Laredo External Survey
Technical Summary

Laredo Urban Transportation Study (LUTS)
Travel Survey program

Interagency Contract With
Texas Department of Transportation

★ **Laredo**

Texas Department of Transportation

Laredo External Survey

TECHNICAL SUMMARY

Prepared by

David F. Pearson. P.E., Ph.D.

Research Engineer

of the

Texas Transportation Institute

June 2003

INTRODUCTION

In 2002-2003, the Transportation Planning and Program (TPP) Division of the Texas Department of Transportation (TxDOT) funded a comprehensive set of travel surveys in the Laredo/Webb County Texas, area. These surveys measured and identified travel patterns within the Webb County area. The data obtained will be used in the development and update of the travel demand model for the Laredo Metropolitan Planning Organization. The Laredo/Webb County surveys included a household travel survey with a Global Positioning System component, a work place survey, an external station survey, a travel time and delay survey, and several special generator surveys conducted as part of the work place survey.

This report presents a Technical Summary of the 2002 Laredo External Station Survey and documents the data collected and the analysis results for the Laredo/Webb County area.

EXTERNAL STATION SURVEY

An external station survey is essentially a survey of vehicles and/or pedestrians traversing the imaginary study area boundary. The survey identifies and measures the characteristics of travel in and out of the study area as well as the travel through the area.

LAREDO STUDY AREA

The boundary established for the Laredo external survey was Webb County. Figure 1 shows Webb County relative to the state of Texas. The county is located in the southwest portion of Texas along the Texas-Mexico border. The population in Webb County based on the 2000 census was 193,117. This represented a growth of nearly 45 percent from the 1990 population of 133,239. The number of households in Webb County grew from 34,510 in 1990 to 50,647 in 2000 (based on the 2000 census). The growth in Webb County is concentrated in the city of Laredo, located directly on the Texas-Mexico border and serves as one of the primary gateways for the movement of people and freight between Mexico, Texas, and the United States.
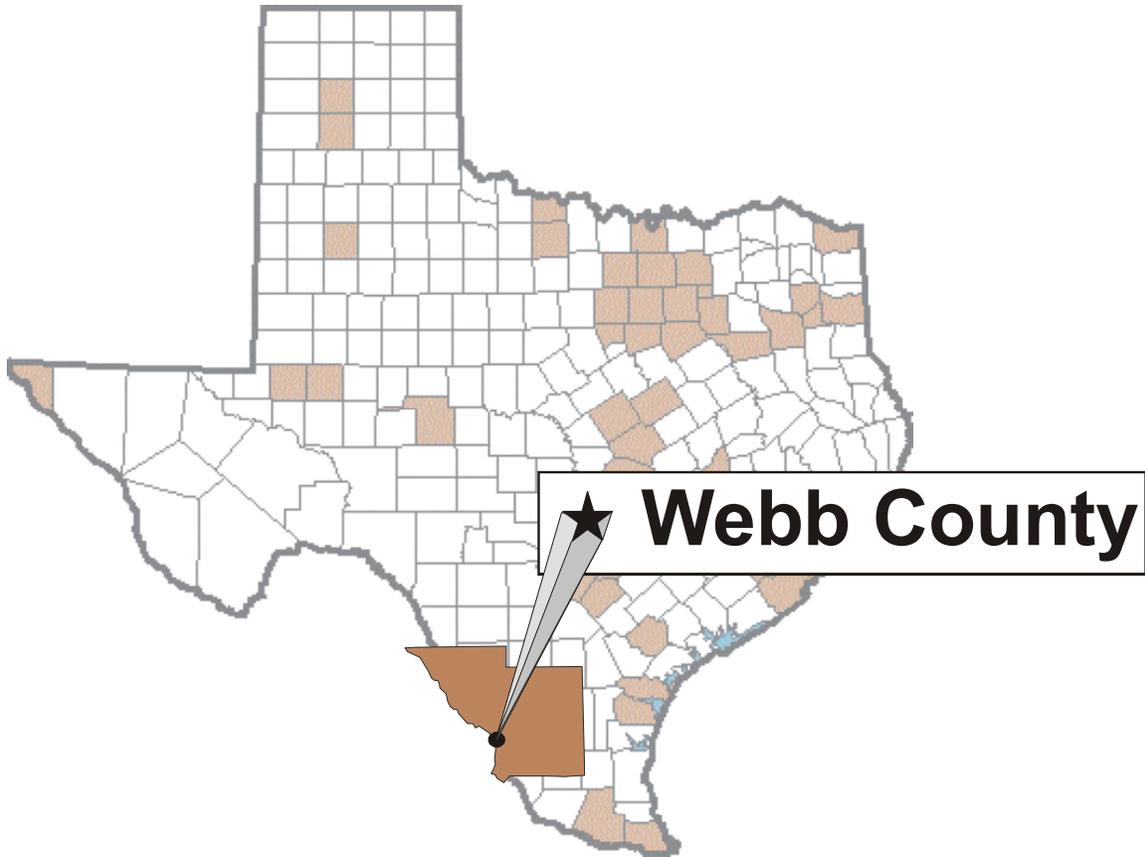
Figure 1. Study Area.

EXTERNAL STATIONS

There were 14 locations on the border of Webb County identified as external stations. Of these 14 external stations, four were international border crossings. Table 1 lists the external stations, their locations, whether the site was surveyed, and the 24-hour traffic count at the location. Figure 2 shows their locations in Webb County. Surveys were conducted at all but two of the external stations.

Table 1. Laredo/Webb County External Stations.

Station Number	Facility	Location	Surveyed	24-Hour Vehicle Count		Location Group
				Inbound	Outbound	
207	Columbia-Solidarity Bridge	Mexico Border	Yes	1,916	1,489	Border
206	Convent Street Bridge	Mexico Border	Yes	2,945	4,513	
205	Lincoln Juarez Bridge	Mexico Border	Yes	13,718	15,640	
209	World Trade Bridge	Mexico Border	Yes	4,315	5,915	
312	US 83	Webb/Zapata County Line	Yes	1,426	1,508	South
313	FM 649	Webb/Jim Hogg County Line	Yes	232	196	
314	SH 359	Webb/Duval County Line	Yes	969	987	East
315	US 59	Webb/Duval County Line	Yes	887	1,146	
316	SH 44	Webb/Duval County Line	Yes	174	206	
317	SH 44	Webb/LaSalle County Line	Yes	206	174	North
318	IH 35	Webb/LaSalle County Line	Yes	4,595	5,182	
319	SH 44	Webb /LaSalle County Line	No	187	161	
320	US 83	Webb/Dimmit County Line	Yes	878	918	
321	FM 1472	Webb/Dimmit County Line	No	131	135	
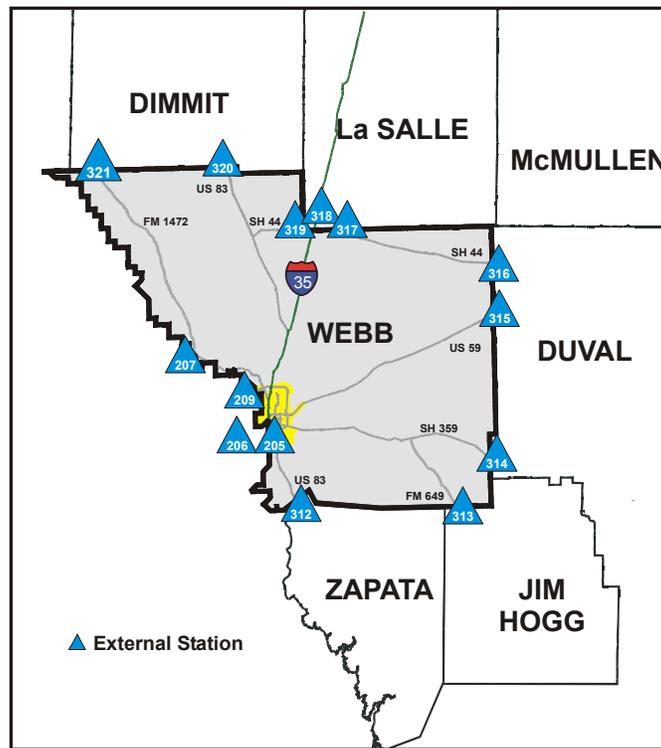
Figure 2. External Station Locations.

A pedestrian survey was also conducted at the Convent Street International Bridge. This was the only international crossing where pedestrians were permitted to cross on foot in both directions. The total number of pedestrians crossing at that location was 25,193. The number inbound to Texas was 12,175 and the number outbound to Mexico was 13,018.

SURVEY METHODOLOGY

The methodology employed in the survey was personal interview. For the non-international border crossing locations, traffic control plans were set up and vehicles in the outbound direction were directed to the side of the road and the drivers interviewed by trained personnel. Drivers of commercial and non-commercial vehicles were interviewed and interviewers used different survey instruments for commercial vehicles and non-commercial vehicles.

At the international border crossings, traffic control plans were set up and vehicles in the inbound direction (i.e., inbound to Texas) were stopped and trained personnel interviewed the drivers. Personnel interviewed drivers of commercial and non-commercial vehicles. Again, interviewers used different survey instruments for both the commercial vehicles and non-commercial vehicles. At the international border crossings, commercial vehicles (i.e., heavy-duty trucks) were allowed to cross at two locations, the Laredo-Columbia Solidarity and World Trade bridges. Figure 3 shows a typical traffic control plan at a border crossing.

Figure 3. Traffic control plan at a border crossing.

The pedestrian survey was conducted as an intercept survey. As pedestrians crossed the Convent Street Bridge coming into Texas, they were stopped by trained interviewers and asked to participate in the survey. Those agreeing to participate were then interviewed and those not wishing to participate were allowed to proceed.

For a more detailed discussion and description of the survey methodology, see the report, *Laredo-Webb County External Travel Survey* prepared by Gram Traffic Counting, Inc. in association with Alliance-Texas Engineering, Inc. The survey instruments used in the survey are presented in the Appendix of this report.

DATA ANALYSIS

There were two survey instruments used in this project, one for non-commercial vehicles and one for commercial vehicles. Non-commercial vehicles are typically personal use passenger cars, trucks, and vans. Commercial vehicles are those used for commercial purposes and, in most cases, were heavy-duty trucks (e.g., 18 wheels). Most of the analyses in the following sections present results for commercial and non-commercial vehicles. A separate section contains the results of the pedestrian survey.

Trip Types

There are two types of trips identified as a part of an external survey - external local trips and external through trips. A local trip is one where either the origin or destination of the trip is in the study area. A through trip is one traveling through the study area without stopping. Table 2 presents a breakdown of the survey data for non-commercial and commercial vehicles in terms of the trips identified as local or through movements. Cells with "na" are locations where those types of vehicles were prohibited (e.g., at the World Trade Bridge only commercial vehicles were allowed to cross and at the Convent Street Bridge no commercial vehicles were allowed to cross). It should also be noted that some totals do not equal the sum of the through and local movements. The difference represents surveys where the respondent refused or did not know if the trip was a through trip. Sites 316 and 317 show no local trips because SH 44 crosses a small portion of the northern part of Webb County and serves no town or development within the county.

Table 2. Survey Results by Type of Trip.

Station Number	Survey Direction*	Facility	Non-Commercial Vehicle Surveys			Commercial Vehicle Surveys		
			Local	Through	Total	Local	Through	Total
207	Inbound	Columbia-Solidarity Bridge	201	24	225	193	8	211
206		Convent Street Bridge	500	31	531	na	na	na
205		Lincoln Juarez Bridge	823	21	844	na	na	na
209		World Trade Bridge	na	na	na	378	4	383
312	Outbound	US 83 @ Zapata Co. Line	349	17	366	66	3	70
313		FM 649	93	3	96	24	1	30
314		SH 359	319	8	327	40	1	41
315		US 59	247	41	288	98	2	100
316		SH 44 @ Duval Co. Line	0	86	86	0	27	27
317		SH 44 @ LaSalle Co. Line E	0	89	89	0	21	21
318		IH 35	228	25	253	163	2	165
319		SH 44 @ LaSalle Co. Line W	Not Surveyed					
320		US 83 @ Dimmit Co. Line	144	50	194	92	16	108
321		FM 1472	Not Surveyed					
Totals			**2,904**	**395**	**3,299**	**1,054**	**85**	**1,156**

* Direction of travel for surveyed vehicles.

The second type of trip identified in the survey is a sub-category of external local trips. These are reported as resident and non-resident trips. A resident is a survey respondent that reported they resided in the Webb County area. A non-resident is a respondent that reported they lived outside of Webb County. Table 3 presents a breakdown of the surveys by residents and non-residents as well as the number of reported trips within the study area. An important element of the trips reported by non-residents is the number of trips made prior to being surveyed. Based on the information provided in the survey, these trips are evaluated to estimate the number of internal trips made by non-residents. An internal trip is one where both ends (i.e., origin and destination) are within Webb County.

By measuring the number of non-residents that travel in and out of Webb County and the number of internal trips they make, an estimate of the total internal trips within Webb County attributable to individuals that do not live in the county may be made. It should be noted that since the surveys at the international crossings were inbound, it was not possible to measure the number of internal trips for those respondents.

