US 27 Transportation Alternatives Study

Prepared for:

Florida Department of Transportation
Systems Planning Office

August 2012

Technical Memorandum:

Identification of Corridor Conditions and Needs

Prepared for:

Florida Department of Transportation
Systems Planning Office

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Chapter 1 – Introduction

1.1 Study Background and Purpose

The US 27 Transportation Alternatives Study was initiated in January 2012 by the Florida Department of Transportation Systems Planning Office. The study will assess the travel demand from people and goods moving along the US 27 Corridor in the State of Florida against five measures: transportation, freight movements, emergency management, homeland security, and economic development. Additionally, the study will identify an effective range of strategies to alleviate congestion, facilitate emergency and security response, and foster economic development in the State of Florida.

The US 27 Alternatives Study consists of three main documents. This Identification of Corridor Needs Technical Memorandum is the first in a series of documents describing the development of the US 27 Transportation Alternatives Study. This document identifies existing conditions along the US 27 Corridor from different perspectives, including transportation, demographic, emergency management, homeland security, and economic development. The document also describes deficiencies and corridor related needs for each perspective.

The Alternative Options and Policy Implications Technical Memorandum will be the second document in the series and will include a discussion of transportation alternatives or different approaches to solving the identified needs, along with the policy implications of implementing those alternatives. The second document will not discuss specific projects or recommend solutions, but will present a comprehensive list of alternative approaches to improving mobility, emergency response, and economic development within the ten county study area. A final report document, titled the US 27 Transportation Alternatives Study, will summarize the full study and conclude the series.

1.2 Study Corridor

US Highway 27 is a major north-south highway that originates in South Florida, and continues northbound through the center of the state. US 27 provides a direct route from Miami-Dade County through central Florida, connects to I-75 in Marion County, and provides further access north into Georgia and several other states. In providing direct access between South and Central Florida regions, it acts as a major truck route. In the central portion of the corridor through Marion County, it also provides tourist access to a number of natural recreation areas and regional agricultural and horse farms and is the location of the large master planned retirement community, The Villages, which spans through Lake, Sumter, and Marion Counties along the corridor. At the northern end of the corridor, access to I-75 and freight movements are of primary state concern. As a major north-south connection throughout Florida and into other states, US 27 plays an important role in regional mobility and the state economy.

1.3 Study Area

The study corridor under evaluation includes ten counties through southeast and central Florida, as identified in **Figure 1.3.1**. The corridor spans over 300 miles, beginning at its southern terminus in Miami-Dade County and proceeding through the central part of the state to I-75 in Marion County.

1.4 Study Participants

The US 27 Transportation Alternatives Study will include coordination and consultation with the following agencies and organizations:

- Florida Department of Law Enforcement
- Florida Division of Emergency Management
- Florida Department of Economic Opportunity
- FDOT Districts One, Four, Five, and Six
- FDOT Modal Offices (Airports, Rail, Seaports, and Transit)
- Other FDOT Offices (Safety, Traffic Operations, and Policy Planning)
- Florida Metropolitan Planning Organizations Advisory Council (MPOAC)
- Five Regional Planning Councils along the US 27 Corridor
    - East Central Florida RPC
    - Central Florida RPC
    - Withlacoochee RPC
    - Treasure Coast RPC
    - South Florida RPC
- Six Metropolitan Planning Organizations along the US 27 Corridor
    - Ocala/Marion County TPO
    - Lake-Sumter MPO
    - Polk TPO
    - Palm Beach County MPO
    - Broward MPO
    - Miami-Dade Urbanized Area MPO
- Three Counties in the South Central Rural Areas of Critical Economic Concern (RACEC) areas not represented by an MPO
    - Highlands County
    - Glades County
    - Hendry County

Figure 1.3.1

US-27 Study Area

The Florida Department of Transportation Systems Planning Office (SPO) is the lead office coordinating all study activities and will coordinate the discussion between FDOT and its partners who will provide data and information for the study. All comments will be incorporated into the final study products.

The six Metropolitan Planning Organizations (MPOs) and five Regional Planning Councils (RPCs) located along the study corridor are also key organizations involved in transportation planning activities. The four FDOT Districts located along the corridor have existing working relationships with local and regional governments and will continue to serve as the key points of contact between the municipalities and regional agencies and the study team.

During the refinement of the Needs Plan, MPOs and RPCs will be asked to provide data, information, and/or other input into the study process to ensure the study team is aware of local issues and activities impacting the US 27 Corridor. During subsequent phases of the study, MPOs and RPCs will be asked to review study products, assist with policy development activities relating to the US 27 Corridor, and provide additional input to their FDOT District offices.

1.5 Project Information and Communications

Up to date information regarding the progress of the US 27 Transportation Alternatives Study can be found at the study website and SharePoint site established for the study (www.US27Alternatives.com). The SharePoint site is a principal communication link between FDOT and its partner agencies during the course of the study. The site also provides the ability for the general public to review study documents.

Chapter 2 – Demographic Elements

Florida's array of beaches, lakes and natural beauty make it ideal for the millions who visit each year and, in turn, decide to call Florida home. Florida as a whole has been at the forefront of a decades-long shift in population from the nation's traditional economic centers in the North and Midwest to the Sunbelt. The recent economic downturn in the state and rest of the country has temporarily slowed this rapid growth across much of the state, but growth in some places along the US 27 Corridor are continuing to see rapid growth even despite these recent trends. For instance, rapid growth in the massive master-planned Villages Retirement Community, which traverses the central and northern portions of the US 27 Corridor in Lake, Sumter, and Marion Counties, has continued to be a trend. In fact, Sumer County, the major hub of The Villages Development, was the second fastest growing county over the ten year period and is one of the fastest growing smaller "micropolitan" communities in the United States today.

The US 27 Corridor, traversing the center and southeast portion of the state, is representative of the diversity of Florida's demographics itself. Beginning at its southern terminus in Miami-Dade County, it covers a largely urbanized area near the coast and serves both commuter and the significant amount of truck traffic originating from the number of intermodal connections near the coast. Moving northward through the central part of the state in Hendry, Glades and Highlands Counties, the corridor is characterized by largely rural areas and concentrations of lakes and other natural features that attract tourists and residents alike interested in the unique scenic beauty of Florida's lakes and serene pace. A number of these small communities, including Moore Haven, Sebring, Avon Park and Lake Wales contain historic downtowns that have their origins in the older railroad booms of the late Nineteenth and early Twentieth Centuries. The corridor continues north through the "Four Corners" region into the heart of the mega-region of Central Florida, which has seen exponential population growth in recent years with a number of developments of regional impact (DRIs) and a series of retirement communities dominating residential development patterns in these once rural areas. At its northern terminus in Marion County, the corridor connects people and freight to the interstate system at I-75. Given the large urbanized areas in the southeastern portion of the corridor, the significant growth in central portions of the corridor, essential north-south linkages to I-95 from the southeast to I-75 in the central western portion of the state as well as several major Strategic Intermodal System (SIS) roadways throughout the state, providing transportation infrastructure to efficiently move people and goods now and into the future is of key importance to the state.

2.1 Existing Demographic Characteristics

The Bureau of Economic and Business Research (BEBR) estimates Florida's population at over 18.9 million as of April 2011.[1] **Table 2.1.1** shows 2010 U.S. Census population counts by county and city in the study area. Statewide, the ten counties with the largest population in 2010 were Miami-Dade, Broward, Palm Beach, Hillsborough, Orange, Pinellas, Duval, Lee, Polk and Brevard.[2] The US 27 corridor runs through four of these top ten counties, making the efficient movement of people and goods a priority for this corridor. In particular, US 27 traverses the top three most populous counties in the state: Miami-Dade, Broward and Palm Beach Counties. Combined, these counties are home to over 5.5 million people, or approximately 30 percent of the state's total population.

Population Growth

From 2000 to 2010, Florida's population grew by 17 percent. Florida remains the 4th ranked most populous state in the country, behind California, Texas and New York, while only ranking 25th in terms of total land area.[3] **Figure 2.1.1** illustrates the population growth rate of study area counties from 2000-2010.The fastest growing counties within the US 27 corridor are located in the central portion of the state, in Polk, Lake, Sumter, and Marion Counties. Sumter County, in particular, grew by over 75 percent over the past decade, and is the 8th fastest growing urbanized area in the nation. This growth can largely be attributed to the development of the master-planned retirement community, The Villages, which has seen populations boom from 8,000 in 2000 to over 50,000 in 2010 and is continuing to grow. Lake County has grown by roughly 41 percent during this same time, and Marion County (28 percent) and Polk County (24.4 percent) also experienced significant growth. Notably, the largest counties in the study area in terms of population, Palm Beach (16.7 percent), Miami-Dade (10.8 percent), and Broward Counties (7.7 percent), grew at a rate slower than the state over the ten year period. This may be attributed to build out conditions in these more urbanized areas. Although remaining largely rural, Glades (21.8 percent) and Highlands (13.1 percent) continued to grow, while the rural area in Hendry County (8.1 percent) experienced much slower rates of population growth during the ten year period.

[1] BEBR, Projections of Florida Population by County (2011-2040), March 2012.
[2] The Florida Legislature Office of Economic and Demographic Research, April 2011.
[3] U.S. Census Bureau, 2012 Statistical Abstract.

Table 2.1.1: Population by County and City, 2000 and 2010

County and City	April 1, 2010	April 1, 2000	Raw Change	Percent Change
Miami-Dade	2,496,435	2,253,779	242,656	10.8
Aventura	35,762	25,267	10,495	41.5
Bal Harbour	2,513	3,305	-792	-24.0
Bay Harbor Islands	5,628	5,146	482	9.4
Biscayne Park	3,055	3,269	-214	-6.5
Coral Gables	46,780	42,249	4,531	10.7
Cutler Bay	40,286	0	40,286	(X)
Doral	45,704	0	45,704	(X)
El Portal	2,325	2,505	-180	-7.2
Florida City	11,245	7,843	3,402	43.4
Golden Beach	919	919	0	0.0
Hialeah	224,669	226,419	-1,750	-0.8
Hialeah Gardens	21,744	19,297	2,447	12.7
Homestead	60,512	31,909	28,603	89.6
Indian Creek	86	33	53	160.6
Islandia	18	6	12	200.0
Key Biscayne	12,344	10,507	1,837	17.5
Medley	838	1,098	-260	-23.7
Miami	399,457	362,470	36,987	10.2
Miami Beach	87,779	87,933	-154	-0.2
Miami Gardens	107,167	0	107,167	(X)
Miami Lakes	29,361	0	29,361	(X)
Miami Shores	10,493	10,380	113	1.1
Miami Springs	13,809	13,712	97	0.7
North Bay Village	7,137	6,733	404	6.0
North Miami	58,786	59,880	-1,094	-1.8
North Miami Beach	41,523	40,786	737	1.8
Opa-locka	15,219	14,951	268	1.8
Palmetto Bay	23,410	0	23,410	(X)
Pinecrest	18,223	19,055	-832	-4.4
South Miami	11,657	10,741	916	8.5
Sunny Isles Beach	20,832	15,315	5,517	36.0
Surfside	5,744	4,909	835	17.0
Sweetwater	13,499	14,226	-727	-5.1
Virginia Gardens	2,375	2,348	27	1.1
West Miami	5,965	5,863	102	1.7
UNINCORPORATED	1,109,571	1,204,705	-95,134	-7.9

Table 2.1.1: Population by County and City, 2000 and 2010

County and City	April 1, 2010	April 1, 2000	Raw Change	Percent Change
Broward	1,748,066	1,623,018	125,048	7.7
Coconut Creek	52,909	43,566	9,343	21.4
Cooper City	28,547	27,914	633	2.3
Coral Springs	121,096	117,549	3,547	3.0
Dania Beach	29,639	20,061	9,578	47.7
Davie	91,992	75,720	16,272	21.5
Deerfield Beach	75,018	64,585	10,433	16.2
Ft. Lauderdale	165,521	152,397	13,124	8.6
Hallandale Beach	37,113	34,282	2,831	8.3
Hillsboro Beach	1,875	2,163	-288	-13.3
Hollywood	140,768	139,368	1,400	1.0
Lauderdale-By-The-Sea	6,056	3,221	2,835	88.0
Lauderdale Lakes	32,593	31,705	888	2.8
Lauderhill	66,887	57,585	9,302	16.2
Lazy Lake	24	38	-14	-36.8
Lighthouse Point	10,344	10,767	-423	-3.9
Margate	53,284	53,909	-625	-1.2
Miramar	122,041	72,739	49,302	67.8
North Lauderdale	41,023	32,264	8,759	27.1
Oakland Park	41,363	30,966	10,397	33.6
Parkland	23,962	13,835	10,127	73.2
Pembroke Park	6,102	5,384	718	13.3
Pembroke Pines	154,750	137,427	17,323	12.6
Plantation	84,955	82,934	2,021	2.4
Pompano Beach	99,845	78,191	21,654	27.7
Sea Ranch Lakes	670	734	-64	-8.7
Southwest Ranches	7,345	0	7,345	(X)
Sunrise	84,439	85,787	-1,348	-1.6
Tamarac	60,427	55,588	4,839	8.7
Weston	65,333	49,286	16,047	32.6
West Park	14,156	0	14,156	(X)
Wilton Manors	11,632	12,697	-1,065	-8.4
UNINCORPORATED	16,357	130,356	-113,999	-87.5

Table 2.1.1: Population by County and City, 2000 and 2010

County and City	April 1, 2010	April 1, 2000	Raw Change	Percent Change
Palm Beach	1,320,134	1,131,191	188,943	16.7
Atlantis	2,005	2,005	0	0.0
Belle Glade	17,467	14,906	2,561	17.2
Boca Raton	84,392	74,764	9,628	12.9
Boynton Beach	68,217	60,389	7,828	13.0
Briny Breezes	601	411	190	46.2
Cloud Lake	135	167	-32	-19.2
Delray Beach	60,522	60,020	502	0.8
Glen Ridge	219	276	-57	-20.7
Golf Village	252	230	22	9.6
Greenacres City	37,573	27,569	10,004	36.3
Gulf Stream	786	716	70	9.8
Haverhill	1,873	1,454	419	28.8
Highland Beach	3,539	3,775	-236	-6.3
Hypoluxo	2,588	2,015	573	28.4
Juno Beach	3,176	3,262	-86	-2.6
Jupiter	55,156	39,328	15,828	40.2
Jupiter Inlet Colony	400	368	32	8.7
Lake Clarke Shores	3,376	3,451	-75	-2.2
Lake Park	8,155	8,721	-566	-6.5
Lake Worth	34,910	35,133	-223	-0.6
Lantana	10,423	9,404	1,019	10.8
Loxahatchee Groves	3,180	0	3,180	-
Manalapan	406	321	85	26.5
Mangonia Park	1,888	1,283	605	47.2
North Palm Beach	12,015	12,064	-49	-0.4
Ocean Ridge	1,786	1,636	150	9.2
Pahokee	5,649	5,985	-336	-5.6
Palm Beach	8,348	9,676	-1,328	-13.7
Palm Beach Gardens	48,452	35,058	13,394	38.2
Palm Beach Shores	1,142	1,269	-127	-10.0
Palm Springs	18,928	11,699	7,229	61.8
Riviera Beach	32,488	29,884	2,604	8.7
Royal Palm Beach	34,140	21,523	12,617	58.6
South Bay	4,876	3,859	1,017	26.4
South Palm Beach	1,171	1,531	-360	-23.5
Tequesta	5,629	5,273	356	6.8
Wellington	56,508	38,216	18,292	47.9
West Palm Beach	99,919	82,103	17,816	21.7
UNINCORPORATED	587,844	521,447	66,397	12.7

Table 2.1.1: Population by County and City, 2000 and 2010

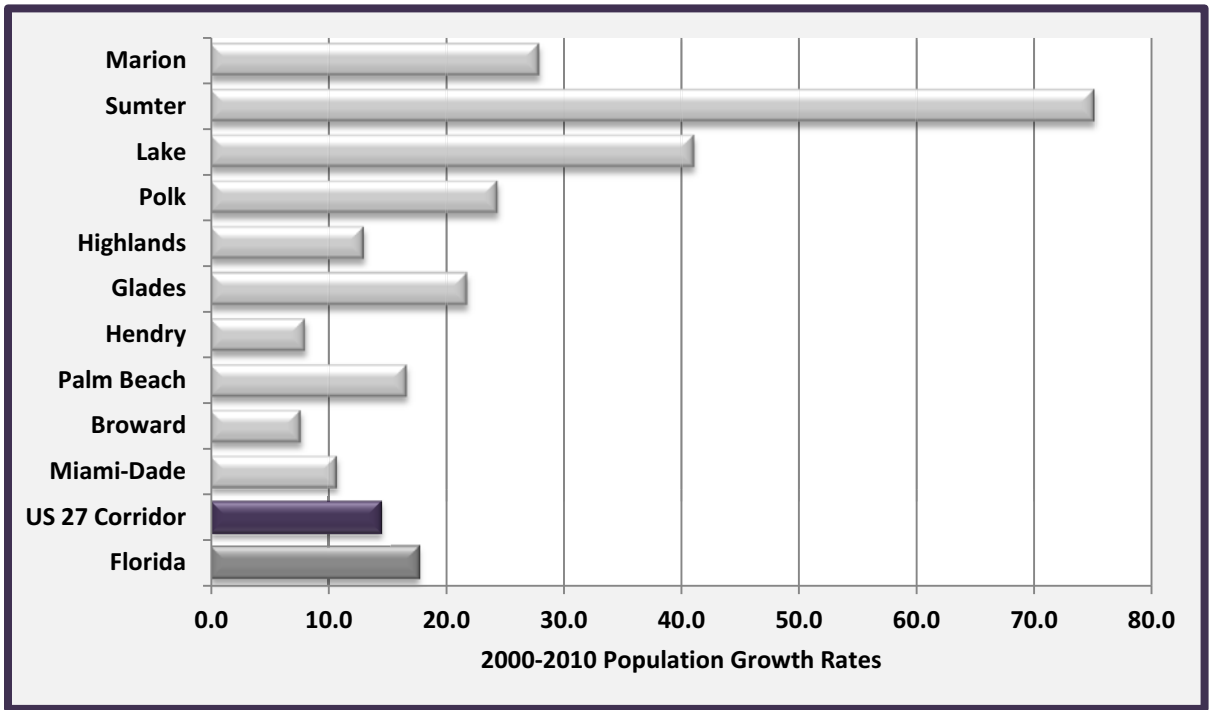
County and City	April 1, 2010	April 1, 2000	Raw Change	Percent Change
Hendry	39,140	36,210	2,930	8.1
Clewiston	7,155	6,460	695	10.8
LaBelle	4,640	4,210	430	10.2
UNINCORPORATED	27,345	25,540	1,805	7.1
UNINCORPORATED	11,575	10,067	1,508	15.0
Glades	12,884	10,576	2,308	21.8
Moore Haven	1,680	1,635	45	2.8
UNINCORPORATED	11,204	8,941	2,263	25.3
Highlands	98,786	87,366	11,420	13.1
Avon Park	8,836	8,542	294	3.4
Lake Placid	2,223	1,668	555	33.3
Sebring	10,491	9,667	824	8.5
UNINCORPORATED	77,236	67,489	9,747	14.4
Polk	602,095	483,924	118,171	24.4
Auburndale	13,507	11,032	2,475	22.4
Bartow	17,298	15,340	1,958	12.8
Davenport	2,888	1,924	964	50.1
Dundee	3,717	2,912	805	27.6
Eagle Lake	2,255	2,496	-241	-9.7
Ft. Meade	5,626	5,691	-65	-1.1
Frostproof	2,992	2,975	17	0.6
Haines City	20,535	13,174	7,361	55.9
Highland Park	230	244	-14	-5.7
Hillcrest Heights	254	266	-12	-4.5
Lake Alfred	5,015	3,890	1,125	28.9
Lake Hamilton	1,231	1,304	-73	-5.6
Lake Wales	14,225	10,194	4,031	39.5
Lakeland	97,422	78,452	18,970	24.2
Mulberry	3,817	3,230	587	18.2
Polk City	1,562	1,516	46	3.0
Winter Haven	33,874	26,487	7,387	27.9
Unincorporated	375,647	302,797	72,850	24.1

Table 2.1.1: Population by County and City, 2000 and 2010

County and City	April 1, 2010	April 1, 2000	Raw Change	Percent Change
Lake	297,052	210,527	86,525	41.1
Astatula	1,810	1,298	512	39.4
Clermont	28,742	9,338	19,404	207.8
Eustis	18,558	15,106	3,452	22.9
Fruitland Park	4,078	3,186	892	28.0
Groveland	8,729	2,394	6,335	264.6
Howey-in-the-Hills	1,098	956	142	14.9
Lady Lake	13,926	11,828	2,098	17.7
Leesburg	20,117	15,956	4,161	26.1
Mascotte	5,101	2,687	2,414	89.8
Minneola	9,403	5,435	3,968	73.0
Montverde	1,463	882	581	65.9
Mount Dora	12,370	9,418	2,952	31.3
Tavares	13,951	9,700	4,251	43.8
Umatilla	3,456	2,214	1,242	56.1
UNINCORPORATED	154,250	120,129	34,121	28.4
Sumter	93,420	53,345	40,075	75.1
Bushnell	2,418	2,050	368	18.0
Center Hill	988	910	78	8.6
Coleman	703	647	56	8.7
Webster	785	805	-20	-2.5
Wildwood	6,709	3,924	2,785	71.0
UNINCORPORATED	81,817	45,009	36,808	81.8
Marion	331,298	258,916	72,382	28.0
Belleview	4,492	3,478	1,014	29.2
Dunnellon	1,733	1,898	-165	-8.7
McIntosh	452	453	-1	-0.2
Ocala	56,315	45,943	10,372	22.6
Reddick	506	571	-65	-11.4
UNINCORPORATED	267,800	206,573	61,227	29.6

Source: US Census Bureau, 2011.
* New cities without data for 2000 are represented by "-"and do not have percent change information.

Figure 2.1.1 US 27 Corridor County Growth Rate Comparisons



Source: U.S. Census and BEBR, April 2012.

Table 2.1.2 shows that the trends of population growth by county were often uneven for the last decade. With the economic downturn and other events, Florida grew faster from 2000 to 2005 than from 2005 to 2010. This was true for all of the the counties within the study area, with the exception of Sumter County which grew by almost 35 percent during 2005-2010. In contrast, growth in Broward County during the 2005-2010 experienced the most stagnation with a growth of only 0.1 percent during the five year period. Despite slowed growth as a result of economic conditions, considerable growth in Lake, Polk and Marion Counties still continued over the 2005-2010 period compared to other counties in the study area.

Table 2.1.2 County Level Population Trends 2000-2010

County	Percent Change 2000-2005	Percent Change 2005-2010	Percent Change 2000-2010
Miami-Dade	5.9%	4.6%	10.8%
Broward	7.6%	0.1%	7.7%
Palm Beach	13.0%	3.3%	16.7%
Hendry	5.6%	2.5%	8.2%
Glades	16.6%	4.9%	22.3%
Highlands	9.4%	3.3%	13.0%
Polk	13.1%	10.0%	24.4%
Lake	27.2%	11.0%	41.2%
Sumter	29.9%	34.9%	75.2%
Marion	17.3%	9.1%	28.0%

Source: U.S. Census Bureau, Population Division, September 2011. Intercensal Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2010 (ST-EST00INT-01)

Population Density

Population densities have an important impact on the transportation network. Clustered and more urbanized development may impact roadway congestion levels and make alternative transportation modes more cost feasible given the close proximity of concentrations of people. In contrast, rural areas with low population densities may impact the distance needed to travel to key destinations and transportation options are often limited. In addition, state and federal roadways often provide the most direct route for meeting transportation needs and local street networks often depend upon these facilities.

Figures 2.1.2A and **2.1.2B** show population density of the US 27 corridor counties by census tract. Development along the US 27 corridor is already fairly high density around Miami, Ft. Lauderdale, Pompano Beach, and Boca Raton areas on the southeast coast of Florida. Due to a number of factors including the allure of the coastal areas and some environmental unsuitability for development, the population within Miami-Dade, Broward, and Palm Beach Counties is clustered in urban areas along the coast. This clustering of development is specifically concentrated in the Miami area within the US 27 corridor. Higher densities are also located in the Orlando and Tampa metropolitan areas east and west of the corridor in the center of the state, and many communities in Polk and Lake Counties are concentrated near major roadways such as US 27 that provide connectivity to these major hubs of economic activity.

Figure 2.1.2A

Population Density by Census Tract

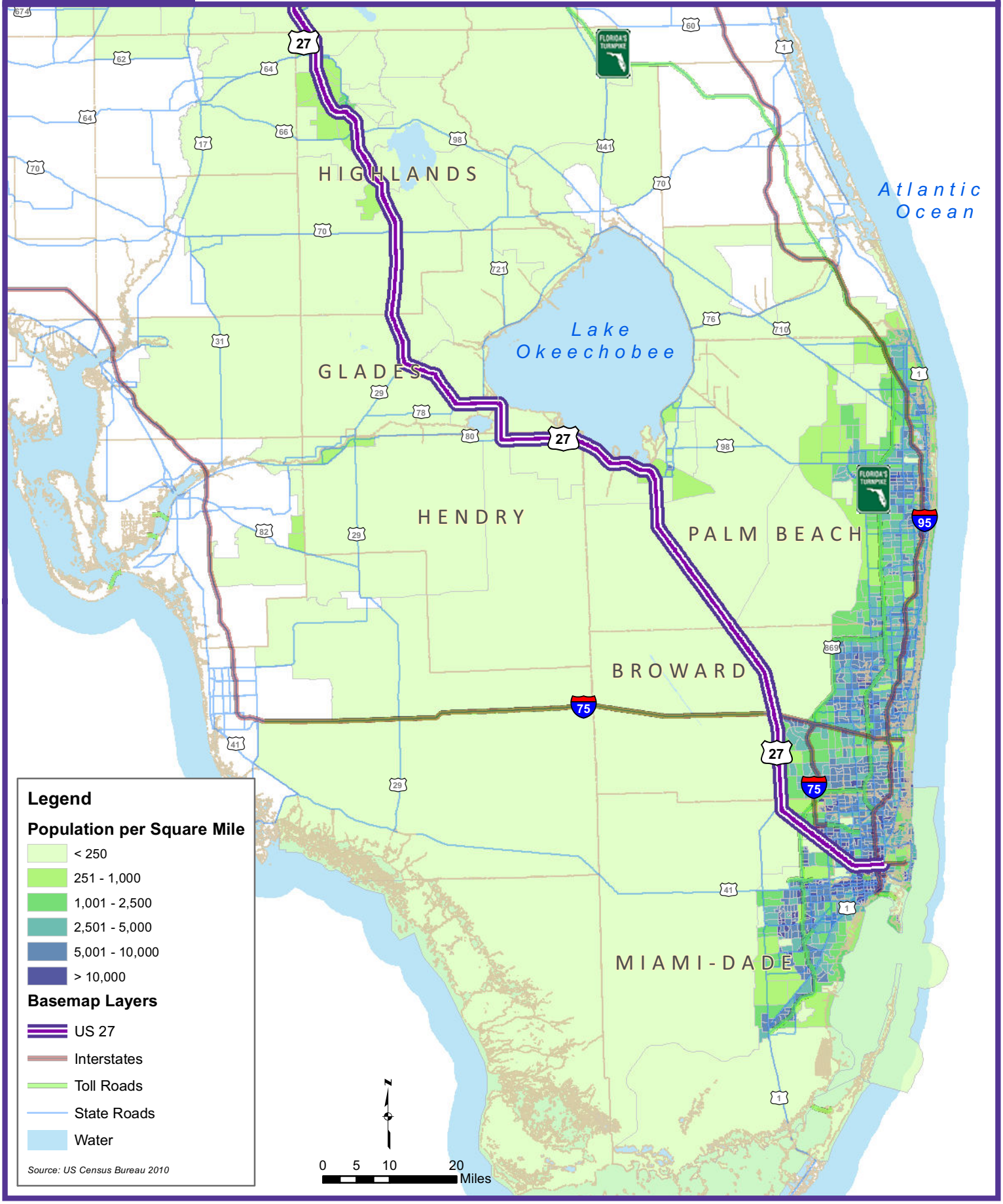
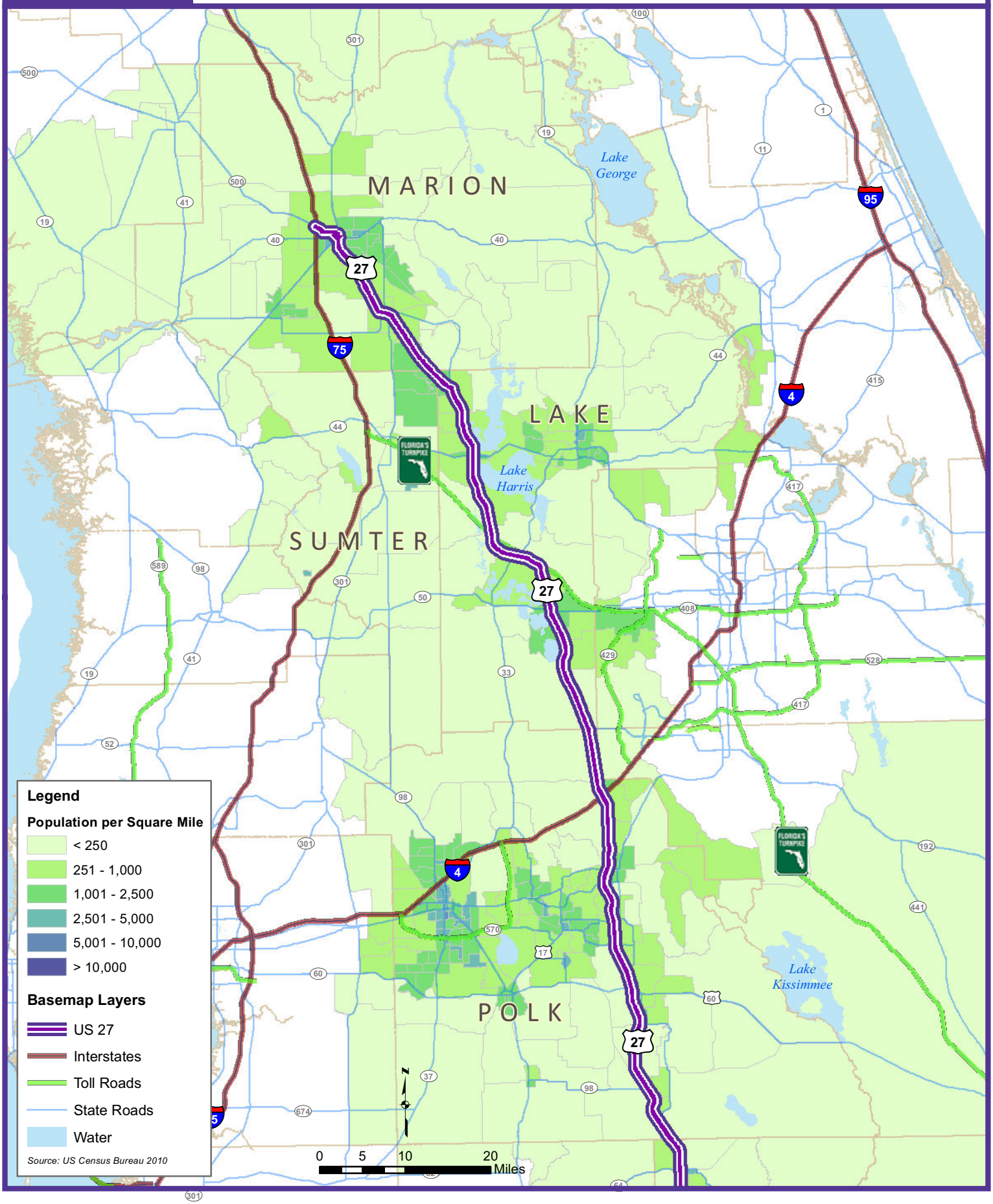


Figure 2.1.2B

Population Density by Census Tract



Lower density rural areas are concentrated in the northwestern portion of Broward Counties and north in Hendry, Glades, and Highlands Counties along the corridor, with only a few urban areas. The population density characteristics near and between these major urban areas in south and central Florida are quite distinct, and therefore will likely require different approaches in alternative options.

Urban Growth Patterns

Urban growth patterns have been an important trend over the last ten years along the US 27 Corridor and are necessary to understand the varying context of this corridor. With both traditionally large populations concentrated along the southeast coast of Florida and more intense development in recent years in the center of the state near the Four Corners and in the vicinity of the Villages, urban growth patterns help to define existing and future needs within the corridor.

Statewide, the top ten counties with the highest total change in population between 2000 and 2010 were Orange, Miami-Dade, Hillsborough, Palm Beach, Lee, Broward, Pasco, Polk, Osceola and Lake. Of these counties, three are located within the study area. In particular, growth in Polk and Lake Counties over the last ten years reflects intense changes in development patterns in these once rural areas to areas of economic development opportunities as bedroom communities of the much large Tampa-Orlando areas which they border and as the new location of a series of master planned and retirement communities that have brought a dramatic increase in retired people to these areas.

Miami-Dade, Palm Beach and Broward Counties continue to serve a large portion of the state's population and are important to note as a factor along the corridor. **Table 2.1.3** shows the top raw growth increased in population for counties in the study area. US 27 corridor counties with the largest number of increases in population were Miami-Dade, Palm Beach, and Broward Counties. Over the ten year period, the US 27 corridor counties added 890,458 new people. Of the roughly 2.8 million people added to Florida's population over the last decade, approximately 32 percent have located within the counties in the study area. While some areas near the US 27 corridor in the Miami area have seen slight decreases in population as a result of disinvestment, such as Hialeah, the populations in the areas of Miami and Hialeah represent the most concentrated urbanized areas within the corridor.

Table 2.1.3 Top County Raw Growth 2000-2010

County	Raw Change
Miami-Dade	242,656
Palm Beach	188,943
Broward	125,048
Polk	118,171
Lake	86,525
Marion	72,382
Sumter	40,075
Highlands	11,420
Hendry	2,930
Glades	2,308

Source: US Census Bureau, 2011.

Figure 2.1.3 illustrates the designated urban areas and urban clusters within the study corridor. The U.S. Census defines urban areas as:

> *"those comprised in a densely settled core of census tracts and/or census blocks that meet minimum population density requirements, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. To qualify as an urban area, the territory identified according to criteria must encompass at least 2,500 people, at least 1,500 of which reside outside institutional group quarters."*[4]

There are two types of urban areas defined by the U.S. Census: Urbanized Areas (UAs) of 50,000 or more people and Urban Clusters (UCs) of at least 2,500 and less than 50,000 people. Urbanized areas found in the corridor are located along the southeastern coast, west of the US 27 corridor in Winter Haven and Lakeland within Polk County, in Southern Lake County near State Road 50 and close to Orlando, as well as in the Lake-Sumter-Marion county area in Lady Lake and The Villages. Urban clusters are located sporadically along the corridor, with greater concentrations of these urban clusters located within Highlands and Polk Counties near the Sebring and Avon Park area and in the Four Corners area bordering Polk and Lake Counties. This urban growth has resulted in one new urbanized area being identified in the study corridor: Sebring-Avon Park in Highlands County. **Table 2.1.4** shows urban areas within the study area as of 2010.

[4] U.S. Census Definition of Urban Areas, 2010.

Figure 2.1.3

Urban Areas within US-27 Corridor

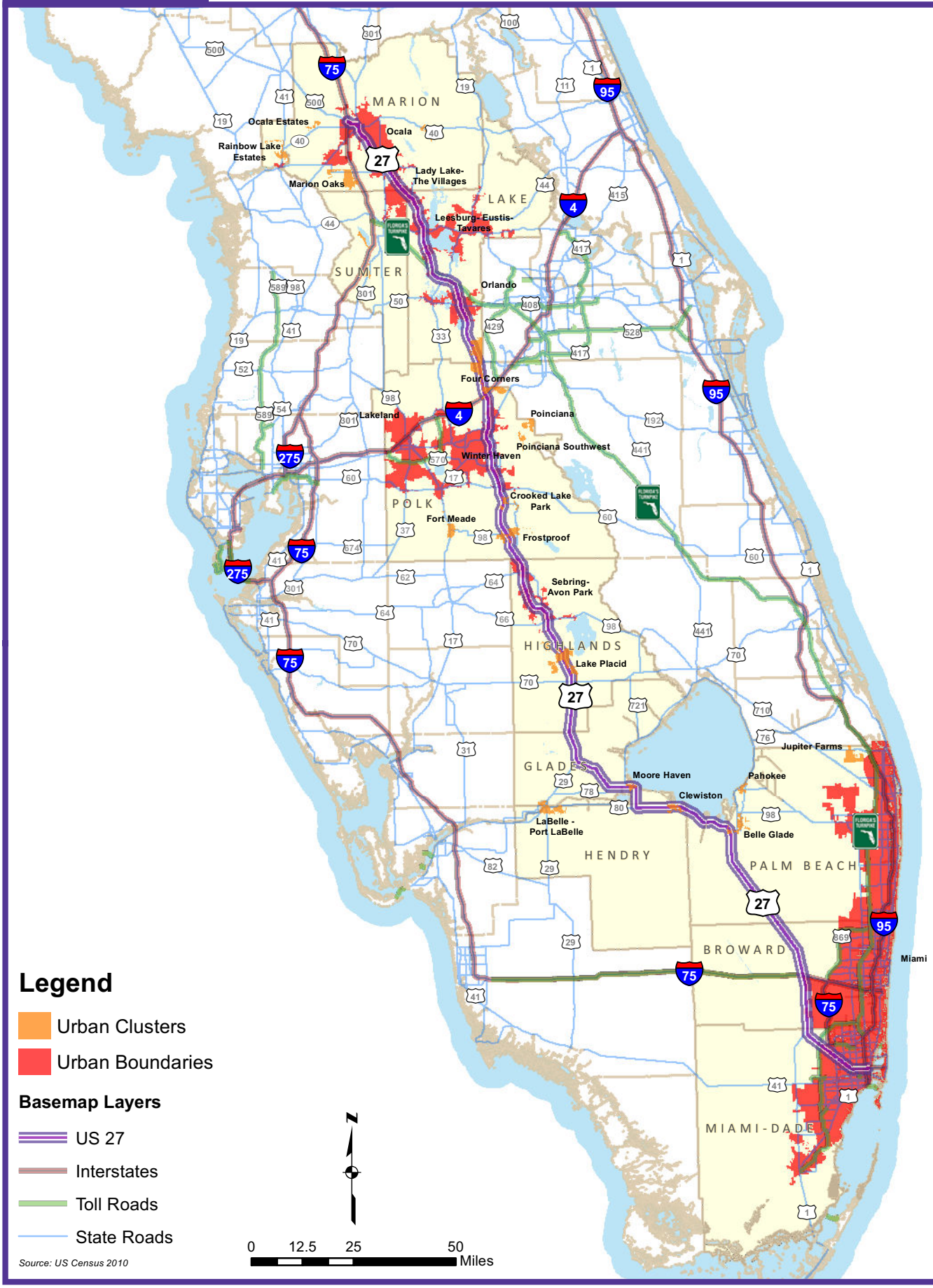


Table 2.1.4: Urbanized Area Populations, 2010

2010 Urbanized Area	Within Study Area County	2010 Urbanized Area Population
Miami	Miami-Dade	2,486,340
Miami	Broward	1,747,770
Miami	Palm Beach	1,263,360
Sebring-Avon Park	Highlands	61,625
Winter Haven	Polk	201,289
Lakeland	Polk	262,160
Orlando	Lake	82,411
Leesburg-Eustis-Tavares	Lake	129,684
Leesburg-Eustis-Tavares	Sumter	1,653
Lady Lake	Lake	16,649
Lady Lake	Sumter	52,238
Lady Lake	Marion	44,104
Ocala	Marion	156,909

Source: FDOT Urbanized Areas Population Estimates, U.S. Census Data, April 2012.

2.2 Special Population Considerations

In addition to understanding overall population trends, analyzing and understanding specialized population considerations are needed to sufficiently identify and address the transportation needs of people in the corridor. A key focus of the 2060 Florida Transportation Plan (FTP) is demographic change in Florida. In addition to the large tourist population present year-round in Florida, the number of elderly and/or disabled people is expected to continue to grow[5]. Elderly, disabled, minority and low-income populations have unique mobility needs that must be considered in the planning process.

Elderly Populations

This year, America's 50 and older population is expected to reach 100 million. Each year, more than 3.5 million "Baby Boomers" turn 55 years old. Over the next 20 years, 74 million people will retire. In Florida alone, it is expected that at least one in four people will be 65 or older by the year 2030. This is compared to the national expectation of 20 percent of the population. With these shifting demographic trends coinciding with increased life expectancies overall, greater demands will be placed on government programs and services, including the provision of effective transportation infrastructure. As people age, they often become less able to drive safely. In many areas being unable to drive means living in isolation, as there are no

[5] 2060 Florida Transportation Plan, 2010.

other means to participate in social interaction. Good alternative transportation options will be necessary in most US 27 counties to provide for an aging population. **Table 2.2.1** shows the anticipated growth of the elderly as a proportion of the population from 2009 to 2030.

Table 2.2.1 Elderly (65+) Population by County

County	2009	2030	Percent of Population 2009	Percent of Population 2030
Miami-Dade	351,078	570,416	14.18%	19.99%
Broward	250,289	398,848	14.36%	20.96%
Palm Beach	277,483	457,507	21.56%	29.53%
Hendry	4,340	6,697	10.58%	13.12%
Glades	2,118	3,157	18.69%	25.17%
Highlands	32,279	51,059	58.01%	40.92%
Polk	106,792	200,832	18.29%	26.01%
Lake	75,653	162,417	25.78%	35.97%
Sumter	31,689	76,298	31.90%	40.61%
Marion	81,128	161,558	24.54%	34.43%

Source: Bureau of Economic and Business Research (BEBR), Population Studies, June 2010, Volume 43, Bulletin No. 157.

Along the US 27 corridor, almost all of the counties are expected to have elderly populations in excess of the state average. Over 30 percent of the population will be over the age of 65 in Highlands, Lake, Sumter and Marion counties by 2030. Areas in Highlands and Polk Counties where development has not been as intense may face specific transportation challenges in meeting the needs of senior populations into the future. In more rural areas, providing adequate alternative transportation options presents an enhanced challenge given the distances between locations to be served and resulting in more costly government provision for essential services, such as paratransit.

Lake, Sumter, and Marion see the most concentrated geographic locations in the corridor for this aging population given the presence of a number of retirement communities, including the massive master planned Villages Retirement Community, present in each of these counties. Because The Villages is not near its expected build out, the exponential growth of senior populations in these areas is expected to continue into the future and present specific regional transportation challenges.

Disabled Populations

Along with elderly populations, disabled populations often have special needs for transportation that need to be taken into account in effective planning for improvements. As aging populations increase, so does the likelihood of increased disabled populations. This factor may warrant additional considerations in areas with high elderly and disabled populations today. **Table 2.2.2** shows disabled populations by county in the study area.

Table 2.2.2 Disabled Population by County

County	Total	With A Disability	Percent With a Disability
Miami-Dade	2,423,678	255,790	10.6%
Broward	1,723,961	191,212	11.1%
Palm Beach	1,298,124	152,209	11.7%
Hendry	37,122	5,656	15.2%
Glades	N/A	N/A	N/A
Highlands	97,862	22,081	22.6%
Polk	587,493	83,819	14.3%
Lake	293,161	43,910	15.0%
Sumter	80,751	14,861	18.4%
Marion	324,979	53,012	16.3%

Source: U.S. Census, 2010. S1810: Disability Characteristics, 2008-2010 American Community Survey 3-Year Estimates
Note: Disabled population data was not available for Glades County.

Although the largest total numbers of disabled populations are located in the southern portion of the corridor, it is important to note the percentages of disabled populations in each county. Highlands County contains the greatest percentage of disabled populations relative to their total populations, with almost 23 percent of residents estimated to have a disability. In the northern portion of the corridor, in Lake, Sumter, and Marion Counties, disabled populations are also much higher than other portions of the corridor. This is potentially related to the number of elderly retirement communities that are also concentrated in these counties. Particularly in rural areas, disabilities can make transportation challenging given distances to major destinations and limited transportation options.

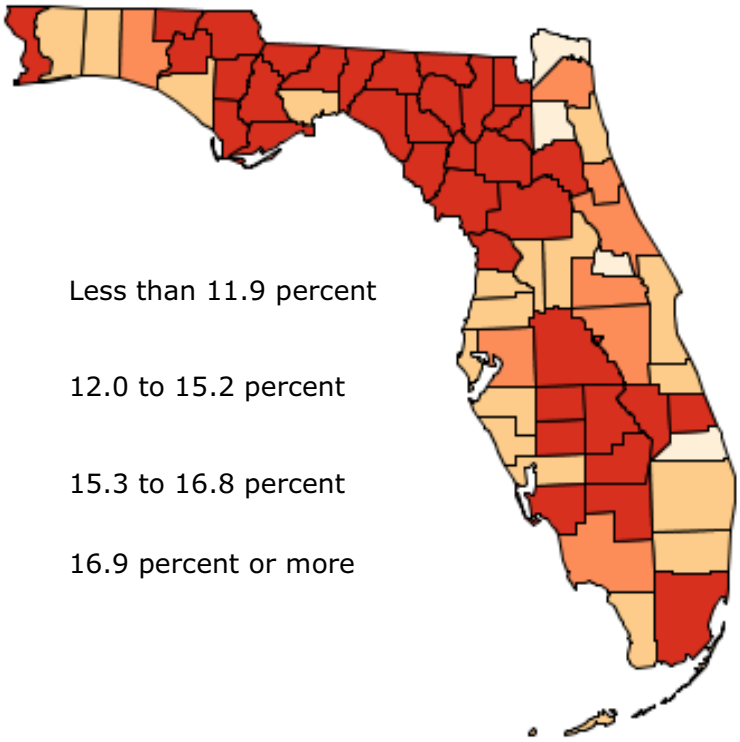
Low Income Populations

Transportation costs are generally the second largest annual expense behind housing for American families, comprising a cost over three times that of healthcare. Lower income families are particularly sensitive to the burden of these costs, which have been shown to place enhanced strains on measures of economic

prosperity for these families, both inhibiting home ownership and wealth creation[6]. As fuel prices fluctuate and rise, these populations are particularly impacted by mobility options and costs.

Figure 2.3.1 shows poverty levels as a percentage of populations within each county. Within Florida, 2010 Census data indicates that over 3 million residents, or approximately 16.5 percent of the population, are at or below the poverty level. Large concentrations of counties with high poverty rates are located in rural counties, where transportation options are often limited.

Figure 2.2.1: Percent of Total Population in Poverty, Florida Counties 2010



Source: U.S. Department of Agriculture, Economic Research Service, 2012.

Table 2.2.3 provides details on county poverty levels within the US 27 corridor. Six of the ten counties in the study area exceed the statewide average for poverty levels. Poverty in Hendry County, at 26.7 percent, is the highest in the study area and the fifth highest in the state. Poverty levels in Glades, Highlands, and Miami-Dade County are also above 20 percent of the total population. Data on Marion County indicates that poverty levels in that county are nearing 20 percent as well.

[6] Surface Transportation Policy, *Transportation Costs and the American Dream*, July 2003.

Table 2.2.3: Percent of Total Population in Poverty, Florida Counties 2010

County	Poverty Estimate All Ages	Poverty Percent All Ages	Confidence Interval	
			90% CI Lower Bound	90% CI Upper Bound
Florida	3,048,621	16.5	16.3	16.7
Broward County	256,295	14.7	13.7	15.7
Glades County	2,383	**21.0**	15.9	26.1
Hendry County	9,963	**26.7**	22.1	31.3
Highlands County	20,137	**20.7**	17.7	23.7
Lake County	39,711	13.5	11.6	15.4
Marion County	63,368	**19.6**	17.6	21.6
Miami-Dade County	500,537	**20.3**	19.4	21.2
Palm Beach County	186,355	14.3	13.3	15.3
Polk County	103,277	**17.5**	16.1	18.9
Sumter County	11,035	13.0	10.6	15.4

Source: U.S. Census Bureau, Small Area Estimates Branch, December 2011.

Minority Populations

Low income and minority populations may experience disproportionate impacts as a result of transportation project improvements, and must be considered in evaluating impacts from an environmental justice perspective. **Table 2.2.4** provides details on racial composition within the study area.

Table 2.2.4 Racial Composition by County

County	Total	Percent of Total				
		White	Black	Asian	Other	Hispanic
FLORIDA	18,801,310	57.9	15.2	2.4	2.1	22.5
Miami-Dade	2,496,435	15.4	**17.1**	1.4	1.1	**65.0**
Broward	1,748,066	43.5	**25.7**	**3.2**	**2.5**	**25.1**
Palm Beach	1,320,134	**60.1**	**16.8**	2.3	1.8	19.0
Hendry	39,140	34.9	12.9	0.7	**2.3**	**49.2**
Glades	12,884	**61.7**	11.9	0.4	**4.9**	21.1
Highlands	98,786	**70.7**	8.9	1.4	1.7	17.4
Polk	602,095	**64.6**	14.2	1.6	2.0	17.7
Lake	297,052	**74.5**	9.4	1.7	**2.3**	12.1
Sumter	93,420	**82.8**	9.4	0.7	1.2	6.0
Marion	331,298	**74.0**	11.9	1.3	1.9	10.9

Source: BEBR, Population by Race and Hispanic Origin by County, 2010.

Greater racial diversity is found in the southern portion of the study area. Notably, the Hispanic population in Miami-Dade County accounts for 65 percent of the total population and far exceeds the overall state average of 22.5 percent. In addition, Hendry County (49.2 percent) and Broward County (25.1 percent) also exceed the statewide averages for Hispanic populations. In addition to Hispanic population, Miami-Dade, Broward and Palm Beach comprise an African American population that is higher than the state's average. Conversely, areas in the northern portion of the study area indicate white population constituency that is much higher than the state average. Over 60 percent of the population make up from Glades County and north through Marion County are non-minority, white populations. This is most acutely found in Sumter County, whose composition indicates almost 83 percent of the population is white.

