



Alico Road Connector Study

**Lee County Department
of Transportation**

Lee County, Florida

Prepared by



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1.0 INTRODUCTION

1.1 Project Description and Purpose

As a coastal community, most of Lee County's initial development occurred along the western region. With the continuing expansion of the community to the east, the two principle north-south routes (US-41 and I-75) have become overwhelmed. US-41 is constrained against further growth by the existing businesses along the corridor, and I-75 is planned for major widening to an eventual ten lanes. Lee County has been working in cooperation with Collier County to create a new north-south corridor, east of I-75, along CR-951. The planning phase of this project is nearing completion. The CR-951 corridor will provide connectivity between the two counties and an alternative route to I-75 and US-41. However, the CR-951 study ends at Alico Road. The latest adopted long-range transportation plan (Year 2030) includes a north/south corridor from Alico Road to SR-80. This study will develop an alignment to provide a north-south connection to SR-82 and to Lehigh Acres via Sunshine Boulevard. **Figure 1** graphically depicts the project site location.

The purpose of the Alico Road Connector Study is to develop a roadway connector from Alico Road to SR-82 that improves the level of mobility in the area and maintains a high quality environment for the community and minimizes impacts to the natural environment. The proposed project will seek to minimize habitat fragmentation and improve habitat connectivity.

The Alico Road Connector will be part of an overall solution to improve transportation by helping to alleviate the adjacent roadway network system, offering not only more capacity but also a better connection for the east Lee County area and, especially, the Lehigh Acres population. The proposed project will promote transportation and land-use improvements that support localized trip-making between and within communities.

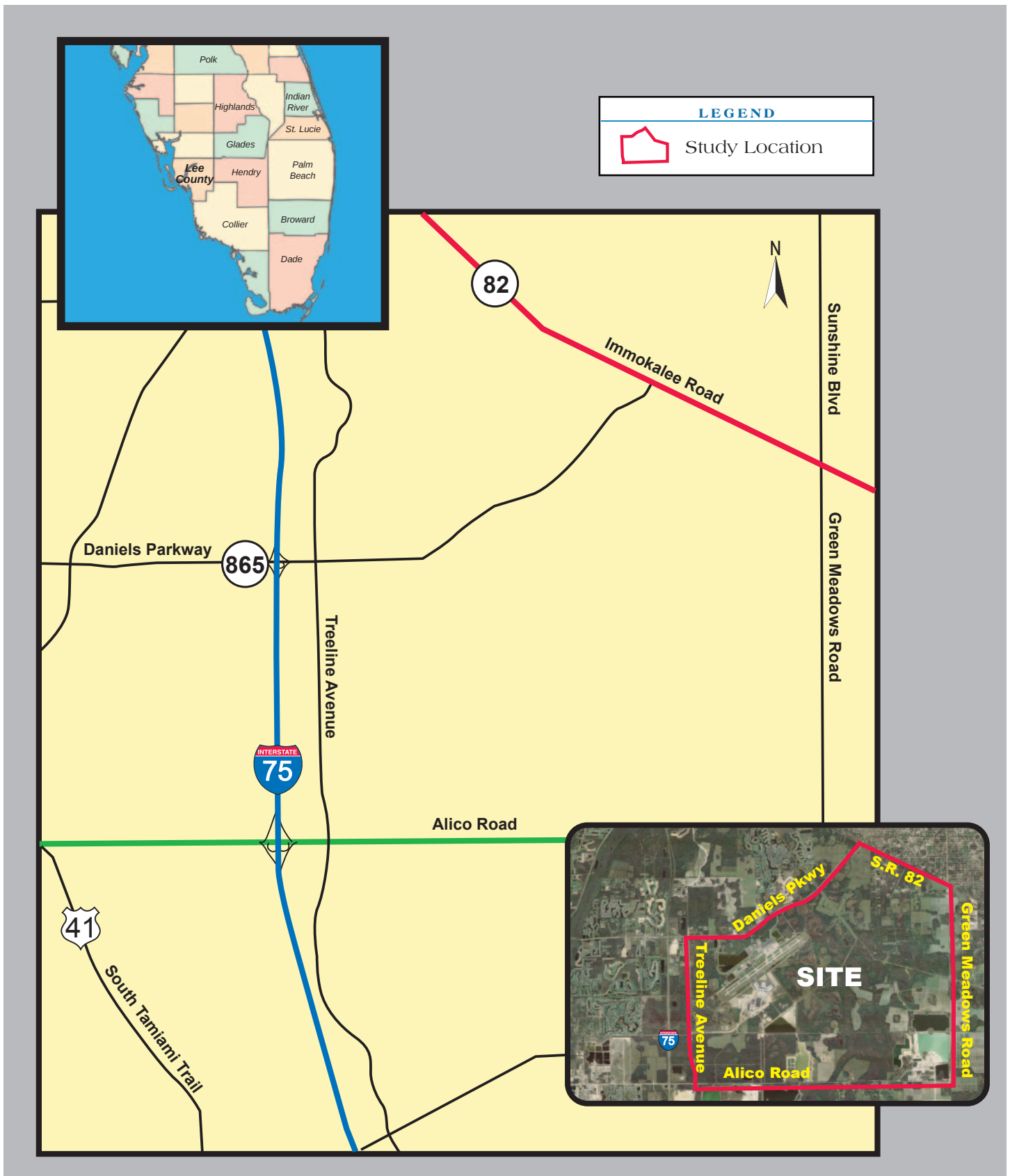


Figure 1
Site Location Map
Alico Road Connector Study
Lee County, Florida

1.2 Project Study Area

The Alico Road Connector Corridor study area is bound by the Southwest Florida International Airport to the west, Green Meadows Road and Sunshine Boulevard to the east, Alico Road to the south and SW 40th Street, which is located north of State Road 82 (SR 82), to the north. The study area, including major roadways, is shown on **Figure 2**.

1.3 Agency Coordination

Extensive coordination has occurred, between all respective governmental agencies, to identify the locations of potential roadway alignments for the project. These agencies included the following:

- Lee County Department of Transportation
- Lee County Land Division
- Florida Power & Light Company (FPL)
- Southwest Florida Water Management District
- Lee County Port Authority
- Florida Department of Transportation (FDOT)
- Florida Fish and Wildlife Conservation Commission (FFWCC)
- United States Fish & Wildlife Service (USFWS)

1.4 Public Involvement

Throughout the project process, ongoing coordination has occurred between government agencies, local engineering firms, developers, local business owners and residents. Public meetings were held to present the proposed alignments to the public and to obtain public questions/comments. More information regarding those public meetings are summarized in subsequent sections of this report.

1.5 Analysis Years and Alternatives

The proposed project was evaluated for short-term and long-term improvements. Analyses were performed for the following years:

- Year 2007
- Year 2010
- Year 2030

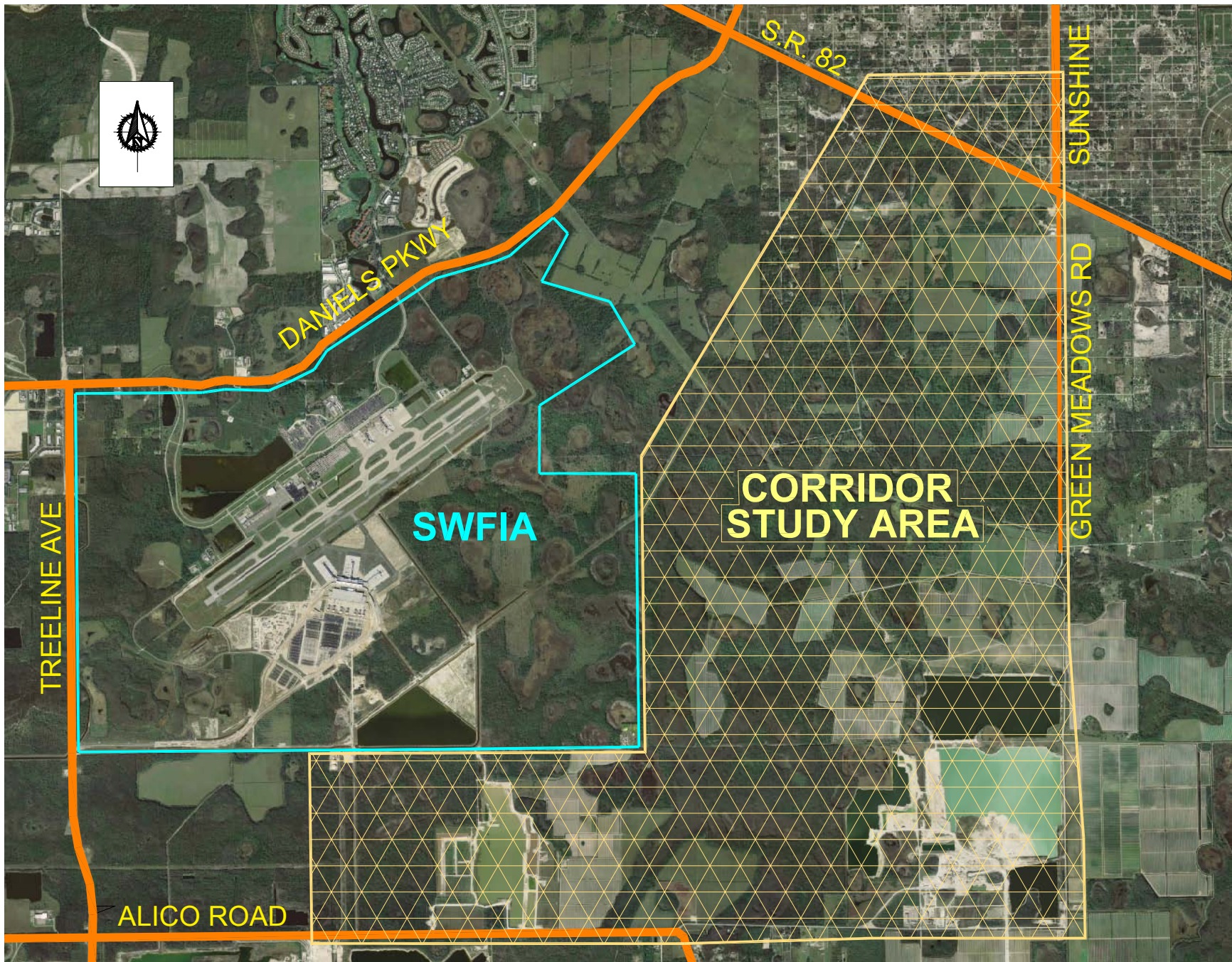


Figure 2
Study Area Map
Alico Road Connector Study
Lee County, Florida

Analyses were performed for the following scenarios:

PHASE I

- Existing Conditions and Analysis
- Future No Build Conditions
- Preliminary Alternatives Analysis
- Alternatives Analysis
- Preferred Alternatives Analysis
- Final Alternatives Analysis

PHASE II

- Modifications of Selected Final Alignment
- Final Alternative Analysis

2.0 EXISTING ENGINEERING CONDITIONS AND ANALYSIS

2.1 Roadway Characteristics

Field reviews were conducted to obtain all relevant roadway characteristics including roadway geometries, speed-limit information, functional classification, jurisdiction, area photographs and access classification. The collected information is summarized in **Table 1**. In addition, the general locations of FPL poles, resident homes and other pertinent information were also identified.

Field review photos are included in **Appendix A**.

Figure 3 graphically depicts the existing roadways within the study area, which include SR-82/Immokalee Road, Daniels Parkway, Treeline Avenue, Alico Road, Sunshine Boulevard and Green Meadows Road.

2.2 Traffic Data

Existing (2007), seventy-two hour automatic traffic recorder counts were collected by McMahon Associates, Inc., (McMahon) from January 23rd, 2007 through January 25th, 2007 along SR-82/Immokalee Road, Treeline Avenue, Alico Road and Sunshine Boulevard. **Figure B-1**, included in **Appendix B**, shows the collected-data, traffic count locations.

The existing roadway counts were averaged and are shown on **Figure 4**. As a result of the growth throughout the area, several roadways within the study area are at or nearing capacity thresholds, including SR-82, where congestion, significant delays, excessive travel times and safety issues are present. Further, Alico Road between Treeline Avenue and Green Meadows Road, which is currently a two-lane, undivided roadway, experiences significant delays and congestion as a result of truck traffic.

TABLE 1
EXISTING ROADWAY CHARACTERISTICS
ALICO ROAD CONNECTOR STUDY

ROADWAY SEGMENT	FROM	TO	FUNCTIONAL CLASSIFICATION	JURISDICTION	LENGTH (MILES)	NUMBER OF LANES
Alico Road	Three Oaks	I 75	Arterial	County Maintained Arterial	0.5	6L
	I 75	Treeline Av (Ben Hill Griffin Pkwy)	Arterial	County Maintained Arterial	0.5	6LD
	Treeline Av (Ben Hill Griffin Pkwy)	Green Meadow Rd	Arterial	County Maintained Arterial	4.0	2L
	Green Meadow Rd	Corkscrew Rd	Arterial	County Maintained Arterial	3.0	2L
SR 82	Gunnery Blvd (Daniels Blvd Ext)	Sunshine Blvd S	Arterial	State Maintained Arterial	2.5	2L
	Sunshine Blvd S	Alabama Rd	Arterial	State Maintained Arterial	1.0	2L
	Alabama Rd	Homestead Rd S	Arterial	State Maintained Arterial	3.2	2L
Sunshine Blvd S	SR 82	Lee Blvd	Collector	County Maintained Arterial	3.6	2L

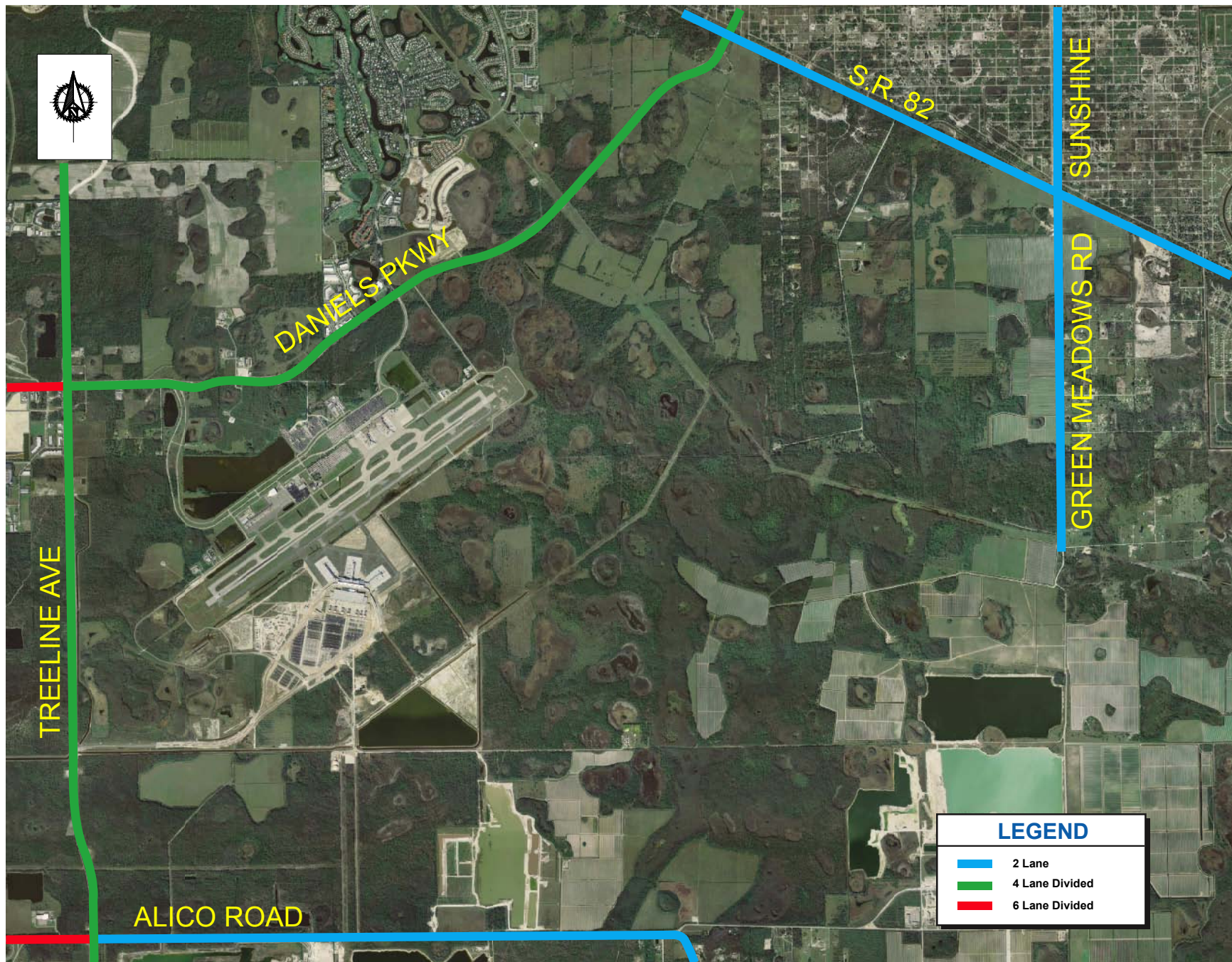


Figure 3
Existing Roadway Geometry
Alico Road Connector Study
Lee County, Florida

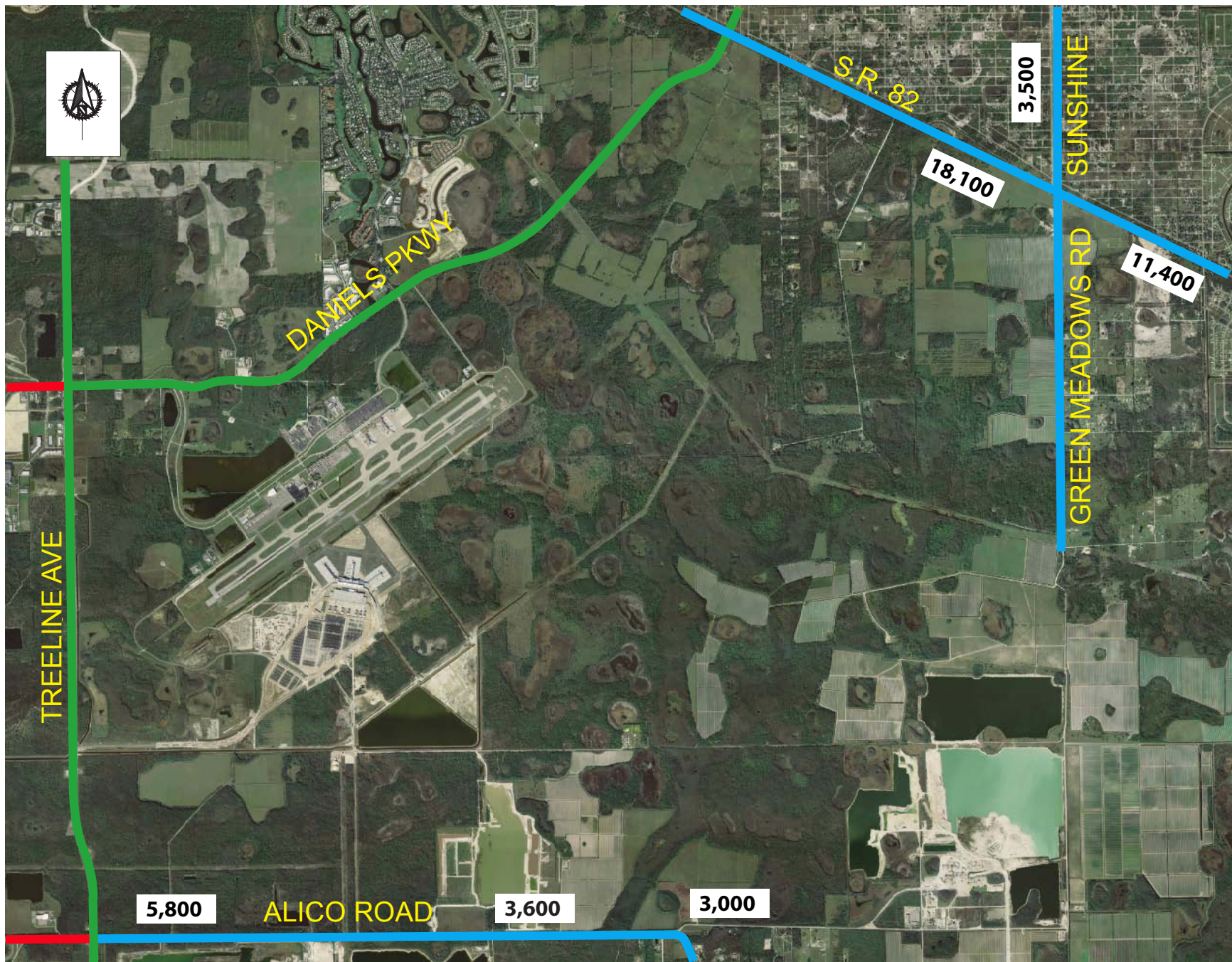


Figure 4
Existing (2007) Roadway Counts
Alico Road Connector Study
Lee County, Florida

The proposed connection between Alico Road and SR-82 is expected to provide an alternative north-south roadway for area travel, including Lehigh Acres residents and airport traffic. The tradeport areas of the Southwest Florida International Airport are also expected to benefit from the proposed project. In addition, it will provide an additional hurricane evacuation route for Lee County.

The proposed roadway connection is anticipated to improve traffic operations along the major area roadways within the study area, thereby reducing travel-time delays and overall road user costs. Without the new facility, the existing congestion and significant delays are expected to worsen.

2.3 Historical Area Growth

During the past six years, Lehigh Acres has experienced a tremendous growth in population, from 33,430 persons in Year 2000 to 44,403 in Year 2006. This represents a growth rate of 4.8 percent. This population increase has contributed to the significant traffic congestion currently present along SR-82 and the surrounding roadway network. Historical traffic data was obtained from Lee County DOT and is included in **Appendix C**. The historical data, for the major roadways within the study area, are summarized in **Table 2**. A review of the historical data indicated growth rates ranging from 3.7 percent to 21.1 percent throughout the study area. As a consequence of the significant area growth, even when factoring in the recent downturn, the demand for an alternate northeast/southwest roadway in the area is appreciable. The proposed Alico Road Connector is anticipated to provide the desired traffic relief.

The region has been experiencing significant growth, not only in population but also in economic activities. An additional one million people are expected to be in the region by Year 2030. Tourism represents about 30 percent of the total economic activity in the region. The number of Lee County visitors increased 2.7 percent in the last year. The amount of Southwest Florida Airport passengers grew 7.2 percent between October 2005 and October 2006. Although current economic growth has declined, it is expected that Lee County will continue to grow and develop eastward. It becomes increasingly important to plan to expand the roadway network, which will provide better roadway connections for county residents and visitors.

