Chapter 2 - Data Collection

The collection of quality data was an early priority in this study. Most importantly, a clear statement of purpose and need for any recommended improvements to SR 316 would be needed to further the planning for these projects.

In addition, safety was a key consideration in developing strategies to improve conditions in the corridor. As such, a significant portion of data collection was devoted to an investigation of accidents from a data set containing the latest three years of complete accident information. Also, with the coordination of data collected from the Atlanta Regional Commission, the Northeast Georgia Regional Development Center, and Athens-Clarke County, and to make the data applicable to the entire corridor, demographic data, aerial photography and travel model information from these organizations was merged and converted into a common format for use by this study.

2.1 Traffic Volumes

The study collected supplemental traffic data at several locations in the SR 316 corridor to complement daily traffic counts published annually by the GDOT. In addition, supplemental data including peak period turning movement counts was provided by the Gwinnett County Department of Transportation for several major intersections in the Lawrenceville-Dacula area.

Two types of counts were used to compile the base year profile of traffic volumes: peak period (AM and PM) turning movement counts and 24-hour vehicle classification counts. Locations where supplemental traffic counts were collected for the study are listed in Table 2-1, while vehicle classification locations are listed in Table 2-2..

All turning movement and vehicle classification data was collected during February and March of 2001. The volumes and vehicle types reflect those that occur on typical weekdays. Data collection activities did not occur on weekends, holidays or during the University of Georgia's spring break.

Twenty-four hour vehicle classification counts were used to obtain the percentage of trucks on several sections of SR 316 and some cross streets. Table 2-2 lists the locations of the vehicle classification counts along with truck percentages for daily, A.M. peak-hour, and P.M. peak-hour. Truck percentages on SR 316 were found to be typical for this type of roadway, with daily values fluctuating between 10% and 20% of the total traffic. During peak hours, the percentage of trucks usually falls relative to the daily share in the peak direction of travel. However, in the off-peak direction of travel, the peak hour percent of trucks can be equivalent or higher than the daily average.

Based on the classification counts, a traffic flow bandwidth map (Figure 2-1) was created showing concentrations of daily volume on SR 316 as well as selected cross streets where observed traffic volumes were available.

Table 2-1
Turning Movement Count Locations

County	Intersection Name	Area
Gwinnett	WB SR316 Ramps At SR120	Lawrenceville
	EB SR316 Ramps At SR120	Lawrenceville
	Lawrenceville-Suwanee At SR120	Lawrenceville
	Lawrenceville-Suwanee At Old Norcross	Lawrenceville
	SR316 At Hi Hope Rd.	Lawrenceville
	SR316 At Progress Center Rd.	Lawrenceville
	SR316 At Hurricane Trail	Lawrenceville
	SR316 At Fence Rd.	Dacula
Barrow	SR316 At Kilcrease Rd.	Auburn
	SR316 At Patrick Mill Rd.	Auburn
	SR316 At Bethlehem Rd./SR324	Auburn
	SR316 At SR81	Winder
	SR316 At SR11	Winder
	SR316 At SR53	Winder
	SR316 At McCarty Rd.	Stratham
	SR316 At Stratham Rd./SR324	Stratham
Oconee	SR316 At McNutt Rd.	Bogart
	SR316 At Mars Hill Rd.	Bogart
	SR316 At Jimmy Daniels Rd.	Watkinsville
	SR316 At Virgil Langford Rd.	Watkinsville
	SR316 At Mars Hill Extension	Watkinsville

Daily traffic volume on SR 316 varies from its western end at I-85 to its eastern end in Oconee County. Traffic volumes are heaviest on the five mile portion of urban freeway in Gwinnett County (between I-85 and SR 120). Daily traffic volumes range from a total of 70,000 to 86,000 vehicles per day between Boggs Road and the SR 120 interchange.

Moving east into the five-mile portion classified as an urban principal arterial between SR 120 and Winder Highway (State Route 8), traffic volumes are lower. At Collins Hill Road, average daily traffic is 59,000 vehicles per day. Further east between Cedars Road and Winder Highway, daily traffic falls to 40,000 vehicles per day. SR 316's four-lane capacity is restricted in this area by a series of closely spaced, at-grade intersections that limit the growth of traffic volumes through this area.

