

SECTION NINE
TRANSPORTATION

INTRODUCTION

Transportation provides the means for getting people, goods and services from one location to another. The aim of a transportation system is to move people, goods and services efficiently. The transportation system in the City of Villa Rica is an interconnecting web of roads, highways, bridges, railroads, airports, sidewalks, and trails. This chapter will describe how people use the transportation network, inventory the existing system, and determine areas where improvements may be in order.

Exhibit 83: Place of Work--Villa Rica, Carroll and Douglas

	Carroll		Douglas		Villa Rica	
	No.	Per.	No.	Per.	No.	Per.
Workers 16 years and over	39,730	100%	46,176	100%	1,791	100%
<i>Worked in State:</i>	39,257	98.8%	45,840	99.3%	1,781	99.4%
<i>Worked outside State</i>	473	1.2%	336	0.7%	10	0.6%
Worked in county	24,611	61.9%	16,924	36.7%	833	46.5%
Worked outside county	14,646	36.9%	28,916	62.6%	948	52.9%

U.S. Bureau of the Census, 2000

A higher percentage of residents working in their county of residence (46.5% in 2000 versus 44.5% in 1990) is encouraging because the more work found locally means there is less need for long commutes.

Exhibit 84: Means of Transportation -- Villa Rica, Carroll and Douglas

	2000					
	Carroll		Douglas		Villa Rica	
Workers 16 years and over: Total	39,730	100%	46,176	100%	1,791	100%
Car, truck or van	37,552	94.5%	44,286	95.9%	1,628	90.9%
Drove alone by car, truck or van	31,384	79.0%	37,698	81.6%	1,237	69.1%
Carpooled by car, truck or van	6,168	15.5%	6,588	14.3%	391	21.8%
Public transportation	111	0.3%	233	0.5%	27	1.5%
Motorcycle	61	0.2%	20	0.0%	-	0.0%
Bicycle	67	0.2%	20	0.0%	11	0.6%
Walked	738	1.9%	214	0.5%	69	3.9%
Other means	290	0.7%	289	0.6%	10	0.6%
Worked at home	911	2.3%	1,114	2.4%	46	2.6%

U.S. Bureau of the Census, 2000

Exhibit 84 illustrates that the vast majority (69%) of Villa Rica residents drive alone in their passenger vehicle when going to work. This percentage is down from 1990, when 72.6% of the residents drove alone to work. The change appears to be due to an increased use of people working out of their homes, carpooling and use of transit. In both 1990 and 2000, residents of Villa Rica were slightly less likely to drive alone than residents of Carroll and Douglas counties as a whole.

TRAVEL TIME TO WORK

The travel time for Villa Rica residents has changed since the 1990 Census. Overall, it is taking less time to travel to work, however, this gain is almost entirely offset by the increase in the ratio of people who travel more than 60 minutes to their work place. As more jobs are located in and around the City, it should be expected that that overall commute time would decrease for City residents.

Exhibit 85: Commuting Time--Villa Rica and Douglas

Travel Time	Villa Rica		Carroll County		Douglas County	
	1990	2000	1990	2000	1990	2000
Worked at home	0.7%	2.6%	1.4%	2.3%	1.6%	2.4%
Did not work at home; Commutes less than 30 minutes	52.3%	50.8%	67.1%	60.0%	48.1%	45.2%
Commutes 30 to 60 minutes	36.5%	31.4%	22.6%	25.2%	43.7%	39.6%
Commutes 60 minutes or more	10.5%	15.2%	8.8%	12.5%	6.6%	12.7%

U.S. Bureau of the Census, 2000

AIR QUALITY NONATTAINMENT STATUS AND ITS IMPLICATIONS

A portion of Villa Rica lies within Carroll County, which has been recently added to the list of Georgia counties not in conformance with air quality standards for ozone and particulate matter. This designation of “Nonattainment” status will impact the future development of transportation projects to serve the needs of Villa Rica residents. Where Federal transportation funds are used in a project within these designated areas, the county and State Department of Transportation must show that the project does not result in more pollution being created. Indeed, the goal is to do projects that will help to reduce the pollution problem. The Atlanta Regional Commission administers the process of certifying that projects meet these air quality performance objectives. Future projects must be submitted to the Commission for review and adoption into the metropolitan area Regional Transportation Plan before Federal funding is authorized for construction.

LAND USE IMPLICATIONS

The Suburban County Study produced in June 2004 by Day-Wilburn Associates for the Georgia Department of Transportation notes the following about the impacts of land use upon the transportation system:

LAND USE

Management of the type and location of growth in Carroll County over the next 30 years could support the reduction of traffic congestion and yield a higher quality of life. Planning the location of community activities and services closer to neighborhoods and one another could substantially reduce trips made by vehicle. In addition, promoting intra-parcel access and alternative access facilities between land use types can encourage non-vehicular trip making. This has the potential to lessen traffic congestion, particularly in heavily traveled commercial corridors.

Mixed-use land planning on an activity center, community, and regional level will improve accessibility to the daily locations that people in a community need to visit. The clustering or mixing of uses in a small area enables a community's residents to have access to most of their daily needs within a short multi-purpose drive, bicycle ride, or walk from their homes. Schools, shopping centers, and places of employment are destinations visited daily by a large portion of the population and should be developed in locations providing maximum accessibility to the residents of the community or region. Land use regulations, such as zoning or subdivision development codes, can enable growth while reducing traffic congestion in Carroll County.