TABLE 2
SUMMARY OF HISTORICAL TRAFFIC DATA
ALICO ROAD CONNECTOR STUDY

ROADWAY SEGMENT	FROM	TO	NUMBER OF LANES	AADT								GROWTH RATE
				1999	2000	2001	2002	2003	2004	2005	2006	
Alico Road	Three Oaks	I 75	6LD	16,300	15,700	17,200	18,000	19,000	N/A	N/A	N/A	3.9%
	I 75	Treeline Av (Ben Hill Griffin Pkwy)	6LD	N/A	N/A	N/A	10,100	11,300	14,500	12,500	11,700	3.7%
	Treeline Av (Ben Hill Griffin Pkwy)	Green Meadow Rd	2LN	5,500	5,800	6,500	9,800	N/A	14,700	13,100	12,600	12.6%
	Green Meadow Rd	Corkscrew Rd	2LN	1,000	1,000	N/A	800	2,000	2,100	1,600	2,800	15.8%
SR 82	Gunnery Blvd (Daniels Blvd Ext)	Sunshine Blvd S	2LN	8,200	8,600	9,700	11,700	13,300	15,400	18,000	20,700	14.1%
	Sunshine Blvd S	Alabama Rd	2LN	8,200	8,600	9,700	11,700	13,300	15,400	18,000	20,700	14.1%
	Alabama Rd	Homestead Rd S	2LN	8,200	8,600	9,700	11,700	13,300	15,400	18,000	20,700	14.1%
Sunshine Blvd S	SR 82	Lee Blvd	2LN	1,100	1,200	1,300	1,000	1,800	2,800	3,800	4,200	21.1%

2.4 Utilities

The locations of the existing powerlines are graphically shown on **Figure D-1**, included in **Appendix D**. Surveys of the existing powerlines were provided by Johnson Engineering and are also included in Appendix D.

2.5 Railroads

No existing railroad crossings exist within the study area.

2.6 Soils

A soil survey was performed by McMahon and is included in **Appendix E**.

3.0 EXISTING ENVIRONMENTAL CONDITIONS AND ANALYSIS

3.1 Land Uses

The study area is approximately 9,550 acres and contains a variety of land uses. These include the following:

- 39% (3725 acres) Agricultural
- 21% (2006 acres) Conservation Land – Includes Wild Turkey Strand Preserve.
- 14% (1337 acres) Residential
- 12% (1146 acres) Industrial/Mining
- 11% (1050 acres) Airport Property
- 2% (191 acres) Commercial
- 1% (95 acres) Utilities/Others

The existing, study-area land uses are graphically depicted in **Figure 5**.

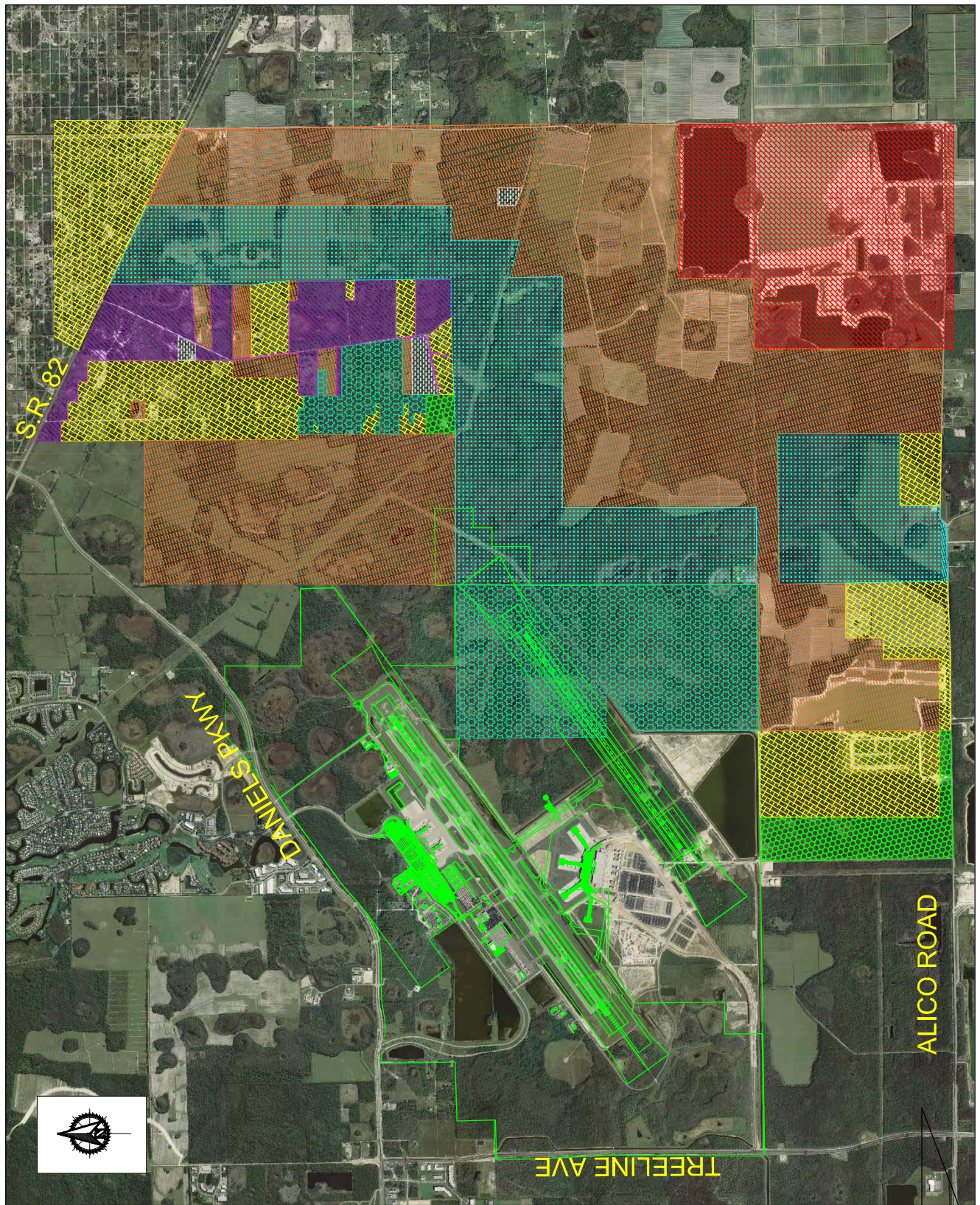
3.2 Archaeological and Historical Sites

There are no known archaeological or historical sites within the project study area.

3.3 Wetlands and Conservation Land

Wetlands and conservation lands can be observed throughout the study area. Information was gathered on environmentally sensitive areas within the study area to determine potential environmental impacts that may occur as a result of the proposed project. The data gathered was based solely upon existing GIS information, as ground truthing was not conducted for this initial evaluation.

Figure 6 depicts the study area wetlands and conservation lands. The conservation lands depicted in this figure were provided by Lee County government and are current as of January 2007. The wetlands and FLUCFCS information was provided by the Southwest Florida Water Management District.



 Agricultural Use	 Conservation Lands	 Residential Use
 Airport Property	 Mining	 Utilities/Other Use
 Commercial Use	 Proposed Conservation	

Figure 5
Existing Land Use Map
Alico Road Connector Study
Lee County, Florida

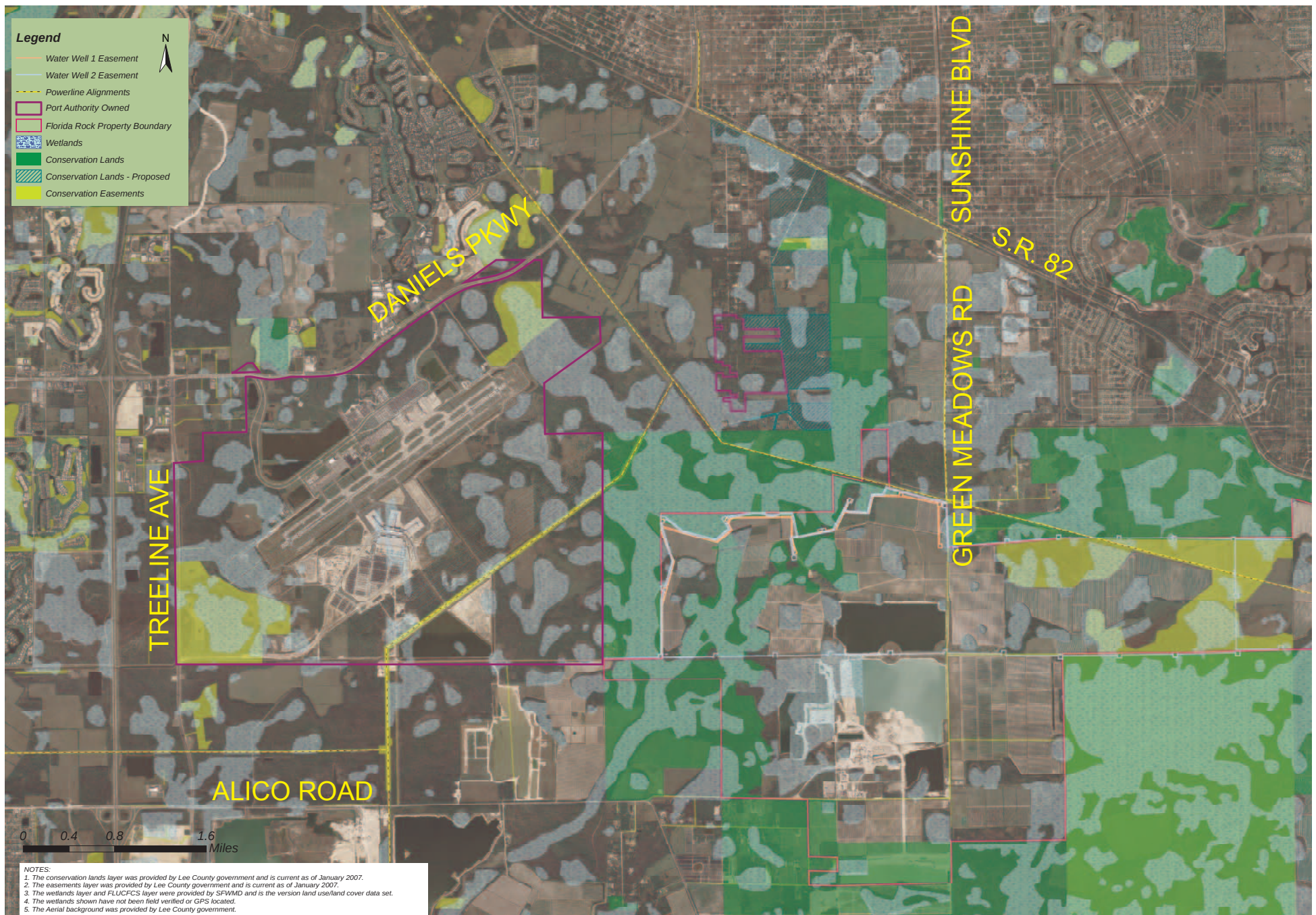


Figure 6
Wetlands and Conservation Land Map
Alico Road Connector Study
Lee County, Florida

3.4 Wildlife and Habitat

The project study area is contained within the U.S. Fish and Wildlife Service (USFWS) Panther Focus Area and, more specifically, the majority of the study area is designated as the primary panther zone, which is considered essential to the recovery goals of the Florida panther. The Florida panther is federally and State listed as endangered, with a current population of approximately 80 to 100 panthers, according to the wildlife agencies.

Figure 7 illustrates the Panther Focus Area, primary panther habitat area, panther mortality locations and panther telemetry locations. The location of the panther focus area was provided by the USFWS, while the panther telemetry sites were provided by the Florida Fish and Wildlife Conservation Commission (FWC).

In addition to panther habitat, other wildlife has also been observed within the study area, as documented by available GIS data from the USFWS and FWC (**Figure 8**). Three Florida black bear locations have been documented in the north-central portion of the study area. In addition two eagle nests and three red cockaded woodpeckers have been previously documented as being located in the northwest portion of the study area. Wading bird and snail kite habitat were previously documented within the Wild Turkey Strand Preserve, located in the center of the study area. Additionally, the project area is located within the 18.6-mile Core Foraging Area of known wood stork colonies.

3.5 Farmlands

Several agricultural lands exist throughout the study area. The existing farmlands are graphically depicted in **Figure 9**.

3.6 Contamination Sites

Based upon available records from the USEPA and FDEP obtained through First Search Technology Corporation, two facilities (Rinker Materials-Fort Myers Quarry and Florida Rock Industries) have documented diesel spills which may impact soil and groundwater within the study area.

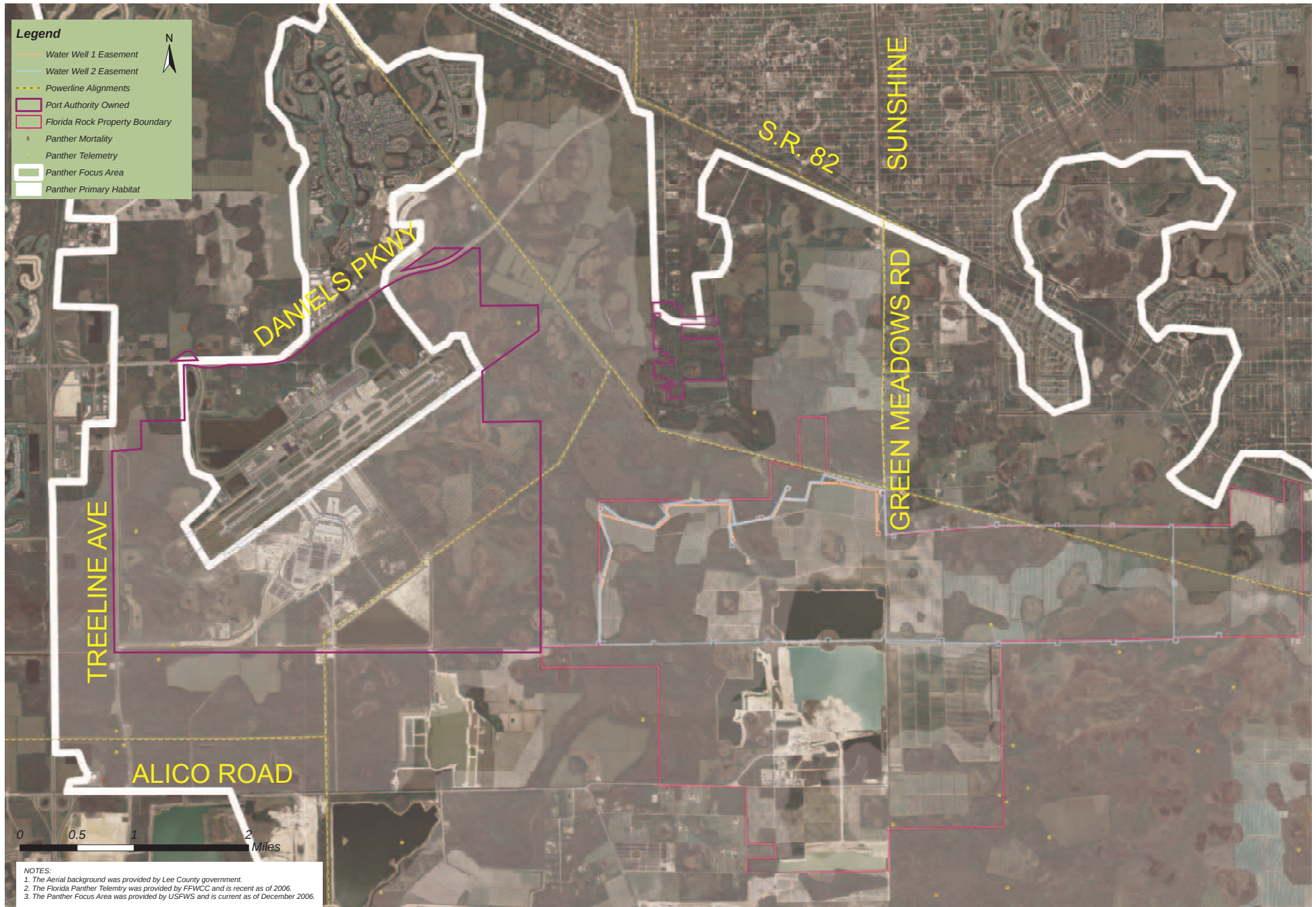


Figure 7
Panther Focus Area
Alico Road Connector Study
Lee County, Florida



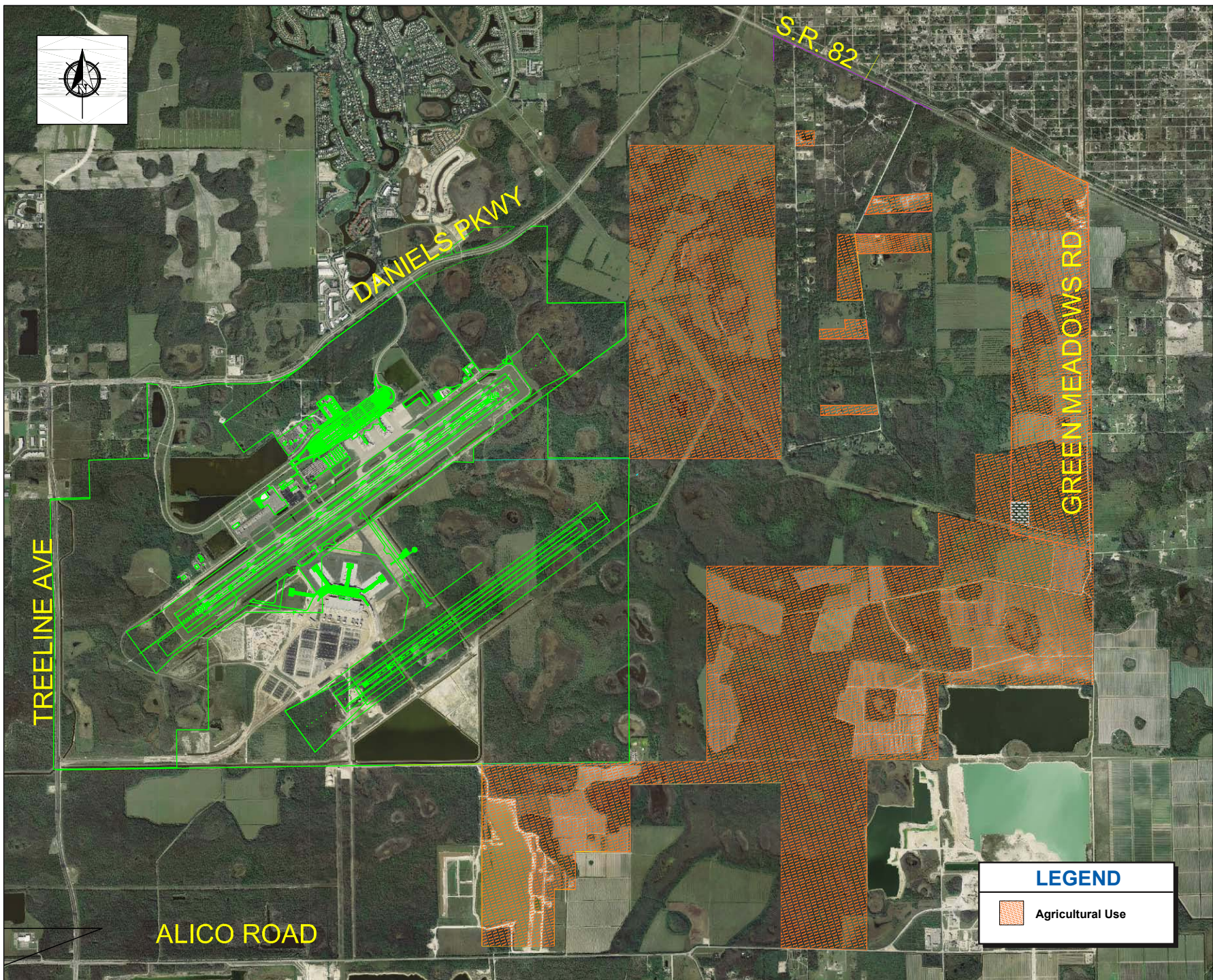


Figure 9
Farmland Map
Alico Road Connector Study
Lee County, Florida

4.0 FUTURE NO BUILD CONDITIONS

4.1 Projected Traffic Growth

As previously mentioned, tremendous growth has occurred over the past several years within the study area. In an effort to determine the expected growth for the immediate future (Year 2010), Year 2006 traffic volumes, obtained from Lee County DOT, were increased utilizing the previously calculated growth rates for the major roadways within the study area. Results, summarized in **Table 3**, indicate that segments of Alico Road and SR-82 are expected to be significantly overcapacity by Year 2010. It is worth mentioning that significant congestion and delays are currently observed along some of these roadway segments.

4.2 Assessment of Related Plans and Programs

Several government documents were reviewed in an effort to determine the consistency of the proposed project and to provide a foundation for creating strategies to develop the solution for the feasibility of the corridor. The following documents were reviewed:

- Lee County Transportation Improvement Program, Fiscal Year 2007/08 – 2011/12
- Lee County Metropolitan Planning Organization (MPO) 2007 Transportation Project Priorities
- Concurrency Report Inventory and Projections 2005/2006-2006/2007
- Lee County Department of Transportation (DOT) Major Road Improvements Tentatively Programmed Through Construction Phase – Fiscal Year 2006/07 – 2010/11
- Lee County Metropolitan Planning Organization (MPO) 2030 Long Range Transportation Plan (LRTP)

The 2030 LRTP is a long range plan for transportation needs developed by the Lee County MPO. The 2030 LRTP recommends major transportation projects, systems, strategies and policies in order to maintain and improve the current transportation system with the objective of meeting future travel demand. The proposed corridor is consistent with the adopted 2030 LRTP, which includes the Alico Road Connector on its 2030 Highway Element Map, as part of the Alico Expressway Corridor from Summerlin Road to SR-82.

TABLE 3
SUMMARY OF PROJECTED TRAFFIC VOLUMES
ALICO ROAD CONNECTOR STUDY

ROADWAY SEGMENT	FROM	TO	NUMBER OF LANES	GROWTH RATE	PROJECTED AADT
					2010
Alico Road	Three Oaks	I 75	6LD	3.9%	24,845
	I 75	Treeline Av (Ben Hill Griffin Pkwy)	6LD	3.7%	13,553
	Treeline Av (Ben Hill Griffin Pkwy)	Green Meadow Rd	2L	12.6%	20,234
	Green Meadow Rd	Corkscrew Rd	2L	15.8%	5,043
SR 82	Gunnery Blvd (Daniels Blvd Ext)	Sunshine Blvd S	2L	14.1%	35,138
	Sunshine Blvd S	Alabama Rd	2L	14.1%	35,138
	Alabama Rd	Homestead Rd S	2L	14.1%	35,138
Sunshine Blvd S	SR 82	Lee Blvd	2L	21.1%	9,031

4.3 Transportation Network Modeling

The travel demand model, used to develop the future year traffic projections, was a merged model, which included the Year 2030 Lee-Collier Counties model provided by Lee County Metropolitan Planning Organization (MPO). This approved model is based on the Florida Standard Urban Transportation Modeling Structure (FSUTMS) and is recognized as an acceptable travel demand forecasting tool.

4.3.1 Year 2010 Network Model Validation and Documentation

The Year 2010 Lee-Collier County model was developed based on Year 2010 ZData provided by Lee County MPO. Year 2010 roadway geometries were modified to code Daniels Parkway as a four-lane divided roadway. The Year 2010 No Build model output volumes are included in **Appendix F**.

4.3.2 Year 2030 Network Model Validation and Documentation

The Year 2030 Lee-Collier County model was provided by Lee County MPO. Although not part of the financially feasible plan, model roadway laneages were reviewed to code SR-82 and Daniels Parkway as six-lane divided roadways. The Year 2030 No Build model output volumes are included in **Appendix F**.

4.3.3 Review of Projected Model Volumes

A summary of the Year 2010 and Year 2030 No Build model volumes, for the major roadways within the study area, are summarized in **Table 4** and **Table 5**, respectively. Model output volumes were converted to an AADT by applying a Model Output Conversion Factor (MOCF) obtained from the 2005 FDOT Peak Season Factor Category Report. Daily volumes were then converted to peak-hour, directional volumes by applying K_{100} factors and D factors obtained from the Year 2006 Lee County Traffic County Report. Estimated future directional volumes were then compared to the directional capacities obtained from the June 2007 Lee County Concurrency Report and the Lee County Generalized Peak-Hour Directional Service Values.