Respondents were asked about the trips they made prior to being surveyed. For outbound vehicles, this would measure trips that had occurred both in and out of the study area. For inbound vehicles, this would only measure trips that had occurred outside the study area. This is why no internal trips are shown for the international border crossings.

The resident questions were only asked of respondents in non-commercial vehicles. Table 3 indicates that a high proportion (nearly 64 percent) of non-commercial travel in and out of Webb County is made by individuals that do not live in Webb County. The number of internal trips associated with those individuals is very small (0.084 trips per vehicle). It should be noted that the internal trips shown are only for those individuals surveyed outbound at non-international borders. It is likely that the number of internal trips made by individuals crossing at the international borders would be higher than the number made by individuals at non-international borders. Figure 4 shows the percentage of surveyed non-commercial vehicles by residency and direction. The surveyed sites are grouped by location in Figure 4. Table 1 shows the sites by location group.

Table 3. Survey Results by Residency (Non-Commercial Vehicles Only).

Station Number	Survey Direction*	Facility	Number of Surveys	Refusals	Residents	Pct.	Non Residents	Pct.	Internal Trips
207	Inbound	Columbia-Solidarity Bridge	201	0	79	39.3	122	60.7	na
206		Convent Street Bridge	500	2	132	26.5	366	73.5	na
205		Lincoln Juarez Bridge	823	20	256	31.9	547	68.1	na
209		World Trade Bridge	No Non-Commercial Vehicles						
312	Outbound	US 83 @ Zapata Co. Line	349	2	157	45.2	190	54.8	4
313		FM 649	93	1	37	40.2	55	59.8	20
314		SH 359	319	1	128	40.3	190	59.7	33
315		US 59	247	0	92	37.2	155	62.8	4
316		SH 44 @ Duval Co. Line	0	0	0	0	0	0	0
317		SH 44 @ LaSalle Co. Line E	0	0	0	0	0	0	0
318		IH 35	228	1	108	47.6	119	52.4	2
319		SH 44 @ LaSalle Co. Line W	Not Surveyed						
320		US 83 @ Dimmit Co. Line	144	3	53	37.6	88	62.4	4
321		FM 1472	Not Surveyed						
Totals			**2,904**	**30**	**1,042**	**36.3**	**1,832**	**63.7**	**67**

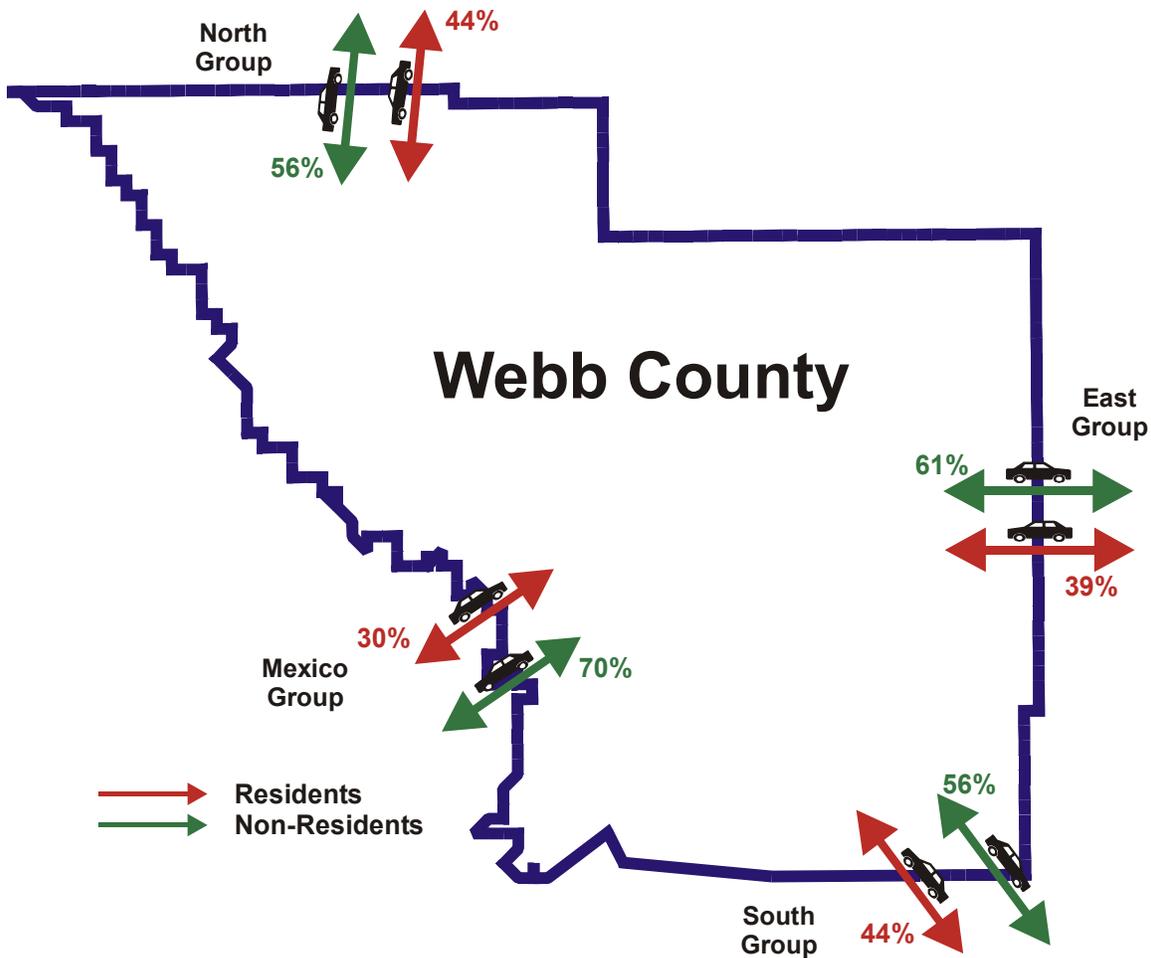* Direction of travel for surveyed vehicles.

Figure 4. Surveyed Non-Commercial Vehicles by Residency.

Travel Purpose

To understand the reasons people travel, the survey included questions about the driver's purpose for being at the location where the trip began (i.e., trip origin) and the purpose for traveling to their destination. There were 15 different purposes included on the survey instrument for non-commercial vehicles and eight purposes on the commercial vehicle survey. Table 4 shows the two categories. For purposes of presenting the results of the survey, the trip purpose categories are combined into a fewer number which represent the primary purposes observed.

Table 4. Categories of Trip Purpose.

Code	Non-Commercial Vehicle Trip Purpose	Code	Commercial Vehicle Trip Purpose
1	Home/Return Home	1	Base Location/Return to Base Location
2	Go/Return to Work	2	Delivery
3	Work Related	3	Pick Up
4	School	4	Maintenance
5	Vacation	5	Driver Needs (Lunch, etc.)
6	Visit Friends/Family	6	To Home
7	Eat Out	7	Buy Fuel
8	Shop	8	Other
9	Buy Gas	99	Refused/Unknown
10	Personal Business		
11	Pick Up/Drop Off Passenger		
12	Change Travel Mode		
13	Delivery		
14	Other		
15	Refused/Do Not Know		

For non-commercial vehicles, the trip purposes are combined into the following six categories:

Category	Trip Purpose Codes
Home	1
Work	2 and 3
School	4
Personal	5, 6, 10, and 11
Shop	7, 8, and 9
Other	12, 13, 14, and 15

Figure 5 shows a typical non-commercial vehicle survey at an international crossing. Figures 6 and 7 present the distribution of non-commercial vehicles by reported trip purpose at the origin of the trips for vehicles surveyed at the international border crossings and at the non-international border crossings. Figures 8 and 9 present the distribution of non-commercial

vehicles by reported trip purpose at the destination end of the trip for vehicles surveyed at the international and non-international crossings. These are presented separately for the two types of crossings because the international border crossings were located in the heart of Laredo, and it was reasoned that major differences might exist between the traffic characteristics for vehicles crossing the international border versus those leaving Webb County.


Figure 5. Typical non-commercial vehicle survey at an international crossing.

The distributions in Figures 6 through 9 clearly show differences in the characteristics of travel at the international crossings as compared to non-international crossings. For the inbound trips at the international crossings, the majority of drivers (68 percent) began their trip at home whereas the majority of trips (33 percent) at the non-international crossings (outbound direction) were coming from work. The majority of trips inbound at the international crossings (36 percent) were for the purpose of shopping, while the majority of trips outbound at non-international crossings (37 percent) were for the purpose of work. Combining the trip purposes into the categories typically used in travel demand modeling (i.e., home-based work [HBW], home-based non-work [HBNW] and non-home based [NHB]) and plotting these distributions for international and non-international crossings yields the results in Figure 10. It is interesting to note that the percent of trips that are HBW are about the same for both international and non-international crossings. The trips crossing at the international borders are mostly HBNW (i.e., over 60 percent) and most of the trips at the non-international crossings are NHB (over 45 percent). This is due to the dominance of trips crossing at the international borders for the purpose of shopping. Over 30 percent of the non-commercial trips crossing the border were home-based shopping trips.

Trip Purpose From Origin*
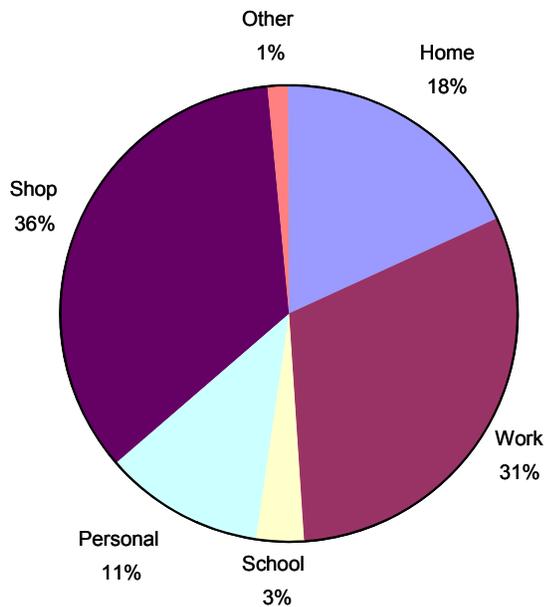**International Crossings (Inbound)**

Shop 4%
Other 1%
Personal 17%
School 0%
Work 10%
Home 68%
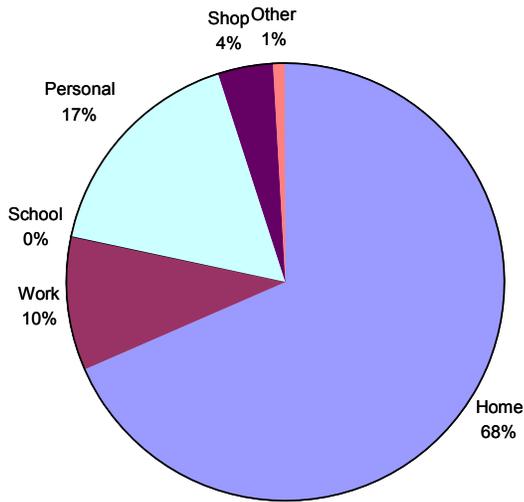
Figure 6. Non-Commercial Vehicles at International Crossings.

Trip Purpose From Origin*
Non-International Crossings (Outbound)

Other 4%
Home 22%
Shop 22%
Personal 16%
School 3%
Work 33%
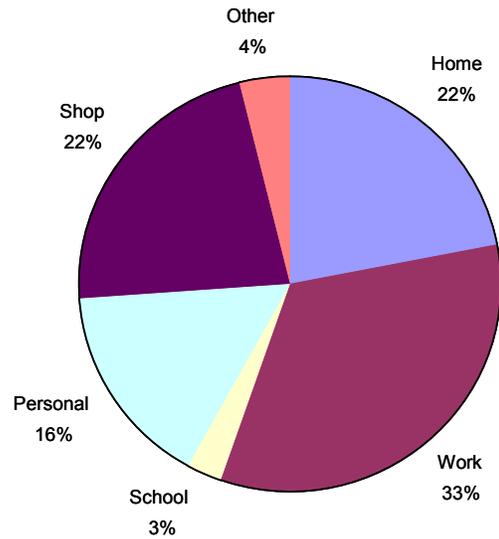
Figure 7. Non-Commercial Vehicles at Non-International Crossings.

Trip Purpose to Destination**
International Crossings (Inbound)

Other 1%
Home 18%
Shop 36%
Work 31%
Personal 11%
School 3%

Figure 8. Non-Commercial Vehicles at International Crossings.

Trip Purpose to Destination**
Non-International Crossings (Outbound)

Shop 4%
Other 3%
Personal 21%
Home 34%
School 1%
Work 37%
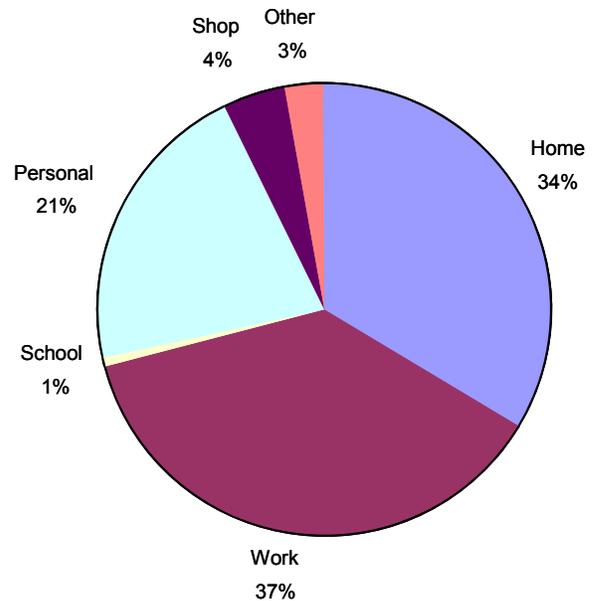
Figure 9. Non-Commercial Vehicles at Non-International Crossings.