2.3 Future Demographic Estimates

2035 Population Projections

Table 2.3.1 provides expected 2035 growth for counties within the study area, based on the most recent data from the Bureau of Economic and Business Research (BEBR). Florida's population is expected to reach nearly 25 million by 2035, growing roughly 19 percent. During this period, two US 27 corridor counties may be in the top ten for percent growth. Sumter County is projected to grow the fastest and could more than double in population by 2035 (98.3 percent). Lake County is anticipated to grow quickly (58.5 percent) as well. Marion and Polk trail behind these top two projected growth counties, with over 40 percent growth in each, respectively.

While growth rates play an important role in shaping the transportation needs of an area, counties with larger base populations are expected to see larger raw growth as well. Miami-Dade is projected to grow by the greatest numerical change (554,985), with Palm Beach (373,742) and Polk Counties (261,608) also falling within the top ten counties in the state in terms of overall population growth. Lake County places 11th in raw population growth over the 2035 horizon, with 174,535 people expected to be added by 2035.

Table 2.3.1 County Level Population Projections- BEBR Medium Series

County and State	April 1, 2011*	Projection April 1 2035	Raw Change	Percent Change
Miami-Dade	2,516,515	3,071,500	554,985	22.1%
Broward	1,753,162	1,915,200	162,038	9.2%
Palm Beach	1,325,758	1,699,500	373,742	28.2%
Hendry	38,908	42,500	3,592	9.2%
Glades	12,812	16,400	3,588	28.0%
Highlands	98,712	120,700	21,988	22.3%
Polk	604,792	866,400	261,608	43.3%
Lake	298,265	472,800	174,535	58.5%
Sumter	96,615	191,600	94,985	98.3%
Marion	331,745	487,100	155,355	46.8%

** Projections Based on April 1, 2011 population estimates*
Source: Bureau of Economic and Business Research (BEBR) March 2012.

Together, the ten counties along the US 27 corridor could add over 1.8 million new residents within the span of a generation. The state of Florida is expected to grow by over 3.6 million by 2035. Approximately half of that growth is projected to be along counties within the US 27 corridor. Depending on the travel choices made, any new population may add significantly to the congestion already being experienced in Florida. It is clear that given these anticipated growth factors, effective planning for moving goods and people simultaneously will be critical in meeting the needs of these areas in the coming years.

The Emergence of Megaregions

A key focus of the new 2060 Florida Transportation Plan (FTP) is broader coordination in transportation planning. "Megaregions" are emerging as a new geographic unit, connected by economic relationships and shared infrastructure[7]. Common transportation systems are a large part of what makes a megaregion, as their populations must be connected within and to each other in order to compete. Analyzing the US 27 corridor as a whole for alternatives is an example of the expanded coordination in planning that will be more necessary in the future.

Megaregions are nationally significant networks of cities created by the expansion and conglomeration of multiple urban areas[5]. The strength of Florida's cities and its appeal as a major tourist destination have made it a megaregion all its own. **Figure 2.3.1** shows the 11 emerging megaregions, including Florida.

[7] 2060 Florida Transportation Plan, 2010.

America 2050 describes the Florida megaregion as fast-growing and diverse. It is dense and populous, with many new foreign residents. The population of the megaregion is projected to grow to over 21 million by 2025; a substantial 45 percent growth from the year 2000. Principal cities were listed as Miami, Orlando, Tampa, and Jacksonville. Obviously, transportation corridors are important given the locations of all highlighted areas. **Figure 2.3.2** shows the metro areas with the largest populations within the megaregion. The US 27 corridor connects two major "megapolitan" clusters in the state: the southeastern coastal areas consisting of Miami, Ft. Lauderdale, Boca Raton and others and Central Florida, including Orlando and Tampa. Reliable transportation between these major population centers along the US 27 corridor is essential to the success of the Florida megaregion.

As the shrinking world is changing the way we compete economically, development patterns are also changing to reflect new ideals. By 2060, Florida may be very different from today. Instead of the wide open trend of the last 50 years, new development may soon be focused in these growing urban areas. This higher density will perhaps increase the feasibility of multimodal transportation options, as well as create opportunities to retain open spaces between urban areas.

Figure 2.3.1: Emerging U.S. Megaregions

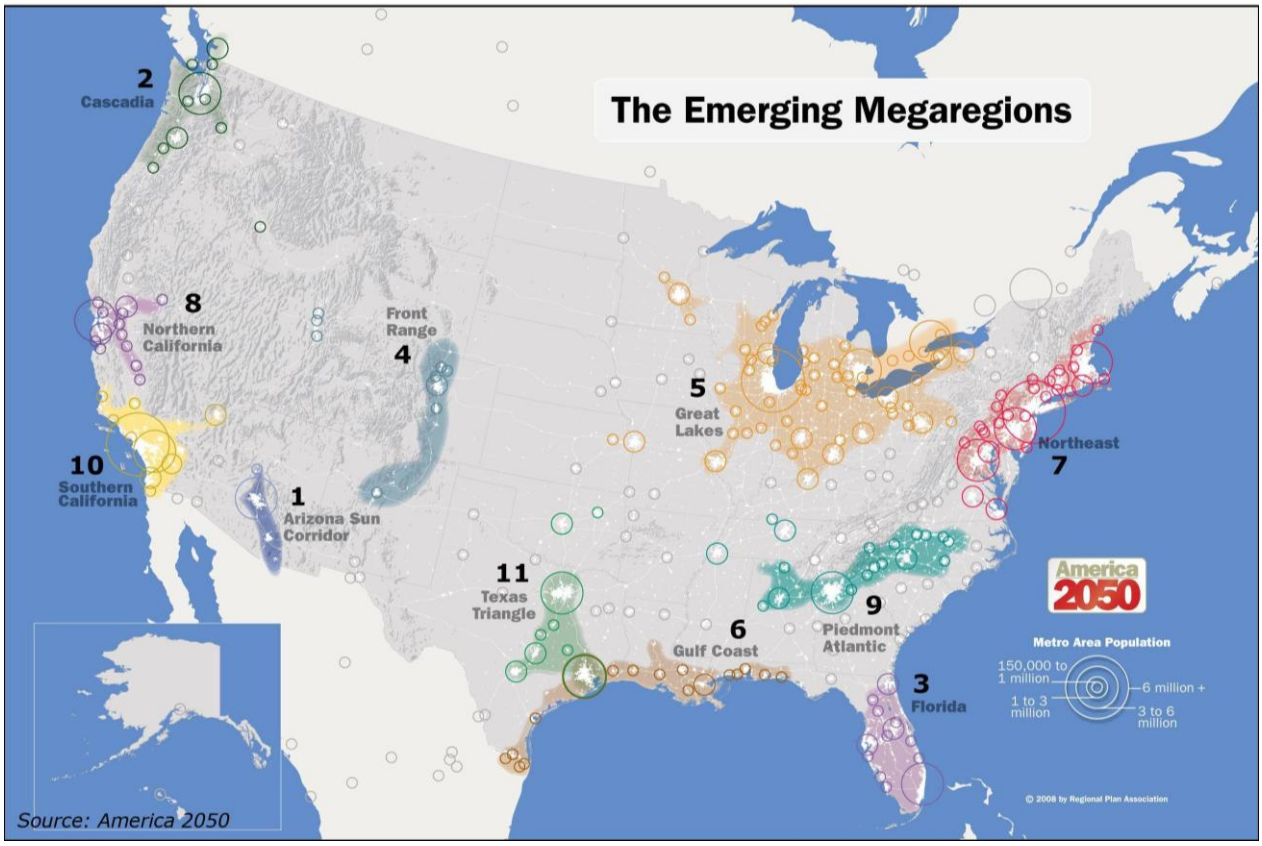
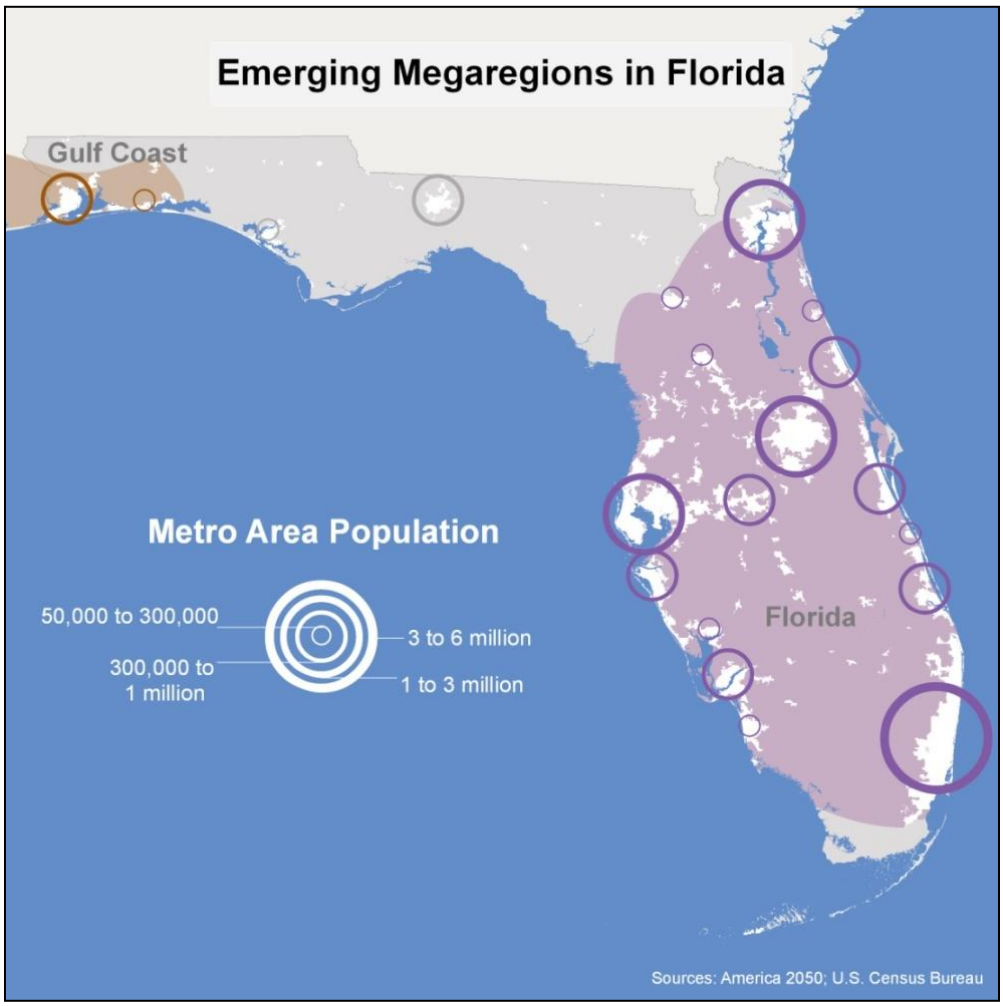


Figure 2.3.2 Florida Megaregions



Another key emphasis will likely be more mixed use development and redevelopment. This will allow for easier access from homes to jobs, schools, shopping, and services, rather than the current trend of building an abundance of homes isolated from any other use. However, some uses are better left in isolation for a variety of reasons, and rural employment centers may become more popular in the future. In order to maintain a range of choices for Florida's diverse population to live, high-quality transportation between cities, suburbs, small towns, and rural areas will be absolutely necessary.

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Chapter 3 – Transportation Conditions

Identifying transportation conditions along the corridor helps to determine existing conditions and known traffic needs and demands along the corridor. While some of the areas within the US 27 Corridor are located in heavily urbanized areas or near community centers, other areas along the corridor through the "Heartland Region" in the center of the state remain largely rural. These characteristics play a significant role in the varying transportation conditions along the corridor, including traffic conditions, speed limits, lane needs, and right-of-way availability. These characteristics also help to define the diversity of needs within the corridor, from solutions that address the needs of urbanized populations in Hialeah and Miami in Miami-Dade County to the unique and seasonal transportation patterns within The Villages in Lake, Sumter and Marion Counties to more regional freight patterns experienced throughout the Corridor. As a connector to a variety of Strategic Intermodal System (SIS) facilities and planned or proposed intermodal logistics centers (ILCs), developing solutions along US 27 that most effectively address overall mobility in the corridor is of particular importance to the state. The sections of this chapter provide further detail on various elements of transportation conditions in the corridor, beginning with a summary of recently completed studies in the corridor and proposed improvements from those studies.

Specific elements of the transportation network are delineated in subsequent sections to provide a comprehensive overview of transportation conditions along the corridor, including:

- Existing SIS highway connections, speed limits, number of through lanes, and right-of-way
- Access management policies along the corridor
- Existing Intelligent Transportation System (ITS) infrastructure and capabilities
- Existing traffic characteristics and operations
- Planned improvements
- Future traffic operations
- Existing freight mobility system, including and an inventory of intermodal locations and characteristics

3.1 Completed Transportation Studies

In order to assess the existing conditions on US 27 and needs that have already been identified, it is necessary to gather and evaluate recent data from a variety of sources, which include completed studies, reports, and transportation plans. This section provides a comprehensive summary of the most recent studies produced for the project corridor, and is based on a review of the most current long range transportation plans (LRTPs) and other study plans provided by FDOT District staff. **Table 3.1.1** contains the summaries of the studies completed in the corridor. In addition, several current studies within the corridor have been identified through coordination with district staff. Within FDOT District 4, the Interregional Transportation Infrastructure Needs (ITIN) Study and Multimodal Planning and Conceptual Engineering (PACE) Studies are included by reference in the table and are expected to provide final documentation soon.

The following studies are not included in the table because these studies are either proposed or recently initiated and documentation was not available at the time of this report; however, these studies will also provide valuable insights into the corridor and should be reviewed, as available, as the US 27 Transportation Alternatives Study progresses:

- FDOT District 6 is proposing to conduct an Okeechobee Road/US 27 Freight Master Plan Study which could have significant impact on plans for the corridor. This study is proposed as a tiered planning study focusing on improving and developing components of Miami-Dade's rail network. The goals of the study are to increase intermodal freight efficiency by utilizing existing rail facilities, establish a separate freight corridor along US 27 to alleviate freight congestion along the FEC line and I-95, provide access to a potential Intermodal Logistics Centers (ILCs) proposed within District 4 (as part of their ITIN and PACE Study Efforts), and link Miami-Dade County's rail infrastructure to provide an alternative route to US 27 for moving freight traffic throughout the region.

- A PD&E Study has commenced along US 27 between Palmetto Drive and the Miami-Dade/Broward County Line. Grade separated intersections are also being reviewed as part of this study.

- FDOT District 5 is conducting an I-75 Systems Access Management Report (SAMR) and Systems Operational Analysis Report (SOAR) in Marion County. These studies will provide a detailed analysis of traffic and operations from proposed development along the corridor to determine impacts to I-75 and identify solutions to maximize the state's investment.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Miami-Dade	Miami-Dade Metropolitan Planning Organization (MPO) 2035 Long Range Transportation Plan (LRTP)	October 2009	Identifies an SR 25/Okeechobee/US 27 project from 79th Avenue to Krome Avenue as a partially funded project in the long range plan. This project would provide an expressway conversion - constructing grade separated overpasses at major intersections to improve operations. Also identifies a long term project on US 27 from SR 826 to Krome Avenue to convert this area to a limited access toll facility.
Miami-Dade	Okeechobee Road Action Plan: Okeechobee Road (U.S. 27/S.R. 25) from Krome Avenue (S.R. 997) to NW 79th Avenue	July 2004	This action plan encompasses approximately 9.6 miles of Okeechobee Road (US 27). The action plan includes an assessment of the corridor's function, land use and cultural features, environmental and historical features, hydrological features, traffic operations, safety, freight movement, access management, and right-of-way. It identifies short term, midterm and long term improvements along the corridor including intersection and roadway capacity improvements. Intersections identified for improvements included Krome Avenue, Hialeah Gardens Boulevard, NW 138th Street, NW 105th Way, NW 103rd Street, north/south HEFT ramps, NW 121st Way, NW 95th Street as well as other intersections near the US 27 Corridor. The study also compared interrupted versus uninterrupted flows along the US 27 Corridor.
Miami-Dade, Broward	SR25/US 27 Florida Intrastate Highway System Action Plan	April 2001	This Action Plan covers 13 miles along the US 27 Corridor from the Broward/Miami-Dade County line north to Interstate 75 (SR 84/I-75/Alligator Alley) and provided traffic projections through 2030 is to identify actions which FDOT and local governments should take to protect and enhance the corridor with respect to mobility of people and goods and accessibility. Future LOS was determined for segments within this corridor and identified failing LOS F for the segment from Krome Avenue to Stirling Road. 2030 intersection LOS was also determined for four intersections within the corridor. These findings indicated an intersection LOS F at US 27 and Pines Boulevard in the AM peak, US 27 and Sheridan Street in the AM and PM peak, and US 27 and Stirling Road in the AM peak.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Miami-Dade, Broward, Palm Beach, Glades	SR-25/US-27 Corridor Multi-Modal Needs Assessment	December 2008	This study included 125-miles of US 27 from the Hialeah Rail Yard on the southern end to the Highlands/Glades County line on the northern end. This study serves as a preliminary concept screening and data collection task for subsequent US 27 studies. It includes a summary of previous studies in the corridor, and assessment of mobility issues such as traffic, safety, ITS, and access management, and provides an environmental screening of the corridor. A series of recommendations from this report on each of these topics are provided to indicate next steps of study and improvement recommended within the corridor.
Miami-Dade, Broward, Palm Beach	South Florida Regional Freight Plan	March 2010	This study summarizes the findings of the 2010 freight summit, which identified a list of specific action items. Action items were categorized as short term (next 5 years), long term (5 to 20 years) and ongoing activities (programmatic items to be initiated in the short term and integrated into annual reviews. Action items specifically related to US 27 include short term implementation of a freight corridors program to develop or expand highway and rail corridors to meet future growth and shifts in demand. Development of a freight-only corridor along US 27 in Miami-Dade, Broward, and Palm Beach Counties are specifically mentioned for further consideration. As part of the stakeholder outreach, the following US 27 freight needs were identified: (1) US 27/Okeechobee Road - Construct grade separated overpass at major intersections between NW 79th Avenue and Krome Avenue, (2) develop a new US 27 Intermodal Logistics Center Rail Project, and (3) Develop a new US 27 Rail Link.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Miami-Dade, Broward, Palm Beach	US 27 Rail Corridor Study	March 2010	During the 2008 Florida State legislative session, funding was authorized via Specific Appropriation 2077 directing the Florida Department of Transportation (FDOT) to study and determine the feasibility of a rail corridor along US 27 from western Miami-Dade County to the City of South Bay in Palm Beach County. This study represents Phase 1 of a two-phase study and identified ten build alternatives at the sketch planning level with their alignment guided by qualitative assessment criteria. Based on the findings of this report, all ten alternatives were determined to be feasible based on a macroscopic assessment of fatal flaws. As part of Phase 2 of this study, a more microscopic analysis will be conducted on the alternatives identified and evaluation will be based on the key considerations identified as part of this initial study.
Miami-Dade, Broward, Palm Beach, Hendry	US-27 Multimodal Planning and Conceptual Engineering (PACE) Study	Current/ Ongoing	This study is investigating the technical and economic feasibility of developing the US 27 Corridor to accommodate multimodal options, including rail and highway modes of transportation. The main objectives of the multimodal PACE Study are to investigate the feasibility of a potential rail by-pass to the west of the densely populated urban areas along the eastern seaboard, to identify conceptual engineering alternatives, and to conduct a preliminary assessment of the potential impact of the alternatives upon the surrounding environment. The study is also addressing the ultimate development of US 27 to accommodate future regional travel demand, in a manner consistent with Strategic Intermodal System (SIS) highway standards. A draft report is underway, and conclusions from that report will be included in the Alternative Strategies Technical Memorandum (Tech Memo #2) for this US 27 Alternatives Study.
Broward	Broward 2035 LRTP	December 2009	Provides details on the US 27 Rail Corridor Study (PACE Study) and overview of phases of that study in the transportation vision as well as allocating funds for the feasibility analysis in the Cost Feasible Plan. Lists US 27 as a major east-west evacuation route in the strategy section. Identifies the need to preserve space for a transit envelope along US 27/Okeechobee Road in Miami-Dade County where express bus may be used in the future in special use lanes. This would potentially connect that area with the Palmetto Metro-Rail Station.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Palm Beach	Palm Beach 2035 LRTP	December 2009	Identifies the following needs/illustrative projects in and around US 27: (1) proposed Inland Port located in the Glades area off of US 27, and (2) the US 27 Rail Corridor Project.
Palm Beach, Glades	Interregional Transportation Infrastructure Needs (ITIN) Study	Current/ Ongoing	This study summarizes the possible infrastructure needs that could arise from the development of three potential Intermodal Logistic Centers (ILCs) located in Palm Beach, Glades, and St. Lucie Counties by year 2035 to match the current Long Range Transportation Plans. It evaluates two scenarios with these ILCs and without implementation of the ILCs. Within the ILC build options, scenarios were developed to identify needs at varying stages of development of these ILCs. This scenario development also involved creating a dynamic sketch planning tool to predict truck traffic impacts. The cumulative scenario, assuming all ILCs are developed, determined the need for eight lanes or more to operate at acceptable LOS through the horizon year: (1) From SR 826 to NW 138th Street (District 6), approximately 4.5 miles long; (2) From I 75 to SR 80 (District 4), approximately 26 miles long; (3) From Old US 27 to SR 78 East (District 1 and 4), approximately 22.5 miles long; and (4) From Lake Hendry Drive to SR 17/SR 64/Main Street (District 1), approximately 22 miles in length.
Hendry	Hendry County 2035 LRTP	May 2008	Identifies needs for US 27 capacity improvements from four to six lanes. Six lanes are shown as needed between CR 833 to South San Francisco Street and from Wheeler to Ford Roads. Four lanes are identified east of Birchwood Road to CR 833. In addition, the needs identify a potential future Clewiston Truck Route that would deviate and return to US 27 in Clewiston.
Hendry	Florida Cargo Fresh Air Cargo of the Americas International Airport Development Concept Report	November 2011	This concept development report covers Airglades Airport, an existing but underutilized public airport in Hendry County approximately 90 miles from Miami International Airport. Significant near-term development is planned for the airport and has the potential for use as a privatized niche market perishable cargo reliever airport. SIS designation has not been given for this airport, but is being sought given the extensive plans for this private airport and its potential impact to SIS facilities.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Highlands	Highlands County Vision 2020	June 2006	Provides details from stakeholder community outreach process to identify a vision for the county. Along US 27, identified the following needs or priorities: (1) Create town centers and discourage strip development along US 27 to reduce trips on US 27. (2) US 27 will continually need improvements to handle current and anticipated growth. Additional alternatives and bypasses need to be developed to alleviate traffic on US 27 and provide an alternative for trucks. (3) There is also a desire for sidewalks and bike paths and there is a need for public and special transportation for children, seniors and others who do not have cars. Also identifies a desire to build roads as alternatives to US 27 in order to encourage growth east and west of US 27 and build a US 27 by-pass as a limited access highway in the county.
Highlands	Corridor Access Management Report	May 2008	This access management plan was prepared based on coordination with FDOT and Highlands County and covers the area one mile south of SR 70 to one mile north of US 98, within the Town of Lake Placid. The plan provides both existing and future conditions, as well as access management recommendations based on those findings for each median opening within the study area. Open or closed medians are proposed as appropriate at each of these 89 median locations. The study also recommends the use of service roads to support development along US 27 and provides guidance on connections spacing and other parameters to provide good traffic circulation. Although specific locations for service roads are not recommended as part of the report, some locations are identified where there may be a potential for service roads as development builds in these areas.
Highlands	County Line Road Traffic Study	August 2010	County Line Road is proposed as a farm-to-market roadway supporting agricultural goods transport in South Central Florida. County Line Road will help separate truck traffic from passenger cars, by diverting citrus trucks and other heavy trucks off of US 27 and US 17. This will improve traffic operations on US 27 and US 17, reduce accident rates, and help delay the need to widen sections of US 27 or US 17 beyond four lanes. It is also proposed to provide an alternative emergency route given its location between US 27 and US 17. The study area for the County Line Road Traffic Assessment extends from north of SR 66 to south of SR 70 and from west of US 17 to east of US 27. The primary purpose of this Traffic Assessment was to compare future year 2030 traffic conditions with the new County Line Road with 2030 traffic conditions without the new County Line Road.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Polk	Polk Transportation Planning Organization (TPO) 2035 LRTP	December 2010	Notes that US 27 is identified as a "core" transit corridor as part of their long range 2060 plans with a park-n-ride at US 27 and SR 60. US 27 needs identified include: (1) widening to six lanes from the Highlands County line to SR 60, from Sunson Road to the Lake County Line, from CR 546 to SR 544, and SR 540 to SR 542, (2) intersection improvements at Central Avenue, Cypress Gardens, Dundee, SR 544, CR 17, CR 547, and Ronald Reagan Parkway, (3) a new interchange at Ernie Caldwell Boulevard, (4) 30-minute bus service at Lake Wales-Four Corners-Haines City. Identifies US 27 for importance to roadway capacity, freight movements, and future proposed transit service.
Polk	US 27 from the Highlands County Line to north of SR 60	Current/ Ongoing	This Project Development & Environment (PD&E) Study will evaluate the widening of US 27 from the Highlands County Line (MP 0.00) to north of SR 60(MP 18.816). The project will evaluate widening the existing four lane divided facility to a six lane divided facility and will include the development of interchange configurations at US 27 and SR 60 that will accommodate the proposed widening. Reports are not yet available for this study.
Polk	US 27 from North of I-4 to US 192 PD&E Study	December 2008	This study was conducted to evaluate road widening along US 27 from North of I-4 to US 192 in Polk County from four to six lanes. The existing four-lane bridge with shoulders over US 192 was recommended to be widened to six lanes with shoulders. A 5-foot sidewalk will be constructed from Polo Park Boulevard to High Grove Boulevard along the western right-of-way line of the interchange is also recommended. All work is to be performed within existing ROW. Design plans have now been prepared.
METROPLAN (Central Florida Region)	METROPLAN Freight, Goods and Service Mobility Strategy Plan	June 2002	This study was conducted to develop a regional strategy plan for the Central Florida region. The report identified US 27 as a priority intermodal corridor of statewide significance, particularly within the boundaries of I-75 and Florida's Turnpike and emphasizes the importance of the corridor to support and enhance links to key markets within the state such as South Florida, Central Florida and Jacksonville. No specific needs are identified within the study for improvements to US 27. An update to this study has recently been initiated. At the time of this review, no additional needs regarding US 27 are available from that report.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Lake, Sumter	Lake-Sumter MPO 2035 LRTP	December 2010	Identifies (1) new interchange in Clermont at US 27 and SR 50 intersection, (2) roadway widening from 4 to 6 lanes between Lake Louisa Road and Boggy Marsh Road, east and west along CR 566, from Lake Ella Road to MLK Boulevard, from Avenida Central to Lake Ella Road, (3) intersection upgrade at US 27 and SR 44, (4) a new US 27 reliever between US 441 and SR 44. Needs Plan projects related to the corridor include (1) CR 566 roadway widening and (2) Lake Louisa to Boggy Marsh Road widening.
Marion	Accomplishing Access Management on the FIHS: The US 27 Corridor in Ocala/Marion County	November 2002	This study reviews existing access management practices in the City of Ocala and Marion County, reviews FDOT plans and policies, and provides summaries from interviews with staff from all jurisdictions in the study area. Recommendations from the conceptual plan were developed to identify uniform standards that could assist efforts to promote comprehensive access management for the corridor. These recommendations included (1) Changing the access management class at the I-75/US 27 interchange from class "5" to class "3", (2) Recommending that the city and county adopt FDOT access management requirements by reference and reinforce them through the land development process,(3) Establish a process for routing FDOT access permitting with local governments for review and comment, (4) Expanding the retrofit requirements in the City of Ocala to include all change in use activity, (5) Establish a corridor management team made up of representatives of each local government, the FDOT, and other interested parties, (6) Extend the point where the existing median ends along US 27 to 44th Street.
Marion	Marion/Ocala 2035 LRTP	November 2010	Identifies the following cost feasible improvements along US 27: • Interchange modification at I-75 (2015-2025) • Expand US 27 to six lanes from NW 44th Ave to NW 27th Avenue (2026-2030) • Expand US 27/US 441 to six lanes from Sumter County line to CR 42 (2026-2030)

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Statewide	Florida's Future Corridors Action Plan	December 2006	The Future Corridors Program has identified statewide transportation corridors that maybe significantly improved, transformed in function or design, or newly developed over the next 50 years. This Action Plan identifies the vision, goals and objectives, planning process, and initial implementation activities to establish the Future Corridors Program. The Action Plan was developed during 2006 based on extensive coordination with other statewide and regional partners and the public. Along the US 27 Corridor, the potential for studying re-use options are identified along US 27 from Miami-Dade to Lake County. The purpose of studying the US 27 Multi-Modal Re-Use corridor would be to identify measures that will maximize the corridor's ability for the movement of people and goods. This transportation corridor is a potential reliever of I-95, Florida's Turnpike, and I-75 for automobile and truck traffic.
Statewide	Rural Economic Development Initiative - 2009 Annual Report	June 2009	Identifies programs being undertaken within the Rural Areas of Critical Economic Concern (RACEC), including the following projects within the study area: (1)US 27 from Lake Isis to Polk Co Line in Highlands County (ROW acquisition), (2) Resurfacing US 27 from SR 78 to north of Lykes Bros in Glades County, (3) US 27 Rail Feasibility Study from Miami-Dade County to South Bay in Palm Beach County, and (4) SR 25/US 27 SCFX rail crossing improvements and signal upgrades in Palm Beach County (2009).
Statewide	Florida Trade and Logistics Study	December 2010	The objectives of this statewide study were to The objectives of the Florida Trade and Logistics Study are to: (1) Document existing and project future domestic and international trade flows to, from, and within Florida, (2) Identify opportunities available to Florida to compete in the global marketplace, and (3) Identify the strategies needed to take advantage of the most promising opportunities. No specific recommendations are provided for the US 27 Corridor. Of the short term recommendations, advancing planning efforts for an integrated statewide network of trade gateways, logistics centers and transportation corridors through the SIS is most relevant to strategies for the US 27 Corridor.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Statewide	SIS 2035 Cost Feasible Plan	December 2009	The SIS Cost Feasible Plan identifies a number of projects along US 27 or on roadways directly connecting to the corridor. These include the following: • District 6: Widening Krome Avenue in Miami-Dade County to four lanes (2031-2035). • District 1: Six lane widening in Polk County on US 27 from Richie to Barry Road (2020-2025) and from Barry Road to the Polk/Lake County lines; widening to four lanes at SR 80 in Hendry and Glades Counties. • District 5: Interchange modification at US 27 and SR 50 in Lake County (2031-2035).
Statewide	SIS 2040 Unfunded Needs Plan	October 2011	This provides a series of short-term, mid-term and long-term SIS improvements through 2040 which are currently unfunded. In summary, US 27 improvements over all time horizons include ultimate plans for US 27 in Miami-Dade County, widening to six lanes throughout Broward and Palm Beach Counties, widening to six lanes in Hendry and Glades Counties from the Palm Beach/Hendry County Line to SR 80, widening to six lanes throughout Highlands County, widening to six lanes from the Highlands/Polk County Line to SR 60 in Polk County and widening to eight lanes in Polk County from Lake Hamilton Creek to I-4. In Lake County, widening to eight lanes is proposed form the Polk/Lake County line to Boggy Marsh Road, six lanes from Boggy Marsh Road to Lake Louisa Road, eight lanes from Brogeon Drive to CR 561, and six lanes from CR 561A to Florida's Turnpike. In Marion County, sic lane widening is proposed from NW 44th Avenue to NW 27th Avenue and from NW 70th Avenue/CR 225A to 60th Avenue.

Table 3.1.1 Completed Transportation Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Statewide	SIS 2040 Unfunded Needs Plan (Cont'd)	October 2011	In addition, a series of intersection/interchange improvements are proposed in both Broward and Polk County to improve operations. Other improvements noted which are not along US 27 but which may have an impact to US 27 include: a new potential SIS road on SR 924 from SR 826 to HEFT in Miami-Dade County, the addition of a frontage road in Broward County from Pembroke Road to SW 26th Street, a new Georgia Avenue Extension Bypass in Hendry County from CR 833 to US 27, a number of connecting capacity improvements in Polk and Highlands Counties (SR 29, SR 70, SR 60, and I-4 special use lanes), I-75 interchange improvements at US 27 in Marion County. Other modal improvements noted include rail capacity improvements parallel to the US 27 Corridor in Maim-Dade, Broward and Palm Beach Counties and a proposed BRT/LRT transit improvements for a US 192 Circulator near US 27 (running from Narcoossee Road in Orange County to the US 27/Four Corners area).

FDOT has also recently initiated the Florida Freight Mobility and Trade Plan. As more details become available in this study, considerations will be given to overall statewide initiatives in the planning of the US 27 Corridor and this US 27 Transportation Alternatives Study.

3.2 Transportation Network System Characteristics

The transportation network characteristics identify major qualities of the physical roadway system of US 27 and its connections. For most of the study area, US 27 is a controlled access facility, with grass or concrete medians used as a form of traffic control, dividing the northbound and southbound lanes. The following section provides details on the existing roadway conditions and includes descriptions of SIS highway connections, speed limits, number of through lanes, and right-of-way.

Existing SIS Highway Connections

The US 27 highway is a key facility of the Strategic Intermodal System (SIS). The SIS encompasses transportation facilities of statewide and interregional significance, and is focused on the efficient movement of passengers and freight.

Figure 3.2.1A and 3.2.1B displays the SIS highway facilities and characteristics in the corridor. The maps are intended to illustrate major highway connections to the US 27 Corridor including existing and emerging SIS highway corridors. As reflected in **Figure 3.2.1**, US 27 intersects with several SIS and emerging SIS corridors including SR 826, SR 821, SR 997, I-75, SR 80, SR 29, SR 70, SR 64, SR 60, I-4, and Florida's Turnpike. The US 27 Corridor intersects with another SIS highway facility in all nine counties within the study area. Miami-Dade County has five SIS highway connections with the US 27 Corridor: I-95, SR 112, SR 826, SR 821, and SR 997. Polk and Highlands counties each have two SIS highway connections within the US 27 Corridor: SR 64 and SR 70 in Highlands County and SR 60 and I-4 in Polk County.

Scenic Highways and Byways

The Florida Scenic Highway Program highlights the state's historic and scenic highways throughout the state. These highways draw attention to the state's cultural, recreational, natural, archeological, historical and scenic features of the areas. The benefits of the program includes showcasing and protecting the natural resources of the state and promoting tourism and economic development through the communities these highways travel through.

Figure 3.2.2 displays the Florida Scenic Highway/Byway routes in the corridor. These are described in further detail in the following pages.

Figure 3.2.1A

US 27 Existing SIS Highway Connections

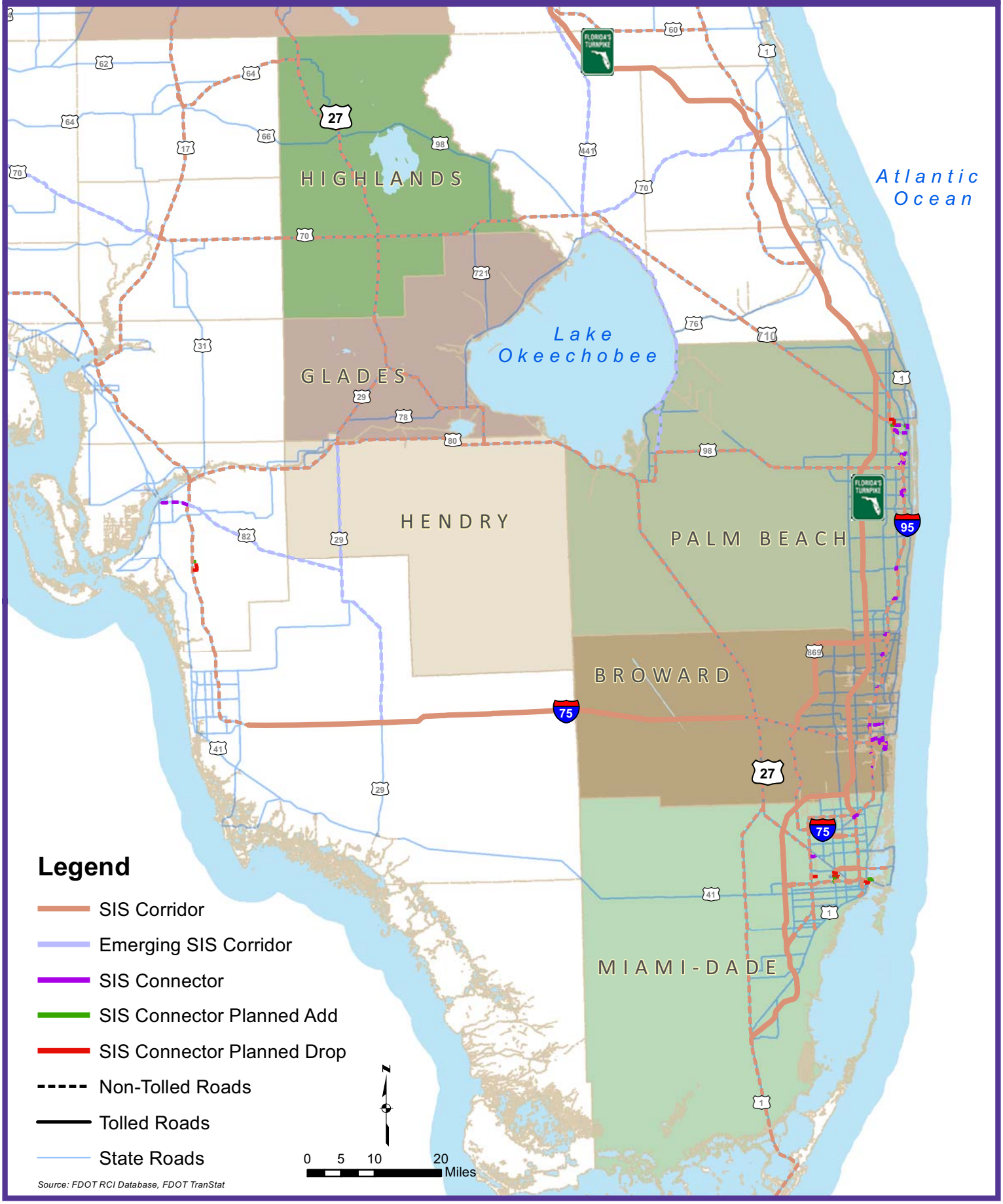


Figure 3.2.1B

US 27 Existing SIS Highway Connections

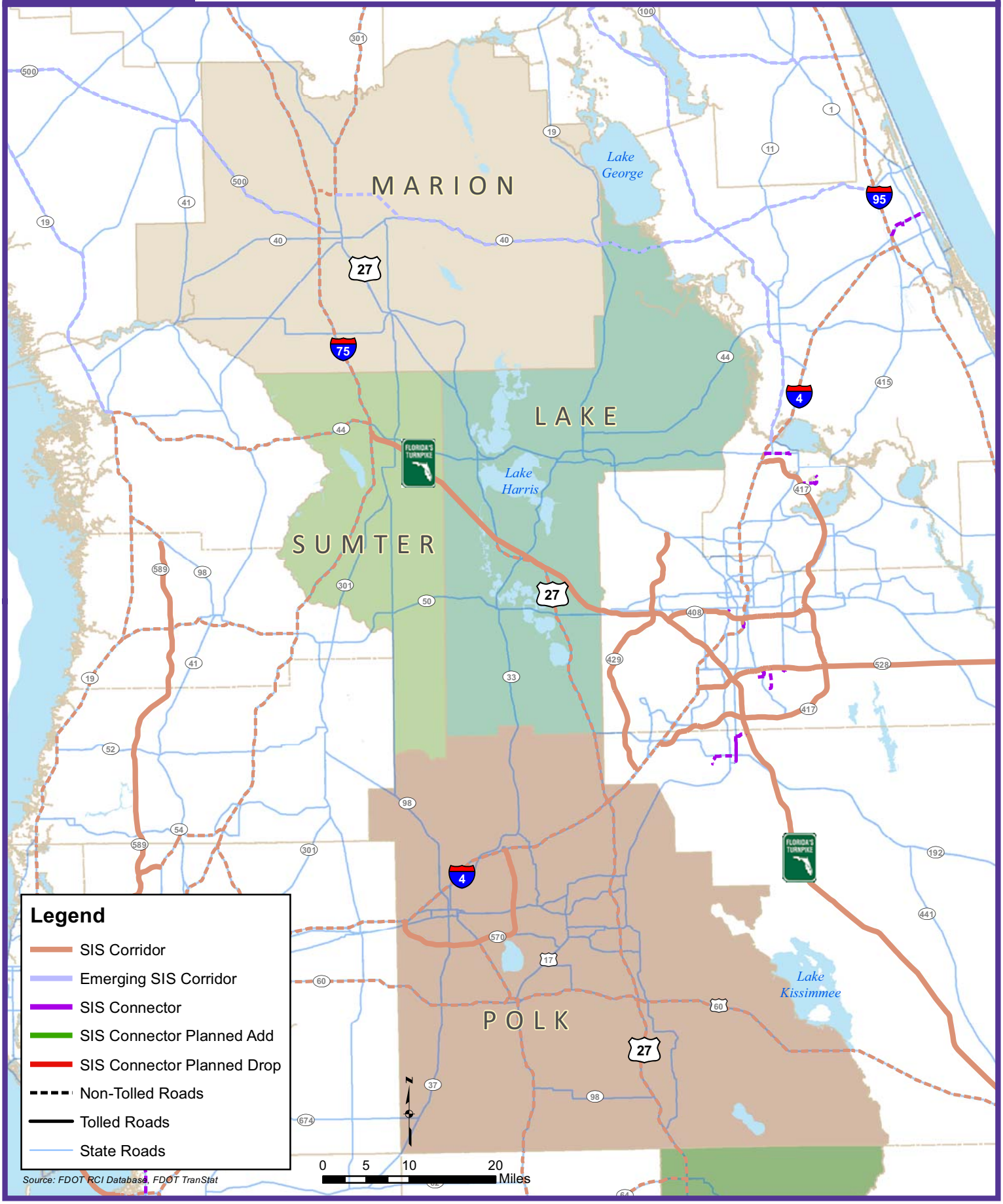
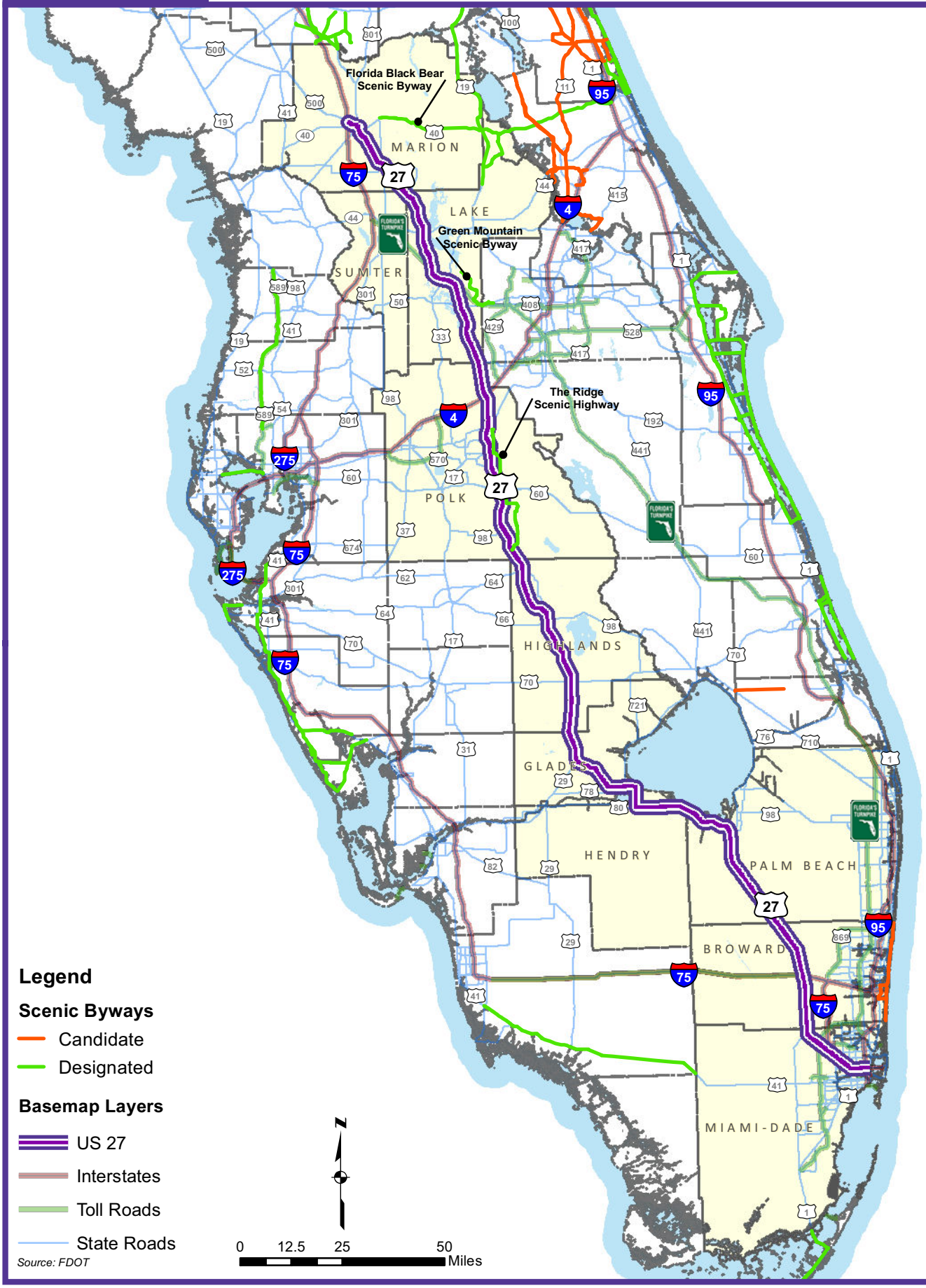


Figure 3.2.2

US 27 Scenic Highways / Byways



The Ridge Scenic Highway
Travelling on SR 17, the Ridge Scenic Highway begins at the intersection with US 17/92 in Haines City and travels south until it terminates at the intersection with US 27 south of Frostproof. The Highway runs parallel to the US 27 Corridor and is located east of the study area. The Ridge Scenic Highway travels north to south in Polk County through the historic towns of Haines City, Lake Hamilton, Dundee, Lake of the Hills, Lake Wales, the Village of Highland Park, Babson Park, Hillcrest Heights, and Frostproof. The route also provides scenic views of the region, passing by lakes, natural areas, and agricultural fields in this historically preserved region of Florida.

The Green Mountain Scenic Byway
The Green Mountain Scenic Byway runs northwest to southeast, parallel to US 27 and the Florida Turnpike (Ronald Reagan) in Lake and Seminole Counties in Central Florida. The Green Mountain Scenic Byway begins at the intersection of County Roads (CR) 455 and 561 in Lake County and travels southeast on CR 455 and Old Highway 50 through the hills of the Lake Wales Ridge. The road travels around the western and southern edges of Lake Apopka, providing views of the Orlando skyline. The route travels through the historic town of Montverde in Lake County. The route is a popular route for bicyclists and motorcyclists along the rolling hills of the area.

Florida Black Bear Scenic Byway
The Florida Black Bear Scenic Byway is located northeast of the US 27 Corridor along SR 40 running east-west from Ormond Beach to Silver Springs and travelling through, Volusia, Lake and Marion counties in Central Florida. This scenic byway also includes additional roads through Ocala National Forest, which provide access to recreational areas along the scenic byway.

Existing Speed Limits

The existing posted speed limit ranges along the US 27 Corridor are shown in **Figures 3.2.3A and 3.2.3B**. The figures depict the posted speed limits using color coded line segments for the actual posted speed limit.

Speed limits are posted in five mile increments throughout the study area. In the Southern portion of the US 27 Corridor, the posted speed limit of less than 30 mph is the lowest in the corridor starting with a short segment of US 27 (NW 36th Street) located in Miami-Dade County. This short segment is located along a curved section of NW 36th Street within the urbanized area. As the corridor approaches the US 27 (Okeechobee Road) segments, the posted speed ranges between 35 mph and 45 mph until reaching SR 826 (Palmetto Expressway), where it ranges from 50 mph to 55 mph range. At the Miami-Dade/Broward County line, the posted speed ranges from 60 mph to 65 mph range, where it is maintained for the majority of the corridor through to Highlands County. The US 27 Corridor travels through the communities of South Bay, Clewiston, Moore Haven, Lake Placid and Avon Park

where the posted speeds on these segments are typically lowered to 45 mph or less through these segments.

In the northern segments of the US 27, the posted speeds fluctuate as the corridor traverses a number of communities to the east and west. North of the Highlands/Polk County line, the posted speed limits range from 60 mph to 65 mph until reaching the community of Haines City. The posted speed changes frequently on the US 27 segments between Haines City and I-4, with speeds ranging from 35 mph, 45 mph to 60 mph to 65 mph. South of the Florida's Turnpike in Lake County, US 27 maintains higher posted speeds ranging from 50 mph to 55 mph and 60 mph to 65 mph.

