

## Urban and Rural Setting

### ➤ INTRODUCTION

As Southwest Florida continues to attract new residents, more visitors, and businesses, the promotion of sustainable growth and development patterns will be critical to continued regional prosperity and quality of life. The challenges of traffic congestion and the cost of delay require that the region implement efficient land use plans on both the local and regional levels, and more closely integrate regional land use and transportation planning.

Over the last decade, Southwest Florida has experienced phenomenal growth. According to the U.S. Census, the seven county region's 2000 population burgeoned to more than 1.2 million people and supported over 500,000 jobs.

While the region has prospered economically from growth, the consequences of development raise new challenges to sustainable growth. Development continues to occur in a scattered, low-density manner. New pressure is being placed on more affordable rural or exurban areas and historically platted lots. From 1990 to 2000, the population increased by 297,308 persons or approximately 33%.

### ➤ REGIONAL OVERVIEW

#### Local Governments

Southwest Florida consists of six counties with a total area (land and water) of 6,663 square miles or a land area of 5,986 square miles. Four of the six counties border the Gulf of Mexico. Consequently, the Region has a coastal orientation, with population and economic activity concentrated in coastal urban areas. Map 18 depicts the county or municipal locations within the region.

The northernmost county, Sarasota County, is 573 square miles in size and was established in 1921. The City of Sarasota (established in 1885) is the county seat and is the Region's second most populous city. Two of the three other municipalities in Sarasota County are Longboat Key and North-Port, which are relatively newly formed communities. The third municipality is Venice, one of the older cities in Southwest Florida. Englewood, an unincorporated area in the south coast section, is a growing population center that spills over into adjacent Charlotte County.

Charlotte County is 690 square miles in area. Established in 1921, it has seen most of its development around Punta Gorda, the county seat and only municipality. Major growth has occurred in recent years in the unincorporated areas of Port Charlotte (north of Punta Gorda) and the Englewood/Grove City/Manasota Key area on the coast. Punta Gorda has experienced growth primarily in the west and south.

The county with the greatest number of the Region's growth centers is Lee County, established in 1887, and now 803 square miles in size. Fort Myers is the county seat and the Region's third most populous city. Cape Coral (the most populous) is the most rapidly growing city in the Region and is

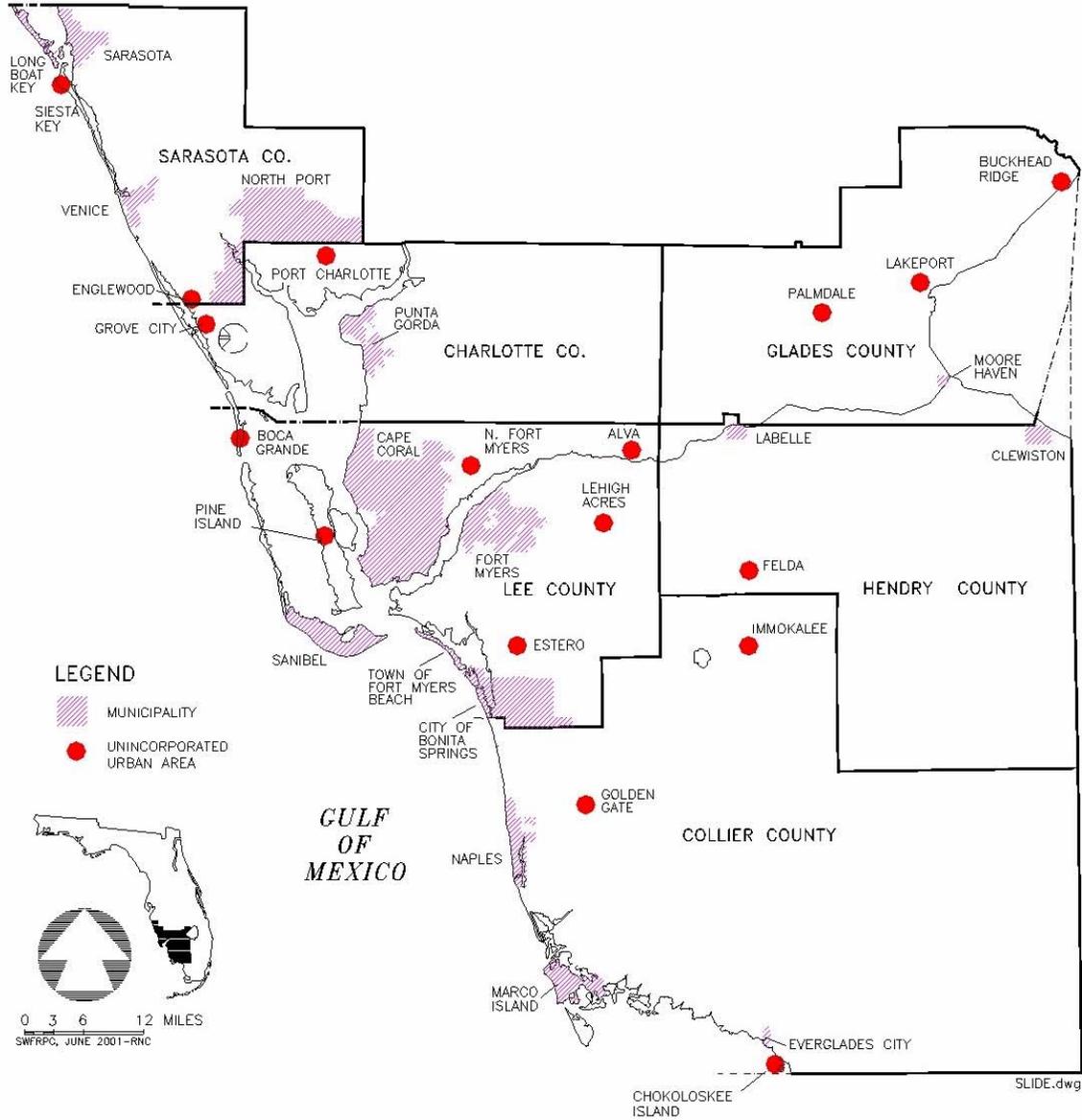
physically the largest. Sanibel is the County's third city, established in 1974. It has a strong tradition of controlling growth. The Town of Fort Myers Beach (1996) and the city of Bonita Springs (1999) are the county's newest municipalities, and are largely built out from pre-incorporation development. There are also numerous distinct unincorporated areas with the potential to become major urban centers, such as Lehigh Acres, Alva, Estero, Captiva, and Boca Grande.

The southernmost county, Collier County, was established in 1923. It is the largest county in the Region in land mass, some 1,894 square miles. The area around Naples has been the primary focus of development. Everglades City is the oldest incorporated area of the county. It was the county seat until after the 1960 hurricane, when the county seat was moved to unincorporated East Naples, the current location. The City of Marco Island is the County's newest City, incorporated in 1997, and was formed from an already established platted area. Immokalee is the only other center of significant size. Although unincorporated, it serves as an agricultural/commercial center for northeastern Collier County.

Glades County, established in 1921, is the northernmost of the Region's two inland counties. It is 763 square miles in size. The only incorporated area is Moore Haven, the county seat. The major population center is unincorporated Buckhead Ridge in the northeastern corner of the county. Lake Okeechobee borders the eastern side of the County and is the cause for a burgeoning seasonal population. Glades County has experienced very gradual growth since its establishment.

The second largest county in the Region is Hendry County at 1,163 square miles. Formed in 1923, it has two population centers, the municipalities of LaBelle and Clewiston. LaBelle, in the northwestern part of the county, is the county seat. Clewiston is in the northeastern part, bordering Lake Okeechobee. The economy of Clewiston is primarily dependent upon the sugar cane industry, located in the area just south of Lake Okeechobee. Winter crops and ranching are also important parts of the economy of the county.

**MAP 18 - COUNTIES AND CITIES**



AREAWIDE LOCATIONS  
SOUTHWEST FLORIDA REGION

## Other Units of Government

Besides the six counties and sixteen municipalities listed above, each of which is a unit of general purpose government, there are a number of single purpose agencies and districts.

### Special Districts

In 1998, The Florida Department of Community Affairs (DCA) maintained a listing of 139 special districts (a reduction from a 1985 SWFRPC inventory of 387), including 24 water/drainage districts, 22 fire control districts, 21 Community Development Districts, and 72 other special districts, such as mosquito control, hospital, parks, housing, etc. Forty four of those registered with DCA were "dependent" districts. (This is a district that has a separate management unit but is overseen by the county commission, but all revenues raised from that area are expended in that same area.) An increase in the popularity of the municipal service taxing (or benefit) unit (a form of "dependent" district that does not have a separate management unit) has caused an decrease in the number of dependent and independent districts that has an advantage in being easily dissolved when no longer needed. In increasingly popular form of "dependent" district is the community redevelopment district. There are established for older areas, commonly for improved services or facilities, and rehabilitation or redevelopment of structures.

Independent Districts are those commonly single purpose districts with governing authority of other local governments. They are chartered through the legislature (commonly), and have had recently imposed reporting and management requirements that have reduced their numbers. As of 1998, there were 95 Independent Districts, with drainage and fire being the most common. An increasingly popular district is the Community Development (or Services) District, established pursuant to Ch. 190 F.S. These are commonly precursors for municipal formation in that they encompass development proposals that need a broad range of municipal services. There are at least 21 of these districts.

### Multi-jurisdictional Agencies

The cities and counties of the Region have formed a number of organizations to deal more effectively with shared problems. This includes a number of city/county bodies, as well as county/county bodies.

The foremost of these is the Southwest Florida Regional Planning Council, which is made up of thirty-one members. Each of the six counties provides two county commissioners and one municipal representative to the Council, while the Governor appoints ten additional lay members, with at least one from each county. In addition to these members, cities may be dues paying members of the Council. The Council is an advisory body, which maintains a technical staff to assist area local governments and entities on a wide variety of growth and planning related matters.

In addition to the Council, there are four Metropolitan Planning Organizations concerned with transportation: Sarasota/Manatee County, Charlotte-Punta Gorda, Naples (Collier County), and Lee County. There are also, as multi-county bodies, the Area Agency on Aging-"Senior Solutions"-Council, the Health Planning council of Southwest Florida, Inc., the bi-county Airport Authority for the Sarasota/Bradenton Airport, the Peace River/Manatee Water Supply Authority, and the West Coast Inland Navigation District.

### Substate Districts and State Agencies

Some thirty state departments and commissions have authority over activities within the Region. A number of these employ different systems of substate offices to aid in the administration and management of their functions.

Two water management districts operate certain water structures and regulate certain water activities within the Region. The Southwest Florida Water Management District (headquarters in Brooksville) and the South Florida Water Management District (headquarters in West Palm Beach) have ad valorem taxing authority, the only non-elected bodies in Florida with that authority. They also employ "basin boards" or sub-district entities to assist them in the administration of their funds (Appendix V-9). The Southwest Florida Water Management District has a governing board of 13, while the South Florida Water Management District has a board of 9.

### Regional Offices of Federal Agencies

The federal government's operations extend throughout the Region, as they do elsewhere. Certain activities are of such an intense nature that different federal agencies maintain a presence through various offices located within the Region.

The Seminole and Miccosukee nations are a special aspect of the federal presence, in that they represent general purpose governments for specific areas within the Region. To a large extent, however, these areas are not subject to state law. (These nations' offices and the areas over which they exercise jurisdiction are also depicted in Appendix V-9.)

## ➤ **URBAN USES OF THE LAND**

### **Land Use**

For the purposes of this report, land use will be categorized into two categories-urban and rural. The term "urban" will refer to those areas having a population of at least 1,000 persons per square mile, areas that have been prepared for populations of that density, areas of intense use that are needed to support urban populations, or areas prepared for intense uses needed to support urban populations. As a consequence of that classification, commercial, industrial, institutional, and transportation land uses in excess of 40 contiguous acres are included as "urban".

Rural land uses (discussed further in the report) will refer to those areas of lesser intensity, density, or extent than urban uses. Reservoirs and mining activities join estate lifestyles, agriculture, and preserves as the common rural uses.

Approximately 20.1% of the Region's 5,986 square miles of land uses are urban (1 993), or are transitioning to urban. The eight land uses that dominate the Region's urban area (taken from the Florida Land Use and Cover Classification System) follow:

Residential: Residential land uses are dominantly single-family, including dwelling are not physically connected to other units, such as the typical suburban home and mobile home, and multi-

family, including units that touch or are attached to other units, such as duplexes, townhouses, and apartments.

Commercial: This refers to uses related to retail and wholesale distribution of goods and services, such as associated warehousing, shopping centers, office complexes, and highway "strip" commercial development.

Industrial: This includes uses related to fabrication, processing, and manufacturing, as well as associated warehousing. Typical examples in the Region include lumber yards and concrete and cement plants.

Institutional: Institutional land uses include those public and semi-public uses such as schools, governmental centers, correctional facilities, hospitals and religious facilities.

Extractive: Those mining operations that are currently underway or have ended without land restoration. Examples of extractive uses include shell pits, quarries, mines, oil and gas wells, and borrow pits for landfill.

Transportation, Communications, Utilities: Those operations such as airports, ports, wellfields, transmission lines, large sewage plants, power plants, etc.

Mixed: This refers to combinations of the land uses above in which no one use constitutes 70% of the land coverage of a 20-acre or larger parcel.

Transitional: This primarily refers to lands prepared for urban development but not pided. Other uses include parks, golf courses, and government-owned s in the urban area.

In addition to these eight categories, there are also "committed future urban areas." These are areas which are committed to urban uses through platting (also included in open and other) or development orders for Developments of Regional Impact. Local comprehensive plans are the sources of statistics for 1999 and the basis for the uses depicted in Map IV-2. (The scale of the map restricts the depiction of some uses that would be visible in larger maps. For example, all residential uses are combined into a single category.)

Residential is the dominant land use. It contains 10% of the region's land mass. Due to mapping scale, areas of homes intermixed with vacant lots are depicted as residential.

The second most dominant land use for the Region's existing urban areas is "transitional," or lands cleared and prepared for development. Usually there is the provision of street and drainage facilities. In 1975, this constituted nearly 65% of the area's urban lands. By 1999, it had dropped to 42.8%. It should be noted that some lands previously prepared for urban uses are transforming into agriculture or natural systems, so this estimate is currently inflated. Transitions are occurring in the Myakka Estates area of Sarasota County, Port LaBelle area of Hendry County, Rotonda area of Charlofte County, and Golden Gate Estates area of Collier County.

The distribution of empty land is not evenly balanced, since it is concentrated in the cities of Cape Coral and North Port, and unincorporated coastal areas of Lee (Lehigh Acres), Charlotte (Rotonda and Port Charlotte), and Collier (Golden Gate Estates) Counties. Elsewhere, these empty lands are not dominant. Overall, there are more vacant single family lots than those with homes.

The remaining urban uses in order of dominance in 1999 are commercial; transportation/utilities; extractive; institutional; and industrial. Table 92 depicts urban uses for 1975 and 1993.

Table 93 compares population and land use from 1975 to 1993. Population increased over 119% as urban land use increased 93%.

The increasing density of population is also seen in Table 93. From 1975 to 1987 population density increased from 1.12 persons per acre of urban land to 1.57 persons per acre. Simultaneously, the amount of land per person declined as the population grew.

<b>TABLE 92</b>					
<b>URBAN LAND USE 1975-1993</b>					
<b>Land Use Category</b>	Acres	Urban	Acres	Urban	<b>% Change Since 1975</b>
	<b>1975</b>	<b>%</b>	<b>1993</b>	<b>%</b>	
Residential	118,003	28.8%	439,988	50.1%	272.9%
Commercial	8,376	2.0%	17,491	2.0%	108.8%
Industrial	1,948	0.5%	7,472	0.9%	283.6%
Institutional	3,724	0.9%	8,621	1.0%	131.5%
Extractive	5,158	1.3%	14,292	1.6%	177.1%
Transportation, Communication, Utilities	7,123	1.7%	24,835	2.8%	248.7%
Mixed*	2,330	0.6%	N/A	N/A	N/A
Transitional	263,575	64.2%	365,879	41.6%	38.8%
<b>TOTALS</b>	<b>410,237</b>	<b>100.0%</b>	<b>878,578</b>	<b>100.0%</b>	<b>1, 141.6%</b>

\* Not used in 1993.

Source: Land Use Policy Plan, SWFRPC, April, 1978, p. 15; local comprehensive plans of the Region updated to 1994 pursuant to the LGCPA of 1985; and 1993 aerial photos.

<b>TABLE 93</b>			
<b>POPULATION AND URBAN LAND USE, SOUTHWEST FLORIDA</b>			
	<b>1975</b>	<b>1993</b>	<b>1975-93 Change</b>
Population	459,200	1,005,887	119%
Urban Land Use	410,237 acres	790,134 acres	93%
	1.12 pers/acre	1.27 pers/acre	13%
Population density	0.89 acres/pers	0.78 acres/pers	-12.40%

Source: U. S. Census Final Revised Figure, April 1, 1980; University of Florida Bureau of Economic and Business Research, "Population Studies Bulletin 55," 1981; "Bulletin 83," January, 1988.

**MAP 19 - GENERALIZED EXISTING LAND USE**

One of the consequences of growth is dramatic land consumption and a demand for more facilities. A sprawling development pattern creates a demand for transportation facilities, while, at the same time, transportation facilities are catalysts for more land development. A related and integral feature of the transportation and land use conundrum is that transportation facilities connecting communities enhances economic competitiveness and social vitality. In recognition of this relationship, communities are working together to improve mobility and design livable communities that are compatible with the environment and sustainable over time.

“Sustainable development” and “smart growth” are terms used to describe the connection between development and quality of life; the balancing of development or growth with economic, cultural, and environmental principals. Sustainable development can also be a strategy by which communities use resources efficiently, create efficient infrastructure, protect the environment, and enhance the sense of community. The regional transportation system is an integral component of the future overall regional quality of life. A fragmented, non-coordinated planning approach to regional transportation issues will result in an inefficient regional transportation system. A number of strategies can be employed that will help minimize the impacts of the transportation system at a variety of levels. For example, coordinated land use and transportation planning can help promote compact development patterns that support public transportation systems. Public transportation systems that effectively meet the travel demand help increase auto occupancy rates and reduce the number of single occupant automobiles.

In addition to land use planning that promotes public transit, traffic congestion can be alleviated through strategies other than highway construction, such as, the use of new technologies, travel demand management, and coordinated intergovernmental planning. Studies have shown that regular signal-retiming can be the most effective tool for keeping local traffic flowing smoothly. The Institute of Transportation Engineers estimates the reduction in travel time from traffic signal re-timing ranges from 8% to 25%. Several of the cities and counties, in cooperation with the metropolitan planning organizations, throughout the region are implementing coordinated computerized traffic signal systems as a component of the metropolitan area intelligent transportation system (ITS) infrastructure. Intelligent Transportation Systems represent the next step in the evolution of the nation's entire transportation system. As information technologies and advances in electronics continue to revolutionize all aspects of our modern-day world, from our homes and offices to our schools and even our recreation, they are also being applied to our transportation network. These technologies include the latest in computers, electronics, and communications and safety systems. More importantly, ITS technologies enable public and private organizations across jurisdictions to share information instantaneously. Thus, jurisdictions can act cooperatively, on a real-time basis. ITS can be applied to our vast transportation infrastructure of highways, streets, and bridges, as well as to a growing number of vehicles, including cars, buses, trucks, and trains. These information and communications technologies can also be used to better manage and improve how transportation providers such as governments, transit agencies and freight handlers offer services to the public.

The Metropolitan Planning Organizations and private sector employers also encourage travel demand management programs. Employers often sponsor carpooling and van pooling programs to reduce the number of single occupant vehicles on the roads. Employers also use flextime, telecommuting, or staggered work hours to spread out peak travel time demand.

The SWFRPC, through the goals and policies adopted in this Strategic Regional Policy Plan, can provide the necessary framework for decision-making at the local level to promote these strategies.

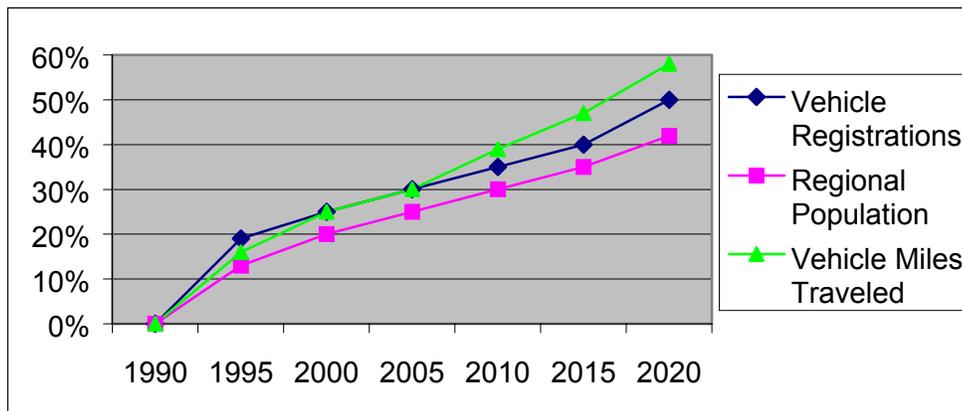
➤ **Region's Growing Demand for Highway Capacity**

Demands on the transportation system are increasing. The growth of Florida's and the region's economy is predicted to continue to outpace national economic growth in the near term.

The Region's population, growing at an average annual rate of slightly less than 2.8%, is expected to grow by more than 1.6 million people during the next 20 years. Along with population growth comes increases in the number of cars and trucks on the region's roads.

Growth means increased demands on the transportation system.

