

APPLICATION FOR CORRIDOR CERTIFICATION

Lake Agnes - Gifford 230kV Transmission Line Project

December 2007



Project Consultants:  **Golder
Associates**



LAKE AGNES TO GIFFORD – A JOINT 230 KV TRANSMISSION LINE PROJECT

December 12, 2007

Mr. Mike Halpin, P.E.
Siting Administrator
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE SITING APPLICATION

Dear Mr. Halpin:

Florida Power Corporation, dba Progress Energy Florida, Inc and Tampa Electric Company are submitting this joint application to obtain certification for the Lake Agnes to Gifford 230-kilovolt (kV) transmission line corridor under the Florida Transmission Line Siting Act, Sections 403.52 through 403.5365, Florida Statutes, and Chapter 62-17, Part II, Florida Administrative Code.

This line will originate at Tampa Electric's existing Lake Agnes Substation and extends east-northeast approximately 18.9 miles within, adjacent to, or in proximity of the Orlando Utilities Commission Corridor for the McIntosh - Taft transmission line right-of-way, which generally runs parallel to Interstate 4, across Polk and Osceola Counties. The preferred corridor then turns north and crosses Loughman Road (Polk County Road 54), Old Lake Wilson Road, and Interstate 4, and continues north along Daniel Webster Western Beltway (State Road 429) co-locating in the SR429 right-of-way, for approximately 8.6 miles. The preferred corridor then turns west and exits the SR429 right-of-way, just north of Western Way and enters into PEF's existing easement, crossing Hartzog Rd into the planned Gifford Substation.

Please note that the existing Lake Agnes Substation and the planned Gifford Substation are not part of this certification application. The overall length of the preferred corridor is approximately 27.5 miles. Detailed ROW location for the Lake Agnes to Gifford transmission line will be finalized following the certification process.

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Tampa Electric Company
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For your review are three paper copies (with CD copies) of the application and an application filing fee calculated at \$127,500.00.

Progress Energy Florida, Inc and Tampa Electric Company are currently distributing copies of this application to the statutory parties. A copy of the distribution list is also provided with this application.

If you have any questions pertaining to this application submittal, please contact the following representatives.

Progress Energy Florida, Inc: Donald Ennis at (919) 546-7323 or Amy Dierolf at (727) 820-5657

Tampa Electric Company: Paul Carpinone at (813) 228-4858 or Adriano "Nate" Alcoz at (813) 228-4843.

Sincerely,



Mr. Paul L. Carpinone
Director, Environmental,
Health & Safety
Tampa Electric Company



Mr. Donald R. Ennis
Manager, Environmental Permitting &
Compliance
Progress Energy Florida, Inc.

Distribution List
Enclosure

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

APPLICANT INFORMATION

Please supply the following information:

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and Tampa Electric Company

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Lake Mary, Florida 32746

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Business Entity (corporation, partnership, co-operative, names, owners, etc.):
Corporation

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Charles R. Black, President, Tampa Electric Company

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Corridor Location (counties crossed):

Portions of Polk, Osceola, and Orange Counties

Incorporated Cities within the corridor (names):

Portions of the City of Auburndale and Reedy Creek

Termination Points:

Lake Agnes Substation and the planned Gifford Substation

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

APPLICANT INFORMATION

Intermediate Substation:

No

Voltage:

230 kilovolts

Line Type (AC or DC):

AC

Length of line and number of circuits:

27.5 miles single circuit

Remarks (if any):

PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY

LAKE AGNES SUBSTATION TO THE PLANNED GIFFORD SUBSTATION
A JOINT 230-kV TRANSMISSION LINE PROJECT

TRANSMISSION LINE SITING ACT APPLICATION

TABLE OF CONTENTS

1.0	PROJECT OVERVIEW	1-1
1.1	Project Introduction.....	1-1
1.1.1	Need for the Project.....	1-4
1.2	Corridor Location and Layout.....	1-6
1.3	Transmission Line and Road Design Characteristics	1-6
1.4	Proposed Intermediate Substations	1-17
1.5	Cost Projections.....	1-17
2.0	BACKGROUND FEATURES OF THE PREFERRED CORRIDOR.....	2-1
2.1	Corridor Selection	2-1
2.1.1	Phase I: Establish and Define the Project Study Area.....	2-1
2.1.2	Phase II: Regional Screening and Mapping	2-3
2.1.3	Phase III: Selection and Evaluation of Corridor Segments	2-4
2.1.4	Phase IV: Selection of the Preferred Corridor.....	2-7
2.1.5	Description of the Preferred Corridor	2-10
2.2	Socio-Political Environment of the Corridor Area.....	2-16
2.2.1	Governmental Jurisdictions.....	2-16
2.2.2	Zoning and Land Use Plans.....	2-20
2.2.3	Easements, Title, Agency Works	2-40
2.2.4	Archaeological and Historic Sites	2-42
2.3	Bio-Physical Environment of the Corridor Area.....	2-43
2.3.1	Land Use/Vegetation.....	2-43
2.3.2	Affected Water and Wetlands	2-50
2.3.3	Ecology	2-51
2.3.4	Other Environmental Features.....	2-59
3.0	EFFECTS OF RIGHT-OF-WAY PREPARATION AND TRANSMISSION LINE CONSTRUCTION.....	3-1
3.1	Construction Techniques.....	3-1
3.1.1	Right-Of-Way Clearing.....	3-1
3.1.2	Access Road and Pad Construction.....	3-2
3.1.3	Line Construction.....	3-3
3.1.4	Erosion	3-4
3.2	Impact on Water-bodies and Uses.....	3-4
3.3	Solid Waste	3-5
3.4	Changes to Vegetation, Wildlife and Aquatic Life	3-5
3.5	Impact on Human Populations	3-6
3.6	Impact on Archaeological and Historic Sites	3-7
4.0	EFFECTS OF TRANSMISSION LINE RIGHT-OF-WAY MAINTENANCE AND POST-CONSTRUCTION IMPACTS AND EFFECTS OF MAINTENANCE	4-1
4.1	Maintenance Techniques.....	4-1
4.2	Multiple Uses	4-1
4.3	Changes in Species Populations.....	4-2

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

4.4	Effects of Public Access.....	4-2
4.5	Electric and Magnetic Field Effects	4-2
4.5.1	Corona Effects.....	4-5
4.5.2	Safety.....	4-9
5.0	VARIANCES, EXCEPTION, AND EXEMPTIONS	5-1

LIST OF APPENDICES

Appendix A – PSC Need Determination, Final Order
Appendix B – Aerials, Future Land Use, Zoning, Land Use and Land Cover and Vegetation Maps
Appendix C – Public Outreach Program
Appendix D – County and Municipal Future Land Use Maps (FLUMS)
Appendix E – Archaeological and Historical Resources
Appendix F – EMF and Audible Noise Calculations

LIST OF FIGURES

FIGURE 1.1-1 STUDY AREA, SERVICE AREAS, EXISTING AND PLANNED SUBSTATION LOCATIONS	1-2
FIGURE 1.1-2 LOCATION OF PROJECT AREA	1-3
FIGURE 1.2-1 PREFERRED CORRIDOR LOCATION AND EXISTING TRANSMISSION LINES GREATER THAN 115Kv WITHIN 5 MILES OF THE CORRIDOR.....	1-7
FIGURE 1.3-1 TYPICAL TANGENT STRUCTURE ON NEW EASEMENT	1-11
FIGURE 1.3-2 TYPICAL TANGENT STRUCTURE PARALLEL TO EXISTING LAKE AGNES – OSCEOLA 230kV LINE.....	1-12
FIGURE 1.3-3 TYPICAL TANGENT STRUCTURE ON ROAD RIGHT-OF-WAY	1-13
FIGURE 1.3-4 EXISTING TANGENT STRUCTURE ON ROAD RIGHT-OF-WAY	1-14
FIGURE 1.3-5 TYPICAL 230kV TANGENT INSULATOR ASSEMBLY	1-15
FIGURE 1.3-6 CONDUCTOR PROFILE FOR TYPICAL 600’ SPAN ON 90’ TANGENT STRUCTURE.....	1-16
FIGURE 1.3-7 TYPICAL ACCESS ROAD	1-18
FIGURE 1.3-8 TYPICAL ACCESS ROAD AND STRUCTURE PAD	1-19
FIGURE 2.1-1 PROJECT STUDY AREA	2-2
FIGURE 2.1-2 REGIONAL SCREENING	2-5
FIGURE 2.1-3 ALTERNATIVE CORRIDORS.....	2-9
FIGURE 2.2-1 GOVERNMENTAL JURISDICTIONS AND GOVERNMENTAL LAND HOLDINGS.....	2-17
FIGURE 2.3-1 FLORIDA AREAS NATURAL INVENTORY.....	2-55

LIST OF TABLES

TABLE 2.1-1. LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE REGIONAL SCREENING CRITERIA	2-3
TABLE 2.1-2. LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE CANDIDATE SEGMENT AND CORRIDOR CRITERIA	2-6
TABLE 2.1-3. LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE QUANTITATIVE EVALUATION CRITERIA.....	2-7
TABLE 2.2-1. EASEMENT, TITLE, AND CROSSING APPROVALS ANTICIPATED TO BE REQUIRED FOR TRANSMISSION LINE CONSTRUCTION IN THE PREFERRED CORRIDOR	2-41
TABLE 2.3-1 ACREAGE OF DOMINANT VEGETATIVE COMMUNITITES WITHIN THE PREFERRED CORRIDOR.....	2-45
TABLE 2.3-2 PLANT SPECIES ASSOCIATED WITH THE DOMINANT VEGETATIVE COMMUNITIES OF THE PREFERRED CORRIDOR.....	2-46
TABLE 2.3-3 WILDLIFE SPECIES OBSERVED AND/OR THOSE LIKELY TO INHIBIT VEGETATIVE COMMUNITIES WITHIN THE PREFERRED CORRIDOR	2-52
TABLE 4.5-1 MAXIMUM CALCULATED EMF FOR LAKE AGNES-GIFFORD 230-KV PROJECT	4-4
TABLE 4.5-2 MAXIMUM CALCULATED AUDIBLE NOISE FOR LAKE AGNES-GIFFORD 230-KV PROJECT	4-6

ACRONYMS

ACSS/TW	Aluminum Conductor Steel Support/Trapezoidal Wire
BMP	Best Management Practice
CAFEP	Corona and Field Effects Program
CR	County Road
dB	decibels
DHR	Florida Department of State, Division of Historical Resources
EMF	Electric and Magnetic Fields
EPA	Environmental Protection Agency
F.A.C.	Florida Administrative Code
F.S.	Florida Statutes
FAA	Federal Aviation Authority
FCC	Federal Communications Commission
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FFWCC	Florida Fish and Wildlife Conservation Commission
FLUCFCS	Florida Land Use Cover and Forms Classification System
FMA	Florida Managed Area
FNAI	Florida Natural Areas Inventory
FPSC	Florida Public Service Commission
FRCC	Florida Reliability Coordinating Council
Ft	feet
ft ²	square feet
GIS	Geographic Information System
kV	kilovolt
kV/m	kilovolt per meter
LULC	Land Use and Land Cover
mG	milliGauss
NERC	North American Electric Reliability Corporation
NESC	National Electric Safety Code
NRHP	National Register of Historic Places
OFW	Outstanding Florida Waters
OUC	Orlando Utilities Commission
PEF	Progress Energy Florida, Inc.
PPSA	Power Plant Siting Act
RARE	Roadless Area Review and Evaluation
RCID	Reedy Creek Improvement District
ROW	Rights-of-way
SECI	Seminole Electric Corporative, Inc.
SECO	Sumter Electric Cooperative, Inc.
SFWMD	South Florida Water Management District
SJRWMD	St. Johns River Water Management District
SR	State Road
SWFWMD	Southwest Florida Water Management District
T&E Species	Threatened and Endangered Species
TECO	Tampa Electric Company
TIITF	Board of Trustees of the Internal Improvement Trust Fund
TLSA	Transmission Line Siting Act
US FWS	United States Fish and Wildlife Service
WMA	Wildlife Management Area
WMD	Water Management District

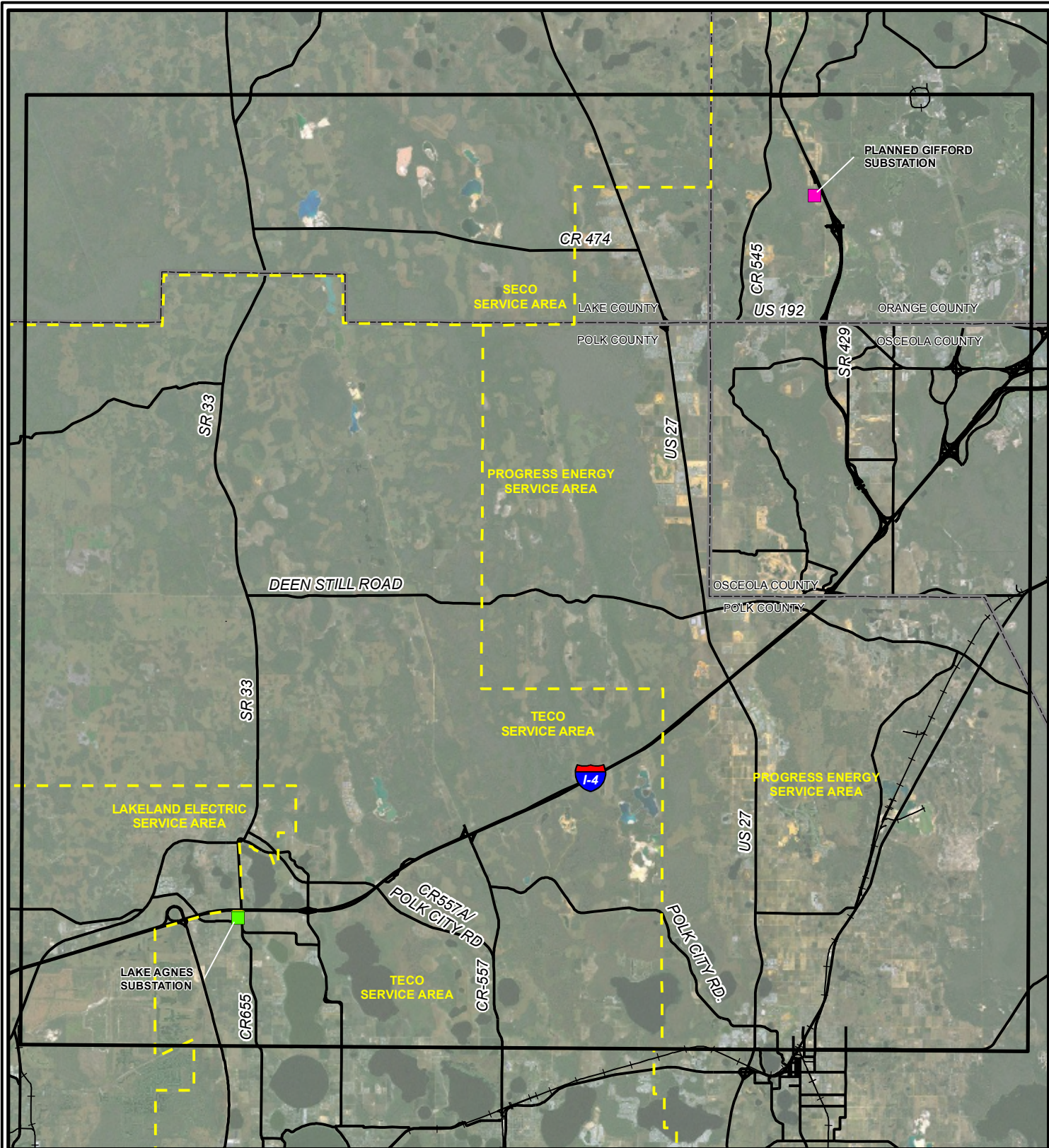
1.0 PROJECT OVERVIEW

1.1 Project Introduction

Florida Power Corporation, dba Progress Energy Florida, Inc. (PEF), and Tampa Electric Company (TECO) are submitting this joint application to obtain certification for the Lake Agnes to Gifford 230-kilovolt (kV) transmission line corridor under the Florida Transmission Line Siting Act (TLSA), Sections 403.52 through 403.5365, Florida Statutes (F.S.), and Chapter 62-17, Part II, Florida Administrative Code (F.A.C.). The TLSA provides for the centralized and coordinated permitting of 230-kV and larger transmission lines which cross county boundaries and are longer than 15 miles in length. Certification under the TLSA is the sole license of the state of Florida and any non-federal agency for the approval of the location of the transmission line corridor and the construction and maintenance of the transmission line. Certification under the TLSA does not convey any property interests to PEF or TECO.

PEF and TECO are both committed to providing safe, reliable, and affordable energy to their customers. Working together, the utilities are investing in a project that will help ensure a reliable supply of electricity to homes, schools, and businesses in the growing community. The joint application will seek a joint certification that will allow the utilities to design, construct, and place into operation the 230-kV transmission line that will be independently maintained by the utilities based on existing service territory boundaries (see Figure 1.1-1).

The Lake Agnes to Gifford transmission line will consist of a single circuit 230-kV transmission line extending from TECO's existing Lake Agnes Substation in Polk County, Florida to PEF's planned Gifford Substation in Orange County, Florida (see Figure 1.1-2). The preferred corridor will traverse portions of Polk, Osceola, and Orange Counties with corridor widths ranging from 500 feet (ft) up to 1 mile. The final width of acquired rights-of-way (ROW) will generally not exceed 100 ft, depending upon adjacent land uses, structures and span lengths utilized. Portions of existing transmission ROW that range up to approximately 145 ft, may also be utilized for co-location opportunities. Once property interests have been acquired for the project, the corridor boundaries will narrow to the final acquired ROW and the remaining certified corridor will have no further legal significance to this certification.



LEGEND

- Study area
- County boundaries
- Existing substation
- Planned substation
- Service territory
- Railroads
- Major roads

REFERENCE

1. Major roads - Florida Department of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Electrical service area information - TECO, PEF, Lakeland Electric, SECO, and OUC; 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

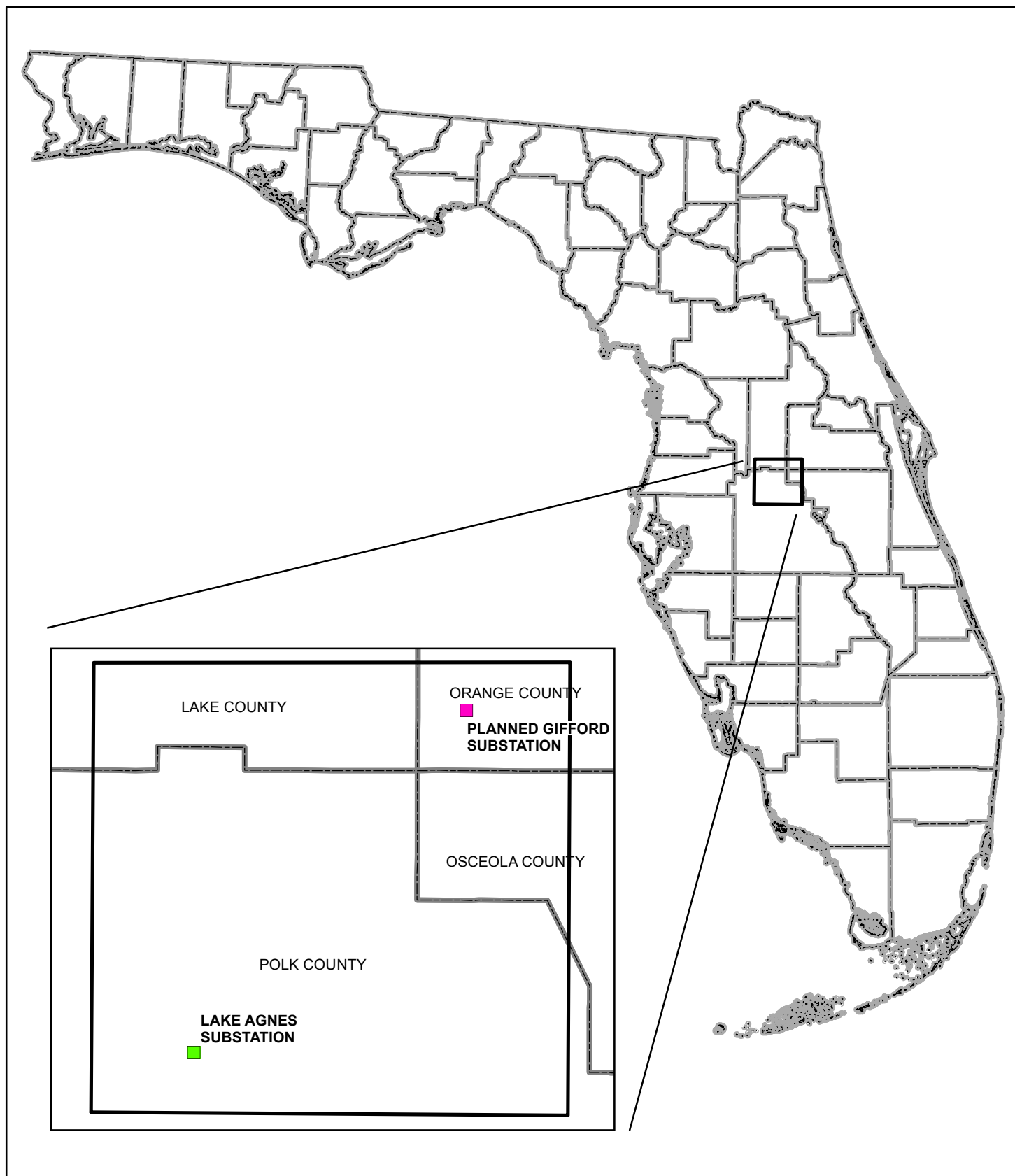
TITLE

STUDY AREA, SERVICE AREAS, AND EXISTING AND PLANNED SUBSTATION LOCATIONS



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GIS	JWT	12/3/2007	
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REVIEW	MM	12/3/2007	

1.1-1



LEGEND

- | | |
|--|---|
|  Study area |  Existing substation |
|  County boundaries |  Planned substation |

REFERENCE

- County boundaries - US Census Bureau, 2007.



PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230KV JOINT TRANSMISSION LINE PROJECT

TITLE

LOCATION OF PROJECT AREA



PROJECT No. 073-89532			SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	1.1-2	
GIS	JWT	12/3/2007		
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REVIEW	MM	12/3/2007		

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

The Lake Agnes to Gifford transmission line project does not propose to certify intermediate or terminal substations.

The length of the preferred corridor (measured along the center line) is approximately 27.5 miles from end point to end point (see Figure 1.1-3), with approximately 10.5 mile in TECO's service territory and approximately 17 miles in PEF's service territory. The corridor contains various existing linear facilities, including existing road and utility ROW, parts of which may be used for the Lake Agnes to Gifford transmission line. The availability of these existing linear facilities and the potential for co-location were important factors in the selection of the preferred corridor.

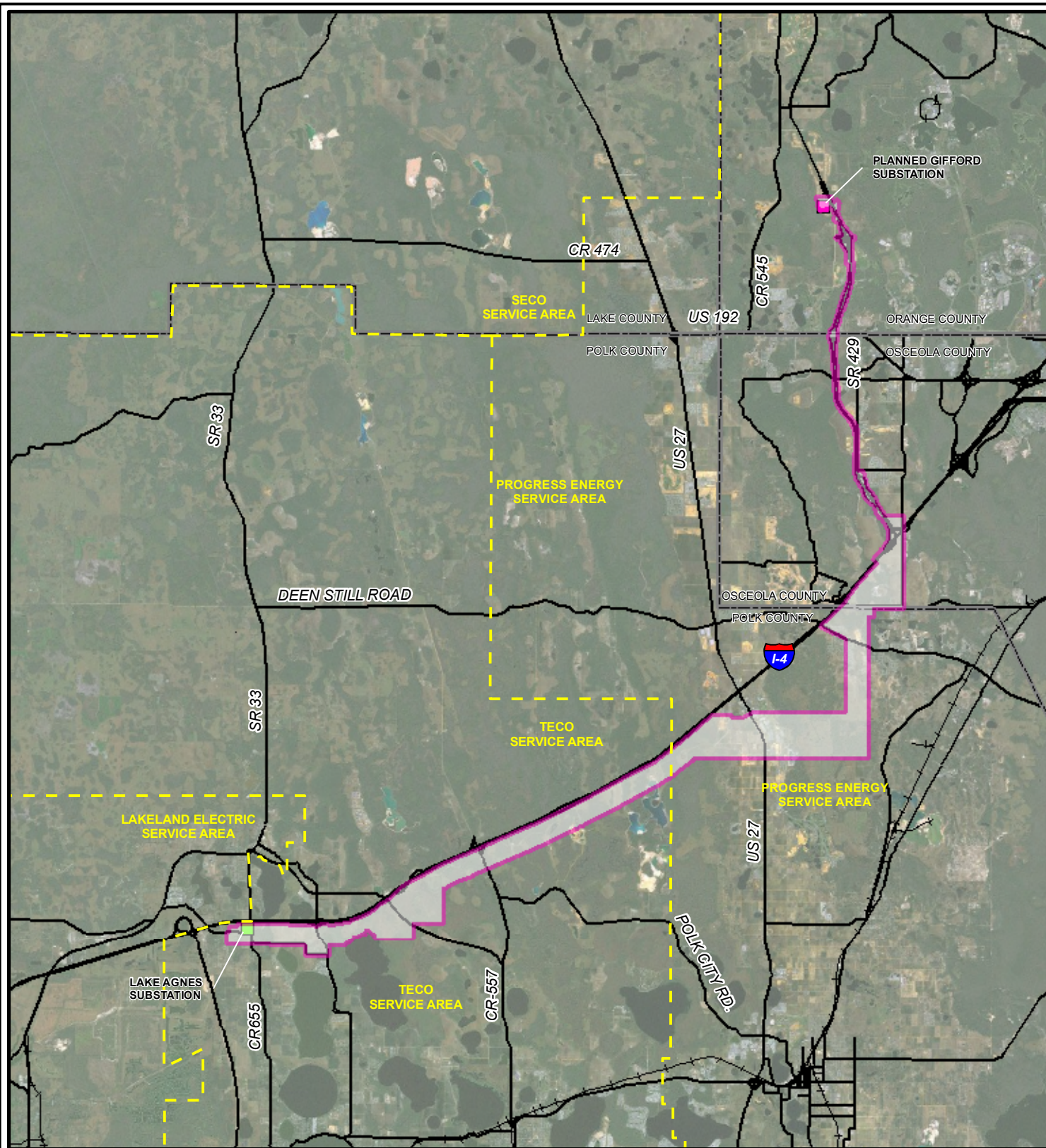
The PEF planned Gifford substation is currently in the design and permitting phases. The substation will be permitted separately from this TLSA process through local government and regulatory agency permitting.

1.1.1 Need for the Project

Pursuant to Section 403.537, F.S., petition for a determination of need for the Lake Agnes to Gifford 230-kV transmission line was submitted to the Florida Public Service Commission (FPSC) on August 1, 2007. The FPSC held a public hearing on the submitted petition on September 12, 2007 and a Final Order was obtained from the FPSC on September 26, 2007. The FPSC determined that the Lake Agnes to Gifford transmission line is needed to be in service by June 2011. A copy of the Final Order is provided in Appendix A. For informational purposes only, a summary of the basis of the need for the project is provided in the following paragraphs.

The Florida Reliability Coordinating Council (FRCC) coordinates electrical transmission planning studies and reliability assessment activities amongst the electric utilities in peninsular Florida. Their function is to coordinate, assess and ensure continued compliance of the region's bulk electric system (transmission grid) to the reliability standards established by the North American Electric Reliability Corporation (NERC). The Florida Central Coordinated Study (FCCS) and the subsequent FCCS Re-Study were conducted by the FRCC and numerous member utilities in accordance with the NERC Reliability Planning Standards. The FCCS Re-Study identified transmission limitations on the existing 230-kV transmission network between the Polk County area and the Greater Orlando area.

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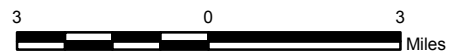


LEGEND

- Preferred Corridor
- County boundaries
- Existing substation
- Railroads
- Planned substation
- Major roads
- Service territory

REFERENCE

1. Major roads - Florida Department of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Electrical service area information - TECO, PEF, Lakeland Electric, SECO, and OUC; 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

PREFERRED CORRIDOR ALIGNMENT



PROJECT No. 073-89532			SCALE AS SHOWN	REV. 0
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LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

The FCCS Re-Study report identified and recommended a group of projects required between 2008 and 2011 to resolve the current transmission capacity concerns and accommodate the load growth in the Central Florida region. The Lake Agnes to Gifford project was selected as the most cost-effective and efficient means to both increase the capability of the existing 230-kV network and serve the increasing load and customer base in the Central Florida region.

The benefits that will result from the 230-kV electrical connection between the Lake Agnes to Gifford substations include:

- Provide additional transmission transfer capability along the I-4 corridor to move electricity generated in the Polk County region to load centers in the Greater Orlando area in a reliable manner consistent with standards established by the NERC, FRCC, and other applicable regulatory agencies; and
- Serve the increasing load and customer base in the projected service area.

