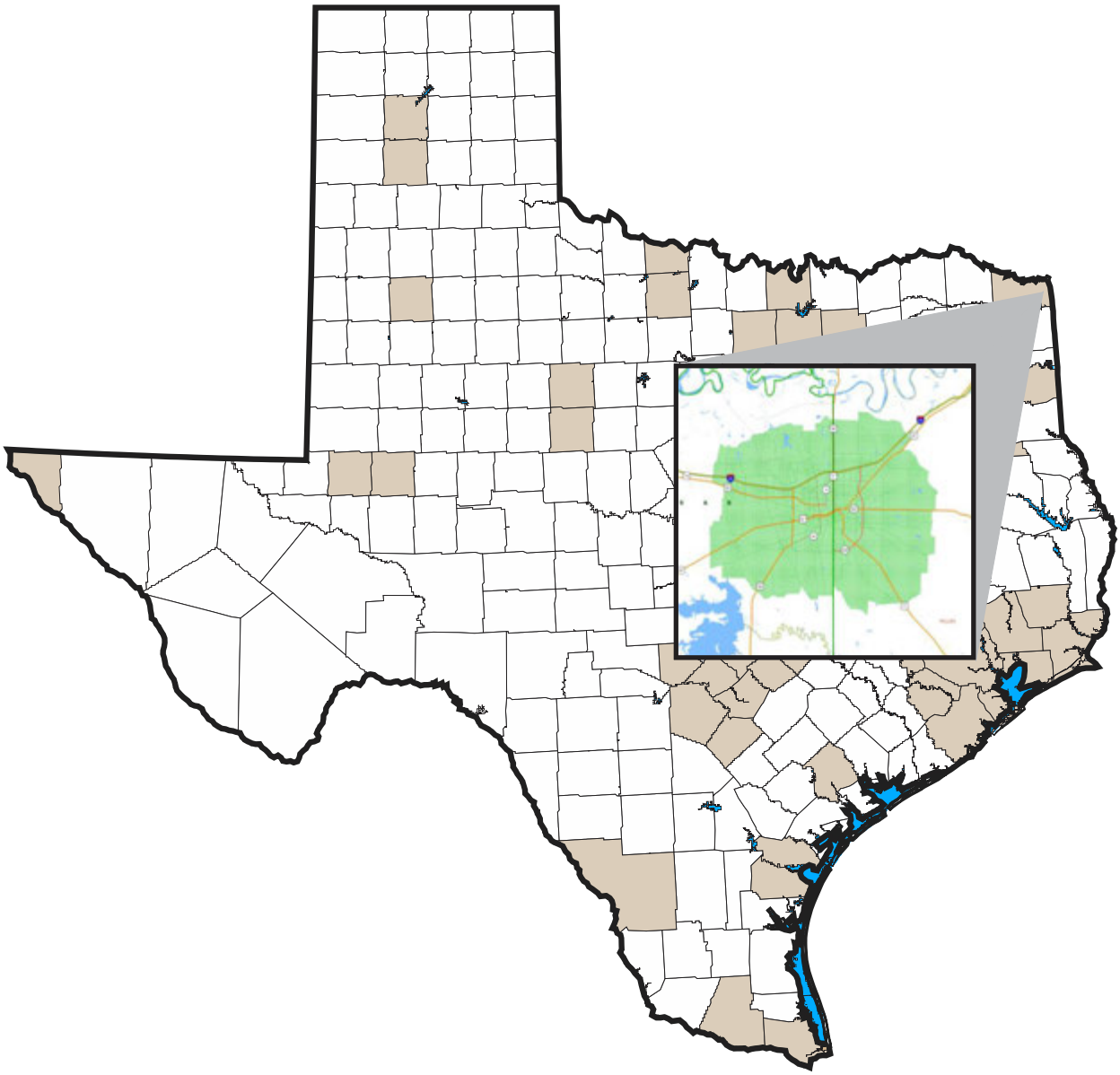
2014 Texarkana Household Travel Survey Technical Summary



Texas Department of Transportation

Prepared by the
Texas A&M Transportation Institute
April 2016

2014 Texarkana Household Travel Survey

Technical Summary

Texas Department of Transportation Travel Survey Program

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Performed in cooperation with the
Texas Department of Transportation
and the
Texarkana Metropolitan Planning Organization
and the
Federal Highway Administration

April 2016

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ACKNOWLEDGEMENTS

There were a number of individuals who extended technical support and assistance during the preparation of this report. Special thanks are due to Mr. Steve Farnsworth of the Texas A&M Transportation Institute for preparation of graphics for the report; Mr. Byron Chigoy of the Texas A&M Transportation Institute for help in coding methods used to produce the report results; and Mr. Gary Lobaugh of the Texas A&M Transportation Institute for editing the report and creating the trip maps.

The authors would also like to thank Christeen Pusch, TxDOT Travel Survey Program Manager, and the Department for its continuing program to collect and analyze urban travel data to support travel demand modeling.

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INTRODUCTION

For Monday through Friday weekdays during the school year from February 2014 through December 2015, the Transportation Planning and Programming Division (TPP) of the Texas Department of Transportation (TxDOT) sponsored a comprehensive set of travel surveys in the Texarkana Metropolitan Planning Organization (MPO) area located within portions of Bowie County, Texas and Miller County, Arkansas. Throughout this report, the area will be referred to as the Texarkana Urban Transportation Study (TUTS) area. The purpose of the survey was to collect data and information needed as input to the TUTS area travel demand model. The model is an important planning tool used to forecast future traffic levels on area roadways, evaluate the region's transportation plan, and aid (if needed) in the region's air quality conformity analyses. Most urbanized areas in Texas (as well as in the U.S. and abroad) rely on travel forecasting models as a tool in their transportation planning and air quality analysis efforts. Since modeling results may be used in determining the conformity or non-conformity status of transportation plans to federal clean air regulations, the use of accurate and up-to-date data from regional travel surveys is important to TxDOT and MPOs across the state.

Three different types of travel surveys were conducted in the Texarkana area, including a household survey that included a passive Global Positioning System (GPS) component, a work place survey that included special generator surveys, and a commercial vehicle survey. The household survey collected data on the amount and characteristics of travel generated by households within the area. The work place survey collected data on travel to and from area businesses, special generators, and places of employment. The commercial vehicle survey collected data on cargo transport vehicles and fleet or service vehicles of area governments and businesses. Each survey collected a different component of travel needed for use in a travel demand model. All surveys were designed to capture characteristics of weekday travel during the school year.

This report summarizes the results of the household survey for the TUTS area. A variety of household summary information is presented in this report. The summary information is subject to modification as the survey data are further evaluated and analyzed within the context of all the travel surveys conducted.

The household survey sample design is based on obtaining travel information from a predetermined number of households within certain ranges of household income and household size. The desired number of surveyed households in any household size/income range is not proportional to the estimated number of households in the cell. Rather, the number of households to be surveyed in each cell is based on the total estimated number of households in the area and the expected number of trips the households will make during a typical school-year weekday.

The survey design is based on a desired level of accuracy of +/- 10 percent with a confidence level of 90 percent of the total person trips in the survey area. Figure 1 shows the general vicinity of the TUTS area, while Figure 2 provides a map showing the household locations, Traffic Analysis Zones (TAZs), and county areas. The number of households in the study area in 2014 was estimated based on three-way population distribution estimates (household size, income, and number of employees) obtained from 2012 American Community Survey data, and updated to reflect the population and households of 2014. Adjustments for age/sex cohorts are also provided based on 2014 estimates for the study area using census data.

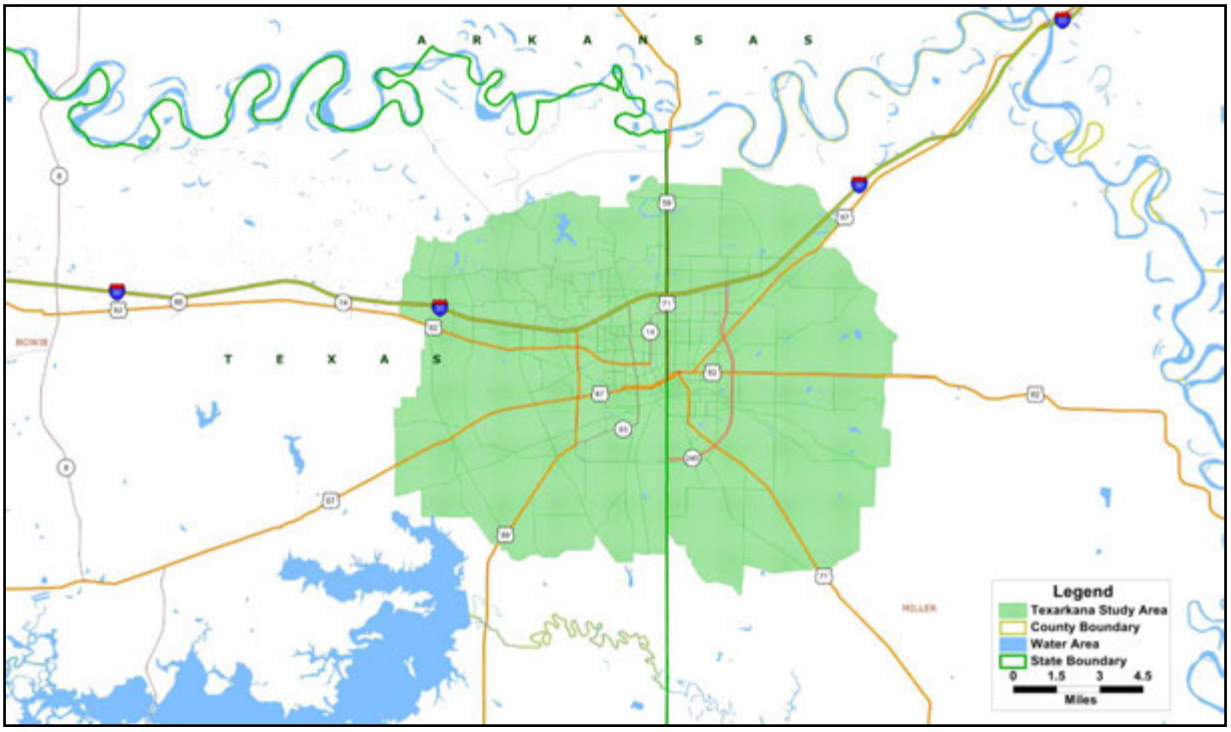

Figure 1. Texarkana Study Area.

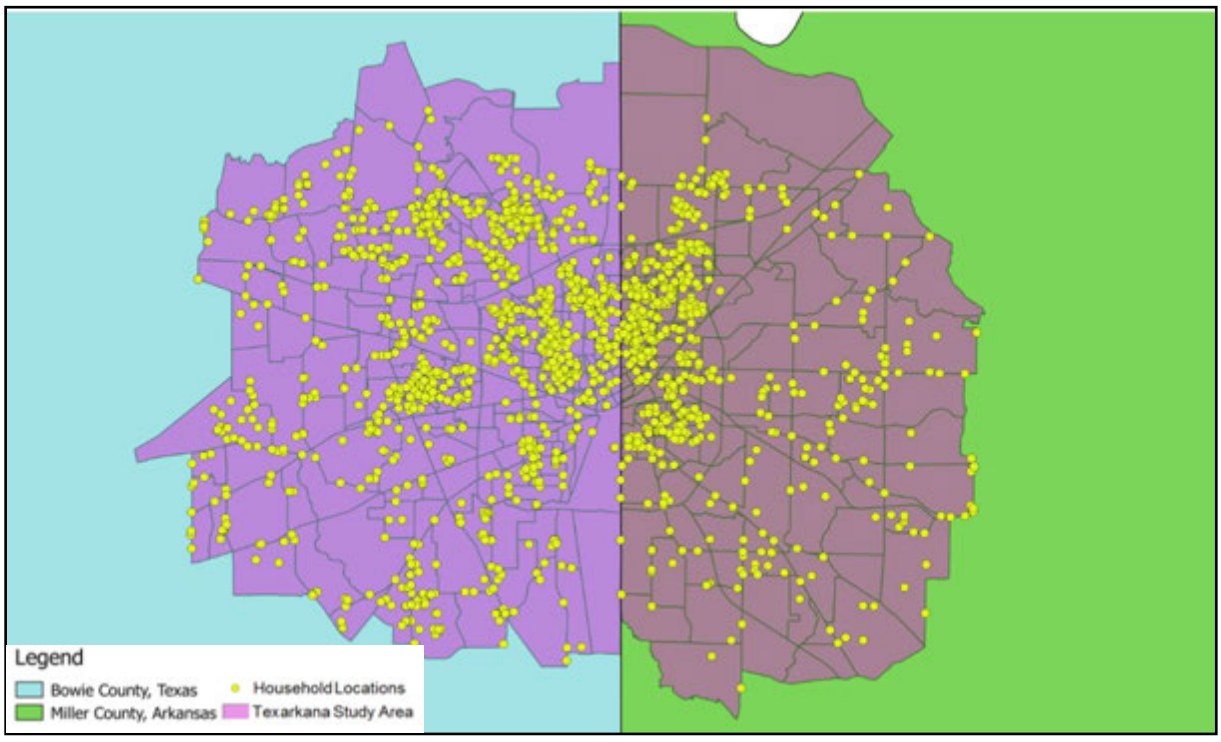

Figure 2. Household Locations within the Texarkana Study Area.

Table 1 shows the estimated number of households in the study area, the number of households surveyed, and the distribution of the number of households surveyed stratified by household size and household income range. A total of 2,515 households were surveyed within the two-county (Bowie County, Texas and Miller County, Arkansas) area. However, only 1,679 of these households were determined to fall within the TUTS area, and were thus retained for analysis. Four of these 1,679 households were located along the study area boundary and were not initially thought to be in the study area. However, upon further investigation of all households located along the study area boundary (using tools in GoogleMaps) the determination was made to include these four households in the analysis. The minimum number of households surveyed in the TUTS area in any household size/income range cell was 13 and the maximum number surveyed was 149. Of the estimated 38,302 households in the TUTS area, 28.2 percent are households with one person and 34.0 percent are households with two persons.

Table 1. Estimated Number of 2014 Households, Number of Households Surveyed, and Percent of Surveyed Households, Stratified by Household Size and Income Range.

Income Range	Household Size					
	1	2	3	4	5+	Total
	Estimated Number of Households					
$0-$14,999	4,294	1,459	781	463	333	7,331
$15,000-$34,999	2,838	2,696	1,042	732	517	7,825
$35,000-$49,999	2,202	3,076	1,348	996	705	8,327
$50,000-$74,999	996	2,892	1,551	1,256	892	7,588
$75,000+	471	2,892	1,471	1,406	992	7,231
Total	**10,801**	**13,015**	**6,193**	**4,853**	**3,440**	**38,302**
	Number of Households Surveyed					
$0-$14,999	57	62	28	16	13	176
$15,000-$34,999	79	108	90	56	45	378
$35,000-$49,999	91	108	78	32	32	341
$50,000-$74,999	64	113	109	73	41	400
$75,000+	24	149	111	70	30	384
Total	**315**	**540**	**416**	**247**	**161**	**1,679**
	Percent of Households Surveyed					
$0-$14,999	1.33	4.25	3.58	3.45	3.90	2.40
$15,000-$34,999	2.78	4.01	8.64	7.65	8.70	4.83
$35,000-$49,999	4.13	3.51	5.79	3.21	4.54	4.10
$50,000-$74,999	6.43	3.91	7.03	5.81	4.59	5.27
$75,000+	5.09	5.15	7.55	4.98	3.02	5.31
Total	**2.92**	**4.15**	**6.72**	**5.09**	**4.68**	**4.38**

HOUSEHOLD SURVEY RESULTS

This survey represents a sample of household demographic and travel characteristics for a Monday through Friday weekday during July 2013 (pilot test) and during the school year from February 2014 through December 2015. The survey data were collected from travel diaries completed on a specified travel day for all occupants of 1,679 households located in the TUTS area (Figure 2).

Key Points Regarding Household Survey Data

- The survey data are for an average weekday collected for a Monday through Friday weekday during July 2013 (pilot test) and during the school year from February 2014 through December 2015.

- The survey data were tabulated only for persons who lived in the surveyed households. Persons living in group quarters, such as nursing homes, correctional facilities, or dormitories were not surveyed.
- The survey data are for persons of all ages unless otherwise noted.
- The survey data do not include non-household-based travel such as commercial vehicles, tourists, or persons staying in hotels.
- The estimates of population and number of households are based on the expanded survey data and may differ from population and household estimates developed by other agencies.
- The survey data are for trips that began and ended within the planning area. Trips that began inside the planning area and ended outside the planning area, or vice versa, are generally captured in external surveys and are therefore not included in household survey reporting.

Findings of the Survey

For the Texarkana area:

- Over 94 percent of households had a vehicle available;
- Over 96 percent of households had a licensed driver;
- In general, trip rates per household increased with household size, with household income, and with vehicle availability;
- The average private vehicle occupancy was 1.42 persons per vehicle;
- 92 percent of all person trips were made in a personal-use vehicle;
- In terms of person trips made, the travel mode breakdown was 65 percent drove a vehicle, 27 percent rode as a passenger in a vehicle, 4 percent used a school bus, and less than 2 percent walked;
- Less than 3 percent of the total persons within the household population did not make an internal trip within the planning area on their survey day (after assigning those persons who reported making no trips on the study day, *and* who had a household member who did reporting making trips on the study day, the average rate by trip purpose as those who *did* make trips in their age cohort);
- On average, each person made 3.2 internal person trips per day and each household made 8.0 internal person trips per day;
- The average person trip length was 3.88 miles and the average person trip duration was 6.67 minutes;
- The average vehicle trip length was 4.06 miles and the average vehicle trip duration was 6.91 minutes;
- The peak hour for household travel was from 7:00 a.m. to 7:59 a.m., during which 12.6 percent of the trip starts occurred. The second highest hour for household trip starts was from 3:00 p.m. to 3:59 p.m. when 12.3 percent of the daily trip starts occurred; and

- Weekday school year household travel internal to the study area accounted for an estimated 790,667 vehicle miles of travel (VMT). This estimate was derived using data for Texarkana study area internal trips (excluding intrazonal trips) and average vehicle trip length (calculation excluding intrazonal trip lengths listed as zero).

HOUSEHOLD CHARACTERISTICS

Characteristics of the household influence travel behavior. For example household size, income, vehicles available, number of persons employed, and family life cycle affect the amount and time-of-day that trips are made. For this survey, households include only persons living in residences, and do not include persons living in group quarters. The figures in this section are for the expanded survey data.

Household Size

Figure 3 shows the distribution of households by household size for the Texarkana study area in 2014. Household size and household income range are the two household variables used to stratify the household trip rates calculated from the household travel survey. When forecasting future travel, the forecast population must be estimated by household size and household income range. Average household size in the TUTS area in 2014 estimated from the expanded survey results was 2.49 persons per household. For the Texarkana area travel model, three variables — household size, household income, and the number of persons employed in the household — were used to stratify trip rates for the home-based work (HBW) trip purpose. For the home-based non-work (HBNW) and the non-home based (NHB) trip purposes, two variables – household size and household income – were used to stratify trip rates.

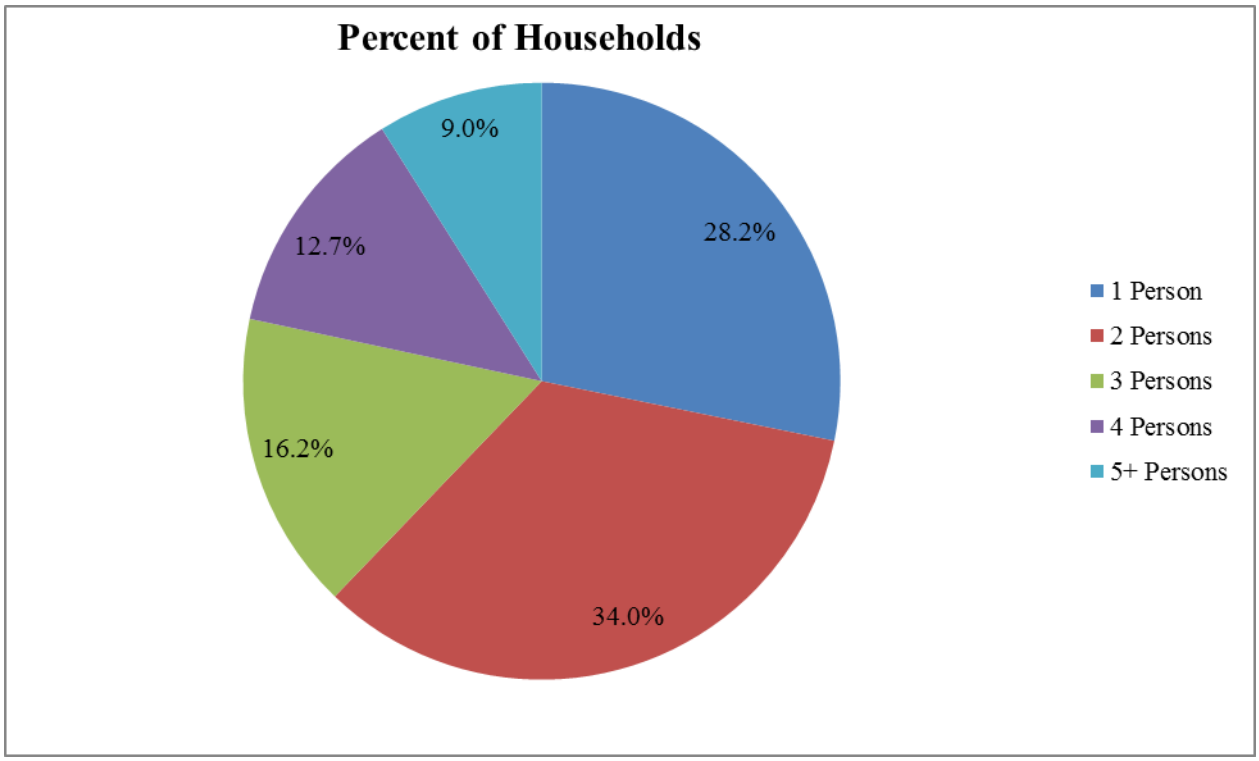

Figure 3. Distribution of Households by Household Size.

A typical household makes a certain number of trips on most days to meet household needs, for example, to purchase food and other necessities, to earn an income, to attend school, to visit friends and family, to receive medical care, to attend events, etc. For this reason, the number of households is a better predictor of future travel than using the number of persons.

Household Life Cycle

Household life cycle influences the amount and time of travel. For example, households with children tend to make more trips than households without children. Households with working adults tend to make more trips than households with retired adults. There were an estimated 38,302 households in the TUTS area in 2014. Figure 4 shows the distribution of these 38,302 households by household size and household life cycle (Adults with No Children, Adults with Children, and Adults Retired).