**FIGURE 14  
REGION'S GROWING DEMAND FOR HIGHWAY CAPACITY**



Source: Vehicle Miles Traveled - Florida Department of Transportation, Transportation Statistics, Public Road Mileage and Miles Traveled Report. Vehicle Registration - Florida Statistical Abstract Transportation, Table 13.32. Motor Vehicle Tags: Total Tags and Passenger Car Tags Sold and Revenue Collected in the State and Counties of Florida

➤ **THE TRANSPORTATION SYSTEM AND ITS ROLE IN SOUTHWEST FLORIDA**

Transportation systems and services are the means of mobility by which individuals and organizations pursue everyday functions within the region. An efficient, well-planned regional transportation system not only serves to meet the travel needs of the region's population and facilitates movement of goods, but also can contribute to the economic well being of the region while maintaining the environmental quality. Therefore, the regional transportation system should be considered as a part of the continuing effort to achieve an overall livable, sustainable and competitive region.

Transportation policies and strategies should be developed to meet the overall regional goals, as well as policies and strategies of other regional components of the Strategic Regional Policy Plan (SRPP). Regional transportation policies and strategies which address the need for inter-modalism and multi-modalism, effective land use planning, and transportation demand management can achieve a variety of overlapping regional goals which have a profound and interconnected impact on the entire region.

## Sustainable Transportation – Protecting the Public’s Investment

A region’s future is defined by its endowment of critical resources and assets: built, natural, human, cultural, and economic. One of the most basic tenets of sustainability is that you must first take care of what you have. A sustainable region is one that continuously and purposefully renews itself by systematically replacing resources that are consumed, renewing and repairing assets that become obsolete, and conserving resources that are non-renewable or irreplaceable. A sustainable region is one that supports a collaborative and fact-based decision making process, leading to better choices and a sensible use of our resources.

The 2020 Florida Transportation Plan (FTP) recognizes that we must manage the transportation system and its impacts in a way that we better preserve and sustain our resources long-term. The 2020 FTP provides policy guidance for a sustainable mobility network that address, cumulative, social, economic, and environmental impacts. Preservation and sustainability are interdependent pieces of an overall multi-disciplinary approach to transportation planning. The 2020 FTP update provides the opportunity to set forth a policy framework that will respond to the needs of the 21<sup>st</sup> century. According to the Florida Department of Transportation (FDOT) that policy framework is centered on three key areas:

Mobility: The ability for people and goods to move from place to place as Florida continues to grow.

Economic development: Using the transportation system to enable Florida to compete in both domestic and global economies, while accounting for their impact upon community and state economic goals.

Sustainability: Balancing efforts to improve the road system with the need to protect the environment and make communities more livable.

Both the state and regional transportation plans provide the framework for continuing the long-term development of the transportation system. Sustainability means meeting the needs of the present without compromising the ability to meet the needs of future. The value of the existing system must be preserved and maximized by the application of technological and other design and planning solutions that promote mobility and the most efficient use of limited resources. Achieving sustainable transportation requires the identification of strategies that encourage public and private transportation entities to meet mobility demands, manage the existing system efficiently, and enhance communities and environment in which the system functions.

The following inventory of existing facilities and conditions provide basic data to evaluate current conditions and to plan for tomorrow’s enhancements.

### Private Automobile

The single occupant vehicle (SOV) continues to be the overwhelmingly dominant mode of transportation in Florida and the country. The SOV is the dominant means of work travel in Florida, accounting for about 77 percent of all work trips in 1990. State ridership data shows that the use of alternative modes of transportation has continued to remain low. Roads can serve more than motor vehicles, but most of them must be modified to better accommodate other means of

travel. High occupancy vehicle lanes for carpools and public transit vehicles and improvements for transit vehicles, bicyclists and pedestrians can create corridors for the movement of people, not just vehicles.

If vehicle occupancy continues to remain low, efforts to make alternative transportation modes more attractive and competitive should be intensified to increase auto occupancy. Programs such as rideshare matching, preferred parking, and HOV lanes, which encourage car pooling, are examples of steps which may help increase the number of carpools and decrease the number of single occupant vehicles, thereby providing better transportation service without expensive highway construction. Land use plans which foster increased transit ridership through increasing densities and concentrated development in designated areas can contribute to increased public transportation ridership. Development corridor densities should be established in those areas that can be potentially well-served by public transit. Land use decisions made with little or no regard to the transportation system will contribute to inefficient use of the existing highway and public transportation system, and will not optimize the expenditure of taxpayers' money.

Automobile registration in Southwest Florida has increased at a rate faster than the population, with total automobiles in the region now exceeding the population. According to the Florida Statistical Abstract, 1,478,304 vehicles were registered in Southwest Florida in 1999, which equates to a ratio of 1.3 vehicles/person. In 1995 there were 1,304,605 vehicles registered in the region, equating to a ratio of 1.26 vehicles/person. Table 94 shows the growth in vehicle registration and population for each of the seven counties in the region. Besides owning a greater number of vehicles, commute times are also increasing as development extends outward from the employment centers and travel time delays increase.

County	Population		Registered Vehicles		Vehicles/Population	
	1995	1999	1995	1999	1995	1999
Charlotte	127,646	136,773	157,509	174,112	1.234	1.273
Collier	186,504	219,685	236,994	282,363	1.271	1.285
Glades	8,551	9,867	6,317	7,738	0.739	0.784
Hendry	29,497	30,552	40,325	53,028	1.367	1.736
Lee	376,702	417,114	480,054	539,288	1.274	1.292
Sarasota	301,528	321,044	383,406	421,775	1.272	1.314
Region	1,030,428	1,135,035	1,304,606	1,478,304	1.26	1.3
State	14,149,317	15,322,040	16,980,698	18,507,126	1.2	1.21

Source: Florida Statistical Abstract 1996 & 2000.

## Roadways

The infrastructure necessary to retain and expand higher wage jobs includes a regional network of roads and facilities. The principal north-south roadways in the region include I-75 and U.S. 41. In addition to I-75 and U.S. 41, other regionally significant north-south roads serving Southwest Florida include S.R. 29, U.S. 27, S.R. 17, and S.R. 31. The main east-west routes in the region include S.R. 62, S.R. 64, S.R. 70, S.R. 72, S.R. 80, S.R. 82, and S.R. 78. Other regional significant east-west roads serving Southwest Florida include I-75, U.S. 41, C.R. 846, S.R./C.R. 884 and C.R. 74.

## Roadway Functional Classification

Functional classification is a way of describing roads by the role that they play in the network of public roads. All roads have two major functions: they provide local access to a particular location, and they provide mobility between locations. A road that emphasizes the mobility function is called an arterial. Arterials are further subdivided between principal arterials, which provide long-distance mobility and little access, and minor arterials, which connect closer areas and provide some access. Principal arterials include Interstates, freeways, and others. Between minor arterials and local roads is another class, called collectors. Collectors provide significant access while still providing mobility by connecting different nearby areas or roads. Collectors are further divided in rural areas between major collectors and minor collectors. Table 95 shows the miles of roadway by county and functional class of road.

County	Interstate	Arterial		Collector		Local	Total
		Principal	Minor	Urban Major	Rural Minor		
Charlotte	22.01	40.53	90	224.32	64.43	1,951.50	2,392.84
Collier	63.5	104.4	90.05	164.8	55.4	1,298.94	1,777.09
Glades	0	41.43	59.61	50.19	47.97	173.05	372.25
Hendry	0	63.51	1.28	124.5	34.52	305.48	529.29
Lee	34.14	77.98	165.39	388.68	23.69	4,216.56	4,906.44
Sarasota	46.62	63.99	73.21	246.76	7.63	1,821.50	2,555.69
Region	166.27	391.84	570.04	1,199.25	1,135.03	9,767.03	12,533.60
State	1,471.66	6,406.75	5,641.55	10,126.30	4,186.39	87,699.44	115,957.40

Source: Florida Department of Transportation, Statistics Office, June 2000

## Vehicular Miles Traveled

Increased auto ownership and shifts in population and employment centers have resulted in an increase in vehicular miles traveled. Available data on vehicle miles traveled on the State Highway System reflects the overall vehicle miles traveled for all roadways in the region. Increases in vehicle miles traveled result in an increase in roadways operating at unacceptable conditions, traffic congestion, and mobile source emissions. As development occurs in greater densities in areas not presently served by public transit, expanded transit services and other transportation demand management strategies should be provided as necessary to increase auto occupancy rates by providing an alternative to the single occupied vehicle. Table 96 shows the 1998 estimated daily vehicle miles traveled by county and functional class of road.

**TABLE 96**  
**ESTIMATED 1998 DAILY VEHICLE MILES TRAVELED**

County/Vehicle Occupancy	Interstate	Arterial		Collector		Local	Total
		Principal	Minor	Urban Major	Rural Minor		
Charlotte (1.40)	770,481	837,591	497,975	407,915	76,240	761,757	3,351,959
Collier (1.62)	1,179,889	1,230,706	852,523	651,965	12,901	876,549	4,804,532
Glades (1.72)	0	239,314	161,327	19,577	11,798	34,610	466,626
Hendry (1.76)	0	600,583	7,395	63,340	14,810	125,842	811,970
Lee (1.46)	1,772,010	2,135,134	2,501,246	1,573,584	7,107	2,215,242	10,204,323
Sarasota (1.43)	2,167,757	2,036,896	1,063,943	1,540,141	3,660	2,394,443	9,206,840
Region (1.57)	5,890,137	6,540,224	5,084,409	4,256,522	126,516	6,408,443	28,846,250
State (000's)	79,446	118,466	59,746	40,374	3,548	63,530	385,940

Source: Florida Department of Transportation, Statistics Office, June 2000. VMT is vehicle miles traveled: the product of a road's length and its traffic volume.

In summary, Florida has seen a 16.5 percent increase in vehicle miles traveled on all public roads from 1986 to 1998. In 1986 Florida had 99,074 centerline miles of public in road; in 1997, Florida had 115,957 miles of public roads with 11,980 under Florida Department of Transportation jurisdiction.

Vehicle miles traveled (VMT) in Florida have increased 24.3% on all public roads since 1990. In 1990 Florida reported 109,997 vehicle miles traveled. By 1998 that figure had grown to 136,681. Urban travel is growing faster than rural. It is also growing faster on higher functionally classified roadways. If the trend continues, VMT will grow another 58.9% by 2020.

### **Congested Roadway Segments**

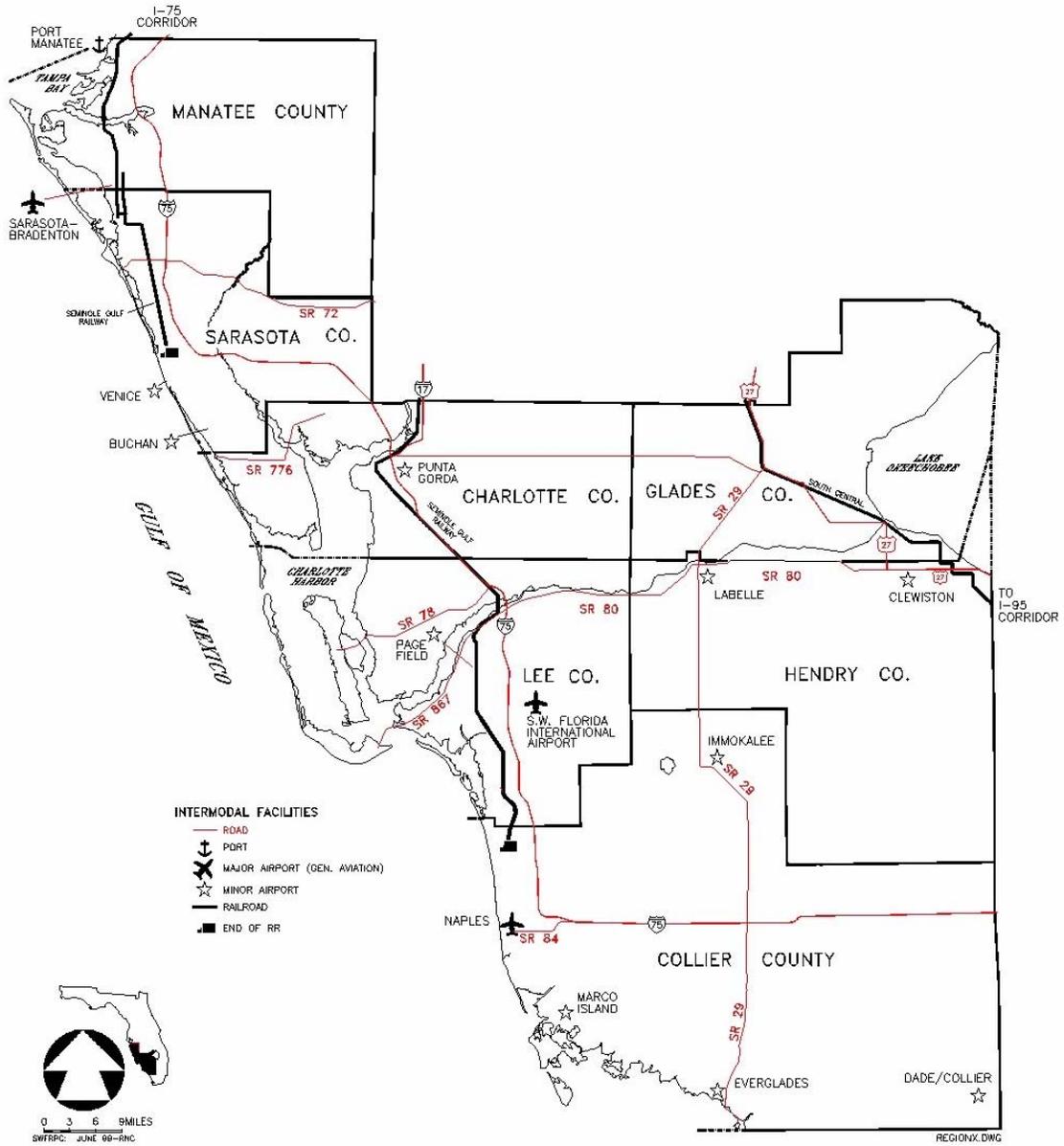
Level of Service (LOS) is a qualitative assessment of road user's perception of a roadway quality of flow, and is represented by the letters "A" through "F". LOS "A" represents free flow, with individual users virtually unaffected by the presence of others in the traffic stream. "B" through "D" represent increasing decline in the freedom to maneuver within the traffic stream. LOS "E" represents operating conditions at or near the road capacity level. Roadway segments are shown as congested based on their operating levels as identified by FDOT. Quantitative and qualitative measures have been incorporated into level of service standards in order to determine the operating conditions. Table 97 shows only those roadways on the Florida Intrastate Highway System (FIHS) that were identified as congested based on LOS traffic volumes by FDOT. More detailed arterial analyses may be necessary in determining actual operating conditions for permitting and concurrency purposes.

<b>TABLE 97</b>				
<b>FLORIDA INTRASTATE HIGHWAY SYSTEM</b>				
<b>CENTERLINE MILES OPERATING BELOW THE LOS</b>				
County	1995		1997	
	<b>Total Miles</b>	<b>&lt;LOS</b>	<b>Total Miles</b>	<b>&lt;LOS</b>
Charlotte	31	5	31	8
Collier	64	3	64	7
Glades	41	0	41	0
Hendry	47	1	47	3
Lee	56	35	56	38
Sarasota	43	11	43	24

Source: Florida Highway Data Source Book, April 2000.

Those regional roadways' segments operating at LOS E or below, which represents the poorest operating level at which a roadway can operate, are identified in Map 20. This map should not be used to identify roadways operating at the adopted level of service standard, which in many cases is higher than LOS E. For example, the adopted level of service for I-75 in most areas of the region is LOS C; roadway segments operating below LOS C have been identified as congested for this map.

**MAP 20 - TRANSPORTATION NETWORK**



SOUTHWEST FLORIDA REGIONAL TRANSPORTATION NETWORK

It should also be noted that the map does not show areas of localized congestion, such as an isolated intersection, unless the operating conditions of the intersection influence the operating conditions of the roadway segment as a whole. In addition, it does not reflect instances where bridge openings or rail crossings contribute to the degradation of the level of service during operation.

As expected, areas of congestion occur in the more developed areas of the region. Downtown Sarasota, Ft. Myers, and Naples and the rapidly growing areas along the coast, near employment centers of the region. In addition, residential development in southern Sarasota County, Cape Coral, Bonita Springs and Lehigh in Lee County, and east Golden Gate Estates and northern Collier County has increased significantly over the past decade as development patterns have extended in all directions. Every indication is that market forces will continue this trend into the future. Other areas of the region, such as LaBelle in Hendry County and Punta Gorda in Charlotte County, have also seen steady growth and increased traffic congestion, albeit to a somewhat lesser degree.

### **Passengers, Goods and Freight Movement**

Trucks transport more freight in, out, and through the region than any other mode, and are a common element in almost all intermodal freight movements. Trucking and the movement of goods and freight play critically important roles in the regional, state, and global economy. Measured by its value, nearly seventy eight percent of freight in Florida is carried exclusively by truck. Trucks are the dominant mode of transportation for businesses shipping goods into and out of the Southwest Florida region. Overall, trucks accounted for about 88 percent of total shipments, on average, among the companies responding to a recent Florida Chamber freight survey.

For most motorists, traffic congestion is frustration and lost time for all types of trips; for business trips, particularly those involving goods and freight movement via truck, congestion also means higher costs and reduced competitiveness. I-75 is the roadway with the highest numbers of trucks. Both the number of trucks and percent of total vehicular volume are high for the I-75 corridor. For example, in 1998 I-75, between Daniels Parkway and C.R. 82 in Lee County and from Clark Road in Sarasota County north to I-275 in Manatee County, handled upwards of 10,000 trucks per day. This represents approximately twenty percent (20%) of the total vehicular daily volume. According to a 1999 Center for Urban Transportation (CUTR) Study, this volume of trucks equates to between 20 to 40 million gross ton per mile.

### **Air Service**

Southwest Florida International Airport and the Sarasota/Bradenton International Airport offer the majority of the Southwest Florida's scheduled airline passenger and shipping service. The Naples Airport and Charlotte County Airport also support limited commercial passenger service. A number of additional airports accommodate charter and general aviation traffic. They include Page Field in Lee County, Buchan Field and Venice Airport in Sarasota County, the Labelle Airport and Airglades Airport in Hendry County, Marco Island, Everglades City, and Immokalee Regional Airports in Collier County. The Critical Facilities Map shows the location of international and general aviation airports and other critical transportation facilities located in Southwest Florida.

Many business leaders and citizens recognize that the Southwest Florida International Airport is one of the region's best examples of how a specific industry can benefit the regional economy. From 1993 to 2001 freight levels have increased 91 percent. SWFIA moved approximately 32 million pounds of freight in 2001. While airport passenger activity fluctuates with the season, upwards of 700,000 passengers visit and leave the airport on a monthly basis. The airport handled 5.3 million passengers in 2001. Annual passenger enplanements at Southwest Florida International Airport are projected to increase 5.6 percent over the next 10 years, growing from the 1990 level of 1.9 million to 5 million by the year 2010. Through the commitment of the airport management and local government, air transport of goods and people through SWFIA stimulates business throughout the entire region. Continued support of the aviation industry, including general aviation airports and the encouragement of expanded international air service must be basic elements in future plans for economic development. Table 98 provides a summary of aviation activity.

<b>TABLE 98</b>			
<b>SOUTHWEST FLORIDA REGIONAL AVIATION SUMMARY</b>			
<b>Year</b>	Total		
	<b>Based Aircraft</b>	<b>Operations</b>	<b>Enplanments</b>
1990	1,209	773,349	2,867,774
1995	1,349	688,076	2,856,945
1997	1,587	761,388	3,048,943
2001*	1,759	849,451	3,877,994

\*= Forecast year; Last historical year: 1997.

Source: FDOT, Aviation Office Non-Official Forecast

Future plans for SWFIA include a new midfield terminal, parallel runway, and a north south access road, running parallel to I-75. The roadway and terminal are scheduled to open in 2005. The new Midfield terminal complex will have 28 gates with associated aircraft ramp development and a transportation center with auto parking and auto rental facilities. While the new access road and terminal egress and ingress may see immediate improvement, the interchanges at Daniels Parkway and Alico Road with I-75 must also be modified to accommodate future airport traffic. Most vehicles arriving via I-75 from the north and south are expected to use these interchanges to access the airport.

The Sarasota Bradenton International Airport (SBIA) is located partly in northwestern Sarasota County and the City of Sarasota and mostly in southwestern Manatee County all of which is adjacent to and east of U.S. 41. The SBIA amended development order of 1990 authorized development of 305,000 gross square feet of terminal, 1,200 parking spaces and 13 airside gates and aircraft parking aprons. In 1996 SBIA submitted plans for a substantial deviation extending the buildout period to 2010, extension of runway 14-323 to 9,500 feet, and for an expansion of 175,00 square feet of airside terminal, up to nine additional gates, a 800 car garage, ancillary commercial aircraft storage, and annexation of four out parcels. The new development levels on these out parcels total 200 hotel room, 80,000 square feet of research/office park, 60,000 square feet of office, 261,180 square feet of commercial, and 220,00 square feet of industrial. As of 1996, the airport accommodated 2,232 enplanements per day.

Two major issues face airport planning and development in Southwest Florida. One is the extent to which existing airports can accommodate current and future aviation demand. The other is the coordination of airport improvements in the region, across the State and throughout the country.