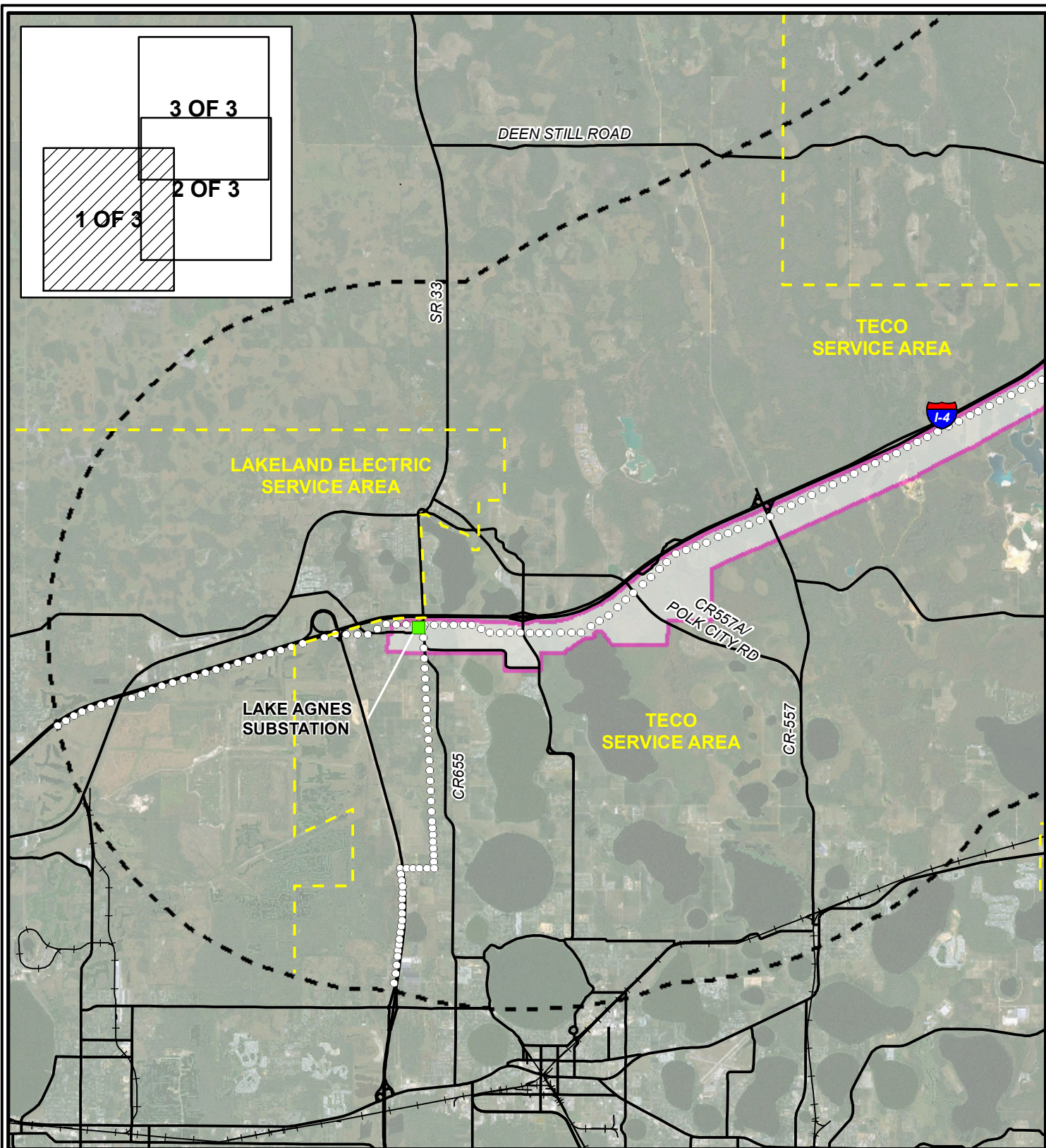
Overall, the proposed transmission line will assure the economic well-being of the citizens of the state of Florida by serving projected new electric load in the region, and improving the region's electric reliability by minimizing exposure to outages on the transmission system. The line is feasible to construct and provides the most cost-effective solution to addressing the need for the project in a manner that is consistent with NERC and FRCC Reliability Standards.

1.2 Corridor Location and Layout

The preferred corridor for the Lake Agnes to Gifford transmission line is presented in Figure 1.2-1 at a scale of 1:126,720, or 1 inch equals 2 miles. Also shown are major geographical features, including roads, and any existing electric transmission lines of 115 kV or greater that are located within 5 miles of the preferred corridor. As presented in the figure, there are no 115 kV lines within 5 miles of the preferred corridor. The preferred corridor is also presented on aerial photographs in Attachment 2-1 of Appendix B. The preferred corridor location on maps other than those in Appendix B is approximate as a result of map scale and graphic accuracy limitations.

1.3 Transmission Line and Road Design Characteristics

The Lake Agnes to Gifford transmission line will be constructed using single-shaft tubular steel or spun concrete structures, with the capability of accommodating an additional 230-kV circuit. Typical

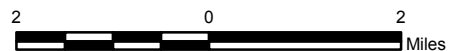


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor
- Five mile buffer
- Existing 230 kV

REFERENCE

1. Major roads - Florida Department of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Electrical service area information - TECO, PEF, Lakeland Electric, SECO, and OUC; 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.

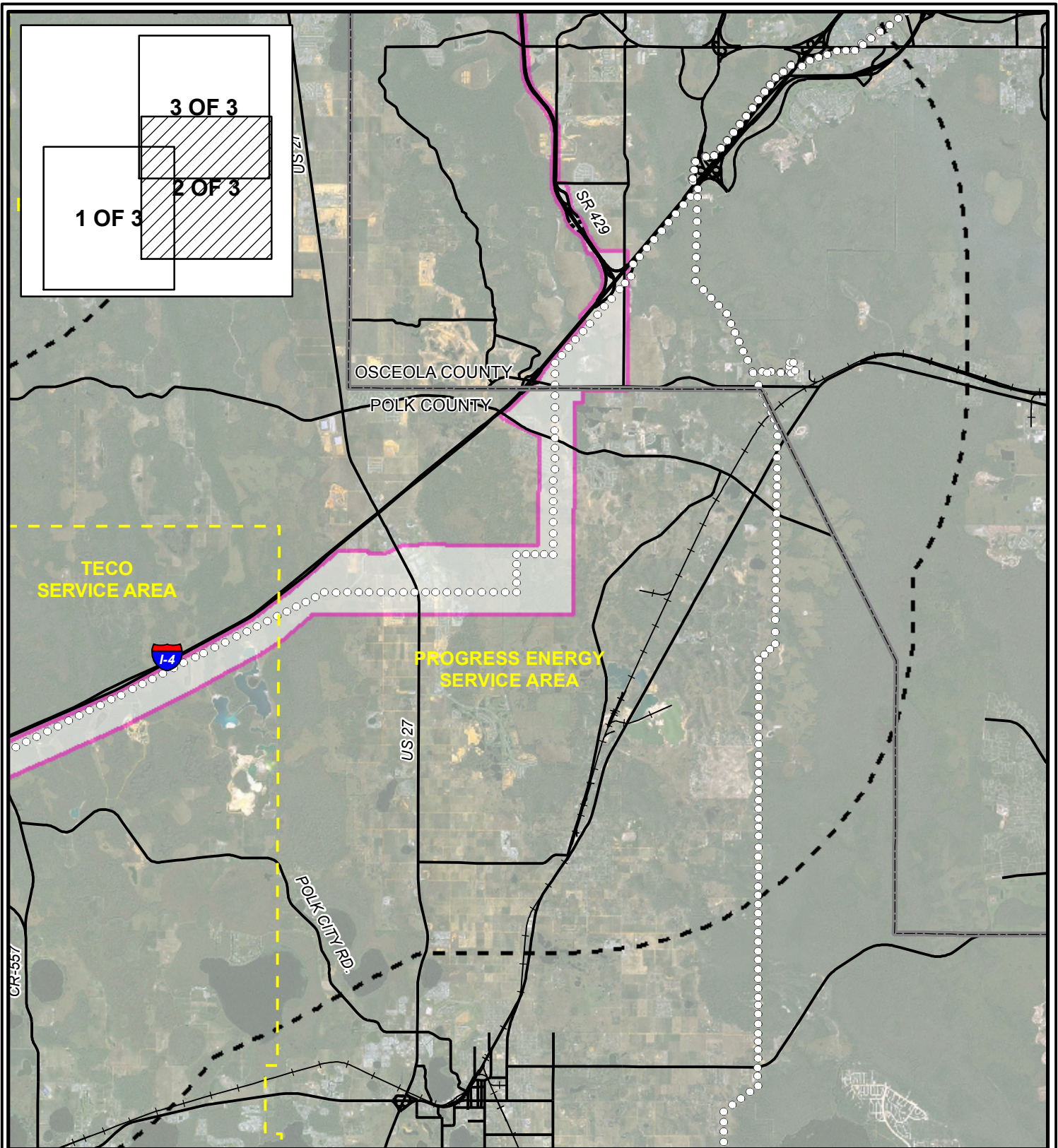


PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE
**PREFERRED CORRIDOR LOCATION AND
EXISTING TRANSMISSION LINES GREATER
THAN 115kV WITHIN 5 MILES OF THE CORRIDOR**



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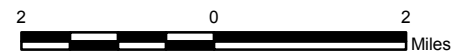


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor
- Five mile buffer
- Existing 230 kV

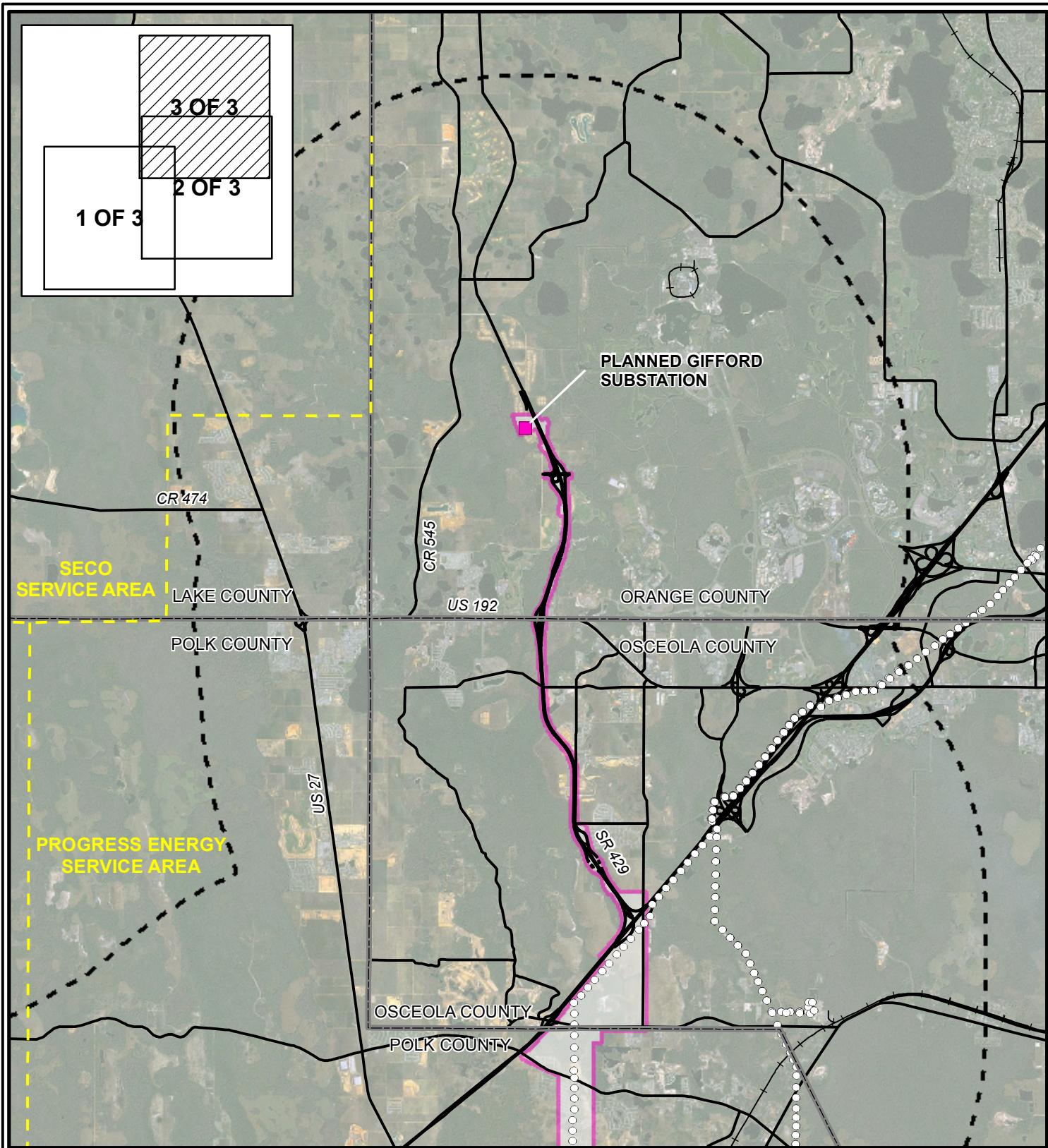
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4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE PREFERRED CORRIDOR LOCATION AND EXISTING TRANSMISSION LINES GREATER THAN 115kV WITHIN 5 MILES OF THE CORRIDOR			
PROJECT No. 073-89532		SCALE AS SHOWN	REV. 0
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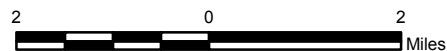


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor
- Five mile buffer
- Existing 230 kV

REFERENCE

1. Major roads - Florida Department of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Electrical service area information - TECO, PEF, Lakeland Electric, SECO, and OUC; 2007.
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TITLE PREFERRED CORRIDOR LOCATION AND EXISTING TRANSMISSION LINES GREATER THAN 115kV WITHIN 5 MILES OF THE CORRIDOR			
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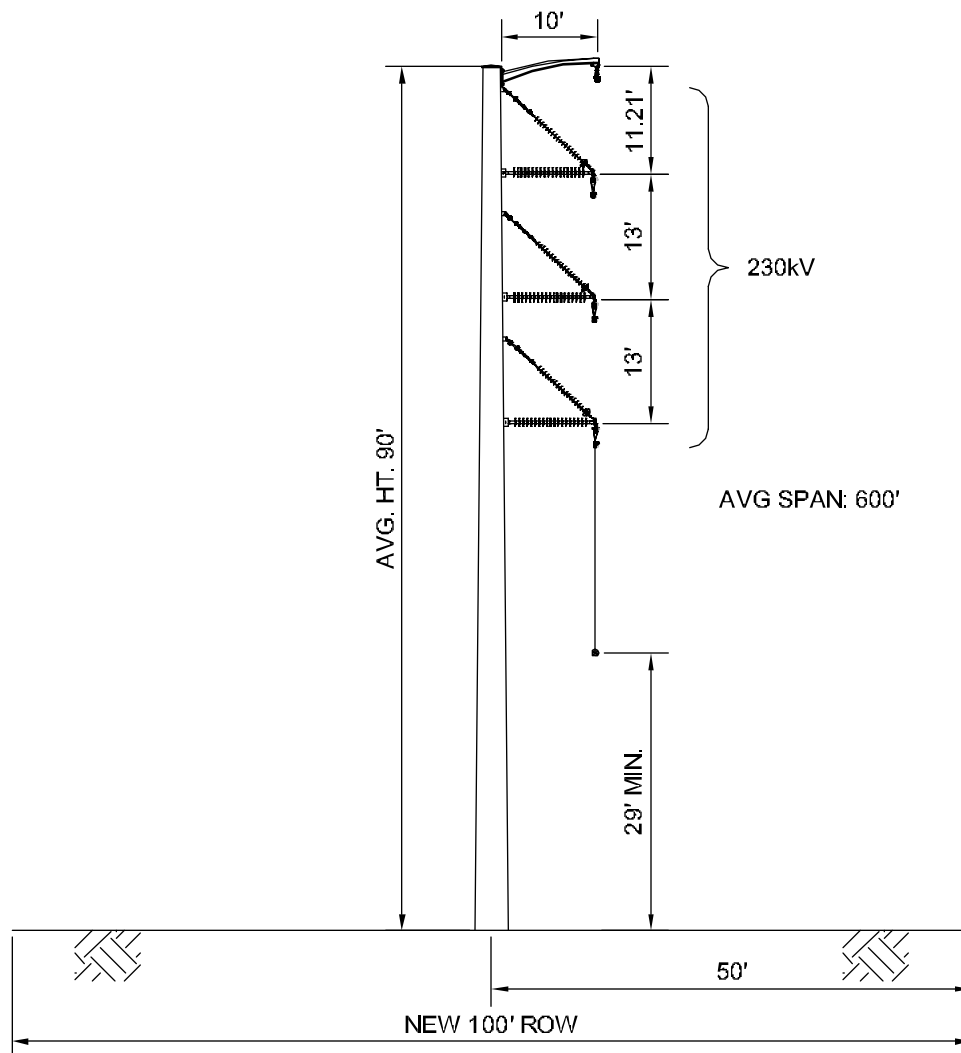
structure configurations anticipated for use on the transmission line are shown in Figure 1.3-1 through Figure 1.3-4. The tangent structures can be either directly embedded or installed on drilled pier foundations, with angle and dead-end structures requiring a drilled pier foundation. Structures other than those shown may be required to accommodate specific features such as streams, major road intersections and highway crossings, other transmission lines, or other site-specific engineering considerations.

The conductor is anticipated to be a two conductor bundle 954 Aluminum Conductor Steel Support/Trapezoidal Wire (ACSS/TW) “Cardinal.” The maximum normal and emergency conductor operating temperature will be 180°C for normal operation and 200°C for emergency operation conditions. The typical conductor configuration, insulators, and hardware are shown in Figure 1.3-5. The conductor profiles for the typical structure configurations are shown in Figure 1.3-6.

The conductors will be attached to the structures with braced line post or V-string insulators. The braced line post arrangement is a compressed construction design which minimizes the amount of ROW needed. The V-string insulator design allows longer span lengths due to the increased strength of this assembly over the standard braced line post arrangement. Advances in strength capability of the braced line post may allow it to be used in lieu of the V-string assembly and will be determined at the time of detailed design.

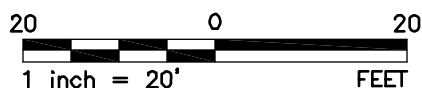
The typical span lengths between structures will range from approximately 500 ft to 700 ft for the braced line post structures and 700 ft to 1,000 ft for the V-string structures. The typical structure heights will range from approximately 85 ft to 175 ft depending upon site-specific conditions. The individual span lengths will be based on the topography of the specific route, the location of the existing structures, the width of the ROW, and other transmission engineering design parameters.

Although the vertical clearance of the transmission line will vary along the corridor, in all instances the transmission line will meet the requirements of the National Electric Safety Code (NESC) (Institute of Electrical and Electronics Engineering, Inc, approved April 2006) and will have a minimum clearance above the ground of 23 ft. Clearance will also provide for operational requirements of regulatory agencies.



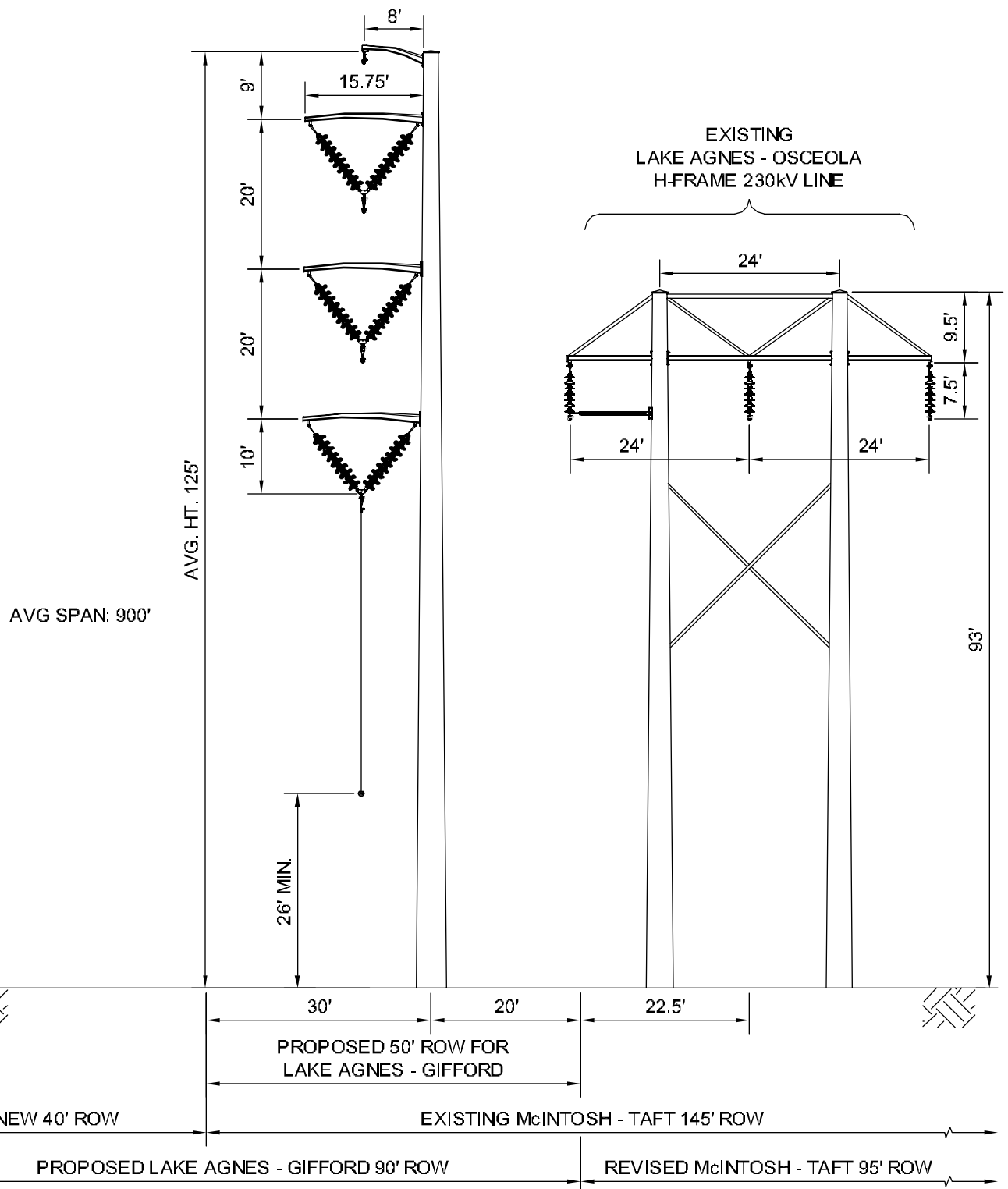
NOTE:

1. FOUNDATION TO BE EITHER DIRECT EMBEDDED POLE OR DRILLED PIER.

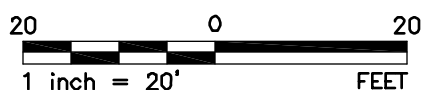


PROJECT					
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY					
LAKE AGNES - GIFFORD					
230kV JOINT TRANSMISSION LINE PROJECT					
TITLE					
TYPICAL TANGENT STRUCTURE ON NEW EASEMENT					
PROJECT No.		073-89532	FILE No.		D73-89532A1.3-1
DESIGN	RLG	10/5/2007	SCALE	AS SHOWN	REV. 0
CADD	SAT	10/5/2007	1.3-1		
CHECK	KK	12/3/2007			
REVIEW	MM	12/3/2007			





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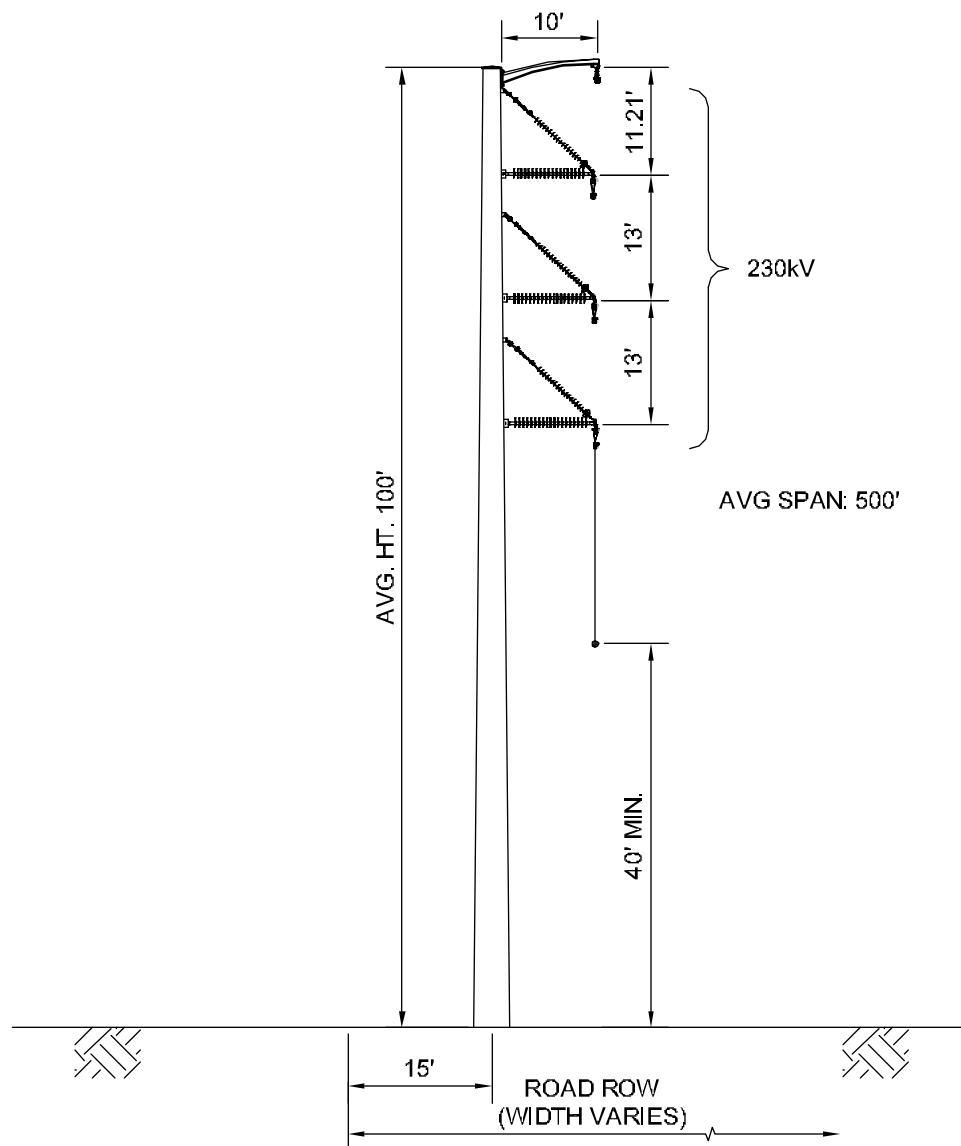


PROJECT	PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES - GIFFORD 230KV JOINT TRANSMISSION LINE PROJECT
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TITLE	TYPICAL TANGENT STRUCTURE PARALLEL TO EXISTING LAKE AGNES - OSCEOLA 230kV LINE
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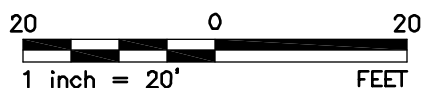


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CADD	SAT 10/5/2007	1.3-2	
CHECK	KK 12/3/2007		
REVIEW	MM 12/3/2007		

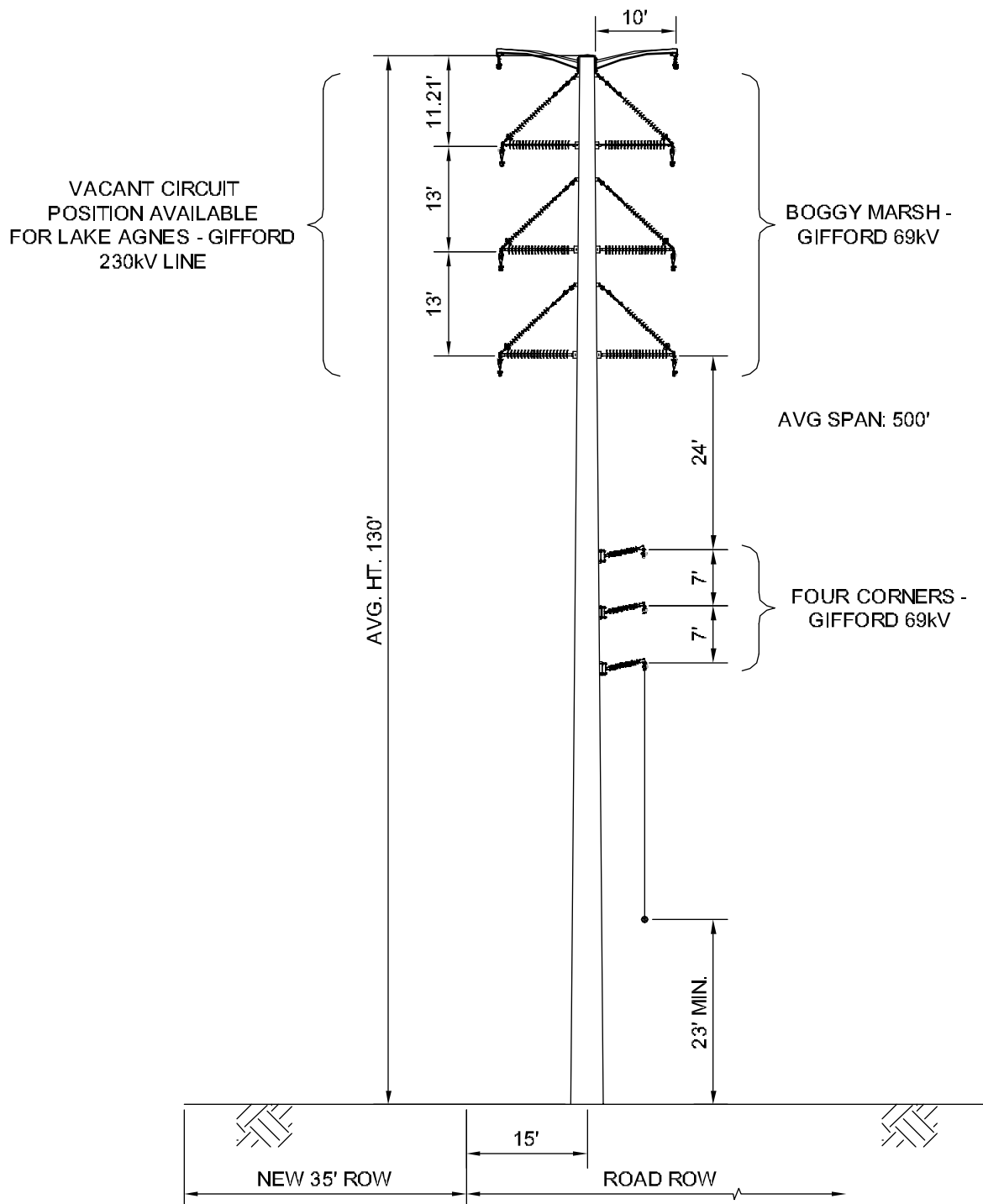


NOTE:

1. FOUNDATION TO BE EITHER DIRECT EMBEDDED POLE OR DRILLED PIER.

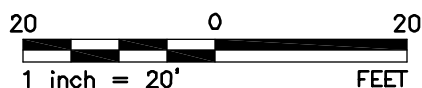


PROJECT					
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY					
LAKE AGNES - GIFFORD					
230KV JOINT TRANSMISSION LINE PROJECT					
TITLE					
TYPICAL TANGENT STRUCTURE ON ROAD RIGHT-OF-WAY					
 Golder Associates Jacksonville, Florida		PROJECT No.		073-89532	
		DESIGN		RLG 10/5/2007	
		CADD		SAT 10/5/2007	
		CHECK		KK 12/3/2007	
		REVIEW		MM 12/3/2007	
		FILE No.		073-89532A1.3-3	
		SCALE		AS SHOWN	
		REV.		0	
				1.3-3	



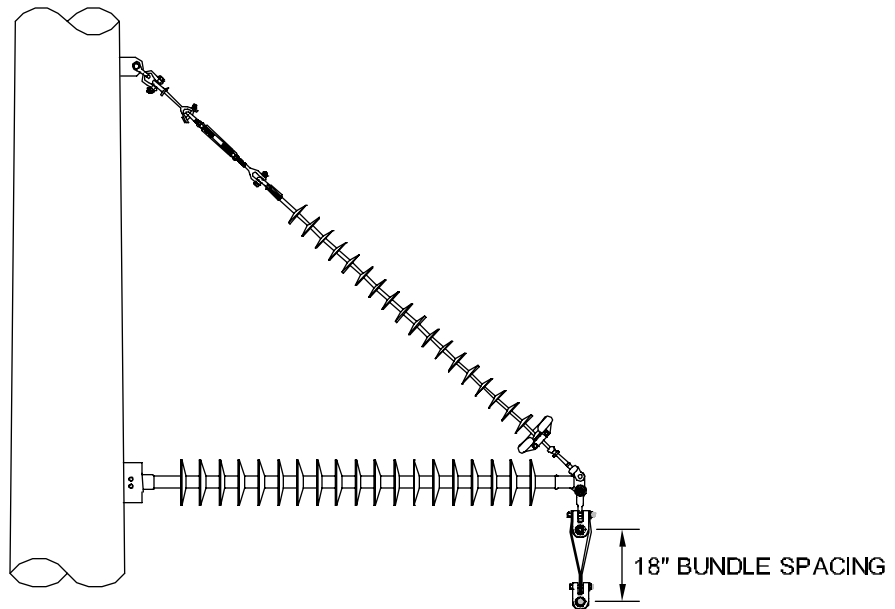
NOTES:

1. FOUNDATION TO BE EITHER DIRECT EMBEDDED POLE OR DRILLED PIER.
2. STRUCTURE TO BE INSTALLED IN 2008-2009 AS PART OF A SEPARATE PEF PROJECT TO CONSTRUCT BOGGY MARSH - GIFFORD 69kV LINE AND FOUR CORNERS - GIFFORD 69kV LINE.



