? _____
(example: McDonalds, Wal-Mart, the name of your employer, Sky Harbor Airport, etc.)

13. What is the EXACT STREET ADDRESS of the place you are going to (in Question 11)? (please be as specific as possible)

Exact Street Address (example: 123 W. Main Street):_____

ONLY if street address is not known: _____ & _____
Nearest Intersecting Streets (NW 7th Street & Main Street)

N W E S

City:_____ County:_____ State:___ Zip Code:_____

OTHER IMPORTANT ITEMS

14. How did you pay for your trip today?
□ Day Pass □ 3-Day Pass □ 7-Day Pass □ 31-Day Pass □ FREE
□ U-Pass □ Employer Subsidized Pass □ Semester Pass □ Courtesy Pass
□ Full Fare □ Youth Fare □ Senior Fare □ Person with Disability Fare
□ Field Trip Pass □ Dial A Ride ID Card □ Reduced Fare Card ID □ Other: _____

15. If TRANSIT SERVICE WAS NOT AVAILABLE, how would you make THIS ENTIRE ONE-WAY TRIP? (check only one)
□ I could not make this trip □ Taxi □ Drive myself
□ Drive with someone else □ Walk/Bike □ Other (specify): _____

16. How many years have you been using public transit in the Phoenix area?
□ Less than 2 years – answer #16a □ 2 Years or more
16a. IF LESS THAN 2 YEARS: Why did you start using public transit in the Phoenix area? (check all that apply)
□ Moved to the area within last 2 years □ Light rail service began □ Started a new job
□ To save money □ Employer offered incentives □ Started going to school
□ Lost my job □ Lost my car/Do not have a car □ Other (specify): _____

17. Compared to 2 years ago, are you using public transit:
□ much more often □ more often □ about the same □ less often □ much less often

18. How do you USUALLY get Transit SCHEDULE information? (select the ONE you use most often.)
□ Transit schedule book □ Valley Metro website □ Other (specify)_____
□ Customer service telephone number □ Posted schedule at bus stop

19. How many registered CARS, TRUCKS, or MOTORCYCLES are in running condition and available to your household?
□ None □ One □ Two □ Three □ Four or more

20. Including YOU, how many people live in your household? _____ people

21. Including YOU, how many people in your household are employed outside the home? _____ people

22. Including YOU, how many adults (age 18 and older) live in your household? _____ adults

23. What is your AGE: _____ years

24. Do you have a valid driver's license? □ Yes □ No

25. Are you: (check the response that BEST describes you)
□ Employed full-time (at least 35 hours per week) □ Employed part-time (less than 35 hours per week)
□ Not currently employed but seeking work □ Retired
□ Not currently employed and not seeking work

26. Are you a student? (check the response that BEST describes you)
□ Not a student □ Yes – college/university (specify institution's name): _____
□ Yes – student thru 12th grade □ Yes – other (specify institution's name): _____

27. How would you describe your race/ethnicity? (check all that apply)
□ White □ Black/African American □ Asian □ American Indian □ Hispanic/Latino □ Other

28. Your Gender: □ Male □ Female

29. Which of the following categories BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME? (this will remain confidential, but it is an important part of our transit planning model because transit usage and travel patterns are strongly related to income.)
□ Below $5,000 □ $20,000 - $24,999 □ $40,000 - $49,999 □ $80,000 - $89,999
□ $5,000-$9,999 □ $25,000 - $29,999 □ $50,000 - $59,999 □ $90,000 - $99,999
□ $10,000-$14,999 □ $30,000 - $34,999 □ $60,000 - $69,999 □ $100,000 - $119,999
□ $15,000-$19,999 □ $35,000 - $39,999 □ $70,000 - $79,999 □ 120,000 or more

30. Did you or will you make this trip in EXACTLY the opposite direction today? □ NO □ YES - what time? _____am/pm

THANK YOU FOR YOUR HELP!

If you completed this survey before getting off the train, please return this survey to the survey staff.

PLEASE COMPLETE INFORMATION ON BACK

Encuesta Regional de Transito del Valle Metro

Version de Riel Station Code: _____ Serial #: _____ Time: _____am/pm Interviewer Initials: _____

Favor de tomar unos momentos para completar esta importante encuesta. Su aportación sera usada para planificar mejoras al transporte en el área de Phoenix. Si tiene alguna pregunta, favor llamar al: 602-253-5000.

INSCRÍBASE PARA GANAR $100, UN PASE GRATUITO MENSUAL, O UN CERTIFICADO DE REGALO

Las personas que sometan una encuesta correctamente completada serán incluidas en un sorteo al azar para uno de los siguientes: $100 EN EFECTIVO (5 premios); PASE GRATUITO MENSUAL (20 Premios), CERTIFICADO DE REGALO a tiendas/restaurantes locales (175 premios).

Favor de proveer su nombre, número de teléfono, y dirección de domicilio completa (o la dirección del lugar donde se esté quedando en el área de Phoenix si está visitando el área). *Toda la información se mantendrá en la más estricta confidencialidad*

Su Nombre: _____ Número de Teléfono: (_____) _____

Dirección de domicilio: (Por favor sea específico, Ej, 123 W. Main Street):_____

Si no conoce su dirección de domicilio: _____ & _____ N W E S

Intersección de calles más cercanas (NW 7th Street & Main Street)

Ciudad:_____ Condado:_____ Estado:___ Código Postal:_____

RESUMEN DE VIAJE

Favor enumerar las rutas de autobús usadas estaciones de tren en las cuales usted abordó o se bajo del tren durante este viaje de un solo sentido abajo. Si abordó el tren, favor de listar las estación donde abordó y se bajó del tren en la secuencia en que fueron usadas.

LUGAR DE INICIO → _____ (1ra Ruta de Autobús o Estación de Tren) → _____ (2da Ruta de Autobús o Estación de Tren) → _____ (3ra Ruta de Autobús o Estación de Tren) → _____ (4ta Ruta de Autobús o Estación de Tren) → DESTINO FINAL

1. ¿De qué tipo de lugar está usted viniendo ahora? ¿Cuál fue el lugar de inicio de este viaje de un solo sentido? (marque uno)

☐ Su LUGAR DE EMPLEO	☐ Recreación/Turismo	☐ Compras
☐ Escuela Elemental (grados K-5)	☐ Colegio para niños (grados 6-8)	☐ Escuela Secundaria(grados 9-12)
☐ Colegio/Universidad (solo estudiantes)	☐ Cita Médica / visita a doctor	☐ Visita Social / Iglesia / personal
☐ Hotel	☐ Aeropuerto (Solo pasajeros)	☐ Otro: _____

☐ Su HOGAR: Si dió su dirección de domicilio arriba: PROCEDA A LA PREGUNTA 4 – próxima página

Si usted NO está viniendo de su hogar ahora mismo;

2. ¿Cúal es el Nombre del lugar de donde usted viene ahora(en la Pregunta 1)? _____
3. ¿Cúal es la DIRECCIÓN FÍSICA EXACTA DEL LUGAR DE DONDE USTED ESTA VINIENDO (en la Pregunta 1)?
   Dirección Física Exacta (ejemplo: 123 W. Main Street):_____

   Si no sabe la dirección de su hogar: _____ & _____ N W E S

   Intersección de calles más cercanas (NW 7th Street & Main Street)

   Ciudad:_____ Condado:_____ Estado:___ Código Postal:_____

ANTES DE SUBIR AL TREN

4. ¿Cómo llegó usted del lugar en el que empezó este viaje de un solo sentido (en la Pregunta 2) al PRIMER autobús/tren que usó para este viaje?
   - ☐ Bicicleta
   - ☐ Caminando: ¿Cuan lejos caminó? (marque uno): hasta ¼ de milla ¼ -½ milla ½ - ¾ milla ¾ - 1 milla 1-2 milla mas de 2 millas
   - ☐ Lo llevó alguien que iba a otro lugar
   - ☐ Fuí con otros que también se subieron en un autobús/tren – ¿Cuántas personas, incluyendo a usted, fueron con usted? _____
   - ☐ Conduje solo ☐ Otro: _____

   Si usted condujo solo o en vehículo compartido, favor contestar 4a:

   4a. ¿Cuál es el nombre del lugar de aparcamiento disuasorio (park/ride) o la intersección más cercana a donde usted estacionó? _____
5. ¿Trasbordó usted de otro autobús o usó el tren desde que partió del lugar del cual comenzó este viaje de un solo sentido (en la Pregunta 1)? ☐ SI ☐ NO – proceda a #6

   Favor enumerar las rutas de autobús usadas estaciones de tren en las cuales usted abordó o se bajo del tren antes de usted abordar este autobús en secuencia.

   → 1er AUTOBÚS/Estación_____ → 2do AUTOBÚS/Estación _____ → 3er AUTOBÚS/Estación _____ Si hizo mas de 3 trasbordos, marque aqui: ☐

ABORDANDO ESTE TREN

6. ¿Aproximadamente a que hora inicialmente abordó este tren? Hora/Minuto: _____ am / pm
7. ¿En qué estación inicialmente abordó el tren para este viaje de un solo sentido?: _____

DESPUES DE BAJARSE DEL TREN

8. ¿En cual estación se va a BAJAR del tren en este viaje de un solo sentido?: _____
9. ¿Trasbordará usted a un autobús una vez se haya bajado de este tren en camino a su destino para este viaje de un solo sentido? ☐ SI ☐ NO –prosiga a #10

   SI RESPONDIO SI a #9: Favor de enumerar las rutas de autobus que usará DESPUES de bajarse de este tren.

   → 1er AUTOBÚS_____ → 2do AUTOBÚS _____ → 3er AUTOBÚS _____ Si hizo más de 3 trasbordos, marque aquí: ☐

10. ¿Como llegará usted de el último autobús o tren que utilice para este viaje de un solo sentido a su destino?
    - ☐ Bicicleta
    - ☐ Caminando: ¿Cuan lejos caminará? (marque uno): hasta ¼ de milla ¼ -½ milla ½ - ¾ milla ¾ - 1 milla 1-2 milla mas de 2 millas
    - ☐ Lo llevará alguien que vá a otro lugar
    - ☐ irácon otros que también se subieron en un autobús/tren – ¿Cuántas personas, incluyendo a usted, fueron con usted? _____
    - ☐ Conducirá solo ☐ Otro: _____

    Si usted condujo solo o en vehículo compartido, favor contestar 10a:

    10a. ¿Cuál es el nombre del lugar de aparcamiento disuasorio (park/ride)? _____

SU DESTINO PARA ESTE VIAJE DE UN SOLO SENTIDO

11. ¿A qué tipo de lugar ESTA YENDO usted ahora? ¿Cuál es el lugar final para este viaje de un solo sentido? (marque uno)
    - ☐ Su LUGAR DE EMPLEO
    - ☐ Recreación/Turismo
    - ☐ Compras
    - ☐ Escuela Elemental (grados K-5)
    - ☐ Colegio para niños (grados 6-8)
    - ☐ Escuela Secundaria(grados 9-12)
    - ☐ Colegio/Universidad (solo estudiantes)
    - ☐ Cita Médica / visita a doctor
    - ☐ Visita Social / Iglesia / personal
    - ☐ Hotel
    - ☐ Aeropuerto (Solo pasajeros)
    - ☐ Otro: _____
    - ☐ Su HOGAR: Si dió su dirección de domicilio arriba: PROCEDA A LA PREGUNTA 14

Si usted NO está yendo a su casa ahora:

12. ¿Cuál es el NOMBRE del lugar al cual usted esta yendo ahora (en la Pregunta 11)? _____
    (ejemplo: McDonalds, Wal-Mart, el nombre de su empleador, Sky Harbor Airport, etc.)
13. ¿Cuál es la DIRECCIÓN FÍSICA EXACTA DEL LUGAR A DONDE USTED ESTA YENDO (En pREGUNTA 11

    Si no conoce su dirección de domicilio: _____ & _____
    Intersección de calles más cercanas (NW 7th Street & Main Street)

    Ciudad:_____ Condado:_____ Estado:___ Código Postal:_____

OTROS DATOS IMPORTANTES

14. ¿Cómo pagó por su viaje de hoy?
    - ☐ Day Pass ☐ Pase de 3-Días ☐ Pase de 7- Días ☐ Pase de 31-Días
    - ☐ Gratis ☐ U-Pass ☐ Pase subsidiado por empleador ☐ Pase se Semestre ☐ Pase de Cortesia
    - ☐ Tarifa Completa ☐ Tarifa Juvenil ☐ Tarifa para personas Mayores ☐ Tarifa para Discapacitado
    - ☐ Pase de Viaje de Campo ☐ Tarjeta de Identidad "Dial A Ride" ☐ Tarjeta de ID de Tarifa Reducida ☐ Otro: _____
15. ¿Si NO ESTABA DISPONIBLE EL SERVICIO DE TRANSITO, como haría usted este viaje de un solo sentido completo?
    - ☐ No podría hacer este viaje ☐ Taxi ☐ Conduciría yo
    - ☐ iría en coche con otra persona ☐ a Pie/ en Bicicleta ☐ Otro (especifique): _____
16. ¿Por cuantos años ha estado usando el transporte público en el area de Phoenix?
    - ☐ Menos de 2 años – proceda a #16a ☐ 2 Años o más

    16a. ¿Si es menos de 2 AÑOS: ¿Porqué empezó a usar el transporte público en el área de Phoenix
    - ☐ Me mudé al área en los últimos 2 años ☐ Inicio el servicio de tren ligero ☐ Comencé un nuevo trabajo
    - ☐ Para ahorrar dinero ☐ Empleador ofreció incentivos ☐ Empecé a asistir a la escuela
    - ☐ Perdí mi empleo ☐ Perdí mi coche ☐ Otro (especifique): _____
17. ¿Comparado a hace 2 años, está usando el transporte público?
    - ☐ Mucho mas a menudo ☐ más a menudo ☐ Más o menos igual ☐ Menos a menudo ☐ mucho menos a menudo
18. ¿Cómo es que USUALMENTE obtiene su información de ITINERARIO DE TRANNSPORTE?
    - ☐Libreta de itinerario de Transporte ☐ Portal en Red del Valle Metro ☐ Otro (especifique)_____
    - ☐ Número de teléfono de Servicio a Clientes ☐ Itinerario anunciado en parada de autobús
19. ¿Cuántos COCHES, CAMIONES, o MOTOCICLETAS Registrados están en condiciones de buen funcionamiento y disponibles en su hogar? ☐ Ninguno ☐ Uno ☐ Dos ☐ Trés ☐ Cuatro o más
20. ¿Incluyendolo a USTED, cuántas personas viven en su hogar? _____ personas
21. ¿Incluyendolo a USTED, cuántas personas trabajan fuera del hogar? _____ personas
22. ¿Incluyendolo a USTED, cuántos adultos (de 18 años o mayores) viven en su hogar? _____ adultos
23. ¿Cúal es su EDAD?: _____ años 24. ¿Tiene usted una licencia de conducir vigente? ☐ Si ☐ No
25. Es usted: (marque la respuesta que MEJOR lo describa)
    - ☐ Empleado tiempo-completo (al menos 35 horas por semana) ☐ Empleado a tiempo parcial (menos de 35 horas por semana)
    - ☐ No empleado actualmente pero buscando trabajo ☐ Jubilado
    - ☐ No empleado actualmente y tampoco buscando trabajo
26. ¿Es usted un estudiante? (marque la respuesta que MEJOR lo describa)
    - ☐ No soy estudiante ☐ Si – colegio/universidad (especifique el nombre de la institución): _____
    - ☐ Si – etudiante hasta el 12 grado ☐ Si – otro (especifique el nombre de la institución): _____
27. ¿Cómo describiría su raza /'étnia? (marque todas las que apliquen)
    - ☐ Blanco ☐ Negro/Africano Americano ☐ Asiático ☐ Indígena Americano ☐ Hispano/Latino ☐ Otro
28. Su Sexo: ☐ Varón ☐ Hembra
29. ¿ Cuál de las siguientes categorías MEJOR describe el INGRESO TOTAL ANUAL DE SU HOGAR? (esto permanecerá confidencial, pero es una importante parte de nuestro modelo de planificación de tránsito debido a que el uso de transporte y patrones de viaje están estrechamente relacionados al ingreso.)
    - ☐ Menor a $5,000 ☐ $20,000 - $24,999 ☐ $40,000 - $49,999 ☐ $80,000 - $89,999
    - ☐ $5,000-$9,999 ☐ $25,000 - $29,999 ☐ $50,000 - $59,999 ☐ $90,000 - $99,999
    - ☐ $10,000-$14,999 ☐ $30,000 - $34,999 ☐ $60,000 - $69,999 ☐ $100,000 - $119,999
    - ☐ $15,000-$19,999 ☐ $35,000 - $39,999 ☐ $70,000 - $79,999 ☐ 120,000 o más
30. ¿Hizo usted o irá a hacer este viaje en EXACTAMENTE la dirección opuesta hoy? ☐ NO ☐ SI -¿a que hora? _____am/pm

GRACIAS POS SU AYUDA!

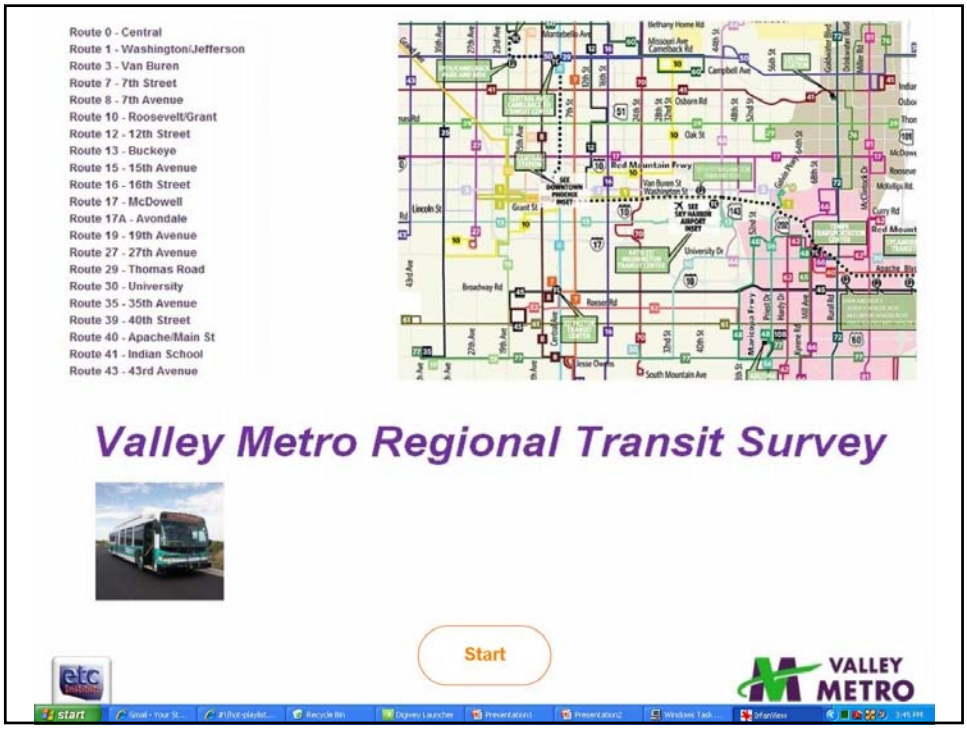
Si usted ha completado esta encuesta antes de bajarse del tren, favor de entregarle la encuesta al personal de la encuesta.

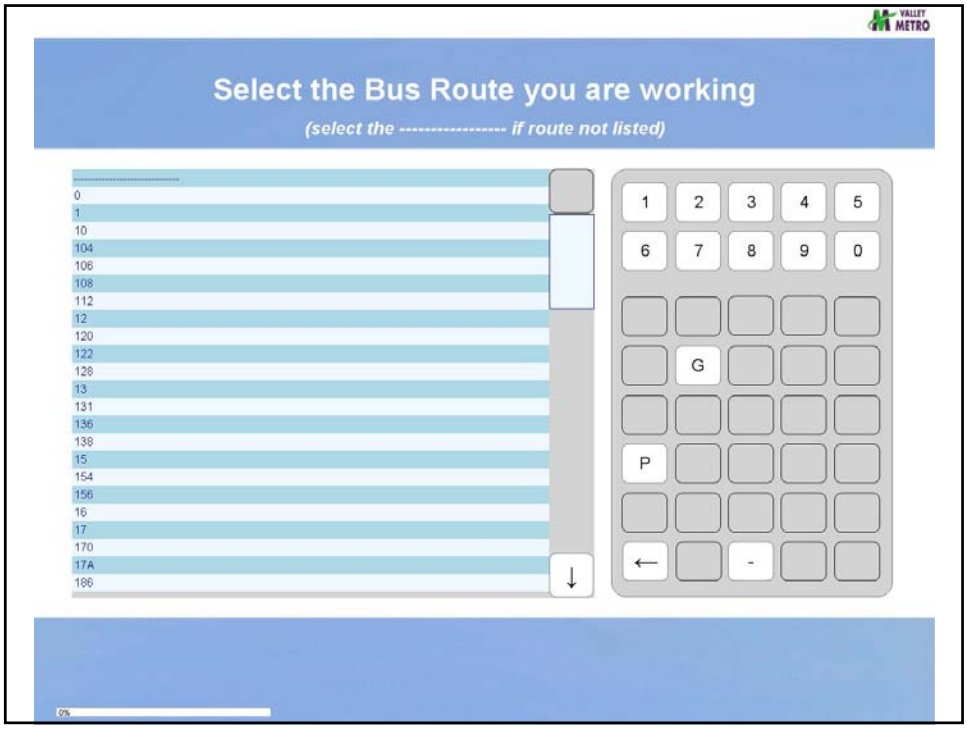
Favor de completetar la informacion atras

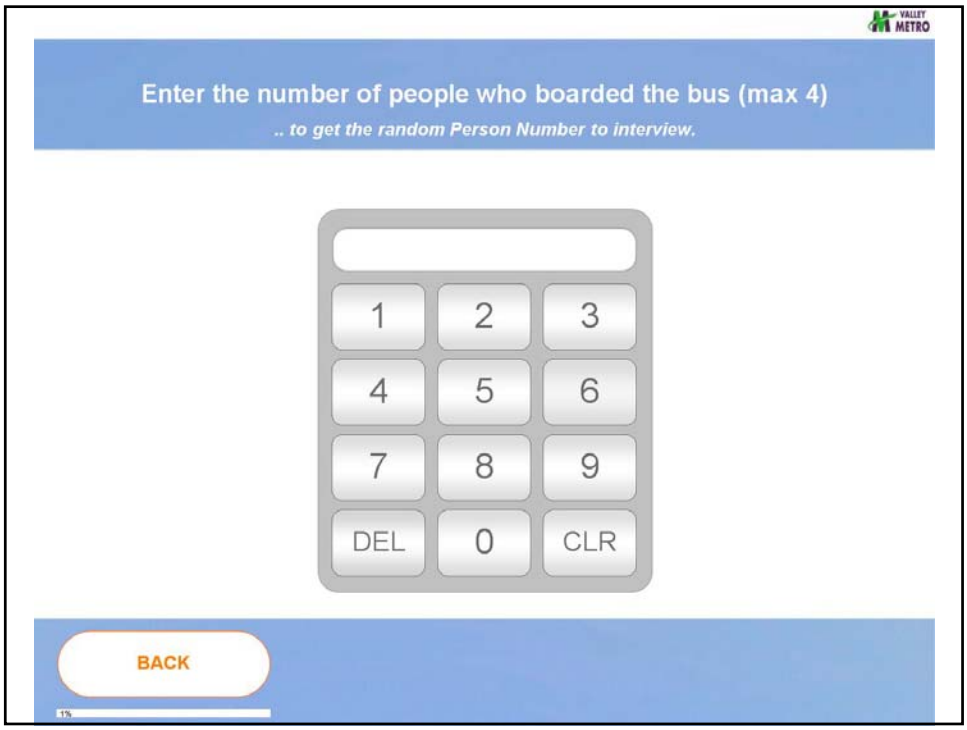
APPENDIX D: TABLET PC SCREENSHOTS

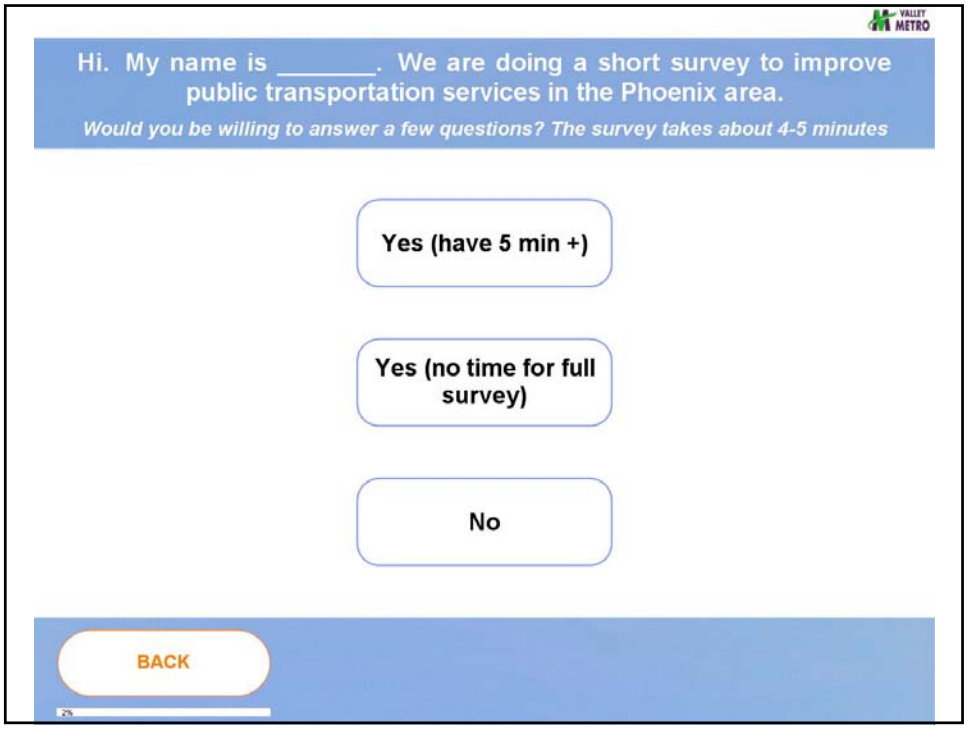
2010-11 Valley Metro Regional Transit Survey

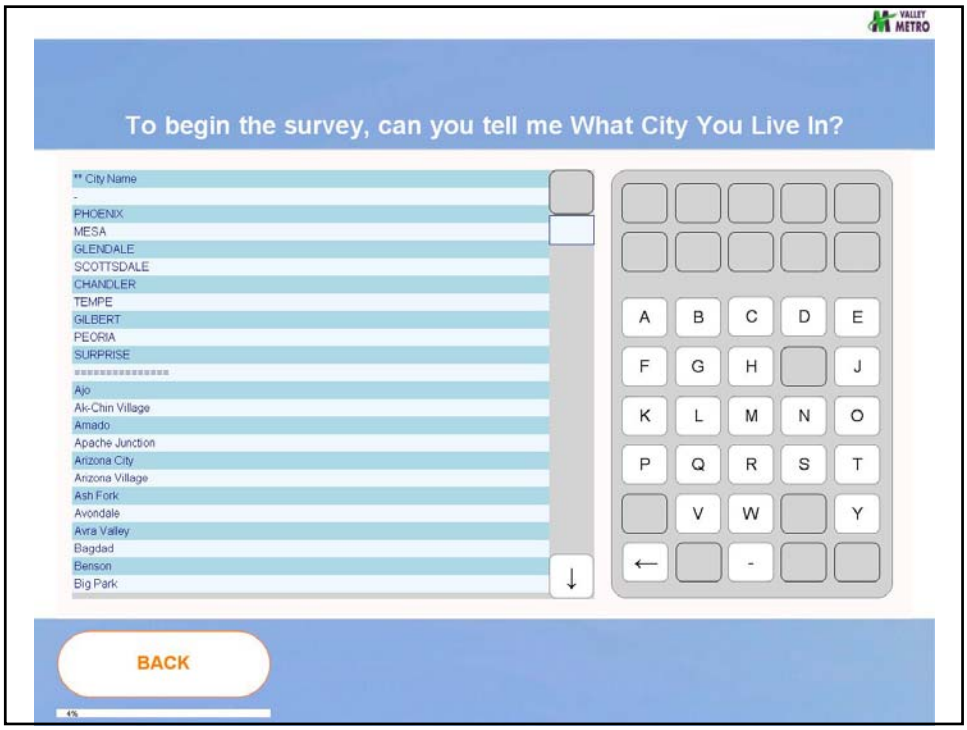
Bus Survey Screen Shots

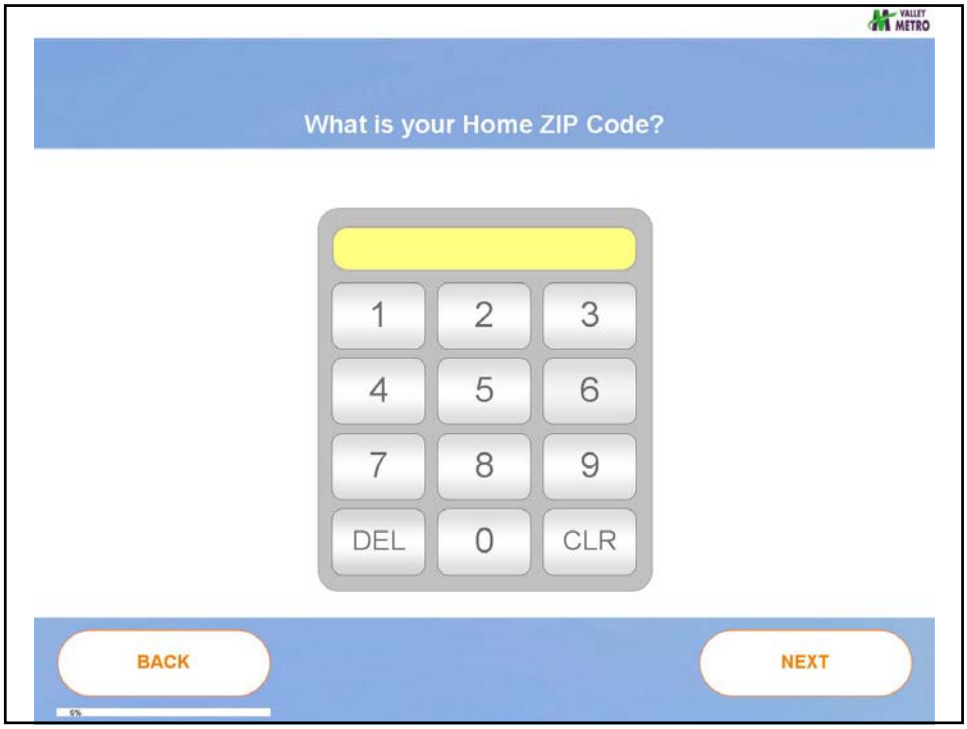


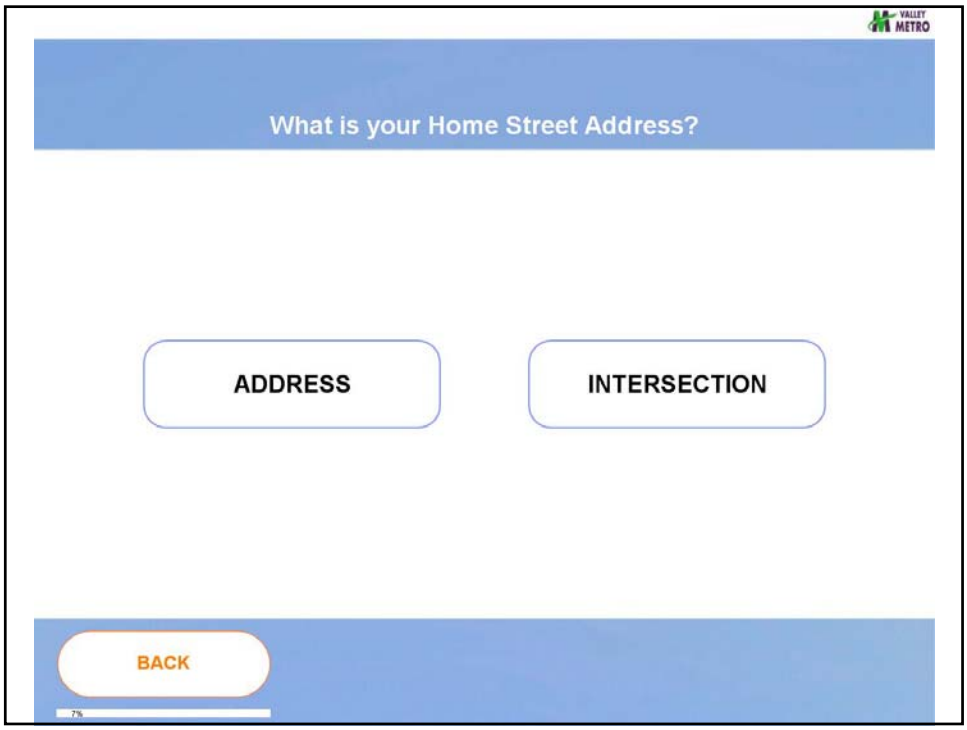

Select the Bus Route you are working
(select the ---------- if route not listed)
0
1
10
104
106
108
112
12
120
122
128
13
131
136
138
15
154
156
16
17
170
17A
186
1 2 3 4 5
6 7 8 9 0
G
P
←
-

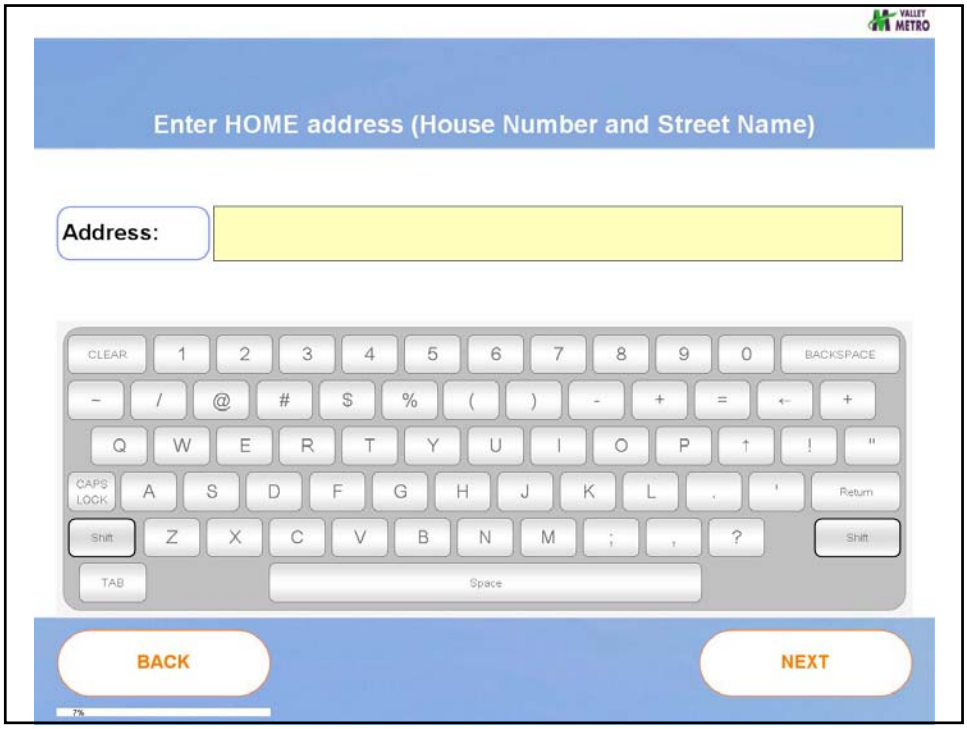

Enter the number of people who boarded the bus (max 4)
.. to get the random Person Number to interview.
1 2 3
4 5 6
7 8 9
DEL 0 CLR
BACK

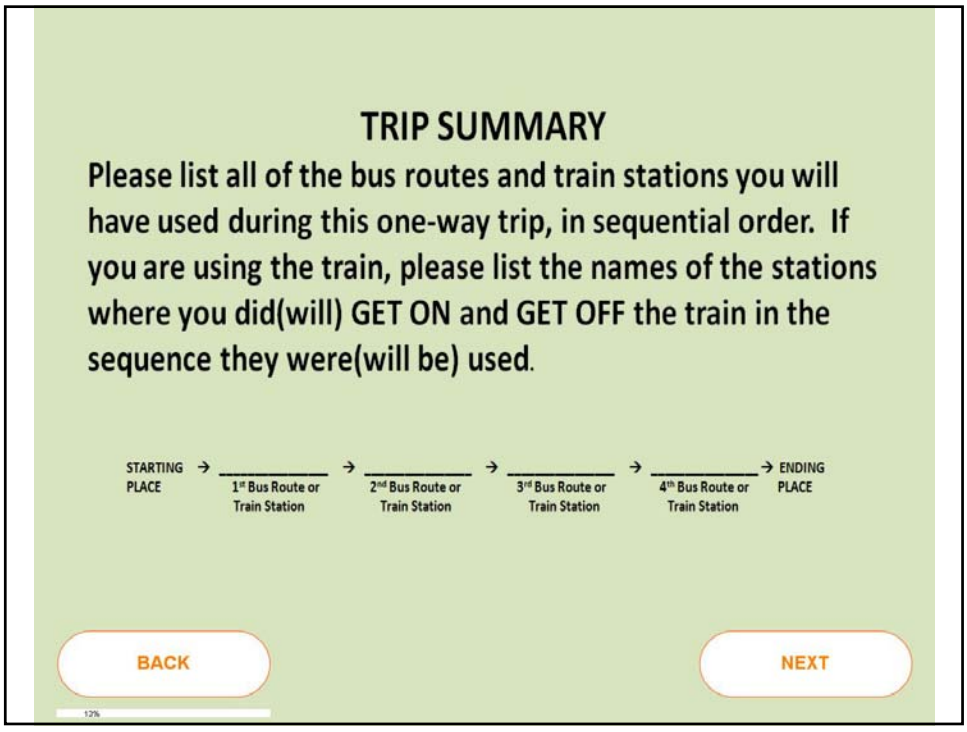

Hi. My name is _____. We are doing a short survey to improve public transportation services in the Phoenix area.
Would you be willing to answer a few questions? The survey takes about 4-5 minutes
Yes (have 5 min +)
Yes (no time for full survey)
No
BACK

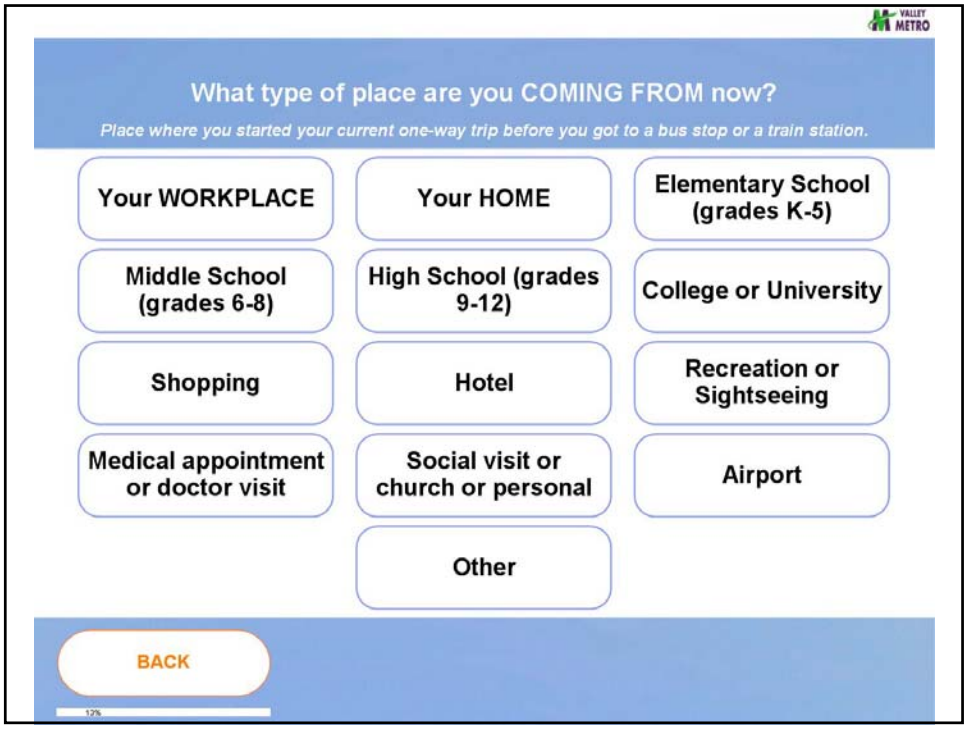

To begin the survey, can you tell me What City You Live In?
** City Name
-
PHOENIX
MESA
GLENDALE
SCOTTSDALE
CHANDLER
TEMPE
GILBERT
PEORIA
SURPRISE
Ajo
Ak-Chin Village
Amado
Apache Junction
Arizona City
Arizona Village
Ash Fork
Avondale
Avra Valley
Bagdad
Benson
Big Park
A B C D E
F G H J
K L M N O
P Q R S T
V W Y
BACK

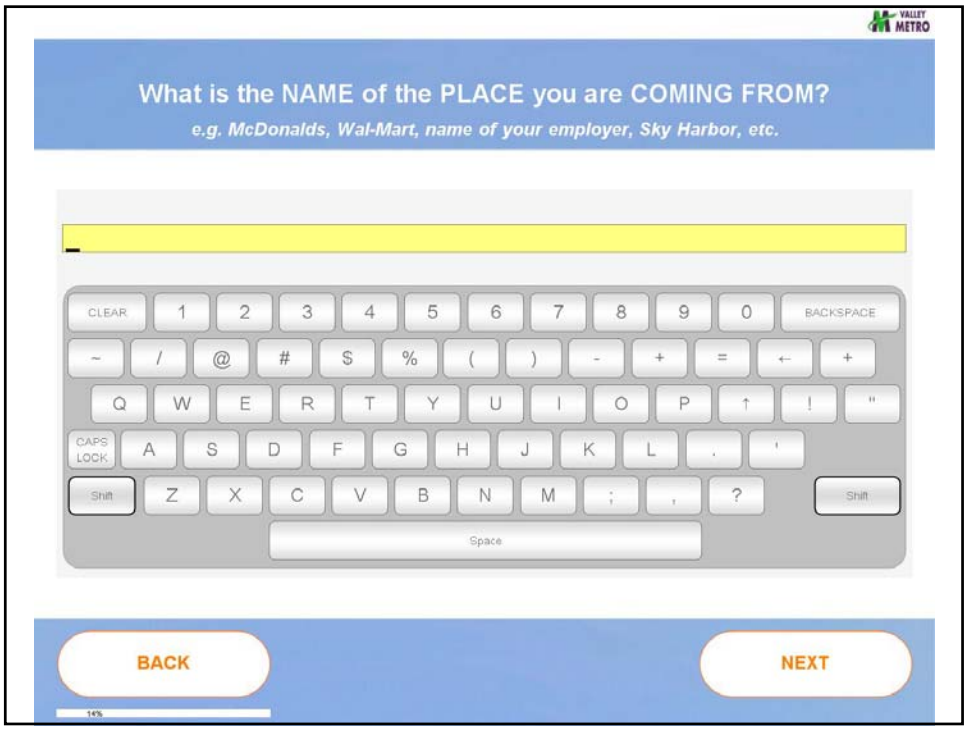

What is your Home ZIP Code?
1
2
3
4
5
6
7
8
9
DEL
0
CLR
BACK
NEXT


What is your Home Street Address?
ADDRESS
INTERSECTION
BACK


VALLEY METRO
Enter HOME address (House Number and Street Name)
Address:
CLEAR 1 2 3 4 5 6 7 8 9 0 BACKSPACE
- / @ # $ % ( ) - + = ← +
Q W E R T Y U I O P ↑ ! "
CAPS LOCK A S D F G H J K L . ' Return
Shift Z X C V B N M ; , ? Shift
TAB Space
BACK
NEXT
7%

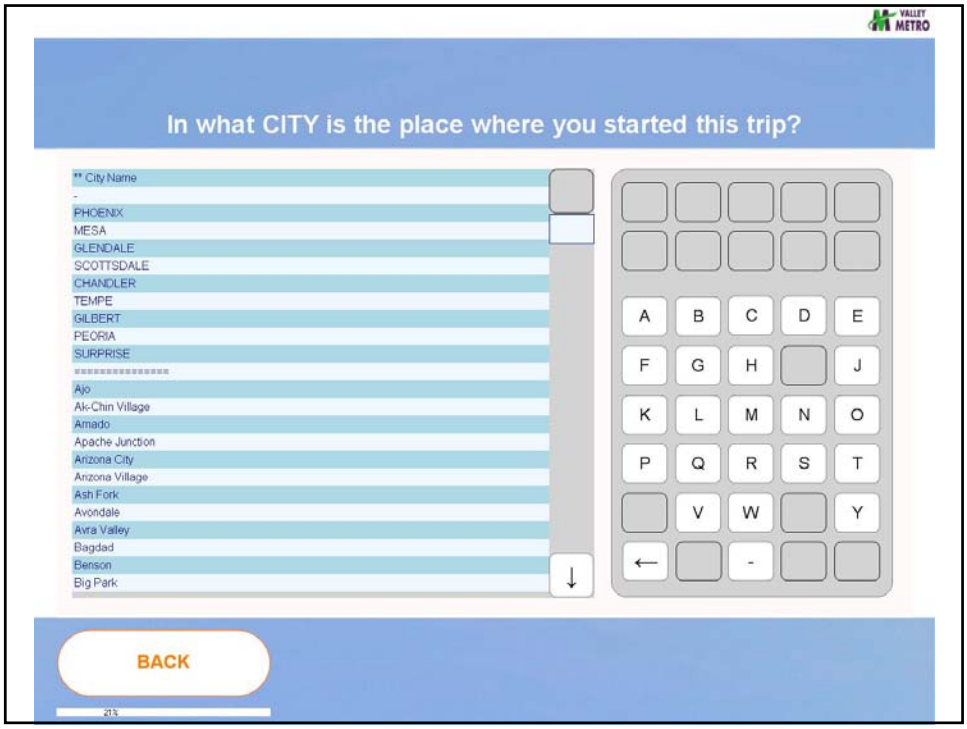

TRIP SUMMARY
Please list all of the bus routes and train stations you will have used during this one-way trip, in sequential order. If you are using the train, please list the names of the stations where you did(will) GET ON and GET OFF the train in the sequence they were(will be) used.
STARTING PLACE → _____ → _____ → _____ → _____ → ENDING PLACE
1st Bus Route or Train Station
2nd Bus Route or Train Station
3rd Bus Route or Train Station
4th Bus Route or Train Station
BACK
NEXT
12%

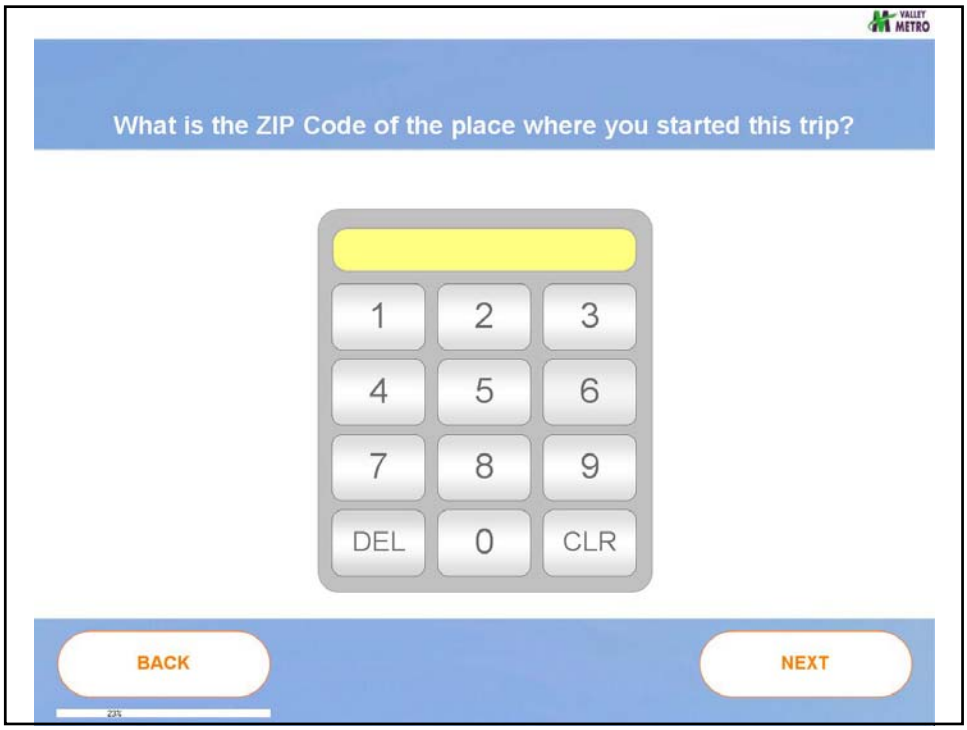

What type of place are you COMING FROM now?
Place where you started your current one-way trip before you got to a bus stop or a train station.
Your WORKPLACE
Your HOME
Elementary School (grades K-5)
Middle School (grades 6-8)
High School (grades 9-12)
College or University
Shopping
Hotel
Recreation or Sightseeing
Medical appointment or doctor visit
Social visit or church or personal
Airport
Other
BACK