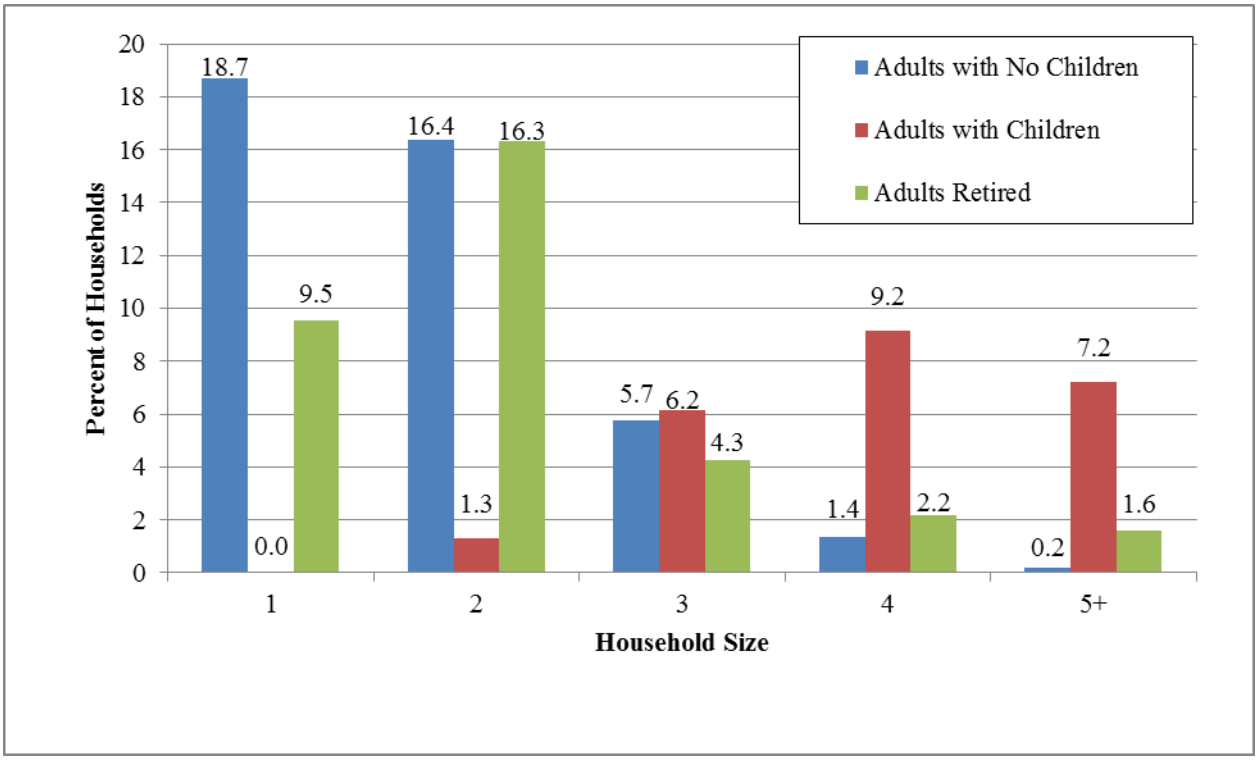

Figure 4. Distribution of Household Size vs. Life Cycle.

Household Income

Household income and household size are the two primary variables used to estimate household trip rates. As household income increases, the amount of household travel tends to increase. Additionally, as income increases, vehicle ownership tends to increase and additional financial resources are available to the household to support increased travel. Figure 5 provides the distribution of the 38,302 expanded households in the survey by the combined annual household income range. For sampling purposes, these income ranges were selected to produce income distributions roughly equal to quintiles of households in the study area. Figure 6 shows a more detailed breakdown of the TUTS to provide further insight into the household income distribution.

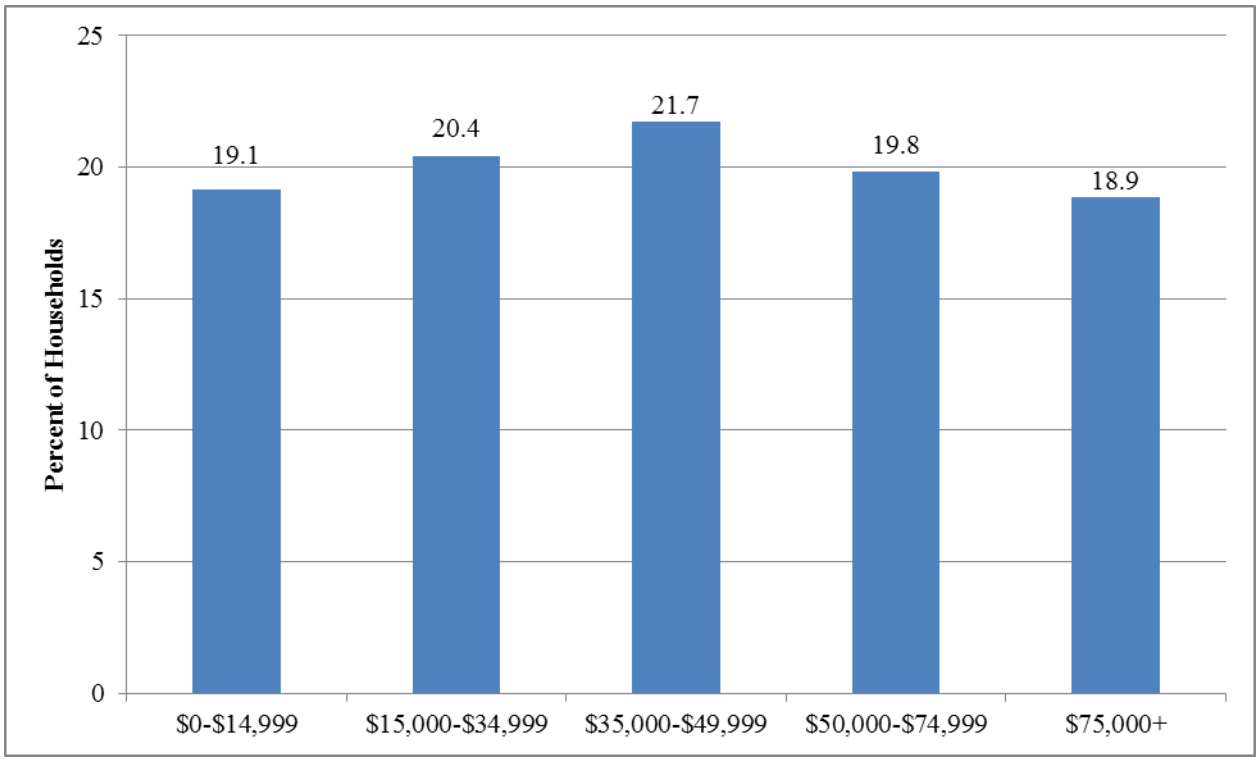

Figure 5. Distribution of Households by Household Income Range.

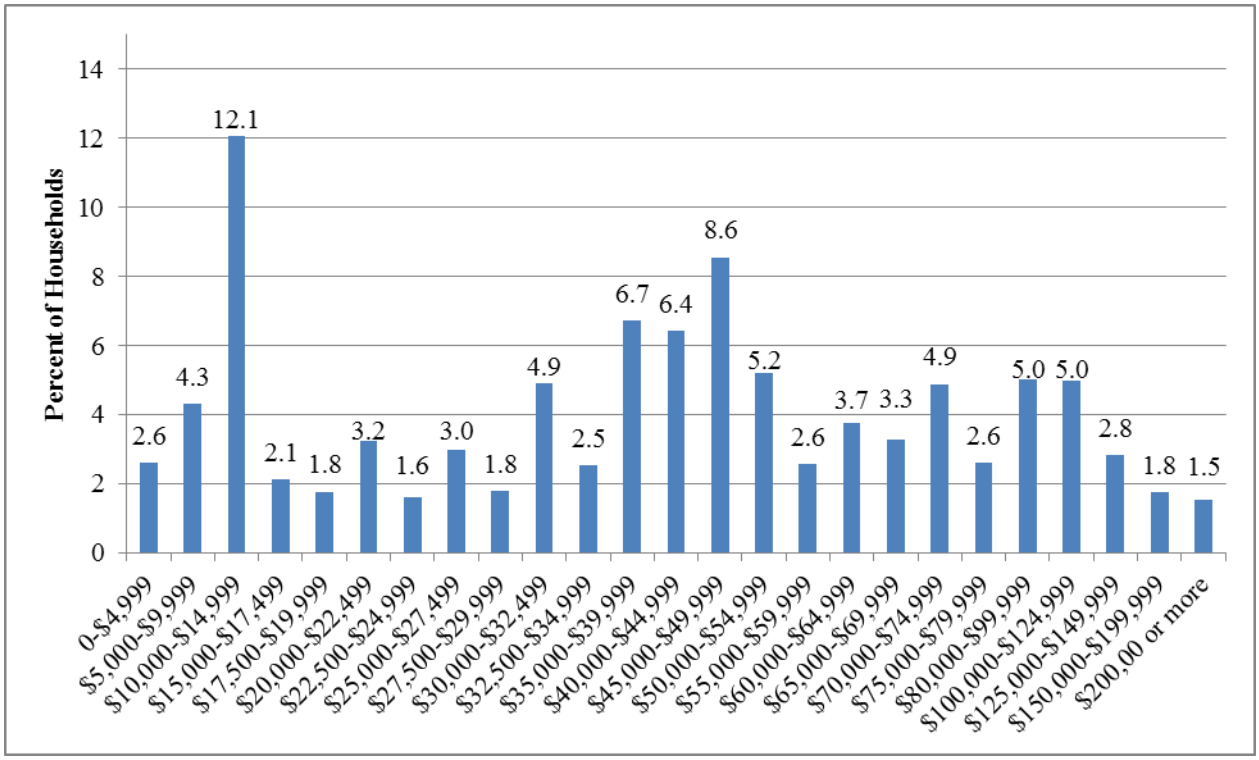

Figure 6. More Disaggregate Distribution of Households by Household Income Range

Household Vehicle Availability and Licensed Drivers

In general, as the number of vehicles available to the household increases, daily household travel increases. This household characteristic also impacts forecasting and the demand for public transportation. As household vehicle availability increases, the household demand for public transportation tends to decrease. Figure 7 shows the distribution of the 38,302 expanded households in the survey by the number of vehicles available. Just fewer than 6 percent of the households did not have a vehicle available. The average number of vehicles available per household was 1.95.

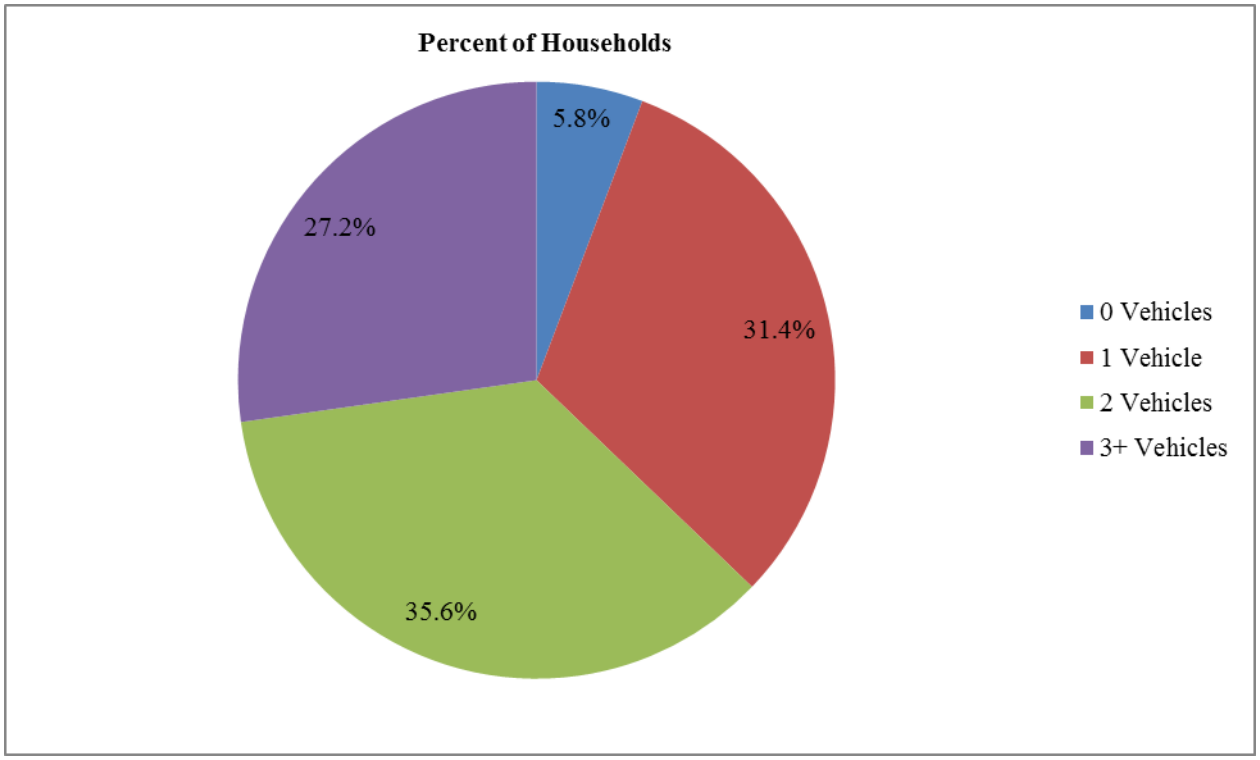

Figure 7. Distribution of Households by Number of Vehicles Available.

Figure 8 shows the distribution of the 38,302 expanded households by the number of licensed drivers per household. Only 3.8 percent of the households did not have a licensed driver.

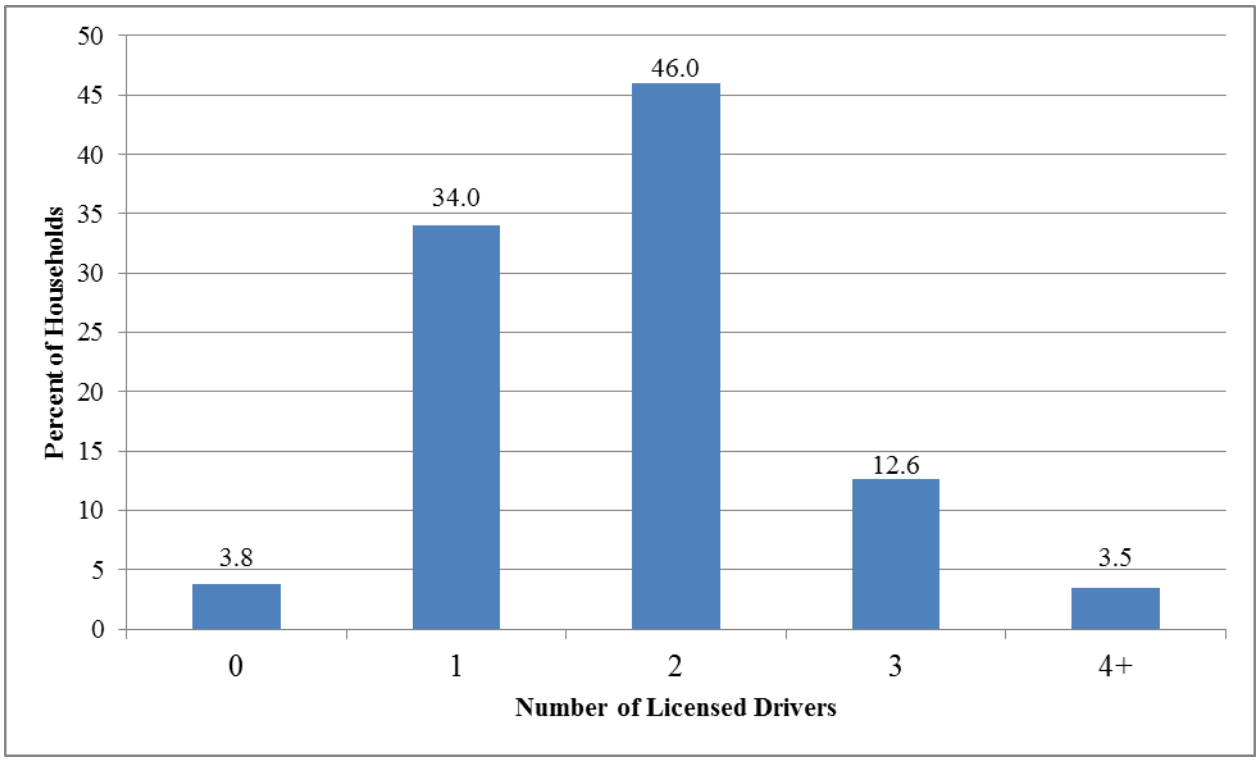

Figure 8. Distribution of Households by Number of Licensed Drivers.

Figure 9 shows the distribution of the 38,302 expanded households by the number of licensed drivers and the number of vehicles available. For 61.0 percent of the households (excepting those households with no licensed drivers and no vehicle available), the number of licensed drivers and the number of vehicles available was equal. For 11.8 percent of the households, the number of licensed drivers was more than the number of vehicles available and for 23.9 percent of the households, the number of licensed drivers was less than the number of vehicles available. Just over 3 percent (3.2 percent) of the households had neither a licensed driver nor a vehicle available.

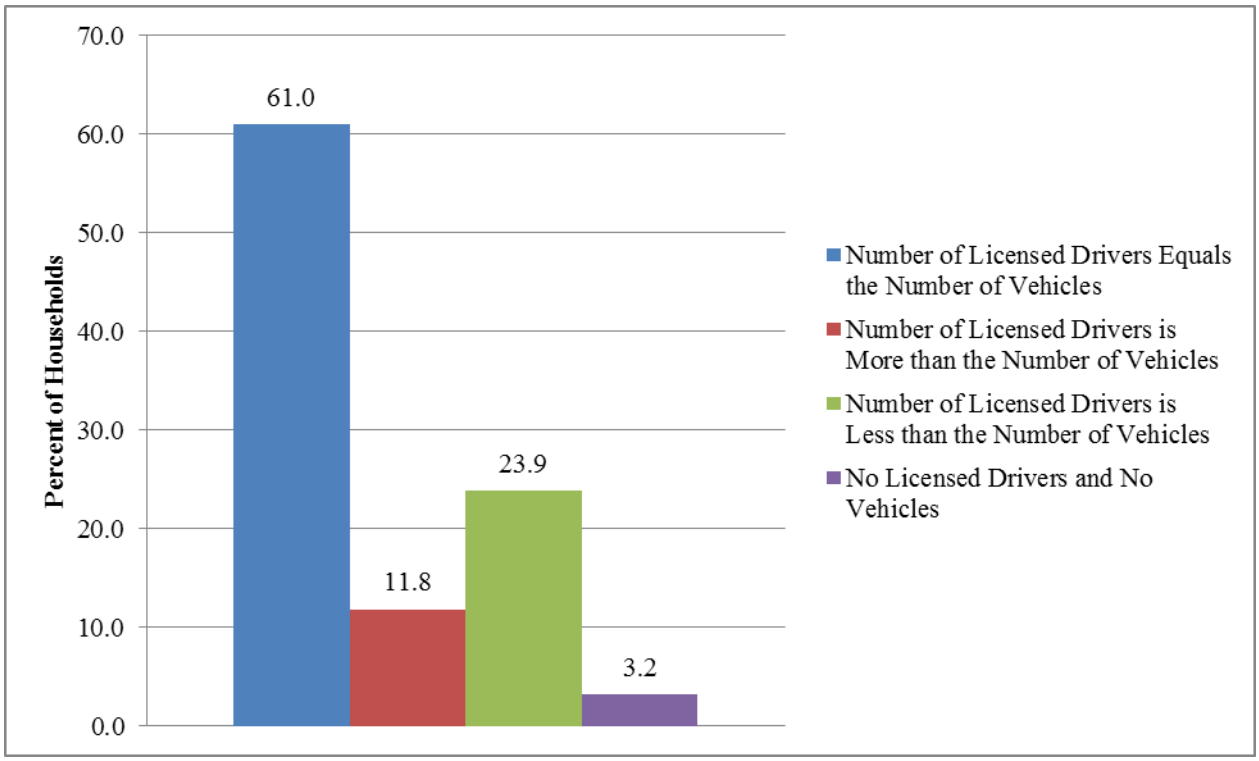

Figure 9. Comparison of Households by Licensed Drivers and Vehicle Availability.

Recall that the 38,302 expanded households had an average household size of 2.49 persons per household. Figure 10 shows the distribution of the 38,302 expanded households by the number of persons employed. Overall, the average number of persons employed per household was 1.07.

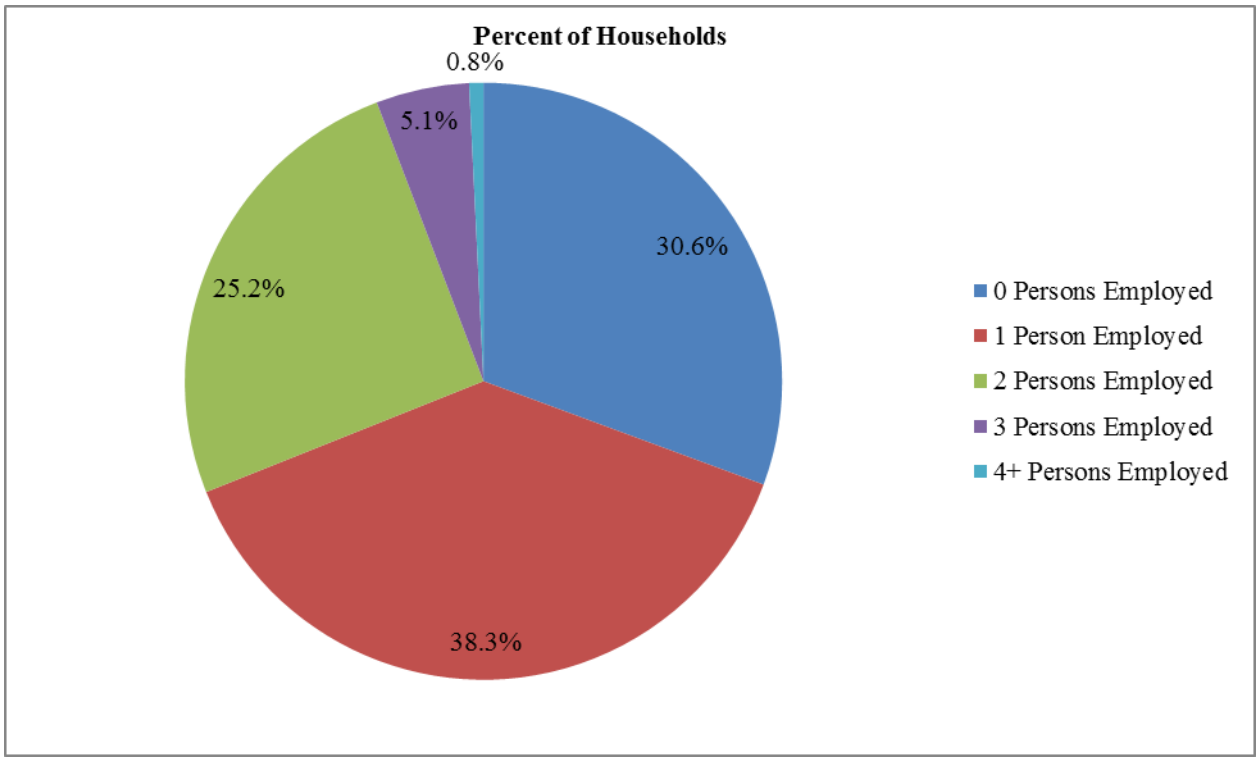

Figure 10. Distribution of Households by Number of Persons Employed.

Figure 11 shows the distribution of all persons regardless of age by employment status. Almost a third of the population (32.8 percent) was employed full time and approximately a quarter (23.1 percent) was unemployed-students. Nearly 13 percent of the population was retired.