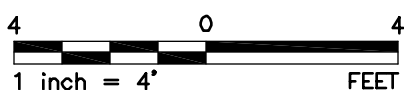
PROJECT					
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY					
LAKE AGNES - GIFFORD					
230kV JOINT TRANSMISSION LINE PROJECT					
TITLE					
EXISTING TANGENT STRUCTURE ON ROAD RIGHT-OF-WAY					
PROJECT No.		073-89532	FILE No.		073-89532A1.3-4
DESIGN	RLG	10/5/2007	SCALE	AS SHOWN	REV. 0
CADD	SAT	10/5/2007	1.3-4		
CHECK	KK	12/3/2007			
REVIEW	MM	12/3/2007			





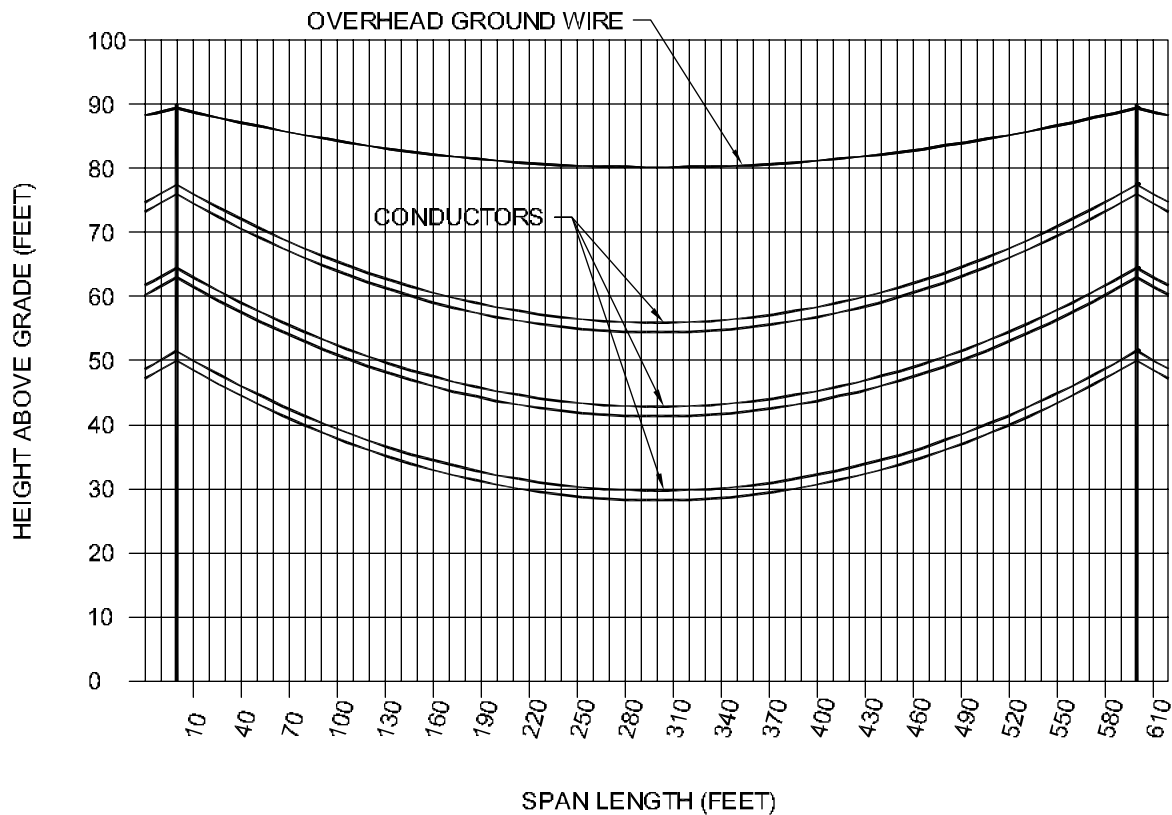
NOTE:

1. TYPICAL INSULATOR ASSEMBLY SHOWN, OTHERS WILL BE REQUIRED BASED ON STRENGTH REQUIREMENTS.



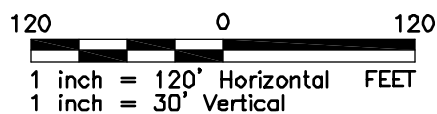
PROJECT					
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY					
LAKE AGNES - GIFFORD					
230kV JOINT TRANSMISSION LINE PROJECT					
TITLE					
TYPICAL 230kV TANGENT INSULATOR ASSEMBLY					
PROJECT No.		073-89532	FILE No.		073-89532A1.3-5
DESIGN	RLG	10/5/2007	SCALE	AS SHOWN	REV. 0
CADD	SAT	10/5/2007	1.3-5		
CHECK	KK	12/3/2007			
REVIEW	MM	12/3/2007			





NOTES:

1. THIS PROFILE ASSUMES A SPAN LENGTH OF 600' AND POLE HEIGHTS 90' ABOVE GRADE. MIDSPAN CLEARANCES ALONG THE LINE WILL VARY DEPENDING ON POLE HEIGHTS AND SPAN LENGTHS BETWEEN STRUCTURES.
2. CONDUCTORS SHOWN AT MAXIMUM CONDUCTOR DESIGN TEMPERATURE OF 392° F.
3. OVERHEAD GROUND WIRE SHOWN AT MAXIMUM CONDUCTOR DESIGN TEMPERATURE OF 120° F.



PROJECT					
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES - GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT					
TITLE					
CONDUCTOR PROFILE FOR TYPICAL 600' SPAN ON 90' TANGENT STRUCTURE					
PROJECT No.		073-89532	FILE No.		073-89532A1.3-6
DESIGN	RLG	10/5/2007	SCALE	AS SHOWN	REV. 0
CADD	SAT	10/5/2007	1.3-6		
CHECK	KK	12/3/2007			
REVIEW	MM	12/3/2007			



Existing roadways, access roads, and structure pads will be used for construction and maintenance access to the transmission line, wherever practicable. Where the new transmission line will be constructed within existing transmission ROW, improvements to the associated access roads and/or pads, will be made depending on the status of the existing conditions. Where adequate access roads or structure pads do not exist, new roads and pads will be constructed. These roads will be unpaved with a top elevation above expected seasonal high water and a typical road surface width of 16 ft. Figure 1.3-7 and 1.3-8 presents a plan and profile view of a typical access road and typical structure pad.

No new bridges are anticipated to be constructed for the Lake Agnes to Gifford transmission line project.

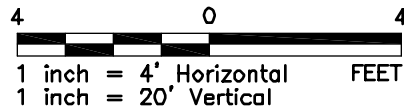
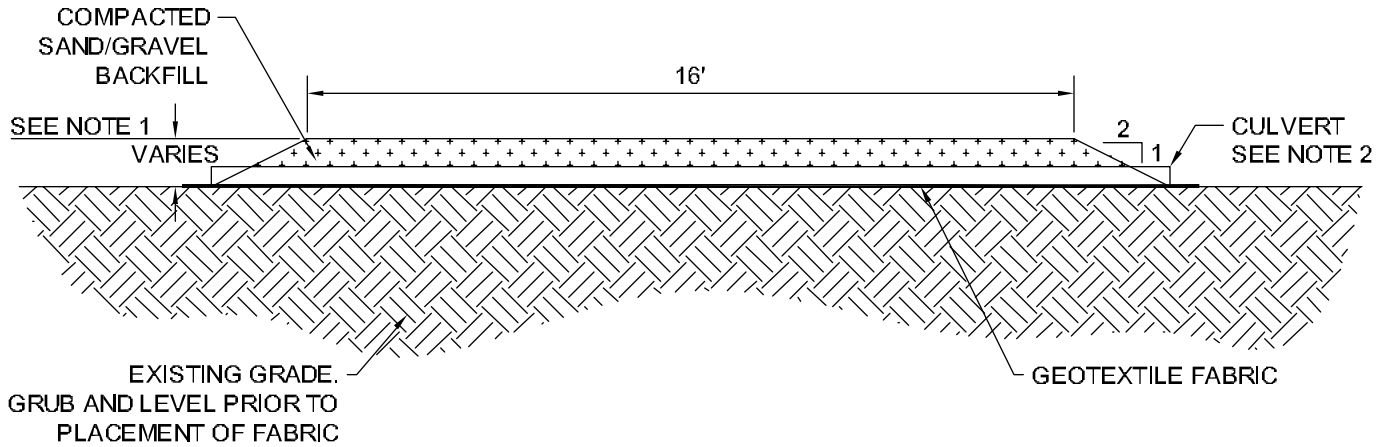
1.4 Proposed Intermediate Substations

No new intermediate substations are proposed for the Lake Agnes to Gifford transmission line project.

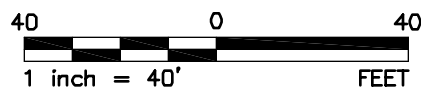
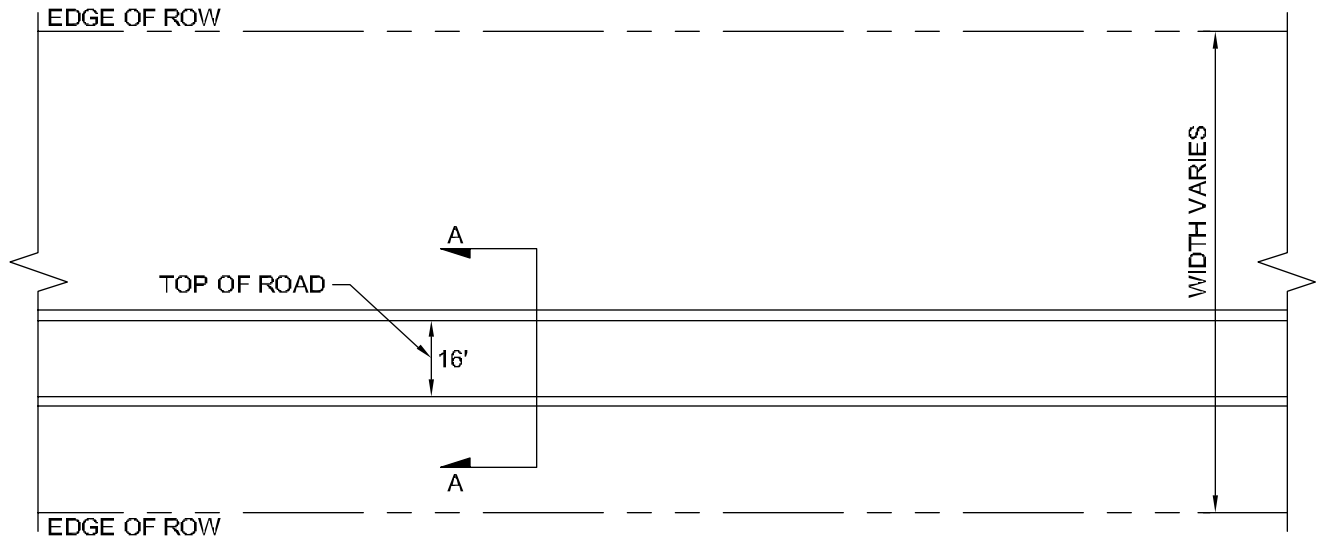
1.5 Cost Projections

Cost projections for the transmission line are based on preliminary design data and estimated costs. The cost projections are based on comparable lines of similar voltage constructed in the region along with average real estate costs from Polk, Osceola, and Orange Counties. The actual costs for the transmission line will depend upon the final location of the ROW within the corridor, line length, structure configuration, the number and type of structures, mitigation costs, costs of ROW, and other site-specific conditions. The exact location, number, and types of structures needed will be determined following certification of the corridor and selection of the ROW.

The estimated per-mile cost for transmission line construction, including ROW acquisition, ROW clearing, access road construction, mitigation, and line installation, is approximately \$2.9 million per mile, or a total construction cost of approximately \$78.5 million.



SECTION A-A



PLAN VIEW

NOTE:

1. TOP OF ROAD SET 2 FEET ABOVE SEASONAL HIGH WATER LINE.
2. SPACING, DIAMETER AND LENGTH OF CULVERTS AS REQUIRED TO MAINTAIN FLOW. A MINIMUM OF 2 FEET OF COVER IS REQUIRED OVER THE CULVERT.

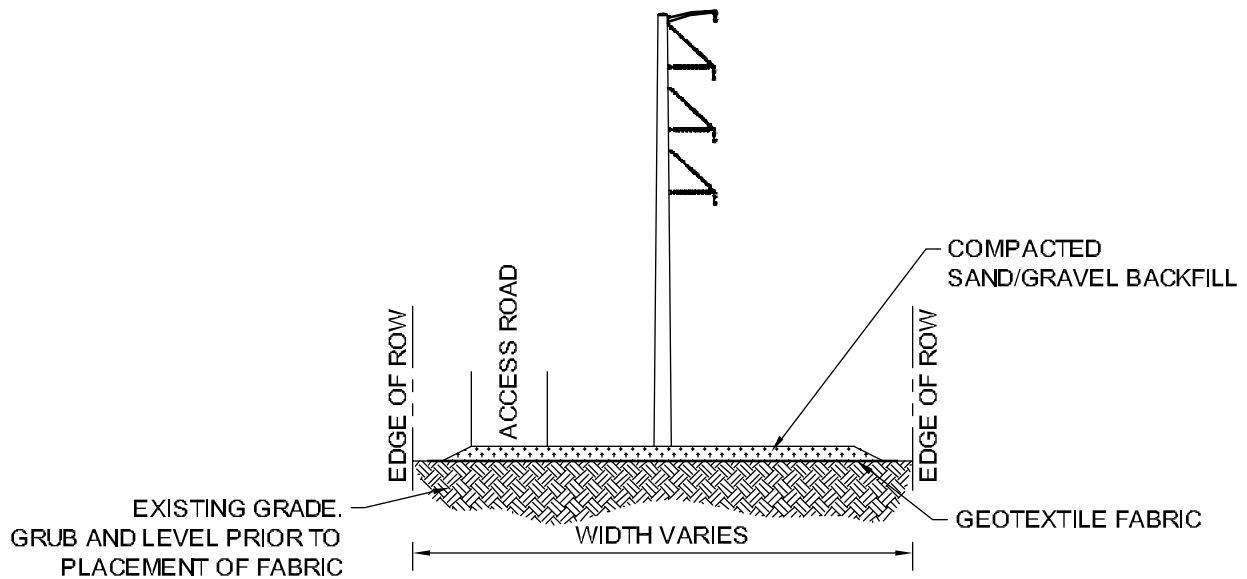
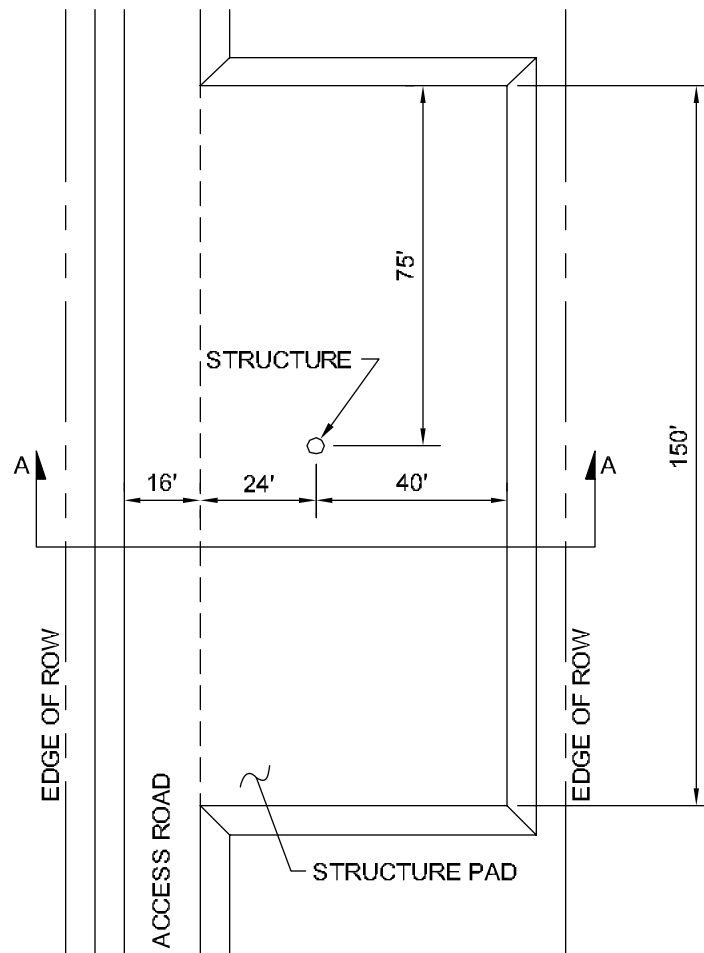
PROJECT **PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES - GIFFORD
230KV JOINT TRANSMISSION LINE PROJECT**

TITLE

TYPICAL ACCESS ROAD

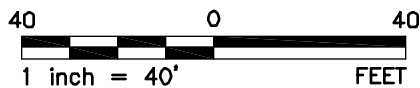


PROJECT No.	073-89532	FILE No.	073-89532A1.3-7
DESIGN	RLG	10/5/2007	SCALE AS SHOWN
CADD	SAT	10/5/2007	REV. 0
CHECK	KK	12/3/2007	1.3-7
REVIEW	MM	12/3/2007	



NOTE:

1. TOP OF ROAD AND PAD SET 2 FEET ABOVE SEASONAL HIGH WATER LINE.
2. ADD CULVERTS AS REQUIRED TO MAINTAIN FLOW. A MINIMUM OF 2 FEET OF COVER IS REQUIRED OVER CULVERTS.



PROJECT **PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES - GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT**

TITLE

**TYPICAL ACCESS ROAD
AND STRUCTURE PAD**



PROJECT No.	073-89532	FILE No.	073-89532A1.3-8
DESIGN	RLG	10/5/2007	SCALE AS SHOWN
CADD	SAT	10/5/2007	REV. 0
CHECK	KK	12/3/2007	
REVIEW	MM	12/3/2007	

1.3-8

2.0 BACKGROUND FEATURES OF THE PREFERRED CORRIDOR

2.1 Corridor Selection

A multidisciplinary siting study was conducted to identify the preferred corridor for the Lake Agnes to Gifford 230-kV transmission line. The overall objective of the corridor selection study was to select a certifiable corridor based on an evaluation of environmental, socioeconomic, engineering, and cost considerations. To this end, a multidisciplinary project team was assembled consisting of the following members:

1. Representatives of PEF's Environmental Services, Transmission Engineering, Real Estate and Legal departments, and Regional Administration;
2. Representatives of TECO's Environmental Services, Transmission Engineering, Real Estate and Legal departments, and Regional Administration;
3. Consultants with expertise in transmission line siting and licensing, ecology, land use planning, and transmission engineering and cost estimating; and
4. PEF and TECO outside Legal counsel.

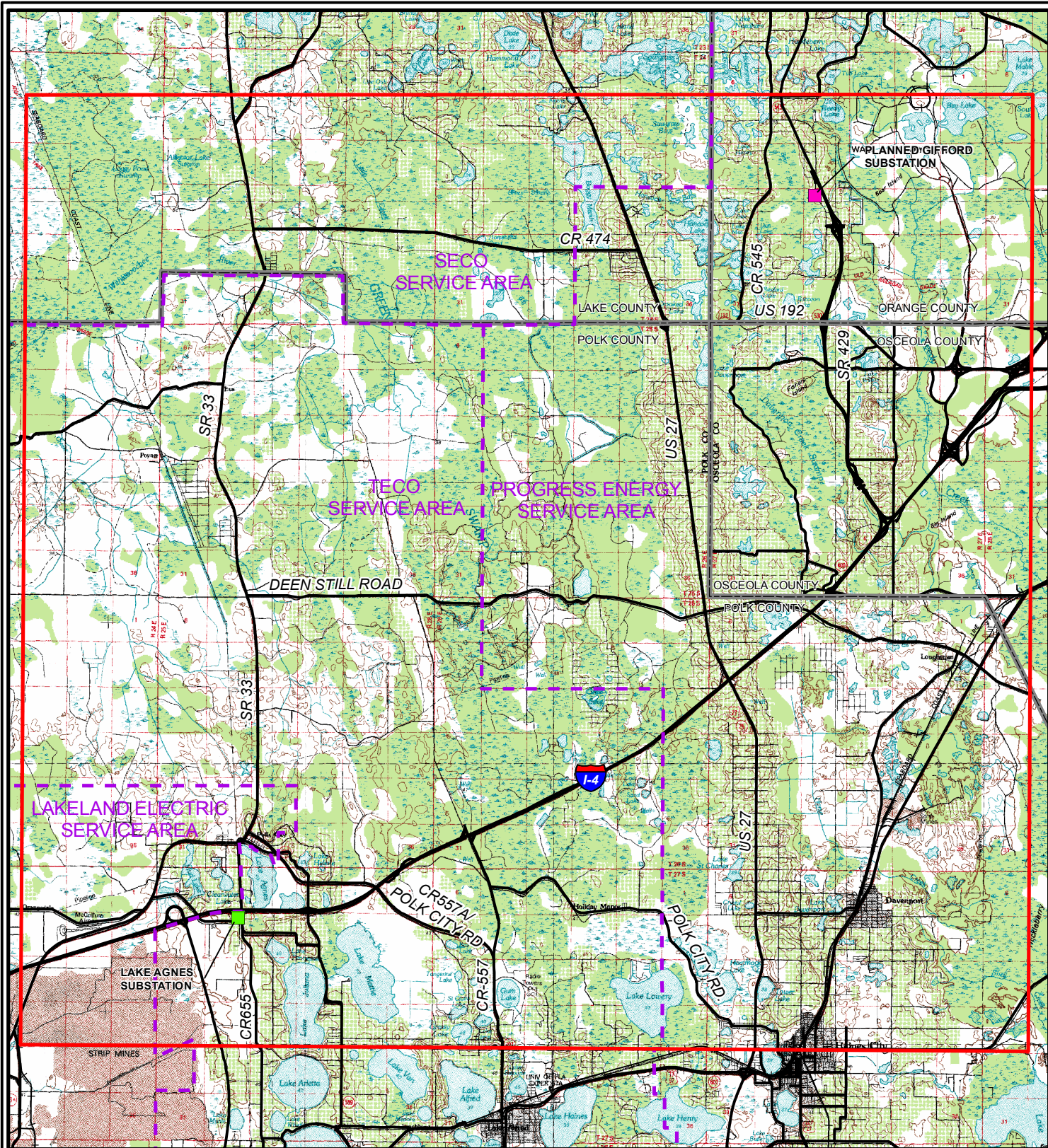
The corridor selection study consisted of a sequential screening and evaluation process, which was conducted in four phases:

1. Phase I: Establish and Define the Project Study Area;
2. Phase II: Regional Screening and Mapping;
3. Phase III: Selection and Evaluation of Candidate Segments; and
4. Phase IV: Selection of the Preferred Corridor.

A summary description of each phase is presented in the following sections.

2.1.1 Phase I: Establish and Define the Project Study Area

The proposed study area for the Lake Agnes to Gifford transmission line project was delineated to meet three main objectives: provide adequate transmission access to the substations, allow for multiple candidate corridors to be identified in multiple directions, and co-locate along public ROW or other existing linear facilities to the maximum extent practicable. The study area was delineated as described below and is presented in Figure 2.1-1.

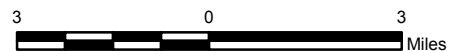


LEGEND

- | | |
|---|--|
| Study area | County boundaries |
| Existing substation | Railroads |
| Planned substation | Major roads |
| Service area boundary | |

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Electrical service area information - TECO, PEF, Lakeland Electric, SECO, and OUC; 2007.
4. Topographic map - USGS 100K Series (Kissimmee, FL; 1987).



PROJECT
 PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
 LAKE AGNES TO GIFFORD
 230kV JOINT TRANSMISSION LINE PROJECT

TITLE

PROJECT STUDY AREA



PROJECT No. 073-89532		SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	
GIS	JWT	12/3/2007	
CHECK	KK	12/3/2007	
REVIEW	MM	12/3/2007	

2.1-1

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

- North: The northern boundary of the study area is approximately 3 miles north of the planned Gifford substation in Orange County and extends west into Lake County, Florida;
- South: The southern boundary of the study area is approximately 4 miles south of the Lake Agnes substation, in Polk County and extends east into Osceola County, Florida;
- East: The eastern boundary of the study area is approximately 4 miles east of Old Lake Wilson Road, in Osceola County and extends north into Orange County, Florida; and
- West: The western boundary of the study area is approximately 6 miles west of State Road (SR) 33 in Polk County and extends north into Lake County, Florida.

2.1.2 Phase II: Regional Screening and Mapping

The objective of the regional screening evaluation was to identify areas of siting opportunities for the placement of a 230 kV transmission line corridor as well as potentially sensitive areas within the boundaries of the study area. Using collected geographic information and the regional screening criteria developed by the multidisciplinary project team, environmental and land use features were identified and inputted into a Geographic Information System (GIS) database. The regional screening criteria are identified in Table 2.1-1 and include land use, environmental and engineering considerations.