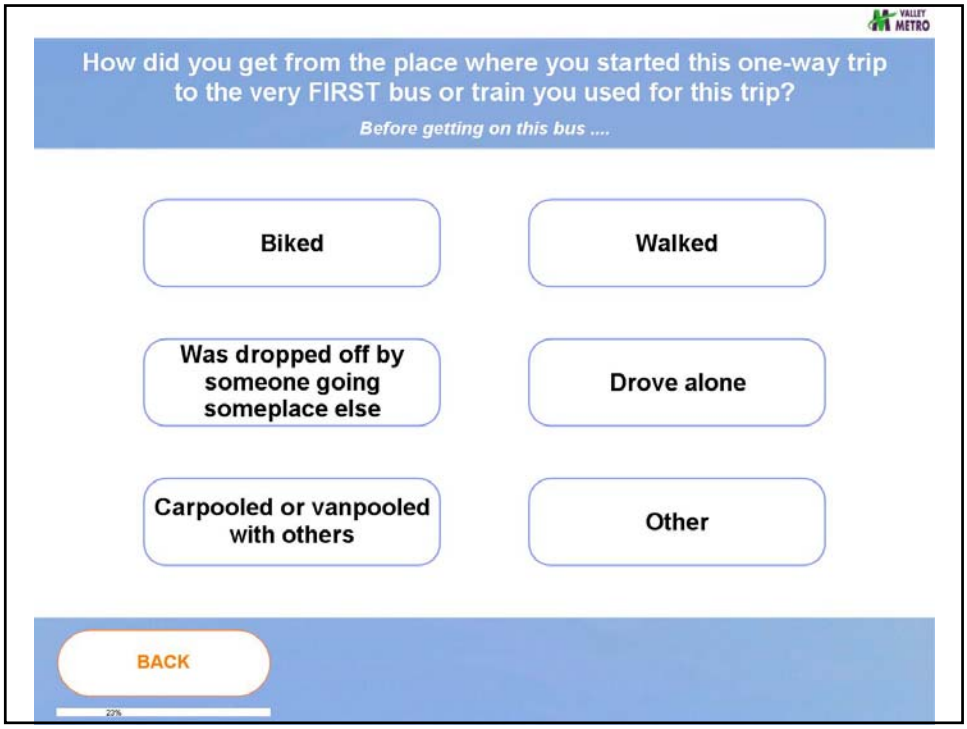

What is the NAME of the PLACE you are COMING FROM?
e.g. McDonalds, Wal-Mart, name of your employer, Sky Harbor, etc.
BACK
NEXT

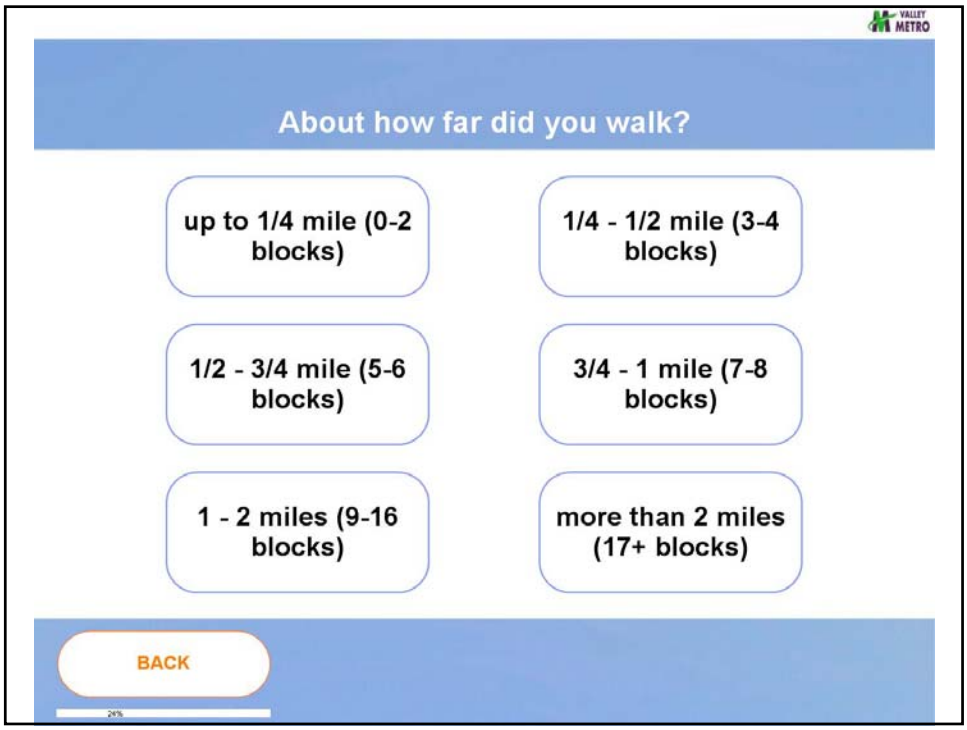

Do you know the EXACT STREET ADDRESS of the place you are coming from?
YES
NO
BACK

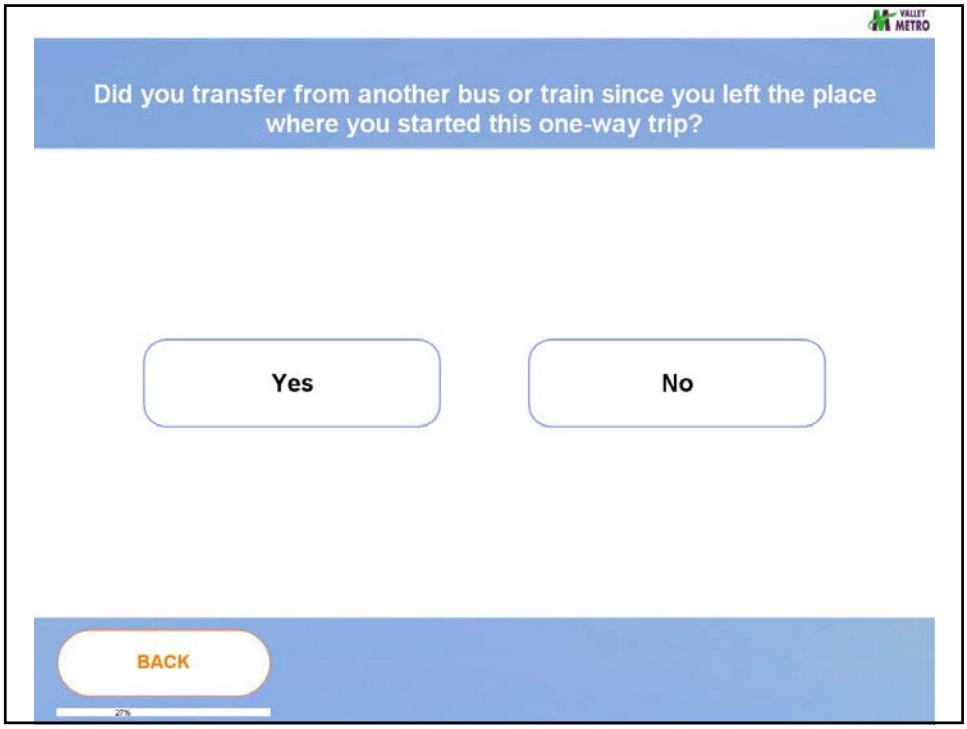

Enter EXACT STREET ADDRESS where this trip started
Exact Address
BACK
NEXT

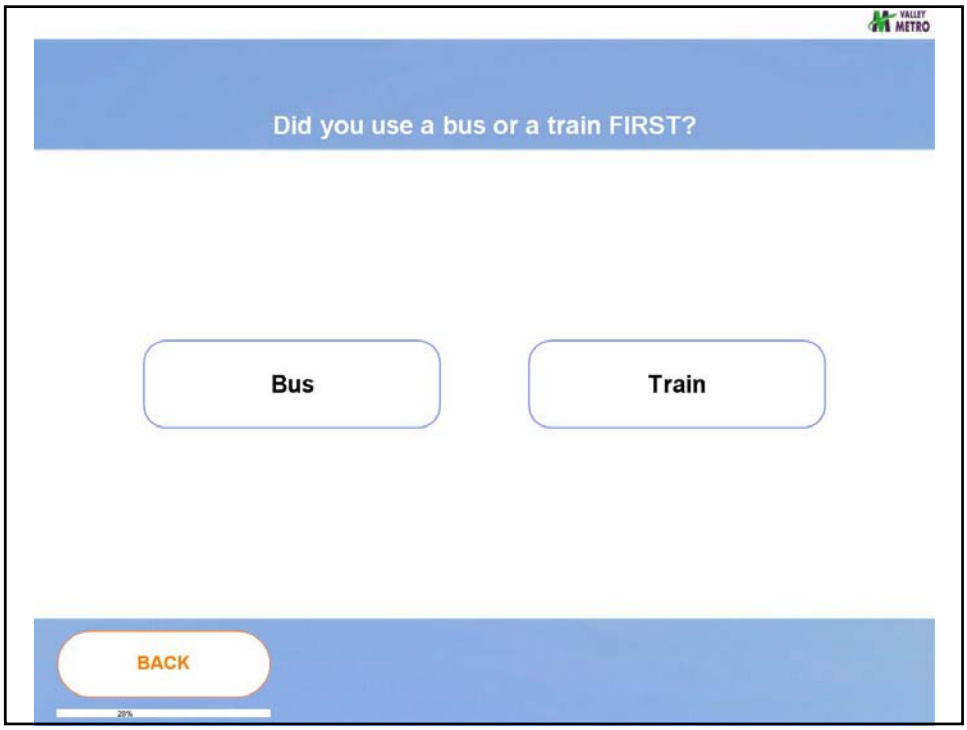

VALLEY METRO
In what CITY is the place where you started this trip?
** City Name
-
PHOENIX
MESA
GLENDALE
SCOTTSDALE
CHANDLER
TEMPE
GILBERT
PEORIA
SURPRISE
==========
Ajo
Ak-Chin Village
Amado
Apache Junction
Arizona City
Arizona Village
Ash Fork
Avondale
Avra Valley
Bagdad
Benson
Big Park
A B C D E
F G H J
K L M N O
P Q R S T
V W Y
-
BACK

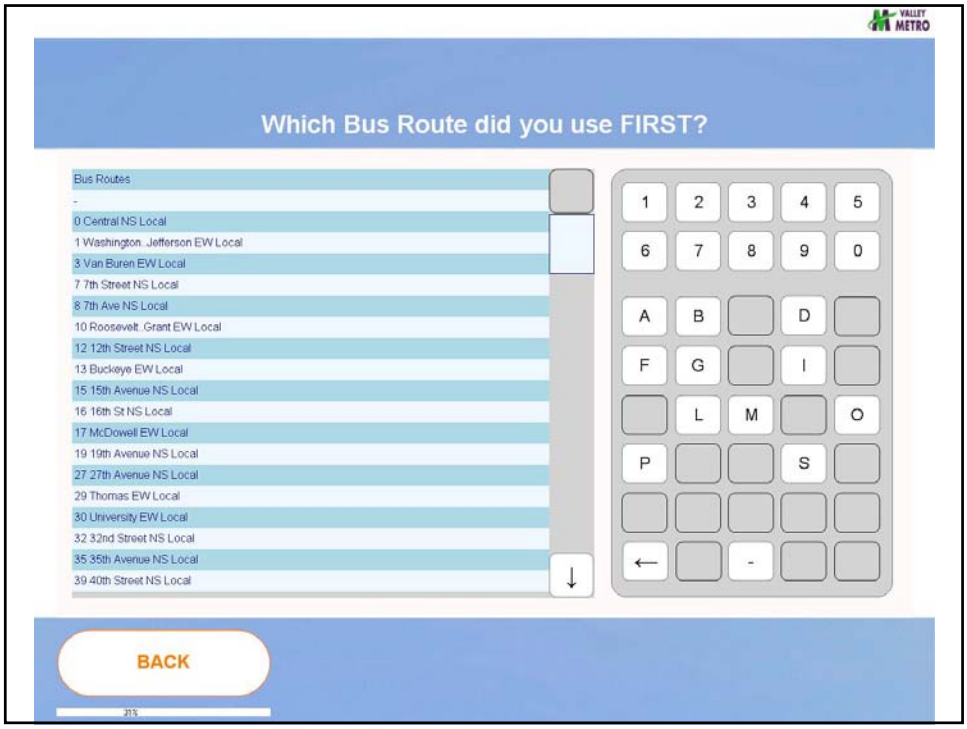

VALLEY METRO
What is the ZIP Code of the place where you started this trip?
1 2 3
4 5 6
7 8 9
DEL 0 CLR
BACK
NEXT

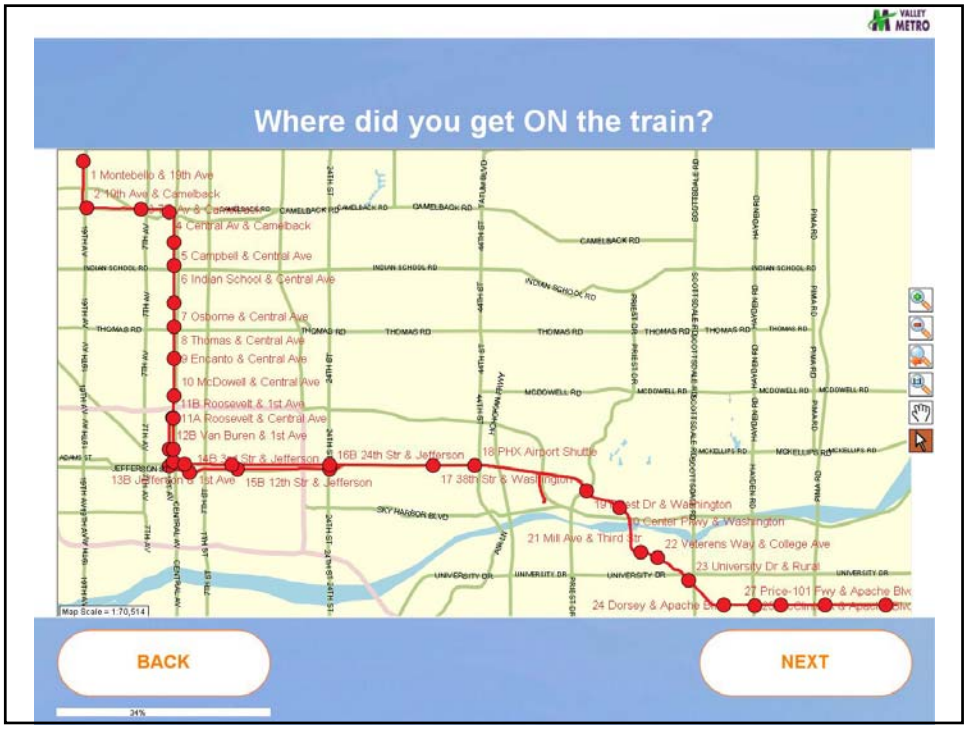

How did you get from the place where you started this one-way trip to the very FIRST bus or train you used for this trip?
Before getting on this bus ....
Biked
Walked
Was dropped off by someone going someplace else
Drove alone
Carpooled or vanpooled with others
Other
BACK

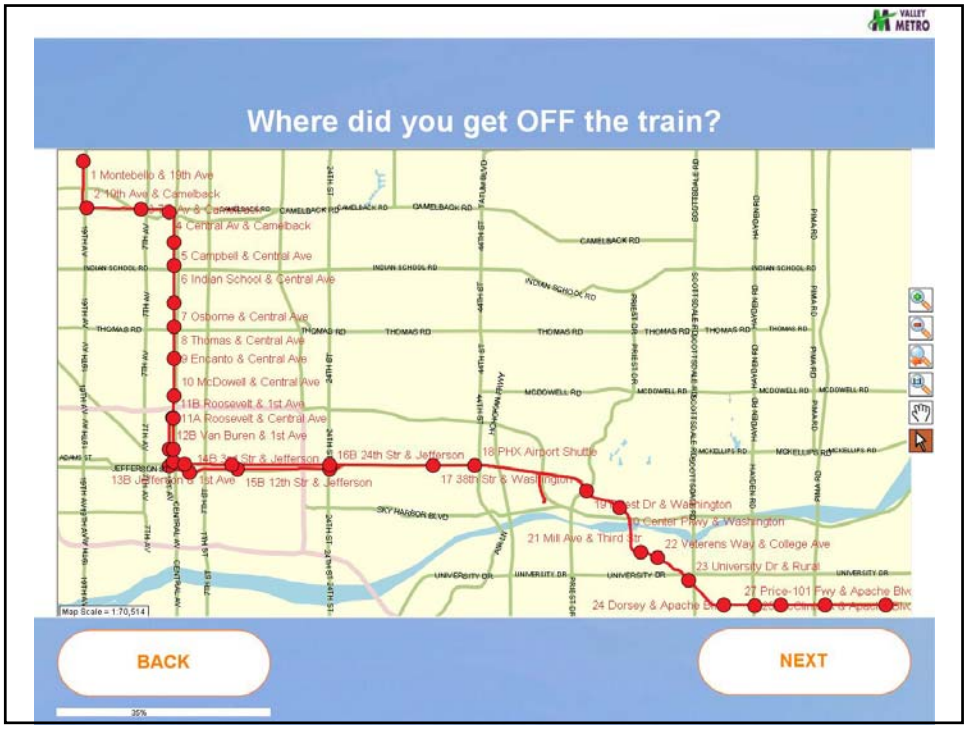

About how far did you walk?
up to 1/4 mile (0-2 blocks)
1/4 - 1/2 mile (3-4 blocks)
1/2 - 3/4 mile (5-6 blocks)
3/4 - 1 mile (7-8 blocks)
1 - 2 miles (9-16 blocks)
more than 2 miles (17+ blocks)
BACK

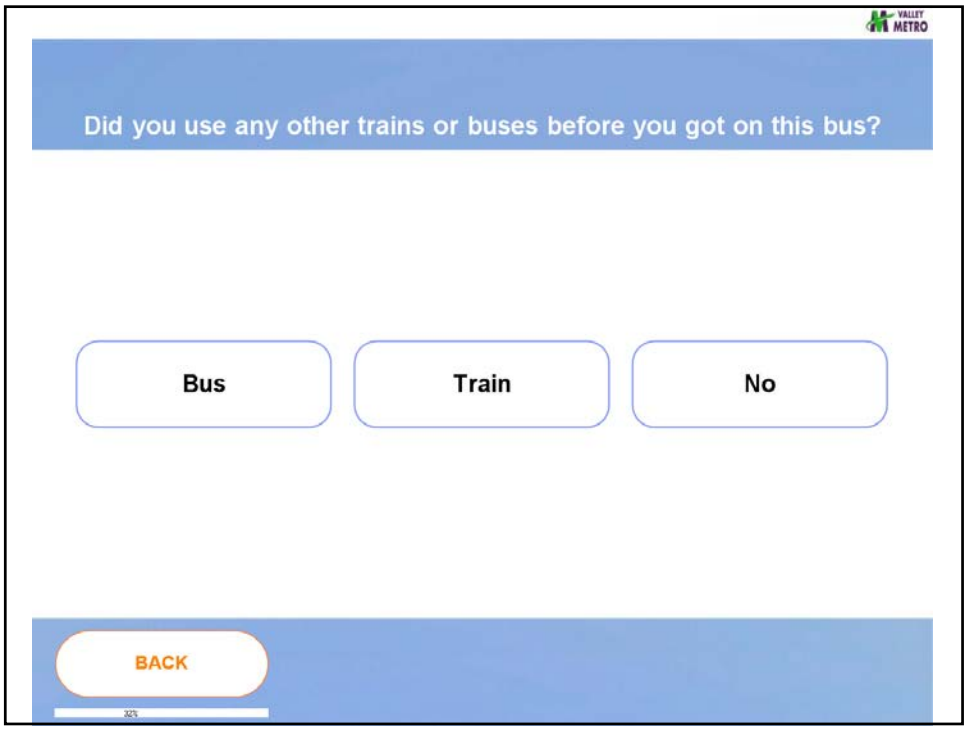

Did you transfer from another bus or train since you left the place where you started this one-way trip?
Yes
No
BACK

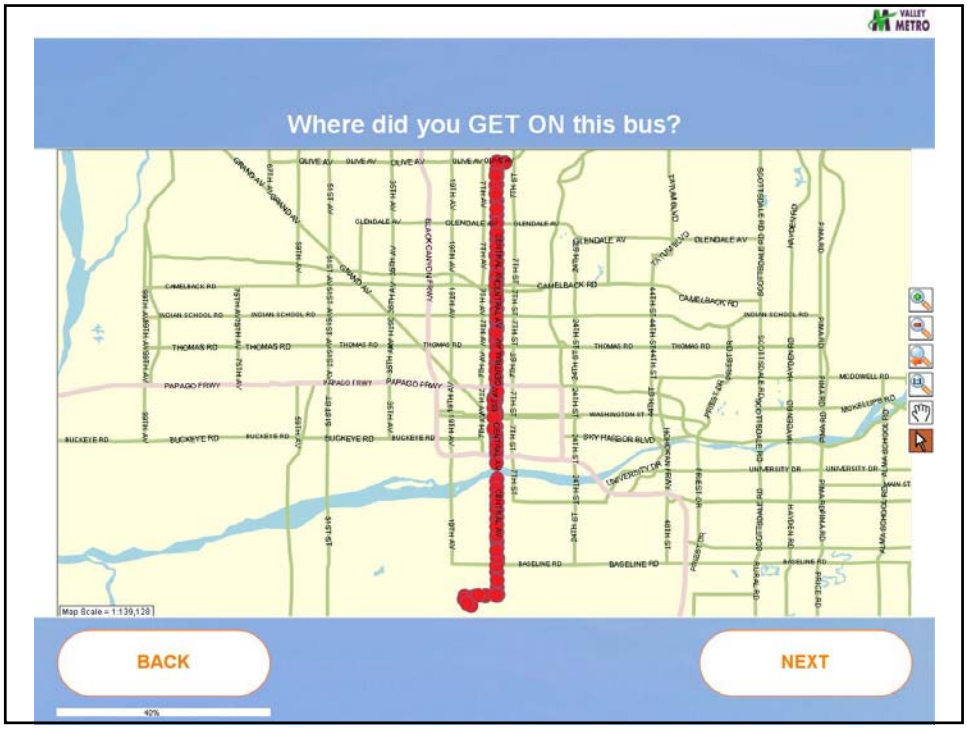

Did you use a bus or a train FIRST?
Bus
Train
BACK

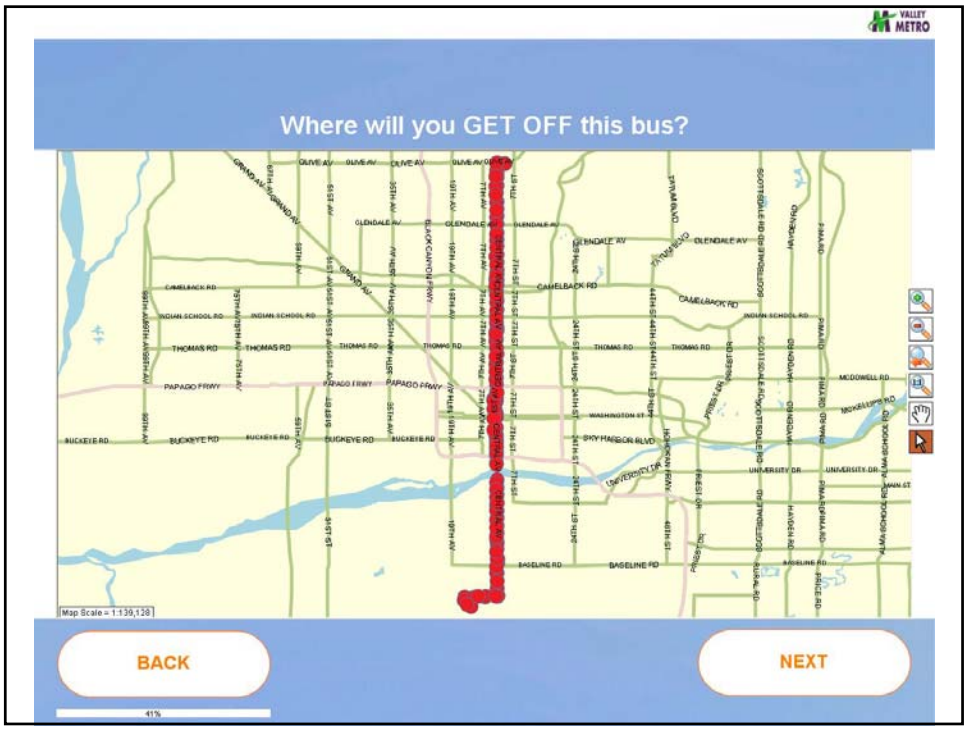

Which Bus Route did you use FIRST?
Bus Routes
-
0 Central NS Local
1 Washington, Jefferson EW Local
3 Van Buren EW Local
7 7th Street NS Local
8 7th Ave NS Local
10 Roosevelt, Grant EW Local
12 12th Street NS Local
13 Buckeye EW Local
15 15th Avenue NS Local
16 16th St NS Local
17 McDowell EW Local
19 19th Avenue NS Local
27 27th Avenue NS Local
29 Thomas EW Local
30 University EW Local
32 32nd Street NS Local
35 35th Avenue NS Local
39 40th Street NS Local
1 2 3 4 5
6 7 8 9 0
A B D
F G I
L M O
P S
BACK

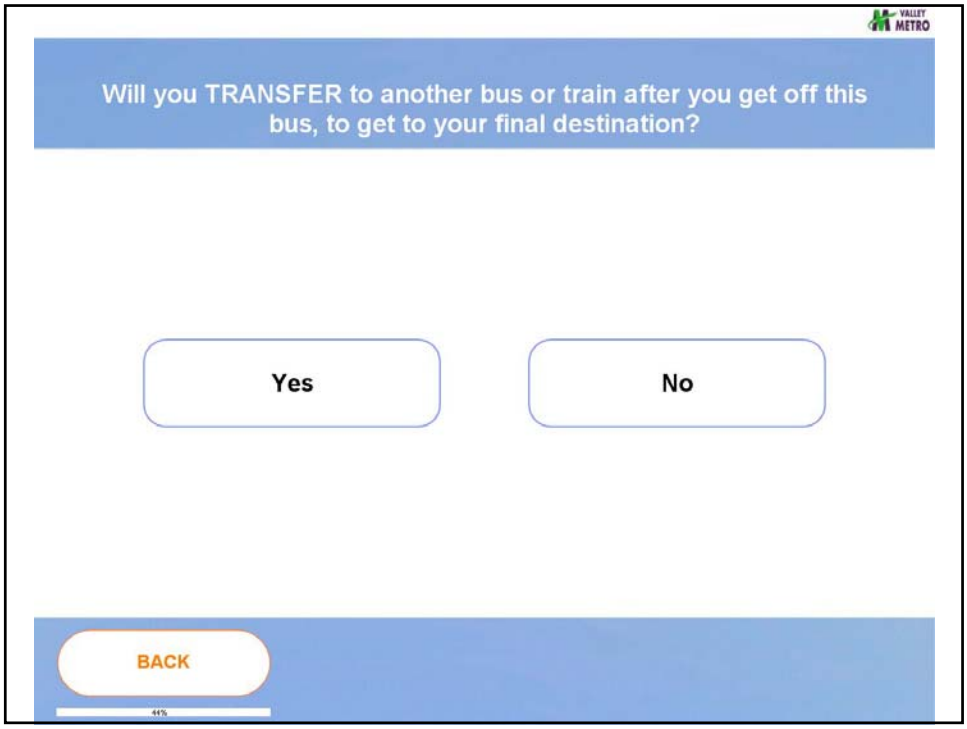

Where did you get ON the train?
1 Montebello & 19th Ave
2 19th Ave & Camelback
4 Central Av & Camelback
5 Campbell & Central Ave
6 Indian School & Central Ave
7 Osborne & Central Ave
8 Thomas & Central Ave
9 Encanto & Central Ave
10 McDowell & Central Ave
11B Roosevelt & 1st Ave
11A Roosevelt & Central Ave
12B Van Buren & 1st Ave
15B 12th Str & Jefferson
16B 24th Str & Jefferson
17 38th Str & Washington
18 PHX Airport Shuttle
21 Mill Ave & Third Str
22 Veterans Way & College Ave
23 University Dr & Rural
24 Dorsey & Apache
BACK
NEXT

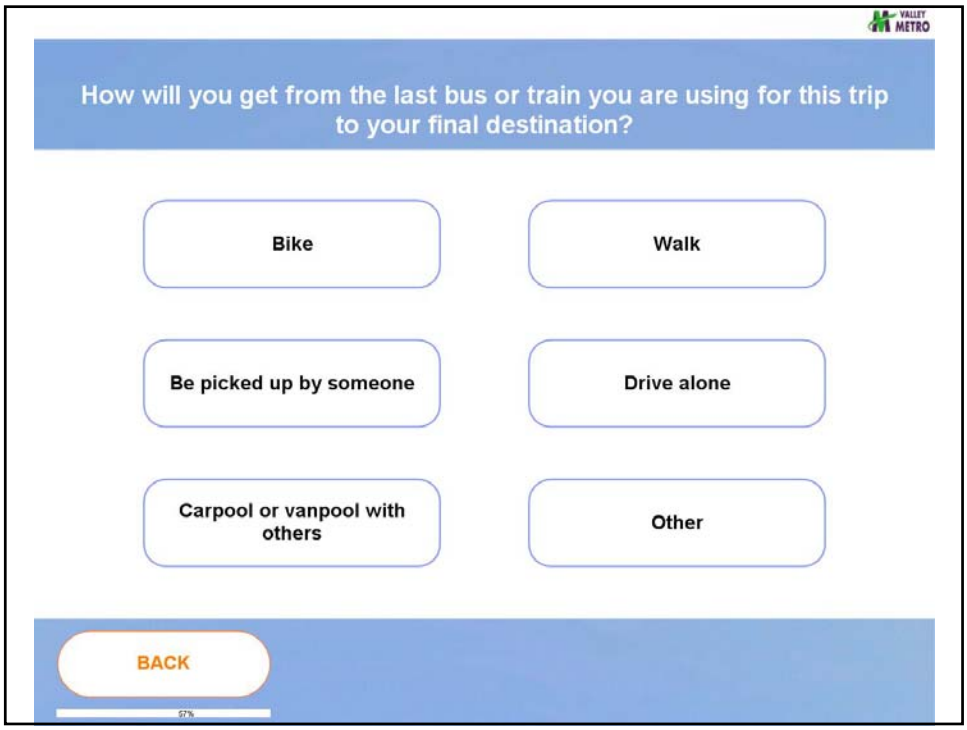

Where did you get OFF the train?
1 Montebello & 19th Ave
2 19th Ave & Camelback
4 Central Av & Camelback
5 Campbell & Central Ave
6 Indian School & Central Ave
7 Osborne & Central Ave
8 Thomas & Central Ave
9 Encanto & Central Ave
10 McDowell & Central Ave
11B Roosevelt & 1st Ave
11A Roosevelt & Central Ave
12B Van Buren & 1st Ave
13B Jefferson & 1st Ave
15B 12th Str & Jefferson
16B 24th Str & Jefferson
17 38th Str & Washington
18 PHX Airport Shuttle
21 Mill Ave & Third Str
22 Veterans Way & College Ave
23 University Dr & Rural
24 Dorsey & Apache Blvd
Map Scale = 1:70,514
BACK
NEXT

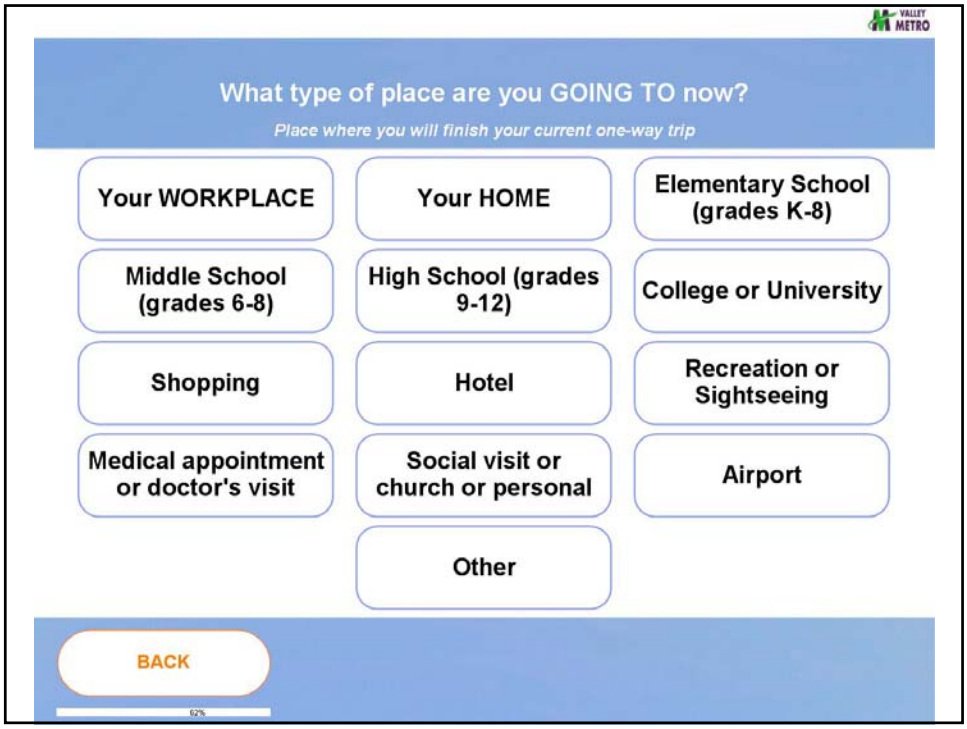

Did you use any other trains or buses before you got on this bus?
Bus
Train
No
BACK

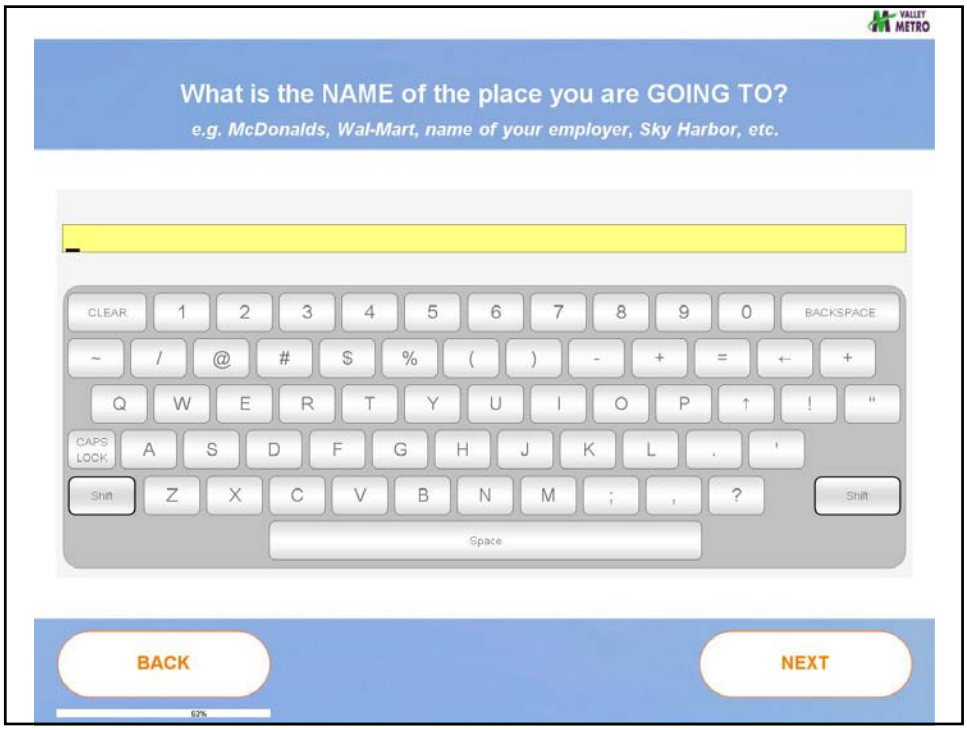

VALLEY METRO
Where did you GET ON this bus?
BACK
NEXT


VALLEY METRO
Where will you GET OFF this bus?
BACK
NEXT

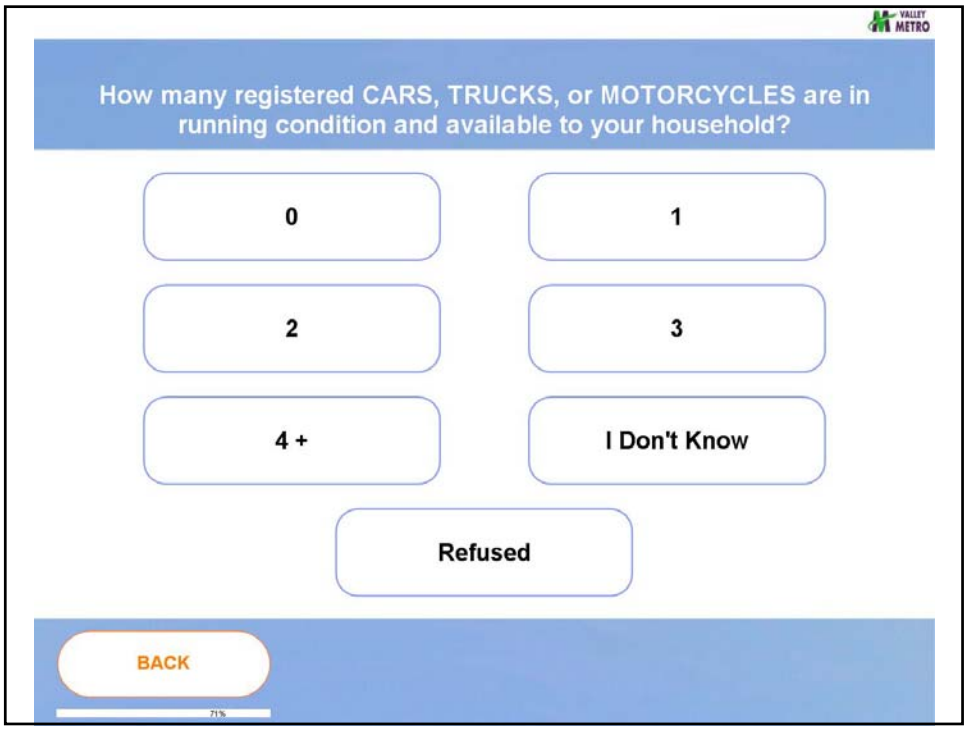

Will you TRANSFER to another bus or train after you get off this bus, to get to your final destination?
Yes
No
BACK

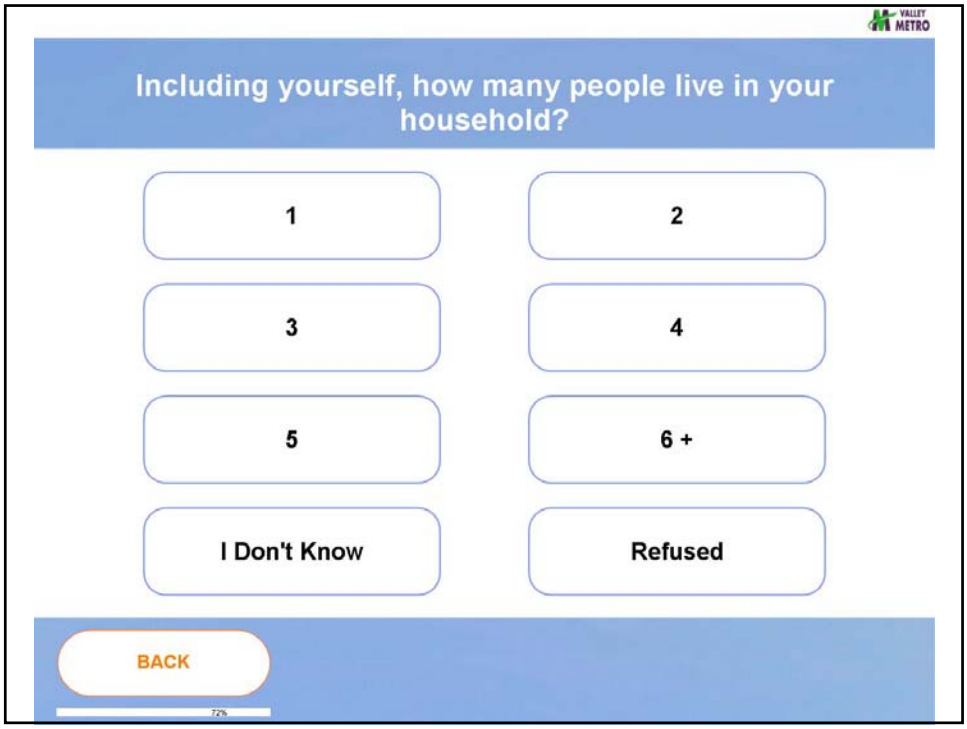

How will you get from the last bus or train you are using for this trip to your final destination?
Bike
Walk
Be picked up by someone
Drive alone
Carpool or vanpool with others
Other
BACK

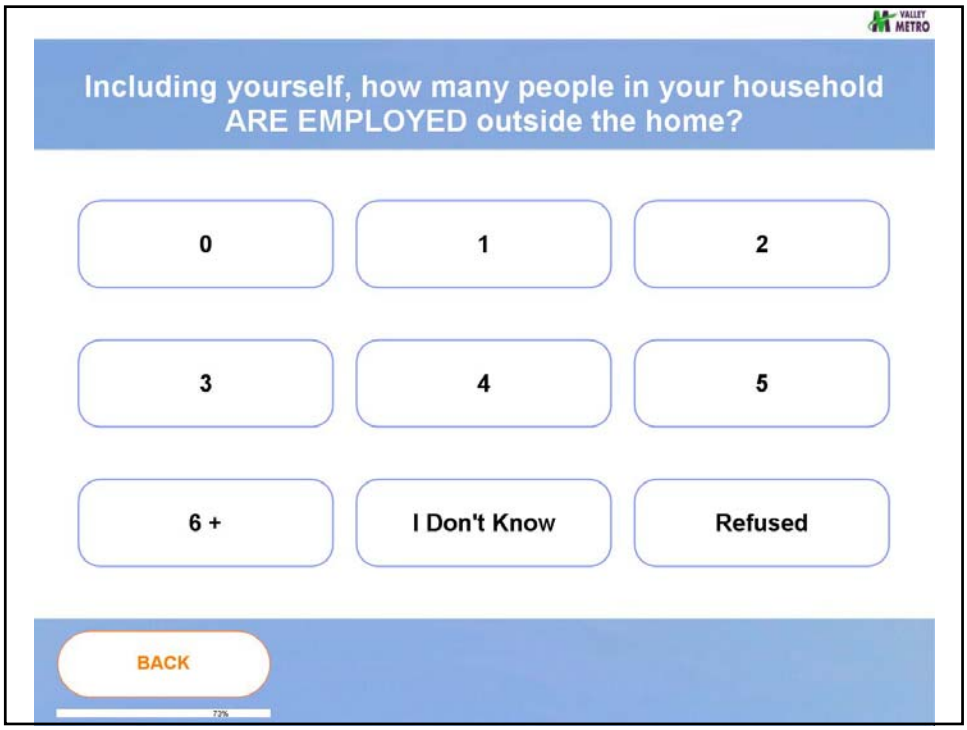

What type of place are you GOING TO now?
Place where you will finish your current one-way trip
Your WORKPLACE
Your HOME
Elementary School (grades K-8)
Middle School (grades 6-8)
High School (grades 9-12)
College or University
Shopping
Hotel
Recreation or Sightseeing
Medical appointment or doctor's visit
Social visit or church or personal
Airport
Other
BACK


What is the NAME of the place you are GOING TO?
e.g. McDonalds, Wal-Mart, name of your employer, Sky Harbor, etc.
BACK
NEXT

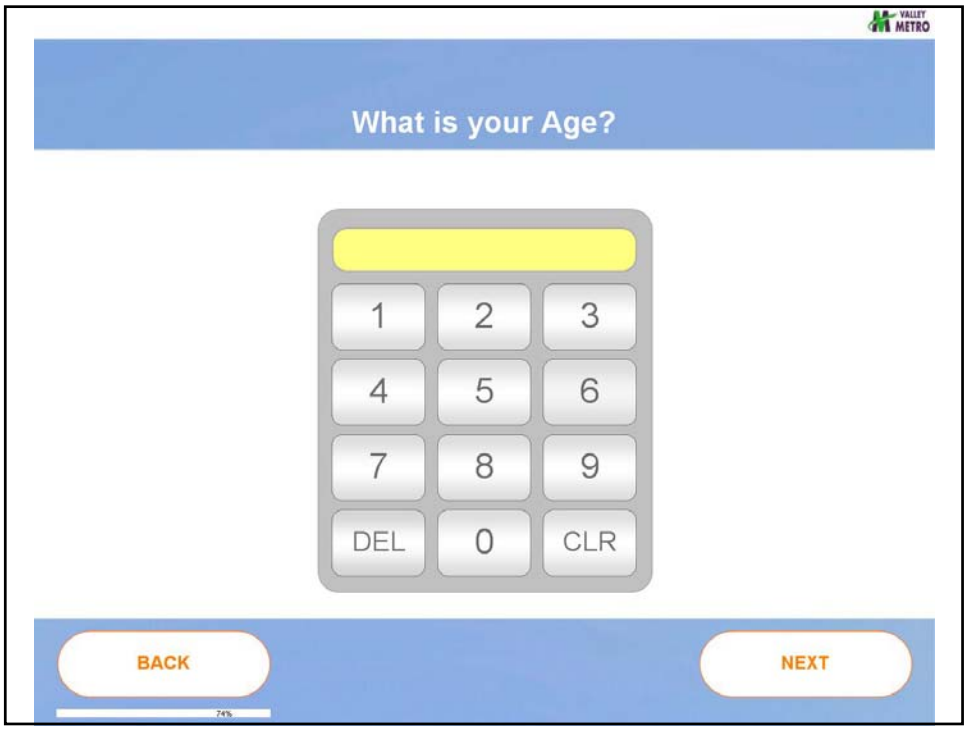

Do you know the EXACT STREET ADDRESS of the place you are going to?
YES
NO
BACK

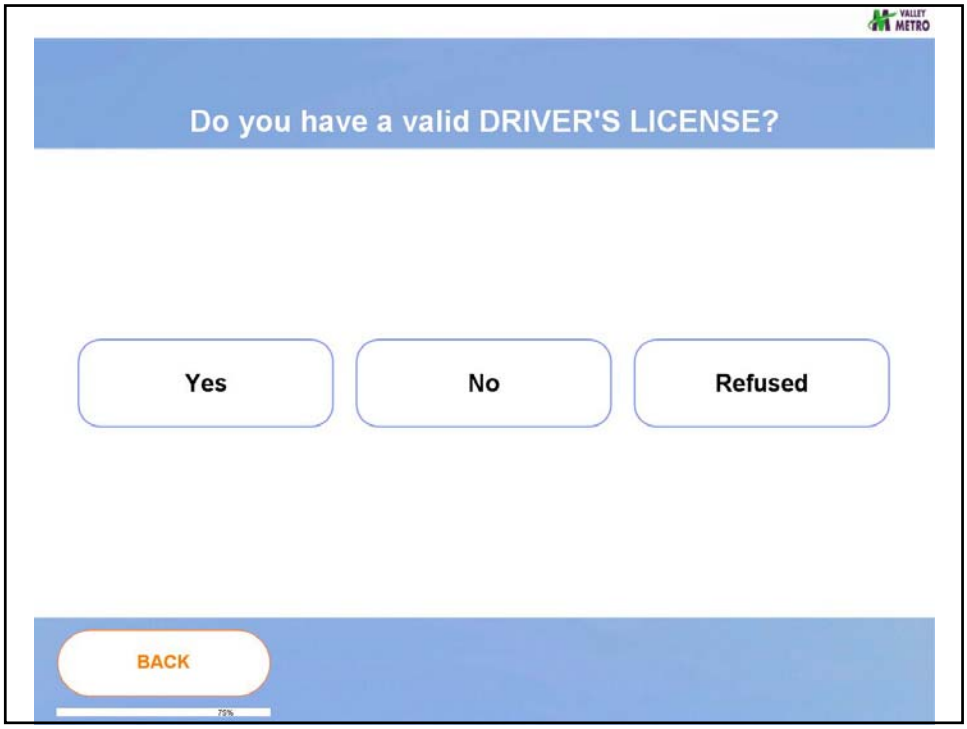

How many registered CARS, TRUCKS, or MOTORCYCLES are in running condition and available to your household?
0
1
2
3
4 +
I Don't Know
Refused
BACK