TABLE 4
SUMMARY OF YEAR 2010 NO BUILD MODEL VOLUMES
ALICO ROAD CONNECTOR STUDY

ROADWAY SEGMENT	FROM	TO	NUMBER OF LANES	PSWADT ⁽¹⁾	AADT ⁽²⁾ 2010	K FACTOR ⁽³⁾	PEAK HOUR	D FACTOR (PEAK HOUR) ⁽⁴⁾	DIRECTIONAL LINK VOLUME (PEAK HOUR)	DIRECTIONAL CAPACITY ⁽⁵⁾	GREATER THAN CAPACITY (Y/N)
Alico Road	Three Oaks	I 75	6	34,588	31,500	0.091	2,870	0.52	1,492	2,920	N
	I 75	Treeline Av (Ben Hill Griffin Pkwy)	6	26,914	24,500	0.126	3,090	0.53	1,638	2,920	N
	Treeline Av (Ben Hill Griffin Pkwy)	Green Meadow Rd / Alico Road	2	4,721	4,300	0.091	390	0.52	203	860	N
	Green Meadow Rd / Alico Road	Corkscrew Rd	2	2,349	2,100	0.091	190	0.52	99	860	N
	Green Meadow Rd / Alico Road Ext	SR 82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Treeline Avenue	Alico Road	Airport Access	4	21,418	19,500	0.101	1,970	0.51	1,005	1,950	N
SR 82	Gunnery Blvd (Daniels Blvd Ext)	Sunshine Blvd S	6	19,871	18,100	0.093	1,680	0.60	1,008	2,920	N
	Sunshine Blvd S	Alabama Rd	6	17,516	15,900	0.093	1,480	0.60	888	2,920	N
	Alabama Rd	Homestead Rd S	6	15,760	14,300	0.093	1,330	0.60	798	2,920	N
Sunshine Blvd S	SR 82	Lee Blvd	2	1,312	1,200	0.102	120	0.59	71	960	N
Daniels Pkwy	I 75	Treeline Av (Ben Hill Griffin Pkwy)	6	61,158	55,700	0.110	6,130	0.52	3,188	2,950	Y
	Treeline Av (Ben Hill Griffin Pkwy)	Gateway	4	32,960	30,000	0.113	3,390	0.55	1,865	1,960	N
	Gateway	SR 82	4	23,087	21,000	0.113	2,370	0.55	1,304	1,960	N

Notes:

(1) Traffic Volumes from a validated FSUTMS

(2) Model Output Correction Factor obtained from the 2005 FDOT Peak Season Factor Category Reports = 0.91

(3) K100 factor obtained from 2006 Lee County Traffic Count Report

(4) D factor obtained from 2006 Lee County Traffic Count Report

(5) Directional Capacity- obtained from 2007 Lee County Concurrency Report - June 2007 (Exception: Treeline Avenue - Standard Lee County Generalized Peak Hour Directional Service Value)

TABLE 5
SUMMARY OF YEAR 2030 NO BUILD MODEL VOLUMES
ALICO ROAD CONNECTOR STUDY

ROADWAY SEGMENT	FROM	TO	NUMBER OF LANES	PSWADT ⁽¹⁾	AADT ⁽²⁾ 2030	K FACTOR ⁽³⁾	PEAK HOUR	D FACTOR (PEAK HOUR) ⁽⁴⁾	DIRECTIONAL LINK VOLUME (PEAK HOUR)	DIRECTIONAL CAPACITY ⁽⁵⁾	GREATER THAN CAPACITY (Y/N)
Alico Road	Three Oaks	I 75	6	66,458	60,500	0.091	5,510	0.52	2,865	2,920	N
	I 75	Treeline Av (Ben Hill Griffin Pkwy	6	53,379	48,600	0.126	6,120	0.53	3,244	2,920	Y
	Treeline Av (Ben Hill Griffin Pkwy	Green Meadow Rd / Alico Road	2	7,698	7,000	0.091	640	0.52	333	860	N
	Green Meadow Rd / Alico Road	Corkscrew Rd	2	1,654	1,500	0.091	140	0.52	73	860	N
	Green Meadow Rd / Alico Road Ex	SR 82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Treeline Avenue	Alico Road	Airport Access	4	57,678	52,500	0.101	5,300	0.51	2,703	1,950	Y
SR 82	Gunnery Blvd (Daniels Blvd Ext)	Sunshine Blvd S	6	55,834	50,800	0.093	4,720	0.60	2,832	2,920	N
	Sunshine Blvd S	Alabama Rd	6	39,127	35,600	0.093	3,310	0.60	1,986	2,920	N
	Alabama Rd	Homestead Rd S	6	41,440	37,700	0.093	3,510	0.60	2,106	2,920	N
Sunshine Blvd S	SR 82	Lee Blvd	2	3,248	3,000	0.102	310	0.59	183	960	N
Daniels Pkwy	I 75	Treeline Av (Ben Hill Griffin Pkwy	6	95,832	87,200	0.110	9,590	0.52	4,987	2,950	Y
	Treeline Av (Ben Hill Griffin Pkwy	Gateway	4	57,431	52,300	0.113	5,910	0.55	3,251	1,960	Y
	Gateway	SR 82	4	57,512	52,300	0.113	5,910	0.55	3,251	1,960	Y

Notes:

(1) Traffic Volumes from a validated FSUTMS

(2) Model Output Correction Factor obtained from the 2005 FDOT Peak Season Factor Category Reports = 0.91

(3) K100 factor obtained from 2006 Lee County Traffic Count Report

(4) D factor obtained from 2006 Lee County Traffic Count Report

(5) Directional Capacity- obtained from 2007 Lee County Concurrency Report - June 2007 (Exception: Treeline Avenue - Standard Lee County Generalized Peak Hour Directional Service Value)

A review of the volumes indicated that one roadway segment is anticipated to be overcapacity in Year 2010, while five roadway segments are expected to be overcapacity by Year 2030. However, after thoroughly reviewing the model output volumes, it was revealed that model volumes were significantly underestimating expected future traffic in the vicinity of the study area. Projected Year 2010 and Year 2030 traffic volumes, for several roadway segments within the study area, were lower, or only slightly higher, than existing roadway volumes. Further the evaluation of model volumes indicated that historical area growth, in particular around Lehigh Acres, was not accurately reflected in the model volumes.

A meeting was held with Lee County DOT to discuss the model findings. While it was agreed that model volumes were underestimated for the study area, a decision was made to utilize the Year 2010 and Year 2030 models for future analyses. The reason was that the model would be utilized to determine the relative diversion of traffic from SR-82 and Daniels Parkway, which are currently congested roadways, to the proposed Alico Road Connector. It was expected that, while model area volumes are lower than anticipated, the model analysis would show a reasonable diversion of traffic to the proposed roadway.

4.4 Environmental Assessment

No environmental effects are associated with the No Build Conditions.

PHASE I

5.0 PRELIMINARY ALTERNATIVES ANALYSIS

5.1 Preliminary Alignments

In addition to the No Build analysis scenario, which assumed the Alico Road Connector was not present, three preliminary alignments were analyzed. The geographic descriptions of these preliminary alignments are summarized below.

- Scenario 1: The proposed connector road was assumed to extend the location where Alico Road bends south and continue east, along the boundary of Florida Rock, until Green Meadow Road, where it would turn north and connect to SR-82.
- Scenario 2: The proposed connector road was assumed to travel along the shortest path. The connector was assumed to again extend from the location where Alico Road bends south. The connector road was projected to extend in a northeast direction and connect to Green Meadows Road on the FPL easement close to Balfour Terrace.
- Scenario 3: The proposed connector road was assumed to connect to Alico Road, approximately at midpoint between Treeline Avenue and the location where Alico Road bends south. The proposed roadway was then assumed to travel slightly north, then east, then northeast, then east again until connecting with Green Meadows Road on the FPL easement close to Balfour Terrace.

Three different lane alternatives were evaluated, through network modeling, for each of the three preliminary alignments/scenarios. The proposed connector road was simulated as a two-lane, four-lane and six-lane, divided roadway for analysis purposes.

5.2 Year 2010 Preliminary Analysis

Year 2010 model outputs for the three scenarios, for all lane alternatives, are attached in **Appendix G**.

Model output volumes were converted to peak-hour, directional volumes by applying the appropriate MOCF, K_{100} and D factors. A comparison of Year 2010 traffic volumes are included in **Appendix H**.

5.3 Year 2030 Preliminary Analysis

Year 2030 model outputs for the three scenarios, for all lane alternatives, are attached in **Appendix I**.

Model output volumes were converted to peak-hour, directional volumes by applying the appropriate MOCF, K_{100} and D factors. A comparison of Year 2030 traffic volumes are included in **Appendix J**.

5.4 Preliminary Engineering Findings

A review of the Year 2010 and Year 2030 model outputs indicated that projected volumes along several major roadway segments are expected to be reduced and diverted to the proposed connector roadway. Significant reductions are expected, for Year 2030, along Daniels Parkway, where traffic volumes are expected to be reduced from approximately 57,000 to approximately 39,000 between Treeline Avenue and SR-82. The review also indicated that the diversion of volumes, to the proposed connector road, did not appear to be significantly affected by the proposed roadway alignment. Diverted volumes were similar for all three scenarios for each respective year.

A meeting was held between the consultants and Lee County DOT to discuss the model findings. Since model volumes are significantly underestimated throughout the study area, a lane alternative for the proposed connector roadway could not be accurately assessed from model output volumes. Based on engineering judgment and expected growth for the area, it was determined that the proposed connector roadway would, most likely, be required to be a two-lane roadway by Year 2010, and either a four-lane or a six-lane divided roadway by Year 2030.

6.0 ALTERNATIVES ANALYSIS

6.1 Proposed Alignments

Several meetings were held between consultants, Lee County DOT and other affected governmental agencies to determine potential, feasible roadway alignments for the proposed connector roadway. Several criteria were considered in the development of the proposed alignments. These included the following:

- Availability of alternative routes
- Cost
- Long-range area planning
- Safety
- Environmental factors (Social, economic and environmental)
 - o Minimize impacts on wetlands
 - o Minimize the division of conservation lands.
 - o Minimize panther-habitat fragmentation
 - o Minimize impacts on residential properties
 - o Minimize effects on commercial businesses
 - o Maximize use of lands owned by Lee County (other than 20/20 property)

In addition to the above-mentioned criteria, relevant plans and programs were reviewed to determine whether the proposed connector roadway should connect, at the north end of the study area, to Sunshine Boulevard or Alabama Road. The assessment suggested that, in order to provide continuity throughout and beyond the study area, the proposed connector roadway should, if possible, connect at the north end to Sunshine Boulevard. This would ensure the connection of three studies culminating in a proposed corridor extending from Marco Island to the Caloosahatchee River.

Further, Alabama Road is a collector road from SR-82 to Homestead Road S. The existing right-of-way would not support a six-lane, divided roadway. Acquiring the additional right-of-way to widen the roadway would be costly.

Based on the previously-mentioned criteria, nine potential roadway alignments were developed and are graphically depicted in **Figure 10**. A description of the travel path of each alignment is described below.

ALTERNATIVE #1

Alternative #1 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. This intersection is proposed to be aligned with the north end of the future CR-951 Extension. The alignment of Alternative #1 uses the existing Airport Haul Road, which was previously the south access to the Southwest Florida International Airport, and is the current access to the water plant. This alternative extends about 1.25 miles north from the Alico Road and Green Meadows Water Plant access roadway intersection. It then continues east 2.28 miles, passing in front of the Green Meadows Water Plant, then turns north, bordering approximately 1.16 miles of the Wild Turkey Strand and mining property. In order to minimize the fragmentation of the Wild Turkey Strand, Alternative #1 turns east along both boundaries for about 2.47 miles until this alignment intersects with Green Meadows Road, approximately 0.18 miles north of the Green Meadows Road and Balfour Terrace intersection. It then continues north about 2.23 miles to SR-82/ Immokalee Road. The total length of Alternative #1 is 9.38 miles.

ALTERNATIVE #2

Alternative #2 also begins at the Alico Road and Green Meadows Water Plant access roadway intersection. This alignment extends about 1.25 miles north from the Alico Road and Green Meadows Water Plant access roadway intersection. Alternative #2 continues east 3.34 miles, passing in front of the Green Meadows Water Plant, then turns northeast, dividing a mining property for about 2.00 miles until this alignment intersects Green Meadows Road approximately 0.18 miles north of the Green Meadows Road and Balfour Terrace intersection. It then continues north about 2.23 miles to intersect with SR-82/ Immokalee Road. Alternative #2 has a total length of 8.91 miles.

ALTERNATIVE #3

Alternative #3 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. This alignment utilizes the existing Alico Road, which continues onto Green Meadows Road.

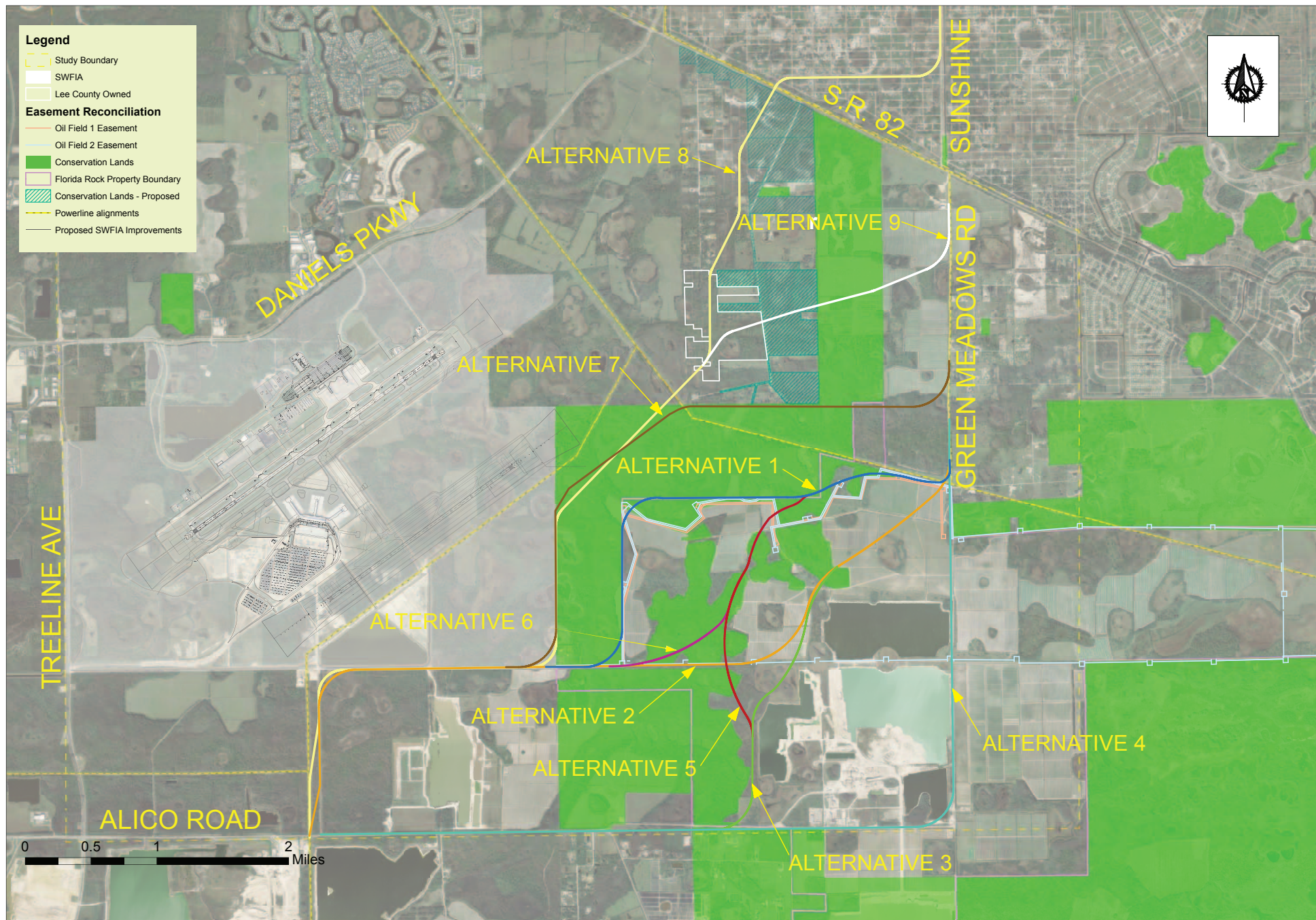


Figure 10
Potential Roadway Alignments
Alico Road Connector Study
Lee County, Florida

This alternative runs 3.33 miles east from the Alico Road and Green Meadows Water Plant access roadway intersection. Alternative #3 then continues north 0.93 miles bordering the Wild Turkey Strand and the southern portion of a mining property. It then deviates northeast about 2.18 miles until this alignment intersects Green Meadows Road near the Green Meadows Road and Balfour Terrace intersection. It then continues north about 2.23 miles to SR-82/Immokalee Road. The length of Alternative #3 is 8.67 miles.

ALTERNATIVE #4

Alternative #4 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. This alignment uses the existing Alico Road, Alico Road Extension and Green Meadows Road. It extends east of the above-mentioned intersection 4.80 miles to Green Meadows Road, then turns north about 4.95 miles to SR-82/Immokalee Road. Alternative #4 runs a total length of 9.74 miles.

ALTERNATIVE #5

Alternative #5 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. Alternative #5 uses the existing Alico Road, which continues onto Green Meadows Road. This alignment runs about 3.33 miles east from the Alico Road and Green Meadows Water Plant access roadway intersection, then continues north 0.94 miles, bordering the Wild Turkey Strand and the south portion of a mining property. It then deviates slightly northwest about 0.85 miles, bordering the west boundary of the mining property, as well as the eastern boundary of the Wild Turkey Strand. It then turns northeast about 2.25 miles in an arc until this alignment intersects Green Meadows Road near the Green Meadows Road and Balfour Terrace intersection. It then continues north about 2.23 miles to SR-82/Immokalee Road. The total length for Alternative #5 is 9.59 miles.

ALTERNATIVE #6

Alternative #6 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. The alignment of Alternative #6 utilizes the existing Airport Haul Road. This alignment extends about 1.25 miles north from the Alico Road and Green Meadows Water Plant access roadway intersection. It then continues east 2.28 miles, passing in front of the Green Meadows Water Plant, then slightly turns northeast 1.04 miles, bordering the west boundary of a mining property and the eastern boundary of Wild

Turkey Strand. Alternative #6 then turns north – northeast about 2.25 miles in an arc until this alignment intersects Green Meadows Road near the Green Meadows Road and Balfour Terrace intersection. It then continues north about 2.23 miles to SR-82/Immokalee Road. Alternative #7 has a length of 9.15 miles.

ALTERNATIVE #7

Alternative #7 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. Alternative #7 travels along the existing Airport Haul Road approximately 1.25 miles north from the Alico Road and Green Meadows Water Plant access roadway intersection. It then continues east 1.85 miles until the location of the Water Plant, where it turns north about 1.27 miles, bordering the Southwest Florida International Airport property and the western boundary of the Wild Turkey Strand. Alternative #7 then turns 1.21 miles northeast towards the northern boundary of the Wild Turkey Strand, where the power lines' alignment is moderately changed. It then continues east about 1.97 miles to intersect Green Meadows Road between Kentara Way and Richard Road. Finally, it continues north about 1.48 miles to SR-82/ Immokalee Road. The length of Alternative #7 is 9.03 miles.

ALTERNATIVE #8

Alternative #8 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. The alignment uses the existing Airport Haul Road and runs about 1.25 miles north from the Alico Road and Green Meadows Water Plant access roadway intersection. Alternative #8 then continues east 1.85 miles until the location of the Water Plant, where it turns north direction for approximately 1.17 miles, bordering the Southwest Florida International Airport property and the western boundary of the Wild Turkey Strand. It then turns northeastern direction 1.55 miles towards the terminus of Cherokee Road. Alternative #8 then continues north on Cherokee Road, about 0.67 miles, where it again turns northeast about 1.36 miles using Gooden Grove Road to the intersection of SR-82 and SW 40th Street. Alternative #8 uses 1.29 miles of 40th Street in Lehigh Acres to connect to Sunshine Boulevard. The total length for this Alternative #8 is 9.109 miles.

ALTERNATIVE #9

Alternative #9 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. Alternative #9 uses the existing Airport Haul Road and extends about 1.25 miles north from the Alico

Road and Green Meadows Water Plant access roadway intersection. Alternative #9 then continues east 1.85 miles until the location of the Water Plant, where it turns north about 1.17 miles, bordering the Southwest Florida International Airport property and the western boundary of the Wild Turkey Strand. The alignment then heads northeast, approximately 1.55 miles, towards the terminus of Cherokee Road. It then continues northeast, about 2.05 miles, through a portion of the Wild Turkey Strand and agricultural property until it gets to Green Meadows Road. Finally, it continues north about 0.53 miles until it intersects SR-82/Immokalee Road. The length for Alternative #9 is 8.40 miles.

6.2 Evaluation of Alignment Alternatives

In an effort to provide a reasonable evaluation of the proposed nine alternatives, this section adheres to guidelines contained in the *FDOT Project Development and Environment Manual Part 2, Chapter 6*. The main purpose of this section is to “explore and objectively evaluate all reasonable alternatives, and, for alternatives which are being eliminated from detailed study, to briefly discuss the reasons for the elimination.”

The proposed alignments were evaluated based on criteria provided by Lee County, which are summarized in **Table 6**. They include availability of alternative routes, cost, environmental factors, long-range area planning and safety. A description of each criterion is described below:

Availability of Alternative Routes

This criterion evaluated each alignment for expected travel demand, and, consequently, the expected roadway capacity and level of service. The basic premise undergirding this criterion is that travel demand on a given roadway will be less when there are a number of available alternative routes. Conversely, travel demand will be greater where alternative routes are not available. With few alternate routes available in the study area, Daniels Parkway was the roadway most affected by the addition of the Alico Road extension. While a significant diversion of traffic away from Daniels Parkway to the proposed new roadway was recognized in the models, those same models lacked sufficient sensitivity to allow one alternative to reliably predict more diversion than another.

TABLE 6
SUMMARY OF EVALUATION CRITERIA
ALICO ROAD CONNECTOR STUDY

Availability of alternative routes		Travel demand (volumes)
		Roadway capacity
		Level of service
Cost		Construction cost
		Maintenance cost
		Right-of-way cost
		Residential and business displacement/dislocation
		Mitigation cost
Environmental factors	Social & economic	Historic, cultural and archaeological resources
		Neighborhood integrity
		Public Support
	Environmental	Wetlands, vegetation wild life
		Hazardous materials
Long range area planning		Regional Connectivity
		Flexibility / Sustainability
Safety		Engineering standards
		Access Control

Cost

The analysis of the Alico Road connector as a new roadway considered the construction costs, maintenance costs, and right-of-way costs, assuming the same cross section and speed for all alternatives.

The extent to which the alignments were contained within Lee County property reduced the right-of-way costs for the alignments. The cost for the displacement and relocation of residential homes and area businesses were also evaluated for each alignment. Finally, mitigation costs for alignments passing through conservation lands or wetlands were determined.

Environmental Factors – Social and Economic

The impacts of the proposed alignments on historical and archaeological sites were reviewed. In addition, each alignment was evaluated based upon its expected ability to improve mobility and connectivity throughout the area, reduce traffic congestion and its attendant social, economic and environmental impacts, and reduce impacts to residential properties and businesses.