**TABLE 2.1-1. LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE
REGIONAL SCREENING CRITERIA**

- | |
|--|
| <ul style="list-style-type: none">• Identification of existing residential areas within the study area based on the Florida Land Use Cover and Forms Classification System (FLUCFCS) 110-130 class definition areas and Land Use/Land Cover maps;• Identification of PEF and TECO existing transmission lines ($\geq 69\text{kV}$) within the study area;• Identification of other electric utility existing transmission lines ($\geq 69\text{kV}$) within the project study area;• Identification of other existing linear facilities (committed major public roads, natural gas pipelines and existing railroads) within the study area;• Identification of parks and conservation lands (utilizing federal, state and local government data sources) within the study area;• Identification of National Register of Historic Places (NRHP) sites within the study area; |
|--|

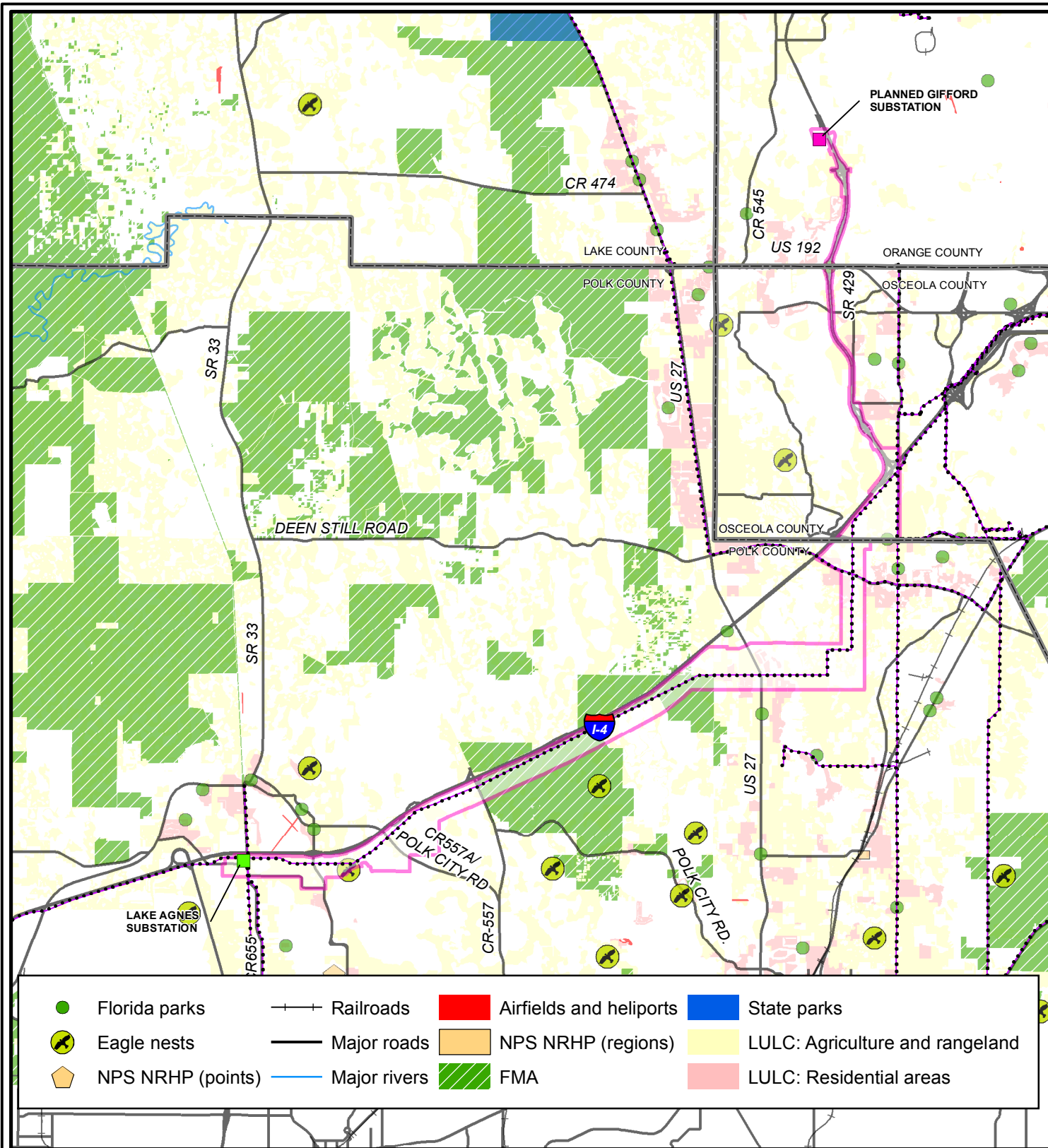
**TABLE 2.1-1. LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE
REGIONAL SCREENING CRITERIA**

- Identification of eagles nest locations based on the Florida Natural Areas Inventory (FNAI) databases within the study area;
- Identification of any licensed public or private airports and helipads registered with Federal Aviation Authority (FAA) and/or Florida Department of Transportation (FDOT) within the study area; and
- Identification of any agriculture and rangelands within the study area based on FLUCFCS 200-330 class definition areas and Land Use/Land Cover maps.

Using the GIS database, a combination of multiple coverages on a single map were developed that provided a visual presentation for identifying potential siting opportunities and sensitive areas within the study area. Figure 2.1-2 presents the regional screening map. The composite map of the study area developed during the regional screening and mapping process was used in the candidate corridor identification process.

2.1.3 Phase III: Selection and Evaluation of Corridor Segments

The objective of this phase of the analysis was to identify corridor segments that can be combined together to form candidate corridors. Corridor segments and candidate corridors were established based on the considerations presented in Table 2.1-2.



- | | | | |
|---------------------|----------------|---------------------------|-----------------------------------|
| ● Florida parks | —+— Railroads | ■ Airfields and heliports | ■ State parks |
| ⦿ Eagle nests | — Major roads | ■ NPS NRHP (regions) | ■ LULC: Agriculture and rangeland |
| ⬡ NPS NRHP (points) | — Major rivers | ■ FMA | ■ LULC: Residential areas |

LEGEND

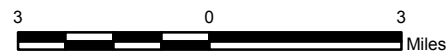
- | | |
|-----------------------|-------------------------------|
| ■ Existing substation | ▭ County boundaries |
| ■ Planned substation | ⋯ Existing transmission lines |
| ▭ Preferred Corridor | |

REFERENCE

1. Major roads - Florida Department Of Transportation; 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Regional screening data - Various federal and state agencies; 2007.

NOTES

1. NPS NRHP - National Park Service National Register of Historic Places
2. FMA - Florida Managed Areas
3. LULC - Land Use Land Cover
4. Existing transmission include lines greater than or equal to 69kV



PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

REGIONAL SCREENING



PROJECT No. 073-89532			SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007		
GIS	JWT	12/3/2007		
CHECK	KK	12/3/2007		
REVIEW	MM	12/3/2007		

2.1-2

**TABLE 2.1-2. LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE
CANDIDATE SEGMENT AND CORRIDOR CRITERIA**

- Maximizing co-location with linear facilities such as existing railroad, transmission line, natural gas pipelines, canals, and public road rights-of-way (particularly arterial and collector roads);
- Maximizing co-location with existing PEF or TECO transmission lines to the maximum extent practicable;
- Minimizing alignment within or adjacent to existing residences and proposed residential developments;
- Following property lines and section lines to minimize the severance of land under common ownership;
- Minimizing new crossings of significant regional resources (i.e., parks, conservation areas, wetlands and surface waters) to the maximum extent practicable;
- Minimizing locations over or adjacent to known threatened or endangered species occurrences;
- Minimizing locations near registered public and private airports consistent with FAA and other applicable state and county regulations;
- Minimizing locations over or adjacent to known significant NRHP archaeological or historic resources; and
- Following previously developed alignments (i.e., natural gas lines and canals) through natural areas.

Using the regional screening map and the corridor segments and corridor criteria, the location of potential candidate corridor were identified. A total of 60 corridor segments were identified that in various combinations created over 1,187 candidate corridors between the Lake Agnes Substation and the planned Gifford Substation. The identified corridor segments and subsequent candidate corridors were then considered for further evaluation.

2.1.4 Phase IV: Selection of the Preferred Corridor

The objective of this phase of the analysis was to select a preferred corridor for the project based on a balancing of ecological and land use resources, evaluating project engineering/safety and cost considerations, and information collected during the public outreach program.

The initial evaluation of candidate corridors consisted of a quantitative measurement of a series of environmental, land use, engineering/safety, and cost criteria. All criteria used in this quantitative evaluation were measurable in terms of actual numbers of units, length or area, and U.S. dollars. Table 2.1-3 presents the quantitative evaluation criteria. Criteria weights were developed by a panel of experts that was comprised of environmental scientists, land use planners, real estate specialists, project managers, and transmission engineers experienced in corridor selection and multidisciplinary aspects of transmission line facilities. The quantitative criteria weights used in the quantitative evaluation were based on the average quantitative criteria scores generated by each disciplinary group of the panel members after discussion and independent weighting by the panel members. Weights were assigned to each criterion to reflect their relative importance to the overall ranking.

**TABLE 2.1-3. LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE
QUANTITATIVE EVALUATION CRITERIA**

- A count of residences in proximity to the corridor segment;
- Area in proximity to the corridor segment that intersects the area of future residential land use designations as identified on adopted local government future land use maps;
- Area in proximity to the corridor segment that intersects the area of major developments identified by the local governments.
- Length of transmission centerline identified as being co-located with existing transmission infrastructure;
- Length of other existing linear facilities (existing and committed roads, existing railroads, and known natural gas pipelines) identified in proximity to the corridor segment;
- A count of parcels (tract[s] or plots of land under common ownership) in proximity to the corridor segment;
- A count of existing and proposed public and existing private schools in proximity to

**TABLE 2.1-3. LAKE AGNES TO GIFFORD – A JOINT TRANSMISSION LINE
QUANTITATIVE EVALUATION CRITERIA**

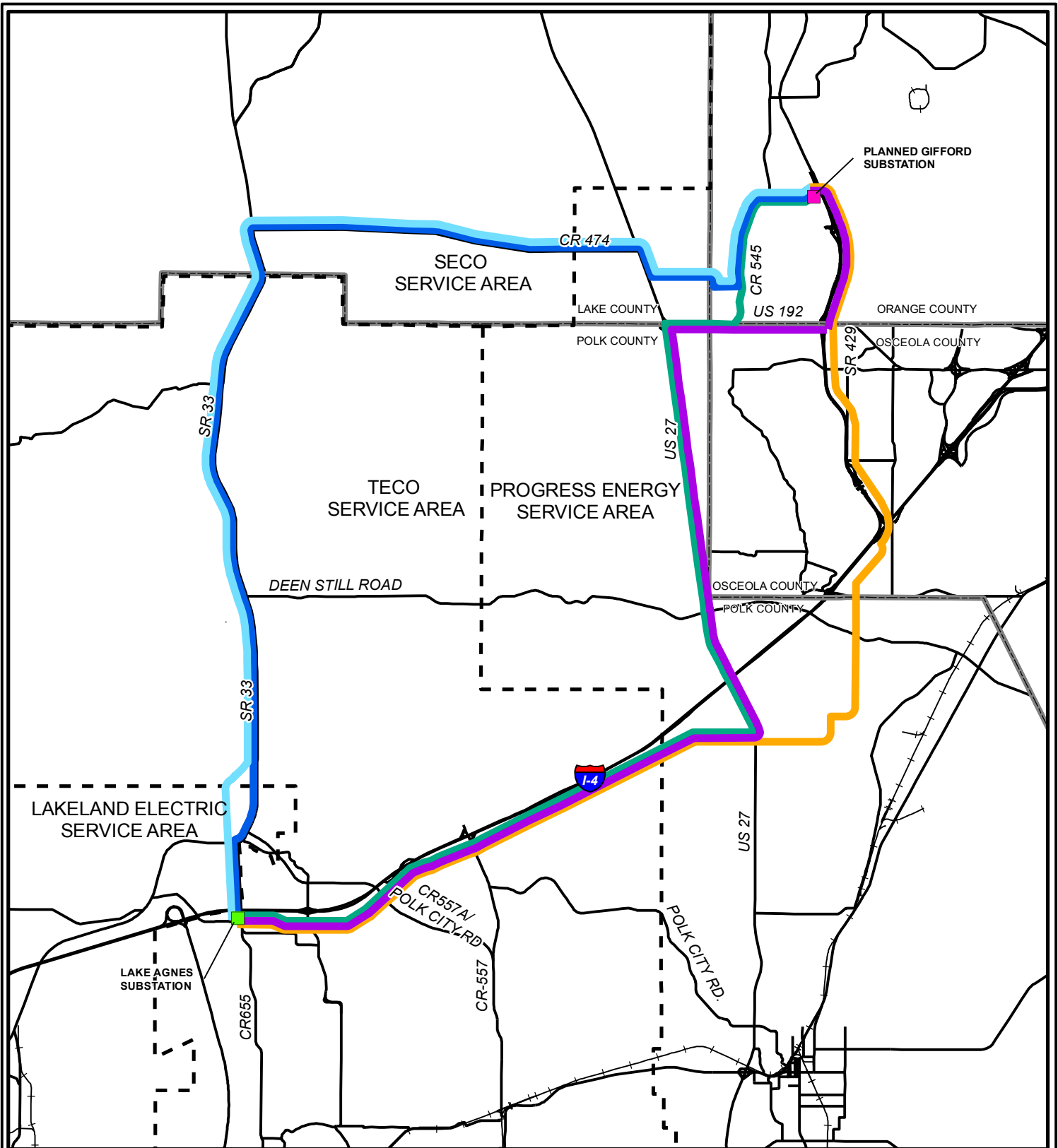
the corridor segment;

- A count of community facilities in proximity to the corridor segment;
- Area of parks and conservation land in proximity to the corridor segment;
- A count of archaeological resource site locations in proximity to the corridor segment;
- A count of historical resources site locations in proximity to the corridor segment;
- A count of protected species (e.g., flora and fauna) locations in proximity to the corridor segment (not including eagle nests);
- A count of eagles nest locations in proximity to the corridor segment;
- Area in proximity to the corridor segment that intersects forested wetland areas;
- Area in proximity to the corridor segment that intersects herbaceous wetland areas; and,
- A U.S. dollar amount of costs to construct the transmission line in proximity to the corridor segment.

* For purposes of the initial quantitative evaluation, corridor segment measurements encompass ¼ mile on either side of the corridor segment centerline.

The quantitative evaluation resulted in the identification of a group of highest ranked candidate corridors that were further evaluated in the qualitative evaluation process. Figure 2.1-3 presents the highest ranked candidate corridors.

A comprehensive evaluation was then conducted on the highest quantitatively ranked candidate corridors. This evaluation included the information collected during each phase of the analysis as well as qualitative information received through state and county agency discussions, public outreach activities and field surveys, as well as design selection decisions, and information provided by PEF and TECO personnel with operational experience within the study area. The result of updated quantitative evaluation and the qualitative evaluation was the selection of the preferred corridor.

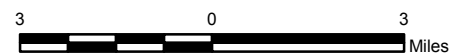


LEGEND

- Existing substation
- Planned substation
- Service area boundary
- County boundaries
- +—+—+— Railroads
- Major roads
- Alternate Corridor 1
- Alternate Corridor 2
- Alternate Corridor 3
- Alternate Corridor 4
- Alternate Corridor 5

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Service area boundaries - TECO, PEF, Lakeland Electric, SECO service area maps; 2007.



PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE ALTERNATIVE CORRIDORS			
PROJECT No. 073-89532		SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	2.1-3
GIS	JWT	12/3/2007	
CHECK	KK	12/3/2007	
REVIEW	MM	12/3/2007	



Boundaries were placed on the preferred corridor resulting in a corridor of variable width to provide PEF and TECO an appropriate amount of flexibility in avoiding or accommodating site-specific constraints and opportunities for selecting the final ROW within the preferred corridor. The preferred corridor selected through the siting process is described in the following subsection. The preferred corridor is shown in Figure 1.1-3 and on aerial photographs at a scale of 1:24,000 in Attachment 2-1 of Appendix B.

2.1.5 Description of the Preferred Corridor

The preferred corridor originates at TECO's existing Lake Agnes Substation, in the proximity of the southwestern corner of the project study area and extends east-northeast approximately 18.9 miles within, adjacent to, or in proximity to the Orlando Utilities Commission (OUC) McIntosh-Taft transmission line ROW, which generally runs parallel to Interstate 4, across Polk and Osceola Counties. The preferred corridor then turns north and crosses Loughman Road (Polk County Road (CR) 54), Old Lake Wilson Road, and Interstate 4, and continues north along the Daniel Webster Western Beltway (SR 429), co-locating in the SR 429 ROW, for approximately 8.6 miles. The preferred corridor then turns west and exits the SR 429 ROW, just north of Western Way and enters into PEF's existing easement, crossing Hartzog Road into the planned Gifford Substation.

The overall length of the preferred corridor is approximately 27.5 miles. The proposed 230 kV transmission line will be planned to minimize disruption to existing utilities within the preferred corridor. The preferred corridor will pass through portions of Polk, Osceola, and Orange Counties. The option of utilizing portions of existing utility and road ROW will assist in minimizing the potential effects of constructing a new transmission line in a new route within the study area.

2.1.5.1 *Existing Utility Corridor*

A significant portion of the proposed Lake Agnes to Gifford 230 kV transmission line corridor parallels and encompasses the existing McIntosh-Taft 230 kV transmission line, which connects the Lakeland Electric McIntosh electrical power plant to the OUC Taft electrical substation, situated just south of the City of Taft, in Orange County. The McIntosh-Taft transmission line was certified as an associated facility when the Lakeland McIntosh electrical generating Unit 3 was certified in 1980 under the Florida Electrical Power Plant Siting Act (PPSA), Chapter 403, Part II, F.S. (PA-74-06). The McIntosh-Taft transmission ROW is approximately 145 ft wide and contains single circuit

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

structures. The Florida Department of Environmental Protection (FDEP) recently issued a PPSA modification order to allow a partial rebuild of this transmission line.

PEF and TECO have discussed with OUC the possibility of locating a portion of the Lake Agnes to Gifford transmission line within the same ROW as the existing McIntosh-Taft transmission line. If there is an agreement to locate a portion of the Lake Agnes to Gifford line within this ROW, there will be a need to revise the existing PPSA site certification for the Lakeland-McIntosh project. Additional land may be required adjacent to this existing ROW to accommodate the proposed Lake Agnes to Gifford transmission line, as discussed in Section 1.1. PEF and TECO believe the most appropriate approach for this revision to the existing McIntosh-Taft certified ROW would be to reduce the width of the affected portion of the PPSA-certified ROW for the McIntosh-Taft line from its approximate 145 ft width to approximately 95 ft in width. The proposed Lake Agnes to Gifford transmission line would be placed in the remaining 50-ft wide portion of that ROW and additional adjacent lands, as required. The portion of the ROW that does not contain the McIntosh-Taft transmission line would then become a portion of the TLSA certified transmission line ROW for the entire PEF-TECO Lake Agnes to Gifford transmission line that is being requested through this application. The remaining portion of the McIntosh-Taft transmission line would continue under its existing, but modified, PPSA certification.

PEF and TECO propose that separate TLSA conditions be developed to address construction and operation of the entire PEF-TECO Lake Agnes to Gifford transmission line to allow ease of administration and compliance with the conditions of certification by the respective permittees and the reviewing agencies.

2.1.5.2 Public Outreach Program

PEF and TECO recognized the need for the public to be informed and involved in the corridor selection process. The primary goals of the public outreach program for the Lake Agnes to Gifford project team were to provide accurate, clear, and timely information to the public on the project, its need, study area conditions, and the required siting and approval process and undertake multiple open house events to provide information and solicit comment. In addition, the project team received input from the public and governmental agencies during the corridor selection process that assisted the project team in conducting the selection process and identifying the preferred corridor.

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

To achieve the goals identified above, the project team first identified interested and involved residents, elected and appointed officials and regulatory agencies (municipal, county, state and federal), homeowners and community/business associations; second, identified and evaluated methods of distributing project information; third, developed project materials for public distribution; fourth, began the distribution process; and finally collected information, comments, and questions from the public.

Stakeholders List

A list of stakeholders was developed that included elected and appointed officials, regulatory agencies, media outlets, and property owners (that included homeowners associations, community/business associations, developers and other utility service providers). Newspapers were also identified based on distribution and service/circulation territories that are within the project study area.

County property appraisers' information for portions of Polk, Osceola, Orange, and Lake Counties assisted in providing property owner information of the approximately 7,900 property owners within a designated area of the highest ranked candidate corridors who were sent a community notification letter.

Information Distribution

Based on the professional experience of PEF, TECO and Golder Associates and its subcontractors, the project team elected the following methods of distributing information to involved and interested members of the public (copies of materials are provided in Appendix C):

- A project factsheet;
- Contact elected and appointed officials and agency representatives;
- Distribute a community notification letter to property owners;
- Establish project web pages (using PEF and TECO company websites);
- Distribute a project survey;
- Publish newspaper advertisements;
- Hold public open house sessions; and

- Operate a toll-free project telephone number.

Project Factsheet

The project factsheet provided project information to stakeholders and the general public. The factsheet contains: project name, need for the project, siting process regulations, project description, the anticipated project schedule, project webpage and toll-free telephone number information, and utility representative contact information.

Contact Elected and Appointed Officials and Agency Representatives

A list of elected and appointed officials and agency representatives at the municipal, county, state and federal levels were identified by the project team. The identified individuals were contacted by representatives of PEF, TECO or their consultants.

Based on requests of counties representatives, the project team met with representatives of Polk, Osceola and Orange Counties to discuss the project. The representatives of the project team met with county representatives to establish an understanding of existing regulatory procedures, to identify potential areas/issues of concern, and to obtain comments concerning ongoing projects within the project study area. The project team provided a description of the TLSA process, the need for the project and the selection process. In return, county representatives provided valuable information involving existing and future projects, and clarified their planned role in the TLSA certification process. Information obtained from discussions with county representatives was taken into consideration during the evaluation process.

Community Notification Letter

Approximately 7,900 property owners, within a designated area of the highest ranked candidate corridors, were sent a community notification letter with a map depicting a number of proposed candidate corridors which the project team had identified based upon the quantitative analysis completed by Golder Associates. In the community notification letter, the public was provided a description of the project, informed of the upcoming public open house sessions, and informed of the project webpage, toll-free project number, and contact information for PEF and TECO.

Project Webpage

Both PEF and TECO have company websites that were used to provide project information to the public. The websites allowed an opportunity for the public to gather information on the project,

obtain mapping information, information on the public open house sessions, obtain and complete a project survey, and provide input on the project if they were unable to attend the open house sessions or otherwise choose not to provide feedback at the open house sessions.

Project Survey

The purpose of the project survey was to gather input from the public on the project. The public was asked to rank a list of quantitative factors, which were identified as important factors based on the project team's past experience with siting and constructing transmission lines. The project team used similar criteria to rank the candidate corridors which were presented to the public. By the public ranking the criteria, the project team was able to gather feedback on what the public believed were the most important criteria to use when selecting a corridor for the transmission line. In addition, the survey asked the public to select a corridor from the highest ranked candidate corridors following the quantitative and preliminary qualitative analyses. This allowed the project team to compare their selections against the comments of the public.

Newspaper Advertisement

Prior to the public open house sessions, the project team advertised the upcoming open house sessions in seven newspapers that service the project study area (i.e., Lakeland Ledger, Winter Haven News Chief, The Reporter, West Orange Times, South Lake Press, Osceola News Gazette, and the Orlando Sentinel).

Public Open House Sessions

A total of three open house sessions were arranged within the project study area. Representatives from PEF, TECO, Golder Associates and their subcontractors were available during the sessions to present the project materials, take questions and provide answers or make arrangements for individuals to get information that was requested during the sessions.

At the open house sessions, individuals were encouraged to sign in (providing name, address, and general contact information) at a welcome station. Attendees were provided a project survey form, a floor plan, and a general questionnaire to obtain comments and information from the session visitors.

Visiting stations were set up to allow individuals to walk through the open house session and gather information about the project and the TLISA siting process. Golder Associates provided visual displays which included:

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

- Project need board (describing the FPSC and TLSA processes);
- An aerial of the overall project study area;
- A map depicting the highest ranked candidate corridors;
- Utility customer service information;
- A typical transmission line structure profile; and
- Map booklets which contained large-scale (24" x 36") aerial enlargements of the highest ranked candidate corridors.

On Thursday August 9, 2007, an open house was held at the Fantasy of Flight in Polk City, Polk County, Florida. Approximately 100 people attended the open house, with 52 individuals signing the contact list. A total of 48 project surveys were filled out and returned to the project team.

On Monday August 13, 2007, and Wednesday August 15, 2007, open houses were held at the Holiday Inn Express and Suites on U.S. Route 192 in south Lake County, Florida. Approximately 24 people attended the open houses with 24 individuals signing the contact list. A total of 16 project surveys were filled out and returned to the project team.

Following the open house sessions, a total of six additional project surveys were submitted through the PEF and TECO project webpages. Therefore, a total of 70 project surveys were received from the public.

Toll-free Project Telephone Number

A toll-free number was established for the Lake Agnes to Gifford project. The number was independent of both PEF and TECO and was managed by Golder Associates on behalf of the utilities. The toll-free number provided a voicemail recording that allowed callers to leave a message in a general message system or specifically for PEF or TECO in two separate messaging systems. The voicemail recording asked callers to leave their name, address or contact information, a detailed question or comment. Callers were informed that a representative from PEF or TECO would return their call within 2 to 4 business days.

As of December 7, 2007, a total of 40 individual telephone calls have been received and responded to from the project toll-free number. The telephone calls and responses were documented by the project team.

In summary, PEF and TECO conducted an extensive public outreach program that identified interested and involved stakeholders; distributed clear, accurate, and informative information on the project and the regulatory process; and obtained valuable input and information from the public. That information provided assistance to the project team in the selection process and identification of a preferred corridor.

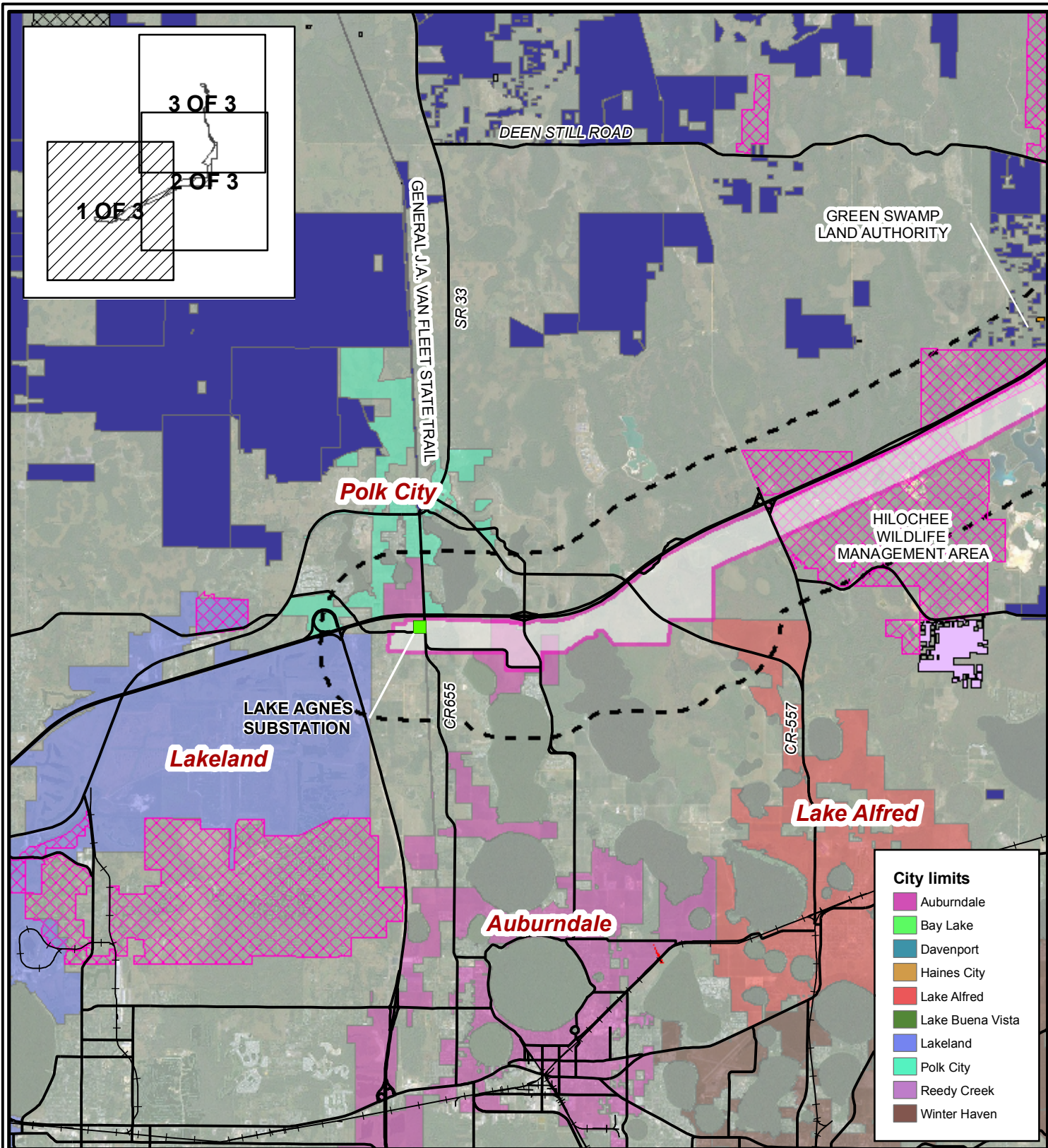
2.2 Socio-Political Environment of the Corridor Area

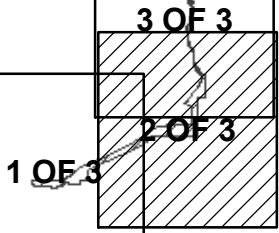
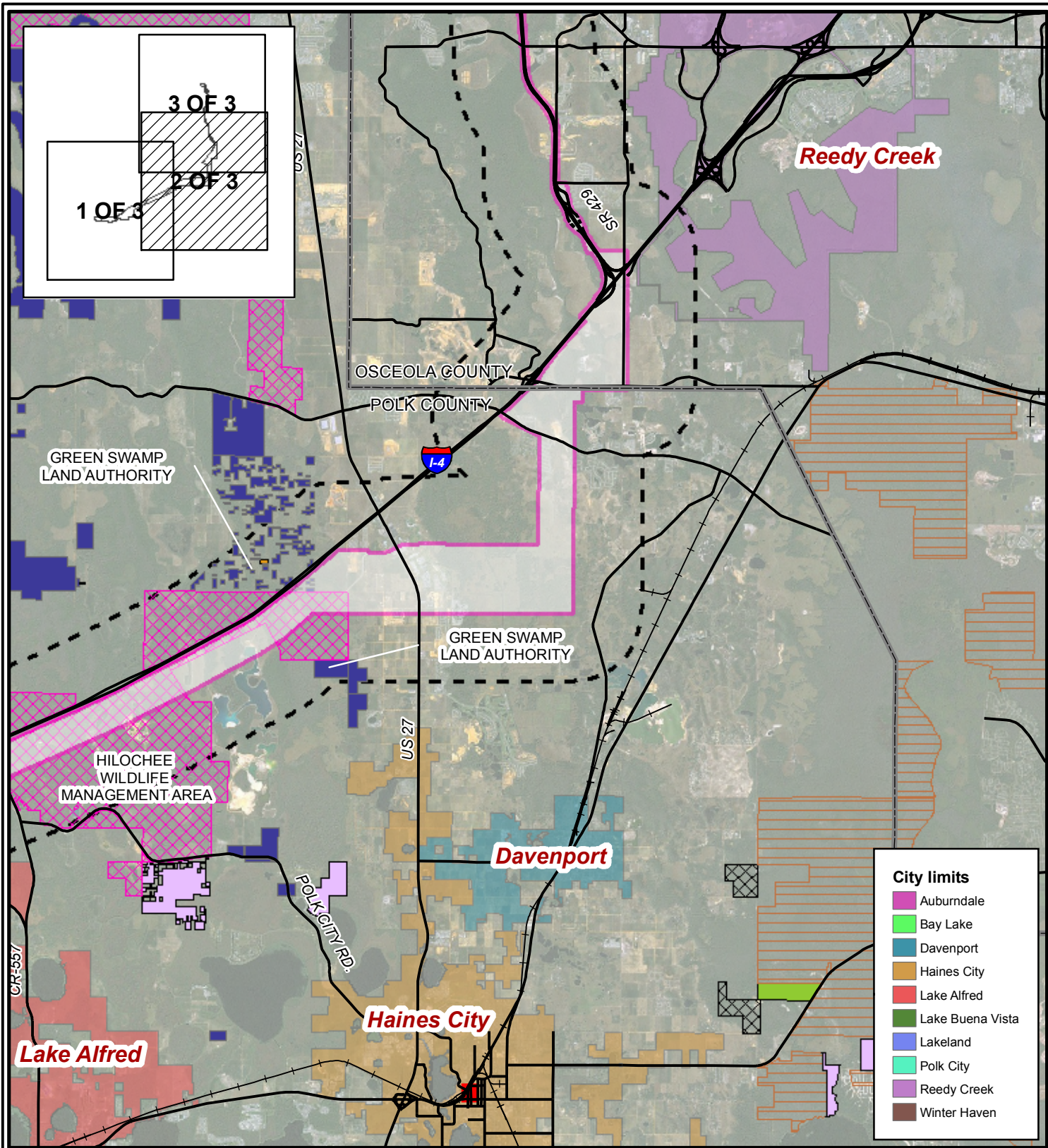
2.2.1 Governmental Jurisdictions

The preferred corridor crosses through portions of Polk County, Osceola County, Orange County, the City of Auburndale, and Reedy Creek (within the Reedy Creek Improvement District (RCID)). The preferred corridor crosses through portions of the Green Swamp Area of Critical State Concern and the Hiloochee Wildlife Management Area. Figure 2.2-1 depicts the governmental jurisdictions crossed by or located within 1 mile of the preferred corridor. The Green Swamp and the Hiloochee Wildlife Management Area are described in Section 2.3.4.