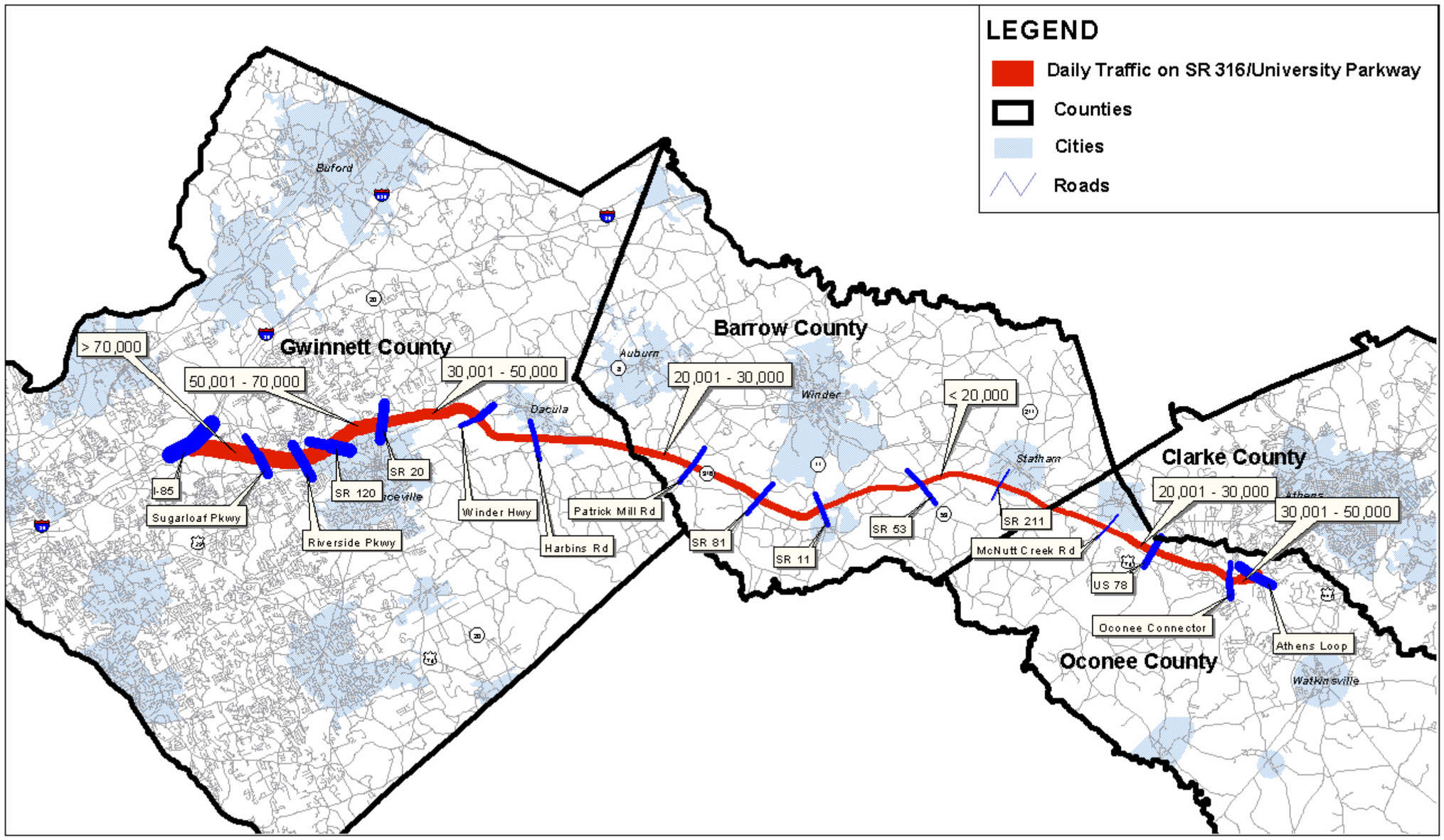
East of Winder Highway, adjacent land-uses change from urban types of development to low-density residential and agricultural uses. As a result, traffic volumes fall significantly compared to near Lawrenceville. In this rural section, daily traffic volumes range from 15,000 to 30,000 vehicles per day between Winder Highway and the Oconee Connector. At the Oconee Connector, an influx of traffic comprised mainly of motorists commuting between Watkinsville and Athens use SR 316. Consequently, daily traffic volumes in that portion average between 30,000 and 40,000 vehicles per day.

Table 2-2
Vehicle Classification Count Locations

Type	Location	Truck %'s			Area
		Day	AM	PM	
Mainline	SR316 (Boggs Rd. - Sugarloaf Pkwy.)	9%	7%	7%	Lawrenceville
	SR316 (SR120 - Cedars Rd.)	15%	10%	10%	Lawrenceville
	SR316 (Patrick Mill Rd. - Bethlehem Rd.)	10%	8%	8%	Winder
	SR316 (West of US78/SR10)	16%	10%	10%	Bogart
	SR316 (East of US78/SR10)	11%	7%	7%	Watkinsville
Ramp	Sugarloaf Pkwy. (EB Off Ramp)	6%	6%	3%	Lawrenceville
	Sugarloaf Pkwy. (WB Ent. Ramp)	6%	9%	2%	Lawrenceville
	Sugarloaf Pkwy. (EB Ent. Ramp)	7%	9%	3%	Lawrenceville
	Sugarloaf Pkwy. (WB Off Ramp)	8%	10%	5%	Lawrenceville
Ramp	Riverside Pkwy. (EB Off Ramp)	10%	10%	6%	Lawrenceville
	Riverside Pkwy. (WB Ent. Ramp)	11%	10%	10%	Lawrenceville
	Riverside Pkwy. (EB Ent. Ramp)	7%	7%	6%	Lawrenceville
Ramp	SR 120 (EB Off Ramp)	6%	6%	3%	Lawrenceville
	SR 120 (WB Ent. Ramp)	6%	7%	6%	Lawrenceville
	SR 120 (EB Ent. Ramp)	5%	8%	4%	Lawrenceville
	SR 120 (WB Off Ramp)	8%	7%	9%	Lawrenceville
Ramp	US 78 (EB Off Ramp)	14%	16%	12%	Bogart
	US 78 (WB Ent. Ramp)	13%	8%	8%	Bogart
	US 78 (EB Ent. Ramp)	10%	6%	6%	Bogart
	US 78 (WB Off Ramp)	9%	4%	6%	Bogart
Ramp	Athens Loop (SB Ent. From EB SR 316)	9%	5%	6%	Watkinsville
	Athens Loop (NB Ent. From EB SR 316)	9%	10%	5%	Watkinsville
	Athens Loop (SB Ent. From WB SR 316)	7%	7%	7%	Watkinsville
	Athens Loop (SB Off To SR 316)	4%	7%	3%	Watkinsville
	Athens Loop (NB Off To SR 316)	11%	11%	5%	Watkinsville

The relative volume of daily traffic on cross streets is also shown in Figure 2-1. Cross street volumes are highest at the Lawrenceville-Duluth portion of the corridor. Daily traffic on I-85 exceeds 220,000 vehicles per day south of SR 316. Also on the western end of SR 316, Sugarloaf Parkway, Riverside Parkway, SR 120 and SR 20 in Gwinnett County experience daily traffic volumes in the 20,000 to 50,000 vehicles per day range. The Athens Loop/SR 10 has traffic volumes on it approaching 50,000 vehicles per day south of SR 316.

Figure 2-1
Daily Traffic Bandwidth



2.2 Safety

Accident data was supplied by the GDOT, using traffic records collected and maintained by the State of Georgia's Office of Highway Safety. It consisted of individual accident records in digital format and several hardcopy reports summarizing accident experience on SR 316 in the study area. Accidents that occurred on streets crossing SR 316, and in the vicinity of its intersection with SR 316, were also included in the accident record data.