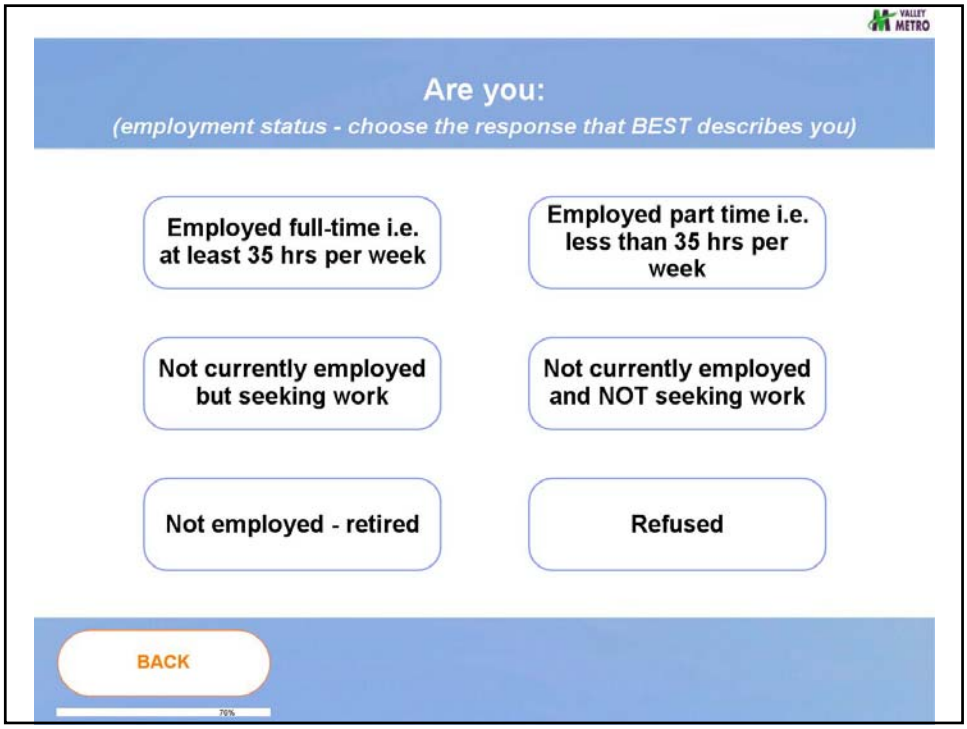

Including yourself, how many people live in your household?
1
2
3
4
5
6 +
I Don't Know
Refused
BACK

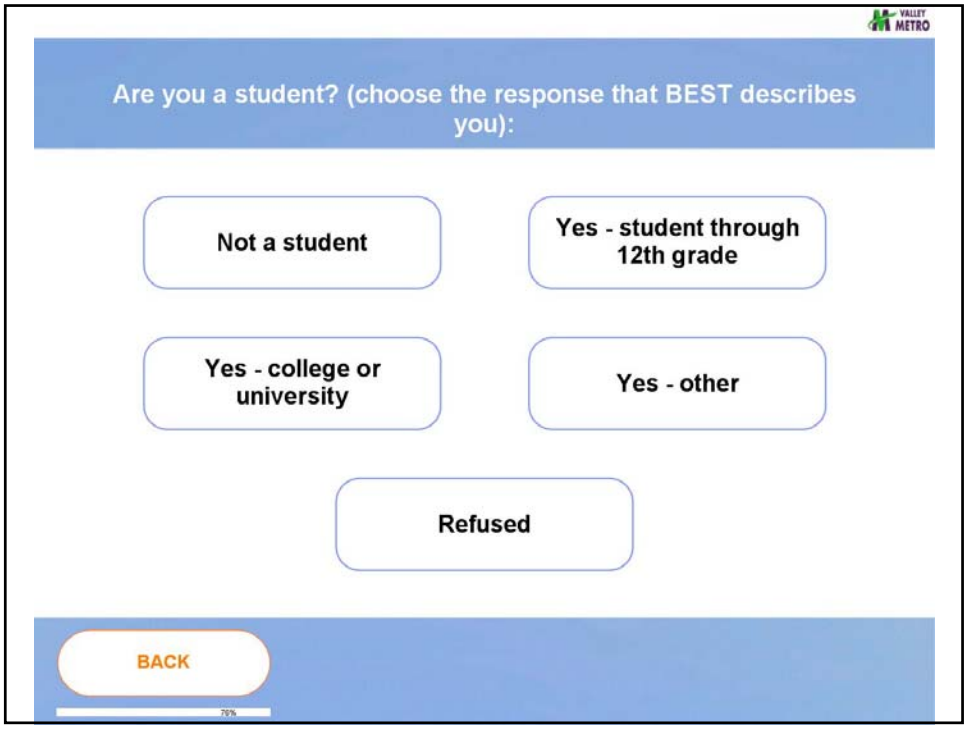

Including yourself, how many people in your household ARE EMPLOYED outside the home?
0
1
2
3
4
5
6 +
I Don't Know
Refused
BACK

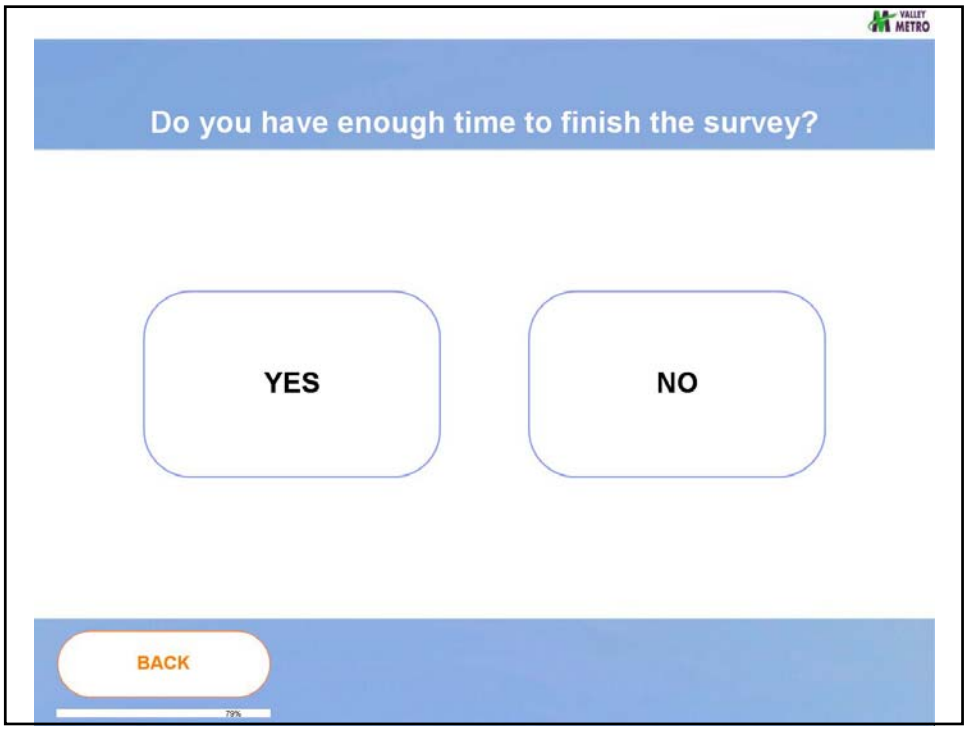

How many ADULTS (age 18 and older) live in your household?
0
1
2
3
4
5
6 +
I Don't Know
Refused
BACK

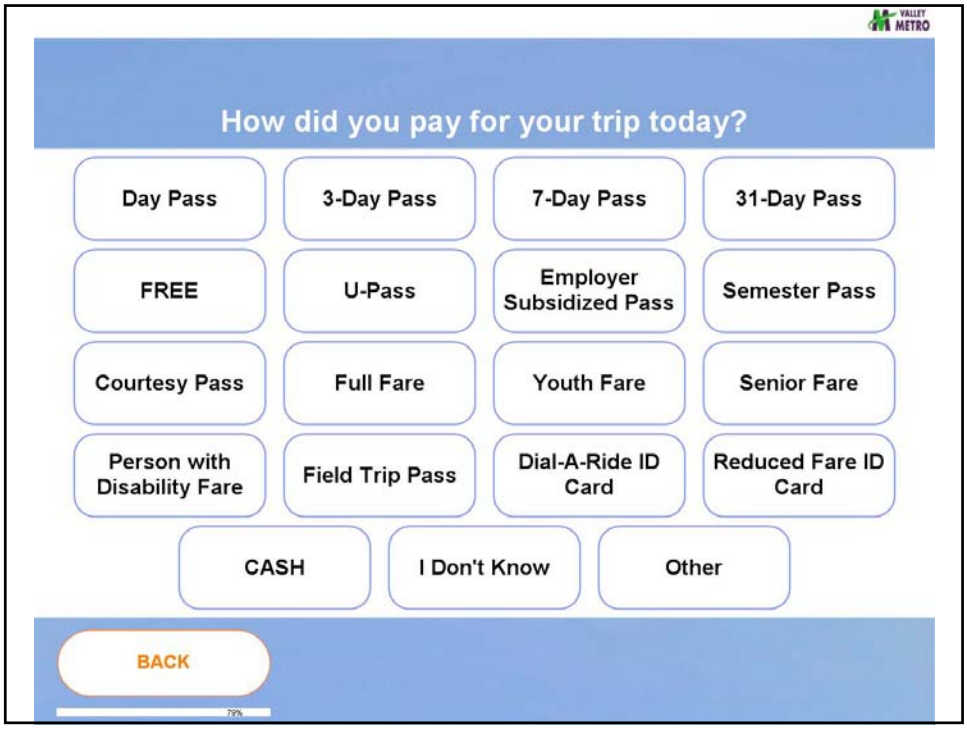

What is your Age?
1
2
3
4
5
6
7
8
9
DEL
0
CLR
BACK
NEXT

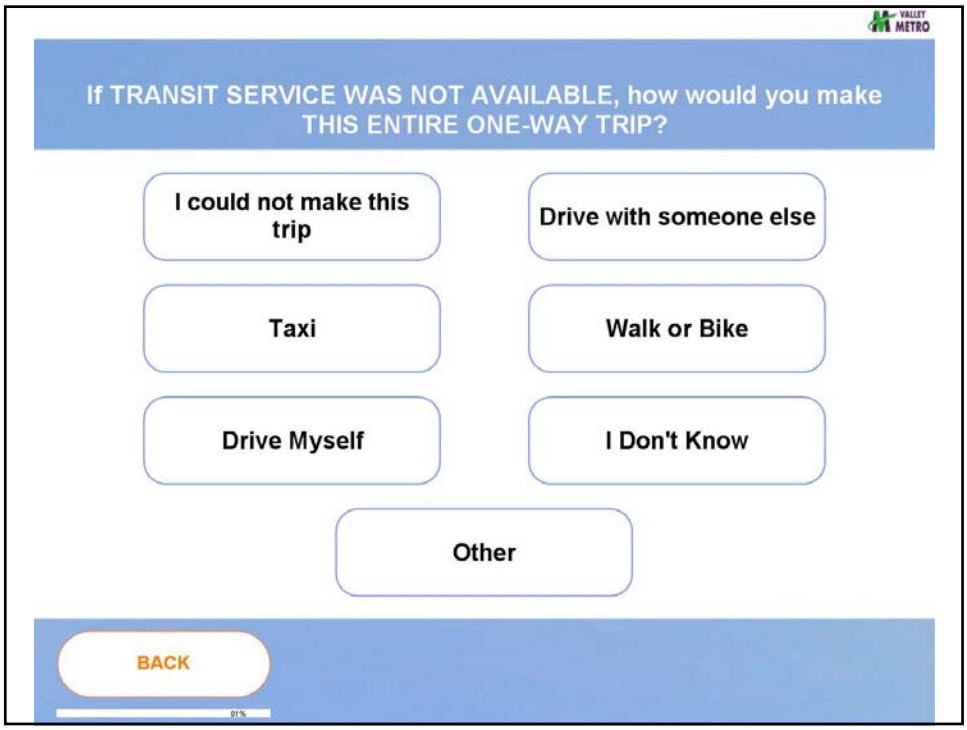

Do you have a valid DRIVER'S LICENSE?
Yes
No
Refused
BACK

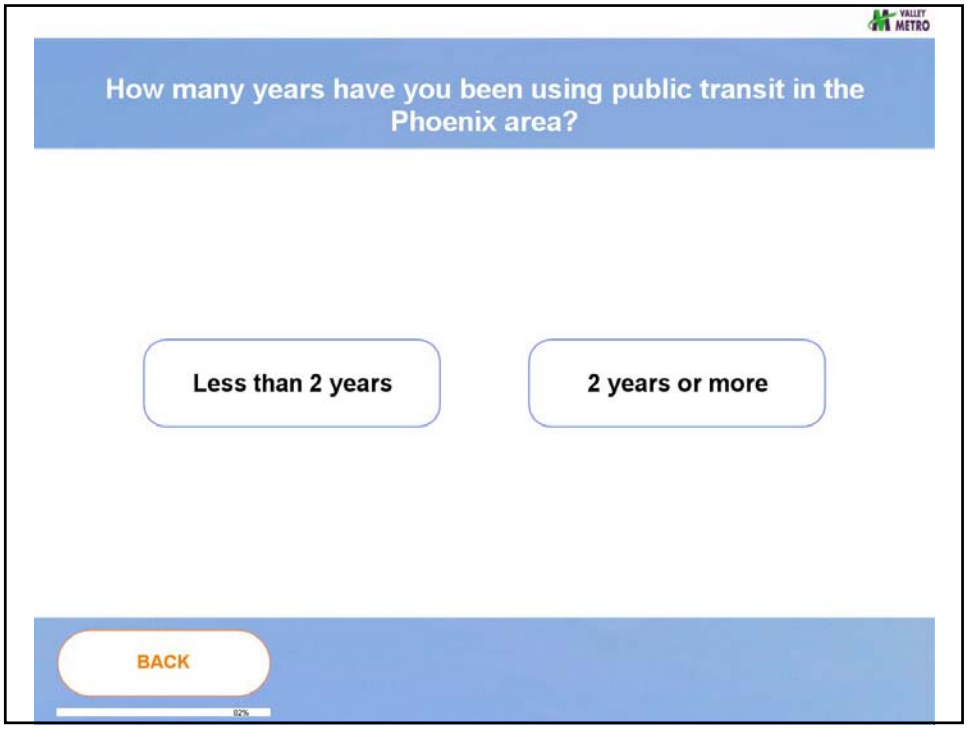

Are you:
(employment status - choose the response that BEST describes you)
Employed full-time i.e. at least 35 hrs per week
Employed part time i.e. less than 35 hrs per week
Not currently employed but seeking work
Not currently employed and NOT seeking work
Not employed - retired
Refused
BACK

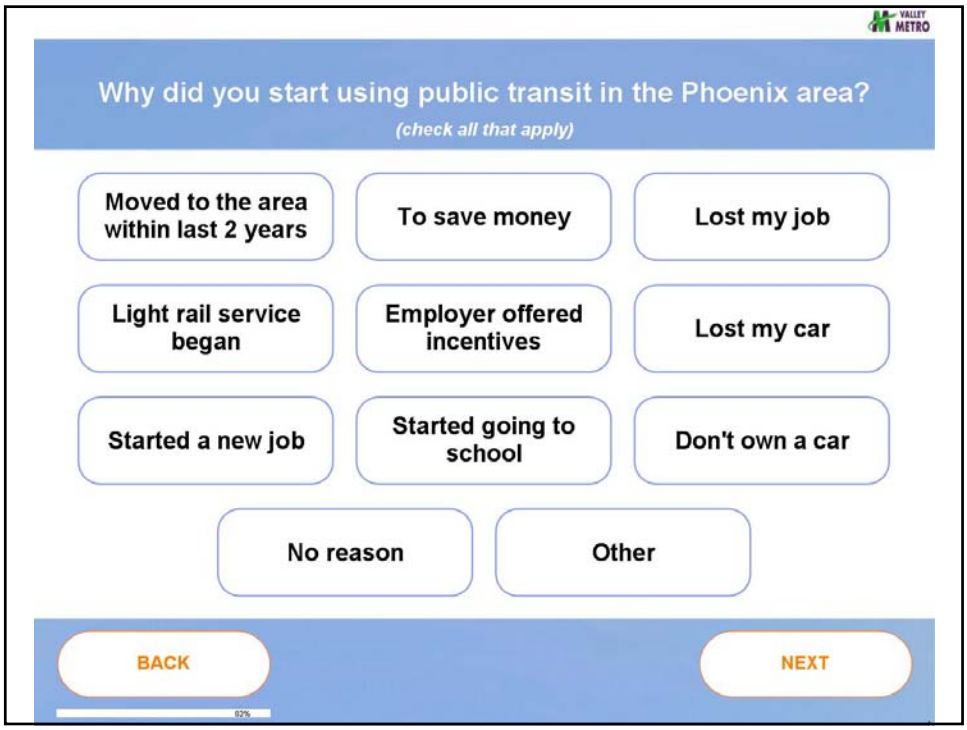

Are you a student? (choose the response that BEST describes you):
Not a student
Yes - student through 12th grade
Yes - college or university
Yes - other
Refused
BACK

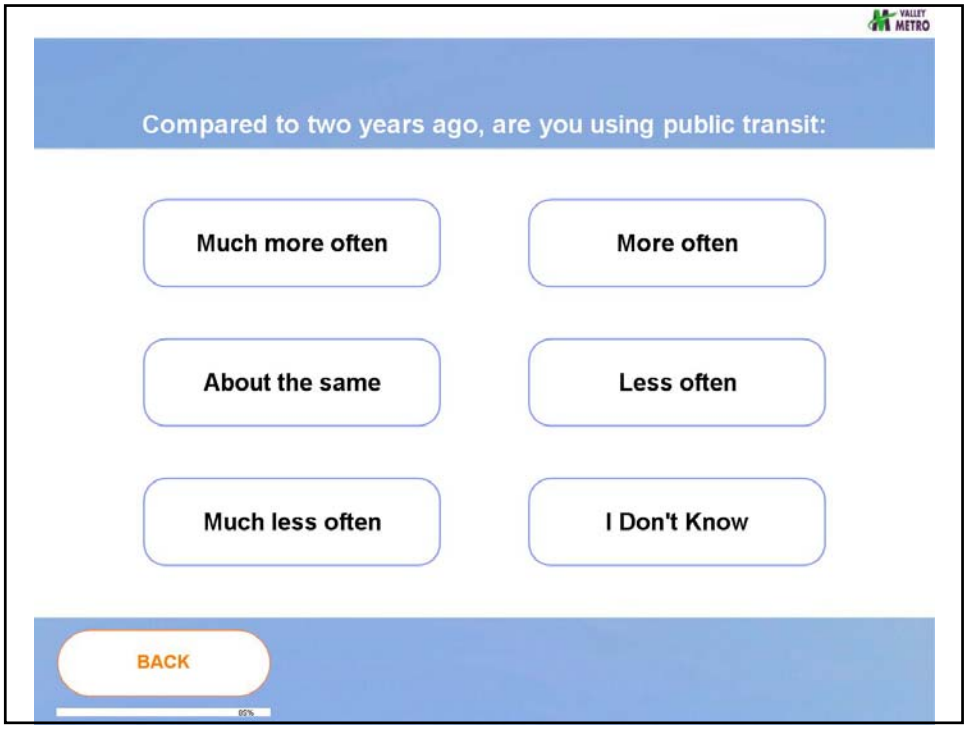

Do you have enough time to finish the survey?
YES
NO
BACK

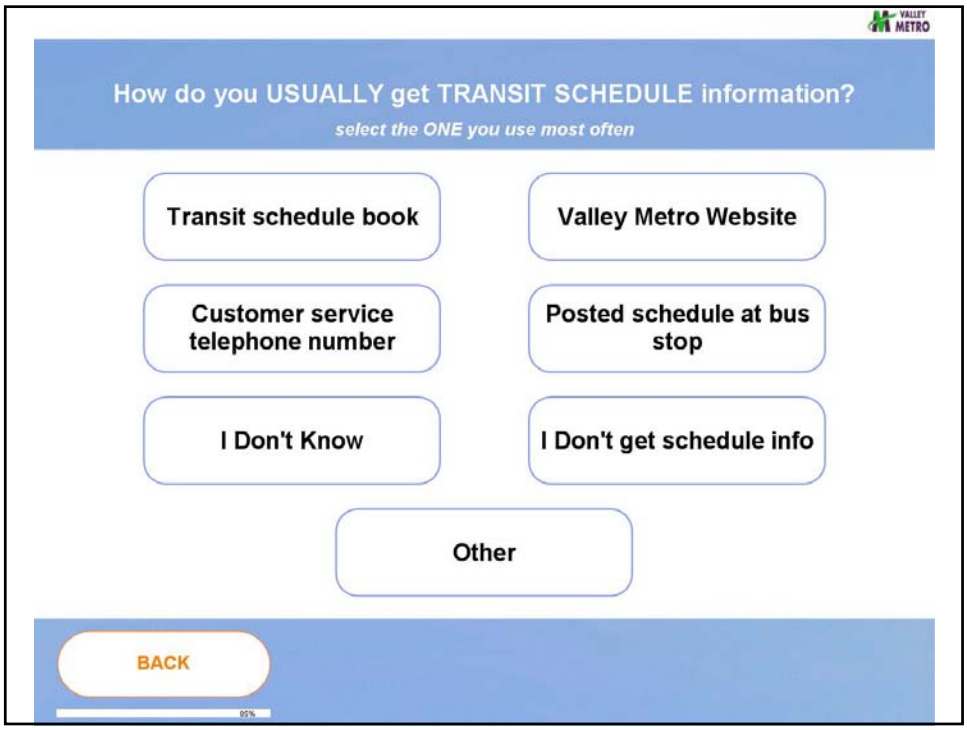

How did you pay for your trip today?
Day Pass
3-Day Pass
7-Day Pass
31-Day Pass
FREE
U-Pass
Employer Subsidized Pass
Semester Pass
Courtesy Pass
Full Fare
Youth Fare
Senior Fare
Person with Disability Fare
Field Trip Pass
Dial-A-Ride ID Card
Reduced Fare ID Card
CASH
I Don't Know
Other
BACK

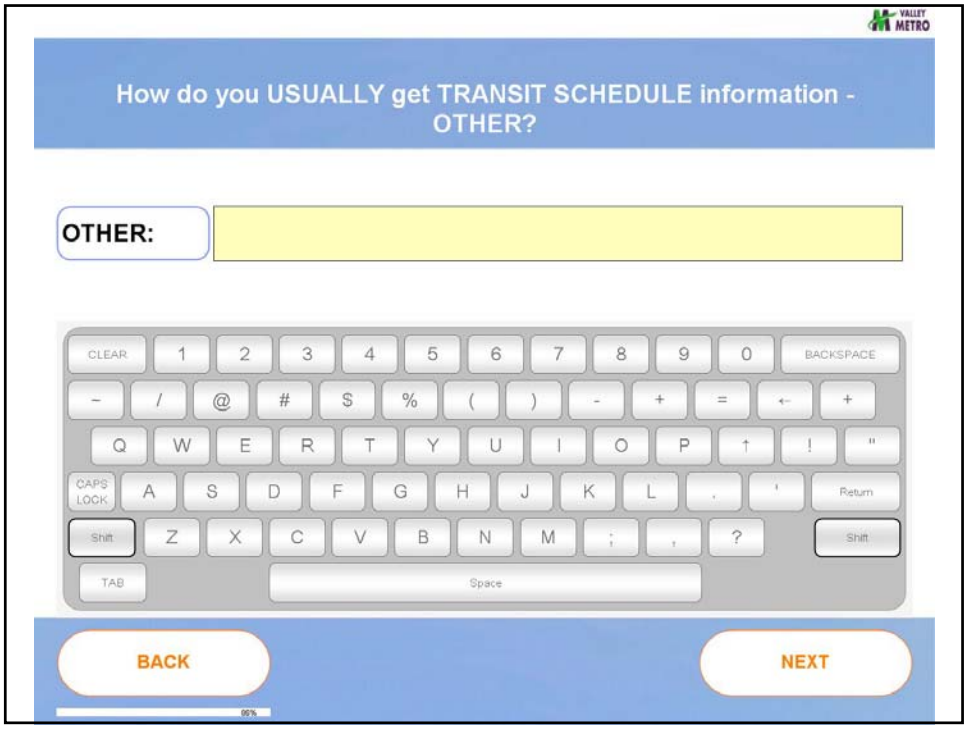

If TRANSIT SERVICE WAS NOT AVAILABLE, how would you make THIS ENTIRE ONE-WAY TRIP?
I could not make this trip
Drive with someone else
Taxi
Walk or Bike
Drive Myself
I Don't Know
Other
BACK

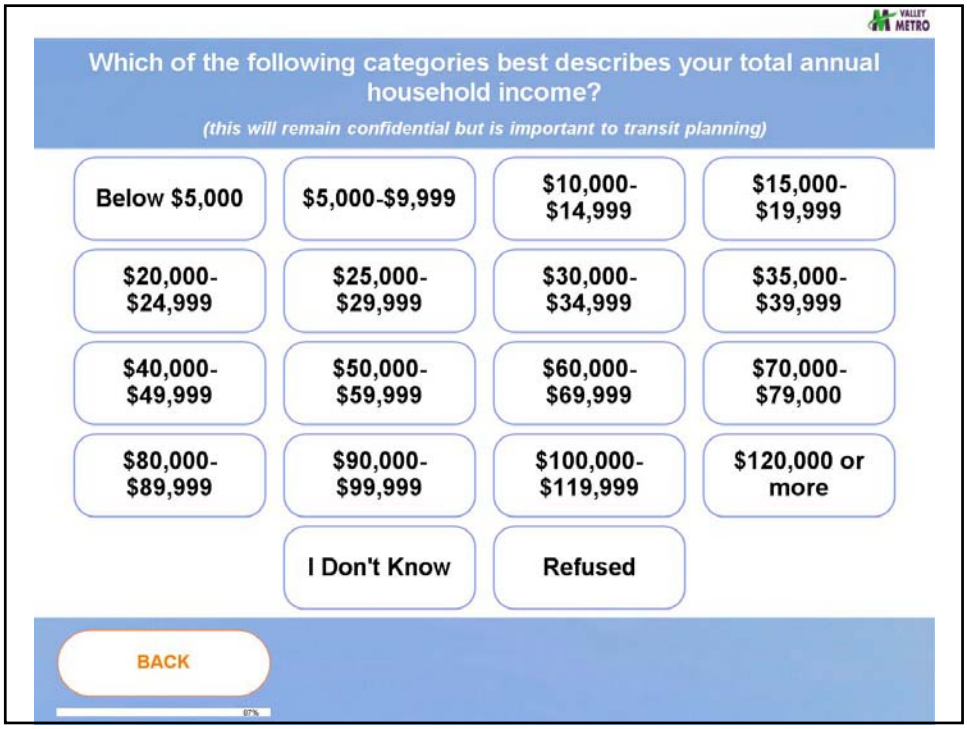

How many years have you been using public transit in the Phoenix area?
Less than 2 years
2 years or more
BACK

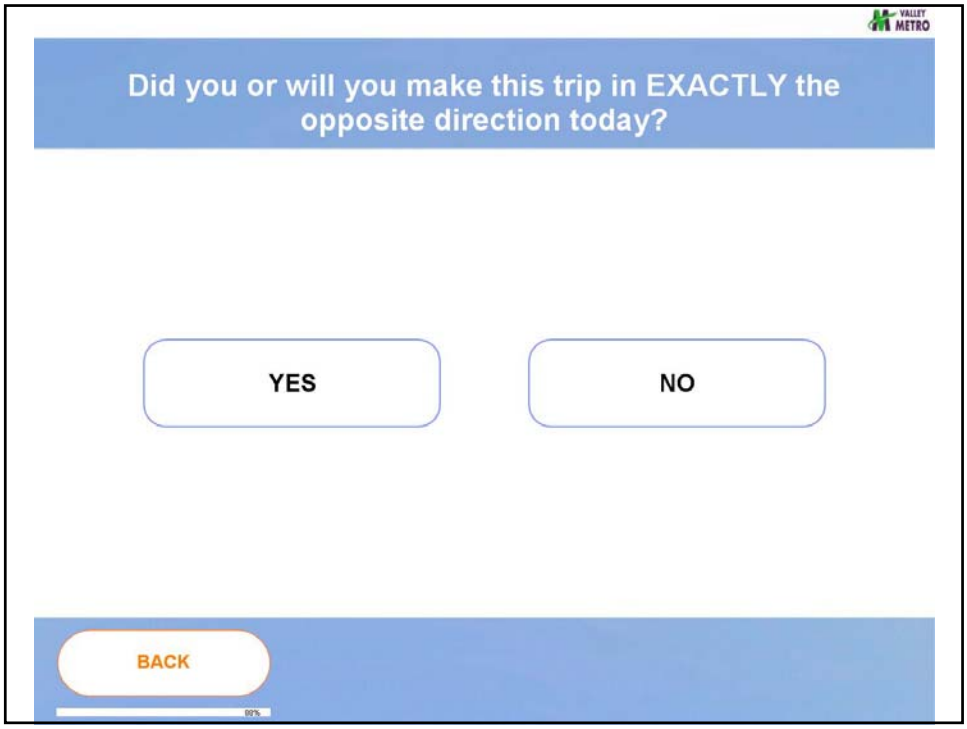

Why did you start using public transit in the Phoenix area?
(check all that apply)
Moved to the area within last 2 years
To save money
Lost my job
Light rail service began
Employer offered incentives
Lost my car
Started a new job
Started going to school
Don't own a car
No reason
Other
BACK
NEXT

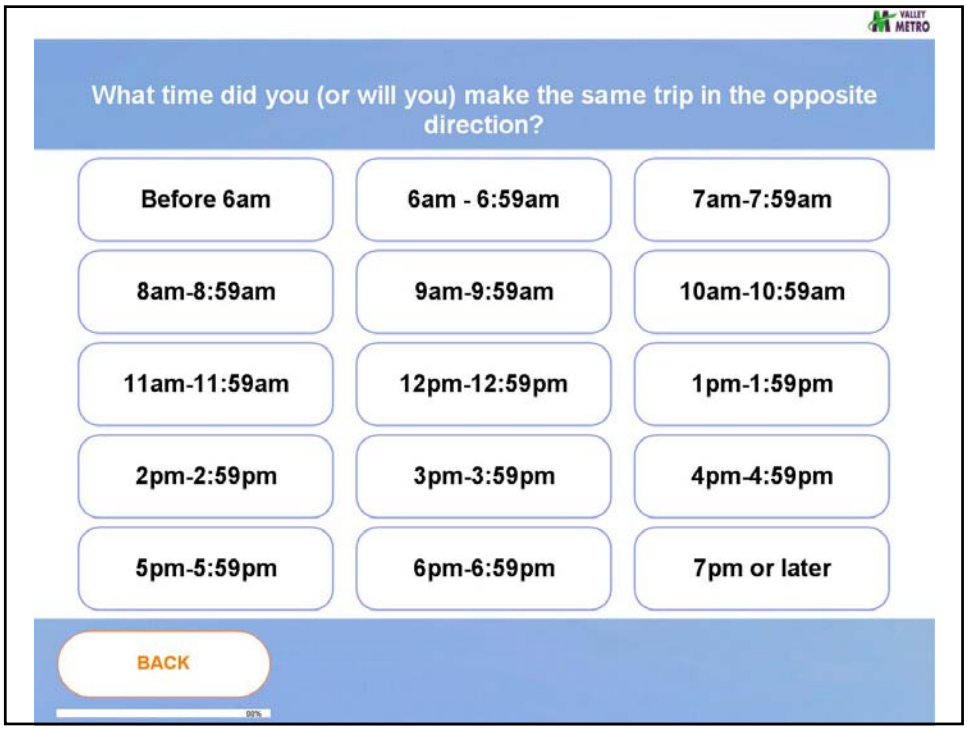

Compared to two years ago, are you using public transit:
Much more often
More often
About the same
Less often
Much less often
I Don't Know
BACK

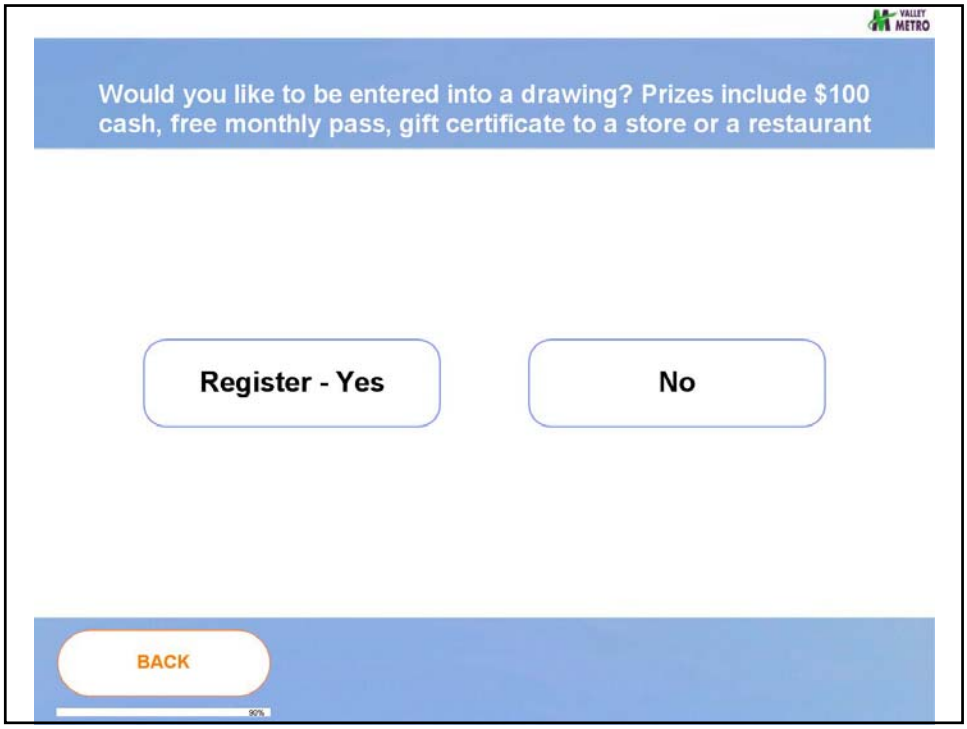

How do you USUALLY get TRANSIT SCHEDULE information?
select the ONE you use most often
Transit schedule book
Valley Metro Website
Customer service telephone number
Posted schedule at bus stop
I Don't Know
I Don't get schedule info
Other
BACK

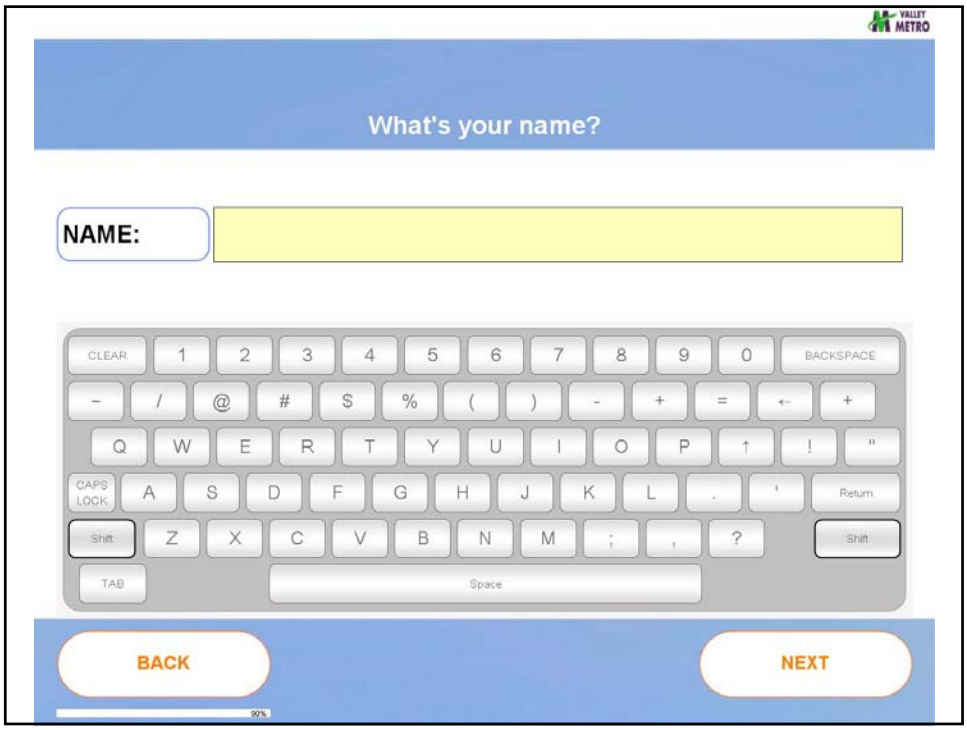

How do you USUALLY get TRANSIT SCHEDULE information - OTHER?
OTHER:
BACK
NEXT

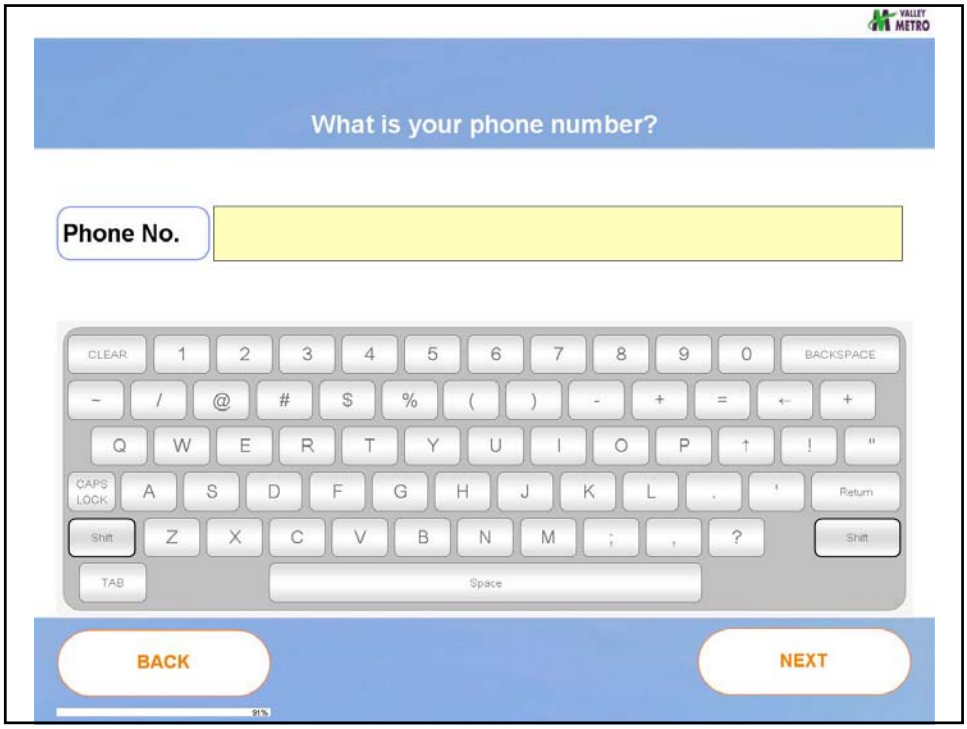

Which of the following categories best describes your total annual household income?
(this will remain confidential but is important to transit planning)
Below $5,000
$5,000-$9,999
$10,000-$14,999
$15,000-$19,999
$20,000-$24,999
$25,000-$29,999
$30,000-$34,999
$35,000-$39,999
$40,000-$49,999
$50,000-$59,999
$60,000-$69,999
$70,000-$79,000
$80,000-$89,999
$90,000-$99,999
$100,000-$119,999
$120,000 or more
I Don't Know
Refused
BACK

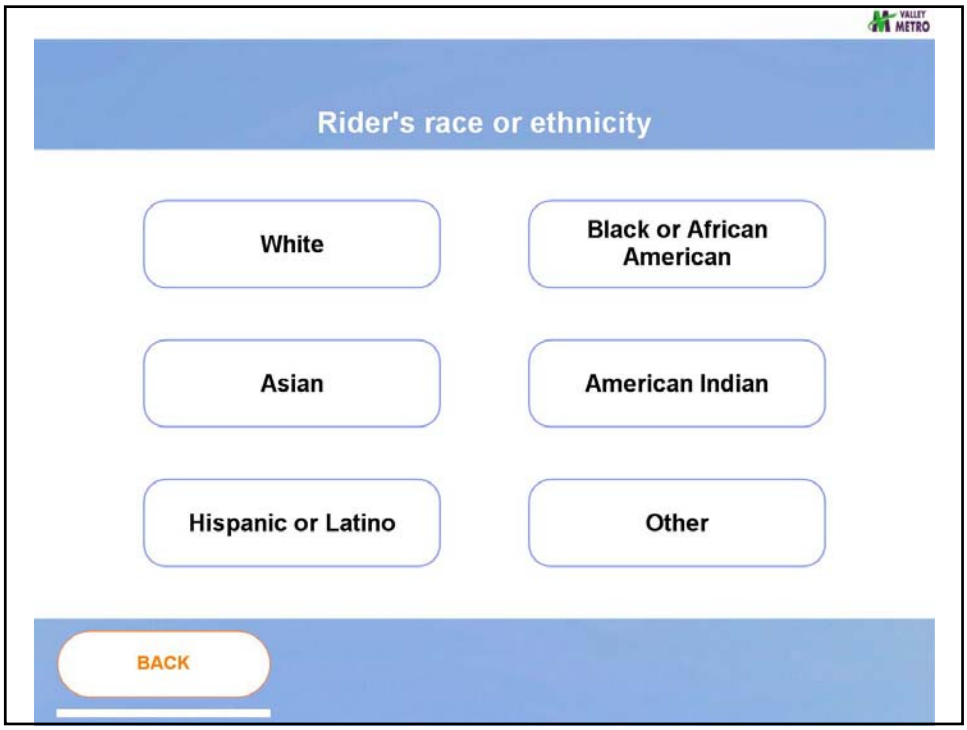

Did you or will you make this trip in EXACTLY the opposite direction today?
YES
NO
BACK

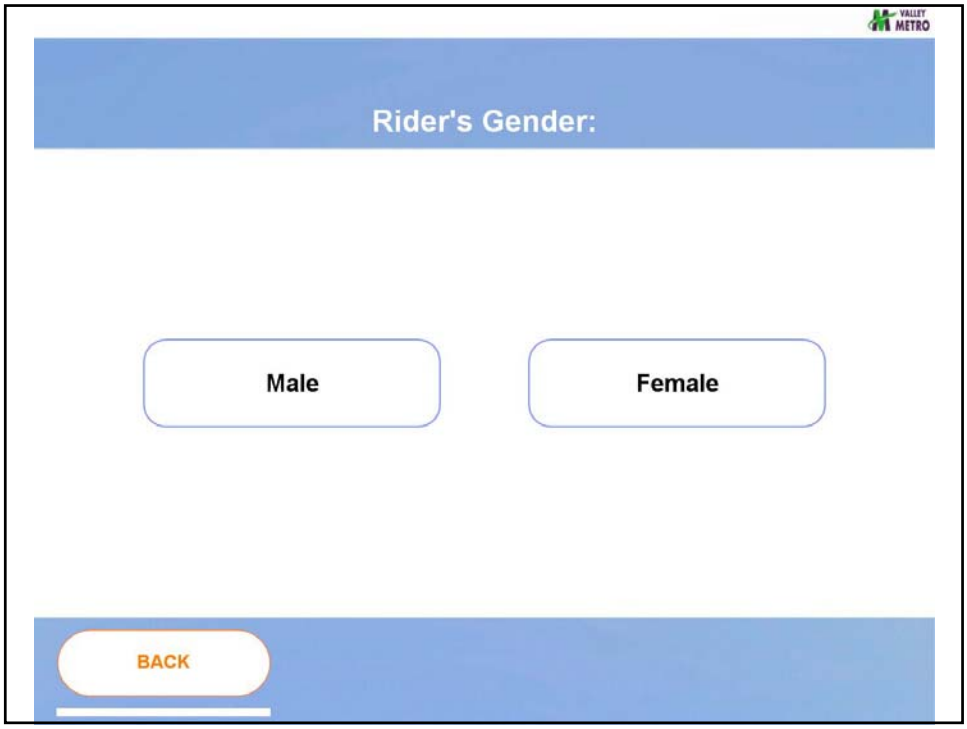

What time did you (or will you) make the same trip in the opposite direction?
Before 6am
6am - 6:59am
7am-7:59am
8am-8:59am
9am-9:59am
10am-10:59am
11am-11:59am
12pm-12:59pm
1pm-1:59pm
2pm-2:59pm
3pm-3:59pm
4pm-4:59pm
5pm-5:59pm
6pm-6:59pm
7pm or later
BACK


VALLEY METRO
Would you like to be entered into a drawing? Prizes include $100 cash, free monthly pass, gift certificate to a store or a restaurant
Register - Yes
No
BACK


VALLEY METRO
What's your name?
NAME:
CLEAR 1 2 3 4 5 6 7 8 9 0 BACKSPACE
Q W E R T Y U I O P
CAPS LOCK A S D F G H J K L Return
Shift Z X C V B N M Shift
TAB Space
BACK
NEXT