* Origin is location where the person began the trip.
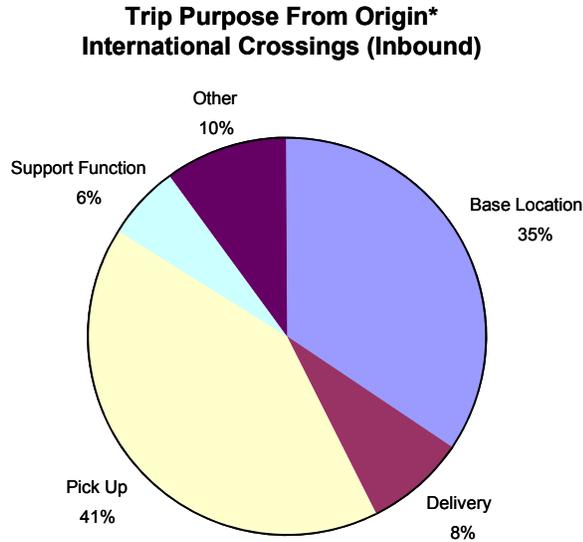** Destination is the location where the person is traveling.

12
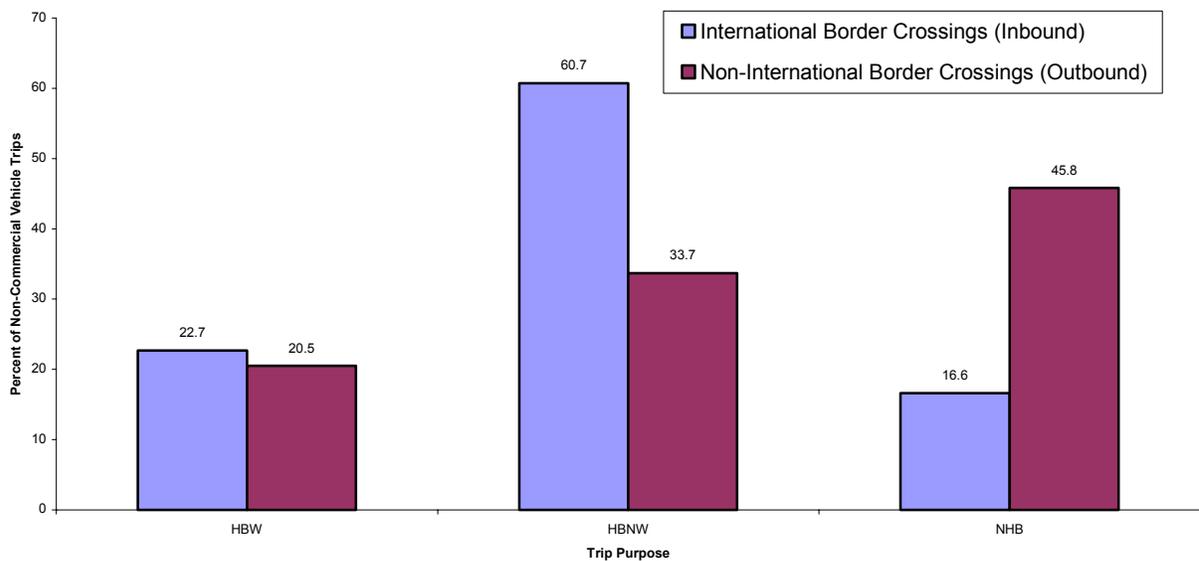
Figure 10: Distribution of Non-Commercial Vehicle Trips by Trip Purpose

For commercial vehicles, the trip purposes shown in Table 4 are combined into the following five categories:
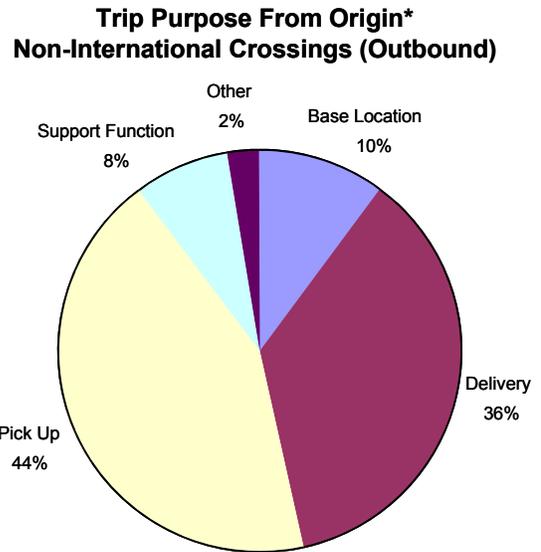
Category	Trip Purpose Codes
Base Location	1
Delivery	2
Pick Up	3
Support Functions	4, 5, 6, and 7
Other	8 and 99

Figures 11 through 14 present the distribution of commercial vehicle trips by reported trip purpose at the origin and destination of the trips for international and non-international crossings. As was observed with the non-commercial vehicles, considerable differences in the distributions of vehicles by purpose at the origin and destination are observed. For example, at the international crossings, slightly more than one out of every three drivers (35 percent) originated their trip at their base location and only 8 percent were returning from making a delivery. At the non-international crossings, only 10 percent of the vehicles originated their trip
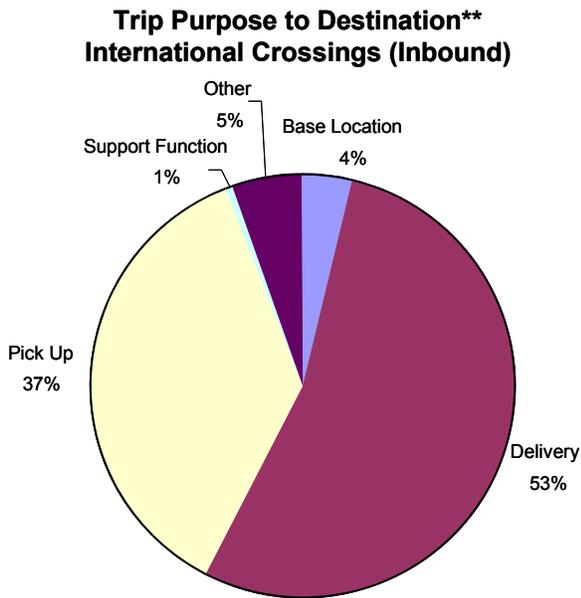
13

at their base location and 36 percent were coming from making a delivery. At the international crossings, only 4 percent of the commercial vehicles were destined for their base location while 17 percent of the commercial vehicles were destined for their base location at the non-international crossings. The majority of commercial vehicles at both international and non-international crossings were either making a pick-up or a delivery.
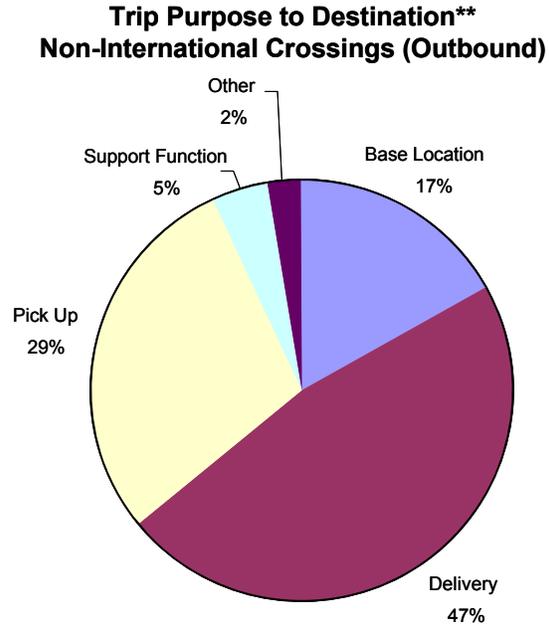
Trip Purpose From Origin*
International Crossings (Inbound)

Other
10%

Support Function
6%

Base Location
35%

Pick Up
41%

Delivery
8%

**Figure 11. Distribution of Commercial
Vehicle Trips by Trip Purpose at Origin.**

Trip Purpose From Origin*
Non-International Crossings (Outbound)

Other
2%

Base Location
10%

Support Function
8%

Delivery
36%

Pick Up
44%

**Figure 12. Distribution of Commercial
Vehicle Trips by Trip Purpose at Origin.**

Trip Purpose to Destination**
International Crossings (Inbound)

Other
5%

Base Location
4%

Support Function
1%

Pick Up
37%

Delivery
53%

**Figure 13. Distribution of Commercial
Vehicles by Trip Purpose at Destination.**

Trip Purpose to Destination**
Non-International Crossings (Outbound)

Other
2%

Base Location
17%

Support Function
5%

Pick Up
29%

Delivery
47%

**Figure 14. Distribution of Commercial
Vehicles by Purpose of Trip Destination.**

* Origin is location where the person began the trip.
** Destination is the location where the person is traveling.

Time-of-Day

Interviewers conducted vehicle classification counts for 24 hours at each external station on the same day as the surveys. While this information is used primarily for expansion of the survey data, it is also of interest to examine the distribution of vehicles by time-of-day. It should be noted that these counts were also conducted at the sites that were not surveyed. The total vehicle counts were shown in Table 1. Figures 15 and 16 present the distribution of non-commercial and commercial vehicles by time-of-day. The data are presented for the international and non-international crossings.
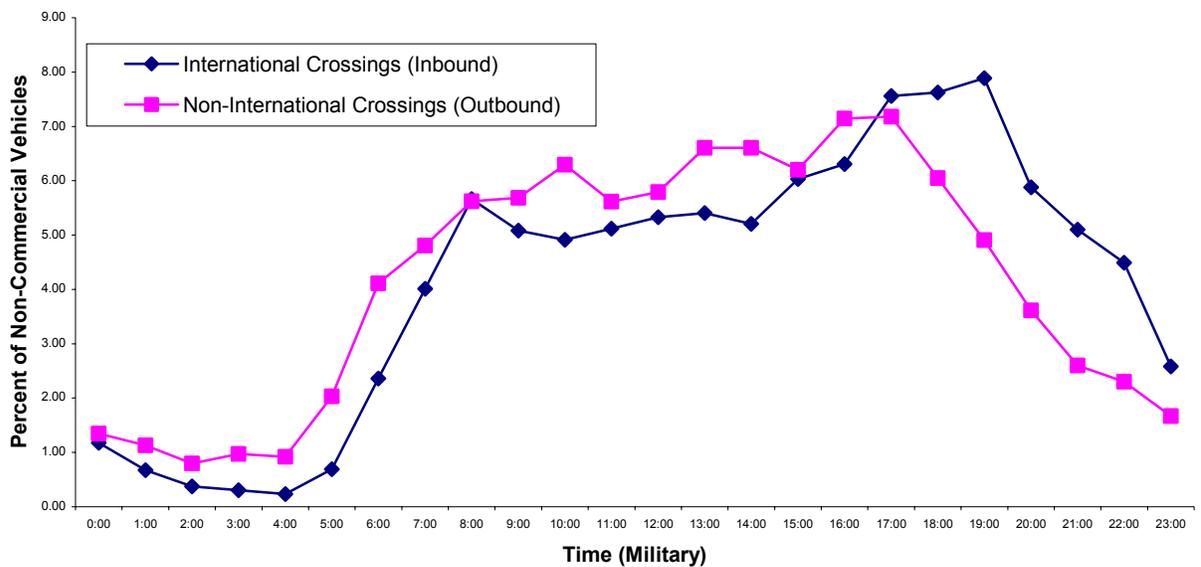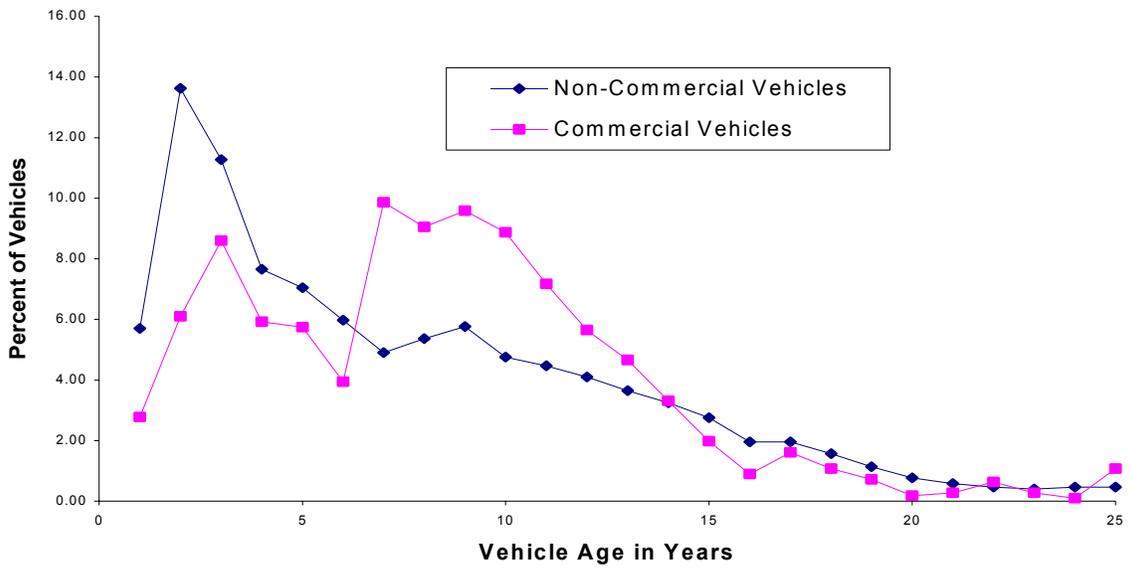