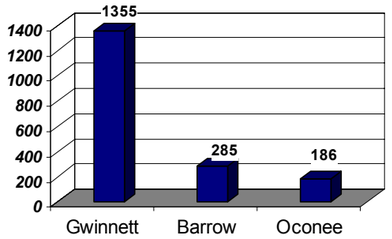
The accident data included all accidents that occurred during the 1995 to 1997 calendar years (the most current years that a complete datasets were available). For tabulations of fatal accidents, data from 1994, 1998, 1999, and most of calendar year 2000, supplemented the 1995 to 1997 data (only location and date information was available from the statewide database for fatal accidents that occurred in 1999 and 2000).

The study makes frequent reference to "severe" types of accidents, which are those where at least one person who was either injured or killed. The study performed accident analyses to:

- Provide a basis for the calculation of the estimated future safety-related benefits that could be expected from the recommended improvements;
- Demonstrate that the recommended improvements to better manage access onto and off of SR 316 will lower existing accident rates;
- Provide justification for prioritizing the study's recommended improvements into an overall long range improvement plan; and,
- Identify locations where safety could be improved by the implementation of study-recommended safety projects.

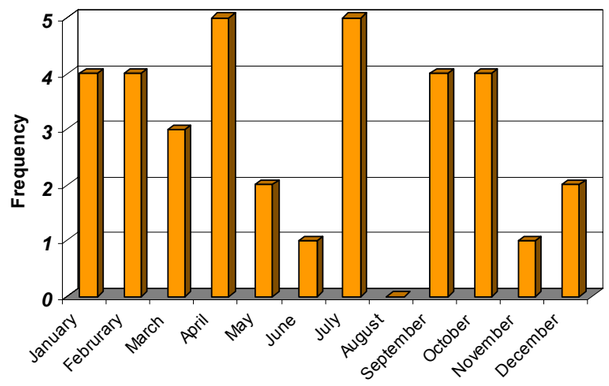
The total number of accidents (all types) that occurred on SR 316 in each county between 1995 and 1997 are illustrated Figure 2-2.

Figure 2-2
Total Accidents By County



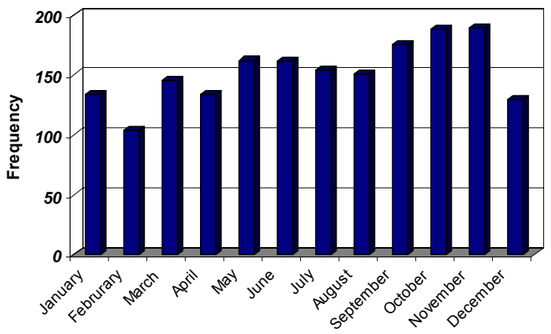
The distribution of fatal accidents by month-of-year is shown in Figure 2-3. The highest number occurred in April and July during. None occurred during the month of August.

Figure 2-3
Fatal Accidents By Month-Of-Year



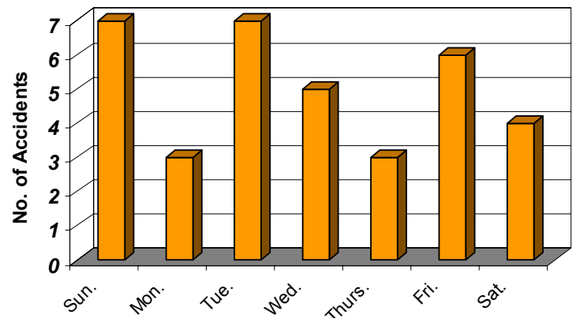
A bar chart showing total accidents by month-of-year is presented in Figure 2-4. The distribution of total accidents by month-of-year follows a pattern similar to the distribution of traffic volumes throughout a calendar year. December, January and February are usually low traffic volume months in comparison with the others. Fewer accidents occurred on SR 316 during these same months.

Figure 2-4
Total Accidents By Month-Of-Year



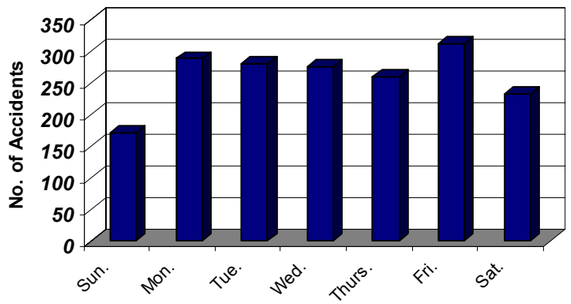
The number of fatal accidents by day-of-week is shown in Figure 2-5. Fatal accidents were most likely to occur on Sundays or Tuesdays. Seven fatal accidents occurred on Sundays and Tuesdays. These figures indicate that high numbers of fatal accidents are not correlated with high traffic volumes (Sundays are the lowest volume travel day of the week). The data may indicate that fatal accidents are more likely correlated with low to moderate traffic volume and relatively higher average travel speeds.

Figure 2-5
Fatal Accidents By Month-Of-Year



Total accidents, by day-of-week, are displayed in Figure 2-6. Similar to Figure 2-4, the day-of-week accident pattern closely resembles typical distributions of traffic volume by day-of-week. It demonstrates how closely the total number of accidents is related to traffic volume under normal circumstances. Fridays are typically the highest volume traffic day and on SR 316 the highest number of total accidents takes place then. The lightest traveled day-of-week is Sunday which is when the fewest total accidents occur.

Figure 2-6
Total Accidents By Day-Of-Week



2.3 Origin-Destination Study

As part of the data collection of this study, an Origin-Destination Survey ("O-D survey") was performed to obtain the actual, current travel patterns of motorists in the corridor. It investigated several aspects of each typical trip: its origin and destination; the time-of-day it occurred; what its purpose was for; what type of vehicle was used; and how many people were in the vehicle ("vehicle occupancy"). Results from this O-D survey were combined with Atlanta Regional Commission 1995 O-D survey data that was completed as part of the update to their regional travel model. The observed trip origins and destinations from both O-D surveys gave the SR 316 study a credible set of travel patterns to update and calibrate its base year (2000) travel demand model.