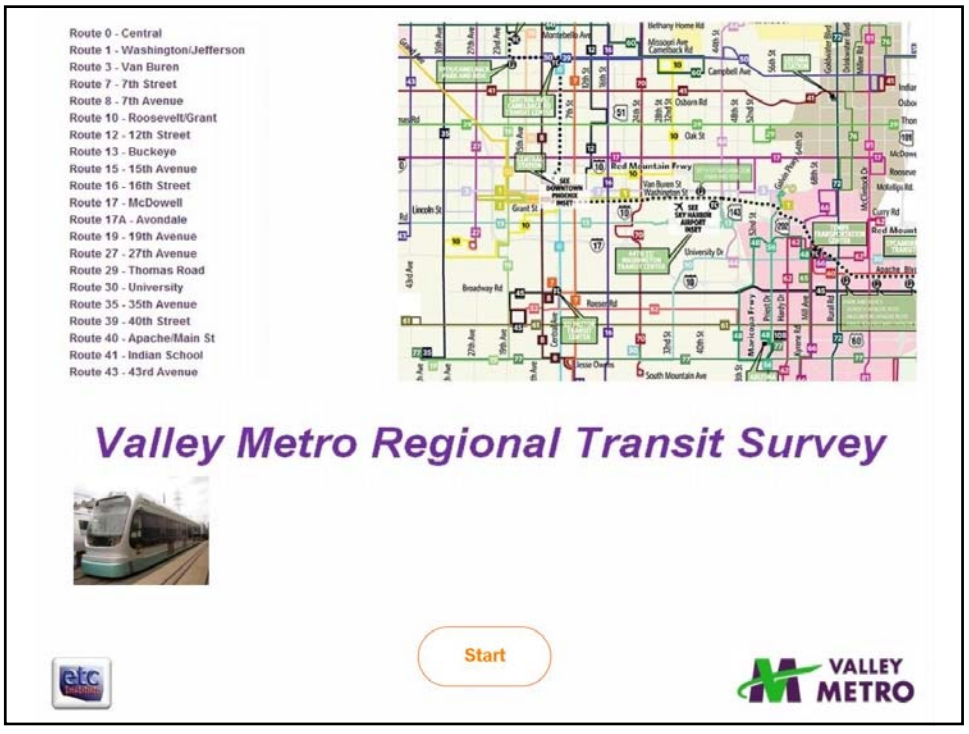

What is your phone number?
Phone No.
BACK
NEXT

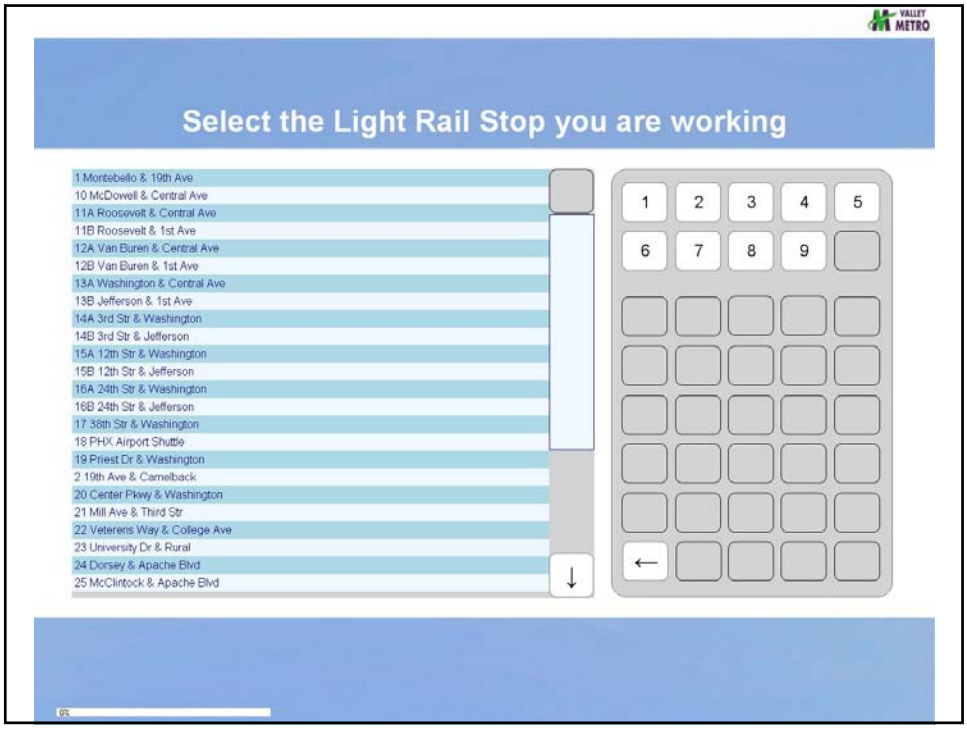

Rider's race or ethnicity
White
Black or African American
Asian
American Indian
Hispanic or Latino
Other
BACK

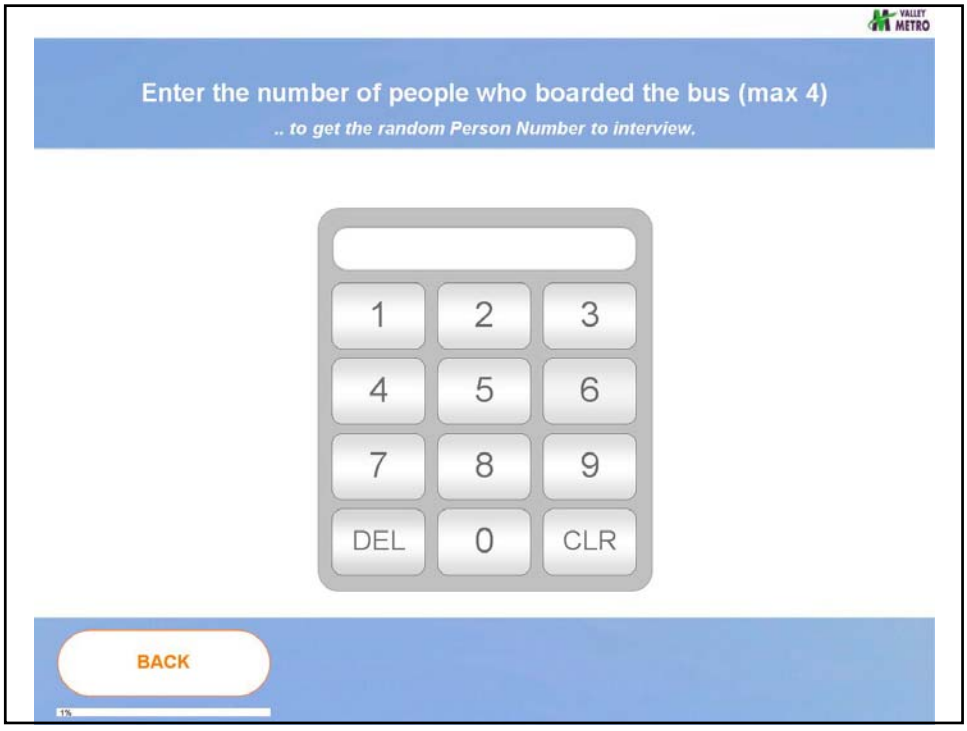

VALLEY METRO
Rider's Gender:
Male
Female
BACK

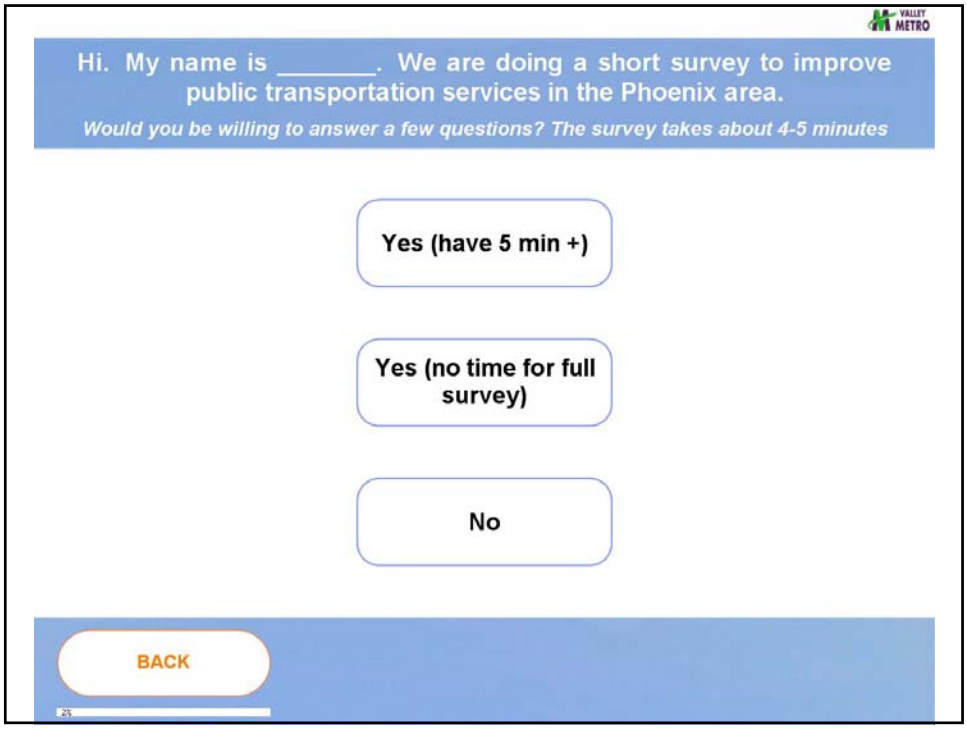
2010-11 Valley Metro Regional Transit Survey

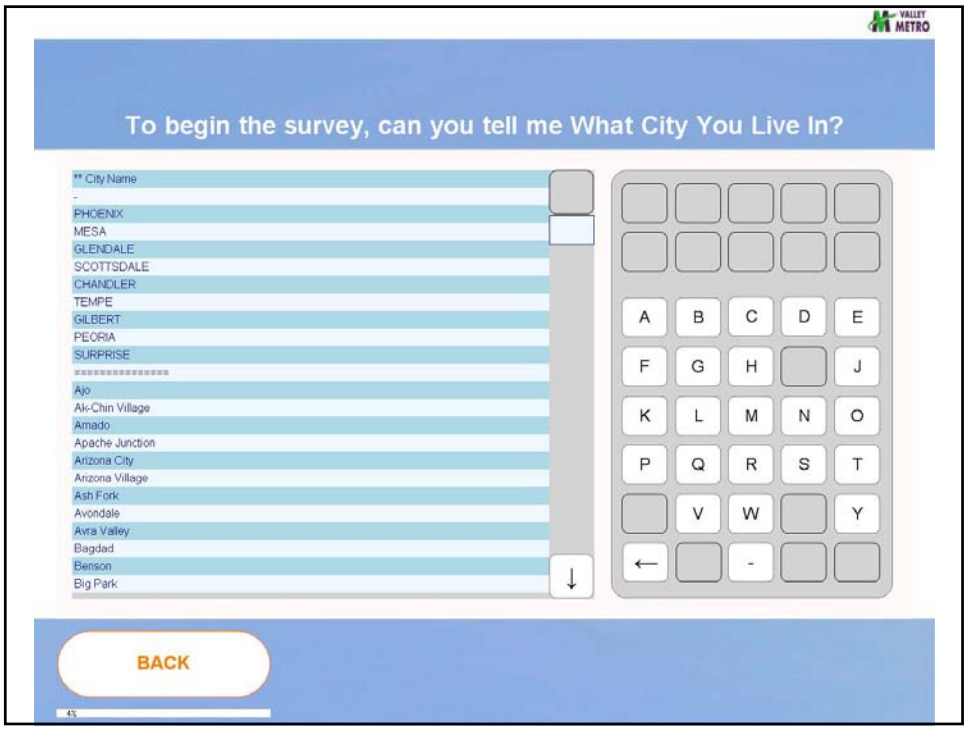
Rail Survey Screen Shots

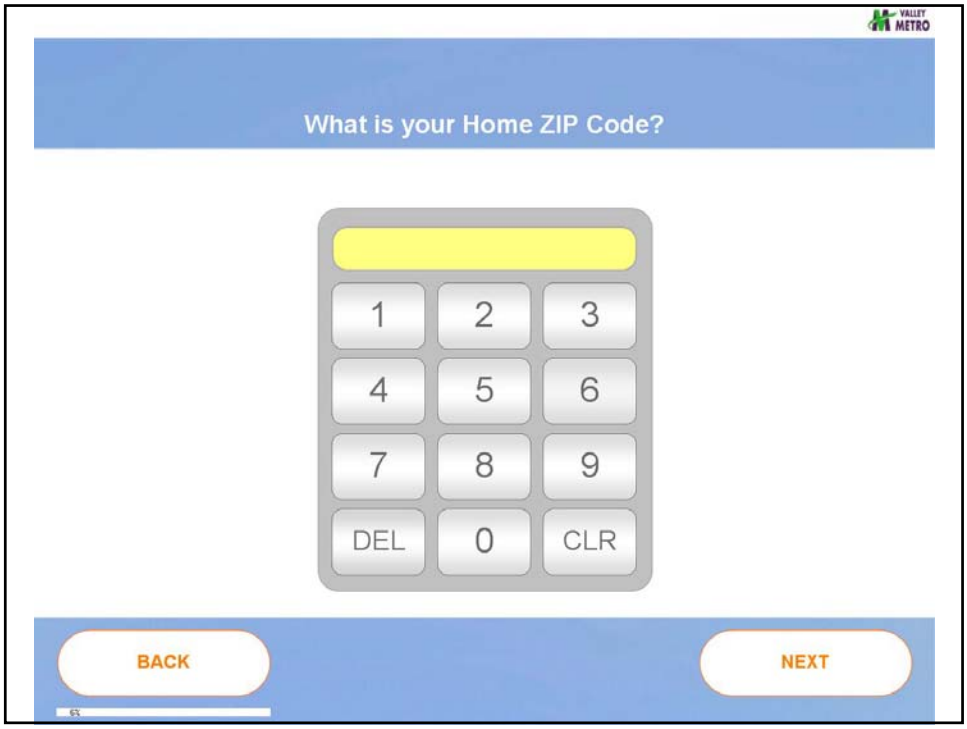


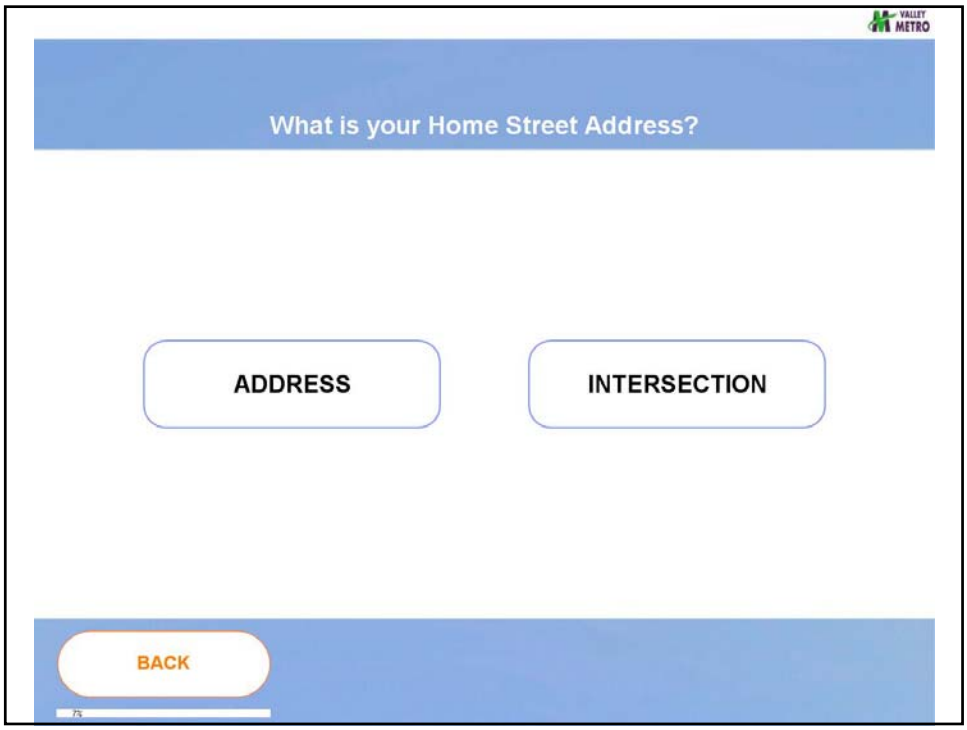

Select the Light Rail Stop you are working
1 Montebello & 19th Ave
10 McDowell & Central Ave
11A Roosevelt & Central Ave
11B Roosevelt & 1st Ave
12A Van Buren & Central Ave
12B Van Buren & 1st Ave
13A Washington & Central Ave
13B Jefferson & 1st Ave
14A 3rd Str & Washington
14B 3rd Str & Jefferson
15A 12th Str & Washington
15B 12th Str & Jefferson
16A 24th Str & Washington
16B 24th Str & Jefferson
17 38th Str & Washington
18 PHX Airport Shuttle
19 Priest Dr & Washington
2 19th Ave & Camelback
20 Center Pkwy & Washington
21 Mill Ave & Third Str
22 Veterans Way & College Ave
23 University Dr & Rural
24 Dorsey & Apache Blvd
25 McClintock & Apache Blvd
1 2 3 4 5
6 7 8 9

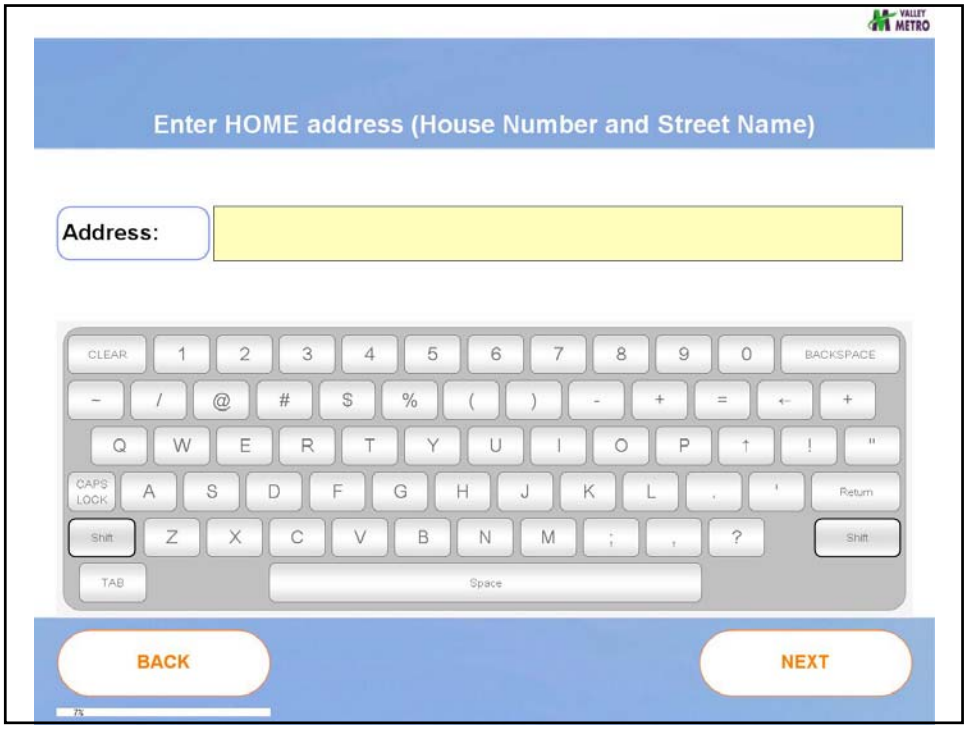

Enter the number of people who boarded the bus (max 4)
.. to get the random Person Number to interview.
1 2 3
4 5 6
7 8 9
DEL 0 CLR
BACK

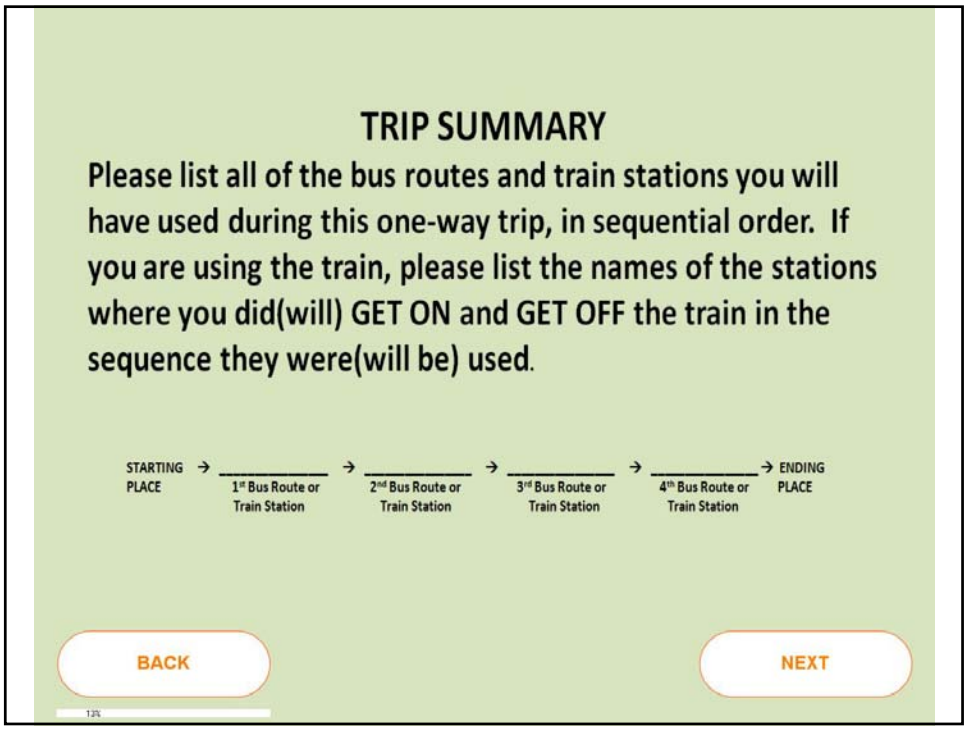

VALLEY METRO
Hi. My name is _____. We are doing a short survey to improve public transportation services in the Phoenix area.
Would you be willing to answer a few questions? The survey takes about 4-5 minutes
Yes (have 5 min +)
Yes (no time for full survey)
No
BACK

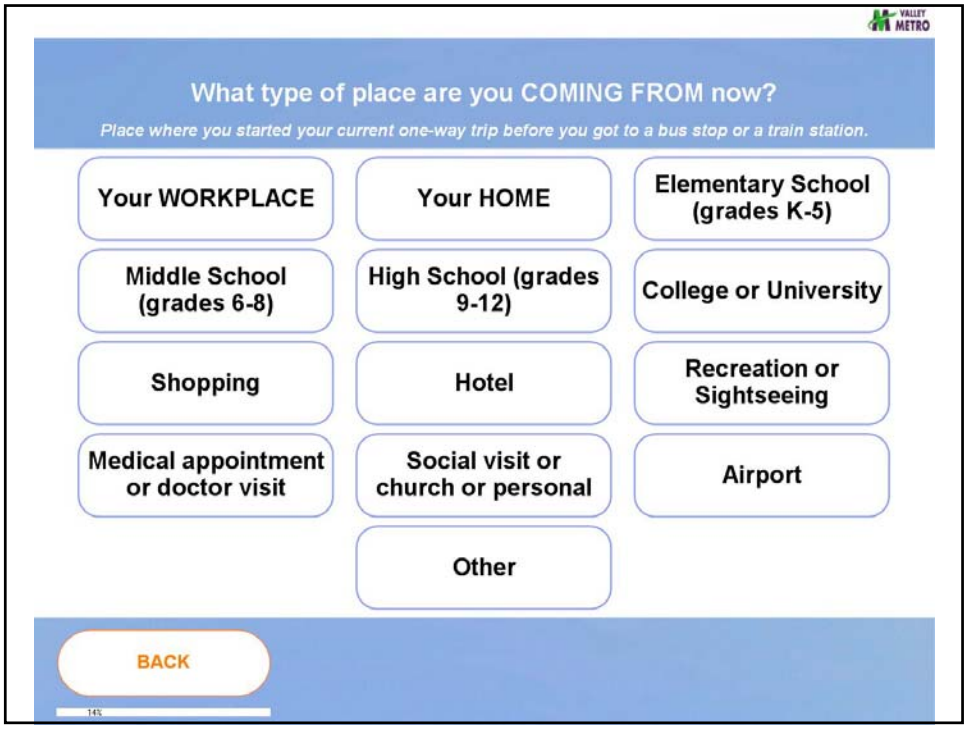

VALLEY METRO
To begin the survey, can you tell me What City You Live In?
** City Name
-
PHOENIX
MESA
GLENDALE
SCOTTSDALE
CHANDLER
TEMPE
GILBERT
PEORIA
SURPRISE
Ajo
Ak-Chin Village
Amado
Apache Junction
Arizona City
Arizona Village
Ash Fork
Avondale
Avra Valley
Bagdad
Benson
Big Park
A B C D E
F G H J
K L M N O
P Q R S T
V W Y
BACK

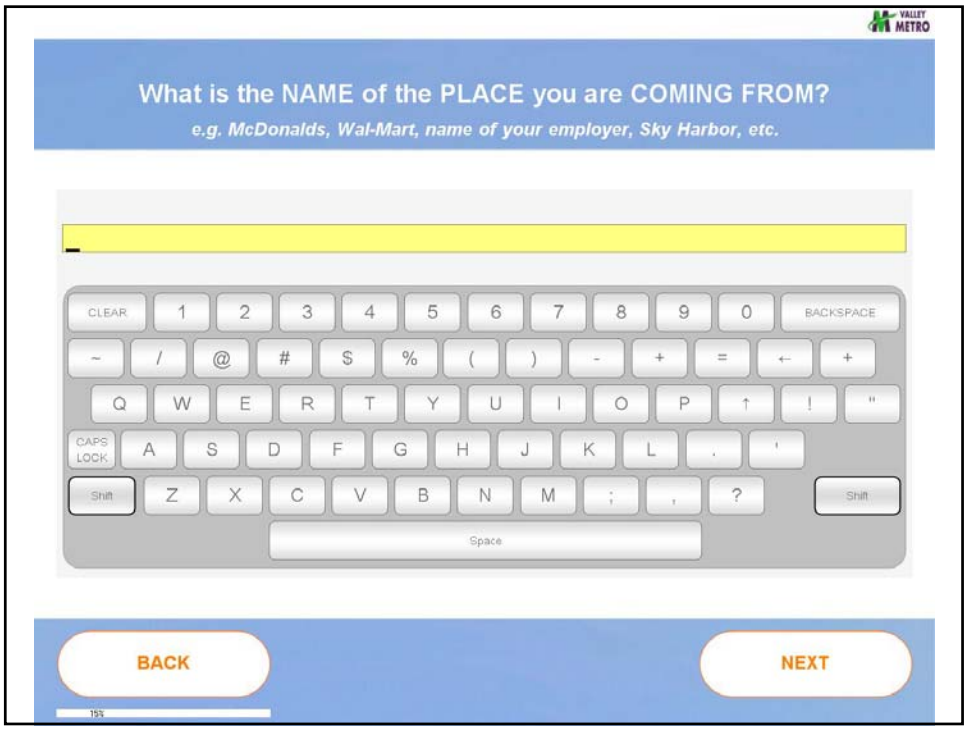

What is your Home ZIP Code?
1
2
3
4
5
6
7
8
9
DEL
0
CLR
BACK
NEXT


What is your Home Street Address?
ADDRESS
INTERSECTION
BACK


VALLEY METRO
Enter HOME address (House Number and Street Name)
Address:
CLEAR 1 2 3 4 5 6 7 8 9 0 BACKSPACE
- / @ # $ % ( ) - + = ← +
Q W E R T Y U I O P ↑ ! "
CAPS LOCK A S D F G H J K L . ' Return
Shift Z X C V B N M ; , ? Shift
TAB Space
BACK
NEXT

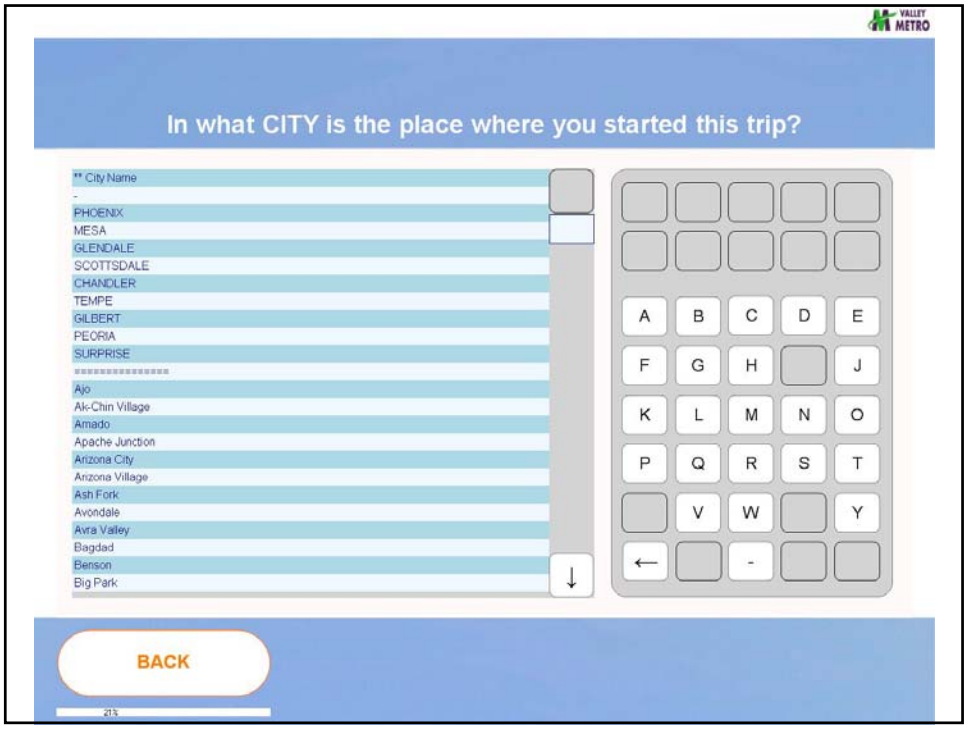

TRIP SUMMARY
Please list all of the bus routes and train stations you will have used during this one-way trip, in sequential order. If you are using the train, please list the names of the stations where you did(will) GET ON and GET OFF the train in the sequence they were(will be) used.
STARTING PLACE → _____ → _____ → _____ → _____ → ENDING PLACE
1st Bus Route or Train Station
2nd Bus Route or Train Station
3rd Bus Route or Train Station
4th Bus Route or Train Station
BACK
NEXT

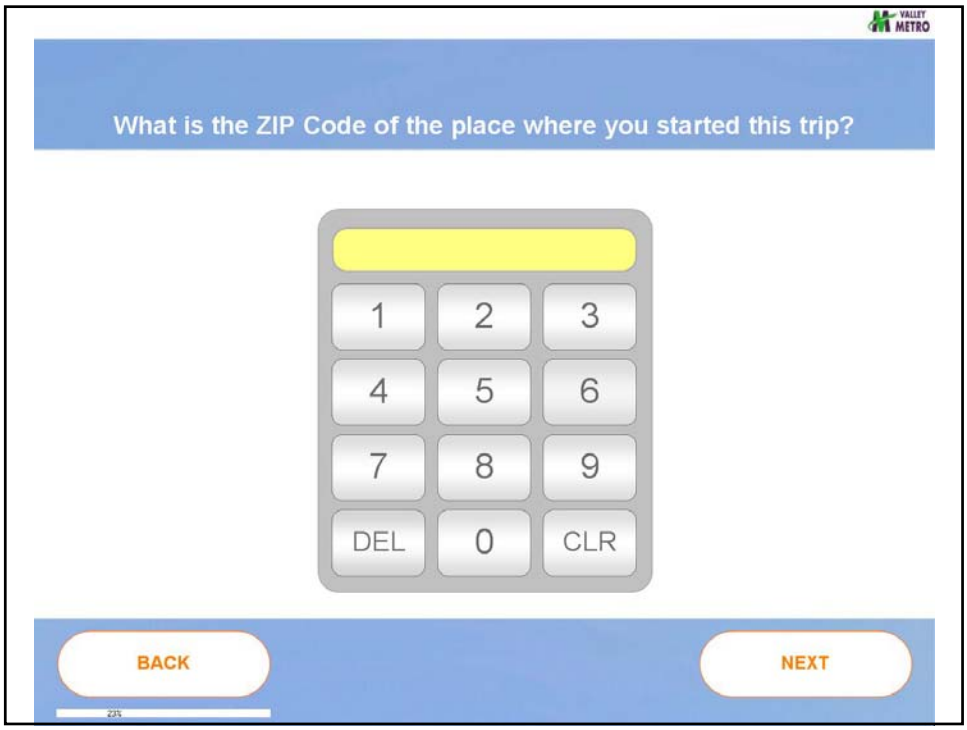

What type of place are you COMING FROM now?
Place where you started your current one-way trip before you got to a bus stop or a train station.
Your WORKPLACE
Your HOME
Elementary School (grades K-5)
Middle School (grades 6-8)
High School (grades 9-12)
College or University
Shopping
Hotel
Recreation or Sightseeing
Medical appointment or doctor visit
Social visit or church or personal
Airport
Other
BACK

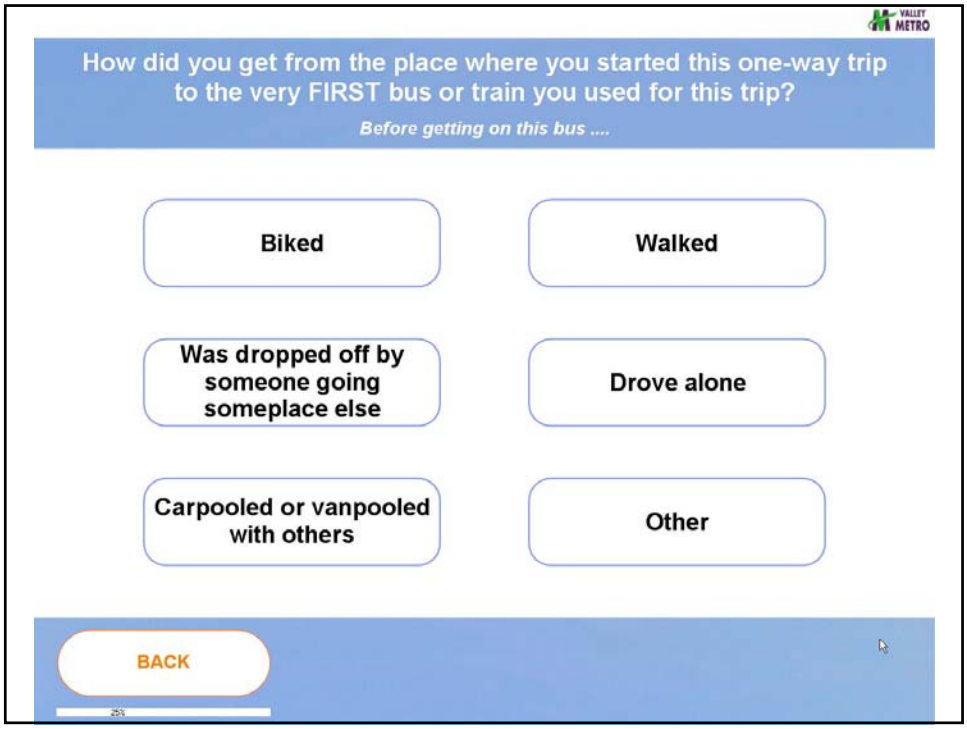

What is the NAME of the PLACE you are COMING FROM?
e.g. McDonalds, Wal-Mart, name of your employer, Sky Harbor, etc.
BACK
NEXT

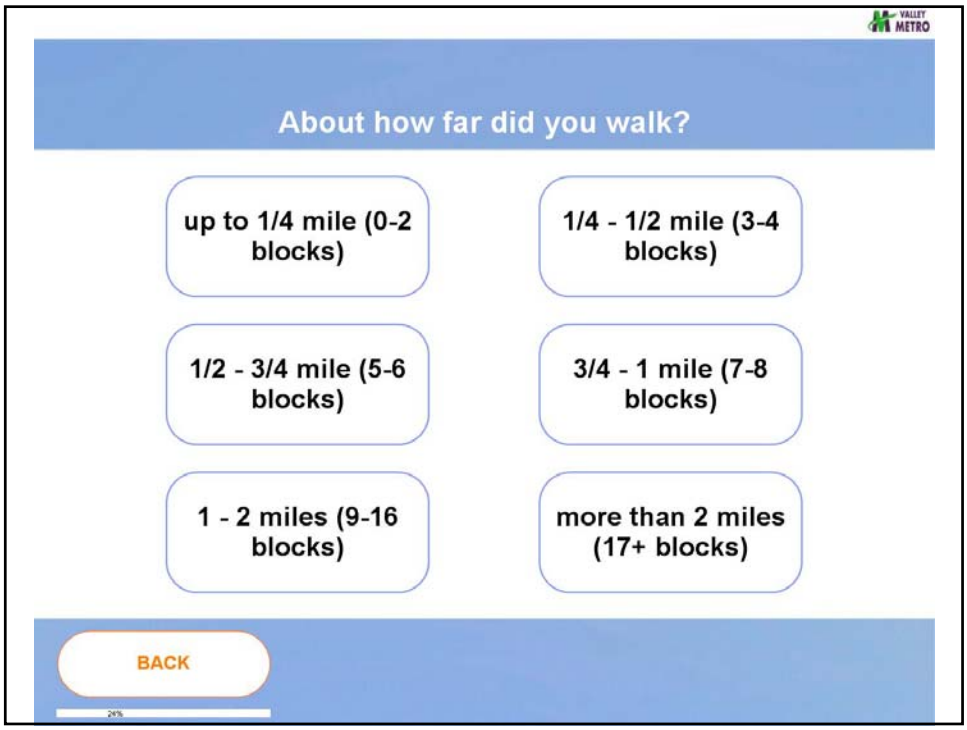

Do you know the EXACT STREET ADDRESS of the place you are coming from?
YES
NO
BACK

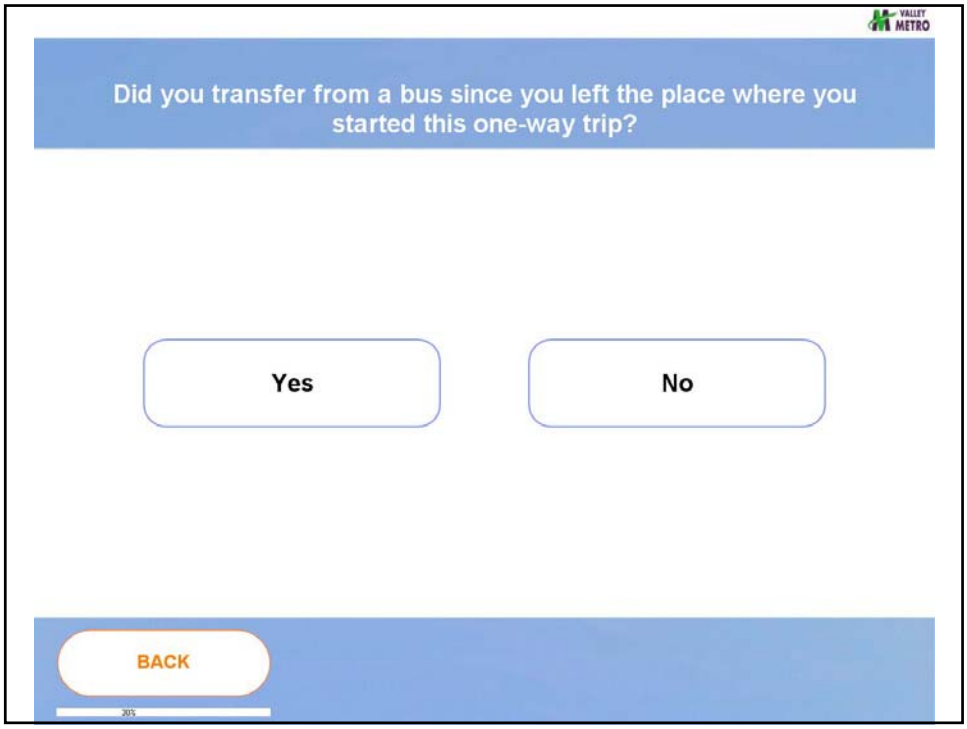

Enter EXACT STREET ADDRESS where this trip started
Exact Address
BACK
NEXT

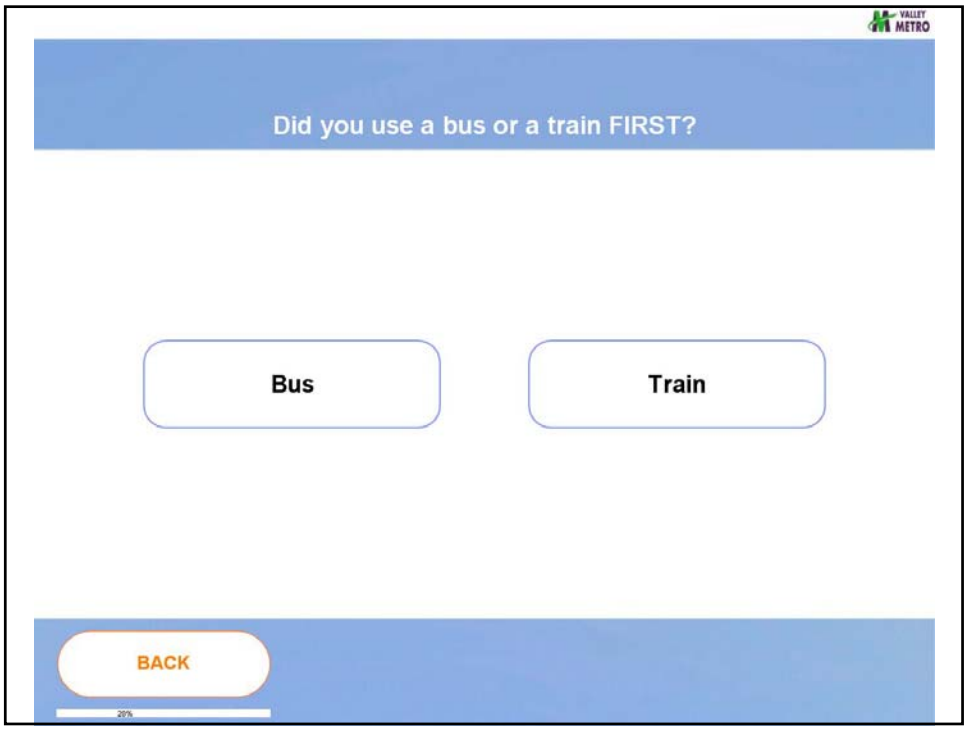

In what CITY is the place where you started this trip?
** City Name
-
PHOENIX
MESA
GLENDALE
SCOTTSDALE
CHANDLER
TEMPE
GILBERT
PEORIA
SURPRISE
Ajo
Ak-Chin Village
Amado
Apache Junction
Arizona City
Arizona Village
Ash Fork
Avondale
Avra Valley
Bagdad
Benson
Big Park
A B C D E
F G H J
K L M N O
P Q R S T
V W Y
-
BACK

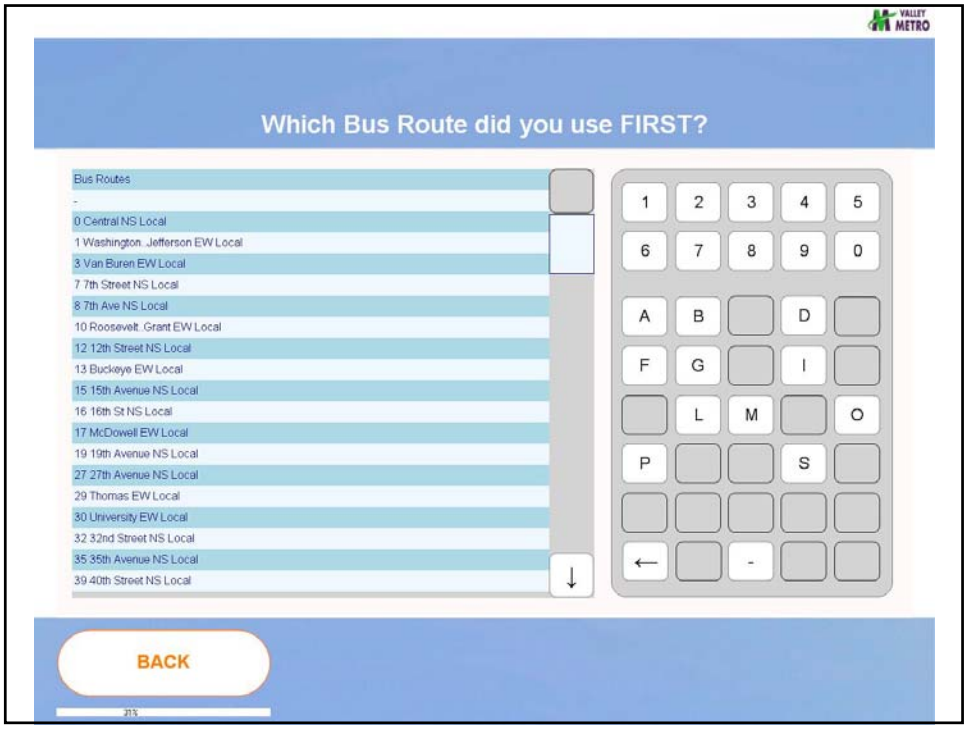

What is the ZIP Code of the place where you started this trip?
1 2 3
4 5 6
7 8 9
DEL 0 CLR
BACK
NEXT

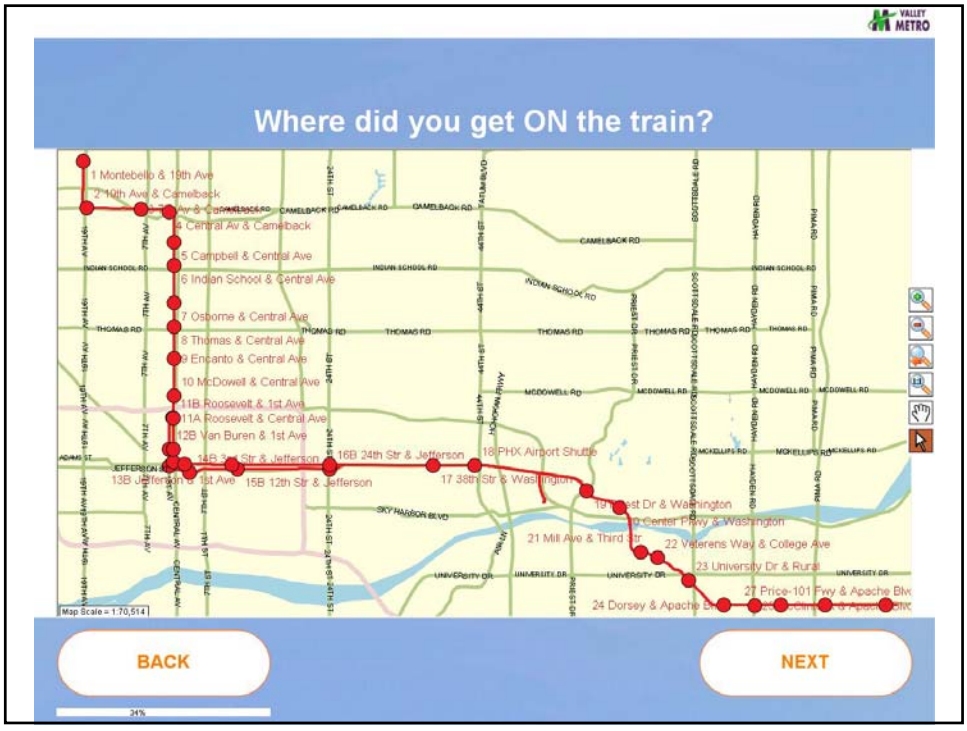

How did you get from the place where you started this one-way trip to the very FIRST bus or train you used for this trip?
Before getting on this bus ....
Biked
Walked
Was dropped off by someone going someplace else
Drove alone
Carpooled or vanpooled with others
Other
BACK

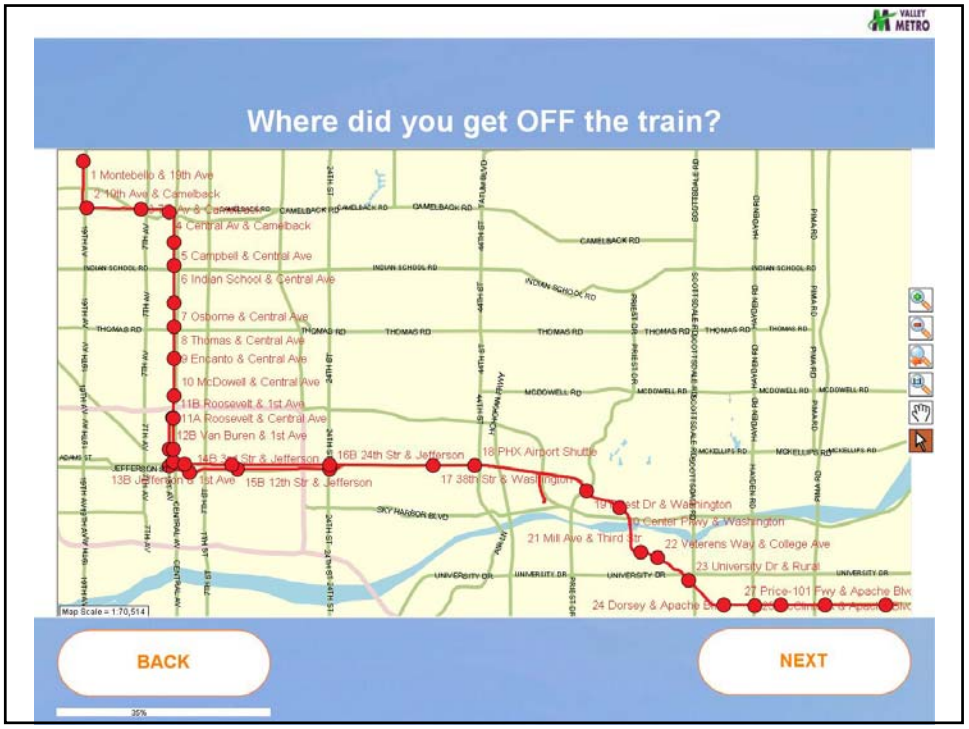

About how far did you walk?
up to 1/4 mile (0-2 blocks)
1/4 - 1/2 mile (3-4 blocks)
1/2 - 3/4 mile (5-6 blocks)
3/4 - 1 mile (7-8 blocks)
1 - 2 miles (9-16 blocks)
more than 2 miles (17+ blocks)
BACK