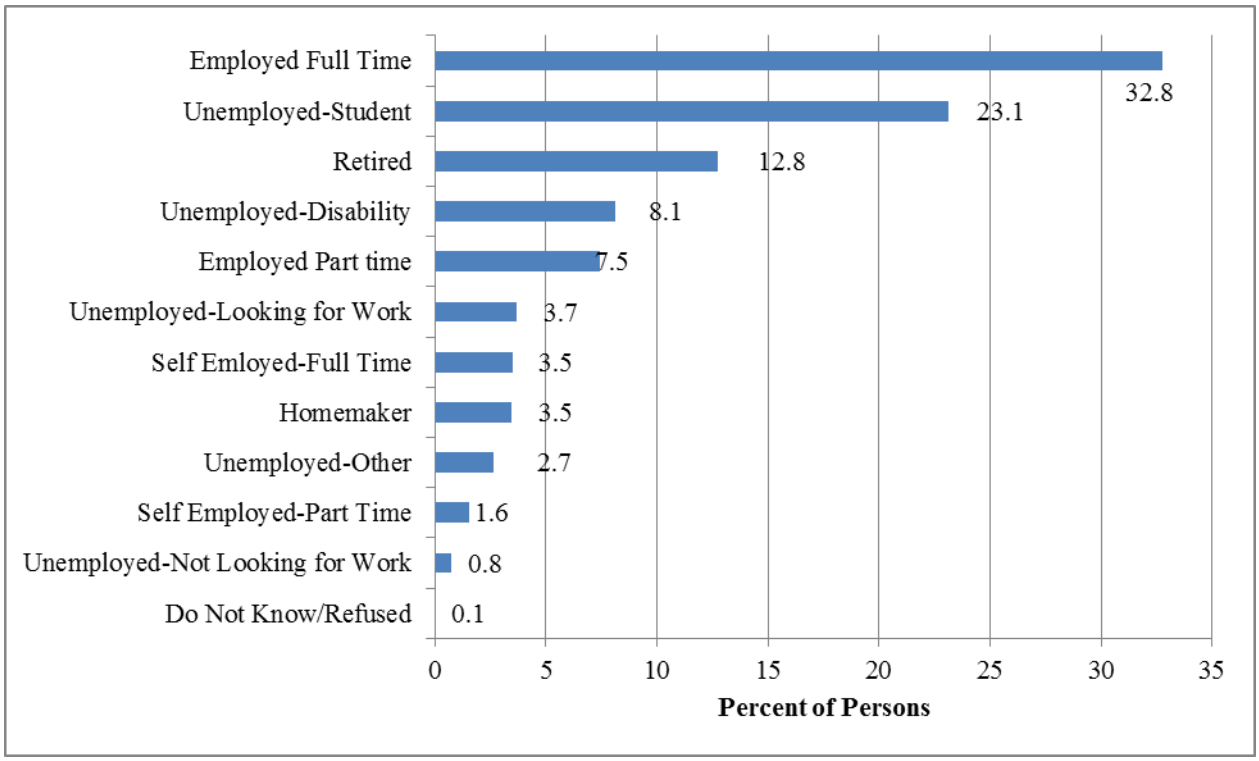

Figure 11. Distribution of Persons by Employment Status.

Figure 12 shows the distribution of the employed persons by the type of employer. The Office (non-government) employer type included the largest percentage of employed persons, encompassing 15.8 percent of those employed. The Retail/Shopping/Gas employer-type accounted for the second largest percentage of employed persons, including 15.1 percent of employees. Industrial/Manufacturing/Warehouse (14.4 percent of employees) and Medical (12.5 percent of employees) were third and fourth. Note that these percentages include some persons who work more than one job; meaning that the number of employed persons is less than the sum of all employees for all employer types.

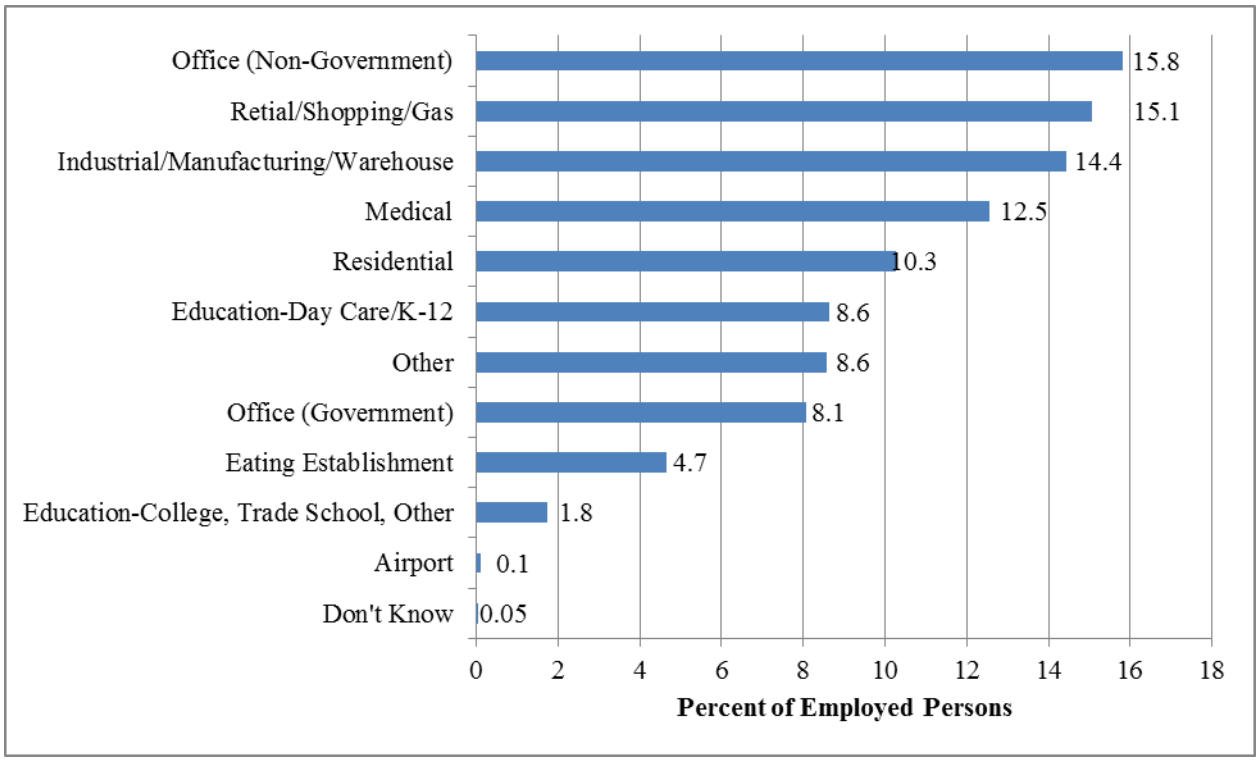

Figure 12. Distribution of Employed Persons by Employer Type.

Ethnicity

Figure 13 shows the distribution of the 95,243 persons by ethnicity. Two-thirds of the population (66.4 percent) was White/Caucasian and 28.4 percent of the population was Black/African American. Hispanic/Mexican American persons comprised 2.8 percent of the population. All other ethnicities comprised a relatively small portion of the population (i.e., each less than 2 percent). While these ethnicity breakdowns match the 2014 combined census values for Miller County, Arkansas and Bowie County, Texas fairly well, there are some slight discrepancies, which may partially be a reflection of the fact that our reported values are for the Texarkana Study Area, which does not encompass the whole of these two counties.

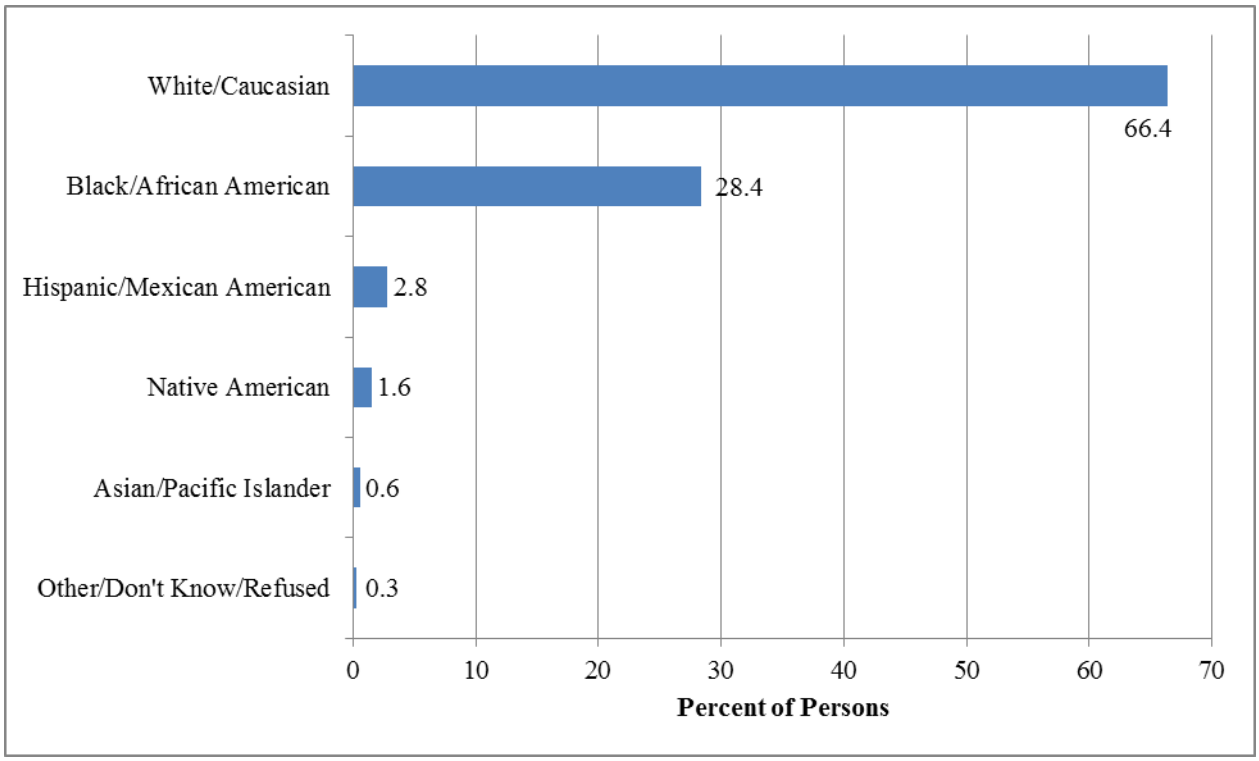

Figure 13. Distribution of Persons by Ethnicity.

TRAVEL CHARACTERISTICS

The previous section reported on a variety of household and person characteristics obtained from the household travel survey. In this section, these household and person characteristics are related to household travel characteristics. Household size, household income, household life cycle, household vehicle availability, household licensed drivers, and household employment all affect the amount of household travel.

Household Trip Rates and Vehicle Occupancy

Figure 14 shows the household trip rate as a function of household size. As the household size increases, the household trip rates increase and become higher for larger household sizes. For travel forecasting applications, households with five or more household members are grouped and an average trip rate is used for the group. Figure 15 shows the household trip rates as a function of the household income range. As expected, as household income increases, the household trip rate increases.

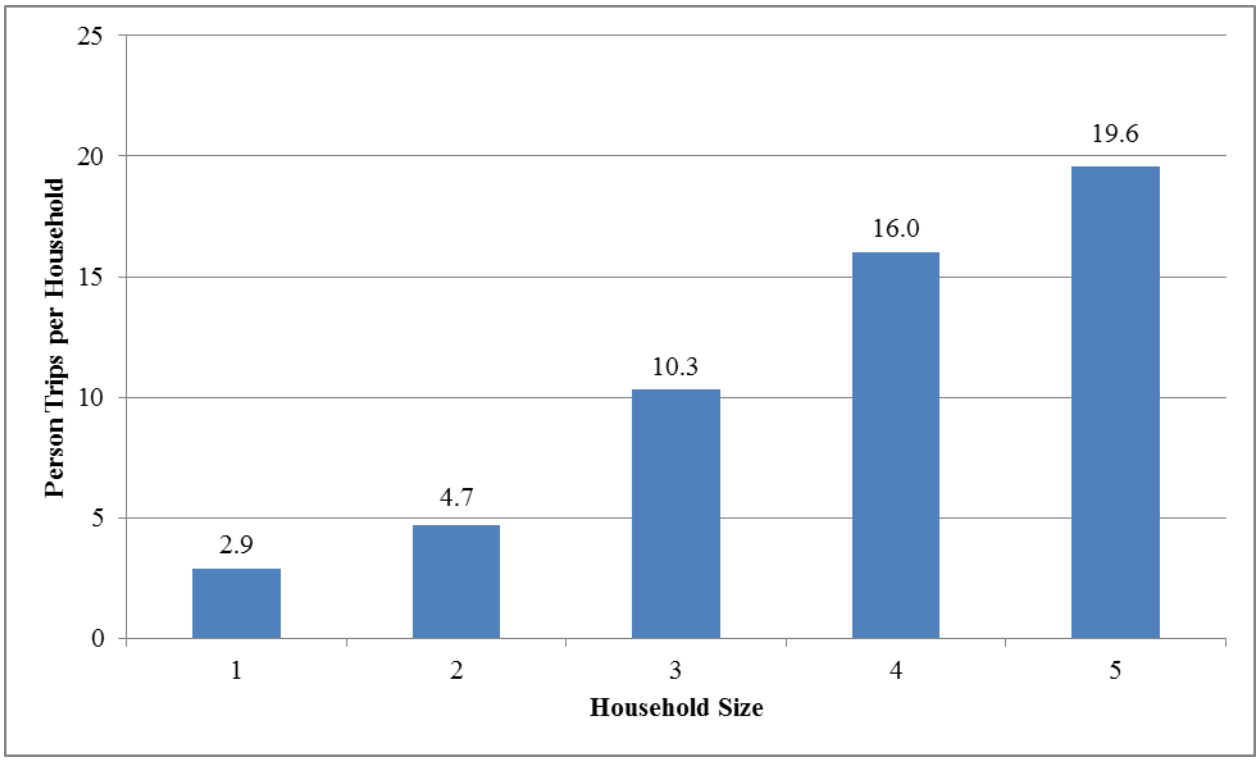

Figure 14. Household Trip Rates by Household Size.

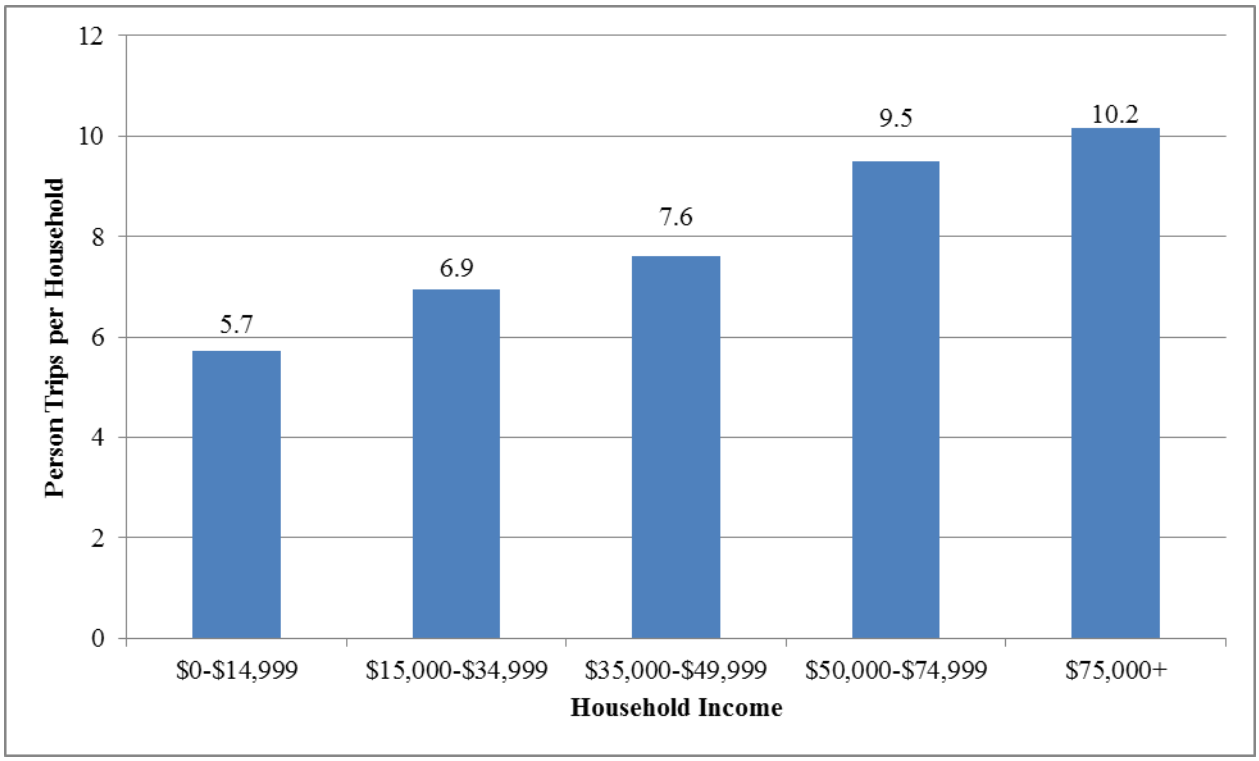

Figure 15. Household Trip Rates by Household Income Range.

Figure 16 shows the household trip rates as a function of the number of vehicles available to household members for travel. As expected, households with no vehicles available made fewer trips per household than those households with vehicles available to them; however, note that households with no vehicles available make a meaningful number of trips.

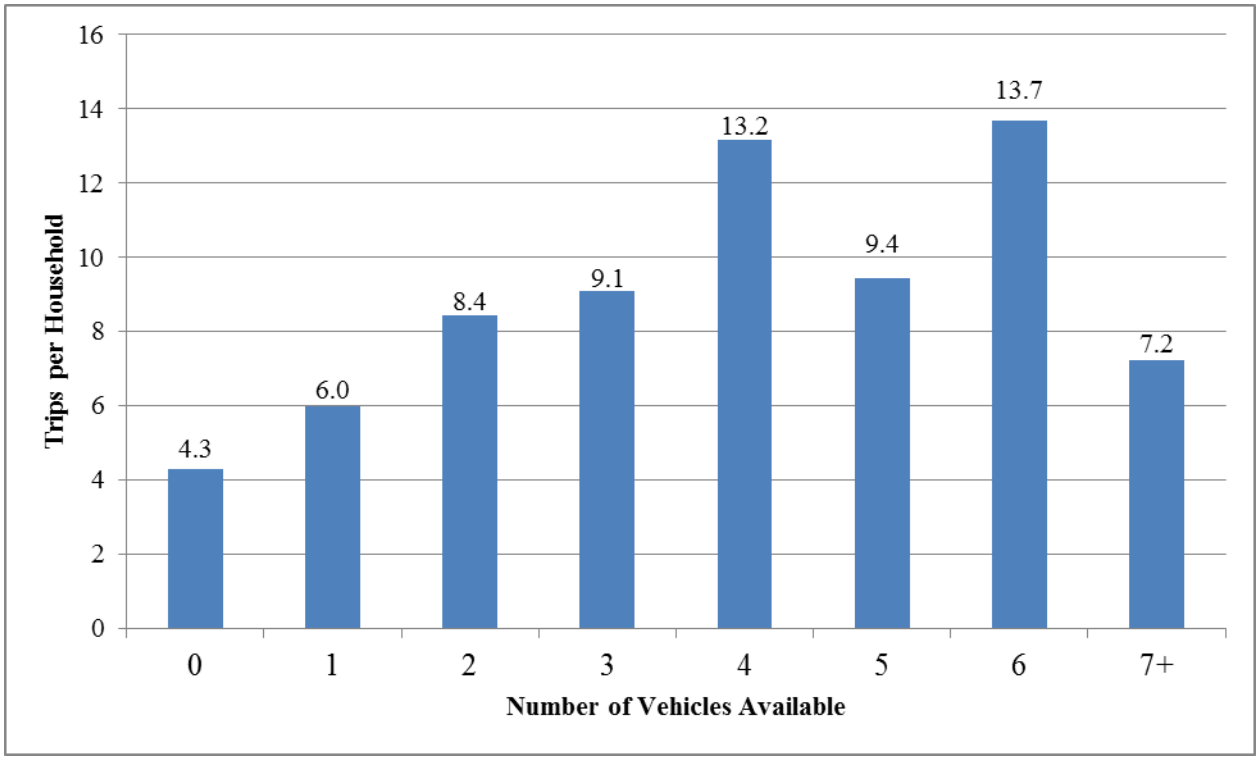

Figure 16. Household Trip Rates by Number of Vehicles Available.

Table 2 shows the person trips per household cross classified by household size and household income for all internal trip purposes combined; that is, trips that begin and end inside the household travel survey area. These trip rates are for all trips by all modes including transit, bicycle, and walk trips. For travel forecasting applications, the cross-classified trip rates are disaggregated by trip purpose into HBW trips, HBNW trips, and NHB trips (see the terminology section for the definitions of these terms). As a part of the travel forecasting process, the person trips are divided among the modes during the mode split step. The average person trips per household, internal to the planning area for all households, was 7.96 person trips.

Table 2. Person Trips per Household by Household Size and Household Income.

Household Income Range	Household Size					
	1	2	3	4	5+	Total
$0-$14,999	3.28	6.25	8.25	17.53	17.29	5.71
$15,000-$29,999	4.02	5.86	8.13	12.36	14.74	6.94
$30,000-$49,999	3.93	6.29	8.94	10.63	18.07	7.61
$50,000-$74,999	4.85	7.36	9.20	13.78	16.43	9.50
$75,000+	5.31	6.37	10.81	14.33	17.12	10.17
Total	**3.84**	**6.45**	**9.23**	**13.38**	**16.69**	**7.96**

Table 3 shows the average vehicle occupancy for person trips made in private vehicles by household size and by household income range. The average vehicle occupancy of the households was 1.42 persons per vehicle.

Table 3. Average Vehicle Occupancy by Household Size and Household Income.

Household Income Range	Household Size					
	1	2	3	4	5+	Total
$0-$17,499	1.20	1.43	1.65	2.46	2.31	1.63
$17,500-$32,499	1.07	1.30	1.39	1.73	1.99	1.45
$32,500-$49,999	1.01	1.17	1.37	1.51	1.96	1.38
$50,000-$74,999	1.07	1.17	1.29	1.56	1.70	1.39
$75,000+	1.03	1.10	1.27	1.51	1.66	1.37
Total	**1.09**	**1.21**	**1.34**	**1.64**	**1.82**	**1.42**

Travel by Age Cohort

A total of 95,243 persons were represented in the expanded household survey based on persons who reported their age. Table 4 shows the number of persons and distribution of persons by age cohort that did not make any internal trips on their survey day. As expected, older persons are generally less likely to travel than are younger persons, but the older population is mobile and contribute significantly to the amount of household travel.

Table 4. Number of Persons, Percent of Persons, and Percent of Persons Making Zero Internal Trips by Age Cohort.

Age Cohort	Number of Persons	Percent of Persons	Number of Persons Making Internal Trips	Number of Persons Making Zero Internal Trips	Percent of Persons Making Zero Internal Trips
0-15	20,126	21.1	20,050	76	0.38
16-19	4,699	4.9	4,684	15	0.31
20-24	6,454	6.8	6,291	163	2.52
25-29	6,351	6.7	6,267	84	1.33
30-34	6,410	6.7	6,410	0	0.00
35-39	5,982	6.3	5,850	132	2.21
40-44	6,066	6.4	6,006	60	0.98
45-49	6,212	6.5	6,043	169	2.72
50-54	6,679	7.0	6,446	233	3.50
55-59	6,239	6.6	6,065	174	2.79
60-64	5,660	5.9	5,404	256	4.52
65-69	4,825	5.1	4,528	297	6.15
70-74	3,506	3.7	3,274	232	6.62
75-79	2,298	2.4	2,137	161	7.00
80+	3,736	3.9	3,311	425	11.37
All Age Cohorts	**95,243**	**100.0**	**92,767**	**2,476**	**2.60**

MODE OF TRAVEL

The modes of travel included automobile-driver, automobile-passenger, school bus, walk, taxi and commercial vehicle, public transportation, bicycle, and a handful of "other modes." Figure 17 provides the distribution of person trips by mode. Automobile-Driver trips accounted for nearly two-thirds (64.8 percent) of the person trips. An additional 27.1 percent of trips were Automobile-Passenger trips. The School Bus mode accounted for 4.0 percent of the person trips while the Walk mode accounted for just 1.7 percent of the person trips.

