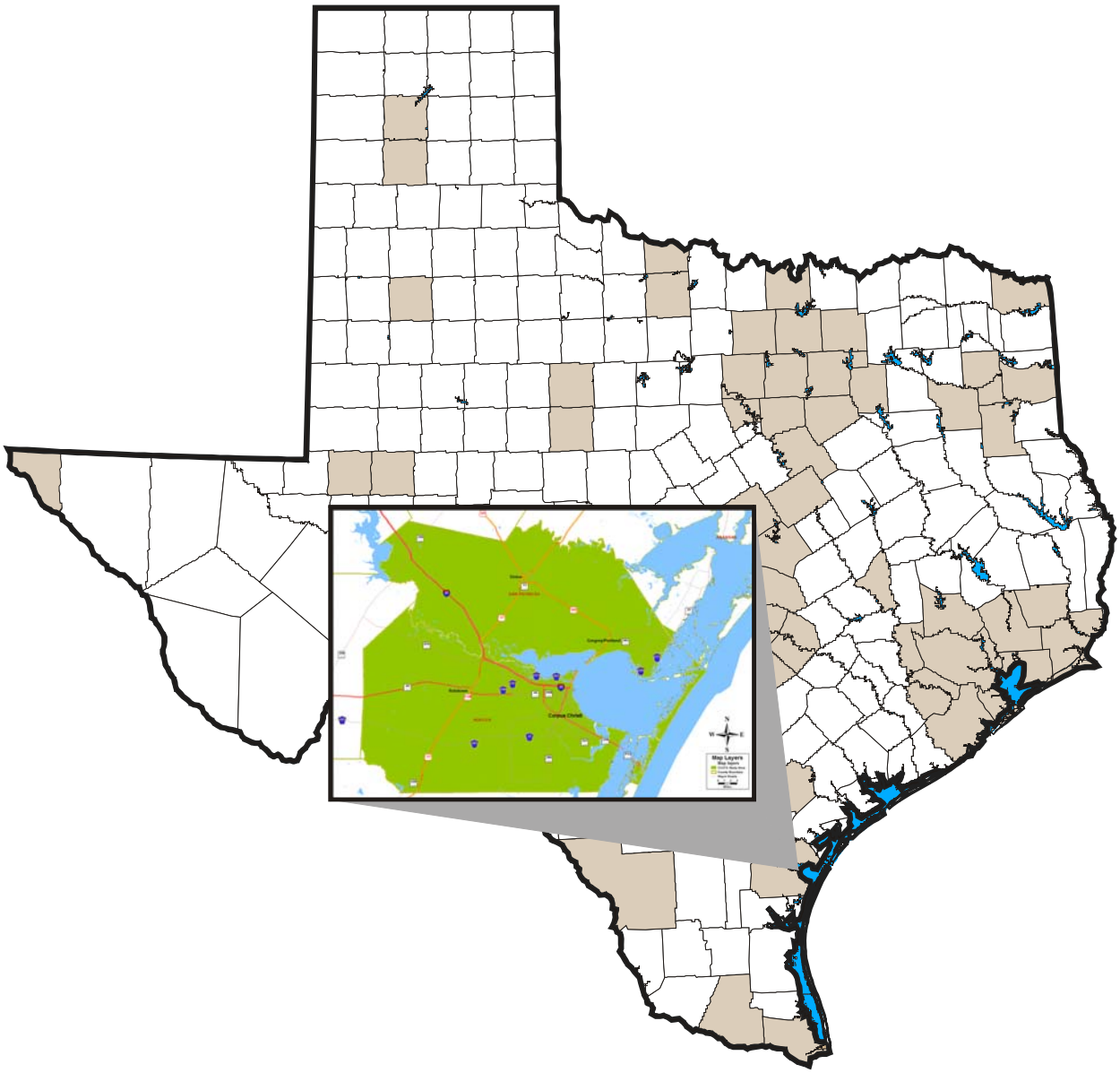
2009-2010 Corpus Christi Household Travel Survey Technical Summary



Texas Department of Transportation

Prepared by the
Texas A&M Transportation Institute
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2009-2010 Corpus Christi Household Travel Survey

Technical Summary

Texas Department of Transportation Travel Survey Program

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INTRODUCTION

From January of 2009 to March 2011, the Transportation Planning and Programming Division (TPP) of the Texas Department of Transportation (TxDOT) sponsored a comprehensive set of travel surveys in the Corpus Christi Metropolitan Planning Organization (MPO) study area, located in Nueces and San Patricio counties of South Texas. The purpose of the surveys was to collect data and information needed as input to the Corpus Christi MPO travel demand model for this two-county study area. The model is an important planning tool used to forecast future traffic levels on area roadways, evaluate the region's transportation plan, and aid 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 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 origin-destination travel surveys were conducted in the Corpus Christi area, including a household survey, a work place survey, 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 the 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 Corpus Christi study 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 pre-determined number of randomly-selected 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 was 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 sample design is based on a desired level of accuracy of +/- 10 percent with a confidence level of 90 percent for the total person trips in the survey area. Figure 1 shows the survey area. The number of households in the MPO study area in 2009-2010 was estimated from the 2010 Census. Table 1 shows the estimated number of households in the study area in 2009-2010, the number of households surveyed, and the distribution of the number of households surveyed stratified by household size and household income range.

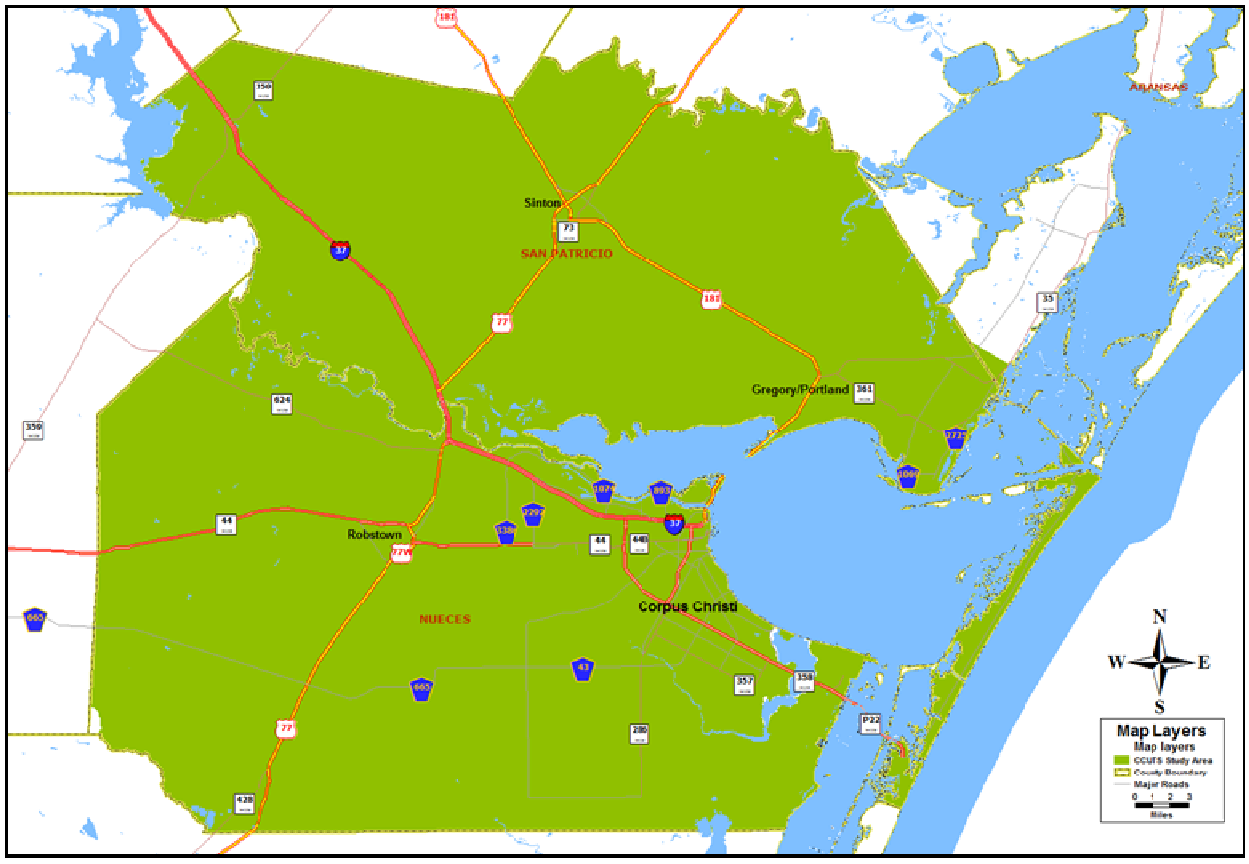


Figure 1. Corpus Christi Household Survey Area.

A total of 1,888 households in the Corpus Christi area were surveyed. The minimum number of households surveyed in any household size/income range cell was 33 and the maximum number surveyed was 131. Of the estimated 141,300 households in the Corpus Christi area, 25 percent are households with one person and 31 percent are households with two persons — 56 percent of the households are one- or two-person households.

Table 1. Estimated Number of 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 2008-2009 Number of Households						
$0 to $14,999	11,855	4,832	2,176	890	1,498	**21,251**
$15,000 to $29,999	8,718	7,687	3,900	2,360	2,515	**25,180**
$30,000 to $44,999	5,610	7,178	4,253	2,925	2,671	**22,637**
$45,000 to $74,999	5,666	11,078	7,136	5,638	4,663	**34,181**
$75,000 +	3,094	13,522	9,467	6,853	5,115	**38,051**
Totals	**34,943**	**44,297**	**26,932**	**18,666**	**16,462**	**141,300**
Number of Households Surveyed						
$0 to $14,999	53	84	71	62	34	**304**
$15,000 to $29,999	56	93	59	107	88	**403**
$30,000 to $44,999	67	118	61	53	48	**347**
$45,000 to $74,999	39	119	54	131	107	**450**
$75,000 +	37	121	127	66	33	**384**
Totals	**252**	**535**	**372**	**419**	**310**	**1,888**
Percent of Surveyed Households						
$0 to $14,999	2.8	4.4	3.8	3.3	1.8	**16.1**
$15,000 to $29,999	3.0	4.9	3.1	5.7	4.7	**21.4**
$30,000 to $44,999	3.5	6.3	3.2	2.8	2.5	**18.3**
$45,000 to $74,999	2.1	6.3	2.9	6.9	5.7	**23.9**
$75,000 +	2.0	6.4	6.7	3.5	1.7	**20.3**
Totals	**13.4**	**28.3**	**19.7**	**22.2**	**16.4**	**100.0**

Source: 2010 Census; Corpus Christi Household Travel Survey; and Texas A&M Transportation Institute (TTI) Analysis.

HOUSEHOLD SURVEY RESULTS

This survey represents a sample of household demographic and travel characteristics for a Monday through Friday weekday during the school year from the spring of 2009 to the spring of 2010. For participating households, each member of the household was provided a diary to record his or her travel. The survey data were retrieved from participants by phone at a pre-arranged call-back time within two days after their specified travel date. Every attempt was made to interview all persons within each of the 1,888 randomly selected households that participated in the survey. In many cases, a proxy provided information for household members who were not available. Adult members of the household usually reported the activities and trips for minors in the household. A small number of households chose to return their completed diaries by mail, in lieu of providing their trip information over the phone.

Key Points Regarding Household Survey Data

- The survey data are for an average weekday in the spring of 2009 and the spring of 2010.
- 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 or tourists or persons staying in hotels.
- The estimates for 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 by residents of the Corpus Christi area that began and ended within the four-county study area. Trips that began inside the county area and ended outside the area or vice versa are not included in this report.

Findings of the Survey

For the Corpus Christi area:

- 96 percent of the households had a vehicle available.

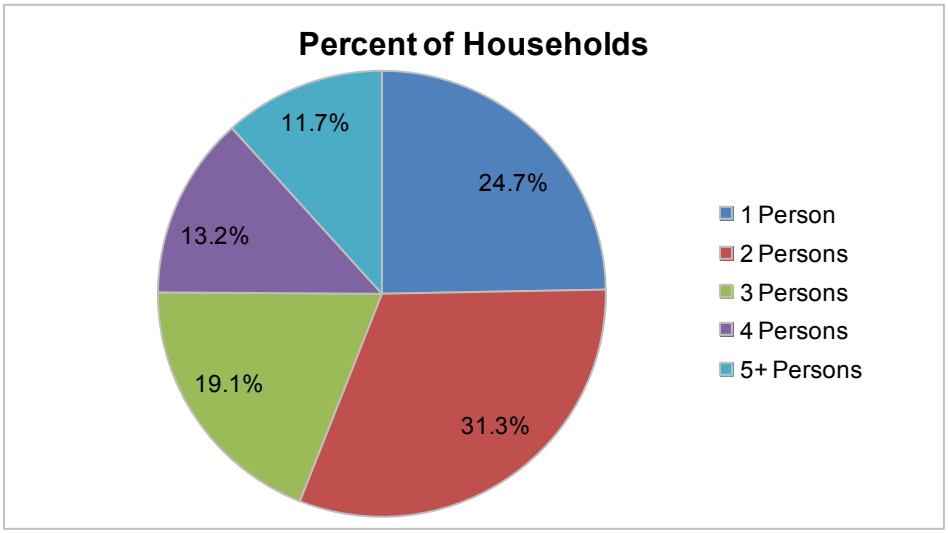
- 98 percent of the households had a licensed driver.
- Trip rates per household generally increased with household size, with household income, and with vehicle availability.
- The average vehicle occupancy was 1.4 persons per vehicle.
- Over 95 percent of all person trips were made in a personal-use vehicle.
- In terms of person trips made, the travel mode breakdown was 72 percent drove a vehicle, 24 percent rode as a passenger in a vehicle and 2 percent walked.
- 27 percent of the total household population did not make an internal trip within the planning area on their survey day.
- On average, each person made 4.0 person trips per day and each household made 9.8 person trips per day.
- The average person trip length was 5.6 miles and the average person trip duration was 8.4 minutes.
- The average vehicle trip length was 5.9 miles and the average vehicle trip duration was 8.7 minutes.
- The peak hour for household travel was from 7:01 a.m. to 8:00 a.m. during which 13 percent of the trip starts occurred. The second highest hour for household trip starts was from 3:01 p.m.-to-4:00 p.m. when 11 percent of the daily trip starts occurred.
- Weekday school year household travel internal to the study area accounted for an estimated 6.32 million vehicle miles of travel (VMT).

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 the time-of-day that trips are made. For this survey, households include only those 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 2 shows the distribution of households by household size resulting from the survey. 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 Corpus Christi area in 2009-2010 estimated from the survey was 2.64 persons per household.



Source: Corpus Christi Household Travel Survey.

Figure 2. Distribution of Households by Household Size.

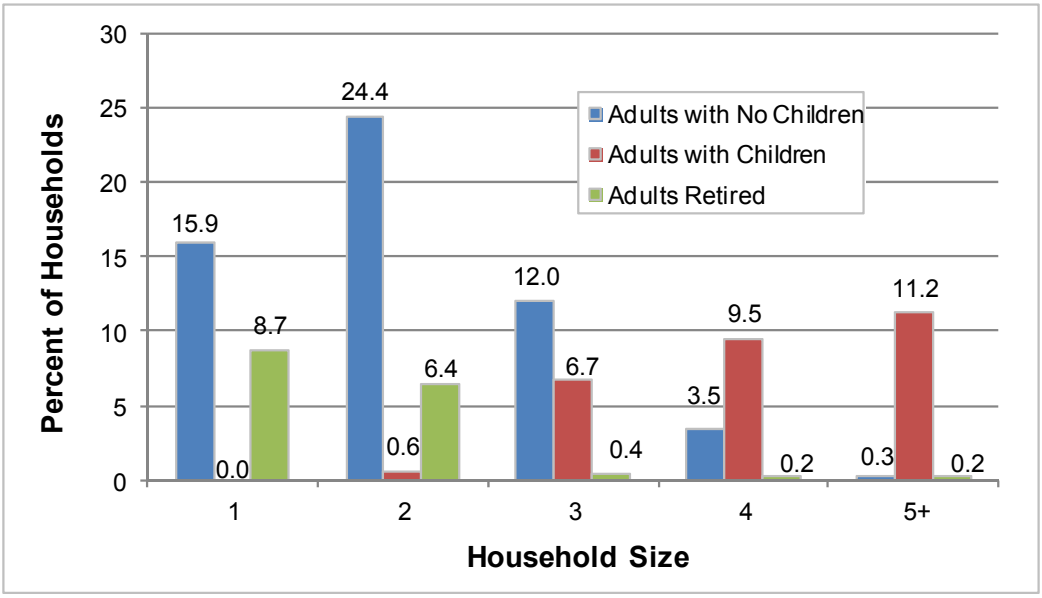
Distribution of Households by Household Size

For the Corpus Christi 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.

A typical household makes a certain number of trips on most days to meet household needs, such as 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. Figure 3 shows the distribution of households in the four-county study area by those with no children and not retired, those with children, and those with only retired persons. The survey found that only 28 percent of the households have children, 56 percent of the households have no children, and 16 percent of the households are retired persons.

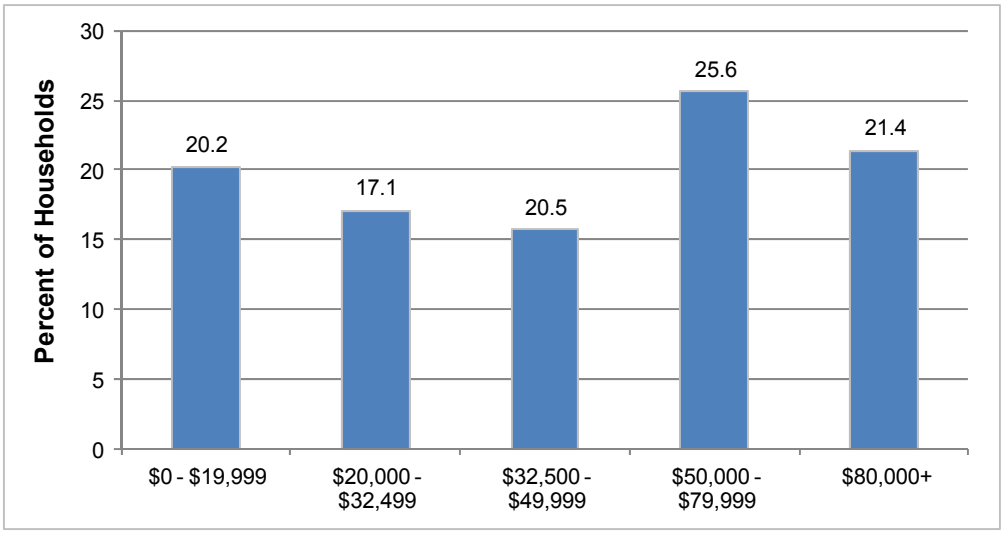


Source: Corpus Christi Household Travel Survey and TTI Analysis. Note: The data represents households within the four-county study area. The data does not include residents who did not report age. Adults are persons 18 years of age and older. Retired households have only retired persons. If one person in the household was retired and the other adult was employed, that household was not counted as a retired household.