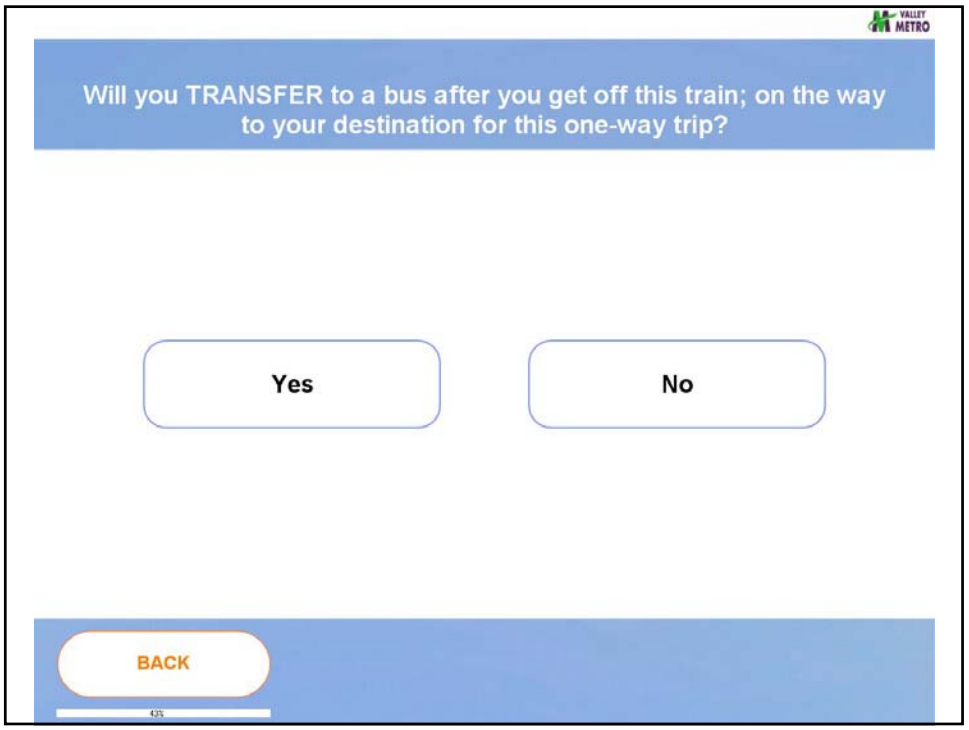

VALLEY METRO
Did you transfer from a bus since you left the place where you started this one-way trip?
Yes
No
BACK

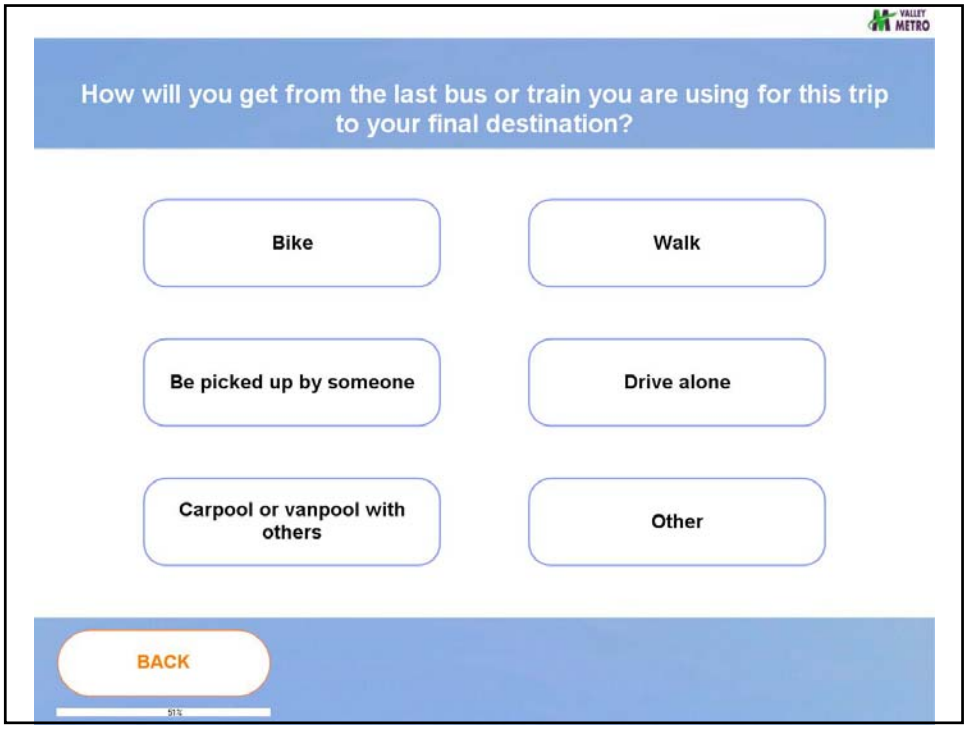

VALLEY METRO
Did you use a bus or a train FIRST?
Bus
Train
BACK

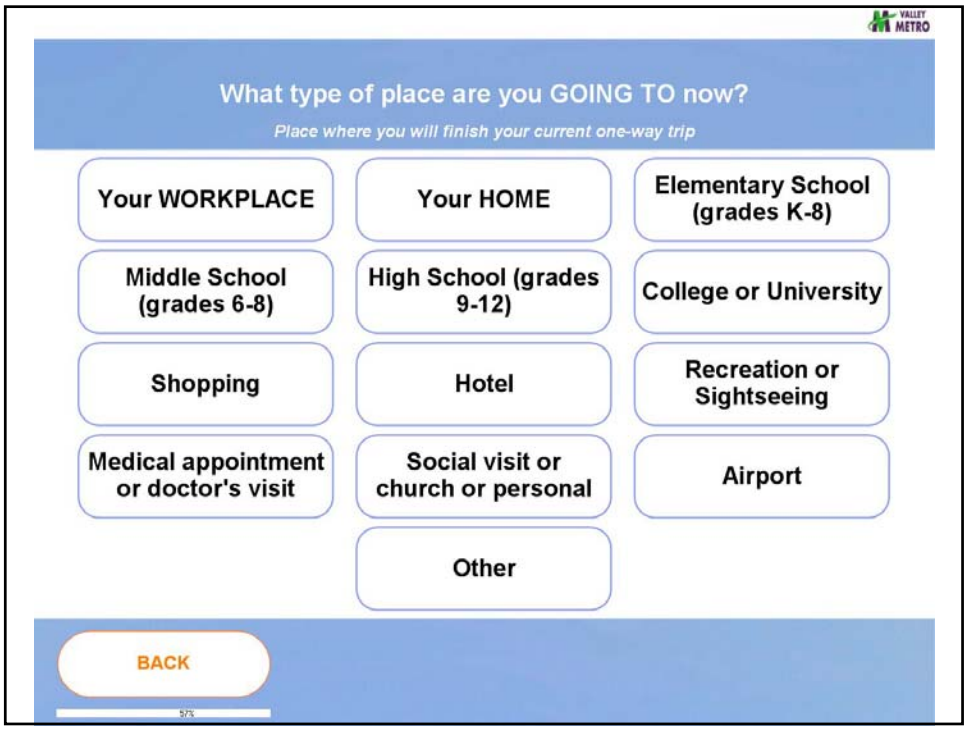

Which Bus Route did you use FIRST?
Bus Routes
-
0 Central NS Local
1 Washington, Jefferson EW Local
3 Van Buren EW Local
7 7th Street NS Local
8 7th Ave NS Local
10 Roosevelt, Grant EW Local
12 12th Street NS Local
13 Buckeye EW Local
15 15th Avenue NS Local
16 16th St NS Local
17 McDowell EW Local
19 19th Avenue NS Local
27 27th Avenue NS Local
29 Thomas EW Local
30 University EW Local
32 32nd Street NS Local
35 35th Avenue NS Local
39 40th Street NS Local
1 2 3 4 5
6 7 8 9 0
A B D
F G I
L M O
P S
BACK

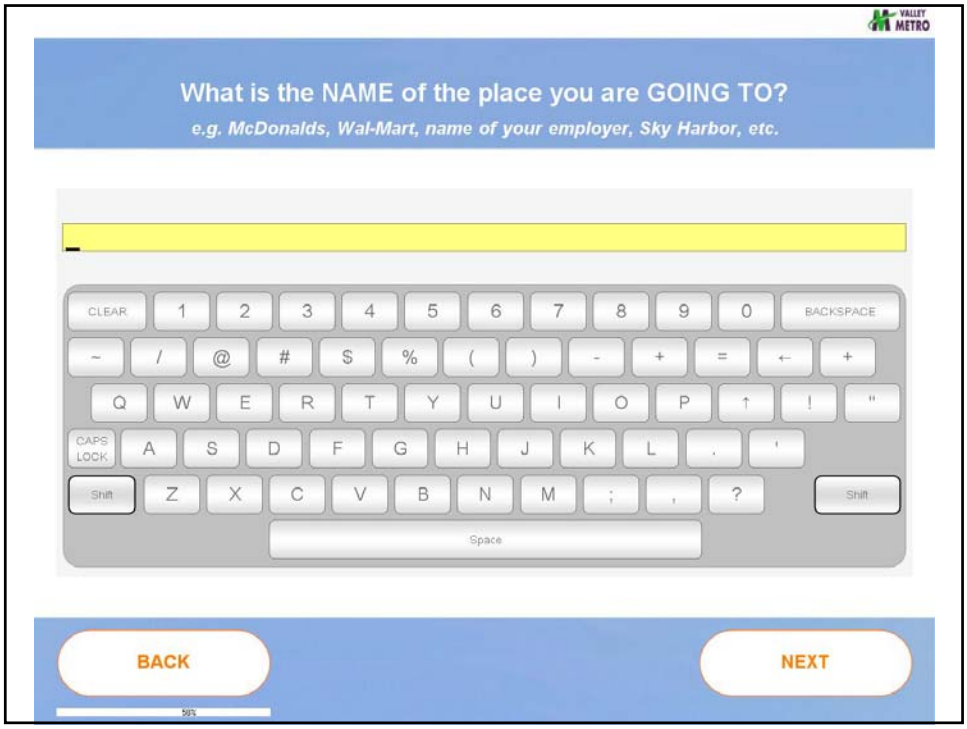

Where did you get ON the train?
1 Montebello & 19th Ave
2 19th Ave & Camelback
4 Central Av & Camelback
5 Campbell & Central Ave
6 Indian School & Central Ave
7 Osborne & Central Ave
8 Thomas & Central Ave
9 Encanto & Central Ave
10 McDowell & Central Ave
11B Roosevelt & 1st Ave
11A Roosevelt & Central Ave
12B Van Buren & 1st Ave
13B Jefferson & 1st Ave
15B 12th Str & Jefferson
16B 24th Str & Jefferson
17 38th Str & Washington
18 PHX Airport Shuttle
21 Mill Ave & Third Str
22 Veterans Way & College Ave
23 University Dr & Rural
24 Dorsey & Apache
BACK
NEXT


Where did you get OFF the train?
1 Montebello & 19th Ave
2 19th Ave & Camelback
4 Central Av & Camelback
5 Campbell & Central Ave
6 Indian School & Central Ave
7 Osborne & Central Ave
8 Thomas & Central Ave
9 Encanto & Central Ave
10 McDowell & Central Ave
11B Roosevelt & 1st Ave
11A Roosevelt & Central Ave
12B Van Buren & 1st Ave
13B Jefferson & 1st Ave
15B 12th Str & Jefferson
16B 24th Str & Jefferson
17 38th Str & Washington
18 PHX Airport Shuttle
21 Mill Ave & Third Str
22 Veterans Way & College Ave
23 University Dr & Rural
24 Dorsey & Apache Blvd
BACK
NEXT

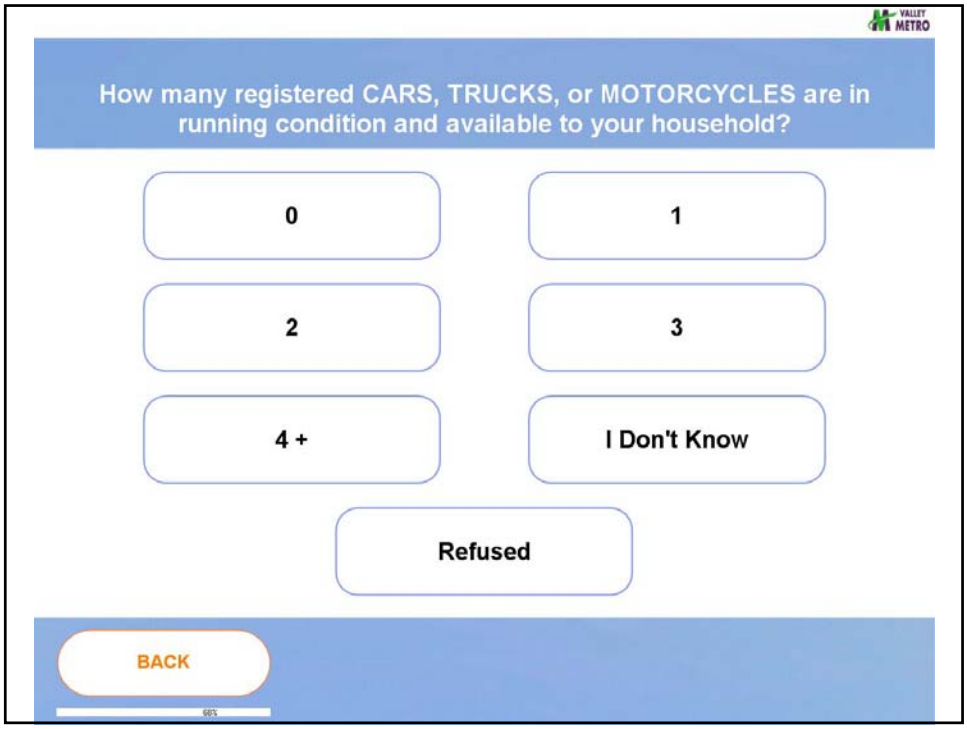

Will you TRANSFER to a bus after you get off this train; on the way to your destination for this one-way trip?
Yes
No
BACK

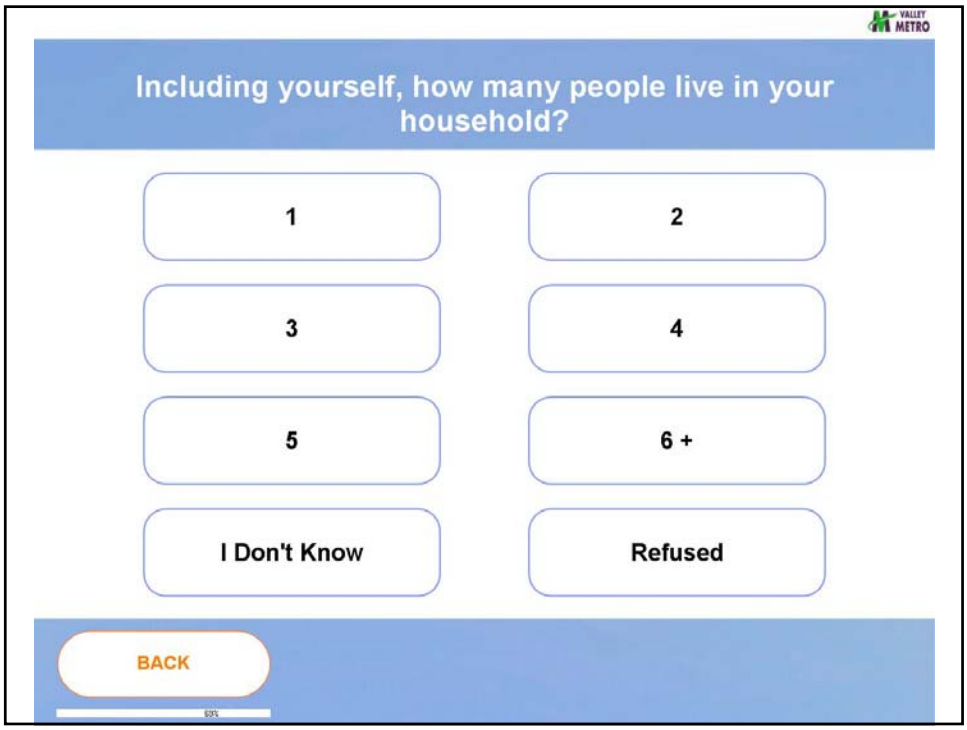

How will you get from the last bus or train you are using for this trip to your final destination?
Bike
Walk
Be picked up by someone
Drive alone
Carpool or vanpool with others
Other
BACK

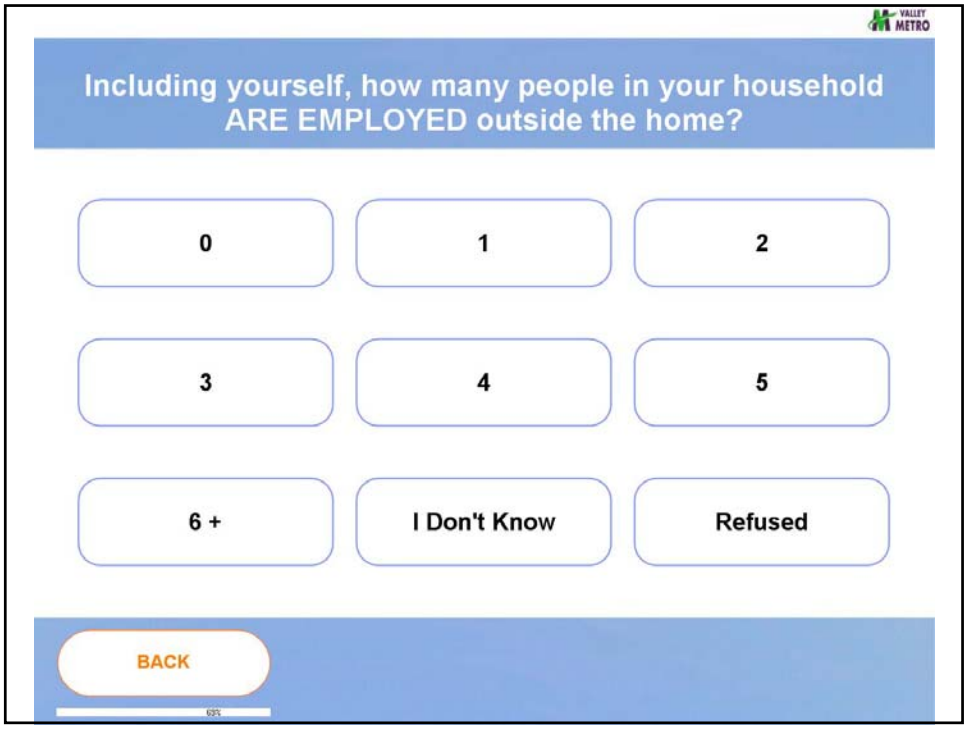

What type of place are you GOING TO now?
Place where you will finish your current one-way trip
Your WORKPLACE
Your HOME
Elementary School (grades K-8)
Middle School (grades 6-8)
High School (grades 9-12)
College or University
Shopping
Hotel
Recreation or Sightseeing
Medical appointment or doctor's visit
Social visit or church or personal
Airport
Other
BACK

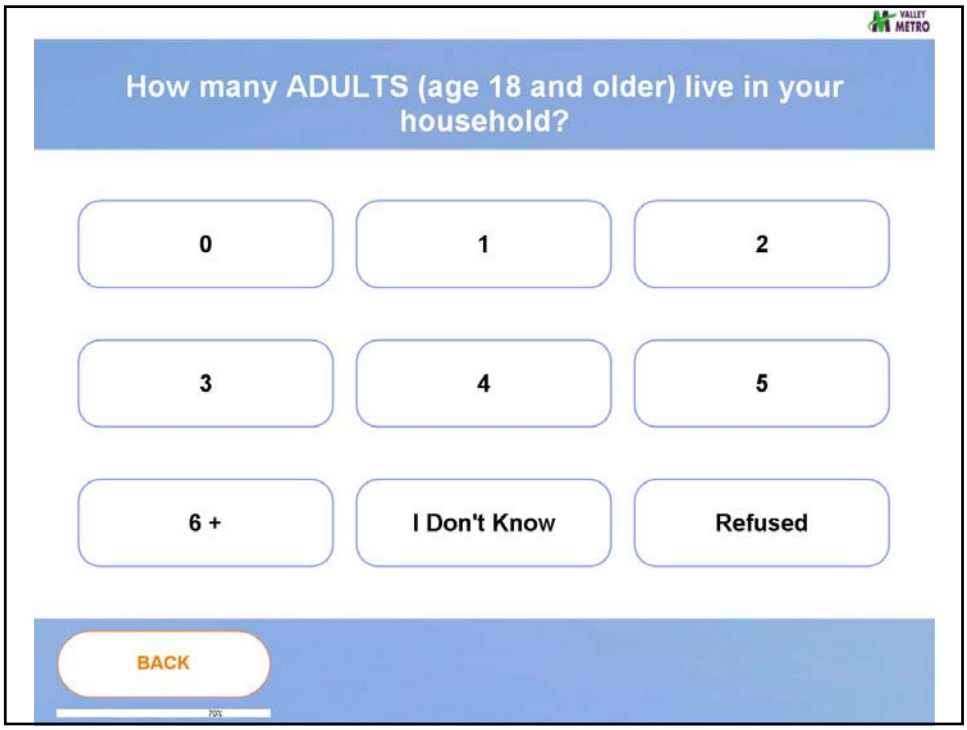

What is the NAME of the place you are GOING TO?
e.g. McDonalds, Wal-Mart, name of your employer, Sky Harbor, etc.
CLEAR 1 2 3 4 5 6 7 8 9 0 BACKSPACE
~ / @ # $ % ( ) - + = ← +
Q W E R T Y U I O P ↑ ! "
CAPS LOCK A S D F G H J K L . '
Shift Z X C V B N M ; , ? Shift
Space
BACK
NEXT

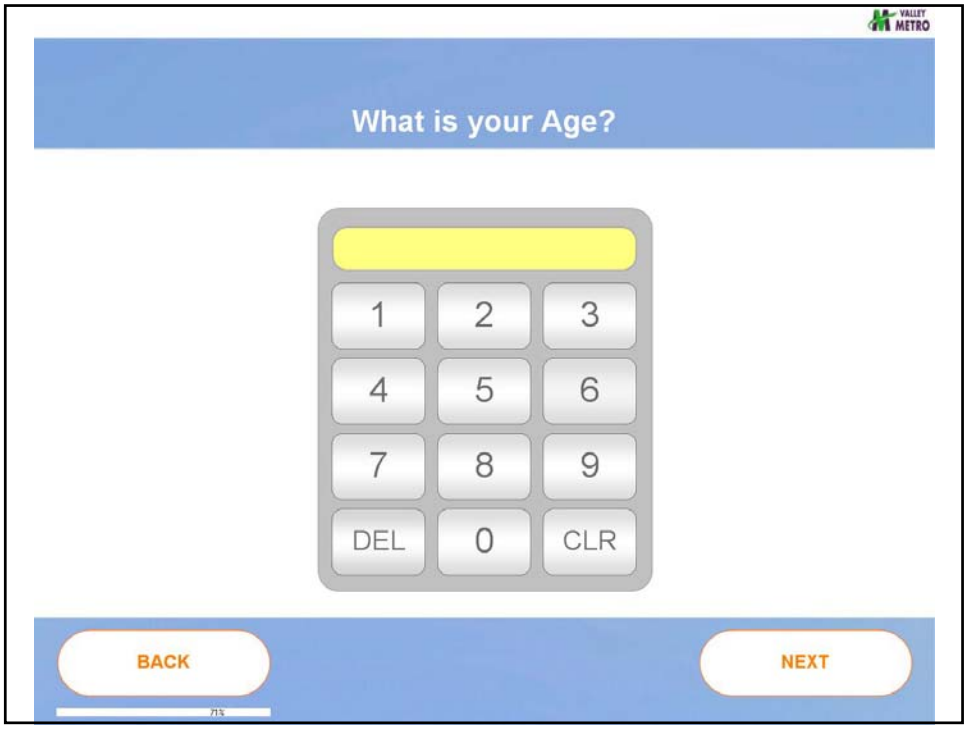

Do you know the EXACT STREET ADDRESS of the place you are going to?
YES
NO
BACK

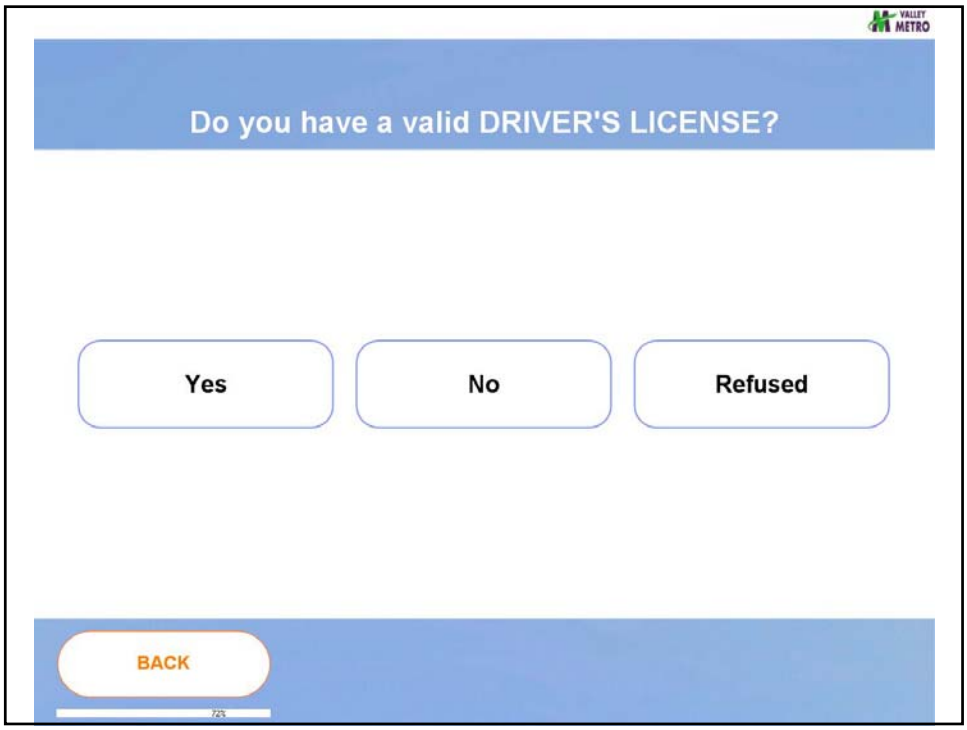

How many registered CARS, TRUCKS, or MOTORCYCLES are in running condition and available to your household?
0
1
2
3
4 +
I Don't Know
Refused
BACK

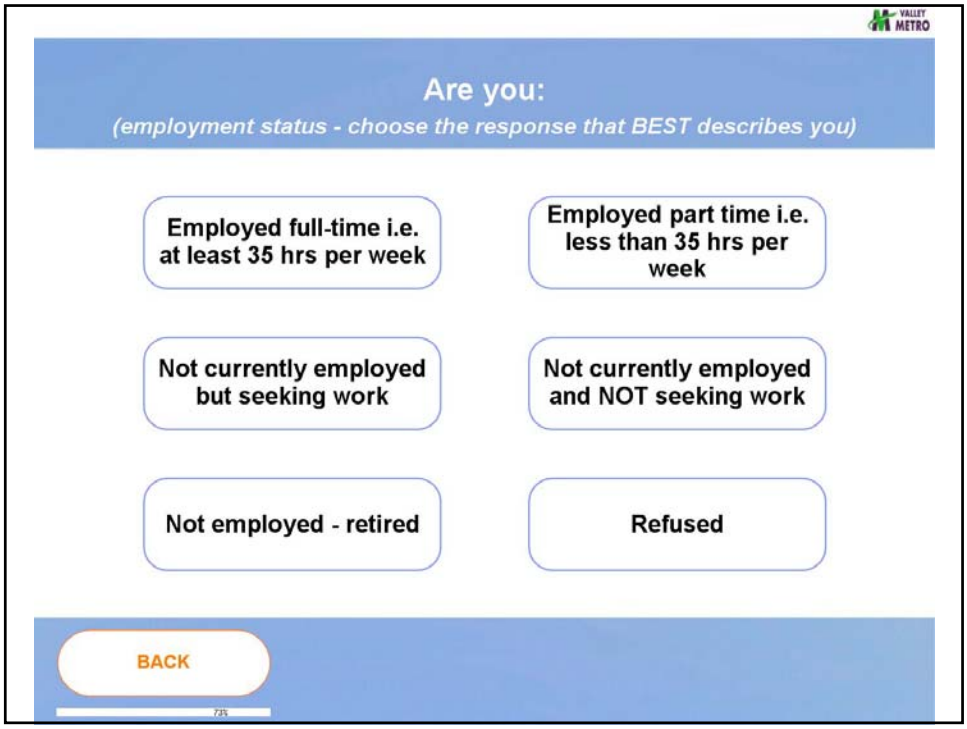

Including yourself, how many people live in your household?
1
2
3
4
5
6 +
I Don't Know
Refused
BACK

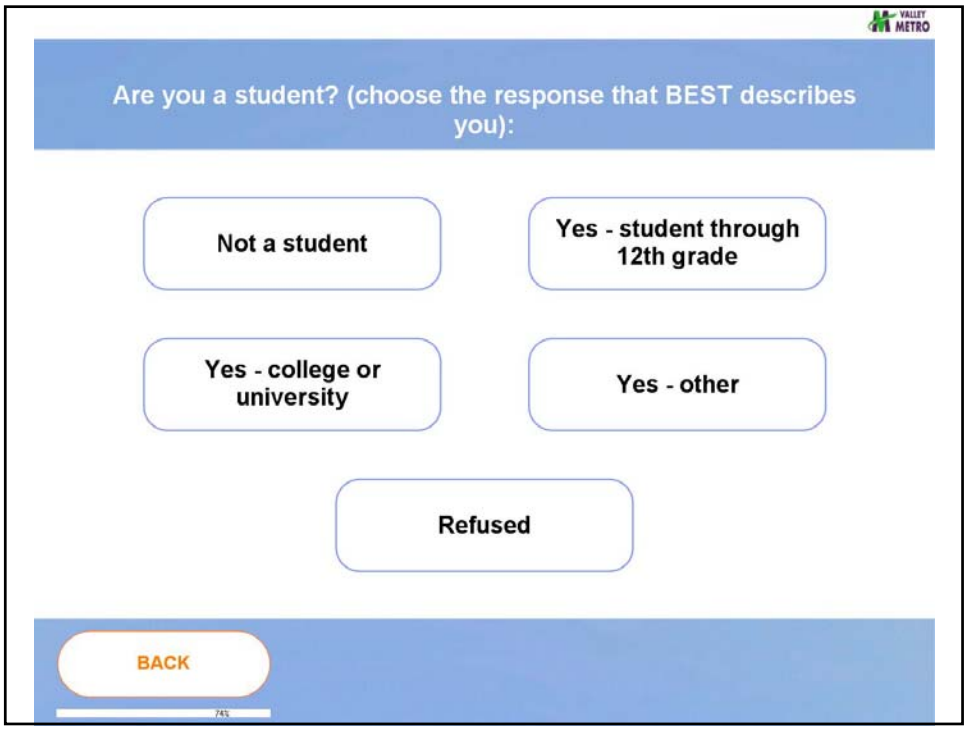

Including yourself, how many people in your household ARE EMPLOYED outside the home?
0
1
2
3
4
5
6 +
I Don't Know
Refused
BACK

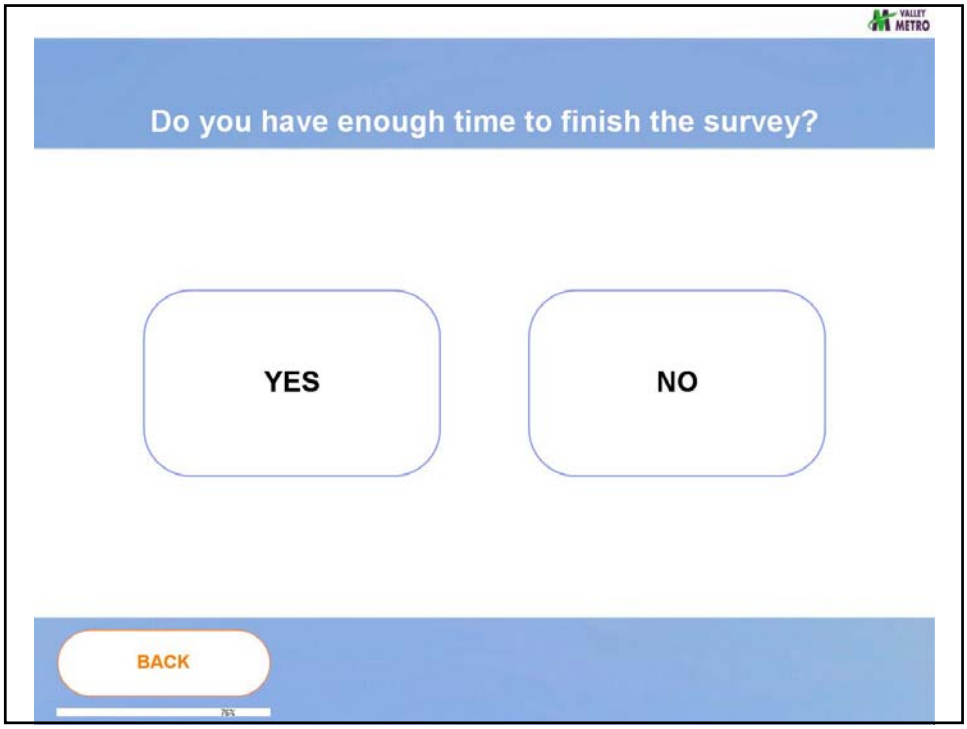

How many ADULTS (age 18 and older) live in your household?
0
1
2
3
4
5
6 +
I Don't Know
Refused
BACK

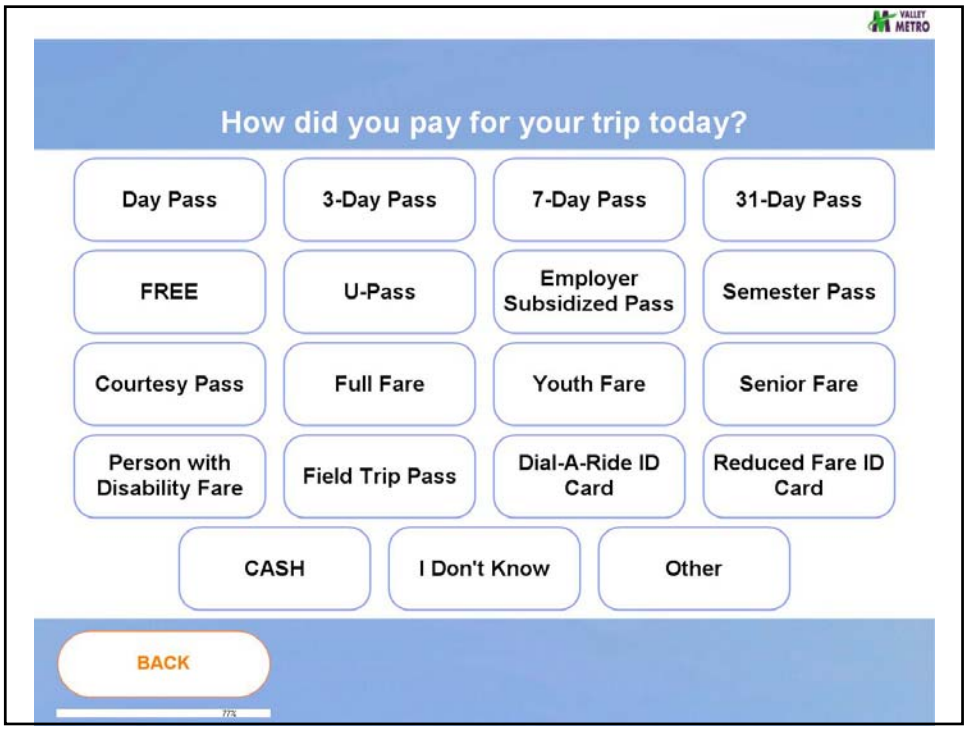

What is your Age?
1
2
3
4
5
6
7
8
9
DEL
0
CLR
BACK
NEXT

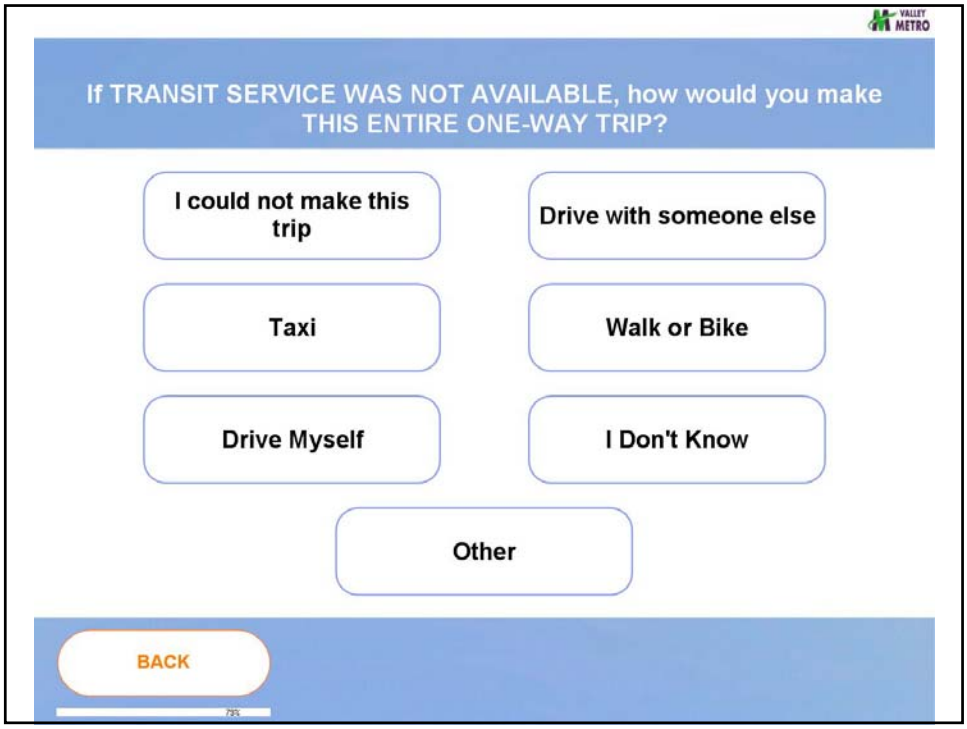

Do you have a valid DRIVER'S LICENSE?
Yes
No
Refused
BACK

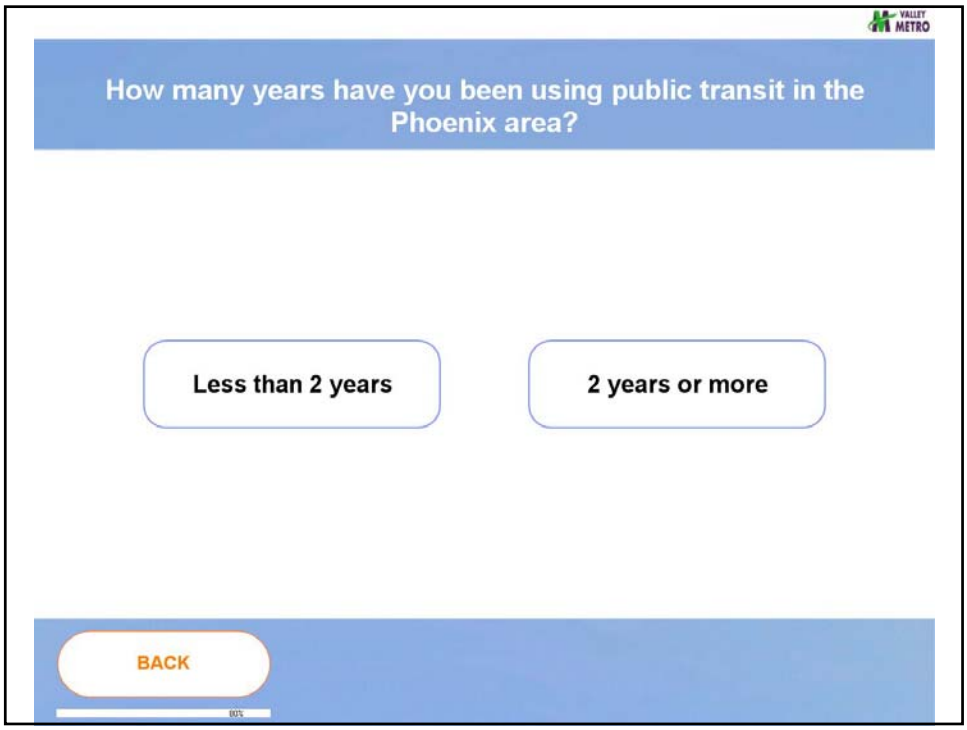

Are you:
(employment status - choose the response that BEST describes you)
Employed full-time i.e. at least 35 hrs per week
Employed part time i.e. less than 35 hrs per week
Not currently employed but seeking work
Not currently employed and NOT seeking work
Not employed - retired
Refused
BACK

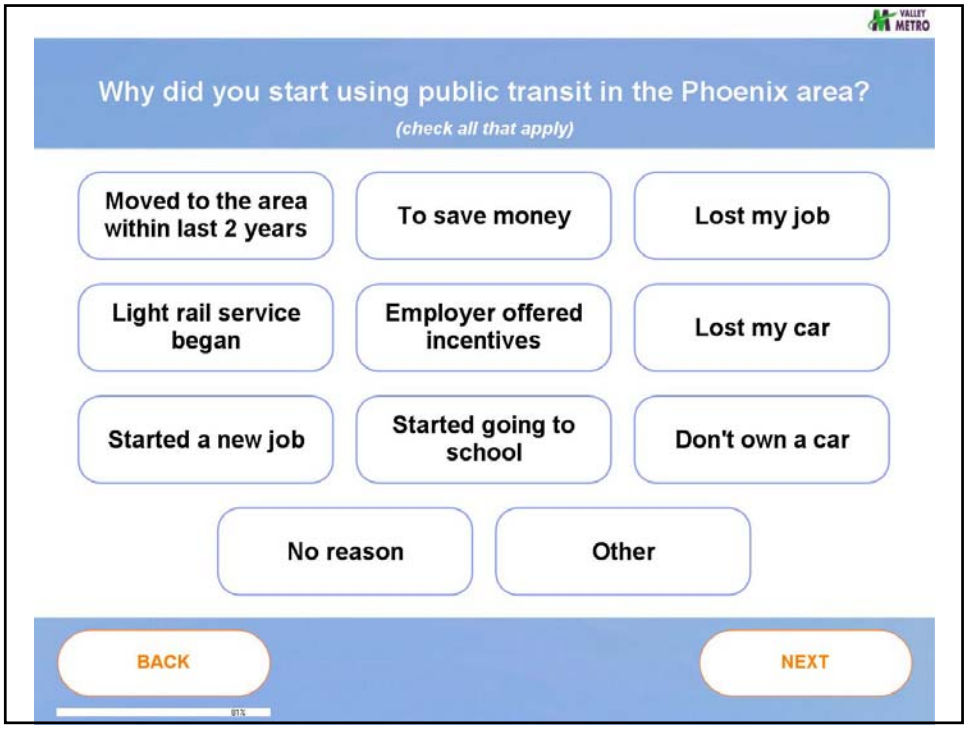

Are you a student? (choose the response that BEST describes you):
Not a student
Yes - student through 12th grade
Yes - college or university
Yes - other
Refused
BACK

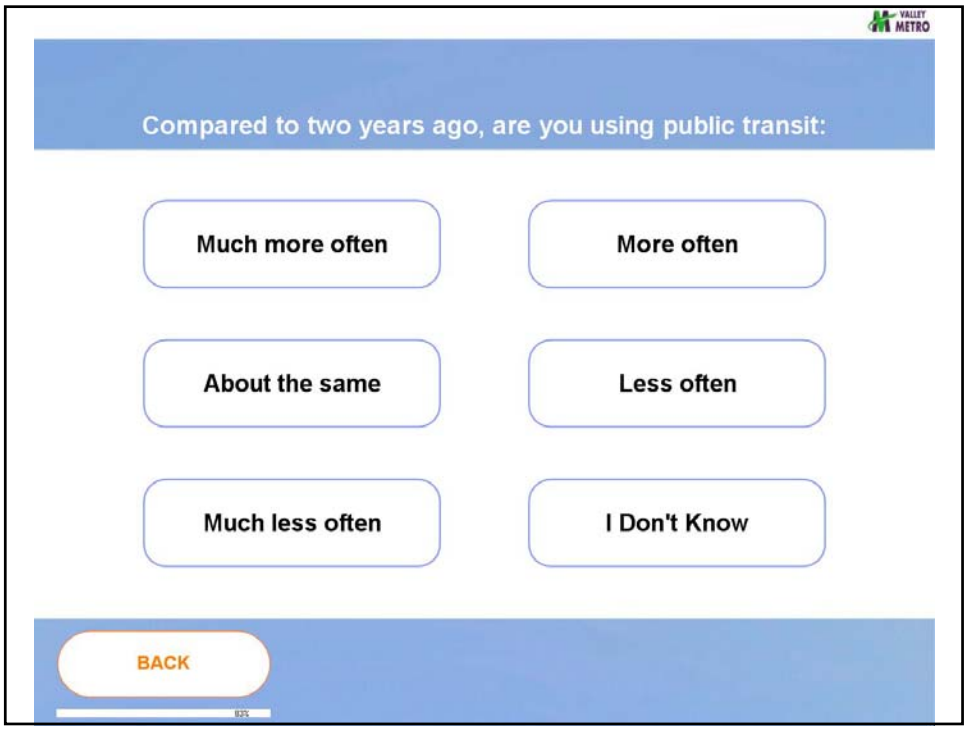

Do you have enough time to finish the survey?
YES
NO
BACK

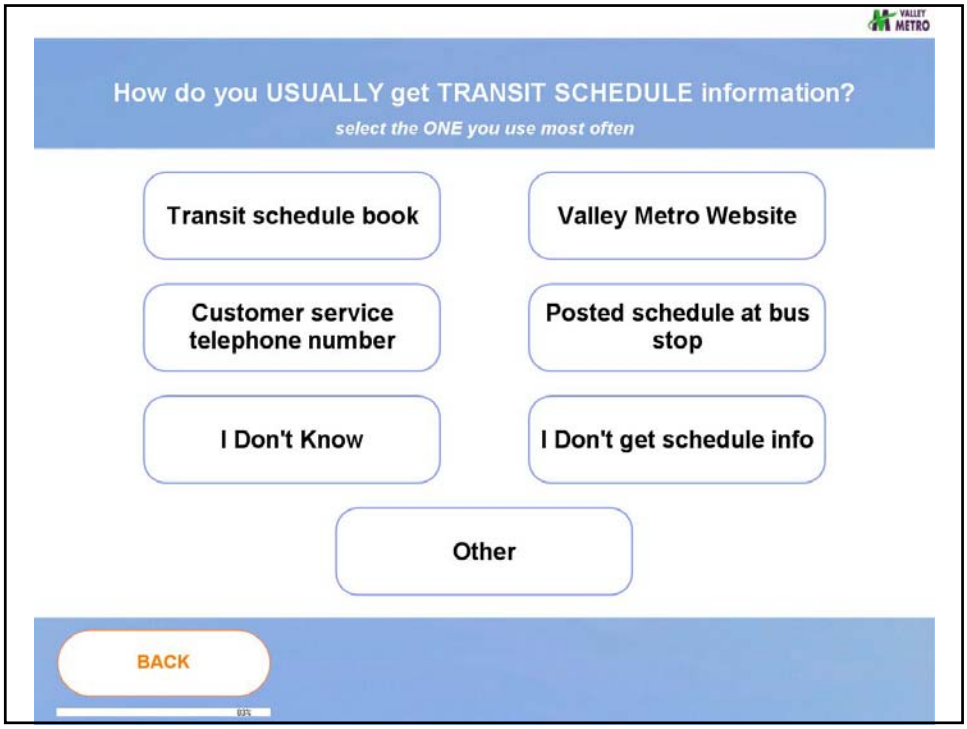

How did you pay for your trip today?
Day Pass
3-Day Pass
7-Day Pass
31-Day Pass
FREE
U-Pass
Employer Subsidized Pass
Semester Pass
Courtesy Pass
Full Fare
Youth Fare
Senior Fare
Person with Disability Fare
Field Trip Pass
Dial-A-Ride ID Card
Reduced Fare ID Card
CASH
I Don't Know
Other
BACK