Southwest Florida's aviation system provides integrated linkages to a network of state, national and international air travel. By the year 2020, airspace corridors over Florida may be a significant concern. It is estimated by FDOT in the Florida Aviation System Plan that interstate air travel is expected to increase by more than 3.7 percent by the year 2021. FDOT estimates that airspace congestion and limited airspace capacity already cost Florida businesses and citizens \$300 million per year.

### **Rail Service**

Only one short-rail line, operated by Seminole Gulf Railroad, provides freight service to Southwest Florida using connections with the CSX line in Arcadia. There is no intermodal terminal in Southwest Florida where containers and trailers on flatcars can be loaded and unloaded. The lack of intermodal access means that there are few alternatives to highways for most types of shipments into and out of the region. Presently, most intermodal traffic bound for the Southwest Florida region is processed through the CSX intermodal terminal in Tampa. Tampa serves as the southern terminus for truck-to-rail transfer facilities on Florida's west coast.

Currently, the Seminole Gulf railroad line also enters Southwest Florida via two routes. The western most route operated by Seminole Gulf follows U.S. 17 from Arcadia in DeSoto County to Punta Gorda in Charlotte County. From there, it proceeds through Fort Myers to terminate east of U.S. 41 in Collier County. The two segments cover 51.6 miles and 26.7 miles respectively. Operating speeds are between 25 and 40 mph. The service frequency is two dinner trains per day plus nine freight trains per week.

The second more eastern route goes into Glades County along the U.S. 27 corridor from Sebring in Highlands County. From there, it extends on to Moore Haven and then to Clewiston in Hendry County. From Clewiston, the route continues on into Palm Beach County. The distance from Sebring to Palmdale is 43 miles. The operating speed ranges from 10 to 25 mph.

### **Florida's Role in High-Speed Rail**

Florida growth has historically been driven by early rail passenger service; recently, Floridians have shown a new interest in high-speed and inter-city passenger rail service. The State and Amtrak are currently planning to restore conventional passenger service and initiate a new high-speed rail feasibility study in Florida. Congress is currently considering a bill that would allow Amtrak to raise \$12 billion over the next decade by issuing high-speed rail bonds. The federal government would provide tax credits to bondholders, removing from Amtrak the burden of paying interest. The money would pay for initial work to upgrade 11 designated high-speed rail corridors throughout the country - one of which connects Tampa, Orlando and Miami. Participating states will be asked to contribute 20 percent of the cost.

In the 1990s, three high-speed rail corridors were designated, linking the major population centers of central and southern Florida. Twice, the public and private sectors initiated partnerships to implement innovative new high-speed rail systems with top speeds on the order of 150–200 mph

between Miami, West Palm Beach, Orlando, and Tampa. However, on January 14, 1999, the State withdrew its support for the high-speed rail project, Florida Overland Express (FOX).

### **Florida Intercity Passenger Rail Service Plan**

Following the withdrawal of support and funding for the Florida high speed rail proposal, Florida Department of Transportation (FDOT) decided to pursue a more incremental intermodal approach to improving intrastate passenger rail and freight rail service. The FDOT requested Amtrak to evaluate intercity passenger service potential over the next twenty years. The Florida Intercity Passenger Rail Vision Plan lays out a twenty-year program for implementation of a statewide passenger rail system in Florida.

The plan includes four phases of development. Phase I covers the restructuring of Amtrak's long distance service to Florida including the splitting of all three exiting interstate routes to increase service between Miami, Orlando, Jacksonville, and Tampa by 2002. Phase two proposes additional expansion of intrastate service between Tampa, Orlando, and Miami using new trains with passenger amenities such as large seats, bistro food, computer ports, and at-seat-entertainment, by 2005.

In phase three, between 2006 and 2015, service would be developed in three new corridors: Tampa to Naples, Orlando to Port Canaveral, and Daytona to Orlando. The study identifies the Tampa to Naples corridor as the fifth biggest potential market in the state. The Vision Plan Executive Summary suggests that the Tampa-Naples line might be routed via some combination of new track down I-75 and existing track, with the existing Seminole Gulf Railroad track being used south of the Peace River. A rail line down the I-75 corridor will likely reduce the number of at-grade crossings but require a greater interface with future public transit to access more urban development and visitor destinations along the coast. Since Phase 3 would presumably start in 2006, corridor alternatives will need to be further analyzed to establish opportunities for intermodal connection and ultimate design.

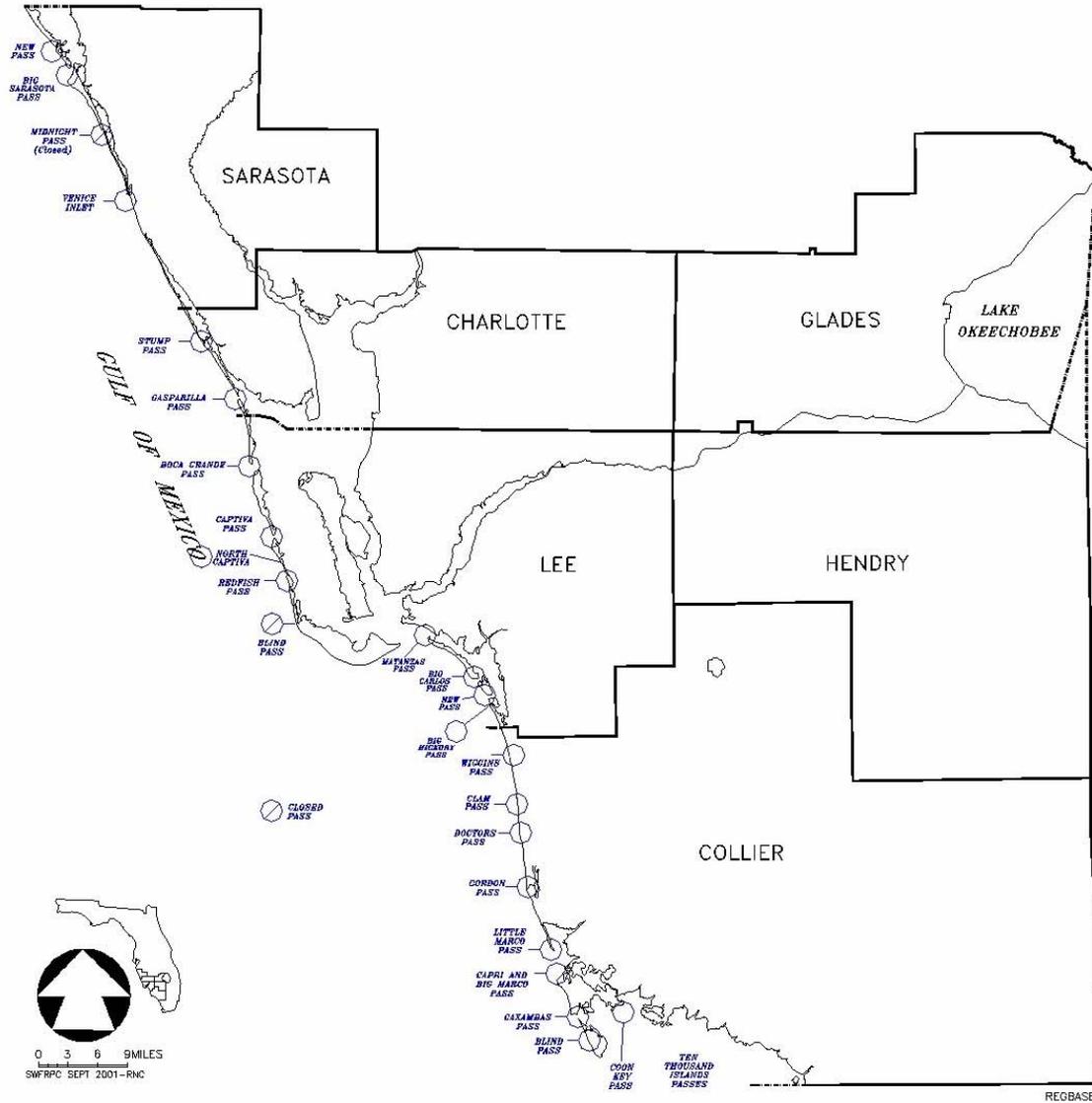
Phase 4, between 2015 and 2020, envisions additional rail service between Naples and Ft. Lauderdale/Miami via the Alligator Alley corridor.

### **Florida's High-Speed Rail Study Commission**

While neither Amtrak's nor the FOX efforts resulted in the start of passenger service, the significant public and private resources invested led to a new effort to restart the high-speed rail concept in Florida in 2000. In November, Florida voters approved a constitutional amendment requiring the state to begin building a rail line by November 2003 that will ultimately link Florida's five biggest urban areas. The trains will have to travel at least 120 miles an hour.

During the 2001 Legislative session, State lawmakers created an agency devoted to establishing the high-speed rail. The high-speed rail network's cost estimate ranges from \$6 billion to \$20 billion, along with another \$1.7 billion per year for maintenance and debt payments. Building the Tampa-to-Orlando segment could cost as much as \$1.9 billion, according to a study by the Florida Department of Transportation. That's along with an annual operating cost of up to \$46 million, depending on the route taken and technology used.

MAP 21- REGIONAL PASSES



REGIONAL PASSES  
SOUTHWEST FLORIDA REGION

## Transit Service

While the number of vehicular miles traveled driven on U.S. roads remained steady last year, the number of passengers riding buses or trains rose to the highest national level since 1959, transit industry figures show. According to national figures reported by municipal transit agencies to the American Public Transportation Association (APTA), there were 9.4 billion trips aboard mass transit last year, a 3.5 percent increase over the 9.1 billion rides in 1999. Clearly, the number of transit trips regionally pales in comparison. Nonetheless, service measures for local transit operation indicate a similar growth trend. According to regional figures reported by the Florida Department of Transportation, there were approximately 3.3 million trips reported in 1992 and over 4.1 million trips aboard the Lee County, Sarasota County, and Manatee County transit systems in 1998, a annual increase of approximately three percent. Two new County transit systems have come on line since 1998. The Charlotte County Dial-a-Ride bus service began operation on January 2001 and the Collier County (Collier Area Transit, CAT) bus service began operation in February of 2001.

Traditional fixed route transit is very viable in the urbanized areas of the region. Public policy, however, may require that for low density areas of the region more attention should be placed on demand-response and other forms of paratransit. However, the cost associated with providing demand response service will greatly limit the type and availability of transportation services.

Flexible routing and scheduling of relatively small vehicles to provide door-to-door or point-to-point transportation at the user's request characterizes demand response transportation service. Paratransit means a system of transporting that provides services between specific origins and destinations selected by individual user and the provider of the service. Paratransit services are provided by vans, buses, taxis, limousines, and other demand responsible operations that are characterized by their non-scheduled, non-fixed route nature. Due to the high cost of demand-response service, many communities are attempting to integrate paratransit service with the more traditional transit usually associated with urban areas.

Community "service routes with deviation" provide regular and recurring service in which routes and schedules are established to meet the travel needs of the greatest number of riders while maintaining a regular schedule and route. The service is characterized by the fact that the service route may be slightly changed or "deviated" along the established transit corridor to accommodate more passengers or to select a new destination along the route. Service routes with deviation can increase vehicle multi-loading and improve system efficiency. Further, fixed route with deviation service offers a method of combining subscription and demand response trips in a manner that produces a viable transit service for both the transit provider customers and the general public.

There are presently five government-operated bus transit systems in Southwest Florida (including two bus systems within the purview of the Sarasota/Manatee Metropolitan Planning Organization). According to the 1998 Performance Evaluation of Florida's Transit Systems, the systems profile noted the following indicators. The Lee County Transit System (Lee Tran) has approximately 53 buses in operation and served approximately 1.7 million annual passengers in FY 1998. The Sarasota County Area Transit System (SCAT) has approximately 56 buses in operation. SCAT served approximately 1.7 million annual passengers. Manatee County Area Transit (MCAT) has approximately 27 buses in operation and served approximately 700,00 thousand annual passengers in 1998. The county transit systems provide regular transit service throughout portions of their

respective counties. The routes comprise flyer services to the outlying suburbs, regular services along the major arterials, and various shuttle and looper services in the urban areas.

### **Lee County Transit (LeeTran)**

LeeTran operates as an independent division governed by the Lee County Board of County Commissioners, a five-member board responsible for the oversight of all Lee County government operations. LeeTran provides public transportation services to Lee County through the direct operation of its fixed-route, fixed schedule motorbus service and the contractual provision of demand-responsive service to persons certified eligible for Americans with Disabilities Act (ADA) service. Over the years, the Lee Tran system has grown to include 21 fixed routes, using forty-three conventional and nine trolley-replica buses. The Lee Tran service area covers 421 miles of road network.

Since 1984, ridership on LeeTran has increased approximately 129 percent, from 810,500 passenger trips in fiscal year 1984 to 1,855,535 passenger trips in fiscal year 1999. Fixed route ridership is projected to increase to approximately 2,287,000 trips by 2005, a 23 percent increase from fiscal year 1999. In addition to providing fixed-route bus service, LeeTran also provides complementary paratransit service. To be eligible for the paratransit service persons must be unable to use fixed route service because of the nature of a disability. ADA paratransit ridership is projected to increase from 80,000 in 2001 to ??? in 2006.

### **Sarasota County Area Transit (SCAT)**

The Sarasota County Area Transit System (SCAT) is a member of the Sarasota County Government. The authority is governed by the five-member Board of County Commissioners. SCAT serves the urbanized portion of Sarasota County, including the cities of Longboat Key, Sarasota, Venice, Englewood and North Port, via fixed-route motorbus service and demand response. SCAT has approximately 56 buses in operation; SCAT served approximately 1.7 million annual passengers in 1998.

### **Manatee County Area Transit (MCAT)**

Manatee County Area Transit (MCAT) is a division within the Community Services Department of Manatee County. The Board of County Commissioners governs the division. MCAT provides service to the urbanized parts of Manatee County via fixed-route motorbus and demand response services. MCAT has approximately 27 buses in operation and served approximately 700,00 thousand annual passengers in 1998.

### **Charlotte County – Charlotte Area Transit (CAT)**

Charlotte Area Transit (CAT) is the public transportation provider in Charlotte County. CAT is a program of the Charlotte County Board of County Commissioners. CAT operates two distinct programs: the Transportation Disadvantaged program, begun in 1989 and a Dial-a-Ride public transportation program. As of July 2000, 21 vehicles were used in the Transportation Disadvantaged program. Both programs are paratransit, providing curb-to-curb service based on

reservations and routes that change daily. No fixed-route service is currently provided in Charlotte County.

Dial-a-Ride bus service began on January 2001 with nine new vehicles serving Charlotte County. The response has been positive. By the second week in January 2001 the demand for trips averaged over 125 calls per day. Approximately 30 percent of these trips were serving transportation disadvantaged program clients.

### **Collier Area Transit (CAT)**

Collier Area Transit (CAT), as of February 2001, is the new public transportation provider in Collier County. CAT is a program of the Collier County Board of County Commissioners. Collier County implemented a deviated fixed route system using five busses on six distinct but overlapping routes.

### **Transportation Disadvantaged**

In Florida, there is a mandate for the coordination of transit services specified in Chapter 427, F.S. Chapter 427, F.S., as passed in 1979 by the Florida Legislature called for the coordination at the county level of all federal and State expenditures for the “transportation disadvantaged.” The Transportation Disadvantaged program addresses the needs of the transportation disadvantaged by approving all community transportation coordinators and planning agencies contracts; assisting communities in developing Coordinated Transportation Development Plans; compiling information on the operations and needs of the program; and establishing standards, policies and procedures for the program. The Commission for the Transportation Disadvantaged is responsible for statewide coordination of transportation services and the disbursement of the Transportation Trust Fund.

The purpose for the establishment and operation of the TD program is to promote the delivery of transportation services in a manner that is cost effective, efficient, and reduces fragmentation and duplication of services. Transportation services are provided using a variety of vehicles, including buses, mini-vans, vans, and automobiles. Many of the vehicles are specially equipped to serve the needs of the disabled and public transit riders.

While it is not feasible for transit service to pay its total operating costs, service modifications to better serve region commuters should be investigated. Due to scattered concentrations of population centers throughout the region, a truly regional mass transit system is not feasible. As development continues in the outlying areas away from existing developed areas, however, the establishment of van service and additional intercounty express bus and park and ride services may be warranted.

In addition to the five public transportation systems, there are community transportation coordinators (CTC) for each county. The CTC arranges for the transportation of the Transportation Disadvantaged population. The transportation disadvantaged (TD) as defined by Chapter 427, are “those persons who because of physical or mental disability, income status, or age are unable to transport themselves or to purchase transportation and are therefore dependent upon others to obtain access to health care, employment, education, shopping, social activities or other life-sustaining activities, or children who are handicapped or high-risk or at-risk.”

According to the Center for Urban Transportation Research (CUTR), the Florida Coordinated Transportation System provides trips for transportation disadvantaged (TD) persons in two population groups -the potential TD population and the TD Population. The Potential TD Population includes all persons who are elderly, disabled, or low- income, while the TD Population includes only those persons who are transportation disadvantaged according to the eligibility guidelines in Chapter 427.

Within the Southwest Region, there are five coordinators of services to the transportation disadvantaged:

Charlotte County: Charlotte County Transit Department is a paratransit service managed by the Charlotte County Government. The CTC operates as a partial-brokerage with five subcontracted operators in 1998. The Charlotte CTC coordinated 124,745 trips in 1998. Charlotte’s Potential TD Population was 74,813 in 1998. Charlotte’s TD Population was 14,350 in 1998.

Collier County: Collier County Board of County Commissioners became the Collier CTC in 1999. The coordinated service is managed by a private-for-profit corporation, Intelitran. Intelitran operated a complete brokerage system with three subcontracted operators in 1999. The Collier CTC coordinated 125,757 trips in 1998. Collier’s Potential TD Population was 87,058 in 1998. Collier’s TD Population was 14,172 in 1998.

Glades County and Hendry County: Good Wheels Inc., is a private non-profit transportation company. It manages the partial brokerage TD program for a joint service area covering all of Glades and Hendry counties. The service provided a total of 73,877 trips in 1998; 9,534 trips were in Glades, and 64,343 in Hendry. Glades’ Potential TD Population was 4,065 in 1998. Glades’ TD Population was 717 in 1998. Hendry’s Potential TD Population was 11,489 in 1998. Hendry’s TD Population was 2,844 in 1998.

Lee County: Intelitran, a private-for-profit corporation coordinates a complete brokerage service under contract to LeeTran in Lee County. The CTC had five subcontracted operators in 1998. The service provided 205,483 trips in 1998. Lee’s Potential TD Population was 171,490 in 1998. Lee’s TD Population was 30,913 in 1998.

Sarasota County: Senior Friendship Centers, Inc. is a private non-profit organization, which primarily provides services to people over the age of 60. Senior Friendship Center also serves as the CTC for Sarasota County. The CTC operates as a partial brokerage with ten subcontracted operators in 1998. The service provided 240,060 trips in 1998. Sarasota’s potential TD Population was 145,947 in 1998. Sarasota’s TD Population was 24,294 in 1998.

➤ **PIPELINE TRANSPORT, PORT FACILITIES, AND WATERWAYS**

**Pipeline Transport**

A crude oil pipeline is used to transport oil produced in the region across south Florida to Port Everglades in Broward County. The Sunniland line is composed of four, six and eight-inch steel

pipe, with five pumping stations; 110 miles of gathering lines feed the main transmission line from oil fields in Hendry County. The Southwest Florida field produced 1.2 million barrels of oil in 1999.

Florida Power & Light company plans to work with Florida Gas Transmission Company to bring clean natural gas to Southwest Florida to fuel its repowered Fort Myers power plant by 2001. The Fort Myers plant, which operates on oil, will be converted to natural gas using leading technology that triples its generating capability. The electricity needs of Southwest Florida are growing 40 percent faster than the rest of FPL's service territory, and repowering offers the opportunity to meet that need in an environmentally conscious way without requiring more land and a new power plant. While Florida Gas Transmission has almost 5,000 miles of natural gas pipeline to serve the needs of Florida, currently none of that natural gas reaches Southwest Florida.

The Florida Gas Transmission proposal calls for constructing a natural gas pipeline approximately 100 miles long, beginning at existing facilities in Hillsborough County near Tampa and running through Polk, Hardee, DeSoto, Charlotte and Lee counties to Fort Myers. Florida Gas Transmission expects to begin construction in the first quarter of 2000 in order to meet the phased start-up of the repowered Fort Myers facility in early 2001. The Fort Myers plant is the first of three projects to expand the capability of FPL's generating system by 14 percent over the next 10 years. Florida Gas Transmission, a wholly owned subsidiary of Citrus Corp., was formed in 1958 to bring natural gas reserves in Texas to the state of Florida. The original 1,480-mile mainline was completed in 1959. With approximately 5,000 miles of pipeline, the system has a transportation capacity of 1.4 billion cubic feet of natural gas per day.