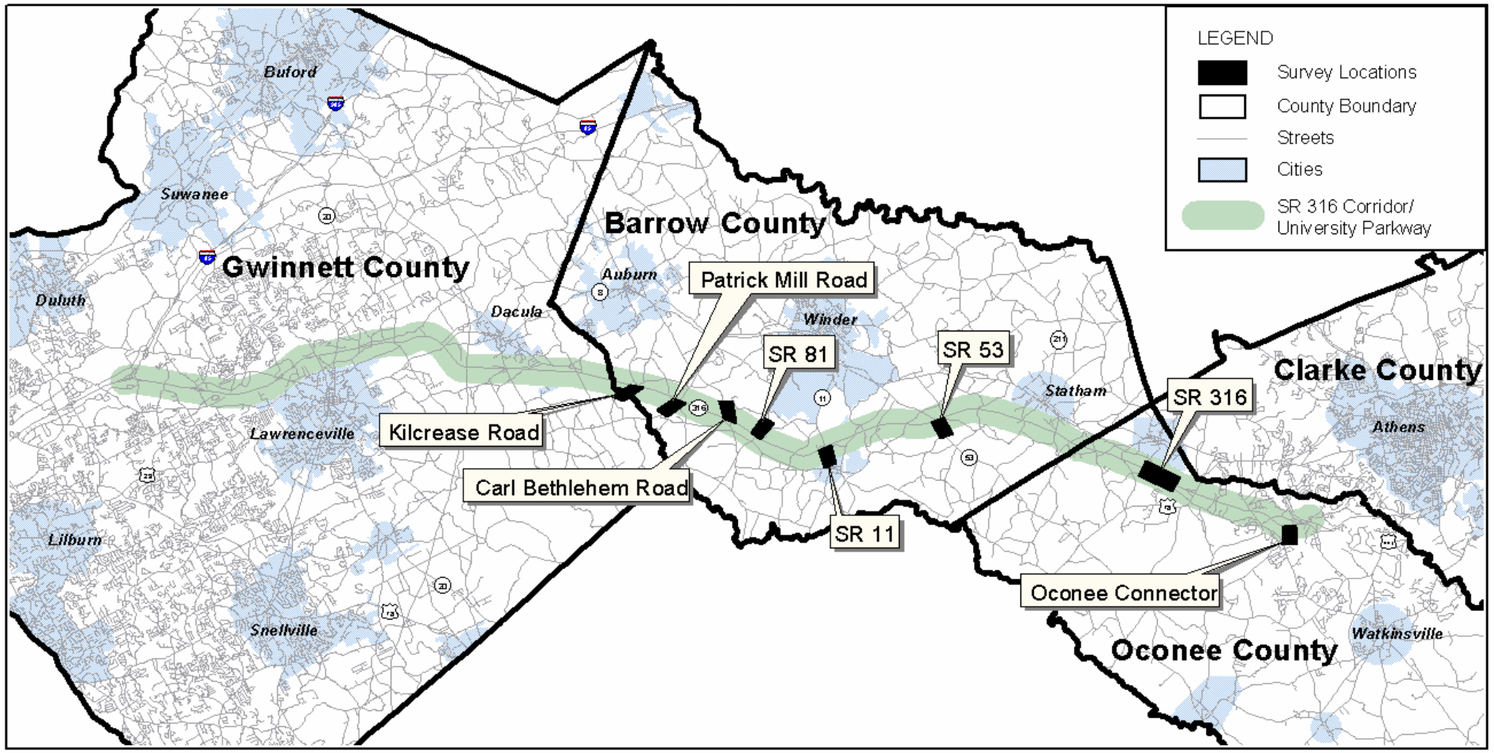
Some of the properties that distinguished the SR 316 study's survey:

- Motorists were directly interviewed at the roadside;
- Survey periods were from 7:00 A.M. to 7:00 P.M.;
- Passenger cars, buses and trucks were included in the sample;
- Designed to capture a 10% sample of passing traffic passing through the survey stations; and,
- 24-hour vehicle classification counts were performed concurrently with motorist interviews.

O-D survey data was collected directly from passing motorists at eight survey stations using a roadside interview technique. The eight locations are displayed in Figure 2-7. There were several factors involved in selecting these survey sites. Most importantly, the study team needed approximately a 10% sample of trip origins and destinations to reasonably validate existing travel patterns in the Barrow and Oconee Counties. In addition, because there was no available current travel pattern information was Barrow County many survey stations were located there. In Gwinnett County, the study made maximum use out of the Atlanta Regional Commission's travel model and the sample of trips it collected as part of its 1995 O-D survey.

At the eastern end, in Athens and Oconee County, the SR 316 study utilized travel patterns from the Athens-Clarke County travel model. With the Athens-Clarke County travel model, however, there were no O-D surveys that were current enough to validate the reliability of modeled travel patterns on the eastern end of SR 316. Therefore, the study's O-D survey included two survey sites in Oconee County.

Figure 2-7
Survey Station Locations



The final sample size of the SR 316 O-D survey is summarized by station in Table 2-3. Overall, a total of 3,821 motorist surveys were completed, which was 106 more than specified when the survey was designed. More than 3,821 motorists were stopped at the survey stations. Some of them, however, were not counted in the preliminary count of completed surveys for the following reasons: some chose not to participate; some were in the process of turning around after making a wrong turn; some misinterpreted the survey questions; and some gave responses that were incomplete or illogical based upon the initial inspection during data entry. Of the 3,821 completed surveys, 3,788 were actually useable for the purpose of further analysis - 438 more than required by the preliminary sample design.

Table 2-3
Origin-Destination Survey Sample

Site	Survey Date	Est. 2000 ADT[1]	Direction of Travel	Sample Size (10%)[3]	Completed Interviews[4]
Kilcrease Rd.	**2/28/01**	1,250	northbound[2]	125	**181**
Patrick Mill Rd.	**3/1/01**	2,000	northbound[2]	200	**270**
Carl Bethlehem Rd./SR324	**3/2/01**	2,000	southbound[2]	200	**255**
Charles Floyd/SR81	**3/21/01**	4,500	southbound[2]	450	**473**
Monroe Hwy./SR11	**3/22/01**	5,000	northbound[2]	500	**521**
Hog Mountain/SR53	**3/13/01**	1,750	northbound[2]	175	**270**
SR316	**3/16/01**	10,000	eastbound	1,000	**1,091**
Oconee Connector	**3/14/01**	7,000	northbound[2]	700	**760**
Totals		**33,500**		**3,350**	**3,821**

(1) Directional ADT
(2) At the approach to SR316
(3) Sample design
(4) Preliminary sample count

2.4 Demographics and Land-Use

In the process of conducting this study, use of reasonable forecasts of future population and employment centers were vital. The study updated estimates of base year (2000) population, number of households, total employment and retail employment. Using historical trends, county land-use plan maps, and base year demographic estimates, the horizon year (2025) forecasts for population, number of households, total employment and retail employment were estimated. Due to the impact existing and future development would have on estimates of travel demand in the SR 316 corridor, estimates were also made for Athens-Clarke County, in addition to Gwinnett, Barrow and Oconee counties.