Other federal, state, and local jurisdictional areas that were neither in nor within 1 mile of the preferred corridor include:

- National Parks;
- National Forests;
- National Seashores;
- National Wildlife Refuges;
- National Memorials or Monuments;
- National Landmarks;
- Marine Sanctuaries;
- Estuarine Sanctuaries;
- Roadless Area Review and Evaluation (RARE) areas;
- State Parks;
- State Forests;
- Aquatic Preserves;
- Outstanding Florida Waters (OFW);
- County Parks;
- Indian Reservations; and
- Military Reservations.





LEGEND

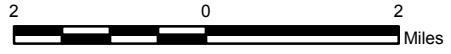
- | | | |
|---------------------|--------------------|---------------|
| Existing substation | NPS NRHP (regions) | SFWMD Lands |
| Planned substation | FDEP Lands | SJRWMD Lands |
| County boundaries | FL FWC Lands | US FWS Lands |
| Railroads | Polk County Lands | 1-mile buffer |
| Major roads | | |
| Preferred Corridor | | |

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Govt. Jurisdictions - Florida Managed Areas data via FGDL, 2007.
4. City limits - Polk County, RCID Future Land Use; 2007.
5. Aerial imagery - Aerials Express 1/2006 ESRI ArcGIS Online.

NOTES

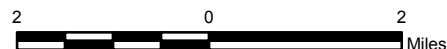
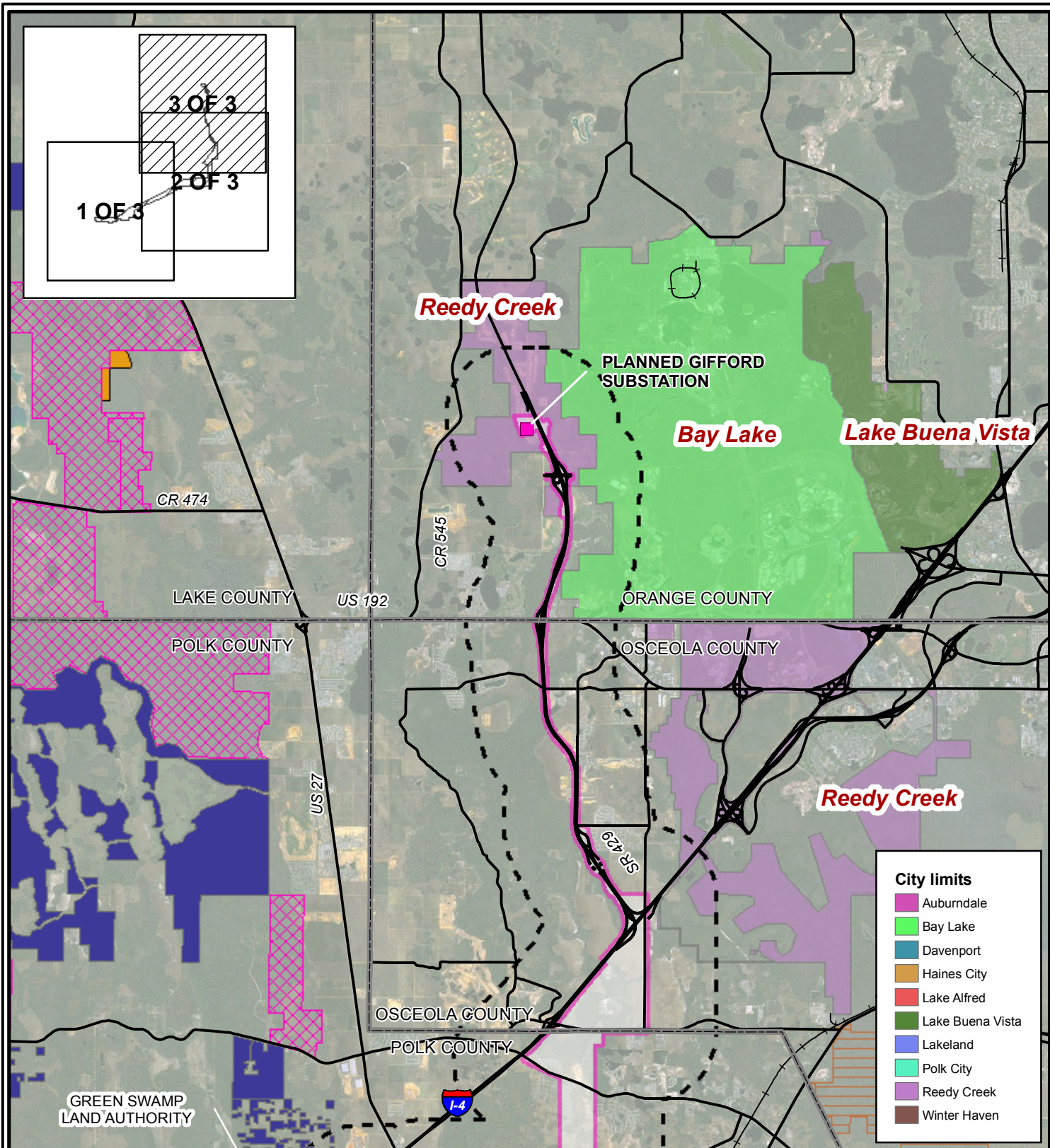
1. FWC - Fish and Wildlife Commission
2. OFW - Outstanding Florida Waters
3. FWS - Fish and Wildlife Service
4. NRHP - Nat. Register of Hist. Places



PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE GOVERNMENTAL JURISDICTIONS AND GOVERNMENTAL LAND HOLDINGS			
Tampa, Florida		PROJECT No. 073-89532 DESIGN: JWT 8/22/2007 GIS: JWT 12/3/2007 CHECK: KK 12/3/2007 REVIEW: MM 12/3/2007	SCALE AS SHOWN REV. 0 2.2-1 2 OF 3

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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

GOVERNMENTAL JURISDICTIONS AND GOVERNMENTAL LAND HOLDINGS



PROJECT No. 073-89532			SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	2.2-1 3 OF 3	
GIS	JWT	12/3/2007		
CHECK	KK	12/3/2007		
REVIEW	MM	12/3/2007		

2.2.2 Zoning and Land Use Plans

The TLSA is a one stop, comprehensive review process involving multi-agency and local government participation coordinated by the FDEP. Through the TLSA the state has preempted the certification of transmission lines and transmission line corridors to which it applies and the certification issued pursuant to that process is the sole non-federal license necessary to construct and maintain the transmission line. As a result, the licensing of the transmission line is conducted pursuant to the TLSA and applicable rules, rather than the procedural requirements of the individual agencies or local governments. Applicable non-procedural requirements of agencies or local governments may be applied to the transmission line via the conditions of certification that may be proposed by parties to the proceeding.

The following sections describe comprehensive plans and zoning provisions of the local government jurisdictions through which the preferred corridor traverses. Where appropriate, some of these non-procedural requirements may be imposed as conditions of certification for the transmission line.

As stated above, references in ordinances and comprehensive plan provisions to separate approval processes and regulatory permits are not applicable under the TLSA process and are summarized in the following discussion only for the purpose of reflecting the contents of the ordinances or plans.

2.2.2.1 *Comprehensive Plans*

Each of the counties and municipalities located within the preferred corridor have adopted Comprehensive Plans to meet the requirements of the Local Government Comprehensive Planning and Land Development Regulation Act of 1985 (also referred to as Florida's Growth Management Act), as presented in Chapter 163, Part II, F.S., and Chapter 9J-5, F.A.C.

The following summary pertains to utility policy information relevant to transmission line siting that is identified in the Future Land Use Elements of the Comprehensive Plans for each of the five governmental jurisdictions.

Polk County

According to the Polk County Comprehensive Plan, Future Land Use Element Policy 2.125-D1(b) states that electrical-transmission and distribution facilities including, without limitation, electrical transmission lines, substations, and related electrical facilities are permitted throughout the County in all future land use classifications to support existing and proposed development.

Osceola County

According to the Osceola Comprehensive Plan, Future Land Use Element Policy 2.1.7.1 states that public utilities which provide essential service to existing and future land uses authorized by this plan are permitted in all future land use categories provided the performance standards in the PPSA, TLSA, Osceola County Future Land Use Element, Osceola County Zoning Regulations, and any other applicable land development regulations are met.

Orange County

According to the Orange County Comprehensive Plan, Future Land Use Element Policy 4.1.15 states that utility and public facilities are allowed in all future land use designations. Policy 1.4.11 of the Comprehensive Plan, Urban Design Element encourages the establishment of standards for above ground utility structures in the public road ROW and front yard setback areas are to be blended into the landscape, completely screened, or relocated to other areas.

City of Auburndale (Polk County)

The City of Auburndale Comprehensive Plan, Future Land Use Element Policy 7.2 states that public utilities needed to service existing and future land uses are permitted in all future land use classifications, provided the performance standards stated in the PPSA, the TLSA, the Auburndale Comprehensive Plan and Auburndale's land development regulations are met.

Reedy Creek within the RCID (Orange County)

According to the RCID Comprehensive Plan, Future Land Use Element Policy 1.7 where no other alternatives are feasible, access and utility corridors may be allowed in the Resource Management/Recreation category in accordance with Future Land Use Policies 3.11 and 3.12 of the Comprehensive Plan. Policy 3.11 identifies the general limitations of the land use category to nonstructural stormwater management and passive recreational facilities. Other uses are only permitted when it is determined that the natural function of wetlands and wetland systems, including functions of water quality enhancement, flood protection, water storage, ground water recharge, and wildlife habitat will not be materially altered. Policy 3.12 states that other activities proposed in the Resource Management/Recreation category would require an Environmental Impact Report to identify and describe the types of impacts expected/proposed and their significance, and identify conservation measures to minimize, compensate, or propose mitigation for impacts.

2.2.2.2 Future Land Use

The preferred corridor traverses three counties and two municipalities within central Florida. The preferred corridor traverses unincorporated portions of Polk, Osceola, and Orange counties and the City of Auburndale and Reedy Creek (located within the RCID). Figure 2.2-1 depicts the location of the preferred corridor in relation to the identified counties and municipalities.

The relevant future land use categories are described below for informational purposes only.

The identification of future land use categories for the three county and two municipalities are shown on aerials, at a scale of 1:24,000 in Attachment 2-2 of Appendix B. Appendix D contains reproductions of relevant portions of Polk, Osceola and Orange Counties and the City of Auburndale and the RCID future land use maps (FLUM).

In Polk County, the preferred corridor traverses the following future land use categories:

- Business Park Center (BPC- 2x);
- Preservation Areas (PRESVx);
- Business Park Center – Limited (BPC- 1x);
- Agriculture/Residential Rural (A/RRx);

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

- Commercial Enclave (CE_x);
- Leisure/Recreation (L/R_x);
- Residential Low (RL-1_x, RL-2_x, RL-3_x, and RL-4_x);
- Residential Medium (RM_x);
- Residential High (RH_x);
- Community Activity Center (CAC_x);
- Neighborhood Activity Center (NAC_x);
- Tourism Commercial Center (TCC_x);
- Recreation and Open Space (ROS_x);
- Employment Center (CE_x);
- Regional Activity Center (RAC_x); and
- Institutional -2/Professional Institutional (INST-2_x).

In addition, within Polk County the preferred corridor traverses the following Special Overlay Districts/ Areas:

- Green Swamp Protection Area of Critical Concern (CORE);
- Selected Area Plans (SAP); and
- Rural Special Protection Area (SPA).

And one Development Area:

- Urban Growth Area.

In Osceola County, the preferred corridor traverses the following future land use categories:

- Commercial;
- Conservation;
- Rural/Agricultural;
- Medium Density Residential;
- Low Density Residential; and
- Institutional.

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

In Orange County, the preferred corridor traverses the following future land use categories:

- Commercial; and
- Conservation.

And one specialized Land Use Area:

- Horizons West.

In the City of Auburndale (Polk County), the preferred corridor traverses the following future land use categories:

- City, Public Uses, Parks;
- Business Park;
- Tourism Commercial Center;
- Conservation/Wetlands; and
- Low Density Residential.

In Reedy Creek – within the RCID (Orange County), the preferred corridor traverses the following future land use categories:

- Mixed Use;
- Conservation;
- Public Facilities; and
- Resource Management/Recreation.

Descriptions of the future land use categories traversed by the preferred corridor in the five jurisdictions are provided below.

Polk County

Business Park Center-2 (BPC- 2x) – The Business-Park Center future land use district is intended to provide areas for light-industrial activities. The district permits light manufacturing, fabrication,

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

assembly, distribution and wholesale activities, and some retail uses to support businesses and activities within the BPC.

Preservation Area (PRESVx) - The Preservation Area future land use district is generally characterized by property publicly or privately owned preservation areas, obtained for long-term protection purposes, containing sensitive and unique vegetative or animal habitats or publicly accessible property intended for long-term open space purposes.

Business Park Center-Limited (BPC- 1x) – The Business-Park Center future land use district is intended to promote employment opportunities within the region by allowing for the establishment of office parks, research and development parks, distribution centers, and wholesale activities. Some retail uses are also permitted to support businesses and activities within the district.

Agriculture/Residential Rural (A/RRx) - The Agriculture/Residential Rural future land use district recognizes the importance of agriculture and provides for its protection and future continuance through the establishment of a very low density residential development. Permitted uses include agricultural activities, agricultural support facilities, multi-family dwelling units, farm labor housing, group living facilities, and community facilities.

Commercial Enclave (CEx) – The Commercial Enclave future land use district recognizes concentrations of commercial and office uses located outside of Activity Centers and Linear Commercial Corridors, whose future development or redevelopment are consistent with the Comprehensive Plan and will not degrade the County's growth management program.

Leisure/Recreation (LRx) – The Leisure/Recreation Area future land use district provides for facilities and areas oriented primarily toward providing recreational-related services for residents and short-term visitors to Polk County.

Residential Low (RL-1x, RL-2x, RL-3x, and RL-4x) - The Residential-Low future land use district provides areas for low density residential needs of residents in urban areas.

RL-1: minimum lot size of 40,000 square feet (ft²)

RL-2: minimum lot size of 15,000 ft²

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

RL-3: minimum lot size of 10,000 ft²

RL-4: minimum lot size of 6,000 ft²

Residential Medium (RMx) - The Residential Medium future land use district provides areas for medium density residential development within urban areas. This district permits single-family dwelling units, duplex units, multi-family units, group living facilities, and community facilities.

Residential High (RHx) - The Residential High future land use district provides areas for high-density residential development within urban areas. This district permits single-family dwellings units, duplex units, multi-family units, group living facilities, and community facilities. Multi-family structures may contain non-residential uses to provide retail and personal services for residences.

Community Activity Center (CACx) and Neighborhood Activity Center (NACx) - The Community Activity Center and the Neighborhood Activity Center future land use districts are two of the six Activity Centers categories. The Activity Center concepts are a way for Polk County to manage higher-intensity land use activities.

CAC: The district provides for special residential development, non-residential uses such as offices, department stores, supermarkets, restaurants and community facilities.

NAC: The non-residential district provides for daily shopping needs of residents within surrounding neighborhoods, such as offices, grocery stores, drug stores, banks and community facilities.

Tourism Commercial Center (TCCx) – The Tourism Commercial Center future land use district provides areas for tourism activities, recreation, and tourist-related commercial establishments. Permitted uses include commercial amusement activities, lodging facilities, service stations, restaurants, gift shops and ancillary non-residential uses.

Recreation and Open Space (ROSx) – The Recreation and Open Space Area future land use district primarily provides sites and facilities which are accessible to the general public, and which are

oriented toward providing recreation services for the resident and the short and long-term visitor to Polk County.

Employment Center (ECx) – The Employment Center future land use district allows light assembly, low impact commercial, and other business uses to serve the needs of the community. Residential development is allowed at a maximum of 15 percent of the total developable area at a medium residential density (5-10 dwelling units/acre).

Regional Activity Center (RACx) – The Regional Activity Center future land use district provides the regional shopping needs for residents and visitors of Polk County. Permitted uses include special residential development, regional shopping centers, and other regional attractors and community facilities.

Institutional-2/Professional Institutional (INST-2x) – The Institutional future land use district primarily provides private and public-services, which are characterized primarily by outdoor activities such as high schools, government vehicle maintenance facilities, Class III utilities, landfill, and prisons.

The preferred corridor traverses through the following Special Overlay Districts and Areas of Polk County. These resource protection overlay districts further regulate use and development of land in environmentally sensitive areas. Future land use districts that are within these special overlay districts are identified by an “x”, which represents the additional special development standards (Polk County LDC, Chapter 2, Section 203).

Green Swamp Protection Area of Critical Concern (CORE) - The Polk County Plan limits development and redevelopment within Green Swamp Area of Critical State Concern, as designated in the Green Swamp Protection Area overlay, to development activities and intensities which will not alter the natural function of its wetlands and aquifer-recharge areas.

Selected Area Plans (SAP) - Selected-Area Plans are included in the Polk County Comprehensive Plan to provide enhanced planning tools for future detailed planning of areas that warrant special review and/or planning of greater specificity than that included within the general guidelines of the Plan's objectives and policies or the Land Use Map Series.

The preferred corridor traverses through land identified as an Urban Growth Area. Development areas have been established in the Comprehensive Plan to identify density and public facilities needs in certain areas of the county.

Urban Growth Area - The Urban Growth Area is for the future development of urban-intensity growth and is an area that is: predominately served by a county-owned; municipal or county-franchised central potable-water system; contiguous to an Urban Development Area or municipality; and is being planned to be served by county-owned, municipal, or county-franchised central sewer systems within years 11 through 20 of the December 1, 1991, Comprehensive Plan.

Osceola County

Commercial – The Commercial future land use category is intended for various degrees of commercial and office development uses. Based on a “tiered” approach this land use category consists of five sub-categories (Regional Center, Community Center, Neighborhood Center, Highway Commercial, and Tourist Commercial) of non-residential development. These uses need readily accessible arterial and collector road networks. Existing commercial uses are due to the tourist demand as well as local residents.

Conservation – The Conservation future land use category is intended for public lands that have been acquired and private lands that have been reserved by mutual agreement with the property owners for the preservation and protection of the County’s valuable natural resources. These lands are suitable for passive recreation or conservation uses. Privately owned lands such as wetland mitigation banks, Regional off-site Mitigation Areas and environmentally sensitive properties owned by the Florida Audubon Society, Nature Conservancy or similar types of non-profit entities may be designated as Conservation so long as formal consent is provided.

Rural/Agricultural – The Rural/Agricultural future land use category is intended to recognize and designate those areas of the county which are currently used primarily for agricultural purposes and are expected to remain in those uses during the 20-year planning time frame. Designation includes agricultural activities related to livestock, silviculture, and farming related uses. Typical uses include agricultural uses that include aquaculture, bee keeping, citrus groves, greenhouses, kennels, livestock, nurseries, poultry, silviculture, sod farming, and truck farming (harvesting of fruits and vegetables).

Typical residential uses include single-family detached housing, mobile homes, and manufactured homes.

Residential (Medium and Low Density) – The Residential future land use categories are predominantly within the urbanizing areas. The maximum densities allowed in the low and medium density residential subcategories are five and ten dwelling units per acre, respectively. With a maximum of 18 units per acre, there is a broad range of residential types which may be developed within this category. However, the ability for any piece of property to obtain density rests primarily with the availability of facilities and services.

Institutional – The Institutional future land use category permits such uses as public schools, public lands, utility locations, and civic buildings. These types of uses must meet criteria requirements that include: signage, conditional use permits for ancillary uses, and determination of compatibility with the surrounding areas for these ancillary uses.

Orange County

Commercial – The Commercial future land use designation is intended for various degrees of commercial and office development uses. These uses need readily accessible arterial and collector road network. Existing commercial uses are due to the tourist demand as well as local residents.

Conservation – The Conservation future land use designation is intended to serve as a conceptual indicator of conservation and wetland areas. The precise delineation of these areas will be determined through site-specific studies and field determinations which assess the extent of wetland vegetation. Areas are identified as Class I, Class II, or Class III conservation areas.

The preferred corridor traverses through the Horizons West specialized land use area.

Horizons West – This development district has been designed to address the need to overcome the problems associated with sprawl; create a better job/housing balance; create a land use pattern that will reduce reliance on the automobile by allowing a greater variety of land use closer to work and home; and, replace piecemeal planning with a long range vision that uses the village as the building block to allow the transition of this portion of the county from rural to urban through a specific

planning process that utilizes a creative design approach to address regional, environmental, transportation, and housing issues.

City of Auburndale (Polk County)

City, Public Uses, and Parks – The City, Public Uses, and Parks future land use classification applies to all City, County, State and Federal lands within the City. The typical uses include parks, offices, municipal buildings, and public lands.

Business Park – The Business Park future land use classification within the Urban Development area provides necessary public facilities and services for residents of the city of Auburndale. This classification is intended to provide locations for the placement of establishments to accommodate light assembly (non-manufacturing) and wholesale employment needs of the residents of the Auburndale planning area and the adjacent areas.

Tourism Commercial Center – The Tourism Commercial Center future land use classification should be located in the Urban Development Areas and are intended to provide for the tourist, recreational needs, and entertainment activities primarily for the short-term visitor to the city of Auburndale and also the residents of the city of Auburndale. Tourism Commercial Centers shall be located at the intersections of arterial or major collectors, preferably with the capability to accommodate a fixed-route mass-transit line. The proximity to other recreational attractions, either existing or proposed, such as recreational water bodies, governmental recreational facilities, natural amenities, or other regional tourist attractions will also be considered in the location of these centers. Typical uses include restaurants, service stations, gift shops, miniature golf, and entertainment activities.

Conservation/Wetlands – The Conservation/Wetland future land use classification applies to all lands designated for conservation purposes and applies to those areas identified as wetlands within the corporate limits. Residential, commercial and industrial land uses are not permissible on land designated as conservation. Residential land uses, such as boat docks, trails, parks and public beaches are permissible, provided that as little of the land as possible is disturbed during construction, and provided that the activity will not degrade or harm the natural resource. A residence for a park ranger or caretaker is permissible at one dwelling unit per twenty acres.

Low Density Residential –The Residential future land use classification has been applied to those areas that primarily consist of existing low-density single-family detached dwellings established over the past years. This classification consists of zero to six dwelling units per acre. This classification is anticipated to expand as the city of Auburndale expands. The typical uses in this classification are free standing or single family detached dwelling units with support uses such as, schools, parks and related public uses.

Reedy Creek – within the RCID (Orange County):

RCID – The Florida Legislature passed a special act in 1967 that created the RCID and granted the RCID a wide range of governmental powers to be used to promote recreation-oriented projects, economic development, and tourism within the RCID’s boundaries. Situated in Orange and Osceola counties, the largest land owners are Walt Disney World Company and the state of Florida. Other land-owning entities consist of Orange County, Palm Hospitality Company, Celebration Company, and the RCID board. The enabling legislation provides the RCID with many of the responsibilities of a city or county, including emergency services, water control, public utilities, land use, building codes and financial responsibility for the issuance of general obligation and revenue bonds.

Mixed Use – The Mixed Use future land use category identifies future development sites in the RCID. The major permitted uses are resort accommodations, theme parks or other entertainment facilities, campgrounds, and recreational facilities. Additional permitted uses include retail shops, commercial services, offices, educational or research facilities, support facilities, housing, schools, and open space. This category is used to permit innovative combinations of land use and development intensity, while ensuring that compatible uses and high aesthetic standards are maintained.

Conservation - The Conservation future land use category is applied to the environmentally sensitive portions of the RCID. The size of this category may be increased during the planning period if development elsewhere in the RCID requires land dedication as a mitigation measure.

Public Facilities – The Public Facilities future land use category consists of wastewater treatment facilities and highway ROW. Road ROW includes extensive land coverage within interchanges as

well as medians, roadsides, and roadways. Other public uses include solid waste recycling and composting facilities, the RCID administrative building, and the RCID fire stations.

Resource Management/Recreation – The Resource Management/Recreation future land use category possesses a combination of soil and drainage conditions that make them poorly suited for urban uses. They also have high habitat values and are an important part of the RCID’s stormwater management system. This category is considered to be inappropriate for development and is generally to be retained as open space. This category may also be incorporated as open space or greenbelts in development on adjoining upland sites. Areas within this category may be used for stormwater management or for activities that require little or no alteration of the natural landscape, such as hiking trails. Access and utility corridors may be allowed within these areas under certain conditions if mitigation is provided (Future Land Use Element Policy 1.7) (as discussed in Section 2.2.2.1). Wetland impacts will only be permitted if functionally equivalent wetlands are created elsewhere in the Reedy Creek basin.

2.2.2.3 Zoning

The preferred corridor traverses the following zoning districts. The identification of the identified zoning categories for the three county and two municipalities are shown on aerials, at a scale of 1:24,000 in Attachment 2-3 of Appendix B.

Polk County:

- Business Park Center (BPC- 2x);
- Preservation Areas (PRESVx);
- Business Park Center – Limited (BPC- 1x);
- Agriculture/Residential Rural (A/RRx);
- Commercial Enclave (CEx);
- Leisure/Recreation (L/Rx);
- Residential Low (RL-1x, RL-2x, RL-3x, and RL-4x);
- Residential Medium (RMx);
- Residential High (RHx);
- Community Activity Center (CACx);

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

- Tourism Commercial Center (TCCx);
- Neighborhood Activity Center (NAX);
- Employment Center (ECx);
- Recreation and Open Space (ROSx);
- Regional Activity Center (RACx);
- Green Swamp Conservation (CORE); and
- Institutional-2/Professional Institutional (INST-2x).

Osceola County:

- Agricultural Development and Conservation (AC);
- Estate Development (E-5);
- Travel Trailer Park (TTP); and
- Planned Development (PD).

Orange County:

- Citrus Rural (A-1); and
- Planned Development (PD).

City of Auburndale (Polk County):

- Open Use Agricultural (OUA);
- Light Industrial (LI);
- Commercial Highway (CH);
- General Residential (RG-1); and
- Planned Development – Housing 1 (PD-H1).

Reedy Creek – within the RCID (Orange County):

- Resource Management/Recreation;
- Mixed Use;
- Conservation; and

- Public Facilities.

2.2.2.4 *Land Development Regulations and Code of Ordinances*

Potentially relevant substantive provisions of each county and municipal government land use regulations or code of ordinances are summarized and discussed in the following paragraphs. No variances, exceptions, and exemptions have been identified, as discussed in Chapter 5.

Polk County Land Development Regulations:

The Polk County Land Development Regulations identify transmission lines as “Utilities, Class I” with a description that includes: transmission lines, whether subterranean or overhead, including electrical, natural gas, and water distribution lines; sewer gravity lines and pressure mains; underground septic tanks and drain fields; effluent disposal systems; cable television and telephone transmission lines; or similar utility lines (LDR, Chapter 10). Activities in the “Utilities, Class I” are permitted uses in all land use districts (LDR, Chapter 2 and 4). Table 5.2 for the Green Swamp Area of Critical State Concern identifies “Utilities, Class I” in the Rural Special Protection Area located in the Preservation future land use category to require a Conditional 2 (C2) Development Approval (LDR, Chapter 5).