### **Water Transportation**

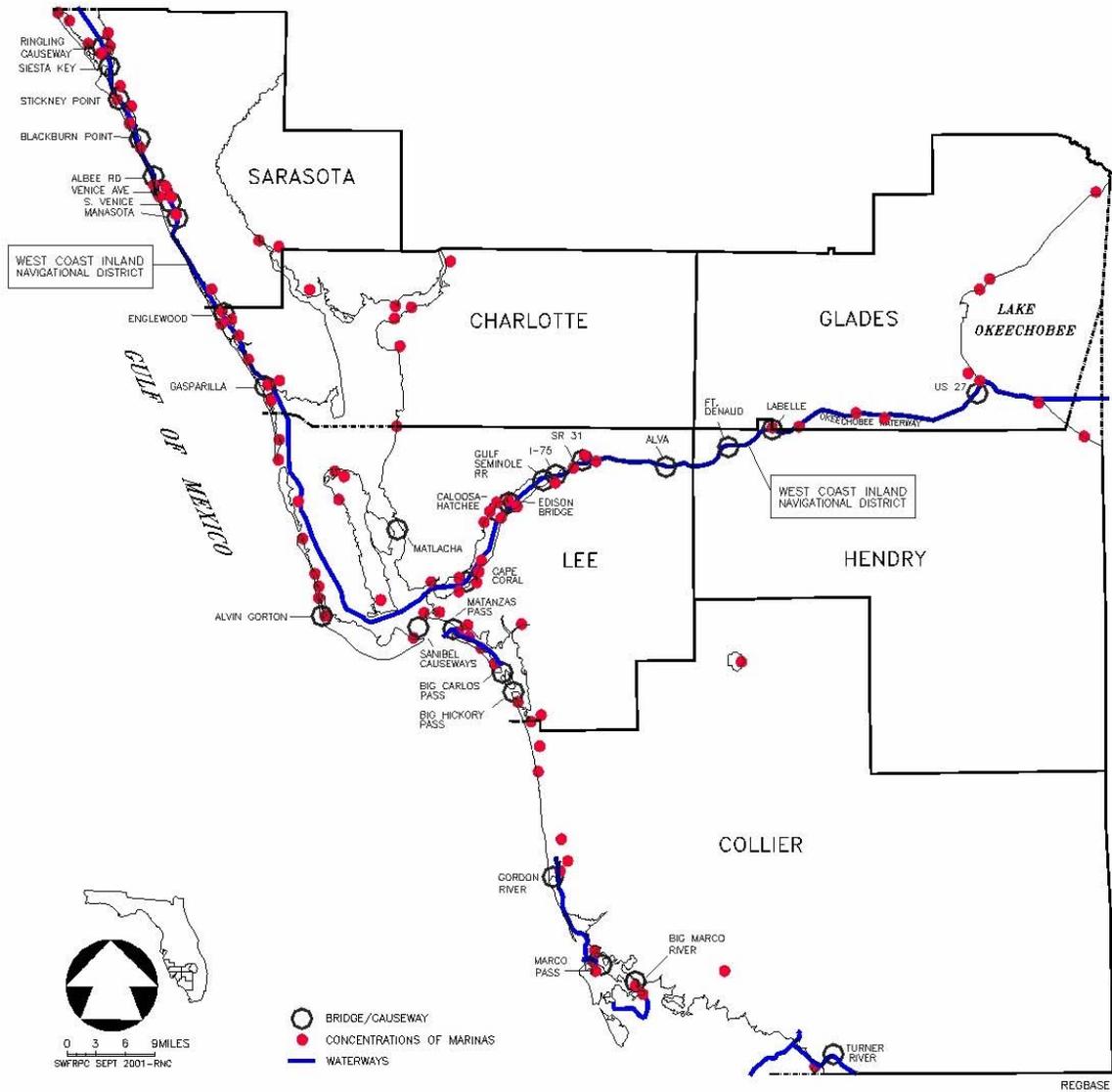
Port Boca Grande is the only deepwater port in Southwest Florida. The port lies almost at the southern tip of Gasparilla Island. Gasparilla Island is a six and one-half mile long barrier island that separates Charlotte Harbor from the Gulf of Mexico. The northern quarter of the island lies in Charlotte County while the southern portion (which includes Boca Grande) is in Lee County. Road access is limited to Charlotte County via a privately owned causeway and toll bridge. There is no land connection with Lee County. Limited port facilities are provided at Port Boca Grande in Lee County. This port has a restricted cargo capacity and provides limited services. The port was a phosphate-shipping center as early as 1887. Phosphate was last shipped out in 1979 and rail service to Boca Grande was ended the same year.

The only recent port-related activity has been the delivery of oil for the Florida Power and Light Company. The ten-acre facility was built in 1958 to receive fuel oil from tankers for transshipment by shallow draft barge to its generating plant east of Ft. Myers along the Caloosahatchee River. The facility is to be abandoned once the Fort Myers power plant is repowered by natural gas.

In addition to port facilities, coastal water traffic is accommodated by the Intracoastal and Okeechobee Waterways. The Intracoastal Waterway follows the coast, generally between barrier islands and the mainland. The Okeechobee Waterway begins in the eastern part of San Carlos Bay and proceeds east to Lake Okeechobee via the Caloosahatchee River. Much of the traffic on the waterways is recreational; however, some commercial activity takes place. The commercial activity includes a variety of boats, some fishing and others traveling to and from a dock, supply point, fish house, or some other destination.

The potential for water borne or ferry service exists for a number of coastal communities in Southwest Florida. Sarasota, Charlotte, Lee, and Collier Counties all experience significant economic activity on off-shore islands, along the harbors and the many waterways. Provision of ferry service has the potential to reduce travel distances between transportation terminal points and visitor destinations. Ferry service can support the tourist industry and also promote further economic activity by providing employment transportation and enhanced trade. Currently, private businesses operate passenger ferry service to a number of coastal barrier islands and resorts, as well as daily service to Key West.

MAP 22- WATERWAYS



WATERWAYS  
SOUTHWEST FLORIDA REGION

## TRANSPORTATION AND THE ENVIRONMENT

Natural resources are among our region's greatest assets. Florida is faced with growing and often-conflicting demands for public facilities (such as transportation), economic development and preservation of our natural resources. Rapid population growth, expanding urban and non-urban development and a growing economy creates pressures on the environment and natural areas of southwest Florida. Air quality, water supply and water quality, wetlands and wildlife habitats may be impacted by the construction of transportation facilities and supporting storm water conveyance features. In recent years, some transportation projects have been significantly delayed because of conflicts over environmental issues, such as encroachment on wetlands and disturbances to wildlife habitats.

Historically, environmental mitigation for road construction projects focused on preventing roadway erosion and limiting stormwater runoff. More recently, concerns about water quality, plant and wildlife habitat, endangered species, historic landscapes, and scenic vistas have led to changes in roadway eco-management. The concept of ecosystem management has led to new methods for water resource and stormwater mitigation. Environmental agencies work with project engineers to find ways to reduce road-related pollutants in stormwater runoff by the construction of detention and retention ponds in proximity to highways.

Transportation eco-management has led to alternative landscape management strategies such as biological control of invasive plants, reestablishment and management of native plants and grasses, the use of controlled burns, application of composted materials, and relocation and restoration of endangered plant species.

The construction and use of some transportation projects can significantly impact wildlife habitats, both terrestrial and aquatic, including those of endangered species. In situations where impacts cannot be completely avoided or minimized, other conservation efforts are required. Informational signing and reducing speed limits to provide safer passage and connectivity for wildlife is an effective option in some instances. Where this is not feasible, habitats important to such animals as the Florida panther and black bear have been purchased and structural alternatives such as wildlife crossings have been constructed. Further, private landowners and public land managers are working together to develop greenway corridors of protected open space that are managed for conservation and recreation. The Region's greenways connect natural preserves, parks, cultural and historic sites, and in some cases, populated areas.

The successful protection of, and mitigation of impacts on, the quality of our air, our water, our wetlands, the habitats of endangered species and other environmental assets calls for a more integrated, flexible approach than just meeting legal standards. Providing for safe travel, enhanced mobility, and environmental protection require the use of sound ecosystem management practices and the support and participation transportation, environmental and economic interests throughout the region.

### ➤ **TRANSPORTATION NEEDS VERSUS FINANCIAL FEASIBILITY**

Transportation needs within the Southwest Florida Region are addressed by many agencies. Within the Southwest Florida Region, there are four Metropolitan Planning Organizations (MPOs), which recently attempted to address the specific issue of needs and financial feasibility of

the transportation networks through adoption of the Long Range Plans for the year 2020. As part of these plans, each MPO determined the roadway and other modal networks required to handle the future demands of the traveling public. These needs were then trimmed to account for the projected available revenues for each jurisdiction and presented in the Financially Feasible Plan (FFP).

The costs associated with the future roadway needs far outweigh the available funding. This is illustrated in the following table, which shows the overall shortfall anticipated to be approximately \$2.4 billion.

County	Available Revenues	Needs Plan Cost	Shortfall
Charlotte	\$214.7 million	\$400.0 million	\$185.3 million
Collier	\$691.0 million*	\$1,466.0 million	\$775.0 million
Lee	\$908.7	\$1,358.9 million	\$450.2 million
Sarasota	\$564.0 million*	\$1,514.0 million	\$950.0 million
<b>Total</b>	<b>\$2,378.4 million</b>	<b>\$4,738.9 million</b>	<b>\$2,360.5 million</b>

\* Plans represent a 2025 time horizon.

Source: 2020/25 Transportation Plans for the four Metropolitan Planning Organizations, 2001.

The situation for rural counties is little better. As provided through the 2020 Florida Transportation Plan, Glades and Hendry Counties have a need for approximately \$86 million on the Florida Intrastate Highway System (FIHS) System. In Glades County and Hendry County, the four-lane improvement for S.R. 29 from S.R. 80 in Hendry County to U.S. 27 is not included in the 2025 Cost Feasible Plan. S.R. 80 in Lee and Hendry County have recently benefited by programmed construction projects in the FDOT Five-Year Work Program. S.R. 80 is four-lanes or improvement projects are included in the Work Program for the segments in Lee County to LaBelle in Hendry County. Future improvements for S.R. 80, from east of LaBelle to U.S. 27, are included in the 2025 Cost Feasible Plan. \$70.6 million is identified for right-of-way and construction. Combined with the total in the table above, the Region-wide need is \$4,754.3 million with only \$2,449 million in revenue. The total Region-wide shortfall is approximately \$2.4 billion.

This shortfall has significant impacts on several issues within the Region, especially economic development and hurricane evacuation. In order for local government and the State to better meet the projected needs, each local jurisdiction and other transportation agencies will be evaluating opportunities for increasing the revenues available for implementation and ways in which travel demand might be reduced or occupancy rates increased. Innovative approaches should be pursued including toll financing, congestion pricing, transportation demand management, changes in land development policy and others.

A continued concern of the Council is the issue of financial equity between FDOT Districts. A financial analysis performed in 1995 showed that District 1 was going to have its funding for transportation projects reduced by \$300 million over its “equity” positions, with the gap occurring in Interstate Highway funding, and in the application of low “floors” (guaranteed funding) and equity “caps” (maximum funding). The gap was forecasted to occur from the year 2000 to the year 2020.

There is still a gap between the “equity” position and forecasted funding to the year 2020. The \$300 million gap is rationalized as legitimate due, in part, to discretionary spending and to transportation modes in which the Region does not have a strong presence, such as transit, compared to the other receiving FDOT Districts. However, it should be noted that transportation investment is the state’s biggest contribution to economic development capital investment. This area’s donor status (signified by the gap) only enhances other parts of the state’s competitiveness (Recipient Districts are Tampa Bay and Metro Dade).

### **Planning and Coordination**

Florida’s transportation and land use planning process has many pieces. At the state level, the Department of Transportation adopted the Florida Transportation Plan. On a regional basis, each of the eleven regional planning councils (RPCs), including the Southwest Florida Regional Planning Council, has adopted a Strategic Regional Policy Plan (SRPP). Similarly, each of the 25 metropolitan planning organizations (MPOs), including four in Southwest Florida, has adopted a long range transportation plan. At the local level, local governments have each adopted a comprehensive plan. Each plan is updated periodically, although the update schedules vary widely. With transportation funding decisions made largely at the state and MPO levels, and with land development and infrastructure decisions made almost exclusively at the local government level, coordination is critical to effective transportation and land use planning.

For urban Florida, each MPO is required to develop a financially feasible long range (at least 20 years) transportation plan. MPOs are also required to adopt transportation improvement programs (TIPs) that prioritize and schedule transportation projects over a five-year period. Once adopted, the TIP establishes the basis for expenditure of federal and state transportation funds.

### **Non-urban or Rural Southwest Florida**

While, there is no universally accepted definition of “rural”, the small towns and sparsely populated areas outside metropolitan areas or incorporated cities, are commonly recognized as rural. About 70% of Southwest Florida’s land and associated natural resources and environmental assets are in rural areas. Successful rural communities are essential to achieving balanced economic and environmental sustainability. Rural Florida is home to the vast majority of our natural resources such as farmland, citrus groves, timber, and minerals. Florida’s environmental assets are predominantly found in rural areas, often in federal and state preserves, forests and parks.

The issues and challenges that face our rural areas often differ from those we face in metropolitan areas. Long distances between residences, places of work, medical services, retail services and other key destinations influence mobility in rural areas. The ability of rural areas to attract jobs depends in part on access to an adequate transportation system. Well-intentioned statewide programs and regulations sometimes stall rural development initiatives, or are too complex and expensive, because they were primarily designed to assist urban Florida. More awareness of rural issues and flexibility in addressing them will help foster successful rural communities.

Each non-metropolitan area has an FDOT liaison that meets with county commissioners and other county officials throughout the year to address transportation project priorities, which were developed with community involvement. FDOT districts establish individual consultation practices; some include participating in county-sponsored planning exercises or sitting on local technical advisory committees.

The Regional Planning Council, Florida Department of Transportation (FDOT) and Department of Community Assistance (DCA) district office review local government comprehensive plans to ensure that their transportation planning provisions are consistent with the regional and state transportation plans to the maximum extent feasible. FDOT is also a key player in the consultation process of developing a statewide strategy for increasing economic opportunities in Florida's rural communities and incorporating those strategies into the transportation planning processes. All such efforts involve coordinating and communicating with non-metropolitan local government officials. FDOT funds transportation projects in rural areas from state and federal revenue sources. These state and federal funds may be used to finance appropriate transportation planning, construction, maintenance, and operation activities in rural areas. Most funding is allocated to the FDOT districts for capacity improvements and system preservation projects. Larger projects are prioritized regionally and then statewide. FDOT conducts an annual review of funds to assure that each county receives at least 80 percent of its fair share over a ten-year time frame.

### **FDOT Five-Year Work Program**

While counties and cities in the region have an active role in constructing and maintaining the regional roadway network, the Florida Department of Transportation (FDOT) is the main responsible entity. The FDOT Five-Year Work Program is the five-year listing of all transportation projects planned for each fiscal year by the FDOT, as adjusted for the legislatively approved budget for the first year of the program. Projects listed in the first three years of the work program have definite commitments for construction, and can be viewed as committed for the purposes of concurrency and DRI review.

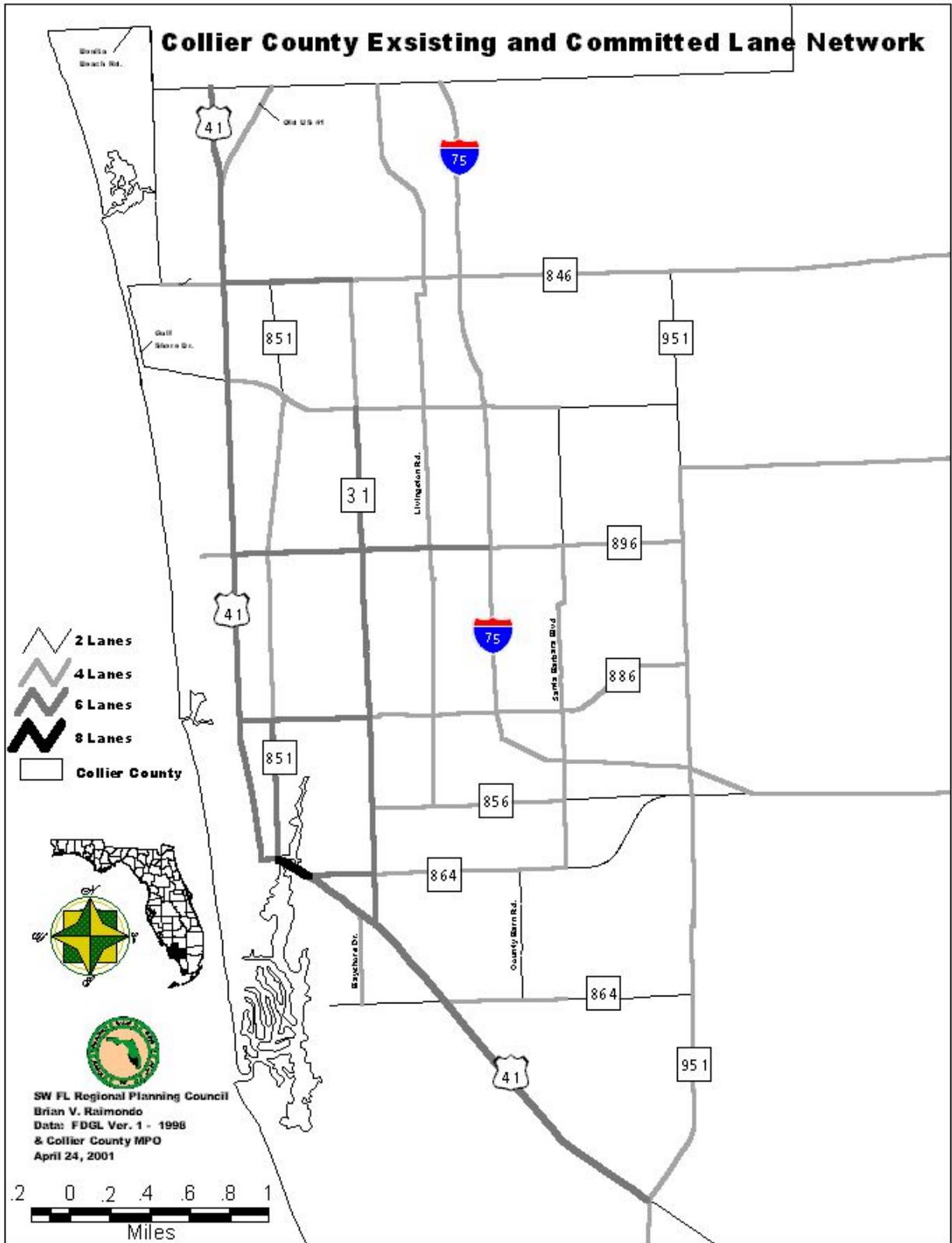
Roadway priorities are established by the Metropolitan Planning Organizations in the urbanized areas. For improvements in the non-urbanized areas of the region, the FDOT works with each of the County Commissions to establish necessary roadway improvements. Florida Law mandates that each County Commission establish the road improvement priorities for its county. In the FDOT District One Tentative Five-Year Work Program, for FY 2001/02 through FY 2005/06, the FDOT has appropriated \$2,277.2 million for product, product support, operation & maintenance, and fixed capital expenses. A total of \$1,558.3 million, or 68 % of the total expenditure is planned to be spent on product incorporated into the Five-Year Work Program, including transit and airport improvements. The breakdown of funding appropriated for transportation improvements in the tentative FDOT Five-Year Work Program for FY 2001/02 through FY 2005/06 in each of our seven counties is as follows:

**TABLE 100**  
**TOTAL FIVE-YEAR DRAFT TENTATIVE WORK PLAN**  
**(in millions)**

<b>County</b>	<b>Product</b>	<b>Fixed Capital</b>	<b>Operation &amp; Maintenance</b>	<b>Product Support</b>	<b>TOTAL</b>
Charlotte	\$43.8	\$0.0	\$11.2	\$11.3	\$66.3
Collier	\$90.8	\$0.0	\$6.7	\$26.6	\$124.2
Glades	\$19.5	\$0.0	\$6.0	\$2.6	\$28.1
Hendry	\$17.2	\$0.8	\$6.8	\$4.6	\$29.5
Lee	\$275.7	\$0.0	\$19.8	\$49.3	\$344.9
Sarasota	\$117.9	\$5.7	\$21.7	\$34.4	\$179.7
District One	\$1,558.3	\$11.4	\$265.7	\$441.8	\$2,277.2

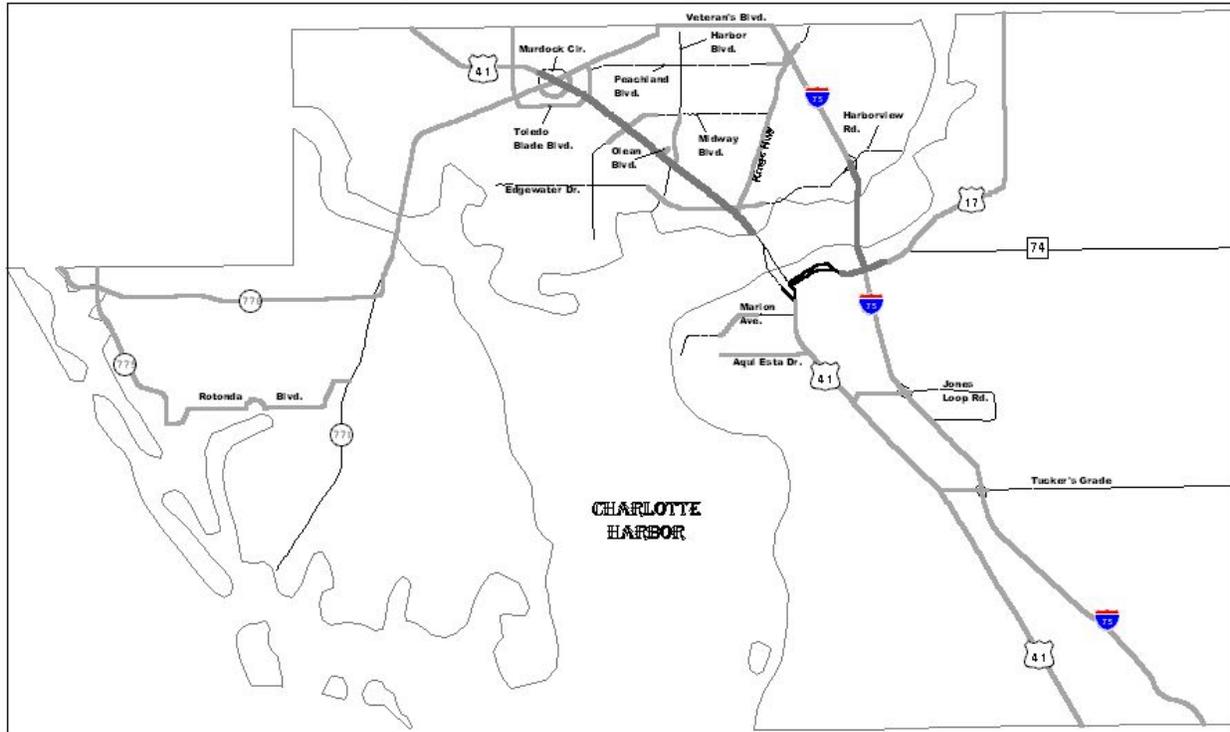
Source: FDOT Program and Resource Plan as of November 6, 2000.