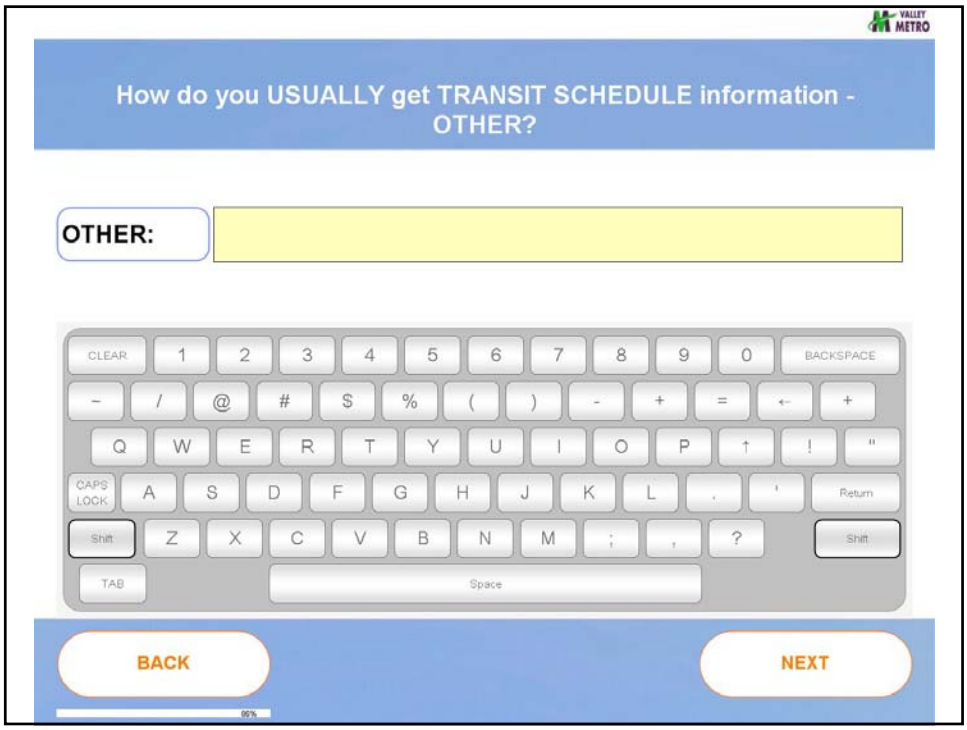

If TRANSIT SERVICE WAS NOT AVAILABLE, how would you make THIS ENTIRE ONE-WAY TRIP?
I could not make this trip
Drive with someone else
Taxi
Walk or Bike
Drive Myself
I Don't Know
Other
BACK

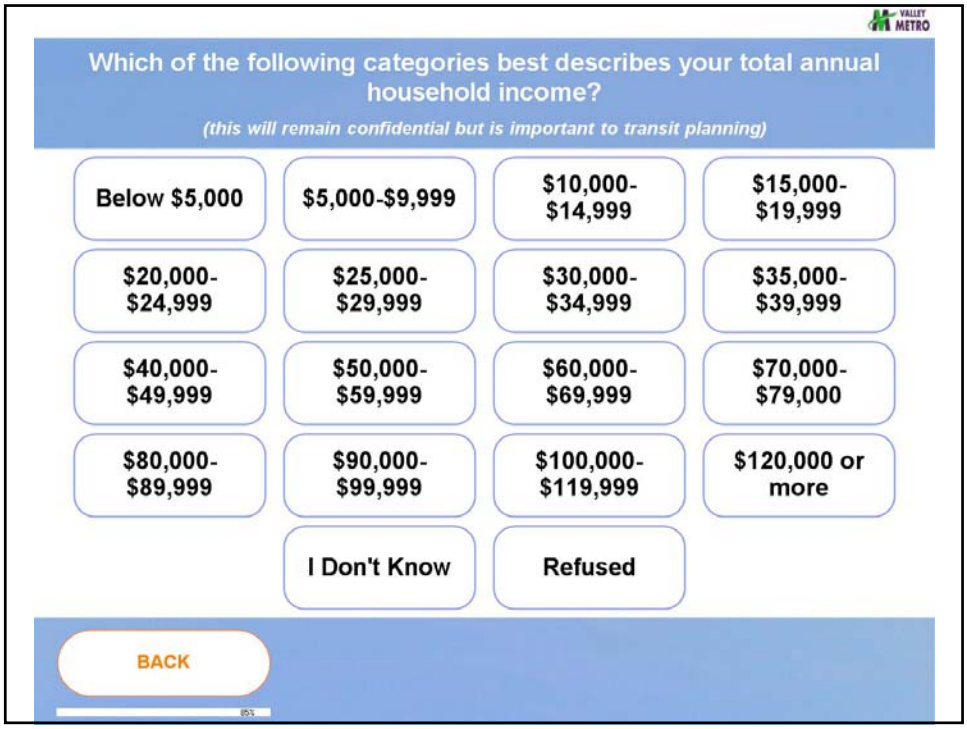

How many years have you been using public transit in the Phoenix area?
Less than 2 years
2 years or more
BACK

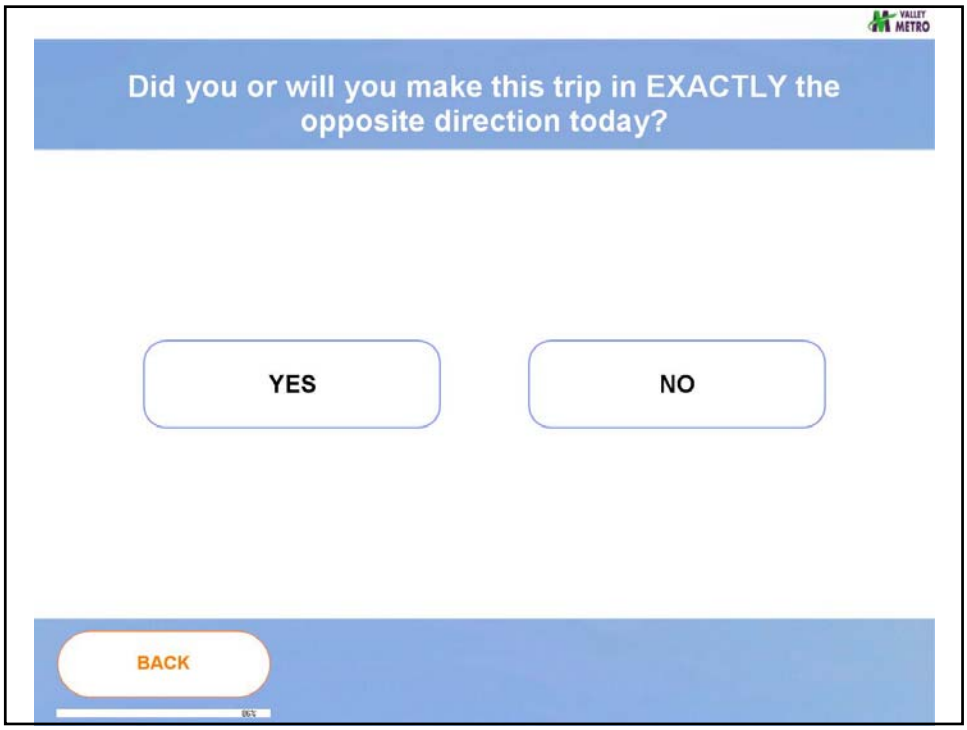

Why did you start using public transit in the Phoenix area?
(check all that apply)
Moved to the area within last 2 years
To save money
Lost my job
Light rail service began
Employer offered incentives
Lost my car
Started a new job
Started going to school
Don't own a car
No reason
Other
BACK
NEXT

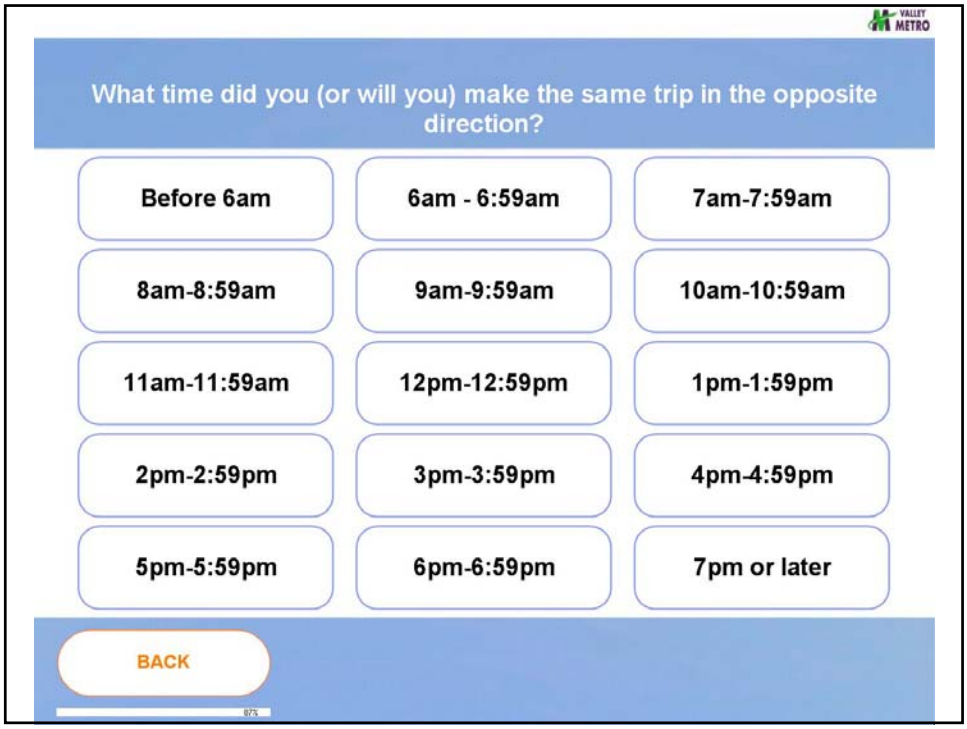

Compared to two years ago, are you using public transit:
Much more often
More often
About the same
Less often
Much less often
I Don't Know
BACK

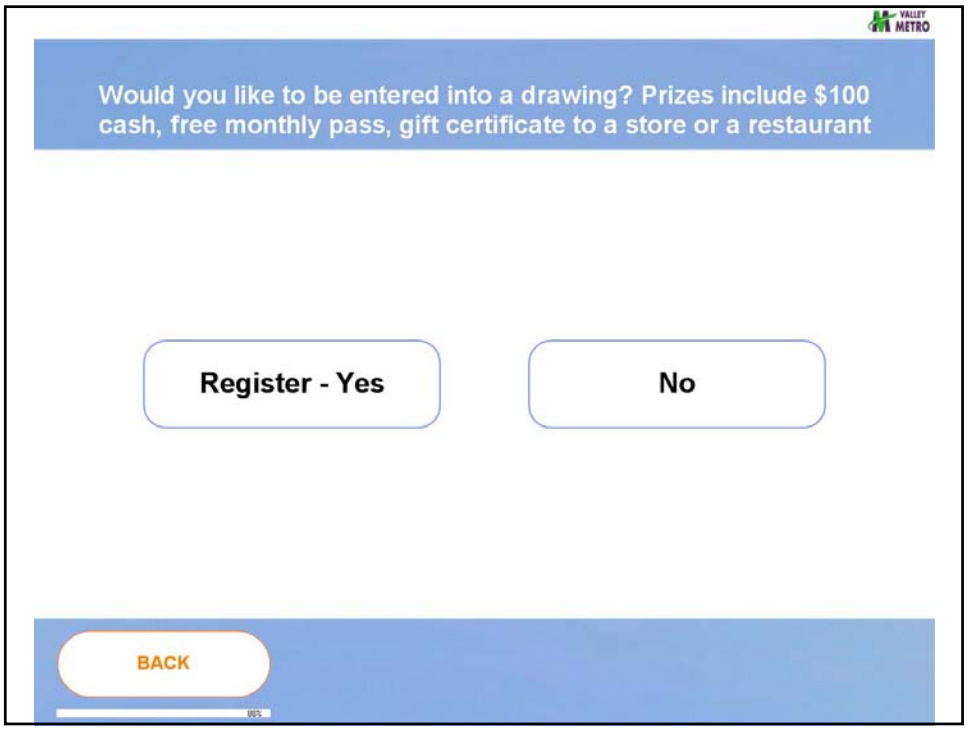

How do you USUALLY get TRANSIT SCHEDULE information?
select the ONE you use most often
Transit schedule book
Valley Metro Website
Customer service telephone number
Posted schedule at bus stop
I Don't Know
I Don't get schedule info
Other
BACK

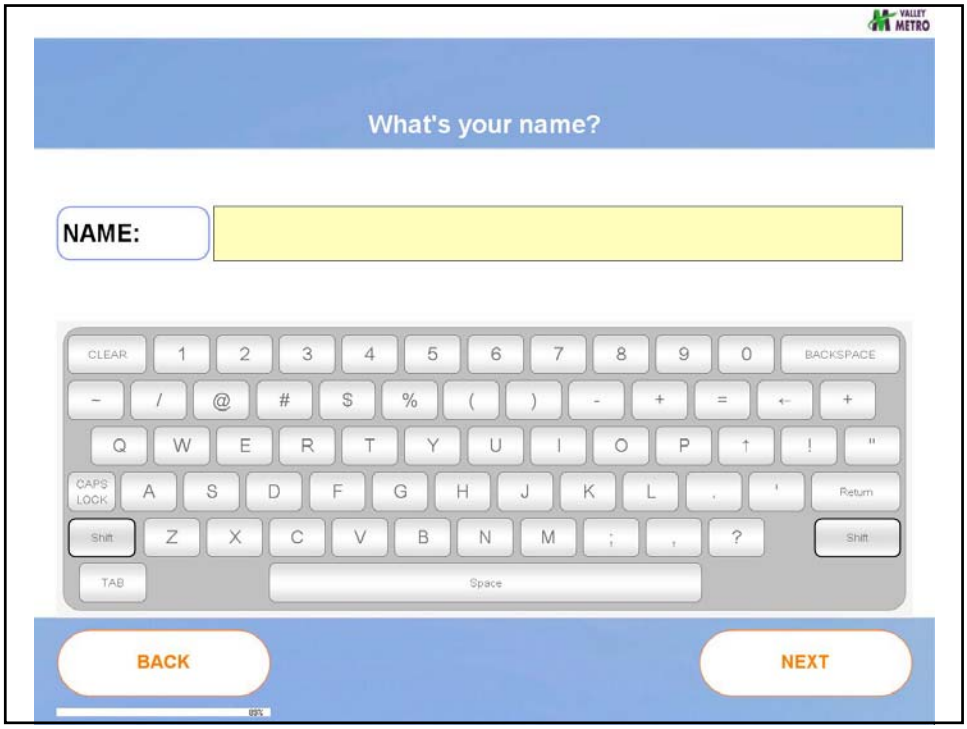

How do you USUALLY get TRANSIT SCHEDULE information - OTHER?
OTHER:
BACK
NEXT

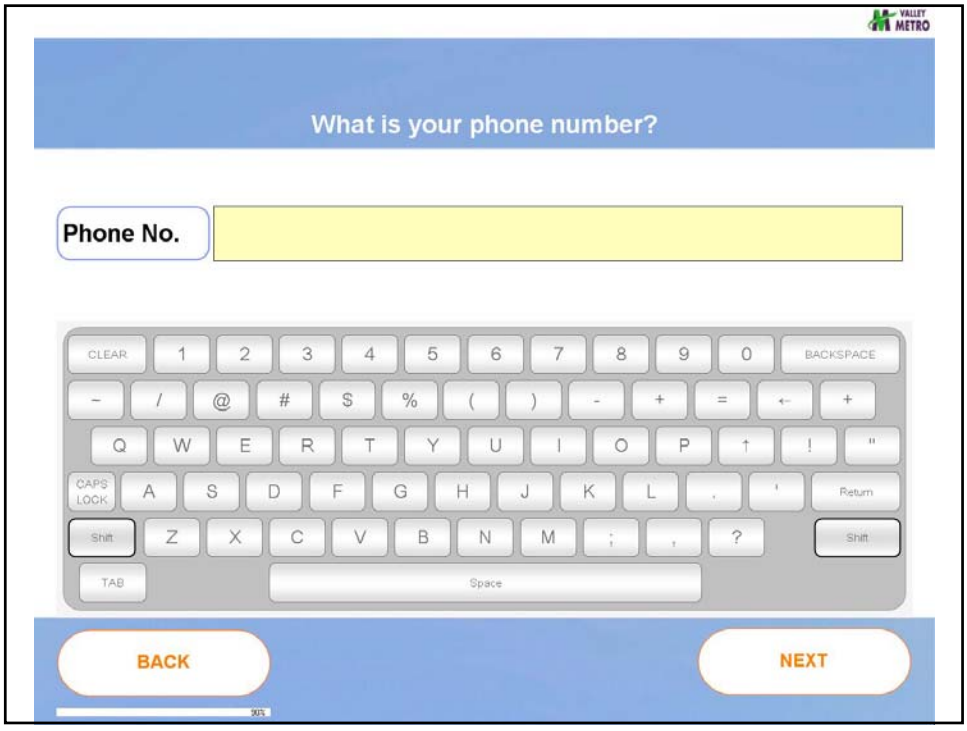

Which of the following categories best describes your total annual household income?
(this will remain confidential but is important to transit planning)
Below $5,000
$5,000-$9,999
$10,000-$14,999
$15,000-$19,999
$20,000-$24,999
$25,000-$29,999
$30,000-$34,999
$35,000-$39,999
$40,000-$49,999
$50,000-$59,999
$60,000-$69,999
$70,000-$79,000
$80,000-$89,999
$90,000-$99,999
$100,000-$119,999
$120,000 or more
I Don't Know
Refused
BACK

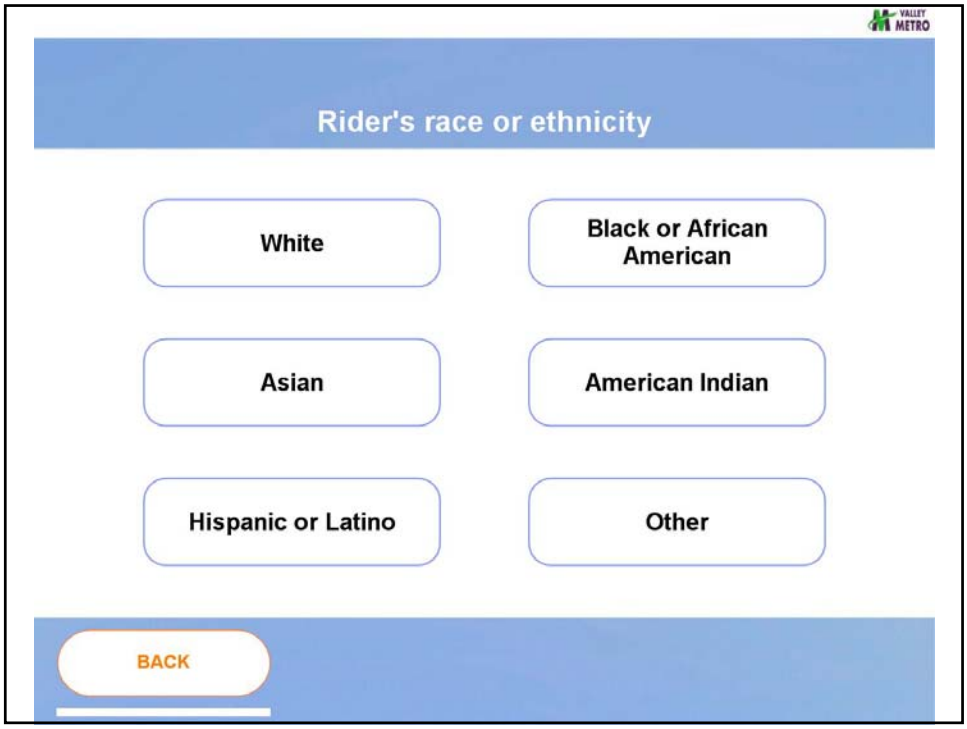

Did you or will you make this trip in EXACTLY the opposite direction today?
YES
NO
BACK

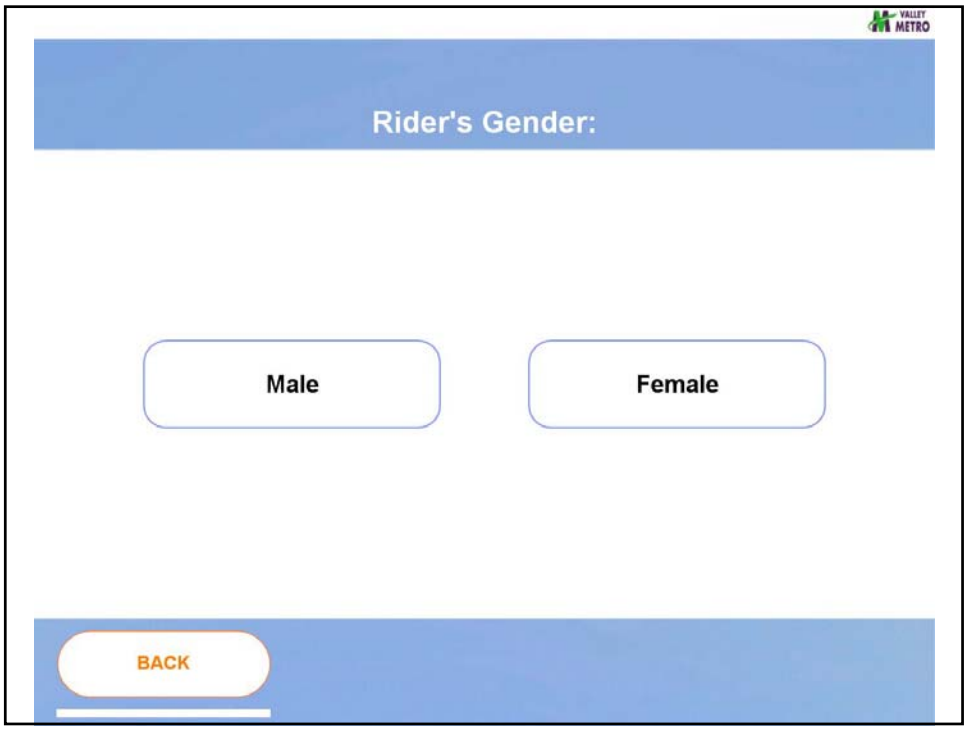

What time did you (or will you) make the same trip in the opposite direction?
Before 6am
6am - 6:59am
7am-7:59am
8am-8:59am
9am-9:59am
10am-10:59am
11am-11:59am
12pm-12:59pm
1pm-1:59pm
2pm-2:59pm
3pm-3:59pm
4pm-4:59pm
5pm-5:59pm
6pm-6:59pm
7pm or later
BACK


Would you like to be entered into a drawing? Prizes include $100 cash, free monthly pass, gift certificate to a store or a restaurant
Register - Yes
No
BACK


What's your name?
NAME:
BACK
NEXT


What is your phone number?
Phone No.
BACK
NEXT


Rider's race or ethnicity
White
Black or African American
Asian
American Indian
Hispanic or Latino
Other
BACK


Rider's Gender:
Male
Female
BACK

APPENDIX E: DATA DICTIONARY

2010-11 Valley Metro Regional Transit Survey

Variable Name	Description	Values
ETC_ID	Unique ETC Identification Number	
MAIN_ID	Main Identification Number	
MAIN_ID2	Main Identification Number 2	
DATE	Date the survey was administered	
BUS OR RAIL	Bus or Rail Record	B=Bus R=Rail
ROUTE_NAME	Route or Station Name	
ROUTE_CODE	Route or Station Name (Code)	
ROUTE_TYPE	Type of Route	
ROUTE_TYPE_CODE	Type of Route (Code)	LOC=Local EXP=Express CIR=Circulator LIM=Limited RAP=Rapid BRT=BRT SHT=Shuttle RAIL=Rail
HOME_ADDRESS	Home Address	
HOME_INTERS_CORNER_CODE	Corner of the intersection where Home is located	1=NorthEast Corner 2=NorthWest Corner 3=SouthWest Corner 4=SouthEast Corner
HOME_INTERS_CORNER	Corner of the intersection where Home is located (code)	
HOME_CITY	Home City	
HOME_ZIP	Home Zip Code	
HOME_LON	Home Longitude	
HOME_LAT	Home Latitude	
ORIGIN_TYPE_OF_PLACE_CODE	Origin Type of Place (Code)	1=Workplace 2=Home 3=Elementary School (grades K-5) 4=Middle School (grades 6-8) 5=High School (grades 9-12) 6=College/University (Students Only) 7=Shopping 8=Hotel 9=Recreation/Sightseeing 10=Medical Appointment/Doctor's Visit 11=Social/Church/Personal/Friend's House 12=Airport (Air Passengers Only) 13=Other
ORIGIN_TYPE_OF_PLACE	Origin Type of Place	
ORIGIN_PLACE_NAME	Origin Place Name	
ORIGIN_ADDRESS	Origin Address	
ORIGIN_INTERS_CORNER_CODE	Corner of the intersection where Origin is located (Code)	1=Northwest 2=Northeast 3=Southwest 4=Southeast
ORIGIN_INTERS_CORNER	Corner of the intersection where Origin is located	
ORIGIN_CITY	Origin City	
ORIGIN_ZIP	Origin Zip Code	
ORIGIN_LON	Origin Longitude	
ORIGIN_LAT	Origin Latitude	
ACCESS_MODE_CODE	Mode of access from the Origin to the transit system (Code)	1=Bike 2=Walk 3=Was dropped off by someone going someplace else 4=Dove alone 5=Carpooled or vanpooled with others 6=Other
ACCESS_MODE	Mode of access from the Origin to the transit system	
ACCESS_MODE_OTHER	Mode of access from the Origin if OTHER	
ACCESS_WALK_DISTANCE_CODE	Distance walked from the Origin to transit system (Code)	1= up to 1/4 mile (0-2 blocks) 2=1/4 - 1/2 mile (3-4 blocks) 3=1/2 - 3/4 mile (5-6 blocks) 4=3/4 - 1 mile (7-8 blocks) 5=1 - 2 miles (9-16 blocks) 6= more than 2 miles (17+ blocks)
ACCESS_WALK_DISTANCE	Distance walked from the Origin to transit system	
ACCESS_CARPOOL_SIZE	Number of persons in the carpool/vanpool	2=2 3=3 4=4 5=5+
ACCESS_PARK_AND_RIDE_LOCATION	Park and Ride location	

2010-11 Valley Metro Regional Transit Survey

Variable Name	Description	Values
FROM_TRANSFER_CODE	Did the passenger transfer FROM another route before boarding the route on which the survey was conducted (Code)	1=Yes 2=No
FROM_TRANSFER	Did the passenger transfer FROM another route before boarding the route on which the survey was conducted	
FROM_BUS_OR_TRAIN_1ST_CODE	Was the 1st FROM transfer a Bus or the Train (Code)	1=Bus 2=Train 3=No
FROM_BUS_OR_TRAIN_1ST	Was the 1st FROM transfer a Bus or the Train	
FROM_1ST_BUS	1st Bus Route Transferred FROM	
FROM_1ST_TRAIN_ON_ADDR	Station Boarded on 1st FROM Train Transfer	
FROM_1ST_TRAIN_OFF_ADDR	Station Alighted on 1st FROM Train Transfer	
FROM_BUS_OR_TRAIN_2ND_CODE	Was the 2nd FROM transfer a Bus or the Train (Code)	1=Bus 2=Train 3=No
FROM_BUS_OR_TRAIN_2ND	Was the 2nd FROM transfer a Bus or the Train	
FROM_2ND_BUS	2nd Bus Route Transferred FROM	
FROM_2ND_TRAIN_ON_ADDR	Station Boarded on 2nd FROM Train Transfer	
FROM_2ND_TRAIN_OFF_ADDR	Station Alighted on 2nd FROM Train Transfer	
FROM_BUS_OR_TRAIN_3RD_CODE	Was the 3rd FROM transfer a Bus or the Train (Code)	1=Bus 2=Train 3=No
FROM_BUS_OR_TRAIN_3RD	Was the 3rd FROM transfer a Bus or the Train	
FROM_3RD_BUS	3rd Bus Route Transferred FROM	
FROM_3RD_TRAIN_ON_ADDR	Station Boarded on 3rd FROM Train Transfer	
FROM_3RD_TRAIN_OFF_ADDR	Station Alighted on 3rd FROM Train Transfer	
FROM_MORE_THAN_3_TRANSFERS_CODE	Did passenger have more than 3 FROM transfers (Code)	1=Yes 2=No 9=Not provided
FROM_MORE_THAN_3_TRANSFERS	Did passenger have more than 3 FROM transfers	
ON_ADDRESS	Description of the location where passenger GOT ON	
ON_LONNUM	Boarding Longitude	
ON_LATNUM	Boarding Latitude	
ON_RAILSTATION_ID	ON Rail Station ID Where Survey was administered	
ON_SEQUENCE	On Sequence of Trip	
OFF_ADDRESS	Description of the location where the passenger GOT OFF	
OFF_LONNUM	Alighted Longitude	
OFF_LATNUM	Alighted Latitude	
OFF_RAILSTATION_ID	OFF Rail Station ID Where Survey was administered	
OFF_SEQUENCE	Off Sequence of Trip	
TO_TRANSFER_CODE	Will the passenger transfer TO another route after alighting the route on which the survey was conducted (Code)	1=Yes 2=No
TO_TRANSFER	Will the passenger transfer TO another route after alighting the route on which the survey was conducted	
TO_BUS_OR_TRAIN_1ST_CODE	Was the 1st TO transfer a Bus or the Train (Code)	1=Bus 2=Train 3=No
TO_BUS_OR_TRAIN_1ST	Was the 1st TO transfer a Bus or the Train	
TO_1ST_BUS	1st Bus Route Passenger will Transfer TO	
TO_1ST_TRAIN_ON_ADDR	Station Boarded on 1st TO Train Transfer	
TO_1ST_TRAIN_OFF_ADDR	Station Alighted on 1st TO Train Transfer	
TO_BUS_OR_TRAIN_2ND_CODE	Was the 2nd TO transfer a Bus or the Train (Code)	1=Bus 2=Train 3=No
TO_BUS_OR_TRAIN_2ND	Was the 2nd TO transfer a Bus or the Train	
TO_2ND_BUS	2nd Bus Route Passenger will Transfer TO	
TO_2ND_TRAIN_ON_ADDR	Station Boarded on 2nd TO Train Transfer	
TO_2ND_TRAIN_OFF_ADDR	Station Alighted on 2nd TO Train Transfer	
TO_BUS_OR_TRAIN_3RD_CODE	Was the 3rd TO transfer a Bus or the Train (Code)	1=Bus 2=Train 3=No
TO_BUS_OR_TRAIN_3RD	Was the 3rd TO transfer a Bus or the Train	
TO_3RD_BUS	3rd Bus Route Passenger will Transfer TO	
TO_3RD_TRAIN_ON_ADDR	Station Boarded on 3rd TO Train Transfer	
TO_3RD_TRAIN_OFF_ADDR	Station Alighted on 3rd TO Train Transfer	
TO_MORE_THAN_3_TRANSFERS_CODE	Did passenger have more than 3 TO transfers (Code)	1=Yes 2=No 9=Not provided
TO_MORE_THAN_3_TRANSFERS	Did passenger have more than 3 TO transfers	

2010-11 Valley Metro Regional Transit Survey

Variable Name	Description	Values
EGRESS_MODE_CODE	Mode of egress from the transit system to the destination (Code)	1=Bike 2=Walk 3=Was dropped off by someone going someplace else 4=Dove alone 5=Carpooled or vanpooled with others 6=Other
EGRESS_MODE	Mode of egress from the transit system to the destination	
EGRESS_MODE_OTHER	Mode of egress if OTHER	
EGRESS_WALK_DISTANCE_CODE	Distance walked from the transit system to the Destination (Code)	1= up to 1/4 mile (0-2 blocks) 2=1/4 - 1/2 mile (3-4 blocks) 3=1/2 - 3/4 mile (5-6 blocks) 4=3/4 - 1 mile (7-8 blocks) 5=1 - 2 miles (9-16 blocks) 6= more than 2 miles (17+ blocks)
EGRESS_WALK_DISTANCE	Distance walked from the transit system to the Destination	
EGRESS_CARPOOL_SIZE	Number of persons in the carpool/vanpool	
EGRESS_PARK_AND_RIDE	Park and Ride Location	
DEST_TYPE_OF_PLACE_CODE	Destination Type of Place (Code)	1=Workplace 2=Home 3=Elementary School (grades K-5) 4=Middle School (grades 6-8) 5=High School (grades 9-12) 6=College/University (Students Only) 7=Shopping 8=Hotel 9=Recreation/Sightseeing 10=Medical Appointment/Doctor's Visit 11=Social/Church/Personal/Friend's House 12=Airport (Air Passengers Only) 13=Other
DEST_TYPE_OF_PLACE	Destination Type of Place	
DEST_PLACE_NAME	Destination Place Name	
DEST_ADDRESS	Destination Address	
DESTIN_INTERS_CORNER_CODE	Corner of the intersection where the destination was located (Code)	1=Northwest 2=Northeast 3=Southwest 4=Southeast
DESTIN_INTERS_CORNER	Corner of the intersection where the destination was located	
DEST_CITY	Destination City	
DEST_ZIP	Destination Zip Code	
DESTIN_LON	Destination Longitude	
DESTIN_LAT	Destination Latitude	
PAYMENT_METHOD_CODE	How the passenger paid for his/her trip (Code)	01=Day Pass 02=3-Day Pass 03=7-Day Pass 04=31-Day Pass 05=Free 06=U-Pass 07=Employer Subsidized Pass 08=Semester Pass 09=Courtesy Pass 10=Full Fare 11=Youth Fare 12=Senior Fare 13=Person w/ Disability Fare 14=Field Trip Pass 15=Year Round 16=Reduced Fare ID Card 17=Cash 18=Dial A Ride ID Card 19=Other 99=Not provided
PAYMENT_METHOD	How the passenger paid for his/her trip	
PAYMENT_METHOD_OTHER	How the passenger paid for his/her trip if OTHER	
IF_NO_TRANSIT_HOW_MAKE_TRIP_CODE	If transit was not available, how passenger would have made trip (Code)	1= I could not make this trip 2= Drive with someone else 3=Taxi 4= Walk or Bike 5= Drive Myself 6= I Don't Know 7= Other
IF_NO_TRANSIT_HOW_MAKE_TRIP	If transit was not available, how passenger would have made trip	

2010-11 Valley Metro Regional Transit Survey

Variable Name	Description	Values
IF_NO_TRANSIT_HOW_MAKE_TRIP_OTHER	If transit was not available, how passenger would have made trip if OTHER	
YEARS_USING_PHX_TRANSIT_CODE	Number of Years Using Public Transit in the Phoenix area (Code)	1= Less than 2 years 2=2 years or more 9= Don't know
YEARS_USING_PHX_TRANSIT	Number of Years Using Public Transit in the Phoenix area	
WHY_USE_PHX_TRANSIT_CODE	If less than 2 years, why passenger started using public transit in the Phoenix area (Code)	1=Moved to area in last 2 years 2=To save money 3=Lost my job 4=Light rail service began 5=Employer offered incentives 6=Lost my car/Do not have a car 7=Started a new job 8=Started going to school 9=Don't own a car 10=No reason 11=Other 12=Don't know
WHY_USE_PHX_TRANSIT	If less than 2 years, why passenger started using public transit in the Phoenix area	
WHY_USE_PHX_TRANSIT_OTHER	If less than 2 years, why passenger started using public transit in the Phoenix area if OTHER	
COMPARED_TO_2_YEARS_AGO_USE_CODE	How frequency of ridership has changed compared to 2 years ago (Code)	1= Much more often 2= More often 3= About the same 4= Less often 5= Much less often 6= I Don't Know
COMPARED_TO_2_YEARS_AGO_USE	How frequency of ridership has changed compared to 2 years ago	
HOW_GET_SCHEDULE_CODE	How passenger gets schedule information (Code)	1= Transit schedule book 2= Valley Metro Website 3= Customer service telephone number 4= Posted schedule at bus stop 5= I Don't Know 6= I Don't get schedule info 7= Other
HOW_GET_SCHEDULE	How passenger gets schedule information	
HOW_GET_SCHEDULE_OTHER	How passenger gets schedule information if OTHER	
VEHICLES_IN_HOUSEHOLD_CODE	Number of Vehicles in the Household (Code)	0=0 1=1 2=2 3=3 4=4 +
VEHICLES_IN_HOUSEHOLD	Number of Vehicles in the Household	
HOUSEHOLD_SIZE_CODE	Number of People in the Household (Code)	1=1 2=2 3=3 4=4 5=5 6=6+
HOUSEHOLD_SIZE	Number of People in the Household	
NUMBER_EMPLOYED_IN_HOUSEHOLD_CODE	Number of employed persons in the household (Code)	0=0 1=1 2=2 3=3 4=4 5=5+
NUMBER_EMPLOYED_IN_HOUSEHOLD	Number of employed persons in the household	
ADULTS_IN_HOUSEHOLD_CODE	Number of Adults in the Household (Code)	1=1 2=2 3=3 4=4 5=5 6=6+
ADULTS_IN_HOUSEHOLD	Number of Adults in the Household	
AGE	Age of Passenger Surveyed	
DRIVERS_LICENSE_CODE	Does the passenger surveyed have a valid drivers license (Code)	1=Yes 2=No
DRIVERS_LICENSE	Does the passenger surveyed have a valid drivers license	

2010-11 Valley Metro Regional Transit Survey

Variable Name	Description	Values
EMPLOYMENT_STATUS_CODE	Employment Status of the Passenger (Code)	1= Employed full-time i.e. at least 35 hrs per week 2= Employed part time i.e. less than 35 hrs per week 3= Not currently employed but seeking work 4= Not currently employed and NOT seeking work 5= Not employed - retired 99=Not provided
EMPLOYMENT_STATUS	Employment Status of the Passenger	
STUDENT_STATUS_CODE	Was passenger surveyed a student (Code)	1= Not a student 2= Yes - student through 12th grade 3= Yes - college or university 4= Yes - other
STUDENT_STATUS	Was passenger surveyed a student	
SCHOOL_NAME	Name of college or university where passenger attended school	
SCHOOL_NAME_OTHER	Name of institution where passenger attended if OTHER	
HOUSEHOLD_INCOME	Annual Household Income (Code)	1=Below $5,000 2=$5,000-$9,999 3=$10,000-$14,999 4=$15,000-$19,999 5=$20,000-$24,999 6=$25,000-$29,999 7=$30,000-$34,999 8=$35,000-$39,999 9=$40,000-$49,999 10=$50,000-$59,999 11=$60,000-$69,999 12=$70,000-$79,000 13=$80,000-$89,999 14=$90,000-$99,999 15=$100,000-$119,999 16=$120,000 or more 17=I Don't Know
HH_INCOME_CODE	Annual Household Income	
MAKE_REVERSE_TRIP_TODAY	Will the respondent make exactly the same trip in the opposite direction on the day he/she was surveyed	
TIME_MAKE_REVERSE_TRIP_CODE	Will the respondent make exactly the same trip in the opposite direction on the day he/she was surveyed (Code)	1=Yes 2=No
TIME_MAKE_REVERSE_TRIP	What time the opposite trip will occur	
RACE_ETHNICITY_CODE	Race/Ethnicity of Passenger (Code)	1= White 2= Black or African American 3= Asian 4= American Indian 5= Hispanic or Latino 6= Other
RACE_ETHNICITY	Race/Ethnicity of Passenger	
GENDER_CODE	Gender (Code)	1=Male 2=Female
GENDER	Gender	
TIME_OF_DAY_CODE	Time of day surveyed was administered (Code)	01=Before 6am 02=6:00am-6:59am 03=7:00am-7:59am 04=8:00am-8:59am 05=9:00am-9:59am 06=10:00am-10:59am 07=11:00am-11:59am 08=12:00pm-12:59pm 09=1:00pm-1:59pm 10=2:00pm-2:59pm 11=3:00pm-3:59pm 12=4:00pm-4:59pm 13=5:00pm-5:59pm 14=6:00pm-6:59pm 15=7pm or later
TIME_OF_DAY	Time of day surveyed was administered	
TIME_PERIOD	AM or PM	
New Time	New Time	
New Direction	New Direction	
New Direction (N,S,E,W)	Direction of the route that survey was administered on	
WGT FACTOR NAME	Weight Factor Name	
WGT FACTOR	Weight Factor	
ETC_ID 2	Unique ETC Identification Number 2	

APPENDIX F: ACTIVITY CENTER ANALYSIS

APPENDIX H: ACTIVITY CENTER ANALYSIS

Appendix H presents summary tables and maps for different trip purposes by Time of the Day within a mile radius of the activity centers listed below. These activity centers have been identified in the MAG Regional Framework Study. The maps in this section show buffers for 1mile, 1.5 miles and 2 miles radius. However, for the purpose of this report the data is summarized for only a mile radius.

1. Downtown Phoenix (Mile Radius of Central Station)
2. Uptown Phoenix (Mile Radius of Park Central Complex)
3. Sky Harbor Airport (Mile Radius of 3400 E Sky Harbor Blvd and 3800 E Sky Harbor Blvd)
4. Arizona State University (Mile radius of Student Health Services)
5. Biltmore Area (Mile Radius of Camelback Esplanade Mall)
6. Metro Center (Mile Radius of Metro Center Transit Station)
7. Scottsdale Airpark (Mile Radius of Scottsdale Municipal Airport)

The MAG Regional Frame Work Study grouped the Traffic Analysis Zones in the region into 26 districts. The map in Figure H.33 shows the service area by districts; summary tables were also generated to show the attraction flow from each of the districts to the activity centers listed above.