With regard to site development standards, a Polk County permit is required for all activity within existing road ROW maintained by Polk County, as specified in Section 706 Right-of-Way Use Permit, and all activities need to be in accordance with the Polk County Right-of-Way Use and Utility Accommodation Guide (LDR, Chapter 7). Right-of-Way Use Permits are reviewed as part of a Level 2 Review approval.

Polk County identifies maximum permissible noise levels by land use designation (LDR, Chapter 7). Section 761 states that no person shall operate, cause to be operated, or permit on private property any source of noise or noise in such a manner as to create a noise level which exceeds the limits, identified by the County, according to land use designations categories.

Business Park Center (BPC-2), Industrial (IND), and High Impact Commercial Center (HIC) land use districts have a noise level limit of 75 dB(A) while Convenience Center (CC), Neighborhood Activity Center (NAC), Community Activity Center (CAC), Linear Commercial Corridor (LCC), Leisure

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

Recreation (L/R), Commercial Enclave (CE), Town Center (TC), Tourism Commercial Center (TCC), Rural Cluster Center (RCC), Business Park Center - Limited (BPC-1), Employment Center (EC) land use districts have a noise level limit of 65 dB(A) during the hours of 7AM to 9PM. The regulation also states that noise levels that exceed designated limits are not permitted for more than ten minutes.

Osceola County Land Development Regulations and Code of Ordinance:

Osceola County regulates the location, installation and adjustment of any facility on county ROW (LDR, Chapter 18). This regulation applies to all private contractors, private citizens, utility companies, municipalities and to any person or group proposed to install, construct, maintain or repair any facility or structure within any of the existing or planned ROW, or traveled ways or drainage easements, dedicated or planned to be dedicated, to the public, or Osceola County.

A facility is defined, by the County as a structure which has been and/or is being placed and maintained along, across, on or under any road ROW within the jurisdiction of the County, including but not limited to: any electric transmission; telephone; cablevision; or telegraph poles; pole lines; poles; railways; ditches; sewers; water; heat or gas lines; heat or gas mains; pipelines; wells; fences; gasoline tanks and pumps; irrigation; landscaping; signage; mailboxes; driveways; specialty paving; or road widening (see Section 18.3, Definitions).

The regulations also discuss siting procedures and pole placement involving county ROW. Section 18.8(A) (2) states that where possible aboveground facilities should be placed at or as close as practical to the ROW line. The regulation also states that all overhead installations should comply with the current standards established by the State Department of Transportation. Poles or other structures to support aerial installations shall be installed at the ROW line, or as close as practical, as specified in Section 18.9 (E).

Osceola County land development regulations specify that no person, firm or agency will remove or relocate any tree with a trunk diameter of 4 inches at diameter breast height or greater from a ROW or on any developed or undeveloped site without regulatory approval (LDR, Chapter 10). No person, firm or agency shall remove vegetation in a buffer or preservation area, perform preliminary land clearing, remove, trim or prune wetlands, specific tree(s), specimen tree stand(s) or historic tree(s), or

conduct any activity which may have a detrimental effect on protected vegetation without prior regulatory approval (LDR, Chapter 10).

The Osceola County Code of Ordinances (Chapter 9 of Article III) identifies and discusses noise regulations. As specified in Section 9-106 Definitions, noise is defined as any sound which annoys or disturbs humans or which causes or tends to cause an adverse psychological or physiological effect on humans. As specified in Section 9-110 (a), no person should create, or cause to be created, any source of sound so as to create a sound level beyond the real property line of the real property upon which the sound source is located which exceeds the following sound level limits: 7:00AM through sunset: 55 dBA and one minute after sunset through 6:59AM: 45 dBA. Exemptions to Section 9-110 are identified in sub-section (h) and include item ten (10) lawful construction activity conducted between the hours of 7AM and sunset.

The Osceola County Code of Ordinances also provides tree protection measures (Chapter 9 of Article II). Section 9-27 (b) specifies: it is the intent of this article to maintain a minimum amount of tree cover using a point system, while at the same time prohibiting the removal of certain trees; and (c) it is the intent of this article to prohibit the strip clearing (clear cutting) of land.

Orange County Code of Ordinances:

The Orange County Code of Ordinances addresses noise and vibration control in order to prevent, prohibit and provide for the abatement of excessive and unnecessary noise and vibration to protect the health, safety and general welfare of the people of Orange County (Chapter 15 of Article V). As specified in Section 15-180, noise is defined as any sound produced in such quantity and for such duration that it annoys, disturbs or may injure a reasonable man or woman of normal sensitivities. As specified in Section 15-185 (9), approved construction activities are exempt provided such activity occurs between 7AM and 10PM.

The Orange County Code of Ordinance addresses tree and vegetation removal (Chapter 15 of article VIII). Pursuant to Section 15-278, it is unlawful for any person to, or cause to, destroy, permanently injure, or remove any protected tree as defined in the ordinance without obtaining prior authorization. A protected tree is defined in Section 15-277, as any tree, on the recommended stock list, which is identified in the protection zones as described in Section 15-301(e). The recommended stock list, as

identified in Section 15-283, is a list of suggested trees native to the region that have proven their performance in central Florida. Exceptions and exemptions to this regulation, as specified in Section 15-279 Exceptions and Exemptions, include (a) a tree removal permit shall not be required for the following tree removal activities, unless the area is designated as a conservation area, (1) Public road or public drainage ROW, utility ROW, or permanent utility easements and/or drainage tracts. Conservation areas are defined in Section 15-277 as lands which have unsuitable or nonrated soils, wetland vegetative species, are seasonally flooded and perform an environmental function, as described in the County's comprehensive plan.

The Orange County Code of Ordinance establishes procedures for the classification and management of conservation areas within the County (Chapter 15 of Article X). The procedures identify all potential conservation areas as either Class I, Class II, or Class III; quantitatively document and measure the significance and viability of conservation areas under natural, altered and developed conditions; and evaluates mitigation and compensation programs designed to enhance, replace, or alter the functioning of conservation areas in conjunction with development activity.

The location, installation and adjustment of any facility on county ROW or easement is regulated under the Orange County Code of Ordinance (Chapter 21 of Article VI). This regulation applies to all private contractors, private citizens, utility companies, municipalities and to any person or group proposing to install, construct, maintain or repair any facility or structure within any of the existing or planned ROW as specified in Section 21-172. A facility is defined by the regulation to be a structure which has been and/or is being placed and maintained along, across, on or under any road ROW within the jurisdiction of the county, including but not limited to any electric transmission, telephone, cablevision, or telegraph lines pole lines, poles, railways, ditches, sewers, water, heat, or gas lines, heat or gas mains, pipelines, wells, fences, gasoline tanks and pumps, irrigation, landscaping, signage or specialty paving as in Section 21-173.

The primary concern in the design and location of utility installations is the protection of the ROW and the safety of the highway users and the secondary concern is aesthetics, as specified in Section 21-231. Also identified in this section are the following requirements: (b) above-ground facilities should be placed at or as close as practical to the ROW line; (c) (1) if an entity owns or maintains one or more sets of poles with accompanying overhead lines along a ROW, and the entity proposes to install another set of poles along the same ROW, co-locating all of the lines on a single set or poles

along one side of the ROW is required and use the least number of poles, lowest height of poles and poles of uniform height; (c)(2) if the entity owns or maintains more than one set of poles with accompanying overhead lines along a ROW or road, and the entity is required to remove and relocate some or all of the poles and accompanying overhead lines due to roadway construction along one or both sides of the ROW or road, the entity shall co-locate all the lines on a single set of poles along one side of the ROW or road and use the least number of poles, lowest height of poles and poles of uniform height.

In addition, all overhead installations will comply with the current standards established by the FDOT and all poles or other structures to support aerial installations should be installed at the ROW line, or as close as practical as specified in Section 21-233.

City of Auburndale (Polk County) Land Development Regulations:

The city of Auburndale Land Development Code addresses Environmental Protection (LDC, Chapter 8). Protection measures for conservation and wetland boundaries as designated on the Future Land Use Map of the Comprehensive Plan are regulated in Section 8.6.1. All dredge and fill activities are prohibited, except for: necessary efforts to establish minimal access to a recreational area, areas of fill deposition where access is made upon the least ecologically valuable portion of the parcel, boardwalks that maintain a minimum setback of 50 ft from the delineated boundary adjacent to identified areas, and any construction within identified areas that occur with minimal disruption to the natural environment and abide by all related habitat protection standards.

In areas where the city has documented evidence or reported sightings indicating endangered or threatened species or native ecological communities the city may request a standardized field assessment and environmental assessment as specified in Section 8.7.2 of Article 7 and 8.8.1 of Article 8.

The city of Auburndale Land Development Code addresses Landscaping and Tree Protection (LDC, Chapter 10). As specified in Section 10.4.1.3, no person, corporation, associated public agency, or agent or employee thereof, shall effectively destroy or remove native vegetation from any property within the city without first obtaining a vegetation removal permit from the city. The permittee may remove native vegetation within Auburndale's jurisdiction within or adjacent to the ROW in order to

meet clearance standards as identified by the city of Auburndale and required by the utilities as presented in Sections 3 and 4 of this application.

The general maintenance of land that includes trash and debris collection, mowing, weed control, and pruning is the responsibility of the property owner. Grassed areas in ROW and public walkways must be landscaped a minimum of two times per calendar year. Weed control measures in ROW and public walkways must be conducted at least once per calendar year. Pruning of shrubs and trees located within ROW and public walkways must be conducted at least once per calendar year, as specified in Section 10.9.4.

At the time of this application submittal there was no reference to noise regulations in the city of Auburndale's Land Development Regulations.

Reedy Creek – within the RCID (Orange County) Land Development Regulations:

The RCID Land Development Code addresses land uses within the RCID (LDC, Chapter 2-10, of Article 2). It is the intent of Article 2 to provide detailed descriptions of land uses and provide provisions for each land use type. As specified in Section 2-20.5, services, such as gas distribution pipelines, electrical distribution and transmission lines, utility poles, and pole transformers that are necessary to support principal land uses shall be considered allowed accessory uses. When considering utility services, this land use type refers to major structures necessary to support development but which allow some flexibility in location in contrast to those utility uses which co-exist with development and which are considered accessory uses. As defined in Section 2-30.24, utility lines are defined as typical uses include natural gas, potable water, reclaimed water and wastewater, transmission pipe lines and electrical transmission and distribution lines.

The RCID Land Development Code addresses Environmental Protection (LDC, Chapter 5 of Article 5). As specified in Section 5-20.4, all wetlands within the RCID are classified as Class I or Class II areas. Class I areas are any functional wetland currently protected by a conservation easement within the South Florida Water Management District (SFWMD), any area included within the Wildlife Management/Conservation Area as defined by SFWMD, and any wetland identified by the Florida Game and Fresh Water Fish Commission (now known as Florida Fish and Wildlife Conservation Commission (FFWCC)) or U.S. Fish and Wildlife Service (US FWS) as providing critical and

essential habitat for species on either the federal or state list of threatened or endangered species. Class II areas are all functional wetlands which do not meet the criteria as in Class I areas.

Uses are allowed in Class II wetland areas provided that: 1) no other alternatives are feasible or practical and the pre-development hydroperiod is maintained after the completion of construction; 2) they do not require structures, grading, fill, draining, or dredging except for (among others) roadway and utility corridors and requirements described in sub-section 5-20.7. As specified in Section 5-20.7, maintenance and repair activities in Class I and Class II wetland areas: must not materially change or enlarge the road, structure or facility; obtain prior approval; and must be conducted using best management practices (BMPs). In addition, maintenance and repair activities within Class II wetland areas require compliance with all state and federal permit regulations. Grading and filling are allowed in Class II wetland areas for utility corridors provided any impacts will be minimized and certification conditions will be established.

As specified in Section 5-90.2, state and federal standards and regulations regarding development in wetlands, and the habitat of species that are endangered, threatened, or of special state concern must be followed within the RCID boundaries.

As specified in Section 5-100.2, development in areas that encompass a historically or archaeological significant site requires archaeological and historic survey concurrence from the Florida Department of State's Division of Historical Resources (DHR).

At the time of this application submittal there was no reference to noise regulations in the RCID Land Development Code.

The project will be sited, designed, constructed and operated in a manner to comply with local, state and federal environmental regulations.

2.2.3 Easements, Title, Agency Works

Easements will be necessary to cross lands under the jurisdiction of the Board of Trustees of the Internal Improvement Trust Fund (TIITF) before construction of the Lake Agnes to Gifford 230-kV transmission line is initiated. Other entities that would normally be contacted for permits or approvals to cross existing facilities include state, county, and municipal governments for maintained

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

roads, water management districts, and gas pipelines. Crossing of federal highways, such as I-4, would typically require approval from the FDOT. All crossing of state and local roads will conform to the specifications in the FDOT’s Utility Accommodation Guide or local standards for use of the ROW.

Table 2.2-1 lists the facilities anticipated to be crossed by the proposed transmission line, the affected agency, the type of approval, and potential changes to be made to the facility or lands. Notification and coordination are usually sufficient when crossing facilities owned by other utilities.

TABLE 2.2-1. EASEMENT, TITLE, AND CROSSING APPROVALS ANTICIPATED TO BE REQUIRED FOR TRANSMISSION LINE CONSTRUCTION IN THE PREFERRED CORRIDOR

Facility	Affected Agency	Type of Approval	Potential Changes
<u>Roads</u>			
I-4	FDOT (District 1 and 5)	Utility Permit Application	None
SR 429 (Daniel Webster Western Beltway)	FDOT (District 1 and 5)	Utility Permit Application	None
CR 557A/Polk City Road	Polk County Transportation Department	Construction Use Permit	None
U.S. 27	FDOT (District 1 and 5)	Utility Permit Application	None
CR 54/ Loughman Road	Polk County Transportation Department	Construction Use Permit	None
U.S. 192	FDOT (District 1 and 5)	Utility Permit Application	None
Hartzog Road	Orange County Development Engineering	Construction Use Permit	None
Highway 655 (Berkley Road)	Polk City Engineering Department/ Polk County Transportation Department	Construction Use Permit	None
SR 559	FDOT (District 1 and 5)	Utility Permit Application	None
Old CR 559A	Polk County Transportation Department	Construction Use Permit	None

TABLE 2.2-1. EASEMENT, TITLE, AND CROSSING APPROVALS ANTICIPATED TO BE REQUIRED FOR TRANSMISSION LINE CONSTRUCTION IN THE PREFERRED CORRIDOR

Facility	Affected Agency	Type of Approval	Potential Changes
CR 557/Polk City Road	Polk County Transportation Department/ Polk City Engineering Department	Construction Use Permit	None
Champions Gate Blvd/Osceola-Polk Line Road	Osceola Engineering Department and Polk County Transportation Department	Construction Use Permit	None
Sandhill Road	Orange County Development Engineering	Construction Use Permit	None
Oak Island Road	Orange County Development Engineering	Construction Use Permit	None
Conservation Lands			
Hilochee Wildlife Management Area	FFWCC / TIITF	Easement or permit	None
Other			
Van Fleet Trail	FDEP Uplands Management	Easement	None
McIntosh-Taft transmission corridor	OUC/TECO	Crossing/Co-location Agreement	None

2.2.4 Archaeological and Historic Sites

The Florida DHR, was contacted to determine whether any known archaeological or historic sites listed or eligible for listing in the NRHP or of national, state, or local significance might be affected by the Lake Agnes to Gifford transmission line. A list of all sections, townships, and ranges crossed by the preferred corridor was submitted to DHR staff for analysis (see Appendix E). Also submitted to the DHR was a list of previously conducted surveys within the preferred corridor, with areas identified on USGS quadrangle maps, and previously recorded cultural resources identified on USGS quadrangle maps within the preferred corridor.

Based on information presented to the DHR on the preferred corridor, the DHR has indicated that significant cultural resources are recorded in the project area and some areas of the preferred corridor have not been investigated by an archaeological or historic professional within the past 10 to 15 years. Therefore, DHR has requested that a Phase I cultural resource survey is conducted in order to assess the cultural resources that may be present within the preferred corridor. A Phase I cultural resource survey will be conducted in accordance with Chapter 1A-46, F.A.C.

The Phase I cultural resources survey will be conducted after the transmission line ROW has been selected following the certification of the corridor, prior to any land clearing. The survey will be submitted to DHR for review and the applicants will consult with DHR on appropriate action(s) to avoid, minimize or mitigate adverse impacts, if any, to any identified cultural resources listed, or eligible for listing in the NRHP as identified by the survey.

2.3 Bio-Physical Environment of the Corridor Area

2.3.1 Land Use/Vegetation

Existing land use and land cover along the preferred corridor and an area extending ½ mile from each edge of the preferred corridor are described in the following subsections. The land use and land cover maps were developed through interpretation of aerial photographs at a scale of 1:24,000, Water Management District (WMD) data, and field reconnaissance. The presentation of the aerial photographs, maps of the land use/land cover and vegetation types are presented in Attachment 2-4 of Appendix B. The land use and land cover along the entire length of the preferred corridor are depicted using the FLUCFCS Level II and III data (FDOT, 1999). Land use/land cover data was obtained from the St. Johns River Water Management District (SJRWMD), the Southwest Florida Water Management District (SWFWMD) (both dated 2004), and the South Florida Water Management District (dated 1999), and updated following field reconnaissance conducted in June, July and August 2007.

2.3.1.1 *Land Use*

The approximately 27.5-mile preferred corridor begins at the Lake Agnes substation heading east-northeast within, adjacent to, or in proximity of the existing OUC transmission line ROW, generally paralleling I-4 east to U.S. 27. Along this portion of the preferred corridor, the corridor

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

predominantly traverses areas of improved pastures, pine flatwoods, citrus groves, lake swamps of Lake Mattie, freshwater marshes, cypress, and mixed forested wetlands of the Green Swamp wetland system, scattered low density residential areas, and a high density residential area near U.S. 27. Just to the east of U.S. 27, the corridor continues within, adjacent to, or in proximity of the OUC transmission line ROW through residential areas and improved pasture. The corridor crosses Horse Creek, a small, wet ditch that flows south through pastureland and eventually into Lake Marion, approximately 8 miles south of the preferred corridor.

Further east of U.S. 27, the corridor traverses freshwater marshes and forested wetlands, turns north and crosses Loughman Road (CR 54), Old Lake Wilson Road, and Interstate 4 and continues north along SR 429. The preferred corridor continues north co-locating with SR 429 ROW through pine forests, forested wetlands, residential subdivisions, citrus groves, disturbed lands, golf courses, and industrial property north to the planned Gifford substation.

2.3.1.2 Vegetation

Dominant vegetative communities commonly observed along the preferred corridor include improved pastures (FLUCFCS 211), shrub and brushland (FLUCFCS 320), pine flatwoods (FLUCFCS 411), hardwood-coniferous mixed forests (FLUCFCS 434), ditches (FLUCFCS 511), reservoirs (FLUCFCS 530), cypress (FLUCFCS 621), wetland forested mixed (FLUCFCS 630), and freshwater marshes (FLUCFCS 641). Each vegetative community is described in more detail in the following subsections. Acreages of each of the vegetative communities are provided in Table 2.3-1. Dominant plant species observed in each community are listed in Table 2.3-2.

Improved Pastures (FLUCFCS 211)

Improved pasture is land typically utilized for cattle grazing which has been cleared, tilled, and reseeded with specific grass types and improved with brush control and fertilizers. Dominant vegetative species observed include grasses such as bahiagrass (*Paspalum notatum*) and barnyard grass (*Echinochloa crusgalli*), shrubs such as saw palmetto (*Serenoa repens*) and wax myrtle (*Myrica cerifera*), and occasional trees such as water oak (*Quercus nigra*), slash pine (*Pinus elliottii*), and live oak (*Quercus virginiana*). Approximately 2,000 acres of improved pastures were identified within the preferred corridor.

**TABLE 2.3-1 ACREAGE OF DOMINANT VEGETATIVE COMMUNITIES
WITHIN THE PREFERRED CORRIDOR**

FLUCFCS Code	FLUCFCS Description	Acreage
211	Improved Pastures	1,963
641	Freshwater Marshes	1,612
630	Wetland Forested Mixed	1,314
411	Pine Flatwoods	281
320	Shrub and Brushland	280
621	Cypress	177
530	Reservoirs	102
434	Hardwood-Coniferous Mixed	102
511	Ditches	*
TOTAL		5,831

Notes:

* Acreages of ditches were not available in land use data and were not estimated during the field investigations; these areas will be delineated during subsequent ROW surveys

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

TABLE 2.3-2. PLANT SPECIES ASSOCIATED WITH THE DOMINANT VEGETATIVE COMMUNITIES OF THE PREFERRED CORRIDOR

Common Name	Improved Pastures FLUCFCS 211	Shrub and Brushland FLUCFCS 320	Pine Flatwoods FLUCFCS 411	Hardwood- Coniferous Mixed FLUCFCS 434	Ditches FLUCFCS 511	Reservoirs FLUCFCS 530	Cypress FLUCFCS 621	Wetland Forested Mixed FLUCFCS 630	Freshwater Marshes FLUCFCS 641
Trees									
<i>Acer rubrum</i>								X	
<i>Crataegus spp.</i>				X					
<i>Gordonia lasianthus</i>			X				X		
<i>Ilex cassine</i>									
<i>Magnolia virginiana</i>			X				X	X	
<i>Persea palustris</i>									
<i>Pinus elliotii</i>	X	X	X	X			X	X	
<i>Pinus palustris</i>				X					
<i>Pinus taeda</i>			X						
<i>Prunus serotina</i>			X	X					
<i>Quercus geminata</i>			X	X					
<i>Quercus laevis</i>				X					
<i>Quercus laurifolia</i>			X						
<i>Quercus nigra</i>	X	X	X		X			X	
<i>Quercus virginiana</i>	X	X	X	X					
<i>Rhus glabra</i>									
<i>Sabal palmetto</i>			X						
<i>Taxodium distichum</i>						X	X	X	
Shrubs and Vines									
<i>Baccharis halimifolia</i>			X					X	
<i>Callicarpa americana</i>			X						
<i>Cephalanthus occidentalis</i>					X	X	X		X
<i>Ilex glabra</i>		X	X						
<i>Ludwigia peruviana</i>					X	X	X	X	X
<i>Myrica cerifera</i>	X		X				X	X	
<i>Parthenocissus quinquefolia</i>			X						
<i>Passiflora spp.</i>			X						
<i>Rhus copallinum</i>		X	X					X	
<i>Rubus argutus</i>									
<i>Salix caroliniana</i>					X		X	X	X
<i>Sambucus canadensis</i>					X		X		
<i>Schinus terebinthifolius</i>			X		X				
<i>Serenoa repens</i>	X	X	X	X					
<i>Smilax spp.</i>								X	
<i>Vitis rotundifolia</i>			X					X	
<i>Vitis spp.</i>		X			X				
<i>Yucca aloifolia</i>				X					

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

TABLE 2.3-2. PLANT SPECIES ASSOCIATED WITH THE DOMINANT VEGETATIVE COMMUNITIES OF THE PREFERRED CORRIDOR

Common Name	Improved Pastures FLUCFCS 211	Shrub and Brushland FLUCFCS 320	Pine Flatwoods FLUCFCS 411	Hardwood- Coniferous Mixed FLUCFCS 434	Ditches FLUCFCS 511	Reservoirs FLUCFCS 530	Cypress FLUCFCS 621	Wetland Forested Mixed FLUCFCS 630	Freshwater Marshes FLUCFCS 641
Herbaceous Species									
<i>Alternanthera philoxeroides</i>							X		X
<i>Ambrosia artemisiifolia</i>		X							
<i>Andropogon glomeratus</i>					X				
<i>Andropogon virginicus</i>									
<i>Aristida stricta</i>				X					
<i>Bacopa caroliniana</i>									X
<i>Bidens</i> spp.			X						
<i>Boehmeria cylindrica</i>									X
<i>Centella asiatica</i>							X		
<i>Commelina</i> spp.				X					
<i>Cyperus ligularis</i>									
<i>Cyperus</i> spp.			X						X
<i>Echinochloa crusgalli</i>	X								
<i>Eichhornia crassipes</i>						X			
<i>Eupatorium capillifolium</i>					X	X			X
<i>Hydrocotyle</i> spp.									X
<i>Hypericum</i> spp.									
<i>Juncus effusus</i>									X
<i>Lachnocaulon</i> spp.									
<i>Lantana camara</i>			X						
<i>Ludwigia octovalvis</i>									X
<i>Osmunda cinnamomea</i>							X		
<i>Panicum hemitomon</i>					X	X	X		X
<i>Panicum repens</i>									
<i>Paspalum notatum</i>	X								
<i>Phytolacca americana</i>						X			
<i>Pluchea</i> spp.									
<i>Polygonum hydropiperoides</i>						X	X		X
<i>Pontederia chordata</i>									X
<i>Rhexia</i> spp.									
<i>Sagittaria graminea</i>							X		
<i>Sagittaria lancifolia</i>						X	X		X
<i>Spartina</i> spp.									X
<i>Stillingia sylvatica</i>				X					
<i>Thelypteris palustris</i>							X		X
<i>Tillandsia</i> spp.							X		
<i>Urena lobata</i>			X					X	
<i>Woodwardia virginica</i>							X	X	X

Shrub and Brushland (FLUCFCS 320)

Shrub and brushland areas are mostly dominated by saw palmetto intermixed with a wide variety of other woody scrub plant species as well as various types of short herbs and grasses. The canopy component is typically sparse. In addition to the saw palmetto understory, other common species observed within shrub and brushland areas include sparse areas of slash pine, water oak, live oak, winged sumac (*Rhus copallinum*), gallberry (*Ilex glabra*), common ragweed (*Ambrosia artemisiifolia*) and grape. Approximately 280 acres of shrub and brushland were identified within the preferred corridor.

Pine Flatwoods (FLUCFCS 411)

Pine flatwoods are common habitats throughout central Florida, typically occurring on flat, well-drained soils. Pine flatwoods along the preferred corridor are dominated by a canopy of slash pine with an understory of saw palmetto. A variety of subdominant canopy species are present, including water oak, live oak, cabbage palm (*Sabal palmetto*), loblolly pine (*Pinus taeda*), laurel oak (*Quercus laurifolia*), and sand live oak (*Quercus geminata*), while shrub and groundcover species include winged sumac, American beautyberry (*Callicarpa americana*), wax myrtle, gallberry, caesarweed (*Urena lobata*), muscadine (*Vitis rotundifolia*), Virginia creeper (*Parthenocissus quinquefolia*), passionflower (*Passiflora spp.*), and lantana (*Lantana camara*). Approximately 280 acres of pine flatwoods were identified within the preferred corridor.

Hardwood-Coniferous Mixed Forests (FLUCFCS 434)

Hardwood-coniferous mixed forest habitats are areas in which neither upland conifers nor hardwoods achieve a 66 percent crown canopy dominance. The canopy is dominated by a mixture of slash pine, longleaf pine (*Pinus palustris*), sand live oak, live oak, turkey oak (*Quercus laevis*), black cherry, and hawthorn (*Crataegus spp.*). Common shrub species include saw palmetto and Spanish bayonet (*Yucca aloifolia*), while groundcover plants include wire grass (*Aristida stricta*), queensdelight (*Stillingia sylvatica*), and dayflower (*Commelina spp.*). Approximately 100 acres of hardwood-coniferous mixed forests were identified within the preferred corridor.

Ditches (FLUCFCS 511)

Ditches were commonly observed along the preferred corridor, primarily associated with roadways. The drainage features vary in hydroperiod from only occasional inundation to others typically containing water year-round. Common vegetation within these ditches include a mixture of woody, herbaceous, and vine species such as Brazilian pepper, water oak, coastal plain willow (*Salix caroliniana*), common buttonbush (*Cephalanthus occidentalis*), elderberry (*Sambucus canadensis*), Peruvian primrose willow (*Ludwigia peruviana*), maidencane (*Panicum hemitomon*), dogfennel, bushy bluestem (*Andropogon glomeratus*), and grape. Acreages of ditches were not available from land use data, and were not estimated during the field reconnaissance.

Reservoirs (FLUCFCS 530)

Several reservoirs were observed along the preferred corridor. Dominant vegetation observed within or adjacent to these surface water bodies include common buttonbush, dogfennel, Peruvian primrose willow, maidencane, American pokeweed (*Phytolacca americana*), bald cypress (*Taxodium distichum*), water hyacinth (*Eichhornia crassipes*), swamp smartweed (*Polygonum hydropiperoides*), and bulltongue arrowhead (*Sagittaria lancifolia*). Approximately 100 acres of reservoirs were identified within the preferred corridor.

Cypress (FLUCFCS 621)

Several areas of cypress domes were observed along the preferred corridor. Dominant species include bald cypress, slash pine, loblolly bay, common buttonbush, wax myrtle, elderberry, coastal plain willow, sweetbay, Peruvian primrose willow, maidencane, bulltongue arrowhead, swamp smartweed, Virginia chain fern, cinnamon fern, spadeleaf, grassy arrowhead (*Sagittaria graminea*), marsh fern (*Thelypteris palustris*), alligatorweed (*Alternanthera philoxeroides*), and airplants (*Tillandsia spp.*). Approximately 180 acres of cypress were identified within the preferred corridor.

Wetland Forested Mixed (FLUCFCS 630)

Mixed wetland forests are communities in which neither hardwoods nor conifers achieve a 66 percent dominance of the crown canopy composition. The canopy is typically dominated by a mixture of red

maple, sweetbay, slash pine, water oak, and bald cypress. Shrub, understory, and vine species include Peruvian primrose willow, groundsel tree, winged sumac, wax myrtle, coastal plain willow, caesarweed, Virginia chain fern, and greenbrier (*Smilax spp.*) and muscadine. Approximately 1,300 acres of mixed wetland forests were identified within the preferred corridor.