Environmental Factors - Environmental

Three factors (wetlands, vegetation, and wildlife) were utilized to evaluate the proposed alignments in order to estimate the anticipated environmental impacts. These factors included potential impacts to wetland areas, native vegetation, existing conservation lands, listed species habitat, and proximity to potentially hazardous materials.

Long-range Area Planning

The proposed alignments were analyzed for consistency with long-range planning for the area. Further, the long-term flexibility and sustainability of each alignment was considered in the evaluation process.

Safety

Engineering standards for roadway curvature, superelevation, cross-slope and other design criteria were obtained from Lee County DOT, FDOT and the AASHTO Green Book as appropriate. Access control was considered for each alignment. In all cases, the northern portion of Alico Road was maintained as close to a perpendicular intersection with SR-82 as possible. This was done to have sufficient tangent sections before the intersection to maintain good visibility and meet sight-distance requirements. These engineering standards, access controls and sight distance standards were considered to ensure that, operationally, each proposed alignment would function in a safe, efficient manner.

The proposed alignments were analyzed based on the five criteria mentioned above. The comparison of potential roadway alignments to these five criteria, in the form of an evaluation matrix, is attached in **Appendix K**.

ALTERNATIVE #1

Alternative #1 travels along a southwest/northeast path through the center of the study area. It is projected to affect about 43 lots. Of these, 13 lots are classified as residential, of which 38 percent are vacant. Four (4) lots are classified as commercial, and are currently vacant. Alternative #1 is also expected to affect 18 lots, currently utilized for agricultural purposes. Approximately 70 percent of this corridor is not anticipated to impact any potential business developments. The proposed alignment also runs along the southwest border of the Wild Turkey Strand Preserve. In general, this alignment is not expected to generate significant residential displacement. Further, since this alternative maximizes the use of County-owned lands, the right-of-way impacts are reduced. Environmentally, it is estimated approximately 35% of the project acreage may result in wetland impacts. Moderate direct and secondary impacts are anticipated to conservation lands. Ninety-nine percent (99%) of the alternative is located within the USFWS Panther Focus Area. Approximately 81% of it is located within primary panther habitat. Due to adjacent agricultural operations, the potential exists for pesticide impacted soils, although none have been documented.

ALTERNATIVE #2

Alternative #2 runs in a southwest/northeast direction through the middle of the study area. It is projected to affect about 41 lots. Of these, 13 lots are classified as residential, of which 38 percent are vacant. Five (5) lots are classified as commercial, and are currently vacant. Alternative #2 is also expected to affect 20 lots, currently utilized for agricultural purposes. This alignment is one of the shortest, reducing the expected construction and maintenance costs, relative to the other alignments. No significant residential displacement is noted. Additionally, Alternative #2 is not projected to impact conservation lands. However, more than 70 percent of this alternative corridor runs through commercial properties, consisting of mining and agricultural uses, thereby causing significant business impacts and very high mitigation costs. Environmentally, it is estimated approximately 28% of the project acreage may result in wetland impacts. Moderate direct and secondary impacts are anticipated to conservation lands. Ninety-nine percent (99%) of the project is located within the USFWS Panther Focus Area. Approximately 84% of it is located within primary panther habitat. Due to adjacent agricultural operations, the potential exists for pesticide impacted soils, although none have been documented.

ALTERNATIVE #3

Alternative #3 extends along a southwest-to-northeast path through the lower portion of the study area. The roadway aligns with the existing portion of Alico Road and extends through a mining property. It is projected to affect about 44 lots. Of these, 22 lots are classified as residential, of which 41 percent are vacant. Two lots are classified as commercial. Seventy-five percent of the commercial property is currently vacant. Alternative #3 is also expected to impact 18 lots, currently designated as agricultural. This alignment is expected to have minimal impact on conservation lands and wetlands, which reduces its mitigation costs. Further, the expected cost of residence relocation is also low. On the other hand, more than 85 percent of this alternative corridor runs through commercial properties, causing significant impacts on their expected production. Environmentally, it is estimated approximately 23% of the project acreage may result in wetland impacts. Low to moderate direct and secondary impacts are anticipated to conservation lands. Ninety-nine percent (99%) of the project is located within the USFWS panther focus area. Approximately 76% of it is located within primary panther habitat. There is the potential for pesticide impacted soils associated with agricultural operations and a documented spill within the alternative vicinity.

ALTERNATIVE #4

Alternative #4 aligns with the existing portion of Alico Road and continues east through a mining property. It then travels north along Green Meadows Road. Alternative #4 is expected to affect about 60 lots. Of these, 29 lots are classified as residential, of which 52 percent are vacant. Six (6) lots are classified as commercial, of which 67 percent is vacant. Alternative 4 also contains 24 agricultural lots that would be affected. This alternative is the longest in length and, therefore, the most expensive relative to construction costs and maintenance costs. Further, since 85 percent of its length is on private property, right-of-way costs are expected to be significant. Environmentally, approximately 14% of the project acreage may result in wetland impacts. No direct impacts to conservation lands are anticipated with this alignment, however some secondary effects may occur to nearby conservation lands. The majority of the project is located within the USFWS Panther Focus Area, with approximately 59% of it is located within primary panther habitat. Documented spills and leaking underground storage tanks associated with mining operations are recorded in the vicinity of this alternative.

ALTERNATIVE #3

Alternative #3 extends along a southwest-to-northeast path through the lower portion of the study area. The roadway aligns with the existing portion of Alico Road and extends through a mining property. It is projected to affect about 44 lots. Of these, 22 lots are classified as residential, of which 41 percent are vacant. Two lots are classified as commercial. Seventy-five percent of the commercial property is currently vacant. Alternative #3 is also expected to impact 18 lots, currently designated as agricultural. This alignment is expected to have minimal impact on conservation lands and wetlands, which reduces its mitigation costs. Further, the expected cost of residence relocation is also low. On the other hand, more than 85 percent of this alternative corridor runs through commercial properties, causing significant impacts on their expected production. Environmentally, it is estimated approximately 23% of the project acreage may result in wetland impacts. Low to moderate direct and secondary impacts are anticipated to conservation lands. Ninety-nine percent (99%) of the project is located within the USFWS panther focus area. Approximately 76% of it is located within primary panther habitat. There is the potential for pesticide impacted soils associated with agricultural operations and a documented spill within the alternative vicinity.

ALTERNATIVE #4

Alternative #4 aligns with the existing portion of Alico Road and continues east through a mining property. It then travels north along Green Meadows Road. Alternative #4 is expected to affect about 60 lots. Of these, 29 lots are classified as residential, of which 52 percent are vacant. Six (6) lots are classified as commercial, of which 67 percent is vacant. Alternative 4 also contains 24 agricultural lots that would be affected. This alternative is the longest in length and, therefore, the most expensive relative to construction costs and maintenance costs. Further, since 85 percent of its length is on private property, right-of-way costs are expected to be significant. Environmentally, approximately 14% of the project acreage may result in wetland impacts. No direct impacts to conservation lands are anticipated with this alignment, however some secondary effects may occur to nearby conservation lands. The majority of the project is located within the USFWS Panther Focus Area, with approximately 59% of it is located within primary panther habitat. Documented spills and leaking underground storage tanks associated with mining operations are recorded in the vicinity of this alternative.

ALTERNATIVE #7

Alternative #7 runs in a southwest/northeast direction through the northern portion of the study area. It is projected to affect about 34 lots. Of these, 11 lots are classified as residential, of which 36 percent are vacant. Four (4) lots are classified as vacant commercial properties. Alternative #7 contains 12 agricultural lots that would be affected. This alignment is one of the least costly regarding right-of-way costs, since it is expected to have minimal impact on residential and commercial properties. However, considerable mitigation efforts may be required for environmental impacts, as it appears to have a higher level of direct / secondary impacts to conservation lands. It is estimated approximately 41% of the project acreage may result in wetland impacts. Ninety-nine percent (99%) of the project is located within the USFWS Panther Focus Area. Approximately 71% of it is located within primary panther habitat. Potential pesticide impacted soils may be associated with agricultural operations, although none have been documented.

ALTERNATIVE #8

Alternative #8 travels along a southwest/northeast path through the northern portion of the study area. It is projected to affect about 222 lots. Of these, 191 lots are classified as residential, of which 76 percent are vacant. Eight (8) lots are classified as vacant commercial properties. Alternative #8 contains 7 agricultural lots that would be affected. While this alternative has a significant impact on residential properties, generating a high residential dislocation cost, it is one of the shortest in length and has 65 percent of its corridor along public land. Therefore, construction, maintenance and right-of-way costs are expected to be low. Additionally, the impact on commercial property is expected to be very low. Environmentally, it is estimated approximately 36% of the project acreage would result in wetland impacts. It appears to have a moderate level of direct / secondary impacts to conservation lands. Approximately seventy percent (70%) of the project is located within the USFWS Panther Focus Area. Approximately 54% of it is located within primary panther habitat. Potential pesticide impacted soils may be associated with agricultural operations, although none have been documented.

ALTERNATIVE #9

Alternative #9 extends along a southwest/northeast path through the northern portion of the study area. It is projected to affect about 27 lots. Of these, three (3) lots are classified as residential, of which 67 percent are vacant. Six (6) lots are classified as vacant commercial lands. Alternative #9 contains 10

agricultural lots that would be affected. Approximately 80 percent of its corridor extends across public lands, which is owned by Lee County and by the Airport Authority. The construction, maintenance and right-of-way cost are the lowest of all alternatives, since Alternative #9 is the shortest alignment. However, most of this corridor borders conservation lands. The mitigation costs and environmental impacts are expected to be significant, with manageable solutions. It is estimated approximately 39% of the project acreage would result in wetland impacts. Ninety-nine percent (99%) of the project is located within the USFWS Panther Focus Area. Approximately 71% of it is located within primary panther habitat. Potential pesticide impacted soils may be associated with agricultural operations, although none have been documented.

6.3 Proposed Roadway Cross Sections

Several roadway cross sections were proposed. They include the following:

- Year 2010 Interim Roadway Cross Section – 2LD
- Year 2030 Rural Roadway Cross Section - 4LD and 6LD
- Year 2030 Suburban Roadway Cross Section – 4LD and 6LD
- Year 2030 Urban Roadway Cross Section – 4LD and 6LD

The roadway design criteria for the rural, suburban and urban alternatives are summarized in **Table 7**. **Figure 11**, **Figure 12**, **Figure 13** and **Figure 14** graphically show the roadway cross sections for the interim, rural, suburban and urban conditions, respectively.

TABLE 7
ROADWAY DESIGN CRITERIA
ALICO ROAD CONNECTOR STUDY

DESIGN CRITERIA	RURAL ALTERNATIVE	SUBURBAN ALTERNATIVE	URBAN ALTERNATIVE
Functional Classification	Arterial	Arterial	Arterial
Design Speed	45 mph	45 mph	45 mph
HORIZONTAL/VERTICAL ALIGNMENT			
Max. Degree of Curvature w/o Superelevation	0 deg. 30'	0 deg. 30'	0 deg. 30'
Max. Deflection w/o Curve	2 deg	2 deg	2 deg
Cross Slope	0.025 ft/ ft - (LCDOT)	0.025 ft/ ft - (LCDOT)	0.025 ft/ ft - (LCDOT)
Minimum Longitudinal Grade	0.00%	0.00%	0.30%
Max. Change in Grade w/o Vertical Curve	0.70%	0.70%	0.70%
Max. Embankment Slope	1:3	1:3	1:3
Clear Zone	24 ft	24 ft	4 ft
CROSS SECTION			
Road Type	4 Lane Divided (6 Lane Ultimate)	4 Lane Divided (6 Lane Ultimate)	4 Lane Divided (6 Lane Ultimate)
Lane Width	12 ft.	12 ft.	12 ft.
Shoulder Width:			
Outside	12 ft (6 ft paved)	12 ft (6 ft paved)	4 ft Paved
Inside	12 ft (4 ft paved)	N/A	N/A
Median Width	50 ft	50 ft	50 ft
Median Type	Depressed	Raised	Raised
Sidewalk	8 ft	8 ft	8 ft
Right of Way Width	250 ft	240 ft	180 ft
Drainage:			
Onsite Conveyance Type	Open (Both Sides)	Open (Both Sides)	Closed
Offsite Conveyance Type	Open (Assumed One Side Only)	Open (Assumed One Side Only)	Open (Assumed One Side Only)
MINIMUM REQUIREMENTS			
Lane Width:	12 ft - FDOT	12 ft - FDOT	11 ft - FDOT
	11 ft - LCDOT	11 ft - LCDOT	11 ft - LCDOT
	11 ft - AASHTO Green Book	11 ft - AASHTO Green Book	11 ft - AASHTO Green Book
Shoulder Width:			
Outside	10 ft - AASHTO Green Book	15.5 ft - AASHTO Green Book	15.5 ft - AASHTO Green Book
Inside	10 ft - AASHTO Green Book	10 ft - AASHTO Green Book	10 ft - AASHTO Green Book
Median Width:	22 ft - AASHTO Green Book	5 ft - AASHTO Green Book	5 ft - AASHTO Green Book
Sidewalk Width:	5 ft - FDOT	5 ft - FDOT	5 ft - FDOT
	5 ft - LCDOT	5 ft - LCDOT	5 ft - LCDOT
	5 ft - AASHTO Green Book	5 ft - AASHTO Green Book	5 ft - AASHTO Green Book

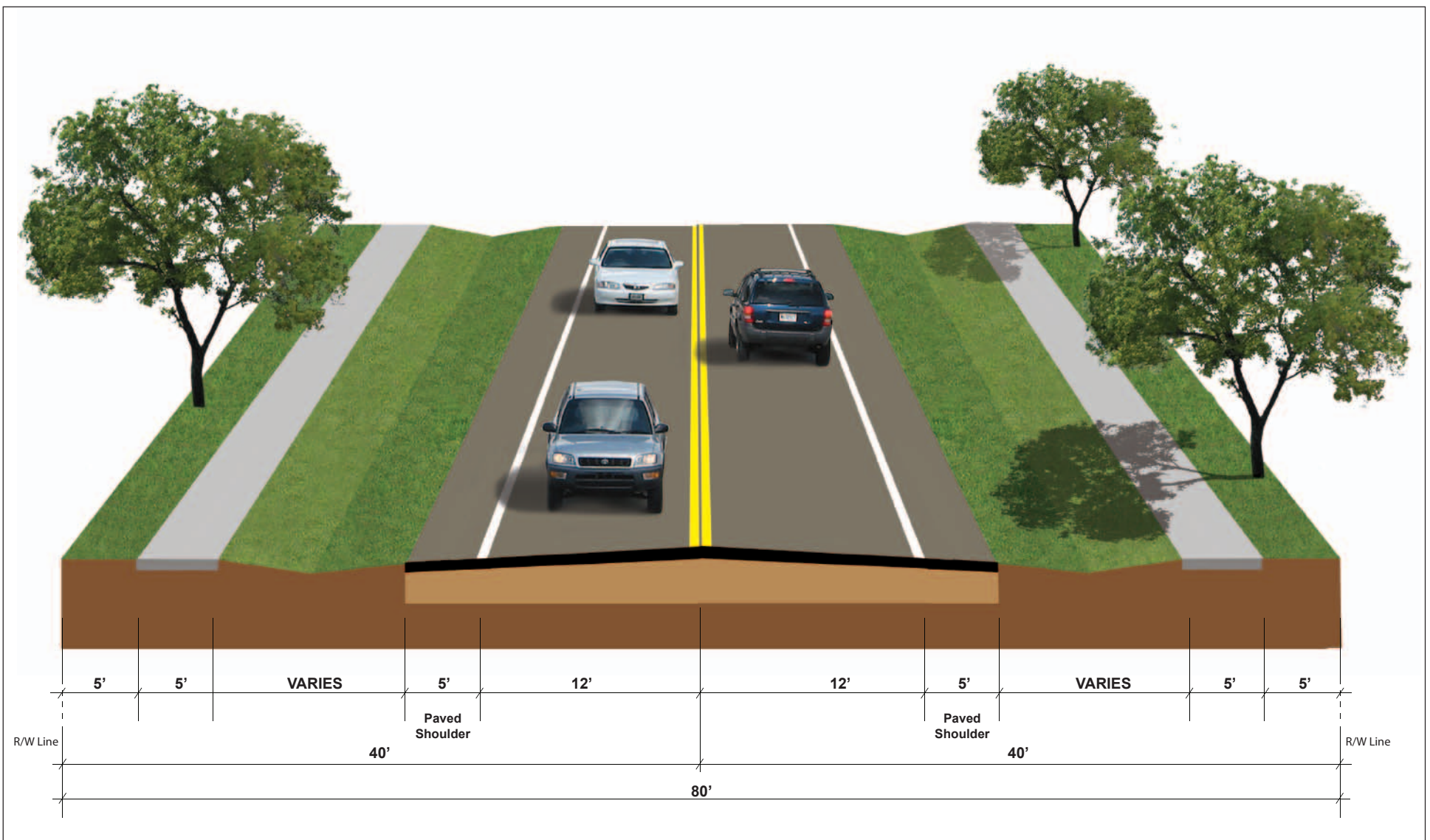
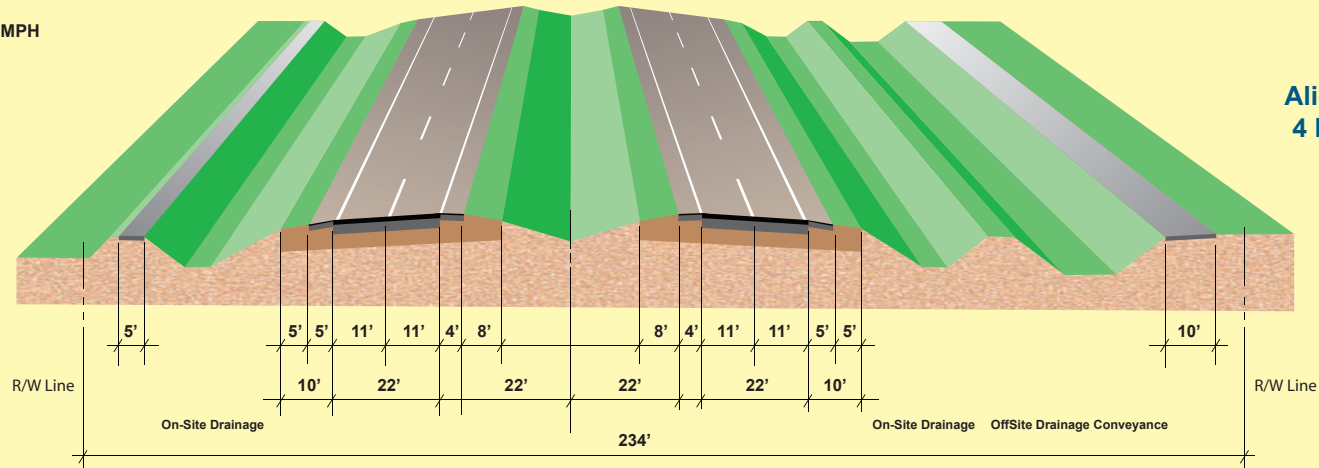


Figure 11
 Year 2010 Interim Roadway Cross Section
Alico Road Connector Study
 Lee County, Florida

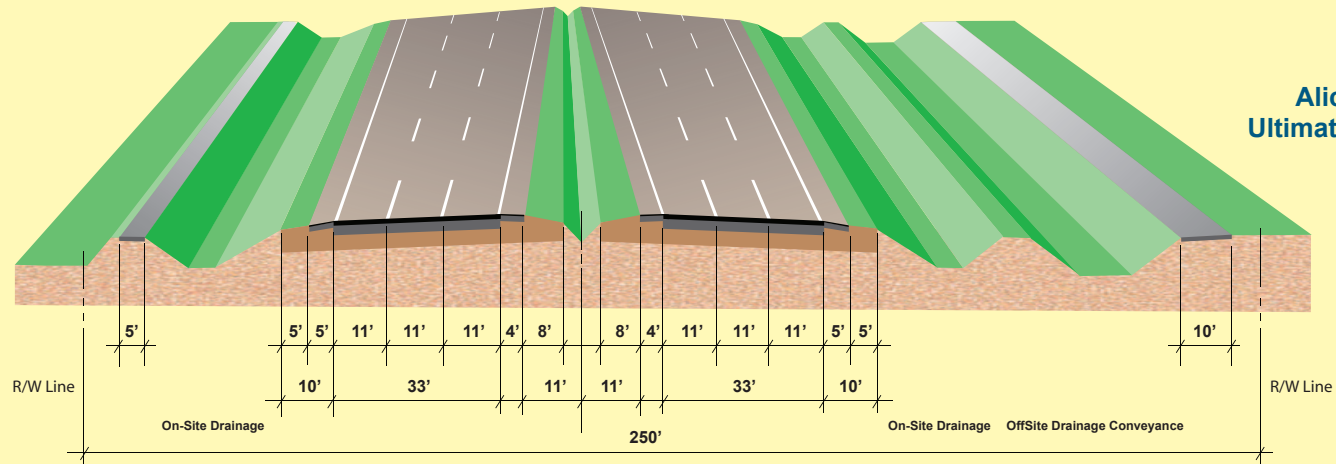


Design Speed $\leq$ 45 MPH

Alico Road Connector 4 Lane Rural Section



Alico Road Connector Ultimate 6 Lane Rural Section



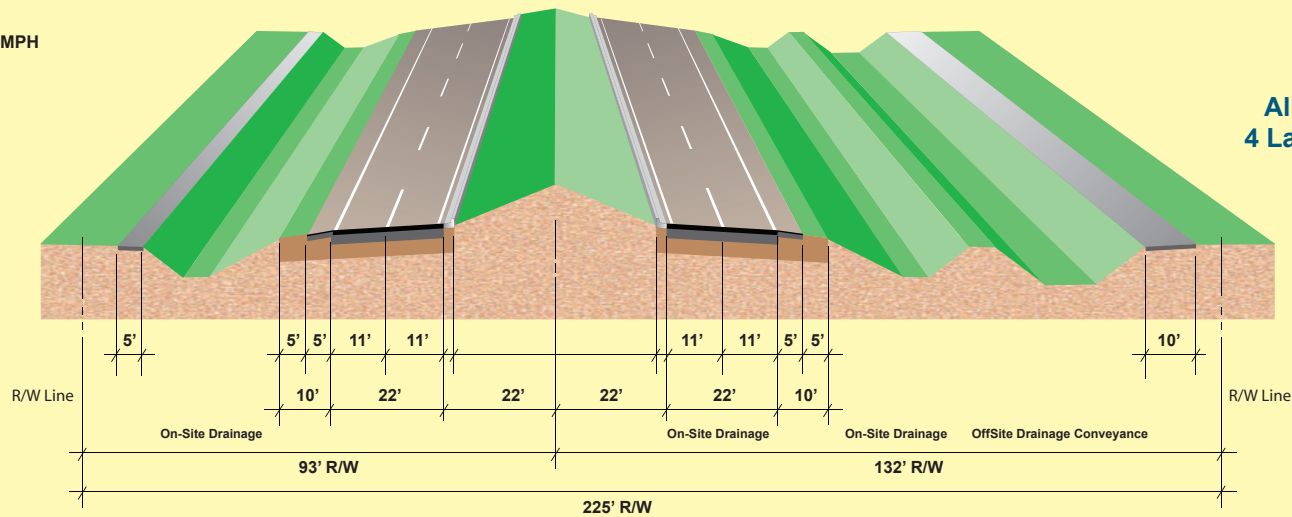
* No Drainage Analysis has been Conducted to size the Conveyances.