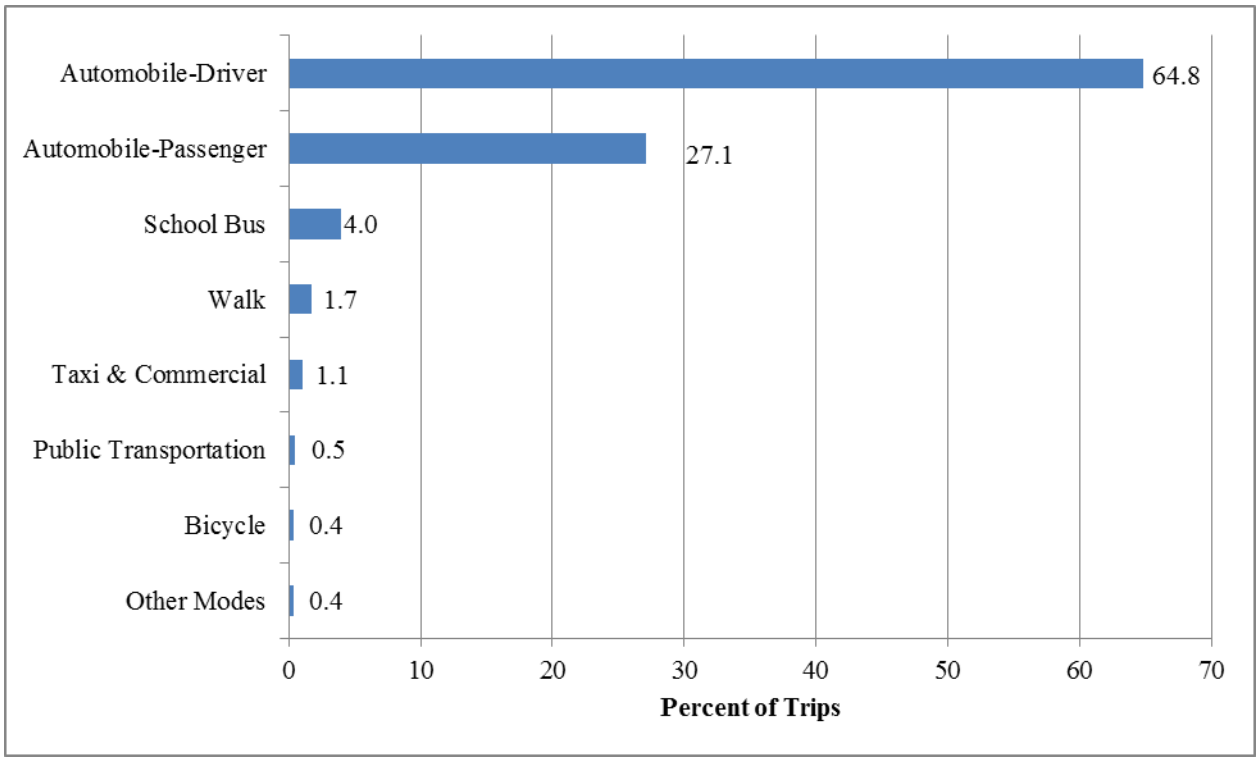

Figure 17. Distribution of Person Trips by Mode of Travel.

AMOUNT OF TRAVEL

Several measures are used to measure the amount of travel — the number of person trips, the number of vehicle trips, the trip distance in miles, the trip duration or travel time in minutes, and the VMT.

Trip Distance

Figure 18 shows the distribution of person trips by the length of the trip in miles. The distribution is for internal person trips, trips beginning and ending inside the study area. The calculation of average trip length in miles does not include intrazonal trips. The average person trip length was 3.88 miles.

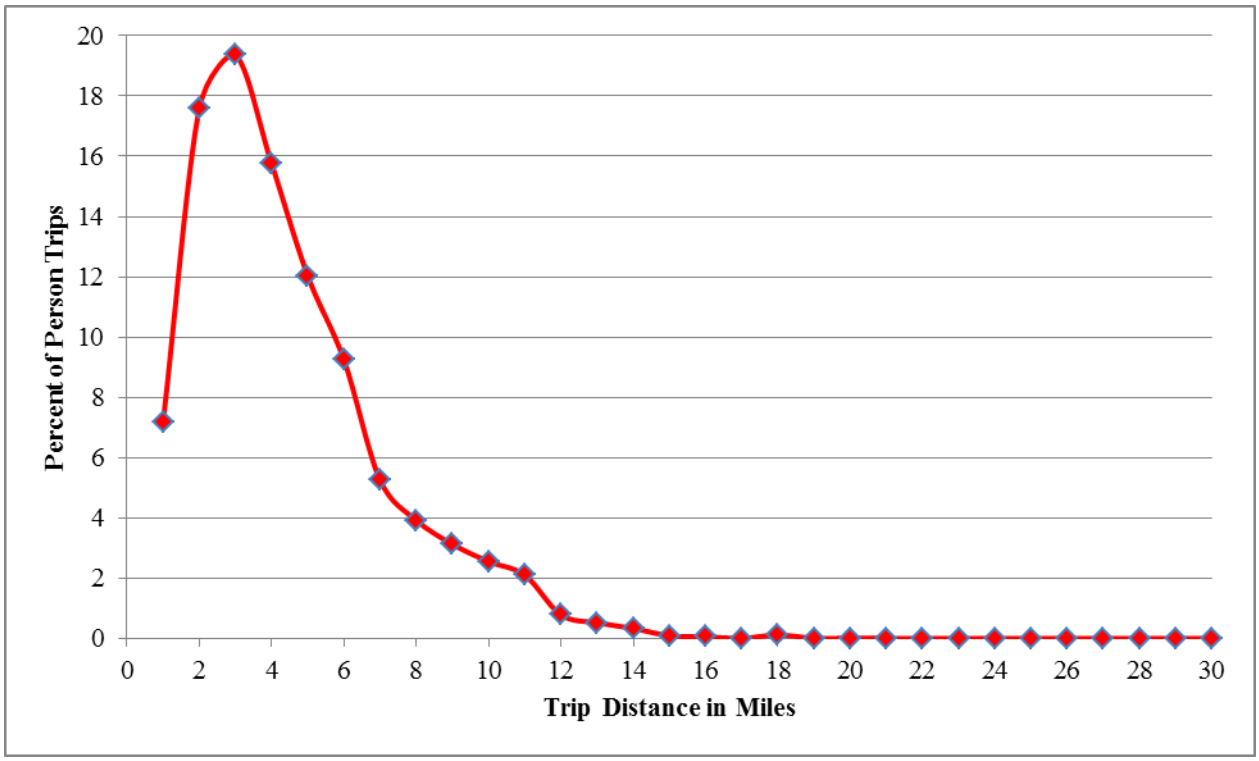

Figure 18. Distribution of Person Trips by Trip Distance in Miles.

Figure 19 provides the distribution of vehicle trips by the length of the trip in miles. For travel demand modeling purposes, the travel modeler needs data about the distribution of vehicle trips in miles and the average vehicle trip length in miles for each internal trip purpose. As with the previously described person trip calculation, the calculation of average vehicle trip length also excludes intrazonal trips. The average vehicle trip length was 4.07 miles.

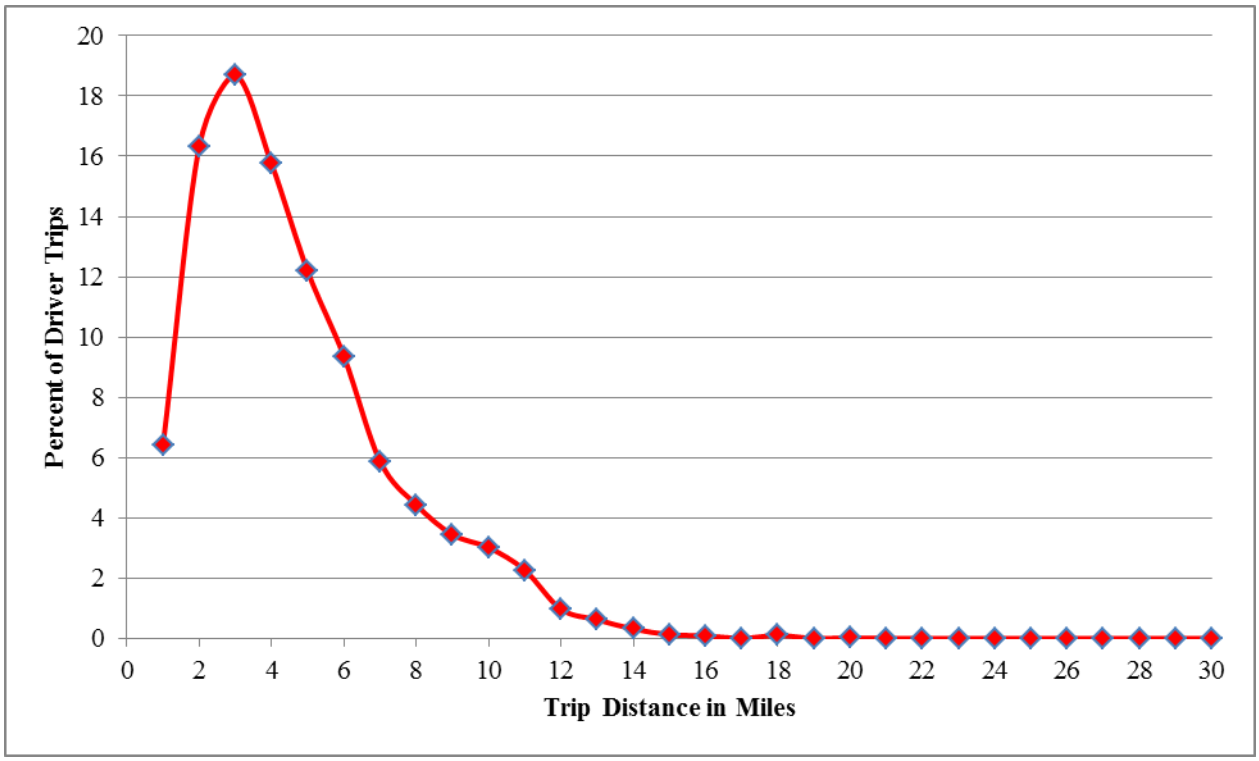

Figure 19. Distribution of Vehicle Trips by Trip Distance in Miles.

Trip Duration

Figure 20 shows the distribution of person trips by the duration of the trip in minutes. The distribution is for internal person trips, trips beginning and ending inside the study area. Unlike the calculation of average trip length in miles, the average trip duration in minutes (both person and vehicle) did include intrazonal trips because intrazonal trips were provided with trip duration in minutes, as opposed to being assigned a trip length in miles of zero. The average person trip duration was 6.67 minutes.

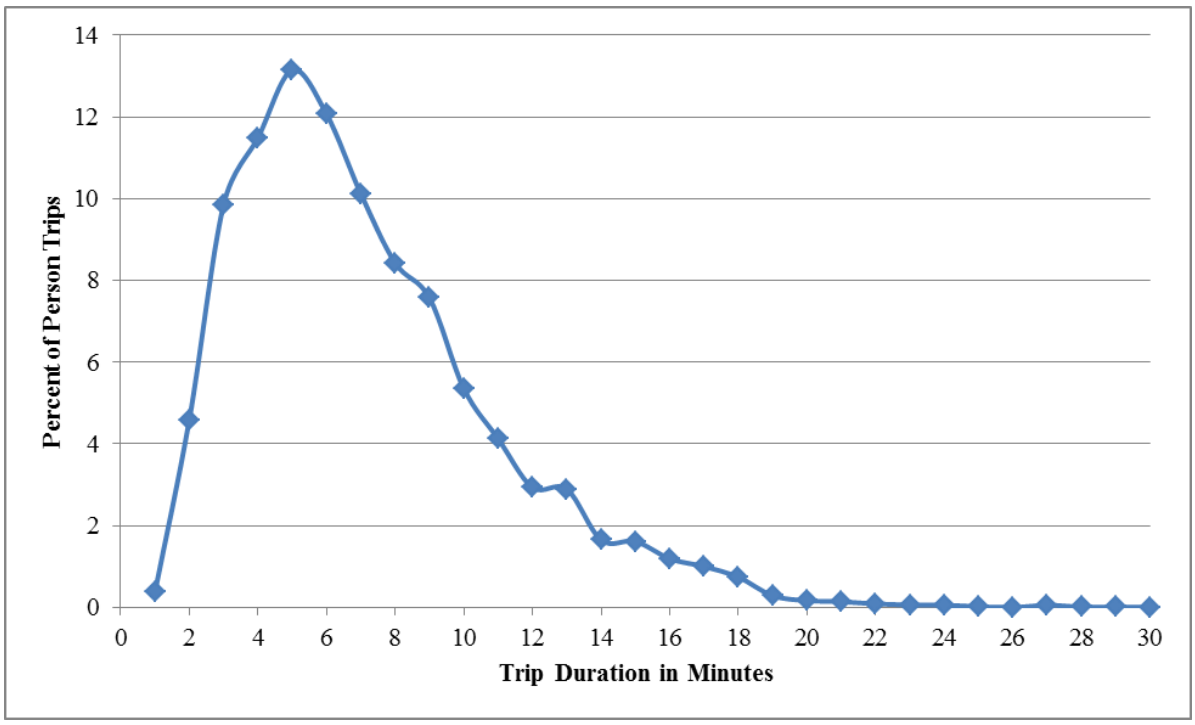

Figure 20. Distribution of Person Trips by Trip Duration in Minutes.

Figure 21 presents the distribution of vehicle trips by the duration of the trip in minutes. The average vehicle trip duration was 6.93 minutes.

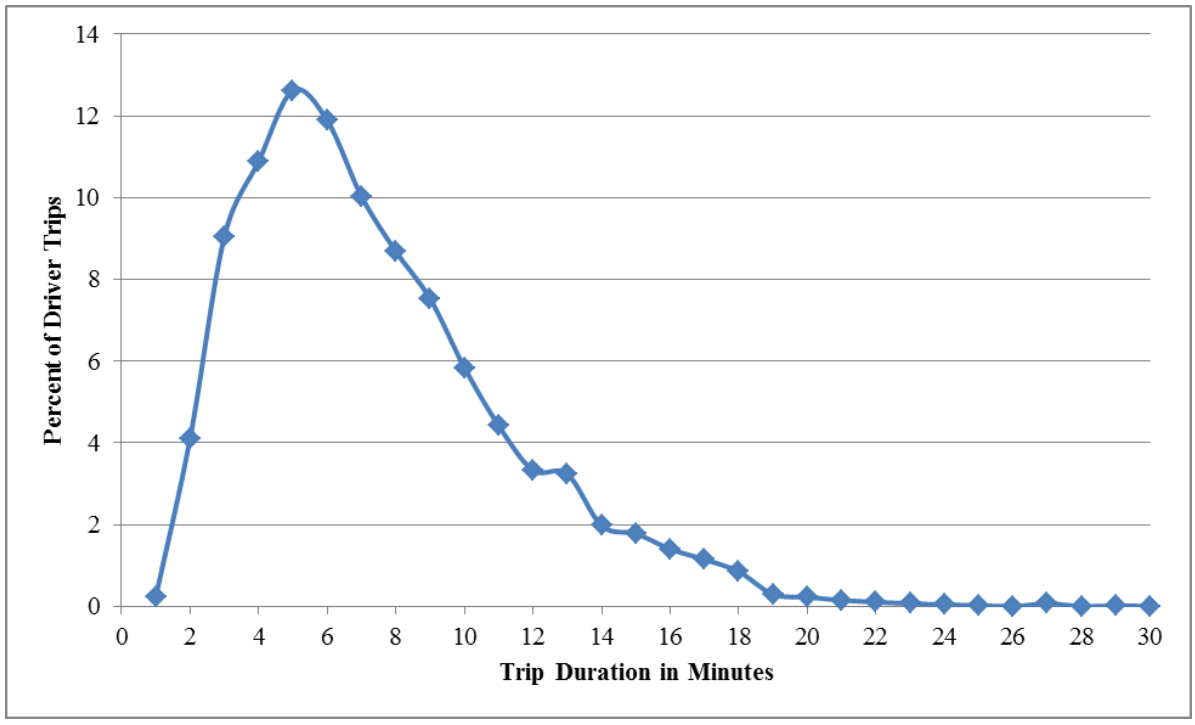

Figure 21. Distribution of Vehicle Trips by Trip Duration in Minutes.

Vehicle Miles of Travel

VMT is calculated as the product of the average internal vehicle trip length in miles and the number of internal vehicle trips. For household trips internal to the study area, the estimated VMT was 790,667 miles per school-year weekday. This is not the total VMT for the study area, as the VMT associated with external-local, external-through, commercial vehicle, visitor travel, and intrazonal trips are not included in the estimate.

TIME OF TRAVEL

The time of travel is a function of the activity to be accomplished. The start times for trips to work and to school are dictated by the time that work and school begin. For other activities, such as trips to shop or for recreation, the trip start times are flexible. As travel during peak periods become more congested, some drivers choose to make trips earlier or later to avoid the most congested travel times. Figure 22 shows the distribution of trip start times for a 24-hour weekday during the school year. The morning peak period of 7:00 a.m. to 7:59 a.m. has the highest percentage (12.6 percent) of daily trip starts. During this morning peak period, trips from home to work and to school are largely contributing to this peak. The second highest percentage, 12.3 percent of trip starts, occurs during the afternoon between the hours of 3:00 p.m. and 3:59 p.m. During this hour, trips from school to home are typical.

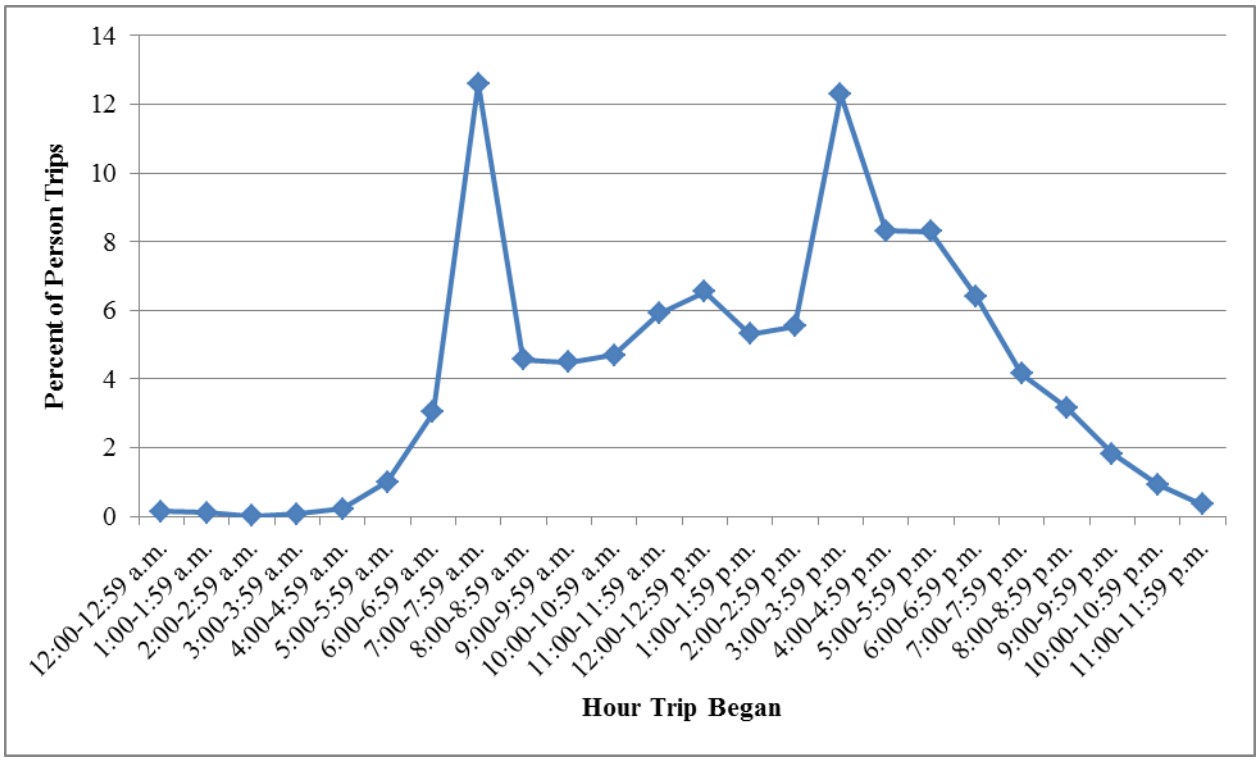

Figure 22. Distribution of Person Trip Start Times by Hour of the Day.

TRAVEL PURPOSE

As a part of their travel diary, each household member was asked to identify from a list of choices what they did at each trip destination. The information about the trip destination was used to categorize the trip by trip purpose. In travel demand modeling, typically there are three internal trip purposes — HBW, HBNW and NHB trips. Figure 23 shows the distribution of person trips by the trip destination purposes used in the survey. As would be expected, the most frequent trip destination was the return home trip.

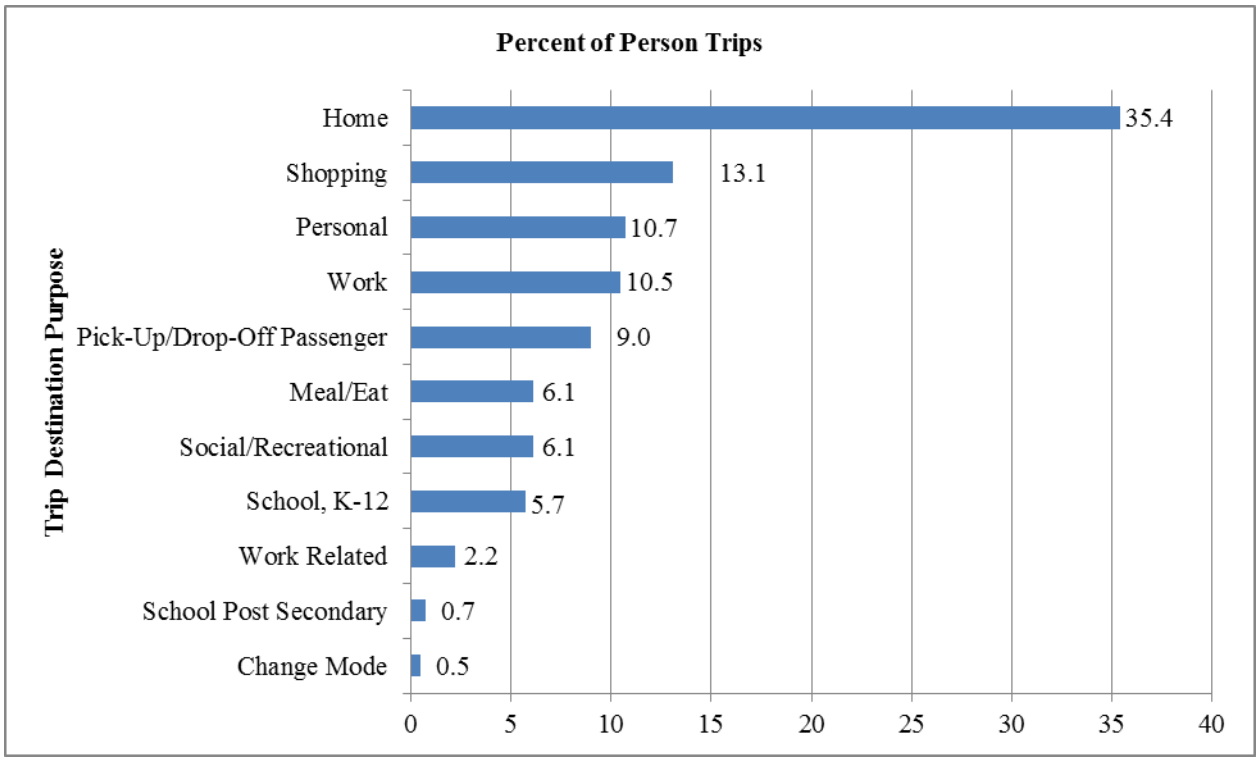

Figure 23. Distribution of Person Trips by Trip Destination Purpose.