Freshwater Marshes (FLUCFCS 641)

Several areas of freshwater marsh are located along the preferred corridor. Freshwater marshes are dominated by shrub and herbaceous species, including common buttonbush, Peruvian primrose willow, coastal plain willow, alligator weed, dogfennel, maidencane, marsh fern, Virginia chain fern, swamp smartweed, bulltongue arrowhead, soft rush (*Juncus effusus*), Mexican primrose willow (*Ludwigia octovalvis*), marsh pennywort (*Hydrocotyle spp.*), pickerelweed (*Pontederia cordata*), lemon bacopa (*Bacopa caroliniana*), false nettle (*Boehmeria cylindrica*), sedges (*Cyperus spp.*), and cordgrass (*Spartina spp.*). Approximately 1,600 acres of freshwater marshes were identified within the preferred corridor.

2.3.2 Affected Water and Wetlands

Several wetland systems are located along the preferred corridor, including drainage ditches, cypress domes, mixed forested wetlands, and freshwater marshes, portions of which are associated with the Green Swamp wetland system. See Section 2.3.1.2 for a description of these wetland habitats. Impacts to wetlands within the preferred corridor will be avoided or minimized during detailed routing, engineering, design and location of the transmission line structure pads and access roads. The majority of freshwater marshes and ditches may likely be spanned by the transmission lines, thereby avoiding impact. Areas of forested wetlands will be avoided where practicable. However, removal of canopy species from the ROW will be required where the transmission line traverses forested wetlands. The preferred corridor and its associated access roads are not anticipated to significantly impact drainage patterns of the Green Swamp and surrounding wetlands, since the preferred corridor is generally located within, adjacent to, or in proximity of existing transmission line ROW, roadways, and urban areas with historically impacted natural drainage.

2.3.3 Ecology

2.3.3.1 *Species-Environmental Relationships*

Terrestrial and Wetland Ecosystems - Fauna

Wildlife habitat in much of the area of the preferred corridor has been altered significantly from its natural state for citrus groves, pastureland, roadways, and residential use. However, several wildlife species do utilize the area within and adjacent to the preferred corridor for foraging and cover. Wildlife observations include direct visual observation, calls, tracks, scat, burrows, or other signs. Wildlife observations recorded during site reconnaissance activities were conducted in June, July and August 2007, and wildlife likely to be present within habitats of the preferred corridor are summarized in Table 2.3-3. Generally, wildlife observed were those species typical of central Florida, such as white-tailed deer (*Odocoileus virginianus*), feral pig (*Sus scrofa*), nine-banded armadillo (*Dasypus novemcinctus*), gray squirrel (*Sciurus carolinensis*), eastern cottontail (*Sylvilagus floridanus*), and various bird and reptile species such as wild turkey (*Meleagris gallopavo*), black vulture (*Coragyps atratus*), osprey (*Pandion haliaetus*), bobwhite quail (*Colinus virginianus*), red-tailed hawk (*Buteo jamaicensis*), Northern mockingbird (*Mimus polyglottis*), red-shouldered hawk (*Buteo lineatus*), killdeer (*Charadrius vociferous*), mourning dove (*Zenadia macroura*), barred owl (*Strix varia*), rufous-sided towhee (*Pipilo erythrophthalmus*), leopard frog (*Rana sphenoccephala*), water moccasin (*Agkistrodon piscivorus*), and black racer (*Coluber constrictor*).

Improved Pastures (FLUCFCS 211)

Improved pastures are unnatural communities providing little cover or foraging habitat for species of wildlife that are not habitat generalists. Wildlife species observed in the improved pastures include the Cuban tree frog (*Osteopilus septentrionalis*), six-lined race runner (*Cnemidophorus sexlineatus*), eastern fence lizard (*Sceloporus undulatus hyacinthinus*), Florida scrub lizard (*Sceloporus woodi*), red-shouldered hawk, American kestrel (*Falco sparverius*), Florida sandhill crane (*Grus canadensis pratensis*), bald eagle (*Haliaeetus leucocephalus*), mourning dove, nine-banded armadillo, and white-tailed deer.

Shrub and Brushland (FLUCFCS 320)

Species observed in the shrub and brushland/mixed rangeland areas include the red-shouldered hawk, swallow-tailed kite (*Elanoides forficatus*), and white-tailed deer.

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

TABLE 2.3-3. WILDLIFE SPECIES OBSERVED AND/OR THOSE LIKELY TO INHIBIT VEGETATIVE COMMUNITIES WITHIN THE PREFERRED CORRIDOR

Scientific Name	Common Name	Improved Pasture FLUCFCS 211	Shrub and Brushland FLUCFCS 320	Pine Flatwoods FLUCFCS 411	Hardwood- Coniferous Mixed FLUCFCS 434	Ditches FLUCFCS 511	Reservoirs FLUCFCS 530	Cypress FLUCFCS 621	Wetland Forested Mixed FLUCFCS 630	Freshwater Marshes FLUCFCS 641
Fish										
<i>Gambusia holbrooki</i>	Mosquitofish					X	X			
<i>Heterandria formosa</i>	Least killifish					X	X			
Amphibians										
<i>Osteopilus septentrionalis</i>	Cuban tree frog	X								X
Reptiles										
<i>Agkistodon piscivorus</i>	Water moccasin					X	X	X	X	X
<i>Coluber constrictor</i>	Black racer		X	X	X					
<i>Cnemidophorus sexlineatus</i>	Six-lined race runner	X			X					
<i>Gopherus polyphemus</i>	Gopher tortoise	X		X	X					
<i>Rana sphenoccephala</i>	Leopard frog					X	X			X
<i>Sceloporus undulatus hyacinthinus</i>	Eastern fence lizard	X								
<i>Sceloporus woodi</i>	Florida scrub lizard	X								
Birds										
<i>Buteo jamaicensis</i>	Red-tailed hawk	X	X	X				X		X
<i>Buteo lineatus</i>	Red-shouldered hawk	X	X	X				X		X
<i>Cardinalis cardinalis</i>	Cardinal			X	X				X	
<i>Charadrius vociferus</i>	Killdeer		X							
<i>Colinus virginianus</i>	Bobwhite quail			X	X					
<i>Coragyps atratus</i>	Black vulture	X	X	X	X					
<i>Corvus brachyrhynchos</i>	American crow	X	X							X
<i>Cyanocitta cristata</i>	Blue jay			X	X				X	
<i>Dendroica palmarum</i>	Palm warbler			X						X
<i>Eudocimus albus</i>	White ibis					X	X	X		X
<i>Egretta caerulea</i>	Little blue heron					X	X	X		X
<i>Egretta thula</i>	Snowy egret					X	X	X		X
<i>Egretta tricolor</i>	Tricolored heron					X	X	X		X
<i>Elanoides forficatus</i>	American swallow-tailed kite		X	X				X		
<i>Falco sparverius</i>	American kestrel	X		X	X					
<i>Grus canadensis</i>	Florida sandhill crane	X								
<i>Haliaeetus leucocephalus</i>	Bald eagle	X					X	X		
<i>Meleagris gallopavo</i>	Wild turkey			X						
<i>Mimus polyglottos</i>	Northern mockingbird		X	X	X					
<i>Pandion haliaetus</i>	Osprey						X	X		X
<i>Pipilo erythrophthalmus</i>	Rufous-sided towhee			X	X				X	
<i>Poliopitila caerulea</i>	Blue-gray gnatcatcher							X		
<i>Strix varia</i>	Barred owl			X	X			X	X	
<i>Vireo griseus</i>	White-eyed vireo			X					X	
<i>Zenaidura macroura</i>	Mourning dove	X								
Mammals										
<i>Dasypus novemcinctus</i>	Nine-banded armadillo	X		X						
<i>Odocoileus virginianus</i>	White-tailed deer	X	X	X	X					
<i>Sciurus carolinensis</i>	Gray squirrel			X						
<i>Sus scrofa</i>	Feral pig			X	X				X	X
<i>Sylvilagus floridanus</i>	Eastern cottontail	X	X	X	X					
Notes:										
	- Listed species. See Section 2.3.3.1 of report for discussion.									

Pine Flatwoods (FLUCFCS 411)

Pine flatwoods provide important cover and foraging habitat for wildlife. A variety of herpetofauna, birds, and mammals are known to utilize pine flatwoods. Wildlife observed in these areas of the preferred corridor include red-shouldered hawk, feral pig, white-tailed deer, nine-banded armadillo, bobwhite quail, gray squirrel, wild turkey, and palm warbler (*Dendroica palmarum*).

Hardwood-Coniferous Mixed (FLUCFCS 434)

Wildlife species observed in hardwood-coniferous forest habitats include the six-lined race runner, bobwhite quail, rufous-sided towhee, and white-tailed deer.

Ditches (FLUCFCS 511)

Ditches are unnatural wetland communities which may provide habitat or foraging areas for a limited number of herpetofauna, fish, and bird species. With the exception of forage fishes such as mosquitofish (*Gambusia holbrooki*) and least killifish (*Heterandria formosa*), no wildlife species were observed in ditches along the preferred corridor, although occasional use by wading birds is likely.

Reservoirs (FLUCFCS 530)

Reservoirs may provide habitat or foraging areas for herpetofauna, fish, and bird species. Mammalian species are also likely to use these areas as a water source. One bird species, the snowy egret (*Egretta thula*), was observed within these areas in the preferred corridor.

Cypress (FLUCFCS 621)

Cypress domes provide important feeding and nesting habitat for a variety of wildlife species. Species observed within the cypress domes in the preferred corridor include the red-shouldered hawk, blue-gray gnatcatcher (*Poliophtila caerulea*), and white ibis (*Eudocimus albus*).

Wetland Forested Mixed (FLUCFCS 630)

Only one species, the rufous-sided towhee, was observed in mixed wetland forest habitats during field reconnaissance. A variety of herpetofauna, birds, and mammals are also likely to utilize this habitat.

Freshwater Marshes (FLUCFCS 641)

Freshwater marsh habitats are important resources for wading birds, which depend on shallow aquatic areas to feed upon small fish, amphibians, and aquatic invertebrates. Species observed within

freshwater marsh areas along the preferred corridor include the Cuban tree frog, red-shouldered hawk, palm warbler, white ibis, little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), and snowy egret.

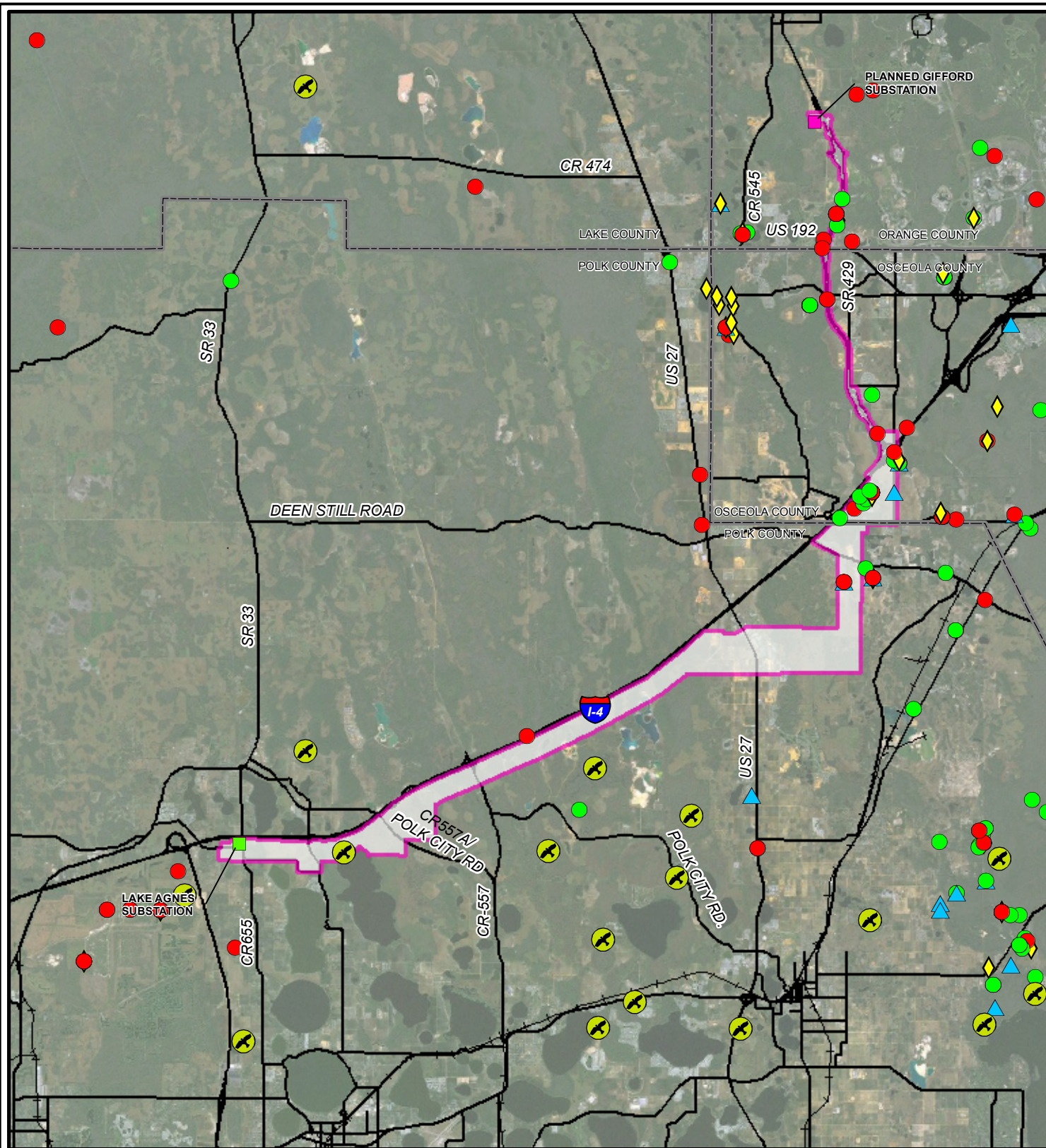
Listed Species – Flora and Fauna

Listed species refers to those plant and animal species that are designated by the FFWCC and/or the USFWS as threatened, endangered, or of special concern. Listed species were observed during field reconnaissance activities conducted July 17 and 18, 2007, and August 1, 2007. Additionally, several documented occurrences of listed species lie within the preferred corridor (FNAI, 2007). Locations of those listed species observed by Golder and FNAI documented occurrences are depicted in Figure 2.3-1 and are discussed in the following text.

Flora

No listed plant species were observed along the preferred corridor during field reconnaissance activities. Additional listed species surveys will be conducted following selection of the ROW within the preferred corridor. According to FNAI data (2007), several plant species have documented occurrences along the preferred corridor. Species name, protection status, and general location descriptions are provided below.

- Britton's beargrass (*Nolina brittoniana*)
 - Classified as endangered by the USFWS and FFWCC
 - Identified in areas of hardwood-coniferous mixed forests/improved pasture and in an area of an existing golf course
- Florida bonamia (*Bonamia grandiflora*)
 - Classified as threatened by the USFWS and endangered by the FFWCC
 - Identified along the preferred corridor near the Polk and Osceola County line within an area of hardwood-coniferous mixed forests/improved pasture
- Scrub buckwheat (*Eriogonum longifolium* var. *gnaphalifolium*)
 - Classified as threatened by the USFWS and endangered by the FFWCC
 - Identified in what is currently a high density residential area and a citrus grove

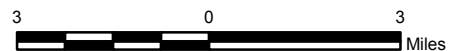


LEGEND

- | | |
|--|--|
| ■ Existing substation | ⚡ FNAI - Eagle nests |
| ■ Planned substation | ● T&E species (animal) |
| County boundaries | ● T&E species (vegetation) |
| Preferred Corridor | ▲ Data sensitive element |
| — Railroads | ◆ Not identified in database |
| — Major roads | |

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2007.
3. Eagles nests and Threatened and Endangered (T&E) species - FNAI, 2007, FFWC, 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



PROJECT
 PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
 LAKE AGNES TO GIFFORD
 230kV JOINT TRANSMISSION LINE PROJECT

TITLE

FLORIDA AREAS NATURAL INVENTORY



PROJECT No. 073-89532	SCALE AS SHOWN	REV. 0
DESIGN: JWT 8/22/2007		
GIS: JWT 12/3/2007		
CHECK: KK 12/3/2007		
REVIEW: MM 12/3/2007		

2.3-1

Fauna

Seven listed species of birds and one reptile species were observed or are considered likely to occur along the preferred corridor. These include the white ibis, little blue heron, snowy egret, tricolored heron, wood stork, American kestrel, Florida sandhill crane, bald eagle, and gopher tortoise, described below.

White Ibis (Eudocimus albus)

The white ibis is a common wading bird classified as a species of special concern by the FFWCC. The white ibis is not listed federally by the USFWS. White ibis were observed foraging adjacent to cypress wetlands and freshwater marshes along the preferred corridor.

Little Blue Heron (Egretta caerulea)

The little blue heron is classified as a species of special concern by the FFWCC, but is not listed federally by the USFWS. Little blue herons forage in shallow freshwater, brackish, and saltwater habitats, such as lake fringes, marshes, swamps, and streams, and nest in mixed-species colonies in forested wetlands. Little blue herons were observed along the preferred corridor foraging in freshwater marsh habitats.

Snowy Egret (Egretta thula)

The snowy egret is listed as a species of special concern by the FFWCC. Snowy egrets were observed foraging within reservoirs, small lakes, and freshwater marshes along the preferred corridor, and are likely to also occasionally use ditches.

Tricolored Heron (Egretta tricolor)

The tricolored heron is classified as a species of special concern by the FFWCC, but is not listed federally by the USFWS. Tricolored herons were observed foraging within freshwater marshes along the McIntosh - Taft transmission line ROW along the preferred corridor.

Wood Stork (Mycteria americana)

The wood stork is listed as endangered by both the FFWCC and the USFWS. Wood storks forage within shallow hydroperiod freshwater marsh and wet prairie systems. Although none were observed during field reconnaissance, wood storks are likely to occasionally forage within wetlands along the preferred corridor.

American Kestrel (Falco sparverius)

The American kestrel is listed as threatened by the FFWCC. Kestrels were observed flying above the pasturelands and mixed pine and oak habitats along the preferred corridor.

Florida Sandhill Crane (Grus canadensis pratensis)

The Florida sandhill crane is classified as threatened by the FFWCC, but is not listed federally by the US FWS. The sandhill crane utilizes wet prairies, freshwater marshes, and pastures for foraging and also will frequent agricultural areas like feed lots and crop fields, golf courses, and open lawns, especially in winter and early spring. Sandhill cranes were observed along open pasture areas along the preferred corridor.

Bald Eagle (Haliaeetus leucocephalus)

The bald eagle was recently delisted by the USFWS, and is currently proposed for delisting within the state of Florida because of the increased number of bald eagles in Florida over the past few decades. Currently, the bald eagle is classified as threatened by the FFWCC. The bald eagle will not be delisted within Florida until the management plan is approved by FFWCC Commissioners. No eagle nests were observed along the preferred corridor, although several individuals were observed flying overhead in areas of improved pastures and one nest is located adjacent to Lake Mattie, south of the preferred corridor.

Gopher Tortoise (Gopherus polyphemus)

Gopher tortoises are known to occur within the Hilochee Wildlife Management Area in upland areas of improved pasture, and are likely to occur within areas of upland hardwood-coniferous forests, pine flatwoods, shrub and brushland, and mixed rangeland. The gopher tortoise is classified by the FFWCC as threatened, but is not listed by the USFWS.

According to FNAI data (2007), several reported occurrences of listed animal species occur along the preferred corridor. Species name, listed species status, and general location descriptions are provided below:

- **Bald eagle (*Haliaeetus leucocephalus*)**
 - Formerly classified as threatened by the USFWS and FFWCC, recently delisted by the USFWS and proposed for delisting by the FFWCC
 - A nest was located by FNAI south of the preferred corridor, adjacent to Lake Mattie

- **Florida long-tailed weasel (*Mustela frenata peninsulae*)**
 - Not listed, but considered either very rare and local in Florida or found locally in a restricted range or vulnerable to extinction from other factors
 - Identified along the I-4 corridor adjacent to a cypress dome along the existing McIntosh-Taft corridor
- **Florida mouse (*Peromyscus floridanus*)**
 - Classified as a species of special concern by the FFWCC
 - Identified in areas of hardwood-coniferous mixed forests/improved pastures and a golf course area
- **Florida scrub jay (*Aphelocoma coerulescens*)**
 - Classified as threatened by both the USFWS and FFWCC
 - Identified in what is currently a residential area
- **Florida scrub lizard (*Sceloporus woodi*)**
 - Not listed, but considered either very rare and local in Florida or found locally in a restricted range or vulnerable to extinction from other factors
 - Identified in an area of hardwood-coniferous mixed forests/improved pastures
- **Gopher frog (*Rana capito*)**
 - Classified as a species of special concern by the FFWCC
 - Identified in an area that is currently a golf course and an area of pine flatwoods
- **Gopher tortoise (*Gopherus polyphemus*)**
 - Currently classified as a species of special concern by the FFWCC, but will be uplisted upon approval of a management plan
 - Identified in areas of hardwood-coniferous mixed forests, improved pastures, and pine flatwoods
- **Sand skink (*Neoseps reynoldsi*)**
 - Classified as threatened by the USFWS and FFWCC
 - Identified in a residential area, hardwood-coniferous mixed forests/ improved pasture, golf course, and along a sandy roadside area adjoining mixed wetland hardwoods
- **Tricolored heron (*Egretta tricolor*)**
 - Classified as a species of special concern by the FFWCC

- Identified in an area of mixed forested wetlands

Once the ROW for the Lake Agnes to Gifford transmission line is finalized, it will be surveyed for listed species and the applicants will consult with FFWCC on appropriate mitigation or avoidance methods in a post-certification process pursuant to conditions of certification.

2.3.4 Other Environmental Features

The Green Swamp Area of Critical State Concern consists of approximately 560,000 acres between Tampa and Orlando, Florida. The drainage from the Green Swamp forms the headwaters of the Withlacoochee, Hillsborough, Oklawaha, and Peace River watersheds. The Green Swamp is comprised of state, local and private ownership. The portion of the Green Swamp that the preferred corridor traverses through is in private ownership.

The Green Swamp Wildlife Management Area, also known as Green Swamp East, consists of nearly 50,000 acres in Lake, Polk, and Sumter counties. The 12,495-acre Hilochee Wildlife Management Area (WMA), considered part of the Green Swamp Florida Forever Project, consists of several non-contiguous parcels: the Jahna parcel; Polk Partners parcel; Wander parcel; Ritter parcel; and the Osprey Unit. Approximately 6.7 miles of the preferred corridor is located within the Osprey Unit of the Hilochee WMA, south of Interstate 4. Much of the Osprey Unit has been previously impacted through historical clay and sand mining (FFWCC 2004).

3.0 EFFECTS OF RIGHT-OF-WAY PREPARATION AND TRANSMISSION LINE CONSTRUCTION

3.1 Construction Techniques

The preferred corridor for the Lake Agnes to Gifford 230-kV transmission line will be within, adjacent to, or in proximity of existing ROW throughout its length. To the extent PEF and TECO are able to locate the proposed transmission line, either wholly or partly, within existing ROW, the use of adjacent undisturbed areas will be minimized during all phases of construction, including ROW clearing, road and pad construction, and line construction. Utilization of existing ROW to the greatest extent practicable will result in a minimization of potential impacts on human populations, water bodies, archaeological and historic sites, vegetation, and wildlife.

Potential construction impacts presented in this chapter were evaluated considering the various conditions present along the preferred corridor and within existing ROW. The construction techniques discussed in this section describe the common practices of both PEF and TECO in the general environments identified; however, for this project, the need for employing many of these techniques may be limited because of the availability of previously cleared areas within the existing ROW. This information is presented for informational purposes, and these techniques will be used only as necessary in limited areas along the ROW.

3.1.1 Right-Of-Way Clearing

For areas where existing ROW widths are insufficient for placement of the proposed transmission line, additional clearing will be necessary. In upland areas, vegetation will be cleared to ground level, all stumps will be removed or ground to 6 inches below ground level.

In the event additional clearing in wetlands is needed, restrictive clearing will be employed. Restrictive wetland clearing will be done by hand, usually with chain saws, or with low-ground pressure shear or rotary machines to reduce soil compaction and damage to vegetation. These methods may be used alone or in combination, as may be necessary for specific sites. Restrictive clearing will include the removal of vegetation from areas extending from the transmission line centerline to 25 ft on each side of the outer conductors, to limit disruption to the transmission line,

and in work areas approximately 80 ft by 150 ft around structure sites, for structure installation, maintenance and to provide adequate access to the structure. Also, in areas where PEF and TECO may need to create access to particular structure sites via finger roads rather than a continuous access road, a path approximately 20 to 25 ft wide will be cleared to reach the site from an access road.

The ROW in wetland areas, will be cleared and maintained in a herbaceous state. Woody vegetation will be cut at ground level and stumps may be left in place to preserve the root mat, and treated with approved herbicide to prevent regrowth.

In wetlands, tree stumps under the conductors and in the cleared work areas at the structure sites will be removed, sheared, or ground to 6 inches below the ground line to allow for travel and construction activities.

If practicable, a 25-ft deep foliage screen of existing vegetation with mature heights not exceeding 14 ft will be left intact at locations where the ROW crosses a navigable waterway. A path may be cleared through the vegetation for PEF and TECO maintenance access to the ROW.

3.1.2 Access Road and Pad Construction

Access roads are required to provide efficient and safe ingress and egress to the transmission line structures for construction and maintenance. Access roads are generally installed the full length of the proposed transmission line ROW. Existing access roads will be used, where available, for construction and maintenance activities associated with the proposed transmission line. Where practicable, new structures will be located adjacent to existing structures to limit the need for new access roads and to limit the amount of new structure pads required.

Where existing structure pads are utilized for the proposed transmission line, areas will be expanded to encompass the new structure. In areas where new ROW are required, new access roads and structure pads will also be required. Figure 1.3-7 provides a typical access road section.

Construction of access roads and pads in wetland areas consists of silt fence installation followed by clearing and grubbing. Once the area is free of trees and stumps a geo-textile liner is put in place. Following the liner installation, compacted clean fill is installed up to about 6 inches below finished grade. The final 6 inches consists of compacted rock to ensure a stable surface. The final grade of

the road and/or pad is generally set 2 ft above the seasonal high water line elevation (see Figure 1.3-7).

Where construction of roads is required in upland areas, soil from both sides of the road surface may be used for fill. Bulldozers and/or motor graders will be used. In cases where hauled fill is required, the fill will be spread, compacted, and shaped to the design width and elevation.

3.1.3 Line Construction

As described in Section 1.3, single-shaft steel or spun concrete poles will be the typical structure type used on this project. Line construction activities will include the placement of foundations, assembly and erection of structures, and installation of conductors.

The foundations will be either directly embedded structures or drilled pier foundations. Foundation installation requires the excavation of a hole, typically 30 to 50 ft deep, using an auger machine. For steel pole direct embed foundations, the steel pole base section will be set in place, and concrete or rock backfill will be hauled to the site and placed around the entire annulus of the base section.

The above-grade portion of the steel structure will be erected by placing sections together, lifting the structure, and connecting it to the embedded section. For concrete pole direct embed foundations, the entire concrete pole will be set in place, and concrete or rock backfill will be hauled to the site and placed around the entire annulus of the embedded portion of the pole. For drilled pier foundations, the reinforced steel rebar cage is assembled and then set in place. Following the rebar installation, the anchor bolt cage is placed. Concrete is then hauled to the site and placed in the hole creating a reinforced concrete drilled pier. The above-grade portion of the structure will be erected by placing sections together, lifting the structure, and connecting it to the foundation. Typical equipment used in this operation includes but is not limited to a crane, water truck, concrete trucks, bucket trucks, flatbed, backhoe, and dump trucks.

After the structures are erected conductor installation commences. Installation of a conductor includes attachment of insulators and roller blocks. Standard wire-pulling equipment including pulling ropes and tensioners will be used to install the conductors and overhead ground wire or optical ground wire (OPT-GW). The conductor is permanently attached to the insulator and the roller blocks are then removed.

Once the conductor is installed the ROW will be restored. ROW restoration includes removal of all construction equipment and supplies, grading of the ROW, if needed, and planting or seeding of the disturbed area.

3.1.4 Erosion

Construction activities will be planned to minimize disturbance to natural ground covers, to the greatest extent practicable. In areas where soil is disturbed, erosion control measures will be implemented. To allow the most appropriate methods to be implemented, detailed plans will be developed once the final ROW has been selected. Measures may include turbidity screens, temporary culverts, or hay bales. Following construction activities, all disturbed areas will be restored by a variety of methods including soil grading.

With the exception of access roads (where required) and work areas around the structures and structure pads, low-lying vegetation will remain. These types of ground cover re-establish themselves quickly and will assist to reduce erosion at the work areas.

3.2 **Impact on Water-bodies and Uses**

Impacts to wetlands will be avoided or minimized to the extent practicable. Wetlands in the study area were avoided and potential impacts minimized by the corridor selection methodology. Many of the wetlands within the preferred corridor have been previously impacted by existing agricultural activities or roads.

During ROW clearing, road and pad construction, and line construction, impacts to these wetlands will be minimized to the extent practicable by limiting construction to an existing cleared ROW, using existing access roads where available, or locating the new ROW immediately adjacent to an existing clearing so only supplemental clearing is needed. Any unavoidable wetland impacts will comply with FDEP's Environmental Resource Permitting criteria.

Mitigation requirements will be fulfilled through the purchase of mitigation credits from a qualified mitigation bank, or through preservation, restoration, enhancement, or creation of wetland habitat.

Impacts to water quality along and adjacent to construction sites will be minimized by the implementation of appropriate BMPs to control the quantity and quality of runoff from the construction sites.

The construction of the transmission line should require no ground water withdrawal, dewatering, or relocation of any water-bodies and the construction will create no new connections to Waters of the State. Since the water-body crossings within the preferred corridor are relatively narrow, the waterways can be spanned, and therefore, no impacts to navigation are anticipated.

Detailed ROW location for the Lake Agnes to Gifford transmission line, as well as detailed design information for all dredging and filling locations, will be provided to agencies with regulatory authority once the project designs are finalized in a post-certification review process pursuant to conditions of certification. Preliminary typical designs for the project are provided in Section 1.