Figure 3.2.3A

US-27 Existing Speed Limit

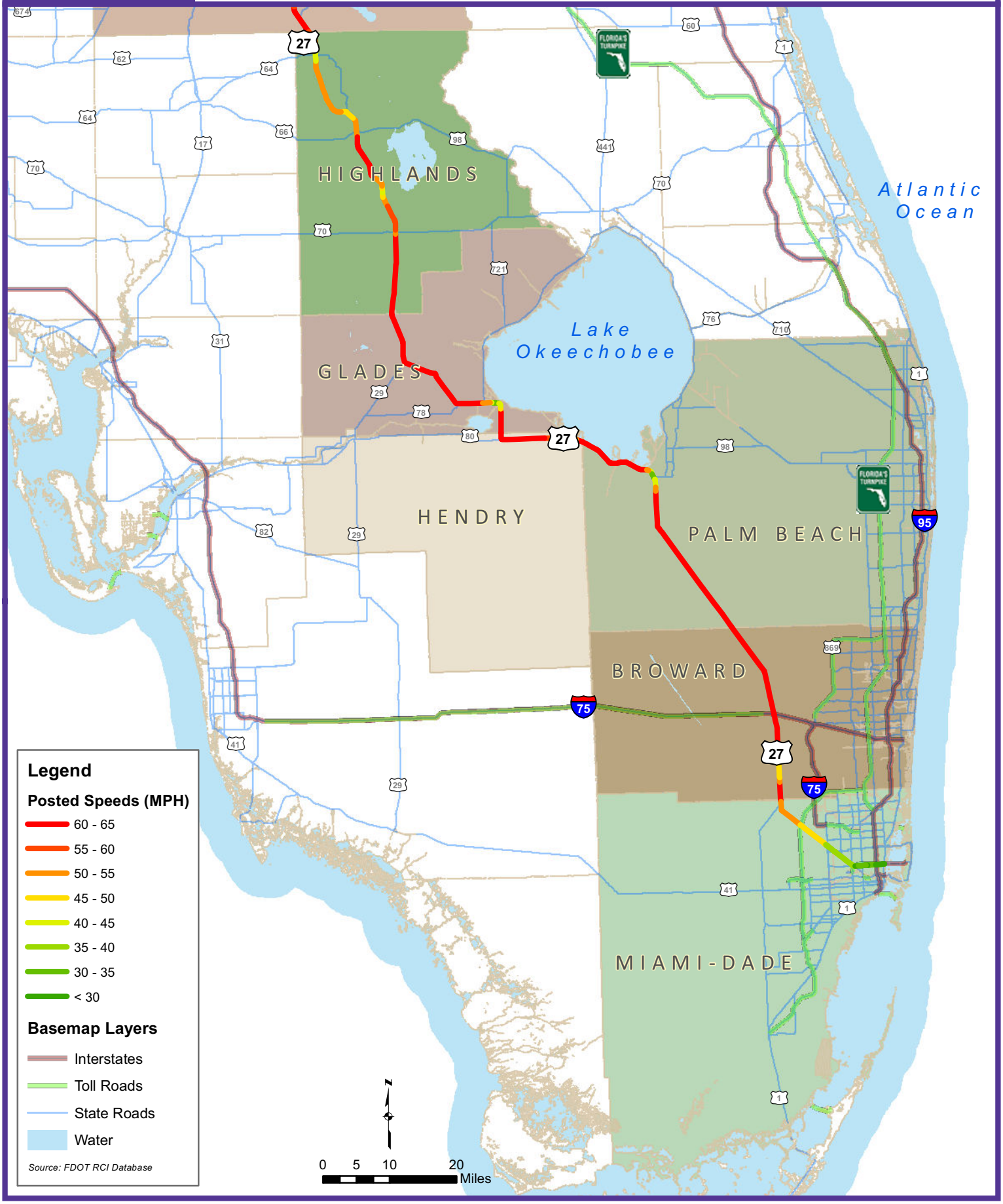
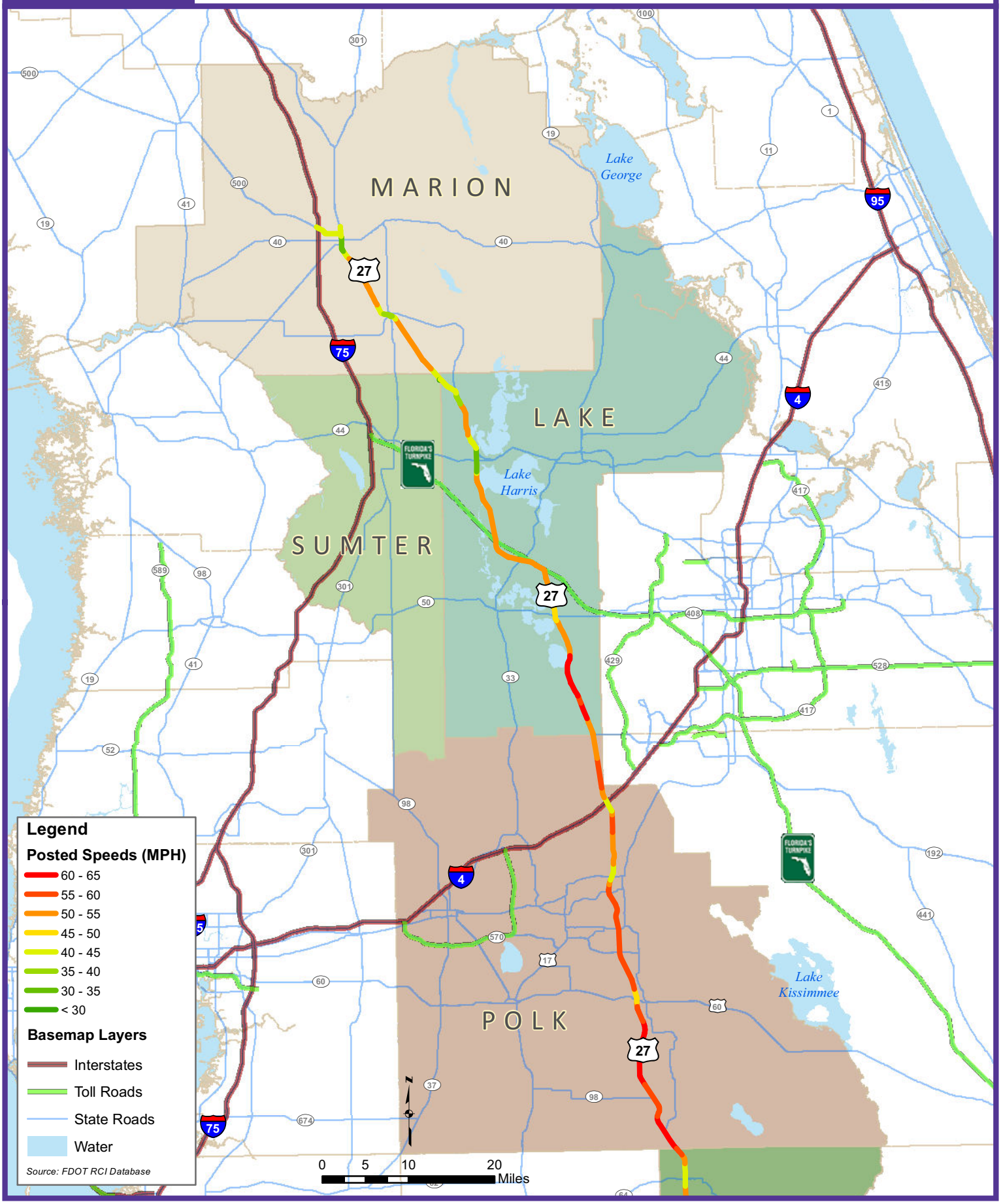


Figure 3.2.3B

US-27 Existing Speed Limit



Existing Number of Through Lanes

The existing number of through lanes along the US 27 Corridor are displayed in **Figures 3.2.4A and 3.2.4B** and shown in tabular format on **Table 3.2.1**. In the figures, the different lane segments on US 27 are shown using different colored line segments for each lane category.

Travelling northbound from Miami-Dade County, the number of lanes along US 27 fluctuates from two lanes to five lanes between I-95 and Le Jeune Road. The number of lanes increases from five to six lanes at LeJeune Road and the corridor continues as a six lane roadway until the SR 821 interchange where the roadway decreases to four lanes. The number of through lanes for the corridor is maintained at four lanes through Broward, Palm Beach, Hendry, and Glades counties.

From Highlands County to Marion County, the US 27 Corridor varies between four and six lanes. In Highlands County, the number of through lanes increases from four lanes to six lanes from south of SR 66/US 98 to north of SR 64, where the roadway crosses into Polk County as a four lane roadway.

In Polk County, US 27 remains a four lane corridor until north of SR 60 where it increases to six lanes. For a small segment of roadway, from north of CR 540 (Cypress Gardens Boulevard/Waverly Road) to north of CR 542 (Dundee Road), the corridor is four lane and increases back to six lanes just north of I-4. Travelling north of I-4, the roadway decreases to four lanes across the Polk/Lake County line until the interchange with US 192/SR 530 (W Irlo Bronson Memorial Hwy). From this interchange to South of Sawgrass Bay Boulevard in Lake County, the roadway is a six lane facility.

Continuing through Lake County, the corridor maintains its four lane configuration until north of SR 50 where the lane configuration reverts back to six lanes through the city of Clermont and changes back into a four lane configuration at CR 561A, north of the city of Minneola. The corridor continues as a four lane configuration, but converts to six lanes through the urban areas north of Florida's Turnpike (through the cities of Clermont, Minneola and Ocala). Through the City of Belleview, US 27 is configured for six lanes, but is painted for four lanes with two lanes of on-street parking.

Figure 3.2.4A

US-27 Existing Number of Through Lanes

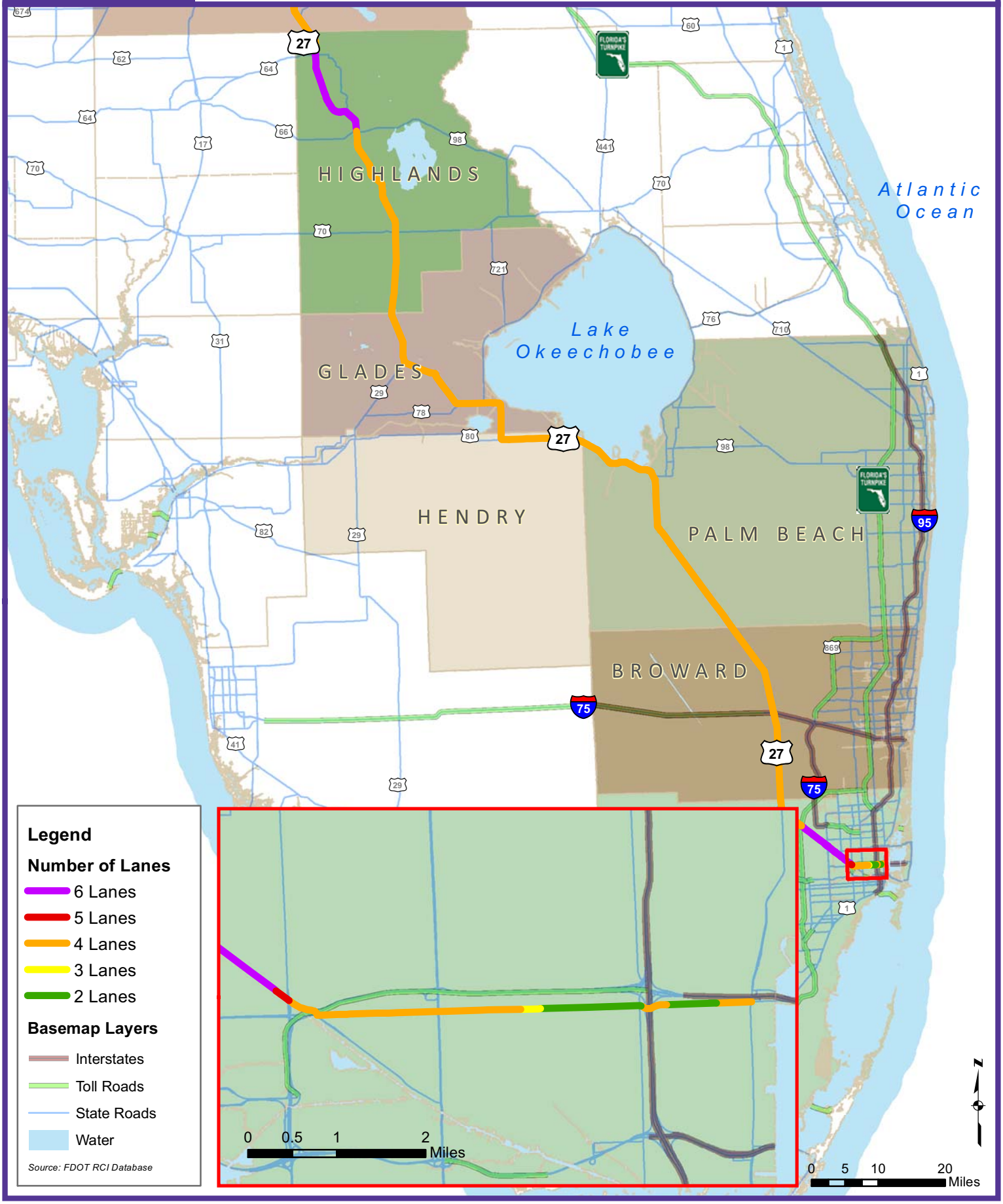


Figure 3.2.4B

US-27 Existing Number of Through Lanes

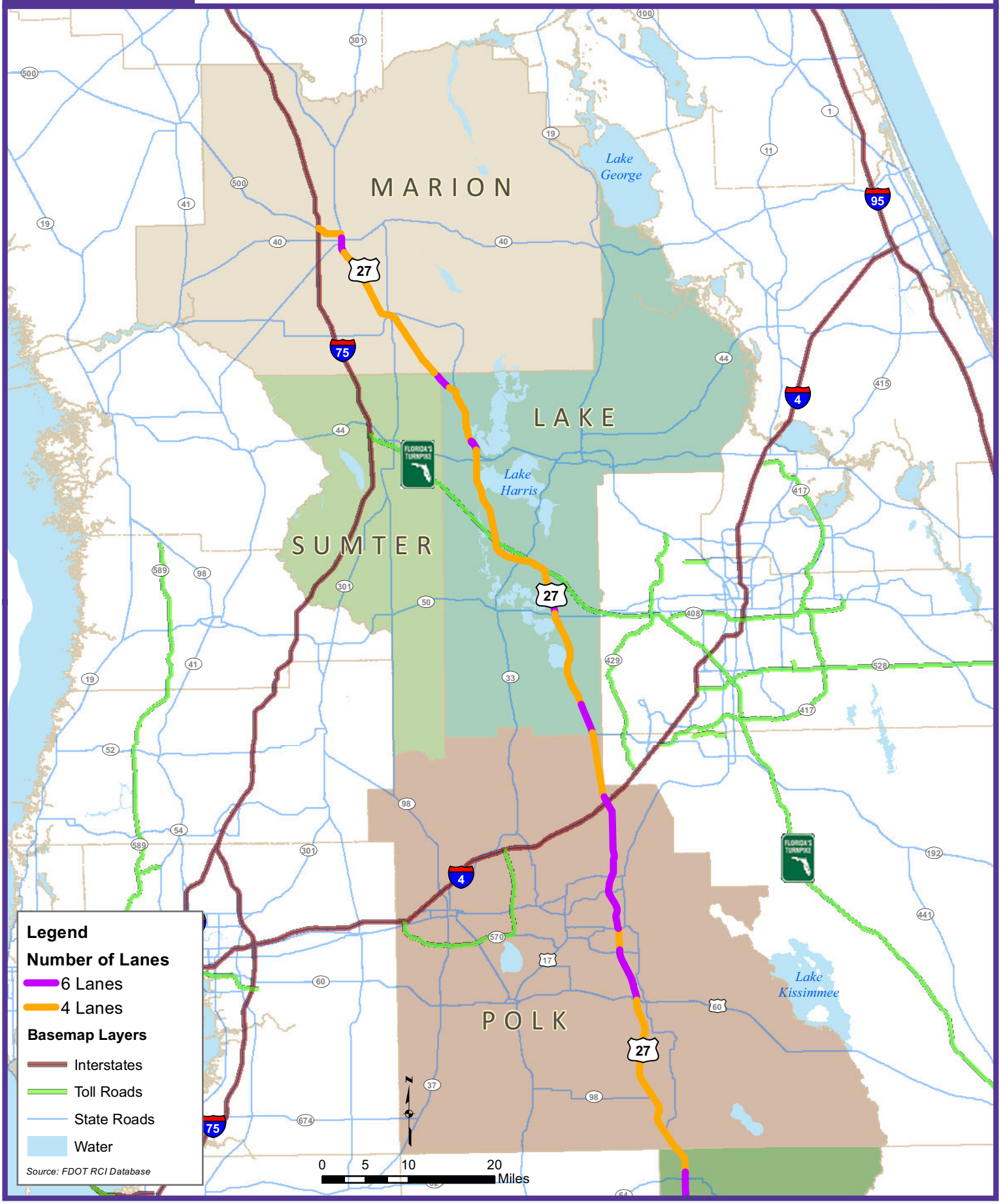


Table 3.2.1 – US 27 Existing Through Lanes

US 27 Segment		Lanes
From	To	
Biscayne Boulevard (US 1), Miami-Dade County	NE 34th Street, Miami-Dade County	6
NE 34th Street, Miami-Dade County	North Miami Avenue, Miami-Dade County	4
North Miami Avenue, Miami-Dade County	NW 5th Avenue, Miami-Dade County	2
NW 5th Avenue, Miami-Dade County	I-95, Miami-Dade County	4
I-95, Miami-Dade County	US 441, Miami-Dade County	4
US 441, Miami-Dade County	NW 17th Avenue, Miami-Dade County	2
NW 17th Avenue, Miami-Dade County	Eastbound Ramp to SR 112 (Airport Expressway), Miami-Dade County	4
Eastbound Ramp to SR 112 (Airport Expressway), Miami-Dade County	Northbound ramp from MIA, Miami-Dade County	5
Northbound ramp from MIA, Miami-Dade County	SR 821 (Homestead Extension), Miami-Dade County	6
SR 821 (Homestead Extension), Miami-Dade County	South of SR 66/US 98, Highlands County	4
South of SR 66/US 98, Highlands County	North of SR 64, Highlands County	6
North of SR 64, Highlands County	North of SR 60, Polk County	4
North of SR 60, Polk County	North of CR 540 (Cypress Gardens Boulevard/Waverly Road), Polk County	6
North of CR 540 (Cypress Gardens Boulevard/Waverly Road), Polk County	North of CR 542 (Dundee Road), Polk County	4
North of CR 542 (Dundee Road), Polk County	North of I-4, Polk County	6
North of I-4, Polk County	South of US 192/SR 530 (W Irlo Bronson Memorial Hwy), Lake County	4
South of US 192/SR 530 (W Irlo Bronson Memorial Hwy), Lake County	South of Sawgrass Bay Boulevard, Lake County	6
South of Sawgrass Bay Boulevard, Lake County	North of SR 50, Lake County	4
North of SR 50, Lake County	CR 561A, Lake County	6
CR 561A, Lake County	US 441, Lake County	4
US 441, Lake County	North of South Dixie Avenue, Lake County	6
North of South Dixie Avenue, Lake County	Avenida Central/Griffin Avenue, Lake County	4
Avenida Central/Griffin Avenue, Lake County	Buenos Aires Boulevard, Sumter County	6
Buenos Aires Boulevard, Sumter County	CR 475 (SE 1st Avenue), Marion County	4
CR 475 (SE 1st Avenue), Marion County	North of SR 40 (West Silver Springs Boulevard), Marion County	6
North of SR 40 (West Silver Springs Boulevard), Marion County	I-75, Marion County	4

Maximum Lane Policy

Maximum lane policies have been established in Lake and Sumter Counties by the Lake-Sumter MPO through the Lake-Sumter MPO Corridor Constraint Policy. Currently through Lake County, US 27 has a maximum laneage of six lanes. It should be noted that this policy applies to through lanes along US 27 and does not apply to turn lanes, auxiliary lanes, and exclusive transit lanes. Although a specific policy is not in place for maximum lanes within Marion County, the Marion/Ocala TPO has initiated a study to review the potential for reducing all or portions of the six lane section of US 27 from CR 475 to NW 2nd Street to four lanes. This project was identified part of the City of Ocala's Vision 2035 Plan and has been incorporated into the TPO Priority Project List. The intent is to improve the pedestrian connectivity along the corridor as well as expand the downtown area to incorporate areas west of US 27.

Existing Right-of-Way

Right-of-way consists of the strip of land that is normally owned and maintained by the governing agency, in this case, the Florida Department of Transportation. The space provides for the existing system, maintenance access, and future expansion. The ability to maximize passenger and freight transportation opportunities within the US 27 Corridor and alleviate congestion on other parallel corridors to US 27 poses an important challenge. In order to improve the opportunities on this facility, it is important to understand the existing right-of-way characteristics. The US 27 Corridor travels between urban and rural environments throughout the span of the study area. Constraints may include either natural or land use restrictions that limit right-of-way. **Table 3.2.2** provides an overview of the right-of-way characteristics for the US 27 Corridor.

The US 27 Corridor acts as an urban arterial through the majority of its path through Miami-Dade County with development built up to the roadway along the eastern portion of the alignment, primarily to the east of SR 826 (Palmetto Expressway). Along these segments of US 27, the right-of-way fluctuates between 34 feet in a short segment near downtown Miami to 78 feet starting at LeJeune Road and transitions to a wider corridor by expanding to 144 feet just north of the SR 826 (Palmetto Expressway) interchange. The corridor right-of-way fluctuates again at the SR 821 interchange starting at 149 feet south of the interchange to 113 feet in the middle of the interchange to 135 feet north of the interchange. The corridor right-of-way expands into a rural arterial roadway (from 143 feet to 228 feet) with a grass median over 100 feet wide through the rest of Miami-Dade County.

Table 3.2.2 - Existing Right-of-Way Widths for US 27

US 27 Segment			ROW Variance (ft)	
County	**From**	**To**	**From**	**To**
Miami-Dade	Biscayne Blvd/US 1	SR 953/LeJeune Road	34	78
	SR 953/LeJeune Road	SR 826	78	104
	SR 826	Miami-Dade/Broward County Line	104	228
Broward	Miami-Dade/Broward County Line	SW 16th Street	218	312
	SW 16th Street	Broward/Palm Beach County Line	218	147
Palm Beach	Broward/Palm Beach County Line	CR 827	142	168
	CR 827	SR 80/W Palm Beach Road	57	146
	SR 80/W Palm Beach Road	Palm Beach/Hendry County Line	86	120
Hendry	Palm Beach/Hendry County Line	Gloria Street	63	114
	Gloria Street	Hendry/Glades County Line	94	138
Glades	Hendry/Glades County Line	1st Street	92	137
	1st Street	SR 78	86	114
	SR 78	Glades/Highlands County Line	114	137
Highlands	Glades/Highlands County Line	US 98	104	137
	US 98	Marble Road/Granite Road	121	139
	Marble Road/Granite Road	Highlands/Polk County Line	85	121
Polk	Highlands/Polk County Line	ENT Citrus Plant	105	119
	ENT Citrus Plant	Polk/Lake County Line	108	138
Lake	Polk/Lake County Line	CR 33	94	126
	CR 33	W Hermosa Street	64	122
	W Hermosa Street	Lake/Sumter County Line	99	140
Sumter	Lake/Sumter County Line	Sumter/Marion County Line	100	140
Marion	Sumter/Marion County Line	Nathan Mayo Hwy/US 301	88	104
	Nathan Mayo Hwy/US 301	SR 200/SW 10th Street	82	326
	SR 200/SW 10th Street	NW 10th Street/SR 492	72	78
	NW 10th Street/SR 492	I-75	78	82

Source: FDOT Straight-Line Diagrams, http://www2.dot.state.fl.us/straight-linesonline/home.aspx, June 2012.

In Broward County, the corridor right-of-way expands to over 300 feet north of SR 820 (Pines Boulevard) and decreases to 218 feet just south of CR 5337. As the corridor approaches the I-75 interchange, right-of-way decreases from 150 to 160 feet through the rest of Broward County. The corridor right-of-way maintains the 150 to 160 foot range until it approaches the city of South Bay in Palm Beach County. The right-of-way reduces to 67 feet while traversing through South Bay, and increases again to over 100 feet through the rest of Palm Beach County (north of South Bay).

In Hendry County, the corridor right-of-way decreases from 114 feet to 63 feet as it travels through the Town of Clewiston. North of Clewiston, the corridor right-of-way increases to over 130 feet until the city of Moore Haven in Glades County, where right-of-way decreases to a low width of 86 feet. North of Moore Haven, the corridor right-of-way increases to 114 feet until CR 78 when it widens to 137 feet. The corridor right-of-way maintains a width over 130 feet until it approaches the city of Lake Placid in Highlands County, where it decreases to 112 feet. The corridor right-of-way maintains its width of 112 feet until it approaches US 98 south of the city of Sebring/Avon Park, where it narrows to 104 feet. North of the intersection in Sebring/Avon Park, it widens back to 127 feet. The corridor right-of-way remains at over 120 feet until it approaches the bridge crossing at Lake Anoka in Avon Park/Sebring, where it fluctuates between 85 and 112 feet until it crosses the Highlands/Polk County line.

The US 27 Corridor maintains approximately 112 feet right-of-way until it reaches the City of Winter Haven in Polk County, where the corridor right of way varies from 102 feet to 144 feet north to the City of Leesburg in Lake County. Right-of-way within the city of Leesburg narrows to 64 feet until it reaches CR 25A in Lake County where the corridor right-of-way widens to 115 feet. The right-of-way gradually decreases to 81 feet between CR 25A and East Lake View Street in Lady Lake and then increases to 137 feet at Main Street in The Villages (south of the Lake/Sumter County line). At the Lake/Sumter County line, the right-of-way is 140 feet and decreases as US 27 extends north toward the Sumter/Marion County line, where the right-of-way is 104 feet.

US 27 maintains a 104 foot right-of-way from the Marion County line to SR 484/Southeast 132nd Street Road in Marion County and narrows as it approaches Belleview. At CR 484 in Belleview, the right-of-way on US 27 is 82 feet and increases to 160 feet near the Belleview Square Shopping Center. From Belleview Square, the right-of-way decreases to 106 feet until the highway encounters the Cross Florida Greenway where the width is 326 feet south of Southeast 80th Street. North of Southeast 80th Street, US 27 returns to a 106 foot right-of-way till south of Southeast 40th Circle at Ocala. From Southeast 40th Circle, the right-of-way decreases from 136 feet to 76 feet near the CSX railroad tracks and then increases to 80 feet south of SR 200 in Ocala. From SR 200 to SR 492/Northeast 10th Street, the right-of-way on US 27 varies from 72 feet to 78 feet. The right-of-way from SR

492/Northeast 10th Street is 78 feet and increases to 82 feet near the terminus of the study area at I-75.

3.3 Access Management

The purpose of this section is to provide an overview of the existing access management policies along the US 27 Corridor. Access management is the managing and planning for the spacing and design of driveways and street connections, medians and median openings, traffic signals, and interchanges. The ability to effectively manage access onto and off of the highway could increase roadway capacity, reduce crashes, and decrease travel times.

Access Management Classifications

Chapter 14-97 in the Florida Administrative Code (FAC) establishes guidance to assist in the realization of access management in the state. The purpose of the rule is to help protect the public health, safety and welfare in communities, while still providing proper access for the mobility of people and goods, and the preservation of the functional integrity of the State Highway System.

The State Highway System Access Management Classification System and Standards is a 7-tier classification system which establishes the guidance to assist in the implementation of access management across the state. **Table 3.3.1** displays the different tiers of the program. In the classification system, Access Class 1 consists of limited access facilities, which are high speed and high volume facilities and do not have direct access to direct property connections and utilize interchanges for their connections to other roadways. Access Classes 2 through 7 consist of controlled access facilities and are arranged from the most restrictive (Access Class 2) to the least restrictive (Access Class 7) class based on development. Generally the roadways serving areas without existing extensive development are classified in the upper portion of the range (Access Class 2, 3, and 4). Those roadways serving areas with existing moderate to extensive development are generally classified in the lower portion of the range (Access Class 5, 6, and 7). The access management standards for each access class are further determined by the posted speed limit.[1]

[1] Defined in Florida Statutes, 14-97.003.

Table 3.3.1: Access Management Statewide Guidance

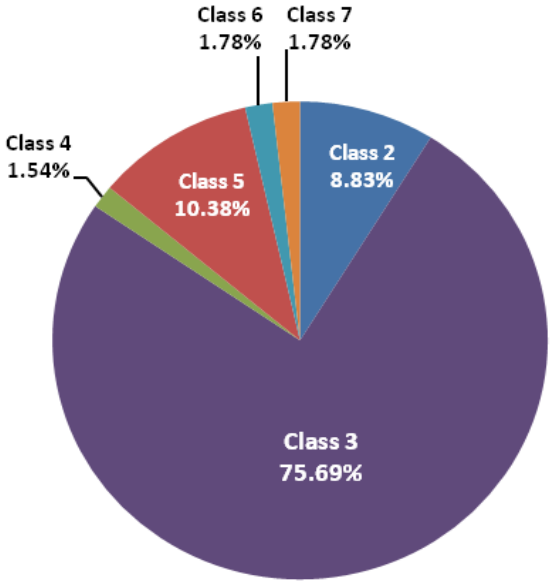
Access Class	Median	Median Opening Spacing Standard (feet)		Signal Spacing Standard (feet)	Connection Spacing Standard (feet)	
		Full	Directional		Posted Speed Greater than 45 MPH	Posted Speed of 45 MPH or Less
2	Restrictive	2,640	1,320	2,640	1,320	660
3	Restrictive	2,640	1,320	2,640	660	440
4	Non-Restrictive			2,640	660	440
5	Restrictive	2,640 Posted Speed Greater than 45 MPH	660	2,640 (Posted Speed Greater than 45 MPH	440	245
		1,320 Posted Speed of 45 MPH or Less		1,320 Posted Speed of 45 MPH or Less		
6	Non-Restrictive			1,320	440	245
7	Both Median Types	660	330	1,320	125	125

Table 3.3.2 shows the limits of the US 27 Corridor and corresponding access management classifications. **Figure 3.3.1** provides a summary of the access management classifications within the corridor and associated definitions of land use considerations for these classes. A review of the corridor indicates that approximately 225 miles of the corridor, or 76 percent of the total corridor length, is identified as Access Class 3. These roadways are defined as controlled access facilities where direct access to abutting land is controlled to maximize the operation of the through traffic movement and where land is still not significantly developed and may be subject to land use changes over time. Given these existing classifications, the number of communities traversing the study corridor and the potential for varying visions for the transportation and land uses within the US 27 Corridor, there exists an opportunity for development of more specific access management standards from a district or regional perspective to provide guidance for meeting the land use and transportation goals within the corridor.

Local Guidance

While FAC Chapter 14-97 establishes guidance of access management for the state as a whole, local governments are the enforcers of access management on the local level and have the ability to create their own access management standards.

Figure 3.3.1: Summary of US 27 Corridor Access Management Classifications

Class	Access Classification Definitions	Corridor Breakdown by Class
2	Highly controlled access facilities distinguished by the ability to serve high speed and high volume traffic over long distances in a safe and efficient manner. This access class is further distinguished by a highly controlled limited number of connections, median openings, and infrequent traffic signals. Segments of the SHS having this classification usually have access restrictions supported by local ordinances and agreements with the Department, and are generally supported by existing or planned service roads.	
3	Direct access to abutting land is controlled to maximize the operation of the through traffic movement. The land adjacent to these roadways is generally not extensively developed and/or the probability of significant land use change exists. These roadways are distinguished by existing or planned restrictive medians.	
4	Direct access to abutting land is controlled to maximize the operation of the through traffic movement. The land adjacent to these roadways is generally not extensively developed and/or the probability of significant land use change exists. These roadways are distinguished by existing or planned non-restrictive median treatments.	
5	Adjacent land has been extensively developed and where the probability of major land use change is not high. These roadways are distinguished by existing or planned restrictive medians.	
6	Adjacent land has been extensively developed, and the probability of major land use change is not high. These roadways are distinguished by existing or planned non-restrictive medians or centerlines.	
7	Adjacent land is generally developed to the maximum feasible intensity and roadway widening potential is limited. This classification shall be assigned only to roadway segments where there is little intent or opportunity to provide high speed travel. Exceptions to access management standards in this access class may be allowed if the landowner substantially reduces the number of connections compared to existing conditions. These roadways can have either restrictive or non-restrictive medians.	

Sources: FDOT Transportation Statistics Office and Florida Statutes 14-97.003

Table 3.3.2: Access Management Classifications along the US 27 Corridor

Class	From	To	Miles	County
7	US 1	South of NW 42nd Avenue	4.7	Miami-Dade
6	South of NW 42nd Avenue	North of Curtis Parkway	1.4	Miami-Dade
4	North of Curtis Parkway	North of SR 826	3.4	Miami-Dade
2	North of SR 826	Miami-Dade/Broward County Line	10.1	Miami-Dade
2	Miami-Dade/Broward County Line	South of I-75	12.5	Broward
3	South of I-75	Broward/Palm Beach County Line	15.1	Broward
3	Broward/Palm Beach County Line	South of SR 80 (Belle Glade)	25.6	Palm Beach
5	South of SR 80 (Belle Glade)	Rock Road/Old US 27	1.5	Palm Beach
3	Rock Road/Old US 27	Palm Beach/Hendry County Line	11.7	Palm Beach
3	Palm Beach/Hendry County Line	Old US 27	1.6	Hendry
5	Old US 27	East Esperanza Avenue	0.7	Hendry
4	East Esperanza Avenue	South Olympia Street	1.2	Hendry
5	South Olympia Street	San Luiz Avenue	0.7	Hendry
3	San Luiz Avenue	Hendry/Glades County Line	9.1	Hendry
3	Hendry/Glades County Line	Tobias Avenue	4.8	Glades
5	Tobias Avenue	Wagon Trail	1.4	Glades
3	Wagon Trail	Glades/Highlands County Line	22.7	Glades
3	Glades/Highlands County Line	CR 29	16.5	Highlands
5	CR 29	South of Heartland Boulevard	2.7	Highlands
3	South of Heartland Boulevard	US 98	9.8	Highlands
5	US 98	Sparta Road	4.0	Highlands
3	Sparta Road	West Hal McRae Boulevard	9.5	Highlands
5	West Hal McRae Boulevard	West Taunton Road/Winthrop Street	1.3	Highlands
3	West Taunton Road/Winthrop Street	Highlands/Polk County Line	3.3	Highlands
3	Highlands/Polk County Line	Lincoln Avenue	27.0	Polk
2	Lincoln Avenue	Frederick Avenue	1.0	Polk
3	Frederick Avenue	McKay Drive (North of US 17-92)	6.4	Polk
5	McKay Drive (North of US 17-92)	Blue Heron Boulevard	1.0	Polk
3	Blue Heron Boulevard	Grayston Boulevard (South of I-4)	6.6	Polk
2	Grayston Boulevard (South of I-4)	North of Ritchie Road	1.4	Polk
3	North of Ritchie Road	Poitras Road Two	6.1	Polk
2	Poitras Road Two	Polk/Lake County Line (US 192)	1.3	Polk
3	Polk/Lake County Line (US 192)	CR 25-A	35.9	Lake
5	CR 25-A	South of Sunshine Avenue	1.8	Lake
6	South of Sunshine Avenue	Urick Street/CR 25A	1.8	Lake

Class	From	To	Miles	County
5	Urick Street/CR 25A	Lake/Sumter County Line	8.4	Lake
5	Lake/Sumter County Line	Sumter/Marion County Line	1.0	Sumter
5	Sumter/Marion County Line	SE Highway 42	2.0	Marion
3	SE Highway 42	South of US 301	6.4	Marion
5	South of US 301	SE 102nd Place	1.7	Marion
3	SE 102nd Place	SE 10th Avenue	6.5	Marion
6	SE 10th Avenue	SW 10th Street	2.0	Marion
7	SW 10th Street	North of NW 2nd Street	0.7	Marion
3	North of NW 2nd	NW 10th Street	0.6	Marion
5	NW 10th Street	I-75	2.8	Marion

Within the US 27 study area, the majority of counties rely on FDOT for access management guidance, but some of the communities along the corridor have applied their own set of access management standards.

In the southern portion of the US 27 Corridor in Miami-Dade County, a number of frontage roads provide alternatives to US 27 for local traffic circulation. Within Highlands County, a study of the Lake Placid area identifies median opening criteria and recommends the potential use of service roads for developed areas along the corridor near the Town of Lake Placid. This concept could also apply to other smaller communities within Highlands County, such as Sebring and Avon Park, where development along the corridor has increased local demands in addition to historical regional trip patterns.

Another example of local guidance is from the Lake/Sumter MPO which has created a corridor constraint policy that establishes lane maximums on through lanes within a corridor throughout the MPO boundaries to limit the costs associated with right-of-way acquisition and roadway capacity improvements through additional lanes. Local access management strategies such as these may provide an opportunity for the development of policies that reinforce desired transportation and land use goals of specific areas within the corridor.

Access Management Strategies

Table 3.3.3 provides examples of operational improvements that were developed by the Transportation Research Board for their *Access Management Manual*. These identified improvements offer congestion relief, while improving safety along the corridor without adding any through lanes on the corridor. These examples represent some strategies for improvements to access management that are available.

Table 3.3.3 – Strategies and Effects of Access Management Techniques[2]

Treatment	Effects
Add Continuous Two Way Left Turn Lanes (TWLTL)	• 35% reduction in total crashes • 30% decrease in delay • 30% increase in capacity
Add non-traversable median	• >55% reduction in total crashes • >30% decrease in delay • >30% increase in capacity
Replace TWLTL with a non-traversable Median	• 15%-57% reduction in crashes on 4-lane roads • 25%-50% reduction in crashes on 6-lane roads
Add a left-turn bay	• 25% to 50% reduction in crashes on 4-lane roads • Up to 75% reduction in total crashes at unsignalized access • 25% increase in capacity
Type of left-turn improvement • Painted • Separator or raised divider	• 32% reduction in total crashes • 67% reduction in total crashes
Add right-turn bay	• 20% reduction in total crashes • Limit right-turn interference with platooned flow, increased capacity
Increase driveway speed from 5 mph to 10 mph	• 50% reduction in delay per maneuver; less exposure time to following vehicles
Visual cue at driveways, driveway illumination	• 42% reduction in crashes
Prohibition of on-street parking	• 30% increase in traffic flow • 20%-40% reduction in crashes
Long signal spacing with limited access	• 42% reduction in total vehicle-hours of travel • 59% reduction in delay • 57,500 gallons fuel saved per mile

3.4 Corridor Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) are a transportation improvement strategy which improves the safety, travel time reliability, and environment elements of the transportation system through the use of electronics, computers, and communications equipment. ITS improvement strategies seek to maximize the

[2] TRB Committee on Access Management, *Access Management Manual*, Table 2-5.

existing transportation system without adding more lanes. Examples of ITS technology include:[3]

- Traffic monitoring and management;
- Providing traveler information;
- Incident management;
- Enhancing safety of both road and user;
- Increasing capacity;
- Enforcement;
- Tracking and evaluation of contract incentives/disincentives (performance-based contracting); and,
- Work zone planning.

ITS coverage in the southern portion of the corridor includes the use of surveillance cameras is employed along the US 27 (Okeechobee Road) segment in Miami-Dade County. In addition, a number of ITS deployment projects are underway in southeast Florida and include:

- An ITS Study in Miami-Dade County on SR 25/Okeechobee Road from NW 79th Avenue to SR 997/Krome Avenue is currently underway.

- Miami-Dade County is in the process of implementing a Rapid Incident Scene Clearance (RISC) Arterial Pilot Program on US 27 (Okeechobee Road) from SR 826 (Palmetto Expressway) to the Miami-Dade/Broward county line. The RISC Program will provide additional roadway coverage, will increase regional response efforts, and improve the clearance times for traffic incidents for the US 27 (Okeechobee Road) corridor. Since the RISC Program was created in 2009, travel lane clearance times have been reduced by 179 percent and total incident clearance times have been reduced by 31 percent.[4]

- Projects for ITS improvements in Broward and Palm Beach Counties are currently underway to expand FDOT's ability to monitor traffic conditions and effectively coordinate multi-agency response to incidents and emergency situations along the US 27 Corridor.

ITS, in the form of cameras and centrally-controlled traffic signals, is also provided along US 27 in the City of Ocala in Marion County at several locations along the corridor. The City of Ocala has deployed traffic monitoring cameras along the US 27

[3] Intelligent Transportation Systems (ITS) & Technology, Office of Operations, Federal Highway Administration.

[4] *District Six Produces RISC Video, Now Available On-Line*, FDOT Sun Guide, November 9, 2011.

Corridor at eight intersections, including the I-75 interchange. These cameras will provide real-time information to our traffic management center (TMC) to assist with improving traffic safety and flow, and incident management. Locations along the corridor include:

1. US 27 /US 441 at SE 31st Street;
2. US 27 /US 441 at SW 17th Street;
3. US 27 /US 441 at SR 200 / SW 10th Street;
4. US 27 /US 441 at SR 40;
5. US 27 / US 441 at NW 10th Street;
6. US 27 at NW Martin Luther King Avenue;
7. US 27at NW 27th Avenue; and
8. US 27 at I-75.

3.5 Existing Traffic Characteristics

Existing traffic volumes for 30 selected sites along the US 27 Corridor were gathered for 2010 from the Florida Department of Transportation TranStat office and included both permanent and temporary count stations. Sites were selected based on historical data availability, area type (urban/rural), and number of lanes. Count locations with at least 10 years of historical data were prioritized in the selection process, but in some rural areas count locations were chosen which have with less historical data to obtain a representative number of counts throughout the corridor. Consideration was also given to major cross streets, such as I-4 in Polk County, which could significantly influence traffic in surrounding areas. The existing Average Annual Daily Traffic (AADT) volumes are illustrated in **Figure 3.5.1A** and **Figure 3.5.1B**.

Seventeen of the 30 sites evaluated are located in urban areas. Nine of the sites have a rural developed designation and are primarily located between the northern part of Broward County to the southern portion of Highlands County along US 27. The following four sites are located in transitioning/urbanized areas under 500,000 and the three of the four sites are located in Highlands County:

- **Site 13 (Count Station 90021)** – Highlands County, north of CR 621 in Lake Placid;
- **Site 15 (Count Station 95022)** - Highlands County, north of CR 634A/Sebring Parkway in Sebring;
- **Site 16 (Count Station 95007)** - Highlands County, north of SR 17/Main Street in Avon Park; and,
- **Site 25 (Count Station 110364)** - Lake County, just south of Florida's Turnpike near CR 565.

Existing AADT along the US 27 Corridor ranges from a high of 56,500 vehicles per day (vpd) in Polk County near I-4 to a low of approximately 6,300 vpd in Glades County north of SR 29. The portion of the US 27 Corridor that is generally the most heavily traveled is located in the northern portion of the corridor in Polk, Lake, and Marion Counties. Traffic volumes are highest near Interstate 4 in Polk County and in Miami-Dade just southeast of SR 826. The southern section of the US 27 Corridor, from the northern portion of Palm Beach County through Hendry and Glades Counties and through the southern portion of Highlands County, has the lowest AADT in the corridor and is primarily rural in nature. AADT within this portion of the corridor generally ranges from 6,300 vpd in Glades County to 14,547 vpd in Hendry County near SR 80.

Truck AADT ranges from a high of more than 9,862 trucks per day (tpd) in Miami-Dade County to a little more than 2,000 tpd in Lake and Marion Counties. Truck percentages also vary throughout the corridor, with trucks accounting for only 3.9 percent of the traffic stream in Marion County near the Lake/Marion County line and approximately 41 percent of the traffic stream in Glades County north of SR 29. The truck percentages are indicated by the T-factor in **Figures 3.5.1A** and **3.5.1B.**

Figure 3.5.1A

US-27 Existing Traffic Characteristics

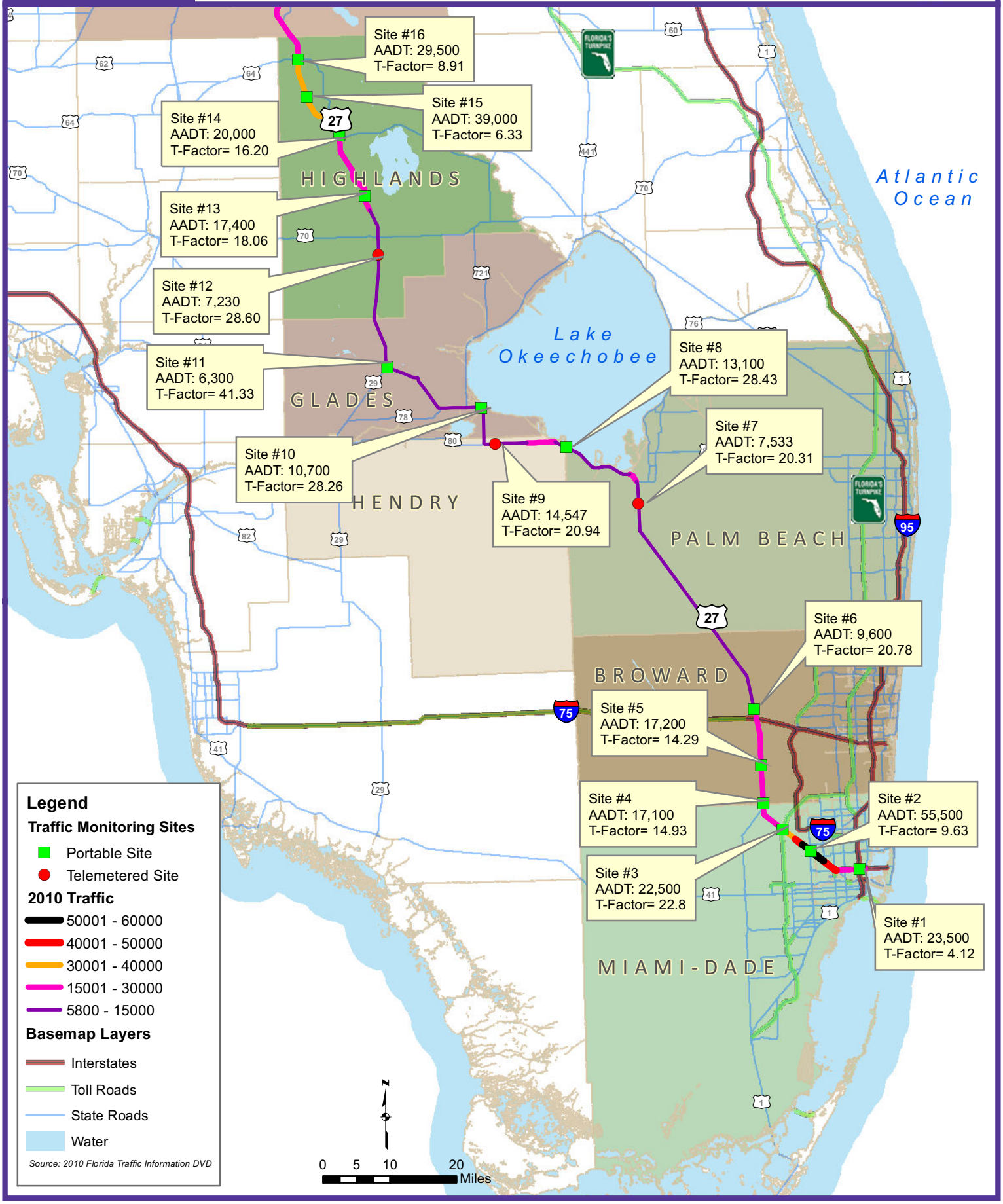
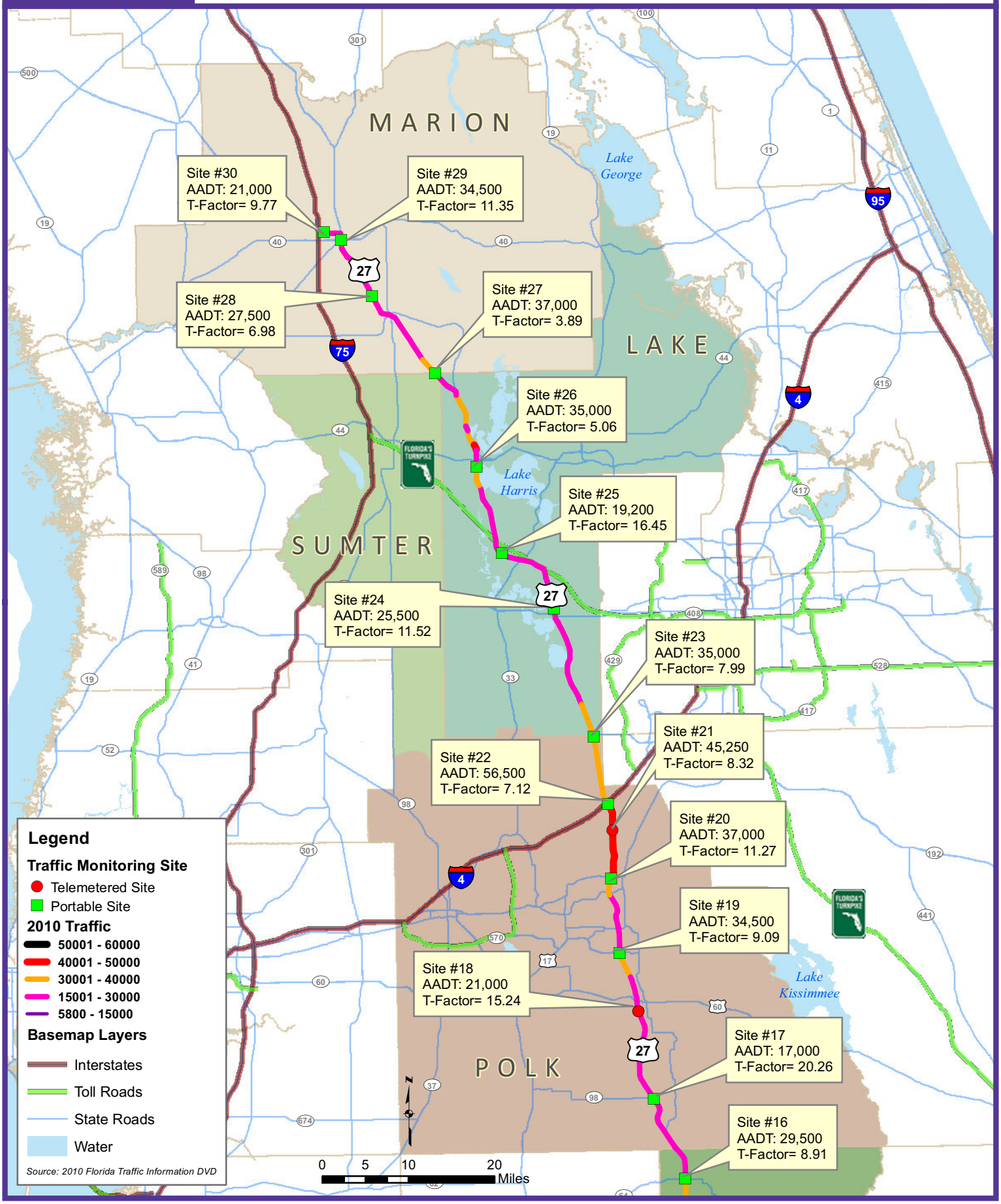


Figure 3.5.1B

US-27 Existing Traffic Characteristics



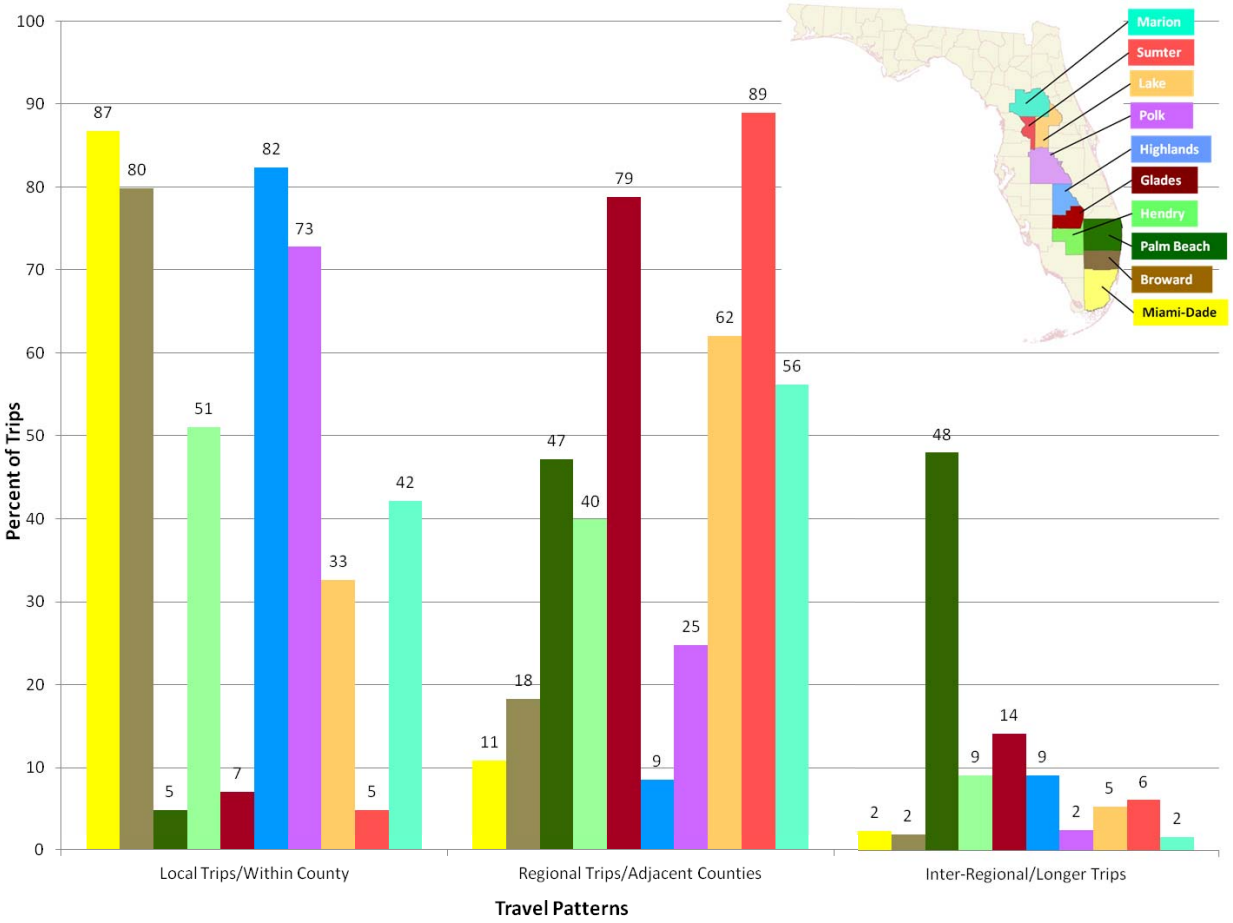
Regional Trip Patterns

Regional trip patterns vary along the US 27 Corridor, depending upon the selected location, as illustrated in **Figure 3.5.2**. In Miami-Dade, Broward, and Highlands Counties, a large percentage of trips along US 27 are considered local trips, starting and ending within each respective county. This trend indicates that US 27 in urbanized areas, such as Miami, is predominantly used for local trips. Highlands, although predominantly rural, also utilizes US 27 for local trips due to its geographic location at the center of the Florida Heartland. Notably, in Polk County, more than 70 percent of trips are local trips.