**Figure 15: Distribution of Non-Commercial vehicles by Time-of-Day.**
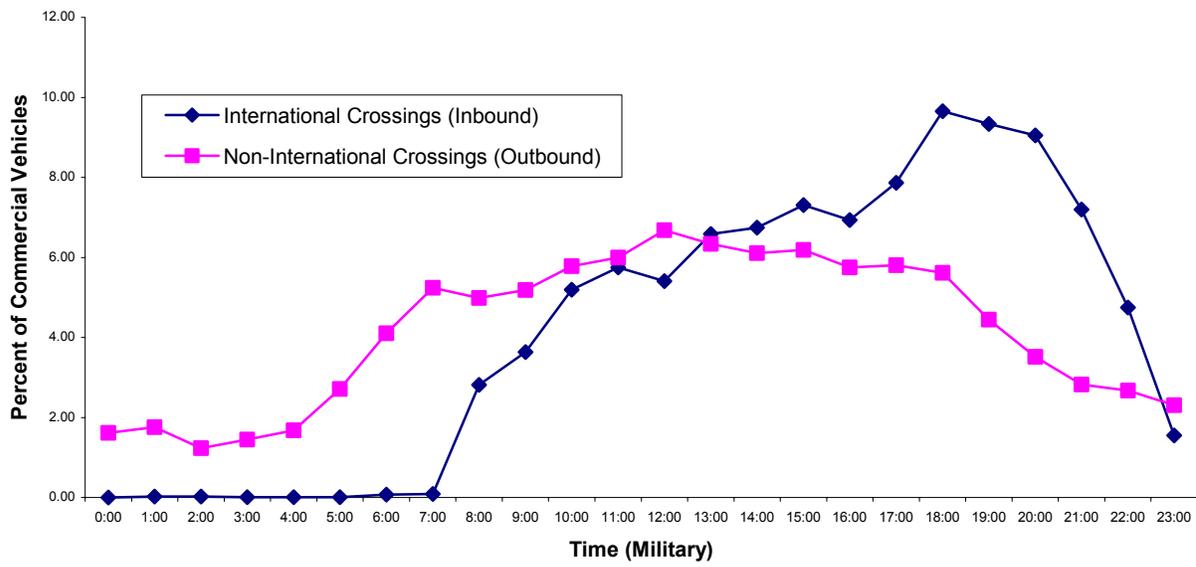
Figure 16: Distribution of Commercial Vehicles by Time-of-Day.

Vehicle Characteristics

As part of the survey, interviewers collected data on the year, make, odometer readings, and model of each vehicle surveyed. This provides an indication of the distribution of vehicles operating (at least at the external stations) by age and condition (as implied by the number of miles on the vehicle). Figure 17 presents the distributions of non-commercial and commercial vehicles by age as reported in the surveys. There were fewer newer commercial vehicles observed than newer non-commercial vehicles. The average age of the non-commercial vehicles was 7.6 years and 8.5 years for the commercial vehicles. Figure 18 shows the average vehicle age.
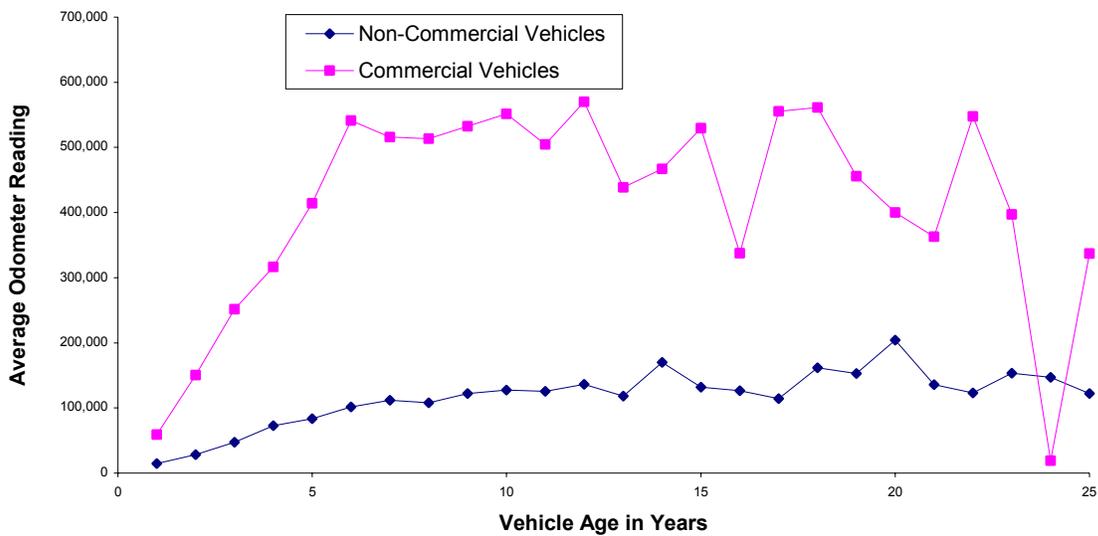
Figure 17. Distribution of Surveyed Vehicles by Age of Vehicle.
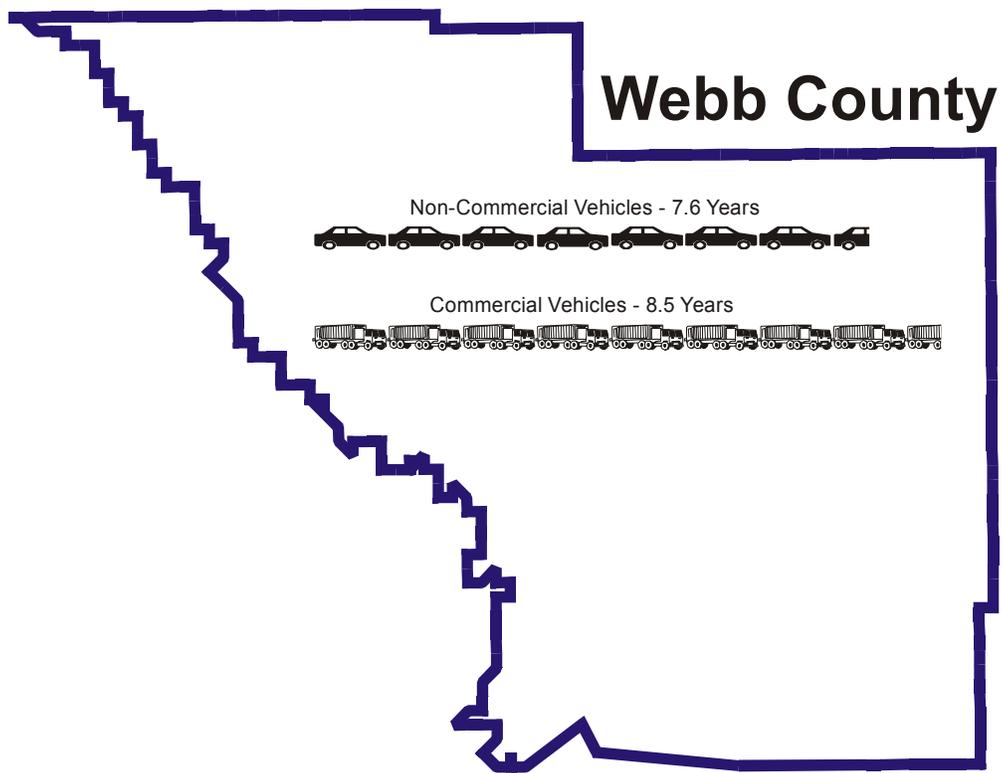


Figure 18. Average Vehicle Age.

Figure 19 presents the average odometer readings for non-commercial and commercial vehicles by age. This data clearly shows the difference in mileage accumulation rates of commercial vehicles as compared to non-commercial vehicles. The data presented in Figures 15 and 16 do not show very smooth trends. This is due in part to the number of observations in the survey. Table 5 presents the numerical values for the data plotted in Figures 17 and 19. The average odometer reading for commercial vehicles was four times higher than the average for non-commercial vehicles. Figure 20 presents the distribution of vehicles by their odometer reading. This figure is misleading since it only shows the percentage of vehicles up to an odometer reading of 250,000 miles. More than 3 percent of the non-commercial vehicles had odometer readings of more than 250,000 miles and 66 percent of the commercial vehicles also had odometer readings above 250,000 miles.

Figure 19. Average Odometer Readings for Vehicles by Age of Vehicle.

Table 5. Distribution of Surveyed Vehicles by Age and Average Odometer Readings.

| Vehicle Age	Non-Commercial Vehicles	Average Odometer Reading	Commercial Vehicles	Average Odometer Reading
1	186	14,511.6	31	59,211.7
2	445	28,510.5	68	150,693.8
3	368	47,255.0	96	251,744.8
4	250	72,604.9	66	316,386.0
5	230	83,543.5	64	414,358.3
6	195	101,418.7	44	541,337.8
7	160	112,001.2	110	515,973.5
8	175	108,110.7	101	513,310.4
9	188	122,282.2	107	532,405.4
10	155	127,630.9	99	551,636.9
11	146	125,335.0	80	504,473.2
12	134	136,200.1	63	569,972.3
13	119	117,971.3	52	438,453.9
14	106	169,923.8	37	467,123.8
15	90	131,670.4	22	529,667.1
16	64	126,584.7	10	337,488.4
17	64	114,432.5	18	555,652.4
18	51	161,834.2	12	561,425.6
19	37	152,728.5	8	455,908.5
20	25	204,413.2	2	399,907.0
21	19	135,907.8	3	363,125.7
22	15	123,020.8	7	547,362.1
23	13	153,619.9	3	397,381.7
24	15	147,224.7	1	18,966.0
25 +	15	122,339.5	12	337,131.3
Totals	**3,265**	**90,318.2**	**1,116**	**439,418.2**
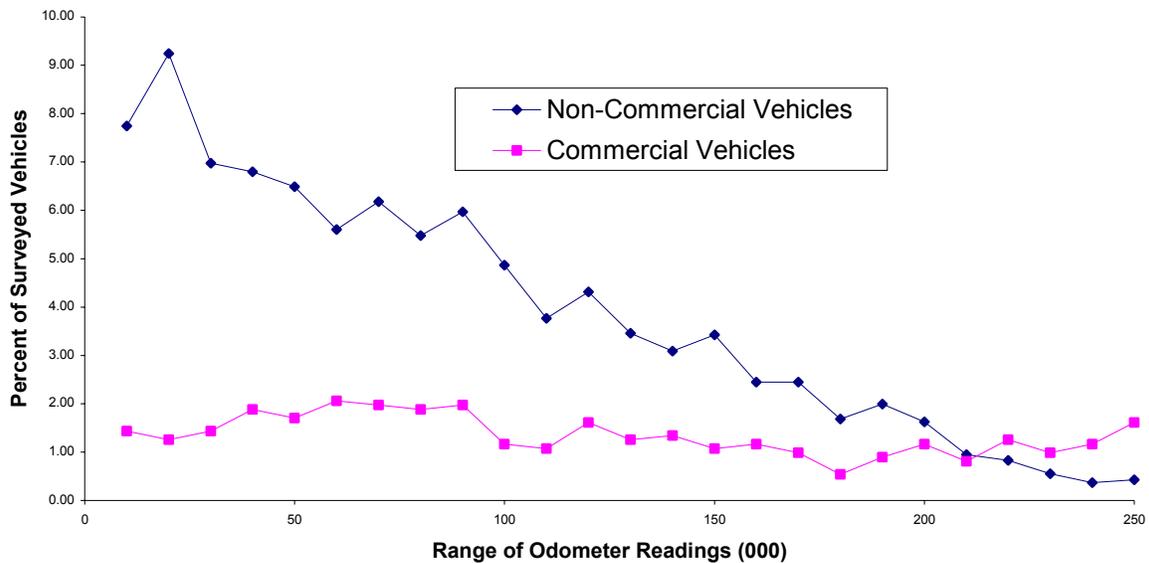
Figure 20. Distribution of Vehicles by Odometer Reading.

Vehicle Occupancy

As vehicles were surveyed, one of the data items recorded was the class (i.e., type) of vehicle and the number of persons in the vehicle. This information provides a means for estimating the number of persons traveling in and out of Webb County. Table 6 presents the number of observed non-commercial and commercial vehicles by class and the average occupancy for each. The overall average occupancy for non-commercial vehicles was 1.72 and 1.13 for commercial vehicles. Figure 21 shows the average vehicle occupancy for the survey area.