MAP 23 A - CHARLOTTE COUNTY ROADS



**MAP 23B – CHARLOTTE COUNTY ROADS**

**Charlotte County 2020 Financially Feasible Lane Network**

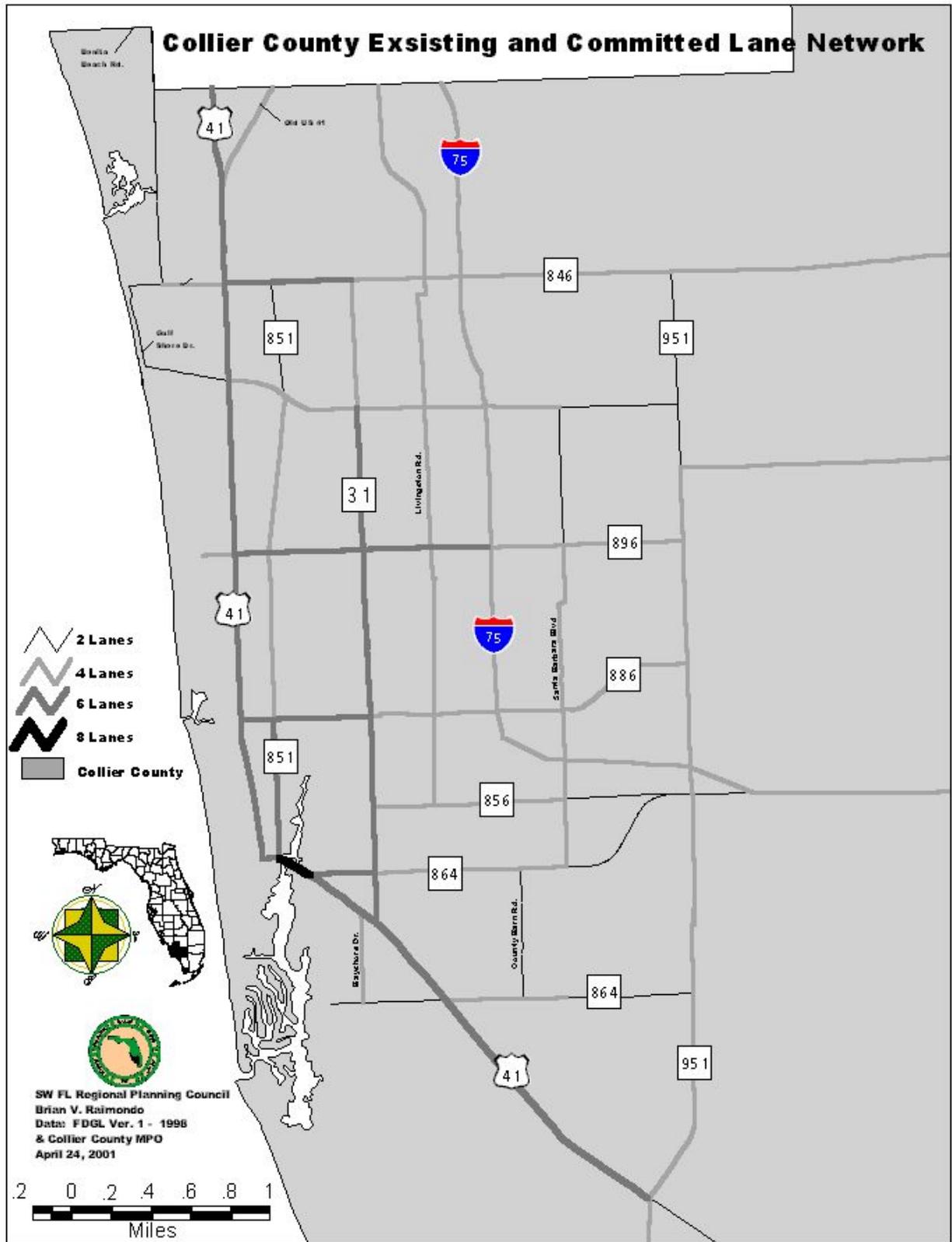


- 2 Lanes
- 3 Lanes (one way)
- 4 Lanes
- 6 Lanes
- Charlotte Boundary

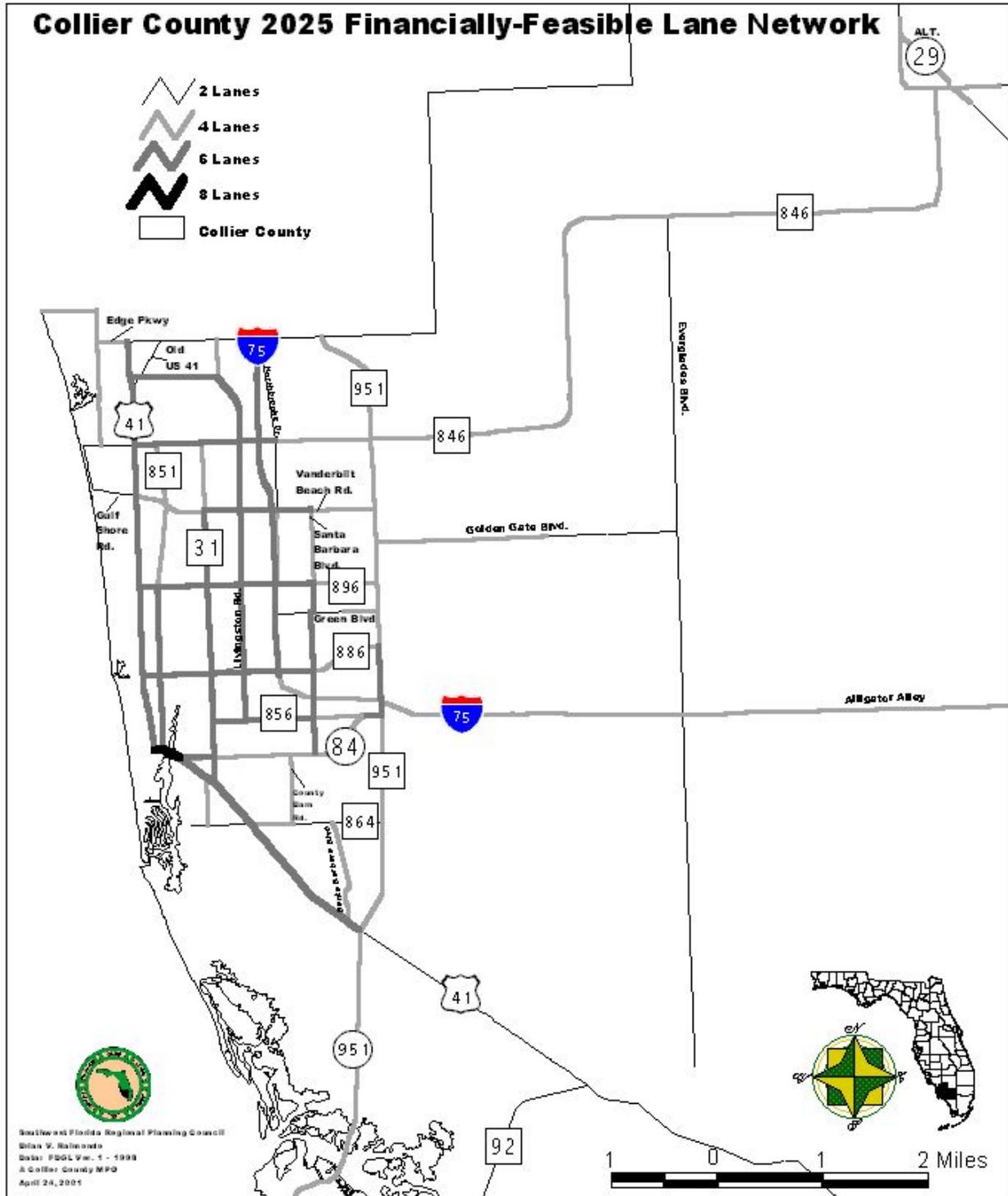


Southwest Florida Regional Planning Council  
 Brian V. Raimondo  
 Date: FDGL Ver. 1 - 1998  
 & Charlotte County - Punta Gorda LRTP 1/30/01  
 March 6, 2001