ACCESS MANAGEMENT

The application of access management standards can improve the efficiency of a transportation network. Access management is a tool that can help prevent traffic congestion by limiting and controlling vehicles entering, exiting, and turning along a travel corridor. Application of access management techniques to arterial and collector roadways enable the roadways to best serve their designated function. Minimizing the potential disruptions to the vehicles in the roadway facilitates traffic movement. Effective access standards benefit a community by reducing accidents, increasing roadway capacity, providing better access to businesses, and improving mobility.

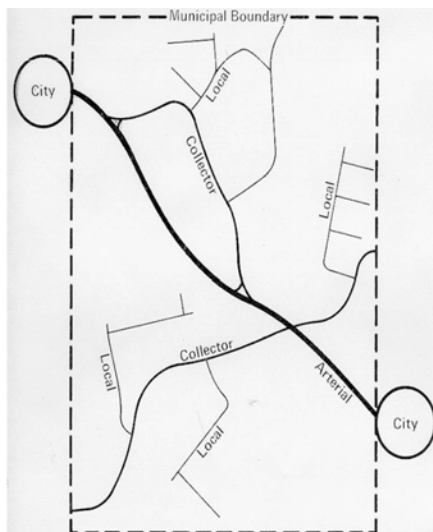
STREETS, ROADS, AND HIGHWAY FUNCTIONAL CLASSIFICATION

Roads serve a variety of needs. Some provide large volumes of traffic a high speed, direct route to the area of their destination, while others provide little more than direct access to one's property. Roads are classified according to their "Functional Classification". This classification impacts decisions about maintenance responsibility, funding levels, and, in some jurisdictions is used to determine zoning restrictions. The transportation element of the Stephens County Comprehensive Plan and the FHWA publication, Functional

Classification Guidelines (available at http://www.fhwa.dot.gov/planning/fcsec2_1.htm-fsua) has a good discussion about the functional classification system and provides the basis of the text in this section of this element.

Roads are generally classified into one of three broad categories: Arterials, Collectors and Local. **Arterials** provide longer through travel between major trip generators (larger cities, recreational areas, and so forth.). **Collector** roads collect traffic from the local roads and also connect smaller cities and towns with each other and to the arterials. **Local** roads provide access to private property or low volume public facilities. Exhibit 85 below generally shows how these three categories relate to one another.

Exhibit 86: Functional Road Categories



FUNCTIONAL ROAD CLASSIFICATIONS

The U.S. Department of Transportation (USDOT) and the Federal Highway Administration (FHWA) have identified 11 different types of Functional Classifications in the United States. Each individual State's designated Transportation Agency is responsible for the classification of all roads in the public road system. In Georgia, this responsibility belongs to the Georgia Department of Transportation (GDOT). Exhibit 86 below identifies the different types of classifications used for roadways in Georgia.

Exhibit 87: Functional Classification Key

Key For Functional Classification	Stands For
IPA	Interstate Principal Arterial
PAR	Principal Arterial- Rural
MAR	Minor Arterial- Rural
MCR	Major Collector- Rural
NMC	Minor Collector- Rural
LOC	Local- Rural
UFY	Freeway- Urban
UPA	Principal Arterial- Urban
MAS	Minor Arterial- Urban
CST	Collector Street- Urban
LOU	Local- Urban

Source: GDOT, Office of Transportation Data

The City of Villa Rica was classified by the GDOT under the rural designations until recently. The City is, like Carroll County, undergoing a transition from a rural county to one that is classified using the urban classification designations. Map 19 shows the functional classification for the roads and highways in the City of Villa Rica as proposed in an October 2004 meeting with GDOT personnel.

The four functional systems for urbanized areas are urban principal arterials, minor arterial streets, collector streets, and local streets. The differences in the nature and intensity of development between rural and urban areas cause these systems to have characteristics that are somewhat different from the correspondingly named rural systems.

URBAN PRINCIPAL ARTERIAL SYSTEM

In every urban environment there exists a system of streets and highways, which can be identified as unusually significant to the area in which it lies in terms of the nature, and composition of travel it serves. In smaller urban areas (under 50,000) these facilities may be very limited in number and extent and their importance may be primarily derived from the service provided to travel passing through the area. In larger urban areas their importance also derives from service to rural oriented traffic, but equally or even more important, from service for major movements within these urbanized areas.

This system of streets and highways is the *urban principal arterial system* and should serve the major centers of activity of a metropolitan area, the highest traffic volume corridors, and the longest trip desires; and should carry a high proportion of the total urban area travel on a minimum of mileage. The system should be integrated, both internally and between major rural connections.

The principal arterial system should carry the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city. In addition, significant intra-area travel, such as between central business districts and outlying residential areas between major inner city communities, or between major suburban centers should be served by this system. Frequently the principal arterial system will carry important intraurban as well as intercity bus routes. Finally, this system in small urban and urbanized areas should provide continuity for all rural arterials that intercept the urban boundary.