Table 6. Distribution of Vehicles by Class and Average Occupancy.

Non-Commercial Vehicle Classification	Observed Vehicles	Average Occupancy	Commercial Vehicle Classification	Observed Vehicles	Average Occupancy
Passenger Vehicle	3,230	1.69	Single Unit – 2 Axle 6 Wheels	77	1.36
Bus	9	5.33			
Taxi/Paid Limo	8	2.62	Single Unit – 3-Axle 10 Wheels	78	1.13
School Bus	2	16.00			
Motorcycle	2	1.00	Single Unit – 4-Axle 14 Wheels	5	1.00
Recreational Vehicle	25	1.92			
Other	23	1.57	Semi-Tractor Trailer Combinations	995	1.12
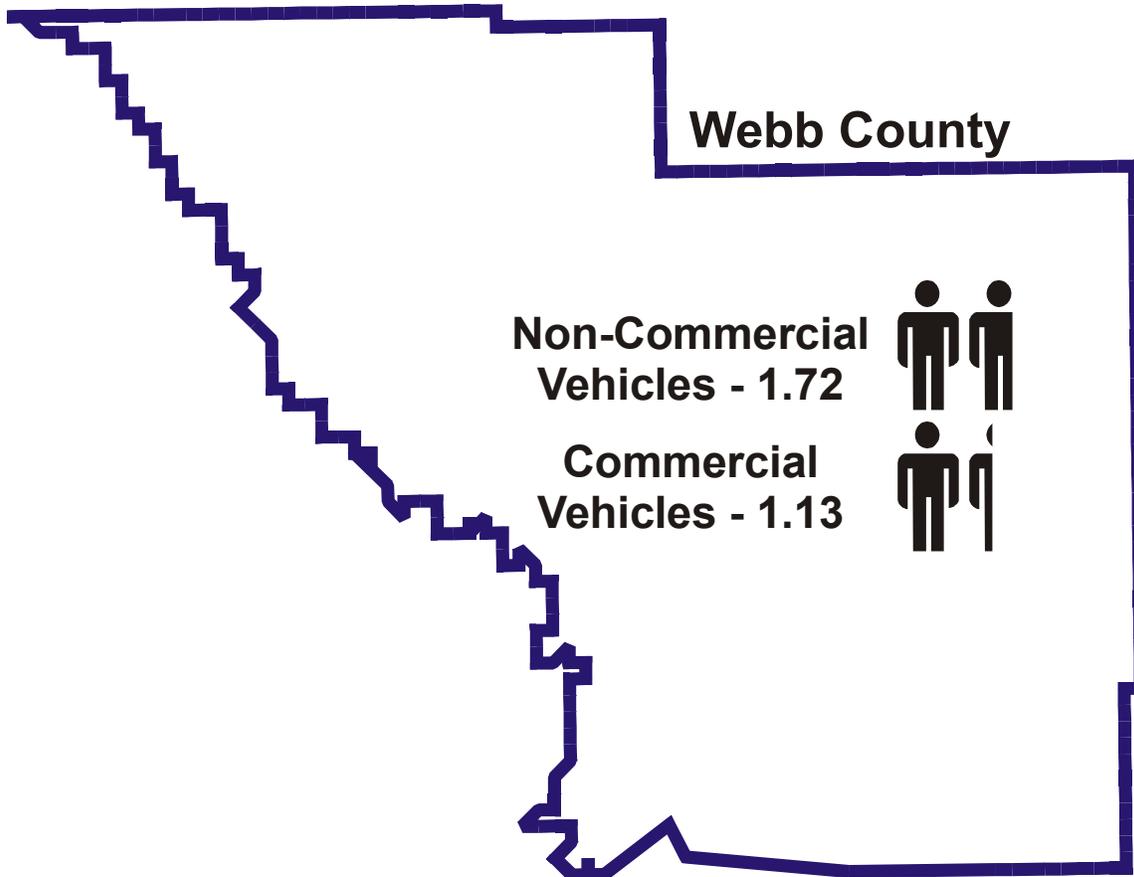
Figure 21. Average Vehicle Occupancy

PEDESTRIAN SURVEY

As previously mentioned, pedestrians were surveyed on the Convent Street International Bridge crossing as they entered the United States to collect information on the characteristics of pedestrian travel between Mexico and Laredo. The number of pedestrians that agreed to participate in the survey was 576. The vendor conducting the survey reported a very high refusal rate of over 40 percent. The vendor also noted that individuals surveyed early in the morning tended to report their purpose for the trip was shopping even though stores were not open at that time. It was believed that many of these individuals may have been traveling to work and did not want to report it in the survey. Figure 22 shows pedestrians crossing at an international border.

Table 7 presents the distribution of persons surveyed by their reported purpose for making the trip. The data is presented by the time-of-day the person was surveyed to determine if any apparent bias may have occurred due to misleading answers. No apparent bias could be

found. The percentage of respondents that reported traveling to/from work before 8 a.m. was nearly 18 percent. The percentage that reported they were going shopping (before 8 a.m.) was about 40 percent. The same percentages for those surveyed between 8 a.m. and 10 a.m. were 10 percent and 55 percent.


Figure 22. Pedestrians crossing at an international border.

As expected, the percentage of persons surveyed before 8 a.m. going to/from work is higher than persons surveyed between 8 a.m. and 10 a.m. The opposite relationship is expected for the two groups relative to the shopping trip purpose. The percentage of persons surveyed that were going shopping (55 percent) in the 8 a.m. to 10 a.m. was higher than the percentage in the before 8 a.m. group (55 percent).

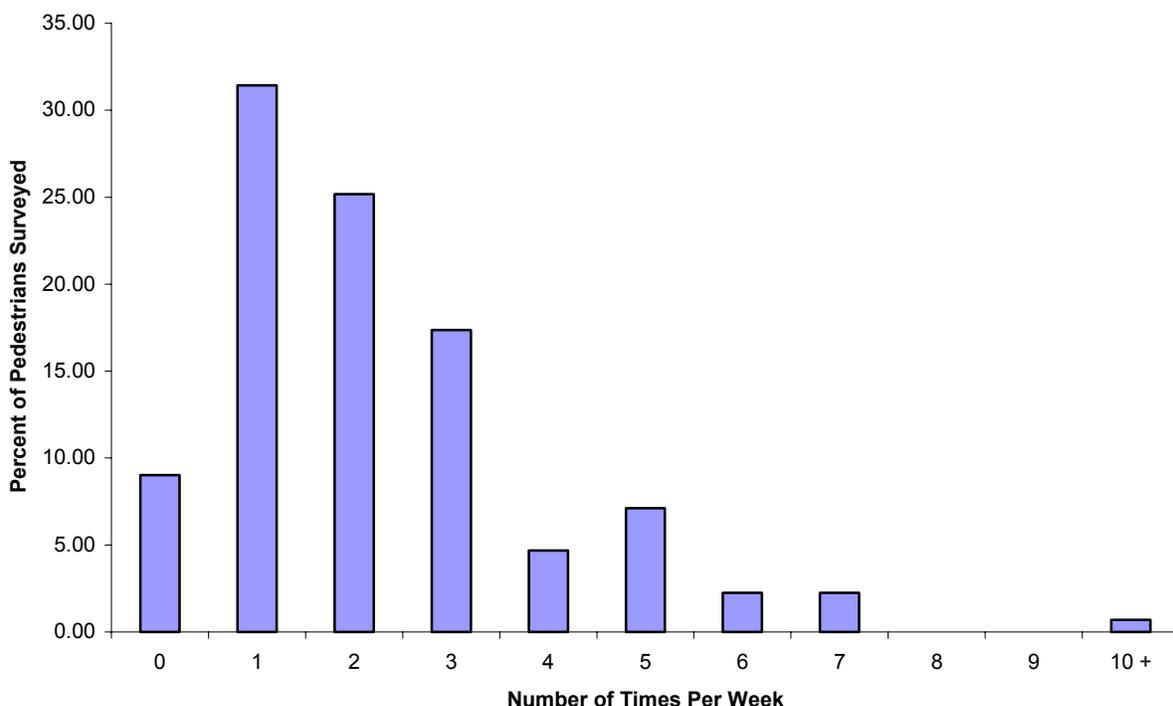**Table 7. Distribution of Pedestrians Surveyed by Trip Purpose.**

Trip Purpose	Pedestrians Surveyed (Inbound)	Pedestrians Surveyed by Time of Day				
		Before 8 a.m.	8 a.m. to 10 a.m.	10 a.m. to 2 p.m.	2 p.m. to 5 p.m.	After 5 p.m.
Home/Return Home	104	13	17	61	13	0
Go/Return Work	39	12	17	10	0	0
Work Related	17	5	9	3	0	0
School	7	3	3	1	0	0
Vacation	1	0	0	1	0	0
Visit Friends/Family	51	8	13	26	4	0
Eat Out	9	0	2	6	1	0
Shopping	328	27	90	166	44	1
Personal Business	16	0	10	5	1	0
Delivery	0	0	0	0	0	0
Other	4	0	2	1	1	0
Refused	0	0	0	0	0	0
All Purposes	576	68	163	280	64	1

Pedestrians were also asked the mode of travel they planned to use to reach their destination after crossing. Nearly 10 percent stated they would be picked up and become a passenger while nearly 25 percent said they would be taking the bus. The majority of persons (i.e., nearly 65 percent) stated they would be walking to their destination. While 57 percent stated their trip purpose was shopping, the number of stops and stores they planned to visit ranged from none to 14. Figure 23 plots the distribution of persons surveyed by the number of stops/stores they planned to visit.
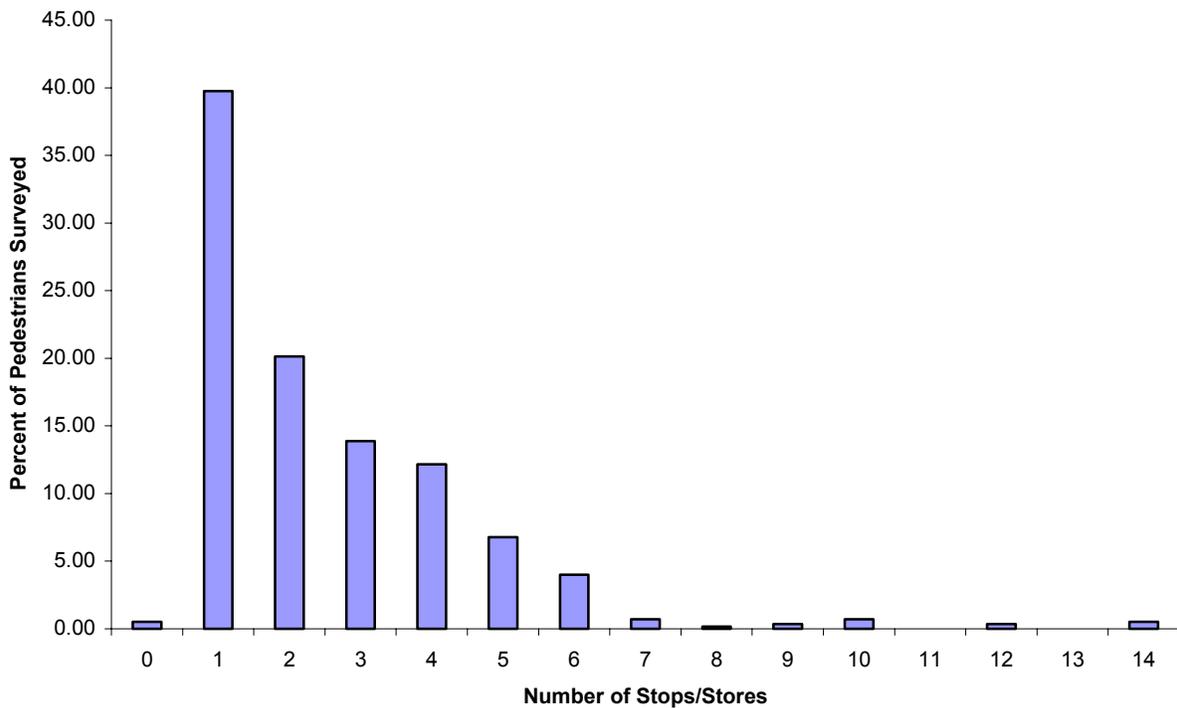
Figure 23. Distribution of Surveyed Pedestrians by Number of Stops/Stores.

Pedestrians were also asked where they lived. Not surprisingly, the majority (82 percent) reported their residence as being in Mexico. The next largest group, 15 percent, reported their residence as being in Laredo and/or Webb County. When asked how often they made this trip every week, the responses ranged from 0 to 7. Zero probably meant the person did not make that particular trip every week. There were also one or two responses of 10 and 15 times. Figure 24 plots the distribution of responses for how often the person made the trip every week.

Figure 24. Distribution of Surveyed Pedestrians by Frequency of Trip.