Figure 12
Year 2030 Rural Roadway Cross Sections
Alico Road Connector Study
Lee County, Florida

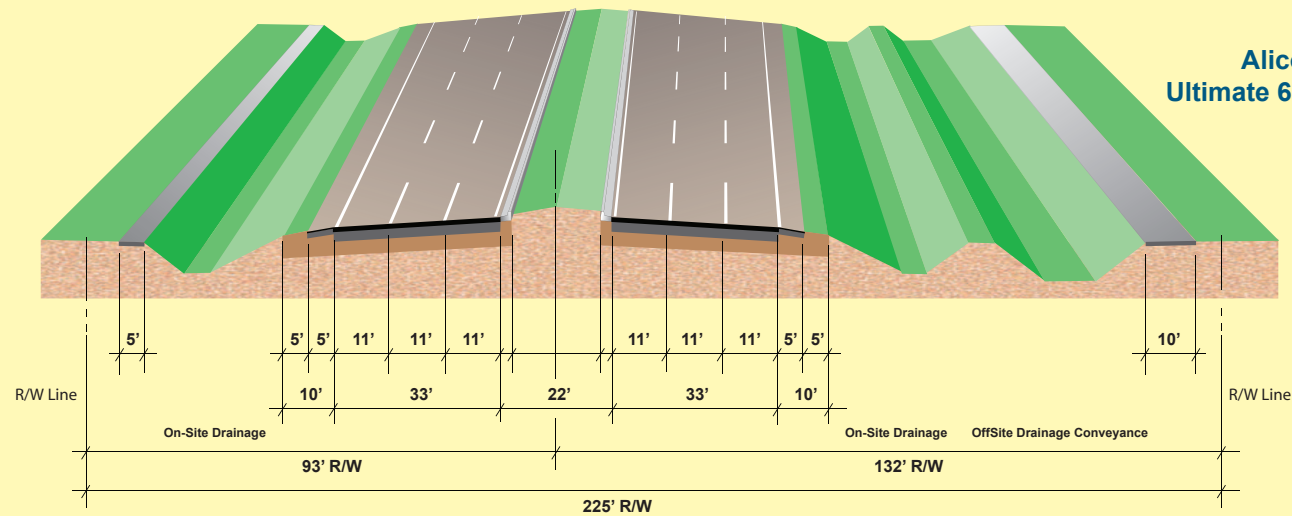


Design Speed $\leq$ 45 MPH

Alico Road Connector 4 Lane Suburban Section



Alico Road Connector Ultimate 6 Lane Suburban Section



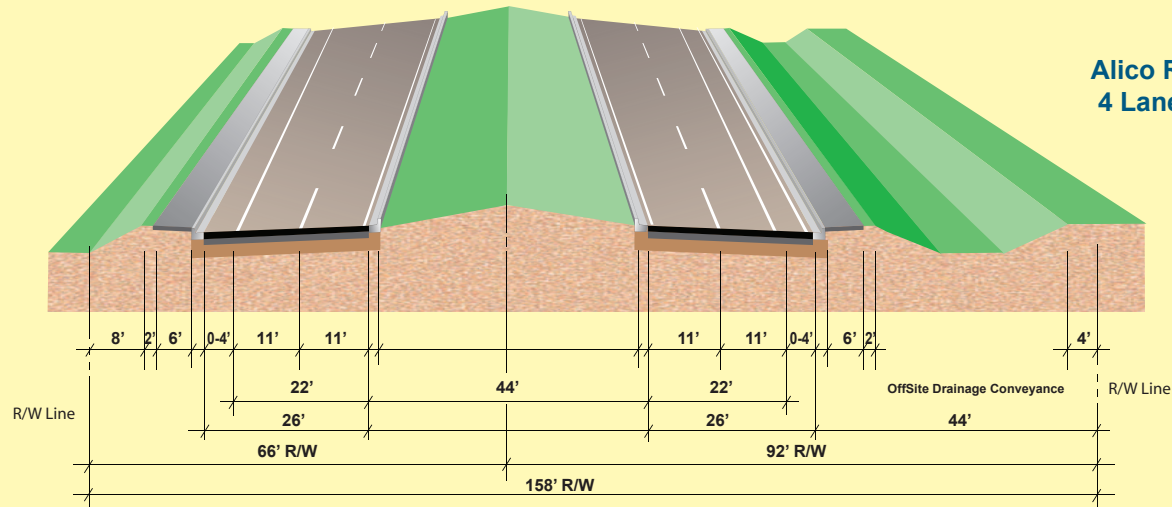
* No Drainage Analysis has been Conducted to size the Conveyances.

Figure 13
Year 2030 Suburban Roadway Cross Sections
Alico Road Connector Study
Lee County, Florida

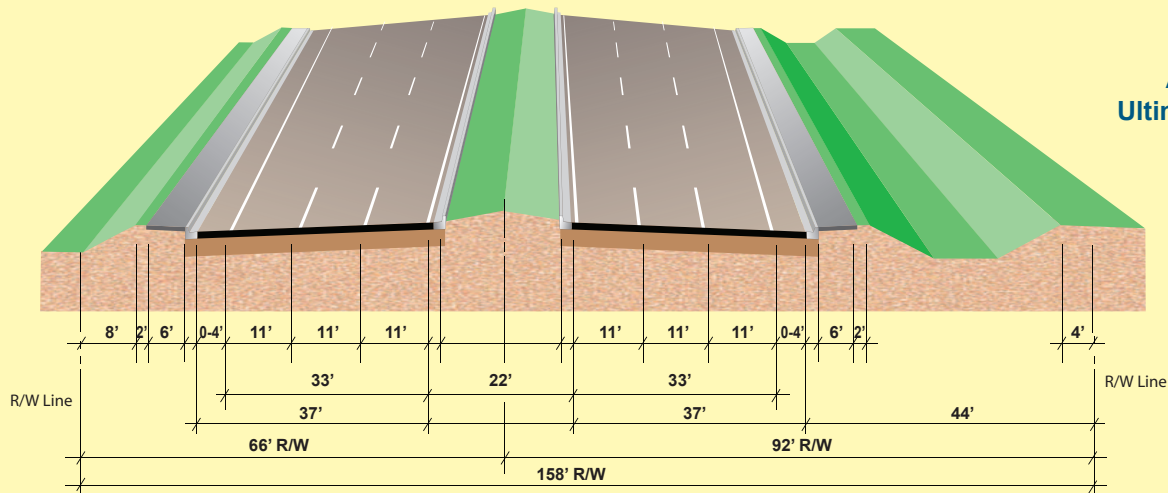


Design Speed $\leq$ 45 MPH

Alico Road Connector 4 Lane Urban Section



Alico Road Connector Ultimate 6 Lane Urban Section



* No Drainage Analysis has been Conducted to size the Conveyances.

Figure 14
Year 2030 Urban roadway Cross Sections
Alico Road Connector Study
Lee County, Florida



7.0 FIRST PUBLIC MEETING

7.1 General Information

To present the proposed alignments to the public, and to obtain public questions/comments on the proposed connector roadway, Lee County DOT held the first of two public workshops on April 10th, 2007.

The workshop was held at Gateway Trinity Lutheran Church, 11381 Gateway Boulevard, Fort Myers, Florida.

A letter with a project area map was mailed out to property owners within the study area, interested parties and relevant County and City elected officials and staff members. The public information workshop was advertised in the News-Press on April 4, 2007 as a ¼-page, legal display ad. A press release was also sent on April 6, 2007 to local media agencies. A copy of the letter, map, legal display ad and press release for the workshop are attached in **Appendix L**.

The meeting was conducted in an “open house” format allowing the public to view the project material, ask questions and get direct answers from the most knowledgeable person. Representatives from LCDOT and the project team were present for this occasion. The information was presented using a handout that summarized the project and provided detailed information about the system roadways and future improvements. Aerial photographs with a project overlay showing the location of each corridor alternatives were on board-mounted exhibits. The handouts provided at the meeting, as well as the list of exhibits presented at the meeting are also included in Appendix L.

7.2 Public Comments

A total of 106 persons signed at the registration table. The sign-in sheets are attached in **Appendix M**. The public was provided with comment forms in order to have their opinion recorded as public record. A total of 34 comments were received at the workshop and in the following 14 days. The comments were recorded in the project file. A summary of the public comments is attached in Appendix M.

7.3 Conclusions and Recommendations

While some alignments were preferred over others, a review of the public comments revealed an overwhelming support for the proposed Alico Road connector. Based on the provided comments, Alternative #9 had the highest public support, followed by Alternative #7 and Alternative #1. Alternative #8 received the lowest support from the public. As a result of discussions held at the public workshop, two additional alignments, Alternative #10 and Alternative #11, were considered as proposed alignments. A description of each is summarized below.

ALTERNATIVE #10

Alternative #10 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. This alignment utilizes existing Airport Haul Road and runs about 1.25 miles north from the Alico Road and Green Meadows Water Plant access roadway intersection. It then continues east 1.35 miles towards the Water Plant location, where it turns north about 1.30 miles to the border of the Southwest Florida International Airport property, and the west boundary of the Wild Turkey Strand. It then turns northeastern direction 1.55 miles towards the terminus of Cherokee Road. Alternative #10 then continues north on Cherokee Road, about 0.67 miles, where it again turns northeast about 1.36 miles using Gooden Grove Road to the intersection of SR-82 and SW 40th Street. Alternative #10 uses 1.29 miles of 40th Street in Lehigh Acres to connect to Sunshine Boulevard. The length of Alternative #10 is 8.77 miles.

ALTERNATIVE #11

Alternative #11 begins at the Alico Road and Green Meadows Road Water Plant access roadway intersection. Alternative #11 uses existing Alico Road, which continues as Green Meadows Road, and extends approximately 2.89 miles east from the Alico Road and Green Meadows Water Plant access roadway intersection. It then continues north 2.22 miles, bordering the Wild Turkey Strand property and the Florida Rock property. Alternative #11 then deviates northeast about 1.05 miles bordering the western boundary of one of the arable Florida Rock parcels, and the east boundary of the Wild Turkey Strand. It turns right continuing on northeast direction about 0.48 miles until this alignment reaches Jamerson Farms. It then continues north about 1.23 miles, avoiding wetlands and traveling near Green Meadows Road, until intersects Green Meadows Road. In order to avoid a power line poles that runs north on the west side of Green Meadows road until SR-82, the alignment 11 runs over the parcels on the

East side of Green Meadows road for 0.89 miles going north. And from this point where the roadway curves into Jamerson Farms to align with the intersection of Sunshine Boulevard and SR-82, the alignment has 0.26 miles. The total length of Alternative #11 is 9.04 miles.

Also at this time, minor adjustments were made to Alignments #8 and #9 in order to avoid direct conflicts with the wetlands along these corridors. The **Figure 15** graphically depicts the eleven potential alignments.

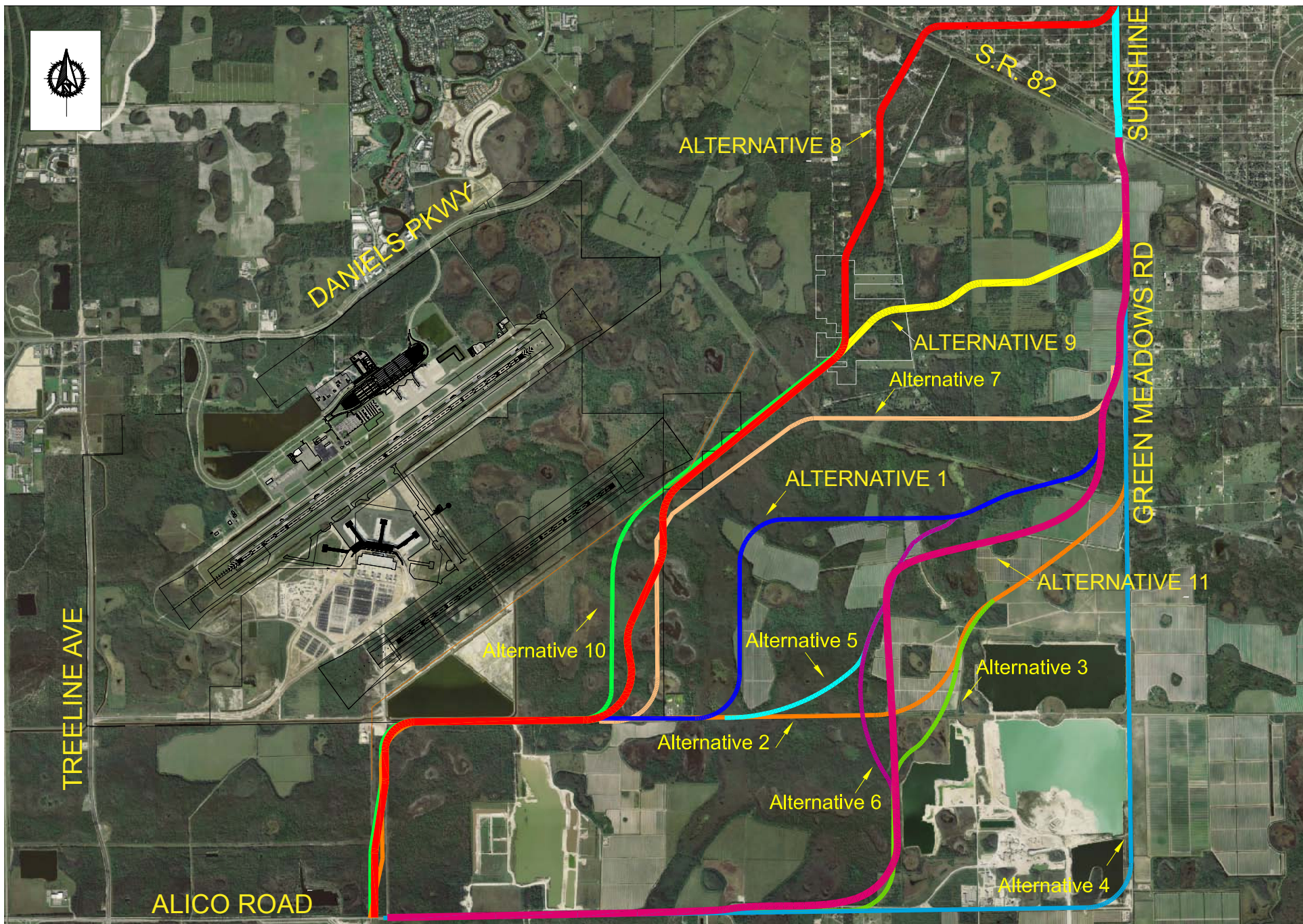


Figure 15
Eleven Potential Alignments
Alico Road Connector Study
Lee County, Florida

8.0 ALTERNATIVES ANALYSIS – PHASE I

8.1 Evaluation of Additional Potential Alignments

ALTERNATIVE #10

Alternative #10 travels along a southwest/northeast path through the northern portion of the study area. It is projected to affect about 222 lots. Of these, 191 lots are classified as residential, of which 76 percent are vacant. Eight (8) lots are classified as vacant commercial properties. Alternative #10 contains 7 agricultural lots that would be affected. While this alternative has a significant impact on residential properties, generating a high residential relocation cost, it is one of the shortest in length and has 65 percent of its corridor along public land. Therefore, construction, maintenance and the right-of-way costs are expected to be low. Additionally, the impact on commercial property is expected to be very low. Although this alignment borders the Wild Turkey Strand Preserve, preliminary evaluations show that its environmental impacts will be at a medium to low level.

ALTERNATIVE #11

Alternative #11 travels along a southwest/northeast path through the southern portion of the study area. The alternative aligns with the existing portion of Alico Road and extends through Florida Rock and Jamerson Farms property. This alternative is projected to affect about 32 lots. Of those, 19 lots are classified as residential, of which 16 percent are vacant. Two (2) lots are classified as vacant commercial properties. Alternative #11 contains 9 agricultural lots that would be affected. Minimal impact is expected on conservation lands.

Table 8 provides a comparison of the eleven potential roadway alignments, relative to the land uses affected by each.

8.2 Contamination Assessment

A limited office-based assessment was performed of the potential and documented presence of hazardous materials along or near eleven alternatives, Alternative #1 through Alternative #9 and Alternative #11. Hazardous materials were defined as those materials, including petroleum products, in soil or groundwater at concentrations that would be subject to regulatory cleanup requirements.

The assessment was performed by reviewing available United States Environmental Protection Agency (USEPA) and Florida Department of Environmental Protection (FDEP) records obtained from a third party (FirstSearch Technology Corporation). Based on the mapped location of documented “hazardous materials” and the location of the proposed Alico Road alternative, a score of 1 through 7 was applied (1=worst, 7=best). The score was also adjusted downward if the alternative traversed agricultural lands that were known to contain residual pesticides. No field verification was performed as part of this limited assessment.

- Alternative #1: Assigned score of 6 due to potential pesticide impacted soils associated with agricultural operations.
- Alternative #2: Assigned score of 6 due to potential pesticide impacted soils associated with agricultural operations.
- Alternative #3: Assigned score of 5 due to potential pesticide impacted soils associated with agricultural operations and documented spill.
- Alternative #4: Assigned score of 4 due to documented spills and leaking underground storage tanks associated with mining operations.
- Alternative #5: Assigned score of 5 due to potential pesticide impacted soils associated with agricultural operations and documented spill.
- Alternative #6: Assigned score of 6 due to potential pesticide impacted soils associated with agricultural operations.
- Alternative #7: Assigned score of 6 due to potential pesticide impacted soils associated with agricultural operations.
- Alternative #8: Assigned score of 6 due to potential pesticide impacted soils associated with agricultural operations.
- Alternative #9: Assigned score of 6 due to potential pesticide impacted soils associated with agricultural operations.
- Alternative #10: Assigned score of 6 due to potential pesticide impacted soils associated with agricultural operations.
- Alternative #11: Assigned score of 5 due to potential pesticide impacted soils associated with agricultural operations and documented spill.

8.3 Four Alignments

In order to determine the preferred roadway alignment, a thorough review was performed of the evaluation of the proposed eleven alignments. Further, each alignment was evaluated for the acreage of land and percentage of the project corridor that was located within the panther focus area. Results indicated that, while the majority of all the alignments are located within the Panther Focus Area, the alignments vary in acreage of direct impacts to primary and secondary habitat areas. Meetings were also held with Lee County DOT to discuss the findings of the alignments. Based on input received through public comment, as well as the evaluation of the costs and environmental impacts of each alignment, seven of the eleven alignments were eliminated and four were carried forward for further analysis. **Figure 16** graphically depicts Alternative #1, Alternative #8, Alternative #9 and Alternative #11.

Figure 17, Figure 18, Figure 19 and **Figure 20** graphically depict Alignment #1, Alignment #8, Alignment #9 and Alignment #11 on the existing land use map, respectively. **Table 9** summarizes the land uses located along each alignment alternative.

8.4 Evaluation of Alternatives

Several factors were included in the evaluation of the alternatives. These included construction costs, which were based on the State Specification and Estimates form Dec 2006, Long Range Estimate (LRE) and included in **Appendix N**, residential impacts, non-residential impacts and environmental factors. The environmental factors included the following:

- Impacts to Natural/Native Communities
- Potential Direct Wetland Impacts
- Potential for Secondary Wetland Impacts
- Conservation Lands Impacts
- Acreage of the Alignment within the U.S. Fish and Wildlife Service (FWS) Panther Focus Area
- Acreage of the Alignment located in Primary Panther Habitat and Secondary Impacts to Panther Habitat.