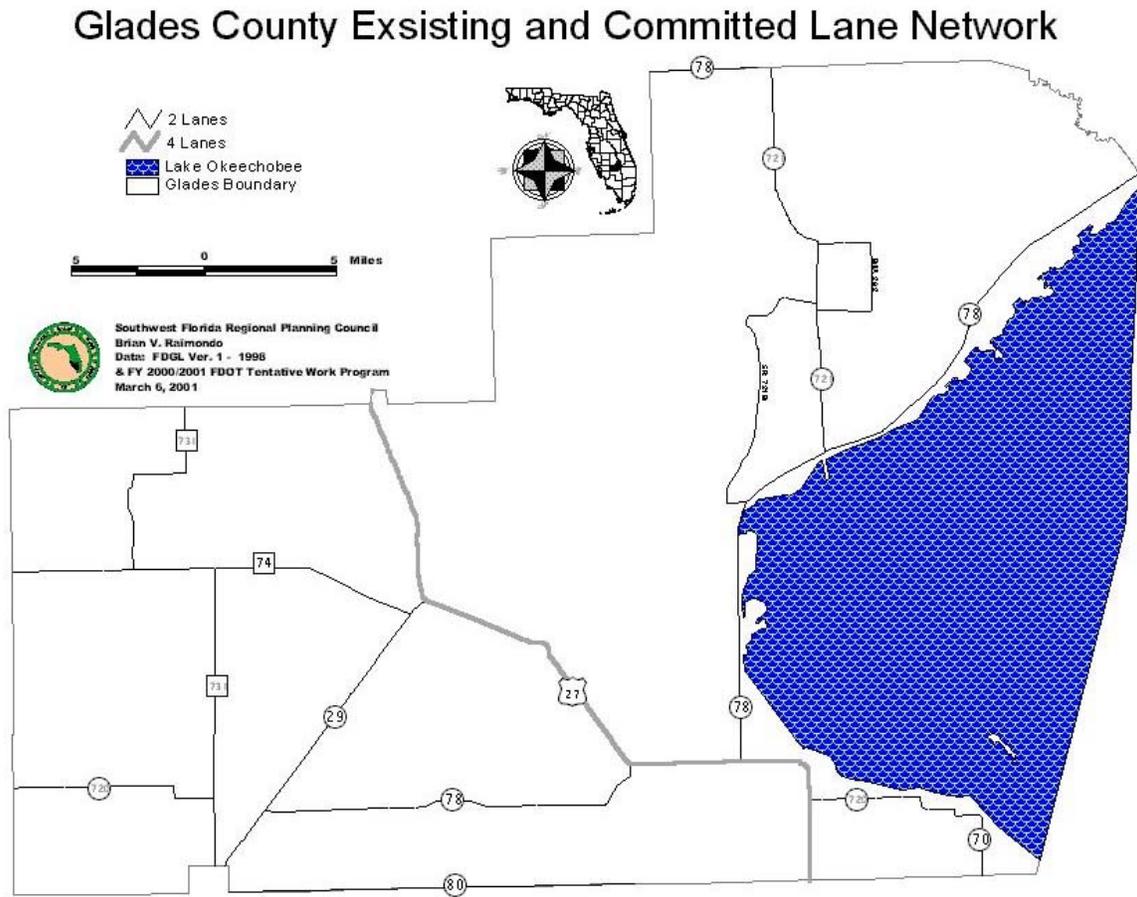
MAP 24A- COLLIER ROADS



MAP 24B- COLLIER ROADS

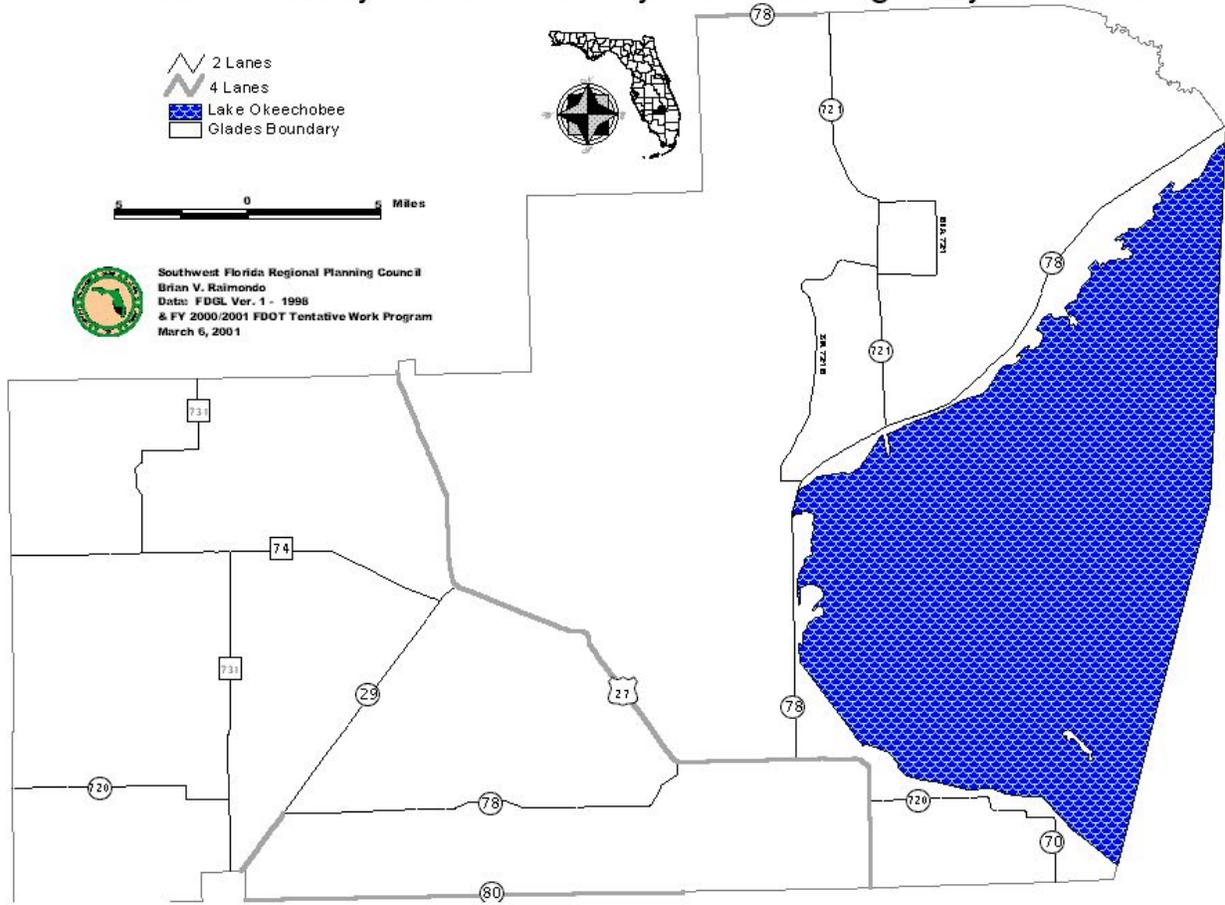


MAP 25A - GLADES ROADS



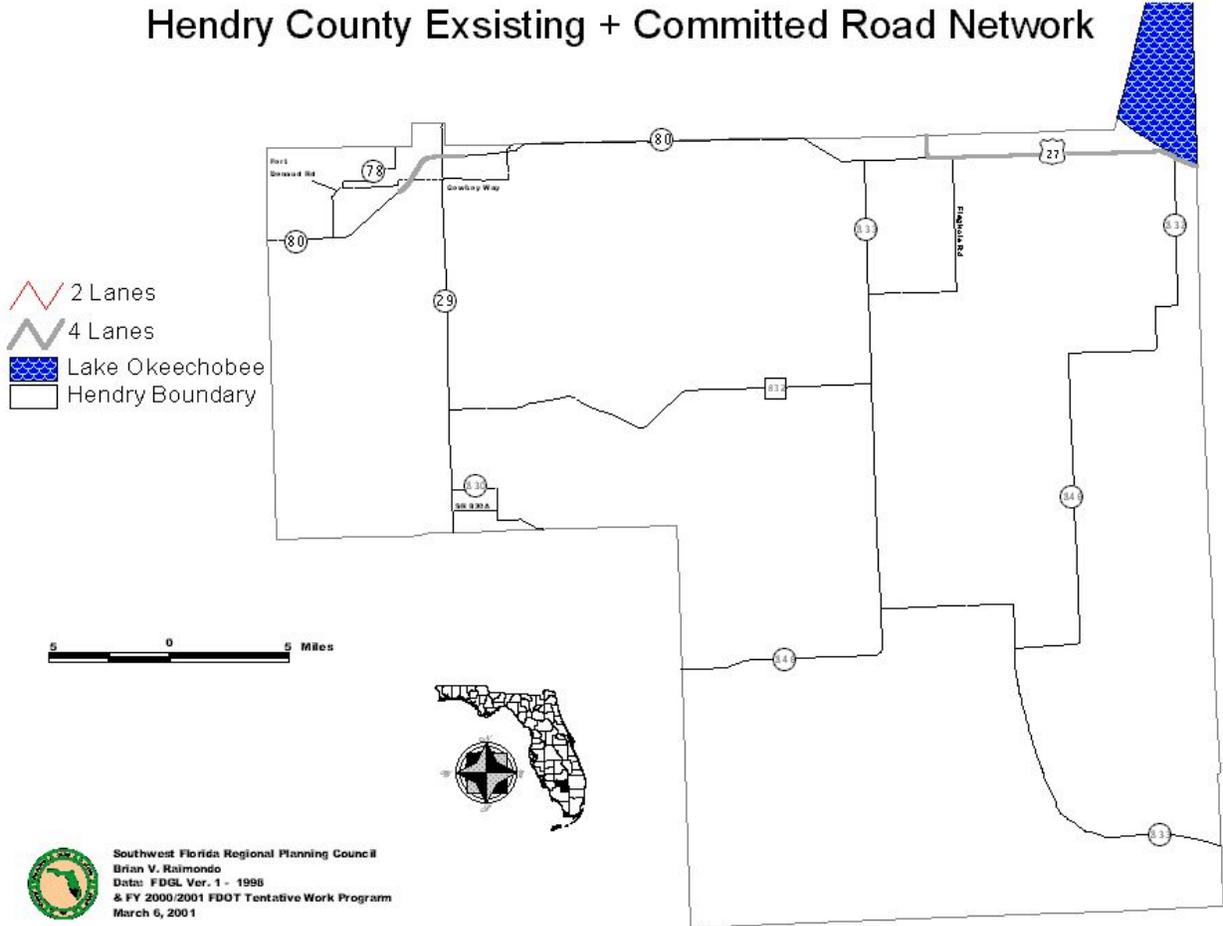
MAP 25B - GLADES ROADS

Glades County 2020 Financially Feasible Highway Network



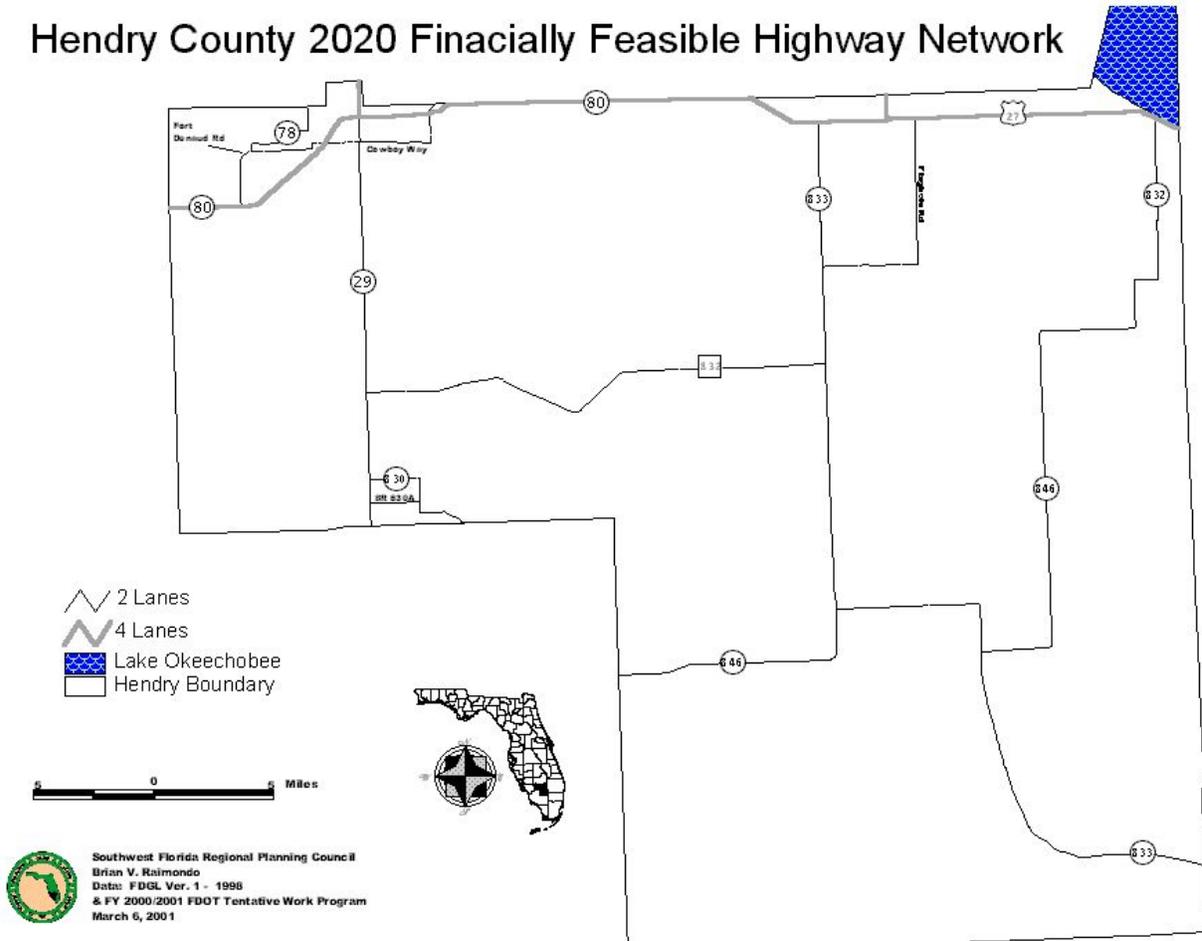
MAP 26A - HENDRY ROADS

Hendry County Existing + Committed Road Network



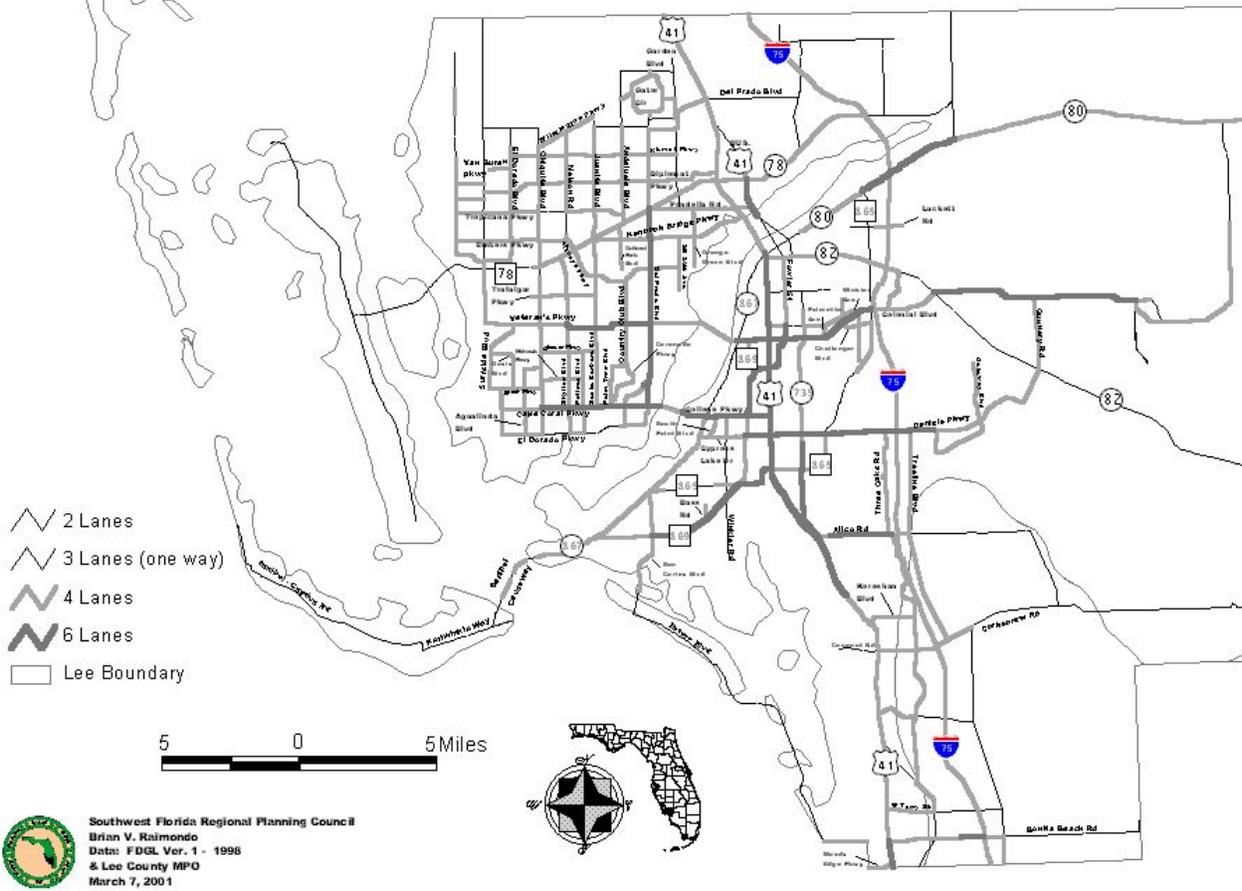
MAP 26B - HENDRY ROADS

Hendry County 2020 Financially Feasible Highway Network



**MAP 27A - LEE ROADS**

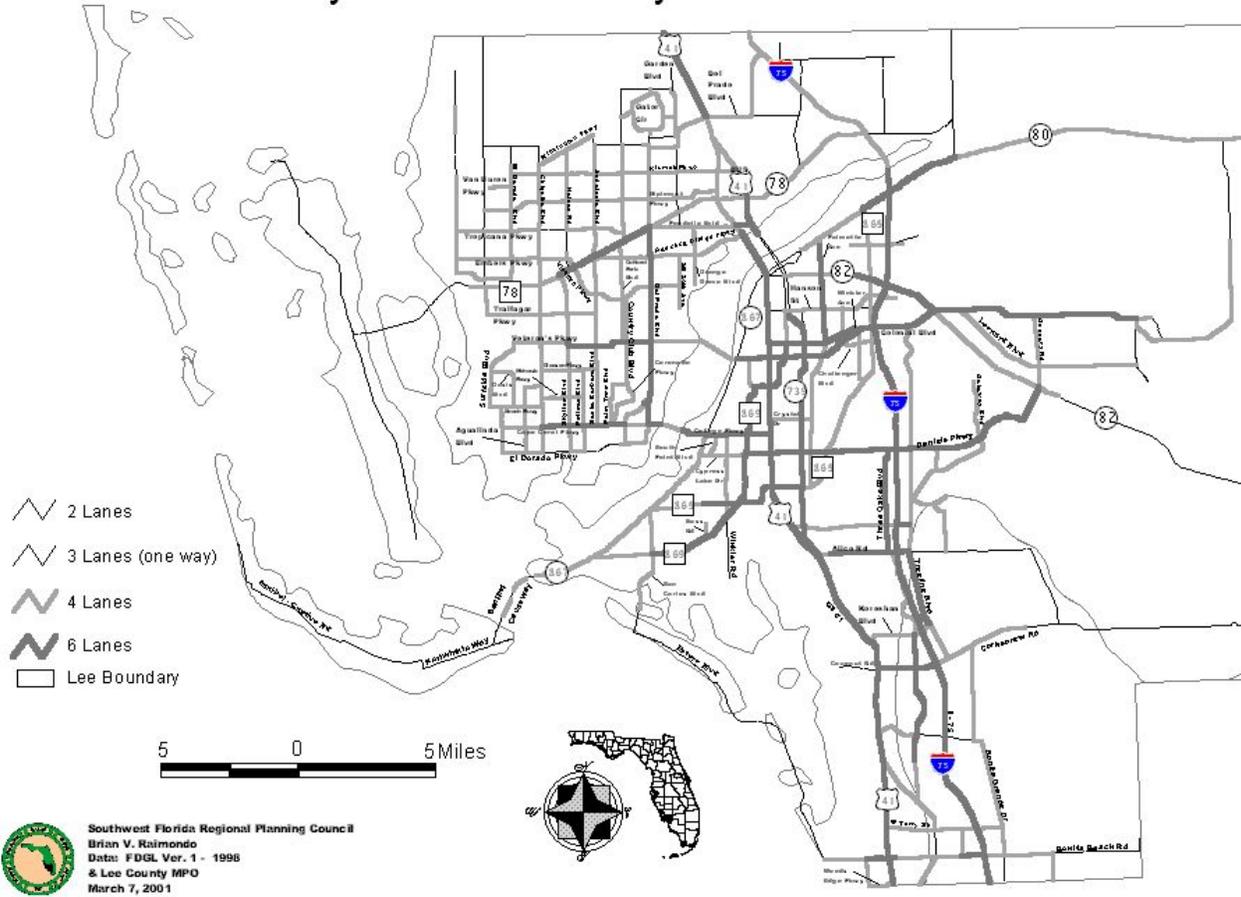
**Lee County Existing and Committed Lane Network**



**Southwest Florida Regional Planning Council**  
 Brian V. Raimondo  
 Data: FDGL Ver. 1 - 1998  
 & Lee County MPO  
 March 7, 2001

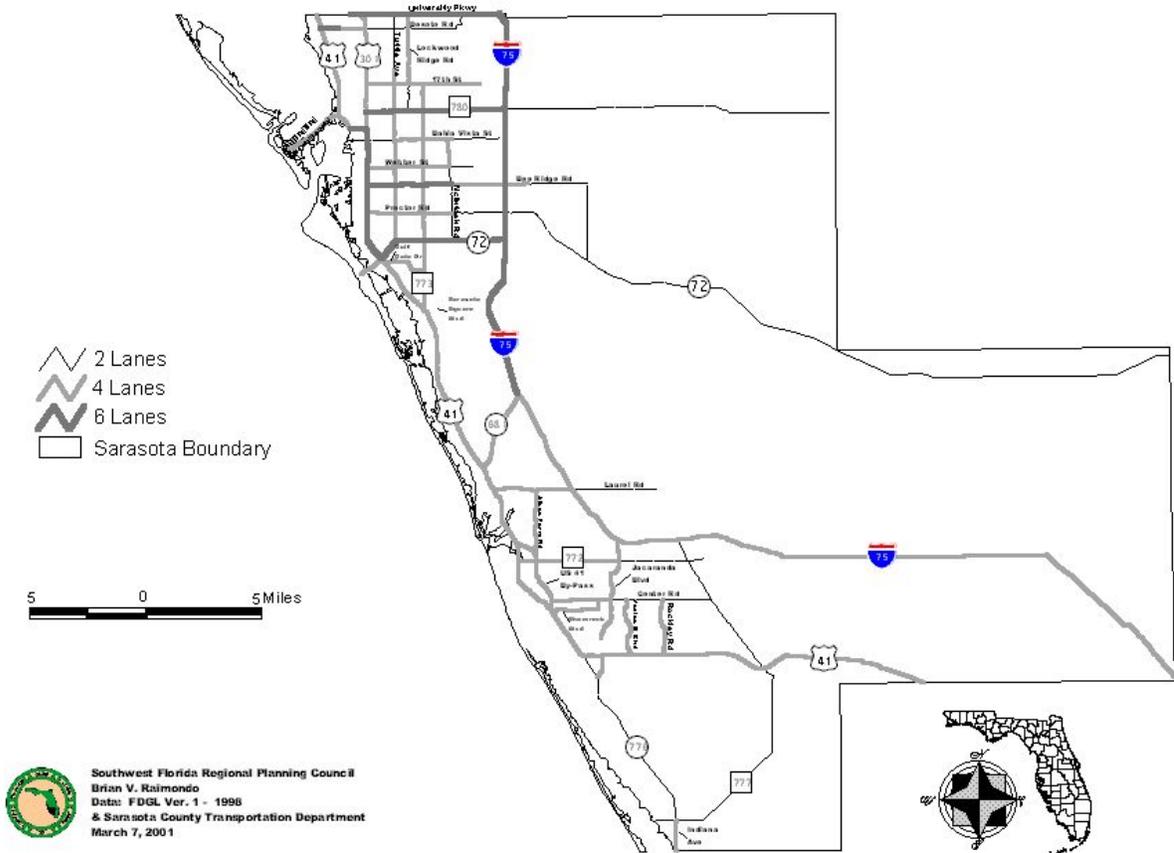
**MAP 27B - LEE ROADS**

## Lee County 2020 Financially Feasible Road Network



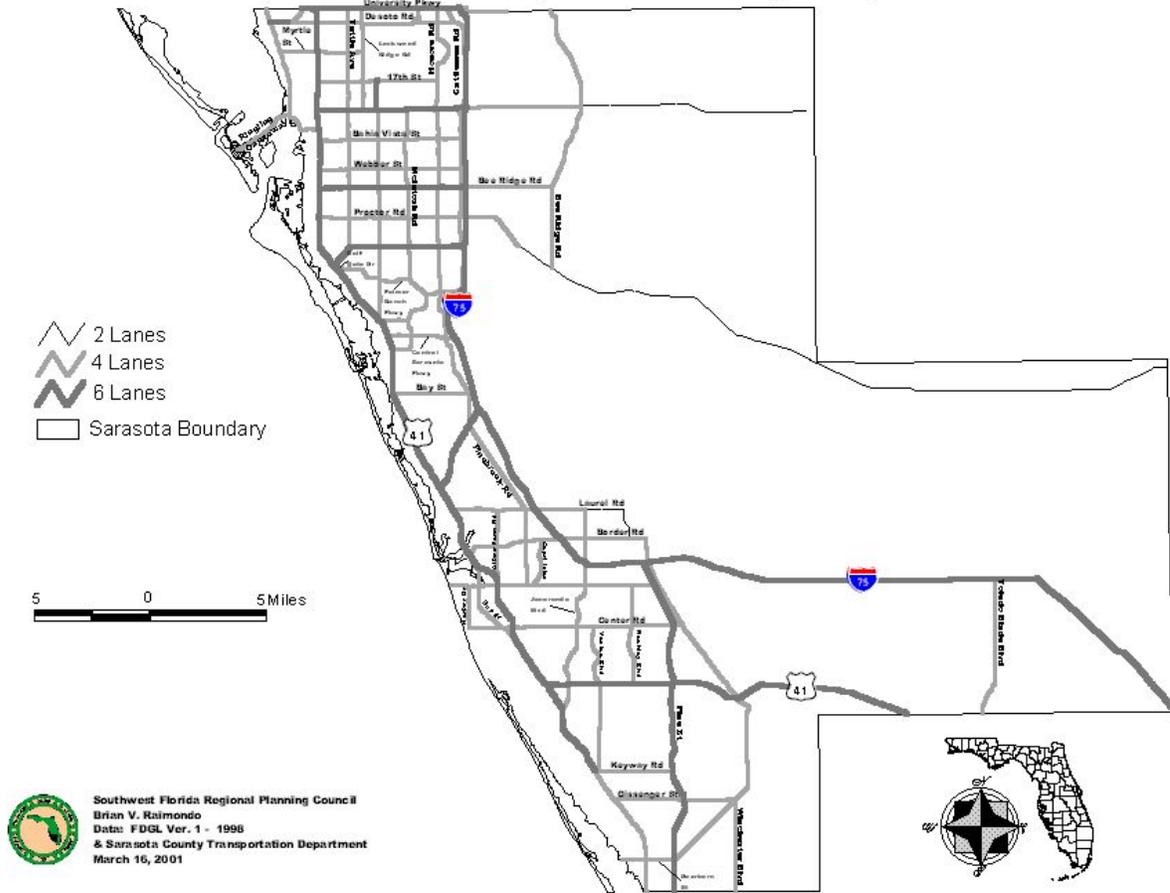
MAP 28A - SARASOTA ROADS

Sarasota County Existing and Committed Lane Network

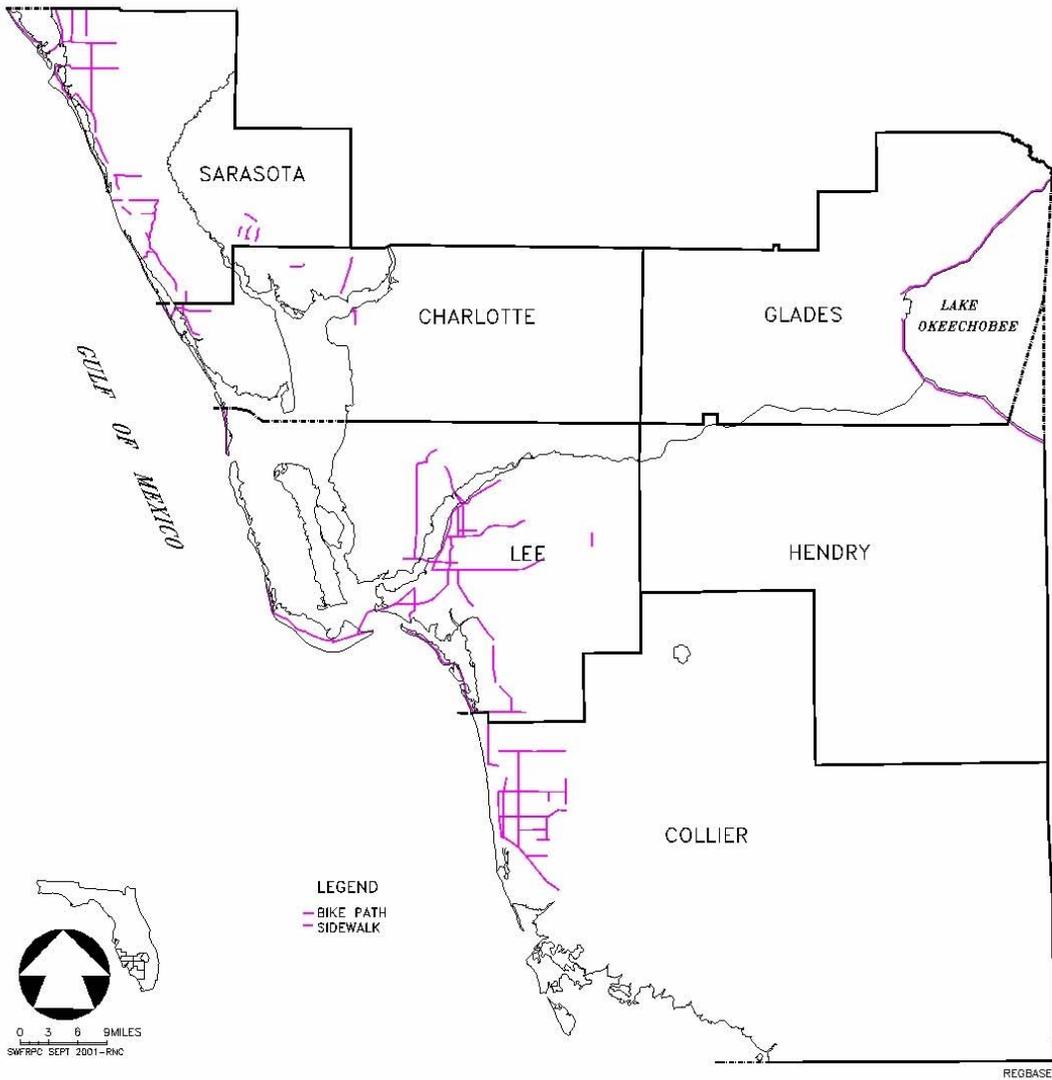


MAP 28A - SARASOTA ROADS

Sarasota County 2025 Financially-Feasible Highway Network Plan



MAP 29 - BIKE PEDESTRIAN FACILITIES



BICYCLE/PEDESTRIAN FACILITIES  
SOUTHWEST FLORIDA REGION

## PRIMARY SUPPORT SERVICES

### Sewage Treatment

Wastewater treatment systems in Southwest Florida consist primarily of three major types: centralized collection and treatment systems, package plants, and septic tanks. The service areas of collection systems are restricted and the level of treatment varies. The package plants usually provide a secondary level of treatment, although disposal methods vary. The most popular disposal methods include retention ponds, drainfields, percolation ponds, and spray irrigation systems.

The plants considered of regional significance are those with the capacity to treat over 1 million gallons per day, or (in rare circumstance) serve the citizens of more than one county. There are thirty such plants in Southwest Florida, depicted on map 30.