Type of Place at Trip Destination

Closely related to the travel purpose and what the traveler did at the destination end of the trip is information on the type of place or business that was at the destination end of the trip. In travel demand modeling, attractions are typically grouped into four categories — basic, retail, service, and education. Table 5 shows the distribution of person trips by the types of places identified in the survey for the destination end of the trip.

Table 5. Number of Person Trips and Distribution of Person Trips by Type of Place at Trip Destination.

Type of Place	Person Trips	Percent of Person Trips
Residential	126,080	41.89
Residential Type Work Place	637	0.21
Construction Site	759	0.25
Transportation Stop	801	0.27
Automotive Dealer/Repair	3,092	1.03
Bank/Financial Institution	5,146	1.71
Barber/Beauty/Nail Salon	1,228	0.41
Bookstore/Newsstand	291	0.10
Convenience/Drug Store	2,382	0.79
Government Offices	6,340	2.11
Offices Non-Government	9,730	3.23
Grocery	8,334	2.77
Health Club	2,652	0.88
Medical Facility/Hospital	14,033	4.66
Movie Theater/Cinema	263	0.09
Restaurant/Fast Food, Bar and Grill	20,467	6.80
Educational-12th Grade or Lower	39,481	13.12
Educational-College, Trade, Etc.	4,181	1.39
Shopping Mall/Department Store	31,107	10.34
Convenience Store/Gas Station	5,367	1.78
Airport	169	0.06
Other	18,410	6.12
Total	**300,950**	**100.00**

WHERE PEOPLE TRAVELED

Figure 24 shows how the TUTS area was divided into six sub-regions, to generally illustrate the geographic distribution of internal person trip movements within the region. Figure 25 through Figure 29 illustrate the number of person trip interchanges between each sub-region and all other sub-regions. The general amount of travel between each sub-region within the region is reflected by the width of the line between each subarea. The wider the line is, the greater the amount of travel movements between the sub-regions. Figure 30, the final figure in this sequence, shows the percent of person trips that remained within each sub-region.

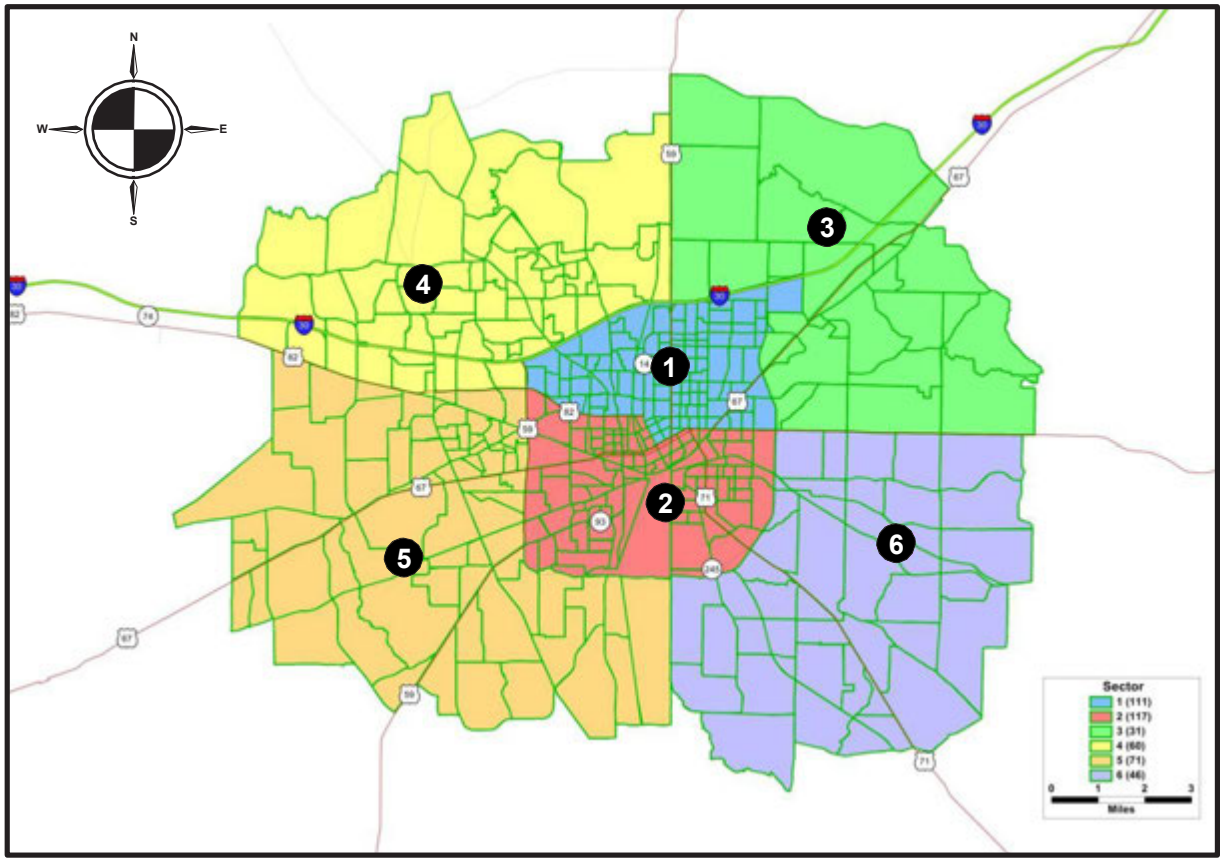

Figure 24. Texarkana Study Area and the Six Sub-Regions within the Study Area.

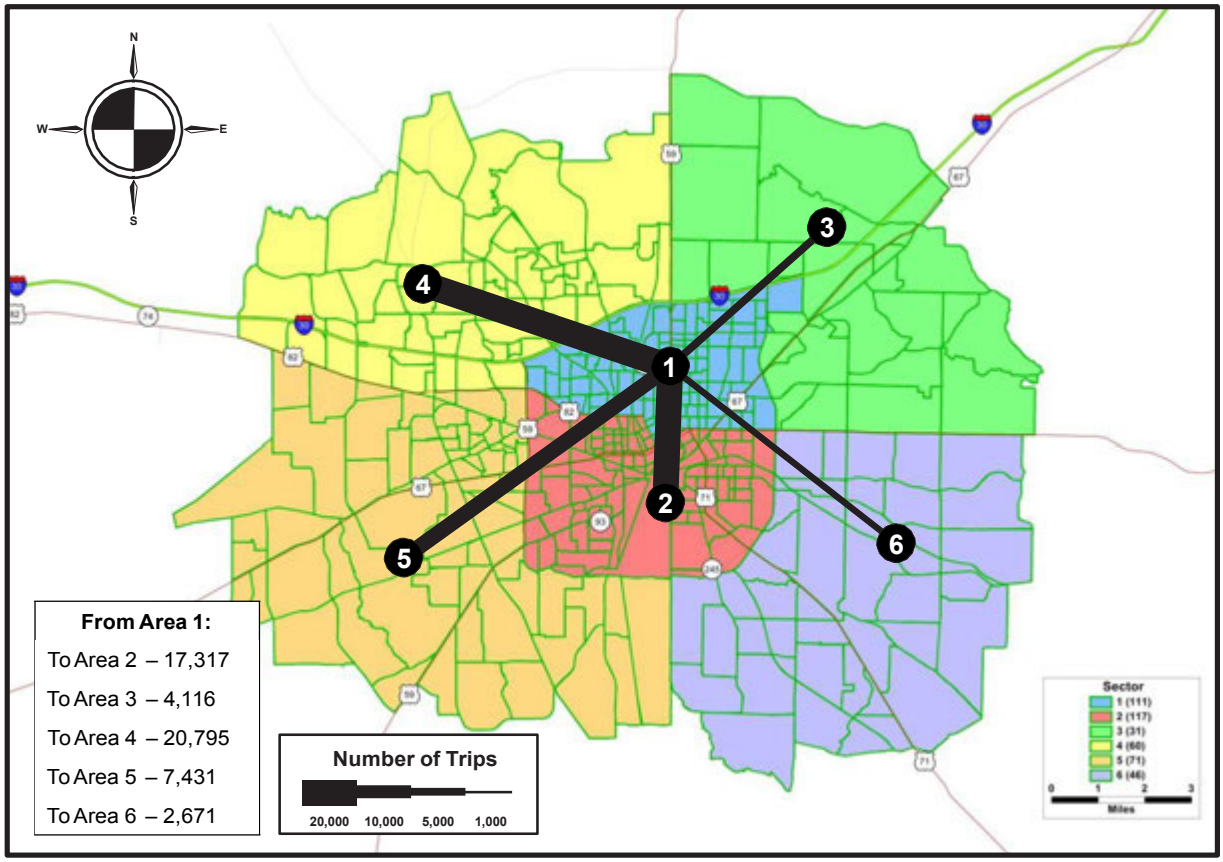

Figure 25. Person Trip Interchanges between Area 1 and Areas 2-6.

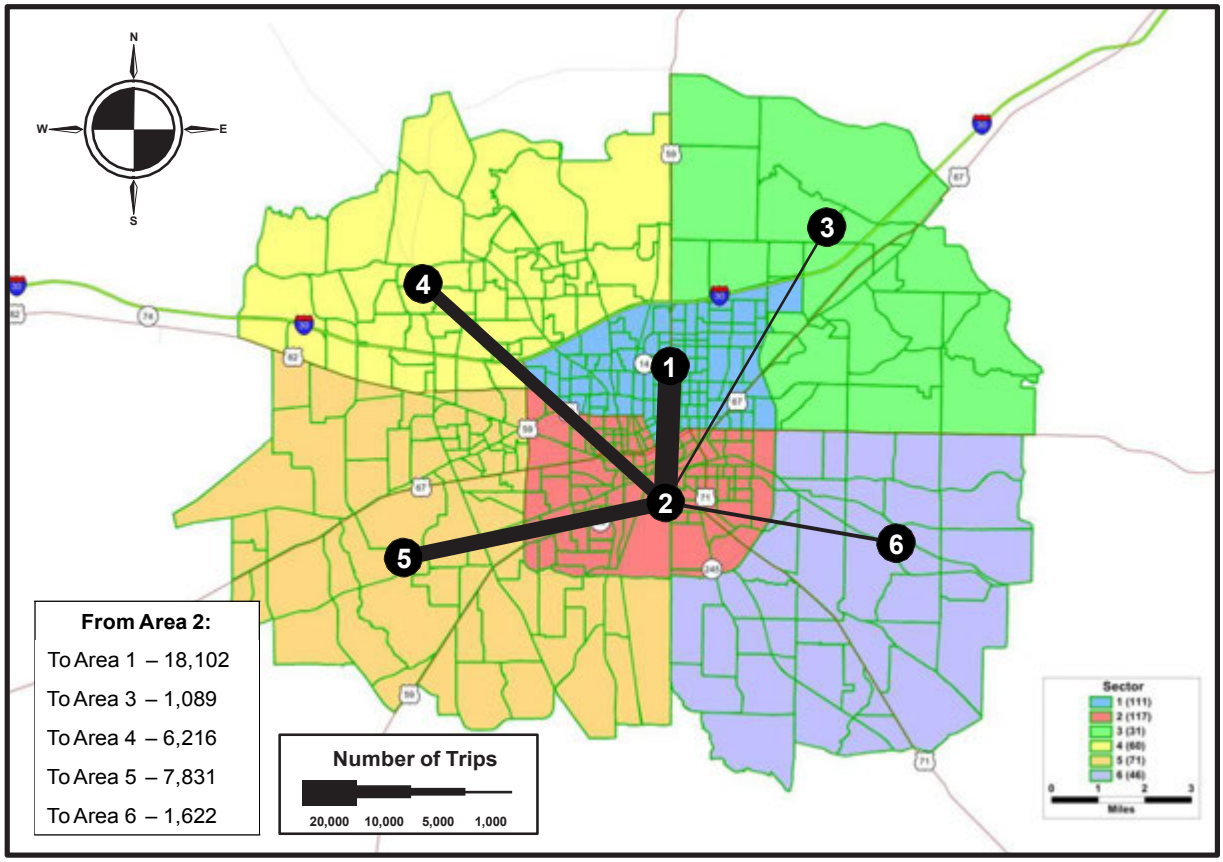

Figure 26. Person Trip Interchanges between Area 2 and Area 1 and Areas 3-6.

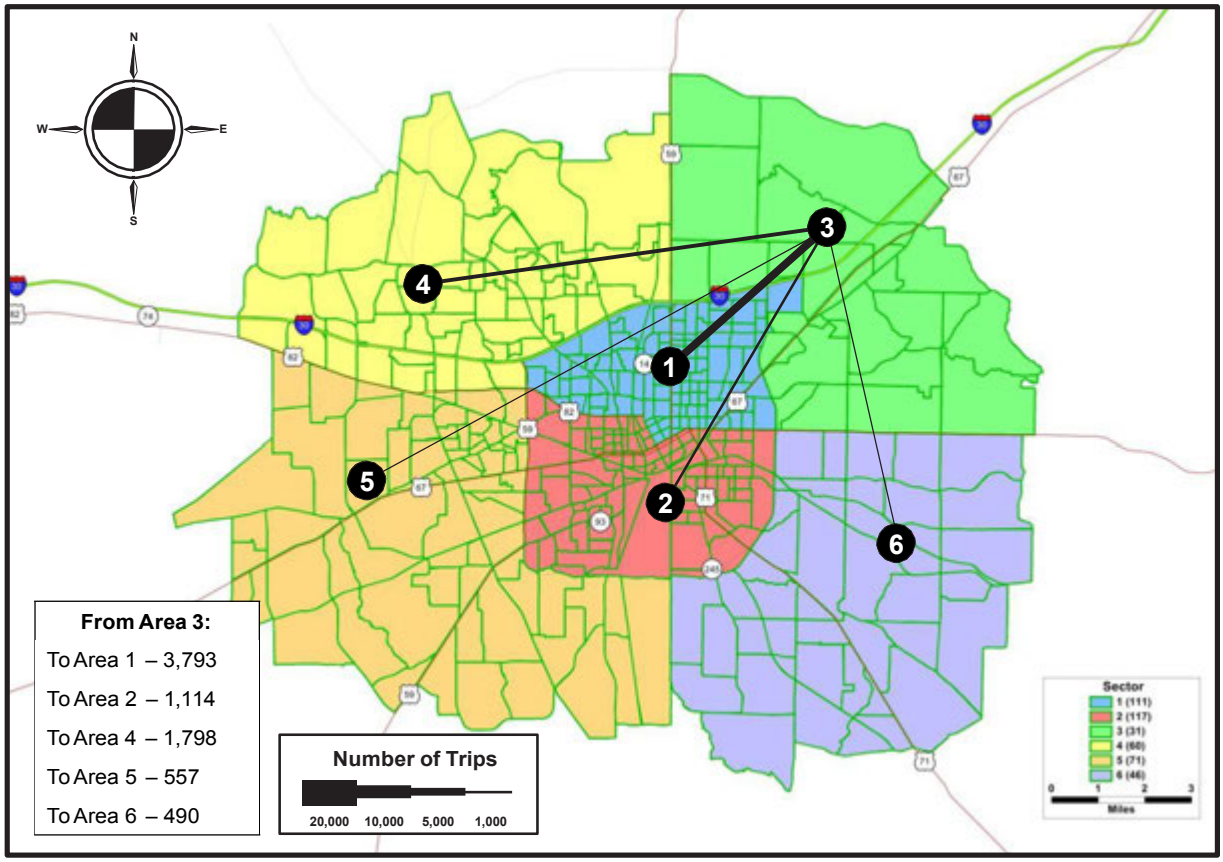

Figure 27. Person Trip Interchanges between Area 3 and Areas 1-2 and Areas 4-6.

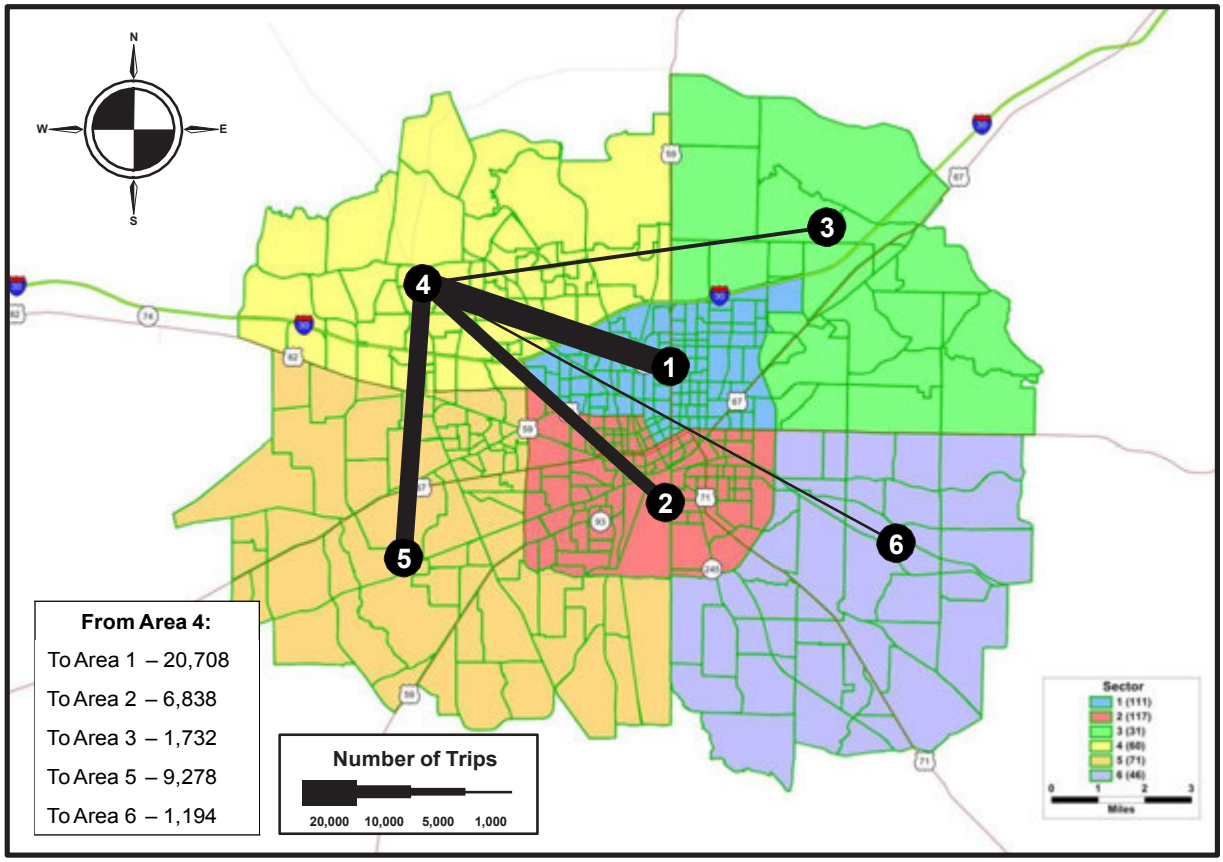

Figure 28. Person Trip Interchanges between Area 4 and Areas 1-3 and Areas 5-6.

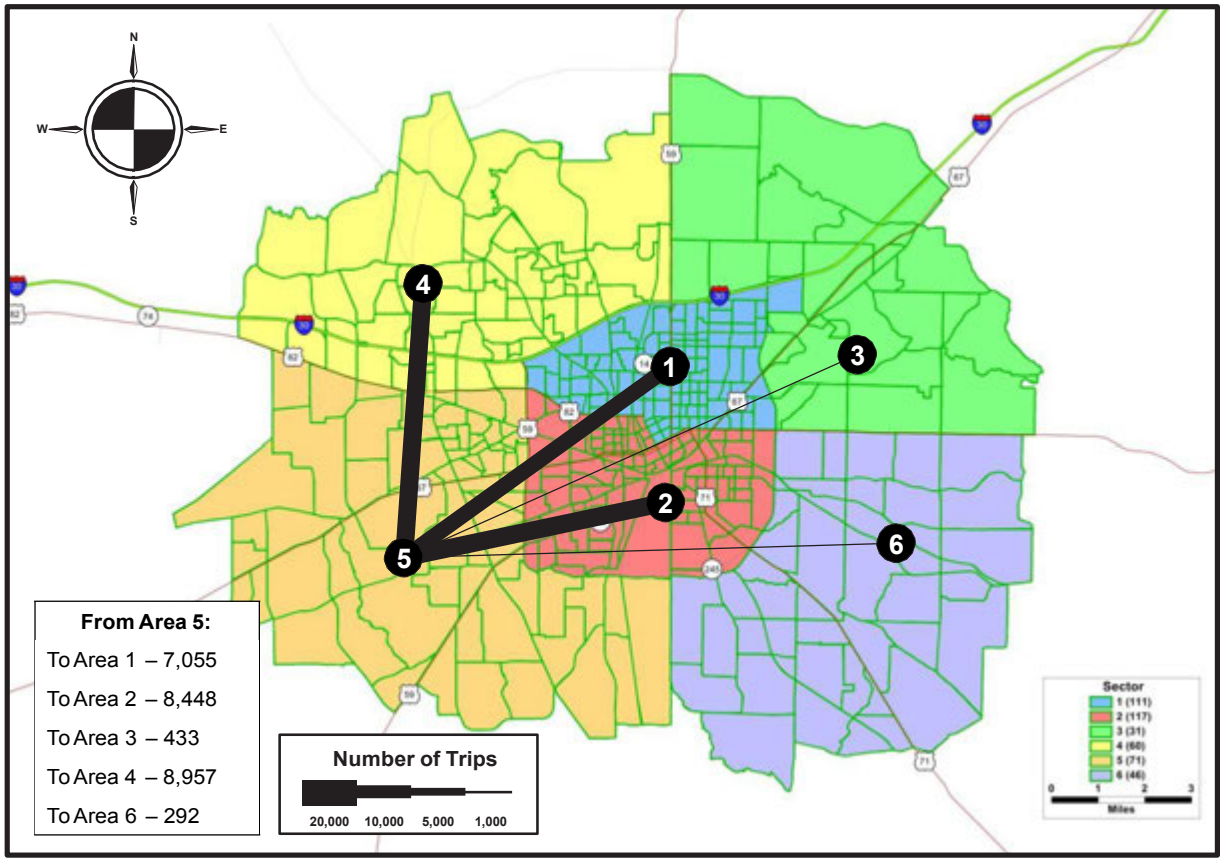

Figure 29. Person Trip Interchanges between Area 5 and Areas 1-4 and Area 6.