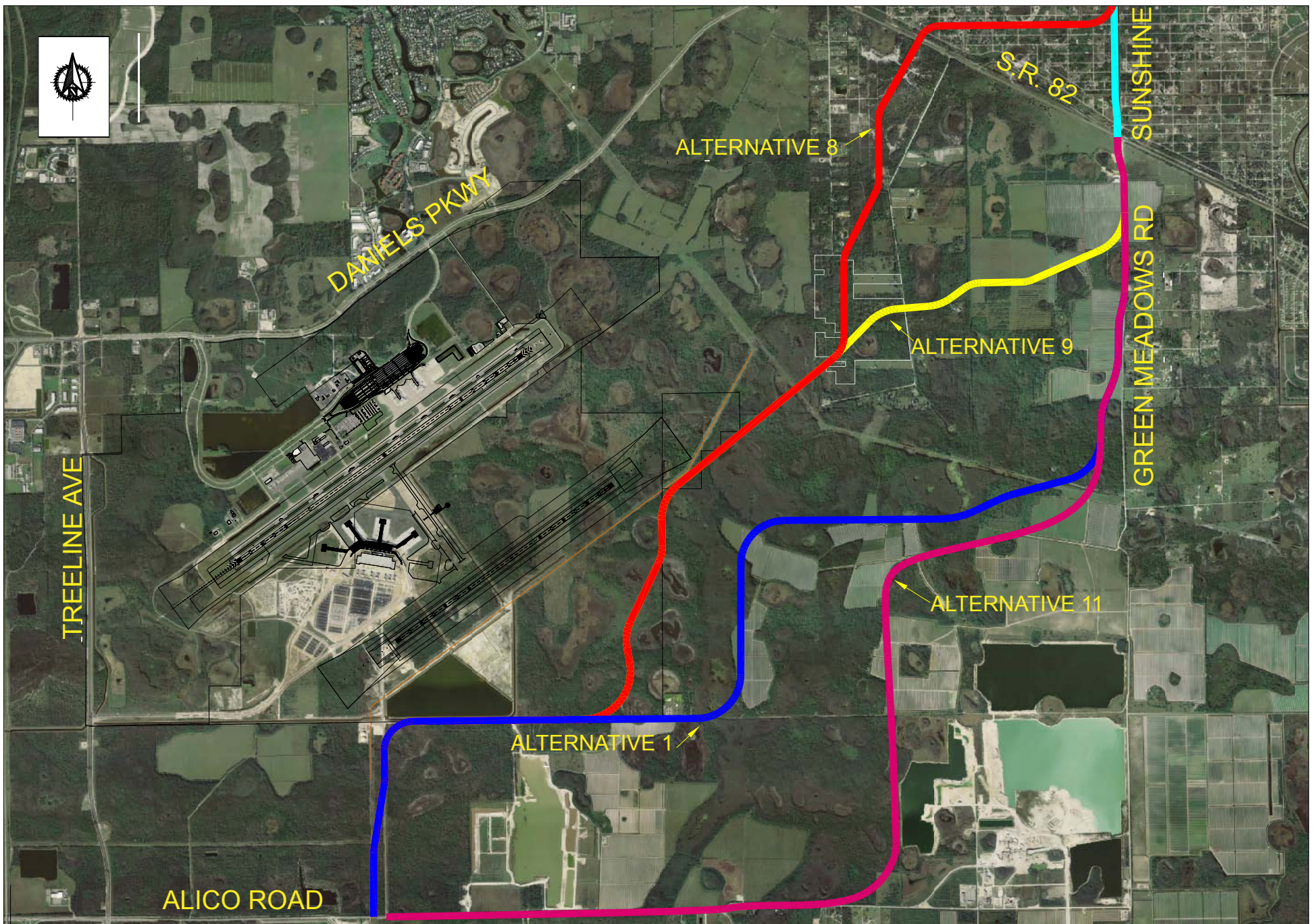


Figure 16
Four Alignments
Alico Road Connector Study
Lee County, Florida

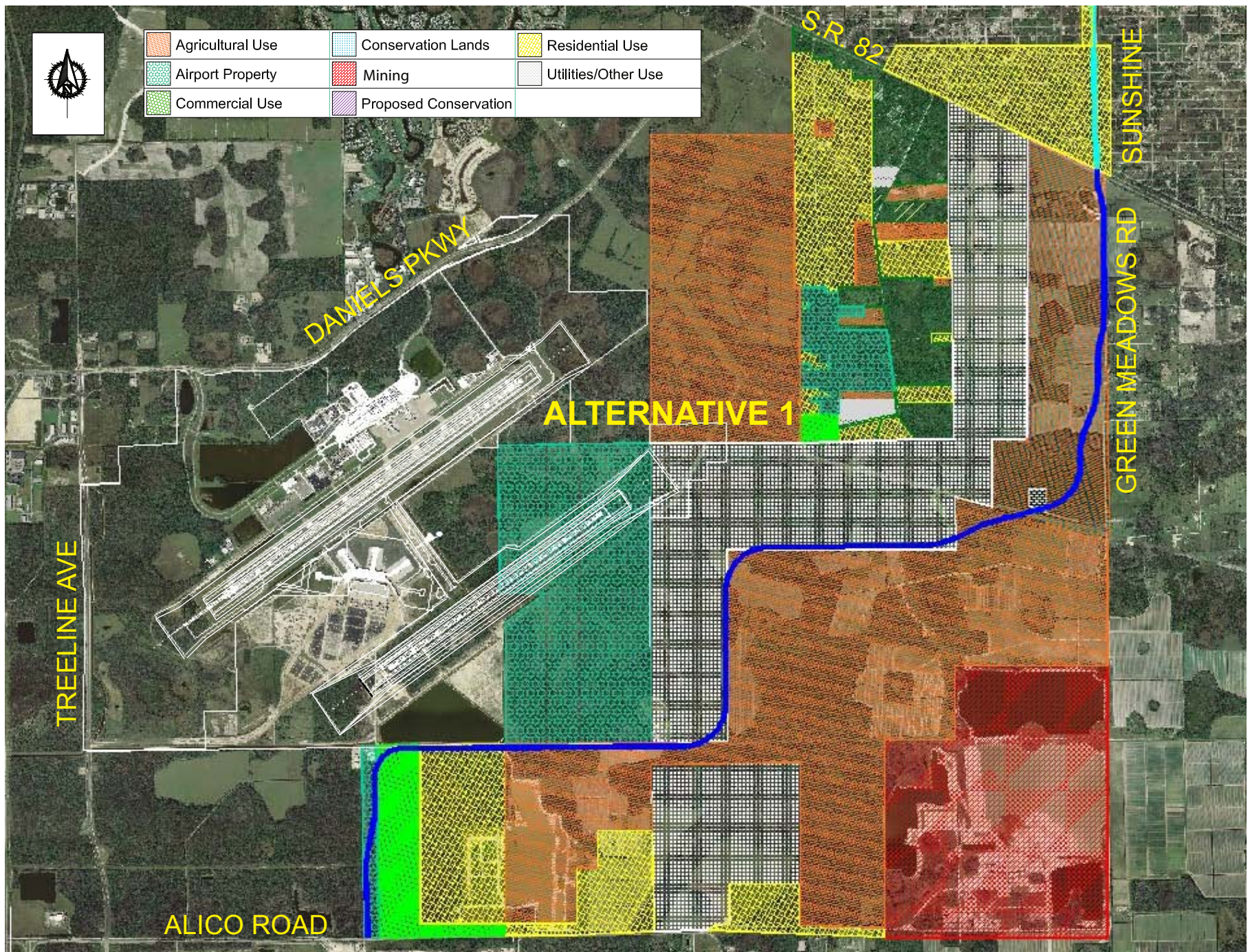


Figure 17
Alignment #1

Alico Road Connector Study

Lee County, Florida

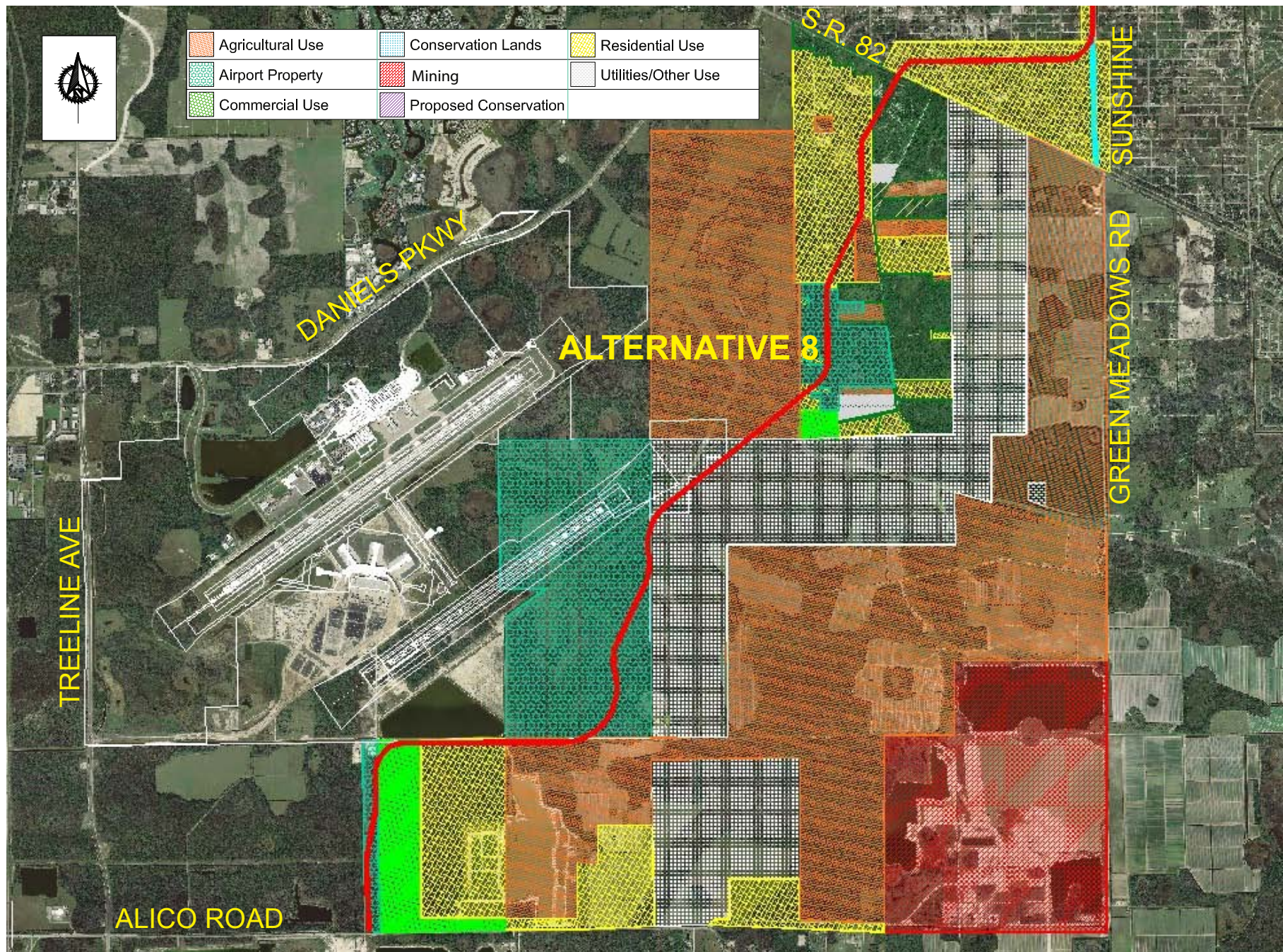


Figure 18
Alignment #8
Alico Road Connector Study
Lee County, Florida

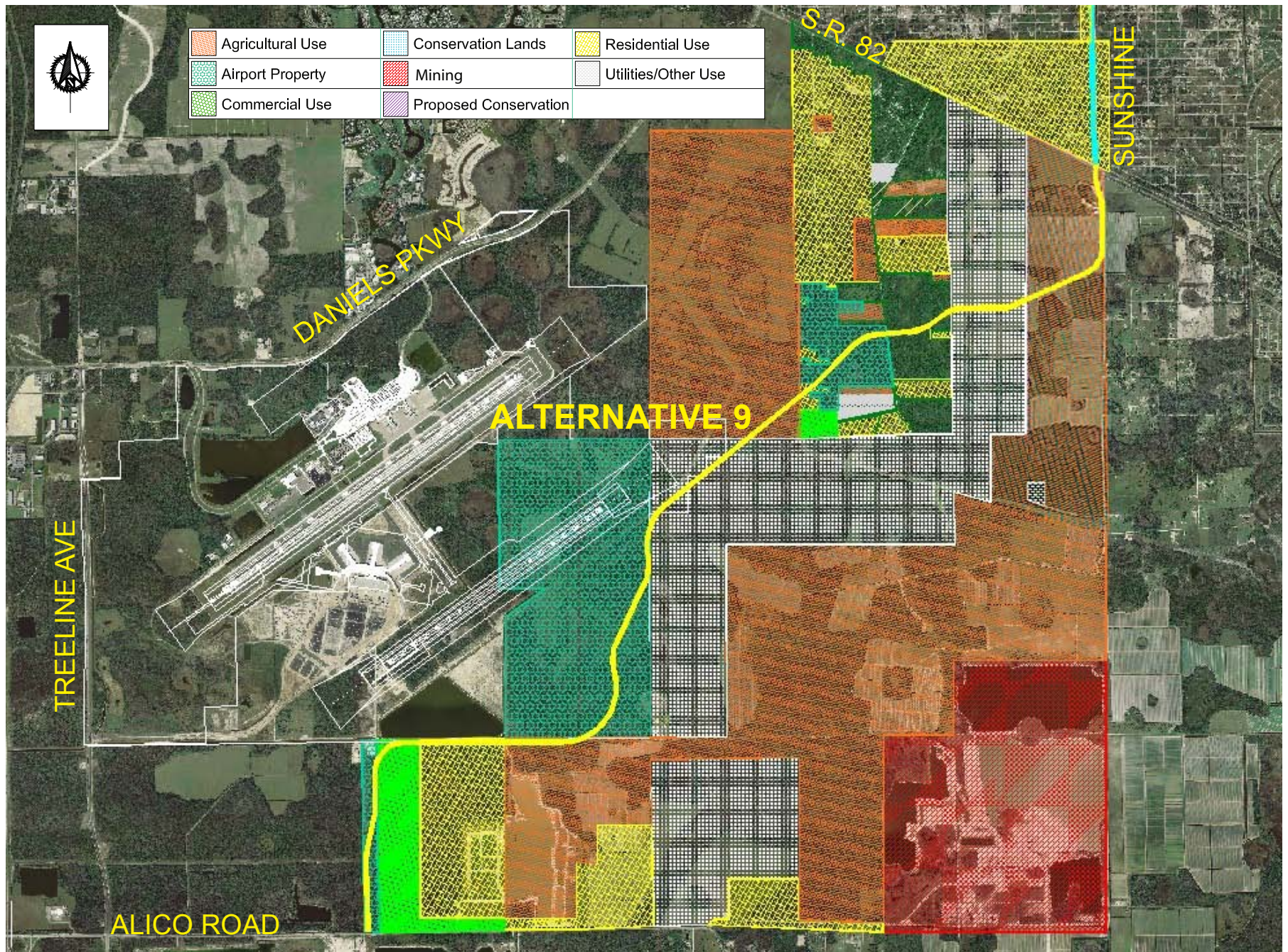


Figure 19
Alignment #9
Alico Road Connector Study
Lee County, Florida

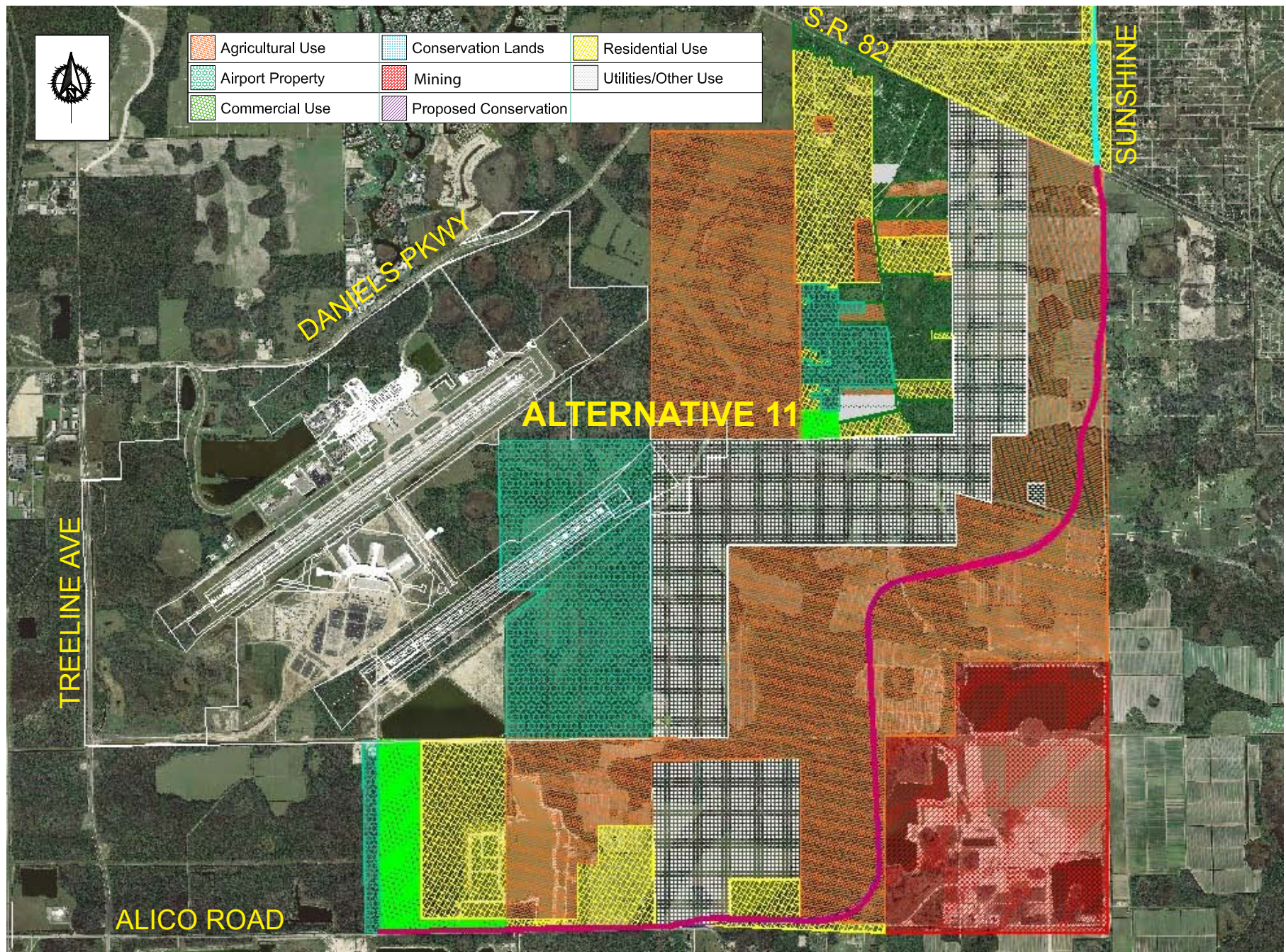


Figure 20
Alignment #11
Alico Road Connector Study
Lee County, Florida

TABLE 9
SUMMARY OF LAND USES ALONG ALIGNMENTS
ALICO ROAD CONNECTOR STUDY

1 Acre = (ft2)	43,560.17	AGRICULTURE	MINING	COMMERCIAL	RESIDENTIAL	CONSERVATION	PUBLIC
Alignment 1	(Acres)						
TOTAL	101.15	13.46	11.14	21.00	61.83	35.40	
Alignment 8							
TOTAL	19.47	-	11.14	78.81	37.70	97.04	
Alignment 9							
TOTAL	50.16	-	11.14	19.65	54.45	95.85	
Alignment 11							
TOTAL	117.66	49.63	10.14	31.65	11.21	-	

These factors represent the major components reviewed by the agencies during the Environmental Resource Permit (ERP) application process. Following is a brief description of the environmental factors analyzed for the preferred alignments.

Acreage in Panther Focus Area

All land within the Panther Focus Area will be evaluated for potential loss of panther habitat by the FWS during the U.S. Army Corps of Engineers (ACOE) permit process. Each alignment was evaluated for the acreage of land and percentage of the project corridor that was located within the focus area, by overlapping the FWS Panther Focus Area on the study area. The majority of all the alignments are located within the FWS Panther Focus Area, as graphically shown on **Figure 21**.

Acreage in Primary Panther Habitat

The FWS Panther Focus Area is comprised of different habitat categories: primary, secondary, and other. Each has an assigned ratio of mitigation required for the corresponding loss of habitat. As primary habitat is considered essential to the recovery goals of the Florida panther, the FWS requires the greatest ratio of mitigation for impacts to primary panther habitat. A majority of the study area is located within primary panther habitat; however, the alignments vary in the acreage of direct impacts to primary habitat by approximately 140 acres.

Secondary Impacts to Panther Habitat

Secondary impacts to panther habitat can be minimized by lessening the fragmentation of the habitat. A scale from High to Low was utilized to evaluate this factor for each alignment.

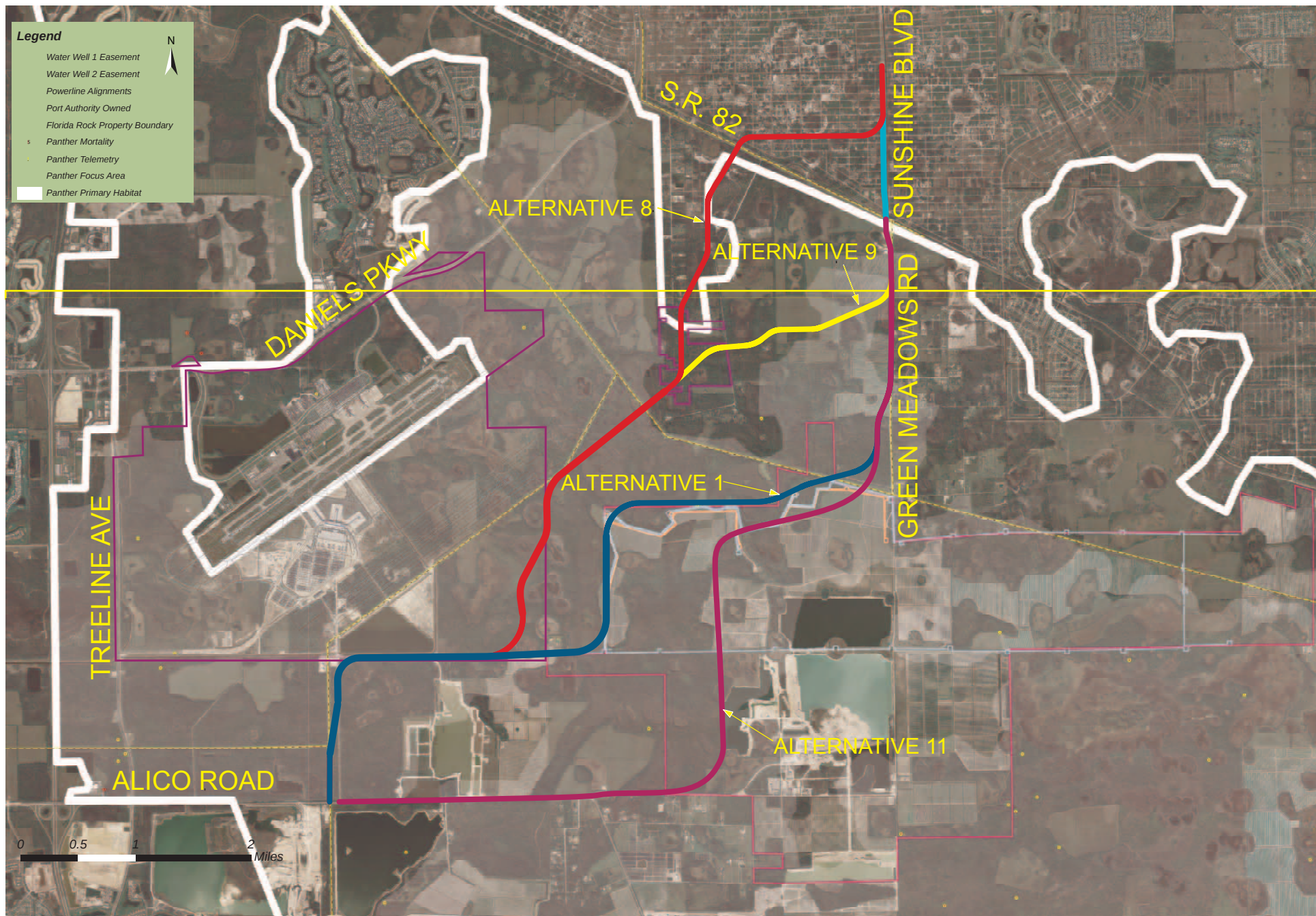


Figure 21
Alignments on Panther Focus Area
Alico Road Connector Study
Lee County, Florida

Impacts to Natural and Native Communities

Utilizing the South Florida Water Management District (SFWMD) habitat mapping [based upon the Florida Land Use, Cover and Forms Classification System (FLUCFCS)] for the project area, a breakdown of the project corridor by FLUCFCS types was evaluated. The acreage of impacts to natural/native communities was calculated, as the impacts represent a loss of native upland/wetland habitat for listed species. In addition, loss of native plant communities may contribute to a decrease in hydrologic connectivity of the area. FLUCFCS Codes, considered as natural/native community for the evaluation, included the following series: 300s (rangeland); 400s (upland forests), excluding FLUCFCS codes 422 (Brazilian Pepper) and 424 (Melaleuca); and 600s (wetlands), excluding FLUCFCS code 619 (Exotic Wetland Hardwoods).

Potential Direct Wetland Impacts

The direct impacts to all 600 series FLUCFCS codes were calculated based on the assumption of a 250' right-of-way. Wetland impacts were to be avoided and minimized to the maximum extent practicable, and compensatory mitigation provided for unavoidable wetland impacts. Due to the constraints of a linear development in the project area, total avoidance of wetland impacts was not possible. As such, the alignments were evaluated on the acreage and percentage of wetlands that comprise the total project acreage. All of the alignments considered appear to contain approximately 30% wetland impacts, so the potential for secondary wetland impacts was also considered to avoid and minimize impacts to wetlands adjacent to the project corridor.

Potential for Secondary Wetland Impacts

Impacts to wetlands may extend outside of the right-of-way (area of direct impact) due to edge effect. Secondary impacts could involve the loss of hydrologic connectivity, altered hydro period, and reduced support for wetland dependent species. During the ERP process, an evaluation of the loss of wetland function for all wetlands adjacent to the road corridor will be required. The more wetlands adjacent to the roadway, the greater the likelihood of secondary wetland impacts. As the method to determine the exact limits of secondary wetland impacts varies by project conditions, a scale from High to Low was utilized to evaluate this factor.

Conservation Lands Impacts

Lands currently under a conservation easement and/or public/private conservation lands are scattered throughout portions of the study area. The Wild Turkey Strand Preserve, owned by Lee County, is a large tract of conservation land that runs approximately north-south through most of the study area. The acreage of anticipated impacts to conservation lands was evaluated for this analysis. However, impacts to conservation lands are lessened when fragmentation of the preserve land is minimized. As such, a combination of these factors was considered during the analysis.

Figure 22 graphically illustrates the alignments on wetlands and conservation lands.

An evaluation matrix was prepared, summarized in **Table 10**, to evaluate the four roadway alignments. As previously mentioned, several factors were included in the evaluation of the alternatives, including construction costs, residential impacts, non-residential impacts and environmental factors.