PURPOSE AT ACTIVITY CENTER

Downtown Phoenix

Figure H.1: Purpose at Downtown Phoenix (Origin)

Purpose at Activity Center	Downtown Phoenix as Origin									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	4452	26%	526	17%	291	7%	2921	40%	714	25%
Home	3928	23%	1631	54%	1052	27%	830	11%	415	15%
Elementary School (Grades K-5)	1	0%	0	0%	0	0%	1	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	770	4%	40	1%	75	2%	584	8%	71	2%
College/University (Students Only)	1914	11%	186	6%	490	12%	897	12%	341	12%
Shopping	686	4%	108	4%	303	8%	189	3%	86	3%
Hotel	92	1%	5	0%	13	0%	74	1%	0	0%
Recreation/Sightseeing	765	4%	67	2%	71	2%	349	5%	278	10%
Medical Appointment/Doctor's Visit	368	2%	31	1%	187	5%	52	1%	98	3%
Social/Church/Personal/Friend's House	1484	9%	162	5%	607	15%	429	6%	286	10%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	2676	16%	281	9%	843	21%	990	14%	562	20%
Total Trips	17136	100%	3037	100%	3932	100%	7316	100%	2851	100%

Figure H.2: Purpose at Downtown Phoenix (Destination)

Purpose at Activity Center	Downtown Phoenix as Destination									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	5072	28%	3276	52%	684	15%	467	11%	645	24%
Home	3322	19%	327	5%	670	14%	1460	35%	865	32%
Elementary School (Grades K-5)	6	0%	6	0%	0	0%	0	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	464	3%	425	7%	30	1%	9	0%	0	0%
College/University (Students Only)	2204	12%	660	10%	754	16%	535	13%	255	9%
Shopping	238	1%	58	1%	145	3%	29	1%	6	0%
Hotel	83	0%	14	0%	41	1%	27	1%	1	0%
Recreation/Sightseeing	957	5%	196	3%	170	4%	338	8%	253	9%
Medical Appointment/Doctor's Visit	195	1%	96	2%	76	2%	23	1%	0	0%
Social/Church/Personal/Friend's House	1882	11%	462	7%	902	19%	363	9%	155	6%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	3388	19%	813	13%	1163	25%	876	21%	536	20%
Total Trips	17811	100%	6333	100%	4635	100%	4127	100%	2716	100%

Figure H.3: Downtown Phoenix – Trip Purpose at AM Peak

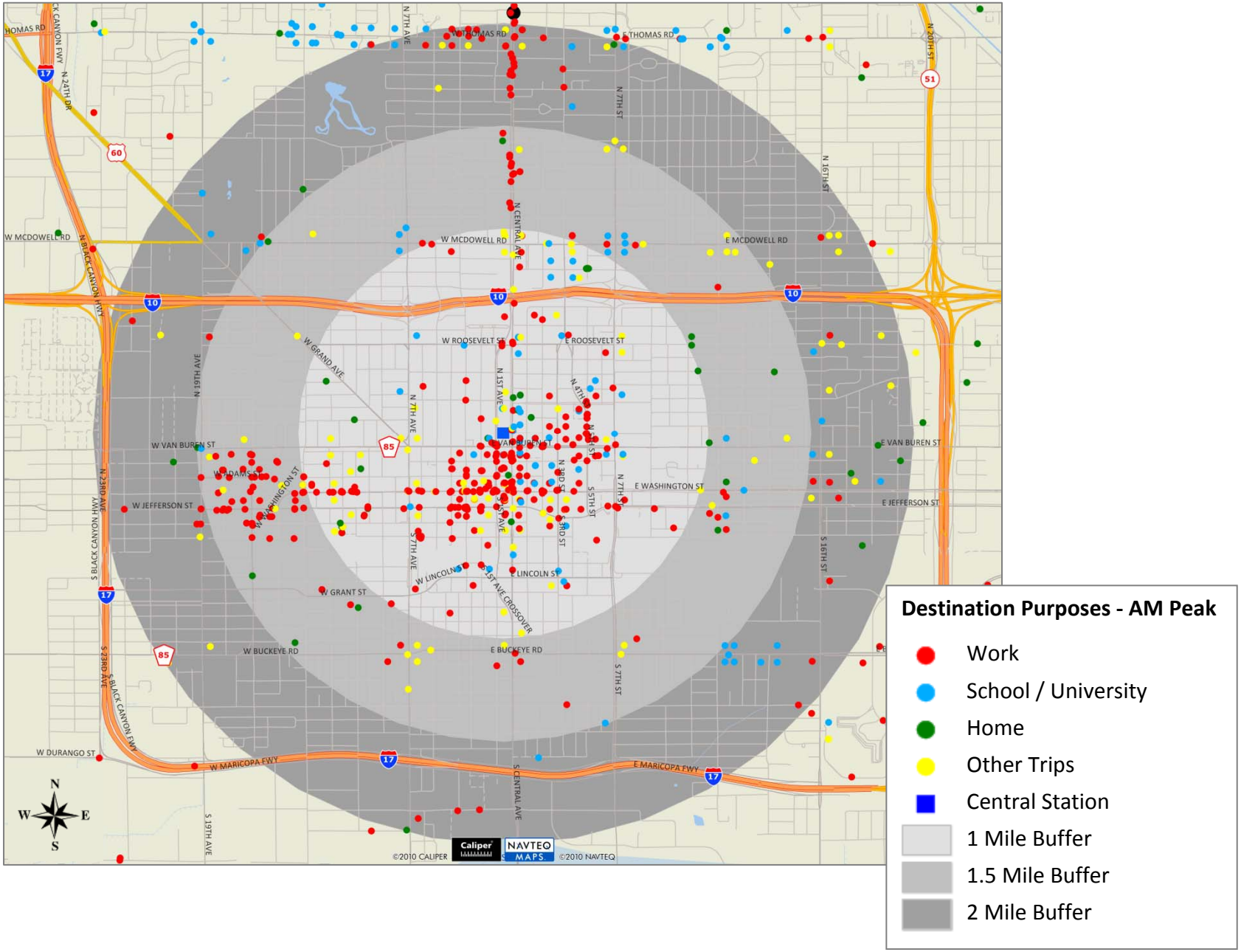


Figure H.4: Downtown Phoenix – Trip Purpose at Mid-Day

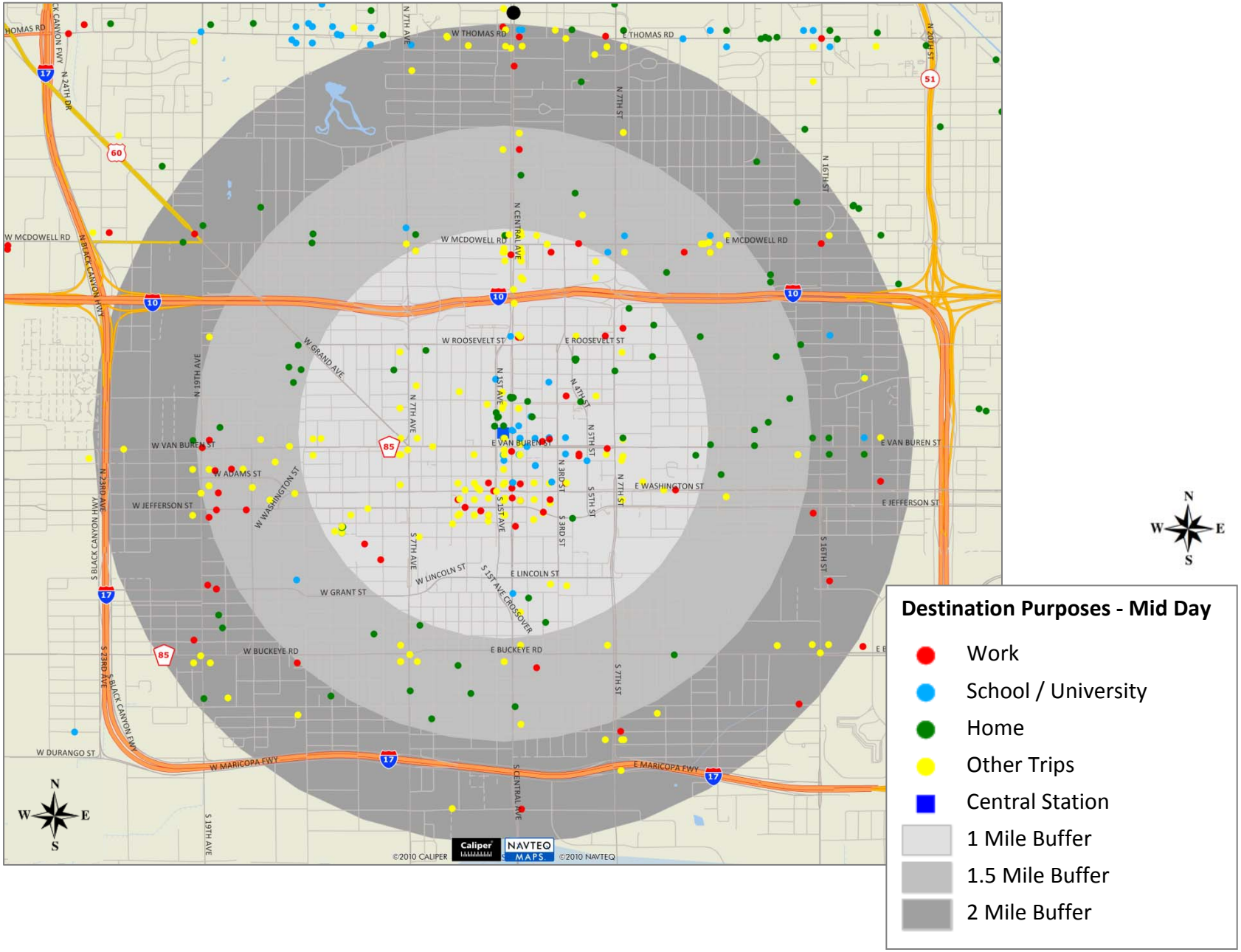
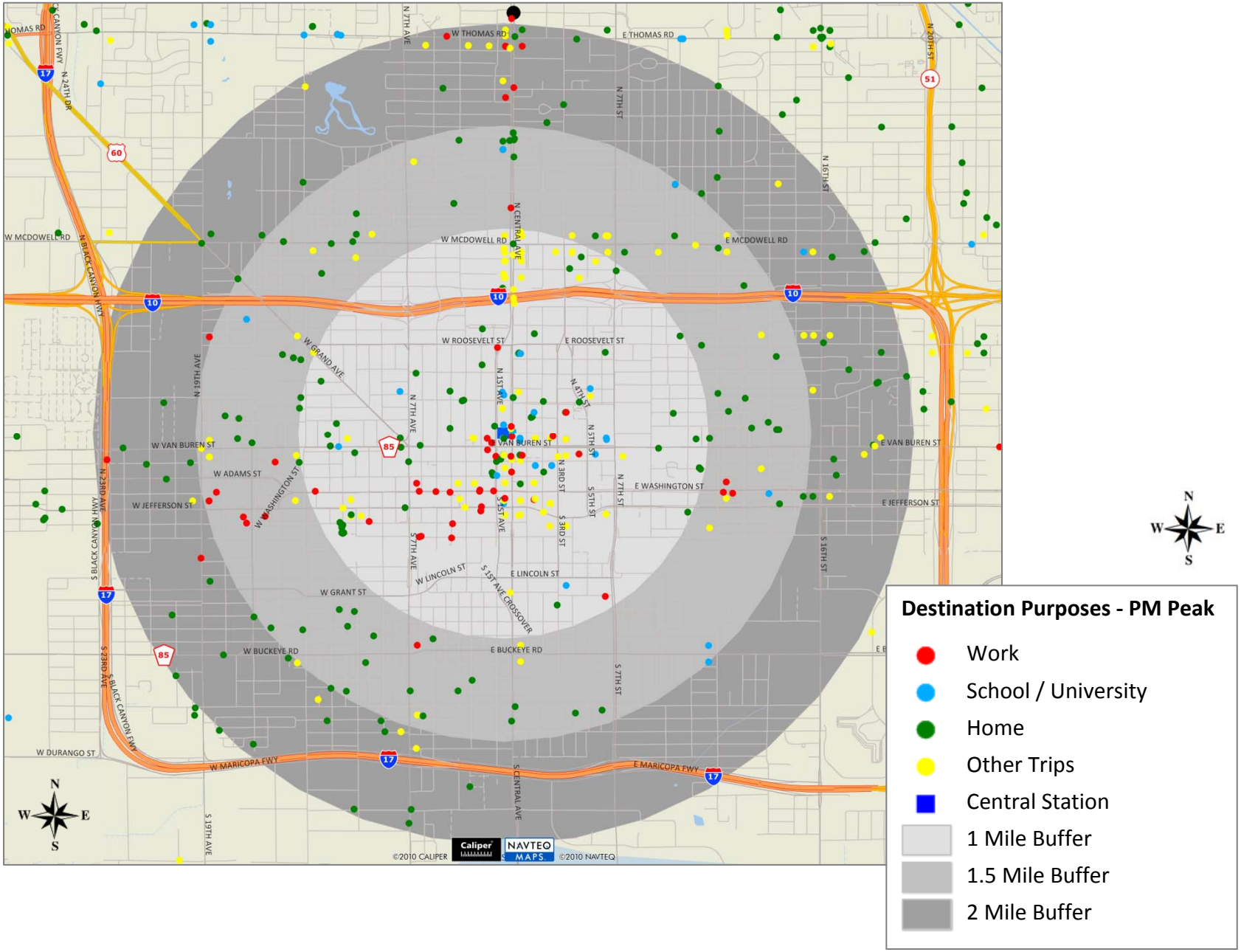


Figure H.5: Downtown Phoenix – Trip Purpose at PM Peak



Uptown Phoenix

Figure H.6: Purpose at Uptown Phoenix (Origin)

Purpose at Activity Center	Uptown Phoenix as Origin									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	2119	23%	203	14%	225	9%	1162	30%	529	33%
Home	2156	23%	754	51%	652	27%	510	13%	240	15%
Elementary School (Grades K-5)	62	1%	0	0%	26	1%	0	0%	36	2%
Middle School (Grades 6-8)	20	0%	0	0%	0	0%	20	1%	0	0%
High School (Grades 9-12)	907	10%	27	2%	113	5%	705	18%	62	4%
College/University (Students Only)	1375	15%	135	9%	579	24%	351	9%	310	19%
Shopping	200	2%	3	0%	28	1%	163	4%	6	0%
Hotel	0	0%	0	0%	0	0%	0	0%	0	0%
Recreation/Sightseeing	145	2%	18	1%	13	1%	65	2%	49	3%
Medical Appointment/Doctor's Visit	977	10%	179	12%	227	9%	344	9%	227	14%
Social/Church/Personal/Friend's House	514	6%	81	5%	196	8%	187	5%	50	3%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	869	9%	81	5%	333	14%	355	9%	100	6%
Total Trips	9344	100%	1481	100%	2392	100%	3862	100%	1609	100%

Figure H.7: Purpose at Uptown Phoenix (Destination)

Purpose at Activity Center	Uptown Phoenix as Destination									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	2317	22%	1341	35%	416	15%	170	7%	390	29%
Home	2052	20%	193	5%	432	15%	946	40%	481	36%
Elementary School (Grades K-5)	21	0%	0	0%	0	0%	21	1%	0	0%
Middle School (Grades 6-8)	29	0%	14	0%	0	0%	0	0%	15	1%
High School (Grades 9-12)	726	7%	556	15%	74	3%	96	4%	0	0%
College/University (Students Only)	1529	15%	837	22%	578	20%	57	2%	57	4%
Shopping	320	3%	92	2%	68	2%	160	7%	0	0%
Hotel	0	0%	0	0%	0	0%	0	0%	0	0%
Recreation/Sightseeing	337	3%	94	2%	50	2%	137	6%	56	4%
Medical Appointment/Doctor's Visit	843	8%	321	8%	353	12%	72	3%	97	7%
Social/Church/Personal/Friend's House	1134	11%	192	5%	455	16%	290	12%	197	15%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	1070	10%	190	5%	426	15%	407	17%	47	4%
Total Trips	10378	100%	3830	100%	2852	100%	2356	100%	1340	100%

Figure H.8: Uptown Phoenix – Trip Purpose at AM Peak

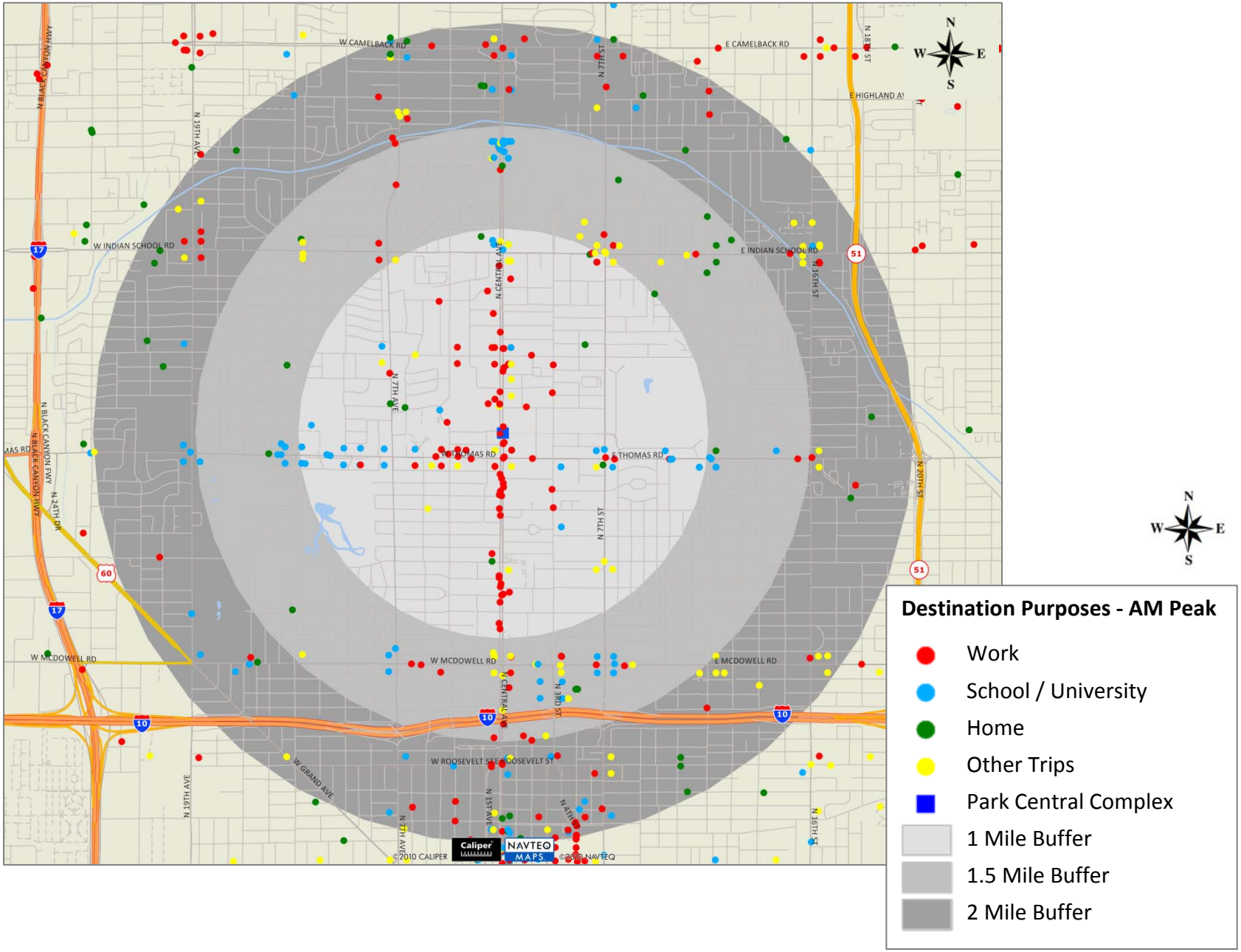


Figure H.9: Uptown Phoenix – Trip Purpose at Mid-Day

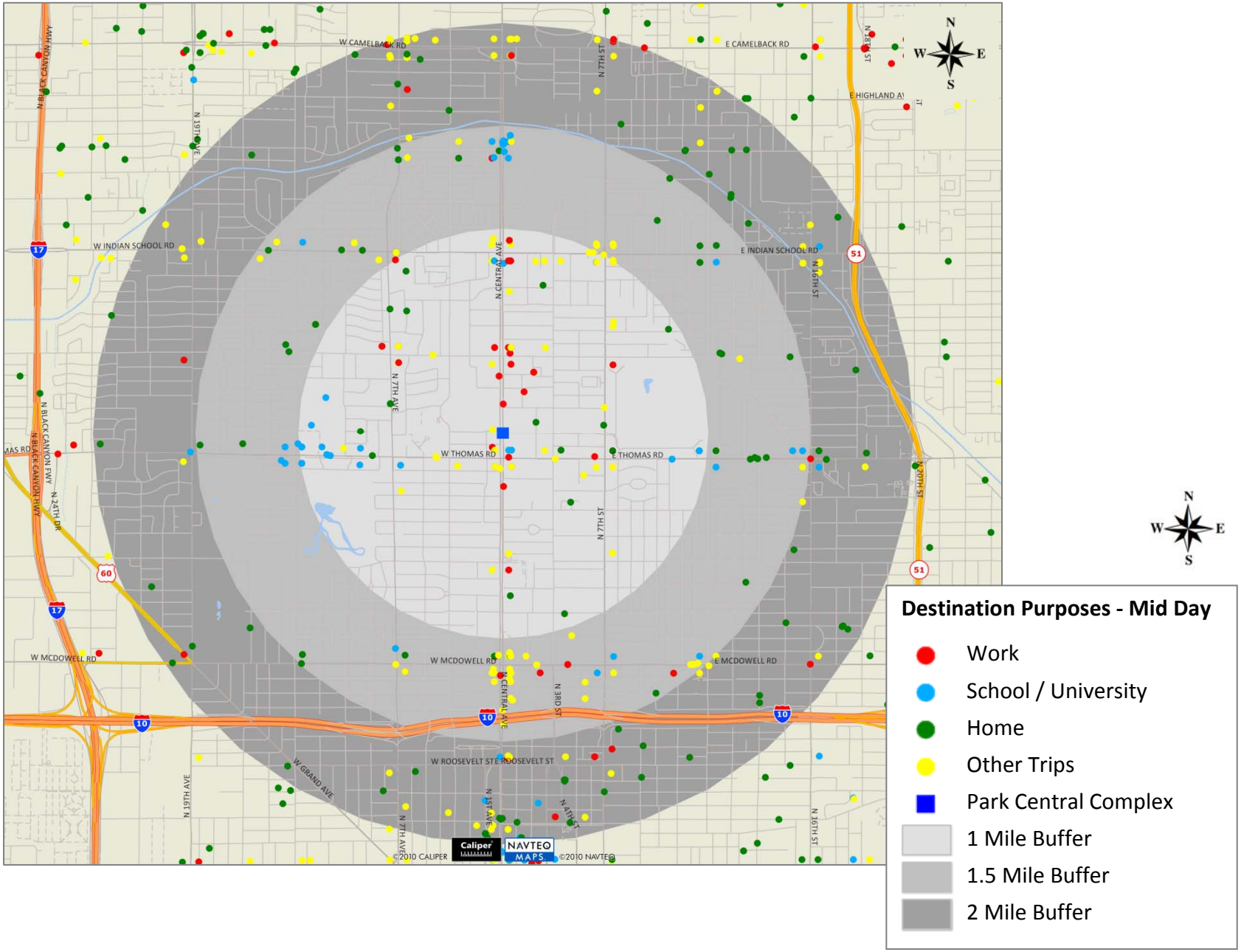
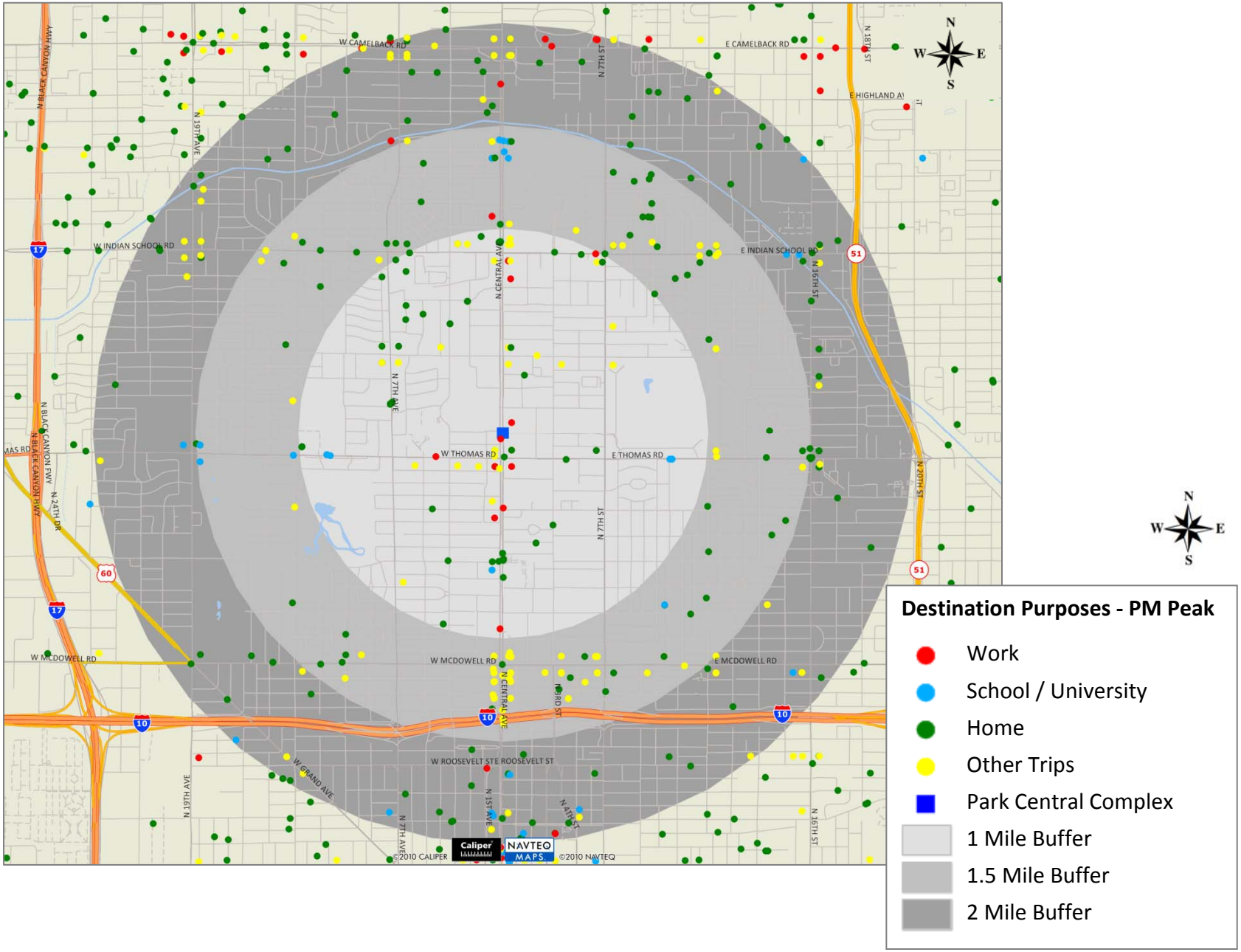


Figure H.10: Uptown Phoenix – Trip Purpose at PM Peak



Sky Harbor Airport

Figure H.11: Purpose at Sky Harbor Airport (Origin)

Purpose at Activity Center	Sky Harbor Airport as Origin									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	478	30%	56	18%	100	21%	216	42%	106	37%
Home	428	27%	159	52%	168	36%	35	7%	66	23%
Elementary School (Grades K-5)	0	0%	0	0%	0	0%	0	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	134	9%	0	0%	14	3%	77	15%	43	15%
College/University (Students Only)	305	19%	31	10%	74	16%	139	27%	61	21%
Shopping	0	0%	0	0%	0	0%	0	0%	0	0%
Hotel	31	2%	31	10%	0	0%	0	0%	0	0%
Recreation/Sightseeing	0	0%	0	0%	0	0%	0	0%	0	0%
Medical Appointment/Doctor's Visit	0	0%	0	0%	0	0%	0	0%	0	0%
Social/Church/Personal/Friend's House	41	3%	0	0%	30	6%	11	2%	0	0%
Airport (Air Passengers Only)	100	6%	28	9%	46	10%	26	5%	0	0%
Other	52	3%	0	0%	36	8%	8	2%	8	3%
Total Trips	1569	100%	305	100%	468	100%	512	100%	284	100%

Figure H.12: Purpose at Sky Harbor Airport (Destination)

Purpose at Activity Center	Sky Harbor Airport as Destination									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	368	34%	122	33%	95	28%	82	41%	69	37%
Home	165	15%	2	1%	104	31%	22	11%	37	20%
Elementary School (Grades K-5)	0	0%	0	0%	0	0%	0	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	15	1%	15	4%	0	0%	0	0%	0	0%
College/University (Students Only)	176	16%	125	33%	10	3%	41	20%	0	0%
Shopping	7	1%	0	0%	0	0%	7	3%	0	0%
Hotel	0	0%	0	0%	0	0%	0	0%	0	0%
Recreation/Sightseeing	0	0%	0	0%	0	0%	0	0%	0	0%
Medical Appointment/Doctor's Visit	17	2%	0	0%	17	5%	0	0%	0	0%
Social/Church/Personal/Friend's House	14	1%	0	0%	14	4%	0	0%	0	0%
Airport (Air Passengers Only)	292	27%	102	27%	68	20%	42	21%	80	43%
Other	41	4%	8	2%	26	8%	7	3%	0	0%
Total Trips	1095	100%	374	100%	334	100%	201	100%	186	100%

Arizona State University

Figure H.13: Purpose at Arizona State University (Origin)

Purpose at Activity Center	Arizona State University as Origin									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	1560	11%	157	8%	160	5%	664	11%	579	17%
Home	2545	17%	1003	52%	659	19%	635	11%	248	7%
Elementary School (Grades K-5)	7	0%	0	0%	7	0%	0	0%	0	0%
Middle School (Grades 6-8)	16	0%	0	0%	0	0%	16	0%	0	0%
High School (Grades 9-12)	317	2%	25	1%	78	2%	151	3%	63	2%
College/University (Students Only)	8245	56%	556	29%	2149	61%	3572	62%	1968	58%
Shopping	433	3%	14	1%	92	3%	256	4%	71	2%
Hotel	29	0%	1	0%	28	1%	0	0%	0	0%
Recreation/Sightseeing	356	2%	22	1%	98	3%	140	2%	96	3%
Medical Appointment/Doctor's Visit	95	1%	33	2%	0	0%	16	0%	46	1%
Social/Church/Personal/Friend's House	618	4%	107	6%	159	5%	174	3%	178	5%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	395	3%	0	0%	88	3%	162	3%	145	4%
Total Trips	14616	100%	1918	100%	3518	100%	5786	100%	3394	100%

Figure H.14: Purpose at Arizona State University (Destination)

Purpose at Activity Center	Arizona State University as Destination									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	1727	10%	1105	20%	360	7%	170	4%	92	4%
Home	2251	13%	259	5%	345	7%	1023	26%	624	29%
Elementary School (Grades K-5)	38	0%	22	0%	0	0%	16	0%	0	0%
Middle School (Grades 6-8)	38	0%	38	1%	0	0%	0	0%	0	0%
High School (Grades 9-12)	187	1%	133	2%	41	1%	0	0%	13	1%
College/University (Students Only)	9889	59%	3351	62%	3879	74%	1778	45%	881	41%
Shopping	392	2%	36	1%	162	3%	77	2%	117	5%
Hotel	0	0%	0	0%	0	0%	0	0%	0	0%
Recreation/Sightseeing	277	2%	67	1%	48	1%	99	3%	63	3%
Medical Appointment/Doctor's Visit	52	0%	1	0%	15	0%	36	1%	0	0%
Social/Church/Personal/Friend's House	1105	7%	215	4%	215	4%	496	13%	179	8%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	814	5%	194	4%	200	4%	226	6%	194	9%
Total Trips	16770	100%	5421	100%	5265	100%	3921	100%	2163	100%

Figure H.15: Arizona State University – Trip Purpose at AM Peak

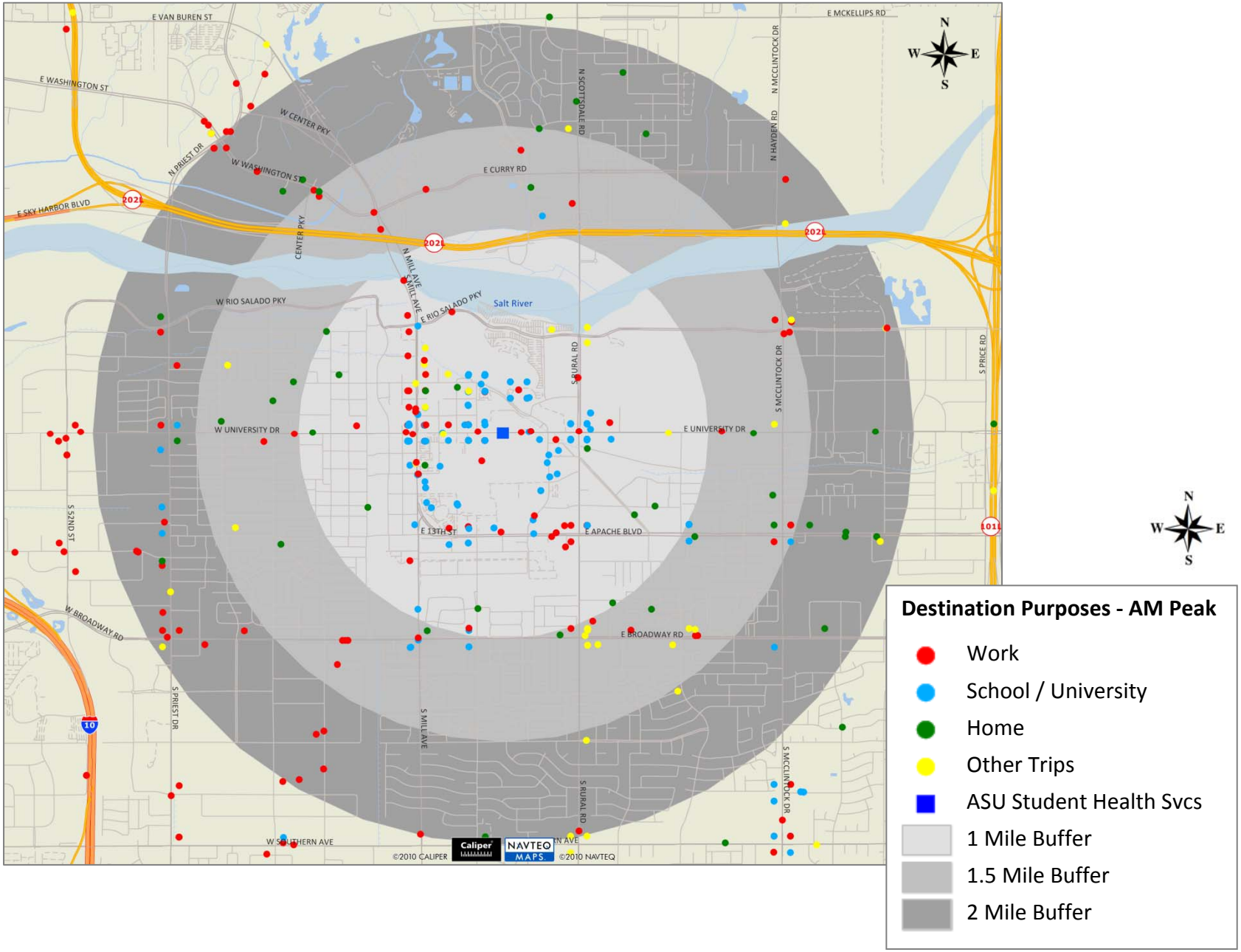


Figure H.16: Arizona State University – Trip Purpose at Mid-Day

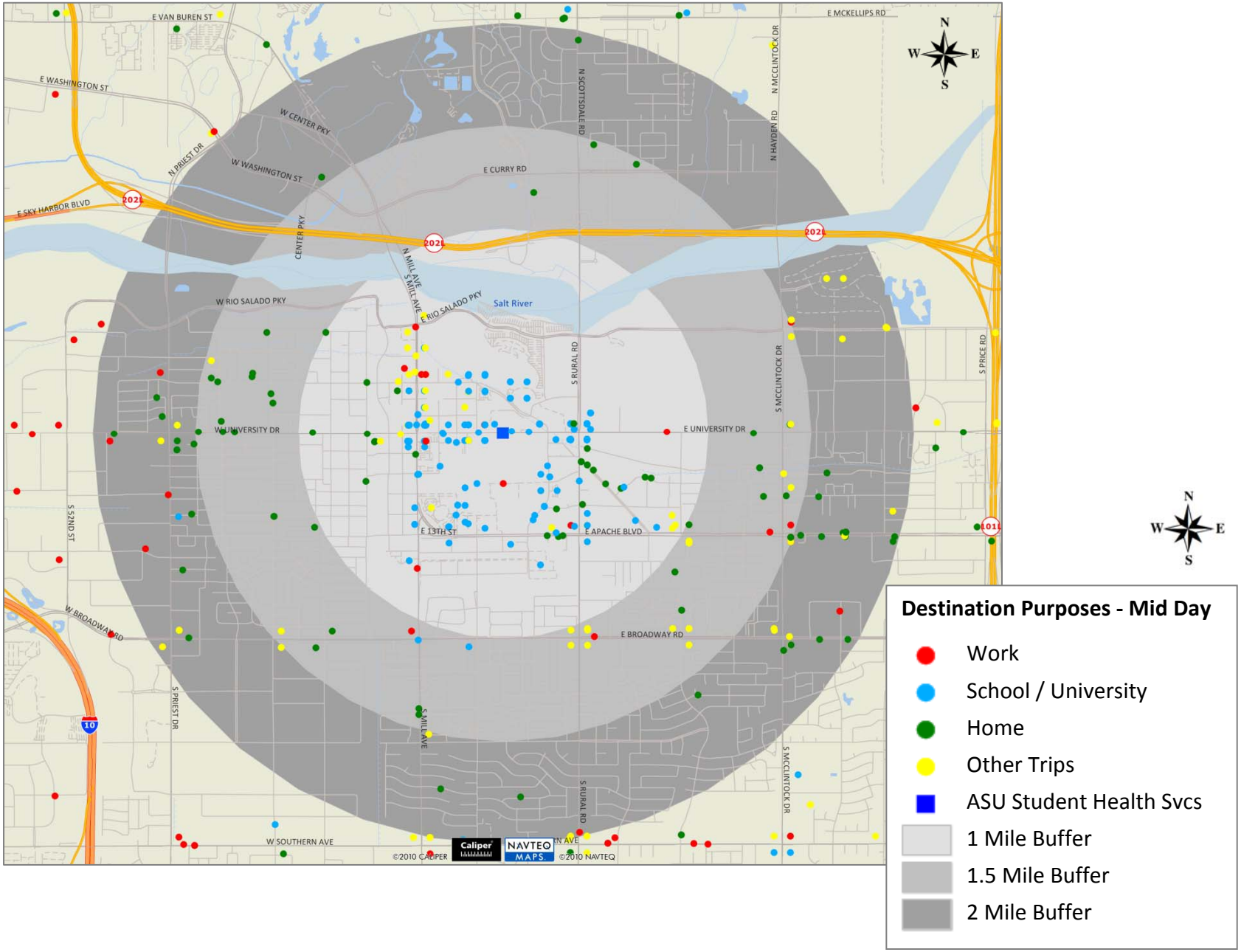
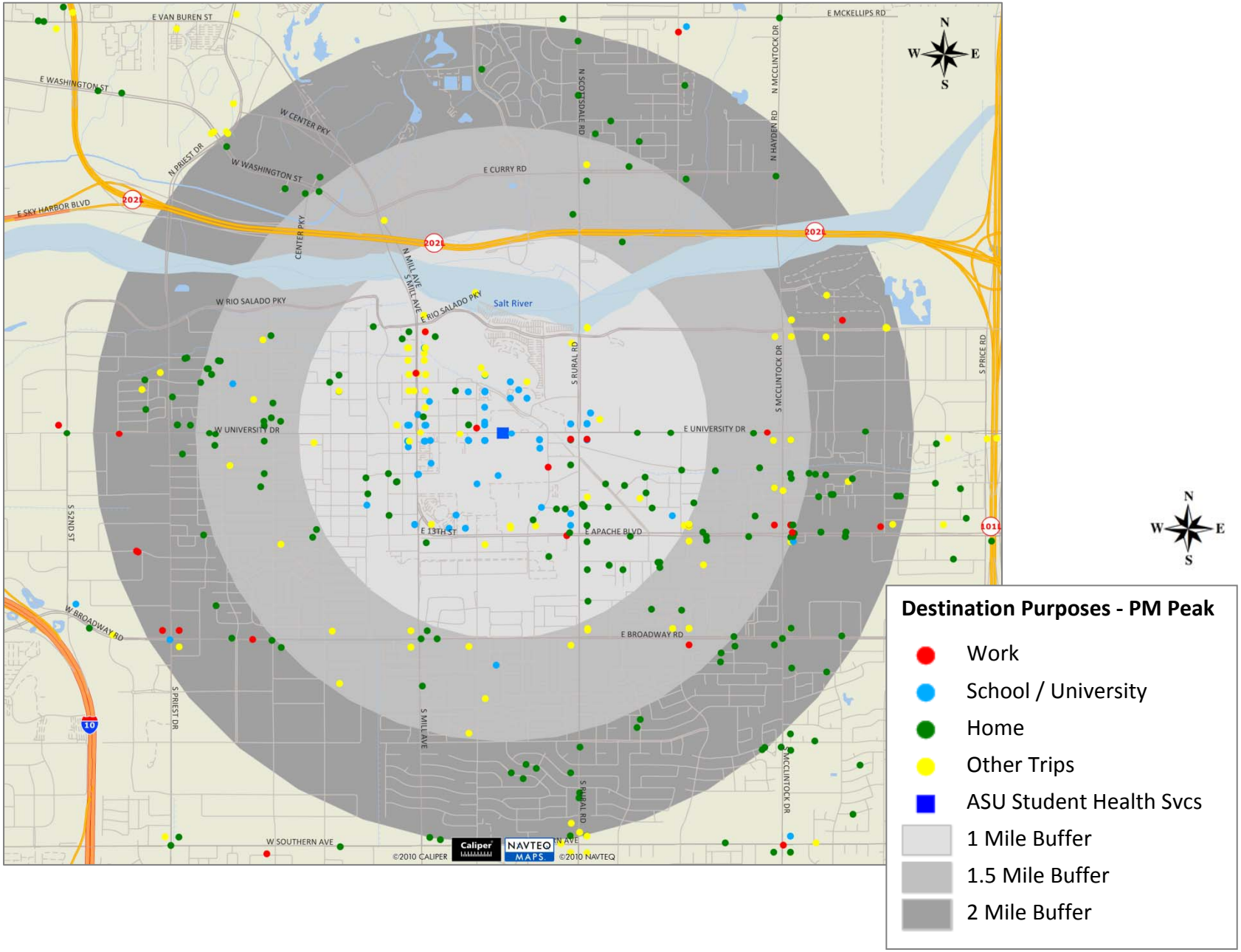


Figure H.17: Arizona State University – Trip Purpose at PM Peak



Biltmore Area

Figure H.18: Purpose at the Biltmore Area (Origin)

Purpose at Activity Center	Biltmore Area as Origin									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	679	24%	35	5%	65	16%	393	36%	186	31%
Home	920	33%	561	78%	204	50%	83	8%	72	12%
Elementary School (Grades K-5)	0	0%	0	0%	0	0%	0	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	544	19%	11	2%	0	0%	381	35%	152	25%
College/University (Students Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Shopping	190	7%	0	0%	51	12%	81	7%	58	10%
Hotel	0	0%	0	0%	0	0%	0	0%	0	0%
Recreation/Sightseeing	46	2%	0	0%	46	11%	0	0%	0	0%
Medical Appointment/Doctor's Visit	135	5%	99	14%	0	0%	36	3%	0	0%
Social/Church/Personal/Friend's House	244	9%	0	0%	25	6%	86	8%	133	22%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	66	2%	12	2%	19	5%	35	3%	0	0%
Total Trips	2824	100%	718	100%	410	100%	1095	100%	601	100%

Figure H.19: Purpose at the Biltmore Area (Destination)

Purpose at Activity Center	Biltmore Area as Destination									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	1126	37%	581	49%	332	47%	153	26%	60	10%
Home	699	23%	12	1%	108	15%	209	36%	370	64%
Elementary School (Grades K-5)	9	0%	0	0%	0	0%	9	2%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	631	21%	496	42%	49	7%	37	6%	49	9%
College/University (Students Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Shopping	187	6%	19	2%	54	8%	62	11%	52	9%
Hotel	0	0%	0	0%	0	0%	0	0%	0	0%
Recreation/Sightseeing	17	1%	0	0%	0	0%	0	0%	17	3%
Medical Appointment/Doctor's Visit	45	1%	1	0%	22	3%	22	4%	0	0%
Social/Church/Personal/Friend's House	270	9%	72	6%	84	12%	87	15%	27	5%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	51	2%	0	0%	51	7%	0	0%	0	0%
Total Trips	3035	100%	1181	100%	700	100%	579	100%	575	100%

Figure H.20: Biltmore Area – Trip Purpose at AM Peak

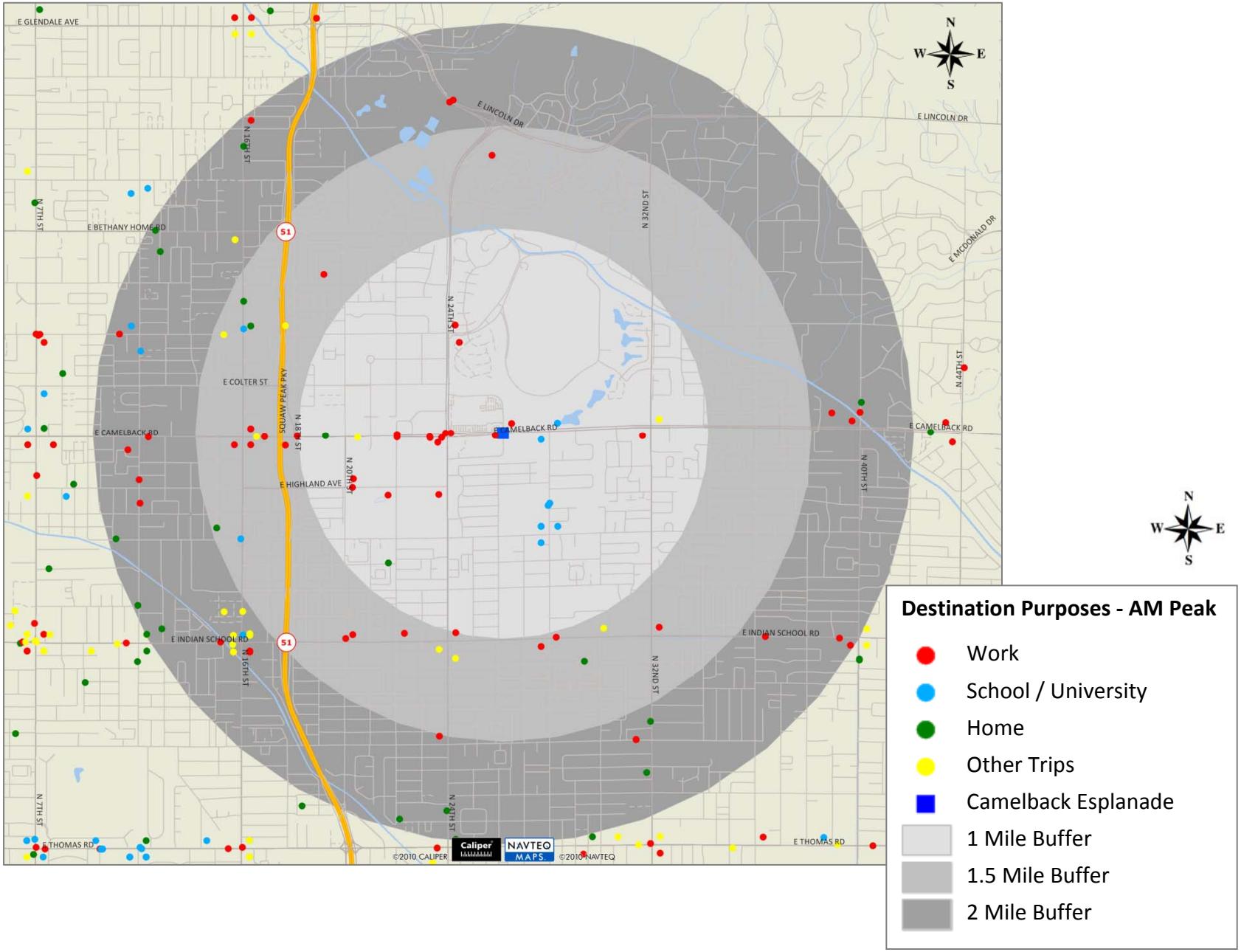


Figure H.21: Biltmore Area – Trip Purpose at Mid-Day

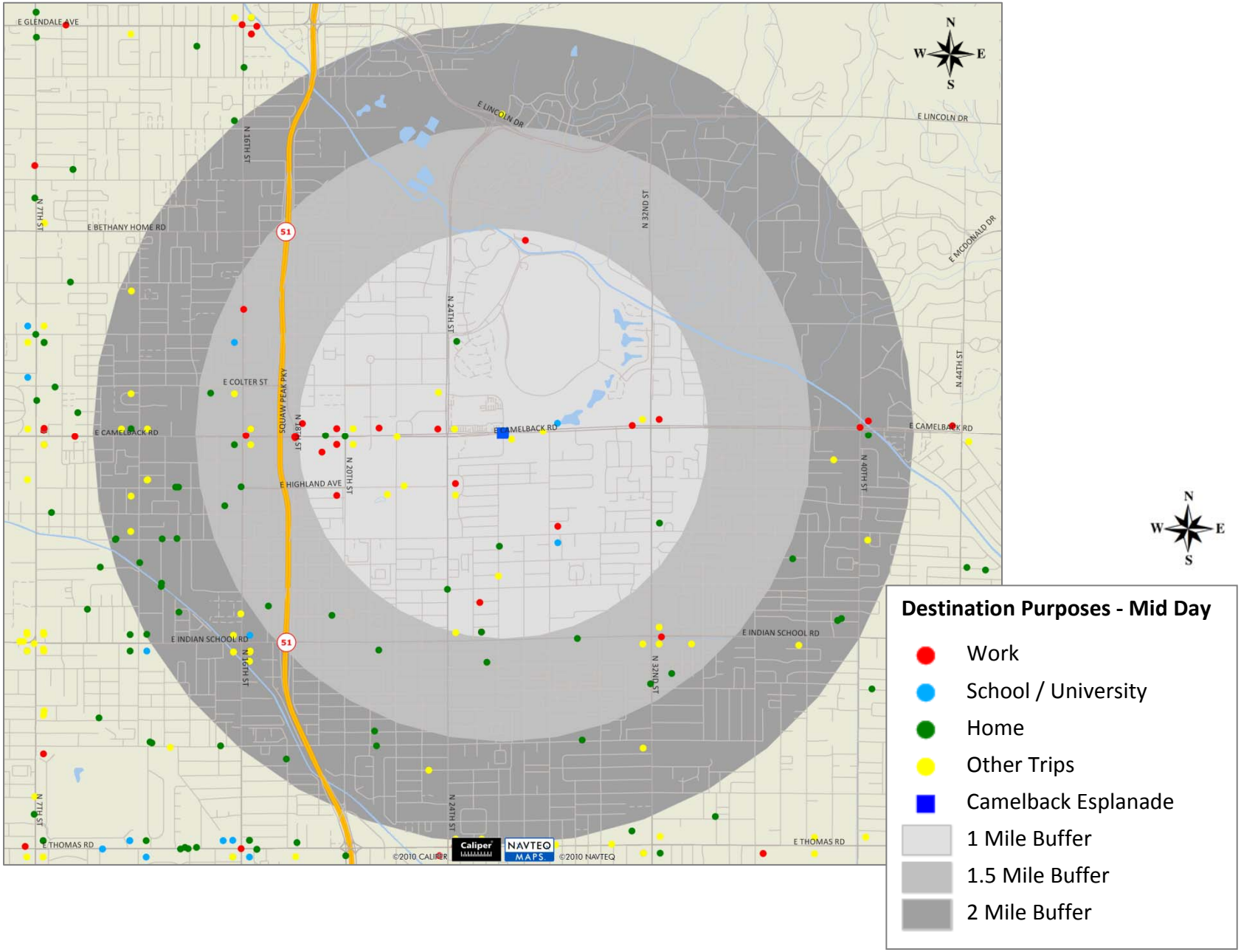
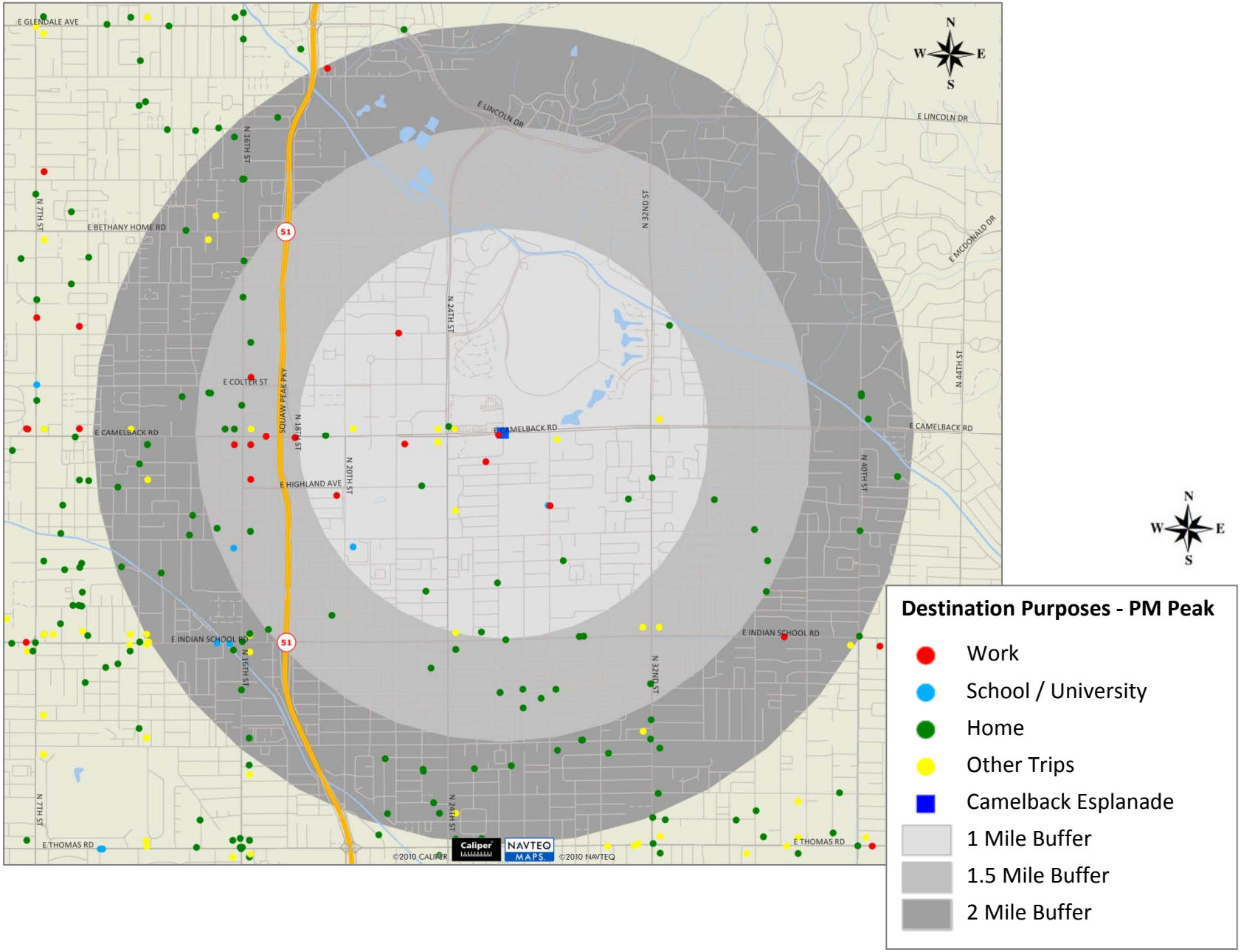