Regional trips, those trips between the county of origin and any surrounding county, represent a significant percentage of trips for several counties, as shown in **Figure 3.5.2**. Counties with regional trips greater than 50 percent include Glades, Lake, Sumter, and Marion Counties. In Marion County, the trips are fairly well split between local trips and regional trips, with local trips making up more than 40 percent of trips and regional trips comprising about 55 percent of trips. This is most likely due to the high volume of commuters between Marion County and Lake and Sumter Counties. It should be noted in reviewing these regional trip patterns that there is a one-mile segment of US 27 in Sumter County which connects Lake, Sumter and Marion Counties. Although these trips are technically crossing county lines and therefore defined as regional, the majority of trips in this area are linked to local traffic in The Villages Retirement Community. In Glades, and Lake Counties, most trips are regional trips in nature. The trip distribution for those counties can be attributed to the number of commuters traveling to regional employment centers in adjacent counties.

Inter-regional trips represent a small percentage of trips for each of the counties in the study area with the exception of Palm Beach County. The segment of US 27 in Palm Beach County is extremely rural in nature and passes through a large swath of wildlife management and conservation areas. This emphasizes the difference in trip characteristics in different areas of the state where US 27 is used more for long distance trips in some areas and used more for local trips in other areas. Trip characteristics of the corridor have large impact on the types of alternatives that should be considered for improving mobility along the US 27 Corridor.

Figure 3.5.2 Percent of Local vs. Regional and Inter-regional Trips along US 27



Source: FDOT Statewide Travel Demand Model

Note: For the purposes of this figure, local trips are defined as trips within the county. Regional trips are defined as trips between the county of origin and any surrounding county. Inter-Regional trips are defined as trips between the county and other areas of the state or out-of-state.

3.6 Existing Traffic Operations

Existing traffic operations are most often described in terms of volume-to-capacity (v/c) ratio and level of service (LOS). A standard measure of travel demand, the v/c ratio describes whether a roadway is operating at a congested condition at a given point in time. A v/c ratio of less than 1.0 indicates that a roadway is operating at volume levels less than capacity, while a v/c ratio of 1.0 or greater indicates that a roadway has reached or exceeded its theoretical operating capacity, and any additional traffic volume will result in a breakdown in traffic flow.

LOS is an indication of roadway operating conditions and can be calculated using numerous measures such as delay (for signalized intersections), free flow travel speed (for arterial roadways), or v/c (for freeways/expressways). LOS is similar to the grading scale of a report card and identifies roadway operating conditions as follows:

- LOS A through C indicates operating conditions where traffic can move relatively freely. These operating conditions most frequently occur in rural areas;
- LOS D signifies that vehicle speed and freedom of movement is beginning to decline slightly due to increasing traffic volume and that the traffic volume is reaching or is at capacity;
- LOS E indicates conditions where traffic volumes are exceeding the capacity of the roadway, resulting in serious delays; and,
- LOS F is the point at which a significant breakdown in vehicular flow occurs. This condition exists when the demand for space on the roadway exceeds the capacity of the roadway.

For the purposes of this study, existing Level of Service (LOS) was determined at 30 different locations along US 27 using existing Average Annual Daily Traffic (AADT) volumes compared to statewide minimum Level of Service (LOS) standards. These LOS standards and capacities were obtained from the Generalized Level of Service (LOS) tables based on the 2009 FDOT Quality/Level of Service Handbook. Existing LOS along the US 27 Corridor is summarized in **Table 3.6.1**.

The intention of **Table 3.6.1** is to provide an existing overview of the LOS operating conditions along US 27. The existing year is based upon the availability of traffic data. Because only 2010 traffic data is available, the existing lane configuration within **Table 3.6.1** represents 2010 conditions and does not reflect improvements completed after that time.

The results illustrate that overall US 27 is performing relatively well, with LOS meeting or exceeding standards in most locations along the corridor. Existing capacity challenges and concerns were identified at three site locations along the corridor. Unacceptable LOS is identified in Miami-Dade County southeast of SR 826, and in the northern portion of the study corridor in Polk County near I-4 and in Marion County at the Sumter/Lake/Marion county lines. These segments are highlighted in red in **Table 3.6.1**.

Table 3.6.1 2010 Traffic Operations

Site #	Count Station	Description	Area Type	Existing Conditions		LOS Std[3]	LOS Std Capacity[4]	Operating LOS
				AADT[1]	Lanes[2]			
1	875077	SR 25/US-27/NW 36 ST, 200' E I-95	Urban	23,500	4	D	33,200	C
2	870528	SR 25/US-27/OKEECHOBEE RD, 200' SE SR 826	Urban	55,500	6	D	50,300	F
3	870007	SR 25/US-27/OKEECHOBEE RD, 200' NW SR 821/HEFT	Urban	22,500	4	D	36,700	B
4	860584	SR 25 / US 27 AT DADE/BROWARD CO LINE	Urban	17,100	4	D	64,300	B
5	865336	SR 25 / US 27 - S OF STIRLING RD	Urban	17,200	4	D	64,300	B
6	860119	SR 25/US 27 - N OF SR 93/I 75	Rural Developed	9,600	4	B	26300	B
7	930268	SR-25/US-27,0.46 MI. N. OF CR-827,PALM BEACH CO.	Rural Developed	7,533	4	B	26300	B
8	930502	SR 25/US 27 AT PALM BCH/HENDRY CO LINE (COUNTY LINK: 7035)	Rural Developed	13,100	4	B	26300	B
9	79918	SR-25&80/US-27,1.6 MI EAST OF SR-80,HENDRY CO.	Rural Developed	14,547	4	B	26300	B
10	50004	SR 25/US 27,SE OF CALOOSAHATCHEE RIVER BRIDGE	Rural Developed	10,700	4	B	26300	B
11	50007	SR 25/US 27, NORTH OF SR 29	Rural Developed	6,300	4	B	26300	B
12	90327	SR-25/US-27,2.7 MI SOUTH OF SR-70,HIGHLANDS CO.	Rural Developed	7,230	4	B	26300	B
13	90021	SR 25/US 27, NORTH OF CR 621 LAKE PLACID	Transition	17,400	4	C	32,100	B
14	90022	SR 25/US 27, SOUTH OF SR 66/700/US 98	Rural Developed	20,000	4	B	10,300	D
15	95022	SR 25/US 27, N OF CR 634A/SEBRING PKWY SEBRING	Transition	39,000	6	C	48,600	B
16	95007	SR 25/700/US 27/98, N OF SR 17/64/MAIN ST AVON PK	Transition	29,500	6	C	68,100	B
17	160076	SR 25/US 27, SOUTHEAST OF SR 700/US 98	Rural Developed	17,000	4	B	26300	B
18	160128	SR-25/US-27 .8 MI S OF SR-60 S OF OWENS RD POLK CO	Urban	21,000	4	C	49,600	B
19	160146	SR 25/US 27, SOUTH OF SR 540/WAVERLY ROAD	Urban	34,500	6	C	53,700	B
20	160097	SR 25/US 27, SOUTH OF SR 600/US 17/92 HAINES CITY	Urban	37,000	6	C	53,700	B
21	160310	SR-25/US-27,280' S OF S HOLLY HILL TANK RD,POLK CO	Urban	45,250	6	C	53,700	C

Table 3.6.1 2010 Traffic Operations

Site #	Count Station	Description	Area Type	Existing Conditions		LOS Std[3]	LOS Std Capacity[4]	Operating LOS
				AADT[1]	Lanes[2]			
22	160126	SR 25/US 27, SOUTH OF SR 400/I-4	Urban	56,500	6	C	39,000	F
23	165209	SR 25/US 27, SOUTH OF SR 530/US 192	Urban	35,000	4	C	35,500	C
24	115047	ON US-27, 0.897 MI. N OF SR-50(UVL)	Urban	25,500	6	C	53,700	B
25	110364	ON US-27, 0.366 MI. S OF CR-565 (RC)	Transition	19,200	4	C	32,100	B
26	115116	ON SR-25(US-27), 0.169 MI. S OF SR-44 (UVL)	Urban	35,000	4	C	35,500	C
27	180209	ON US-441, 0.01 MI. S OF MARION CO. (RCLP) UC 2011	Urban	37,000	4	C	25,000	F
28	360012	ON US 27/301/441, 0.076 MI. S OF SE 38TH TER (RCLP)	Urban	27,500	4	C	35,500	B
29	360132	ON US-441, 0.12 MI. S OF SR-40 (UVL)	Urban	34,500	6	C	53,700	B
30	360033	ON US-27, 0.188MI. N OF 30TH AVE. (UCLP)	Urban	21,000	4	C	35,500	B

Sources:

(1) (2) AADT and lanes are based on FDOT Central Office compiled data from FDOT District Offices.
(3) LOS Standards are based on Florida Statutes.
(4) Service capacity volumes at LOS Standard are based on the *2009 Quality/Level of Service Handbook*.

3.7 Planned Improvements

FDOT and its partner agencies continue to improve the US 27 Corridor as funding permits. Numerous improvement projects are anticipated between 2011 and 2021, as identified in **Table 3.7.1**. Projects were identified from several sources including the County Transportation Improvement Plans (TIP), FDOT Work Program, FDOT SIS First Five Year Plan, and the FDOT SIS Second Five Year Plan. They are listed by county and include a project location (description), project type, anticipated completion, phase, and the source of the information.

Table 3.7.1 Planned Improvements*

COUNTY	PROJECT LOCATION	PROJECT TYPE	ANTICIPATED COMPLETION	PHASE
MIAMI-DADE	FROM NW 79TH AVE TO SR 997/KROME AVE	PD&E	2012	PD&E
BROWARD	FROM PINES BLVD TO GRIFFIN ROAD	MODIFY LEFT LANES	2012	CON
PALM BEACH	FROM BROWARD/PALM BEACH C/L TO MP 5.892	MAINTENANCE RESURFACING (FLEX)	2012	CON
HIGHLANDS	FROM LAKE ISIS AVE TO POLK C/L	PRELIMINARY ENGINEERING	2012	CON
POLK	FROM HIGHLANDS C/L TO N OF SR 60	PD&E	2013	PD&E
POLK	FROM N OF RITCHIE ROAD TO SOUTH OF BARRY ROAD	PRELIMINARY ENGINEERING	2015	CON
POLK	FROM HIGHLANDS C/L TO N OF US 98	RESURFACING	2013	CON
POLK/LAKE	I-4 (POLK COUNTY) TO N OF US 192 (LAKE COUNTY)	ADD 2 LANES TO BUILD 6 LANES	2013	CON
LAKE	FROM N OF BOGGY MARSH RD TO N OF LAKE LOUISA RD	ADD 2 LANES TO BUILD 6 LANES	2012	PE, ROW
LAKE	FROM 1000' N LAKE LOUISA TO N OF CLUSTER OAK DR	ADD LANES & REHABILITATE PAVEMENT	2012	CON
LAKE	FROM NORTH OF MARGAUX DR TO CR 33	SIGNING /PAVEMENT MARKINGS	2012	CON
LAKE	INTERCHANGE WITH SR 50	ADD 2 LANES TO BUILD 6 LANES	2012	PE, ROW, CON
MARION	INTERSECTION OF NW 35TH AVENUE	OPERATIONAL IMPROVEMENTS	2013	CON
MARION	INTERCHANGE AT SB RAMP I-75	OPERATIONAL IMPROVEMENTS	2013	CON

Sources: Broward MPO TIP FY 2011/12 – FY 2015/2016, July 2011; Palm Beach MPO TIP FY 2011-2015, July 2010; Polk TPO TIP, June 2011; Lake-Sumter MPO TIP FY 2011/12-2015/16, June 2011; FDOT Adopted Work Program, July 2010; FDOT SIS First Five Year Plan, July 2010; FDOT SIS Second Five Year Plan, March 2011.

* Note: Projects listed in Table 3.7.1 are current as of the publication dates for each individual report (July 2011 for the SIS Adopted Five Year Plan or March 2011 for the SIS Second Five Year Plan). Supplemental project information was also provided by agencies for improvements not listed in these plans. It is important to note that the anticipated completion dates for any of these projects could change. As State revenues change, projects may move up or down in priority, or be removed from this list. Likewise, new projects could be added as additional revenue becomes available or as implementation priorities changes.

3.8 Future Traffic Operations

The future traffic operations section provides a snapshot of the US 27 mainline mobility needs without the detailed operational analysis typically found in Master Plans and Project Development and Environment (PD&E) studies. Results for sites along the mainline are provided as Average Annual Daily Traffic (AADT) along with corresponding capacity thresholds, as shown in **Table 3.8.1**. The primary purpose of the US 27 traffic forecast is to summarize the demand along the mainline only. Cross street traffic demand is not taken into account for the purposes of this section.

Traffic forecast data is usually available from several sources. In urbanized areas with a Metropolitan Planning Organization (MPO) or Transportation Planning Organization (TPO), a regional travel demand model which complies with the Florida Statewide Urban Transportation Model Structure (FSUTMS) is a good resource for future traffic forecasts. In rural areas, historic growth trends from FDOT's Florida Traffic Information (FTI) DVD together with the Florida Statewide Model provide future traffic information.

The future traffic information used for the US 27 Transportation Alternatives Study is based on averaging the future traffic forecasts provided through FDOT TranStat, regional model projections, and historic growth rates. A one percent growth rate was used in cases where ten-year historical growth was identified as negative. The resulting project year 2035 future traffic characteristics are presented in **Figures 3.8.1A** and **Figure 3.8.1B**. It should be noted that traffic projections may differ depending upon the level of analysis undertaken.

Future year 2035 traffic volumes along US 27 are forecasted to increase significantly throughout the corridor, with the largest absolute increases located in the northern portion of the study area in Polk (north and south of I-4) and Lake Counties. Dramatic increases in these overall volumes are also found in Miami-Dade County near SR 826 and at the Miami-Dade/Broward County line. The highest absolute change in AADT is found in Polk County south of SR 530 and US 192, where volumes are anticipated to increase by approximately 31,500 vpd. The lowest absolute change in AADT is located in northern Highlands County north of CR 634A near Sebring, where volumes are anticipated to increase by approximately 4,500 vpd.

Figure 3.8.1A

US-27 Projected Year 2035 Traffic Characteristics

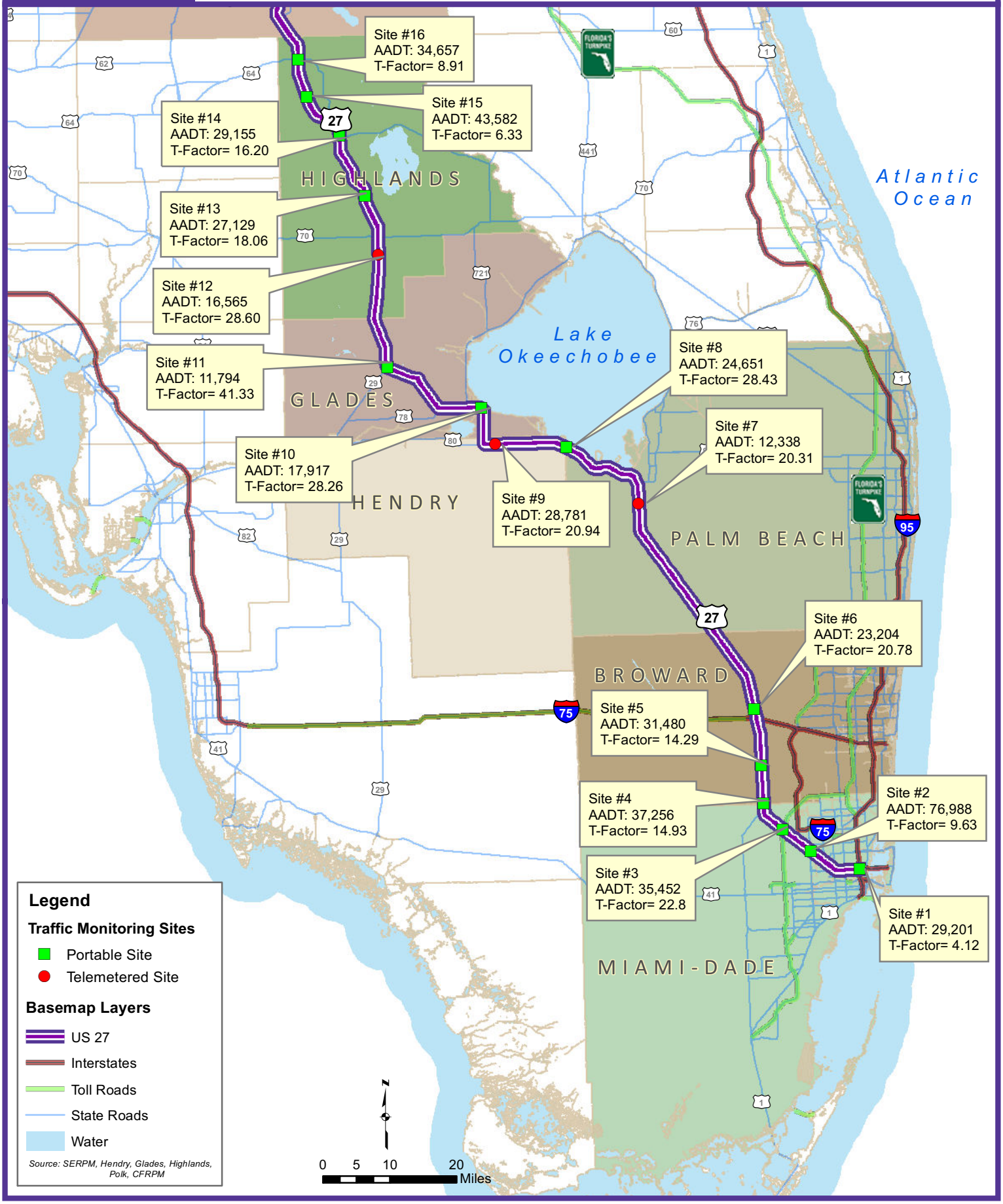


Figure 3.8.1B

US-27 Projected Year 2035 Traffic Characteristics

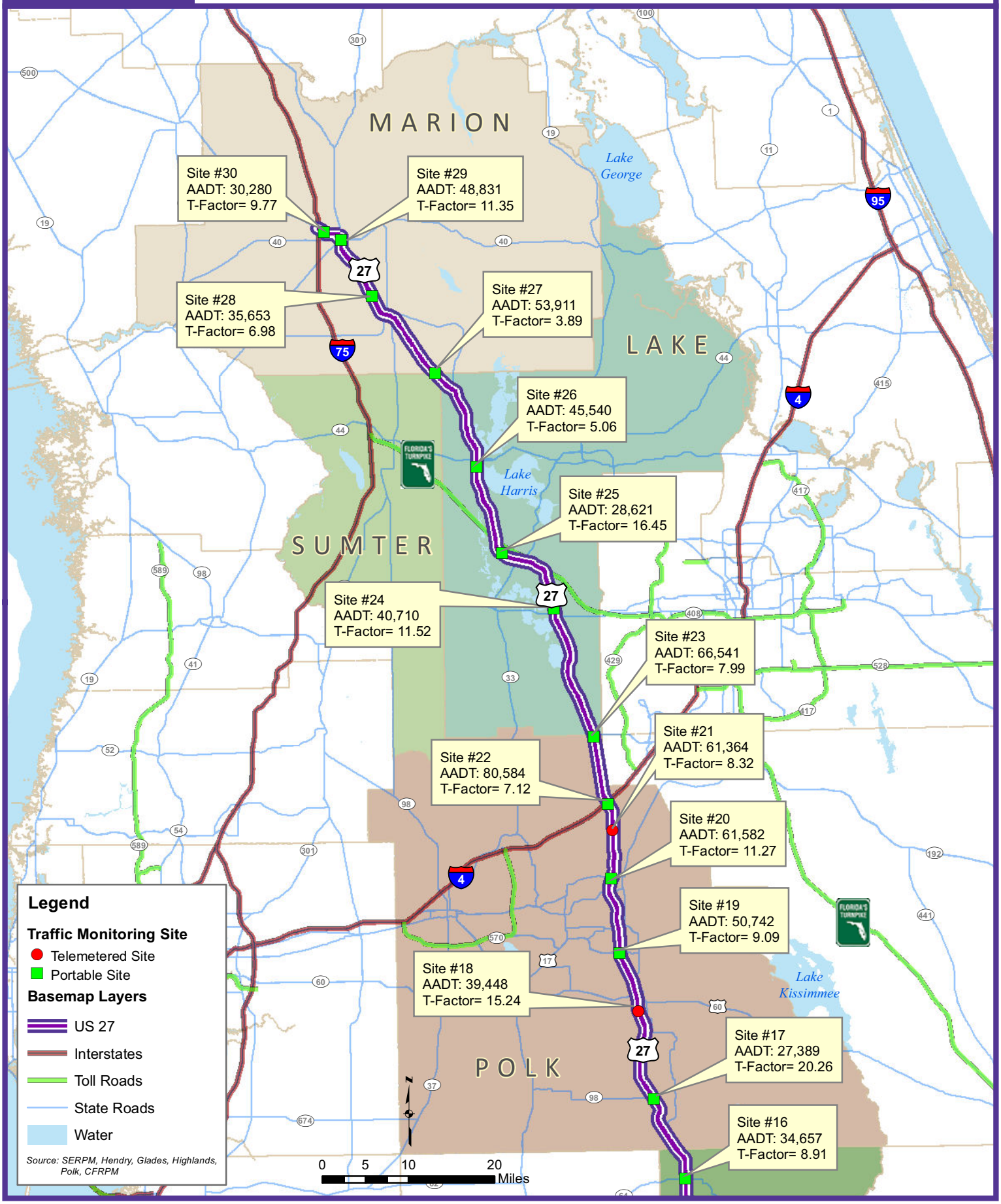


Table 3.8.1 Future Year 2035 Projected Traffic Operations

Site #	Count Station	Description	Area Type	2010 AADT	2010 Lanes	2010 LOS	Projected 2035 AADT	Planned Lanes by 2035	Projected 2035 LOS w/ Planned Lanes
1	875077	SR 25/US-27/NW 36 ST, 200' E I-95	Urban	23,500	4	C	29,201	4	D
2	870528	SR 25/US-27/OKEECHOBEE RD, 200' SE SR 826	Urban	55,500	6	F	76,988	6	F
3	870007	SR 25/US-27/OKEECHOBEE RD, 200' NW SR 821/HEFT	Urban	22,500	4	B	35,452	4	C
4	860584	SR 25 / US 27 AT DADE/BROWARD CO LINE	Urban	17,100	4	B	37,256	4	C
5	865336	SR 25 / US 27 - S OF STIRLING RD	Urban	17,200	4	B	31,480	4	B
6	860119	SR 25/US 27 - N OF SR 93/I 75	Rural Developed	9,600	4	B	23,204	4	B
7	930268	SR-25/US-27,0.46 MI. N. OF CR-827,PALM BEACH CO.	Rural Developed	7,533	4	B	12,338	4	B
8	930502	SR 25/US 27 AT PALM BCH/HENDRY CO LINE (COUNTY LINK: 7035)	Rural Developed	13,100	4	B	24,651	4	B
9	79918	SR-25&80/US-27,1.6 MI EAST OF SR-80,HENDRY CO.	Rural Developed	14,547	4	B	28,781	4	C
10	50004	SR 25/US 27,SE OF CALOOSAHATCHEE RIVER BRIDGE	Rural Developed	10,700	4	B	17,917	4	B
11	50007	SR 25/US 27, NORTH OF SR 29	Rural Developed	6,300	4	B	11,794	4	B
12	90327	SR-25/US-27,2.7 MI SOUTH OF SR-70,HIGHLANDS CO.	Rural Developed	7,230	4	B	16,565	4	B
13	90021	SR 25/US 27, NORTH OF CR 621 LAKE PLACID	Transition	17,400	4	B	27,129	4	C
14	90022	SR 25/US 27, SOUTH OF SR 66/700/US 98	Rural Developed	20,000	4	D	29,155	4	F
15	95022	SR 25/US 27, N OF CR 634A/SEBRING PKWY SEBRING	Transition	39,000	6	B	43,582	6	C
16	95007	SR 25/700/US 27/98, N OF SR 17/64/MAIN ST AVON PK	Transition	29,500	6	B	34,657	6	B
17	160076	SR 25/US 27, SOUTHEAST OF SR 700/US 98	Rural Developed	17,000	4	B	27,389	4	C
18	160128	SR-25/US-27 .8 MI S OF SR-60 S OF OWENS RD POLK CO	Urban	21,000	4	B	39,448	4	C

Table 3.8.1 Future Year 2035 Projected Traffic Operations

Site #	Count Station	Description	Area Type	2010 AADT	2010 Lanes	2010 LOS	Projected 2035 AADT	Planned Lanes by 2035	Projected 2035 LOS w/ Planned Lanes
19	160146	SR 25/US 27, SOUTH OF SR 540/WAVERLY ROAD	Urban	34,500	6	B	50,742	6	C
20	160097	SR 25/US 27, SOUTH OF SR 600/US 17/92 HAINES CITY	Urban	37,000	6	B	61,582	6	F
21	160310	SR-25/US-27,280' S OF S HOLLY HILL TANK RD,POLK CO	Urban	45,250	6	C	64,364	6	F
22	160126	SR 25/US 27, SOUTH OF SR 400/I-4	Urban	56,500	6	F	80,584	6	F
23	165209	SR 25/US 27, SOUTH OF SR 530/US 192	Urban	35,000	4	C	66,541	6	F
24	115047	ON US-27, 0.897 MI. N OF SR-50(UVL)	Urban	25,500	6	B	40,710	6	B
25	110364	ON US-27, 0.366 MI. S OF CR-565 (RC)	Transition	19,200	4	B	28,621	4	C
26	115116	ON SR-25(US-27), 0.169 MI. S OF SR-44 (UVL)	Urban	35,000	4	C	45,540	4	F
27	180209	ON US-441, 0.01 MI. S OF MARION CO. (RCLP) UC 2011	Urban	37,000	4	F	53,911	4	F
28	360012	ON US 27/301/441, 0.076 MI. S OF SE 38TH TER (RCLP)	Urban	27,500	4	B	35,653	4	D
29	360132	ON US-441, 0.12 MI. S OF SR-40 (UVL)	Urban	34,500	6	B	43,831	6	B
30	360033	ON US-27, 0.188MI. N OF 30TH AVE. (UCLP)	Urban	21,000	4	B	30,280	4	C

Sources: 2009 FDOT Quality/Level of Service Handbook; 2010 FDOT TranStat Office; Averages from multiple travel models; CDM Smith.

Four locations, including one site in Miami Dade County, one in Broward, one in Hendry and one in Highlands, are expected to increase by close to 100 percent or more. Of the sites that experienced an increase of more than 100 percent, the location in Broward County north of SR 93 and I-75 is expected to increase by over 141 percent and the location in Highlands County near SR 70 is expected to increase by 129 percent between 2010 and 2035.

Projections indicate that by 2035, seven of the 30 count stations will be at LOS F. Six of these seven locations are concentrated in Polk and Lake Counties from just south of I-4 in Polk County through to the Lake/Marion County line. In addition, US 27 in Miami-Dade County to the southeast of SR 826 is expected to continue to operate at LOS F at this time.

3.9 Existing Freight Mobility System

Freight transportation is an essential component of the economy in each of the ten counties in the study area and to the whole of Florida's economy. The transportation access Florida has to domestic and international markets makes Florida an important cog in the national freight network. Florida's economic competiveness relies on the efficiency and reliability of the state's multimodal transportation system to move goods in the state. The state's most strategic highways, rail lines and freight terminals, as well as other freight routes, terminals and distribution centers are crucial for completing door-to-door freight movements between the shipper and receiver.

The shipment of freight is also a large source of travel demand for the State. According to the *Trends and Conditions Reports*, prepared by the FDOT's Office of Policy Planning, the diversity of freight modes in Florida reflects both the variety of goods generated and consumed in Florida and the alternative modes of freight shipment. Several key state trends were identified: [5]

- Trucks are the dominant mode for freight shipments; this is in both value and tons. Truck miles traveled (TMT) on the State Highway System decreased nearly 10.4 percent in 2010. The recessed economy has contributed to declines in truck movement in the state.

- The aviation system handles a relatively small share of Florida's total freight trade. The aviation system is typically used to transport valuable, fragile, and/or time sensitive items, such as mail and sophisticated manufactured items. Even with post 9-11 security concerns, airline restructuring, and higher fuel costs, the demand for air cargo has experienced moderate growth; the fundamental attractiveness of air travel remains. [6] In 2010, airline freight in Florida increased after a decline the previous two years.

- Most international freight arrives in Florida by water. In 2010, the state's 14 deepwater seaports moved 106.4 million tons of cargo and handled 2.8 million TEUs (20-foot equivalent container units). Compared to FY 2009, Florida's containerized cargo value increased by 19.5 percent, container movements by five percent and waterborne tonnage by over one percent.

- In 2009, Florida's freight railroads moved nearly 98.2 million tons of freight, with 676,600 rail carloads originating in Florida, the eleventh highest state, and 1,036,700 carloads terminating in Florida, the fifth highest state.[7]

[5] Florida Transportation Trends and Conditions - 2011
[6] Trends and Conditions Report-2009 Transportation Systems: Air Facilities-Passengers and Freight
[7] Trends and Conditions Report-2011: The Transportation System – Rail System

- Including all total originating freight tonnage for Florida in 2009, non metallic mineral freight comprised 56 percent. The recent downward t[r]end in rail freight tonnage was mostly due to the changing market conditions for non metallic industries like phosphate.

The remainder of this section assesses freight trends and the importance of intermodal freight and freight operations in the US 27 Corridor. This includes truck freight on the highway itself, as well as rail, air, and water freight and other truck freight that connect to the corridor.

Intermodal Locations and Characteristics

Numerous intermodal facilities are located within the ten county study area, and each supports trucks as a mode type in addition to those locations with air, rail, or maritime/port modes. **Table 3.9.1** lists the names and locations of various intermodal facilities along the corridor and indicates the primary function as well as all modes affiliated with each facility.

Table 3.9.1 Intermodal Facility Locations

Name	Function	Mode Types	Location
Cargill, Inc.-Tampa	Rail	Truck-Port-Rail	Tampa
Miami-Hialeah FEC Intermodal Terminal	Rail	Rail & Truck	Miami
Emery Forwarding-Ft. Lauderdale	Air	Air & Truck	Ft. Lauderdale
Emery Customs Brokers-Miami	Air	Air & Truck	Miami
Emery Ocean Services – Miami	Air	Air & Truck	Miami
Menlo Worldwide Logistics – Miami	Air	Air & Truck	Miami
Emery Forwarding-Orlando	Air	Air & Truck	Orlando
Trans-Express International Courier	Air	Air & Truck	Miami
Ameritrans Cargo Brokers	Air	Air & Truck	Miami
AirTran Airways	Air	Air & Truck	Orlando
Palm Beach International Airport	Air	Air & Truck	Palm Beach
Miami International Airport	Air	Air & Truck	Miami
Orlando International Airport	Air	Air & Truck	Orlando
Kissimmee Gateway Airport	Air	Air & Truck	Kissimmee
Ft. Lauderdale/Hollywood International Airport	Air	Air & Truck	Ft. Lauderdale
NS-Miami	Rail	Rail & Truck	Miami
CSX Intermodal-Orlando	Rail	Rail & Truck	Orlando
CSX Intermodal-Miami	Rail	Rail & Truck	Miami
Florida East Coast-Ft. Lauderdale	Rail	Rail & Truck	Ft. Lauderdale
Port Everglades	Port	Port & Truck	Ft. Lauderdale

Table 3.9.1 Intermodal Facility Locations

Name	Function	Mode Types	Location
Port of Palm Beach	Port	Port & Truck	Rivera Beach
Port of Miami	Port	Port & Truck	Miami
Saddle Creek Corp.-Lakeland	Rail	Rail & Truck	Lakeland
Smith Terminal Distribution Systems-Miami	Rail	Rail & Truck	Miami
Robertson, Johnson Warehouses, Inc.-Orlando	Rail	Rail & Truck	Orlando
Saddle Creek Corp.-Orlando	Rail	Rail & Truck	Orlando
Florida East Coast-Miami	Rail	Rail & Truck	Miami
Florida Bulk Transfer	Rail	Rail & Truck	Miami
Alphinos Distributors, Incorporated	Rail	Rail & Truck	Miami
Sunshine Loading Service, Incorporated	Rail	Rail & Truck	Medley
Challenge Warehousing, Incorporated	Rail	Rail & Truck	Ft. Lauderdale
Air Jamaica	Air	Air & Truck	Miami
Ace Expediters	Air	Air & Truck	Orlando
Florida East Coast-Ft. Lauderdale	Rail	Rail & Truck	Ft. Lauderdale
Yellow-Miami Terminal	Truck	Rail & Truck	Hialeah
Yellow-Ocala Terminal	Truck	Rail & Truck	Ocala
Yellow-Orlando Terminal	Truck	Rail & Truck	Orlando
Yellow-West Palm Beach	Truck	Rail & Truck	Boynton Beach
USPS-AMC-AMF-Ft. Lauderdale	Air	Air & Truck	Ft. Lauderdale
NS Connecting Line Bulk Transfer Terminal-Pompano	Rail	Rail & Truck	Pompano Beach
USPS-AMC-AMF-West Palm Beach	Air	Air & Truck	West Palm Beach
USPS-PFD-PDF-Lakeland	Truck	Truck & Truck	Lakeland
USPS-P and DC-P and DF-West Palm Beach	Truck	Truck & Truck	West Palm Beach
NS Thoroughbred Bulk Transfer Terminal-Miami	Rail	Rail & Truck	Miami
Carry Transit-Lakeland	Rail	Rail & Truck	Lakeland
Transflo-Ft. Lauderdale	Rail	Rail & Truck	Ft. Lauderdale
Trans Air Services	Air	Air & Truck	Orlando

Sources: Bureau of Transportation Statistics National Transportation Atlas Database 2011; FDOT Systems Planning Office 2012.

In addition to these existing intermodal centers, the ITIN Study is also evaluating the potential for implementation of three ILCS located in Glades, Palm Beach and St. Lucie Counties. Two of these locations could have direct impacts to the corridor. The Winter Haven/CSX Rail Yard is also located near the corridor in Polk County and the Ocala Site 489 Business Park ILC site plan adjacent to US 27 and I-75 in Marion

County is currently in progress. Coordination of these ILC plans will need to be considered for effective freight movement throughout the state.

Figures 3.9.1A and 3.9.2B illustrate the Strategic Intermodal System (SIS) hubs along the US 27 Corridor. The SIS hubs include: major airports, intermodal freight-rail terminals, passenger terminals, and seaports. The facilities include both SIS and Emerging SIS hubs. SIS hubs are transportation centers where different transportation modes converge and interact. For example, in a passenger terminal, people enter the facility by one mode of access (e.g. on foot, riding a bicycle, by car, by bus or train, etc.) and leave by another. The US 27 Corridor serves and connects key SIS hubs that are on or adjacent to the corridor. Maintaining and strengthening the intermodal connections which serve these hubs are critical to enhancing the economic competiveness of Florida. Any improvements to US 27 should consider potential impacts to these facilities.

Displayed in **Table 3.9.1**, there are two main geographic area clusters of intermodal facilities along the US 27 Corridor, one in Southeast Florida and the other in Central Florida. The clusters in both locations can be attributed to the heavy urban population of each region. The interior segment of the corridor, between Polk and Palm Beach counties, does not contain any intermodal facilities due to its primarily rural nature; however, the highway does play an important role as a connector.

Shown in **Figure 3.9.1**, the SIS Hubs are the major freight entry and exit points in Florida. In the US 27 Corridor there are two existing SIS Intermodal Freight-Rail terminals, one located in Miami-Dade County and the other in Broward County. The study area includes three SIS deepwater seaport terminals, the Port of Miami in Miami-Dade County, Port Everglades in Broward County, and the Port of Palm Beach in Palm Beach County. There are also four SIS international airports and one gateway/reliever airport located in the study area, Miami International in Miami-Dade County, Ft. Lauderdale-Hollywood International Airport in Broward County, Palm Beach International Airport in Palm Beach County, Orlando International Airport in Orange County, and Kissimmee Gateway Airport in Osceola County.

Figure 3.9.1A

SIS and Emerging SIS Hubs

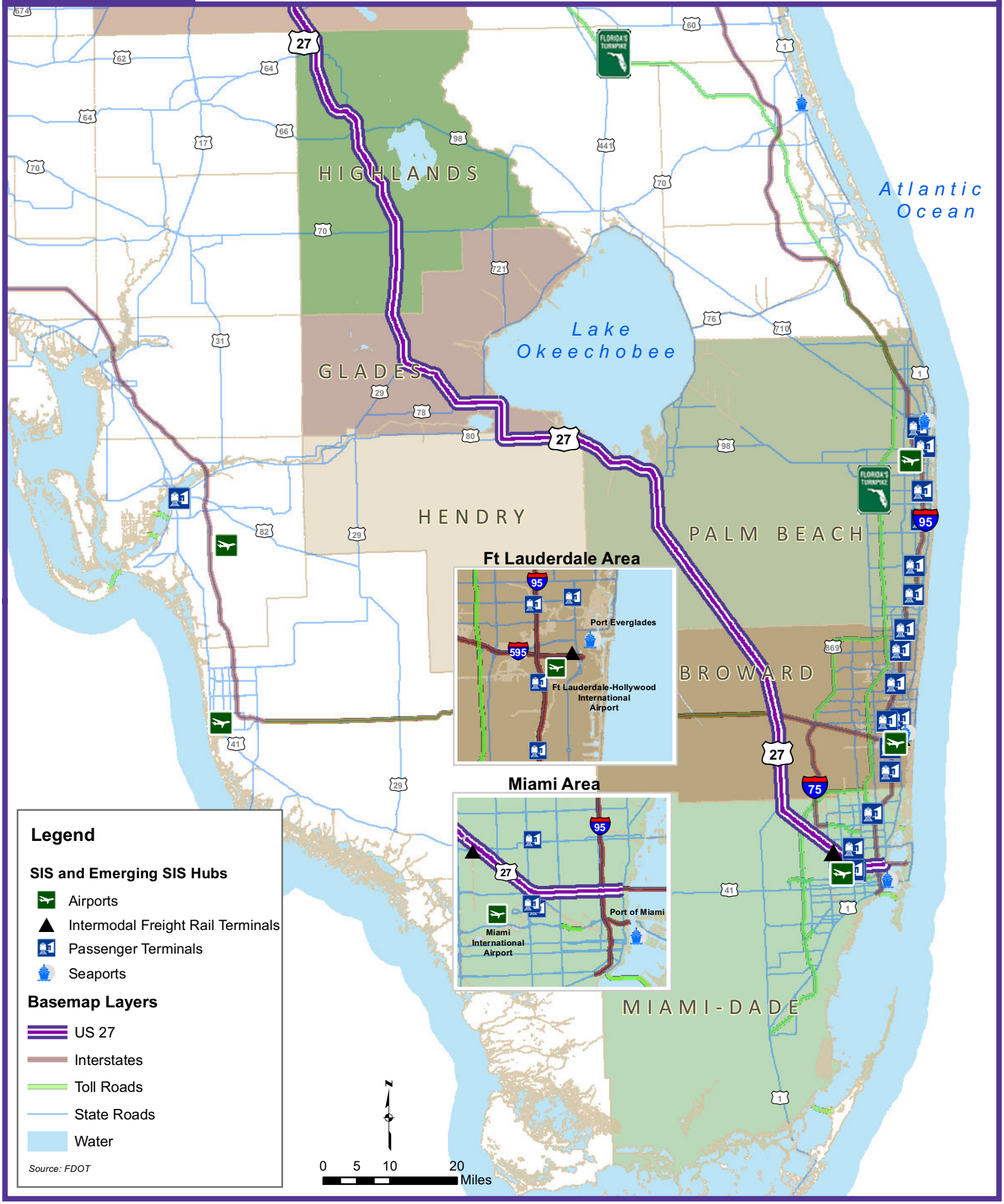
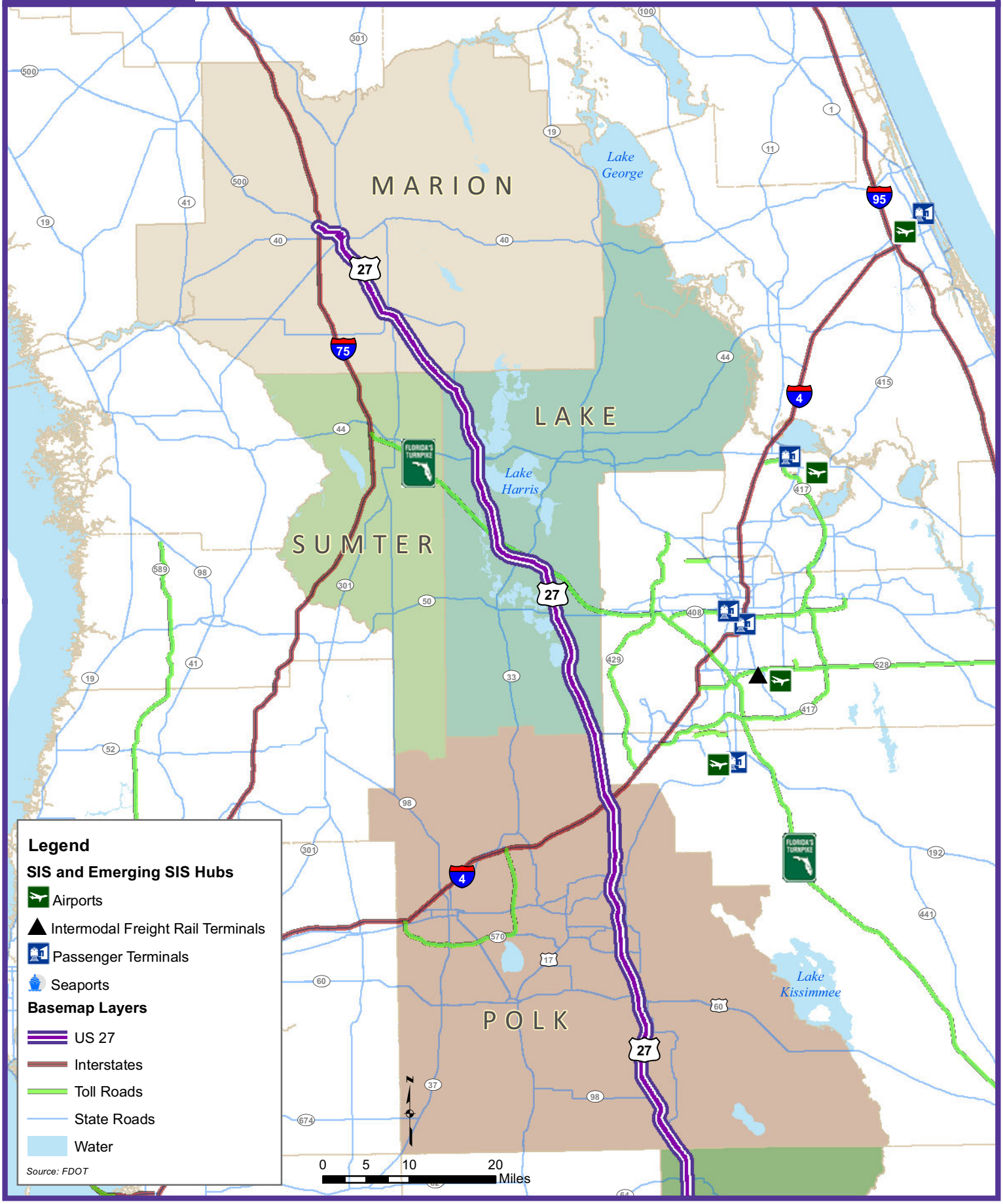


Figure 3.9.1B

SIS and Emerging SIS Hubs



Freight Mobility Needs Identified

Information presented in this summary is based on a review of previous studies conducted for the corridor, including freight and corridor studies. A summary of studies and findings and is included in **Table 3.9.2**.

Table 3.9.2 Freight Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Miami-Dade	Okeechobee Road Action Plan: Okeechobee Road (U.S. 27/S.R. 25) from Krome Avenue (S.R. 997) to NW 79th Avenue	July 2004	This action plan encompasses approximately 9.6 miles of Okeechobee Road (US 27). The action plan includes an assessment of the corridor's function, land use and cultural features, environmental and historical features, hydrological features, traffic operations, safety, freight movement, access management, and right-of-way. It identifies short term, midterm and long term improvements along the corridor including intersection and roadway capacity improvements. Intersections identified for improvements included Krome Avenue, Hialeah Gardens Boulevard, NW 138th Street, NW 105th Way, NW 103rd Street, north/south HEFT ramps, NW 121st Way, NW 95th Street as well as other intersections near the US 27 Corridor. The study also compared interrupted versus uninterrupted flows along the US 27 Corridor and recommends signal timing improvements at intersections within the corridor to improve traffic flows.