Local land-use plans, zoning maps and information about local development proposals and re-zonings also contributed to the demographic projections of future land-use in the corridor. The Atlanta Regional Commission, Athens-Clarke County, Northeast Georgia Regional Development Council, Georgia Department of Community Affairs, Gwinnett County, Barrow County, and Oconee County made significant contributions of data.

2.4.1 Base Year (2000)

For the base year demographic analysis, county-level estimates of the demographic variables were made. These estimates were then allocated into smaller units of geography called traffic analysis zones (TAZ's). As an important component of the travel demand model framework, there were 386 TAZ's in the SR 316 study area. TAZ boundaries for the corridor are shown in Figure 2-9.

The county-level estimates of population and household data were made available from the Atlanta Regional Commission, Athens-Clarke County Transportation Study, Northeast Georgia Regional Development Center, Georgia Rail Passenger Authority and Gwinnett County. These figures were updated to reflect new data made available from the 2000 Census. County-level employment figures reflect the latest Woods & Poole[1] economic data.

Distribution of the population and employment data to the TAZ's required a careful analysis. These analyses utilized current land use patterns; specific knowledge of the area; discussions with local planning staffs; community facilities maps; and professional judgment.

Analysis maps were created to display the distributions of population, households and total employment graphically on density maps for the base year. These allocation figures were sent to each local planning jusdiction,[2] and their feedback was integrated into the next phase of the allocation process. Further refinements were carried out to distribute the population, household and employment figures into study area TAZ's as appropriate to known land uses. County-level distributions of population and total employment are shown in Table 2-4 below.

Table 2-4
Year 2000 Population and Total Employment for Study Area

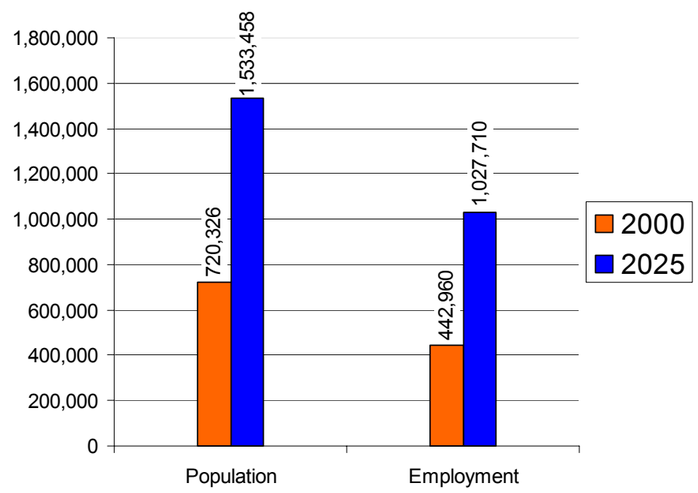
County	Population		Total Employment	
	Year 2000	% Allocation	Year 2000	% Allocation
Gwinnett	589,426	82%	373,338	84%
Barrow[1]	44,805	6%	16,188	4%
Oconee[2]	27,604	4%	9,208	2%
Athens-Clarke[3]	56,491	8%	42,226	10%
	718,326	100%	**442,960**	100%

2.4.2 Future Year (2025)

Population, number of households, total employment and retail employment were projected to future planning years 2020 and 2025. The population projections were based on "best fit" regression analyses of Census data from 1970 to 2000, including the available 2000 Census data. The socioeconomic projections were mapped and using the same TAZ's as the base year data.

Allocations to the TAZ-level were similar to those that were described for baseline data by utilizing each jurisdiction's future land use maps and any further refinement based on feedback from the local jurisdictions. Work meetings with each jurisdiction's representatives were held to discuss the expected growth patterns within Gwinnett, Barrow, Oconee and Athens-Clarke County as well as the principal cities within the corridor. Barriers to future development, such as availability of sewer or condition of soils, were identified. The land use and zoning maps for each jurisdiction were examined and recent zonings of note were identified. Also, major developments that were in their early stages, such as Gateway in Bogart, were identified. The results are the base year 2000 and horizon year estimates of population and total employment for the total study area shown in Figure 2-8. Population is projected to grow by 112%, from 720,326 persons in 2000 to 1,533,458 in 2025. During this same time, total employment in the study area is expected to grow by 131%.

Figure 2-8
Study Area Population and Total Employment
(2000 and 2025)



[1] Woods & Poole Economics, Washington, D.C.
[2] Gwinnett County Planning and Development Dept., Athens-Clarke County Planning Dept., Northeast Georgia RDC (Oconee and Barrow Counties).

2.5 Travel Model

The study included the creation of a travel demand model to assist in identifying potential improvements for the entire SR 316 corridor. Travel demand model assists in the identification of traffic impacts that would be expected as a result of changes to the transportation system or land use within a study area. The Atlanta Regional Commission and Athens-Clarke County Transportation Study already have travel demand models used to support their transportation planning activities for the respective Gwinnett County and Athens-Clarke County areas. Prior to this SR 316 study, there was not such a model for the entire SR 316 study area. The study's model:

- Helped assess the feasibility of different improvement strategies;
- Estimated user-benefits for a proposed set of improvements compared to a future baseline condition;
- Estimated the impact and potential use of HOV lanes on SR 316;
- Identified sections of SR 316 with current and potential future operational problems; and
- Performed a preliminary study of travel demand versus toll sensitivity.