Figure 3. Distribution of Households by 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 4 shows the distribution of the expanded households in the survey by income ranges based on the combined annual income of all household members.

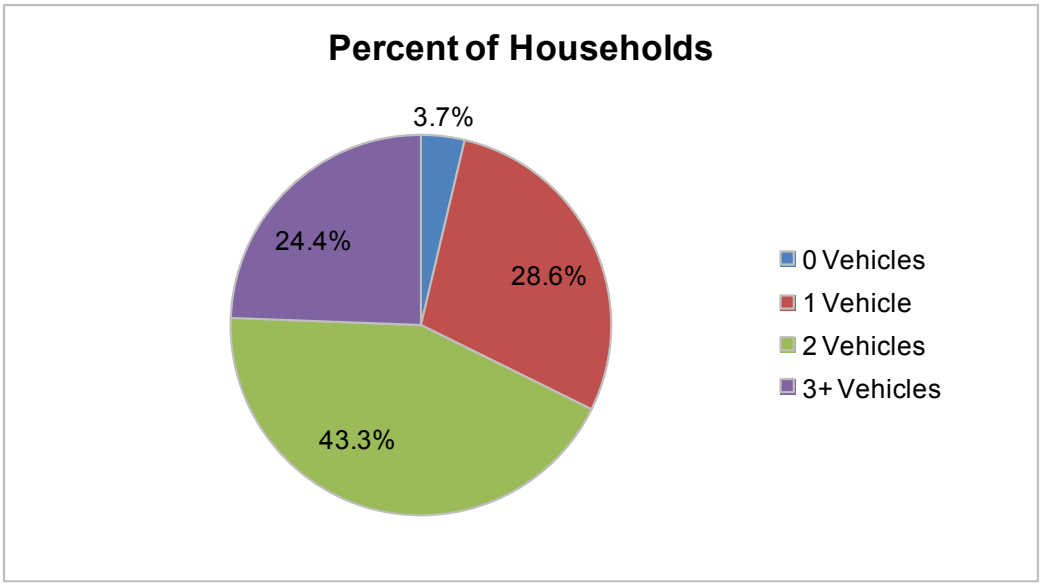


Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 4. Distribution of Households by Household Income Range.

Household Vehicle Availability and Licensed Drivers

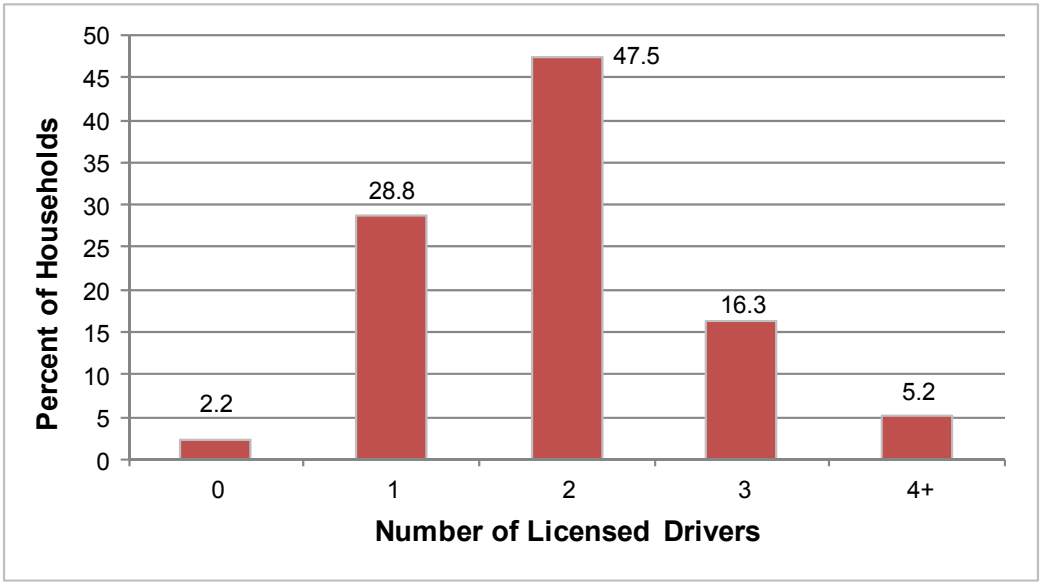
In general, as the number of vehicles available to the household increases, daily household travel increases. This household characteristic also impacts forecasting the demand for public transportation. As household vehicle availability increases, the household demand for public transportation tends to decrease. Figure 5 shows the distribution of the 141,300 expanded households in the survey by the number of vehicles available. Slightly less than 4 percent of the households did not have a vehicle available. The average number of vehicles available per household was 1.99.



Source: Corpus Christi Household Travel Survey and TTI Analysis. Note: A household vehicle is any motorized vehicle available to a household for travel including motorcycles, trucks, vans, automobiles, sport utility vehicles, etc.

Figure 5. Distribution of Households by Number of Vehicles Available.

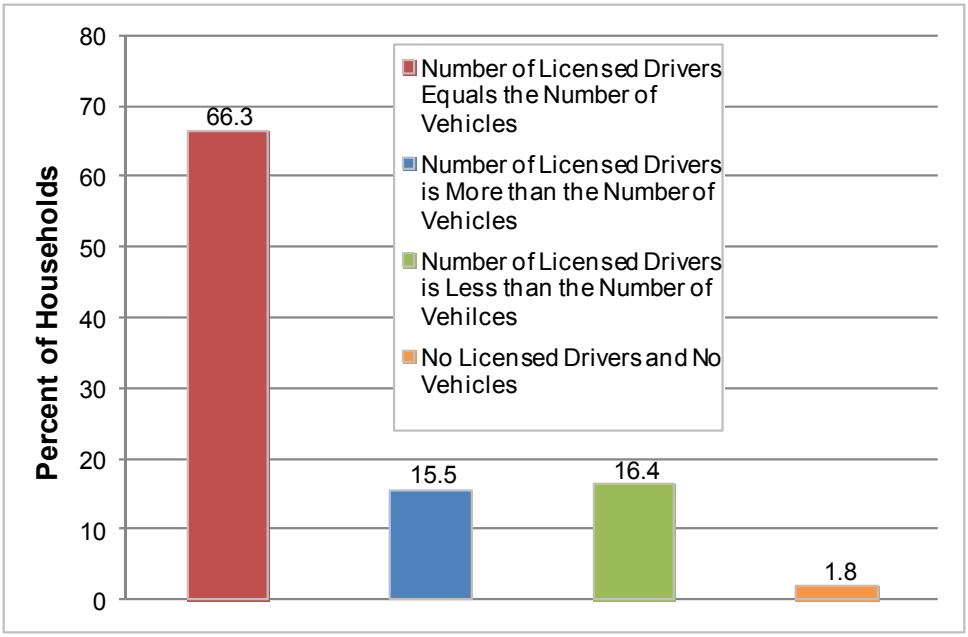
Figure 6 shows the distribution of the expanded households by the number of licensed drivers per household. Less than 2.2 percent of the households did not have a licensed driver.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 6. Distribution of Households by Number of Licensed Drivers.

Figure 7 shows the distribution of the expanded households by the number of licensed drivers and the number of vehicles available. For the majority of households (66 percent), the number of licensed drivers is equal to the number of vehicles available. For 16 percent of the households, the number of licensed drivers is less than the number of vehicles available, and for 16 percent of the households, the number of licensed drivers is greater than the number of vehicles available. Slightly less than 2 percent of the households have neither a licensed driver nor a vehicle available.

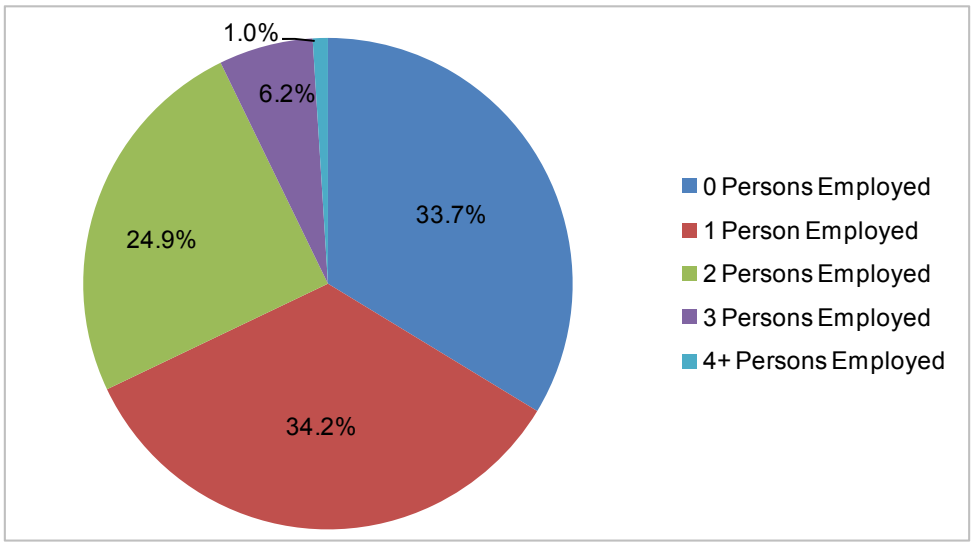


Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 7. Distribution of Households by Licensed Drivers and Vehicle Availability.

Household Employment

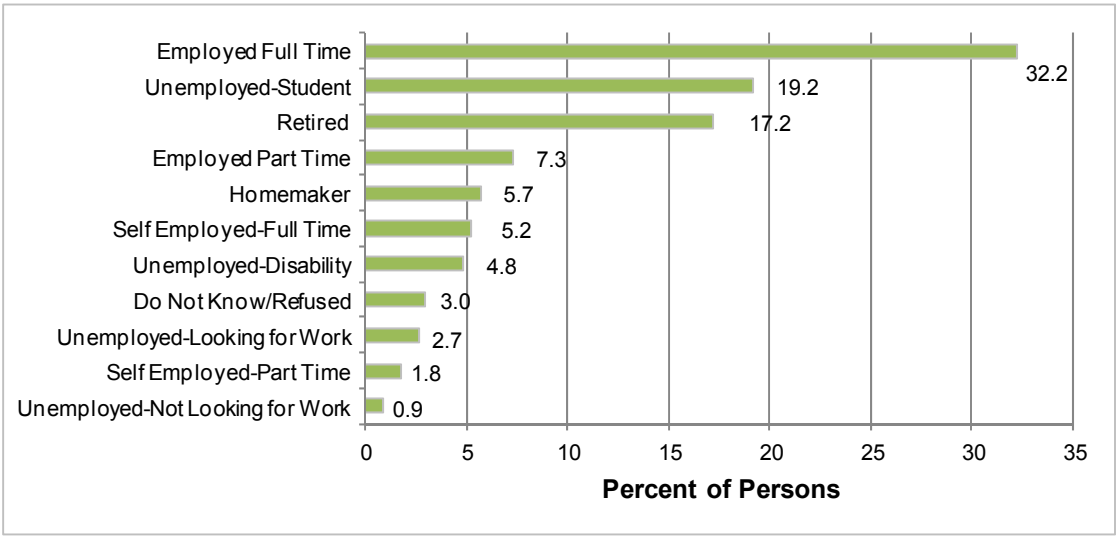
The 141,300 expanded households included 372,919 persons for an average of 2.64 persons per household. Figure 8 shows the distribution of the expanded households by the number of persons employed.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 8. Distribution of Households by Number of Persons Employed.

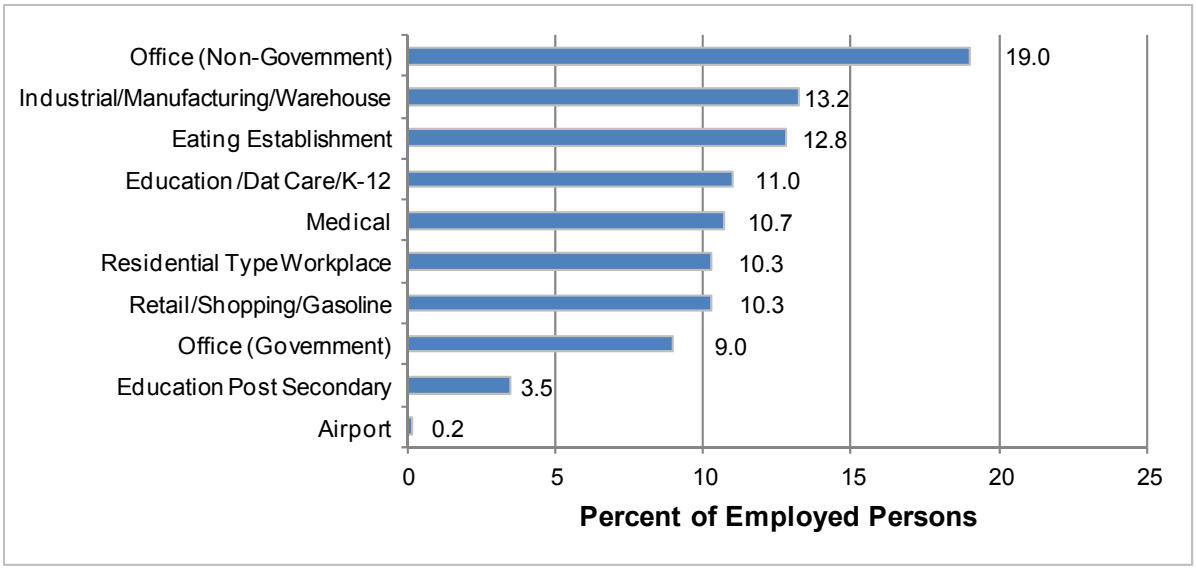
Figure 9 shows the distribution of all persons regardless of age by employment status. More than 32 percent of the population is employed full time and about 19 percent of the population is students. More than 17 percent of the population is retired.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 9. Distribution of Persons by Employment Status.

Figure 10 shows the distribution of the employed persons by the type of employer. The 141,300 households had 172,159 employed persons for an average of 1.22 employed persons per household. The employer-type "office non-government" had the largest percentage of employed persons, comprising 19 percent of those employed. The "industrial/manufacturing/warehouse" employer-type accounted for the second largest percentage of employed persons, reporting just over 13 percent.

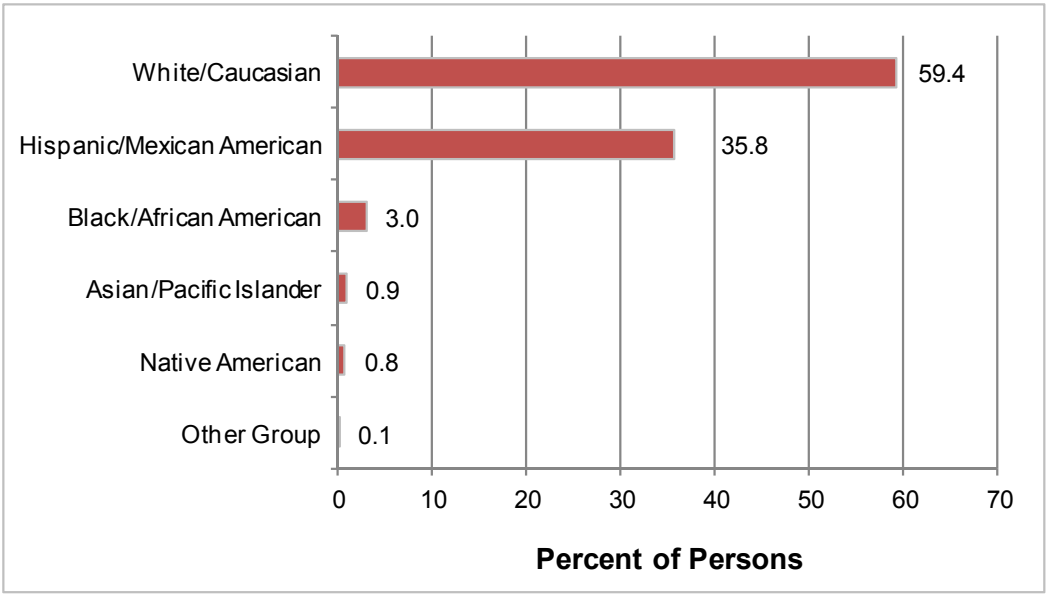


Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 10. Distribution of Employed Persons by Employer Type.