Because of the nature of the travel served by the principal arterial system, almost all fully and partially controlled access facilities will be part of this functional system. However, this system is not restricted to controlled access routes. In order to preserve the identification of controlled access facilities, the principal arterial system is stratified as follows: (1) Interstate, (2) other freeways and expressways, and (3) other principal arterials (with no control of access).

The spacing of urban principal arterials will be closely related to the trip-end density characteristics of particular portions of the urban areas while no firm spacing rule can be established which will apply in all, or even most circumstances, the spacing of principal arterials (in larger urban areas) may vary from less than one mile in the highly developed central business areas to five miles or more in the sparsely developed urban fringes.

For principal arterials, the concept of service to abutting land should be subordinate to the provision of travel service to major traffic movements. It should be noted that only facilities within the "other principal arterial" system are capable of providing any direct access to adjacent land, and such service should be purely incidental to the primary functional responsibility of this system.

Within the City of Villa Rica, the principal arterial system consists of Interstate 20 as well as the Highway 61 Bypass (including the planned portion), South Carroll Road, Main Street and Dallas Road, and Highway 8/78 from the eastern terminus of the proposed bypass into Douglas County.

URBAN MINOR ARTERIAL STREET SYSTEM

The minor arterial street system should interconnect with and augment the urban principal arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials. This system also distributes travel to geographic areas smaller than those identified with the higher system.

The *minor arterial street system* includes all arterials not classified as a principal and contains facilities that place more emphasis on land access than the higher system, and offer a lower level of traffic mobility. Such facilities may carry local bus routes and provide intra-community continuity, but ideally should not penetrate identifiable

neighborhoods. This system should include urban connections to rural collector roads where such connections have not been classified as urban principal arterials.

The spacing of minor arterial streets may vary from 1/8 - 1/2 mile in the central business district to 2 - 3 miles in the suburban fringes, but should normally be not more than 1 mile in fully developed areas.

In the City of Villa Rica, the minor arterial street network consists of West and East Bankhead Highway, West and East Bankhead Streets, Hickory Level Road as it enters the City, portions of Dogwood Street, Rockmart Road, Old Town Road, Old Stone Road, Connors Road, and Liberty Road south of its intersection with Interstate 20.

URBAN COLLECTOR STREET SYSTEM

The *collector street system* provides land access service and traffic circulation within residential neighborhoods, commercial and industrial areas. It differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination. Conversely, the collector street also collects traffic from local streets in residential neighborhoods and channels it into the arterial system. In the central business district, and in other areas of like development and traffic density, the collector system may include the street grid that forms a logical entity for traffic circulation.

The Urban Collector system in the City of Villa Rica includes Berry Drive, Edge Road, Thomas Dorsey Boulevard east of Spring Street, Spring Street between South Carroll Road and Thomas Dorsey Boulevard, North Avenue, and West Church Street from North Carroll Street to North Avenue.

URBAN LOCAL STREET SYSTEM

The *local street system* comprises all facilities not on one of the higher systems. It serves primarily to provide direct access to abutting land and access to the higher order systems. It offers the lowest level of mobility and usually contains no bus routes. Service to through, traffic movement usually is deliberately discouraged.

Map 19 shows the proposed Functional Classification network being recommended by Villa Rica staff working in conjunction with the Georgia Department of Transportation.

SYSTEM INVENTORY

According to GDOT reporting, the mileage of roads within the City of Villa Rica has increased by 5.36 miles during the 2000-2003-time period. This represents a 1.25% increase annually in the mileage of roadways. It is important for residents to note that 85% of the new mileage comes in the form of additional local (city) streets, which the city must budget to maintain each year.

Exhibit 88: Villa Rica Road Mileage, 2000-2003

Route Type	2000 Mileage	2003 Mileage	Mileage Increase (Decrease)	Percent Change, 2000-2003
State Route	10.87	10.87	0	0%
County Road	16.01	16.40	0.39	2.4%
City Street	36.92	39.21	2.29	6.2%
Total	63.80	66.48	2.68	4.2%

The streets and highways within the City of Villa Rica are in generally good condition, with some exceptions, which are noted on **Map 21** labeled “Condition Classification”. According to the data provided by the GDOT Multi-Modal Transportation Planning Tool, these roads in and around the Villa Rica city limits were in need of immediate maintenance:

Within the City of Villa Rica:

- Barber Drive
- Stockmar Road
- Jones Street
- East Wilson Street

Immediately outside the City of Villa Rica:

- Harlan Lane Road
- Luther Circle
- Sapphire Street
- Ridgeside Drive
- Old Scenic Road