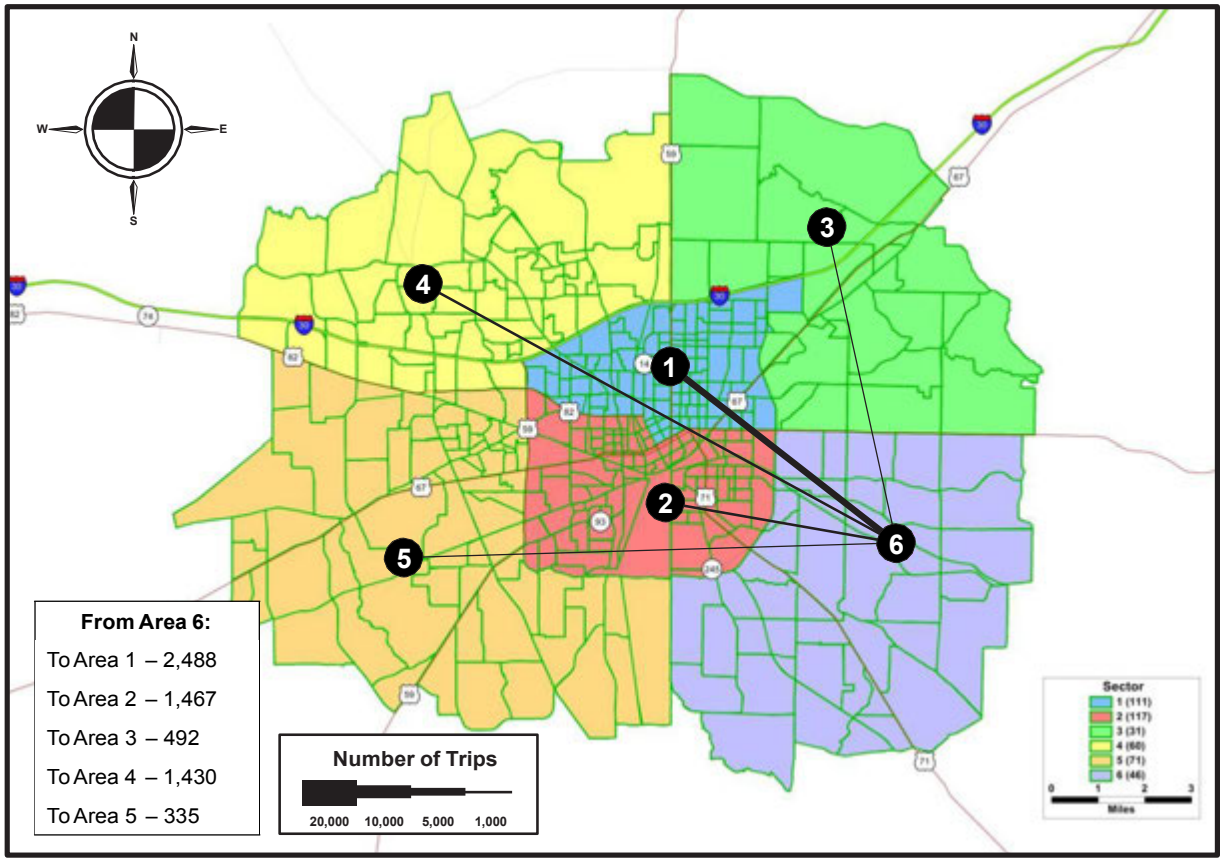

Figure 30. Person Trip Interchanges between Area 6 and Areas 1-5.

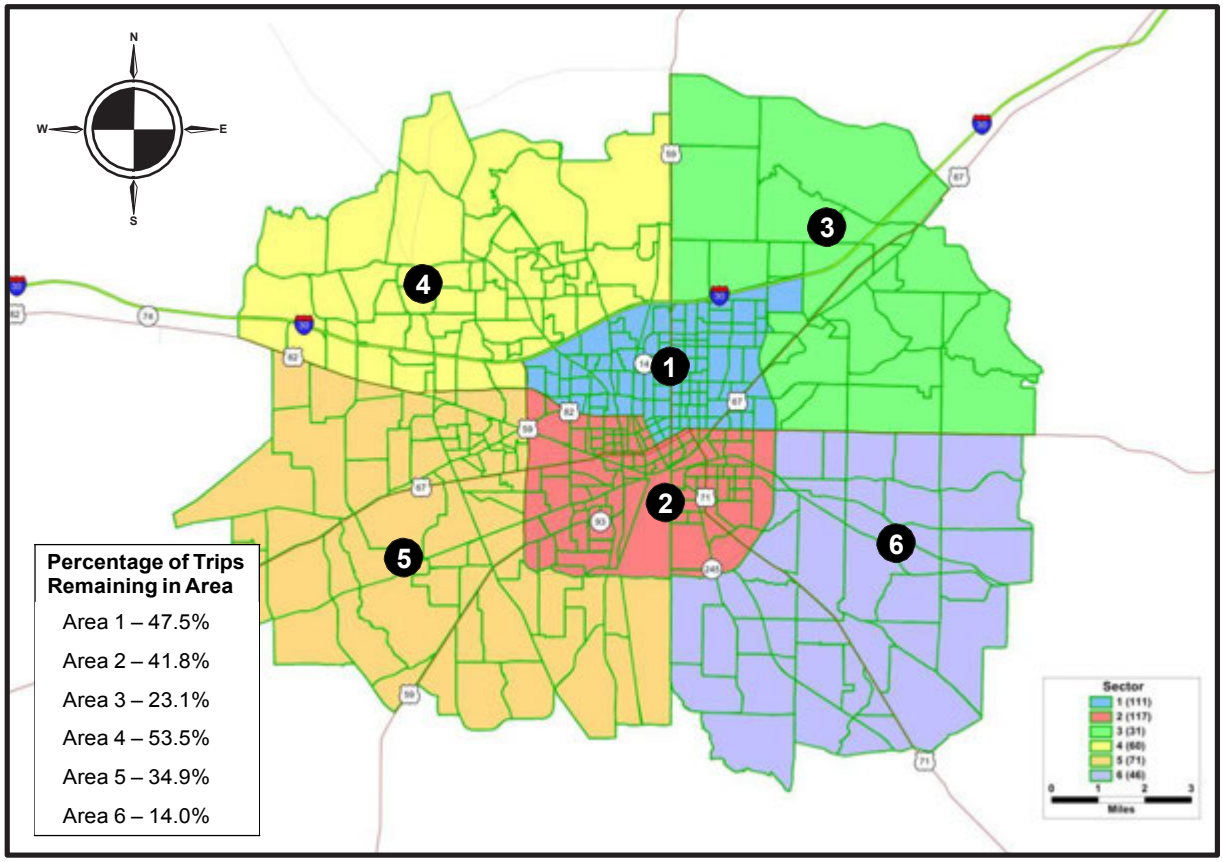

Figure 31. Percentage of Person Trips that Remain within Each Sub Region.

SUMMARY DATA

Table 6 shows the household survey summary data for the TUTS area and for travel surveys conducted in a few other study areas in Texas.

Table 6. Comparative Travel Survey Data for Selected Texas Urban Areas.

Urban Area	2003 Longview and Gregg County	2003 Tyler	Taylor and Jones Counties	Texarkana Study Area
Demographics				
Household Population	113,600	183,900	131,496	95,243
Licensed Drivers	74,100	129,300	92,930	66,399
Number of Households	42,800	69,600	50,724	38,302
Average Household Size	2.52	2.64	2.59	2.49
Number of Motor Vehicles	81,300	136,700	100,571	74,862
Motor Vehicles per Household	1.9	1.9	1.98	1.95
Number of Daily Trips by Mode				
Total Person Trips	461,000	672,800	830,583	300,950
Automobile-Driver Trips	294,800	417,300	523,635	194,923
Motor Vehicle Passenger Trips	138,400	221,800	265,544	81,643
School Bus Trips	14,000	15,100	7,872	12,095
Walk Trips	8,400	9,600	11,563	5,100
Public Transit Trips	1,800	2,900	7,872	1,643
Bicycle Trips	2,100	1,800	2,002	1,308
Commercial Vehicle Trips	N/A	N/A	81,403	2,891
Other Modes/Taxi	1,500	3,800	1,873	1,347
Number of Daily Trips by Destination/Purpose				
Trips to Home	153,100	215,400	300,993	106,626
Trips to Work	62,300	90,100	86,938	31,544
Trips Work Related	N/A	N/A	25,302	6,626
Trips to Shop	54,700	75,100	95,421	39,308
Trips to Pick-Up/Drop-Off Passenger	41,100	66,300	77,014	27,004
Trips for Personal Business	47,400	70,000	73,011	32,192
Trips for Social/Recreation	37,600	56,100	68,556	18,340
Trips for School K-12	29,400	43,500	46,973	17,283
Trips for School Post-Secondary			4,897	2,186
Trips for Meal/Eat	34,500	49,000	46,049	18,354
Trips to Change Mode	N/A	N/A	2,836	1,487
Other Trips	900	1,400	2,590	0
Daily Trip Rates				
Person Trips per Person	4.02	3.66	3.62	3.22
Person Trips per Household	10.78	9.66	9.38	7.96
Trip Lengths				
Average Person Trip Length in Miles	4.4	6.1	4.7	3.9
Average Vehicle Trip Length in Miles			5.0	4.1
Average Person Trip Duration in Minutes	7.1	9	5.9	6.7
Average Vehicle Trip Duration in Minutes			6.1	6.9

TERMINOLOGY

Within the context of the household travel survey, a number of terms are used. These terms are defined in this section.

Automobile Driver Trip – The movement of a vehicle from one location to another location. These trips are recorded for the person driving the vehicle. These are also referred to as vehicle trips.

Home-Based Non-Work (HBNW) Trip – A trip with one end of the trip at home and the other end of the trip is at a location other than the work location. An HBNW trip is non-directional in terms of the trip activity/trip purpose.

Home-Based Work (HBW) Trip – A trip that has one end of the trip at home and the other end of the trip at work. An HBW trip is non-directional in terms of the trip activity/trip purpose (i.e., a trip from home to work or from work to home is defined as an HBW trip).

Mode of Travel – The physical means used by the household member to make a trip. The modes are walk, vehicle driver, vehicle passenger, carpool driver, carpool passenger, public transportation, school bus, taxi/paid limousine, bicycle, motorcycle/moped, and other.

Non-Home-Based (NHB) Trip – A trip with neither end of the trip at home.

Person Trip – The movement of an individual form one location to another location. In the household survey, trips were recorded for all persons in a surveyed household.

Trip Activity – The activity at the location the trip began and/or the location the trip ended. There are 22 activities used in the household survey. The activities were recorded in the survey and post processed to identify the trip purpose associated with each trip activity.

Trip Attractions – The number of trips attracted to a particular category of land use. Trip attractions are calculated by trip purpose and mode of travel for different land use categories.

Trip Productions – The number of trips produced by members of a household. Trip productions are calculated by trip purpose and mode of travel. Production rates are the number of trip productions divided by the number of households that produced those trips.

Trip Purpose – Stated in terms of the purpose at the location the trip began and the purpose at the location the trip ended. For example, a trip that began at home and ended at work would be referred to as a home-based work (HBW) trip. There are three primary trip purposes used in the household survey. These include HBW, HBNW, and NHB.

Vehicle Availability – The number of vehicles available to members of a household for making trips.

Vehicle Occupancy – The number of occupants in a vehicle during a vehicle trip including the driver of the vehicle.

APPENDIX A
HOUSEHOLD SURVEY INSTRUMENTS

Location 5: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

&

Nearest Intersecting Streets

City State County

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park?

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other

How did you get to Location 5?

What was the primary type of transportation you used?

- ☐ Car, van, truck
- ☐ Motorcycle or moped
- ☐ Bicycle
- ☐ Taxi
- ☐ Walk
- ☐ School Bus
- ☐ Service vehicle
- ☐ Cargo transport vehicle
- ☐ Transit Bus
- ☐ Other

How far did you walk to the bus stop?

How far did you walk to your destination?

Intersection where you get off the bus?

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle?

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle?

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year Make/Model

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

- ☐ Return Home from your primary job
- ☐ Return Home for another reason
- ☐ Meal/Eat
- ☐ Work
- ☐ Work Related
- ☐ School
- ☐ Personal Business:
- ☐ Volunteer/Civic
- ☐ Shop
- ☐ Social/Recreation/Entertainment
- ☐ Pick-Up/Drop-Off Passenger
- ☐ Change Mode (e.g., car to bus):
- ☐ Other:

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - OR - - - - - - - - - - - -

· This was the last place I went today

If You **Forgot** a Stop ***Anywhere*** Between This Location and Location 6, Provide the Information Below:

For what reason did you stop between Location 5 and 6?

Number of minutes stopped:

Where did you stop?

Name of Stop Location | Address or Nearest Intersection | City, County, and State

Location 6: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

&

Nearest Intersecting Streets

City State County

Zip Code (if known)

Did you walk fore than a block from a parking lot to this location? 01=Yes 02=No

Where did you park?

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other

How did you get to Location 6?

What was the primary type of transportation you used?

- ☐ Car, van, truck
- ☐ Motorcycle or moped
- ☐ Bicycle
- ☐ Taxi
- ☐ Walk
- ☐ School Bus
- ☐ Service vehicle
- ☐ Cargo transport vehicle
- ☐ Transit Bus
- ☐ Other

How far did you walk to the bus stop?

How far did you walk to your destination?

Intersection where you get off the bus?

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle?

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle?

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year Make/Model

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

- ☐ Return Home from your primary job
- ☐ Return Home for another reason
- ☐ Meal/Eat
- ☐ Work
- ☐ Work Related
- ☐ School
- ☐ Personal Business:
- ☐ Volunteer/Civic
- ☐ Shop
- ☐ Social/Recreation/Entertainment
- ☐ Pick-Up/Drop-Off Passenger
- ☐ Change Mode (e.g., car to bus):
- ☐ Other:

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - OR - - - - - - - - - - - -

· This was the last place I went today

If You **Forgot** a Stop ***Anywhere*** Between This Location and Location 7, Provide the Information Below:

For what reason did you stop between Location 6 and 7?

Number of minutes stopped:

Where did you stop?

Name of Stop Location | Address or Nearest Intersection | City, County, and State

Location 7: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

&

Nearest Intersecting Streets

City State County

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park?

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other

How did you get to Location 7?

What was the primary type of transportation you used?

- ☐ Car, van, truck
- ☐ Motorcycle or moped
- ☐ Bicycle
- ☐ Taxi
- ☐ Walk
- ☐ School Bus
- ☐ Service vehicle
- ☐ Cargo transport vehicle
- ☐ Transit Bus
- ☐ Other

How far did you walk to the bus stop?

How far did you walk to your destination?

Intersection where you get off the bus?

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle?

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle?

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year Make/Model

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

- ☐ Return Home from your primary job
- ☐ Return Home for another reason
- ☐ Meal/Eat
- ☐ Work
- ☐ Work Related
- ☐ School
- ☐ Personal Business:
- ☐ Volunteer/Civic
- ☐ Shop
- ☐ Social/Recreation/Entertainment
- ☐ Pick-Up/Drop-Off Passenger
- ☐ Change Mode (e.g., car to bus):
- ☐ Other:

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - - OR - - - - - - - - - - - - -

· This was the last place I went today

If You **Forgot** a Stop ***Anywhere*** Between This Location and Location 8, Provide the Information Below:

For what reason did you stop between Location 7 and 8?

Number of minutes stopped:

Where did you stop?

Name of Stop Location | Address or Nearest Intersection | City, County, and State

Location 4: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

&

Nearest Intersecting Streets

City State County

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park?

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other

How did you get to Location 4?

What was the primary type of transportation you used?

- ☐ Car, van, truck
- ☐ Motorcycle or moped
- ☐ Bicycle
- ☐ Taxi
- ☐ Walk
- ☐ School Bus
- ☐ Service vehicle
- ☐ Cargo transport vehicle
- ☐ Transit Bus
- ☐ Other

How far did you walk to the bus stop?

How far did you walk to your destination?

Intersection where you get off the bus?

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle?

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle?

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year Make/Model

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

- ☐ Return Home from your primary job
- ☐ Return Home for another reason
- ☐ Meal/Eat
- ☐ Work
- ☐ Work Related
- ☐ School
- ☐ Personal Business:
- ☐ Volunteer/Civic
- ☐ Shop
- ☐ Social/Recreation/Entertainment
- ☐ Pick-Up/Drop-Off Passenger
- ☐ Change Mode (e.g., car to bus):
- ☐ Other:

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - - OR - - - - - - - - - - - - -

· This was the last place I went today

If You **Forgot** a Stop ***Anywhere*** Between This Location and Location 5, Provide the Information Below:

For what reason did you stop between Location 4 and 5?

Number of minutes stopped:

Where did you stop?

Name of Stop Location | Address or Nearest Intersection | City, County, and State

Location 3: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

&

Nearest Intersecting Streets

City State County

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park? _____

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $_____

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other _____

How did you get to Location 3?

What was the primary type of transportation you used?

- ☐ Car, van, truck
- ☐ Motorcycle or moped
- ☐ Bicycle
- ☐ Taxi
- ☐ Walk
- ☐ School Bus
- ☐ Service vehicle
- ☐ Cargo transport vehicle
- ☐ Transit Bus
- ☐ Other _____

How far did you walk to the bus stop? _____

How far did you walk to your destination? _____

Intersection where you get off the bus? _____

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle? _____

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle? _____

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year _____ Make/Model _____

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

- ☐ Return Home from your primary job
- ☐ Return Home for another reason
- ☐ Meal/Eat
- ☐ Work
- ☐ Work Related
- ☐ School
- ☐ Personal Business: _____
- ☐ Volunteer/Civic
- ☐ Shop
- ☐ Social/Recreation/Entertainment
- ☐ Pick-Up/Drop-Off Passenger
- ☐ Change Mode (e.g., car to bus):
- ☐ Other: _____

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - OR - - - - - - - - - - - -

· This was the last place I went today

If You **Forgot** a Stop ***Anywhere*** Between This Location and Location 4, Provide the Information Below:

For what reason did you stop between Location 3 and 4? _____

Number of minutes stopped: _____

Where did you stop? _____ (Name of Stop Location) _____ (Address or Nearest Intersection) _____ (City, County, and State)

Location 8: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

&

Nearest Intersecting Streets

City State County

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park? _____

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $_____

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other _____

How did you get to Location 8?

What was the primary type of transportation you used?

- ☐ Car, van, truck
- ☐ Motorcycle or moped
- ☐ Bicycle
- ☐ Taxi
- ☐ Walk
- ☐ School Bus
- ☐ Service vehicle
- ☐ Cargo transport vehicle
- ☐ Transit Bus
- ☐ Other _____

How far did you walk to the bus stop? _____

How far did you walk to your destination? _____

Intersection where you get off the bus? _____

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle? _____

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle? _____

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year _____ Make/Model _____

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

- ☐ Return Home from your primary job
- ☐ Return Home for another reason
- ☐ Meal/Eat
- ☐ Work
- ☐ Work Related
- ☐ School
- ☐ Personal Business: _____
- ☐ Volunteer/Civic
- ☐ Shop
- ☐ Social/Recreation/Entertainment
- ☐ Pick-Up/Drop-Off Passenger
- ☐ Change Mode (e.g., car to bus):
- ☐ Other: _____

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - OR - - - - - - - - - - - -

· This was the last place I went today

If You **Forgot** a Stop ***Anywhere*** Between This Location and Location 9, Provide the Information Below:

For what reason did you stop between Location 8 and 9? _____

Number of minutes stopped: _____

Where did you stop? _____ (Name of Stop Location) _____ (Address or Nearest Intersection) _____ (City, County, and State)

Location 9: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

_____ & _____

Nearest Intersecting Streets

_____ ____ _____

City State County

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park? _____

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $_____

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other _____

How did you get to Location 9?

What was the primary type of transportation you used?

☐ Car, van, truck ☐ Motorcycle or moped

☐ Bicycle ☐ Taxi

☐ Walk ☐ School Bus

☐ Service vehicle ☐ Cargo transport vehicle

☐ Transit Bus ☐ Other _____

How far did you walk to the bus stop? _____

How far did you walk to your destination? _____

Intersection where you get off the bus? _____

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle? _____

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle? _____

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year _____ Make/Model _____

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

☐ Return Home from your primary job

☐ Return Home for another reason

☐ Meal/Eat

☐ Work

☐ Work Related

☐ School

☐ Personal Business: _____

☐ Volunteer/Civic

☐ Shop

☐ Social/Recreation/Entertainment

☐ Pick-Up/Drop-Off Passenger

☐ Change Mode (e.g., car to bus):

☐ Other: _____

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - - OR - - - - - - - - - - - - -

· This was the last place I went today

If You Forgot a Stop *Anywhere* Between This Location and Location 10, Provide the Information Below:

For what reason did you stop between Location 9 and 10? _____

Where did you stop? _____ (Name of Stop Location) _____ (Address or Nearest Intersection) _____ (City, County, and State)

Number of minutes stopped: _____

Location 2: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

_____ & _____

Nearest Intersecting Streets

_____ ____ _____

City State County

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park? _____

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $_____

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other _____

How did you get to Location 2?

What was the primary type of transportation you used?

☐ Car, van, truck ☐ Motorcycle or moped

☐ Bicycle ☐ Taxi

☐ Walk ☐ School Bus

☐ Service vehicle ☐ Cargo transport vehicle

☐ Transit Bus ☐ Other _____

How far did you walk to the bus stop? _____

How far did you walk to your destination? _____

Intersection where you get off the bus? _____

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle? _____

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle? _____

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year _____ Make/Model _____

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

☐ Return Home from your primary job

☐ Return Home for another reason

☐ Meal/Eat

☐ Work

☐ Work Related

☐ School

☐ Personal Business: _____

☐ Volunteer/Civic

☐ Shop

☐ Social/Recreation/Entertainment

☐ Pick-Up/Drop-Off Passenger

☐ Change Mode (e.g., car to bus):

☐ Other: _____

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - - OR - - - - - - - - - - - - -

· This was the last place I went today

If You Forgot a Stop *Anywhere* Between This Location and Location 3, Provide the Information Below:

For what reason did you stop between Location 2 and 3? _____

Where did you stop? _____ (Name of Stop Location) _____ (Address or Nearest Intersection) _____ (City, County, and State)

Number of minutes stopped: _____

Location 1: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

_____ & _____

Nearest Intersecting Streets

_____ ____ _____

City State County

_____

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park? _____

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $_____

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other _____

How did you get to Location 1?

What was the primary type of transportation you used?

☐ Car, van, truck ☐ Motorcycle or moped

☐ Bicycle ☐ Taxi

☐ Walk ☐ School Bus

☐ Service vehicle ☐ Cargo transport vehicle

☐ Transit Bus ☐ Other _____

How far did you walk to the bus stop? _____

How far did you walk to your destination? _____

Intersection where you get off the bus? _____

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle? _____

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle? _____

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year _____ Make/Model _____

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

☐ Return Home from your primary job

☐ Return Home for another reason

☐ Meal/Eat

☐ Work

☐ Work Related

☐ School

☐ Personal Business: _____

☐ Volunteer/Civic

☐ Shop

☐ Social/Recreation/Entertainment

☐ Pick-Up/Drop-Off Passenger

☐ Change Mode (e.g., car to bus):

☐ Other: _____

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - - OR - - - - - - - - - - - - -

· This was the last place I went today

If You Forgot a Stop *Anywhere* Between This Location and Location 2, Provide the Information Below:

For what reason did you stop between Location 1 and 2? _____ Number of minutes stopped: _____

Where did you stop? _____ (Name of Stop Location) _____ (Address or Nearest Intersection) _____ (City, County, and State)

Location 10: Where did you go next?

When did you arrive at this location?

___ ___ : ___ ___ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

_____ & _____

Nearest Intersecting Streets

_____ ____ _____

City State County

_____

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park? _____

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $_____

Pay Method: 01=Hourly 02=Daily

03=Weekly 04=Monthly 05=Annually

96=Other _____

How did you get to Location 10?

What was the primary type of transportation you used?

☐ Car, van, truck ☐ Motorcycle or moped

☐ Bicycle ☐ Taxi

☐ Walk ☐ School Bus

☐ Service vehicle ☐ Cargo transport vehicle

☐ Transit Bus ☐ Other _____

How far did you walk to the bus stop? _____

How far did you walk to your destination? _____

Intersection where you get off the bus? _____

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle? _____

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle? _____

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year _____ Make/Model _____

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

☐ Return Home from your primary job

☐ Return Home for another reason

☐ Meal/Eat

☐ Work

☐ Work Related

☐ School

☐ Personal Business: _____

☐ Volunteer/Civic

☐ Shop

☐ Social/Recreation/Entertainment

☐ Pick-Up/Drop-Off Passenger

☐ Change Mode (e.g., car to bus):

☐ Other: _____

When did you leave this location?

___ ___ : ___ ___ · AM · PM

- - - - - - - - - - - - - OR - - - - - - - - - - - - -

· This was the last place I went today

If You Forgot a Stop *Anywhere* Between This Location and Location 11, Provide the Information Below:

For what reason did you stop between Location 10 and 11? _____ Number of minutes stopped: _____

Where did you stop? _____ (Name of Stop Location) _____ (Address or Nearest Intersection) _____ (City, County, and State)

Location 11: Where did you go next?

When did you arrive at this location?