Ethnicity

Figure 11 shows the distribution of the 372,919 expanded persons by ethnicity. Over 59 percent of the population was white/caucasian. The next largest ethnic group was Hispanic/Mexican American with nearly 36 percent.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

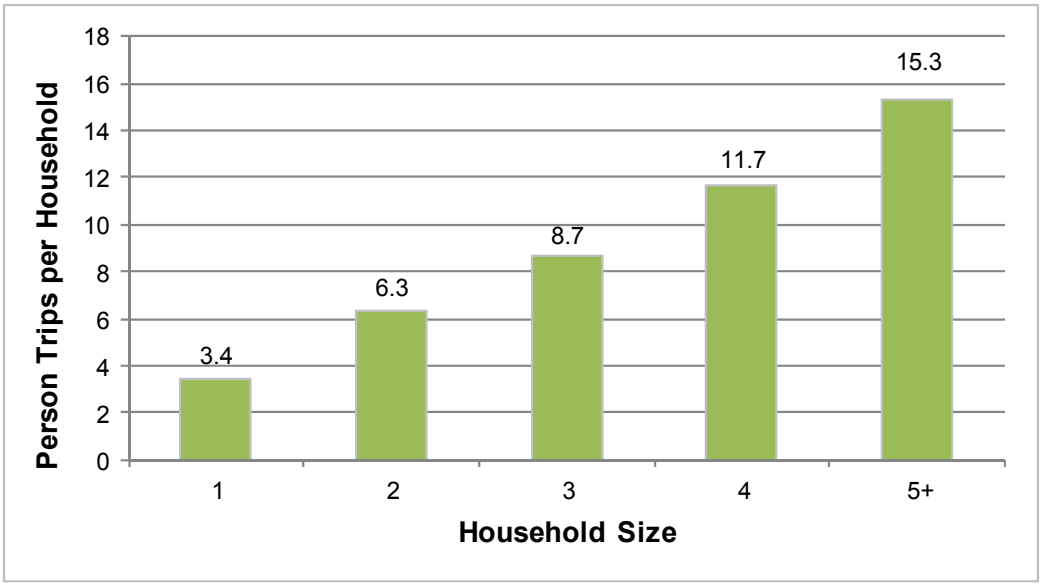
Figure 11. Distribution of Persons by Ethnicity.

TRAVELER 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

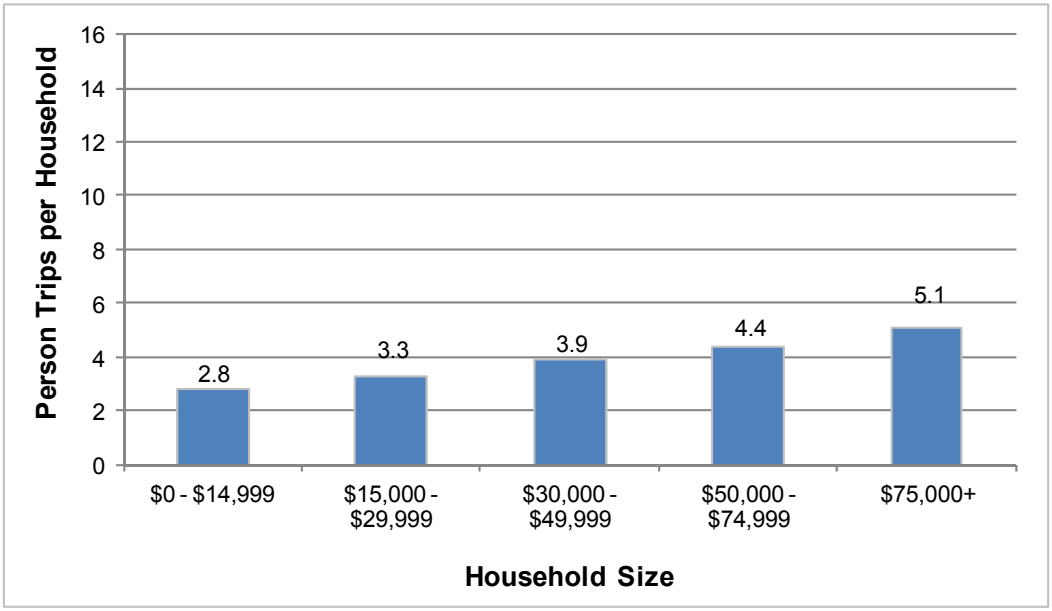
The household trip rates in this section are for person trips made in a vehicle either as the driver or as a passenger. Figure 12 shows household trip rates as a function of household size. As the household size increases, household trip rates increase and become large for large household sizes. For travel forecasting applications, households with five or more household members are grouped and an average trip rate is used for the group.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 12. Household Trip Rates by Household Size.

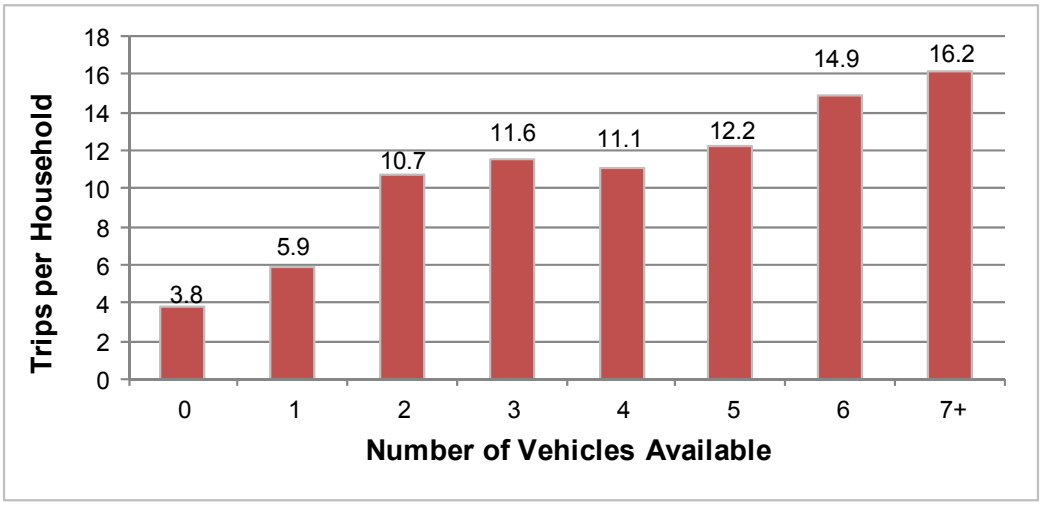
Figure 13 shows the household trip rates for different household income ranges. As expected, as household income increases, the household trip rate increases.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 13. Household Trip Rates by Household Income Range.

Figure 14 shows the household trip rates as a function of the number of vehicles available to household members for travel. Generally, as the number of vehicles available to the household increases, the household trip rate increases, but the rate increases at a lower rate after two vehicles. Note that households with no vehicles available do make a meaningful number of trips. The unusually low value shown in the 7+ vehicle categories stems from an insufficient sample size in these categories.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 14. Household Trip Rates by Number of Vehicles Available.

Table 2 shows the person trip rates cross classified by household size and household income for all internal trip purposes combined, that is, trips that begin and end inside the four-county study 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 trip rate for all households internal to the study area was 9.8 trips per household.

Table 2. Person Trip Rates by Household Size and Household Income.

Household Income Range	Household Size				
	1	2	3	4	5 +
$0 - $14,999	2.87	6.51	6.04	10.76	16.33
$15,000 - $29,999	3.24	6.53	9.03	11.62	18.65
$30,000 - $44,999	4.43	8.57	12.09	12.83	20.38
$45,000 - $74,999	4.55	8.87	15.06	16.56	21.36
$75,000 +	4.34	7.98	13.26	20.32	30.10

Source: Corpus Christi Household Travel Survey.

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 for all households was 1.4 persons per vehicle.

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

Household Income Range	Household Size				
	1	2	3	4	5 +
$0 - $14,999	1.02	1.32	1.34	1.52	2.15
$15,000 - $29,999	1.07	1.26	1.28	1.44	1.92
$30,000 - $44,999	1.15	1.27	1.27	1.42	1.86
$45,000 - $74,999	1.30	1.26	1.35	1.49	1.73
$75,000 +	1.12	1.14	1.24	1.46	1.84

Source: Corpus Christi Household Travel Survey.

Travel by Age Cohort

An estimated 372,919 persons were represented in the expanded household survey. 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. Generally speaking, older persons are less likely to travel than are younger persons, but the older population is mobile and contribute significantly to the amount of household travel. The rather high percentage of persons making zero internal trips in

the 20-24 age cohort probably is due to under reporting or not reporting of trips by this age cohort.

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

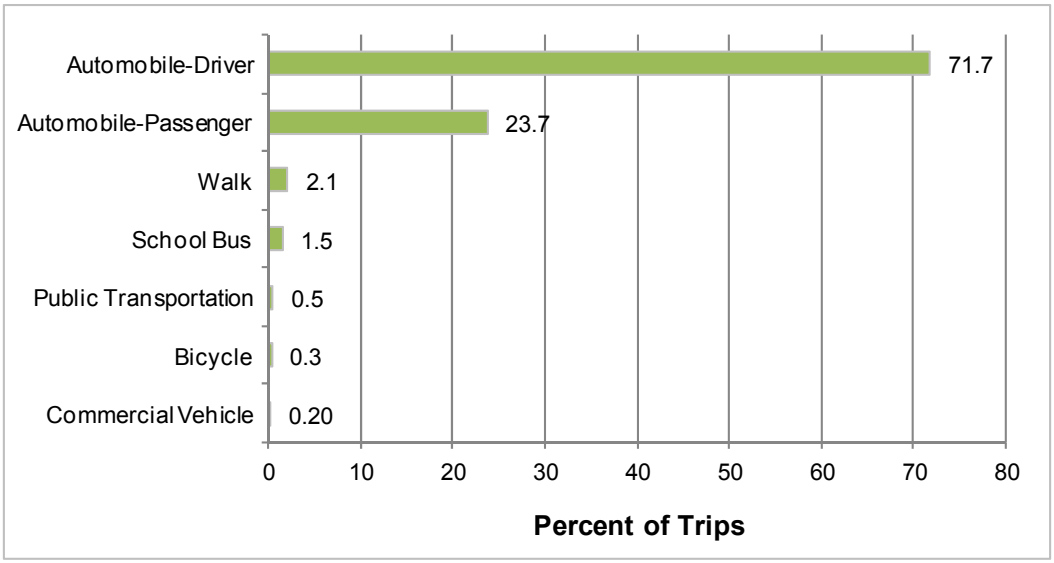
Age Cohort	Number of Persons Observed	Percent of Persons	Number of Persons Making Trips	Number of Persons Making Zero Internal Trips	Percent of Persons Making Zero Internal Trips
0-15	67,241	18.0	59,413	7,828	13.2
16-19	18,603	5.0	16,322	2,281	14.0
20-24	15,905	4.3	10,474	5,432	51.9
25-29	11,906	3.2	9,684	2,222	23.0
30-34	11,670	3.1	9,133	2,537	27.8
35-39	14,424	3.9	12,264	2,160	17.6
40-44	20,839	5.6	17,715	3,124	17.6
45-49	24,418	6.5	19,933	4,485	22.5
50-54	36,570	9.8	29,633	6,937	23.4
55-59	38,422	10.3	31,461	6,962	22.1
60-64	35,991	9.7	28,094	7,896	28.1
65-69	23,123	6.2	17,598	5,525	31.4
70-74	21,881	5.9	13,324	8,557	64.2
75-79	15,034	4.0	9,205	5,829	63.3
80 +	16,892	4.5	9,416	7,475	79.4
Total	**372,919**	**100.00**	**293,669**	**79,250**	**27.0**

Source: Corpus Christi Household Travel Survey.

MODE OF TRAVEL

The modes of travel were household automobile-driver, household automobile-passenger, school bus, walk, public transportation, bicycle, carpool/vanpool, and commercial vehicle. Figure 15 shows the distribution of person trips by mode. Automobile travel accounted for 95 percent of the person trips. Commercial vehicle trips accounted for less than 1 percent of the person trips

and "walk" mode accounted for 2 percent of the person trips. The surveyed households made little use of public transportation, accounting for less than 1 percent of the person trips.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

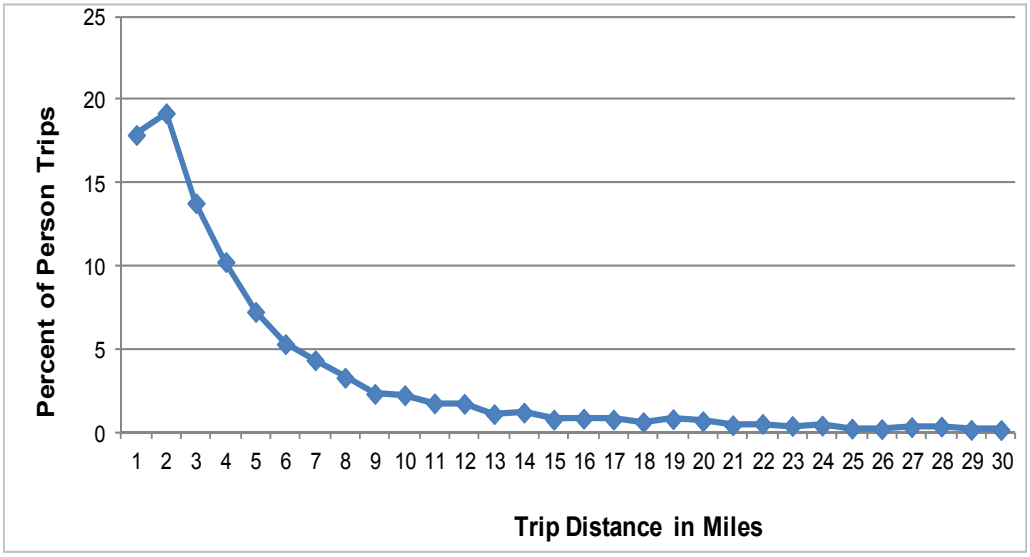
Figure 15. Distribution of Person Trips by Mode of Travel.

AMOUNT OF TRAVEL

Several measures are used to record the amount of travel — the number of person trips, the number of vehicle trips, the trip distances in miles, the trip durations or travel times in minutes, and the vehicle miles of travel (VMT).

Trip Distance

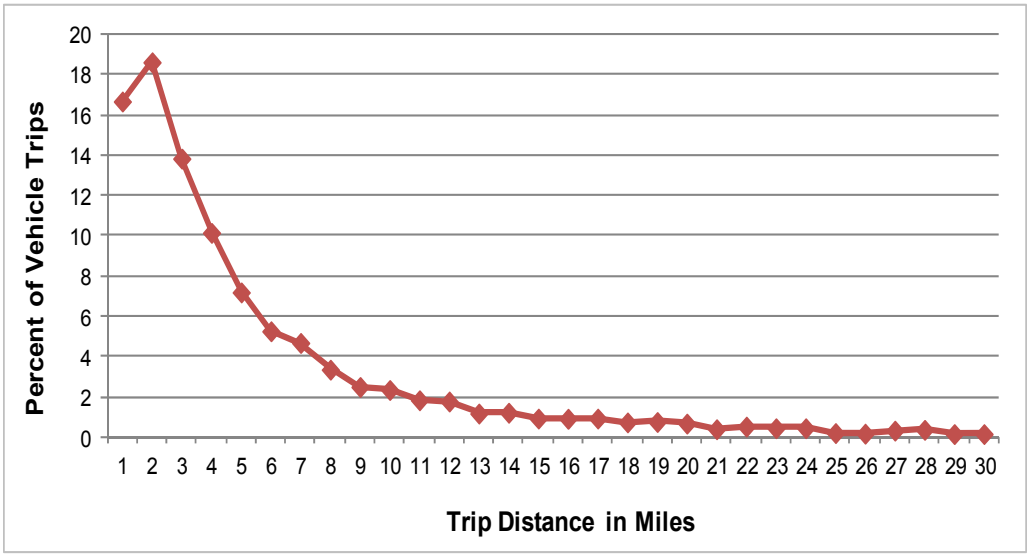
Figure 16 shows the distribution of person trips by the length of the trip in miles. The distribution is for internal person trips, trips beginning and ending inside the study area. The average person trip length was 5.6 miles.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 16. Distribution of Person Trips by Trip Distance in Miles.

Figure 17 shows the distribution of vehicle trips by the length of the trip in miles. The average vehicle trip length was 5.9 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. Distributions similar to Figure 17 can be prepared for each internal trip purpose.

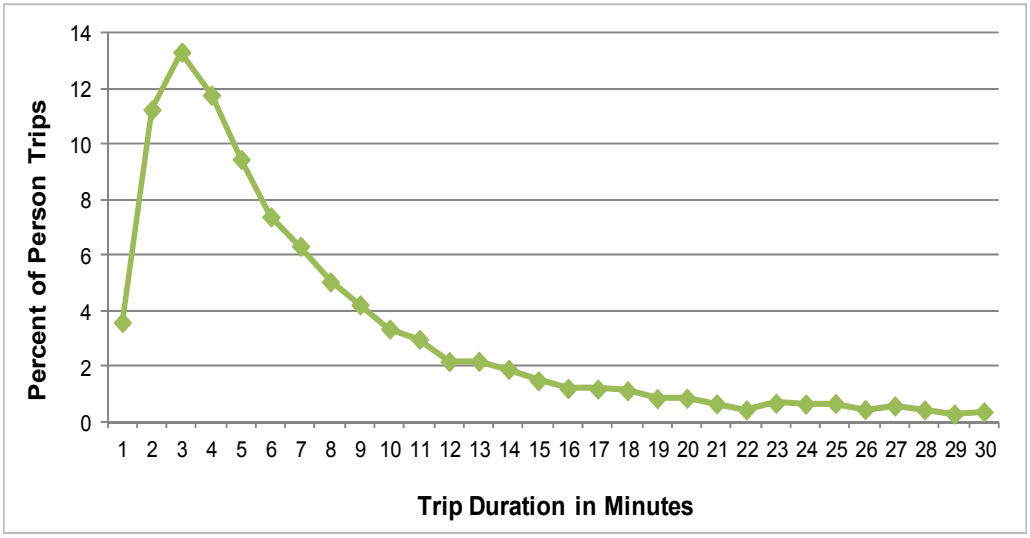


Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 17. Distribution of Vehicle Trips by Trip Distance in Miles.