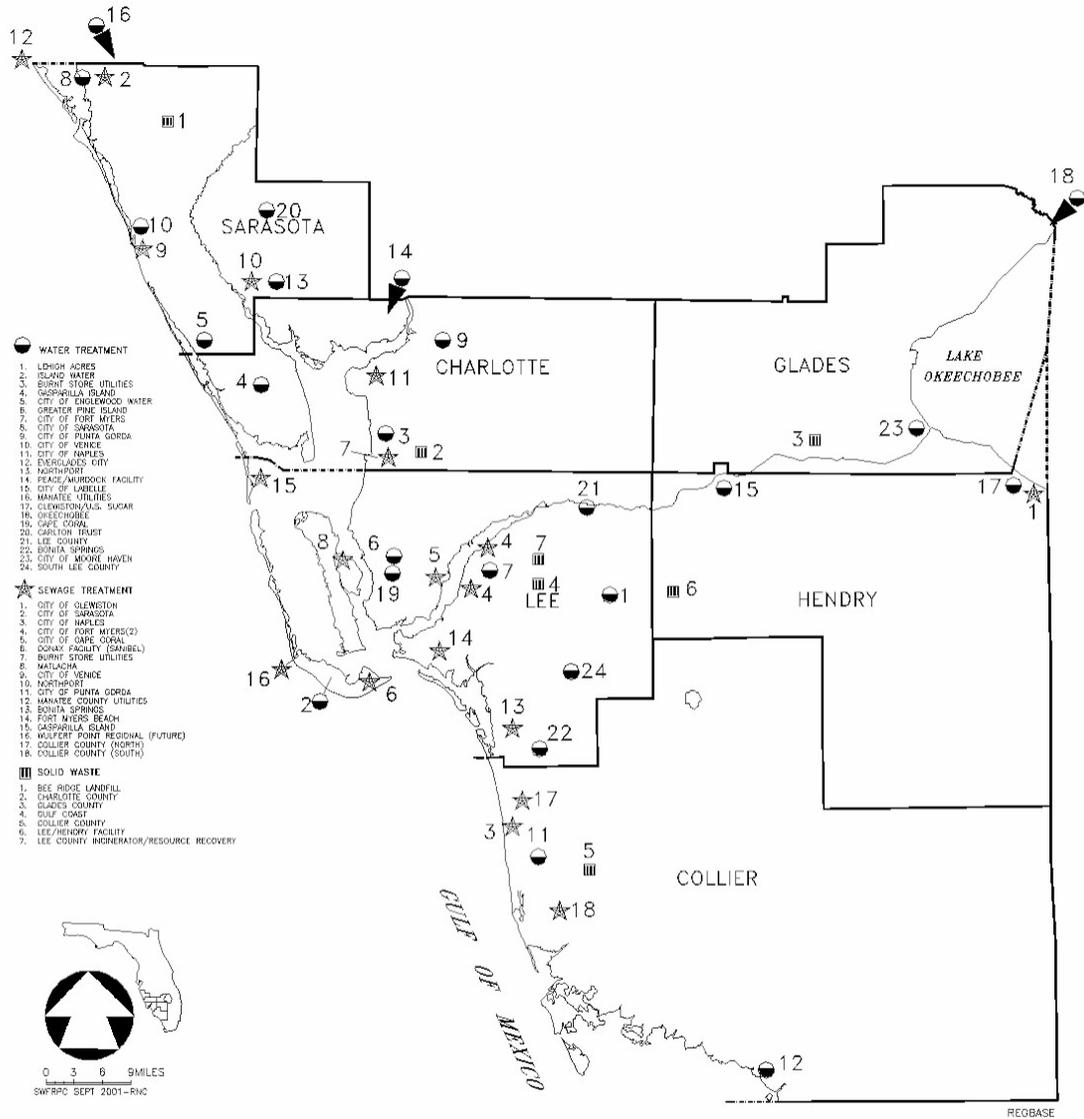
The large concentration of package plants in the coastal area often leads to the degradation of surface and groundwater quality. In addition, septic tanks are often too concentrated in location or are used in the wrong type of soils to be fully effective. Stricter state regulations are being enforced, however, to alleviate pollution and locational problems generated by these septic tank systems. Further, the percentage of homes on septic tanks and package systems are decreasing due to improved central sewage. Those areas where septic tanks may be considered suitable without major alteration of the soils are depicted on Map 31.

### Water Treatment

Potable water supplies throughout the Region are provided by public, private and franchised water treatment facilities. The majority of water treatment plants are small, privately-operated plants that serve small complexes such as mobile home parks, apartments, and similar facilities. The larger plants are municipally operated and franchised systems.

Plants of regional significance are those of over 1 million gallons of water a day capacity, or serve the citizens of more than one county. There are 31 such plants in or serving Southwest Florida. These facilities are depicted on map 30.

**MAP 30 - REGIONAL SEWER, SOLID WASTE**



REGIONAL SEWER, WATER AND SOLID WASTE FACILITIES  
SOUTHWEST FLORIDA REGION

**MAP 31 - SOILS FOR SEPTIC TANKS**

In addition to water treatment plants, there are thousands of individual wells in the Region that provide water to residential, commercial and industrial users. These are especially prevalent in rural areas, although they are also found in some suburban developments.

The technologies utilized in producing potable water involve treating groundwater or surface water by conventional methods or by new treatment processes such as reverse osmosis.

Most of the Region's freshwater resources suitable for potable uses have been tapped, either by public water suppliers or major private water users, such as agricultural concerns. Historic hydrological trends within the Region indicate that these freshwater sources have been declining either in quantity or in quality. The decline in quality is the result of many factors, including the effects of increased salinity of the shallow aquifer systems due to excessive water withdrawal and the effects of urban and agricultural runoff on surface water. Many private wells have become unusable as potable water sources. Wells, bottled water, or the development or expansion of water distribution systems will be required as a solution to the problem.

### **Solid Waste**

All solid waste disposal facilities within Southwest Florida currently consist of sanitary landfills, transfer stations, and yard trash compost sites. These facilities are operated by public or franchised agencies and regulated by the Florida Department of Environmental Regulation.

Although sanitary landfills are generally considered the best solid waste disposal method in terms of cost and health factors, they are not without problems. The higher groundwater table and the possible contamination of underground water supplies have made proper disposal of solid waste difficult.

There are seven landfills operating within the Region that are permitted by the Florida Department of Environmental Regulation. Collier County and Sarasota County each currently own and operate two landfills. Lee County has an incinerator which is owned by the county but is managed by a private company. Charlotte and Hendry Counties each own and operate a single facility, with Hendry county's facility serving Lee county's incinerator under a bi-county agreement. Glades County leases its present site but operates the facility. The locations of these facilities, all of which are regional in scope, are depicted on Map 30.

Mandatory solid waste pick-up is in effect in all or part of all counties in the Region.

### **Electrical Power**

Currently within the Southwest Florida Region, there are five companies that supply electric service to the area. These companies are:

Glades Electric Cooperative  
Lee County Electric Cooperative  
Florida Power and Light Company  
Peace River Electric  
Clewiston Electric Company

Several of the cooperatives purchase power from the Florida Power and Light Company. Glades Electric Cooperative provides power to the majority of Glades and Hendry Counties. The Peace River Electric Cooperative provides power to a small section of rural Sarasota County. In addition, the Clewiston Electric Company provides electricity to its incorporated area in Hendry County. Lee County Electric Cooperative purchases its power from the Seminole Electric Cooperative, a generation and transmission utility located in Palatka, Florida.

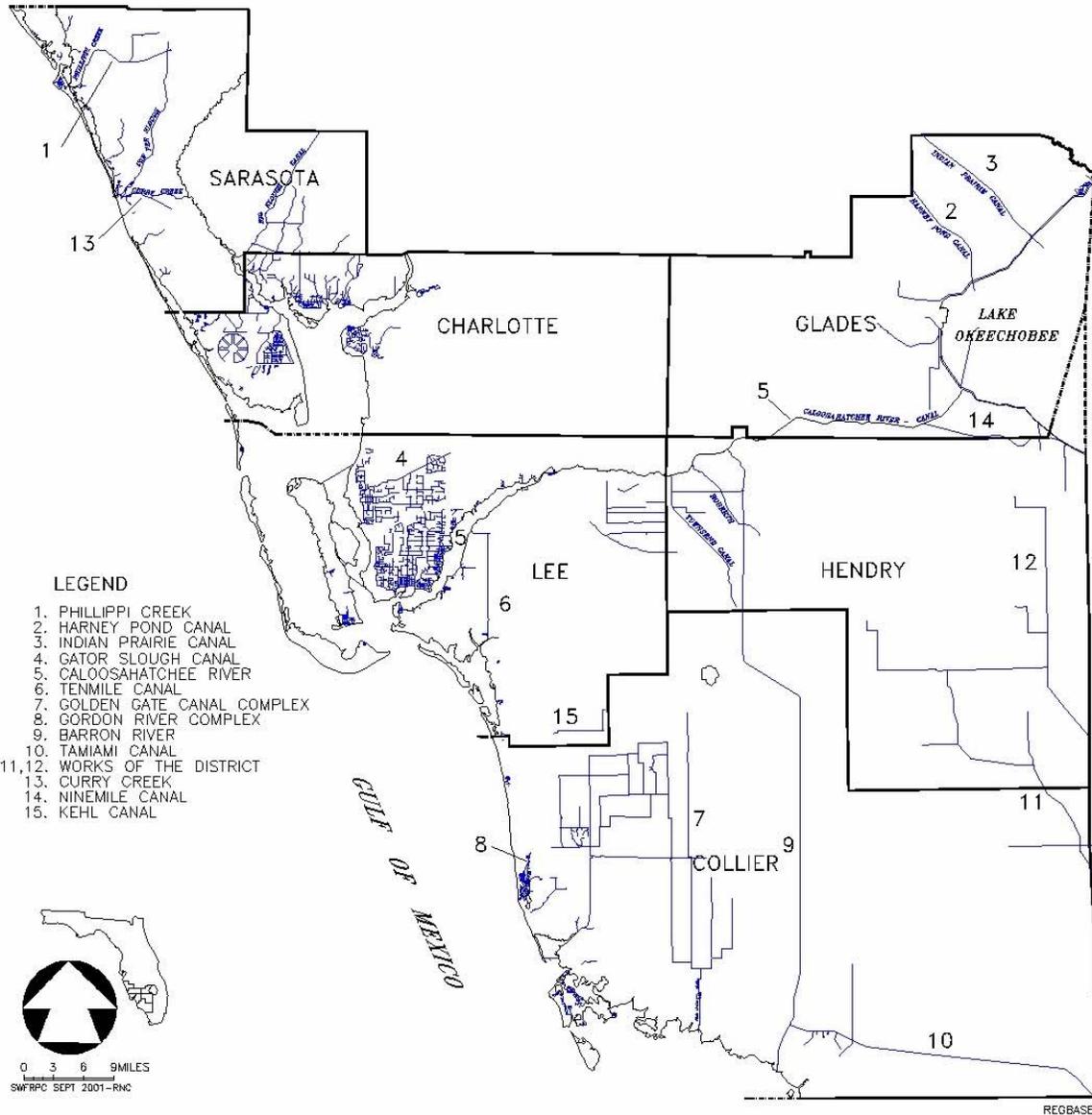
Power is provided through an interconnected network of generating plants located throughout the state. The one electrical generating facility in the Region is operated by Florida Power and Light Company near Fort Myers, depicted on Map IV-14. It is oil-fired and has a total capacity of 1,176 megawatts. (By 2002, it is to convert to a natural gas powered plant, which will be the terminus of the gas pipeline using the SR 31 corridor.)

### **Drainage and Stormwater**

There are twelve major drainage canals recognized by the water management districts. These include the Harney Pond Canal, Indian Prairie Canal, Caloosahatchee River, Faka Union Canal, Barron River, and Tamiami Canal.

There are also extensive local systems that have altered what were once vast wetland systems to accommodate man's needs both for urban development and agriculture. These include the canal systems for Golden Gate Estates, Cape Coral, Port Charlotte, Rotonda, and North Port. There are also major canals for suburban areas, such as Ten Mile Canal and Gator Slough in Lee County and Phillippi Creek in Sarasota County. These canal systems are depicted on Map 32.

**MAP 32 –DRAINAGE AND STORMWATER**



MAJOR CANALS  
SOUTHWEST FLORIDA REGION

## SECONDARY SUPPORT SERVICES

### Health Care Facilities

Health care is provided by hospitals, nursing homes, specialty hospitals, health departments, and various clinics (mental health, drug abuse, alcoholism, and migrant health). In Southwest Florida (1998), there are sixteen acute care facilities with a total of 3,606 beds. The same facilities also contain an additional 578 beds dedicated to special purposes, bringing the total to 4,169. There were also three specialty hospitals with an additional 275 beds. Additionally, there are sixty-two nursing homes having a total of 6,701 beds. There are numerous other health care facilities of specialized nature in the region, most of who are identified in Regional Support Service lists.

### Schools

Public education is provided through six school districts (one for each county), two community college systems and the State's university system. The regional facilities are the post secondary school sites serving more than one county. It should be noted that the county based school districts generally have interlocal agreements allowing students in one county to attend facilities in another county if those are the most reasonably convenient facilities.

Four public schools at six campuses in the Region meet the needs for higher education. Two of these are colleges and two are community colleges. The community colleges are Edison Community College and Manatee Community College.

Edison Community College in Fort Myers (with branch campuses in Charlotte and Collier Counties, and extension programs in Hendry and Glades Counties) provides education to approximately 7,400 students. Manatee Community College (located in Manatee County) maintains a branch facility in Venice.

The colleges are a branch campus of the University of Florida, and Florida Gulf Coast University. The University of South Florida has a campus in Sarasota, sharing the site with New College, a fully accredited liberal arts college. The new Florida Gulf Coast University (established in 1997) is located in Lee County, south and west of the International Airport, and is Florida's newest University. It should be noted that the University of Florida offers courses at the Institute for Food and Agricultural Studies (IFAS) in Immokalee in Collier County.

There are also nine separate private colleges offering components of post secondary education.

### Police Protection

Police protection in Southwest Florida is provided by both county and municipal agencies. In 1999, there were sixteen separate local police forces, as well as uniformed armed police at the Southwest Florida International Airport. The Florida Highway Patrol and the Florida Marine Patrol also provide police protection for certain areas.

## **Fire Protection**

Fire protection in Southwest Florida is provided by a combination of municipal fire departments and special fire control districts. The State of Florida operates the Division of Forestry that provides protection to rural areas in the counties, while local governments service the remaining areas through fifty-four separate fire departments.

Problems associated with fire protection include funding of necessary expansions, administrative coordination, and the need for adequate distribution of hydrants to provide ample water pressure and a necessary water supply for each county. Although certain agencies in the Region, particularly municipal departments, are relatively well prepared for growth, other fire protection agencies are not ready to service increasing demands. Most area fire departments have mutual aid agreements to assist each other in crisis situations. To the degree that their agreements involve two or more jurisdictions, these may be considered regional facilities. Further, the nature of many hazards requires regional coordination plans for these diverse facilities.

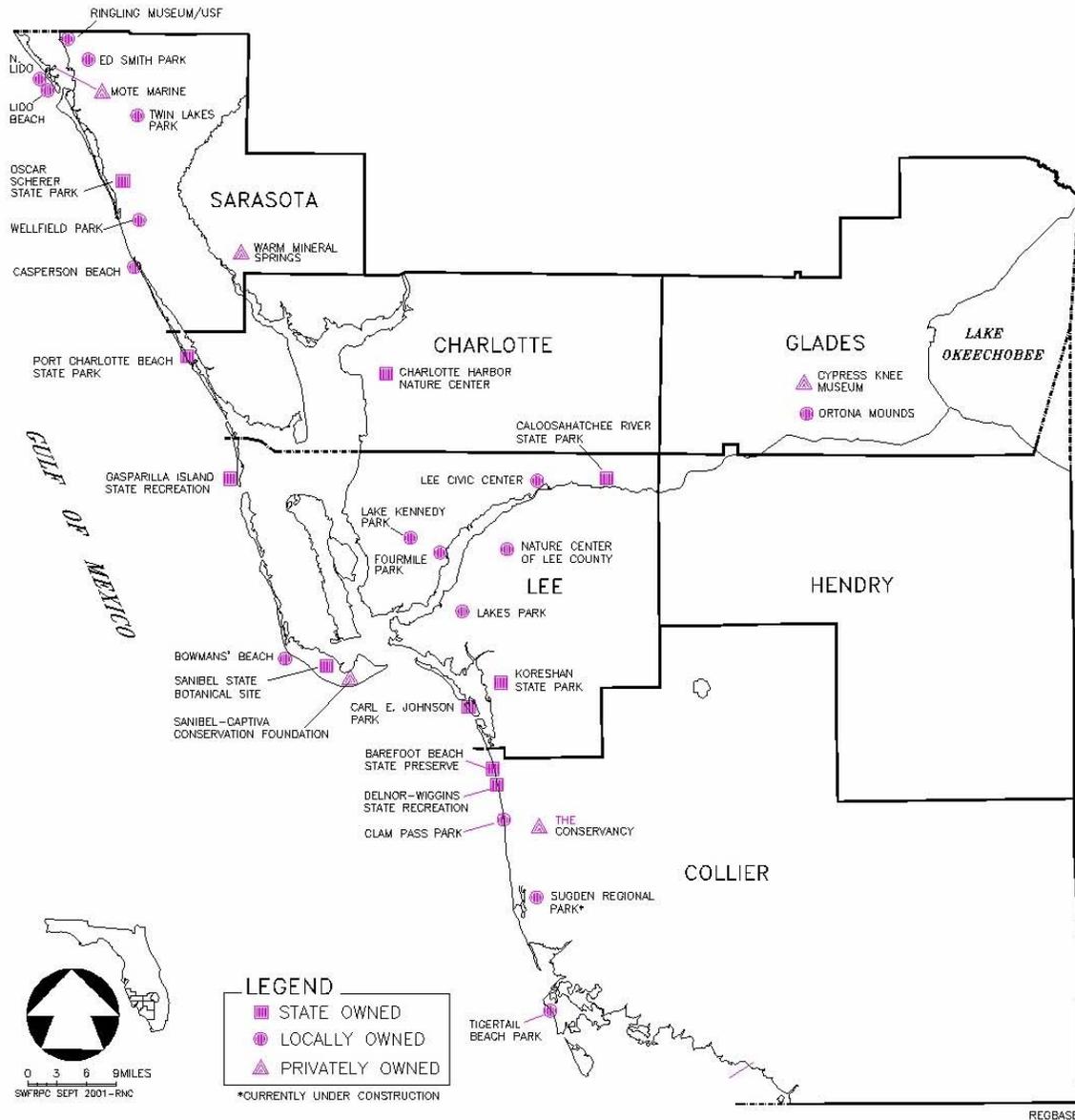
## **Parks and Recreation Areas**

In Southwest Florida, recreation areas are administered by the federal government, state government, county government, and various municipal governments, as well as by private agencies and private commercial interests.

Types and sizes of parks vary widely in the Region. Parks and recreation areas have been classified into two categories: user-oriented and resource-based. User-oriented recreation areas are defined as those containing facilities which can be provided almost anywhere for the convenience of the user. Among such facilities are ballfields, golf courses, and playgrounds. Resource-based outdoor recreation areas are dependent upon some particular element or combination of elements in the natural environment. These areas include beaches or hunting areas. Sizes of parks in Southwest Florida range from less than one acre to several thousand acres.

Within the urban setting, most of the regionally significant parks and recreation areas are owned by the State of Florida or a local government. These areas include the Oscar Scherer State Recreation Area, Wiggins Pass State Recreation Area, and Lakes Park. The regionally significant parks and recreation areas located in the urban portions of the Region are identified in Map 33 and Table IV-101.

**MAP 33 - URBAN PARKS AND RECREATION**



REGIONAL SIGNIFICANT URBAN PARKS AND RECREATION AREAS  
SOUTHWEST FLORIDA REGION

**TABLE 101  
REGIONALLY SIGNIFICANT URBAN PARK AND RECREATION AREAS**

<b>State-owned</b>	<b>County</b>	<b>Land Acreage</b>
1. Caloosahatchee River State Recreation Area	Lee	718
2. Koreshan State Historic Site	Lee	156
3. Sanibel Island State Botanical Site	Lee	186
4. Lover's Key State Recreation Area/ Carl Johnson Park (local)	Lee	712
5. Gasparilla Island State Recreation Area	Lee	113
6. Oscar Scherer State Recreation Area	Sarasota	467
7. Port Charlotte Beach State Recreation Area/Don Pedro Island	Charlotte	378
8. Recreation Area/Don Pedro Island	Charlotte	378
9. Delnor-Wiggins Pass State Recreation Area	Collier	166
10. Barefoot Beach State Preserve	Collier	157
11. Ringling Museum/C'dzan	Sarasota	40*
	<b>Subtotal</b>	<b>3,248</b>
<b>Locally owned</b>	<b>County</b>	<b>Land Acreage</b>
1. Nature Center	Lee	105
2. Lakes Park	Lee	276
3. Caspersen Beach	Sarasota	327
4. Four Mile Cove Eco-Park	Lee	365
5. Wellfield Park	Sarasota	161
6. Ed Smith	Sarasota (City)	52
7. Bowman Beach Regional Recreation Area	Lee	196
8. Twin Lakes	Sarasota	123
9. Knight Trail	Sarasota	267
10. Lido Beach/N. Lido	Sarasota	12
11. Brohard Beach	Sarasota	84
12. Clam Pass	Collier	35
13. Lake Kennedy	Cape Coral	42
14. Lee Civic Center	Lee	96
	<b>Subtotal</b>	<b>2,141</b>
<b>Privately owned</b>	<b>County</b>	<b>Land Acreage</b>
1. Sanibel-Captiva Conservation Foundation Preservation Area	Lee	651
2. Conservancy Park	Collier	114
3. Warm Mineral Springs	Sarasota	29
4. Cypress Knee Museum	Glades	40
5. Charlotte Harbor Environmental Center	Charlotte	800
6. Conservancy of Southwest Florida		40
	<b>Subtotal</b>	<b>1,634</b>
<b>TOTAL OF ALL AREAS</b>		<b>7,027</b>

Source: Florida Department of Natural Resources, "Florida Recreation and Parks Facility Inventory" (unpublished data), April 15, 1986.

## Beaches and Beach Access

Although the existing public beaches and beach access sites in Southwest Florida appear adequate to serve the resident population, the increase in population during the peak tourist season overloads many facilities. Beach facilities can also become overcrowded at other times of the year, especially during holidays. There are 194 public beach parks and beach access points in the Region.