As shown in Table 10, the construction cost, estimated for a six-lane, divided roadway, varies minimally between the alternatives. It appears that Alternative #11 is anticipated to have no impact on residential lots or non-residential properties. Alternative #8 is expected to impact residential units the most, while Alternative #9 is anticipated to have the most impact on non-residential properties.

A review of the environmental assessment revealed that Alignment #11 has the least impact on natural/native communities, impacting 158 acres, while Alignment #8 has the most impact, impacting 210 acres. Further review demonstrated that Alignment #11 also has the least direct wetlands impacts, secondary wetlands impacts and impacts to existing conservation land/easements, while Alignment #1 has the most impact on the mentioned environmental factors. The estimated cost of wetland mitigation is the lowest for Alternative #11, \$2,718,000, and the highest for Alternative #8, \$4,116,000.

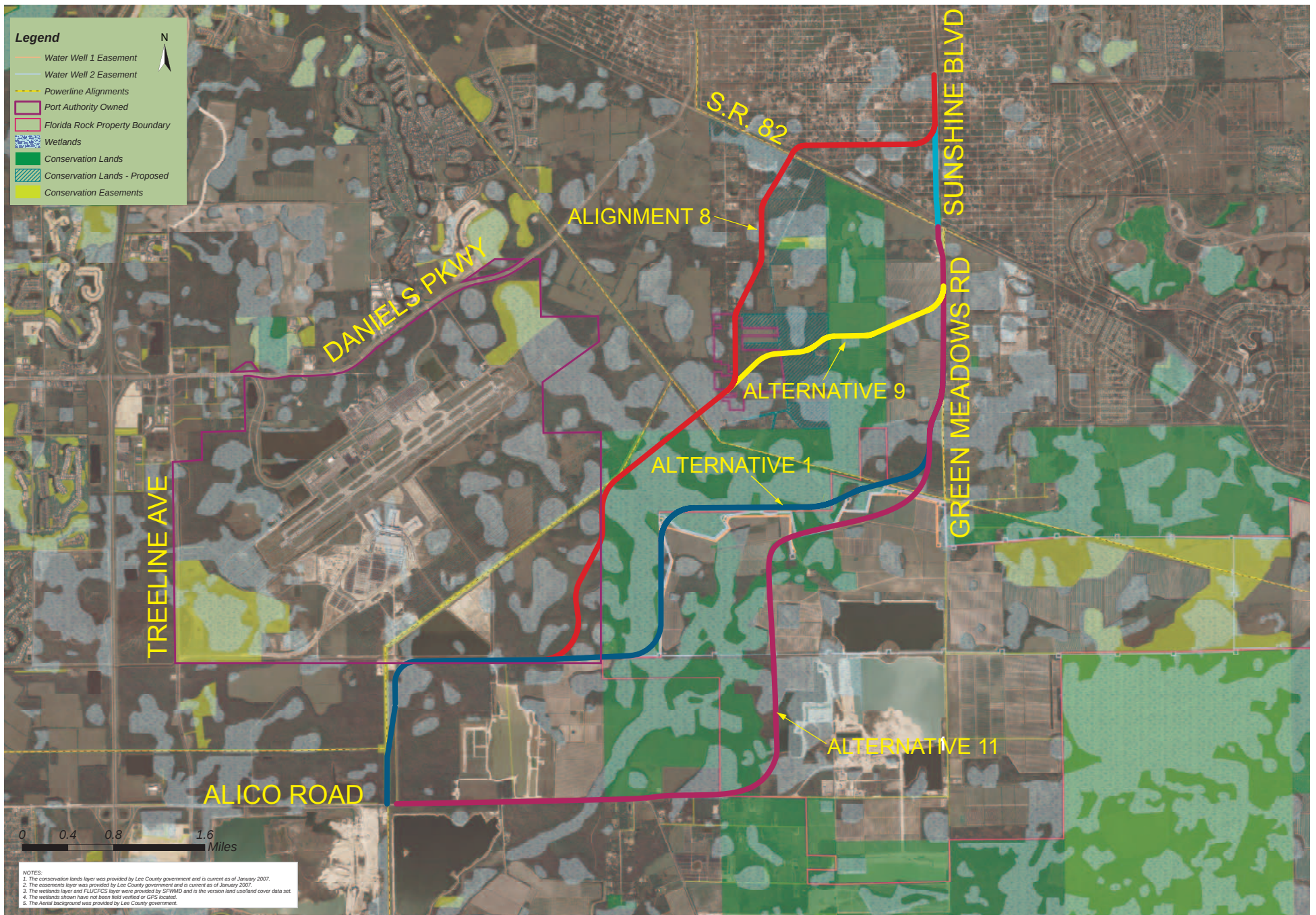


Figure 22
Preferred Alignments on Wetlands and Conservation Lands
Alico Road Connector Study
Lee County, Florida

TABLE 10
EVALUATION MATRIX FOR ALIGNMENTS
ALICO ROAD CONNECTOR STUDY

ALTERNATIVE	1	8	9	11
Construction Cost (6L)	\$135,953,340	\$132,233,810	\$122,814,759	\$125,422,144
Length (Miles)	9.4	9.1	8.4	9.0
Residential Property Impacts (Acres)	62	41	29	76
Residential Lots Impacted (Units)	13	191	3	0
Non-Residential Property Impacts (Acres)	8	10	12	0
Impacts to Natural /Native Communities (Acres)	165	210	162	158
Direct Wetland Impacts (Acres)	92	86	72	58
Potential for Secondary Wetland Impacts (Acres)	45	41	35	28
Impacts to Existing Conservation Land / Easements (Acres)	54	33	48	30
Estimated Cost of Wetland Mitigation	\$4,092,000	\$4,116,000	\$3,408,000	\$2,718,000
Panther Focus Area Impacts (Acres)	241	200	252	280
Primary Panther Habitat Impacts (Acres)	218	159	179	223
Potential Secondary Impacts to Panther Habitat (still under review)	High	Lowest	Mid	Highest
Estimated Cost of Panther Mitigation	\$5,751,410	\$4,892,600	\$6,338,161	\$6,849,800
Total Construction and Mitigation Cost	\$145,796,750	\$141,242,410	\$132,560,920	\$134,989,944

Analysis results from Table 10 also indicated that the highest impacts to the Panther Focus Area, primary panther habitat and secondary panther habitat are from Alternative #11, while the lowest impact is from Alternative #8. The estimated costs of panther mitigation range from \$4,892,000 to \$6,849,000.

Based on the information provided in Table 10, it can be concluded that the total construction and mitigation costs for the four alternatives are very similar, ranging between \$132,560,920, for Alternative #9, and \$145,796,750 for Alternative #1.

9.0 SECOND PUBLIC MEETING

9.1 General Information

A second public workshop was held, by Lee County DOT on October 4th, 2007, to obtain public questions/comments. The workshop was held at Gateway Trinity Lutheran Church, 11381 Gateway Boulevard, Fort Myers, Florida.

A newsletter with an updated alignment map was mailed out to property owners within the study area, interested parties and relevant County and City elected officials and staff members. The public information workshop was advertised in the News-Press on Thursday, September 27, 2007 as a ¼-page, legal display ad. A press release was also sent on October 1, 2007 to local media agencies. A copy of the newsletter, map, legal display ad and press release for the workshop are attached in **Appendix O**.

The meeting was conducted in an “open house” format allowing the public to view the project material. Representatives from LCDOT and the project team were present. A handout was provided that summarized the project. The handouts provided at the meeting, as well as the list of exhibits presented at the meeting are also included in Appendix O.

9.2 Public Comments

A total of 52 persons signed at the registration table. The sign-in sheets are attached in **Appendix P**. The public was provided with comment forms in order to have their opinion recorded as public record. A total of 15 comments were received at the workshop and in the following 14 days. The comments were recorded in the project file and are also included in Appendix P. A summary of the public comments is also attached in Appendix P.

9.3 Conclusions and Recommendations

Review of the public comments revealed an overwhelming support for the proposed Alico Road connector. Based on the provided comments, Alignment #11 appeared to have the highest public support. **Figure 23** and **Figure 24** illustrate the ultimate interim roadway cross section and the ultimate roadway cross sections, respectively, presented at the workshop.

Design Speed $\leq$ 45 MPH

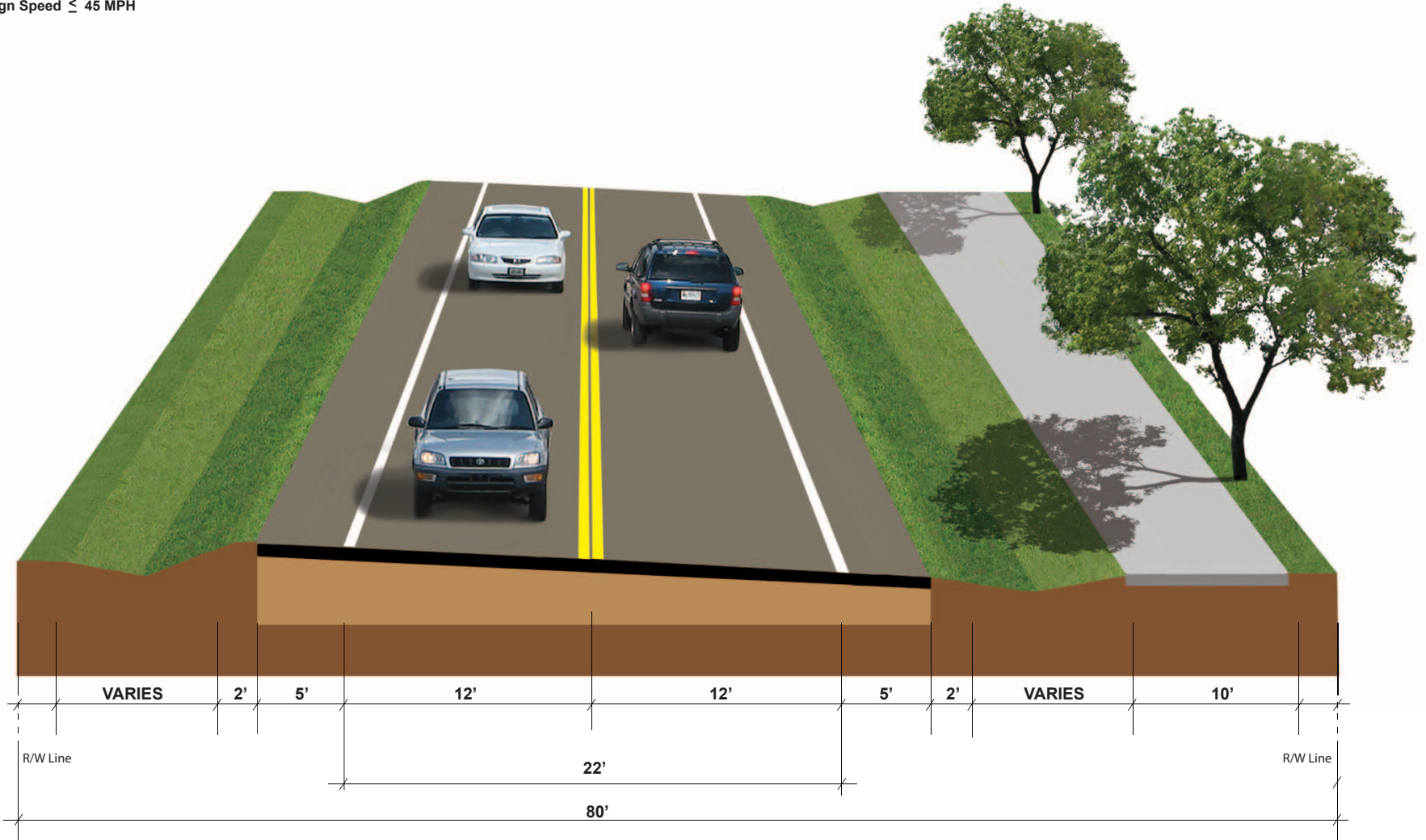
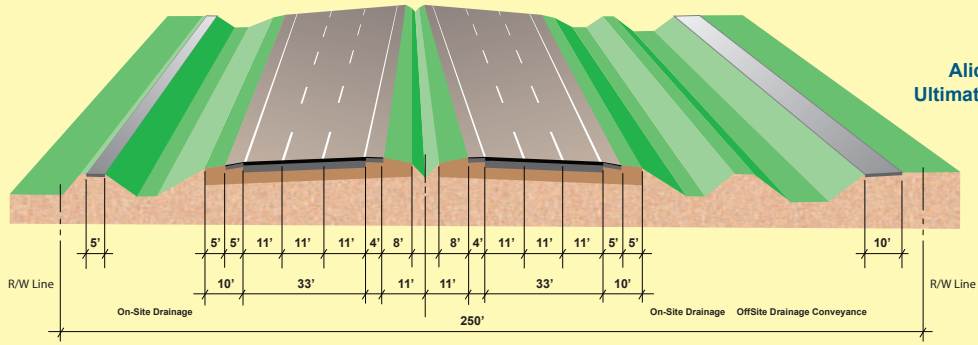


Figure 23
Ultimate Year 2010 Interim Roadway Cross Section
Alico Road Connector Study
Lee County, Florida



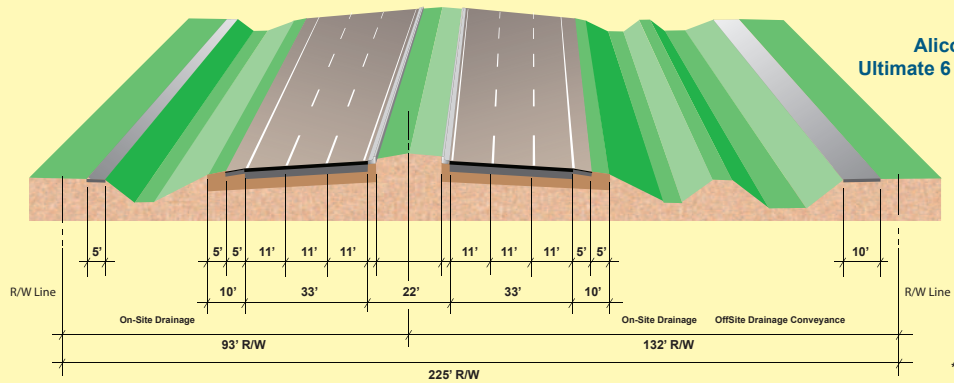
Design Speed $\leq$ 45 MPH



**Alico Road Connector
Ultimate 6 Lane Rural Section**

* No Drainage Analysis has been Conducted to size the Conveyances.

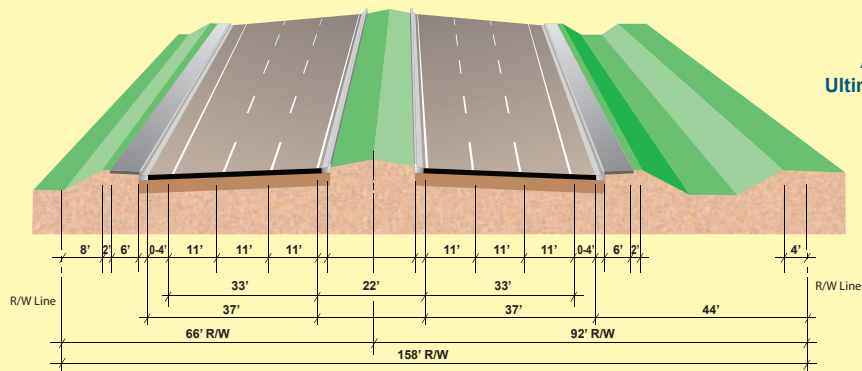
Design Speed $\leq$ 45 MPH



**Alico Road Connector
Ultimate 6 Lane Suburban Section**

* No Drainage Analysis has been Conducted to size the Conveyances.

Design Speed $\leq$ 45 MPH



**Alico Road Connector
Ultimate 6 Lane Urban Section**

* No Drainage Analysis has been Conducted to size the Conveyances.

Figure 24
Ultimate Year 2030 Roadway Cross Sections
Alico Road Connector Study
Lee County, Florida



10.0 SECOND ALTERNATIVE ANALYSIS – PHASE I

10.1 Cost Evaluation of Alignments - Phase I

Table 9, Summary of Land Uses along Alignments, and Table 10, Evaluation Matrix for Alignments, were utilized by Lee County Division of County Lands to prepare right-of-way acquisition costs for the alignments during Phase I. The memorandum prepared by Lee County Division of County Lands is included in **Appendix Q**.

Based on the information provided by Lee County Division of County Lands, a complete cost evaluation was prepared for the alignments. These included updated construction costs based on the FDOT Construction Costs, August 2007, attached in **Appendix R**, wetland mitigation costs, panther mitigation costs and right-of-way costs. **Table 11** summarizes the final cost evaluation for the alignments for Phase I.

10.2 Selection of Final Alignment - Phase I

A review of costs, documented in Table 11, indicated that Alignment #11 appeared to be the least costly alignment, regardless of the assumed cross section. Alignment #11 also received the highest public support, based on information obtained from the second public workshop. The USFWS provided no objection to Alignment #11 based upon Lee County's potential to purchase adjacent lands and install wildlife crossings underneath the roadway to create a continuous preserve corridor for the Florida panther. Based on these findings, the recommended alignment for the proposed Alico Road Connector Study in Phase I is Alignment #11. **Figure 25** illustrates the location on the final alignment for Phase I.

TABLE 11
FINAL COST EVALUATION OF ALIGNMENTS - PHASE I
ALICO ROAD CONNECTOR STUDY

ALTERNATIVE	LENGTH	CONSTRUCTION COST ESTIMATES			RIGHT-OF-WAY COST ESTIMATES	WETLAND MITIGATION COSTS	PANTHER MITIGATION COSTS	TOTAL COST (CONSTRUCTION & ROW COST ESTIMATES)		
		2 LANE	4 LANE	6 LANE				2 LANE	4 LANE	6 LANE
Rural Section (250 ft)										
1	9.4	\$59,958,004	\$105,774,295	\$135,953,340	\$21,000,000	\$4,092,000	\$5,751,410	\$90,801,414	\$136,617,705	\$166,796,750
8	9.1	\$58,780,718	\$103,023,026	\$132,233,810	\$33,000,000	\$4,116,000	\$4,892,600	\$100,789,318	\$145,031,626	\$174,242,410
9	8.4	\$56,495,233	\$96,270,168	\$122,814,759	\$27,000,000	\$3,408,000	\$6,338,161	\$93,241,394	\$133,016,329	\$159,560,920
11	9.0	\$43,488,157	\$93,939,567	\$125,422,144	\$16,000,000	\$2,718,000	\$6,849,800	\$69,055,957	\$119,507,367	\$150,989,944
Suburban Section (225 ft)										
1	9.4	\$67,895,397	\$114,587,132	\$144,697,583	\$21,000,000	\$4,092,000	\$5,751,410	\$98,738,807	\$145,430,542	\$175,540,993
8	9.1	\$66,562,259	\$111,573,546	\$140,725,721	\$32,000,000	\$4,116,000	\$4,892,600	\$107,570,859	\$152,582,146	\$181,734,321
9	8.4	\$63,974,216	\$104,124,555	\$130,648,001	\$26,000,000	\$3,408,000	\$6,338,161	\$99,720,377	\$139,870,716	\$166,394,162
11	9.0	\$49,245,230	\$102,611,286	\$133,823,552	\$16,000,000	\$2,718,000	\$6,849,800	\$74,813,030	\$128,179,086	\$159,391,352
Urban Section (160 ft)										
1	9.4	\$86,415,980	\$135,150,418	\$165,100,817	\$15,000,000	\$4,092,000	\$5,751,410	\$111,259,390	\$159,993,828	\$189,944,227
8	9.1	\$84,719,187	\$131,524,760	\$160,540,179	\$22,000,000	\$4,116,000	\$4,892,600	\$115,727,787	\$162,533,360	\$191,548,779
9	8.4	\$81,425,175	\$122,451,456	\$148,925,564	\$18,000,000	\$3,408,000	\$6,338,161	\$109,171,336	\$150,197,617	\$176,671,725
11	9.0	\$62,678,400	\$122,845,298	\$153,426,838	\$11,000,000	\$2,718,000	\$6,849,800	\$83,246,200	\$143,413,098	\$173,994,638

NOTES:

Construction cost data provided by District Seven DRI Coordinator

ROW cost data provided by Division of County Lands Lee County, November 2007

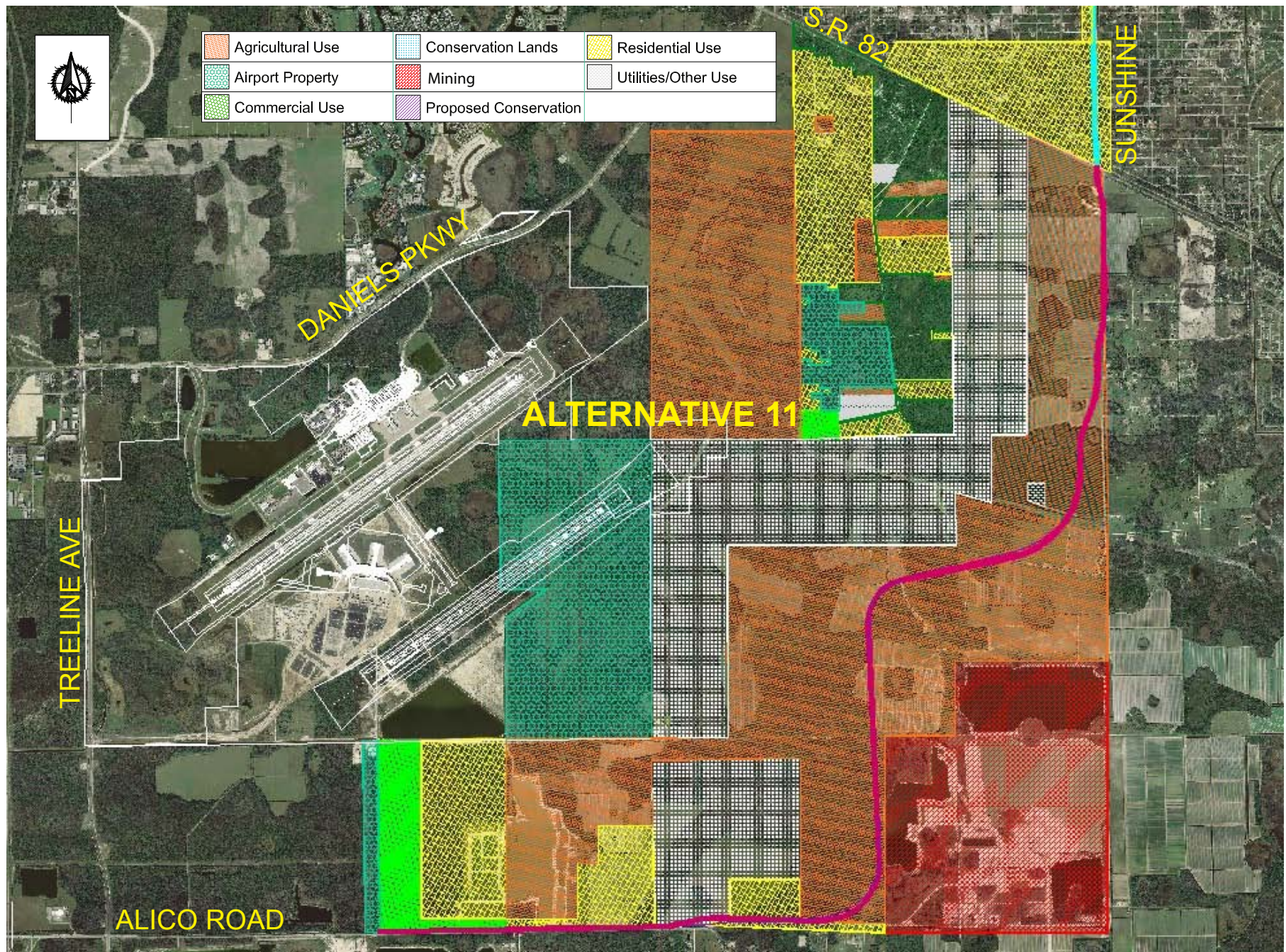


Figure 25
Suggested Final Alignment - Phase I
Alico Road Connector Study
Lee County, Florida

PHASE II

11.0 MODIFICATIONS OF SELECTED FINAL ALIGNMENT IN PHASE I

11.1 General Information

Due to the land acquisition requirements of the project, and in an effort to improve the feasibility of future construction by decreasing the cost of such acquisition, Alternative #11 was individually presented to major property owners for feedback in determining the major stakeholder's issues and concerns.