Trip Duration

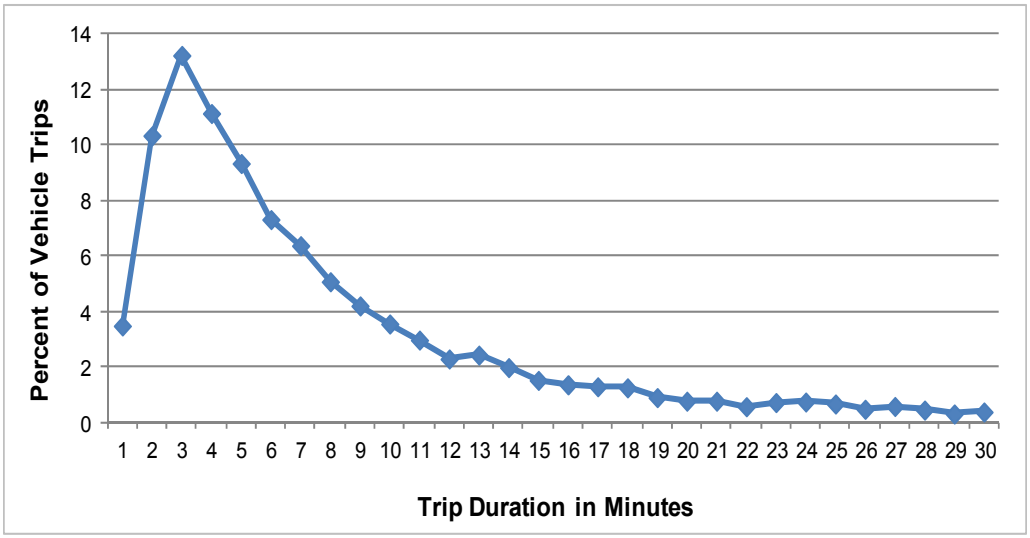
Figure 18 shows the distribution of person trips by the duration of the trip in minutes. The distribution is for internal person trips — trips beginning and ending inside the four-county study area. The average person trip duration was 8.4 minutes.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 18. Distribution of Person Trips by Trip Duration in Minutes.

Figure 19 shows the distribution of vehicle trips by the duration of the trip in minutes. The average vehicle trip duration was 8.7 minutes.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

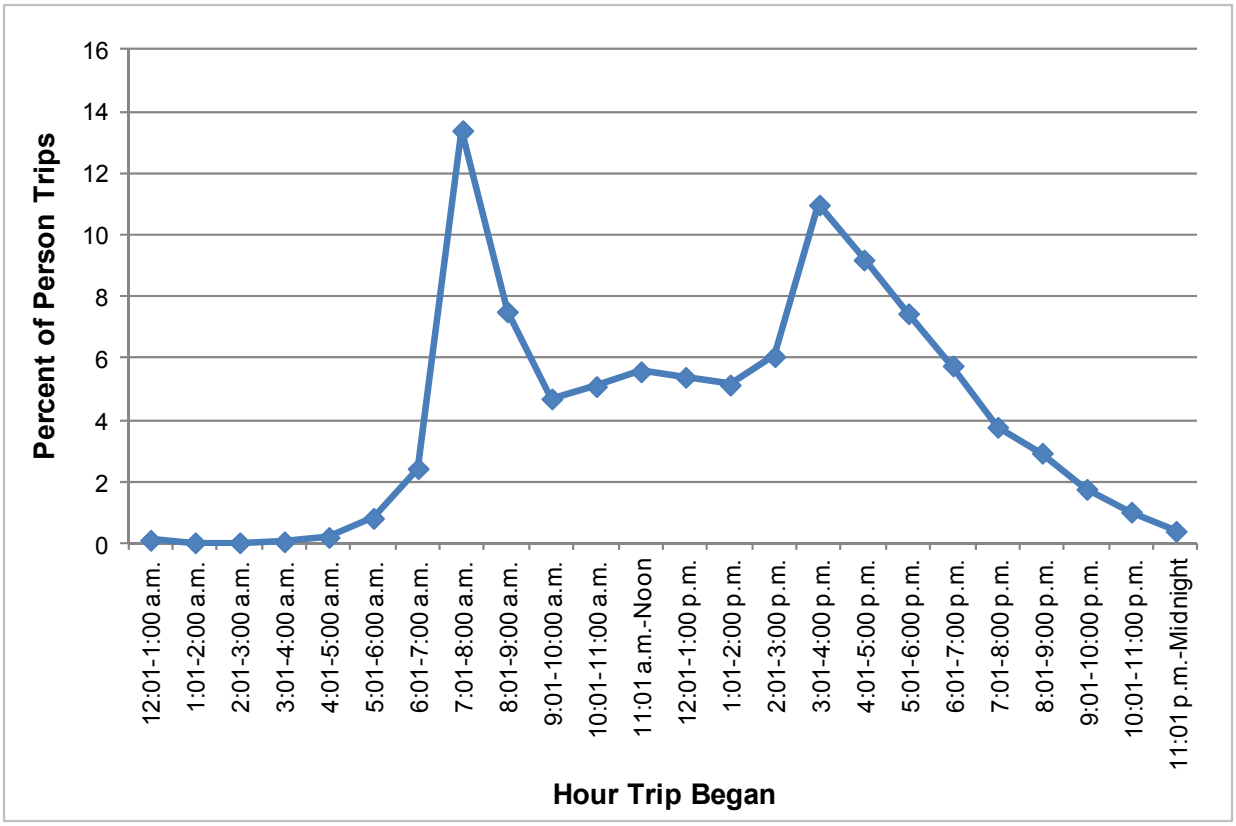
Figure 19. Distribution of Vehicle Trips by Trip Duration in Minutes.

Vehicle Miles of Travel

VMT is calculated as the product of the average vehicle trip length in miles times the number of vehicle trips. For household trips internal to the Corpus Christi study area, the estimated VMT is 6.32 million 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 when 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 becomes more congested, some drivers choose to make trips earlier or later to avoid the most congested travel time. Figure 20 shows the distribution of trip start times for a 24-hour weekday during the school year. The morning peak period, 7:01 a.m. to 8:00 a.m., has the highest percentage (13 percent) of daily trip starts. During the morning peak period, trips from home to work and from home to school are the primary destinations. The second highest percentage (11 percent) of trip starts occurs during the hour of 3:01 p.m. to 4.01 p.m. During this hour, trips from school to home are the primary destination. Trip starts during the hour from 4:01 p.m. to 5:00 p.m., which are largely trips from work to home, has the third highest percentage (9 percent) of daily trip starts.

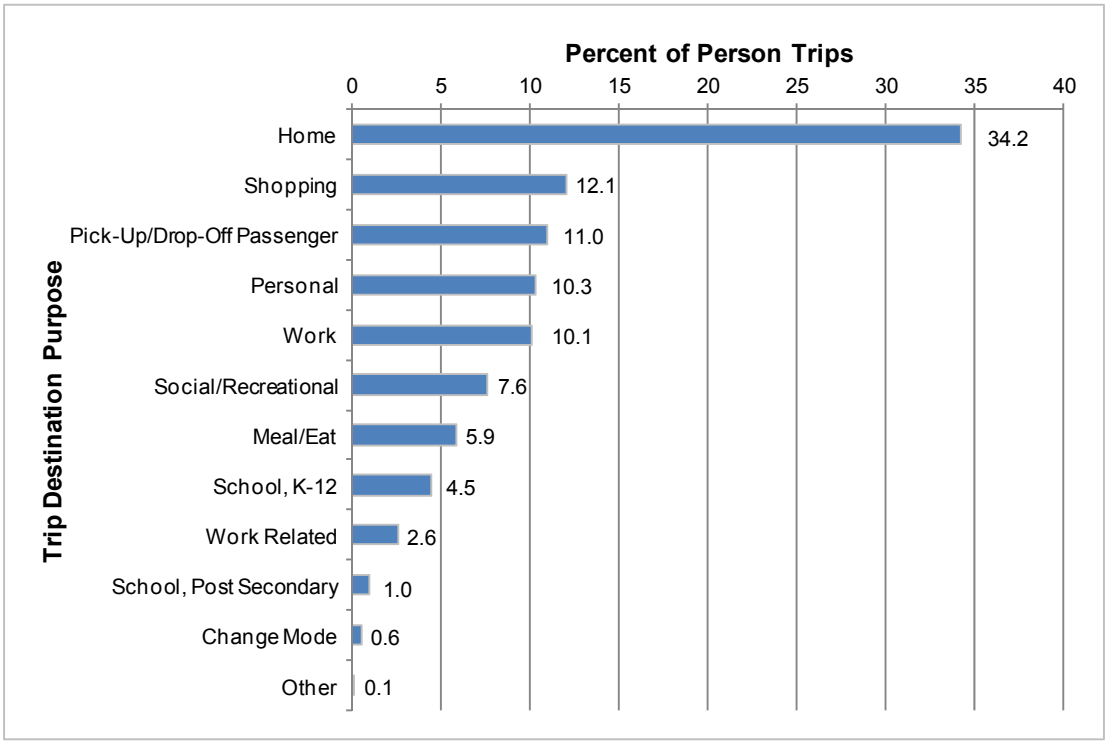


Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 20. 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 21 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.



Source: Corpus Christi Household Travel Survey and TTI Analysis.

Figure 21. 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. This information is used by the travel demand modeler to develop trip attraction rates for various types of land use. In travel demand modeling, attractions are typically grouped into three categories — basic, retail, and service. 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	115,277	7.7
Residential Type Work Place	8,975	0.6
Construction Site	5,466	0.4
Transportation Stop	11,860	0.8
Automotive Dealer/Repair	14,421	1.0
Bank/Financial Institution	32,432	2.2
Barber/Beauty/Nail Salon	10,140	0.7
Bookstore/Newsstand	2,746	0.2
Convenience/Drug Store	42,406	2.8
Government Offices	63,097	4.2
Offices Non-Government	85,122	5.7
Grocery	96,057	6.4
Health Club	17,869	1.2
Medical Facility/Hospital	104,249	7.0
Movie Theater/Cinema	3,433	0.2
Restaurant/Fast food, Bar and Grill	136,393	9.1
Educational – 12th Grade or Lower	341,224	22.8
Educational – College, Trade, Etc.	41,095	2.8
Shopping Mall/Department Store	147,088	9.8
Gas Station	27,220	1.8
Airport	1,772	0.1
Other	186,413	12.5
Total	**1,494,755**	**100.0**

Source: Corpus Christi Household Travel Survey and TTI Analysis.

WHERE PEOPLE TRAVELED

Figure 22 shows the Corpus Christi area divided into 11 sub-regions. This map is used to generally illustrate the geographic distribution of internal person trip movements within the region. Figure 23 through Figure 33 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 indicates a greater amount of travel between the sub-regions. Figure 34, the final figure in this sequence, shows the percent person trips that remained within each sub-region.

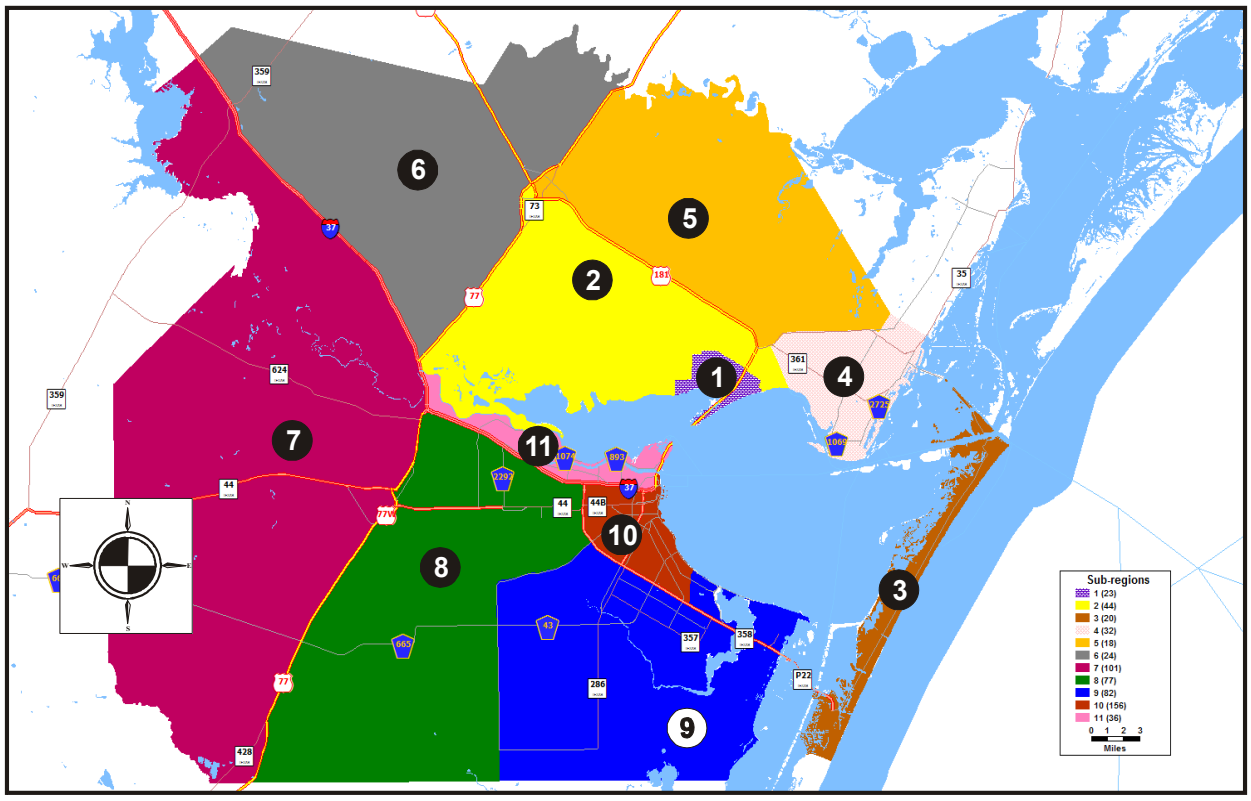


Figure 22. Corpus Christi Area and the 11 Sub-Regions within the Study Area.

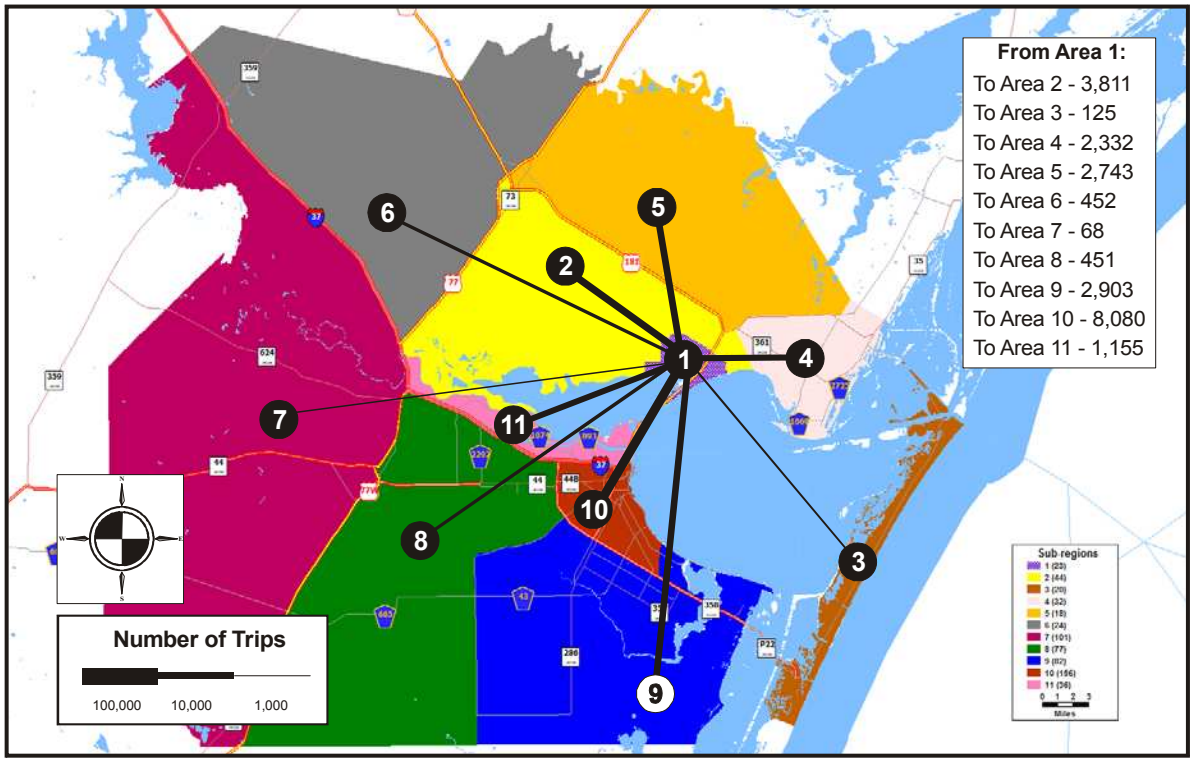


Figure 23. Person Trip Interchanges between Area 1 and Areas 2-11.

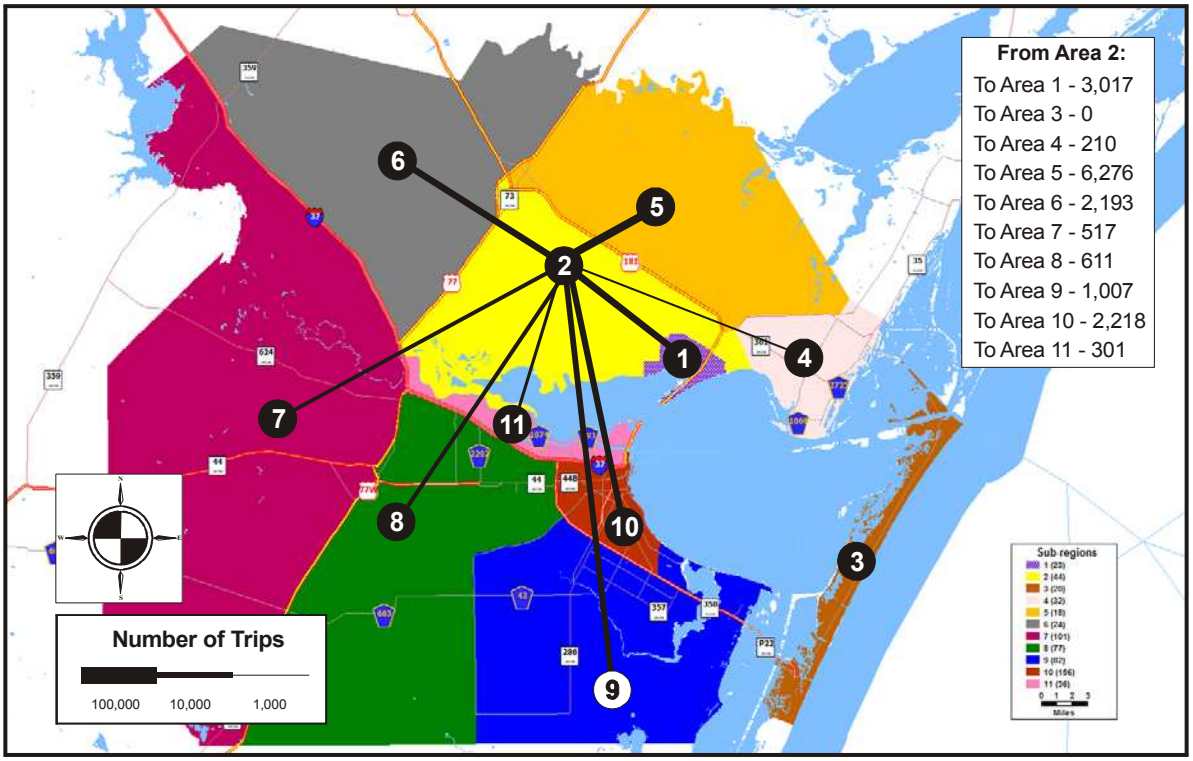


Figure 24. Person Trip Interchanges between Area 2 and Area 1 and Areas 3-11.