COMMERCIAL VEHICLE CARGO CHARACTERISTICS

Commercial vehicles represent a major component of travel into, out of, and through Webb County. Laredo serves as a major port for goods moving between Mexico, Texas, and the United States. Specific questions were included in the commercial vehicle survey to obtain information on the cargo being transported, the type of facility where it was picked up and its destination, and how the cargo was transported to the vehicle. Table 8 presents data on the number of commercial vehicles surveyed by survey site and whether or not their cargo was from Mexico.

It should be noted that the values do not sum to the total surveyed. This is due to some respondents reporting that they did not know or refused the question. More than half of the vehicles surveyed were empty and carrying no cargo. This was about the same for both international and non-international crossings. As expected, those vehicles carrying cargo were for the most part carrying Mexico cargo (cargo that originates in Mexico). For those vehicles with cargo, 44 percent reported they picked the cargo up at an intermodal facility and 40 percent

reported they would drop off the cargo at an intermodal facility. An intermodal facility is one where cargo may be transferred between several different modes (e.g., rail to truck, pipeline to truck, etc.)

Figures 25 and 26 present the distribution of surveyed commercial vehicles by the type of transfer for their cargo at the origin (point of pick up) and at the destination (point of drop off). There were some vehicles that reported transferring their cargo from a ship or plane but these were so few they were not included in the plots shown. The majority of cargo transfers were reported as other. The second most reported transfer was truck to/from truck and the third was warehouse to/from truck. Figure 27 shows a commercial vehicle being directed to a survey area.

Table 8. Commercial Vehicles With Mexico Cargo.

| Station Number	Survey Direction*	Facility	Surveyed Vehicles	Empty Vehicles	Vehicles With Mexico Cargo	Vehicles Without Mexico Cargo
207	Inbound	Columbia-Solidarity Bridge	211	88	113	7
206		Convent Street Bridge	No Commercial Vehicles Allowed			
205		Lincoln Juarez Bridge	No Commercial Vehicles Allowed			
209		World Trade Bridge	383	196	175	6
312	Outbound	US 83@ Zapata Co. Line	70	51	1	18
313		FM 649	30	15	0	14
314		SH 359	41	33	0	7
315		US 59	100	62	10	27
316		SH 44@ Duval Co. Line	27	20	1	6
317		SH 44@ LaSalle Co. Line E	21	9	2	9
318		IH 35	165	50	68	43
319		SH 44@ LaSalle Co. Line W	Not Surveyed			
320		US 83@ Dimmit co. Line	108	57	14	36
321		FM 1472	Not Surveyed			
Total Vehicles			**1,156**	**581**	**384**	**173**

* Direction of travel for surveyed vehicles.

Cargo Transfer at Point of Pickup
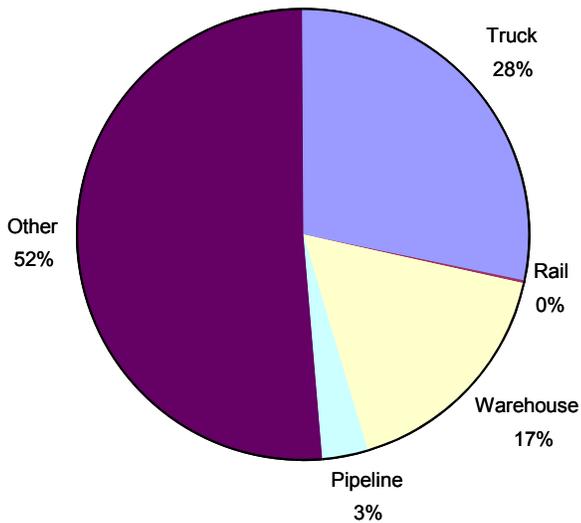
Figure 25. Distribution of Commercial Vehicles by Transfer at Point of Cargo Pickup.

Cargo Transfer at Point of Drop Off
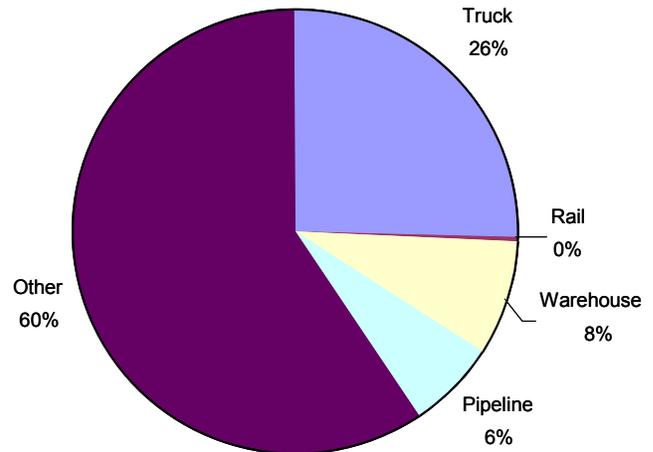
Figure 26. Distribution of Commercial Vehicles by Cargo Transfer at Point of Cargo Pickup.

Figure 27. Cargo shipments were surveyed to determine cargo type and origin of shipment.

Table 9 presents the breakdown of surveyed commercial vehicles by their reported cargo. The data are presented for international and non-international crossings. The distribution is similar for international and non-international crossings. Empty vehicles comprise the majority of vehicles. For those vehicles with cargo, the most reported cargo was manufactured goods and equipment products at both types of crossings. The noticeable difference between the two types of crossings is the number of vehicles carrying metals and minerals at the international crossings. This was more than double that at the non-international crossings. There was also a sizeable difference in the number of vehicles carrying clay, concrete, glass, or stone products at the

international crossings as compared to those at the non-international crossings. The number of vehicles with miscellaneous cargo at the non-international crossings was much higher than those at the international crossings.

Table 9. Distribution of Commercial Vehicles by Type of Cargo.

Type of Cargo	Surveyed Commercial Vehicles			
	International (Inbound)	Percent	Non-International (Outbound)	Percent
Farm Products	13	2.19	11	1.96
Forest Products	2	0.34	4	0.71
Marine Products	0	0.00	3	0.53
Metals and Minerals	63	10.61	29	5.16
Food, Health, and Beauty Products	30	5.05	28	4.98
Tobacco Products	1	0.17	1	0.18
Textiles	13	2.19	14	2.49
Wood Products	12	2.02	9	1.60
Printed Matter	3	0.51	2	0.36
Chemical Products	6	1.01	11	1.96
Refined Petroleum or Coal Products	2	0.34	8	1.42
Rubber, Plastic, and Styrofoam Products	23	3.87	15	2.67
Clay, Concrete, Glass, or Stone Products	31	5.22	10	1.78
Manufactured Goods/Equipment Products	72	12.12	64	11.39
Wastes	2	0.34	4	0.71
Miscellaneous Shipments	3	0.51	18	3.20
Hazardous Materials	0	0.00	3	0.53
Transportation Products	14	2.36	11	1.96
Unclassified Cargo	13	2.19	16	2.85
Refused to Answer	1	0.17	0	0.00
Unknown to Driver	3	0.51	8	1.42
Empty	284	47.81	297	52.85
Totals	**594**	**100.00**	**562**	**100.00**

EXPANDED VEHICLE SURVEY

The vehicle survey data were expanded based on the 24-hour directional vehicle classification counts conducted at each survey site on the day the site was surveyed. The assumption is made that the traffic in the non-surveyed direction is a mirror image of the traffic in the surveyed direction. For example, if 10 percent of the surveyed outbound traffic was through trips, it is assumed that 10 percent of the inbound traffic will be through trips. Table 10 presents the expanded estimates of external local and through trips for non-commercial and commercial vehicles by site as well as the estimates of trips by residents and visitors (i.e., non-residents). It should be noted that estimates are included in Table 10 for the non-surveyed sites (i.e., sites 319 and 321) in Table 2. These estimates are based on the 24-hour vehicle classification counts and two assumptions. The first is that since these sites are low volume and no through trips were reported to those sites at the surveyed sites, all of the trips are assumed to be local. The second assumption is that the trips are made by non-residents. Figure 28 shows the estimates of external-local trip movements by direction and Figure 29 shows the estimates of through trip movements by direction and by location groups.

Table 10. Expanded Survey Results by Station.

Station Number	Survey Direction*	Facility	Non-Commercial Vehicles			Commercial Vehicles			Resident Trips	Visitor Trips
			Local	Through	Total	Local	Through	Total		
207	Inbound	Columbia-Solidarity Bridge	1,160	204	1,364	1,948	93	2,041	536	828
206		Convent Street Bridge	6,931	527	7,458	0	0	0	1,977	5,481
205		Lincoln Juarez Bridge	28,409	769	29,178	0	0	0	9,302	19,876
209		World Trade Bridge	0	0	0	10,106	124	10,230	0	0
312	Outbound	US 83@ Zapata Co. Line	1,307	125	1,432	1,409	93	1,502	648	784
313		FM 649	188	11	199	221	8	229	80	119
314		SH 359	979	156	1,135	801	20	821	457	678
315		US 59	719	250	969	1,052	12	1,064	361	608
316		SH 44@ Duval Co. Line	0	193	193	0	187	187	0	193
317		SH 44@ LaSalle Co. Line E	0	193	193	0	187	187	0	193
318		IH 35	3,408	1,226	4,634	5,068	75	5,143	2,205	2,429
319	Not Surveyed	SH 44@ LaSalle Co. Line W	92	125	217	47	84	131	0	217
320	Outbound	US 83@ Dimmit Co. Line	568	203	772	869	155	1,024	290	482
321	Not Surveyed	FM 1472	165	0	165	101	0	101	0	165
Totals			**43,926**	**3,983**	**47,909**	**21,622**	**1,038**	**22,660**	**15,855**	**32,053**

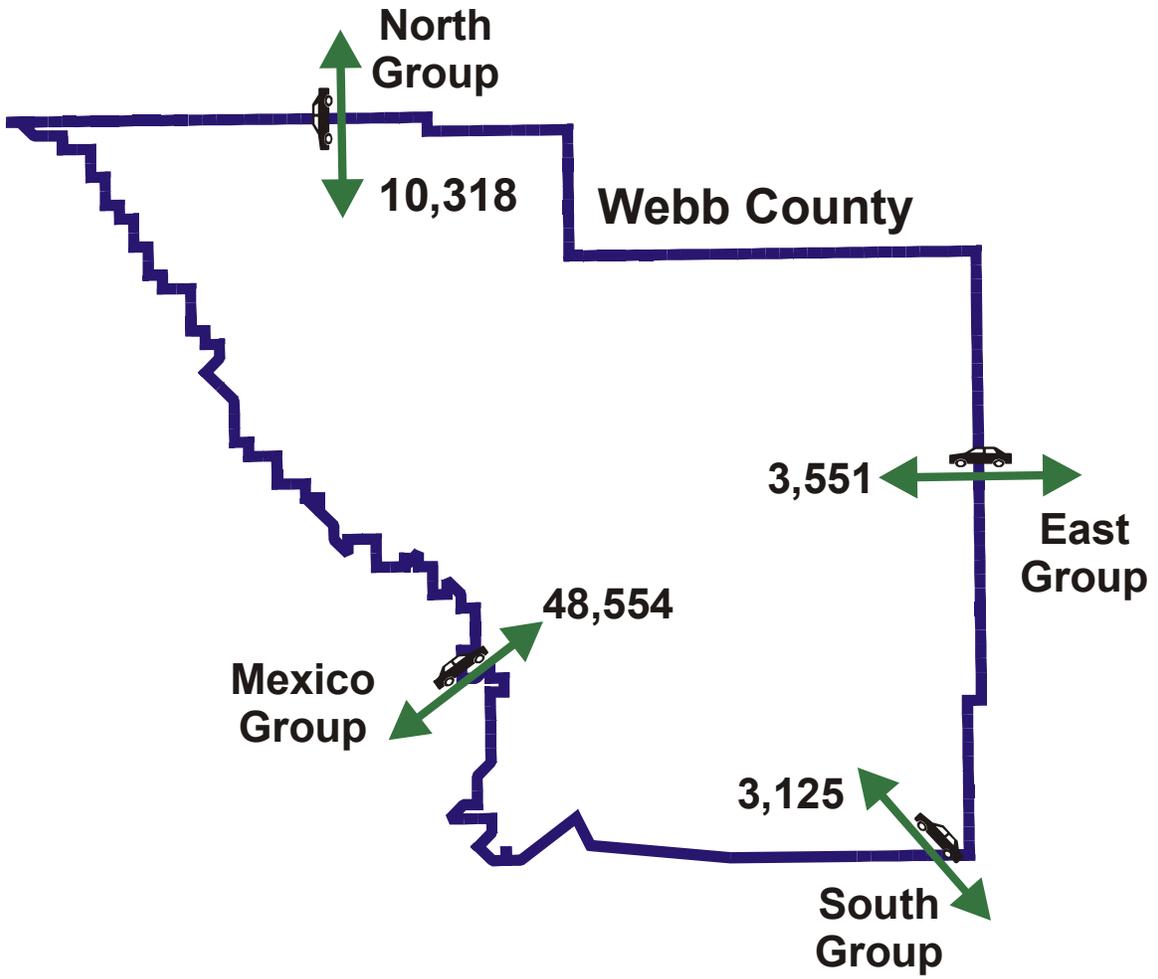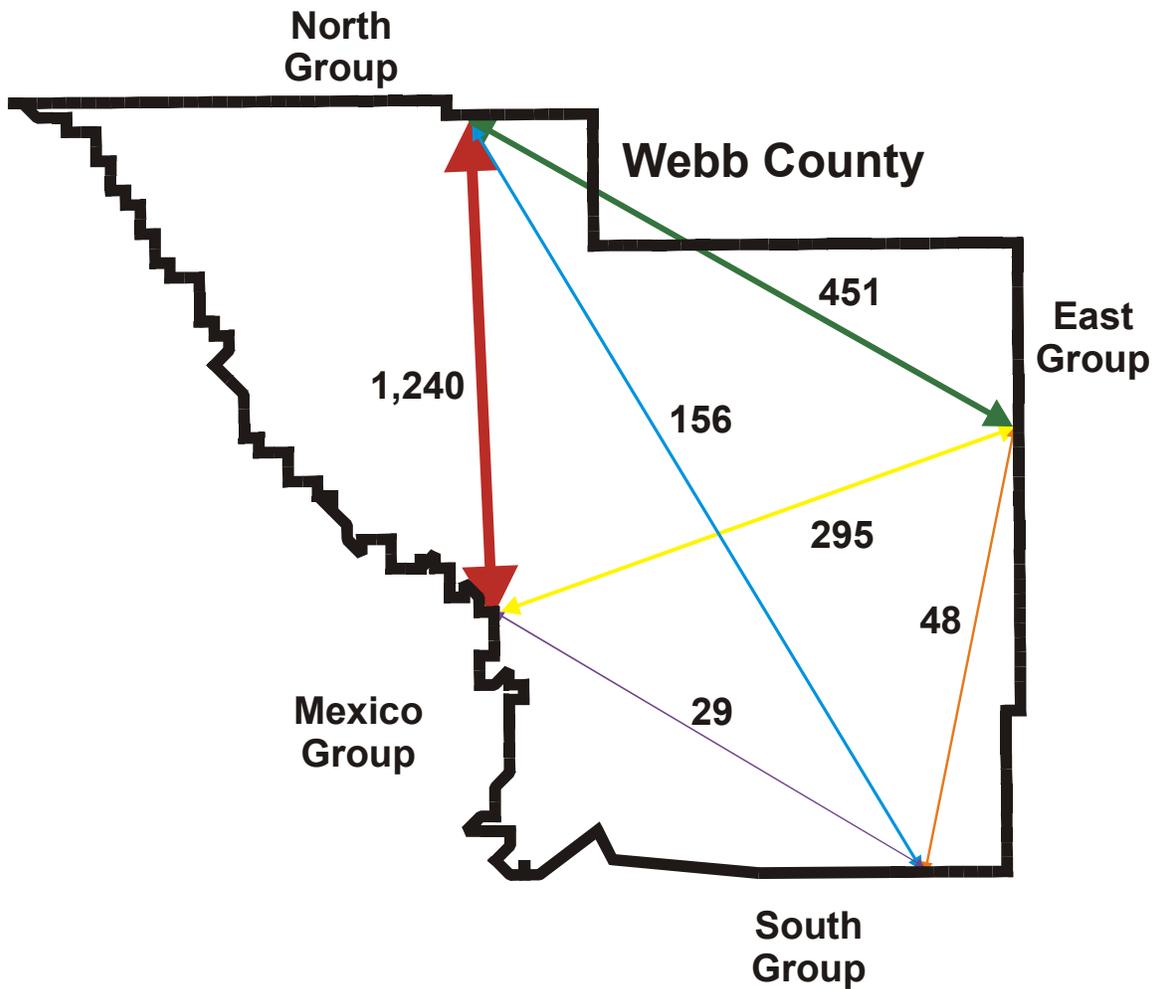* Direction of travel for surveyed vehicles.