The study's travel demand model was used to estimate the base year (2000) travel patterns, as well as to estimate horizon year (2025) traffic projections. This model was unique in that it subcategorized the number of trips made by Single Occupant Vehicles (SOV's) and Multi-Occupant Vehicles (MOV's). Completion of the model was done using Citilab's TP+ modeling and visual graphics platform, consistent with GDOT's existing urban area travel demand models.

A full description of the procedure that was used in developing base and horizon year travel demand model applications is beyond the scope of documentation included in this report, which contains only a brief summary of the models. A full description of the models' formulation is reported in two technical documents that were done during the study. These are titled:

Technical Memorandum Number 4, Base Year 2000 Trip Table; and,
Technical Memorandum Number 7, Future Year 2025 Trip Table .

2.5.1 Base Year 2000

The base year 2000 model application was designed to simulate daily traffic patterns on major streets across the entire SR 316 study area. Although most analyses were done using the 2025 model application, the base year 2000 application is important because its calibrated set of data files provided the foundation needed for development of the 2025 application. For a basic understanding how the base year 2000 application works, several of the most important elements are described below.

TAZ's and Highway Network. TAZ's are the small units of geography facilitating the assignment of trips from a trip table onto a highway network. TAZ's are small subareas to which county-level estimates of population, number of households and employment are subdivided for use in the travel demand model. TAZ's correlate the intensity of different development types to levels of trip making. The TAZ system and road network coverage are illustrated in Figure 2-9. There are 386 TAZ's inside the study area.

A highway network represents the study area road system. It consists of links symbolizing the roadway facilities. Each link has the following attributes: length; free-flow speed; capacity; number of lanes; facility type; and area type.

Trip Table. The base year 2000 trip table was constructed to contain average annual daily traffic flow for zone-pair combination in the study area. Each vehicle trip was assigned to be a SOV or MOV based on its length and the socioeconomic characteristics at its zone of origin and destination zone.

Trip generation is the first step performed in calculating the number of trips. It is also the step that links land use with travel demand. Trip generation calculates the number of trips that begin and end in each individual traffic analysis zone (TAZ). The demographic variables that were used in trip generation are:

- Population;
- Number of total households;
- Number of retail employees; and
- Number of total employees (for all classifications of employment).

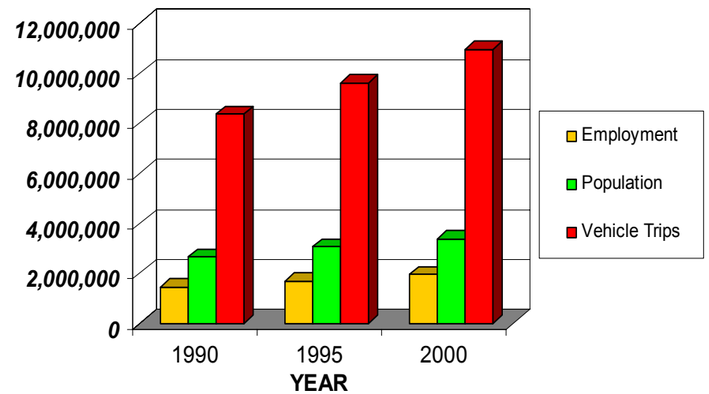
2.5.2 Future Year 2025

The base year trip table for total vehicles was used along with projections of future year socioeconomic data to compute the horizon year trip table using the Fratar Process. In anticipation of subsequent model applications, the horizon year total vehicle trip table was split into three other trip tables: SOV, MOV; and a total person trip table. MOV and SOV trip tables were created because a HOV-lane project on SR 316 is proposed in the Atlanta Regional Commission's Regional Transportation Plan (2025 RTP) for Gwinnett County. The total person trips estimated by the model were used to take into account all trips in the corridor, regardless of mode (including a commuter rail line between Atlanta and Athens as proposed in the Atlanta Regional Commission's 2025 RTP).

Fratar Process. Total vehicle trip tables for the horizon year were computed through application of the Fratar process. The Fratar expansion process works by applying growth factors to each of the TAZ's. Individual trip interchanges in the base trip table are expanded in an iterative process to develop the future trip table.

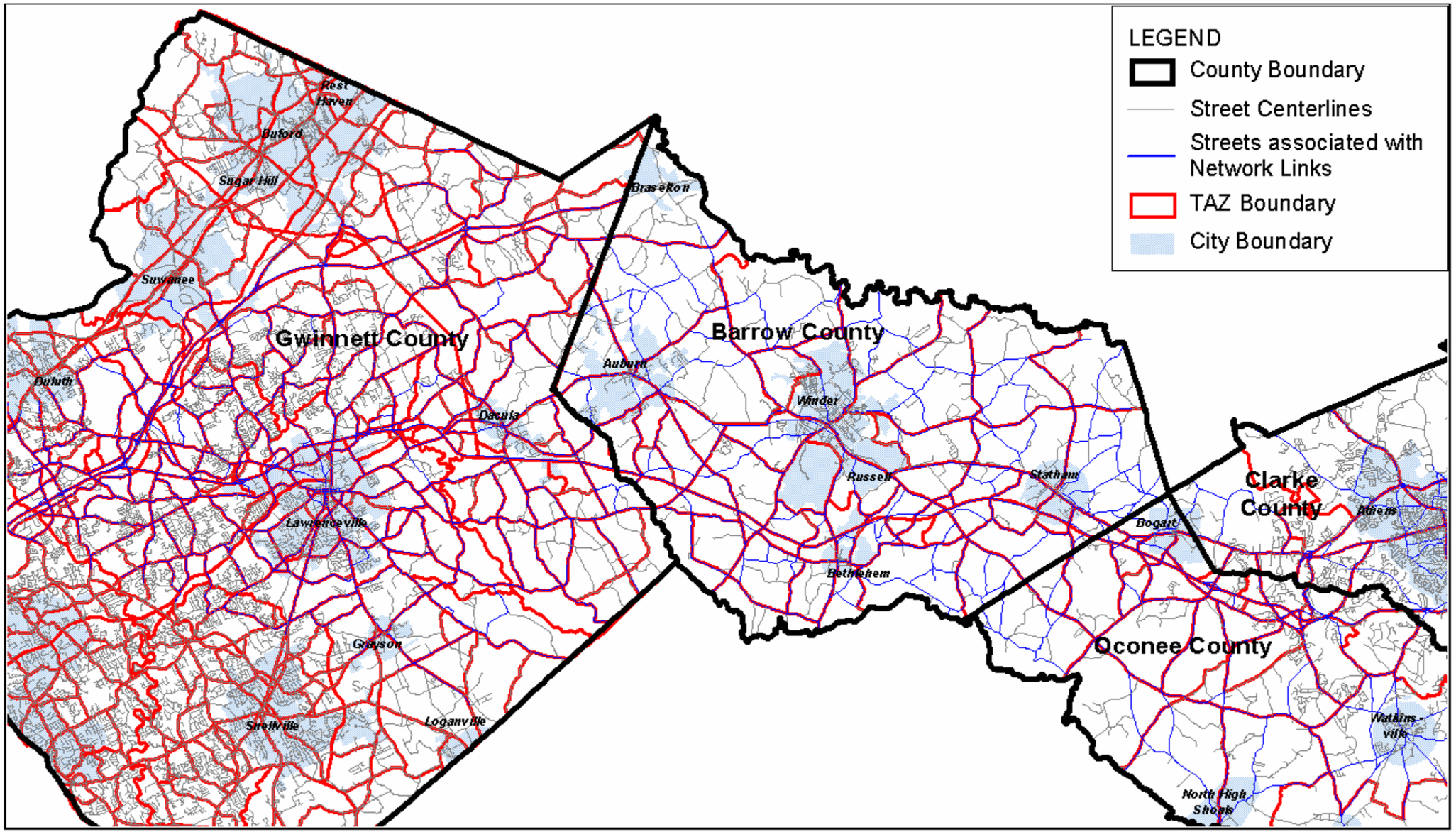
Demographic Growth and Travel Demand. Using the Atlanta Regional Commission's ravel model for Gwinnett County, the relationship between changes in socioeconomic data over time and its impact on regional travel demand was examined. Regional population, total employment and vehicle trip figures for 1990, 1995 and 2000 in the Atlanta metropolitan area are shown by means of a bar chart in Figure 2-10.