As a result of conversations with these property owners, Alternative #11 was determined to have significant impact on a major property located in the northern portion of the proposed alignment, Jamerson Farms, and on the existing Lee County Tower Facility. Consequently, two variations of this alternative, Alternative #12 and Alternative #13, were considered and are graphically depicted in **Figure 26**.

An impact analysis of the proposed new alignments on Jamerson Farms indicated that Alternative #12 would continue to have an impact on the areas currently developed for agriculture, while Alternative #13 would significantly impact residential developments along Green Meadows Road.

After consideration of Alternatives #12 and #13, the property owner for Jamerson Farms proposed a modification to Alternative #12. It was proposed that the northern segment of the alignment be shifted to the western boundary of the property. Safety improvements were made to the property owner's alignment recommendation. These changes included the realignment of the northern portion of Alico Road to provide as close to a perpendicular intersection with SR-82 as possible. This was done to have sufficient tangent sections before the intersection to maintain good visibility and meet sight-distance requirements. In addition, the new alignment was modified to avoid a communications. These changes resulted in Alternative #14, which is graphically depicted in **Figure 27**.

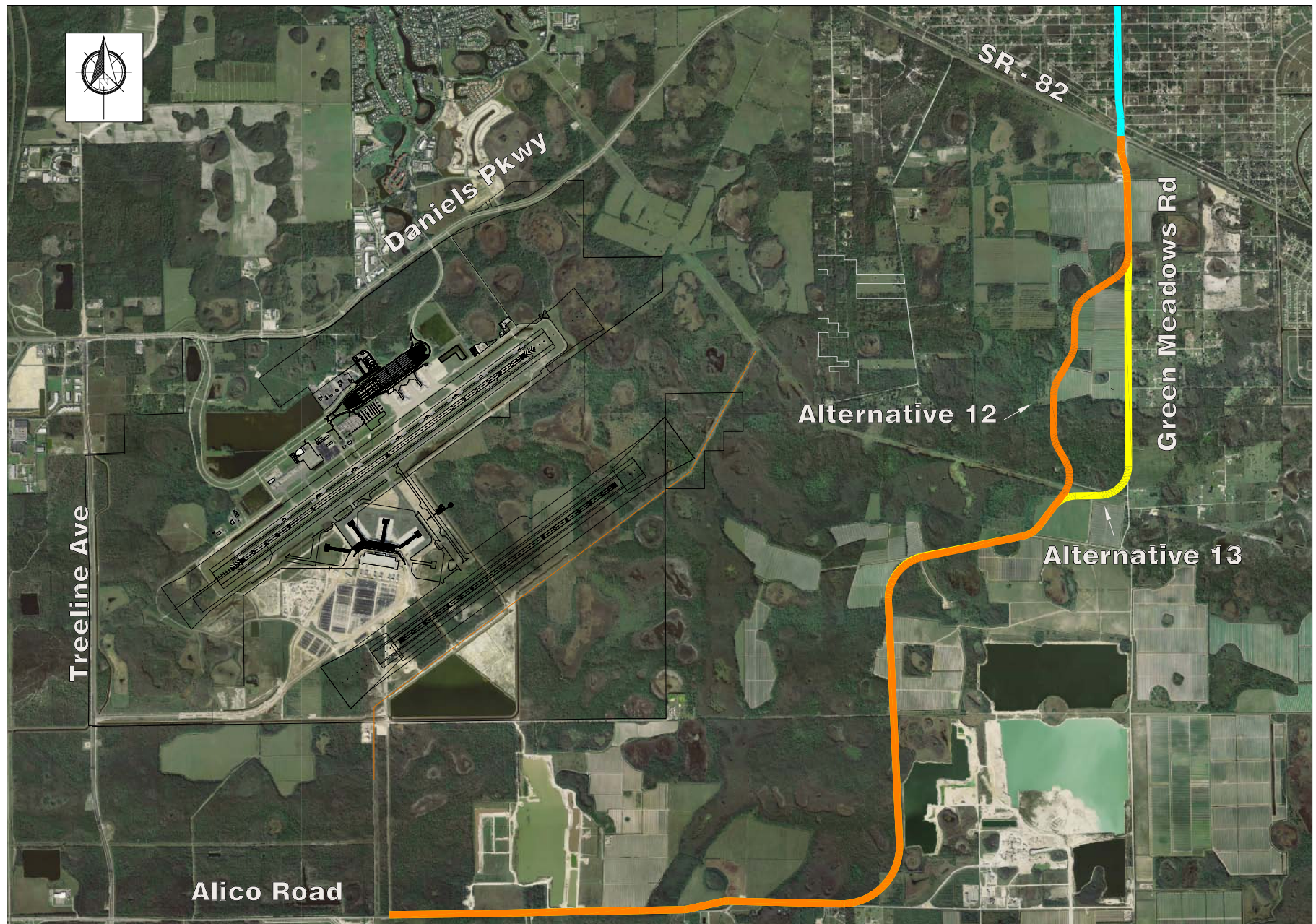


Figure 26
Alignments #12 and #13
Alico Road Connector Study
Lee County, Florida

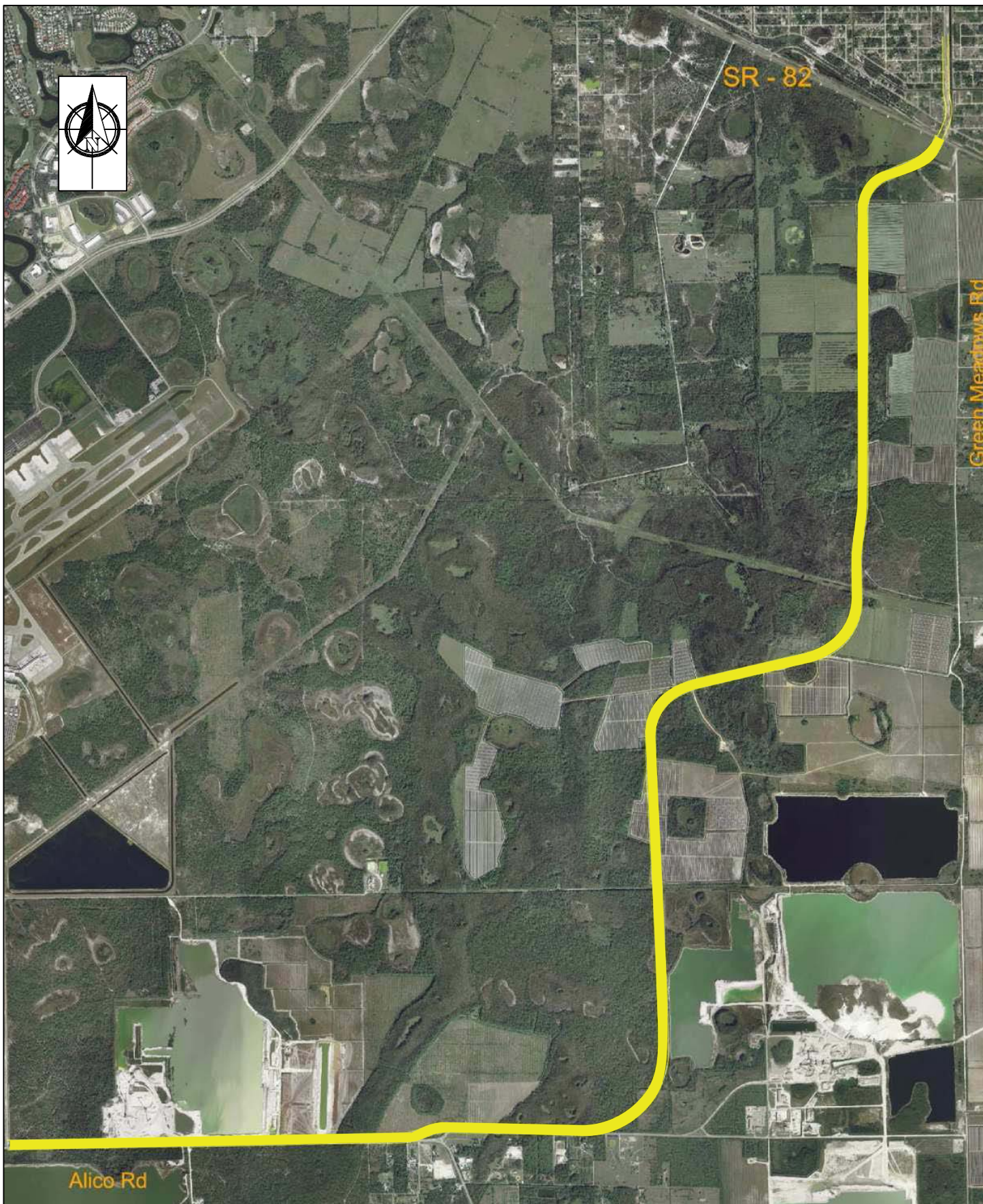


Figure 27
Preferred Alignment #14

Alico Road Connector Study

Lee County, Florida



Detailed descriptions of the proposed alternatives are summarized below:

ALTERNATIVE #12

Alternative #12 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. Alternative #12 uses existing Alico Road and extends approximately 2.89 miles east from the Alico Road and Green Meadows Water Plant access roadway intersection. It then continues north 2.22 miles, bordering the Wild Turkey Strand property and the Florida Rock property. It turns northeast for about 1.43 miles to the edge of Jamerson Farms and then curves north for about one mile (1.05 miles) on the west side of the property. The alternative then travels northeast for about 0.77 miles through Jamerson Farms and then curves north onto Green Meadows Rd for about 0.75 miles to align with the intersection of Sunshine Boulevard and SR-82. The total length of Alternative #12 is 9.12 miles.

ALTERNATIVE #13

Alternative #13 begins at the Alico Road and Green Meadows Water Plant access roadway intersection. Alternative #13 uses existing Alico Road and extends approximately 2.89 miles east from the Alico Road and Green Meadows Water Plant access roadway intersection. It then continues north 2.22 miles, bordering the Wild Turkey Strand property and the Florida Rock property. It turns northeast for about 1.64 miles remaining south of Jamerson Farms and then curves north onto Green Meadows Rd for about 2.44 miles to align with the intersection of Sunshine Boulevard and SR-82. The total length of Alternative #13 is 9.2 miles.

ALTERNATIVE #14

Alternative #14 begins at the Alico Road and Green Meadows Road Water Plant access roadway intersection. Alternative #14 uses existing Alico Road and extends approximately 2.89 miles east from the Alico Road and Green Meadows Water Plant access roadway intersection. It then continues north 2.22 miles, bordering the Wild Turkey Strand property and the Florida Rock property. Alternative #14 then deviates northeast about 1.0 mile and curves to the north, traveling in the east boundary of Florida Rock and west boundary of Jamerson Farms for about 2.35 miles. It then turns northeast about 0.3 miles until it curves north to align with Sunshine Boulevard for 0.6 miles. This alternative intersects with SR-

82/Immokalee Rd 490.32 feet northwest of the actual SR-82 and Green Meadows Rd intersection. The total length of Alternative #14 is 9.35 miles.

12.0 FINAL ALTERNATIVES ANALYSIS

12.1 Evaluation Impacts

ALTERNATIVE #12

Alternative #12 travels along a southwest/northeast path through the southern portion of the study area. The alternative aligns with the existing portion of Alico Road and extends through Florida Rock and Jamerson Farms property. This alternative is projected to affect about 28 lots. Of those, 14 lots are classified as residential, of which 21 percent are vacant. Two (2) lots are classified as commercial and are vacant properties. Nine (9) agricultural lots would be affected by this alternative.

ALTERNATIVE #13

Alternative #13 travels along a southwest/northeast path through the southern portion of the study area. The alternative aligns with the existing portion of Alico Road and extends through Florida Rock and Jamerson Farms property. This alternative is projected to affect about 36 lots. Of those, 23 lots are classified as residential, of which 13 percent are vacant. Two (2) lots are classified as vacant commercial properties. Alternative #13 contains nine (9) agricultural lots that would be affected.

ALTERNATIVE #14

Alternative #14 travels along a southwest/northeast path through the southern portion of the study area. The alternative aligns with the existing portion of Alico Road and extends through Florida Rock and Jamerson Farms property. This alternative is projected to affect about 25 lots. Of those, 13 lots are classified as residential, of which 38 percent are vacant. Two (2) lots are classified as vacant commercial properties. Alternative #14 contains seven (7) agricultural lots that would be affected.

The above information is summarized in **Table 12**, which provides a comparison of the new alignments relative to the land uses affected by each.

Table 13 summarizes the land uses located along each of the new alignments.

TABLE 12
NUMBER AND TYPES OF PARCELS AFFECTED BY ALIGNMENTS #12, #13 AND #14
ALICO ROAD CONNECTOR STUDY

LAND USE	ALIGNMENTS		
	12	13	14
Commercial	2	2	2
Vacant Commercial	2	2	2
Bordering	2	2	2
Through	0	0	0
Commercial Developed	0	0	0
Bordering	0	0	0
Through	0	0	0
Residential	14	23	13
Vacant Residential	3	3	5
Bordering	3	3	3
Through	0	0	2
Residential Developed	11	20	8
Bordering	11	20	8
Through	0	0	0
County	3	2	3
County Developed	0	0	0
Bordering	0	0	0
Through	0	0	0
County Other	3	2	3
Bordering	2	1	2
Through	1	1	1
Agricultural	9	9	7
Bordering	2	3	1
Through	7	6	6
Preserve	0	0	0
Total	28	36	25

Percent of Parcels Affected by Type

	A12	A13	A14
Commercial	7.14%	5.56%	8.00%
Residential	50.00%	63.89%	52.00%
County	10.71%	5.56%	12.00%
Agricultural	32.14%	25.00%	28.00%
Preserve	0.00%	0.00%	0.00%
Total	100.00%	100.00%	100.00%

12.2 Cost Evaluation of Alignments – Phase II

Based on the information provided by Lee County Division of County Lands, a complete cost evaluation was prepared for the preferred alignments. These included updated construction costs based on the FDOT Construction Costs, August 2007, wetland mitigation costs, panther mitigation costs and right-of-way costs. **Table 14** summarizes the final cost evaluation for the new alignments.

12.3 Selection of Preferred Alignment – Phase II

Alignment #14 was determined to be the most desired alignment based on input received through public comment and meetings with land owners and government agencies. Therefore, the preferred alignment for the proposed study is Alternative #14. **Figure 28** illustrates the location on the recommended final alignment.

12.4 Survey Information of Preferred Alignment - Phase II

A final survey was performed for the preferred alignment. A summary report, with the findings, is included in **Appendix S**.

12.5 Environmental Review of Preferred Alignment – Phase II

A detailed environmental review was performed for the preferred alignment. A summary report, with the findings, is included in **Appendix T**.

TABLE 14
FINAL COST EVALUATION OF ALIGNMENTS #12, #13 AND #14
ALICO ROAD CONNECTOR STUDY

ALTERNATIVE	LENGTH	CONSTRUCTION COST ESTIMATES ⁽¹⁾			RIGHT-OF-WAY COST ESTIMATES ⁽²⁾	WETLAND MITIGATION COSTS	PANTHER MITIGATION COSTS	TOTAL COST (CONSTRUCTION & ROW COST ESTIMATES)		
		2 LANE	4 LANE	6 LANE				2 LANE	4 LANE	6 LANE
Rural Section (250 ft)										
12	9.1	\$44,932,265	\$95,408,934	\$127,017,699	\$16,000,000	\$2,900,000	\$6,900,000	\$70,732,265	\$121,208,934	\$152,817,699
13	9.2	\$34,909,669	\$90,411,341	\$124,041,388	\$16,000,000	\$2,765,000	\$6,500,000	\$60,174,669	\$115,676,341	\$149,306,388
14	9.5	\$50,995,387	\$102,002,848	\$134,378,040	\$17,600,000	\$3,079,800	\$4,841,780	\$76,516,967	\$127,524,428	\$159,899,620
Suburban Section (225 ft)										
12	9.1	\$50,880,512	\$104,150,173	\$135,500,786	\$16,000,000	\$2,900,000	\$6,900,000	\$76,680,512	\$129,950,173	\$161,300,786
13	9.2	\$39,531,100	\$99,358,520	\$132,579,428	\$16,000,000	\$2,765,000	\$6,500,000	\$64,796,100	\$124,623,520	\$157,844,428
14	9.5	\$57,746,286	\$111,092,196	\$143,254,840	\$17,600,000	\$3,079,800	\$4,841,780	\$83,267,866	\$136,613,776	\$168,776,420
Urban Section (160 ft)										
12	9.1	\$64,759,756	\$124,546,398	\$155,294,654	\$11,000,000	\$2,900,000	\$6,900,000	\$85,559,756	\$145,346,398	\$176,094,654
13	9.2	\$50,314,438	\$120,235,271	\$152,501,520	\$11,000,000	\$2,765,000	\$6,500,000	\$70,579,438	\$140,500,271	\$172,766,520
14	9.5	\$73,498,383	\$132,300,673	\$163,967,375	\$11,000,000	\$3,079,800	\$4,841,780	\$92,419,963	\$151,222,253	\$182,888,955

NOTES:

Construction cost data provided by District Seven DRI Coordinator

ROW cost data provided by Division of County Lands Lee County, November 2007

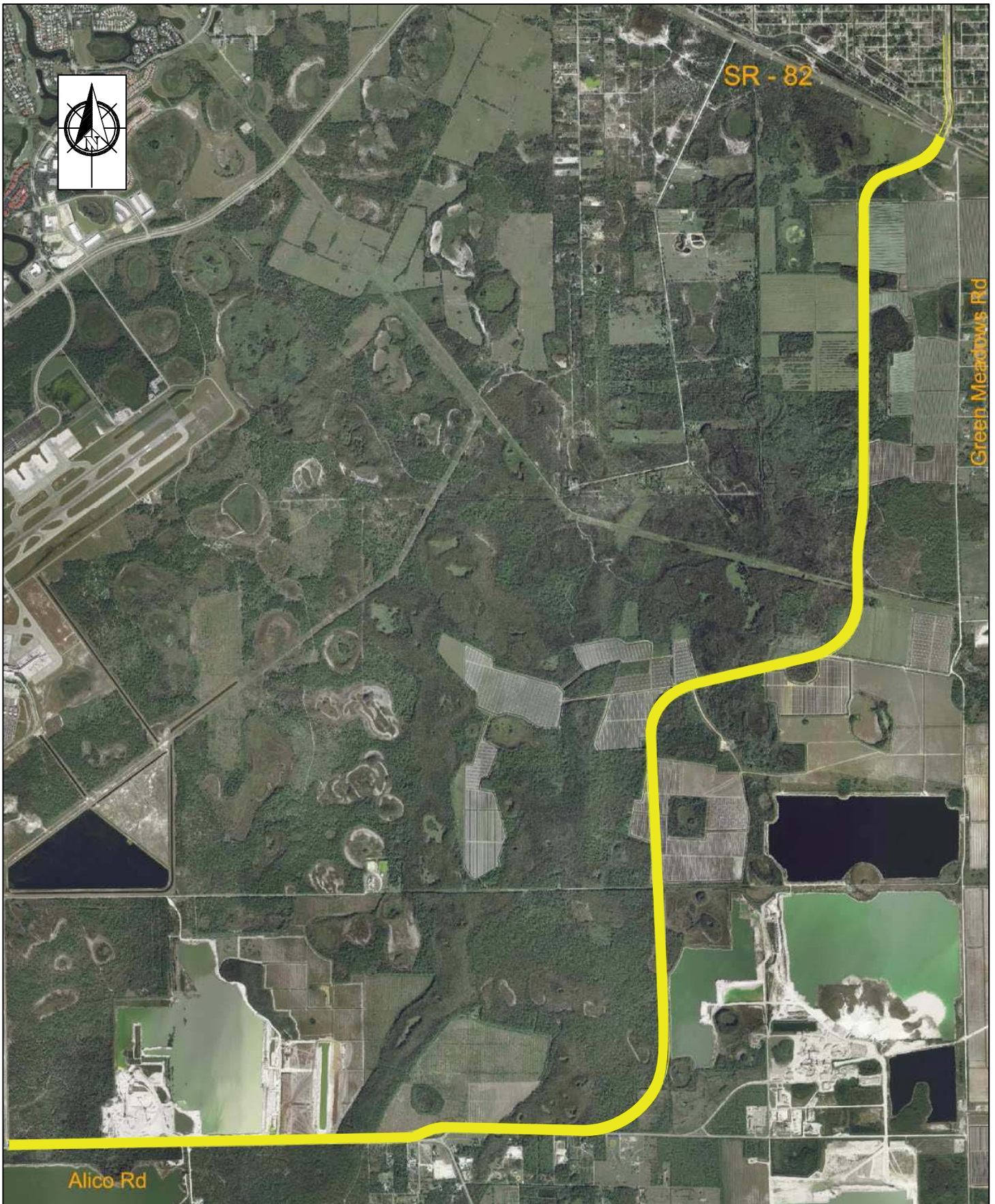


Figure 28
Recommended Final Alignment (#14)
Alico Road Connector Study
Lee County, Florida

13.0 CONCLUSIONS AND RECOMMENDATIONS

As Lee County's coastal population has expanded eastward, the two principal north-south routes (US-41 and I-75) have become overwhelmed. A new north-south corridor, CR-951 has been proposed that will provide a north-south route between Collier County and southeast Lee County. The missing link to a north-south roadway extending from Marco Island to SR-80 would be the Alico Road Connector, which would run from Alico Road to SR-82 and tie in to Sunshine Boulevard. As a new north-south corridor, east of I-75, Alico Road will improve the mobility patterns east of I-75 and provide an alternate route to east Lee County/Lehigh Acres. The proposed project will also support transportation and land-use planning efforts.

Phase I of the analysis included the evaluation of eleven roadway alignments for the proposed connector roadway. In order to determine the preferred roadway alignment, a thorough review was performed of the proposed eleven alignments. The review included the evaluation of several criteria including availability of alternative routes, costs, long-range area planning, safety and environmental factors. Extensive coordination also occurred between government agencies, stakeholders, developers, local business owners and residents to identify the locations of potential roadway alignments for the project. Based on the findings, the preferred alignment for the proposed Alico Road Connector Study in Phase I was Alignment #11

Due to the right-of-way impact on two large parcels associated with Alternative #11, three other alternatives were evaluated as part of Phase II of this project. These included Alternative #12, Alternative #13 and Alternative #14. An impact analysis of the proposed new alignments indicated that Alternative #12 would continue to have an impact on areas currently used for agriculture, while Alternative #13 would significantly affect residential developments along Green Meadows Road. Alignment #14 was the most desired alignment, based on conversations between land owners and government agencies. Therefore, the selected preferred alignment for the proposed study is Alternative #14.