Figure 28. Estimates of External-Local Trip Movements by Direction.

Figure 29. Estimates of Through Trip Movements by Location Group.

The expanded vehicle survey data were used to develop zone-to-zone estimates of non-commercial and commercial vehicle trips based on the geocoded origins and destinations for the surveyed trips. Vehicle miles of travel and average trip length information could not be developed because a final calibrated network for the study area of Webb County is still under development. Trips for non-surveyed sites were distributed to the destination zones observed from the surveyed sites on a proportional basis. It is assumed that the surveyed sites are representative of the most likely destination zones for the non-surveyed sites. Since the volume of vehicle trips at the non-surveyed sites is low, the amount of error that may be generated by that assumption is believed to be small.

SURVEY SUMMARY

Over 70,000 vehicles enter and leave Webb County daily. Nearly one-third (32 percent) of those are commercial vehicles. Only 7 percent of the 70,000 vehicles make through trips. More than 70 percent (50,271) of the total vehicles entering and leaving Webb County are at the international border crossings. Nearly two out of every three non-commercial vehicles entering or leaving Webb County are driven by individuals that do not live in Webb County.

Based on the average vehicle occupancy observed in the survey, an estimated 82,400 persons are entering and leaving Webb County daily by non-commercial vehicles and 25,600 persons are entering and leaving by commercial vehicle. Counting the pedestrians crossing the international border, it is estimated that 133,000 persons enter, leave, and/or travel through Webb County daily. The estimated number of non-residents (persons that do not live in Webb County) that enter Webb County daily is over 37,000. This implies that the population of Webb County increases by nearly 20 percent daily due to non-residents traveling into the county. These persons also leave the county but represent a significant influx of people daily into Webb County.

The reasons for travel differed significantly between international and non-international crossings. Persons crossing from Mexico to Laredo were traveling primarily for work or shopping. Persons at the non-international crossings were either returning home or traveling to work. The percentage of HBW trips were about the same for both international and non-international crossings. Significant differences were found in the categories of HBNW and NHB trips.

Commercial vehicle drivers reported similar trip purposes at the destination end of their trip. Some differences were noted at the origin of the trip for commercial vehicles crossing at international crossings versus those crossing at non-international crossings. The trip origin purpose for drivers of commercial vehicles crossing at international crossings was primarily traveling to their base location and returning from a pick-up while drivers at the non-international crossings reported most of their trip origin purposes as either coming from a pick-up or delivery.

The distribution of non-commercial vehicles by time-of-day was similar for both international and non-international crossings. The same distribution for commercial vehicles was not the same. This may have been due to the hours of operation of the commercial vehicle inspection sites at the international crossings.

The average age of surveyed non-commercial vehicles was 7.6 years and the average odometer reading on the vehicle was just over 90,000 miles. The average age for commercial vehicles was 8.5 years and the average odometer reading was nearly 440,000 miles. Every two out of three commercial vehicles had an odometer reading of more than 250,000. Average vehicle occupancy for non-commercial vehicles was 1.72 and average vehicle occupancy for commercial vehicles was 1.13.

Over 12,000 pedestrians cross into Laredo from Mexico daily. They make an average of 2.5 stops or visits to stores and, on average, they make the trip 2.2 times every week. Over half of the pedestrians were coming into Laredo to go shopping.

Figure 30. Typical traffic control plan for surveying non-commercial vehicles.

While commercial vehicles represent nearly a third of all vehicles entering, leaving, and/or traveling through Webb County, approximately half of the vehicles were empty. The most reported cargo being transported was manufactured goods and equipment products.

APPENDIX

LAREDO EXTERNAL SURVEY, SURVEY INSTRUMENTS

Laredo International Border Crossing
        Non-Commercial Vehicle Survey Interview Form A   2 pages

Laredo International Border Crossing Commercial Vehicle Survey Interview
        Commercial Vehicle Survey Interview Form B   3 pages

Laredo International Border Crossing Pedestrian Survey Interview
        Pedestrian Survey Interview Form C   1 page

Laredo External Station
        Non-Commercial Vehicle Survey Interview Form D   2 pages

Laredo External Station
        Commercial Vehicle Survey Interview Form E   2 pages

LAREDO INTERNATIONAL CROSSING NON-COMMERCIAL VEHICLE TRAVEL SURVEY INTERVIEW FORM - A
(INBOUND TO LAREDO)

Station # _____

Survey Date _____

_____
Station Name/Location

Interviewer _____

_____

For each vehicle you collect:	Vehicle 1	Vehicle 2	Vehicle 3
Time	_____a.m. _____p.m.	_____a.m. _____p.m.	_____a.m. _____p.m.
Number of people in vehicle			
Vehicle Type			

Vehicle Type Options:
1) Passenger (car/truck/van) 2) Bus 3) Taxi/Paid Limo 4) School Bus
5) Commercial Vehicle (over 1 ton) 6) Motorcycle 7) Recreational Vehicle 8) Other (specify in block)

QUESTIONS:

	Vehicle 1	Vehicle 2	Vehicle 3
1. What year, make, and model is this vehicle?	_____ Year _____ Make _____ Model	_____ Year _____ Make _____ Model	_____ Year _____ Make _____ Model
Gas (leaded, unleaded), diesel, propane or other fuel?	Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____	Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____	Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____
2. What is the mileage on your odometer?			
3. Where was the last place you got into your vehicle? (place/address or nearest intersection/city)			
4. What time did you leave that location?	_____a.m. _____p.m.	_____a.m. _____p.m.	_____a.m. _____p.m.
5. What was your purpose for being at that location? (Choose from trip purpose options)			
6. What is your next destination? (place/address or nearest intersection/city)			
7. Is that location in Webb County?	☐ Yes ☐ No (Yes go to 9; no go to 8)	☐ Yes ☐ No (Yes go to 9; no go to 8)	☐ Yes ☐ No (Yes go to 9; no go to 8)
8. What road/highway will you be on when you leave Webb County?			
9. What is your purpose for traveling to your next destination? (Choose from trip purpose options)			

Trip Purpose Options:
1)Home/Return Home 2)Go/Return to work 3)Work-related 4)School 5)Vacation
6)Visit Friends/Family 7)Eat out 8)Shop 9)Buy gas 10) Personal Business
11)Pick-up/Drop-off passenger 12)Change travel mode 13)Delivery 14)Other (specify) 15)Refused/Unknown

10. Do you live in Webb County?	☐ Yes ☐ No (Yes go to 13; no go to 11)	☐ Yes ☐ No (Yes go to 13; no go to 11)	☐ Yes ☐ No (Yes go to 13; no go to 11)
11. Did you stay in Webb County overnight?	☐ Yes ☐ No (Yes do 12; No do 14)	☐ Yes ☐ No (Yes do 12; No do 14)	☐ Yes ☐ No (Yes do 12; No do 14)
12. How many nights have you stayed in Webb County?			
13. How many more nights do you plan to stay in Webb County?			

To measure the amount of travel you made today, we need to know the number of places you have gone today. Would you please tell us:

14. Where did your first trip today begin? (city/county/landmark)			
15. Where did you go first? (city/county/landmark)			
16. Where did you go next? (city/county/landmark)			
17. Where did you go next? (city/county/landmark)			
18. Where did you go next? (city/county/landmark)			
19. Where did you go next? (city/county/landmark)			
20. Where did you go next? (city/county/landmark)			
21. How many more places did you stop today?			

LAREDO INTERNATIONAL CROSSING COMMERCIAL VEHICLE SURVEY INTERVIEW FORM - B
(INBOUND TO LAREDO)

Station #

_____

Station Name/Location

_____

Survey Date _____

Interviewer _____

For each vehicle you collect:	Vehicle 1	Vehicle 2	Vehicle 3
1. Time	_____a.m. _____p.m.	_____a.m. _____p.m.	_____a.m. _____p.m.
2. Number of people in vehicle			
3. Vehicle Classification			
4. What is the cargo (choose from vehicle cargo codes)			
5. Did the cargo originate in Mexico?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
6. Where did you pick up your load? (Place/Address or nearest intersection and city)			
7. Was that location an inter-modal transfer or custom brokerage site?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
8. How was your load transferred at that site (choose from transfer codes)?			
9. Where will you drop your cargo off? (Place/Address or nearest intersection and city)			
10. Is that location an inter-modal transfer or custom brokerage site?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
11. How will the cargo be transferred at that site (choose from transfer codes)?			

Vehicle Classification Options: 1) Single Unit 2-axle (6 wheels)   2) Single Unit 3-axle (10 wheels)   3) Single Unit 4-axel (14 wheels)
4) Semi (all tractor-trailer combinations)   5) Other (specify)   99) Unknown

Cargo Transfer Options: 1) Truck-to-Truck   2) Rail-to-Truck   3) Ship-to-Truck
4) Airplane-to-Truck   5) Warehouse-to-Truck   6) Unknown

QUESTIONS:

	Vehicle 1	Vehicle 2	Vehicle 3
12. What is the year and gross weight of this vehicle? Gas (leaded, unleaded), diesel, propane or other fuel?	_____ Year _____ Gross Weight Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____	_____ Year _____ Gross Weight Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____	_____ Year _____ Gross Weight Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____
13. What is the mileage on your odometer?			