Exhibit 89: Villa Rica Traffic Counts, 1998-2003

Count Station	Street	GDOT Name	1998	2000	2002	2003	1998-2003
443	S. Carroll St.	CS 084111	3,298	3,814	5,302	5,550	68%
105	W.Montgomery St.	SR 61,8	6,667	7,780	8,552	11,200	68%
447	Dogwood St.	CS 081511	522	648	957	870	67%
167	Dallas Road	SR 61	6,483	8,806	9,524	9,470	46%
165	Dallas Road	SR 61	6,284	7,157	7,567	8,520	36%
107	E.Montgomery St.	SR 8	8,590	9,480	10,780	11,220	31%
201	Rockmart Road	CR 814	6,054	6,784	7,828	7,870	30%
159	Industrial Blvd.	SR 101	13,051	10,968	16,943	16,750	28%
161	Main Street	SR 61	8,330	6,651	9,424	10,230	23%
152	Highway 61	SR 101	23,443	22,999	27,889	27,350	17%
284	Interstate Highway	I-20	56,690	62,357	65,108	63,870	13%
101	E. Bankhead Hwy	SR 8	13,539	16,886	17,408	15,020	11%
156	Ga Route 61 Bypass	SR 101	22,999	28,465	24,615	25,050	9%
445	Main Street	SR 61	6,884	7,300	7,227	7,450	8%
158	Industrial Blvd.	SR 101	24,042	27,620	23,354	25,720	7%
454	Paulding St.	CS 081711	6,300	5,300	2,705	3,100	-51%
441	S. Carroll St.	CS 084111	3,230	2,857	3,000	1,230	-62%
198	Rockmart Road	CR 814	4,572	5,260	4,996	280	-94%
	TOTAL		82,722	85,087	104,766	109,030	32%

Travel volume on the interstate, state highway and local road systems in the Villa Rica area is expected to differ by system. In 2001/2002, the average annual daily traffic (AADT) carried by the three transportation systems was as follows:

Interstate System -- 52,750

State Highway System --13,118

Local (city and county) Road System --1,140

ACCIDENT HISTORY

Using software provided by the Georgia Department of Transportation, it is possible to identify those road segments that have a higher-than-normal road accident history. For Carroll County, the software reviewed the crash rates over the three-year period 2000, 2001 and 2002. For Douglas County, the data review was limited to a one-year reporting period, the year 1997. Map 20 illustrates these crash prone corridors.

Exhibit 90: Villa Rica Crash Analysis

ROAD NAME	GDOT RTE#	Segment Description	AADT	RTE	FC	3 Yr Avg. Crash Rate	Average Crash Rate
Hwy 8/78	8	East from City limits to Carroll Road	12100	STR	MAS	674	540
Hwy 8/78	8	"	17400	STR	MAS	969	540
Hwy 8/78	8	"	8600	STR	MAS	2053	540
Hwy 61	61	From N.Candler St. to N. Carroll St.	24600	STR	UPA	1100	646
Hwy 61	61	"	7200	STR	UPA	1268	646
Interstate 20	402	East of Villa Rica Interchange	65100	CYR	IPA	219	166
Hickory Level Rd.	393	West from S. Carroll Road	1000	CYR	MAS	595	540
Barber Drive	626	From Hwy 61 to Stockmar Road	830	CYR	LOU	1158	607
Pate Drive	728	From Hwy 61 to dead end	830	CST	LOU	1000	607
Henderson Street	733	From Hwy 101 to dead end	830	CST	LOU	1375	607
Edge Road	758	From S. Wilson St. to Liberty Rd.	830	CST	LOU	1435	607
Darden Street	761	From Louise Lane to Anderson Dr.	830	CST	LOU	1834	607
Spring Street	773	From Westview Dr. to Thos. Dorsey Blvd.	830	CST	LOU	1079	607
W. Wilson Street	775	From W. Bankhead St. to Stone St.	830	CST	LOU	6034	607
Cheves Street	780	From Dogwood St. to dead end	830	CST	LOU	917	607
Jones Street	781	From Peachtree St. to Main St.	830	CST	LOU	5501	607
Maple Street	785	From Dogwood St. to W. Montgomery St.	830	CST	LOU	917	607
Wall Street	792	From Hwy 8 to Midway St.	830	CST	LOU	647	607
Clearview Street	793	From Midway St. to Meadowlark Dr.	830	CST	LOU	2201	607
Punkintown Road	802	From Hwy 61 to Old Stone Rd.	830	CST	LOU	825	607
Dogwood Street	815	From Cheves St. to S. Carroll Rd.	1000	CST	MAS	571	540
Dogwood Street	815	"	830	CST	LOU	1000	607
E. Montgomery St	250	From E. Bankhead St. to Mirror Lake Blvd.	430	CYR	LOC	754	245

From: GDOT Multi-Modal Transportation Planning Tool, version 3

LEVELS OF SERVICE

The concept of “Level of Service” is meant to help evaluators of a transportation system determine where the traffic system is, or will be, overloaded. Level of Service (LOS) is a qualitative measure on a scale of “A” to “F” describing operational conditions while driving in traffic and motorists’ perceptions of those conditions. LOS “A” is described as free flow conditions with low volumes and high speeds. Motorists perceive traffic conditions as “excellent” at this LOS. Conditions deteriorate across the scale, with LOS “F” characterized by frequent stops and starts and very unstable flow. Motorists perceive LOS “F” conditions as “completely unsatisfactory” because they are stuck in extreme traffic snarls and very slow travel times. While a transportation system that works at LOS A would be most desirable from a traveler’s standpoint, it is also the most costly level of service to maintain. People are generally tolerant of a system that operates consistently at a level of service “C” or better.

SYSTEM DEFICIENCIES

Using computer software provided by the Georgia Department of Transportation, we can estimate the impact that growth will have on the City’s street network. The following table presents an estimate of the levels of service 20-years from now by type of roadway and jurisdiction.