Table 3.9.2 Freight Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Miami-Dade, Broward, Palm Beach	South Florida Regional Freight Plan	March 2010	This study summarizes the findings of the 2010 freight summit, which identified a list of specific action items. Action items were categorized as short term (next 5 years), long term (5 to 20 years) and ongoing activities (programmatic items to be initiated in the short term and integrated into annual reviews). Action items specifically related to US 27 include short term implementation of a freight corridors program to develop or expand highway and rail corridors to meet future growth and shifts in demand. Development of a freight-only corridor along US 27 in Miami-Dade, Broward, and Palm Beach Counties are specifically mentioned for further consideration. As part of the stakeholder outreach, the following US 27 freight needs were identified: (1) US 27/Okeechobee Road - Construct grade separated overpass at major intersections between NW 79th Avenue and Krome Avenue, (2) develop a new US 27 Intermodal Logistics Center Rail Project, and (3) Develop a new US 27 Rail Link.
Miami-Dade, Broward, Palm Beach	US 27 Rail Corridor Study	March 2010	During the 2008 Florida State legislative session, funding was authorized via Specific Appropriation 2077 directing the Florida Department of Transportation (FDOT) to study and determine the feasibility of a rail corridor along US-27 from western Miami-Dade County to the City of South Bay in Palm Beach County. This study represents Phase 1 of a two-phase study and identified ten build alternatives at the sketch planning level with their alignment guided by qualitative assessment criteria. Based on the findings of this report, all ten alternatives were determined to be feasible based on a macroscopic assessment of fatal flaws. As part of Phase 2 of this study, a more microscopic analysis will be conducted on the alternatives identified and evaluation will be based on the key considerations identified as part of this initial study.

Table 3.9.2 Freight Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Miami-Dade, Broward, Palm Beach, Hendry	US-27 Multimodal Planning and Conceptual Engineering (PACE) Study	Current/ Ongoing	This study is investigating the technical and economic feasibility of developing the US-27 corridor to accommodate multimodal options, including rail and highway modes of transportation. The main objectives of the multimodal PACE Study are to investigate the feasibility of a potential rail by-pass to the west of the densely populated urban areas along the eastern seaboard, to identify conceptual engineering alternatives, and to conduct a preliminary assessment of the potential impact of the alternatives upon the surrounding environment. The study is also addressing the ultimate development of US-27 to accommodate future regional travel demand, in a manner consistent with Strategic Intermodal System (SIS) highway standards. A draft report is underway, and conclusions from that report will be included in the Alternative Strategies Technical Memorandum (Tech Memo #2) for this US 27 Alternatives Study.
Palm Beach	Palm Beach 2035 LRTP	December 2009	Identifies the following needs/illustrative projects in and around US 27: (1) proposed Inland Port located in the Glades area off of US 27. (2) The US 27 Rail Corridor Project (PACE Study).
Palm Beach, Glades	Interregional Transportation Infrastructure Needs (ITIN) Study	Current/ Ongoing	This study summarizes the possible infrastructure needs that could arise from the development of three potential Intermodal Logistic Centers (ILCs) located in Palm Beach, Glades, and St. Lucie Counties by year 2035 to match the current Long Range Transportation Plans and address anticipated regional freight growth over this time period. A number of roadway improvements for eight lanes along US 27 are identified to meet anticipated traffic needs resulting from implementation of these ILCs.
Hendry	Hendry County 2035 LRTP	May 2008	Identifies needs for US 27 capacity improvements from four to six lanes. Six lanes are shown as needed between CR 833 to South San Francisco Street and from Wheeler to Ford Roads. Four lanes are identified east of Birchwood Road to CR 833. In addition, the needs identify a potential future Clewiston Truck Route that would deviate and return to US 27 in Clewiston.

Table 3.9.2 Freight Studies US 27 Corridor

MPO/ County	Plan/Study	Date	Overview
Highlands	County Line Road Traffic Study	August 2010	County Line Road identifies the potential for a proposed farm-to-market roadway supporting agricultural goods transport in South Central Florida. County Line Road could help separate truck traffic from passenger cars, by diverting citrus trucks and other heavy trucks off of US 27 and US 17. The study area for the County Line Road Traffic Assessment extends from north of SR 66 to south of SR 70 and from west of US 17 to east of US 27.
METROPLAN (Central Florida Region)	METROPLAN Freight, Goods and Service Mobility Strategy Plan	June 2002	This study was conducted to develop a regional strategy plan for the Central Florida region. The report identified US 27 as a priority intermodal corridor of statewide significance, particularly within the boundaries of I-75 and Florida's Turnpike and emphasizes the importance of the corridor to support and enhance links to key markets within the state such as South Florida, Central Florida and Jacksonville. No specific needs are identified within the study for improvements to US 27. An update to this study has recently been initiated. At the time of this review, no additional needs regarding US 27 are available from that report.
Statewide	Florida Trade and Logistics Study	December 2010	The objectives of this statewide study were to The objectives of the Florida Trade and Logistics Study are to: (1) Document existing and project future domestic and international trade flows to, from, and within Florida, (2) Identify opportunities available to Florida to compete in the global marketplace, and (3) Identify the strategies needed to take advantage of the most promising opportunities. No specific recommendations are provided for the US 27 Corridor. Of the short term recommendations, advancing planning efforts for an integrated statewide network of trade gateways, logistics centers and transportation corridors through the SIS is most relevant to strategies for the US 27 Corridor.

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Chapter 4 – Environmental Considerations

As the US 27 Transportation Alternatives Study moves forward to develop alternatives to relieve congestion, improve emergency and security response, and encourage economic development, numerous environmental issues may need to be evaluated. The Florida Department of Transportation (FDOT) and partner agencies are instrumental in identifying environmental issues and setting a path for preservation of the State's valuable natural resources.

The following sections provide an overview of the federal, state, and project processes for environmental evaluations, and provide the context of this phase of study with more detailed assessments that will be conducted at later phases. An analysis of environmental features along or near the corridor is also provided in this chapter to identify environmental concerns early on and in concert with the planning process for this study. The environmental review presented in this chapter should not be considered a complete analysis of the study area, but rather the initial step in identifying environmentally sensitive lands early on in this corridor study.

4.1 The Federal NEPA Process

The National Environmental Protection Act (NEPA) is the all-encompassing "umbrella" law that guides environmental protection at the federal level. By requiring environmental documentation at this level, NEPA establishes an overall process that ensures the integration of natural, social and environmental considerations into the planning and decision-making process.

Because NEPA analysis is more detailed and technically more specific than state and local planning-level analyses, traditionally NEPA environmental analysis has been conducted separately from the transportation analysis used to develop long-range plans (LRTPs), statewide/metropolitan Transportation Improvement Programs (STIPs/TIPs), and/or planning-level corridor and subarea studies. Over time, this separate process has often resulted in unnecessary duplication of work, additional expense, confusion for the public and policymakers, and a potential delay in project implementation.

If NEPA reviewers become involved in transportation planning studies and use planning information for informing future NEPA review, the result may be better and more efficient project delivery and documented decision-making. Prior to NEPA, transportation planning studies should be developed in a manner consistent with NEPA, so results will be suitable for use in the NEPA process.

It is important to emphasize that analyses done during the transportation planning process does not need to be done to the NEPA compliance level. However, the products of the transportation planning process – especially if appropriately documented and coordinated – can inform an environmental assessment (EA) or

environmental impact statement (EIS), greatly enhancing the NEPA effort by allowing the project sponsors to rely on and use previous planning work.[1]

The transportation planning regulations governing the use of transportation planning materials to inform project development (23 CFR 450.212 and 450.318) identify the following five items among the products that corridor or subarea studies may produce for a proposed transportation project:

Purpose and need or goals and objectives statement(s)	• Defining the *goals and objectives* or vision statement for a particular area or corridor and, • Framing the *scope* of the problem to be addressed by a future project.
General travel corridor and/or general mode(s) definition	• This is not the specific alignment, but does direct future study of the corridor into one general area. • Focus on what modes can meet the goals and objectives identified for the area or corridor.
Preliminary screening of alternatives and elimination of unreasonable alternatives	• Level of detail in the analysis will be higher • Eliminated alternatives should have a rational basis that has been thoroughly documented, including documentation of the necessary and appropriate public involvement processes.
Basic description of the environmental setting	• Provide enough detail to support the analyses conducted in the study, and as much as possible document the project-level environmental setting.
Preliminary identification of environmental impacts and environmental mitigation	• Detailed enough to support planning-level decisions for environmental impact avoidance, minimization, early and compensatory mitigation.

Source: *Guidance on Using Corridor and Subarea Planning to Inform NEPA*, April 2011.

These products may be incorporated directly or by reference into NEPA documents, provided certain conditions are met.

An essential component in linking planning activities to the NEPA process is making sure that activities, coordination, and decisions are documented and that the information developed is carried through to project development. Therefore, it is important to properly document how the planning study meets the conditions set out by the regulations for incorporation of planning products and to build relationships between planning agencies, resource agencies, and the stakeholders that will be preparing and reviewing the environmental documentation. This will help ensure that the planning study can be used to inform NEPA.

[1] *Guidance on Using Corridor and Subarea Planning to Inform NEPA, April 2011.*

4.2 Study Environmental Process

This transportation alternatives study process provides an early opportunity for general conceptual transportation options to be reviewed at the statewide level by FDOT's agency partners. Those options will be presented in the Alternatives Options and Policy Implications Technical Memorandum, which follows this document. Following the completion of this study, if more specific alternative strategies are selected for implementation, environmental considerations will be driven by the Future Corridors Program. Once specific projects are identified for implementation through the Future Corridors Program, those projects will be screened through Florida's Efficient Transportation Decision Making (ETDM) process.

Future Corridors Process

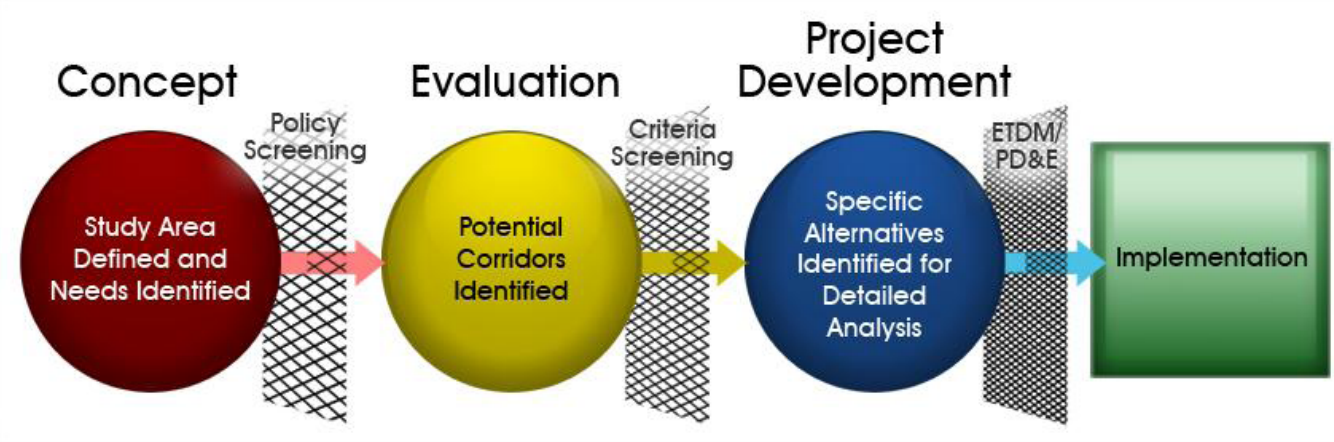
As listed in Florida's Future Corridors Action Plan, one of the goals for the program is Environmental Stewardship, which includes the following policy objectives:

- Plan, design, construct, and operate transportation facilities in a manner that preserves or, where feasible, restores the function and character of the natural environment.
- Promote efficient and appropriate use of land and water.
- Design, build, and maintain corridors in a manner that is consistent with the conservation and management of surrounding natural resources and protects nonrenewable resources.
- Offset unavoidable impacts to natural resources through mitigation.

In order to fulfill these objectives, the Future Corridors Program will coordinate with the Century Commission for a Sustainable Florida, the Department of Economic Opportunity (DEO), the Department of Environmental Protection (FDEP), the Florida Fish and Wildlife Conservation Commission, and Enterprise Florida to build upon and help harmonize long-range statewide planning activities. Through consensus around a shared vision, these partners will identify where new transportation corridors will be needed.

According to the Future Corridors Action Plan, the Future Corridors Program utilizes a three-stage planning process, which is illustrated in **Figure 4.2.1**. The process includes the Concept stage, the Evaluation stage, and Project Development stage. Each stage leads to decisions about which corridors should move forward, which should wait for additional information, and which should potentially move no further. The screening and evaluation gets progressively finer, as the criteria and data become more detailed. The basic progression is from high-level policy analyses to detailed technical analyses.

Figure 4.2.1 Future Corridors Planning Process



Source: Florida's Future Corridors Initiative, July 2012.

The approach for the planning process is designed to:

- Use objective criteria related to the Florida Transportation Plan and other statewide planning goals to guide decision-making;
- Integrate the corridor planning with established ETDM and Project Development & Environmental (PD&E) processes;
- Involve partners early and often throughout the planning process so that mobility, economic, environmental, and community needs are balanced as soon as possible; and
- Advance corridors or segments to the next phase of development.

Criteria for evaluating potential statewide corridors include mobility and connectivity, economic competitiveness, community livability, and environmental stewardship. Environmental stewardship criteria will identify areas where impacts should be avoided, minimized, or may need to be mitigated. Emphasis will be placed on conservation lands, surface waters, wetlands, coastal and marine environments, threatened and endangered species and their habitats, cultural and historic resources, air quality and energy consumption.

At the statewide level, FDOT will work with state agencies, statewide commissions, statewide associations, and other partners to set the context for planning future corridors. Participating agencies and commissions include:

- Century Commission for a Sustainable Florida
- Department of Agriculture and Consumer Services
- Department of Economic Opportunity
- Department of Elder Affairs
- Department of Environmental Protection

- Department of State
- Enterprise Florida
- Florida Fish and Wildlife Conservation Commission
- Division of Strategic Business Development (formerly OTTED)
- Public Service Commission
- Visit Florida

FDOT will also work with Metropolitan Planning Organizations (MPOs), regional visioning groups, regional planning councils, county and city governments, water management districts, modal partners, transportation authorities, economic development organizations, other interested parties, and the public to guide Future Corridor planning and to integrate corridor planning with other planning activities in each region.

Project Level Process

At the project level, environmental issues can be identified through FDOT's early project scoping process called the ETDM process. The process fosters early identification and consideration of potential environmental impacts on qualifying transportation projects and facilitates open and continuous engagement among planners, regulatory and resource agencies, and Native American tribes during the planning stage of project development. The participating planning, regulatory, and resource agencies, as well as involved Native American Tribes compose an Environmental Technical Advisory Team (ETAT).

The ETAT members serve as agency experts and remain as contacts throughout the project development process. The ETAT perform multidisciplinary reviews of transportation projects at prescribed points in the Planning and Programming Phases. These reviews assist in the determination of the feasibility of proposed project alternatives (if developed), focus studies for PD&E, and allow for early identification of avoidance, minimization and mitigation opportunities. In addition to ETAT reviews, potential effects on communities are also identified through public involvement activities and analysis of socio-cultural effects.

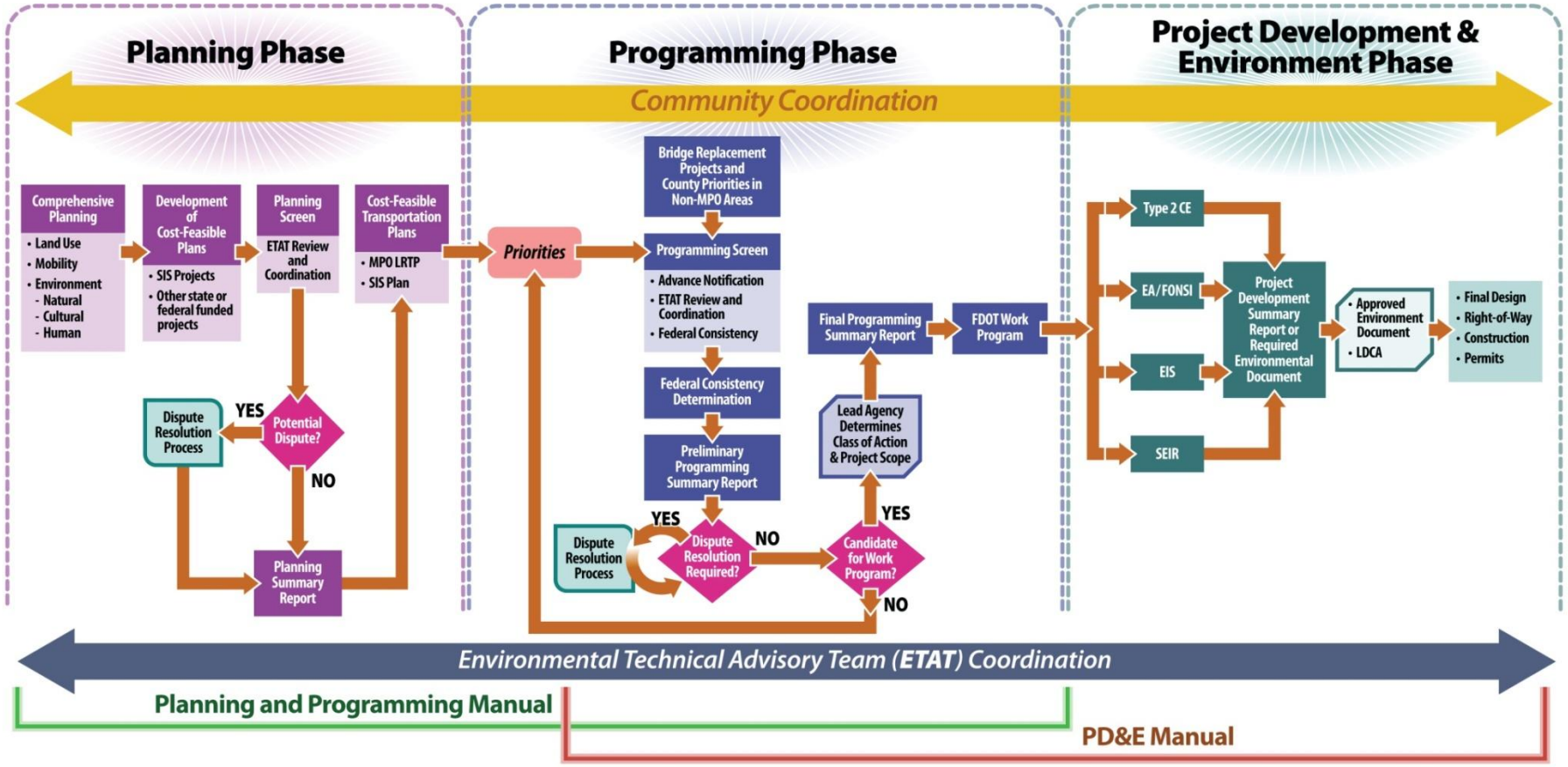
This coordination assists the FDOT in planning and developing the project while considering the environmental issues which may include:

- Community
  - Aesthetics Effects
  - Land Use Changes
  - Relocation Potential
  - Economic
  - Farmlands
  - Mobility
  - Social

- Cultural
  - Section 4(f)
  - Historic and Archaeological Sites
  - Recreation Areas
- Natural
  - Coastal and Marine
  - Wetlands
  - Water Quality and Quantity
  - Floodplains
  - Wildlife and Habitat
- Physical
  - Noise
  - Air Quality
  - Contamination
  - Navigation
  - Infrastructure
- Special Designations

As illustrated in **Figure 4.2.2**, the ETDM Process involves two screenings during the transportation project delivery process: the Planning and Programming Screens. During the Planning Screen, ETAT comments help FDOT and the applicable MPO (if in an MPO area) in their assessment of projects for their adopted LRTP. During the Programming Screen, qualifying priority projects under consideration for funding and inclusion in FDOT's Work Program or the MPO's TIP are screened. The resulting agency comments assist with scoping the project. Information gathered in the Planning and Programming Screens gives FDOT the opportunity to identify project-specific potential environmental issues, consider avoidance, minimization, and mitigation opportunities early, identify fatal flaws, and inform and support PD&E activities.

Figure 4.2.2 ETDM Process Overview



Source: FDOT Environmental Management Office, 2012.

Coordination with the ETAT and public is facilitated through the Environmental Screening Tool (EST), an Internet-accessible interactive database and mapping application. The EST provides the vehicle for information exchange to and from ETAT members regarding project details, potential effects, and agency recommendations or requirements. Project information is made available to the public through the EST's public access website (http://etdmpub.fla-etat.org).

4.3 Corridor Environmental Considerations

The following sections and associated figures provide general environmental considerations in the corridor. The focus is on environmental resources at the entire county level as impacts from the development of transportation alternatives will not be concentrated solely along the US 27 Corridor. Natural resources, such as water resources, wetlands and floodplains, sensitive habitats, and conservation and recreational areas, are summarized and illustrated. The social environment and economic environment are furthered described in Chapter 2 and Chapter 6, respectively.

Water Resources

Figure 4.3.1 shows the water management districts and watersheds within the US 27 Corridor. The US 27 Corridor traverses three water management districts (WMDs): the South Florida Water Management District (SFWMD), the Southwest Florida Water Management District (SWFWMD), and the St. Johns River Water Management District (SJRWMD). Of the 29 major watersheds in Florida, the US 27 Corridor passes through nine, as shown in **Table 4.3.1**. Each watershed contains rivers, streams, springs, lakes, canals, wetlands, bays and other water features. The following sub-sections provide details on water resources within this area.

Table 4.3.1: US 27 Corridor - Major Watersheds[2]

Watershed Name	County Coverage Within Study Area	Size (Mi^2)
Southeast Florida Coast- Biscayne Bay	Miami-Dade, Broward	1,200
Everglades	Miami-Dade, Broward, Palm Beach, Hendry	N/A
Lake Okeechobee	Palm Beach, Hendry, Glades	1,023
Caloosahatchee River	Hendry, Glades	1,408
Fisheating Creek	Glades, Highlands	2,932
Peace River	Polk	2,350
Kissimmee River	Glades, Highlands, Polk	2,932
Withlacoochee River South	Polk, Lake, Sumter	2,100
Ocklawaha River	Lake, Marion	2,769

Source: FGDL and FDEP, April 2012.

[2] Florida Department of Environmental Protection, http://www.protectingourwater.org/watersheds/map/

Figure 4.3.1A

Water Management Districts and Watershed Boundaries

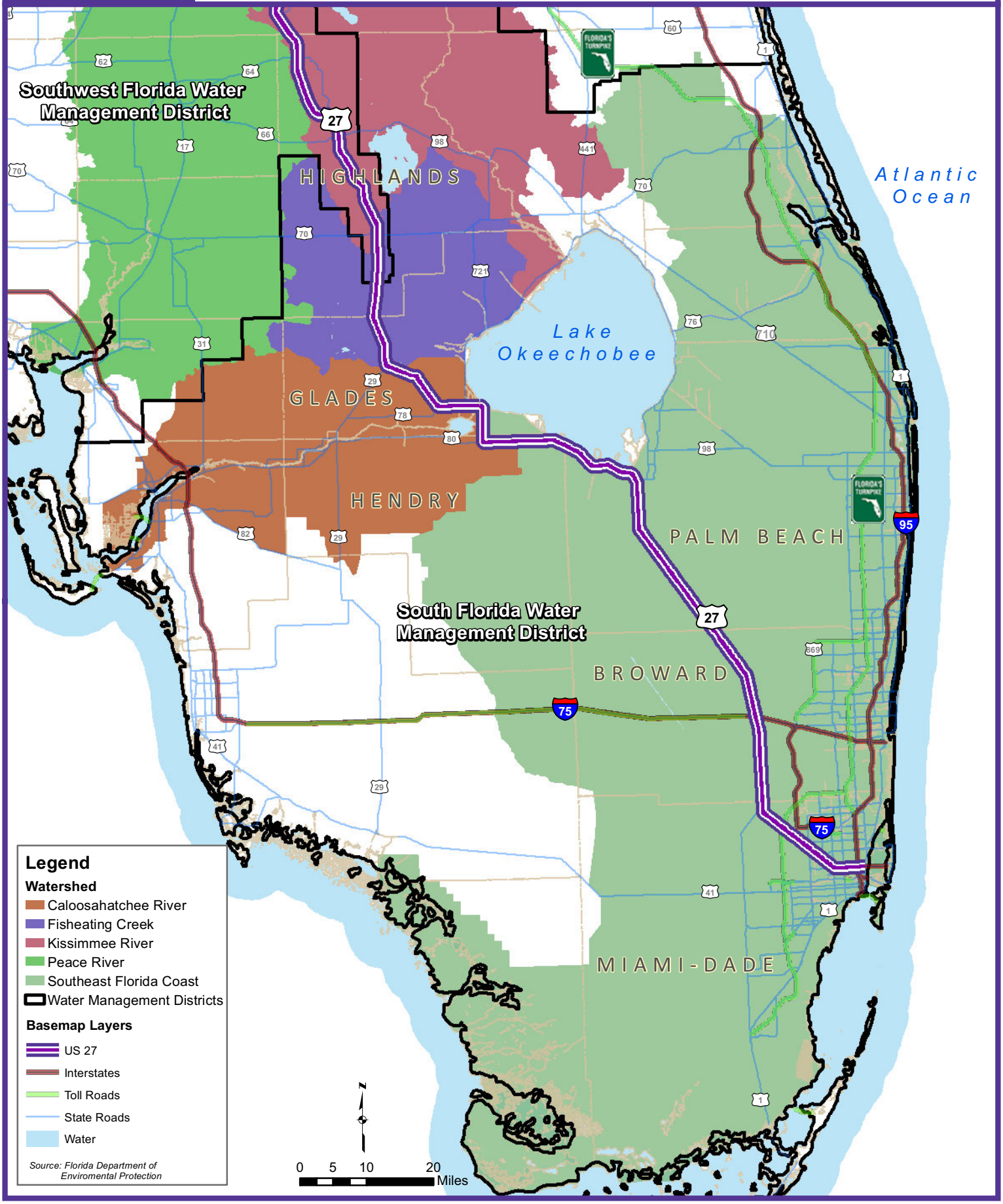
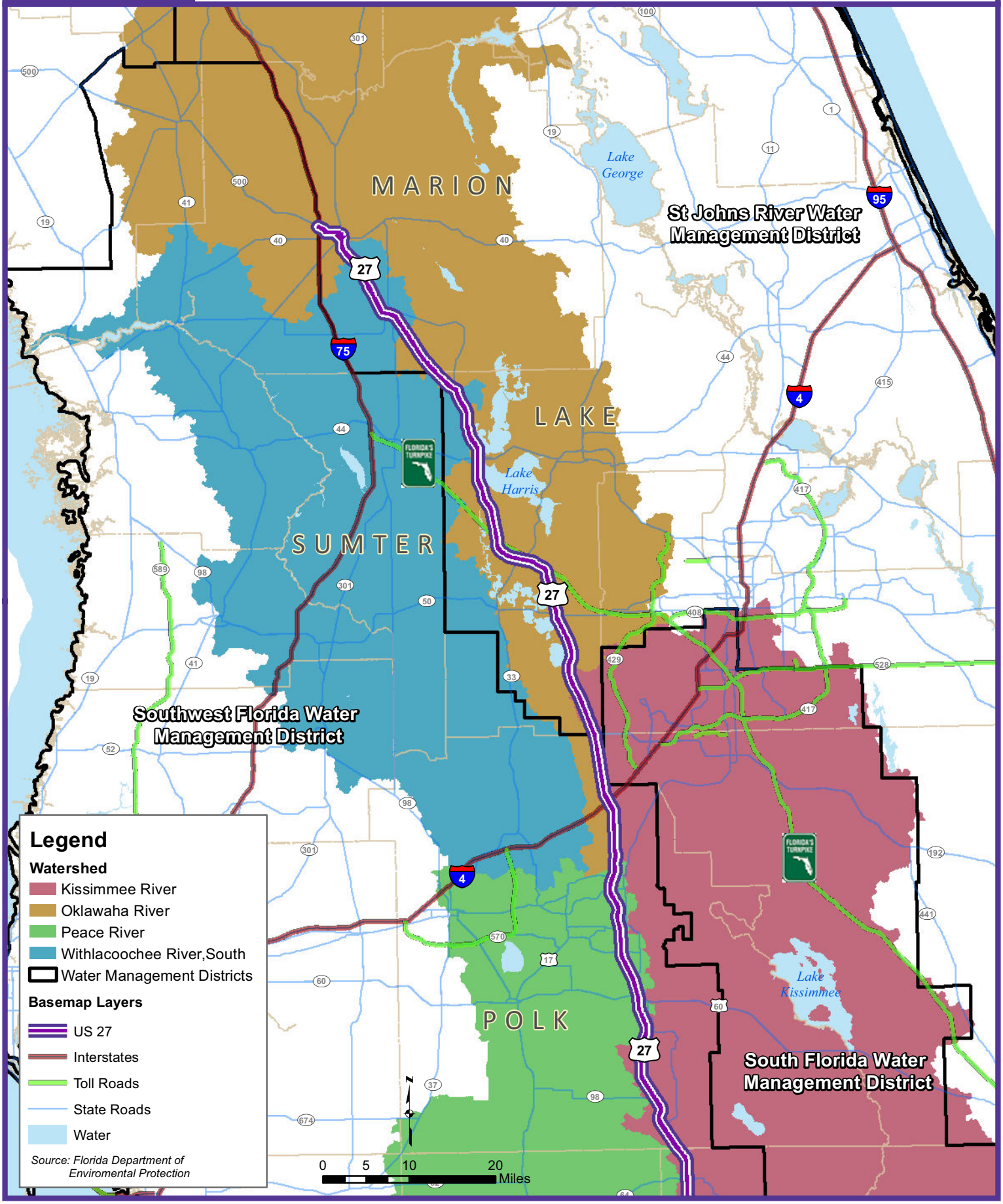


Figure 4.3.1B

Water Management Districts and Watershed Boundaries



Surface Waters

Florida's surface water features are defined by lowland and ridge topography, and are closely related to Florida's geology and ground water resources. Beneath the surface, thick layers of porous limestone of the Floridian Aquifer and intermediate aquifer underlie the state. Except in those areas where these limestone formations break the surface of the ground, these two aquifers lie beneath a surficial aquifer. The upper boundary of the surficial aquifer system is defined by the water table. In the swampy lowlands and flatlands, the water table generally is at or near land surface throughout much of the year.

A total of 132 surface waters have been identified within a quarter-mile of the US 27 Corridor, as shown in **Table 4.3.2**. The largest of these surface waters is Lake Okeechobee, which is located near just south and west of the corridor in Palm Beach and Glades Counties. In cases where larger surface waters such as Lake Okeechobee are found, the contiguous surface waters have been split into two resource groups by FDEP (as noted on the table). Surface water resources found within the study area include lakes, streams, ditches, canals, and wetlands. Florida's surface water resources are classified based upon the following six use categories:[3]

1. **Class I - Potable Water Supplies:** Fourteen general areas throughout the state including: impoundments and associated tributaries, certain lakes, rivers, or portions of rivers, used as a source of potable water.

2. **Class II - Shellfish Propagation or Harvesting:** Generally coastal waters where shellfish harvesting occurs.

3. **Class III - Fish Consumption, Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife:** The surface waters of the state are Class III unless described in Rule 62-302.400, Florida Administrative Code.

4. **Class III-Limited – Fish Consumption; Recreation or Limited Recreation; and/or Propagation and Maintenance of a Limited Population of Fish and Wildlife:** This classification is restricted to waters with human-induced physical or habitat conditions that, because of those conditions, have limited aquatic life support and habitat that prevent attainment of Class III uses.

5. **Class IV - Agricultural Water Supplies:** Generally located in agriculture areas around Lake Okeechobee.

[3] Florida Department of Environmental Protection. Surface Water Quality Standards – Classes, Uses, Criteria.

6. **Class V - Navigation, Utility and Industrial Use:** Currently, there are not any designated Class V bodies of water. The Fenholloway River was reclassified as Class III in 1998.

Federally, water quality designations are provided through CFR, Title 40, Part 131 and are regulated through the Federal Clean Water Act. At the state level, water quality classifications and standards are defined by 62-302.400, Florida Administrative Code (F.A.C.). Water quality classifications are arranged in order of the degree of protection required, with Class I water having generally the most stringent water quality criteria and Class V the least. However, Class I, II, and III surface waters share water quality criteria established to protect fish consumption, recreation and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife.

Table 4.3.2: Surface Waters within ¼-Mile of US 27 Corridor

Water Body	Water Shed	Type	Class
C-6/MIAMI CANAL	SOUTHEAST COAST – BISCAYNE BAY	STREAM	III
SNAKE CREEK CANAL (WEST)	SOUTHEAST COAST – BISCAYNE BAY	STREAM	III
C-6/MIAMI CANAL (WEST)	SOUTHEAST COAST – BISCAYNE BAY	STREAM	III
SOUTH NEW RIVER CANAL (C-11)	SOUTHEAST COAST – BISCAYNE BAY	STREAM	III
C-6/MIAMI RIVER	SOUTHEAST COAST – BISCAYNE BAY	ESTUARY	III
C-7/LITTLE RIVER	SOUTHEAST COAST – BISCAYNE BAY	STREAM	III
ICWW (MIAMI-DADE COUNTY)	SOUTHEAST COAST – BISCAYNE BAY	ESTUARY	III
WAGNER CREEK	SOUTHEAST COAST – BISCAYNE BAY	ESTUARY	III
WCA 3A (EAST SECTOR)	EVERGLADES	STREAM	III
STA-3/4	EVERGLADES	STREAM	III
WCA 2A (WEST SECTOR)	EVERGLADES	STREAM	III
WCA 2A (CENTRAL SECTOR)	EVERGLADES	STREAM	III
WCA 2B	EVERGLADES	STREAM	III
S-7	EVERGLADES	STREAM	III
NEW RIVER CANAL (NORTH SEGMENT)	EVERGLADES	STREAM	III
SOUTH BAY	EVERGLADES	STREAM	III
S-3	EVERGLADES	STREAM	III
S-236	EVERGLADES	STREAM	III
LAKE OKEECHOBEE	LAKE OKEECHOBEE	LAKE	I
LAKE OKEECHOBEE	LAKE OKEECHOBEE	LAKE	I
CALOOSAHATCHEE RIVER ABOVE S-78	CALOOSAHATCHEE	STREAM	III
S-4 BASIN	CALOOSAHATCHEE	STREAM	III
C-19 CANAL	CALOOSAHATCHEE	STREAM	III
NINEMILE CANAL	CALOOSAHATCHEE	STREAM	III

Table 4.3.2: Surface Waters within ¼-Mile of US 27 Corridor

Water Body	Water Shed	Type	Class
LAKE HICPOCHEE	CALOOSAHATCHEE	LAKE	III
FISHEATING CREEK	FISHEATING CREEK	STREAM	III
GATOR SLOUGH	FISHEATING CREEK	STREAM	III
HARNEY POND CANAL	FISHEATING CREEK	STREAM	III
GOPHER GULLY	FISHEATING CREEK	STREAM	III
PEACE CREEK DRAINAGE CANAL	SARASOTA BAY-PEACE-MYAKKA	STREAM	III
UNNAMED DITCH	SARASOTA BAY-PEACE-MYAKKA	STREAM	III
LAKE BLUE (SOUTH)	SARASOTA BAY-PEACE-MYAKKA	LAKE	III
PEACE CREEK TRIBUTARY CANAL	SARASOTA BAY-PEACE-MYAKKA	STREAM	III
LAKE HENRY	SARASOTA BAY-PEACE-MYAKKA	LAKE	III
LAKE JOE	SARASOTA BAY-PEACE-MYAKKA	LAKE	III
LAKE TRACY OUTLET	SARASOTA BAY-PEACE-MYAKKA	STREAM	III
LAKE TRACY	SARASOTA BAY-PEACE-MYAKKA	LAKE	III
MIDDLE LAKE HAMILTON	SARASOTA BAY-PEACE-MYAKKA	LAKE	III
LITTLE LAKE HAMILTON	SARASOTA BAY-PEACE-MYAKKA	LAKE	III
LAKE EFFIE OUTLET	SARASOTA BAY-PEACE-MYAKKA	STREAM	III
LAKE HAMILTON	SARASOTA BAY-PEACE-MYAKKA	LAKE	III
LAKE HAMILTON OUTLET	SARASOTA BAY-PEACE-MYAKKA	STREAM	III
CHANNELIZED STREAM	SARASOTA BAY-PEACE-MYAKKA	STREAM	III
LAKE EFFIE	SARASOTA BAY-PEACE-MYAKKA	LAKE	III
LAKE DAMON	KISSIMMEE RIVER	LAKE	III
TROUT LAKE	KISSIMMEE RIVER	LAKE	III
LAKE HICKORYNUT DRAIN	KISSIMMEE RIVER	STREAM	III
LAKE DAMON OUTLET	KISSIMMEE RIVER	STREAM	III
LAKE LILLIAN	KISSIMMEE RIVER	LAKE	III
LAKE GLENADA	KISSIMMEE RIVER	LAKE	III
LAKE ISIS	KISSIMMEE RIVER	LAKE	III
CROOKED LAKE	KISSIMMEE RIVER	LAKE	III
LITTLE CROOKED LAKE	KISSIMMEE RIVER	LAKE	III
LAKE LIVINGSTON DRAIN	KISSIMMEE RIVER	STREAM	III
BRENTWOOD LAKE	KISSIMMEE RIVER	LAKE	III
LAKE CLINCH OUTLET	KISSIMMEE RIVER	STREAM	III
CROOKED LAKE OUTLET	KISSIMMEE RIVER	STREAM	III
LAKE SEBRING OUTLET	KISSIMMEE RIVER	STREAM	III
LAKE PLACID OUTLET	KISSIMMEE RIVER	STREAM	III
GRASSY CREEK	KISSIMMEE RIVER	STREAM	III

Table 4.3.2: Surface Waters within ¼-Mile of US 27 Corridor

Water Body	Water Shed	Type	Class
JOSEPHINE CREEK	KISSIMMEE RIVER	STREAM	III
JACKSON CREEK	KISSIMMEE RIVER	STREAM	III
DAVENPORT CREEK	KISSIMMEE RIVER	STREAM	III
LAKE LETTA OUTLET	KISSIMMEE RIVER	STREAM	III
HORSE (HORSESHOE) CREEK	KISSIMMEE RIVER	STREAM	III
LAKE LELIA	KISSIMMEE RIVER	LAKE	III
LAKE ANOKA	KISSIMMEE RIVER	LAKE	III
LAKE BYRD	KISSIMMEE RIVER	LAKE	III
LAKE ADELAIDE	KISSIMMEE RIVER	LAKE	III
DAVENPORT CREEK HEADWATERS	KISSIMMEE RIVER	STREAM	III
LAKE JUNE IN WINTER	KISSIMMEE RIVER	LAKE	III
LAKE JUNE IN WINTER DRAIN	KISSIMMEE RIVER	STREAM	III
BUCK LAKE	KISSIMMEE RIVER	LAKE	III
PEARL LAKE	KISSIMMEE RIVER	LAKE	III
LAKE MCCOY	KISSIMMEE RIVER	LAKE	III
LAKE GRASSY	KISSIMMEE RIVER	LAKE	III
SADDLEBAGS LAKE	KISSIMMEE RIVER	LAKE	III
CLAY LAKE	KISSIMMEE RIVER	LAKE	III
MIRROR LAKE	KISSIMMEE RIVER	LAKE	III
BLUE LAKE	KISSIMMEE RIVER	LAKE	III
UNNAMED "B" LAKE	KISSIMMEE RIVER	LAKE	III
LAKE PLACID	KISSIMMEE RIVER	LAKE	III
LAKE NELLIE (NORTHWEST SEGMENT)	KISSIMMEE RIVER	LAKE	III
LAKE JOSEPHINE	KISSIMMEE RIVER	LAKE	III
LAKE JACKSON	KISSIMMEE RIVER	LAKE	III
LITTLE LAKE JACKSON	KISSIMMEE RIVER	LAKE	III
UNNAMED "E" LAKE	KISSIMMEE RIVER	LAKE	III
YELLOW BLUFF CREEK	KISSIMMEE RIVER	STREAM	III
BIG JONES CREEK	WITHLACOOCHEE	STREAM	III
LAKE MIONA OUTLET	WITHLACOOCHEE	STREAM	III
LAKE LILLIAN	WITHLACOOCHEE	LAKE	III
ROBINSON LAKE OUTLET	WITHLACOOCHEE	STREAM	III
LAKE OKAHUMPKA OUTLET	WITHLACOOCHEE	STREAM	III
LAKE SUNSHINE	WITHLACOOCHEE	LAKE	III
UNNAMED DITCH	OCKLAWAHA	STREAM	III
SILVER RIVER DRAIN	OCKLAWAHA	STREAM	III

Table 4.3.2: Surface Waters within ¼-Mile of US 27 Corridor

Water Body	Water Shed	Type	Class
UNNAMED DRAIN	OCKLAWAHA	STREAM	III
HELENA RUN	OCKLAWAHA	STREAM	III
NONCONTRIBUTING AREA	OCKLAWAHA	STREAM	III
TIGER LAKE OUTLET	OCKLAWAHA	STREAM	III
LAKE WEIR OUTLET	OCKLAWAHA	STREAM	III
UNNAMED SLOUGH	OCKLAWAHA	STREAM	III
LAKE SPENCER OUTLET	OCKLAWAHA	STREAM	III
LAKE MINNEOLA	OCKLAWAHA	LAKE	III
PALATLAKAHA RIVER	OCKLAWAHA	STREAM	III
LAKE MINNEHAHA OUTLET	OCKLAWAHA	STREAM	III
GRASSY LAKE OUTLET	OCKLAWAHA	STREAM	III
UNNAMED DRAIN	OCKLAWAHA	STREAM	III
BIG CREEK REACH	OCKLAWAHA	BLACKWATER	III
DIXIE LAKE OUTLET	OCKLAWAHA	STREAM	III
LAKE LOUISA OUTLET	OCKLAWAHA	STREAM	III
LAKE LOUISA	OCKLAWAHA	LAKE	III
FLAT LAKE OUTLET	OCKLAWAHA	STREAM	III
LAKE DIXIE EAST	OCKLAWAHA	LAKE	III
LAKE DIXIE WEST	OCKLAWAHA	LAKE	III
LAKE GRIFFIN OUTLET	OCKLAWAHA	STREAM	III
HAMMOND LAKE	OCKLAWAHA	LAKE	III
UNNAMED SLOUGH	OCKLAWAHA	STREAM	III
LAKE LORRAINE OUTLET	OCKLAWAHA	STREAM	III
LAKE HARRIS	OCKLAWAHA	LAKE	III
LAKE HARRIS OUTLET	OCKLAWAHA	STREAM	III
DEAD RIVER	OCKLAWAHA	STREAM	III
LAKE FELTER	OCKLAWAHA	LAKE	III
JACKS LAKE OUTLET	OCKLAWAHA	STREAM	III
APSHAWA LAKE OUTLET	OCKLAWAHA	STREAM	III
CHURCH LAKE	OCKLAWAHA	LAKE	III
TOWER LAKE	OCKLAWAHA	LAKE	III
CRYSTAL LAKE	OCKLAWAHA	LAKE	III
CHURCH LAKE OUTLET	OCKLAWAHA	STREAM	III
CRYSTAL LAKE DRAIN	OCKLAWAHA	STREAM	III
DILLY MARSH DRAIN	OCKLAWAHA	STREAM	III
BONNET LAKE OUTLET	OCKLAWAHA	STREAM	III

Source: FDEP, Water Bodies, April 2012.

Within the US 27 Corridor, all but two identified surface waters are Class III waters. There are two identified surface waters that are listed as Class I potable water sources, and they are both located in Lake Okeechobee. Any projects which may impact water quality of these surface waters must meet criteria as outlined in F.A.C.

Outstanding Florida Waters

Section 403.061(27), Florida Statutes, grants the Department of Environmental Protection (DEP) the power to establish rules that provide for a special category of water bodies within the state, to be referred to as "Outstanding Florida Waters" (OFWs), which shall be worthy of special protection because of their natural attributes. This special designation is applied to certain waters and is intended to protect and maintain existing acceptable quality standards. Most of the OFWs are contained within the boundaries of publicly-owned lands managed for conservation and/or recreation so that the extent of the water features that are protected can be defined by the legal boundary of the park, recreation area, preserve, or other publicly-owned property.

Outstanding Florida Waters generally include surface waters in the following areas:

- National Parks
- National Wildlife Refuges
- National Seashores
- National Preserves
- National Marine Sanctuaries and Estuarine Research Reserves
- National Forests (certain waters)
- State Parks & Recreation Areas
- State Preserves and Reserves
- State Ornamental Gardens and Botanical Sites
- Environmentally Endangered Lands Program, Conservation and Recreational Lands Program, and Save Our Coast Program Acquisitions
- State Aquatic Preserves
- Scenic and Wild Rivers (both National and State)
- "Special Waters"

"Special waters" include 41 of Florida's 1,700 rivers, several lakes and lake chains, several estuarine areas, and the Florida Keys.

As shown in **Table 4.3.3**, there are four OFWs located within 1,500 feet of the US 27 Corridor. Three of these are located in Lake County, one is located in Polk County, and one is located in Miami-Dade County.

Table 4.3.3: Outstanding Florida Waters within 1,500 Ft

Name	Type	County
Lake Louisa State Park	State Park	Lake
Clermont Chain of Lakes	Special Waters	Lake
Lake Griffin State Recreation Area	State Park	Lake
Crooked Lake	Special Waters	Polk
Biscayne Bay Aquatic Preserve	State Aquatic Preserve	Miami-Dade

Source: Florida Department of Environmental Protection, Outstanding Florida Waters, February 2012. Retrieved April 2012 from Florida Geographic Data Library (FGDL).

When projects are proposed within an OFW, the project must not lower existing ambient water quality as of the year of the OFW designation or the year before requesting a permit, whichever water quality level is determined to be higher. In general, FDEP cannot issue permits for direct discharges to OFWs that would lower ambient water quality. FDEP also may not issue permits for indirect discharges that would significantly degrade a nearby water body designated as an OFW. In addition to these ambient water quality requirements, projects that may result in a discharge or significantly degrade the OFW must demonstrate the need for the project as within the public interest to receive an Environmental Resource Permit (ERP).

In determining whether an activity or discharge that requires an ERP permit is not contrary to the public interest or is clearly in the public interest, FDEP or the WMD must consider and balance the following factors:[4]

1. Whether the activity will adversely affect the public health, safety, welfare or the property of others;

2. Whether the activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;

3. Whether the activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling;

4. Whether the activity will adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;

5. Whether the activity will be of a temporary or permanent nature;

6. Whether the activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of S. 267.061; and

[4] Florida Statutes, Chapter 373.414(1)(a), 2010.

7. The current condition and relative value of functions being performed by areas affected by the proposed activity.

Wild and Scenic Rivers

Initiated by the U.S. Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.), the National Wild and Scenic Rivers System was created to preserve the free flowing condition of rivers across the United States with outstanding natural, cultural, and recreational values. Rivers may be designated by Congress or in special circumstances, by the Secretary of Interior, and the program is administered through federal or state agencies. This 'Wild and Scenic River' designation serves to balance area development pressures with the need to protect the special character of these rivers over time. Rivers are classified as wild, scenic, or recreational, as defined:

- **Wild River Areas** — Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

- **Scenic River Areas** — Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

- **Recreational River Areas** — Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

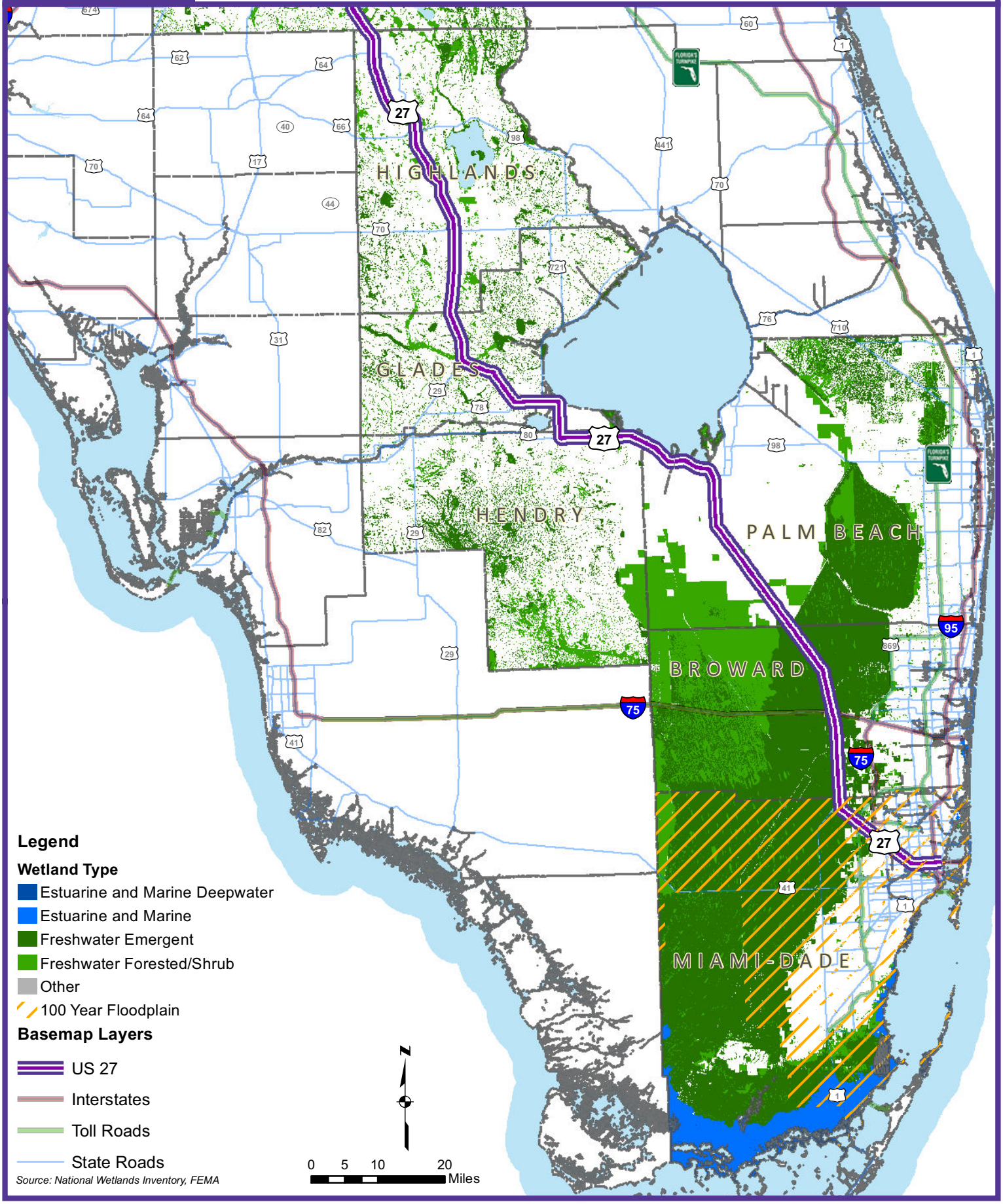
There are two rivers in the state that are nationally designated as wild and scenic rivers and one that has been listed by the Florida Legislature as a state designated wild and scenic river: Loxahatchee River, Wekiva River and the Myakka River (state designated only). None of these rivers are located near the US 27 Corridor. The following provides a brief location of these three federal or state designated rivers.