Figure H.22: Biltmore Area – Trip Purpose at PM Peak



Metro Center

Figure H.23: Purpose at the Metro Center (Origin)

Purpose at Activity Center	Metro Center as Origin									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	594	15%	76	9%	229	20%	119	12%	170	19%
Home	1470	38%	592	72%	389	33%	250	24%	239	27%
Elementary School (Grades K-5)	0	0%	0	0%	0	0%	0	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	76	2%	0	0%	16	1%	22	2%	38	4%
College/University (Students Only)	563	14%	0	0%	278	24%	235	23%	50	6%
Shopping	589	15%	15	2%	122	10%	260	25%	192	22%
Hotel	37	1%	0	0%	0	0%	0	0%	37	4%
Recreation/Sightseeing	85	2%	0	0%	8	1%	14	1%	63	7%
Medical Appointment/Doctor's Visit	132	3%	33	4%	32	3%	15	1%	52	6%
Social/Church/Personal/Friend's House	253	7%	71	9%	79	7%	87	8%	16	2%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	88	2%	31	4%	18	2%	23	2%	16	2%
Total Trips	3887	100%	818	100%	1171	100%	1025	100%	873	100%

Figure H.24: Purpose at the Metro Center (Destination)

Purpose at Activity Center	Metro Center as Destination									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	652	15%	344	29%	113	9%	119	10%	76	11%
Home	1514	36%	273	23%	320	26%	457	39%	464	69%
Elementary School (Grades K-5)	0	0%	0	0%	0	0%	0	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	96	2%	63	5%	33	3%	0	0%	0	0%
College/University (Students Only)	668	16%	197	17%	267	22%	118	10%	86	13%
Shopping	583	14%	59	5%	239	20%	237	20%	48	7%
Hotel	0	0%	0	0%	0	0%	0	0%	0	0%
Recreation/Sightseeing	8	0%	8	1%	0	0%	0	0%	0	0%
Medical Appointment/Doctor's Visit	314	7%	120	10%	71	6%	123	11%	0	0%
Social/Church/Personal/Friend's House	253	6%	71	6%	104	9%	78	7%	0	0%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	157	4%	55	5%	67	6%	35	3%	0	0%
Total Trips	4245	100%	1190	100%	1214	100%	1167	100%	674	100%

Figure H.25: Metro Center – Trip Purpose at AM Peak

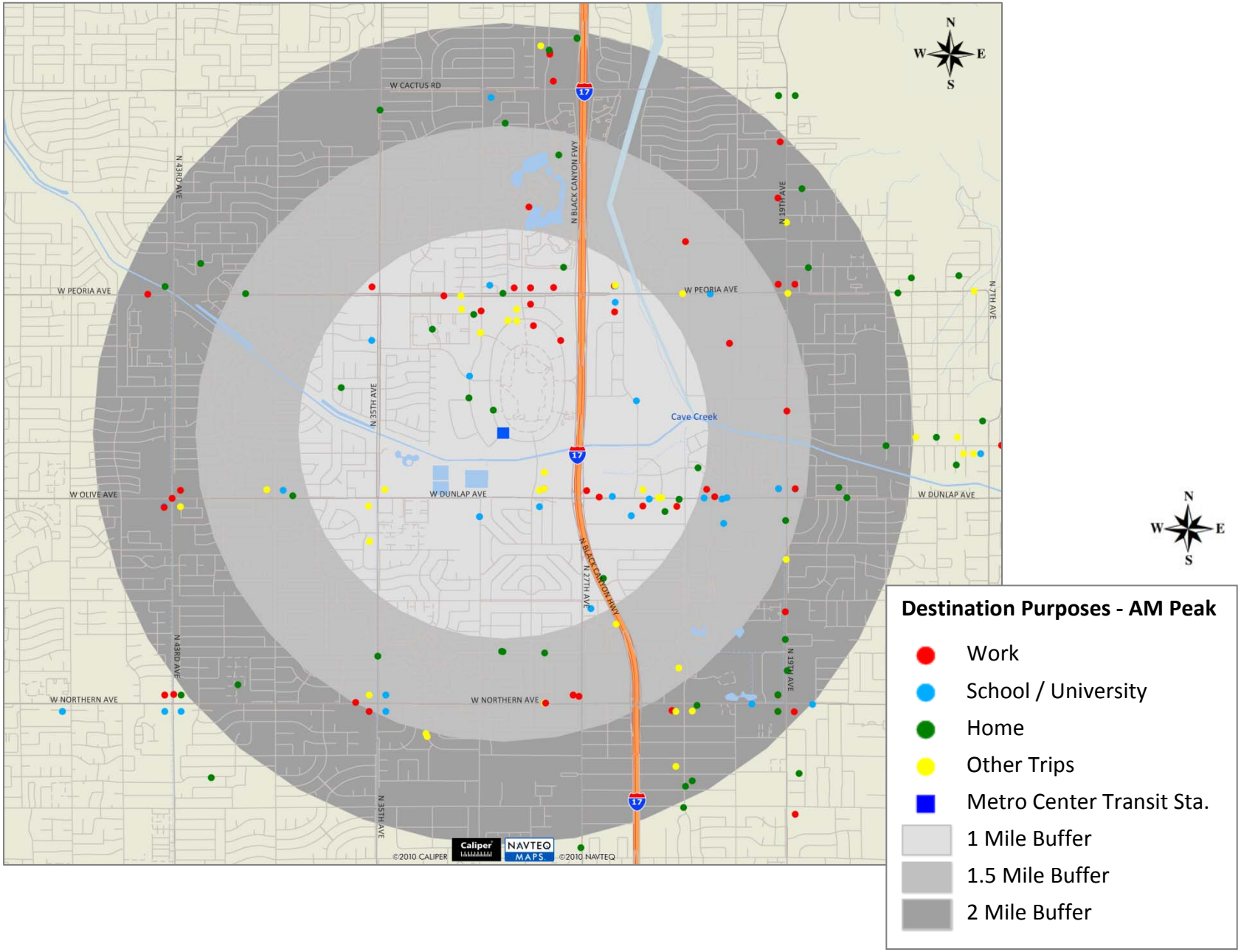


Figure H.26: Metro Center – Trip Purpose at Mid-Day

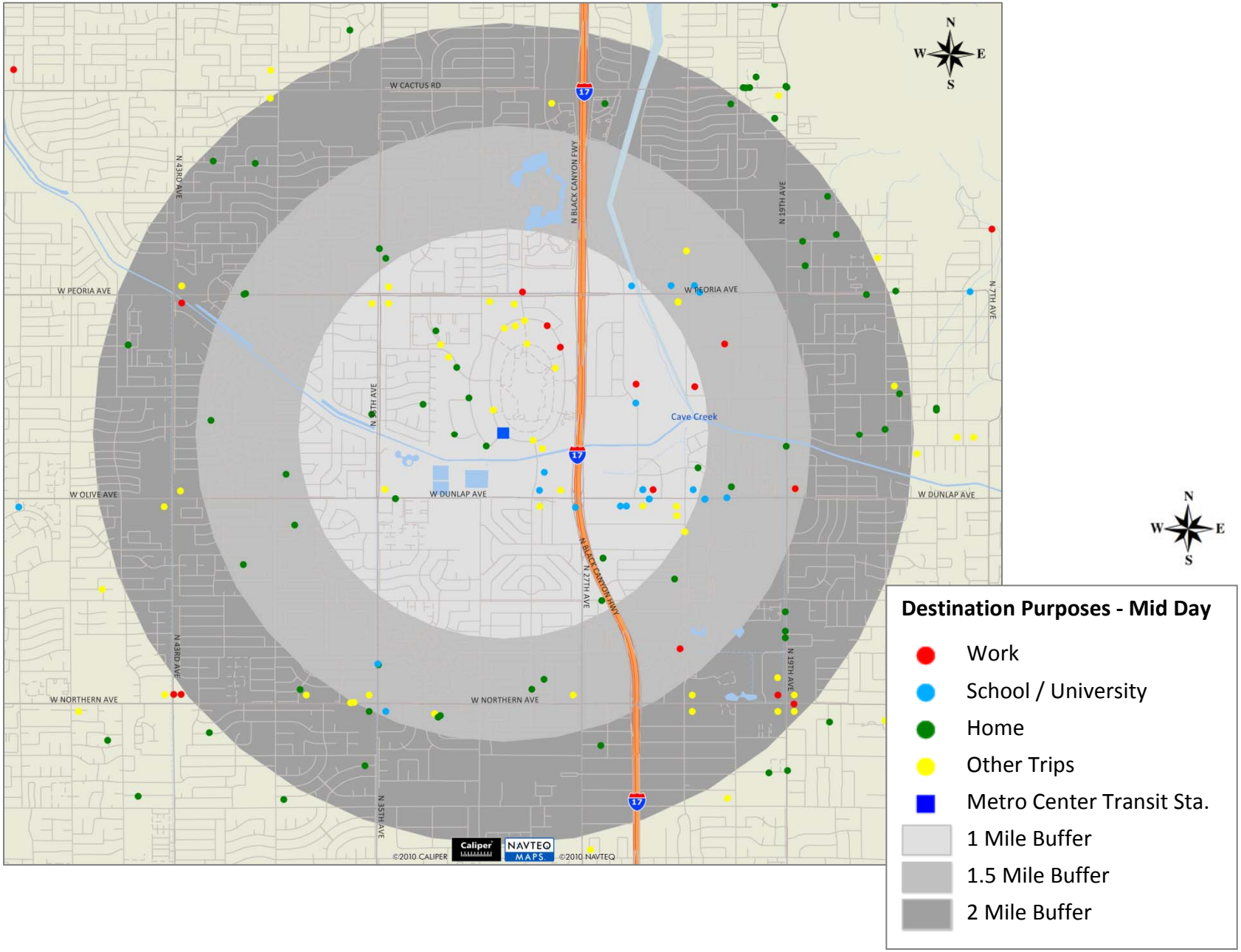
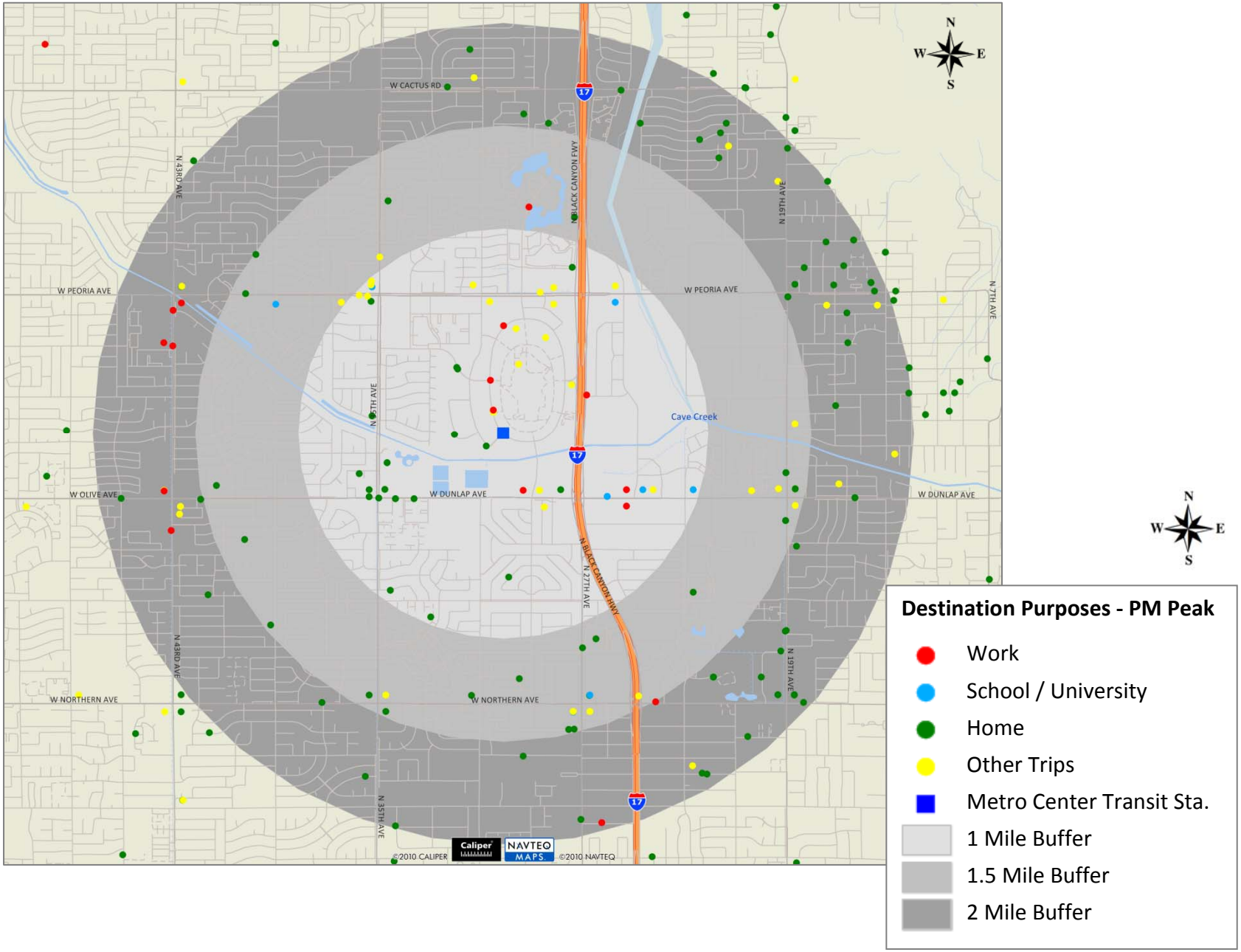


Figure H.27: Metro Center – Trip Purpose at PM Peak



Scottsdale Airpark

Figure H.28: Purpose at the Scottsdale Airpark (Origin)

Purpose at Activity Center	Scottsdale Airpark as Origin									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	662	91%	71	88%	31	54%	243	89%	317	100%
Home	3	0%	0	0%	3	5%	0	0%	0	0%
Elementary School (Grades K-5)	0	0%	0	0%	0	0%	0	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	6	1%	0	0%	0	0%	6	2%	0	0%
College/University (Students Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Shopping	19	3%	10	12%	9	16%	0	0%	0	0%
Hotel	14	2%	0	0%	14	25%	0	0%	0	0%
Recreation/Sightseeing	0	0%	0	0%	0	0%	0	0%	0	0%
Medical Appointment/Doctor's Visit	0	0%	0	0%	0	0%	0	0%	0	0%
Social/Church/Personal/Friend's House	0	0%	0	0%	0	0%	0	0%	0	0%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	25	3%	0	0%	0	0%	25	9%	0	0%
Total Trips	729	100%	81	100%	57	100%	274	100%	317	100%

Figure H.29: Purpose at the Scottsdale Airpark (Destination)

Purpose at Activity Center	Scottsdale Airpark as Destination									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Workplace	553	93%	228	100%	80	66%	43	100%	202	100%
Home	0	0%	0	0%	0	0%	0	0%	0	0%
Elementary School (Grades K-5)	0	0%	0	0%	0	0%	0	0%	0	0%
Middle School (Grades 6-8)	0	0%	0	0%	0	0%	0	0%	0	0%
High School (Grades 9-12)	0	0%	0	0%	0	0%	0	0%	0	0%
College/University (Students Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Shopping	41	7%	0	0%	41	34%	0	0%	0	0%
Hotel	0	0%	0	0%	0	0%	0	0%	0	0%
Recreation/Sightseeing	0	0%	0	0%	0	0%	0	0%	0	0%
Medical Appointment/Doctor's Visit	0	0%	0	0%	0	0%	0	0%	0	0%
Social/Church/Personal/Friend's House	0	0%	0	0%	0	0%	0	0%	0	0%
Airport (Air Passengers Only)	0	0%	0	0%	0	0%	0	0%	0	0%
Other	0	0%	0	0%	0	0%	0	0%	0	0%
Total Trips	594	100%	228	100%	121	100%	43	100%	202	100%

Figure H.30: Scottsdale Airpark – Trip Purpose at AM Peak

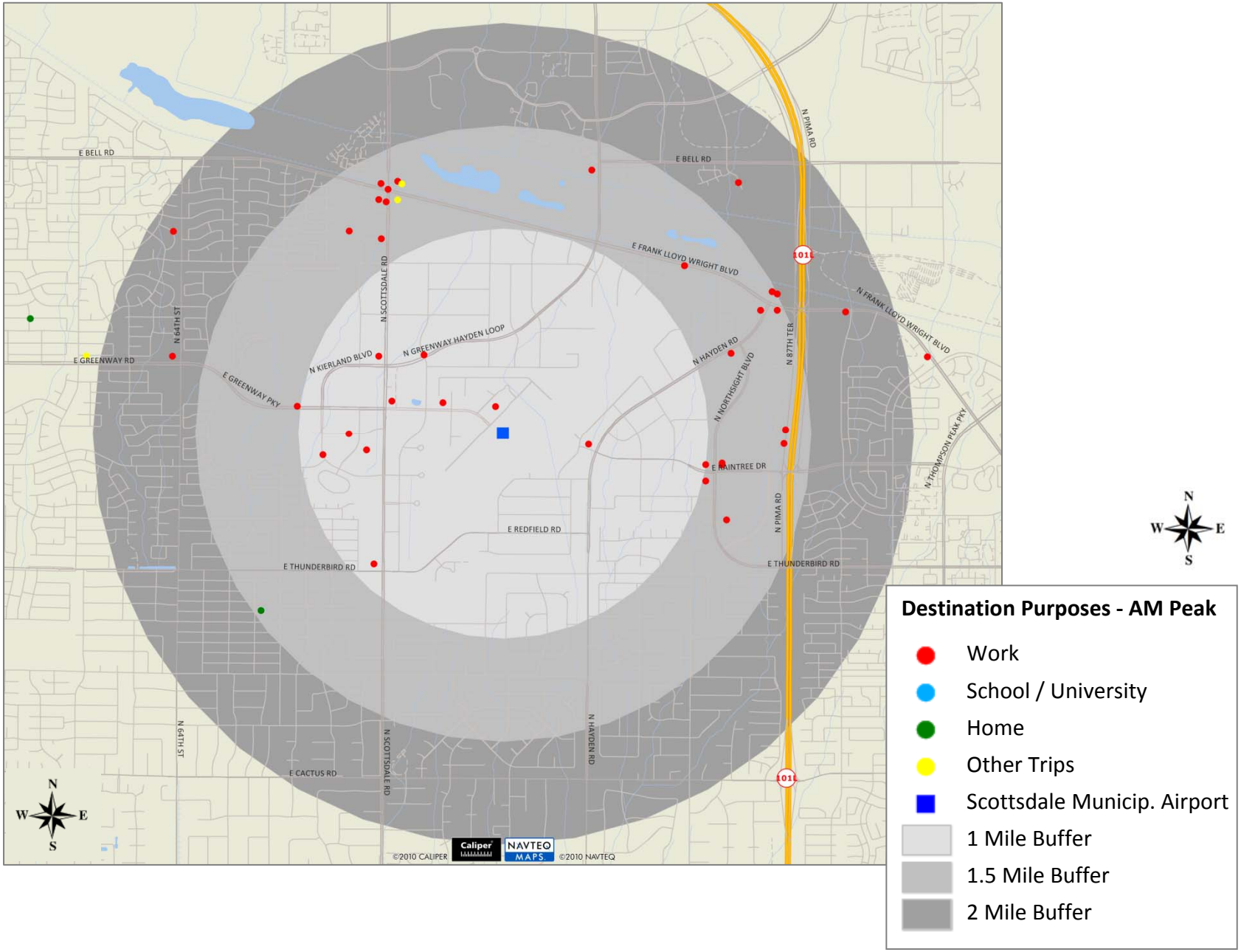


Figure H.31: Scottsdale Airpark – Trip Purpose at Mid-Day

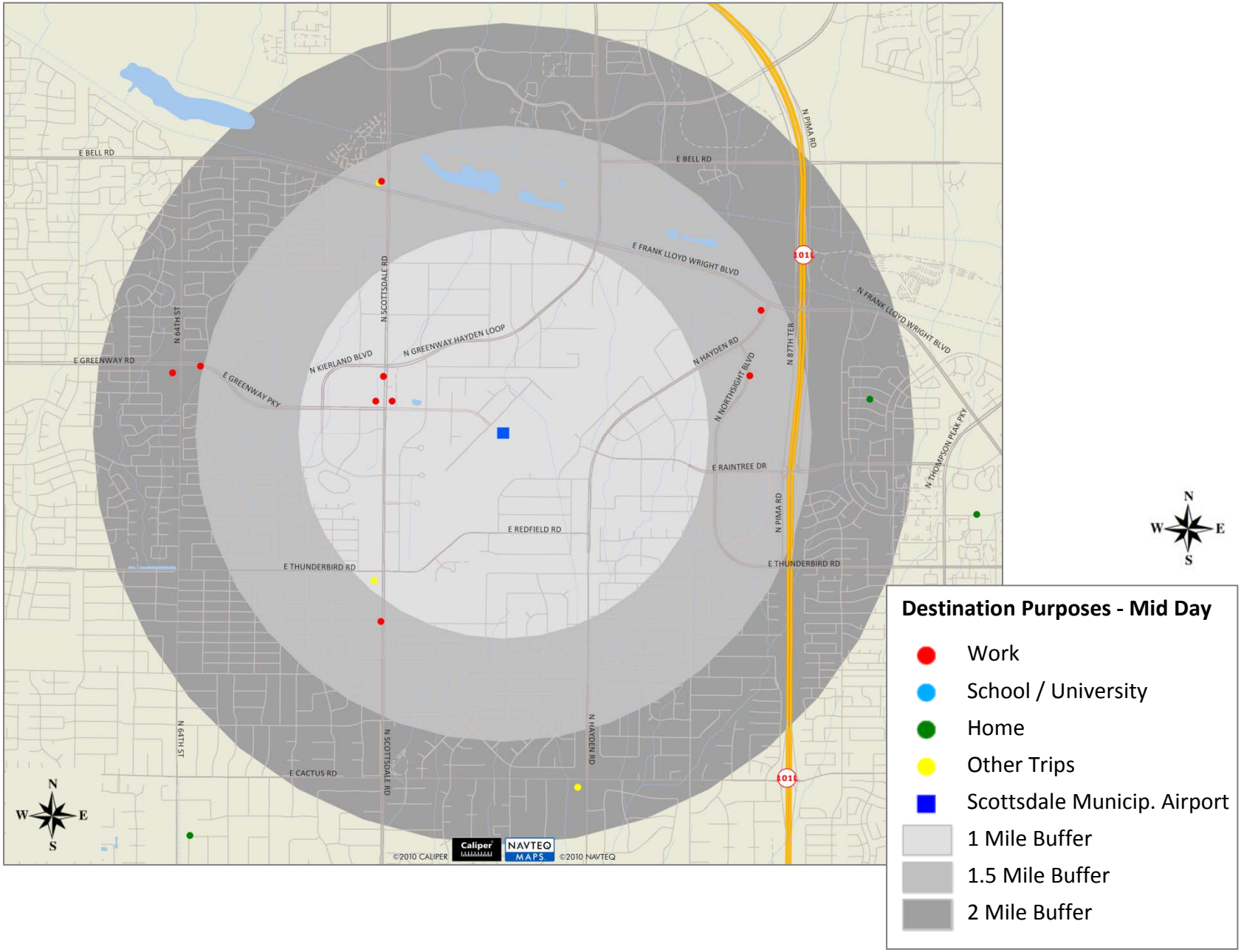


Figure H.32: Scottsdale Airpark – Trip Purpose at PM Peak

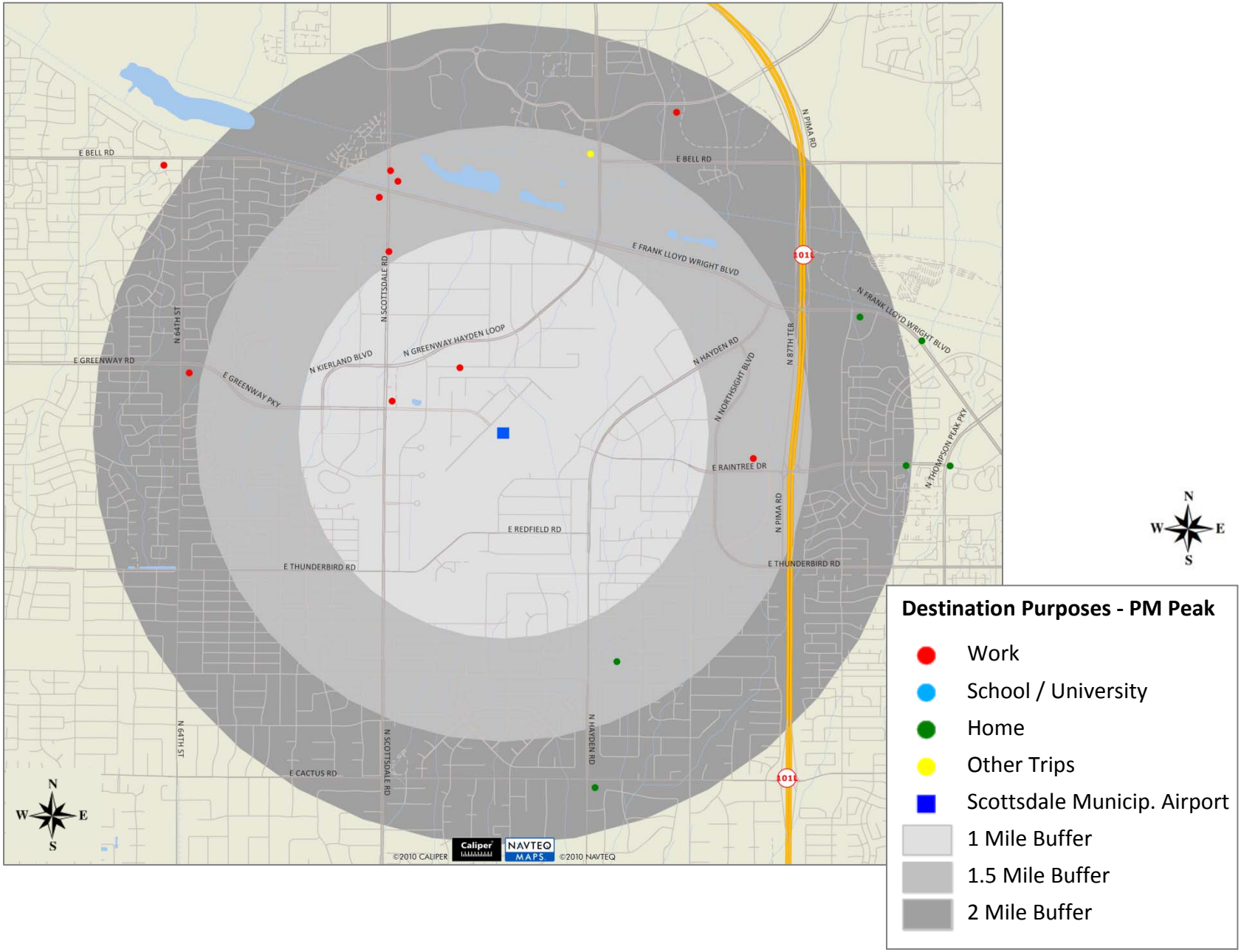


Figure H.33: Service Area Districts

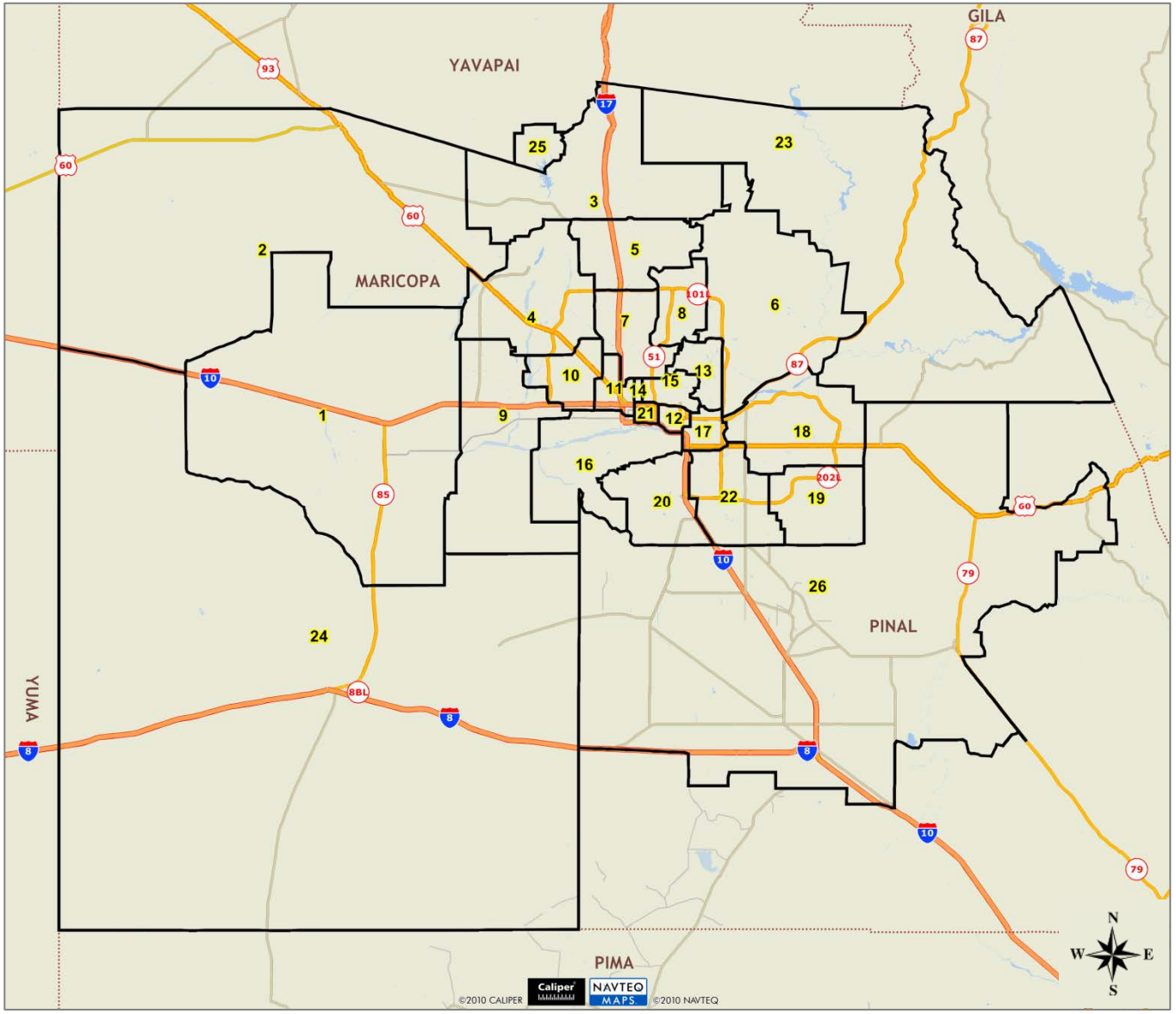


Figure H.34: Attraction Flow for Downtown Phoenix

Origin District	Attraction Flow for Downtown Phoenix									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
District 1	35	0%	35	1%	0	0%	0	0%	0	0%
District 2	7	0%	0	0%	0	0%	0	0%	7	0%
District 3	77	0%	77	1%	0	0%	0	0%	0	0%
District 4	427	2%	270	4%	55	1%	15	0%	87	3%
District 5	113	1%	60	1%	39	1%	9	0%	5	0%
District 6	108	1%	37	1%	10	0%	26	1%	35	1%
District 7	2902	16%	856	14%	856	18%	643	16%	547	20%
District 8	63	0%	24	0%	39	1%	0	0%	0	0%
District 9	214	1%	70	1%	47	1%	24	1%	73	3%
District 10	1233	7%	444	7%	530	11%	161	4%	98	4%
District 11	1947	11%	434	7%	625	13%	627	15%	261	10%
District 12	578	3%	144	2%	278	6%	116	3%	40	1%
District 13	297	2%	93	1%	125	3%	59	1%	20	1%
District 14	1331	7%	410	6%	203	4%	497	12%	221	8%
District 15	1534	9%	733	12%	256	6%	392	9%	153	6%
District 16	1030	6%	356	6%	258	6%	258	6%	158	6%
District 17	1682	9%	448	7%	483	10%	457	11%	294	11%
District 18	1108	6%	472	7%	166	4%	186	5%	284	10%
District 19	176	1%	118	2%	13	0%	16	0%	29	1%
District 20	273	2%	183	3%	4	0%	69	2%	17	1%
District 21	1664	9%	408	6%	556	12%	445	11%	255	9%
District 22	963	5%	627	10%	77	2%	127	3%	132	5%
District 23	0	0%	0	0%	0	0%	0	0%	0	0%
District 24	0	0%	0	0%	0	0%	0	0%	0	0%
District 25	0	0%	0	0%	0	0%	0	0%	0	0%
District 26	35	0%	34	1%	1	0%	0	0%	0	0%
Outside	14	0%	0	0%	14	0%	0	0%	0	0%
Total Trips	17811	100%	6333	100%	4635	100%	4127	100%	2716	100%

Figure H.35: Attraction Flow for Uptown Phoenix

Origin District	Attraction Flow for Uptown Phoenix									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
District 1	7	0%	7	0%	0	0%	0	0%	0	0%
District 2	0	0%	0	0%	0	0%	0	0%	0	0%
District 3	0	0%	0	0%	0	0%	0	0%	0	0%
District 4	189	2%	95	2%	15	1%	0	0%	79	6%
District 5	119	1%	30	1%	26	1%	0	0%	63	5%
District 6	63	1%	39	1%	13	0%	0	0%	11	1%
District 7	2252	22%	794	21%	719	25%	294	12%	445	33%
District 8	115	1%	9	0%	54	2%	52	2%	0	0%
District 9	179	2%	26	1%	105	4%	48	2%	0	0%
District 10	937	9%	325	8%	403	14%	79	3%	130	10%
District 11	1290	12%	372	10%	414	15%	447	19%	57	4%
District 12	375	4%	151	4%	151	5%	15	1%	58	4%
District 13	181	2%	105	3%	23	1%	53	2%	0	0%
District 14	581	6%	56	1%	170	6%	247	10%	108	8%
District 15	917	9%	519	14%	181	6%	137	6%	80	6%
District 16	1019	10%	585	15%	109	4%	190	8%	135	10%
District 17	517	5%	194	5%	62	2%	181	8%	80	6%
District 18	348	3%	102	3%	143	5%	53	2%	50	4%
District 19	52	1%	35	1%	17	1%	0	0%	0	0%
District 20	91	1%	62	2%	0	0%	29	1%	0	0%
District 21	1033	10%	251	7%	234	8%	504	21%	44	3%
District 22	105	1%	65	2%	13	0%	27	1%	0	0%
District 23	0	0%	0	0%	0	0%	0	0%	0	0%
District 24	0	0%	0	0%	0	0%	0	0%	0	0%
District 25	0	0%	0	0%	0	0%	0	0%	0	0%
District 26	8	0%	8	0%	0	0%	0	0%	0	0%
Outside	0	0%	0	0%	0	0%	0	0%	0	0%
Total Trips	10378	100%	3830	100%	2852	100%	2356	100%	1340	100%

Figure H.36: Attraction Flow for Sky Harbor Airport

Origin District	Attraction Flow for Sky Harbor Airport									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
District 1	0	0%	0	0%	0	0%	0	0%	0	0%
District 2	0	0%	0	0%	0	0%	0	0%	0	0%
District 3	0	0%	0	0%	0	0%	0	0%	0	0%
District 4	16	1%	16	4%	0	0%	0	0%	0	0%
District 5	80	7%	0	0%	0	0%	0	0%	80	43%
District 6	0	0%	0	0%	0	0%	0	0%	0	0%
District 7	82	7%	2	1%	69	21%	11	5%	0	0%
District 8	0	0%	0	0%	0	0%	0	0%	0	0%
District 9	15	1%	0	0%	0	0%	15	7%	0	0%
District 10	40	4%	0	0%	20	6%	20	10%	0	0%
District 11	88	8%	38	10%	35	10%	15	7%	0	0%
District 12	101	9%	46	12%	5	1%	14	7%	36	19%
District 13	35	3%	20	5%	0	0%	15	7%	0	0%
District 14	14	1%	0	0%	14	4%	0	0%	0	0%
District 15	114	10%	30	8%	8	2%	39	19%	37	20%
District 16	81	7%	30	8%	12	4%	39	19%	0	0%
District 17	144	13%	89	24%	36	11%	19	9%	0	0%
District 18	133	12%	56	15%	52	16%	0	0%	25	13%
District 19	10	1%	10	3%	0	0%	0	0%	0	0%
District 20	44	4%	11	3%	25	7%	0	0%	8	4%
District 21	36	3%	4	1%	23	7%	9	4%	0	0%
District 22	62	6%	22	6%	35	10%	5	2%	0	0%
District 23	0	0%	0	0%	0	0%	0	0%	0	0%
District 24	0	0%	0	0%	0	0%	0	0%	0	0%
District 25	0	0%	0	0%	0	0%	0	0%	0	0%
District 26	0	0%	0	0%	0	0%	0	0%	0	0%
Outside	0	0%	0	0%	0	0%	0	0%	0	0%
Total Trips	1095	100%	374	100%	334	100%	201	100%	186	100%

Figure H.37: Attraction Flow for Arizona State University

Origin District	Attraction Flow for Arizona State University									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
District 1	0	0%	0	0%	0	0%	0	0%	0	0%
District 2	0	0%	0	0%	0	0%	0	0%	0	0%
District 3	0	0%	0	0%	0	0%	0	0%	0	0%
District 4	135	1%	93	2%	39	1%	0	0%	3	0%
District 5	53	0%	7	0%	0	0%	0	0%	46	2%
District 6	134	1%	28	1%	27	1%	74	2%	5	0%
District 7	648	4%	241	4%	204	4%	123	3%	80	4%
District 8	191	1%	85	2%	81	2%	17	0%	8	0%
District 9	142	1%	72	1%	53	1%	0	0%	17	1%
District 10	238	1%	87	2%	44	1%	85	2%	22	1%
District 11	407	2%	142	3%	118	2%	88	2%	59	3%
District 12	373	2%	114	2%	132	3%	37	1%	90	4%
District 13	443	3%	161	3%	93	2%	116	3%	73	3%
District 14	179	1%	22	0%	109	2%	48	1%	0	0%
District 15	632	4%	203	4%	203	4%	124	3%	102	5%
District 16	520	3%	168	3%	147	3%	123	3%	82	4%
District 17	7111	42%	2165	40%	2351	45%	1934	49%	661	31%
District 18	1855	11%	722	13%	458	9%	324	8%	351	16%
District 19	135	1%	99	2%	15	0%	21	1%	0	0%
District 20	227	1%	100	2%	83	2%	44	1%	0	0%
District 21	1173	7%	122	2%	385	7%	416	11%	250	12%
District 22	2047	12%	764	14%	650	12%	325	8%	308	14%
District 23	0	0%	0	0%	0	0%	0	0%	0	0%
District 24	0	0%	0	0%	0	0%	0	0%	0	0%
District 25	0	0%	0	0%	0	0%	0	0%	0	0%
District 26	127	1%	26	0%	73	1%	22	1%	6	0%
Outside	0	0%	0	0%	0	0%	0	0%	0	0%
Total Trips	16770	100%	5421	100%	5265	100%	3921	100%	2163	100%

Figure H.38: Attraction Flow for the Biltmore Area

Origin District	Attraction Flow for the Biltmore Area									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
District 1	0	0%	0	0%	0	0%	0	0%	0	0%
District 2	0	0%	0	0%	0	0%	0	0%	0	0%
District 3	0	0%	0	0%	0	0%	0	0%	0	0%
District 4	58	2%	0	0%	18	3%	40	7%	0	0%
District 5	7	0%	0	0%	1	0%	6	1%	0	0%
District 6	113	4%	0	0%	0	0%	12	2%	101	18%
District 7	704	23%	293	25%	217	31%	118	20%	76	13%
District 8	100	3%	14	1%	0	0%	44	8%	42	7%
District 9	26	1%	0	0%	26	4%	0	0%	0	0%
District 10	169	6%	73	6%	25	4%	20	3%	51	9%
District 11	319	11%	57	5%	102	15%	122	21%	38	7%
District 12	222	7%	147	12%	15	2%	26	4%	34	6%
District 13	272	9%	84	7%	72	10%	22	4%	94	16%
District 14	39	1%	23	2%	0	0%	0	0%	16	3%
District 15	494	16%	262	22%	94	13%	75	13%	63	11%
District 16	263	9%	162	14%	50	7%	18	3%	33	6%
District 17	48	2%	0	0%	18	3%	30	5%	0	0%
District 18	52	2%	10	1%	15	2%	0	0%	27	5%
District 19	37	1%	37	3%	0	0%	0	0%	0	0%
District 20	10	0%	0	0%	10	1%	0	0%	0	0%
District 21	59	2%	1	0%	37	5%	21	4%	0	0%
District 22	43	1%	18	2%	0	0%	25	4%	0	0%
District 23	0	0%	0	0%	0	0%	0	0%	0	0%
District 24	0	0%	0	0%	0	0%	0	0%	0	0%
District 25	0	0%	0	0%	0	0%	0	0%	0	0%
District 26	0	0%	0	0%	0	0%	0	0%	0	0%
Outside	0	0%	0	0%	0	0%	0	0%	0	0%
Total Trips	3035	100%	1181	100%	700	100%	579	100%	575	100%

Figure H.39: Attraction Flow for the Metro Center

Origin District	Attraction Flow for Metro Center									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
District 1	0	0%	0	0%	0	0%	0	0%	0	0%
District 2	0	0%	0	0%	0	0%	0	0%	0	0%
District 3	0	0%	0	0%	0	0%	0	0%	0	0%
District 4	295	7%	61	5%	34	3%	142	12%	58	9%
District 5	23	1%	0	0%	11	1%	12	1%	0	0%
District 6	53	1%	0	0%	53	4%	0	0%	0	0%
District 7	1052	25%	246	21%	450	37%	261	22%	95	14%
District 8	308	7%	127	11%	84	7%	13	1%	84	12%
District 9	44	1%	44	4%	0	0%	0	0%	0	0%
District 10	601	14%	158	13%	167	14%	186	16%	90	13%
District 11	682	16%	204	17%	103	8%	322	28%	53	8%
District 12	118	3%	33	3%	0	0%	61	5%	24	4%
District 13	53	1%	10	1%	19	2%	24	2%	0	0%
District 14	97	2%	28	2%	14	1%	22	2%	33	5%
District 15	184	4%	86	7%	32	3%	28	2%	38	6%
District 16	394	9%	116	10%	141	12%	17	1%	120	18%
District 17	73	2%	0	0%	5	0%	5	0%	63	9%
District 18	49	1%	39	3%	10	1%	0	0%	0	0%
District 19	0	0%	0	0%	0	0%	0	0%	0	0%
District 20	0	0%	0	0%	0	0%	0	0%	0	0%
District 21	183	4%	38	3%	55	5%	74	6%	16	2%
District 22	36	1%	0	0%	36	3%	0	0%	0	0%
District 23	0	0%	0	0%	0	0%	0	0%	0	0%
District 24	0	0%	0	0%	0	0%	0	0%	0	0%
District 25	0	0%	0	0%	0	0%	0	0%	0	0%
District 26	0	0%	0	0%	0	0%	0	0%	0	0%
Outside	0	0%	0	0%	0	0%	0	0%	0	0%
Total Trips	4245	100%	1190	100%	1214	100%	1167	100%	674	100%

Figure H.40: Attraction Flow for Scottsdale Airpark

Origin District	Attraction Flow for Scottsdale Airpark									
	Total		AM Peak		Mid-Day		PM Peak		Other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
District 1	0	0%	0	0%	0	0%	0	0%	0	0%
District 2	0	0%	0	0%	0	0%	0	0%	0	0%
District 3	0	0%	0	0%	0	0%	0	0%	0	0%
District 4	47	8%	20	9%	0	0%	0	0%	27	13%
District 5	0	0%	0	0%	0	0%	0	0%	0	0%
District 6	9	2%	9	4%	0	0%	0	0%	0	0%
District 7	90	15%	7	3%	44	36%	0	0%	39	19%
District 8	137	23%	51	22%	67	55%	19	44%	0	0%
District 9	0	0%	0	0%	0	0%	0	0%	0	0%
District 10	91	15%	48	21%	10	8%	0	0%	33	16%
District 11	14	2%	14	6%	0	0%	0	0%	0	0%
District 12	0	0%	0	0%	0	0%	0	0%	0	0%
District 13	23	4%	13	6%	0	0%	10	23%	0	0%
District 14	0	0%	0	0%	0	0%	0	0%	0	0%
District 15	58	10%	18	8%	0	0%	0	0%	40	20%
District 16	0	0%	0	0%	0	0%	0	0%	0	0%
District 17	102	17%	39	17%	0	0%	0	0%	63	31%
District 18	9	2%	9	4%	0	0%	0	0%	0	0%
District 19	0	0%	0	0%	0	0%	0	0%	0	0%
District 20	0	0%	0	0%	0	0%	0	0%	0	0%
District 21	14	2%	0	0%	0	0%	14	33%	0	0%
District 22	0	0%	0	0%	0	0%	0	0%	0	0%
District 23	0	0%	0	0%	0	0%	0	0%	0	0%
District 24	0	0%	0	0%	0	0%	0	0%	0	0%
District 25	0	0%	0	0%	0	0%	0	0%	0	0%
District 26	0	0%	0	0%	0	0%	0	0%	0	0%
Outside	0	0%	0	0%	0	0%	0	0%	0	0%
Total Trips	594	100%	228	100%	121	100%	43	100%	202	100%