Exhibit 91: Projected Level of Road Service

LOS	Carroll						Douglas					
	Current			20-Year			Current			20-Year		
	Freeway	State	Local	Freeway	State	Local	Freeway	State	Local	Freeway	State	Local
A			58.77			56.18			19.13			16.47
B		0.88	5.89			2.59			0.33			2.66
C		1.06	2.13			4.75			0.5			
D	1.35	5.15	0.09			1.05		1.12				
E	2.16	3.75				0.45	4.64				1.12	0.33
F	0.28	0.11				0.36		0.72				
~	0	0		3.79	10.59	1.86				4.64	0.72	0.5
Total Miles	3.79	10.95	66.88	3.79	10.95	66.88	4.64	1.84	19.96	4.64	1.84	19.96

Estimated using data provided by the GDOT Multi-Modal Transportation Planning Tool, version 3.

Without additional improvements, this modeling suggests that 25.41 miles of roadway will be at level of service D or below in 20 years. This figure represents 23.5%, or almost a quarter of the existing roadways, that will not function at an acceptable level of service if no additional improvements are planned and executed within the next twenty years.

In a June 2004 transportation study of Carroll County conducted by Day-Wilburn and Associates at the request of the Georgia Department of Transportation, the road network was examined and modeled against projected population trends. When taking into account the existing road network plus those projects that are committed by GDOT to be built for the City, the study finds that several routes are probably going to be operating at less than desirable levels of service by the Year 2030. These routes include:

- **Highway 61** – As it leaves the city center and travels north to Douglas County
- **Highway 101** – From the City center north to Lake Paradise Road
- **Villa Rica Interchange** – All exit ramps
- **South Carroll Road** – From Highway 61 to the City center

The following material comes directly from the Suburban County Study of Carroll County conducted by Day-Wilburn and Associates for the Georgia Department of Transportation in June 2004.

Carroll County is actively pursuing the development and maintenance of a road network that accommodates continuing growth. Map 23 shows the short and long-term transportation projects programmed to increase mobility and connectivity for the traveling public. Villa Rica is working with GDOT and Carroll County to assure that the future needs of the community are met in order that these projects are implemented.

PARKING FACILITIES

There is one park and ride facility in Villa Rica. The site is located off of Interstate 20 on SR 61. The 160 space lot is the largest in Carroll County and had a 51% utilization rate in 2004 which is a three percent increase over the previous year. (*Source: Georgia Department of Transportation*). The Villa Rica lot needs repaving and is identified on the District's priority list for this activity but is not funded. This lot serves carpools and vanpools. Resident can access express bus service at a 15.18 acre site behind the Douglas County Courthouse or another access point in Douglas County. From these locations residents catch express service to downtown Atlanta and the Cumberland Mall/Galleria area in Cobb County. GRTA provides the express service, which will add service to Hartsfield-Jackson International Airport in Summer 2006 (*Source: Georgia Regional Transportation Administration*).

Given this usage and the anticipated non-attainment status of Carroll County, it is probable that the Georgia Regional Transportation Authority will be expanding commuter service (buses, HOV lanes) to Carroll County within the long term (future STIP) planning framework. Villa Rica will work with GRTA, the Regional Development Center, GDOT and with Carroll County in determining service alternatives to increase the auto occupancy in the I-20/Bankhead Highway corridor.

Downtown Villa Rica has an estimated 170 public parking spaces. (Source: Survey & Analysis: Ernest E. Blevins, MFA 1983) The utilization, according to the Blevins's study is 38%. The business community has taken an active role in the assessment of downtown parking needs in Villa Rica. Parking will be addressed in the Upcoming Downtown Master Plan.

BRIDGES AND BRIDGE CONDITION

There are seven road bridges located within the City of Villa Rica (**Map 24**). These bridges are at the following locations:

Bridge	Over
SR 61 North-bound lanes	I-20
SR 61 South-bound lanes	I-20
SR 101	Spring Branch
Daniel Street	I-20
South Carroll Road	I-20
Liberty Road North-bound	I-20
Liberty Road South-bound	I-20

All bridges are in good to excellent condition, as determined by GDOT.

EVACUATION ROUTES

The State of Georgia designates Interstate 20 as an evacuation route for hurricanes and as an escape route in the event of an incident at the Anniston Military Depot. Located in Anniston, Alabama, this military facility is in the process of disposing of all the nation's nerve gas supplies. The Depot lies approximately 50 miles west of the region.

Exhibit 92: Villa Rica Road Inventory and Maintenance Responsibilities

Type of Route	2000		2003		Change	
	Total Mileage	Daily VMT	Total Mileage	Daily VMT	Total Mileage	Daily VMT
State Route	10.87	277,506	10.87	293,762	0.0%	5.9%
County Road	16.01	15,165	16.40	18,103	2.4%	19.4%
City Street	36.92	44,263	39.21	45,900	6.2%	3.7%
Total	63.80	336,934	66.48	357,765	4.2%	6.2%

There has been an increase in traffic on all roads within the study area. Even though there were more city streets added during the interim shown above, it is the county roads that experienced the greatest increase in traffic during that same time frame.