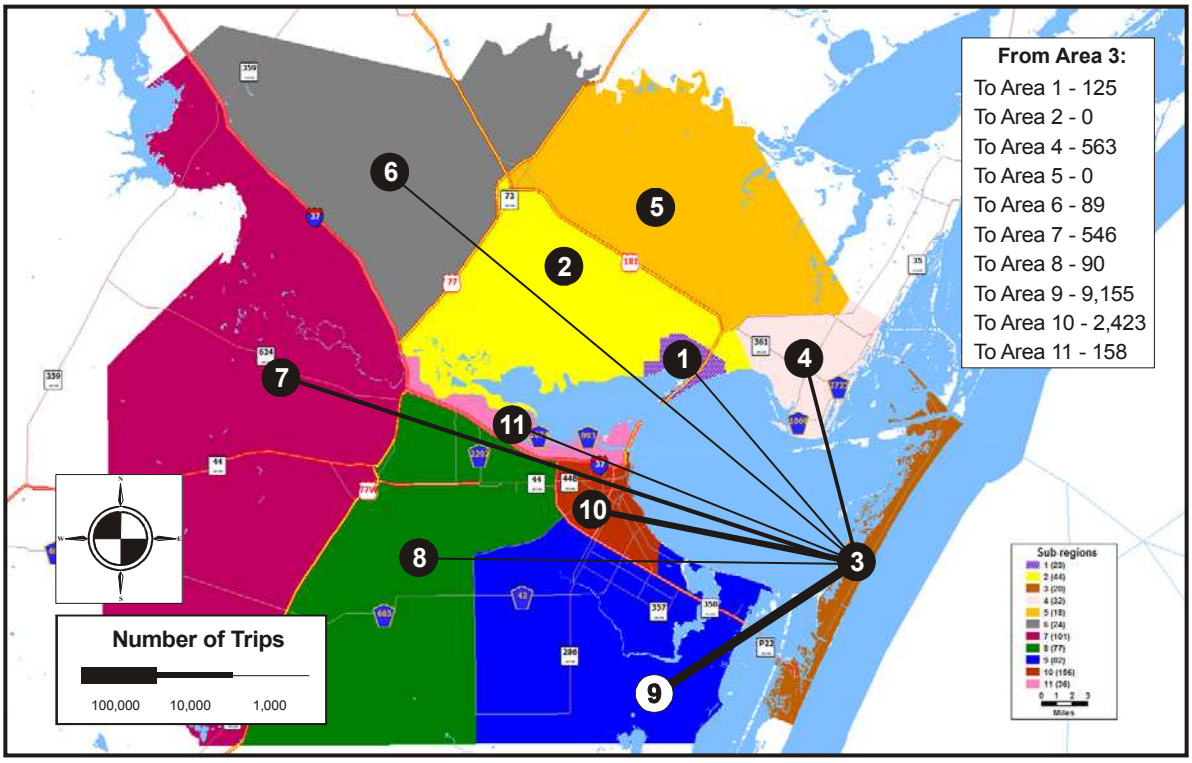


Figure 25. Person Trip Interchanges between Area 3 and Areas 1-2 and Areas 4-11.

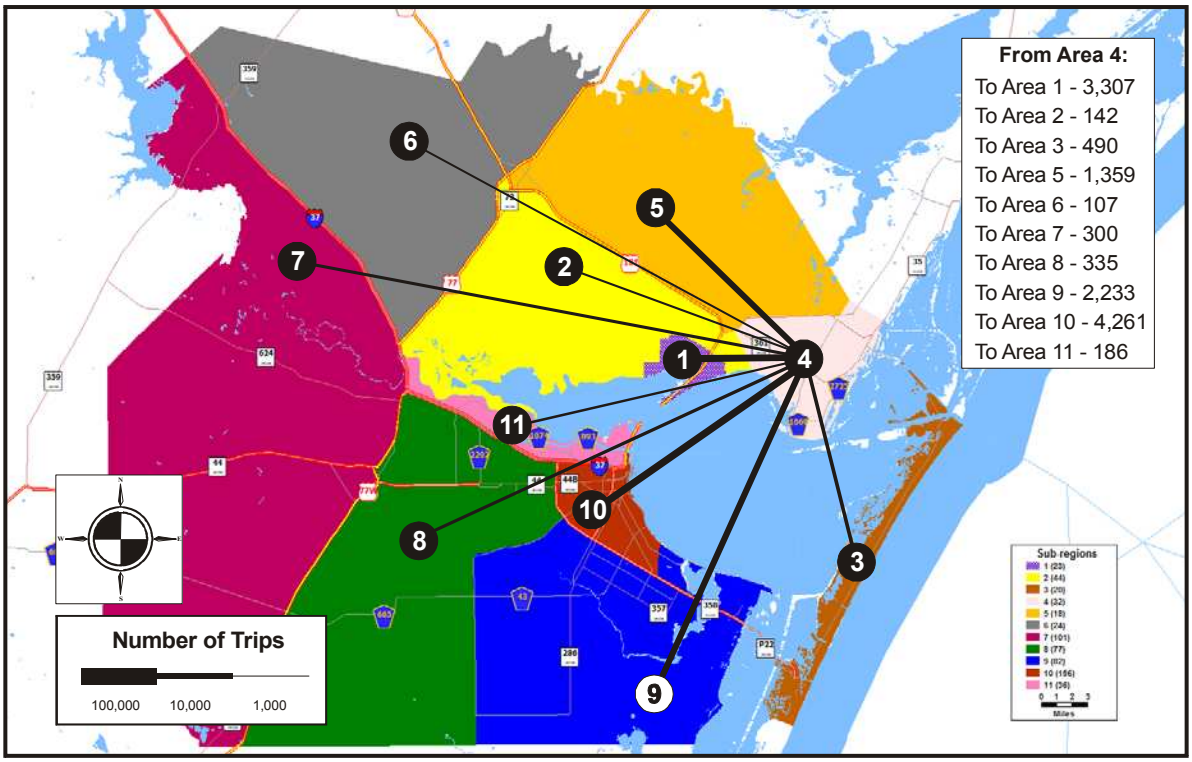


Figure 26. Person Trip Interchanges between Area 4 and Areas 1-3 and Areas 5-11.

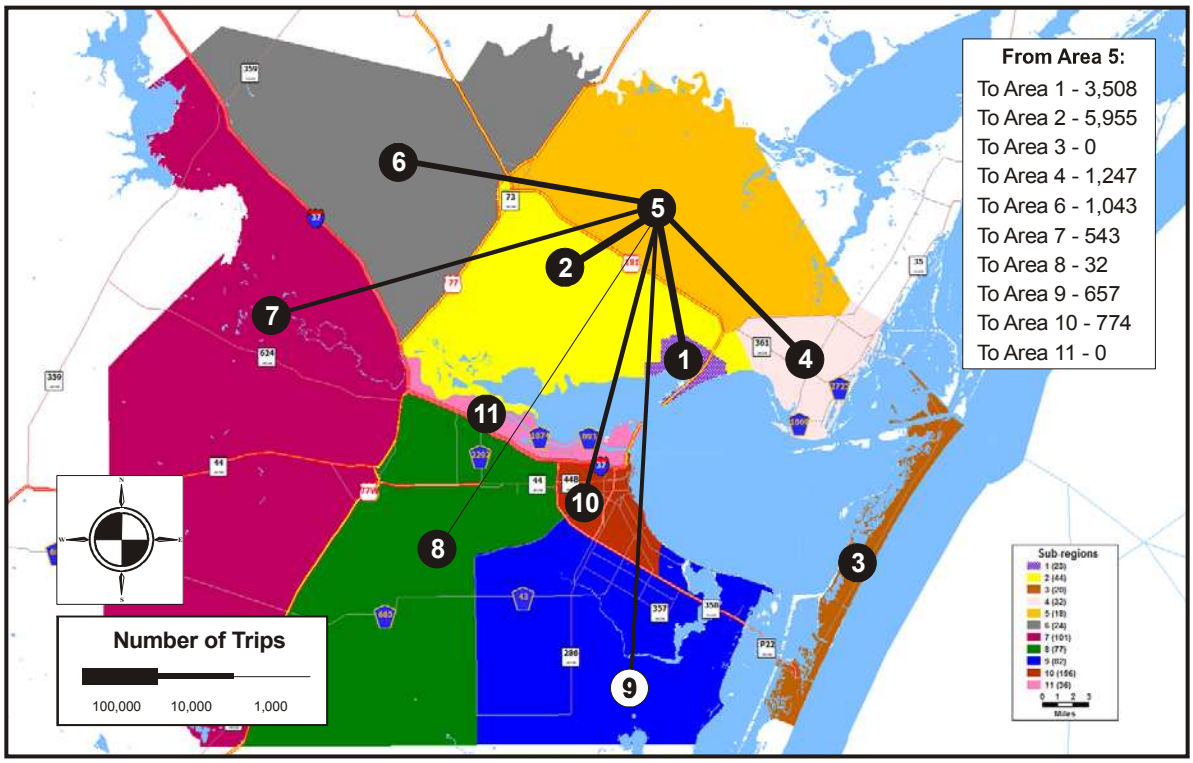


Figure 27. Person Trip Interchanges between Area 5 and Areas 1-4 and Areas 6-11.

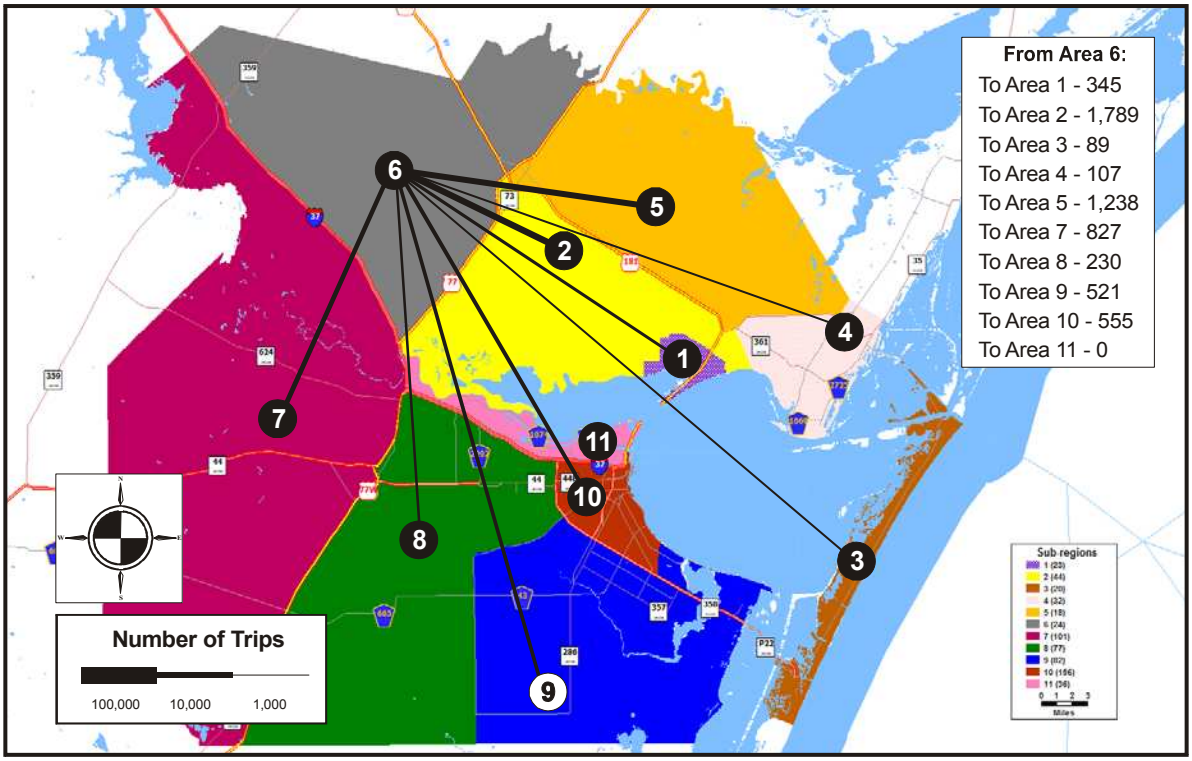


Figure 28. Person Trip Interchanges between Area 6 and Areas 1-5 and Areas 7-11.

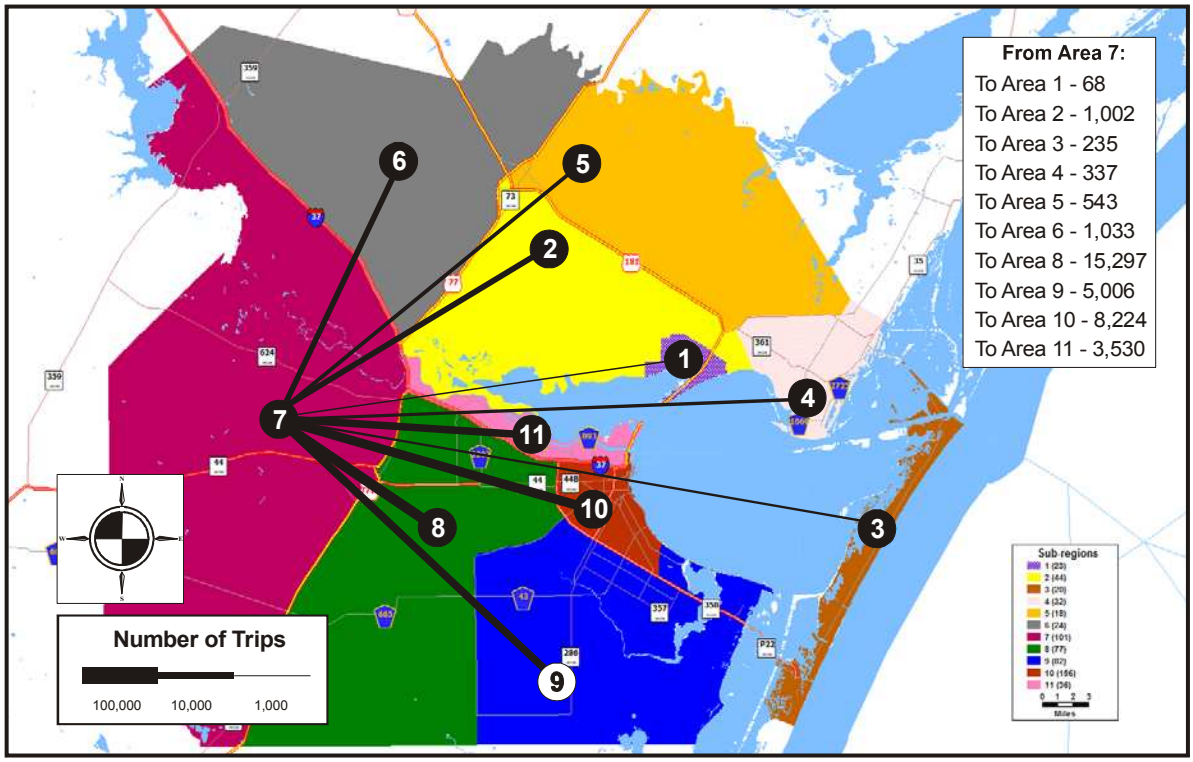


Figure 29. Person Trip Interchanges between Area 7 and Areas 1-6 and Areas 8-11.

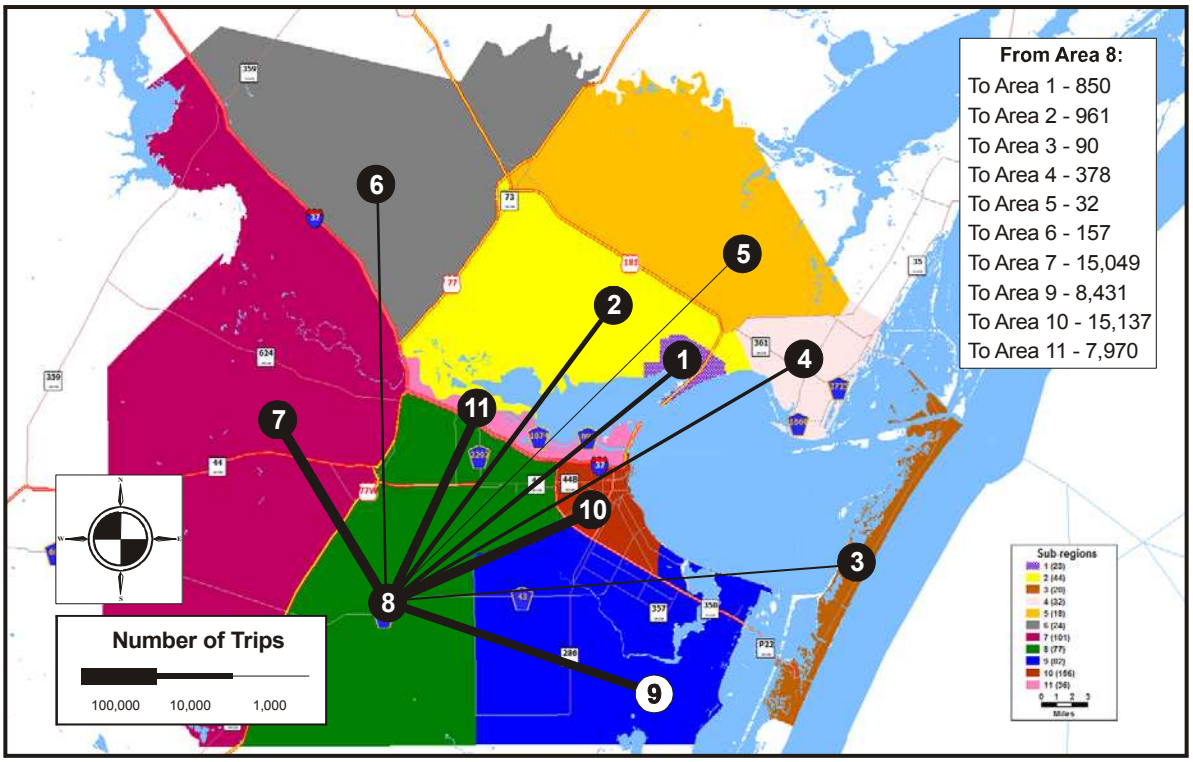


Figure 30. Person Trip Interchanges between Area 8 and Areas 1-7 and Areas 9-11.