Wetlands and Floodplains

Figure 4.3.2 shows wetlands and floodplains along the corridor. Because of the abundance of wetlands and floodplains in and around the corridor, this analysis identifies areas where wetlands and floodplains are concentrated and where the greatest impacts may be expected. In general, the southern portion of the US 27 Corridor in Palm Beach, Broward, and Miami Dade Counties can be expected to have the heaviest presence of wetlands and floodplains due to their proximity to the Everglades National Park and a number of other publicly owned/managed conservation lands.

Figure 4.3.2A

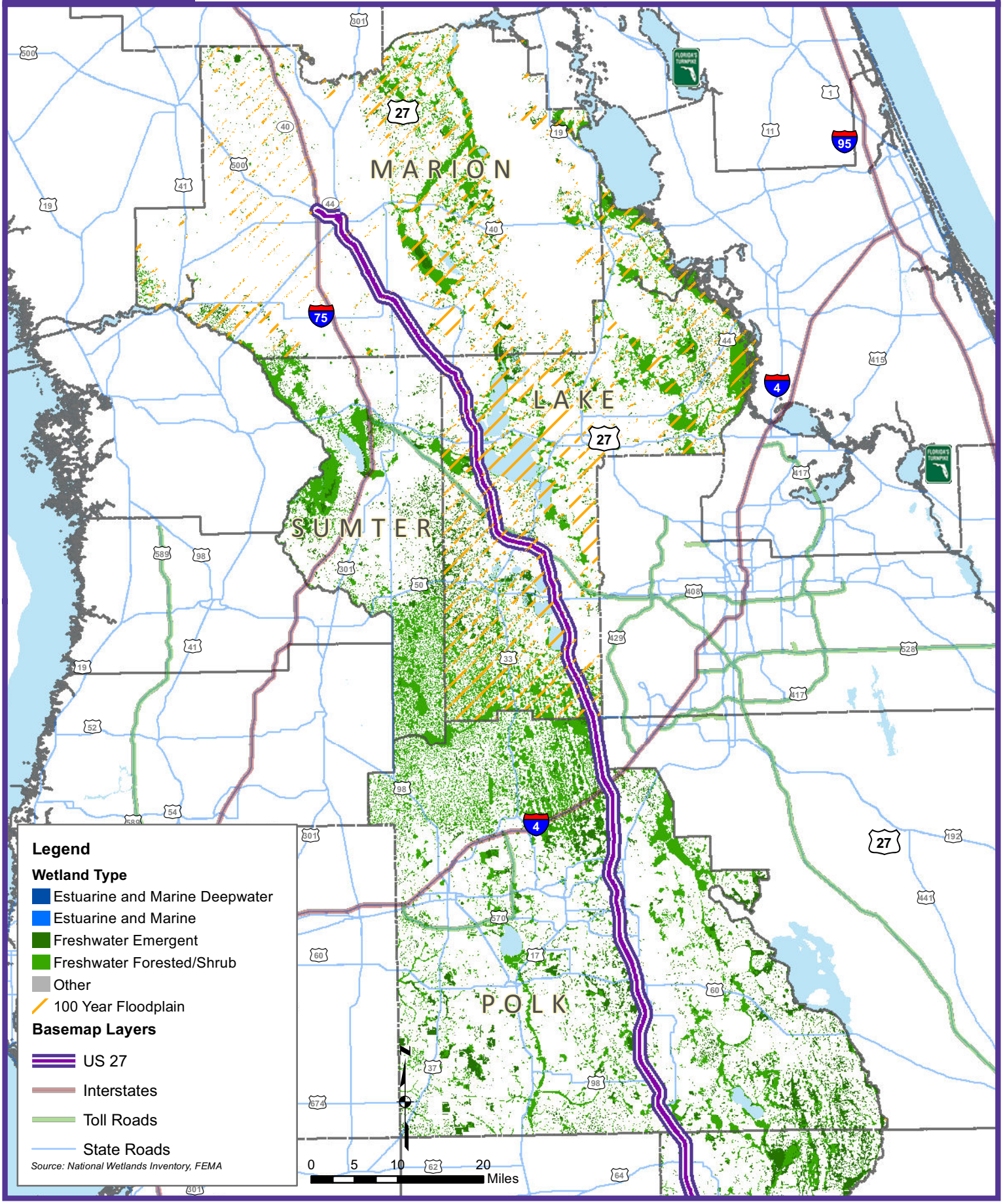
Wetlands and Floodplains along US-27 Corridor



Source: National Wetlands Inventory, FEMA

Figure 4.3.2B

Wetlands and Floodplains along US-27 Corridor



Wetlands are protected under Section 404 of the Clean Water Act, Executive Order 11990, Protection of Wetlands; and USDOT Order 5660.1A, Preservation of the Nation's Wetlands. Section 404 of the Act requires that a permit be issued for most activities that would dredge or fill any of the nation's waters, including wetlands. In accordance with Section 404, each time a wetland area is destroyed it must be mitigated for (replaced through the creation or enhancement of another wetland for "no net loss"). Enforcement of these provisions is provided through state and federal agencies.

Comprehensive Everglades Restoration

The Comprehensive Everglades Restoration Plan (CERP) is a massive environmental restoration effort to restore historic water levels to the Florida Everglades encompassing many agencies and projects. Project agency sponsors include the U.S. Department of the Interior, U.S. Army Corps of Engineers, and the South Florida Water Management District. Over 80 projects are currently listed and were reviewed to determine wetland restoration areas of critical concern along the corridor. Within a ¼-mile boundary of the US 27 corridor, 16 CERP projects have been identified, as shown on **Table 4.3.4**. Concentrated areas of the corridor that are part of these CERP projects are located in the southern portion of the corridor in Highlands, Glades, Hendry and Broward Counties. Any improvements to US 27 within the CERP would require consideration and coordination with U.S. Army Corps of Engineers and the WMD.

Table 4.3.4: Comprehensive Everglades Restoration Plan (CERP) Project Boundaries

PROJECT NAME	DESCRIPTION	LOCATIONS IN CORRIDOR
LAKE BELT IN-GROUND RESERVOIR TECHNOLOGY PILOT	LAKEBELT INGROUND RESERVOIR TECHNOLOGY PILOT	MIAMI-DADE
CENTRAL LAKE BELT STORAGE AREA	CENTRAL LAKE BELT STORAGE AREA	MIAMI-DADE
WPA CONVEYANCE	DADE-BROWARD LEVEE & CANAL	MIAMI-DADE
NORTH LAKE BELT STORAGE AREA	NORTH LAKE BELT STORAGE AREA	MIAMI-DADE
BROWARD COUNTY WATER PRESERVE AREAS	C-9 IMPOUNDMENT	MIAMI-DADE, BROWARD
WCA 3 DECOMPARTMENTALIZATION AND SHEETFLOW ENHANCEMENT	WCA 3 DECOMPARTMENTALIZATION & SHEETFLOW ENHANCEMENT - PART 1 (S-351)	MIAMI-DADE, BROWARD
WCA 3 DECOMPARTMENTALIZATION AND SHEETFLOW ENHANCEMENT	WCA 2B FLOWS TO CENTRAL LAKEBELT STORAGE AREA	BROWARD
BROWARD COUNTY WATER	C-11 IMPOUNDMENT	BROWARD

Table 4.3.4: Comprehensive Everglades Restoration Plan (CERP) Project Boundaries

PROJECT NAME	DESCRIPTION	LOCATIONS IN CORRIDOR
PRESERVE AREAS		
BROWARD COUNTY WATER PRESERVE AREAS	3A/3B SEEPAGE MANAGEMENT	BROWARD
EVERGLADES AGRICULTURAL AREA STORAGE RESERVOIRS	EVERGLADES AGRICULTURAL AREA STORAGE RESERVOIR - PHASE 1	PALM BEACH
EVERGLADES AGRICULTURAL AREA STORAGE RESERVOIRS	EAA RESERVOIR - L-16 CROSS CANAL	PALM BEACH
EVERGLADES AGRICULTURAL AREA STORAGE RESERVOIRS	EAA RESERVOIR - L-21 BOLLES CANAL	PALM BEACH
EVERGLADES AGRICULTURAL AREA STORAGE RESERVOIRS	EVERGLADES AGRICULTURAL AREA STORAGE RESERVOIR - PHASE 1	PALM BEACH
EVERGLADES AGRICULTURAL AREA STORAGE RESERVOIRS	EAA COMPARTMENT B	PALM BEACH
LAKE OKEECHOBEE AQUIFER STORAGE AND RECOVERY	LAKE OKEECHOBEE ASR	PALM BEACH, HENDRY, GLADES, HIGHLANDS
LAKE OKEECHOBEE WATERSHED	LAKE OKEECHOBEE WATERSHED	GLADES, HIGHLANDS, POLK

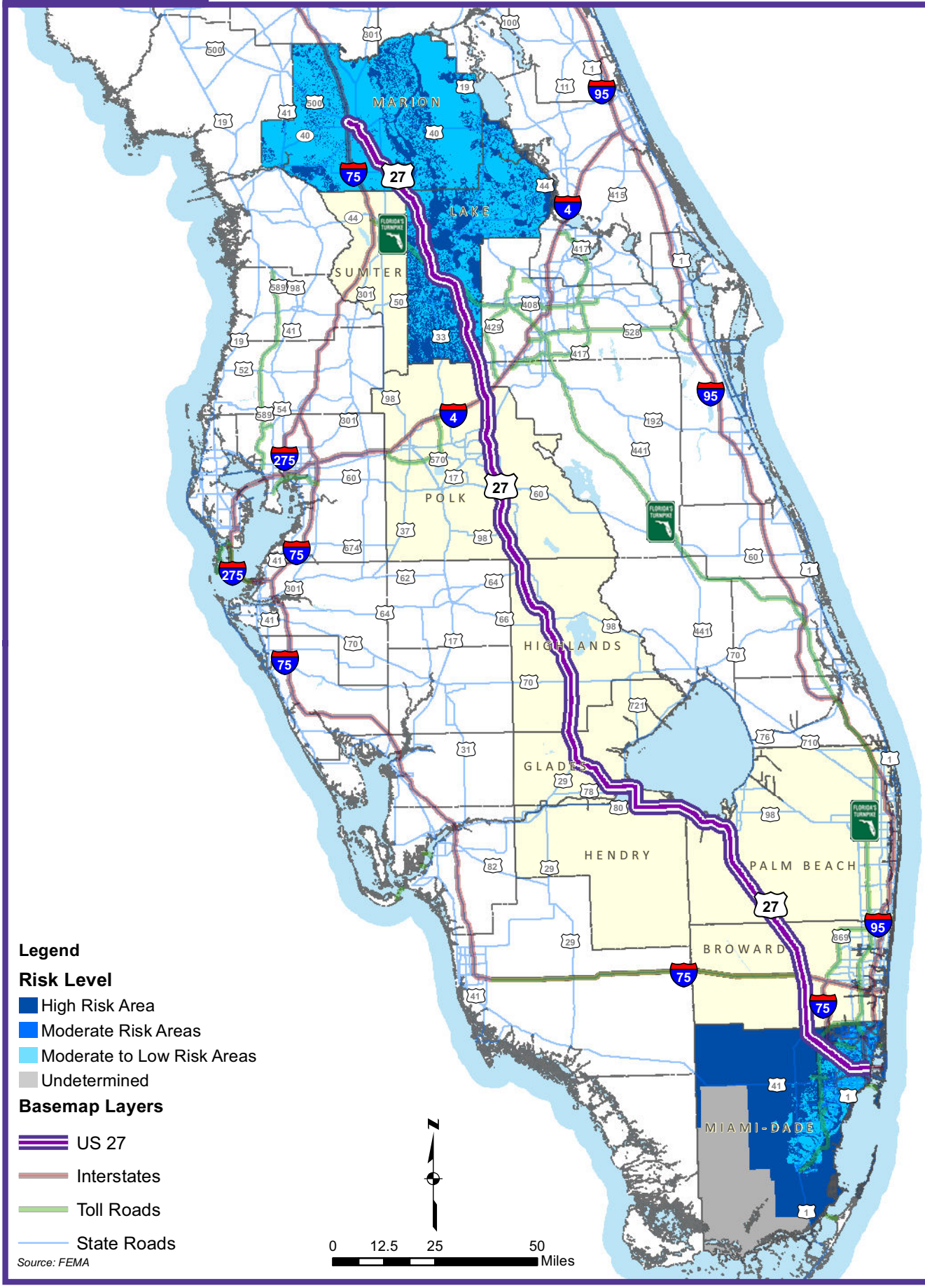
Source: SFWMD, Comprehensive Everglades Restoration Plan Project Boundaries, April 2011.

Flood Hazard Zones

Flood Hazard Zones are shown in **Figure 4.3.3**. These zones are used by the Federal Emergency Management Agency (FEMA) to designate the Special Flood Hazard Area (SFHA) and for insurance rating purposes. The primary risk classifications used are the one-percent-annual-chance flood event (100 year), the 0.2-percent-annual-chance flood event (500 year), and areas of minimal flood risk. Within the US 27 Corridor, moderate to high flood hazard zones are located in Lake and Marion Counties where a number of surface water lakes are found in the northern portion of the corridor and in Miami-Dade County near the coastline along the southern portion of the corridor. Improvements proposed along the corridor in these areas should be sensitive to potential flood hazards, particularly taking steps to avoid areas within the 100-year floodplain.

Figure 4.3.3

Flood Hazard Zones along US-27 Corridor



Threatened and Endangered Species

Consultation areas for threatened and endangered species within the corridor are shown on **Figure 4.3.4**. To analyze sensitive habitats along the US 27 Corridor, the Florida Natural Areas Inventory (FNAI) Biodiversity Matrix was used to identify a list of "Documented," "Documented-Historic," and "Likely" occurrences of rare species within one square mile of the corridor. The Biodiversity Matrix category definitions of rare species and communities include the following:[5]

DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however, the occurrence has not been observed/ reported within the last twenty years.

LIKELY - The species or community is known to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. a documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; or
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

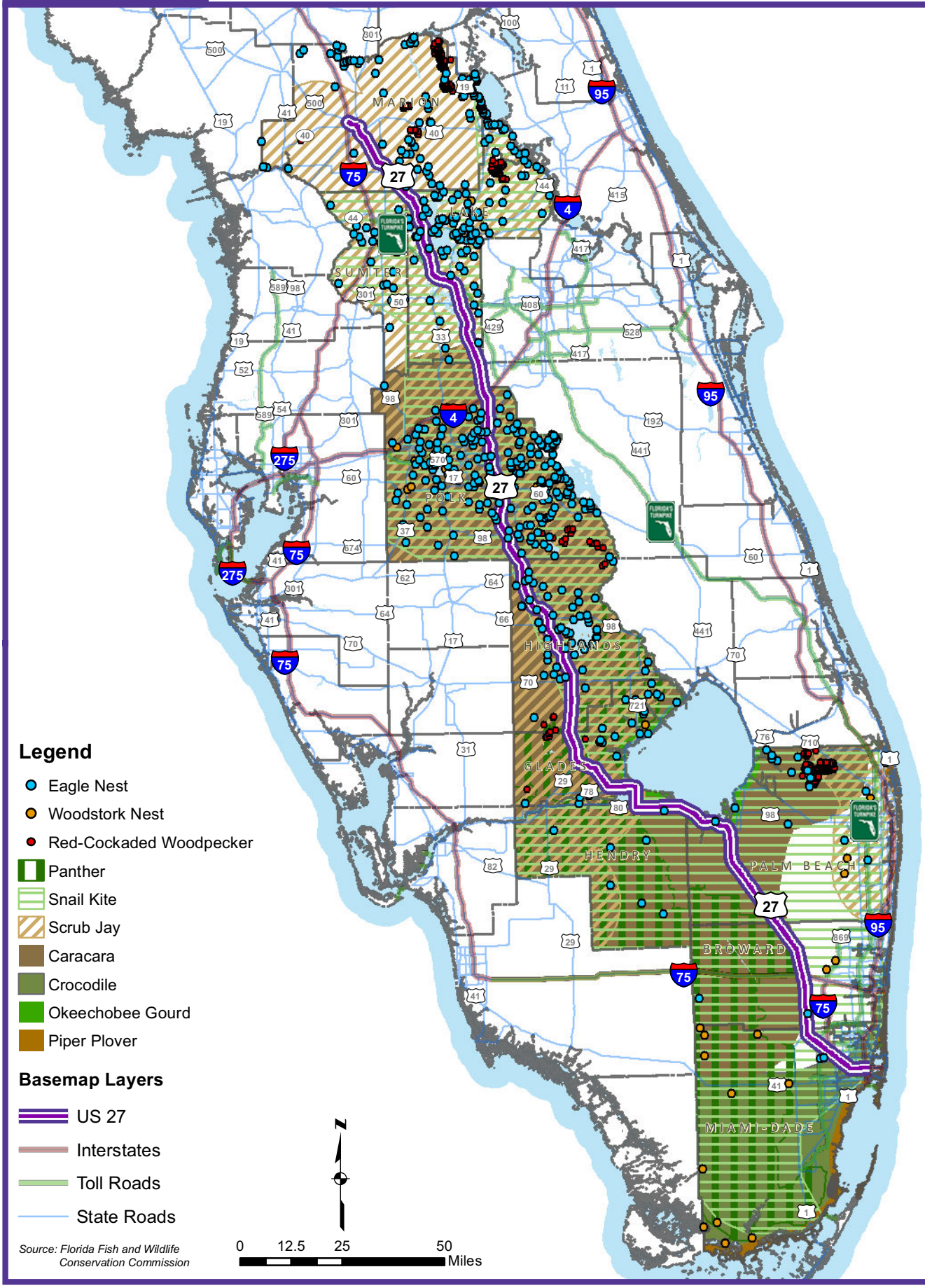
POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and land cover.

Species and communities listed as "Potential" were not included in the analysis because the probability of these species occurring in any single unit measured is likely to be very small. This level of analysis provides an overview of likely and documented occurrences of rare species and communities surrounding the corridor and should not replace site specific surveys for particular improvement projects, which will be conducted later in project development once projects and activities are better defined.

[5] Florida Natural Areas Inventory (FNAI) Biodiversity Matrix Website, April 2012.

Figure 4.3.4

Endangered and Threatened Species Consultation Areas along US-27 Corridor



Source: Florida Fish and Wildlife Conservation Commission

Table 4.3.5 summarizes the documented and likely rare species occurrences within one square mile of the US 27 Corridor. The federal and state status for each of these likely or documented species is provided as well. These categories include the following for the corridor, as defined by FNAI:

- **N** = Not currently listed, nor currently being considered for listing.
- **FE** = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service. All federally listed species require coordination and consultation with the U.S. Fish and Wildlife Service
- **FT** = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service. All federally listed species require coordination and consultation with the U.S. Fish and Wildlife Service.
- **LE** = Endangered: species in danger of extinction throughout all or a significant portion of its range.
- **LT** = Threatened: species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
- **ST** = State population listed as threatened by the Florida Fish and Wildlife Conservation Commission (FFWCC). Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
- **SSC** = Listed Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

Table 4.3.5: FNAI Diversity Matrix, US 27 Corridor

Common Name	Element Occurrence	Federal Status	State Status	Marion	Sumter	Lake	Polk	Highlands	Glades	Hendry	Palm Beach	Broward	Miami-Dade
Ashe's Savory	Documented-Historic	N	LT					X					
Basin Marsh	Likely	N	N			X							
Blue-Tailed Mole Skink	Likely	LT	FT					X					
Britton's Beargrass	Likely	LE	LE					X					
Crested Caracara	Likely	LT	FT							X			
Crested Caracara	Documented	LT	FT						X				
Crested Caracara	Documented-Historic	LT	FT						X				
Cuban Crescent	Likely	N	N								X		
Dry Prairie	Likely	N	N						X				
E. Diamondback Rattlesnake	Likely	N	N						X				
Eastern Indigo Snake	Likely	LT	FT	X				X	X				
Eastern Indigo Snake	Documented	LT	FT					X	X				
Edison's Ascyrum	Documented	N	LE						X				
Florida Black Bear	Likely	N	ST						X				
Florida Blazing Star	Likely	N	N					X					
Florida Blazing Star	Documented-Historic	N	N					X					
Florida Bonamia	Likely	LT	LE					X					
Florida Burrowing Owl	Documented	N	SSC		X								
Florida Jointweed	Likely	LE	LE					X					
Florida Mouse	Likely	N	SSC					X					
Florida Panther	Likely	LE	FE						X	X		X	
Florida Sandhill Crane	Likely	N	ST				X		X	X			
Florida Scrub Jay	Likely	LT	FT					X	X				
Florida Scrub Lizard	Likely	N	N					X					
Giant Orchid	Documented	N	LT				X						
Gopher Tortoise	Documented	N	ST			X	X						
Gopher Tortoise	Documented-Historic	N	ST					X					
Highlands Scrub Hypericum	Likely	LE	LE					X					
Lake Eustis Pupfish		N	SSC			X							
Mesic Flatwoods	Likely	N	N	X		X	X	X	X				

Table 4.3.5: FNAI Diversity Matrix, US 27 Corridor

Common Name	Element Occurrence	Federal Status	State Status	Marion	Sumter	Lake	Polk	Highlands	Glades	Hendry	Palm Beach	Broward	Miami-Dade
Nodding Pinweed	Documented-Historic	N	LT					X					
Paper-Like Nailwort	Likely	LT	LE					X					
Paper-Like Nailwort	Documented-Historic	LT	LE					X					
Red-Cockaded Woodpecker	Likely	LE	FE						X				
Relictual Tiny Sand-loving Scarab	Likely	N	N				X						
Sand Skink	Documented	LT	FT				X						
Sand Skink	Likely	LT	FT					X					
Sandhill	Likely	N	N					X					
Sandhill Upland Lake	Likely	N	N			X	X						
Scrub	Likely	N	N					X	x				
Scrub Bluestem	Likely	N	LE					X					
Scrub Buckwheat	Documented-Historic	LT	LE			X		X					
Scrub Buckwheat	Likely	LT	LE					X					
Scrub Palmetto Flower Scarab Beetle	Documented	N	N					X					
Scrub Pigeon-Wing	Likely	LT	LE					X					
Scrub Plum	Likely	LE	LE					X					
Scrub Spurge	Likely	N	N					X					
Sherman's Fox Squirrel	Likely	N	SSC		X				X				
Short-leaved Rosemary	Likely	LE	LE					X					
Short-leaved Rosemary	Documented-Historic	LE	LE					X					
Small's Jointweed	Likely	LE	LE					X					
Small's Jointweed	Documented-Historic	LE	LE					X					
Snail Kite	Likely	LE	FE									X	X
SE American Kestrel	Likely	N	ST		X			X					
Tequesta Grasshopper	Likely	N	N					X					
Upland Hardwood Forest	Likely	N	N	X									
Wood Stork	Likely	LE	FE		X		X	X				X	X

Source: FNAI Biodiversity Matrix, April 2012.

Conservation and Recreation Lands

FNAI has identified certain public and private lands as having natural resource value to be managed for conservation purposes. In reviewing these managed lands within a 1,500 foot buffer of the US 27 Corridor, 20 land resources have been identified and are described in **Table 4.3.6**.

Mitigation Banks

Mitigation banks also serve an important conservation function and are established pursuant to Chapter 62-342, F.A.C. Mitigation banks may be permitted by the local WMD or by FDEP. Mitigation banking is a practice in which an environmental enhancement and preservation project is conducted by a public agency or private entity to provide mitigation for unavoidable wetland impacts within a defined region. The mitigation bank is the site itself, and the currency sold by the banker to the impact permittee is a credit, which represents the wetland ecological value equivalent to the complete restoration of one acre of high quality wetland. The number of potential credits permitted for the bank and the credit debits required for impact permits are determined by the permitting agencies. One mitigation bank was identified within 1500 feet of US 27 in Polk County: Hammock Lake Mitigation Bank. This mitigation bank is located west of the US 27 Corridor, north of Haines City near CR 17/Old Polk Road.

Florida Areas of Critical State Concern

Areas of critical state concern (ACSCs) are defined by Section 380.05, Florida Statutes as "an area containing, or having a significant impact upon, environmental or natural resources of regional or statewide importance." There are five designated ACSCs in the state, as shown in **Figure 4.3.5**: the Big Cypress Area, the Green Swamp Area, the Florida Keys and the City of Key West Area, and the City of Apalachicola area. Within the US 27 Corridor, the Green Swamp ACSC borders the corridor on the west. It covers areas in Polk and Lake Counties, from approximately Haines City in Polk County to Clermont/SR 50 in Lake County.

The Department of Economic Opportunity (DEO), as the state's land planning agency, is responsible for recommending areas for inclusion as an ACSC and promulgating rules establishing principles for guiding development in these areas. DEO provides information to guide the purchase of lands situated within the boundaries of the proposed area as environmentally endangered lands and outdoor recreation lands. These recommendations also contain actions which the local government and state and regional agencies must accomplish in order to implement the principles for guiding development. These actions may include recommendations for revisions of the local comprehensive plan and adoption of land development regulations, density requirements, and special permitting requirements regarding wetlands, floodplain, water quality protection, and endangered species habitat.

Table 4.3.6: FNAI Managed Lands Inventory within 1,500 Ft

NAME	LAND TYPE	OWNER	ACRES	COUNTY
EAST COAST BUFFER	STATE	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	20,755.5	MIAMI-DADE, BROWARD, PALM BEACH
EVERGLADES AND FRANCIS S. TAYLOR WILDLIFE MANAGEMENT AREA	STATE	TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND	671,831.0	MIAMI-DADE, BROWARD, PALM BEACH
STORMWATER TREATMENT AREAS	STATE	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	47,606.1	PALM BEACH, HENDRY
EVERGLADES AGRICULTURAL AREA	STATE	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	52,125.5	PALM BEACH, HENDRY
FISHEATING CREEK WILDLIFE MANAGEMENT AREA	STATE	TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND	18,272.0	GLADES
FISHEATING CREEK/LYKES BROTHERS CONSERVATION EASEMENT	STATE	PRIVATE INDIVIDUAL(S)	41,596.4	GLADES
ARCHBOLD BIOLOGICAL STATION	PRIVATE	ARCHBOLD EXPEDITIONS, INC.	8,876.9	HIGHLANDS
SCRUB CONSERVATION BANK	PRIVATE	PRIVATE INDIVIDUAL(S)	151.3	HIGHLANDS
FISHEATING CREEK/SMOAK GROVES CONSERVATION EASEMENT	STATE	PRIVATE INDIVIDUAL(S)	8,433.9	HIGHLANDS
LAKE WALES RIDGE WILDLIFE AND ENVIRONMENTAL AREA	STATE	TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND	14,989.0	HIGHLANDS, POLK
CROOKED LAKE WEST - STUART TRACT	LOCAL	SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT	3,508.2	POLK
CROOKED LAKE WEST	LOCAL	POLK COUNTY	1,013.4	POLK
CROOKED LAKE WEST - BRITT TRACT	LOCAL	SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT	77.3	POLK
HILOCHEE WILDLIFE MANAGEMENT AREA	STATE	TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND	16,324.0	POLK, LAKE

Table 4.3.6: FNAI Managed Lands Inventory within 1,500 Ft

NAME	LAND TYPE	OWNER	ACRES	COUNTY
LAKE LOUISA STATE PARK	STATE	TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND	4,556.3	LAKE
LAKE GRIFFIN STATE PARK	STATE	TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND	620.7	LAKE
PALATLAKAHA ENVIRONMENTAL AND AGRICULTURAL RESERVE PARK	LOCAL	TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND	318.0	LAKE
HELENA RUN PRESERVE	LOCAL	LAKE COUNTY	18.6	LAKE
FLAT ISLAND PRESERVE	LOCAL	LAKE COUNTY WATER AUTHORITY	2,365.9	LAKE, SUMTER
MARJORIE HARRIS CARR CROSS FLORIDA GREENWAY STATE RECREATION/CONSERVATION AREA	STATE	INTERNAL IMPROVEMENT TRUST FUND	79,527.3	MARION

Figure 4.3.5A

US-27 Conservation Areas

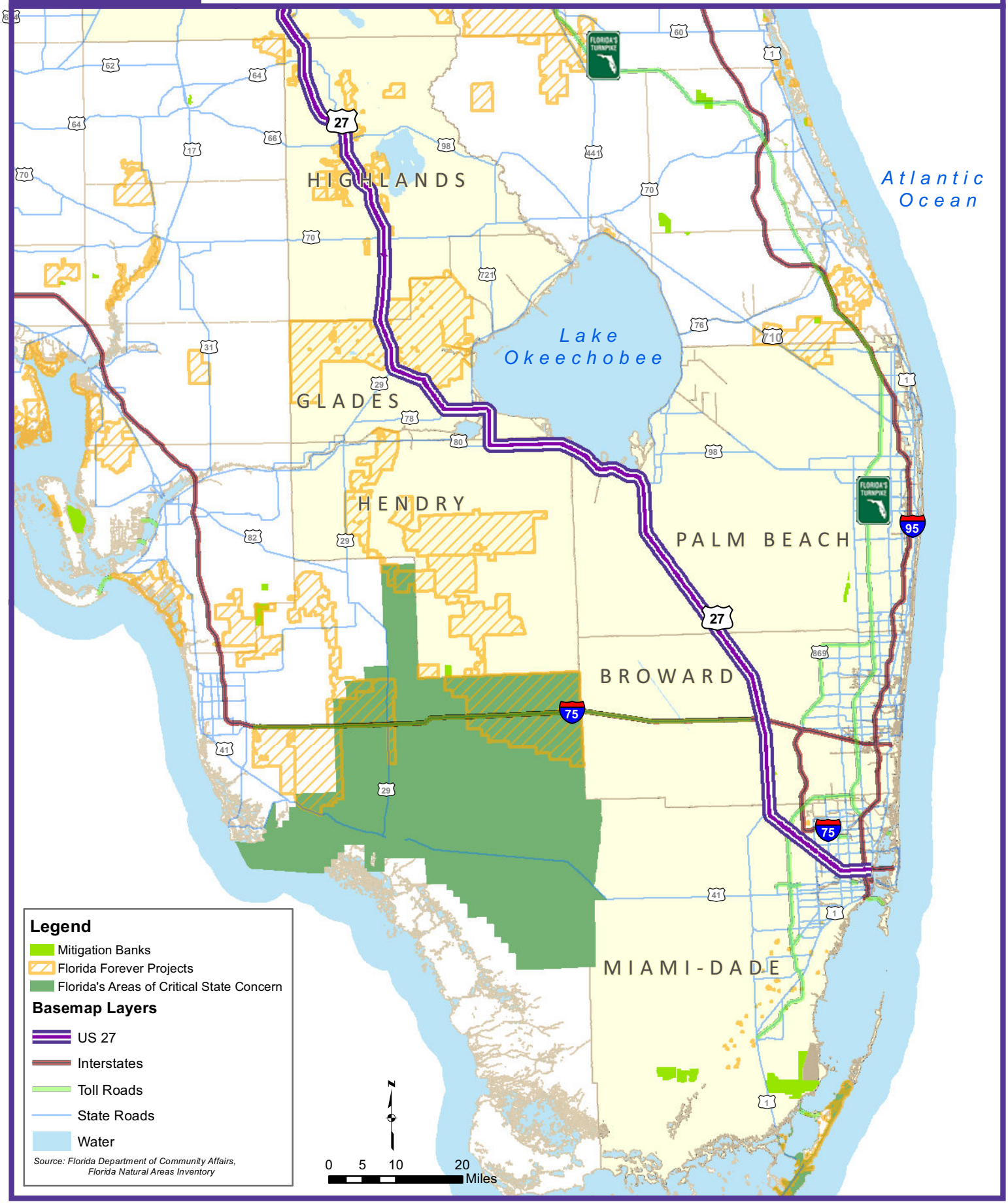
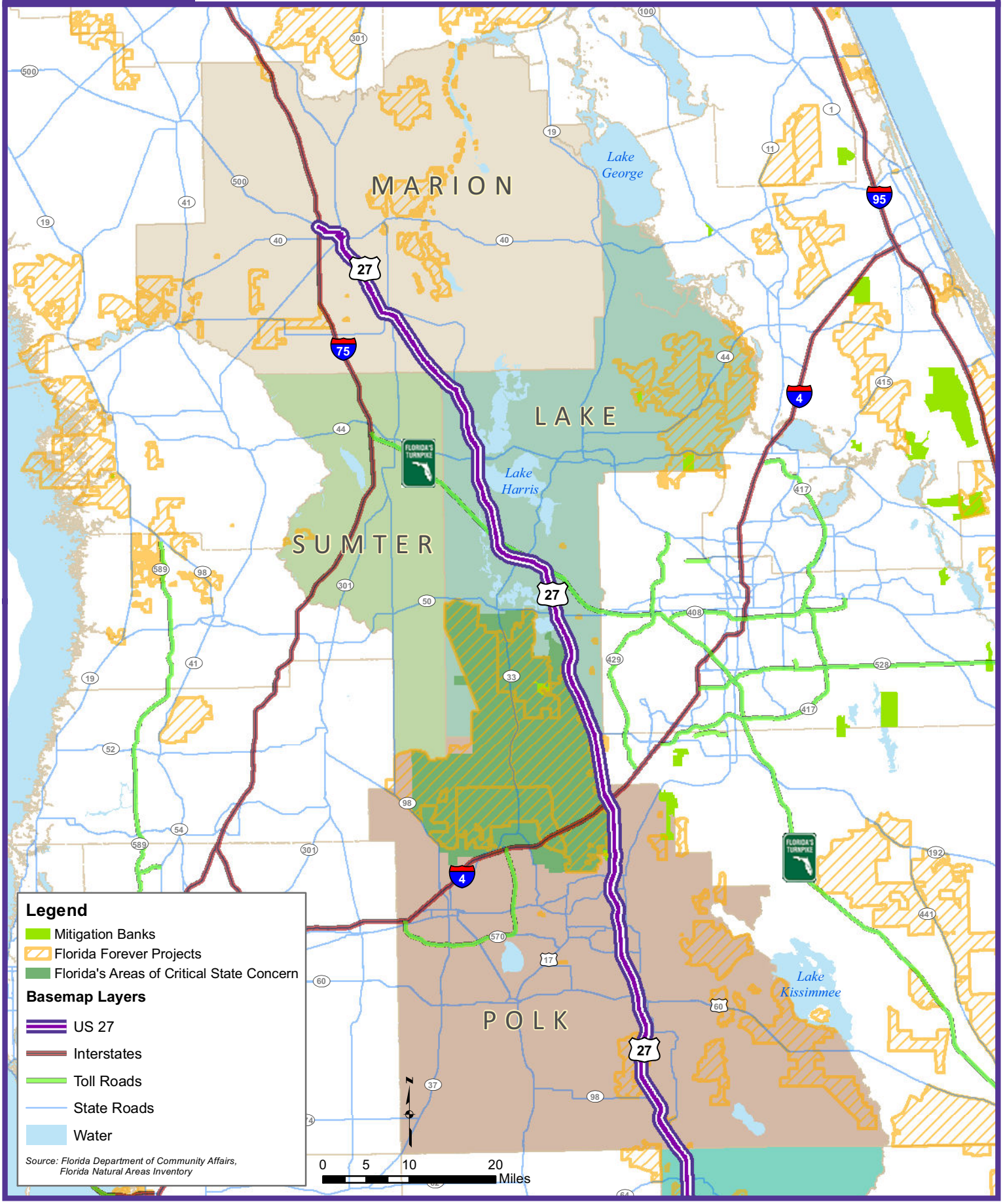


Figure 4.3.5B

US-27 Conservation Areas



Florida Forever Projects

Florida Forever lands have been proposed for acquisition because of outstanding natural resources, opportunity for natural resource-based recreation, or historical and archaeological resources. However, these areas may not be currently managed for their resource value. Portions of these projects may have already been acquired by the state and/or its acquisition partners. A review of Florida Forever projects within 1,500 feet of the study area indicates that there are nine Florida Forever projects near the US 27 Corridor, as shown in **Table 4.3.7**. A map of Florida Forever projects is also included in **Figure 4.3.5**.

Table 4.3.7: Florida Forever Lands within 1,500 Ft

PROJECT NAME	IMPROVEMENT DESCRIPTION/AREA	COUNTY	ACRES
FISHEATING CREEK ECOSYSTEM	ACREAGE AQUIRED	GLADES, HIGHLANDS	177,319.0
LAKE WALES RIDGE ECOSYSTEM	GOULD ROAD	HIGHLANDS	268.2
LAKE WALES RIDGE ECOSYSTEM	HENSCRATCH ROAD/JACK CREEK	HIGHLANDS	3,146.1
LAKE WALES RIDGE ECOSYSTEM	SUN N LAKES SOUTH	HIGHLANDS	485.1
LAKE WALES RIDGE ECOSYSTEM	CROOKED LAKE WEST	POLK	11,185.1
LAKE WALES RIDGE ECOSYSTEM	SUNRAY/HICKORY LAKE SOUTH	POLK	896.6
LAKE WALES RIDGE ECOSYSTEM	MOUNTAIN LAKE CUTOFF	POLK	210.8
GREEN SWAMP	HILOCHEE CORRIDOR	POLK, LAKE	93,056.4
ETONIAH	CROSS FL GREENWAY PHASE II	MARION	2,278.4

Parks and recreational land uses are also of particular concern to communities and conservation efforts within the US 27 Corridor. Within 1,500 feet of the US 27 Corridor, 14 parks have been identified, as shown in **Figure 4.3.6** and detailed in **Table 4.3.8**. One state park was identified in Lake County, Lake Griffin Park. It is located east of the corridor near CR 466A and the park can be accessed using US 27. The remaining 13 parks are local parks, predominantly located in Miami-Dade County. Of these local parks, there are three that are directly adjacent to the corridor: Triangle Park, Mattingly Park, and Moore Park. Improvements to this area of the corridor will need to determine any potential for park impacts.

Figure 4.3.6A

US-27 Parks and Public Lands

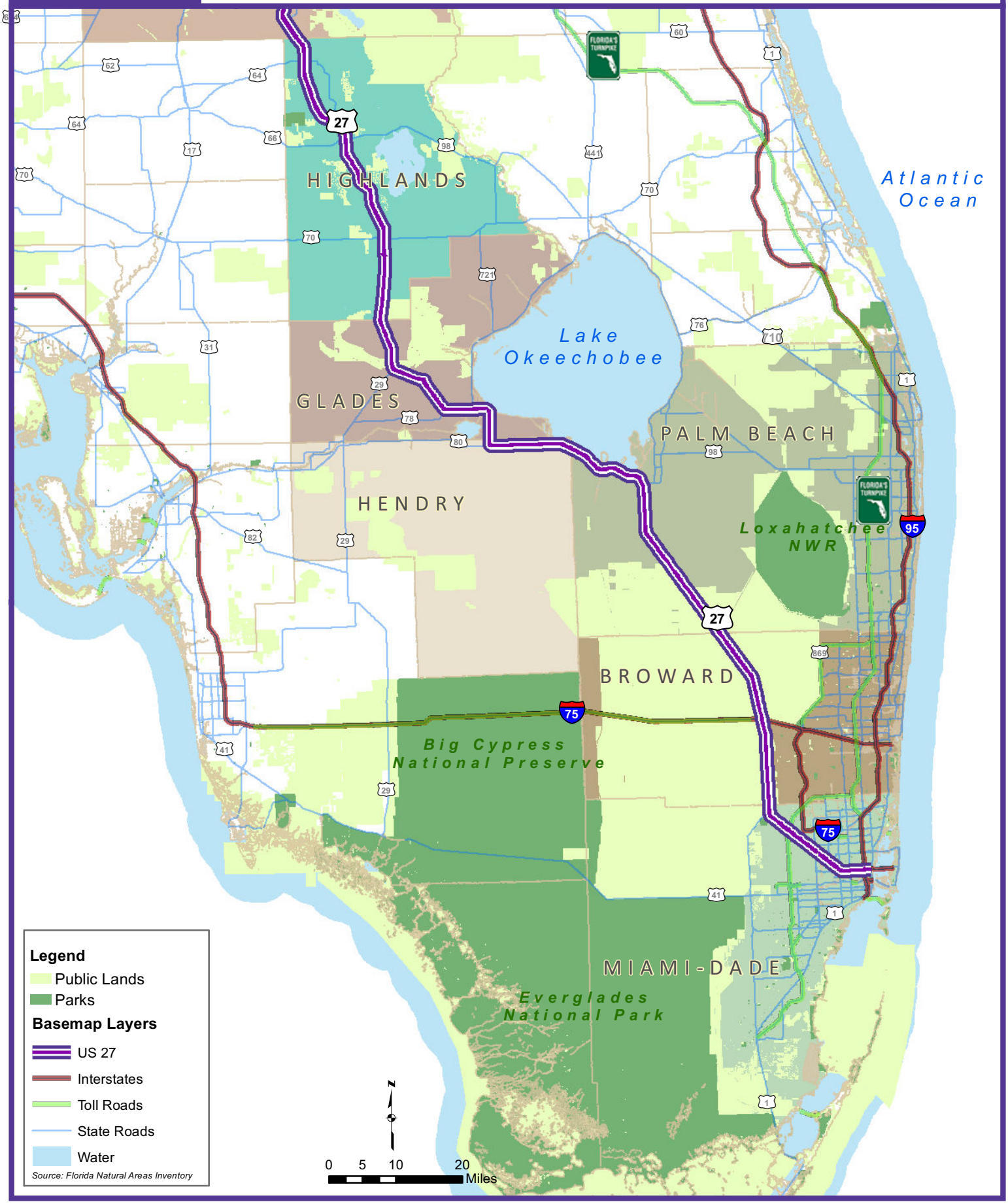


Figure 4.3.6B

US-27 Parks and Public Lands

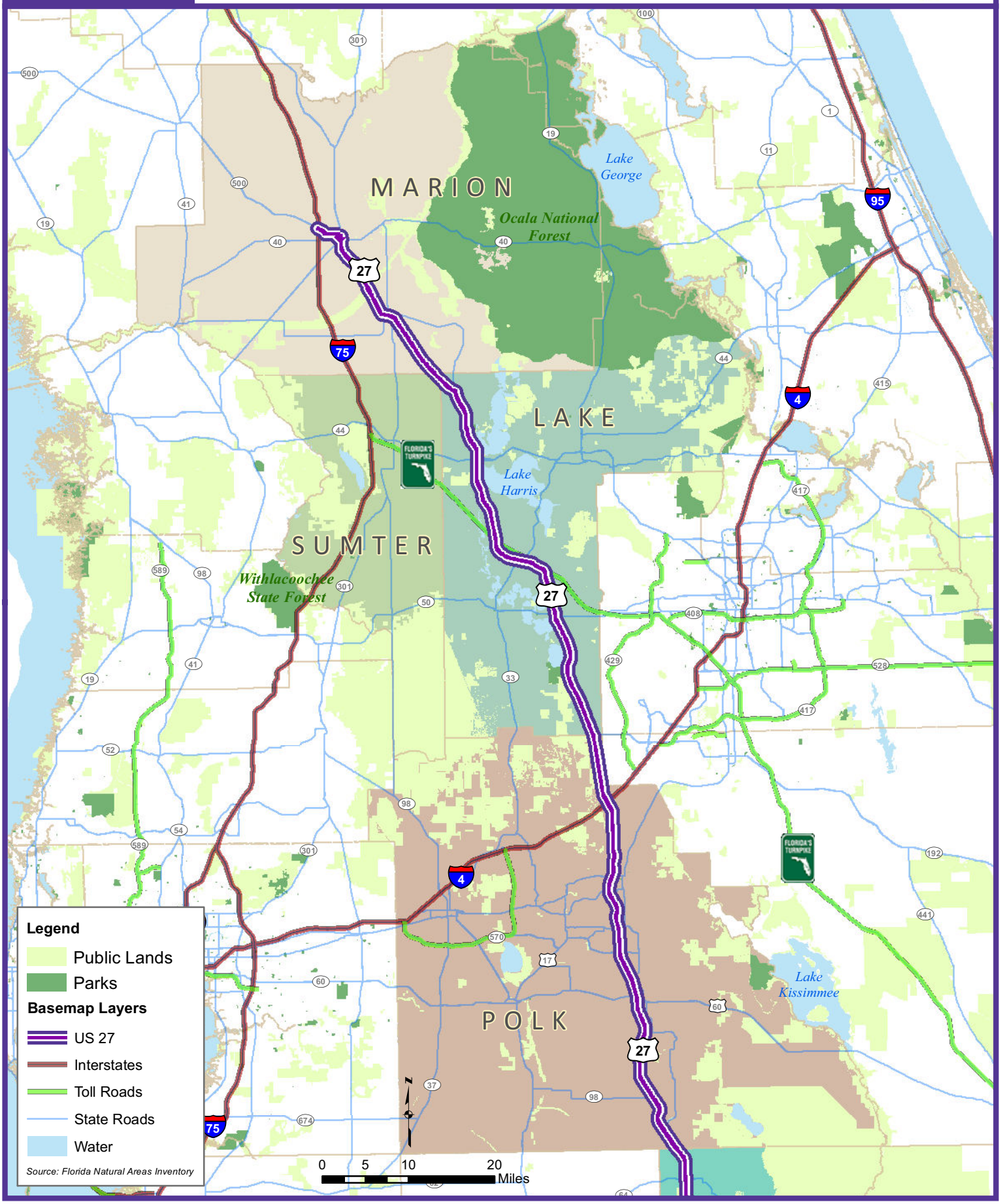


Table 4.3.8: National, State and Local Parks within 1,500 Ft

Name	FCC	Square Miles	County
Circle Park	Local Park	0.003	Miami-Dade
Mattingly Park	Local Park	0.003	Miami-Dade
East Drive Park	Local Park	0.015	Miami-Dade
Moore Park	Local Park	0.031	Miami-Dade
Roberto Clemente Park	Local Park	0.008	Miami-Dade
Martell Park	Local Park	0.002	Miami-Dade
Magnolia Park	Local Park	0.006	Miami-Dade
Southeast Park	Local Park	0.004	Miami-Dade
Triangle Park	Local Park	0.003	Miami-Dade
Wilson Park	Local Park	0.005	Miami-Dade
Stearns Park	Local Park	0.003	Miami-Dade
Everglades Park	Local Park	0.108	Broward
Lake Griffin State Park	State Park	0.632	Lake
McKinney Park	Local Park	0.008	Lake

Cultural Resources

To determine cultural resource impacts along the US 27 Corridor, a desktop analysis of the historic and archeological resources was conducted to identify any notable cultural resources that might be impacted by improvements along the US 27 Corridor. Where needed, the Florida Master Site File (FMSF), a database of recorded historical cultural resources in Florida, was also utilized. The Florida Master Site File contains records for archaeological sites, historical structures, historical cemeteries, historical bridges and historic districts. Sites were reviewed for designations from the Florida Division of Historical Resources, the state historic preservation officer (SHPO) for the state of Florida. Only eligible and potentially eligible SHPO evaluations are detailed for the purposes of this overview assessment. Eligible and potentially eligible historic structures located within 1,500 feet of the corridor include 27 locations, as described in **Table 4.3.9**. Of these identified structures, nearly half of these locations (13 total) are located within Miami-Dade County.