SIGNIFICANT BIKE AND PEDESTRIAN FACILITIES

The following material comes in large part from the Suburban County Study of Carroll County conducted by Day-Wilburn and Associates for the Georgia Department of Transportation in June 2004.

Used for transportation as well as recreation, pedestrian and bicycle facilities serve as an integral element of a multimodal transportation network. Pedestrian and bicycle facilities are vital for providing links to transit, accommodating short trips between neighborhoods and community facilities, and providing circulation between land uses in denser activity centers. The connection of neighborhoods to activity centers, including employment centers, community facilities, and retail opportunities, by way of pedestrian and bicycle facilities will improve resident accessibility to these locations. Demand for bicycle and a pedestrian facility has grown substantially since the inception of ISTEA and TEA-21, which provided more funding for these modes.

There are two basic categories or forms of bicycle improvements: on-road facilities and off-road paths or trails. Within these categories are included bike lanes, widened curb lanes, bike routes, multi-use paths, and designated bike routes. Bicycle users have varying levels of expertise; therefore, different types of facilities are desirable to different types of users. Cyclists are typically separated into three groups, Type A, Type B, and Type C, which are described in the AASHTO Guide for the Development of Bicycle Facilities as follows:

- Type A Cyclists: Advanced or experienced riders who generally use their bicycles as they would a motor vehicle.
- Type B Cyclists: Basic or less confident adult riders who may also be using their bicycles for transportation purposes, e.g., to get to the store or to visit friends, but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by the faster traveling motor vehicles.
- Type C Cyclists: Children, riding on their own or with parents, who may not travel as fast as their adult counterparts but still require access to key destinations in their community, such as schools, convenience stores and recreational facilities.

On-road facilities, such as designated bike routes, widened curb lanes or striped bicycle lanes immediately adjacent to vehicle travel lanes, serve mostly experienced cyclists (Type A) who use their bicycles as they would a motor vehicle. Less experienced Type B and Type C cyclists favor the security of wider roadways, less traffic, and off-road, multi-use paths.

STATE BICYCLE ROUTE

The Georgia Bicycle and Pedestrian Plan includes the Chattahoochee Trace Route, which includes 23 miles in Carroll County. This route enters the County from Coweta County on US 27 Alternate/SR 16 and continues on SR 166, Northside Drive/CR 1063, SR 113, CR 261, CR 273, CR 274 and Academy Road/CR 244 where it enters Haralson County. No part of this route passes through the City of Villa Rica.

REGIONAL BICYCLE ROUTES

The State of Georgia, in its '91-'92 Bicycle Touring Guide, indicates that the Chattahoochee Trail route passes through Temple, the Sand Hill community, and eastern Carroll County before exiting to the south through Whitesburg. No part of this route passes through the City of Villa Rica.

INTER-CITY ROUTES

The adopted form of the Chattahoochee-Flint Regional Bicycle and Pedestrian Plan lays out a network for the purpose of designating inter-city travel routes for cyclists. The inter-city system connects the City of Villa Rica with the cities of Temple and Carrollton. The Temple route uses State Route 8 (West Bankhead Highway) as it leaves Villa Rica and for the majority of the route into Temple. The Carrollton route makes use of South Carroll and Hickory Level Roads.

RECREATIONAL BICYCLE ROUTES

The two primary groups using bicycle travel for recreation are children and recreational cyclists. An assessment conducted by the Georgia Department of Transportation indicates that almost all of the streets within Villa Rica are suitable for the use of bicycles, with the exception of the state designated highway routes as these leave the central business district. Recreational cyclists have designated a route that enters Villa Rica from the north on Rockmart Road (SR 101) and exits to the south along the South Carroll route named earlier. A map showing the routes and areas designated suitable for bicycle and pedestrian use is attached to this plan.

PEDESTRIAN FACILITIES

There are three areas with sidewalks developed for pedestrian use within the City of Villa Rica. These areas are located:

- 1) in the historic downtown bounded roughly by Montgomery Avenues, North Avenue and Anderson Drive;
- 2) in the Mirror Lake development, and
- 3) in the Bay Springs development.

Both the Mirror Lake and Bay Springs areas are relatively new residential developments.

BIKE AND PEDESTRIAN FACILITY IMPROVEMENTS

The Temple and Carrollton inter-city bicycle routes lie along roads that are deemed in need of major improvements to make them safer for their use by cyclists. The 2010 cost estimate for these improvements are as follows:

SR 8 (West Bankhead Street/Highway)	\$264,000
South Carroll Road	<u>\$596,000</u>
Total Improvements	\$860,000

City Hall is moving from its present location on West Bankhead Highway to a location in the historic downtown. With this relocation, plans are being discussed to create a greenway along the middle fork of Town Creek that will eventually tie in the downtown with the Mirror Lake development via a pedestrian path. The route will add about three miles of pathway to the existing pedestrian network. The project cost is estimated to be \$600,000.

Traffic calming, particularly in downtown Villa Rica can be accomplished with the addition of pedestrian bulb-outs, raised crosswalks and greenery. The Downtown Master Plan will address these amenities.

PUBLIC TRANSPORTATION

There is more than one transit provider operating for the benefit of Villa Rica residents, but these providers serve specific clientele and no one operation serves the mobility needs of the general public within the City limits of Villa Rica.