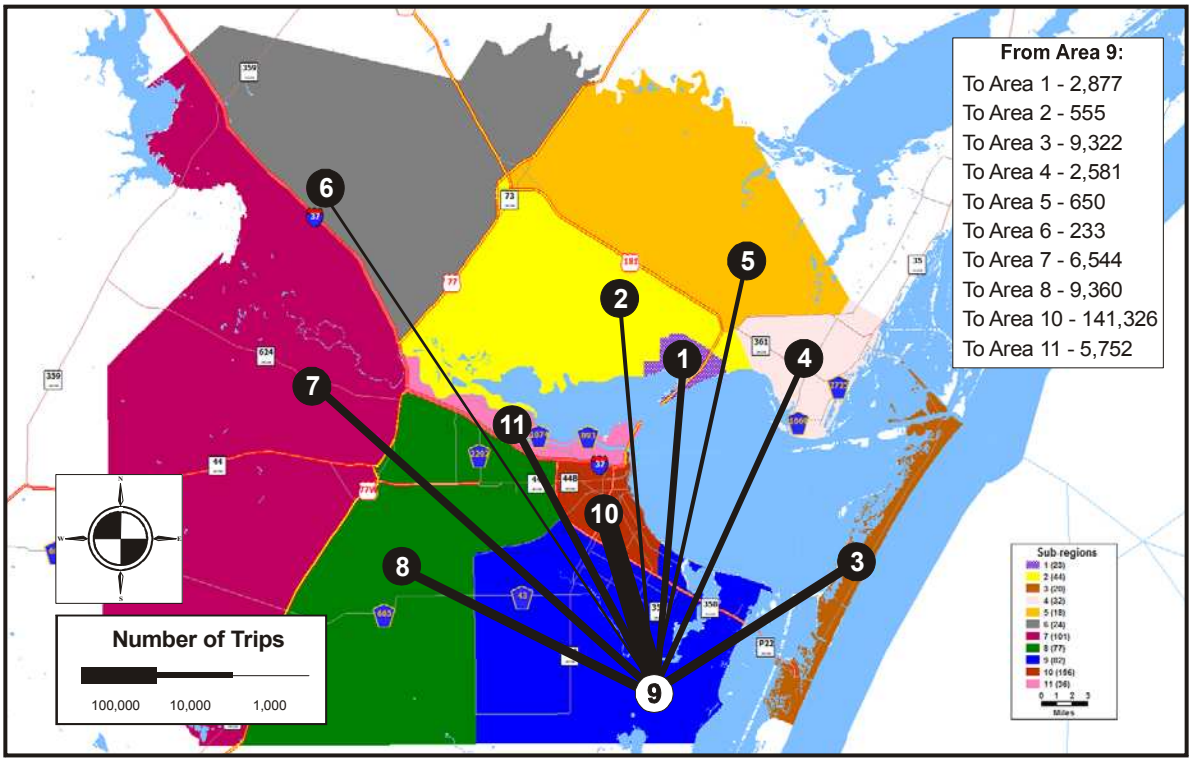


Figure 31. Person Trip Interchanges between Area 9 and Areas 1-8 and Areas 10-11.

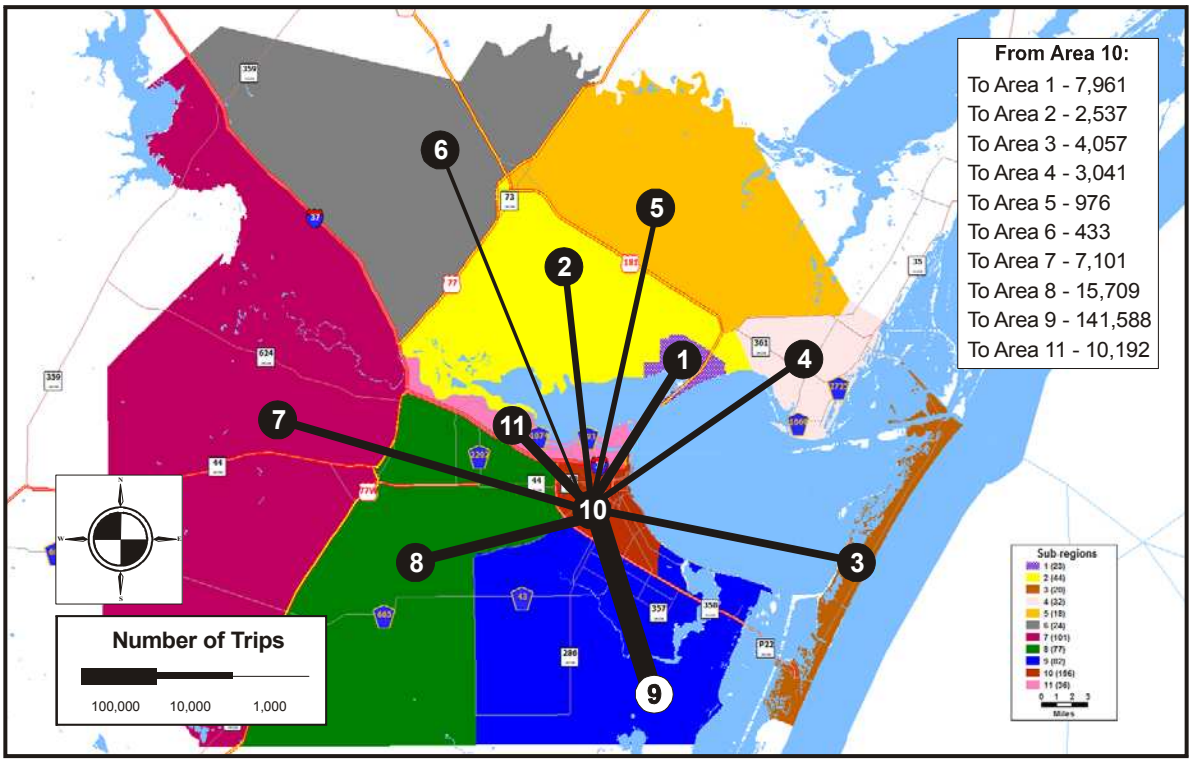


Figure 32. Person Trip Interchanges between Area 10 and Areas 1-9 and Area 11.

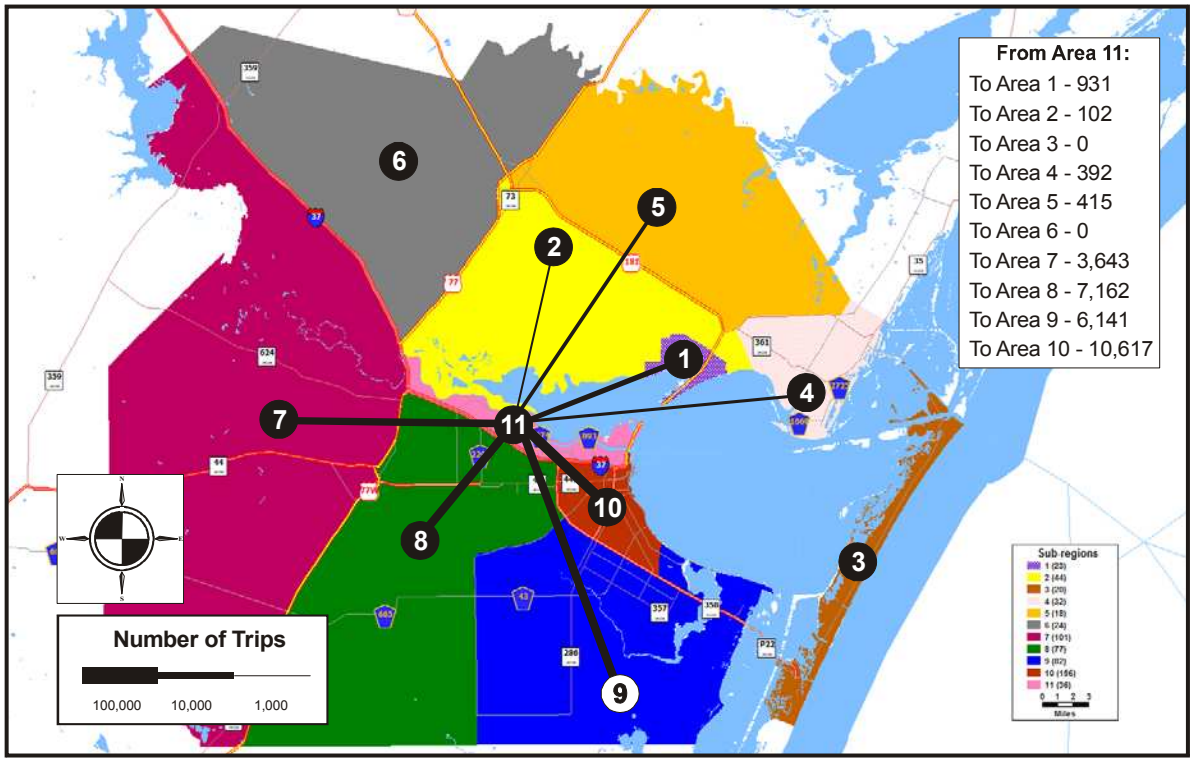


Figure 33. Person Trip Interchanges between Area 11 and Areas 1-10.

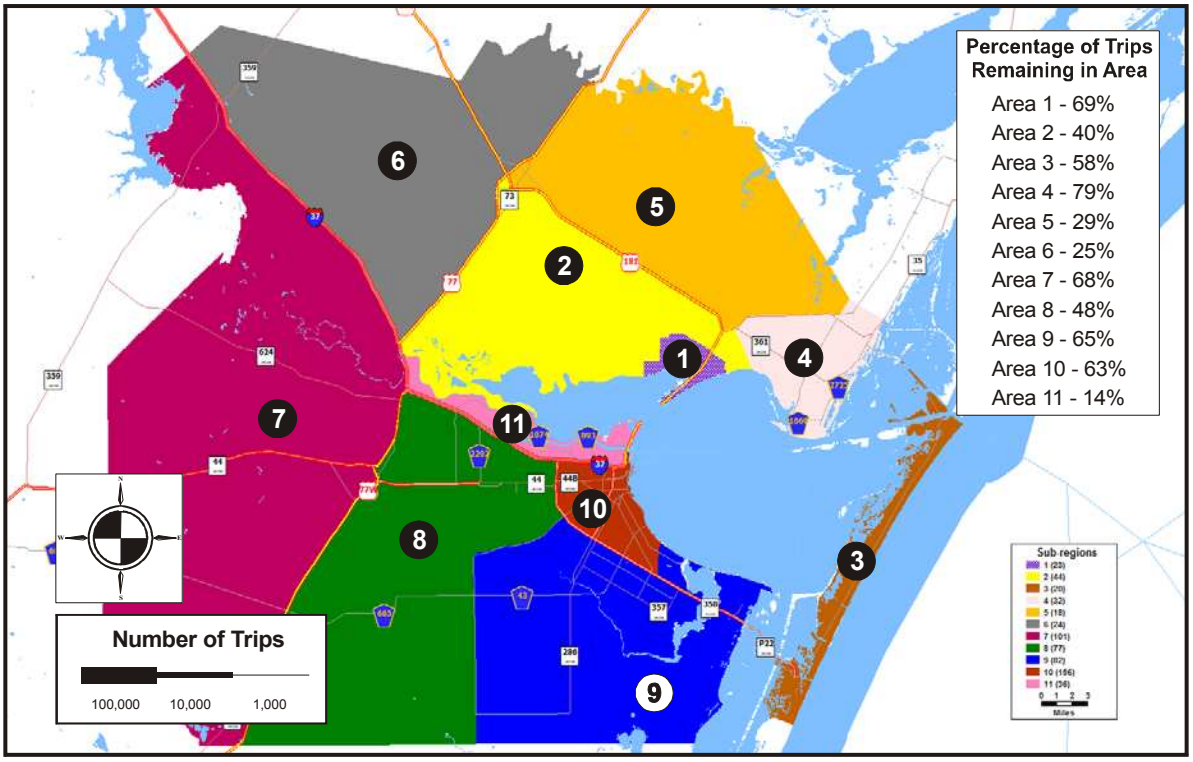


Figure 34. Percent of Person Trips that Remain within Each Sub-Region.

SUMMARY DATA

Table 6 shows summary data for the Corpus Christi area along with comparative household survey summary data for three other urban areas in Texas. More detailed data containing trip rates and trip tables has been provided in a Technical Memorandum to TxDOT's TPP Division for their use in updating the Corpus Christi area travel demand model.

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

Urban Area	Jefferson-Hardin-Orange Counties	Nueces and San Patricio Counties	Cameron and Hidalgo Counties	Bastrop, Caldwell, Hays, Travis, and Williamson Counties
Demographics				
Household Population	360,020	372,919	1,030,139	1,486,117
Licensed Drivers	272,471	274,191	585,035	1,060,436
Number of Households	143,406	141,300	294,825	574,225
Average Household Size	2.51	3.1	3.49	2.59
Number of Motor Vehicles	283,944	280,578	555,443	1,065,898
Motor Vehicles per Household	1.98	1.99	1.88	1.86
Number of Daily Trips by Mode				
Total Person Trips	1,307,392	1,494,755	3,583,480	5,093,023
Automobile-Driver Trips	946,808	1,071,753	2,023,295	3,353,404
Motor Vehicle Passenger Trips	300,436	353,617	1,243,681	1,292,793
School Bus Trips	29,864	22,456	188,781	138,951
Walk Trips	12,526	31,087	93,337	189,256
Public Transit Trips	1,661	7,618	9,889	43,475
Bicycle Trips	1,810	5,095	6,571	31,470
Commercial Vehicle Trips*	174,894	176,587	89,192	202,454
Other Modes/Taxi	848	727	3,709	5,712
Number of Daily Trips by Destination/Purpose				
Trips to Home	417,854	509,208	1,322,199	1,866,466
Trips to Work	123,633	150,403	353,105	661,624
Trips Work Related	27,343	38,410	109,126	158,955
Trips to Shop	156,475	180,398	333,674	489,085
Trips to Pick-Up/Drop-Off Passenger	124,042	164,225	410,936	434,359
Trips for Personal Business	123,193	153,920	228,654	356,953
Trips for Social/Recreation	105,021	112,447	276,680	359,071
Trips for School K-12	51,982	66,927	292,203	302,415
Trips for School Post Secondary	10,746	14,662	46,762	56,962
Trips for Meal/Eat	72,345	87,099	171,603	325,699
Trips to Change Mode	5,654	8,759	24,622	76,436
Other Trips	2,645	1,081	3,596	4,986
Daily Trip Rates				
Person Trips per Person	3.63	4.0	3.48	3.42
Person Trips per Household	9.11	9.8	12.15	8.87
Trip Lengths and Durations				
Average Person Trip Length in Miles	6.5	5.6	6.5	7.8
Average Vehicle Trip Length in Miles	6.7	5.9	7.0	8.4
Average Person Trip Duration in Minutes	10.3	8.4	9.2	12.8
Average Vehicle Trip Duration in Minutes	10.5	8.7	9.8	13.8

Source: Selected Texas Travel Surveys and TTI Analysis.
*Values taken from Commercial Vehicle Technical Reports.

TERMINOLOGY

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

Person Trip – A person trip is the movement of an individual from one location to another location. In the household survey, trips were recorded for all persons in a surveyed household.

Automobile Driver Trip – An automobile driver trip is 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.

Trip Purpose – The trip purpose is 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 were 11 trip purposes used in the household survey.

Trip Activity – The trip activity is stated in terms of the activity at the location the trip began and/or the location the trip ended. There were 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.

Vehicle Availability – Vehicle availability is the number of vehicles available to members of a household for making trips.

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

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

Home-Based Work (HBW) Trip – An HBW trip is 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.

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

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

Trip Productions – Trip productions are 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 Attractions – Trip attractions are 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.

APPENDIX A:
HOUSEHOLD TRAVEL SURVEY FORMS

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)

_____ & _____

Nearest Intersecting Streets

_____ _____ ____

City County State

Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?

☐ Yes If YES: where did you park?

☐ No _____

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 (Specify Route: _____)

☐ Other _____

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

How much did you pay to park? $_____

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):

_____

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 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)

_____ & _____

Nearest Intersecting Streets

_____ _____ ____

City County State

Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?

☐ Yes If YES: where did you park?

☐ No _____

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 (Specify Route: _____)

☐ Other _____

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

How much did you pay to park? $_____

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 (car to bus): _____

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)

_____ & _____
Nearest Intersecting Streets

_____ _____ ____
City County State

Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?
☐ Yes If YES: where did you park?
☐ No _____

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 (Specify Route: _____)
☐ Other _____

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

How much did you pay to park? $_____

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 (car to bus): _____

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 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)

_____ & _____
Nearest Intersecting Streets

_____ _____ ____
City County State

Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?
☐ Yes If YES: where did you park?
☐ No _____

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 (Specify Route: _____)
☐ Other _____

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

How much did you pay to park? $_____

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 (car to bus): _____

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 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)

_____ & _____
Nearest Intersecting Streets

_____ _____ ____
City County State

_____
Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?
☐ Yes If YES: where did you park?
☐ No _____

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 (Specify Route: _____)
☐ Other _____

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

How much did you pay to park? $_____

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 (car to bus): _____

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? _____ 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)

_____ & _____
Nearest Intersecting Streets

_____ _____ ____
City County State

_____
Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?
☐ Yes If YES: where did you park?
☐ No _____

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 (Specify Route: _____)
☐ Other _____

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

How much did you pay to park? $_____

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 (car to bus): _____

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 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)

_____ & _____
Nearest Intersecting Streets

_____ _____ ____
City County State

_____
Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?
☐ Yes If YES: where did you park?
☐ No _____

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 (Specify Route: _____)
☐ Other _____

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
How much did you pay to park? $_____

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 (car to bus): _____

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 1: Where did you go first?