Figure 2-10
Socioeconomic Growth and Travel Demand Relationship



According to trends tracked by the Atlanta Regional Commission, population and total employment grew by 27% and 33%, respectively, in the Atlanta metropolitan area between 1990 and 2000. During the same time period, the number of trips in the region grew by 31%, from 8.3 to 10.9 million per day. These numbers show that the relative increase in vehicle trips was essentially the same as the relative change in population and total employment between 1990 and 2000. The forecast of future travel demand in the SR 316 applied the same relationship in the Fratar Process, using the base year trip table as the base from which the horizon year forecasts were made.

Figure 2-9
Traffic Analysis Zones and Highway Network Coverage

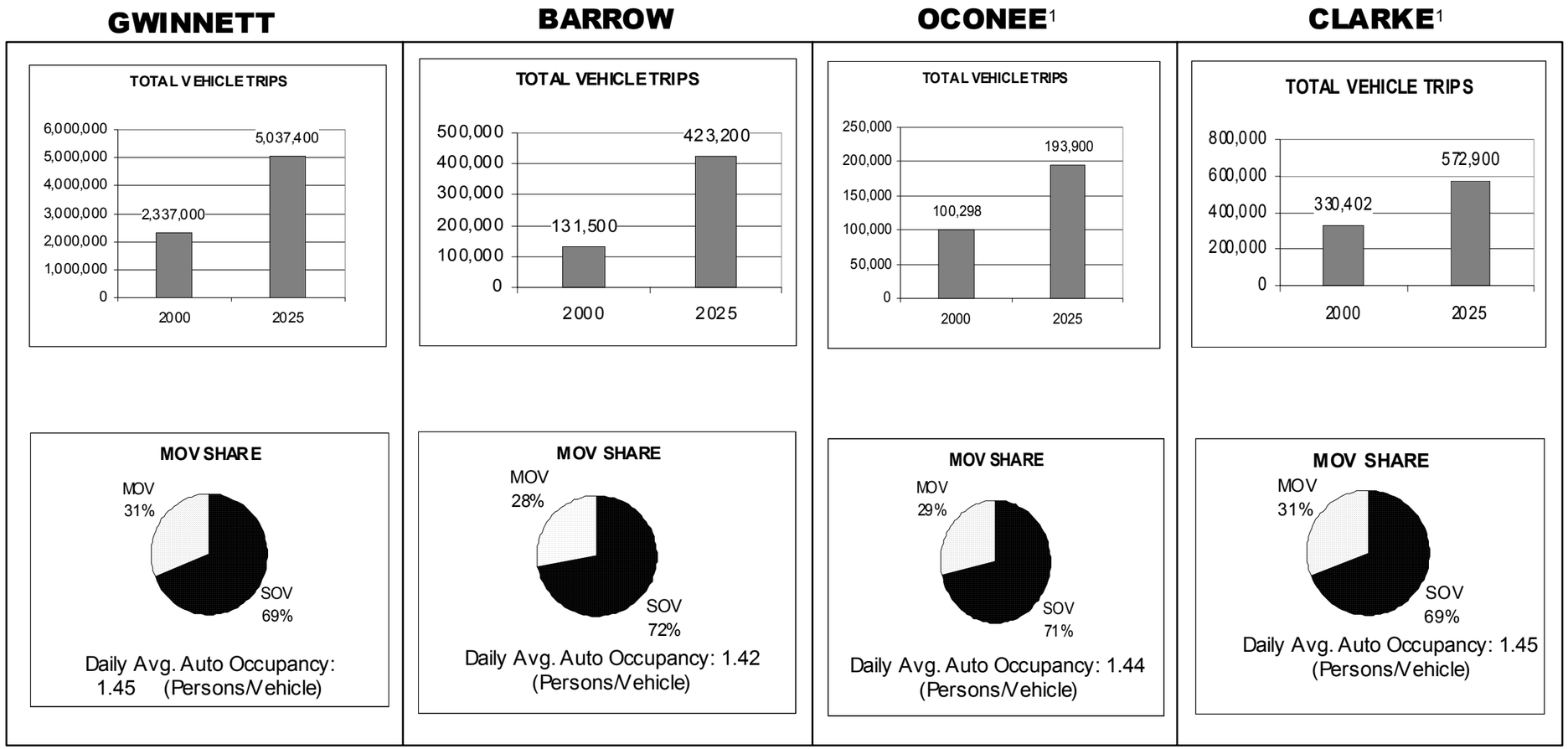


Trip Tables. Summaries of the base year and horizon year trip tables generated by the study's travel demand model are summarized by county in Figure 2-11. It shows the estimated change in total vehicle trips between the base and horizon year, the estimated split between SOV and MOV trips in the future (2025), and the average vehicle occupancy. As one would anticipate, the 2.3 million and 5.0 million trips per day estimated for Gwinnett County in 2000 and 2025, respectively, surpass the level of trips made in the other counties in the study area.