The Villa Rica Senior Center is served by the Coordinated Transportation System operating under the auspices of the Georgia Department of Human Resources. Their records indicate that in FY 2004, the system provided 4.946 trips to 23 participants in activities at the Villa Rica Senior Center. Others in Villa Rica use the system to access services from the Carroll County Department of Family and Childrens' Services, the Pathways Center, and the Carroll County Training Center, but the records do not specify the residency of those making these trips, so no numbers are available.

Douglas County operates a system that provides van pool and express bus services. All transit vehicles operate out of Douglasville meaning that the Villa Rica residents seeking to take advantage of the service must commute to that city to board the transit vehicle. The system provides 29 daily routes with the vanpool and operates Monday-Friday between the hours of 6:00 AM to 6:30 PM. The principal destinations are downtown and midtown Atlanta and DeKalb County. The peak hour capacity of the system is 350 passengers. The system collects annual revenues of \$110,000 against operating costs of \$300,000. The local government picks up the difference. The vanpool program reports that 28 persons living within the area defined by the Villa Rica zip code use the service, along with 10 from the Temple zip code area and 4 from the area designated by the Carrollton zip code.

The Georgia Regional Transportation Authority started the express bus service in July. The system provides five daily routes in the mornings and evenings between the hours of 5:30 AM and 6:30 PM, Monday-Friday. At the time of contact, there was no ridership information available.

RAILROADS

Norfolk-Southern Railroad serves the City of Villa Rica. Approximately 20-25 trains per day pass along this route, which traverses the center of the historic downtown. This route also provides passenger service through Amtrak, which uses the facility twice daily. The Crescent route has daily runs from New York City to New Orleans by way of Greensboro, NC and Atlanta, GA. There are no passenger stops for this route in the City of Villa Rica. The adjacent eastern and western boarding stops are at Atlanta, Georgia and Anniston, Alabama.

AIRPORTS AND AIR TERMINALS

The City of Villa Rica is served by one general aviation airport located elsewhere in Carroll County. The airport accommodates a variety of aviation related activities including recreational flying, agricultural spraying, corporate/business jets, experimental aircraft, police/law enforcement, and ultra-lights. The following information is provided from the State Aviation Plan.

EXISTING FACULTIES

The West Georgia Regional Airport is a 396-acre facility that has one runway of 5,500 feet. The airport has medium intensity runway lighting, a recently-installed Instrument Landing Approach system, and provides a full range of services including fuel, repairs, and storage. The general aviation airport is classified a Level III airport in the state aviation plan.

CURRENT AND FORECAST DEMAND

A review of the airport's historic demand levels shows that based aircraft increased from 55 in 1990 to a current level of 94. By 2021, the airport's based aircraft are expected to reach 117. The airport has approximately 47,325 annual aircraft takeoffs and landings divided between local and itinerant operations. This figure is projected to increase to 64,585 by 2021. By the end of the planning period, the airport is expected to reach 29% of its available annual operating capacity.

Exhibit 93: Aircraft at West Georgia Regional Airport

W-GA Regional-O.V. Gray Field	Current	2006	2011	2021
Based Aircraft	94	99	105	117
Operations	47,325	50,527	54,835	64,585
Local	16,703	17,833	19,353	22,795
Itinerant	30,622	32,694	35,481	41,790
Enplanements	NA	NA	NA	NA
Demand/Capacity Ratio	21%	22%	24%	29%

AIRPORT FACILITY AND SERVICE NEEDS

West Georgia Regional – O.V. Gray Field has been classified a Level III airport and should provide appropriate facilities and services commensurate with its system role. Airport improvements identified in the System Plan include:

- Install precision approach
- Upgrade MIRL to HIRL
- Install MALSR*
- Phase III: 8 additional hangar spaces are needed
- Phase I: 24 additional apron parking spaces are needed;
- Phase II: 3 additional apron parking spaces are needed;
- Phase III: 6 additional apron parking spaces are needed
- Phase I: 109 additional auto parking spaces are needed;
- Phase II: 9 additional GA auto parking spaces are needed;
- Phase III: 18 additional auto parking spaces are needed
- Provide a separate 2,500 square foot terminal

* Committed funds and project is ongoing

The table on the following page summarizes current facilities and services, the airport's facility and service objectives, and actions/projects that are needed for West Georgia Regional – O.V. Gray Field to meet these objectives.