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)

_____ & _____
Nearest Intersecting Streets

_____ _____ ____
City County State

_____
Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?
☐ Yes If YES: where did you park?
☐ No _____

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 (Specify Route: _____)
☐ Other _____

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
How much did you pay to park? $_____

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): _____

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

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

☐ At Home

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

☐ 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?_____

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)

_____ & _____
Nearest Intersecting Streets

_____ _____ ____
City County State

_____
Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?

☐ Yes If YES: where did you park?
☐ No _____

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 (Specify Route: _____)
☐ Other _____

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

How much did you pay to park? $_____

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 (car to bus): _____

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? _____ 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)

_____ & _____

Nearest Intersecting Streets

_____ _____ ____

City County State

Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?

☐ Yes If YES: where did you park?

☐ No _____

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 (Specify Route: _____)
- ☐ Other _____

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

How much did you pay to park? $_____

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 (car to bus): _____

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 the "Additional Locations" 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

Work Information

Do you currently work on a regular basis? ☐ Yes ☐ No

If you do <u>not</u> currently work, please go to the "Start Location" section.

How many different jobs do you have? _____

If you have more than one job, please refer to the job at which you spend the most hours for the following questions.

In which type of industry do you work?

- ☐ Agriculture, forestry, fishing and hunting, mining
- ☐ Construction
- ☐ Manufacturing
- ☐ Wholesale trade
- ☐ Retail Trade
- ☐ Transportation, warehousing, utilities
- ☐ Information
- ☐ Finance, insurance, real estate, rental, leasing
- ☐ Professional, scientific, management, administrative, and water management services
- ☐ Education, health, social services
- ☐ Arts, entertainment, recreation, accommodation, and food service
- ☐ Other services (except public administration)
- ☐ Public administration

Of the last seven days, how many did you work at home? ___ days

What is the location of your workplace?

_____

Name of Employer

_____

Type of Business

_____

Street Address

_____ _____ _____

City, County State

_____

Zip Code

_____ & _____

Nearest Intersecting Streets

Is this location an office in the home or a business operated out of the home? ☐ Yes ☐ No

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

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)

_____ & _____
Nearest Intersecting Streets

_____ _____ ____
City County State

_____
Zip Code (if known)

Did you walk **more than a block** from a parking lot or bus stop to get to this location?

☐ Yes ☐ No If YES: where did you park? _____

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 (Specify Route: _____)
☐ Other _____

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

How much did you pay to park? $_____

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 (car to bus): _____

When did you leave this location?

__ __ : __ __ ☐ AM ☐ 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)

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

Circle your travel day: Monday Tuesday Wednesday Thursday Friday

Write your travel date: _____

Person's age: _____ Gender: Male Female

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.

2009 Corpus Christi Area
HOUSEHOLD ACTIVITY/TRAVEL SURVEY

Texas Department of Transportation

CORPUS CHRISTI MPO
METROPOLITAN PLANNING ORGANIZATION

APPENDIX B:
HOUSEHOLD SURVEY DATA FILE FORMATS

Household / Activity Survey
Corpus Christi/Victoria Data File Format

This file will contain information collected for each household: Record Type 1 - Household Information, Record Type 2 – Person Information, Record Type 3 – Vehicle Information, and Record Type 4 – Trip/Activity Information

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. Day of Week	26	26	Numeric RJ	I1	Day of the week travel was recorded; 1-Monday, 2-Tuesday, 3-Wednesday, 4-Thursday, 5-Friday.
7. Advance Letter	27	28	Numeric RJ	I2	Code indicating if household received advance letter; 1-Yes, 2-No, 98-Don't Know, 99-Refused.
8. Address	29	88	Alphanum. LJ	A60	Street address or nearest cross streets of household.
9. City	89	118	Alphanum. LJ	A30	City where household is located.
10. Zip Code	119	123	Numeric RJ	I5	Zip code of household address.
11. HH County	124	125	Numeric RJ	I2	Code indicating county/area in which household is located: 1- Nueces County, 2- San Patricio County, 3-Victoria County, 98 – Unknown, 99- Refused
12. HH Study Area	126	126	Alphanum	A1	Code indicating study area in which household address/TAZ zone is located. Use 'C' if zone is in the Corpus Christi study area and 'V' if the zone is in the Victoria study area.
13. HH Zone	127	131	Numeric RJ	I5	TAZ number where household is located. The HH address must be coded to a zone in one of the two study areas (Corpus Christi or Victoria). Unknown zones should be coded 8888.
14. Longitude	132	141	Numeric RJ	F10.6	Longitude of household address. If unknown, it should be coded 888.8888.
15. Latitude	142	151	Numeric RJ	F10.6	Latitude of household address. If unknown, it should be coded 888.8888.
16. Number Persons	152	153	Numeric RJ	I2	Number of persons living in residence.
17. Number Employed	154	155	Numeric RJ	I2	Number of persons in household that are employed either full or part time.
18. Vehicles Available	156	157	Numeric RJ	I2	Number of cars, vans, light trucks, motorcycles available for use by the HH; 98-Don't Know, 99-Refused.
19. Vehicles Owned / Leased	158	159	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.
20. Bikes	160	161	Numeric RJ	I2	Number of working bicycles available for use by members of household; 98-Don't know, 99-Refused.
21. Residence	162	163	Numeric RJ	I2	Code indicating the type of residence. See below for code definitions.
22. Other Residence	164	188	Alphanum. LJ	A25	If residence is coded as "other", this field contains a description of the type of residence.
23. Tenure	189	190	Numeric RJ	I2	Code indicating number of years at residence; 0-<1yr, 1-one year, 2-two years, 3-three years, 4-four years, 5-five or more years.
24.Previous Residence	191	191	Numeric RJ	I1	If tenure was less than five years, this code indicates if previous residence was in one of the 10 modeling area counties; 1-Yes, 2-No.
25. Previous Zip Code	192	196	Numeric RJ	I5	If tenure was less than five years, this is the zip code of the previous residence.

Record Type 1 – Continued

FIELD COLUMNS – CONTINUED

Item	Begin	End	Type	Format	Description
26. HH Factors	197	216	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 code definitions.
27. Other Factors	217	246	Numeric RJ	A30	Other factors influencing their decision to locate in their current household.
28. Income	247	248	Numeric RJ	I2	Code indicating combined annual income of all household members. See codes below.
29. Sample HH Income	249	250	Numeric RJ	I2	Household income stratification for sampling quota. 1 thru 5 representing the income strata for the area the household is located
30. Day Visitors	251	252	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.
31. Overnight Visitors	253	254	Numeric RJ	I2	Number of overnight visitors at this residence during their travel day. 98-Don't Know, 99-Refused.
32. Delivery Vehicle	255	255	Numeric RJ	I1	Code indicating if someone in household drives a form of delivery vehicle; 1-Yes, 2-No, 98-Don't Know, 99-Refused.
33. Number Delivery Driver	256	257	Numeric RJ	I2	Number of persons in household that are delivery drivers or travel within study area as part of their work.
34. Phone Service	258	259	Numeric RJ	I2	Number of times within past 12 months household was without telephone service.
35. Time Without	260	261	Numeric RJ	I2	Code indicating the average length of time household was without phone service. See code definitions below.
36. HH Vehicle Use by Non HH Number	262	263	Numeric RJ	I2	Code indicating if one or more of the HH 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.
37. Share Phone	264	265	Numeric RJ	I2	Number of households that share a phone line with this household.
38. GPS House	266	266	Numeric RJ	I1	Code indicating if household vehicles had GPS equipment installed for GPS survey.
39. Total HH Trips	267	269	Numeric RJ	I3	The total combined number of all trips made by all persons in the household on the assigned travel day.

21. RESIDENCE
1 – Unattached Single Family Home
2 – Condo
3 – Duplex
4 – Apartment
5 – Mobile Home
6 – Other
98 – Don't Know
99 – Refused

26. HH FACTORS
1 – Price of Property
2 – Taxes
3 – Proximity to Work
4 – School District
5 – Proximity to School
6 – Character of Neighborhood or Area
7 – Access to Public Transportation
8 – Security / Safety
9 – Other
98 – Don't Know
99 – Refused

35. TIME WITHOUT
1 – Less than one week
2 – one week to less than two weeks
3 – two weeks to less than three month
4 – one month to less than four months
5 – three months to less than six months
6 – six months to less than one year
7 – one year or more
98 – Don't know
99 – Refused

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

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 with 0 assigned to be the head of household.
4. Relationship	13	14	Numeric RJ	I2	Code indicating relationship of person to the head of household. See code definitions below.
5. Head of household	15	16	Numeric RJ	I2	Code indicating the person number in the household 0 should be assigned to be the head of household
6. Sex	17	18	Numeric RJ	I2	Sex of person; 1-Male, 2-Female, 98- Don't Know, 99 - Refused.
7. Ethnicity	19	20	Numeric RJ	I2	Race or ethnicity of person. See code definitions below.
8. Ethnicity Other	21	80	Alphanum RJ	A60	Description of other ethnicity which is not included in code definitions.
9. Age	81	83	Numeric RJ	I3	Age of person. 998-Don't know, 999 - Refused.
10. Licensed Driver	84	85	Numeric RJ	I2	Code indicating if person is a licensed driver; 1-Yes, 2-No, 98 - Don't Know, 99-Refused.
11. Employment	86	87	Numeric RJ	I2	Code indicating if person is employed in a paying or volunteer job; 1-Yes, 2-No, 98 – Don't Know, 99-Refused.
12. Employment Status	88	89	Numeric RJ	I2	If person is employed, this is a code number indicating the person's employment status. See code definitions.
13. Hours	90	92	Numeric RJ	I3	On average, the number of hours worked per week. 998 – don't know, 999-varies from week to week.
14. Not Employed	93	94	Numeric RJ	I2	Code indicating current status if person is not employed. See code definitions below.
15. Not Employed Other	95	154	Alphanum LJ	A60	Description of employment status if none of the options in the employment status code is applicable.
16. Delivery	155	156	Numeric RJ	I2	Code indicating if person is a delivery driver or not; 1-Yes, 2-No, 98 – Don't Know, 99-Refused.
17. Transporting Cargo	157	158	Numeric RJ	I2	Code indicating if vehicle is used for transporting cargo; 1-Yes, 2-No, 98 – Don't Know, 99-Refused.
18. Comm. Service	159	160	Numeric RJ	I2	Code indicating if vehicle is used for commercial service; 1-Yes, 2-No, 98 – Don't Know, 99-Refused
19. Flex Time	161	162	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.
20. Job	163	164	Numeric RJ	I2	Code indicating if person has more than one paying job; 1-Yes, 2-No, 98-Don't Know, 99-Refused.
21. Employer Name	165	224	Alphanum. LJ	A60	Name of person's primary employer.
22. Workplace Type	225	226	Numeric RJ	I2	Code indicating type of workplace where person is employed. See code definitions below.
23. Other Workplace	227	256	Alphanum. LJ	A30	Description of workplace type if "other" is coded.
24. Home Office	257	258	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.
25. Telecommute	259	260	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.
26. Workplace Address	261	320	Alphanum. LJ	A60	Street address of workplace or nearest intersecting street names.
27. Workplace City	321	350	Alphanum. LJ	A30	City where workplace is located.
28. Workplace County	351	352	Numeric RJ	I2	Code indicating county/area in which work place is located: 1- Nueces County, 2- San Patricio County, 3- Victoria County, 98 – Unknown, 99- Refused
29. Zip Code	353	357	Numeric RJ	I5	Zip code or workplace address.

Record Type 2 – Continued

FIELD COLUMNS - CONTINUED

Item	Begin	End	Type	Format	Description
30. Work Study Area	358	358	Alphanum	A1	Code indicating study area in which work address and TAZ zone is located. Use 'C' if zone is in the Corpus Christi study area and 'V' if the zone is in the Victoria study area. Field should be left blank if location is not within one of these two study areas.
31. Work Zone	359	363	Numeric RJ	I5	Zone where workplace is located. This should be coded to a TAZ in one of the two study areas. If unknown but in one of the study areas it should be coded 8888. Locations outside of either of the two study areas but within Texas should be coded using the Statewide Zone System and preceded by the number 1 in column 359. Unknown locations outside of the study areas but within Texas should be coded 16666. Addresses in Mexico should be coded 7777. Addresses outside of Texas and Mexico should be coded using 9999.
32. Longitude	364	373	Numeric RJ	F10.6	Longitude of workplace location. If within either of the study areas, but unknown it should be coded 888.8888. If outside either of the study areas 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.
33. Latitude	374	383	Numeric RJ	F10.6	Latitude of workplace location. If within either of the study areas, but unknown it should be coded 888.8888. If outside either of the study areas 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. Days Worked	384	385	Numeric RJ	I2	Number of days per week person typically works. 98-Don't Know, 99-Refused.
35. Work at Home	386	387	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.
36. Second Job Type	388	389	Numeric RJ	I2	Code indicating type of workplace where person works at second job. See code definitions below.
37. Second Job Other	390	449	Alphanum. LJ	A60	Description of workplace type for second job if "other" is coded.
38. Second Job Employment Status	450	451	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.
39. Total Hours	452	454	Numeric RJ	I3	Total hours on average person works per week at all jobs. 888-Don't know, 999-Refused.
40. Primary Occupation	455	456	Numeric RJ	I2	Code indicating the type of occupation for primary job. See code definitions below
41. Primary Industry	457	458	Numeric RJ	I2	Code indicating the type of industry worked in for primary job. See code definition below.
42. Secondary Occupation	459	460	Numeric RJ	I2	Code indicating the type of occupation for secondary job. See code definitions below
43. Secondary Industry	461	462	Numeric RJ	I2	Code indicating the type of industry worked in for secondary job. See code definition below.
44. Student Status	463	464	Numeric RJ	I2	Code indicating if person is enrolled in any type of school; 1-Yes, 2-No, 98-Don't Know, 99-Refused.
45. School Type	465	466	Numeric RJ	I2	Code indicating type of school attended. See code definitions below.
46. School Type Other	467	526	Alphanum. LJ	A60	Description of 'other' if other is coded as school type.
47. Hours Enrolled	527	528	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.
48. Bike Use	529	530	Numeric RJ	I2	Number of days a person rode bike in last seven days. 98-Don't Know, 99-Refused.
49. Bike Purpose	531	532	Numeric RJ	I2	Code indicating the most common trip purpose for person's bike trips. See code definitions below.
50. Disability	533	534	Numeric RJ	I2	Code indicating if person has transportation disability; 1-Yes, 2-No, 98-Don't Know, 99-Refused.

Record Type 2 – Continued

FIELD COLUMNS - CONTINUED

Item	Begin	End	Type	Format	Description
51. Travel	535	536	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.
52 Person trips	537	539	Numeric RJ	I3	The total number of trips the person made on his/her travel day.
53. Why No Travel	540	599	Alphanum LJ	A60	Description of why the person did not make any trips on the travel day.
54. Diary Use	600	601	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; 3 – Did not receive diary; 4 – Based on memory; 98 – Don't Know; 99 – Refused
55. Data Retrieval	602	603	Numeric RJ	I2	Code indicating how data was retrieved. 01 – from respondent, 02 – by proxy, 03 – mailed diary, 04 – internet, 98 – Don't know; 99 – Refused
56. Proxy ID	604	605	Numeric RJ	I2	This item identifies the person by person number who provided the information by proxy. 98 – Don't know; 99 – Refused
57. Date data was retrieved.	606	609	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.