The portion of Athens-Clarke County included for analysis in this study has the second highest number of trips with an estimated 330,402 trips in 2000 and 572,900 trips projected for 2025. However, the highest relative traffic growth is anticipated in Barrow County where the daily number of trips is forecast to expand from 131,500 in 2000 to 423,200 in 2025, a 222% rate of growth. The highest share of MOV trips was in Gwinnett County and Athens-Clarke County where 31% of the trips had two or more occupants.

The lowest percentage was in Barrow County where 28% of the total trips were estimated to have at least 2 occupants.

Figure 2-11
Travel Model Data (2000 and 2025)



[1] Portion of Oconee and Clarke counties in the modeled study area.

2.6 Current Transportation Plans

Transportation recommendations in this study took into account, and were consistent and coordinated with, other proposed improvements in the corridor. Some are planned; others have been planned and partially or fully designed, while others have been implemented. For example, express bus services in Gwinnett County started operations during the fall of 2001. Other significant projects being considered in this study are listed in Table 2-5 with brief descriptions and their general location. They are shown graphically in Figure 2-12.

These proposed projects do not constitute an exhaustive list of transportation improvements being planned in the corridor. There could be other future highway system, transit, travel demand management and ITS improvements proposed in the future. The list in the table is limited in that it provides a snapshot of the most significant improvements currently programmed by the transportation planning processes of the Atlanta Regional Commission (ARC), Athens-Clarke County Transportation Study (ACORTS), and GDOT (as noted in the State Transportation Improvement Program [STIP]). This list provides a reasonable background context, or "baseline condition", to serve as a foundation for this study to consider improvement recommendations for SR 316. In fact, the horizon year highway network for study's travel model included these projects to represent the baseline condition.

The Governor's Transportation Choices Initiative program, introduced by Governor Roy Barnes in 2001, will accelerate the implementation of a number of transportation projects throughout Georgia. By doing this, more projects, including some in the STIP and ARC's 2025 RTP will be able to advance due to the availability of funding. The Transportation Choices Initiative program could benefit projects recommended in this study by making more money available for their implementation in the near term.

Eight different types of improvements are shown in Figure 2-5. Four of the planned improvements are new roads and include: the proposed Northern Arc in Gwinnett County, the proposed Winder Bypass in Barrow County , Jennings Mill Parkway Extension in Oconee County and a short connector road that would link Epps Bridge Road with Daniels Bridge Road in Oconee County. Some form of new commuter or intercity rail service is being planned in the Athens to Atlanta corridor running generally parallel to the SR 316 highway alignment. The commuter rail improvement is in the preliminary stages of project development, and as such, decisions regarding its implementation schedule, station locations and levels-of-service were not available for use in this study. Other improvement types in Table 2-5 include: High Occupancy Vehicle (HOV) lanes in Gwinnett County; Intelligent Transportation System (ITS) expansions; road widening; express bus service; interchange reconstructions; and a new interchange.

Table 2-5
Currently Planned Improvements

Map No.	Description	Location	Type	County	Plan
1	SR 316 HOV-Lanes	I-85 to Drowning Creek Rd.	Add 2 lanes/1 each travel direction	Gwinnett	ARC
2	SR 316 Intersection Reconstruction	Collins Hill Rd. and Buford Dr./SR 20	Grade Separate	Gwinnett	ARC
3	SR 316 Interchange Reconstruction	At I-85	Reconfigure	Gwinnett	ARC
4	ITS on SR 316	I-85 to Buford Dr./SR 20	Traffic management, Variable messages & Cameras	Gwinnett	None
5	Northern Arc	I-75 (Cartersville) to SR 316 (Lawrenceville)	New 4-Lane Expressway	Gwinnett	ARC
6	Intercity/Commuter Rail or Bus	Athens to Atlanta	Public Transportation	Gwinnett/Barrow/ Oconee	ARC/ ACORTS
7	Gwinnett Co. Commuter Bus	Lawrenceville to Atlanta	Public Transportation	Gwinnett	ARC
8	Winder By-Pass	SR 316 to SR 53	New 4-Lane Roadway	Barrow	STWP
9	US 78/SR 10	Athens Hwy. to Athens Loop/SR 10	Widen 4>6	Clarke	ACORTS
10	SR 53/Mars Hill/Oconee Connector	US 441 to SR 316	Widen 2>4	Oconee	ACORTS
11	Jennings Mill Pkwy.	Epps Bridge Rd. to Jennings Mill Rd.	New 2-Lane Roadway	Oconee	ACORTS
12	Athens Loop/SR 10	At Jennings Mill Pkwy.	New Partial Interchange	Oconee	ACORTS
13	Daniels Bridge-Epps Bridge Connector	Daniels Bridge to Epps Bridge	New 2-Lane Roadway	Oconee	ACORTS
14	Gwinnett Co. Commuter Bus	Buford (SR 20) to Atlanta	Public Transportation	Gwinnett	ARC
15	I-85 HOV Lanes Extension	SR 316 to I-985	Add 2 lanes/1 each direction	Gwinnett	ARC
16	I-85	Barrow County to I-984	Widen 4>6	Gwinnett	ARC
17	ITS on I-85	SR 316 to I-985	Traffic management, Variable messages & Cameras	Gwinnett	ARC
18	SR 120	From I-85 to Sugarloaf Parkway	Widen 2>4	Gwinnett	ARC

Figure 2-12
Planned Transportation Improvements