__ __ : __ __ · AM · PM

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

- OR -

&

Nearest Intersecting Streets

City State County

Zip Code (if known)

Did you walk more than a block from a parking lot to this location? 01=Yes 02=No

Where did you park?

Did you pay to park? 01=Yes 02=No

How much did you pay to park? $

Pay Method: 01=Hourly 02=Daily 03=Weekly 04=Monthly 05=Annually 96=Other

How did you get to Location 11?

What was the primary type of transportation you used?

- ☐ Car, van, truck
- ☐ Motorcycle or moped
- ☐ Bicycle
- ☐ Taxi
- ☐ Walk
- ☐ School Bus
- ☐ Service vehicle
- ☐ Cargo transport vehicle
- ☐ Transit Bus
- ☐ Other

How far did you walk to the bus stop?

How far did you walk to your destination?

Intersection where you get off the bus?

If you used a car, van, or truck for this trip . . .

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle?

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle?

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year Make/Model

Was this your household's vehicle? · Yes · No

What did you do here?

What did you do at this location? (check all that apply)

- ☐ Return Home from your primary job
- ☐ Return Home for another reason
- ☐ Meal/Eat
- ☐ Work
- ☐ Work Related
- ☐ School
- ☐ Personal Business:
- ☐ Volunteer/Civic
- ☐ Shop
- ☐ Social/Recreation/Entertainment
- ☐ Pick-Up/Drop-Off Passenger
- ☐ Change Mode (e.g., car to bus):
- ☐ Other:

When did you leave this location?

__ __ : __ __ · AM · PM

- - - - - - - - - - - - OR - - - - - - - - - - - -

· This was the last place I went today

If You Forgot a Stop *Anywhere* Between This Location and Location 12, Provide the Information Below:

For what reason did you stop between Location 11 and 12?

Number of minutes stopped:

Where did you stop?

Name of Stop Location | Address or Nearest Intersection | City, County, and State

Start Location: At 3:00 am today, were you . . .?

☐ **At Home**

Street Address (be as specific as possible)

City County State

Zip Code (if known)

&

Nearest Intersecting Streets

Why NO travels?

☐ **Traveling** (you were driving or flying at 3:00 am today)

What type of transportation were you using?

- ☐ Car, van, truck
- ☐ Motorcycle or moped
- ☐ Bicycle
- ☐ Taxi
- ☐ Walk
- ☐ School Bus
- ☐ Service vehicle
- ☐ Cargo transport vehicle
- ☐ Transit Bus (Specify Route:)
- ☐ Other

Were you the . . .? ☐ driver ☐ passenger

Including yourself, how many TOTAL people were in the vehicle?

Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle?

Was this a . . .? · Carpool · Vanpool · Neither

Please indicate the following about the vehicle:

Year Make/Model

Was this your household's vehicle? · Yes · No

☐ **At Work**, or

☐ **At Another Location**

What is the Name of this Location?

What Type of Place/Business Is This?

Street Address (be as specific as possible)

City County State

Zip Code (if known)

&

Nearest Intersecting Streets

At what time did you leave your starting location? ☐ AM ☐ PM

Please proceed to "Location 1" on the next page.

Additional Instructions

- If you travel by bus please include your walk to and from the bus stop as individual trips.
- If you stopped to at a gas station or drive-thru, please record each location as an individual trip
- Return trips home should also be recorded as individual trips
- If someone stays home all day – Mark Location 1 "Stayed home all day" and return the diary in the enclosed envelope
- If someone is out of town or away from the residence for the entire day and night – Mark Location 1 "Out of Region all day" and return the diary in the enclosed envelope

If you have any questions, please call:
ETC Institute
1-888-801-5368

Work Location

If employed, please provide the following information about your work location:

_____
Name of Employer

_____
Address of Workplace

_____ _____
City State

_____ _____
County Zip Code

Additional Locations

Use the additional sheets provided if you have more than 11 Locations where you made a stop.

Questions?

If you have any questions, please call **1-888-801-5368** toll-free.

ETC Institute
725 W. Frontier Circle
Olathe, KS 66061

Comments

_____

_____

_____

_____

Thank you for your participation in this important survey.

****** Example ******

Location 2: Where did you go next?	How did you get to Location 2?	What did you do here?
When did you arrive at this location? 6 : 4 5 X AM · PM St Michaels Health Center What is the Name of this Location? Hospital What Type of Place/Business Is This? 2223 Morris Ln Street Address (be as specific as possible) Summer Hill Rd OR & Morris Ln Nearest Intersecting Streets Texarkana / TX / Bowie City / State / County 75503 Zip Code (if known) Did you walk more than a block from a parking lot to this location? 01=Yes 02=No XX Where did you park? _____ Did you pay to park? 01=Yes 02=No How much did you pay to park? $_____ Pay Method: 01=Hourly 02=Daily 03=Weekly 04=Monthly 05=Annually 96=Other _____	What was the primary type of transportation you used? ☒ Car, van, truck ☐ Motorcycle or moped ☐ Bicycle ☐ Taxi ☐ Walk ☐ School Bus ☐ Service vehicle ☐ Cargo transport vehicle ☐ Transit Bus ☐ Other _____ How far did you walk to the bus stop? _____ How far did you walk to your destination? _____ Intersection where you get off the bus? _____ ***If you used a car, van, or truck for this trip . . .*** Were you the . . .? ☒ driver ☐ passenger Including yourself, how many TOTAL people were in the vehicle? 1 Including yourself, how many people from YOUR HOUSEHOLD were in the vehicle? 1 Was this a . . .? · Carpool · Vanpool X Neither Please indicate the following about the vehicle: Year 2008 Make/Model Chevy Malibu Was this your household's vehicle? · Yes X No	What did you do at this location? (check all that apply) ☐ Return Home from your primary job ☐ Return Home for another reason ☐ Meal/Eat ☒ Work ☐ Work Related ☐ School ☐ Personal Business: _____ ☐ Volunteer/Civic ☐ Shop ☐ Social/Recreation/Entertainment ☐ Pick-Up/Drop-Off Passenger ☐ Change Mode (e.g., car to bus): ☐ Other: _____ **When did you leave this location?** 7 : 1 5 · AM · X PM - - - - - - - - - - - - OR - - - - - - - - - - - - · This was the last place I went today

If You Stopped ***Anywhere*** Between This Location and Location 3, Provide the Information Below:

For what reason did you stop between Location 2 and 3? _____ Number of minutes stopped: _____

Where did you stop? _____ (Name of Stop Location) _____ (Address or Nearest Intersection) _____ (City, County, and State)

2012 Texas Department of Transportation

Texarkana Household Activity/Travel Survey

Instructions

Please tell us about ALL locations you traveled to, what you did, and how you got there, beginning at 3 a.m. Include all changes in location you made whether you were traveling by vehicle, bus, bike, walking, or other means. Give us as much information as you can about each location or place you stopped, no matter how short. For example, if you stop to get gas on your way to work, please record both locations separately. Also, try to record as much detail about the address as possible. For example, write 123 N. Main Street instead of 123 Main.

If you have any questions, please call 1-888-801-5368
ETC Institute

Each person in the household completes an activity/travel diary for **ONE** day
See Example on back page

Person's age: _____ Gender: Male Female

Write your travel date: _____

Circle your travel day: Monday Tuesday Wednesday Thursday Friday

- *If someone stays home all day,*
  Mark diary Location 1 "stayed home all day" and return.
- *If someone is out of town or away from residence for entire day and night,*
  Mark diary Location 1 "out of region all day" and return.

APPENDIX B:
HOUSEHOLD SURVEY DATA FILE FORMATS

HOUSEHOLD / ACTIVITY SURVEY
DATA FILE FORMAT

RECORD TYPE 1 - HOUSEHOLD INFORMATION

This file will contain the household information collected for each household on Part 1, Household Information in the Household Survey. The data should be in an ASCII data file.

FIELD COLUMNS

Item	Begin	End	Type	Format	Description
1. Record Type	1	2	Numeric RJ	I2	Code indicating type of record. Here it should be 1.
2. Sample Number	3	9	Numeric RJ	I7	Unique non-zero number assigned to each household participating in survey.
3. Phone	10	21	Alphanum. LJ	A12	Phone number of household.
4. Month	22	23	Numeric RJ	I2	Month of travel day.
5. Day	24	25	Numeric RJ	I2	Day of the month of travel.
6. Year	26	29	Numeric RJ	I4	Year travel day occurred.
7. Day of Week	30	30	Numeric RJ	I1	Day of the week travel occurred: 1-Monday, 2-Tuesday, 3-Wednesday, 4-Thursday, 5-Friday.
8. Advance Letter	31	32	Numeric RJ	I2	Code indicating if household received advance letter: 1-Yes, 2-No, 3-No letter sent, 98-Don't Know, 99-Refused.
9. HH address	33	92	Alphanum. LJ	A60	Street address or nearest cross streets to household.
10. HH City	93	122	Alphanum. LJ	A30	City where household is located.
11. HH State	123	137	Alphanum. LJ	A15	State where household is located.
12. HH Zip Code	138	142	Numeric RJ	I5	Zip code of household address.
13. HH County	143	144	Numeric RJ	I2	Code indicating county/area in which household is located: 1-Bowie County, 2-Miller County.
14. HH Study Area	145	146	Alphanum	A2	Use 'TA' to indicate zone is in the Texarkana-Bowie/Miller County study area.
15. HH Zone	147	151	Numeric RJ	I5	This field should be left blank-TxDOT or TTI will complete. TAZ number where household is located. The HH address must be coded to a zone in the Texarkana-Bowie/Miller County study area. Unknown zones should be coded 88888.
16. HH Longitude	152	161	Numeric RJ	F10.6	Longitude of household address. If unknown, it should be coded 888.8888.
17. HH Latitude	162	171	Numeric RJ	F10.6	Latitude of household address. If unknown, it should be coded 888.8888.
18. Number Persons	172	173	Numeric RJ	I2	Number of persons living in residence.
19. Number Employed	174	175	Numeric RJ	I2	Number of persons in household that are employed either full or part time.
20. Vehicles Available	176	177	Numeric RJ	I2	Number of cars, vans, light trucks, motorcycles available for use by the HH. 98-Don't Know, 99-Refused
21. Vehicles Owned / Leased	178	179	Numeric RJ	I2	Combined number of cars, vans, light trucks, motorcycles owned or leased by members of the household. 98-Don't know, 99-Refused
22. Bikes	180	181	Numeric RJ	I2	Number of working bicycles available for use by members of household. 98-Don't know, 99-Refused
23. Residence	182	183	Numeric RJ	I2	Code indicating the type of residence. See below for code definitions.
24. Other Residence	184	213	Alphanum. LJ	A30	If residence is coded as 'other', this field contains a description of the type of residence.
25. Tenure	214	215	Numeric RJ	I2	Code indicating number of years at residence: 1-one year or less, 2-two years, 3-three years, 4-four years, 5-five or more years, 98-Don't know, 99-Refused.
26. Previous Residence	216	217	Numeric RJ	I2	If tenure was less than five years, this code indicates if previous residence was in the Texarkana-Bowie/Miller County study area: 1-Yes, 2-No, 98-Don't know, and 99-Refused.
27. Previous Zip Code	218	222	Numeric RJ	I5	If tenure was less than five years, this is the zip code of the previous residence. 99998-Don't Know, 99999-Refused
28. HH Factors	223	242	Alphanum LJ	A20	Code indicating factors that influenced their decision to locate in their current household. If more than one, separate code numbers by comma. See below for code definitions.

Record Type 1, Continued

29. Other Factors	243	272	Alphanum LJ	A30	Other factors influencing their decision to locate in their current household.
30. Income	273	274	Numeric RJ	I2	Code indicating combined annual income of all household members. See codes below.
31. Day Visitors	275	276	Numeric RJ	I2	Number of non-family persons that stopped at this residence for any reason on the travel day. 98-Don't Know, 99-Refused
32. Overnight Visitors	277	278	Numeric RJ	I2	Number of overnight visitors at this residence during their travel day. 98-Don't Know, 99-Refused
33. Delivery Vehicle	279	280	Numeric RJ	I2	Code indicating if someone in household drives a form of delivery vehicle: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
34. Number Delivery Driver	281	282	Numeric RJ	I2	Number of persons in household that are delivery drivers or travel within study area as part of their work. 98-Don't know, 99-Refused
35. HH Vehicle Use by Non HH Number	283	284	Numeric RJ	I2	Code indicating if one or more of the household vehicles was used by a non-household member on the travel day: 1-Yes, 2-No, 3-Zero vehicle household, 98-Don't Know, 99-Refused.
36. GPS House	285	286	Numeric RJ	I2	Code indicating if household vehicles had GPS equipment installed for GPS survey: 1-Yes, 2-No.
37. Total HH Trips	287	289	Numeric RJ	I3	The total combined number of all trips made by all persons in the household on the assigned travel day.

RESIDENCE	HH FACTORS	TIME WITHOUT PHONE
1 - Unattached Single Family Home	1 - Price of Property	1 - Less than one week
2 - Condo	2 - Taxes	2 - one week to less than two weeks
3 - Duplex	3 - Proximity to Work	3 - two weeks to less than one month
4 - Apartment	4 - School District	4 - one month to less than three months
5 - Mobile Home	5 - Proximity to School	5 - three months to less than six months
96 - Other	6 - Character of Neighborhood or Area	6 - six months to less than one year
98 - Don't Know	7 - Access to Public Transportation	7 - one year or more
99 - Refused	8 - Security / Safety	98 - Don't know
	96 - Other	99 - Refused
	98 - Don't Know	
	99 - Refused	

HOUSEHOLD INCOME CODES		
1 - Less than $5,000	11 - $32,500 to $34,999	21 - $80,000 to $99,999
2 - $5,000 to $9,999	12 - $35,000 to $39,999	22 - $100,000 to $124,999
3 - $10,000 to $14,999	13 - $40,000 to $44,999	23 - $125,000 to $149,999
4 - $15,000 to $17,499	14 - $45,000 to $49,999	24 - $150,000 to $199,999
5 - $17,500 to $19,999	15 - $50,000 to $54,999	25 - $200,000 or more
6 - $20,000 to $22,499	16 - $55,000 to $59,999	98 - Don't Know
7 - $22,500 to $24,999	17 - $60,000 to $64,999	99 - Refused
8 - $25,000 to $27,499	18 - $65,000 to $69,999	
9 - $27,500 to $29,999	19 - $70,000 to $74,999	
10 - $30,000 to $32,499	20 - $75,000 to $79,999	

RECORD TYPE 2 - PERSON INFORMATION					
This file will contain the information on each person in the household in Part 2, Person Information. The data should be in an ASCII data file.					
			FIELD COLUMNS		
Item	Begin	End	Type	Format	Description
1. Record Type	1	2	Numeric RJ	I2	Code indicating type of record, here it should be 2.
2. Sample Number	3	9	Numeric RJ	I7	Unique non-zero number assigned to each household participating in survey. This number should match the sample number of the above record.
3. Person Number	10	12	Numeric RJ	I3	Number assigned to each person in the household.
4. Relationship	13	14	Numeric RJ	I2	Code indicating relationship of person to the head of household. See code definitions below.
5. Sex	15	16	Numeric RJ	I2	Sex of person: 1-Male, 2-Female, 98-Don't Know, 99-Refused.
6. Ethnicity	17	18	Numeric RJ	I2	Race or ethnicity of person. See code definitions below.
7. Ethnicity Other	19	78	Alphanum RJ	A60	Description of other ethnicity which is not included in code definitions.
8. Age	79	81	Numeric RJ	I3	Age of person. 998-Don't know, 999-Refused
9. Licensed Driver	82	83	Numeric RJ	I2	Code indicating if person is a licensed driver (regardless of age): 1-Yes, 2-No, 98-Don't Know, 99-Refused.
10. Employment	84	85	Numeric RJ	I2	Code indicating if person is employed in a paying or volunteer job (regardless of age): 1-Yes, 2-No, 98-Don't Know, 99-Refused.
11. Employment Status	86	87	Numeric RJ	I2	If person is employed, this is a code number indicating the person's employment status. See code definitions.
12. Hours	88	90	Numeric RJ	I3	On average, the number of hours worked per week: 996-Varies from week to week, 998-Don't know, 999-Refused
13. Not Employed	91	92	Numeric RJ	I2	Code indicating current status if person is not employed. See code definitions below.
14. Not Employed Other	93	152	Alphanum LJ	A60	Description of employment status if none of the options in the employment status code is applicable.
15. Commercial Vehicle Driver	153	154	Numeric RJ	I2	Code indicating if person is a commercial vehicle driver: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
16. Commercial Vehicle Type	155	156	Numeric RJ	I2	If person drives commercial vehicle, enter code identifying type of vehicle: 1-Cargo transport vehicle, 2-Commercial service vehicle, 3-Cargo transport and Service vehicle, 96-Other, 98-Don't Know, 99-Refused. If person does not drive a commercial vehicle, this field should be blank.
17. Other Vehicle	157	186	Alphanum. LJ	A30	If commercial vehicle type is coded as 'other', this field contains a description of the type of commercial vehicle.
18. Flex Time	187	188	Numeric RJ	I2	Code indicating if person's employer allows them to work flexible hours or the hours are fixed: 1-Flexible/Variable, 2-Fixed/Unchanging, 98-Don't Know, 99-Refused.
19. Job	189	190	Numeric RJ	I2	Code indicating if person has more than one paying job: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
20. Employer Name	191	250	Alphanum. LJ	A60	Name of person's primary employer.
21. Workplace Type	251	252	Numeric RJ	I2	Code indicating type of workplace where person is employed. See code definitions below.
22. Other Workplace	253	282	Alphanum. LJ	A30	Description of workplace type if 'other' is coded.
23. Home Office	283	284	Numeric RJ	I2	Code indicating if workplace is a home office or business operated out of the home: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
24. Telecommute	285	286	Numeric RJ	I2	If employed 30 or more hours per week, code indicating if person works from home or telecommutes on a regular basis: 1-Yes, 2-No, 98-Don't Know, 99-Refused.

Record Type 2, Continued

25. Work Place Address	287	346	Alphanum. LJ	A60	Street address of work place or nearest intersecting street names.
26. Work Place City	347	376	Alphanum. LJ	A30	City where work place is located.
27. Work Place State	377	391	Alphanum. LJ	A15	State where work place is located.
28. Work Place County	392	393	Numeric RJ	I2	Code indicating county/area in which work place is located: 1-Bowie County, 2-Miller County, 96-Other, 98-Unknown, 99-Refused.
29. Work Place Other County	394	423	Alphanum LJ	A30	If county is coded as 'other', this field should contain the name of the county where the work place is located.
30. Work Place Zip Code	424	428	Numeric RJ	I5	Zip code of workplace address.
31. Work Place Study Area	429	430	Alphanum	A2	Code indicating study area in which work address and TAZ zone is located. Use 'TA' to indicate zone is in the Texarkana-Bowie/Miller County study area. If work address is outside the study area but in Texas, 'TX' should be entered in this field to indicate the zone number in the following field is a state zone number. Field should be left blank if location is outside the state of Texas.
32. Work Zone	431	435	Numeric RJ	I5	This field should be left blank-TxDOT or TTI will complete. Zone where workplace is located. This should be coded to a TAZ in the Texarkana-Bowie/Miller County study area. If unknown but in the study area being surveyed, it should be coded 88888. Locations outside of the study area but within Texas should be coded using the Statewide Zone System. Unknown locations outside of the study areas but within Texas should be coded 66666. Addresses in Mexico should be coded 77777. Addresses outside of Texas and Mexico should be coded using 99999.
33. Work Place Longitude	436	445	Numeric RJ	F10.6	Longitude of workplace location. If within the study area being surveyed, but unknown it should be coded 888.8888. If outside the study area being surveyed but within Texas and unknown, it should be coded as 666.6666. Locations in Mexico should be coded 777.7777 and addresses outside of Texas and Mexico should be coded 999.9999.
34. Work Place Latitude	446	455	Numeric RJ	F10.6	Latitude of workplace location. If within the study area being surveyed, but unknown it should be coded 888.8888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.6666. Locations in Mexico should be coded 777.7777 and addresses outside of Texas and Mexico should be coded 999.9999.
35. Days Worked	456	457	Numeric RJ	I2	Number of days per week person typically works. 98-Don't Know, 99-Refused
36. Work at Home	458	459	Numeric RJ	I2	Out of the last seven days, the number of days worked at home instead of going to work. Valid responses: 0-7, 98-Don't Know, 99-Refused.
37. Second Job Type	460	461	Numeric RJ	I2	Code indicating type of workplace where person works at second job. See code definitions below.
38. Second Job Other	462	521	Alphanum. LJ	A60	Description if workplace type for second job is coded as other.
39. Second Job Employment Status	522	523	Numeric RJ	I2	If person is employed in a second job, this is a code number indicating the person's employment status related to the second job. See code definitions below.
40. Total Hours	524	526	Numeric RJ	I3	Total hours on average person works per week at all jobs. 998-Don't know, 999-Refused
41. Primary Occupation	527	528	Numeric RJ	I2	Code indicating the type of occupation for primary job. See code definitions below.
42. Primary Industry	529	530	Numeric RJ	I2	Code indicating the type of industry worked in for primary job. See code definition below.
43. Secondary Occupation	531	532	Numeric RJ	I2	Code indicating the type of occupation for secondary job. See code definitions below.

Record Type 2, Continued

44. Secondary Industry	533	534	Numeric RJ	I2	Code indicating the type of industry worked in for secondary job. See code definition below.
45. Student Status	535	536	Numeric RJ	I2	Code indicating if person is enrolled in any type of school: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
46. School Type	537	538	Numeric RJ	I2	Code indicating type of school attended. See code definitions below.
47. School Type Other	539	598	Alphanum. LJ	A60	Description of school type if coded as other.
48. Hours Enrolled	599	600	Numeric RJ	I2	If person is enrolled in a college, trade school, etc., code indicates if person is enrolled for 12 or more hours: 1-Yes, 2-No, 98-Don't know, 99-Refused.
49. Bike Use	601	602	Numeric RJ	I2	Number of days person rode bike in last seven days. 98-Don't Know, 99-Refused
50. Bike Purpose	603	604	Numeric RJ	I2	Code indicating the most common trip purpose for person's bike trips. See code definitions below.
51. Disability	605	606	Numeric RJ	I2	Code indicating if person has a transportation disability: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
52. Travel	607	608	Numeric RJ	I2	Code indicating if person traveled on the designated travel day: 1-Yes, 2-No, 96-Indicates person was out of town or away from the residence for the entire day and night of their travel day.
53. Person trips	609	611	Numeric RJ	I3	The total number of trips the person made on his/her travel day.
54. Why No Travel	612	671	Alphanum LJ	A60	Description of why the person did not make any trips on the travel day.
55. Diary Use	672	673	Numeric RJ	I2	Code indicating if person used diary or if information is based on memory: 1-Yes, used diary; 2-No, did not use diary - information is based on memory.
56. Data Retrieval	674	675	Numeric RJ	I2	Code indicating how data was retrieved: 1-from respondent, 2-by proxy, 3-mailed diary, 4-internet, 98-Don't know, 99-Refused.
57. Proxy ID	676	677	Numeric RJ	I2	This item identifies the person by person number who provided the information. 98-Don't know, 99-Refused
58. Date data was retrieved	678	681	Numeric RJ	I4	The month and day the data was retrieved. Record all months as 2 digits and all days as 2 digits with the month preceding the day. Example: April 1st should be coded as 0401.
59. Travel to Austin - San Antonio	682	683	Numeric RJ	I2	Code indicating frequency of travel to Austin - San Antonio. See coding options below.
60. Travel to Dallas - Ft. Worth	684	685	Numeric RJ	I2	Code indicating frequency of travel to Dallas - Ft. Worth. See coding options below.
61. Travel to Houston	686	687	Numeric RJ	I2	Code indicating frequency of travel to Houston. See coding options below.
62. Passenger Rail to Dallas - Ft. Worth, Houston, or Austin - San Antonio	688	689	Numeric RJ	I2	Code indicating whether respondent would use passenger rail service to Dallas - Ft. Worth, Houston, or Austin - San Antonio: 1 - Yes, 2 - No, 3 - Possibly.