Table 4.3.9: Historic Structures within 1,500 Ft

SITE ID	COUNTY	SITE NAME	USE	SHPO EVALUATION	NRHP LISTING
DA00103	MIAMI-DADE	HIALEAH PASSENGER STATION	TERMINAL, AIR/BUS/RAIL	POTENTIALLY ELIGIBLE	7/14/1995
DA01121	MIAMI-DADE	3224 BISCAYNE BLVD	APARTMENT	POTENTIALLY ELIGIBLE	
DA01123	MIAMI-DADE	3300 BISCAYNE BLVD	APARTMENT	POTENTIALLY ELIGIBLE	
DA00164	MIAMI-DADE	GRAHAM DAIRY HOUSE	PRIVATE RESIDENCE	POTENTIALLY ELIGIBLE	
DA00342	MIAMI-DADE	CITY OF MIAMI WATER PLANT	SEWAGE TREATMENT	POTENTIALLY ELIGIBLE	
DA02319	MIAMI-DADE	PALLANT BUILDING	COMMERCIAL	POTENTIALLY ELIGIBLE	
DA06197	MIAMI-DADE	MIAMI-DADE CO WATER AND SEWER DEPT	OTHER	POTENTIALLY ELIGIBLE	
DA06683	MIAMI-DADE	DALE MILLER RESIDENCE	PRIVATE RESIDENCE	POTENTIALLY ELIGIBLE	
DA06684	MIAMI-DADE	CENTRAL NAZARENE CHURCH	MEETING HOUSE (RELIGIOUS)	POTENTIALLY ELIGIBLE	
DA06685	MIAMI-DADE	420 NW 40TH STREET	PRIVATE RESIDENCE	POTENTIALLY ELIGIBLE	
DA06686	MIAMI-DADE	410 NW 40TH STREET	PRIVATE RESIDENCE	POTENTIALLY ELIGIBLE	
DA06690	MIAMI-DADE	555 NW 40TH STREET	PRIVATE RESIDENCE	POTENTIALLY ELIGIBLE	
DA06691	MIAMI-DADE	+/- 575 NW 41ST ST	PRIVATE RESIDENCE	POTENTIALLY ELIGIBLE	
PB02028A	PALM BEACH	HERBERT HOOVER DIKE	DAM	POTENTIALLY ELIGIBLE	
PB13507	PALM BEACH	NORTH NEW RIVER CANAL LOCK	LOCK STRUCTURE-CANAL	POTENTIALLY ELIGIBLE	
PB13510	PALM BEACH	PUMP STATION 3	SEWAGE TREATMENT	POTENTIALLY ELIGIBLE	
HN00526	HENDRY	CLEWISTON HISTORIC SCHOOLS	EDUCATION RELATED	POTENTIALLY ELIGIBLE	9/26/1997
HN00527	HENDRY	CLEWISTON HISTORIC SCHOOLS	EDUCATION RELATED	POTENTIALLY ELIGIBLE	9/26/1997
HN00665	HENDRY	DIXIE CRYSTAL THEATER	THEATER	POTENTIALLY ELIGIBLE	9/25/1998
HN00095	HENDRY	CLEWISTON INN	HOTEL, MOTEL, INN	POTENTIALLY	2/21/1991

Table 4.3.9: Historic Structures within 1,500 Ft

SITE ID	COUNTY	SITE NAME	USE	SHPO EVALUATION	NRHP LISTING
				ELIGIBLE	
HG00091	HIGHLANDS	HARDER HALL	HOTEL, MOTEL, INN	POTENTIALLY ELIGIBLE	6/20/1990
HG00854	HIGHLANDS	CITRUS TOWER	TOWER	POTENTIALLY ELIGIBLE	
LA01779	LAKE	106 S HWY 27/441	COMMUNITY CENTER (E.G., RECREATION HALL)	POTENTIALLY ELIGIBLE	
LA01809	LAKE	SECOND LADY LAKE SCHOOL, THE	COMMUNITY CENTER (E.G., RECREATION HALL)	POTENTIALLY ELIGIBLE	
LA01810	LAKE	112 EAST MCCLENDON STREET, W	TEMPLE (RELIGIOUS)	POTENTIALLY ELIGIBLE	
LA01811	LAKE	114 EAST MCCLENDON STREET, W	HOUSE OF WORSHIP	POTENTIALLY ELIGIBLE	
MR02651	MARION	BELLEVIEW SCHOOL	CITY HALL	POTENTIALLY ELIGIBLE	3/25/1999

Of the five historic cemeteries identified by SHPO within 1,500 feet of the corridor, only one has been determined to be potentially eligible for NRHP listing: Evergreen Cemetery in the City of Ocala in Marion County. This cemetery is due east of the corridor and not directly located along US 27 Corridor. It is located along NW 8th Street and is not anticipated to be impacted by improvements along US 27.

Three potentially eligible historic bridges are located along the US 27 Corridor, as shown in **Table 4.3.10**, and are all are located in Miami-Dade County. These bridges are still in use, but have not been designated in the NRHP.

Table 4.3.10: Potentially Eligible Historic Bridges within 1,500 Ft

SITEID	COUNTY	SITE NAME	IN USE	SHPO EVALUATION
DA00099	MIAMI-DADE	NORTHWEST 54TH STREET BRIDGE	YES	POTENTIALLY ELIGIBLE
DA05910	MIAMI-DADE	CSXT RAILROAD BRIDGE #M.P. 1036.7	YES	POTENTIALLY ELIGIBLE
DA11618	MIAMI-DADE	NW 36TH STREET BRIDGE	YES	POTENTIALLY ELIGIBLE

Developments of Regional Impact (DRIs)

All projects within the corridor are subject to local comprehensive plan policies and land development code ordinances. Any proposed improvements impacting community features should undergo specific environmental analysis of potential land use impacts and ensure community cohesion. Due to the large study area, for the purposes of this analysis, developments of regional impact (DRIs) were reviewed and are identified herein. Chapter 380.06, Florida Statutes (F.S.), defines a DRI as "any development which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety, or welfare of citizens of more than one county. Some locations and types of developments are exempt from the DRI program." The most recently available DRI information was obtained from FGDL for the third quarter of 2011, and approved DRIs within five miles of the US 27 Corridor were identified for inclusion in the inventory of existing conditions based upon size and proximity. These are shown in **Table 4.3.11**.

Table 4.3.11: Approved DRIs in the US 27 Study Area

PROJECT NAME	LOCAL GOVERNMENT	COUNTY IN STUDY AREA	DEVT TYPE	ACRES
PORTOFINO	MIAMI BEACH CITY	MIAMI-DADE	RESIDENTIAL	2.73
CLAUGHTON ISLAND	MIAMI-DADE COUNTY	MIAMI-DADE	OFFICE	44.48
FISHER ISLAND	MIAMI-DADE COUNTY	MIAMI-DADE	RESIDENTIAL	205.42
MIAMI BEACH MARINA	MIAMI BEACH CITY	MIAMI-DADE	PORT	35.81
DADE COUNTY REGIONAL SERVICE CENTER	MIAMI CITY	MIAMI-DADE	OFFICE	3.35
PLAZA VENETIA & OMNI MARINAS	MIAMI-DADE COUNTY	MIAMI-DADE	PORT	7.37
FISHER ISLAND TERMINAL	MIAMI-DADE COUNTY	MIAMI-DADE	PETROLEUM	8.85
SOUTH SHORE DEVELOPMENT	MIAMI BEACH CITY	MIAMI-DADE	RESIDENTIAL	306.60
BALL POINT	MIAMI-DADE COUNTY	MIAMI-DADE	COMMERCIAL	4.69
MIAMI INTERNATIONAL AIRPORT	MIAMI-DADE COUNTY	MIAMI-DADE	AIRPORT	2,995.50
WEST DADE MALL	MIAMI-DADE COUNTY	MIAMI-DADE	COMMERCIAL	118.80
PORT OF MIAMI	MIAMI CITY	MIAMI-DADE	PORT	536.37
NASHER PLAZA	MIAMI CITY	MIAMI-DADE	OFFICE	3.44
1221 BRICKELL	MIAMI CITY	MIAMI-DADE	OFFICE	2.08
SOUTHEAST FINANCIAL CENTER	MIAMI CITY	MIAMI-DADE	OFFICE	2.12
MIAMI CENTER I	MIAMI CITY	MIAMI-DADE	OFFICE	13.30

Table 4.3.11: Approved DRIs in the US 27 Study Area

PROJECT NAME	LOCAL GOVERNMENT	COUNTY IN STUDY AREA	DEVT TYPE	ACRES
MIAMI WORLD TRADE CENTER	MIAMI CITY	MIAMI-DADE	OFFICE	1.50
FLAGLER STATION (GRAN PARK)	MIAMI-DADE COUNTY	MIAMI-DADE	INDUSTRIAL	155.00
BRICKELL BAY OFFICE TOWER	MIAMI CITY	MIAMI-DADE	OFFICE	0.98
CORPORATE OFFICE PARK	MIAMI-DADE COUNTY	MIAMI-DADE	OFFICE	120.70
WATERFORD AT BLUE LAGOON	MIAMI-DADE COUNTY	MIAMI-DADE	OFFICE	134.59
1111 BRICKELL	MIAMI CITY	MIAMI-DADE	OFFICE	1.35
BALL POINT	MIAMI CITY	MIAMI-DADE	OFFICE	8.59
MIAMI DOWNTOWN	MIAMI CITY	MIAMI-DADE	OFFICE	780.41
SOUTHEAST OVERTOWN/PARK WEST-II	MIAMI CITY	MIAMI-DADE	OFFICE	245.43
FLAGLER PARK PLAZA	MIAMI-DADE COUNTY	MIAMI-DADE	RETAIL	140.51
MIAMI ARENA	MIAMI CITY	MIAMI-DADE	RECREATION	11.31
DOWNTOWN GOVERNMENT CENTER-M	MIAMI CITY	MIAMI-DADE	OFFICE	39.27
EMERALD ESTATES AND PARK OF COMMERCE	WESTON CITY	BROWARD	RESIDENTIAL	284.78
COUNTRY LAKES WEST	MIRAMAR CITY	BROWARD	OFFICE	1,768.24
84 SOUTH	SUNRISE CITY	BROWARD	RESIDENTIAL	783.93
ARVIDA INDIAN TRACE INCREMENT II	BROWARD COUNTY	BROWARD	RESIDENTIAL	5,499.62
BRICKELL SQUARE PHASE I	WESTON CITY	BROWARD	OFFICE	149.83
ARVIDA INCREMENT IIA-ECUMED	BROWARD COUNTY	BROWARD	OFFICE	1,668.26
CHAPEL TRAIL	PEMBROKE PINES CITY	BROWARD	RESIDENTIAL	2,042.91
PEMBROKE PINES REGIONAL SHOPPING CENTER	PEMBROKE PINES CITY	BROWARD	RETAIL	104.53
SILVER LAKES	MIRAMAR CITY	BROWARD	RESIDENTIAL	2,165.32
LAKE PLACID GROVES	HIGHLANDS COUNTY	HIGHLANDS	RESIDENTIAL	2,170.19
LAKESHORE MALL	HIGHLANDS COUNTY	HIGHLANDS	RETAIL	156.47
FOUR CORNERS TOWN CENTER	POLK COUNTY	POLK	RETAIL	104.20
WINTERSET	POLK COUNTY	POLK	COMMERCIAL	53.76
RIDGEWOOD LAKES	POLK COUNTY	POLK	RESIDENTIAL	2,962.30
VICTOR POSNER CENTER	POLK COUNTY	POLK	RETAIL	861.93
STATE FARM INSURANCE DRI	POLK COUNTY	POLK	OFFICE	128.57

Table 4.3.11: Approved DRIs in the US 27 Study Area

PROJECT NAME	LOCAL GOVERNMENT	COUNTY IN STUDY AREA	DEVT TYPE	ACRES
OAK HILLS ESTATES	POLK COUNTY	POLK	MULTI-USE	2,268.70
WESTGATE	OSCEOLA COUNTY	OSCEOLA	RESIDENTIAL	234.80
CELEBRATION	OSCEOLA COUNTY	OSCEOLA	MULTI-USE	5,083.15
WESTSIDE	OSCEOLA COUNTY	OSCEOLA	RETAIL	1,059.97
STONEYBROOK SOUTH	OSCEOLA COUNTY	OSCEOLA	RESIDENTIAL	924.06
FANTASY HEIGHTS	OSCEOLA COUNTY	OSCEOLA	RESIDENTIAL	302.83
LINDFIELDS	OSCEOLA COUNTY	OSCEOLA	RESIDENTIAL	362.17
REUNION RESORT & CLUB	OSCEOLA COUNTY	OSCEOLA	OFFICE	2,121.26
FORMOSA GARDENS	OSCEOLA COUNTY	OSCEOLA	RESIDENTIAL	490.98
GRAND PALISADES RESORT	ORANGE COUNTY	ORANGE	RESIDENTIAL	437.51
ORANGE LAKE RESORT AND COUNTRY CLUB	ORANGE COUNTY	ORANGE	RESIDENTIAL	1,410.73
CHRISTOPHER C. FORD INDUSTRIAL PARK	LAKE COUNTY	LAKE	INDUSTIAL	782.41
PLAZA COLLINA	LAKE COUNTY	LAKE	RETAIL	146.84
HILLS OF MINNEOLA	MINNEOLA CITY	LAKE	RESIDENTIAL	1,899.29
SECRET PROMISE	LEESBURG CITY	LAKE	RESIDENTIAL	3,753.29
PLANTATION AT LEESBURG	LEESBURG CITY	LAKE	RESIDENTIAL	1,580.48
EVANSVILLE WESTERN RAILWAY RAIL TERMINAL	WINTER HAVEN CITY	LAKE	INDUSTRIAL	363.01
SUMMER BAY	LAKE COUNTY	LAKE	RESIDENTIAL	310.32
WATER OAK ESTATES	LAKE COUNTY	LAKE	RESIDENTIAL	439.66
CAGAN CROSSINGS	LAKE COUNTY	LAKE	RESIDENTIAL	729.78
VILLAGES OF SUMTER	WILDWOOD CITY	SUMTER	RETAIL	14,741.87
TRI-COUNTY VILLAGES	SUMTER COUNTY	SUMTER	RESIDENTIAL	5,491.38
VILLAGES OF MARION, THE	MARION COUNTY	MARION	RESIDENTIAL	1,791.04
DEL WEBB'S SPRUCE CREEK COUNTRY CLUB	MARION COUNTY	MARION	RETAIL	1,544.22
HEATH BROOK	OCALA CITY	MARION	RESIDENTIAL	913.38
PADDOCK MALL	OCALA CITY	MARION	COMMERCIAL	83.86
ON TOP OF THE WORLD	MARION COUNTY	MARION	RESIDENTIAL	12,932.98
PADDOCK PARK	OCALA CITY	MARION	COMMERCIAL	274.83
CALA HILLS	OCALA CITY	MARION	COMMERCIAL	233.90
OCALA MUNICIPAL AIRPORT RUNWAY EXTENSION	OCALA CITY	MARION	AIRPORT	475.46
STONECREST	MARION COUNTY	MARION	RESIDENTIAL	988.24
SPRUCE CREEK SOUTH	MARION COUNTY	MARION	RESIDENTIAL	662.31

Contaminated Sites

The potential for contaminated sites is extremely important in any analysis of improvements along the corridor, and the PD&E Manual provides procedures for full environmental analysis of contaminated sites during a PD&E Study. Full analysis of contamination issues are done through Contamination Screening Evaluation Reports (CSERs) for projects. Each CSER utilizes FDOT's hazardous materials rating system to rate the potential risk of contamination at each property identified. This rating system includes four possible values:

NO: After reviewing available information, there is nothing to indicate that contamination is a problem at the designated facility. It is possible that contaminants could have been handled on the property, however all available information indicates that problems are not expected.

LOW: The former or current operation has a hazardous waste generator identification number, or deals with hazardous materials; however, based on all available information, there is no reason to believe there would be any involvement with contamination. This is the lowest rating a gasoline station operating within current regulations could receive.

MEDIUM: After a review of all available information, indications are found (reports, Notice of Violation, consent orders, etc.) that identify known soil and/or water contamination and that the problem does not need remediation, is being remediated (i.e., air stripping of the groundwater, etc.) or that continued monitoring is required.

HIGH: After a review of all available information, there is a potential for contamination problems. Further assessment will be required after alignment selection to determine the actual presence and/or levels of contamination and the need for remedial action.

Given the large study area of the US 27 Corridor and the lack of previous PD&E studies to provide sufficient details on segments of the corridor with regard to contaminated sites, this review provides details on potential contamination concerns such as the identification of National Priority List (NPL) sites, State funded Hazardous Waste Cleanup Sites, and brownfield areas. Full environmental analysis of contamination would be addressed as projects move forward.

National Priority List (NPL) Sites

The US Environmental Protection Agency (EPA) National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. Within 1,500 feet of the US 27 Corridor, there are two sites that have been identified for further investigation, as shown in **Table 4.3.12**. Both are located in Miami-Dade County. One is located in Medley,

approximately 400 feet from the US 27 Corridor, and another is located in Hialeah, approximately 900 feet from the US 27 Corridor. Additional analysis would need to be conducted for any improvements in this area to fully identify contamination impacts.

Table 4.3.12: National Priority List Sites within 1,500 Ft

FACILITY NAME	ADDRESS	CITY	ZIP	COUNTY
B AND B TRITECH INCORPORATED	875 WEST 20TH STREET	HIALEAH	33010	MIAMI DADE
PEPPER STEEL & ALLOYS, INC.	11100 NORTHWEST S RIVER DRIVE	MEDLEY	33178	MIAMI DADE

State Funded Hazardous Waste Cleanup Sites

State funded hazardous waste cleanup sites are designated by FDEP District Offices for remediation as part of a program designed to address sites where (1) there are no viable responsible parties, (2) the site poses an imminent hazard, and (3) the site does not qualify for Superfund or is a low priority for EPA. Within 1,500 feet of the US 27 Corridor, two state funded hazardous waste cleanup sites have been identified, as shown in **Table 4.3.13**. Both sites have now been delisted. They are located in Lake and Marion Counties, respectively.

Table 4.3.13: State Funded Cleanup Sites within 1,500 Ft

NAME	OPERATION	ADDRESS	CITY	COUNTY	STATUS
BELLEVIEW GASOLINE CONTAMINATION	GAS/ PETROLEUM	ROBINSON RD. & US HWY 441	BELLEVIEW	MARION	DELISTED
PEARSON PROPERTY	OTHER	14 GINGER CIRCLE	LEESBURG	LAKE	DELISTED

Brownfields

Brownfields are defined by FDEP as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. The primary goals of Florida's Brownfields Redevelopment Act (Chapter 376.77-.85 Florida Statutes) are to reduce health and environmental hazards on existing commercial and industrial sites that are abandoned or underused due to these hazards and create financial and regulatory incentives to encourage redevelopment and voluntary cleanup of contaminated properties. A "brownfield area" means a contiguous area of one or more brownfield sites, some of which may not be contaminated, that has been designated as such by a local government resolution. Such areas may include all or portions of community redevelopment areas, enterprise zones, empowerment zones, other such designated economically deprived communities and areas, and EPA designated brownfield pilot projects.

Table 4.3.14 shows the brownfield sites within 1,500 feet of the US 27 Corridor. A total of 14 brownfield areas have been identified, and are most predominant in Miami-Dade (six sites) and Marion (six sites) Counties. One location has been identified in Highlands County, and one has been identified in Lake County. Additional analysis on these brownfields may be warranted as projects are identified within these areas. This analysis would indicate any special considerations for development of these areas near the corridor.

Table 4.3.14: Brownfield Sites within 1,500 Ft

BROWNFIELD NAME	CITY	COUNTY	ACRES
CENTRAL MIAMI AREA	MIAMI	MIAMI-DADE	4,111.3
MIAMI EZ EXPANSION AREA	MIAMI	MIAMI-DADE	4,809.7
CITY OF HIALEAH BROWNFIELD AREA	HIALEAH	MIAMI-DADE	3,089.1
MEDLEY REDEVELOPMENT BROWNFIELDS AREA	MEDLEY	MIAMI-DADE	9.3
MIAMI AREA	MIAMI	MIAMI-DADE	5,018.2
MODEL CITY\BROWNSVILLE AREA	MIAMI	MIAMI-DADE	9,708.2
HIGHLANDS COUNTY BROWNFIELD AREA	SEBRING	HIGHLANDS	12,770.5
CARVER HEIGHTS / MONTCLAIR AREA CRA	LEESBURG	LAKE	1,162.2
SOUTHEAST BROWNFIELD EXPANSION AREA	OCALA	MARION	27.4
WEST OCALA EXPANSION AREA	OCALA	MARION	1,015.4
OCALA AREA #1	OCALA	MARION	262.3
OCALA AREA #5 (NW 1ST STREET)	OCALA	MARION	1.4
OCALA AREA #7 (817 NORTH PINE AVENUE)	OCALA	MARION	0.8
OCALA AREA #3 (NW 10TH STREET)	OCALA	MARION	3.2

4.4 Next Steps

The review presented in this chapter should not be considered a complete analysis of the study area, but rather the initial step in identifying environmentally sensitive lands. More detailed, precise information, on-site environmental assessments, as well as identification of effects of any improvement to the surrounding environment, will be necessary in future phases of this study. If any projects advance, impacts to the environment will be assessed following FDOT processes and procedures and will be coordinated with appropriate resource and regulatory agencies.

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Chapter 5 – Emergency & Security Response

The US 27 corridor serves as a key north-south highway facility for the movement of passengers and freight. The security of this vital route is of the utmost concern since any disruption, natural or manmade, could have important impacts to the efficient movement of people and freight. This chapter of the US 27 Needs Plan discusses existing plans for evacuation and emergency management to identify critical issues facing US 27 with regard to facilitating emergency and security response. It also presents the role of security and law enforcement in the project corridor.

The results of this assessment are based on a review of information of Florida's Statewide Regional Evacuation Study Program and County Comprehensive Emergency Management Plans for each of the ten counties within the US 27 Corridor. Of critical importance in facilitating emergency and security response is providing adequate access points to other emergency networks in the corridor. While certain areas within the corridor easily connect US 27 to I-95, I-75, Florida's Turnpike, and I-4 and provide a series of alternatives for emergency and evacuation responses, some of the more rural areas of Hendry, Glades, and Highlands County rely heavily upon the network of supporting county and state roads to offer access to other areas around the state in case of evacuation. These rural areas are also home to a greater number of mobile home parks, which are particularly vulnerable to damage during disasters. In addition to these factors, a number of environmental factors have been identified that may impact emergency and security response, including the potential for a breach of the Herbert Hoover Dike surrounding Lake Okeechobee should severe flooding occur. The following sections provide further details on the relationship of evacuation plans within the state and counties to the facilitating emergency and security response along the US 27 Corridor.

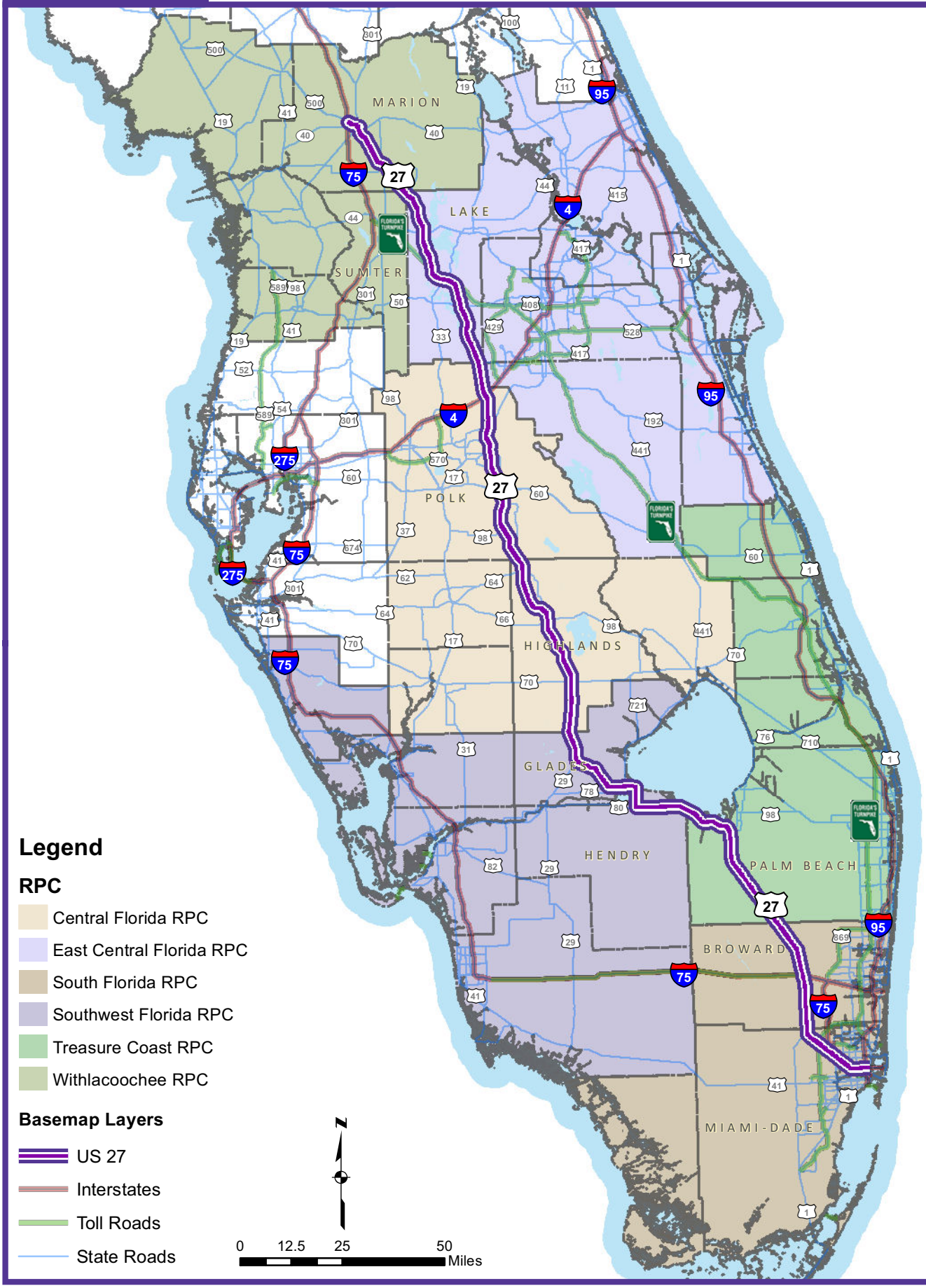
5.1 Statewide Regional Evacuation Study Program

Under Florida House Bill 7121, Disaster Preparedness Response and Recovery, the Florida Division of Emergency Management (DEM) received funding to update all 11 regional evacuation studies for Florida's Regional Planning Councils (RPCs)[1], including the six RPCs along the US 27 Corridor which are illustrated in **Figure 5.1.1**.

[1] Per Chapter 2006-71, Laws of Florida, HB 7121 provides legislative findings with respect to the need for improvements in the state's infrastructure in response to the hurricane seasons of 2004 and 2005; provides criteria for appropriation to fund the construction or renovation of county emergency operations centers and designates alternate state emergency operations centers; provides criteria for an appropriation for retrofitting public hurricane evacuation shelters, etc.

Figure 5.1.1

Study Area RPC Boundaries



Chapter 5 – Emergency & Security Response

The Statewide Regional Evacuation Study Program (SRESP) was created to identify and implement strategies for the facilitation of evacuations. The program has allowed regions to coordinate resources and tie together all regional evacuation studies into one coordinated statewide plan.

As part of the study process for the SRESP, new coast Light Detection and Ranging (LIDAR) data was gathered and provided to update coastal surge/flood modeling tools including Sea, Lake and Overland Surges from hurricanes (SLOSH). [2] The project also includes demographic and land use analysis, hazards and behavioral analysis, shelter analysis, and an evaluation of the transportation networks in each region. The major components of the SRESP include the following:

- **Demographic and Land Use Analysis** – describes general population characteristics and implications for evacuation dynamics, as well as future land use analysis;
- **Regional Hazards Analysis** – addresses not only hurricanes but also other significant hazards which have the potential to bring about major evacuations, such as wildfires. The hazards analysis includes general information about each hazard, a history of activity in the region, and geo-spatial analysis of the potential effects of the hazard;
- **Vulnerability Analysis** – provides an assessment of the human and social impacts of hazards and identifies the population-at-risk and the vulnerability of critical facilities. The vulnerability analysis also illustrates the treats of multiple hazard impacts following a hurricane;
- **Behavioral Analysis** – includes the development of necessary assumptions based on how people respond to the changing conditions leading up to and during an evacuation. The assumptions are founded on survey data and show the response of people with respect to five behaviors: how many people would evacuate; when they would leave; what type of refuge they would seek; where they would travel for refuge; and how many vehicles they would use;
- **Shelter Analysis** – presents a picture of shelter preparedness. The analysis includes an inventory of shelters, as well as the special demands on those shelters. The criteria for shelter selection and the selection process are also discussed; and,

[2] Light Detection and Ranging (LIDAR) is a remote sensing system used to collect topographic data. SLOSH (Sea, Lake and Overland Surges from Hurricanes) is a computerized model run by the National Hurricane Center (NHC) to estimate storm surge heights and winds resulting from historical, hypothetical, or predicted hurricanes.

- **Transportation Analysis** – is part of the backbone of the SRESP. The transportation portion serves to estimate evacuation clearance times for every county and region and ensures that all Regional Planning Councils (RPCs) and the members of their respective regions use the same consistent transportation methodology. The RPCs and local county emergency management staff also identified evacuation networks, which were used as input for the transportation analysis.

The transportation analysis portion of the SRESP includes the creation and development of a travel demand modeling system to calculate estimated evacuation clearance times and permit RPCs to evaluate multiple "what-if" scenarios of various storm conditions. The travel demand model structure uses the Cube Voyager platform, consistent with FDOT and MPO travel demand models, and includes behavioral data, demographic data, an evacuation network and evacuation zones. The outputs from the model include clearance times, the number of evacuees entering and leaving the county, and evacuation network traffic volumes. The results of this analysis are helpful in exposing where deficiencies exist in the evacuation network.

The SRESP was completed in December of 2010. The work completed on the transportation analysis and evacuation networks provided important information in confirming the importance of US 27 as a north/south evacuation corridor. US 27 played a key role in the evacuation network for the six regional planning councils and ten counties in the study area, as illustrated in **Figures 5.1.2A and 5.1.2B**.

Presently, US 27 directly connects to nearly 42 access points to other RPC designated facilities that are part of the SRESP evacuation network. This connectivity provides important linkages to alternate routes in the case that any section of US 27 or other roads becomes impassable or unsafe. The counties within the study area with the highest number of evacuation network connections to US 27 are Miami-Dade, Polk, Lake and Marion Counties. This is especially significant given the larger populations in each county that must be moved quickly in the event of a hurricane or other disastrous event. The major access point from US 27 in Broward County is I-75. Access points are less prevalent in the more rural areas of Palm Beach, Hendry, Glades, and highlands Counties. These areas may therefore be expected to create more traffic along US 27 during evacuations given the distances between viable access points, and create additional burdens on the following access points in these counties as evacuees attempt to travel east or west of the corridor to access I-75, Florida's Turnpike, and I-95: SR 80, SR 78, SR 29, SR 70, US 98, and SR 60.

Figure 5.1.2A

Statewide Regional Evacuation Study Program Designated Evacuation Network

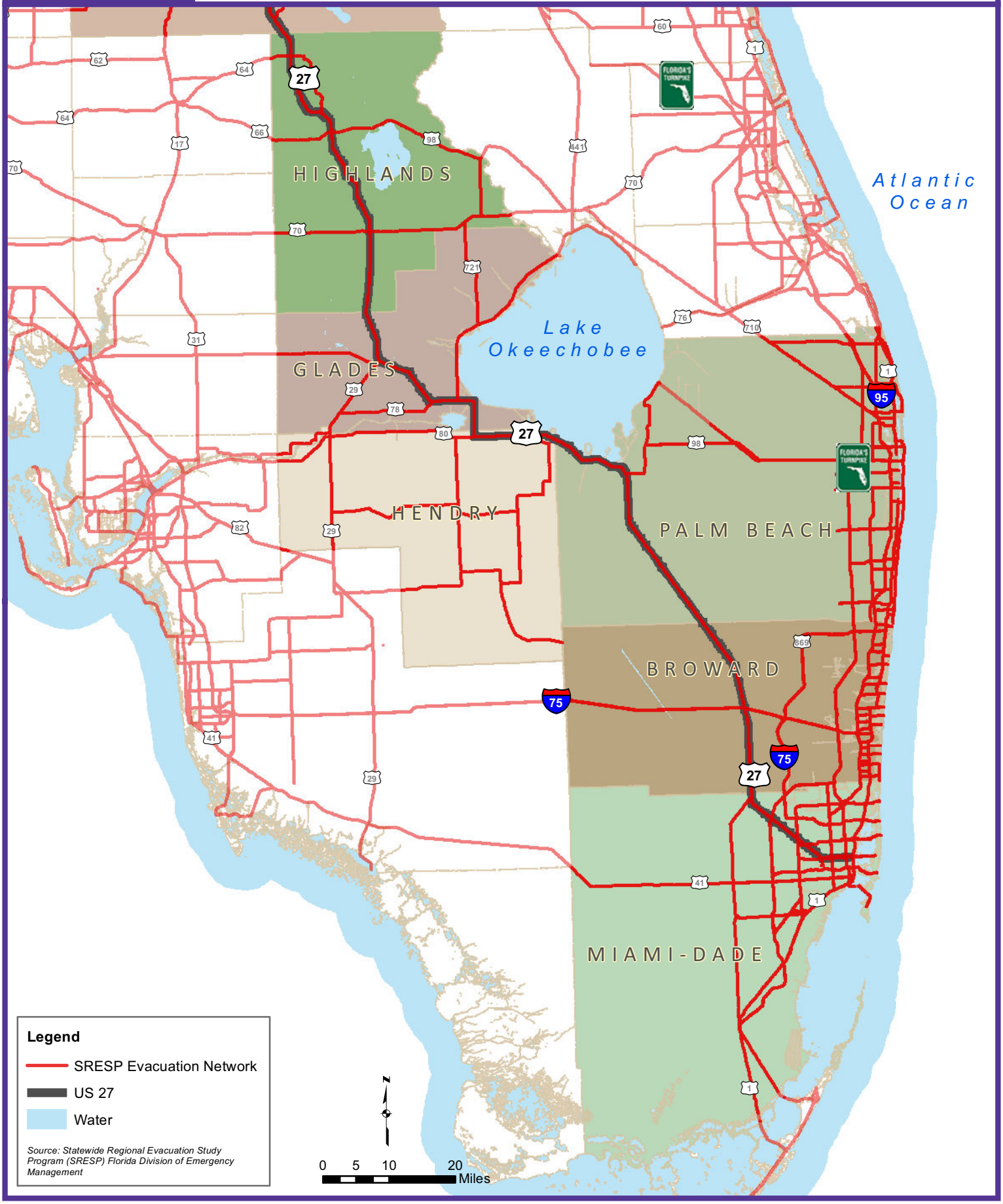
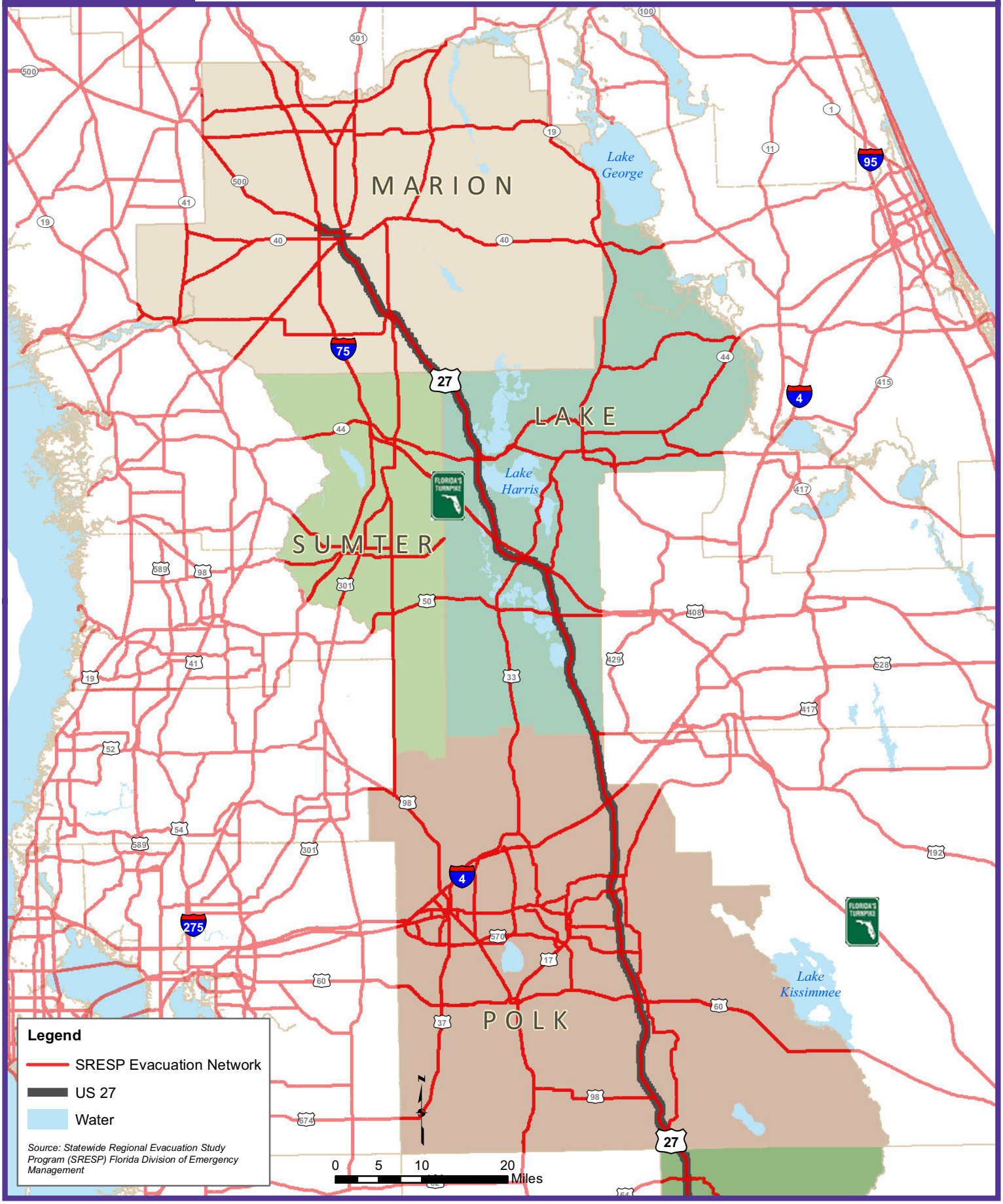


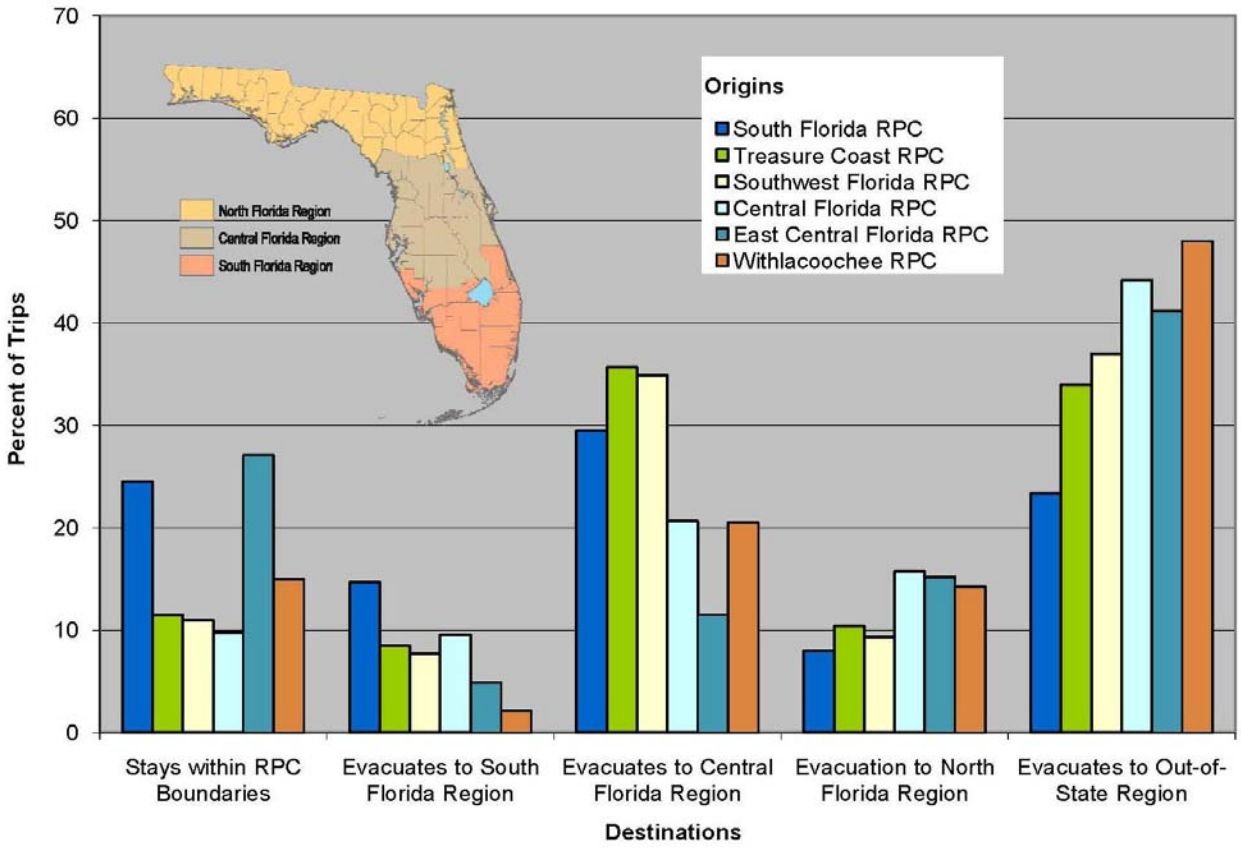
Figure 5.1.2B

Statewide Regional Evacuation Study Program
Designated Evacuation Network



The comprehensive behavioral studies completed as part of the SRESP included interviews with more than 18,000 Floridians and provided important information regarding evacuation trip characteristics. Evacuation trip distribution data was averaged for all evacuation categories and storm types to provide an average evacuation trip distribution from the six RPC areas along the US 27 corridor, as illustrated in **Figure 5.1.3**.

Figure 5.1.3: Average Evacuation Trip Distributions for Regional RPC Evacuations along the US 27 Corridor



Less than 30 percent of the evacuation trips for each of the RPCs remain within the RPC boundaries. For RPCs evacuating to South Florida Region, only the South Florida RPC is above 10 percent. Evacuees to the Central Florida Region, South Florida RPC, Treasure Coast RPC, and the Southwest Florida RPC are all above or just below 30 percent of trips, while Central Florida RPC and Withlacoochee RPC are above 20 percent, and East Central Florida RPC is above 10 percent. Evacuees to the North Florida Region, Central Florida RPC, East Central Florida RPC, and the Withlacoochee RPC account for under 20 percent of the evacuation trips, while

South Florida RPC, Treasure Coast RPC, and the Southwest Florida RPC account for less than 10 percent of the evacuation trips. Many of these trips could possibly use the US 27 corridor as their primary evacuation route, which emphasizes the importance of the US 27 corridor as a major evacuation facility.

The geography of the state itself creates issues for citizens during an evacuation, given the predominately northbound single direction evacuation from southern Florida. In a worst case storm scenario (Category 4 or 5 storm), the current structure of US 27 is not sufficient to accommodate evacuation trips, especially since the highway transverses through many urban areas within the corridor during hurricane events.

5.2 County Comprehensive Emergency Management Plans

Chapter 9G-6, Florida Administrative Code, requires each County to develop a Comprehensive Emergency Management Plan, while Chapter 252, Florida Statues, (State Emergency Management Act) dictates that the Division of Emergency Management is responsible for the adoption of standards and requirements for county emergency management plans. The county plans must be consistent and coordinated with the Florida Comprehensive Emergency Management Plan (CEMP). The CEMPs for the ten counties in the US 27 corridor, as well the rest of the counties in the state, are operation-oriented documents. The CEMPs establish the framework for an effective system to ensure that the counties and their municipalities will be adequately prepared to deal with the occurrence of emergencies and disasters.

The county plans outline the roles and responsibilities of local government, state and federal agencies and volunteer organizations. The CEMPs unite the efforts of these groups under the Emergency Support Function (ESF) format with a designated lead agency for a comprehensive approach to mitigation, planning response and recovery from identified hazards.[3] In Florida, there are 18 ESFs. A brief summary of each ESF is listed in **Table 5.2.1**. Each ESF has an important role in emergency operations and incident management, and the State Emergency Response Team (SERT) plays an intricate role in supporting all the ESFs along US 27.

[3] The ESF concept was developed by the Federal Emergency Management Agency (FEMA) in the late 1980s to address the potential management concerns that would be necessary to coordinate a federal response to a catastrophic earthquake in California. FEMA subsequently implemented the ESF concept in the development of its Federal Response Plan. *Source:* http://www.floridadisaster.org/bpr/emtools/esf.htm

Table 5.2.1 Emergency Support Functions

ESF	Function Name	Description
1	Transportation	Provide or obtain transportation support.
2	Communications	Provide telecommunications, radio and satellite support.
3	Public Works	Provide in restoration of critical public services, roads, and utilities.
4	Firefighting	Support detection and suppression of wild land, rural, and urban fires.
5	Plans	Collect, analyze, and disseminate critical disaster information to SERT members.
6	Mass Care	Manage temporary sheltering, mass feeding, and distribution of essential supplies for victims.
7	Resource Management	Provide logistical and resource support to other organizations through purchasing, contacting, renting, and leasing supplies.
8	Health & Medical	Provide health, medical care, and social service needs.
9	Search & Rescue	Locate lost persons and victims trapped in collapsed structures and provide immediate medical care.
10	Environmental Protection	Respond to actual or potential hazardous materials discharges and other situations threatening the environment.
11	Food & Water	Secure bulk food, water and ice to mass care sites.
12	Energy	Support response and recovery from shortages and disruptions in supply and delivery of energy resources.
13	Military Support	Provide military resources to support logistical, medical, transportation, and security services.
14	External Affairs – Public Information	Disseminate disaster-related information the public.
15	Volunteers & Donations	Coordinate utilization and distribution of donated goods and services.
16	Law Enforcement & Security	Coordinate the mobilization of law enforcement and security resources.
17	Animal & Agricultural Issues	Provide rescue, protective car, feeding and identification of animals separated from their owners.
18	Business, Industry & Economic Stabilization	Provide support to business and industry in their response to a disaster.

Sources: http://www.floridadisaster.org/cemp.htm; Florida Comprehensive Emergency Management Plan, 2010.

These plans are structured to parallel state and federal activities set forth in the State of Florida CEMP and the Federal Response Plan. The plans describe how state, federal and other outside resources are coordinated to supplement county resources and response efforts.

General County CEMP Considerations

Although the particular role of US 27 in the CEMPs is limited, US 27 is still important since it facilitates movement. With large population areas located on or adjacent to the corridor, US 27 is part of the critical transportation infrastructure and serves as part of the evacuation network in each county of the study area. In every case, US 27 serves as a geographic reference; the issues and considerations identified for the US 27 corridor would generally apply to most other roadways in the state as well. From each of the county CEMPs, the following general considerations emerged and apply to all ten counties in the study area:[4]

- US 27 is a major north/south transportation facility for the entire study area. This roadway could be expected to facilitate regional mass evacuations, and the nature of these evacuations will inevitably cause congestion along the interstate. Evacuees wishing to leave the region that utilize US 27 must leave well in advance of any evacuation order being issued. Out of county evacuation may not possible due to factors such as limited transportation capacity and low population densities;

- Critical intersections of other evacuation roadways with US 27 need to be monitored during an evacuation event to ensure and expedite vehicle movement. The movement of vehicles will require extensive traffic control efforts;

- The entire US 27 study area is susceptible to hazardous materials incidents, whether by damage to fixed facilities or by accidents resulting from transportation of those materials by railway, through the air, by water or over major roadways such as US 27;

[4] Sources: Miami-Dade County, Florida Comprehensive Emergency Management Plan, June 2008; Broward County Comprehensive Emergency Management Plan, November 2009; Palm Beach County Comprehensive Emergency Management Plan, 2011; Highlands County Multi-Hazard Local Mitigation Strategy, May 2005;Polk County Comprehensive Emergency Management Plan, May 2008; Lake County Comprehensive Emergency Management Plan, December 2010;

- The US 27 corridor acts as a major north-south connector through the center of the state and is used by passenger and commercial traffic. As such, it is undeniably vulnerable to transportation system accidents;

- Large amounts of pesticides and fertilizers used for agricultural operations along the corridor are transported into the region via trucks, freight trains, and aircraft.

- Any incident that closes or significantly blocks US 27 will require notification of the respective county's emergency management division so that the agency may issue warning to other organizations and the public;

- Staging areas are, in many cases, located near or along US 27. These sites are readily accessible to rail, roadway, and air carriers for the assembly of personnel, supplies, and equipment prior to deployment to the affected area(s);

- If US 27 is damaged or impassable, alternate routes to US 27 should be available and clear. The disruption of the US 27 infrastructure would be a major hindrance to recovery operations, such as distribution of food, water and ice;

- Emergency Support Function (ESF) 3, Public Works, is an important factor in each county's CEMP. Public works is vital for clearing roadways and access to stricken areas. Public works is integral to the removal of debris from transportation routes. The assessment of damage and clearance of US 27 would greatly depend on this function. The Florida Department of Transportation is responsible for clearing debris from state and federal roads in major arterial systems;

- Hazards categories that could cause roadway blockage on US 27 are: hurricanes/tropical storms, inland flooding, tornados, severe thunderstorms, urban/wildfires, lightning, hazardous materials, water system failure, oil spills, sinkholes, civil disorder, and terrorism; and,

US 27 Corridor Specific Considerations

In addition to these general considerations and the major role that the corridor plays in the evacuation system in each of the study area counties, the following are notable considerations for the corridor specifically:

- Potential for fresh water flooding during hurricane events
- Susceptibility to wildfires
- Potential breach of the Herbert Hoover Dike surrounding Lake Okeechobee as a result of flooding
- Connectivity to I-95, I-75, I-4, and Florida's Turnpike which could provide additional statewide evacuation may present particular difficult for rural areas in Hendry, Glades and Highlands Counties where access to these areas must be made through a series of State and County Roads.
- The most vulnerable populations within the US 27 Corridor are in rural areas where mobile home parks are particularly prevalent
- Response times for law enforcement and rescue in rural areas of the US 27 corridor

5.3 Homeland Security and Emergency Response

On US 27, various law enforcement agencies are used to monitor and control passenger and commercial traffic, investigate accidents, and provide general security enforcement. From day to day, these agencies help regulate the safety of the US 27 corridor; however, these agencies have major responsibilities with regard to homeland security as well as emergency response and recovery actions during a disaster.