From one county to the next, the number of beaches and beach access points varies widely. Although some counties seem to have an abundance of facilities, access to these areas is often restricted or difficult. Also, several beach areas have remained undeveloped for recreational use.

## Marinas and Boat Ramps

There are a large number of marinas and boat ramps in Southwest Florida due to the coastal orientation of the Region and the popularity of water-based recreational activities. There are approximately 250 marinas and boat ramps in the Region with almost 8,000 slips (both wet and dry storage). This is exclusive of approximately eighty private docking associations with ten slips or more.

### ➤ MAJOR ACTIVITY CENTERS

Land uses, transportation facilities, and support services can combine to create major activity centers with regional significance. These centers (depicted on Map 34) are characterized as follows:

#### Major economic centers

These are areas where the concentration of business activity serves as a draw for employment, retail, or business trade for an area greater than the county in which it is located. Such a center may be a solitary site of great magnitude, such as a regional mall, or it may be a concentration of relatively small activities that act to dominate a great part of the region's economic activity, such as a central business district. In Southwest Florida, these major economic centers include the three commercial airports (Sarasota-Bradenton, Southwest Florida Airport, and Naples Airport), the central business districts in the cities of Sarasota and Fort Myers, and the several regional malls. The interstate interchanges merit special consideration as being points by which most commerce—such as truck traffic, motor vehicular tourists—enter the region. (U.S. 27 is effectively the only other route that serves that function, and is vital for the eastern part of the region.)

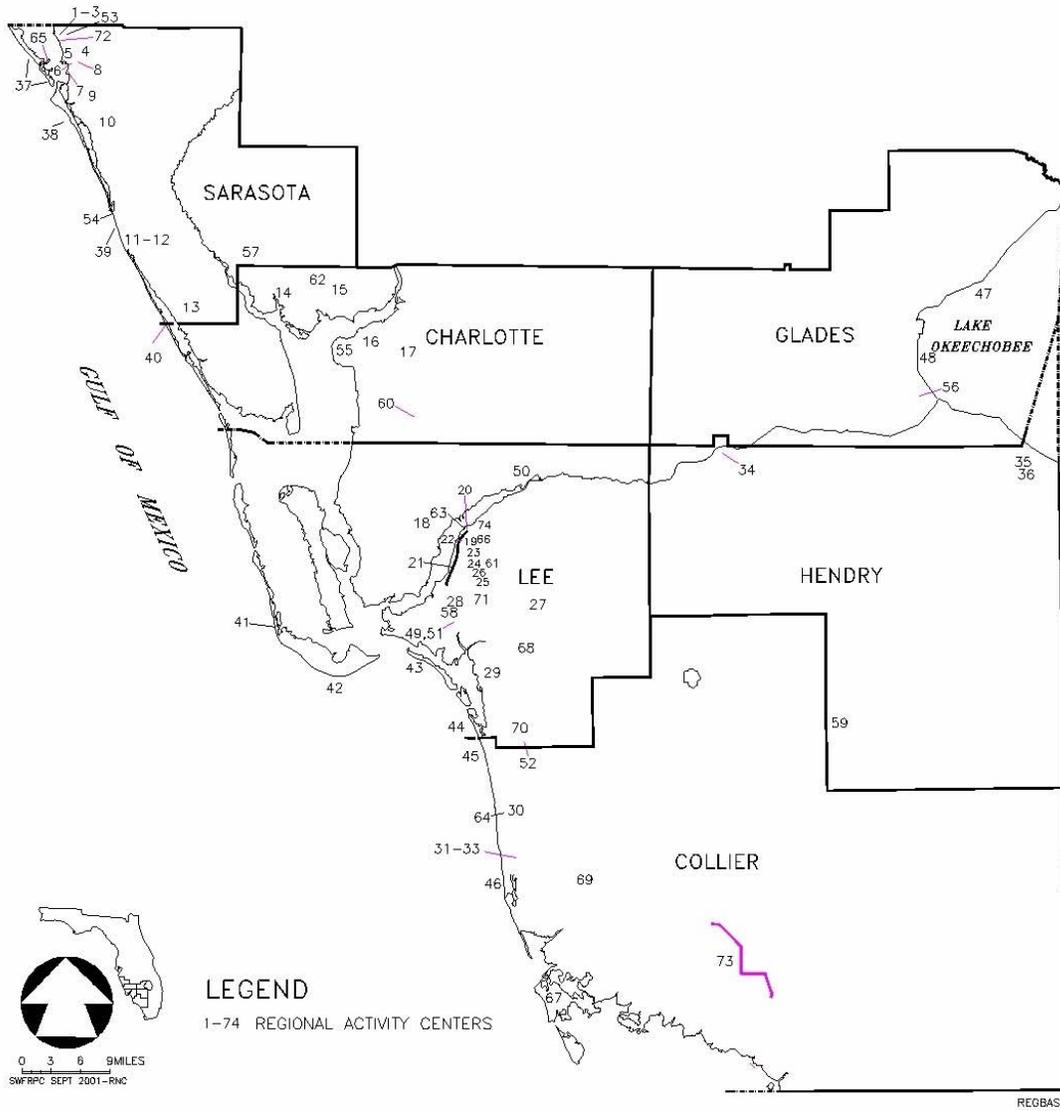
Major cultural, health, and educational centers:

These are facilities that provide programs or services that benefit an area greater than the county in which they are found or are designated as unique facilities of significance to the Region. Facilities that are of multi-county significance include the major hospitals, educational institutions (the main campus of Edison Community College, the University of South Florida campuses in Lee and Sarasota Counties, and New College), and the Ringling Museum Complex in Sarasota. Unique facilities include the Edison Home, the Ford Home, the restored Lee County Courthouse, and that part of McGregor Boulevard lined with royal palms (all in Lee County), and Mote Marine Laboratories in Sarasota.

#### Major recreational facilities

These are facilities that contribute both to the marketing of the Region by the tourist industry and the enjoyment of area residents. They include the major beaches of the Region, the state park system, certain local parks such as Lakes Park in Lee County, and the spring training grounds of major league baseball teams.

MAP 34 - REGIONAL ACTIVITY CENTERS



REGIONAL ACTIVITY CENTERS  
SOUTHWEST FLORIDA REGION

**MAP 34 - LEGEND**  
**REGIONAL ACTIVITY CENTERS**

Central Business Districts, Downtowns, and Regional Malls

- 6. City of Sarasota/Central Business District
- 10. Sarasota Square Mall
- 20. Fort Myers/Central Business District
- 24. Edison Mall
- 30. Coastland Mall
- 31. Naples/Central Business District
- 34. LaBelle, Downtown
- 35. Clewiston, Downtown
- 54. Venice Central Business District
- 55. Punta Gorda Central Business District
- 56. Moore Haven, Downtown
- 57. North Port, Downtown
  
- 62. Murdock Center Regional Mall
- 72. Sarasota Downtown

**Community Colleges, Universities, and Vocational Education Facilities**

- 3. University of South Florida/New College
- 49. Edison Community College
- 68. Florida Gulf Coast University

**Correctional Facilities**

- 59. Hendry Correctional Facility
- 60. Charlotte Correctional Facility
- 75. Glades Correctional Facility

**Enterprise Zones and Free Trade Zones**

- 74. Dunbar enterprise zone (Fort Myers in Lee County)

**Major Medical Facilities**

- 9. Sarasota Memorial Hospital
- 11. Venice Hospital
- 13. Lemon Bay Hospital
- 15. Port Charlotte Hospital
- 16. Punta Gorda Hospital
- 18. Cape Coral Hospital
- 22. Lee Memorial Hospital (Downtown)
- 23. Southwest Florida Regional Medical Center

**MAP 34 – LEGEND (Cont'd.)**

**REGIONAL ACTIVITY CENTERS**

- 32. Naples Hospital
- 36. Clewiston Hospital
- 58. Health Park Hospital

**Sports, Entertainment, and Cultural Facilities**

- 2. Ringling Museum Complex
- 4. Ed Smith Sports Stadium
- 5. Van Wezel Auditorium
- 7. Selby Gardens
- 8. White Sox Spring Training Ground
- 14. Rangers Spring Training Ground
- 19. Edison Home
- 21. McGregor Boulevard Scenic Drive
- 25. Twins Spring Training Ground
- 28. Lakes Park
- 29. Koreshan Museum
- 50. Lee County Civic Center
- 51. Barbara B. Mann Performing Arts Center
- 52. Naples-Fort Myers Dog Track
- 53. Sarasota Dog Track
- 63. Harborside Convention Center
- 64. Philharmonic Center for the Arts
- 65. Mote Marine Laboratories
- 66. Red Sox Training Ballpark
- 69. Florida Sports Complex (Mudbogging)
- 70. Everglades Wonder Garden
- 71. Minnesota Twins Training Ballpark
- 73. Janes Scenic Drive
- 76. TECO (Everblades) Ice Hockey Arena
- Ortona Indian Mound

**Tourist oriented Areas and Beaches**

- 37. Tourist-oriented Beaches/Sarasota
- 38. Tourist-oriented Siesta Key
- 39. Tourist-oriented Venice
- 40. Tourist-oriented Englewood/Charlotte
- 41. Tourist-oriented Captiva
- 42. Tourist-oriented Sanibel
- 43. Tourist-oriented Fort Myers Beach
- 44. Tourist-oriented Bonita Beach
- 45. Tourist-oriented Wiggins Pass/Vanderbilt Beach
- 46. Tourist-oriented Naples

**MAP 34 – LEGEND (Cont'd.)**

**REGIONAL ACTIVITY CENTERS**

- 47. Tourist-oriented Lake Recreation
- 48. Tourist-oriented Lake Recreation
- 67. Tourist-oriented Marco Island

**Transportation Facilities**

- 1. Sarasota Bradenton Airport
- 12. Venice Municipal Airport
- 17. Charlotte County Airport
- 26. Page Field
- 27. Southwest Florida Regional Airport
- 33. Naples Airport

➤ **RURAL USES OF THE LAND**

**Agriculture**

Agriculture plays a key role in the economy of Southwest Florida. The primary agricultural uses include cropland, timberland, grazing or improved pasture, orchards and groves, dairies and feed lots, and other (including rangeland).

In 1997, approximately 43% of the Region was comprised of farmland acreage. The figures in Table 102 vary from other reports but this disparity is attributed to the use of different definitions. The general distribution of cropland is depicted on Map 35.

Citrus is increasingly important, both to the Region and the State (Map 36 and Table 103). Southwest Florida citrus acreage grew by 198% from 1982 to 1992. During that same period, the Region's share of statewide citrus acreage increased from 7.0% to 19.9%, partially due to declines elsewhere in the State.

<b>TABLE 102</b>				
<b>1997 FARMLAND</b>				
<b>County</b>	<b>Total</b>	<b>Cropland</b>	<b>Pasture Land</b>	<b>Wooded* Land</b>
Charlotte	290,340	44,577	181,571	95,813
Collier	277,279	69,212	139,677	52,707
Glades	380,377	41,361	314,047	5,984
Hendry	604,677	204,996	333,231	104,758
Lee	129,001	34,155	89,842	12,738
Sarasota	128,655	18,781	117,251	21,704
<b>Total</b>	<b>1,819,329</b>	<b>413,082</b>	<b>1,175,619</b>	<b>293,704</b>

Source: U.S. Census of Agriculture, 1997, multiple tables.

**MAP 35 - CROP LAND**

**MAP 36 - GROVES**

<b>TABLE 103 CITRUS ACREAGE</b>					
<b>County</b>	<b>1982</b>	<b>1987</b>	<b>1992</b>	<b>1997</b>	<b>%Change 1982-97</b>
Charlotte	6,120	8,758	15408	23487	283
Collier	7,931	10,049	30343	34861	339
Glades	4,026	6,066	8690	10596	163
Hendry	32,944	40313	110272	114600	247
Lee	6,711	7308	8298	13786	105
Sarasota	1,570	1565	3248	2376	51
Region	59,302	74059	176259	199706	236
State	847,856	623,568	886,273	959,364	13
Region's part of State(%)	7.0	11.9	19.9	20.8	

Source: U.S. Census' of Agriculture, 1982-97

## ➤ CONSERVATION

### Open Space

For the purpose of this inventory, "open space" applies to land set aside for preservation or conservation purposes. Uses within such areas include historic preservation, outdoor recreation, hunting, fishing, and nature study. Improvements are generally few and vary according to a particular tract's designation, either for preservation (preserve, wilderness area, refuge, or sanctuary) or for limited use (such as a wildlife management area). Both state and federal governments have been the two most active agencies in setting aside open space lands. In addition to the recreation areas found in the urban portions of the Region, there are forty major private, local, state or federal open space areas. These total 833,092 acres, not including water bodies (Table 104). A significant amount of this area was created through the federal acquisition of 475,000 acres in eastern Collier County, which constitute the Big Cypress National Water Preserve. This Preserve is contained within the Region's one Area of Critical State Concern (ACSC). This ACSC was established to provide a regulatory framework for the preservation and controlled use of the important environmental systems within its boundaries.

The Region is also in part subject to two Resource Planning and Management Committee programs. The first, the Charlotte Harbor program, involves the entirety of Sarasota, Charlotte, and Lee Counties. The second, the Kissimmee River, is concerned with the Kissimmee River Basin, including twenty square miles of Glades County.

Expansion plans include the final acquisition of the northeast corner of Big Cypress, through land and swamps involving the Department of Interior and private owners and several Save Our Rules/CARL proposals. Further, there is currently a joint initiative by the South Florida Water Management District, the County Commissions of Lee County and Collier County, and private parties to preserve the Flint Pen/Bird Rookery/Corkscrew Swamp system in Lee and Collier Counties. The ultimate size is as yet unknown, but should approach one hundred square miles.

## Historic and Archaeological Sites

"Historic and archaeological sites" is the category under preservation and conservation land uses that reflects man's activities in the past. According to the Division of Archives, Florida Department of State, there are 8,219 historic and archaeological sites in Southwest Florida recorded on the Florida Master Site File (1994). These sites are distributed among Charlotte (429 sites), Collier (689 sites), Glades (129 sites), Hendry (96 sites), Lee (1,723 sites), and Sarasota (3,153 sites). Only parts of the Region have been extensively surveyed; consequently, there may be considerably more sites to be discovered.

At present, few of Southwest Florida's historical or archaeological sites are listed on the National Register of Historic Places. Collier County has twelve sites listed, including the following: Halfway Creek Site, Hinson Mounds, C. J. Ostl Site, Palm Cottage, Platt Island, Seaboard Coast Line Railroad Depot, Ted Smallwoods Store, Sugar Pot Site, and the Turner River Site.

Lee County also has twelve sites including: Boca Grande Lighthouse, Charlotte Harbor and Northern Railway Depot, Demere Key, Josslyn Island Site, Koreshan Unity Settlement Historic District, Mound Key, Pineland Site, and Sanibel Lighthouse and Keeper Quarters.

Sarasota County has the most sites listed, twenty-four, including Atlantic Coast Line Passenger Depot, Bacon and Tomlin, Inc., Burns Court Historic District, Caples-Ringlings' Estate, F. A. Decanizares House, Demarcay Hotel, Edward Theatre, El Vermona Apartments-Broadway Apartments, Frances-Carlton Apartments, Dr. Joseph Hilton House, Hotel Venice, S. H. Kress Building, Little Salt Springs, Osprey Archaeological and Historic Site, Capt. W. F. Purdy House, Roth Cigar Factory, Sarasota County Courthouse, Sarasota Herald Building, Sarasota High School, Sarasota Times Building, U. S. Post Office-Federal Building, Warm Mineral Springs, H. B. Williams House, and Dr. C. B. Wilson House.

Charlotte County has only one site and Glades has none. In Hendry County, the Hendry County Courthouse is listed on the National Register.

## ➤ OPEN AND OTHER LANDS

Open and other lands constitute about two percent of the Region's land area. As the designation is applied here, it refers principally to "barren lands" which can vary from empty fields within urban areas to forested areas which are not classified as "agriculture" to lands virtually indistinguishable in character from open space areas.

In addition, the status of such land is subject to abrupt changes. For example, the successful application for certain types of tax exemptions can change the status of these lands to open space or agricultural, without any physical changes having been made to the land.

Barren or vacant lands are transitory and do not in themselves constitute a use. As a result, they cannot be accurately depicted on a map. They generally have only a minor role in the development of the Region. One category, existing potable water well-fields, however, needs further examination because of its uniqueness. (See discussion in Part I of the Description of the Region.)

**TABLE 104  
OPEN SPACE AREAS**

<b>Federal</b>	<b>County</b>	<b>Land Acreage</b>
1. Everglades National Park	Collier	39262
2. Big Cypress National Preserve/Panther Sanctuary	Collier	475,060*
3. Rookery Bay National Estuarine Sanctuary (also private)	Collier	11315
4. Caloosahatchee National Wildlife Refuge/ Franklin Locks	Lee	103
5. Ding Darling National Wildlife Refuge	Lee	5014
6. Pine Island National Wildlife Refuge	Lee	404
7. Matlacha Pass National Wildlife Refuge	Lee	231
8. Island Bay National Wildlife Refuge	Charlotte	20
9. Sarasota Bay National Estuarine Program (also local participation)	Sarasota Manatee	No Acres
10. Florida Panther NWR	Collier	24300
	<b>Subtotal</b>	<b>555,709</b>
<b>State</b>	<b>County</b>	<b>Land Acreage</b>
11. Cape Romano State Aquatic Preserve	Collier	27,642
12. Collier-Seminole State Park	Collier	6,423
13. Fahkahatchee Strand State Preserve	Collier	58,290
14. Estero Bay State Aquatic Preserve	Lee	---
15. Matlacha Pass State Aquatic Preserve	Lee	---
16. Pine Island Sound State Aquatic Preserve	Lee	---
17. Mound Key State Archaeological Site	Lee	149
18. Little Pine Island	Lee	4,259
19. North Captiva Island	Lee	25
20. Cayo Costa State Park	Lee	1,700
21. Gasparilla Sound State Aquatic Preserve	Charlotte	---
22. Cape Haze Aquatic Preserve	Charlotte	11,289
23. Webb Wildlife Management Area	Charlotte	65,343
24. Charlotte Harbor State Preserve	Charlotte/Lee	28,357
	<b>Subtotal</b>	<b>555,709</b>
<b>Landowner Name</b>	<b>County</b>	<b>Land Acreage</b>
25. Lemon Bay Aquatic Preserve	Charlotte/ Sarasota	---
26. Myakka River State Park	Sarasota	18,929
27. Charlotte Harbor State Aquatic Preserve	Lee/Charlotte	---
28. Deltona Sanctuary	Collier	14,000
29. Corkscrew Regional Ecosystem Watershed	Lee/Collier	14,000*
	<b>Subtotal</b>	<b>250,406</b>
<b>Locally-owned</b>	<b>County</b>	<b>Land Acreage</b>
30. Carlton Reserve/Ringling MacArthur	Sarasota	24,000
	<b>Subtotal</b>	<b>24,000</b>
<b>Privately-owned</b>	<b>County</b>	<b>Land Acreage</b>
31. Audubon Sanctuary Corkscrew Swamp	Collier	11,000
32. Lykes Fisheating Creek Private Preserve/Campground	Glades	180
33. Little Salt Springs	Sarasota	100
	<b>Subtotal</b>	<b>11,280</b>
<b>TOTAL OF ALL AREAS</b>		<b>841,395</b>

--- Water areas are not calculated as part of the subtotals or totals.

Footnote: As this plan was being developed, the Florida Division of Forestry announced the pending establishment of a new State Forest in the Belle Meade area of Collier County. Upon its establishment, this table and accompanying map will be updated.

Source: "Florida Recreation and Parks Facility inventory" (unpublished data), Florida Department of Natural Resources. Local comprehensive plans and contact with owners.

➤ **GAME AND FISH AREAS**

It is difficult to map areas where hunting and fresh water fishing take place. To a certain extent, hunting can take place on lands not devoted to urban or intense agricultural activity. This in effect, means all non-preserve lands, not previously depicted as "urban" or "agriculture", on preceding map series. Fishing, similarly, can take place on any water body with quality that sustains recreational fish populations. These activities are popular, as demonstrated in Table 105, Fish and Wildlife Licenses.

Hunting is a more extensive land use, in that various birds (turkeys, for an example) small and large mammals need sufficient lands to maintain breeding populations. The Florida Fish and Wildlife Conservation Commission information serves to indicate where this activity takes place. Habitat for game species commonly overlaps habitat for the "listed" species indicated in the preceding Natural Resource section, but is even more extensive. Much of the hunting, as well as fishing, takes place on privately owned and managed lands.

<b>TABLE 105</b>					
<b>FISH AND WILDLIFE LICENSES</b>					
<b>1999 Estimate</b>					
County	Fishing		Hunting Licenses		NOI
	Saltwater	Fresh	General	Specialty	
Charlotte	24,406	3,407	539	611	354
Collier	29,929	5,313	884	968	518
Glades	150	6,520	98	396	142
Hendry	1,064	7,435	629	1,047	401
Lee	35,647	5,752	1,421	1,806	781
Sarasota	23,583	3,810	748	1,030	405
<b>Total</b>	<b>114,779</b>	<b>32,237</b>	<b>4,319</b>	<b>5,858</b>	<b>2,601</b>

NOTES: NOI-Not Otherwise include represents the sportsman and combined, hunting and fishing licenses and permits. Specialty: trapping, muzzleloading hunting, archery hunting, and particular game licenses.

Estimate: calculated from 10 months of data.