Record Type 2, Continued

RELATIONSHIP	ETHNICITY	EMPLOYMENT STATUS
0 - Head of Household	1 - Black / African American	1 - Employed full time 30 or more hours per week
1 - Husband / Wife / Unmarried Partner	2 - Hispanic / Mexican American	2 - Employed part time less than 30 hours per week
2 - Mother / Father / In-law	3 - Asian / Pacific Islander	3 - Self employed full time 30 or more hours per week
3 - Brother / Sister / In-law	4 - Native American	4 - Self employed part time less than 30 hours per week
4 - Grandfather / Grandmother	5 - White / Caucasian	98 - Don't Know
5 - Grandson / Granddaughter	96 - Other	99 - Refused
6 - Son / Daughter / In-law	98 - Don't Know	
7 - Aunt / Uncle	99 - Refused	
8 - Other Relative		OCCUPATION
9 - Other Non-Relative		1 - Management, professional, and related occupations
10 - Household Help	WORK PLACE TYPE	2 - Service occupations
98 - Don't Know	1 - Office (Non-government)	3 - Sales and office occupations
99 - Refused	2 - Office (Government)	4 - Farming, fishing, and forestry occupations
	3 - Retail/Shopping/Gas	5 - Construction, extraction, and maintenance occupations
	4 - Industrial/Manufacturing/Warehouse	6 - Production, transportation, and material moving occupations
NOT EMPLOYED STATUS	5 - Medical	96 - Other / Not applicable (unemployed / student / retired)
1 - Retired	6 - Education - Day Care/K-12	98 - Don't know
2 - Disability Status	7 - Education-College, trade school, other	99 - Refused
3 - Homemaker	8 - Residential	
4 - Looking for Work	9 - Airport	
5 - Not Looking for Work	10 - Eating Establishment	SCHOOL TYPE
6 - Student (any age)	96 - Other	1 - Day Care / Pre-School
96 - Other	98 - Don't Know	2 - K-12th
98 - Don't Know	99 - Refused	3 - Post Secondary, College, Trade
99 - Refused		96 - Other
		98 - Don't Know
		99 - Refused
BIKE TRIP PURPOSE		
1 - Work	INDUSTRY	
2 - School	1 - Agriculture, forestry, fishing and hunting, mining	
3 - Shopping	2 - Construction	
4 - Visiting	3 - Manufacturing	
5 - Recreation / Exercise	4 - Wholesale trade	
96 - Other	5 - Retail trade	
98 - Don't Know	6 - Transportation, warehousing, utilities	
99 - Refused	7 - Information	
	8 - Finance, insurance, real estate, rental and leasing	
	9 - Professional, scientific, management, administrative, and waste management services	
FREQUENCY OF TRAVEL OPTIONS	10 - Education, health, and social services	
1 - Never	11 - Arts, entertainment, recreation, accommodation, food services	
2 - 1 to 2 times per year	12 - Other services (except public administration)	
3 - 1 to 2 times every 6 months	13 - Public Administration	
4 - 1 to 2 times every 3 months	96 - Not Applicable - (unemployed, student, retired)	
5 - 1 or more times every month	98 - Don't Know	
6 - 1 or more times every week	99 - Refused	

RECORD TYPE 3-VEHICLE INFORMATION					
This file will contain the information on each vehicle available to members in each household. Each vehicle will have a data record. The data should be in an ASCII data file.					
			FIELD COLUMNS		
Item	Begin	End	Type	Format	Description
1. Record Type	1	2	Numeric RJ	I2	Code indicating type of record, here it should be 3.
2. Sample Number	3	9	Numeric RJ	I7	Unique non-zero number assigned to each household participating in survey.
3. Vehicle Number	10	11	Numeric RJ	I2	Unique non-zero number assigned to vehicle.
4. Type of Vehicle	12	13	Numeric RJ	I2	Code indicating type of vehicle. See code definitions below.
5. Other Vehicle Type	14	43	Alphanum LJ	A30	Other vehicle type not listed in vehicle codes below.
6. Year	44	47	Numeric RJ	I4	Year vehicle was manufactured. 9998-Don't Know, 9999-Refused
7. Make	48	49	Numeric RJ	I2	Make of vehicle. See vehicle make codes below.
8. Other Make	50	109	Alphanum LJ	A60	Specify other make of vehicle if not included in vehicle make codes below.
9. Model	110	169	Alphanum. LJ	A60	Model of vehicle.
10. Type of Fuel	170	171	Numeric RJ	I2	Type of fuel used by vehicle: 1-Gasoline, 2-Diesel, 3-Propane, 4-Natural Gas, 5-Electricity, 6-Gas/Electric Hybrid, 96-Other, 98-Don't Know, 99-Refused.
11. Other Fuel Type	172	186	Alphanum. LJ	A15	Other type of fuel specified.
12. Commercial Use	187	188	Numeric RJ	I2	Code indicating if vehicle is used for commercial purposes: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
13. Commercial Type	189	190	Numeric RJ	I2	If vehicle is used for commercial purposes, this field contains a code indicating the type of commercial use: 1-Cargo Delivery, 2-Commercial Service, 3-Cargo Delivery and Commercial Service, 96-Other, 98-Don't know; 99-Refused.
14. Other Commercial	191	220	Alphanum. LJ	A30	If commercial type is coded as 'other', this field contains a description of the type of commercial vehicle.
15. Odometer	221	228	Numeric RJ	I8	Odometer reading on vehicle at beginning of travel day. 99999998-Don't know, 99999999-Refused
16. Ownership	229	230	Numeric RJ	I2	Code indicating ownership of this vehicle: 1-Owned or leased by a member of HH, 2-Owned or leased by a non-household member or business, 98-Don't Know, 99-Refused.
17. Non HH Use	231	232	Numeric RJ	I2	Code indicating if vehicle was used by a non-household member on the travel day: 1-Yes, 2-No, 98-Don't Know, 99-Refused.

Record Type 3, Continued

VEHICLE MAKE CODES		TYPE OF VEHICLE CODES
1 - Acura	42 - Alfa Romeo	1 - Motorcycle (includes mopeds)
2 - Audi	43 - AM General	2 - Car (includes station wagons)
3 - BMW	44 - AMC	3 - Van (mini and passenger)
4 - Buick	45 - Austin / Austin Healey	4 - Sport Utility Vehicle
5 - Cadillac	46 - Bluebird	5 - Pickup Truck
6 - Chevrolet	47 - Brockway	6 - Cargo Van
7 - Chrysler	48 - BSA	96 - Other
8 - Dodge	49 - Daihatsu	98 - Don't Know
9 - Ford	50 - Diamond Reo / Reo	99 - Refused
10 - Geo	51 - Ducati	
11 - GMC	52 - Eagle	
12 - Harley Davidson	53 - Eagle Coach	
13 - Honda	54 - Fiat	
14 - Hyundai	55 - Freightliner	
15 - Infiniti	56 - FWD	
16 - Isuzu	57 - Gillig	
17 - Jaguar	58 - Grumman	
18 - Jeep	59 - Imperial	
19 - Kawasaki	60 - International Harvester / Navistar	
20 - KIA	61 - Iveco / Magirus	
21 - Lexus	62 - Kenworth	
22 - Lincoln	63 - Lancia	
23 - Mazda	64 - Mack	
24 - Mercury	65 - MCI	
25 - Mercedes-Benz	66 - Merkur	
26 - Mitsubishi	67 - MG	
27 - Nissan/Datsun	68 - Moto-Guzzi	
28 - Oldsmobile	69 - Norton	
29 - Plymouth	70 - Peterbuilt	
30 - Pontiac	71 - Peugeot	
31 - Porsche	72 - Renault	
32 - Range/Land Rover	73 - Sterling	
33 - Saab	74 - Thomas Built	
34 - Saturn	75 - Triumph	
35 - Subaru	76 - White / Autocar-White GMC	
36 - Suzuki	77 - Yugo	
37 - Toyota	78 - Other Make Moped	
38 - Volkswagen	79 - Other Make Motorcycle	
39 - Volvo	96- Other	
40 - Yamaha	98 - Don't Know	
41 - Daewoo	99 - Refused	

RECORD TYPE 4-TRIP INFORMATION					
This file will contain the trip/activity information for each person in each household. The data should be in an ASCII data file.					
			FIELD COLUMNS		
Item	Begin	End	Type	Format	Description
1. Record Type	1	2	Numeric RJ	I2	Code indicating type of record. Here it should be 4.
2. Sample Number	3	9	Numeric RJ	I7	Unique non-zero number assigned to each household participating in survey. This number must match the number used for the same household and recorded in the Household Data File.
3. Month	10	11	Numeric RJ	I2	Month of travel day.
4. Day	12	13	Numeric RJ	I2	Day of the month of travel.
5. Year	14	17	Numeric RJ	I4	Year travel day occurred.
6. Person Number	18	19	Numeric RJ	I2	Number assigned to the person doing this activity.
7. Activity/Trip Number	20	21	Numeric RJ	I2	The first trip/activity for each person will be recorded as 0 for where their day began. Each subsequent trip/activity should be numbered sequentially as 1, 2, 3, etc.
8. Activity Type Code	22	23	Numeric RJ	I2	Code indicating the type of activity. See activity codes below. For activity 0 (where day began), this should be coded as 1 if it began at home, 4 if day began at work, or as 96 if it began at another location. If this is coded as 96, the activity description should be included in the activity description field.
9. Activity Description	24	83	Alphanum LJ	A60	Description of other activity.
10. Location	84	113	Alphanum. LJ	A30	Name of location where activity took place.
11. Location Address	114	173	Alphanum. LJ	A60	Street address of location or names of nearest intersecting streets.
12. Location City	174	203	Alphanum. LJ	A30	Name of city where location is.
13. Location State	204	218	Alphanum. LJ	A15	Name of state where location is.
14. Location County	219	220	Numeric RJ	I2	Code indicating county/area where location is: 1-Bowie County, 2-Miller County, 96-Other, enter name of county in next field, 98-Unknown, 99-Refused.
15. Location Other County	221	250	Alphanum. LJ	A30	If county location is coded as other, this field should contain the name of the county where location is.
16. Location Zip Code	251	255	Numeric RJ	I5	Zip code of location address.
17. Exit Route Name	256	315	Alphanum LJ	A60	If location is outside of the study area being surveyed, this is the name of the highway/route/road used to exit the applicable study area.
18. External Zone	316	320	Numeric RJ	I5	This field should be left blank-TxDOT or TTI will complete. If location is outside the study area being surveyed, this field should contain the external zone number associated with the name of the highway/route/road used to exit the applicable study area.
19. Location Study Area	321	322	Alphanum	A2	Code indicating study area in which activity address/TAZ zone is located. Use 'TA' to indicate zone is in the Texarkana-Bowie/Miller County study area. If location is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. Field should be left blank if location is outside Texas.

Record Type 4, Continued

20. Location Zone Number	323	327	Numeric RJ	I5	This field should be left blank-TxDOT or TTI will complete. Zone number of location address. If in the study area being surveyed but location unknown, it should be coded 88888. Locations in Mexico should be coded 77777 and addresses outside of the study area being surveyed, but within Texas should be coded using the Statewide Zone System. Unknown locations outside of the study area being surveyed but within the state of Texas should be coded 66666. Addresses outside of Texas and Mexico should be coded using 99999.
21. Location Longitude	328	337	Numeric RJ	F10.6	Longitude of location. If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.6666. Locations in Mexico should be coded 777.7777 and addresses outside of Texas and Mexico should be coded 999.9999.
22. Location Latitude	338	347	Numeric RJ	F10.6	Latitude of location. If within the study area being surveyed, but unknown it should be coded 888.8888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.6666. Locations in Mexico should be coded 777.7777 and addresses outside of Texas and Mexico should be coded 999.9999.
23. Type of Place	348	349	Numeric RJ	I2	Code indicating the type of place at this location. If coded as other, specify in the next field. See code definitions below.
24. Other Place	350	379	Alphanum. LJ	A30	Description of type of place where activity occurred if coded as other.
25. Purpose	380	381	Numeric RJ	I2	Purpose of trip, developed based on the activity type. See code definitions below.
26. Mode of Travel	382	383	Numeric RJ	I2	Code indicating mode of travel used in traveling to this location. See travel mode code definitions below.
27. Other Mode	384	413	Alphanum. LJ	A30	If other is coded in mode of travel, this is the description of the other mode.
28. Number of People	414	415	Numeric RJ	I2	If mode of travel was by auto, van, truck, commercial vehicle, motorcycle/moped, or taxi/limo, this is the number of persons in the vehicle, including the person driving. All other modes (bus, bicycle, walk, etc.) should be coded 96.
29. HH Members	416	417	Numeric RJ	I2	Of those in the vehicle, how many were household members. Field should be blank if number of people was coded 96.
30. Persons on Trip	418	427	Alphanum LJ	A10	Who was/were the household members traveling with you? Code person numbers separated by commas.
31. Non HH Members	428	429	Numeric RJ	I2	Compute Non HH Members as number of people minus number of HH member. If number of people is coded as 96, this field should be blank.
32. HH Vehicle	430	431	Numeric RJ	I2	Was a HH vehicle used to make this trip? 1=Yes, 2=No, 98-Don't Know, 99-Refused
33. Vehicle Used	432	433	Numeric RJ	I2	If household vehicle was used for travel, this is the vehicle number (must correspond with vehicle number in household record). If other vehicle is used, this should be coded as 96.
34. Body Type	434	435	Numeric RJ	I2	See codes below for body type.
35. Other Body Type	436	465	Alphanum LJ	A30	If body type is not in code set, describe body type.
36. Other Vehicle Year	466	469	Numeric RJ	I4	Year of other vehicle used for trip. 9998-Don't Know, 9999-Refused
37. Other Vehicle Make	470	471	Numeric RJ	I2	Make of other vehicle used for trip. See codes below.
38. Other Vehicle Make Description	472	531	Alphanum. LJ	A60	If make of other vehicle is coded as other, this field contains a description of the vehicle make.

Record Type 4, Continued

39. Other Vehicle Model	532	591	Alphanum. LJ	A60	Model of other vehicle used for trip.
40. Other Vehicle Fuel	592	593	Numeric RJ	I2	Type of fuel used by vehicle: 1-Gasoline, 2-Diesel, 3-Propane, 4-Natural Gas, 5-Electricity, 6-Gasoline/Electric Hybrid, 96-Other, 98-Don't Know, 99-Refused.
41. Other Fuel	594	608	Alphanum. LJ	A15	Description of other fuel for other vehicle, if coded as 96 above.
42. Other Vehicle Commercial Use	609	610	Numeric RJ	I2	Code indicating if other vehicle is used for commercial purposes: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
43. Other Commercial Vehicle Type	611	612	Numeric RJ	I2	If other vehicle is used for commercial purposes, this field indicates the type of commercial use. 1-Cargo delivery, 2-Commercial Service, 3-Cargo Delivery and Commercial Service, 96-Other, 98-Don't Know, 99-Refused.
44. Commercial Vehicle Type Other	613	642	Alphanum. LJ	A30	If commercial type of use code above is other, this field contains a description of the commercial type of use.
45. To Bus Stop	643	644	Numeric RJ	I2	Code indicating if person walked more than one block to get to bus stop: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
46. To Activity	645	646	Numeric RJ	I2	Code indicating if person got off bus more than one block from activity: 1-Yes, 2-No, 98-Don't Know, 99-Refused.
47. Off Bus Location	647	706	Alphanum. LJ	A60	If person did get off of bus more than one block from activity, this field should contain the street address or names of nearest intersecting streets where person got off bus.
48. Park	707	708	Numeric RJ	I2	Code indicating if person parked vehicle more than one block from activity: 1-Yes, 2-No, 98-Don't know, 99-Refused.
49. Parking Location	709	768	Alphanum. LJ	A60	If vehicle was parked more than one block from activity, this field should contain the street address or the names of the nearest intersecting streets where vehicle was parked.
50. Pay Parking	769	770	Numeric RJ	I2	Code indicating if person paid to park vehicle: 1-Yes, 2-No, 98-Don't know, 99-Refused.
51. Parking Cost	771	777	Numeric RJ	F7.2	If person paid to park vehicle, this is the amount paid for parking in dollars and cents. Example: $1.50 should be coded as 0001.50
52. Parking Payment Period	778	779	Numeric RJ	I2	If person paid to park vehicle at this location, this is the time period for parking cost payment: 1-Hourly, 2-Daily, 3-Weekly, 4-Monthly, 5-Annually, 96-Other, 98-Don't Know, 99-Refused.
53. Arrival Hour	780	781	Numeric RJ	I2	Hour that person arrived at this location. This hour should be in terms of military time. If this is activity 0, this should be blank since this is where they began their day.
54. Arrival Minute	782	783	Numeric RJ	I2	Minute that person arrived at this location. If this is activity 0, this should be blank since this is where they began their day.
55. Departure Hour	784	785	Numeric RJ	I2	Hour that person departed this location. This hour should be in terms of military time. If this is the last activity, this should be blank.
56. Departure Minute	786	787	Numeric RJ	I2	Minute that person departed this location. If this is the last activity for this person, this should be blank.

Record Type 4, Continued

TYPE OF PLACE CODES					
1 - Residential				13 - Health Club	
2 - Residential Type Workplace				14 - Medical Facility/Hospital	
3 - Construction Site				15 - Movie Theater/Cinema	
4 - Transportation stop (Bus, Train)				16 - Restaurant/Fast Food, Bar & Grill	
5 - Automotive Dealer/Repair				17 - Educational - 12th Grade or lower	
6 - Bank / Financial Institution				18 - Educational - college, trade, etc.	
7 - Barber/Beauty/Nail Salon				19 - Shopping Mall/ Department Store.	
8 - Bookstore/News Stand				20 - Convenience Store/ Gas Station	
9 - Convenience / Drug Store				21 - Airport	
10 - Government/City/County/State/Federal Offices				96 - Other	
11 - Offices (Non-Government)				98 - Don't Know	
12 - Grocery				99 - Refused	
ACTIVITY TYPES					
1 - At Home; primary job related				12 - Other Services	
2 - At Home; other				13 - Social / Recreational	
3 - At Home; job and non-job related				14 - Eat Out	
4 - Work				15 - Civic Activities (including church)	
5 - Work Related				16 - Pick-up / Drop-off Person at Work	
6 - School; post secondary, college, trade				17 - Pick-up / Drop-off Person at School / Day Care	
7 - School; secondary-day care, kindergarten, elementary, middle, high				18 - Pick-up / Drop-off Person at Other	
8 - Incidental Shopping; gas, groceries, etc.				19 - Change Mode of Travel	
9 - Major Shopping; clothes, appliances, etc.				96 - Other Activity	
10 - Banking				98 - Don't Know	
11 - Personal Business; laundry, dry cleaning, barber, medical, etc				99 - Refused	
TRIP PURPOSE CODES				MODE OF TRAVEL CODES	
1 - Home (Act. Codes 1,2,3)				1 - Walk	
2 - Meal/Eat (14)				2 - Auto / Van / Truck Driver	
3 - Work (Act. Codes 4)				3 - Auto / Van / Truck Passenger	
4 - Work Related (Act. Code 5)				4 - Carpool Driver	
5 - School; K thru 12 (Act. Codes 7)				5 - Carpool Passenger	
6 - School; Post Secondary (Act. Code 6)				6 - Vanpool Driver	
7 - Shopping (Act. Codes 8,9)				7 - Vanpool Passenger	
8 - Personal (Act. Codes 10,11,12,15)				8 - Commercial Service Vehicle Driver	
9 - Social / Recreation (Act. Codes 13,)				9 - Commercial Service Vehicle Passenger	
10 - Pick-up Drop-off (Act. Code 16, 17, 18)				10 - Commercial Cargo Transport Vehicle Driver	
11 - Change Mode (Act. Code 19)				11 - Commercial Cargo Transport Vehicle Passenger	
96 - Other (Act. Code 96)				12 - Bus	
98 - Don't Know				13 - School Bus	
99 - Refused				14 - Taxi / Paid Limo	
				15 - Bicycle	
OTHER VEHICLE CLASSIFICATION CODES				16 - Motorcycle / Moped	
1 - Motorcycle (includes mopeds)				96 - Other	
2 - Car (includes station wagons)				98 - Don't Know	
3 - Van (mini and passenger)				99 - Refused	
4 - Sport Utility Vehicle					
5 - Pickup Truck					
6 - Cargo Van					
96 - Other					
98 - Don't Know					
99 - Refused					

Household Travel and Activity Survey
GPS Data Part 1 – GPS Administrative Data File

Item	Name	Type	Format	Width	Description
1.	Data File Name	Alphanum. LJ	A	11	Name assigned to the data file with the GPS data for this vehicle. Naming convention is MMDDYY_XXXX where MM is the month, DD is the day, YY is the year, and XXXX is the identification number assigned to the GPS unit. The date is the travel day the GPS data is being collected.
2.	Sample Number	Numeric RJ	I	7	Sample number assigned to household being surveyed. This number should match that used in Record Types 1 thru 4
3.	Vehicle Number	Numeric RJ	I	2	Unique non-zero number assigned to vehicle. This number should match that for the vehicle in Record Type 3.
4.	Survey Year	Numeric RJ	I	4	Year survey is being done.
5.	Vehicle Year	Numeric RJ	I	4	Year vehicle was manufactured; 9998-don't know; 9999 refused
6.	Vehicle Make	Alphanum. LJ	A	60	Make of vehicle
7.	Vehicle Model	Alphanum. LJ	A	60	Model of vehicle
8.	Begin Odometer	Numeric RJ	I	8	Odometer reading on vehicle when GPS unit is installed
9.	End Odometer	Numeric RJ	I	8	Odometer reading on vehicle when GPS unit is removed
10	Installed Date	Numeric RJ	I	4	MMDD-month and day GPS unit is installed. Include leading zeros for single-digit values.
11.	Installed Time	Numeric RJ	I	4	HHMM-military time GPS unit is installed. Include leading zeros for single-digit values.
12.	Remove Date	Numeric RJ	I	4	MMDD-month and day GPS unit is removed. Include leading zeros for single-digit values.
13.	Remove Time	Numeric RJ	I	4	HHMM-military time GPS unit is removed. Include leading zeros for single-digit values.

Household Travel and Activity Survey
GPS Data Part 2 – GPS Trip Data

Item	Name	Type	Format	Width	Description
1.	GPS Unit Number	Numeric RJ	I	4	Identification number assigned to GPS unit used to collect data.
2.	Sample Number	Numeric RJ	I	7	Sample number assigned to household being surveyed. This number should match that used in Record Types 1 thru 4
3.	Vehicle Number	Numeric RJ	I	2	Unique non-zero number assigned to vehicle. This number should match that for the vehicle in Record Type 3.
4.	GMT Date	Alphanum. LJ	A	10	Greenwich mean date stamp. MM/DD/YYYY with leading zeros for single digit values.
5.	GMT Time	Alphanum. LJ	A	8	Greenwich mean time stamp. HH:MM:SS with leading zeros for single digit values.
6.	Local Date	Alphanum. LJ	A	10	Local date stamp. MM/DD/YYYY with leading zeros for single digit values.
7.	Local Time	Alphanum. LJ	A	8	Local time stamp. HH:MM:SS with leading zeros for single digit values.
8.	Latitude	Numeric RJ	F	10	Latitude in decimal degrees as XXX.XXXXXX
9.	Longitude	Numeric RJ	F	10	Longitude in decimal degrees as XXX.XXXXXX
10	Elevation	Numeric RJ	I	8	Elevation in feet
11.	Velocity	Numeric RJ	F	6	Speed in miles per hour as XXX.XX
12.	Heading	Numeric RJ	F	6	Heading of vehicle in degrees as XXX.XX