Exhibit 94: West Georgia Regional Airport—Facility and Service Objectives

	Existing	System Objective	Recommended
Airside Facilities			
Runway Length (Rwy 16 / 34)	5,500	5,500 feet or greater	None
Runway Width	100	100 feet	None
Taxiway Length	Full Parallel	Full Parallel	None
Approach	Non-Precision	Precision	Precision
Lighting-Runway	MIRL	HIRL for precision approaches; MIRL for non-precision	HIRL
Lighting-Taxiway	MIRL	MIRL	None
NAVAIDS	Rotating Beacon	Rotating Beacon	None
NAVAIDS	Segmented Circle	Segmented Circle	None
NAVAIDS	Wind Cone	Wind Cone	None
NAVAIDS	PAPI	PAPI	None
Weather	AWOS-3	AWOS / ASOS	None
Ground Communication	Phone	GCO / Phone	None
Approach Light System	MALSR*	Approach Lighting System	None
General Aviation Landside Facilities			
Hangared Aircraft Storage	74 spaces	70% of based fleet	Phase III: 8 add'l spaces needed
Apron Parking / Storage	28 spaces	30% based of aircraft plus additional 75% for transient aircraft	Phase I: 24 add'l spaces needed Phase II: 3 add'l spaces needed Phase III: 6 add'l spaces needed
Terminal / Administrative	1,000 square feet	2,500 square feet minimum with amenities	Provide a separate 2,500 square foot terminal building
Aviation Auto Parking	40 spaces	One space for each based aircraft, plus 50% for visitors / employees	Phase I: 109 add'l spaces needed Phase II: 9 add'l spaces needed Phase III: 18 add'l spaces needed
Services			
FBO	Full Service	Full Service	None
Maintenance	Full Service	Full Service	None
Fuel	AvGas	AvGas	None
Fuel	Jet Fuel	Jet Fuel	None
Rental Cars	Available	Available	None

*Committed funds and project is ongoing

OTHER RECOMMENDATIONS

Additional actions or project required for West Georgia Regional – O.V. Gray Field to meet Level III performance objectives:

- Update the Master Plan/ALP in Phase I (2003) and Phase III (2013)
- Adopt land Use/Zoning Controls
- Pavement Condition Index (PCI) needs to increase 5 PCI to reach the 70 PCI objective
- Correct RSA deficiency

The following table provides estimated costs for airport to meet each of the recommendations of the Georgia Aviation System Plan.

Exhibit 95: West Georgia Regional Airport Development Costs

Associated City FAA Identifies Level	Carrollton CTJ III	WEST GEORGIA REGIONAL AIRPORT						
		Facility Objectives			Costs			
	Existing	Objective	Facility Needs			Phase I	Phase II	Phase III
Airfield								
Runway Length	5,500	5,500						
Runway Width	100	100						
Taxiway Lighting	Full Parallel	Full Parallel						
Runway Lighting	MIRL	HIRL	Upgrade from MIRL to HIRL			\$165,000		
Taxiway Lighting	MIRL	MIRL						
Land Acquisition			Acquire 19 acres for airfield requirements			\$98,000		
Earthwork								
Pavement Maintenance	65PCI	>70PCI	Rehabilitate runway			\$376,113		
Navigational Aids								
PAPI	Yes	PAPI						
Rotating Beacon	Yes	Rotating Beacon						
Segmented Circle	Yes	Segmented Circle						
Windcone	Yes	Windcone						
Weather	AWOS-3	ASOS or AWOS						
GCO / Phone	Phone	GCO / Phone						
Approach Lighting	None	Approach Lighting	1			Projected is funded / ongoing		
General Aviation Facilities								
			Phase I	Phase II	Phase III			
Hanger Storage	74	82			8			\$200,000
Apron	28	61	24	3	6	\$518,400	\$64,800	\$129,600
Auto Spaces	40	176	109	9	18	\$163,500	\$13,500	\$27,000
Terminal Space	1,000	2,000			2,500			\$375,000
Fuel								
Planning / Environmental								
ALP Update	1992	Update every 10 years	1		1	\$60,000		\$60,000
Environmental Assessment								
Subtotal						\$1,381,813	\$78,300	\$811,600
Total Estimated Cost						\$2,271,713		

Exhibit 96: Signalization and Signage Inventory--Villa Rica and Carroll

	Stop Sign	Beacon- Amber	Stop All Directions	Flasher	Traffic Control - Left Turn Arrow	Stop Sign Opposite	Traffic Control - Pedestrian Signal	Beacon - Red	Signal	Yield Sign Opposite Inventory	Yield Sign	Grand Total
Villa Rica	75	1	26		5	115		1	7		1	231
Carroll Co. Total	856	10	140	2	27	1154	18	8	74	3	9	2301

Georgia Department of Transportation, RC File,

SIGNIFICANT TRANSPORTATION ISSUES

Based upon the data presented herein and the information gathered at the visioning meeting, the most critical issues facing Villa Rica pertaining to transportation are relative to congestion and its affect on the integrity of the community based activity centers, particularly Downtown Villa Rica. Improvements planned must not only emphasize through traffic but also the subregional needs in the community. New activity centers when developed need to be attractive, mixed-use, pedestrian-friendly places. Access corridors to downtown and the Villa Rica downtown need to be preserved and protected from the congestion caused by commuting. Residential areas, both new and existing need to be tied into the activity centers with parallel access and with pedestrian, transit and bicycle access.

Road safety must be maintained. This is critical to the smooth functioning of the roads and the activity centers. The lack of pedestrian activated signal devices and sidewalks throughout the community must be addressed.

Primary road corridors must be protected from inappropriate development patterns. Existing commercial corridors must be managed so as to not cause undue disruption to the access corridors and the activity centers. Access corridors to Villa Rica are identified as any road that enters and leads directly into the city limits and ultimately into the central downtown business district. These roads are classified as major and minor arterial.

In the City of Villa Rica, these roads include U.S. Highway 78 (East and West Bankhead Highway), GA Highway 61 (Dallas Highway), GA Highway 101 (Rockmart Road/ Main Street), and South Carroll Road.