4. RELATIONSHIP
1 – Husband / Wife / Unmarried Partner
2 – Mother / Father / In-law
3 – Brother / Sister / In-law
4 – Grandfather / Grandmother
5 – Grandson / Granddaughter
6 – Son / Daughter / In-law
7 – Aunt / Uncle
8 – Other Relative
9 – Other Non-Relative
10 – Household Help
98 – Don't Know / Refused
99 – Refused

7. ETHNICITY
1 – Black / African American
2 – Hispanic / Mexican American
3 – Asian / Pacific Islander
4 – Native American
5 – White / Caucasian
6 – Other Group
98 – Don't Know
99 – Refused

14. STATUS FOR NOT EMPLOYED
1 – Retired
2 – Disability Status
3 – Homemaker
4 – Looking for Work
5 – Not Looking for Work
6.- Student
7 – Other
98 – Don't Know
99 - Refused

22,36. TYPE OF WORK PLACE
1. Office (Non-government)
2. Office (Government)
3. Retail/Shopping/Gas
4. Industrial/Manufacturing/Warehouse
5. Medical
6. Education – Day Care/K-12
7. Education – College, trade school, other
8. Residential
9. Airport
10. Eating Establishment
996 – Other
998 – Don't Know
999 – Refused

45. SCHOOL TYPE
1 – Day Care / Pre-School
2 – K-12th
3 – Post Secondary, College, Trade
4 – Other
98 – Don't Know
99 – Refused

49. BIKE TRIP PURPOSE
1 – Work
2 – School
3 – Shopping
4 – Visiting
5 – Recreation / Exercise
6 – Other
98 – Don't Know
99 – Refused

12, 38 EMPLOYMENT STATUS
1 Employed full time 30 or more hours per week
2 Employed part time less than 30 hours per week
3 Self employed full time 30 or more hours per week
4 Self employed part time less than 30 hours per week
98. – Don't Know
99 – Refused

Record Type 2 - Continued

40, 42. OCCUPATION
01 – Management, professional, and related occupations
02 – Service occupations
03 – Sales and office occupations
04 – Farming, fishing, and forestry occupations
05 – Construction, extraction, and maintenance occupations
06 – Production, transportation, and material moving occupations
96 – Not applicable (unemployed / student / retired)
98 – Don't know
99 – Refused

41, 43. INDUSTRY
01 – Agriculture, forestry, fishing and hunting, mining
02 – Construction
03 – Manufacturing
04 – Wholesale trade
05 – Retail trade
06 – Transportation, warehousing, utilities
07 – Information
08 – Finance, insurance, real estate, rental and leasing
09 – Professional, scientific, management, administrative, and waste management services
10 – Education, health, and social services
11 – Arts, entertainment, recreation, accommodation, and food services
12 – Other services (except public administration)
13 – Public Administration
96 – Not Applicable – (unemployed, student, retired)
98 – Don't Know
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	48	Alphanum LJ	A35	Other vehicle type not listed in vehicle code below.
6. Year	49	52	Numeric RJ	I4	Year vehicle was manufactured; 9998-Don't Know, 9999-Refused.
7. Make	53	54	Numeric RJ	I2	Make of vehicle. See vehicle make code below.
8. Other Make	55	114	Alphanum LJ	A60	Specify other make of vehicle if not included in vehicle make code below.
9. Model	115	174	Alphanum. LJ	A60	Model of vehicle.
10. Type of Fuel	175	175	Numeric RJ	I1	Type of fuel used by vehicle; 1-Gasoline, 2-Diesel, 3-Propane, 4- Natural Gas, 5- Electricity, 6 – Other, 7 – Gas/Electric, 8-Don't Know, 9-Refused.
11. Other Fuel Type	176	190	Alphanum. LJ	A15	Other type of fuel specified..
12. Commercial Use	191	192	Numeric RJ	I2	Code indicating if vehicle is used for commercial purposes; 1-Yes, 2-No, 98-Don't Know, 99-Refused.
13. Odometer	193	200	Numeric RJ	I8	Odometer reading on vehicle at beginning of travel day. Don't Know, 99999998. Refused, 99999999.
14. Ownership	201	202	Numeric RJ	I2	Code indicating ownership of this vehicle. 1 – Owned or leased by HH or member of HH, 2 – Owned or leased by another person, 98-Don't Know, 99-Refused
15. Non HH Vehicle Number	203	204	Numeric RJ	I2	If one or more household vehicles used by non-household member, this is the number of the vehicle that was used.
16. Non HH Use	205	205	Numeric RJ	I1	Code indicating if vehicle was used by a non-household member on the travel day. 1 – Yes, 2 – No, 8 – Don't Know, 9 – Refused.
17. Lighter	206	206	Numeric RJ	I1	Code indicating if vehicle has working cigarette lighter. 1 – Yes; 2 – No; 9 - Refused

4. TYPE OF VEHICLE CODES
1. Motorcycle (includes mopeds)
2. Car (includes station wagons)
3. Van (mini and passenger)
4. Sport Utility Vehicle
5. Pickup Truck
6. Cargo Van
7 Commercial Cargo Transport Vehicle
8 Commercial Service Vehicle
9 Other
98 – Don't Know
99 – Refused

Record Type 3 - Continued

7. VEHICLE MAKE CODES

01 – Acura
02 – Audi
03 – BMW
04 – Buick
05 – Cadillac
06 – Chevrolet
07 – Chrysler
08 – Dodge
09 – Ford
10 – Geo
11 – GMC
12 – Harley Davidson
13 – Honda
14 – Hyundai
15 – Infiniti
16 – Isuzu
17 – Jaguar
18 – Jeep
19 – Kawasaki
20 – KIA
21 – Lexus
22 – Lincoln
23 – Mazda
24 – Mercury
25 – Mercedes-Benz
26 – Mitsubishi
27 – Nissan/Datsun
28 – Oldsmobile
29 – Plymouth
30 – Pontiac
31 – Porsche
32 – Range/Land Rover
33 – Saab
34 – Saturn
35 – Subaru
36 – Suzuki
37 – Toyota
38 – Volkswagen
39 – Volvo
40 – Yamaha
41 – Daewoo
42 – Alfa Romeo
43 – AM General
44 – AMC
45 – Austin / Austin Healey
46 – Bluebird
47 – Brockway
48 – BSA
49 – Daihatsu
50 – Diamond Reo / Reo
51 – Ducati
52 – Eagle
53 – Eagle Coach
54 – Fiat
55 – Freightliner
56 – FWD
57 – Gillig
58 – Grumman
59 – Imperial
60 – International Harvester / Navistar
61 – Iveco / Magirus
62 – Kenworth
63 – Lancia
64 – Mack
65 – MCI
66 – Merkur
67 – MG
68 – Moto-Guzzi
69 – Norton
70 – Peterbuilt
71 – Peugeot
72 – Renault
73 – Sterling
74 – Thomas Built
75 – Triumph
76 – White / Autocar-White GMC
77 – Yugo
78 – Other Make Moped
79 – Other Make Motorcycle
97 – Other (specify)
98 – Don't Know
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 survey day.
4. Day	12	13	Numeric RJ	I2	Day of the month of the survey.
5. Person Number	14	15	Numeric RJ	I2	Number assigned to the person doing this activity.
6. Activity/Trip Number	16	17	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.
7. Activity Type Code	18	19	Numeric RJ	I2	Code indicating the type of activity. See activity codes below. This may be posted coded. For activity 0 (where day began), this should be coded as a 1 if it began at home, 4 if day began at work, or as 20 if it began at another location. If this is coded as 20, the activity description should be included in item 8.
8. Activity Description	20	79	Alphanum LJ	A60	Description of Activity.
9. Location	80	109	Alphanum. LJ	A30	Name of location where activity took place.
10. Location Address	110	169	Alphanum. LJ	A60	Street address of location or name of nearest intersecting streets.
11. Location City	170	199	Alphanum. LJ	A30	Name of city where location is.
12. Location County	200	201	Numeric RJ	I2	Code indicating county/area where location is; 1- Nueces County, 2- San Patricio County, 3- Victoria County, 98 – Unknown, 99- Refused
13. Zip Code	202	206	Numeric RJ	I5	Zip code of location address.
14. Exit Route Name	207	256	Alphanum LJ	A50	If location is outside of the Corpus Christi and Victoria study area, this is the name of the highway/route/road used to exit the applicable study area.
15. Route Code	257	261	Numeric FJ	I5	Code indicating route used to exit area. Currently this field is blank and not used.
16. Study Area	262	262	Alphanum	A1	Code indicating study area in which activity address/TAZ zone is located. Use ‘C’ if zone is in the Corpus Christi study area and ‘V’ if the zone is in the Victoria study area. Field should be left blank if location is not within one of these two study areas.
17. Zone Number	263	267	Numeric RJ	I5	Zone number of location address. If in the Corpus Christi or Victoria study area but location unknown, it should be coded 8888. Locations in Mexico should be coded 7777 and addresses outside of the Corpus Christi and Victoria study areas counties, but within Texas should be coded using the Statewide Zone System and preceded by the number 1 in column 263. Unknown locations outside of the Corpus Christi and Victoria study areas but within the state of Texas should be coded 16666. Addresses outside of Texas and Mexico should be coded using 9999.
18. Longitude	268	277	Numeric RJ	F10.6	Longitude of location. If within either of the study areas, but unknown it should be coded 888.8888. If outside either of the study areas 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.
19. Latitude	278	287	Numeric RJ	F10.6	Latitude of location. If within either of the study areas, but unknown it should be coded 888.8888. If outside either of the study areas 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.

Record Type 4 – Continued

FIELD COLUMNS - CONTINUED

Item	Begin	End	Type	Format	Description
20. Type of Place	288	289	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.
21. Other Place	290	309	Alphanum. LJ	A20	Description of "other" type of place where activity occurred.
22. Purpose	310	311	Numeric RJ	I2	Purpose of trip, developed based on the activity type in Item 7. See code definitions below.
23. Mode of Travel	312	313	Numeric RJ	I2	Code indicating mode of travel used in traveling to this location. See travel mode code definitions below.
24. Other Mode	314	343	Alphanum. LJ	A30	If "other" is coded in mode of travel, this is the description of the "other" mode.
25. Number of People	344	345	Numeric RJ	I2	If travel was by private vehicle, this is the number of persons in the vehicle, including the person driving. Non-private vehicle modes should be coded 96..
26. HH Members	346	347	Numeric RJ	I2	Of those in the vehicle, how many were household (HH) members.
27. Persons on Trip	348	357	Alphanum LJ	A10	Who was/were the HH members traveling with you? Code person numbers separated by commas.
28. Non HH Members	358	359	Numeric RJ	I2	Compute Non HH Members using information from items 25 and 26.
29.HH Vehicle	360	360	Numeric RJ	I1	Was a HH vehicle used to make this trip? 1=Yes, 2=No, 8-Don't Know, 9-Refused.
30. Vehicle Used	361	362	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 99.
31. Body Type	363	364	Numeric RJ	I2	See code set for body type.
32.Other Body Type	365	399	Alphanum LJ	A35	If body type is not in code set, describe body type.
33. Other Vehicle Year	400	403	Numeric RJ	I4	Year of "other" vehicle used for trip. 9998-Don't Know, 9999-Refused.
34. Other Vehicle Make	404	405	Numeric RJ	I2	Make of "other" vehicle used for trip. See code set.
35. Other Vehicle Make Description	406	465	Alphanum. LJ	A60	If the make of the other vehicle is coded as other, this field contains a description of the vehicle make
36.Other Vehicle Model	466	525	Alphanum. LJ	A60	Model of "other" vehicle used for trip.
37. Other Vehicle Fuel	526	527	Numeric RJ	I2	Code indicating type of fuel used by "other" vehicle; 1-Gasoline, 2-Diesel, 3- Propane, 4- Natural Gas, 5-Electricity, 6 – Other, 7-Gas/Electric, 98-Don't Know, 99-Refused.
38. Other Fuel	528	544	Alphanum. LJ	A17	Description of "other" fuel for "other" vehicle, if not in fuel code above.
39. Other Vehicle Commercial Use	545	546	Numeric RJ	I2	Code indicating if "other" vehicle used for commercial purposes; 1-Yes, 2-No, 98-Don't Know, 99-Refused.
40. To Bus Stop	547	548	Numeric RJ	I2	Code indicating if they walked more than one block to get to bus stop; 1-Yes, 2-No, 98-Don't Know, 98-Refused.
41. To Activity	549	550	Numeric RJ	I2	Code indicating if they parked or got off bus more than one block from this activity; 1-Yes, 2-No, 98-Don't Know, 99- Refused.
42. Off Bus Location	551	600	Alphanum. LJ	A50	Street address or nearest intersecting streets where person got off of bus.
43. Parking Location	601	650	Alphanum. LJ	A50	Street address of nearest intersecting streets where vehicle was parked.
44. Parking Cost	651	657	Numeric RJ	F7.2	Amount paid for parking.
45. Payment Method	658	659	Numeric RJ	I2	Time period for parking cost payment; 1-Hourly, 2-Daily, 3-Weekly, 4-Monthly, 5-Annually, 98-Other, 99-Don't Know / Refused.
46. Arrival Hour	660	661	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.
47. Arrival Minute	662	663	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.
48. Departure Hour	664	665	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.
49. Departure Minute	666	667	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
2. Residential Type Workplace
3. Construction Site
4. Transportation stop (Bus, Train)
5. Automotive Dealer/Repair
6. Bank / Financial Institution
7. Barber/Beauty/Nail Salon
8. Bookstore/Newstand
9. Convenience / Drug Store
10. Government/City/County/State/Federal Offices
11. Offices (Non-Government)
12. Grocery
13. Health Club
14. Medical Facility/Hospital
15. Movie Theater/Cinema
16. Restaurant/Fast Food, Bar & Grill
17. Educational – 12th Grade or lower
18. Educational – college, trade, etc.
19. Shopping Mall/ Department Store.
20. Convenience Store/ Gas Station
21. Airport
22. Other
98. Don't Know
99. Refused

ACTIVITY TYPES

1 – At Home; primary job related
2 – At Home; other
3 – At Home; job and non-job related
4 – Work
5 – Work Related
6 – School; post secondary, college, trade
7 – School; secondary-day care, kindergarten, elementary, middle, high
8 – Incidental Shopping; gas, groceries, etc.
9 – Major Shopping; clothes, appliances, etc.
10 – Banking
11– Personal Business; laundry, dry cleaning, barber, medical, etc
12– Other Services
13– Social / Recreational
14– Eat Out
15– Civic Activities (including church)
16 – Pick-up / Drop-off Person at Work
17 – Pick-up / Drop-off Person at School / Day Care
18 – Pick-up / Drop-off Person at Other
19 – Change Mode of Travel
20 – Other Activity (specify)
98 – Don't Know
99 – Refused

TRIP PURPOSE CODES

1 – Home (Act. Codes 1,2,3)
2. – Meal/Eat (14)
3 – Work (Act. Codes 4)
4 – Work Related (Act. Code 5)
5 – School; K thru 12 (Act. Codes 7)
6 – School; Post Secondary (Act. Code 6)
7 – Shopping (Act. Codes 8,9)
8 – Personal (Act. Codes 10,11,12,15)
9 – Social / Recreation (Act. Codes 13,)
10 – Pick-up Drop-off Other (Act. Code 16, 17, 18)
11 – Change Mode (Act. Code 19)
12 – Other (Act. Code 20)
98 – Don't Know
99 – Refused

MODE OF TRAVEL CODES

1 – Walk
2 – Auto / Van / Truck Driver
3 – Auto / Van / Truck Passenger
4 – Carpool Driver
5 – Carpool Passenger
6 – Vanpool Driver
7 – Vanpool Passenger
8 – Commercial Service Vehicle Driver
9 – Commercial Service Vehicle Passenger
10 – Commercial Cargo Transport Vehicle Driver
11 – Commercial Cargo Transport Vehicle Passenger
12 – Bus
13 – School Bus
14 – Taxi / Paid Limo
15 – Bicycle
16 – Motorcycle / Moped
17 – Other
98 – Don't Know
99 – Refused

38. VEHICLE CLASSIFICATION CODES

1. Motorcycle (includes mopeds)
2. Car (includes station wagons)
3. Van (mini and passenger)
4. Sport Utility Vehicle
5. Pickup Truck
6. Cargo Van
7 Commercial Cargo Transport Vehicle
8 Commercial Service Vehicle
9 Other
98 – Don't Know
99 – Refused

HOUSEHOLD ACTIVITY SURVEY
GPS DATA PART 1 – GPS ADMINISTRATIVE DATA FILE MATRIX

Item #	Variable Name	Variable Description	Data Type	Justification	Field Width	Collection Stage	Values
GC-1	UNIT_ID	ID link to Admin File	I	RJ	3	GPS	Ordinal Variable
GC-2	HH_ID	Household ID Number	I	RJ	6	Admin	
GC-3	FILE	File Name	A	LJ	8	Admin	Travel Date_ Box#(e.g.,0511_b2)
GC-4	VEHNUM	Vehicle Number	I	RJ	2	REC	
GC-5	YEAR	Vehicle X – Year	I	RJ	4	REC	
GC-6	MAKE	Vehicle X – Make	A	LJ	20	REC	
GC-7	MODEL	Vehicle X – Model	A	LJ	20	REC	
GC-8	BEG_OD	Odometer Reading when GPS Installed	I	RJ	8	GPS	######.#
GC-9	END_OD	Odometer Reading when GPS Unit Removed	I	RJ	8	GPS	######.#
GC-10	INST_DATE	Date GPS Unit Installed	I	RJ	6	GPS	
GC-11	INS_TIME	Time GPS Unit Installed	I	RJ	4	GPS	HHMM (Military Time – include leading zero for single digit hour or minute)
GC-12	REM_DATE	Date GPS Unit Removed	I	RJ	6	GPS	
GC-13	REM_TIME	Time GPS Unit Removed	I	RJ	4	GPS	HHMM (Military time – include leading zero for single digit hour or minute)
GC-14	POWER	Power Source	I	RJ	1	GPS	1=Switched; 2=Continuous
GC-15		1st Vehicle Start Time	I	RJ	4		HHMM (Military time – include leading zero for single digit hour or minute)
GC-16		1st Vehicle Stop time	I	RJ	4		HHMM (Military time – include leading zero for single digit hour or minute)
GC-17		2nd Vehicle Start Time	I	RJ	4		HHMM (Military time – include leading zero for single digit hour or minute)
GC-18		2nd Vehicle Stop Time	I	RJ	4		HHMM (Military time – include leading zero for single digit hour or minute)
“		“	“	“	“	“	“
GC-N		Nth Vehicle Stop Time	I	RJ	4		HHMM (Military time – include leading zero for single digit hour or minute)

HOUSEHOLD/ACTIVITY TRAVEL SURVEY
GPS DATA PART 2 – MATRIX OF GPS DATA ITEMS

Item #	Variable Name	Variable Description	Data Type	Just.	Field Width	Coll. Stage	Verify Stage	Values	Formal and Full Text
GR-1	RECTYPE	Record Type	I	RJ	2	A	NA	GPS Record Type =5	Corrected Data
GR-2	GPS_ID	GPS Receiver Unit ID Number	A	LJ	20	GPS	NA	AAA1234567	
GR-3	Unit_ID	ID Number Linked to Admin. ID File	I	RJ	3	A	NA		
GR-4	GMT_DATE	Greenwich Mean Time Date Stamp	I	RJ	10	GPS	NA	MM/DD/YYY (include leading zero for single month or day)	
GR-5	GMT_TIME	Greenwich Mean Time Time Stamp	I	RJ	5	GPS	NA	HH:MM (Military Time – include leading zero for single hour or minute)	
GR-6	LOC_DATE	Local Date Stamp	I	RJ	10	GPS	NA	MM/DD/YYY (include leading zero for single month or day)	
GR-7	LOC_TIME	Local Time Stamp	I	RJ	5	GPS	NA	HH:MM (Military Time – include leading zero for single hour or minute)	
GR-8	LAT_RAW	Latitude	F	RJ	16	GPS	NA	Degrees	XXX.XXXXXX deg
GR-9	LONG_RAW	Longitude	F	RJ	16	GPS	NA	Degrees	XXX.XXXXXX deg.
GR-10	ELEV_RAW	Elevation	F	RJ	16	GPS	NA	Meters	
GR-11	VELOCITY	Velocity	F	RJ	8	GPS	NA	Meters/second	0..514.00m/s
GR-12	HEADING	Direction of Vehicle	F	RJ	6	GPS	NA	True north	0.0..359.9 deg