The roles and responsibilities of various law enforcement agencies along the US 27 corridor includes the following:

Florida Department of Law Enforcement (FDLE), Homeland Security – The Florida Department of Law Enforcement (FDLE) is a key player with regard to its commitment to domestic security in the Florida. FDLE is given its authority by Florida Statutes, Chapter 943, Department of Law Enforcement Act. Within this

chapter, Section 943.03101, *Counter-terrorism Coordination,* places FDLE in control of the coordination of specialized efforts of emergency management that are unique to counter-terrorism activities. According to this Section:

> *These efforts intrinsically involve very close coordination of federal, state, and local law enforcement agencies with the efforts of all others involved in emergency-response efforts. In order to best provide this specialized effort with respect to counter-terrorism efforts and responses, the Legislature has determined that such efforts should be coordinated by and through the Department of Law Enforcement, working closely with the Division of Emergency Management and other involved in preparation against acts of terrorism in or affecting this state.* [5]

FDLE provides an important aspect to the information sharing and intelligence element of US 27 during a domestic security event. FDLE operates the Florida Fusion Center (FFC), which has a significant role in passing intelligence to state and local partners. The FFC, located in Tallahassee, serves as Florida's primary fusion center for gathering, processing, analysis, and dissemination of criminal intelligence, terrorism, and homeland security information. If a suspicious activity or potential public safety threat along US 27 is reported to the local law enforcement agency, this information can then be communicated through regional fusion centers or directly to the FFC. The FFC would complete analysis of this information and determine appropriate dissemination of this information or intelligence. This dissemination would include federal and state agencies as well as the regional fusion centers across Florida. The FFC has a working partnership with 18 state and federal agencies as well as professional associations (fire and law enforcement). FFC partners maintain the ability to utilize indices checks from their respective agency databases in order to provide collaborative analysis and additional information regarding the activities and incidents potentially affecting public health and safety.

In addition, the FFC participates in the National SAR Initiative (NSI), wherein if a suspicious incident takes place on US 27 and is reported by a local or state agency as a tip, field interview report or suspicious activity report (SAR), the FFC will review the report for behaviors and indicators that may have a nexus to terrorism. If these indicators are present, the FFC will place the report into the national "shared space" in order to index the event and link other threat events/activities taking place both inside and outside Florida. This shared space environment is accessible by other fusion centers and federal entities, to include the Federal Bureau of Investigation and the Department of Homeland Security. Further

[5] Florida Statutes 943.03101, *Counter-terrorism coordination.*

information on domestic security efforts in Florida may be in found in the *Florida Domestic Security Plan, 2009-2011.*[6]

FDLE, Emergency Response and Mutual Aid – According to Florida's Comprehensive Emergency Management Plan (CEMP), FDLE is the primary state agency for Emergency Support Function 16, Law Enforcement and Security (ESF 16). FDLE coordinates the mobilization of law enforcement and security resources. Appendix XVI of the Plan states:

> *When an emergency situation is anticipated or occurs, the Florida Department of Law Enforcement will dispatch sworn personnel from the nearest Florida Department of Law Enforcement office to the affected agency(ies) to establish state mutual aid liaisons and monitor the situation. These personnel will coordinate all requests for additional state law enforcement resources from within the affected region of the state and make regionally resources immediately available to the local law enforcement agency(s). The Special Agent in Charge, or a designee from the nearest Florida Department of Law Enforcement office, will accomplish coordination of the use of state resources for the local law enforcement executive(s). Should the situation escalate or require at the onset additional state law enforcement resources from outside the affected region, such resources will be dispatched in conjunction with other state law enforcement agency(s) listed in this appendix by the Florida Department of Law Enforcement Mutual Aid Director in Tallahassee.*[7]

An example of an emergency situation involving US 27 in which FDLE would be activated would be a hurricane evacuation. The movement of vehicles during an evacuation requires extensive traffic control efforts to make maximum use of roadway capacity and to expedite safe escape from hurricane hazards; this requires the coordinated efforts of municipal, county and state law enforcement agencies. [8] FDLE would need to coordinate law enforcement resources to monitor critical intersections and expedite vehicular movements and confirm condition of evacuation routes with ESF 3 Public Works. Re-entry to evacuated areas would also need to coordinated through ESF 16.

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[6] The Florida Domestic Security Plan is available on the internet at: http://www.fdle.state.fl.us/Content/getdoc/0aead9bc-20f4-4c4e-86fd6bd15df62b38/FloridaDomesticSecurityStrategicPlan2009-2011.aspx

[7] Florida Comprehensive Emergency Management Plan, Appendix XVI: Emergency Support Function 16 – Law Enforcement and Security, 2010.

[8] Florida Comprehensive Emergency Management Plan, Appendix XVI: Emergency Support Function 16 – Law Enforcement and Security, 2004.

Department of Highway Safety and Motor Vehicles (HSMV), Enforcement and Emergency Response – The Department of Highway Safety and Motor Vehicles is the parent agency for the Florida Highway Patrol (FHP). FHP promotes safety on US 27 and all Florida highways through enforcement as well as educational efforts. FHP publishes road closure information and also provides it to the Division of Emergency management (DEM). One of the main goals of FHP is to attempt to reduce criminal activities occurring on Florida's highways through detection, prevention, and enforcement of criminal laws relating to highway violence, transportation of illegal drugs/contraband, auto theft, driver license fraud, and emissions fraud.

Local Law Enforcement Agencies – Sheriff's offices are the chief law enforcement entities in each county of the US 27 study area. Both the sheriff's offices and police departments in the corridor have the responsibility to take action in homeland security events within their communities and their jurisdictions. These agencies are the primary first responders when a disaster strikes. For example, local SWAT teams could be called in the case of a terrorist event on US 27. Local law enforcement agencies also have primary control over evacuation traffic control and reentry for their respective municipalities.

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Chapter 6 – Economic Development Benefits and Tourism

US 27 is a strong contributor to economic development in the ten county study area and in the state as a whole. Given its location near a number of intermodal centers and SIS hubs, US 27 also has the capability to funnel trips from major facilities such as I-95, I-75, and I-4 to developments and businesses in the Heartland of Florida. Major businesses that move freight, such as the U.S. Sugar Corporation, Public Supermarkets and others, are located near the corridor and rely on US 27 for the freight movements. Understanding and coordinating freight and considering the number of development plans in the study area will be essential to identifying transportation alternatives that facilitate continued economic development and investment along the US 27 Corridor.

A number of Rural Areas of Critical Economic Concern (RACEC) and enterprise zones are also located along the US 27 Corridor and provide opportunities for economic development that deserve specific context sensitive considerations. In particular, catalyst sites such as the City of Sebring in Highlands County are targeted for RACEC economic development and a new "Health and Wellness Way" in southern Lake County may provide new economic development opportunities along the corridor in the future.

Economic development in the corridor is also burgeoning as residential and commercial development has spurred intense growth in recent years. Recent retiree development in Lake, Sumter and Marion Counties has generated new commercial businesses in and around The Villages, providing new regional jobs and seasonal economic and traffic variations with transient residents during the peak months of November through May each year. In addition, with the location of a number of regional hospitals along the corridor in Glades, Highlands, Polk and in The Villages has created a burgeoning health care industry that has begun to flourish around these hospitals and along the US 27 Corridor.

Tourism generates economic development along US 27 and requires special considerations for the movement of people. In addition to the massive tourists that flock to South Florida and Orlando each year, a number of destinations, local events, RV Parks, Campgrounds and motels generate local economic development and tourism in the US 27 Corridor itself. Tourist attractions along the corridor include the Sebring International Raceway, the relatively new Legoland Theme Park in Polk County just west of US 27, and Bok Tower near the Four Corners area. Local events, such as professional football and baseball games in Miami, the annual "Twelve Hours of Sebring", the Leesburg Bikefest, and others all bring with them local economic development opportunities along the corridor.

The following sections present information regarding economic development potential along the US 27 corridor, along with a summary of tourism impacts. These

considerations will play an essential role in informing transportation alternatives that help to foster economic development within the state of Florida.

6.1 Areas of Economic Concern

US 27 is a conduit between economic centers in both rural and urban areas, as well as designated enterprise zones in central and south Florida. The US 27 corridor also runs through and provides access to a number of counties and communities designated as Rural Areas of Critical Economic Concern.

Rural Areas of Critical Economic Concern (RACEC)

Robust rural communities are essential to the overall success of the State's economy. While Florida's urban communities have grown rapidly over the past 50 years, its rural communities have not shared this growth and prosperity. Because most rural areas continue to experience severe and sustained economic distress, the State has designated 29 of its 32 rural counties and five communities as Rural Areas of Critical Economic Concern (RACEC). Per 288.0656(2)(d) Florida Statutes, the definition of a RACEC is as follows:

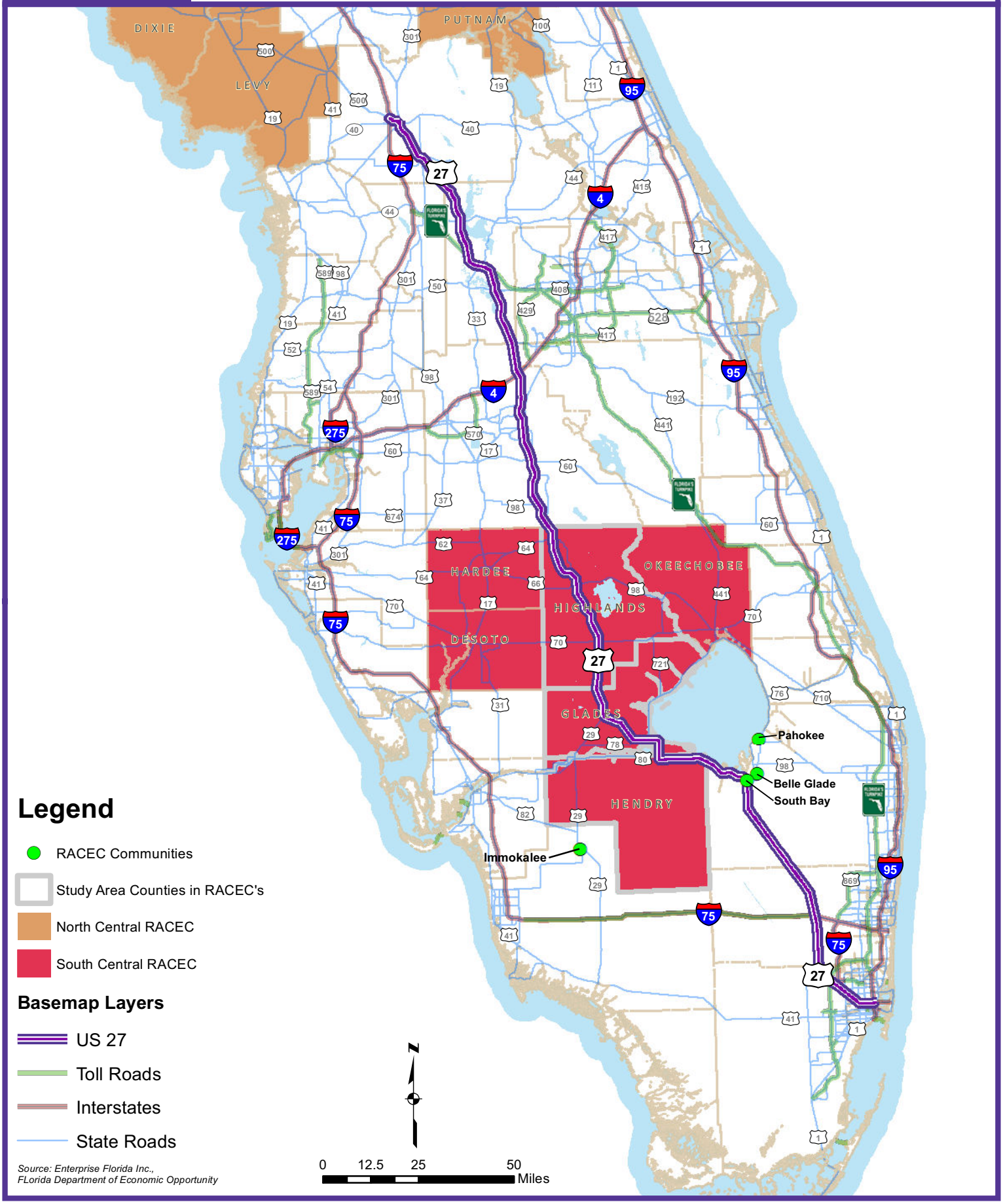
"Rural area of critical economic concern" means a rural community, or a region composed of rural communities, designated by the Governor, that has been adversely affected by an extraordinary economic event, severe or chronic distress, or a natural disaster or that presents a unique economic development opportunity of regional impact."

The Governor may designate up to three RACECs. This designation establishes the regions as priority assignments for Rural Economic Development Initiative (REDI) agencies and allows the Governor waive criteria of any economic development incentive including transportation projects under 288.063 Florida Statutes.

Within the study area, Highlands, Glades, and Hendry Counties are designated as RACEC counties. As shown in **Figure 6.1.1**, the counties are part of the South Central RACEC, which also contains Okeechobee, Hardee, and DeSoto Counties. The towns of Pahokee, Belle Glade, and South Bay, located in Palm Beach County, area also designated as RACEC communities.

Figure 6.1.1

Rural Areas of Critical Economic Concern (RACEC) Adjacent to or Within US-27 Corridor



There are catalyst sites designated within each RACEC area. For the South Central RACEC area, an area in the City of Sebring in Highlands County has been chosen as a catalyst site. This site, which is proximate to US 27, has been targeted by the state for state supported funds such as Rural Infrastructure Funds and Community Development Block Grants. The Sebring catalyst site is identified to facilitate economic development, in particular distribution centers, logistic centers and other job creating industrial developments. US 27 is important to the development of this catalyst site.

The proximity of US 27 to the Rural Areas of Critical Economic Concern (RACEC) serves as an important component in providing much needed exposure to those areas. US 27 provides direct access to the RACEC counties within the corridor and to the RACEC community of South Bay. Belle Glade and Pahokee are connected to US 27 via SR 80 and US 98. US 27 also connects to SR 29 near the RACEC community of Immokalee in Collier County. Although outside of the US 27 study area, Immokalee in Collier County is a RACEC area included within the Round II Federal Rural Enterprise Community. RACEC counties that are immediately adjacent to the corridor are connected to US 27 via the following roadways:

- SR 70 connects US 27 to DeSoto County;
- SR 66 and SR 64 connect US 27 to Hardee County;
- US 98 and SR 70 connect US 27 to Okeechobee County;
- SR 29 connects US 27 to the RACEC community of Immokalee (outside of the study area);
- SR 19 connects US 27 to Putnam County; and,
- US 27 directly connects to Levy County.

Enterprise Zones

Along the US 27 corridor, one of the key strategies supporting economic development is the use of Enterprise Zones. Florida's Enterprise Zone Program encourages economic growth and investment in distressed areas by offering tax advantages and incentives to businesses that are located in these areas. An Enterprise Zone is a specific geographic area targeted for economic revitalization. Potential benefits include sales tax refunds on building materials and equipment, sales tax exemptions on electricity, corporate tax credits, and any local incentives. Currently, the state has designated 63 enterprise zones in Florida, and the federal government has designated five. Included within that total are:

- Three Federal Enterprise Communities
- Two Federal Empowerment Zones
- 30 Rural Enterprise Zones

- 33 Urban Enterprise Zones

Within the ten county US 27 study area, there are a total of eleven Enterprise Zones, as identified in **Table 6.1.1**. The Enterprise Zone program operates at both the state and federal levels, and almost every state has some form of an Enterprise Zone program. The federal government has designated a total of 172 Enterprise Communities and Empowerment zones across the United States[1]. These designations are based on criteria including population, poverty rates, and economic distress. Because of the diversity in the population and economy throughout the state of Florida, the Enterprise Zone program is designed to accommodate both rural and urban areas. Because rural areas do not attract and retain the same types of businesses that urban areas do, rural Enterprise Zones are given different tax credits through the various incentives.

Table 6.1.1 Florida Enterprise Zones Located within the US 27 Study Area and Local Accomplishments 10/1/2010-9/30/2011

Enterprise Zone	Zone ID	Class	New Businesses	New Jobs
Broward County/Ft Lauderdale	EZ 601	Urban	839	1,414
Glades County	EZ 2201	Rural	2	14
Hendry County	EZ 2601	Rural	120	79
Highlands County	EZ 2801	Rural	0	0
Lakeland	EZ 5301	Urban	3	46
Miami-Dade County	EZ 1301	Urban	Unknown	630
City of Ocala	EZ 4201	Urban	3	235
Pahokee	EZ 5001	Urban	0	0
Palm Beach County	EZ 5002	Urban	47	1,241
Sumter County	EZ 6001	Rural	0	0
City of Winter Haven	EZ 5302	Urban	N/A	N/A

Source: Enterprise Florida Inc., Florida Enterprise Zone Program Annual Report, April 2012.

Enterprise Zones all have the same basic goals of economic revitalization and community redevelopment; however these incentives are especially important in

[1] *Enterprise Florida Inc. Florida Enterprise Zone Program Annual Report, March 2011.*

urban areas trying to change their development pattern. Many cities have had trouble with infill strategies due to the fact that redevelopment is often more expensive than new development. This program offers local governments more control to direct development into areas that need it most. This could be a powerful tool for directing development to maximize the potential of the US 27 alternatives.

6.2 Major Businesses and Development Considerations

As reflected in *Fortune*[2], several major businesses chose to locate in or near the ten county US 27 corridor study area. Fortune magazine has been a trusted source for business news and analyses for decades, including the distribution of major businesses in Florida. Among the well-known researched and ranked lists is the Fortune 500, an annual list compiled and published by Fortune magazine that ranks the top American public corporations as measured by their gross revenue. There are 16 Fortune 500 companies headquartered in Florida, and four of those companies are located along the US 27 Corridor[3]. Proximity to US 27 and its connectivity to other major highway facilities is an important aspect in location choice. **Table 6.2.1** identifies the Fortune 500 Companies headquartered along the US 27 Corridor.

These companies are not only high in earnings, but one also represents one of the industry clusters defined as strengths in Florida. Ryder System is linked to the Logistics and Distribution cluster focusing on wholesale trade, transportation, logistics, and distribution. This US 27 Corridor company plays a key role in the state's continued economic success and competitiveness.

Table 6.2.1 US 27 Corridor Fortune 500 Companies Headquarters, 2011

National Rank	Company	Industry	City	Revenue ($ millions)
102	Publix Super Markets	Food and Drug Stores	Lakeland	$25,328
133	World Fuel Services	Wholesalers: Diversified	Miami	$24,376
197	AutoNation	Automotive Retailing, Services	Ft Lauderdale	$12,502
437	Ryder System	Trucking, Truck Leasing	Miami	$5,136

Source: Fortune Magazine, Annual Ranking of America's Largest Corporations, 2012.

[2] Fortune Magazine, Annual Ranking of America's Largest Corporations, 2012.

[3] Enterprise Florida Inc. Florida Company Listing, 2012.

In addition, U.S. Sugar Corporation is one of the nation's largest fully integrated producer's of sugar cane and one of Florida's main producers of orange juice products, and is headquartered in the City of Clewiston just off of the US 27 Corridor (west of Lake Okeechobee). The company utilizes more than 180,000 acres in Hendry, Glades and Palm Beach Counties and is a major source of jobs in these areas. The company also operates a regional short line rail that moves sugar cane and products, fertilizer and farm equipment as well as products for lumber, paper and citrus industries.[4] Connections to U.S. Sugar business are made via US 27 and this regional rail in south Florida, and provide nearly eight percent of the nation's sugar production.

Health Care Industries

There are many other companies that have headquarters along the US 27 corridor that also have high earnings and provide above average wage jobs to Floridians. Companies like these far outnumber the larger Fortune 500 companies, and if taken as a whole, have substantial impacts on not only the local, but state economy as well. In particular, health industries including hospitals and other health care businesses, are located throughout the US 27 corridor. Regional hospitals in Hendry, Highlands, Polk and The Villages in Lake, Sumter and Marion Counties serve as hubs for burgeoning health care industries in these areas and are a major source of jobs for the surrounding communities.

New economic opportunities are being explored to extend this health care industry into the future as well. For instance, economic development sector plans are underway in South Lake County near the Four Corners area for a proposed "Health and Wellness Way" Corridor that would include over 16,000 acres located in the "Golden Triangle," inside of I-4, Florida's Turnpike, and US 27. This corridor is planned as a regionally significant employment center is anticipated to complement Medical City economic development in Orange County as well as serving the master planned Horizon's West Community due east of the corridor in Orange County.

Freight and Intermodal Logistics Centers

US 27 is a major selling point that can enhance Florida's economic competitiveness and diversification at local, regional and global levels. The US 27 corridor is home to multinational corporations and is part of a network that connects international markets to the United States and vice versa. US 27 offers unparalleled access to economic opportunities in the counties along the corridor where many corporate operations are either located or desire to locate.

[4] http://www.ussugar.com/company/agribusiness.html. *U.S. Sugar Corporation Website, July 2012.*

Due to the convergence of multimodal hubs, the corridor plays an important role for distribution and freight, connecting seaports, airports and distribution centers. The Port of Miami, Hialeah Rail Yard, and Port Everglades already support distribution and freight movements along the corridor. Certain locations along US 27 are also ideal for the establishment of integrated logistics centers (ILCs), which attract warehousing, forwarding, and logistics businesses, as well as restaurants and hotels. A number of ILCs are proposed, planned or in operation along the corridor. These include a proposed South Florida Regional Intermodal Logistics Center near Belle Glade in Palm Beach County, a proposed America's Gateway Logistics Center in Glades County, the Winter Haven/CSX ILC (which replaces the closed Taft Rail Yard in Orlando), as well as the Ocala Site 489 ILC near the intersection of US 27 and I-75 in Marion County. Coordination of distribution and other economic development plans for these ILCs and surrounding areas will be necessary in establishing an efficient and seamless network of freight movements that fosters economic development along the corridor.

Residential and Commercial Development

The US 27 Corridor is also potential ground for new housing developments that spur commercial growth as the population grows. Because access to US 27 is a desirable feature of these residential developments, the integration of mixed uses, especially in transit oriented and transit adjacent developments in urbanized areas, would be a potential benefit to the economy. Proposed transit oriented developments could lead to reduction in VMT (vehicle miles traveled) growth and a degree of system preservation, which translates to economic preservation.[5] A number of developments of regional impact (DRIs) have already located in the Four Corners areas near Polk and Lake Counties, and may be expected to grow into the future in both north Polk County and South Lake Counties. In addition, the exponential growth of The Villages Retirement Community in Lake, Sumter and Marion Counties has created a series of new residential and commercial "villages" that support the regional economy. With The Villages not yet at build out conditions and transportation alternatives such as golf carts creating unique transportation opportunities in these areas for VMT reduction in terms of local traffic, economic growth and opportunity in this area may be expected to continue well into the future.

[5] Vehicle miles traveled is the total number of miles traveled in a given period of time (e.g., day, year) by a given vehicle or fleet of vehicles. Benefits of VMT reduction include improved roadway capacity, reduction in gasoline consumption, and reduced greenhouse gas emissions.

6.3 Tourism and Seasonal Population Impacts

Tourism plays a fundamental role in Florida's economy, with the sun, sand, and a variety of other attractions bringing millions of visitors to Florida each year. Understanding visitor travel trends is an important part of using and predicting future travel demands, especially in a state with such a strong tourism industry. Visitor travel patterns are often different from resident or freight travel in both temporal and geographic distribution. For this reason visitor travel can also follow a different growth pattern. At one time, Florida visitor travel grew faster than resident travel; now, visitor travel is growing at a slower rate than resident travel.[6]

Understanding the significance of visitor travel is relevant to US 27 as it is a core part of the statewide transportation system, and Florida tourism is heavily dependent on a strong transportation system. Visitors to any new place want convenient, safe and efficient travel both into and out of their destination. Failure to meet the transportation needs of visitors could diminish Florida's attractiveness and jeopardize the economic momentum currently enjoyed. The state's tourism marketing agency, VISIT FLORIDA, measures the economic impact of tourists through recreational taxable sales, travel-related employment, car rental surcharges and tourist taxes.

According to the most recent annual tourism estimates, Florida attracted 82.3 million visitors in 2010. This represents a 1.8 percent increase over 2009[7]. The percentage of air travel is also rising, with an air/non-air split of 52.7/47.3 percent in 2010 compared to the 51.3/48.7 percent split in 2009. Due to the limited availability of other modes, this means the demand on highway facilities, including facilities like the US 27 Corridor, were responsible for nearly half of all trips to Florida in 2010. **Table 6.3.1** illustrates the distribution of visitor origins to Florida by year.

[6] VISIT FLORIDA Research Study 2010
[7] VISIT FLORIDA Research Study 2010.

Table 6.3.1 Florida Historic Visitor Numbers (in millions)

Year	Domestic	Overseas	Canadian	Total
2000	64.7	6.0	2.0	72.8
2001	62.3	5.3	1.9	69.5
2002	67.9	4.4	1.6	73.9
2003	68.7	4.2	1.7	74.6
2004	73.4	4.4	1.9	79.7
2005	77.2	4.4	2.0	83.6
2006	77.6	4.1	2.1	83.9
2007	77.3	4.7	2.5	84.5
2008**	76.1	5.2	2.9	84.2
2009	71.3	7.0	2.6	80.9
2010	71.2	8.0	3.1	82.3

Source: VISIT FLORIDA Research Study, 2010.
*** In 2008, VISIT FLORIDA changed its visitor estimation method to increase accuracy, so estimates made prior to that year are not directly comparable to more recent yearly estimates.*

The substantial historic economic impact of tourism on Florida can be shown in total spending, the amount of total sales tax revenues, and the number of persons directly employed by the tourism industry. In 2010, tourists spent over $65 billion and the total sales tax revenues to the state were nearly $4 billion[8]. **Table 6.3.2** shows the total tourism spending, total sales tax revenues, and number employed by tourism in Florida by year.

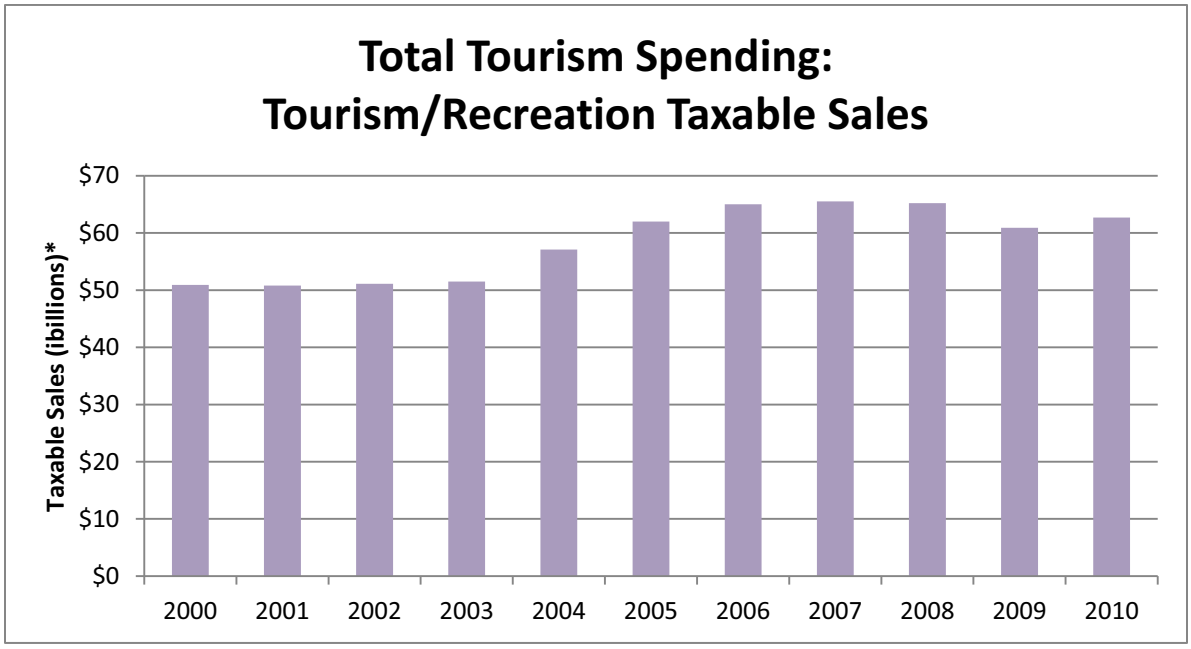
The top three states for total domestic visitors to Florida in 2010 were Georgia, New York, and Illinois[9]. The US 27 corridor is one of the likely choices for visitors from Georgia traveling by auto. With just under half of Florida's visitors arriving by non-air mode in 2010, it can be assumed that visitors utilized US 27 at some point in their travels. Europe and South America had over half of the share of overseas visitor volume, with the United Kingdom as the top origin country totaling 1.3 million visitors in 2010[10].

[8] VISIT FLORIDA Research Study 2010.

[9] VISIT FLORIDA Research Study 2010.

[10] VISIT FLORIDA Research Study 2010.

Table 6.3.2 Historic Economic Impact of Tourism on Florida 2000-2010



Source: VISIT FLORIDA Research Study, 2010.
**Beginning in 2003, DOR revised this calculation to include 12 kind codes versus 14.*

With 28.9 percent of the total, Orange County remained the top destination among domestic visitors in 2010[11]. The Orlando area, with its theme parks and other attractions generates many trips as well, and the proximity of US 27 to the park makes it an instrumental player in moving vehicular traffic to and from the area. In addition, the Legoland Theme Park in Polk County is creating new tourist attractions just west of the corridor in Winter Haven. Other top ranked tourist destination counties were Hillsborough, Broward, Miami-Dade, and Duval. In Broward and Miami-Dade Counties, beaches and shopping make these areas ideal for tourists during peak seasons and those looking for a reprieve from winter climates.

Throughout the 1940's, 50's, and 60's, US 27 was traveled by great numbers of post-WWII tourists, making it the backbone of the Florida tourism industry.[12] For its entire length, US 27 is dotted with lost tourist attractions from another era. Smaller tourist destinations along the corridor include places like Lake Placid and Sebring in Highlands County as well as various locations in Lake and Marion

[11] VISIT FLORIDA Research Study 2010.

[12] Briggs, Betty. *Highway To Yesterday- US 27 Is Florida`s Forgotten Highway.* Printed March 1991. Retrieved from http://articles.sun-sentinel.com/1991-03-24/features/9101150473_1_highway-ends-lake-okeechobee-sugarland-highway

Counties. Lake Placid and Sebring have abundant natural amenities and small town charm, and are emblematic of 'Old Florida'. The towns heralds back to a time when US 27 was one of the main tourist travel routes in Florida, and are the location of numerous RV parks, campgrounds, and local motels that are used by tourists year round. These RV parks, campgrounds and motels may also be found throughout areas of Lake County and into Ocala in Marion County. A number of specialized local events also bring economic development into some of the counties along the corridor during specific times of year. These include football and baseball games in Miami, events such as the "Twelve Hours of Sebring" (an annual racecar event at the Sebring International Raceway) as well as the Leesburg Bikefest in Lake County. These events often generate massive traffic and are of special consideration within the corridor in terms of economic development.

Finally, the number of seasonal residents presents specific conditions along the US 27 Corridor. In particular, seasonal residents in South Florida and The Villages in Lake, Sumter and Marion Counties contribute to fluctuating economies during peak seasons as well as tremendous increases in traffic during these times of year. Particularly through the months of November through May, populations may be expected to as much as double in The Villages, creating constrained traffic conditions along the US 27 Corridor.

Chapter 7 - Conclusions

7.1 Summary of Findings

The US 27 corridor covers approximately 300 miles and traverses ten counties along the southeast and central portion of the state. It provides a major north-south connection through the center of the state for meeting the travel demands of people and freight, and has the potential to act as a reliever for congested interstate travel. Within Lake and Marion Counties, US 27 also combines with US 441 and US 301, creating additional connectivity in the region. Connecting to several SIS seaports, I-95 and Florida's Turnpike in southeast Florida as well as proposed or planned intermodal logistics centers (ILCs) near Lake Okeechobee in Palm Beach and Glades Counties, SR 60 and I-4 in Polk County and I-75 in Marion County, the US 27 Corridor acts as an important SIS facility and economic development generator throughout the state.

The US 27 Corridor is also as diverse as the state itself, connecting to major urban megapolitan areas along the southeast coast in Miami-Dade and Broward Counties and providing connections between Tampa and Orlando in the center of the state within Polk County and southern Lake County. Portions of the corridor between these major urbanized centers remain largely rural in character, with urban clusters developing intermittently in areas between southern Polk, Highlands, Glades and Hendry Counties. In addition, intense development near The Villages master planned retirement community in Lake, Sumter and Marion Counties have created increasing demands on the US 27 Corridor, and development continues in these areas. Given the diverse nature of the corridor, a variety of approaches or strategies may be needed to address both rural and urbanized areas.

The technical memorandum provides a baseline assessment of the travel demand of people and freight moving along the US 27 Corridor in the State of Florida against five measures: transportation, freight movements, emergency management, homeland security, and economic development. The following section summarizes key findings from this review along the corridor and provides a preliminary framework for developing a range of corridor strategies to alleviate congestion, facilitate emergency and security response, and foster economic development in the State of Florida.

General Corridor Considerations

Alternatives must consider demands of population growth in the corridor. US 27 traverses the top three most populous counties in the state: Miami-Dade, Broward and Palm Beach Counties. Combined, these counties are home to over 5.5 million people, or approximately 30 percent of the state's total population. The fastest growing counties within the US 27 corridor are located in the central portion of the state, in Polk, Lake, Sumter, and Marion Counties where connections between

Tampa and Orlando as well as The Villages have has a substantial impact on population growth. Sumter County, in particular, grew by over 75 percent over the past decade, and is the 8th fastest growing urbanized area in the nation. Florida's population is expected to reach nearly 25 million by 2035, growing by roughly 19 percent. During this period, two US 27 corridor counties may be in the top ten for percent growth. Sumter County is projected to grow the fastest and could more than double in population by 2035 (+98.3 percent). Lake County is also anticipated to grow quickly (+58.5 percent). Marion and Polk trail behind these top two projected growth counties, with over 40 percent growth in each, respectively. As these areas continue to grow, demands along US 27 are expected to increase.

Alternatives considered should be sensitive to rural areas and those with larger low-income, aging and disabled populations. By 2030, elderly populations over 65 years of age are expected to reach over 25 percent in the state. This trend is particularly prevalent within the US 27 Corridor, with a number of retirement communities located within the study area counties continuing to attract retirees. Almost all of the counties in the study area are expected to have elderly populations in excess of the state average by this same time. Over 30 percent of the population will be over the age of 65 in Highlands, Lake, Sumter, and Marion counties by 2030. Lake, Sumter, and Marion see the most concentrated geographic locations in the corridor for this aging population.

Disabled populations also have specialized transportation needs and were investigated for this study. Highlands County has the largest percentage of their population with a disability in the study area, with almost 23 percent of the total estimated having a disability. In rural areas, such as portions of Highlands County, disabilities can make transportation particularly challenging given distances to major destinations and limited transportation options. In the northern portion of the corridor, in Lake, Sumter, and Marion Counties, disabled populations are also much higher than other portions of the corridor and this is potentially related to the number of elderly retirement communities that are also concentrated in these counties.

Low income populations present another special population concern in the corridor. Within the US 27 Corridor, six of the ten counties in the study area exceed the 16.5 percent statewide average for poverty levels. Poverty in Hendry County, at 26.7 percent, is the highest in the study area and the fifth highest in the state. Poverty levels in Glades, Highlands, and Miami-Dade County are also above 20 percent of the total population. Data on Marion County indicates that poverty levels in that county are nearing 20 percent as well.

Access Management strategies could support orderly growth along the corridor as land uses continue to change. The ability to effectively manage access strategies onto and off of US 27 could assist in increasing roadway capacity, enhancing safety, and decreasing travel times. Currently, the majority of the

corridor is classified as Access Class III, meaning that land use changes are anticipated throughout much of the corridor over time. There is an opportunity to develop access management strategies to support community visions and statewide transportation needs for US 27 in these areas. In addition, a number of more urbanized areas in Hialeah and Miami in the southern portion of the corridor and areas near The Villages in Lake, Sumter, and Marion Counties may require special access management considerations given right-of-way and policy constraints for the corridor. Several best practice access management strategies have been identified in this technical memorandum for further consideration and feasibility for implementing an array of these strategies along various locations along the corridor will be reviewed as part of the next steps of this study.

Alternative strategies should also consider that US 27 is a key connector to state scenic highways and byways in Polk, Lake and Marion Counties. Three Scenic Highways/Byways are located within the US 27 corridor: the Ridge Scenic Highway, the Green Mountain Scenic Byway, and the Florida Black Bear Scenic Byway. Connection to these scenic highways and byways is provided in Polk, Lake, and Marion Counties and consideration for accessing these facilities should be given in addressing overall mobility goals for these areas.

Transportation Network

Existing traffic along the US 27 corridor ranges from a high of 56,500 vehicles per day (vpd) in Polk County near I-4 to a low of approximately 6,300 vpd in Glades County north of SR 29. Existing level of service (LOS) analysis indicates that overall US 27 is performing relatively well, with LOS meeting or exceeding standards in most locations along the corridor. Existing capacity challenges and concerns were identified at three site locations along the corridor. Failing LOS is identified in Miami-Dade County south of SR 826, and in the northern portion of the study corridor in Polk County near I-4 and in Marion County at the Sumter/Lake/Marion county lines where The Villages contribute to heavy traffic volumes particularly during peak season. These areas are all near major urban economic centers and improvements will be needed over time to meet increasing demands.

Future year 2035 traffic volumes along US 27 are forecasted to increase significantly throughout the corridor, with the largest absolute increases located in the northern portion of the study area in Polk north and south of I-4 and in Lake County. Dramatic increases in these overall volumes are also found in Miami-Dade County near SR 826 and at the Miami-Dade/Broward County line. The highest absolute change in AADT is found in Polk County south of SR 530 and US 192, where volumes are anticipated to increase by approximately 31,500 vpd. These areas will need to be considered in greater detail in providing alternative strategies that could be employed in these areas to address future anticipated traffic growth.

In addition, a number of locations along the corridor that have been identified through a review of existing plans as potential locations for longer term transit improvements. In considering alternatives for the corridor, the following locations should be noted specifically for potential transit alternatives: preserving space for a transit envelope along US 27/Okeechobee Road in Miami-Dade County where express bus may be used in the future in special use lanes; park-n-ride potential at US 27 and SR 60 in Polk County; existing park-n-ride locations and services along US 27 in Lake County near Clermont and Minneola; and the potential for 30-minute bus service and express service at Lake Wales-Four Corners-Haines City in Polk County. In addition, special alternative modes considerations may be warranted near The Villages where golf carts provide personal mobility for retirees just off of the US 27 Corridor.

Freight Mobility

Freight movement plays an important role along the corridor. Existing truck traffic ranges from a high of more than 9,862 trucks per day (tpd) in Miami-Dade County to a little more than 2,000 tpd in Lake and Marion Counties. The percentage of trucks utilizing US 27 also varies throughout the corridor, with trucks accounting for only 3.9 percent of the traffic stream in Marion County near the Lake/Marion County line and approximately 41 percent of the traffic stream in Glades County north of SR 29. There are two main geographic area clusters of intermodal facilities along the US 27 corridor, one in Southeast Florida and the other in Central Florida. The clusters in both locations can be attributed to the heavy urban population of each region. The interior segment of the corridor, between Highlands and Palm Beach counties, does not contain any intermodal facilities due to its primarily rural nature; however, US 27 still plays an important role as a connector between these areas. ILCs are also proposed or in various stages of site planning and implementation in a number of locations along or near the corridor which will contribute to the future of freight in the corridor. These include: South Florida Regional Intermodal Logistics Center near Belle Glade in Palm Beach County, America's Gateway Logistics Center west of Lake Okeechobee in Glades County, the Winter Haven/CSX ILC along SR 60 near I-4 in Polk County, and the Ocala 489 Commerce Park near I-75 and US 27 in Marion County.

There are two existing Strategic Intermodal System (SIS) Intermodal Freight-Rail terminals in the US 27 Corridor, one located in Miami-Dade County and the other in Broward County. The study area includes connections to three SIS deepwater seaport terminals: the Port of Miami in Miami-Dade County, Port Everglades in Broward County, and the Port of Palm Beach in Palm Beach County. There are also four SIS international airports and one gateway/reliever airport located in the study area: Miami International in Miami-Dade County, Ft. Lauderdale-Hollywood International Airport in Broward County, Palm Beach International Airport in Palm Beach County, Orlando International Airport in Orange County, and Kissimmee Gateway Airport in Osceola County.

Given the extensive growth of freight in the southeast and central portions of the state, Florida Department of Transportation (FDOT) districts are working to provide alternative options for moving freight and passengers in these areas. Current freight feasibility and scenario studies underway by District 4 include the US 27 Multimodal Planning and Conceptual Engineering (PACE) Study and Interregional Transportation Infrastructure Needs Study (ITINS) Report, and will need to be coordinated with during the next step in this study to ensure that the alternative options identified are consistent with and support regional efforts already underway.

Evacuation and Homeland Security

Presently, the US 27 Corridor directly connects to nearly 42 access points to other regional planning council (RPC) designated facilities that are part of the Statewide Regional Evacuation Study Program (SRESP) evacuation network. This connectivity provides important linkages to alternate routes in the case that any section of US 27 or other roads becomes impassable or unsafe. The counties within the study area with the highest number of evacuation network connections to US 27 are Miami-Dade, Polk, Lake and Marion Counties. This is especially significant given the larger populations in each county that must be moved quickly in the event of a hurricane or other disastrous event.

A number of general considerations are needed in providing safe evacuation planning and apply to evacuation strategies throughout the state. Specific considerations for evacuation within the US 27 corridor include the potential for fresh water flooding during hurricane events, susceptibility to wildfires, the potential breach of Lake Okeechobee as a result of flooding, and response times for law enforcement and rescue in rural areas of the corridor.

Environmental Considerations

FDOT and cooperating partner agencies are instrumental in identifying environmental issues and setting a path for preservation of the State's most valuable natural resources. This transportation alternatives study process provides an early opportunity for transportation options to be reviewed at the statewide level by FDOT's agency partners. A large scale review of major environmental considerations in the corridor was determined as part of this needs assessment, including delineation of main natural and community features. The findings of this generalized assessment comprise an initial step in identifying environmentally sensitive lands. More detailed, precise information as well as on-site environmental assessments may be necessary in future phases of this study.

Major environmental considerations noted in this analysis will need to be considered during subsequent phases of study where more detailed, site specific analysis, may be conducted. Following the completion of this study, as alternative options progress forward, environmental considerations will be driven by the Future Corridors Program. The Future Corridors Program will coordinate with the Century Commission for a Sustainable Florida, the Department of Economic Opportunity (DEO), the Department of Environmental Protection (FDEP), the Florida Fish and Wildlife Conservation Commission, and Enterprise Florida to build upon and help harmonize long-range statewide planning activities. Major environmental considerations in the corridor include:

- Lake Okeechobee is defined as a Class I potable water supply source. Any projects which may impact water quality of these surface waters must meet criteria as outlined in F.A.C. 62-302.400.

- There are four Outstanding Florida Waters (OFLs) located within 1,500 feet of the US 27 corridor. Three of these are located in Lake County, one is located in Polk County, and one is located in Miami-Dade County.

- In general, the southern portion of the US 27 Corridor in Palm Beach, Broward, and Miami Dade Counties can be expected to have the heaviest presence of wetlands and floodplains due to their proximity to the Everglades and a number of publicly owned/managed conservation lands.

- The Comprehensive Everglades Restoration Plan (CERP) is a massive environmental effort encompassing many organizations and projects. Over 80 projects are currently listed and were reviewed to determine wetland restoration areas of critical concern along the corridor. Within a ¼-mile boundary of the US 27 corridor, 16 CERP projects have been identified. Concentrated areas of the corridor that are part of these CERP projects are located in the southern portion of the corridor in Highlands, Glades, Hendry and Broward Counties.

- Within the US 27 corridor, moderate to high flood hazard zones are located in Lake and Marion Counties where a number of surface water lakes are found in the northern portion of the corridor and in Miami-Dade County near the coastline along the southern portion of the corridor. Improvements proposed along the corridor in these areas should be sensitive to potential flood hazards.

- One mitigation bank was identified in Polk County: Hammock Lake Mitigation Bank. This mitigation bank is located west of the US 27 corridor, north of Haines City near CR 17/Old Polk Road.

- Within the US 27 corridor, the Green Swamp Area of Critical State Concern borders the corridor on the west. It covers areas in Polk and Lake Counties, from approximately Haines City in Polk County to Clermont/SR 50 in Lake County.

- A number of state and local parks are located near the study corridor. There are three local that are directly adjacent to the corridor: Triangle Park, Mattingly Park, and Moore Park. Improvements to this area of the corridor will need to determine any potential for park impacts.

- Although no impacts to historic or archeological resources are anticipated from this analysis of the US 27 Corridor, there are a few non-historic cemeteries along the corridor in Polk County which are adjacent to US 27. PD&E Studies in District 1 are addressing the environmental impacts of roadway widening or other improvements on these facilities.

- The US Environmental Protection Agency (EPA) National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. Within 1,500 feet of the US 27 corridor, there are two sites in Miami-Dade County that have been identified for further investigation. One is located in Medley, approximately 400 feet from the US 27 corridor, and another is located in Hialeah, approximately 900 feet from the US 27 corridor. Additional analysis would need to be conducted for any improvements in this area to fully identify contamination impacts.

- The primary goals of Florida's Brownfields Redevelopment Act (Chapter 376.77-.85 Florida Statutes) are to reduce health and environmental hazards on existing commercial and industrial sites that are abandoned or underused due to these hazards and create financial and regulatory incentives to encourage redevelopment and voluntary cleanup of contaminated properties. A total of 14 brownfield areas have been identified, and are most predominant in Miami-Dade (six sites) and Marion (six sites) Counties. One location has been identified in Highlands County, and one has been identified in Lake County. Additional analysis on these brownfields may be warranted as projects are identified within these areas. This analysis would indicate any special considerations for development of these areas near the corridor.

Economic Development

The proximity of US 27 to the Rural Areas of Critical Economic Concern (RACEC) serves as an important component in providing much needed exposure to these geographic areas. The US 27 corridor runs through and provides access to a

number of counties and communities designated as RACEC. Within the study area, Highlands, Glades, and Hendry Counties are designated as RACEC counties. These counties are part of the South Central RACEC, which also contains Okeechobee, Hardee, and DeSoto Counties. The towns of Pahokee, Belle Glade, and South Bay, located in Palm Beach County, area also designated as RACEC communities. West of the corridor and with access provided from SR 29 and US 27, the Town of Immokalee in Collier County is also designated a RACEC area. Improvements in these areas should be closely coordinated with DEO to ensure that local visions and plans for the corridor are consistent with what improvements are proposed.

A key strategy supporting economic development in the state is through the use of Enterprise Zones to provide tax incentives in key areas identified for development and revitalization. Within the US 27 corridor, there are a total of ten Enterprise Zones. These include Enterprise Zones in Miami-Dade County, Broward County/Ft. Lauderdale area and Palm Beach County, as well as in Hendry, Glades, Highlands Counties, and Sumter Counties. Areas in Pahokee in Palm Beach County, Lakeland in Polk County, and Ocala in Marion County have also been identified as areas where economic development initiatives are underway to improve the corridor. Providing sufficient access for these businesses will be needed to providing efficient transportation improvements in these areas of the corridor.

Economic development in the corridor is also burgeoning as residential and commercial development has spurred intense growth and economic development in recent years. Recent retiree development in Lake, Sumter and Marion Counties has generated new commercial business, providing new regional jobs and seasonal economic and traffic variations with transient residents during the peak months of November through May each year. In addition, with the location of a number of regional hospitals along the corridor, a burgeoning health care industry has begun to flourish around these hospitals and along the US 27 Corridor. A number of economic development plans have recognized this industry as a key job creator and considerations for these economic development plans should be considered in the development of alternative strategies.

Tourism is also of importance to the corridor. Special tourism considerations for the US 27 corridor include tourist traffic from Orlando area theme parks and regular generators like the football games in Miami; a relatively new theme park, LegoLand, in Polk County just west of the corridor in Winter Haven; and a series of annual local events, such as Sebring's "Twelve Hours of Sebring" and the Leesburg Bikefest. These events generate massive traffic and are worth further consideration in the development of alternatives that address these economic generators. In addition, a number of scenic natural areas, RV Parks, campgrounds and motels are located in the center of the state in locations like Lake Placid, Sebring, and northward at Bok Tower in Lake Wales and in Ocala, which attract tourists within and outside of the state who desire to take advantage of the abundance of natural resources and scenic wildlife the area has to offer. Addressing economic

development in the corridor, there will require balancing tourism and mobility needs with the preservation of the scenic quality that US 27 is known for in the central to southern portion of the state.

7.2 Next Steps

The US 27 Alternatives Study consists of three main documents. This Identification of Corridor Needs Technical Memorandum is the first in a series of documents describing the development of the US 27 Transportation Alternatives Study. This document has identified existing conditions along the US 27 Corridor from different perspectives, including transportation, demographic, emergency management, homeland security, and economic development. The summary provided in this section will provide the preliminary framework for developing potential alternative options along the corridor.

The Alternative Options and Policy Implications Technical Memorandum will be the next document in the series and will include a discussion of transportation alternatives or different approaches to solving the identified needs, along with the policy implications of implementing those alternatives. The second document will not discuss specific projects or recommend solutions, but will present a comprehensive list of alternative approaches to improving mobility, emergency response, and economic development within the ten-county study area. A final report document, titled the US 27 Transportation Alternatives Study, will summarize the full study and conclude this study.

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CDM Smith