40

14. Where was the last place you got into your vehicle? (place/address or nearest intersection/city)			
15. What time did you leave that location?	_____a.m. _____p.m.	_____a.m. _____p.m.	_____a.m. _____p.m.
16. What was your purpose for being at that location? (Choose from trip purpose options)			
17.What is your next destination? (Place/Address or nearest intersection and city)			
18. Is that location in Webb County?	☐ Yes ☐ No (Yes, go to 22; No go to 19)	☐ Yes ☐ No (Yes, go to 22; No go to 19)	☐ Yes ☐ No (Yes, go to 22; No go to 19)
19. What road/highway will you be on when you leave Webb County?			
20. Is that location in Texas?	☐ Yes ☐ No (Yes, go to 22; No go to 21)	☐ Yes ☐ No (Yes, go to 22; No go to 21)	☐ Yes ☐ No (Yes, go to 22; No go to 21)
21. What road/highway will you be on when you leave Texas?			
22. What is your purpose for traveling to your next destination? (Choose from trip purpose options)			

Trip Purpose Options: 1) Base location/return to base location   2) Delivery   3) Pick-up
4) Maintenance   5) Driver needs (lunch, etc.)   6) To Home   7) Buy fuel
8) Other (specify)   9) Refused/Unknown

To measure the amount of travel you made today, we need to know the places you have gone today. Would you please tell us:

23. Where did your first trip today begin? (city/county/landmark)			
24. Where did you go first? (city/county/landmark)			
25. Where did you go next? (city/county/landmark)			
26. Where did you go next? (city/county/landmark)			
27. Where did you go next? (city/county/landmark)			
28. Where did you go next? (city/county/landmark)			
29. Where did you go next? (city/county/landmark)			
30. How many more places did you stop today?			

41

Vehicle Cargo Codes

1	-	Farm Products	Livestock, fertilizer, dirt, landscaping, etc.
2	-	Forest Products	Trees, sod, etc.
3	-	Marine Products	Fresh fish, seafood, etc.
4	-	Metals and Minerals	Crude petroleum, natural gas, propane, Metals, gypsum, ores, etc.
5	-	Food, Health, and Beauty Products	Assorted food products, cosmetics, etc.
6	-	Tobacco Products	Cigarettes, cigars, and chewing tobacco
7	-	Textiles	Clothing, linens, etc.
8	-	Wood Products	Lumber, paper, cardboard, wood pulp, etc.
9	-	Printed Matter	Newspapers, magazines, books, etc.
10	-	Chemical Products	Soaps, paints, household or industrial chemicals, etc.
11	-	Refined Petroleum or Coal Products	Gasoline, etc.
12	-	Rubber, Plastic, and Styrofoam Products	Finished products of rubber, plastic, or Styrofoam
13	-	Clay, Concrete, Glass, or Stone	Finished products of clay, concrete, glass, or stone
14	-	Manufactured Goods/Equip.	Miscellaneous products, such as machinery, appliances, furniture, etc.
15	-	Wastes	Waste products including scrap and recyclable materials
16	-	Miscellaneous Shipments	U.S. mail, U.P.S., Federal Express, and other mixed cargo
17	-	Hazardous Materials	Hazardous chemicals and substances
18	-	Transportation	Automobiles, Heavy Equipment, etc.
19	-	Unclassified Cargo	Cargo not falling within one of the above categories
20	-	Driver Refused to Answer	Driver refused to answer
21	-	Unknown to Driver	Unknown to driver
22	-	Empty	Empty (including empty shipping containers)

LAREDO INTERNATIONAL CROSSING PEDESTRIAN SURVEY INTERVIEW FORM – C
(INBOUND TO LAREDO)

Station #

_____
Station Name/Location

_____

Survey Date _____

Interviewer _____

For each person you collect:	Person 1	Person 2	Person 3
Time	a.m. p.m.	a.m. p.m.	a.m. p.m.
1. What is your next destination? (place/address or nearest intersection)			
2. How will you travel to that destination? (Choose from vehicle type options)			
3. What is the purpose of traveling to your next destination? (Choose from trip purpose options)			
4. How many places/stores do you plan to visit in Laredo today?			
5. Do you live in	☐ Mexico (go to 6) ☐ Laredo/Webb Co (go to 6) ☐ Texas ☐ Other _____	☐ Mexico (go to 6) ☐ Laredo/Webb Co (go to 6) ☐ Texas ☐ Other _____	☐ Mexico (go to 6) ☐ Laredo/Webb Co (go to 6) ☐ Texas ☐ Other _____
6. How many time per week do you make this trip?			

Trip Purpose Options: 1)Home/Return Home 2)Go/Return to work 3)Work-related 4)School 5)Vacation
6)Visit Friends/Family 7)Eat out 8)Shop 9)Personal Business
10)Delivery 11)Other (specify) 12)Refused/Unknown

Vehicle Type Options: 1) Passenger (car/truck/van) 2) Bus 3) Taxi/Paid Limo 4) School Bus
5) Commercial Vehicle (over 1 ton) 6) Motorcycle 7) Recreational Vehicle 8) Other (specify in block)

Laredo External Station
TRAVEL SURVEY INTERVIEW FORM - D
(OUTBOUND DIRECTION FROM WEBB COUNTY)

Station # _____   Survey Date _____

Station Name/Location _____   Interviewer _____

For each vehicle you collect: Vehicle 1

Vehicle 2
Vehicle 3

	Vehicle 1	Vehicle 2	Vehicle 3
Time	_____a.m. _____p.m.	_____a.m. _____p.m.	_____a.m. _____p.m.
Number of people in vehicle			
Vehicle Type			

Vehicle Type options: **1)**Passenger (car/truck/van)   **2)**Bus   **3)**Taxi/Paid Limo   **4)**School Bus
                         5)Commercial Vehicle (over 1 ton)   **6)**Motorcycle   **7)**Recreational Vehicle   **8)**Other (specify in block)

QUESTIONS:

	Vehicle 1	Vehicle 2	Vehicle 3
1. What year, make, and model is this vehicle? Gas (leaded, unleaded), diesel, propane or other fuel?	_____ Year _____ Make _____ Model Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____	_____ Year _____ Make _____ Model Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____	_____ Year _____ Make _____ Model Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____
2. What is the mileage on your odometer?			
3. Where was the last place you got into your vehicle? (place/address or nearest intersection/city)			
4. Was that location in Laredo or Webb County?	☐ Yes ☐ No (Yes go to 6; no go to 5)	☐ Yes ☐ No (Yes go to 6; no go to 5)	☐ Yes ☐ No (Yes go to 6; no go to 5)
5. What road/bridge did you use to enter Laredo or Webb County?			
6. What time did you leave that location?	_____a.m. _____p.m.	_____a.m. _____p.m.	_____a.m. _____p.m.
7. What was your purpose for being at that location? (Choose from trip purpose options)			
8. What is your next destination? (place/address or nearest intersection/city)			
9. Is that location in Texas?	☐ Yes ☐ No (Yes go to 11; no go to 10)	☐ Yes ☐ No (Yes go to 11; no go to 10)	☐ Yes ☐ No (Yes go to 11; no go to 10)
10. What road/bridge will you use to leave Texas?			
11. What is your purpose for traveling to your next destination? (Choose from trip purpose options)			

Trip Purpose Options: **1)**Home/Return home   **2)**Go/Return to work   **3)**Work-related   **4)**School   **5)**Vacation
      6)Visit Friends/Family   **7)** Eat out   **8)**Shop   **9)**Buy gas   **10)** Personal business
      11) Pick-up/Drop-off passenger   **12)**Change travel mode   **13)**Delivery   **14)**Other (specify)
      15) Refused/Unknown

12. Do you live in Laredo or Webb County ?	☐ Yes ☐ No (Yes go to 14; no go to 13)	☐ Yes ☐ No (Yes go to 14; no go to 13)	☐ Yes ☐ No (Yes go to 14; no go to 13)
13. Did you stay in Laredo/Webb County overnight?	☐ Yes ☐ No (If YES do 13a)	☐ Yes ☐ No (If YES do 13a)	☐ Yes ☐ No (If YES do 13a)
13a. How many nights have you stayed in Laredo/Webb County?			

To measure the amount of travel you made today, we need to know the number of places you have gone today. Would you please tell us:

14. Where did your first trip today begin? (city/county/landmark)			
15. Where did you go first? (city/county/landmark)			
16. Where did you go next? (city/county/landmark)			
17. Where did you go next? (city/county/landmark)			
18. Where did you go next? (city/county/landmark)			
19. Where did you go next? (city/county/landmark)			
20. Where did you go next? (city/county/landmark)			
21. How many more places did you stop today?			

Station # _____   Survey Date _____

Station Name/Location _____   Interviewer _____

For each vehicle you collect:	Vehicle 1	Vehicle 2	Vehicle 3
1. Time	_____a.m. _____p.m.	_____a.m. _____p.m.	_____a.m. _____p.m.
2. Number of people in vehicle			
3. Vehicle Classification			
4. What is the cargo (choose from vehicle cargo codes)			
5. Did your cargo originate in Mexico?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
6. Where did you pick up your load? (Place/Address or nearest intersection and City)			
7. Was that location an inter-modal transfer or custom brokerage site?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
8. How was your load transferred at that site (choose from transfer codes)?			
9. Where will you drop your cargo off? (Place/Address or nearest intersection and City)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
10. Is that location an inter-modal transfer or custom brokerage site?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
11. How will the cargo be transferred at that site (choose from transfer codes)?			

Vehicle Classification Options: 1) Single Unit 2-axle (6 wheels)   2) Single Unit 3-axle (10 wheels)   3) Single Unit 4-axel (14 wheels)
4) Semi (all tractor-trailer combinations)   5) Other (specify)   99) Unknown

Cargo Transfer Options: 1) Truck-to-Truck   2) Rail-to-Truck   3) Ship-to-Truck   4) Airplane-to-Truck
5) Warehouse-to-Truck   6) Pipeline-to-Truck   7) Unknown

QUESTIONS:

	Vehicle 1	Vehicle 2	Vehicle 3
12. What is the year and gross weight of this vehicle? Gas (leaded, unleaded), diesel, propane or other fuel?	_____ Year _____ Gross Weight Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____	_____ Year _____ Gross Weight Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____	_____ Year _____ Gross Weight Leaded ☐ Unleaded ☐ Diesel ☐ Propane ☐ Other ☐ _____
13. What is the mileage on your odometer?			
14. Where was the last place you got into your vehicle? (place/address or nearest intersection/city)			
15. Was that location in Laredo or Webb County?	☐ Yes ☐ No (Yes go to 17; no go to 16)	☐ Yes ☐ No (Yes go to 17; no go to 16)	☐ Yes ☐ No (Yes go to 17; no go to 16)
16. What road/bridge did you use to enter Laredo / Webb County?			
17. What time did you leave that location?	_____a.m. _____p.m.	_____a.m. _____p.m.	_____a.m. _____p.m.
18. What was your purpose for being at that location? (Choose from trip purpose options)			
19. What is your next destination? (place/address or nearest intersection/city)			

20. Is that location in Texas?	☐ Yes ☐ No (Yes go to 22; no go to 21)	☐ Yes ☐ No (Yes go to 22; no go to 21)	☐ Yes ☐ No (Yes go to 22; no go to 21)
21. What road/bridge will you use to leave Texas?			
22. What is your purpose for traveling to your next destination? (Choose from trip purpose options)			

Trip Purpose Options: 1) Base location/return to base location   2) Delivery   3) Pick-up
4) Maintenance   5) Driver needs (lunch, etc.)   6) To Home   7) Buy fuel
8) Other (specify)   9) Refused/Unknown

To measure the amount of travel you made today, we need to know the places you have gone today. Would you please tell us:

23. Where did your first trip today begin? (city/county/landmark)			
24. Where did you go first? (city/county/landmark)			
25. Where did you go next? (city/county/landmark)			
26. Where did you go next? (city/county/landmark)			
27. Where did you go next? (city/county/landmark)			
28. Where did you go next? (city/county/landmark)			
29. Where did you go next? (city/county/landmark)			
30. How many more places did you stop today?			

Vehicle Cargo Codes
1 – Farm Products   Livestock, fertilizer, dirt, landscaping, etc.
2 – Forest Products   Trees, sod, etc.
3 – Marine Products   Fresh fish, seafood, etc.
4 – Metals and Minerals   Crude petroleum, natural gas, propane, metals, gypsum, etc.
5 – Food, Health, Beauty Products   Assorted food products, cosmetics, etc.
6 – Tobacco Products   Cigarettes, cigars, and chewing tobacco
7 – Textiles   Clothing, lines, etc
8 – Wood Products   Lumber, paper, cardboard, wood pulp, etc
9 – Printed Matter   Newspapers, magazines, books, etc.
10 – Chemical Products   Soaps, paints, household or industrial chemicals, etc
11 – Refined Petroleum or Coal Products   Gasoline, etc.
12 – Rubber, Plastic, Styrofoam Products   Finished products of rubber, plastic, or Styrofoam
13 – Clay, Concrete, Glass, or Stone   Finished products of clay, concrete, glass, or stone
14 – Manufactured Goods/Equipment   Miscellaneous products such as machinery, appliances, etc
15 – Wastes   Waste products, including scrap and recyclable materials
16 – Miscellaneous Shipments   U.S. Mail, U.P.S., Federal Express, and other mixed cargo
17 – Hazardous Materials   Hazardous chemicals and substances
18 – Transportation   Automobiles, Heavy Equipment, etc.
19 – Unclassified Cargo   Cargo not falling within one of the above categories
20 – Driver Refused to Answer   Driver refused to answer
21 – Unknown to Driver   Unknown to driver
22 - Empty   Empty