3.3 Solid Waste

Solid waste generated from ROW clearing and line construction typically consists of cleared vegetation and construction debris. Where practicable, PEF and TECO may mulch or chip vegetation on-site, that may be spread on-site or removed for use elsewhere. Alternatively, cleared vegetation and combustible debris may be burned on-site. Applicable state and local fire-related regulations will be followed.

All noncombustible solid waste will be collected and removed for off-site disposal in compliance with all applicable regulations. The quantity of solid waste generated will depend upon site-specific characteristics of the area being cleared. Since it is anticipated that the majority of the transmission line will be located within, adjacent to, or in proximity of the existing ROW, relatively small amounts of solid waste should be generated.

3.4 Changes to Vegetation, Wildlife and Aquatic Life

Permanent changes to the vegetation, wildlife, and aquatic systems in the preferred corridor are anticipated to be minimal and localized. Vegetation will be impacted in the transmission line ROW by maintenance activities such as trimming, mowing, or herbicide application. Clearing and

placement of fill material may be required in the immediate area of the transmission line structures and at access road locations. Forested wetlands will be cleared to facilitate construction and maintenance of the transmission line. This will result in the conversion of the wetland from a forested system to an herbaceous wetland. Where practicable, herbaceous and open water wetland areas will be spanned to avoid impacts. A limited number of structures may require unavoidable impacts to wetlands. In these cases, fill at each structure location may be required to facilitate construction and maintenance. Where practicable, access roads will be located to avoid or minimize wetland impacts. All wetland impacts will be addressed in accordance with the FDEP's Environmental Resource Permitting criteria.

No impacts to listed species are anticipated. The majority of listed species observed in the preferred corridor are mobile avian species that may relocate to similar habitats during construction activities. The movement of migratory birds should not be impeded and there should not be a significant increase in bird strikes due to the placement of the proposed transmission line since a large portion of the proposed line will be placed adjacent to existing linear facilities. Structures will be located so as to avoid less mobile species, such as the gopher tortoise and other species known to utilize gopher tortoise burrows (commensal species), such as the gopher frog, Florida mouse, and eastern indigo snake. In the event that impacts to gopher tortoise or other less mobile species cannot be avoided, these impacts will be mitigated as required under existing FFWCC and USFWS regulations.

Once the ROW for the Lake Agnes to Gifford transmission line is finalized, it will be surveyed for listed species and the applicants will consult with FFWCC on appropriate mitigation or avoidance methods in a post-certification process pursuant to conditions of certification.

3.5 Impact on Human Populations

Construction of the Lake Agnes to Gifford transmission line will consist of a series of tasks performed by several specialized crews. Some of these crews may work simultaneously along any part of the transmission line. The length of time needed to construct the approximately 27.5-mile transmission line will be approximately 12 to 18 months. During this construction time, a particular crews' time at a structure location could typically be one to two weeks. Crew sizes will vary depending upon the task. The largest crew in any one location could consist of approximately 15 members; however, the typical crew could have 8 to 10 members. Use of construction equipment

may result in temporary noise impacts to residences and businesses located along the ROW. These impacts will be brief and intermittently spaced due to the nature of transmission line construction and equipment use. A majority of the construction activities are planned to occur during daylight hours to minimize disturbance. Special circumstances could require nighttime activities. These special circumstances will be coordinated with appropriate agencies and governmental representatives.

Clearing and road construction would be minimized where the preferred corridor is within, adjacent to, or in proximity of existing ROW. Where the proposed transmission line follows existing public roads, the construction contractor will follow FDOT guidelines for flagging and use of barriers for traffic control.

In general, because of the temporary nature of the construction process and the relatively short duration of each phase of construction at any given location, impacts experienced by the human populations residing or working adjacent to the transmission line will be minor.

3.6 Impact on Archaeological and Historic Sites

A Phase I cultural resource survey will be conducted in the areas identified by DHR as archeologically sensitive after the transmission line ROW has been selected following the certification of the corridor prior to the construction of the transmission line. If the survey reveals any significant sites, the sites will be avoided if possible during the construction and maintenance of the transmission line. If avoidance is not possible, a salvage excavation plan of the site will be developed by a professional archaeologist. The survey and any salvage excavation plan recommendations will be submitted to DHR for review and approval. Upon DHR concurrence with any recommendations for excavations, the sites will be excavated, findings analyzed, and a report submitted to DHR.

If any cultural resource finds are discovered during construction, construction activities will be immediately halted in the vicinity of the site and DHR will be notified. A determination of the significance of the find will be conducted, as appropriate, and PEF or TECO will coordinate with DHR to evaluate mitigative measures necessary to protect the site from adverse impacts.

4.0 EFFECTS OF TRANSMISSION LINE RIGHT-OF-WAY MAINTENANCE AND POST-CONSTRUCTION IMPACTS AND EFFECTS OF MAINTENANCE

4.1 Maintenance Techniques

Maintenance activities for the Lake Agnes to Gifford 230-kV transmission line will consist of preventative and corrective measures. Although transmission lines normally require minimal maintenance, PEF and TECO will conduct annual inspections to ensure the safe and reliable operation of their respective portions of the line using ground or aerial means.

Maintenance of the ROW, including wetlands, will be consistent with the ROW clearing described in Section 3.1. Using the same restrictive clearing practices described in Section 3.1 will allow ROW maintenance in wetlands areas to be performed while encouraging the growth of low-growing woody and herbaceous vegetation to the greatest extent practicable. Care will be taken not to cause unnecessary damage to vegetation in these environmentally sensitive areas. Any vegetation that may be cut during clearing of the ROW (Section 3.1) may alternatively be girdled or selectively treated with herbicides during line maintenance. Girdled or treated vegetation will be allowed to remain standing to provide habitat and food sources for wildlife.

Herbicides used on the Lake Agnes to Gifford transmission line ROW will include only those registered by the U.S. Environmental Protection Agency (EPA) and which have state approval. Herbicide application rates and concentrations will be in accordance with label directions and will be carried out by a licensed applicator, meeting all federal, state, and local regulations.

The exact manner in which maintenance will be performed will depend on the location, type of terrain, and surrounding environment. Each area of the ROW will be addressed based on site-specific vegetation and habitat. Endangered or threatened species, if present, are considered and accommodated in the maintenance program.

4.2 Multiple Uses

Multiple uses within a transmission line ROW typically can include agricultural operations (e.g., grazing, orange groves, and row crops), controlled landscaping and other activities that do not

interfere with PEFs or TECOs use of the ROW for the operation and maintenance of the proposed transmission line. In areas where the new transmission line will be located within, adjacent to, or in proximity of an existing transmission line ROW, multiple uses consistent with those currently allowed will generally be acceptable.

Both PEF and TECO each currently maintain a ROW utilization program that will consider future requests for multiple uses. This Program reviews requests for such multiple uses to assure that the proposed use of the ROW is compatible with safe line operation and maintenance.

4.3 Changes in Species Populations

Since the majority of the Lake Agnes to Gifford transmission line will be constructed either within, adjacent to, or in proximity of existing ROW, impacts to plant and animal populations as a result of maintenance and post-construction activities will be minimized. In those areas where the existing ROW will need to be widened, maintenance practices will be similar to the initial clearing activities and will not result in adverse impacts to plant and animal populations.

4.4 Effects of Public Access

Neither ROW nor access roads are anticipated to increase the exposure of previously undisturbed areas to the public. Vehicular traffic will be limited to that necessary for routine maintenance activities. In areas where the new transmission line will be located either within, adjacent to, or in proximity of existing ROW, the degree of public access is anticipated to remain unchanged. Locked gates will be provided at all points where a transmission line access road intersects previously fenced property.

4.5 Electric and Magnetic Field Effects

Like all electric power lines, the Lake Agnes to Gifford 230-kV transmission line will produce electric and magnetic fields (EMF). The electric field strength is dependent upon the voltage impressed on the transmission line conductors. The magnetic field strength is a function of the amount of current flowing on the transmission line. The voltage on a transmission line is held relatively constant (usually within 5 percent), but the current flowing on the conductors varies

depending upon the power needs of the customers ultimately served by a line. Because of these characteristics, the electric field near transmission lines is relatively constant over time, but the magnetic field fluctuates depending on load requirements.

The major cause of variation in electric field strength at various locations along the transmission line ROW is the fluctuation in the height of the conductors above the ground. The conductors are securely attached to the support structures at the end of each span but sag somewhat between structures. Consequently, they are usually closest to the ground midway between the structures. This point halfway between the structures is called midspan. Increases in conductor temperature resulting from high current in the conductors and from extreme weather conditions result in temporary elongation of the conductors and additional sag at midspan. The extent to which the conductors sag is carefully designed to ensure that adequate safety clearance is maintained between the conductors and ground for all extremes of electrical load and weather conditions. Since the extreme conditions of electrical load and weather conditions are very infrequent, the actual midspan height of the transmission line conductors is usually considerably higher than their design minimum midspan clearance. At points other than midspan, the conductors are even higher, reaching their greatest height above ground at the structures. Directly beneath the transmission line, the electric field strength is strongly influenced by the conductor height. The electric field is greatest at the point where the conductors are closest to ground. Consequently, the maximum electric field occurs at midspan when load and weather conditions cause the transmission line conductors to sag to their minimum height aboveground. At all other times and at all other locations along the span, the conductors are higher above ground and the electric field is less than the maximum value. At locations other than those directly beneath the conductors, such as at the edge of the ROW or beyond, the electric field is less dependent on conductor height and will increase or decrease depending on location, line design, shielding by vegetation or other structures and other factors.

Magnetic field strength varies depending on load current and on conductor height. The highest magnetic field occurs at midspan when the current in the transmission line is at its maximum value and load and existing weather conditions cause the conductors to sag to their minimum height above the ground. At all other times and at all other locations, the magnetic field will be considerably less than the maximum. As with electric fields, magnetic fields directly beneath the transmission line are most strongly dependent on conductor height. At other locations such as at the edge of the ROW and beyond, increased conductor height leads to lower magnetic fields, but the effect is slight.

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

The FDEP regulates EMF from electrical transmission lines under the provisions of Sections 403.061(30) and 403.523(14), of the F.S. The pertinent rule is Chapter 62-814, F.A.C., and the application form is 62-814.900 of the F.A.C. The proposed Lake Agnes to Gifford 230-kV transmission line complies with the FDEP EMF regulations found in 62-814.450(3), F.A.C. The FDEP EMF rules applicable to this new 230-kV transmission line project are:

- The maximum electric field at the edge of the transmission line ROW and at the substation property boundary shall not exceed 2 kilovolts per meter (kV/m);
- The maximum electric field on the transmission line ROW shall not exceed 8 kV/m; and
- The maximum magnetic field at the edge of the transmission line ROW and at the substation property boundary shall not exceed 150 milliGauss (mG).

EMF associated with the Lake Agnes to Gifford 230-kV transmission line was calculated using the EzEMF software program developed through the Florida Electric Power Coordinating Group. The EzEMF software was developed using the Bonneville Power Administration Corona and Field Effects Program (CAFEP) as the source for the electric and magnetic calculations.

Table 4.5-1 presents the maximum calculated EMF that can be produced by the proposed transmission line under maximum normal operating conditions consistent with Chapter 62-814, F.A.C. These fields comply with FDEP rule requirements for new 230-kV lines. Appendix F contains data depicting the maximum EMF at maximum operating conditions for each of the typical line configurations, both on the ROW and laterally under the transmission line. Since some of the preferred corridor contains existing transmission line ROW that may be used for alignment of the new transmission line, the existing lines were included in the calculations, where appropriate.

TABLE 4.5-1 MAXIMUM CALCULATED EMF FOR LAKE AGNES-GIFFORD 230-KV PROJECT

ROW Configuration	Electric Field (kV/m)		Magnetic Field (mG) at MCR* on Edge of ROW
	On ROW	Edge of ROW	
Lake Agnes substation property boundary	N/A	0.35	112.5
Typical tangent structure on 100-ft ROW	3.7	0.4	147.1
Typical tangent structure on 185-ft right-of-way including the existing McIntosh -	4.2	0.7	111.4

TABLE 4.5-1 MAXIMUM CALCULATED EMF FOR LAKE AGNES-GIFFORD 230-KV PROJECT

ROW Configuration	Electric Field (kV/m)		Magnetic Field (mG) at MCR* on Edge of ROW
	On ROW	Edge of ROW	
Taft 230-kV line			
Typical tangent structure on road ROW	2.2	1.1	146.1
Existing tangent structure on road ROW with additional 35-ft easement including the existing Boggy Marsh-Gifford and Four Corners-Gifford 69 kV lines	1.3	0.4	57.3
Gifford substation property boundary	N/A	0.01	17.9
Florida EMF Rule limit for new 230-kV lines	8.0	2.0	150

* The MCR for the LAG 230-kV line is 3,000 amperes per phase.

Other configurations may be developed during the detailed design of the transmission line and cannot be presented here. Although these additional configurations may result in EMF that are greater than those shown in this certification application all configurations will be within the limits defined in Chapter 62-814, F.A.C. The detailed design of the transmission line will start after the corridor is certified, during which a specific ROW within the corridor is selected. PEF and TECO will submit all configurations in this certification application to FDEP at least 90 days prior to the start of construction.

4.5.1 Corona Effects

The electric field at the surface of transmission line conductors can, under some conditions, result in localized ionization of the air near the conductors. This phenomenon is called corona. As explained in the following paragraphs, corona activity at the surface of transmission line conductors produces low levels of acoustic and radio frequency electric energy which, under some conditions, can result in audible noise and radio or television interference.

4.5.1.1 *Audible Noise*

The primary cause of audible noise on high-voltage transmission lines is corona resulting from an irregularity on the surface of the conductor, such as buildup from fog, water droplets, significant

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

particulate matter, etc. Corona activity at the surface of the conductor produces a low-level audible noise that is a slight humming sound. Under wet conditions, higher noise levels are experienced than would occur under dry conditions. However the background noise from various sources such as falling rain, traffic, blowing leaves, etc. has the effect of masking transmission line noise. A secondary cause of audible noise on transmission lines are gap-type discharges on hardware or scintillations on insulators with an accumulation of salt deposits or certain other foreign particles. Gap type discharges are not anticipated to be significant audible noise sources on the Lake Agnes to Gifford 230-kV transmission line because gap discharges are characteristic of higher frequencies than the audible noise frequency band for “A” weighted human hearing (less than 10,000 Hertz).

During fair weather conditions when the conductors are dry, the audible noise levels produced by the Lake Agnes to Gifford 230-kV transmission line will be less than normal outdoor ambient noise levels. Table 4.5-2 presents the maximum audible noise levels that could be produced by the proposed transmission line during rain or other wet weather conditions. Audible noise levels were calculated using the CAFEP developed by Bonneville Power Administration.

**TABLE 4.5-2 MAXIMUM CALCULATED AUDIBLE NOISE FOR LAKE AGNES-
GIFFORD 230-KV PROJECT**

ROW Configuration	L50* (dBA)
Typical tangent structure on 100-ft ROW	36.9
Typical tangent structure on 185-ft ROW including the existing McIntosh - Taft 230-kV line	37.6
Typical tangent structure on road ROW	35.8
Existing tangent structure on road ROW with additional 35-ft easement including the existing Boggy Marsh-Gifford and Four Corners-Gifford 69 kV lines	33.8

*Maximum audible noise occurs during rain or other wet weather conditions. Noise levels will be lower during dry weather conditions.

The calculated audible noise levels anticipated to be produced by the proposed transmission line will comply with all applicable audible noise ordinances in Polk, Osceola, and Orange Counties. There are no references to any noise regulations for the cities of Auburndale and Reedy Creek at the time of this application submittal (see Section 2.2.2 for applicable limits).

4.5.1.2 *Radio and Television Interference*

Electrical noise in the radio frequency range can be produced by corona on transmission line conductors or by gap discharges on transmission line hardware. Corona noise is most significant in the lower frequencies such as those used for amplitude modulation (AM) radio broadcasting. Noise from gap discharges, on the other hand, extends to higher frequencies (peak levels are in the 30 to 100 MHz range) and can be a source of interference with television broadcast reception. Since the Lake Agnes to Gifford 230-kV transmission line will be constructed with new hardware, gap discharges are not anticipated to occur. Should a gap discharge develop on a damaged, defective, or improperly installed piece of hardware and lead to interference, the hardware causing the gap discharge will be located and repaired or replaced. Therefore, the following analysis focuses on interference from corona on the transmission line conductors. Radio and television interference levels were calculated using the CAFEP developed by Bonneville Power Administration. The results of the calculations are summarized in the following paragraphs.

Radio

Communications systems using frequency modulation (FM), such as FM radio broadcast or business and public service communications, are not affected by transmission line noise because the corona discharge radio frequency amplitudes decreases significantly above 3 MHz (which is below the FM frequency band). Systems using amplitude modulation, such as AM radio and the video (picture) portion of television broadcasts can be affected if the broadcast signal strength is weak or the noise level is high, or both. The Federal Communications Commission (FCC) has characterized AM broadcast signals into categories based on the strength of signal received. Six categories Type A, B, C, D, E & F have been identified, with the stronger signals being Type A and Type B. The FCC primarily protects the Type A and Type B signals from co-channel or adjacent channel interference.

AM radio stations providing broadcast signals sufficiently strong to be free of naturally occurring atmospheric interference (static) at least 90 percent of the time are classified as providing Type A signal service by the FCC. In general, stations with Type A signal service will not experience objectionable interference from the Lake Agnes to Gifford 230-kV transmission line during fair weather if the receiver is located beyond the edge of the ROW.

Weaker AM radio station signals, which are likely to experience naturally occurring atmospheric interference at least 50 percent of the time, are defined as Type B signal service by the FCC. Weak stations minimally meeting the Type B criterion (signal strength equal to 54 decibels (dB)) could experience noticeable interference from transmission line corona during fair weather at receivers located at the edge of the ROW, however, these stations will not experience objectionable interference from the Lake Agnes to Gifford 230-kV transmission line during fair weather if the receiver is located 100 ft beyond the outermost conductor (radio noise interference levels are below 32 dB which results in an acceptable signal-to-noise ratio of 22 dB or higher). Calculating the expected interference level at 100 ft beyond the outermost conductor is a realistic approach since most residences and businesses where radios are being utilized are beyond the 100-ft threshold.

During rainy weather, naturally occurring radio interference from atmospheric electricity (static) increases significantly causing interference with all but the stronger local AM radio stations, thereby masking any interference from transmission lines. The primary source from atmospheric noise is lightning activity. Lightning activity several thousands of miles away can cause severe static to weak AM radio signals. Consequently, interference from transmission line corona during rain is not a significant concern.

Television

Grade A television signal strengths have been defined by the FCC as those capable of providing acceptable reception at 70 percent of the receiver locations more than 90 percent of the time. The proposed transmission line will not likely cause an interference with any Grade A television station under wet weather condition regardless of antenna location outside the ROW.

Grade B television signals generally provide acceptable reception at 50 percent of the receiver locations 90 percent of the time. The proposed transmission line may interfere with the reception of weaker stations minimally meeting the Grade B signal criterion and operating on Channels 2 thru 6 (signal strength equal to 47 dB). Signal interference may occur at the edge of the ROW under wet weather conditions, however, these signals will not experience objectionable interference from the Lake Agnes to Gifford 230-kV transmission line during wet weather conditions if the receiver is located 100 ft beyond the outermost conductor (television interference levels are approximately 7 dB which results in an acceptable signal-to-noise ratio of 40 dB or higher). Calculating the expected

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

interference level at 100 ft beyond the outermost conductor is a realistic approach since most residences where televisions are being utilized are beyond the 100-ft threshold. Grade B stations operating at Channel 7 (signal strength equal to 56 dB) and above will not likely experience interference under wet weather conditions regardless of antenna location outside the ROW.

Summary

Operation of 230 kV lines and below has historically created very few issues related to radio and television interference. Although this analysis indicates the possibility of interference with some Grade B or lesser radio stations and Grade B television stations, the probability of such interference is low for the following reasons:

- Only the weakest Grade B and lower radio signals are affected;
- Only the weakest Grade B television stations operating on Channels 2 thru 6 are affected;
- Most of the residences near the proposed transmission line are in more urban areas where the signal strengths for radio and television stations are higher;
- The proximity of the radio or television unit is normally more than 100 ft away from the transmission line;
- The radio or television antenna axis orientation may not conflict with the line;
- There are some existing transmission lines that have operated in the area for many years without any known interference problems; and
- The proposed transmission line will not interfere with cable television, satellite television, or telephone reception.

Should any homeowner or business experience abnormal interference as a result of these transmission lines, PEF or TECO, as appropriate, will investigate all complaints and provide appropriate mitigation for impacts to radio or television reception caused by the proposed transmission line.

4.5.2 Safety

As required by the Florida PSC in Chapter 25-6 F.A.C., the proposed transmission line will comply with all requirements of the NESC. The purpose of this code, among other things, is the practicable safeguarding of persons during the installation, operation, and maintenance of electric utility lines and associated equipment.

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT

PEF and TECO standards will require that fences and gates either crossing or parallel to and within the transmission line ROW be grounded to mitigate shock hazards. These construction-related activities will be included in the transmission line construction project.

5.0 VARIANCES, EXCEPTION, AND EXEMPTIONS

No known variances, exceptions or exemptions from applicable state, regional or local regulations or standards have been identified for the certification, construction, maintenance or operation of the proposed Lake Agnes to Gifford 230 kV transmission line.

APPENDICES

APPENDIX A

PSC Need Determination Final Order

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for determination of need for
Lake Agnes-Gifford 230 kV transmission line
in Polk and Orange Counties, by Progress
Energy Florida, Inc., and Tampa Electric
Company.

DOCKET NO. 070393-EI
ORDER NO. PSC-07-0784-FOF-EI
ISSUED: September 26, 2007

The following Commissioners participated in the disposition of this matter:

MATTHEW M. CARTER II
KATRINA J. McMURRIAN
NANCY ARGENZIANO

FINAL ORDER DETERMINING THE NEED
FOR AN ELECTRICAL TRANSMISSION LINE

APPEARANCES:

LEE L. WILLIS, ESQUIRE, and JAMES D. BEASLEY, ESQUIRE, Ausley &
McMullen, Post Office Box 391, Tallahassee, Florida 32302
On behalf of Tampa Electric Company (TECO).

KENNETH HOFFMAN, ESQUIRE, Rutledge Law Firm, Post Office Box 551,
Tallahassee, Florida 32302
On behalf of Progress Energy Florida (PEF).

R. ALEXANDER GLENN, ESQUIRE, and JOHN BURNETT, ESQUIRE,
Progress Energy Florida, Inc., Post Office Box 14042, Saint Petersburg, Florida
33733
On behalf of Progress Energy Florida (PEF).

KEINO YOUNG, ESQUIRE and MARTHA C. BROWN, ESQUIRE, Florida
Public Service Commission, 2540
Shumard Oak Boulevard, Tallahassee, Florida 32399-0850
On behalf of the Florida Public Service Commission (Staff).

BY THE COMMISSION:

CASE BACKGROUND

On August 1, 2007, Progress Energy Florida (Progress) and Tampa Electric Company
(Tampa Electric) filed a Petition for a Determination of Need for a proposed Lake Agnes-Gifford
230kV transmission line in Polk and Orange Counties, pursuant to Section 403.537, Florida

DOCUMENT NUMBER-DATE

08826 SEP 26 06

FPSC-COMMISSION CLERK

Statutes (F.S.), and Rule 25-22.080, Florida Administrative Code (F.A.C.). We held an administrative hearing on Progress and Tampa Electric's petition on September 12, 2007. Notice of the filing of Progress and Tampa Electric's petition and of the September 12, 2007, public hearing was provided in accordance with applicable statutes and rules to those persons requesting notice and to counties and regional planning councils in whose jurisdiction the transmission line could be placed.

No other parties intervened in the proceeding. At the hearing, the testimony and exhibits were stipulated into the hearing record and stipulated positions were proposed to all the issues in the case. We issued a bench decision at the hearing approving the proposed stipulations and thereby determining the need for the transmission line. Our decision, explained in more detail below, determined the need and the beginning and end points for the transmission line. The Transmission Line Siting Board will make the final determination concerning the length and route of the line.

DECISION

As provided in section 403.537, F.S., we are required to take the following into account in determining the need for a proposed transmission line subject to our review under Florida's Transmission Line Siting Act (sections 403.52-403.5365, F.S.):

[T]he need for electric system reliability and integrity; the need for abundant, low-cost electrical energy to assure the economic well-being of the citizens of this state; the appropriate starting and ending point of the line; and other matters within [our] jurisdiction deemed relevant to the determination of need.

Need for Electric System Reliability and Integrity

Progress and Tampa Electric's proposed new 32.4 miles 230 kV transmission line, extending from Tampa Electric's existing Lake Agnes Substation in Polk County to Progress' planned Gifford Substation in Orange County, is scheduled to be in service by June 2011. The project meets area load requirements by serving proposed future distribution substations along the Interstate 4 (I-4) corridor from existing and planned generation in the Polk/Hardee County area to the greater Orlando area load center while maximizing system reliability and minimizing cost to customers.

Transmission assessment studies, the Florida Central Coordinated Study (FCCS) and the FCCS Re-Study, issued in 2006, identified regional transmission system limitations in the I-4 corridor between Polk County and the greater Orlando area. These studies show that the transmission limitations on the existing 230kV transmission network between the Polk County area and the Greater Orlando area are due to projected load growth in the 2008-2011 timeframe. Progress and Tampa Electric's study of transmission improvements for the area evaluated various alternatives and resulted in the selection of the Lake Agnes to Gifford Project as the most cost-effective and efficient means to both increase the capability of the existing 230 kV network and serve the increasing load and customer base in the Central Florida region.

Progress and Tampa Electric have demonstrated the need for the Lake Agnes-Gifford 230 kV Transmission Line Project in Polk and Orange Counties by June 2011 to: (a) provide additional transmission transfer capability along the I-4 corridor to move electricity generated in the Polk County region to load centers in the Greater Orlando area in a reliable manner consistent with the North American Electric Reliability Council (NERC) and the Florida Reliability Coordinating Council (FRCC) and other applicable standards; (b) serve the increasing load and customer base in the projected service area; and (c) potentially provide for another electrical feed via a separate Right of Way (ROW) path, thereby reducing the impact of a loss of the existing transmission facilities on a common ROW.

For these reasons, we find that Progress and Tampa Electric's proposed Lake Agnes-Gifford Project is needed to preserve electric system reliability and integrity.

Need for Abundant, Low-Cost Electrical Energy to Assure the Economic Well-Being of the Citizens of this State

Progress and Tampa Electric evaluated four alternatives to the proposed Lake Agnes-Gifford Project. All four alternatives were transmission modifications to the proposed ROW that used a portion of or the entire existing common ROW. Progress and Tampa Electric rejected the alternatives primarily due to economics and reliability concerns. The estimated capital cost of the Lake Agnes-Gifford Project is \$67.5 million, excluding right-of-way. Progress and Tampa Electric will reduce transmission losses by approximately 18.5 MW for the FRCC region, which includes a 10.8 MW reduction for Progress and a 1.9 MW increase for Tampa Electric. The cost benefits and the reliability benefits of the project will be enhanced by the construction of the project in a geographically separate ROW. While the final cost of the project is subject to the final routing and conditions of certification required by the Transmission Line Siting Board, we find that the estimated cost of the project is reasonable, and we find that the transmission line will assure the economic well-being of the citizens of the state by serving projected new electric load in the region, and improving the region's electric reliability by minimizing exposure to single contingency events.

Appropriate Starting and Ending Points

We find that the existing Lake Agnes Substation and the planned Gifford Substation, as described and analyzed in the exhibit of the joint prefiled testimony of Progress' witness Brantley Tillis and Tampa Electric's witness Thomas J. Szelistowski, are the appropriate starting and ending points of the proposed Lake Agnes-Gifford 230 kV electrical transmission line. As stated above, the Transmission Line Siting Board will make the final determination concerning the length and route of the transmission line.

Conclusion

We approve Progress and Tampa Electric's Petition for determination of need for the Lake Agnes-Gifford 230 kV transmission line in Polk and Orange Counties. Progress and

Tampa Electric have adequately demonstrated the need for the proposed project according to the criteria prescribed in section 403.537, F.S. This Order memorializing our decision will serve as our report to the Department of Environmental Protection.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that Progress Energy Florida, Inc., and Tampa Electric Company's Petition for determination of need for the Lake Agnes-Gifford 230 kV transmission line in Polk and Orange Counties is granted. It is further

ORDERED that Progress Energy Florida, Inc., and Tampa Electric Company's Lake Agnes-Gifford 230 kV transmission line project is needed, taking into account the criteria set forth in section 403.537, Florida Statutes. It is further

ORDERED that this docket shall be closed.

By ORDER of the Florida Public Service Commission this 26th day of September, 2007.



ANN COLE
Commission Clerk

(S E A L)

KY

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

Any party adversely affected by the Commission's final action in this matter may request:

- 1) reconsideration of the decision by filing a motion for reconsideration with the Office of Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, within five (5) days of the issuance of this order in the form prescribed by Rule 25-22.060, Florida Administrative Code; or
- 2) judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or the First District Court of Appeal in the case of a water and/or wastewater utility by filing a notice of appeal with the Office of Commission Clerk, and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days after the issuance of this order, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.

APPENDIX B

Aerials, Future Land Use, Zoning, Land Use/Land Cover and Vegetation Maps

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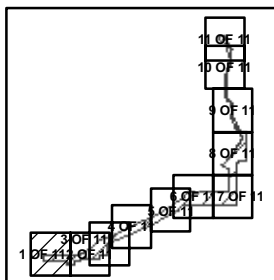
SEE FIGURE 2 OF 11 FOR CONTINUATION

LEGEND

- Existing substation
- Planned substation
- Preferred Corridor
- Service territory
- County boundaries
- Railroads
- Major roads

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Aerial photography - Aerials Express 1/16/2006 via ESRI's ArcGIS Online



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PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

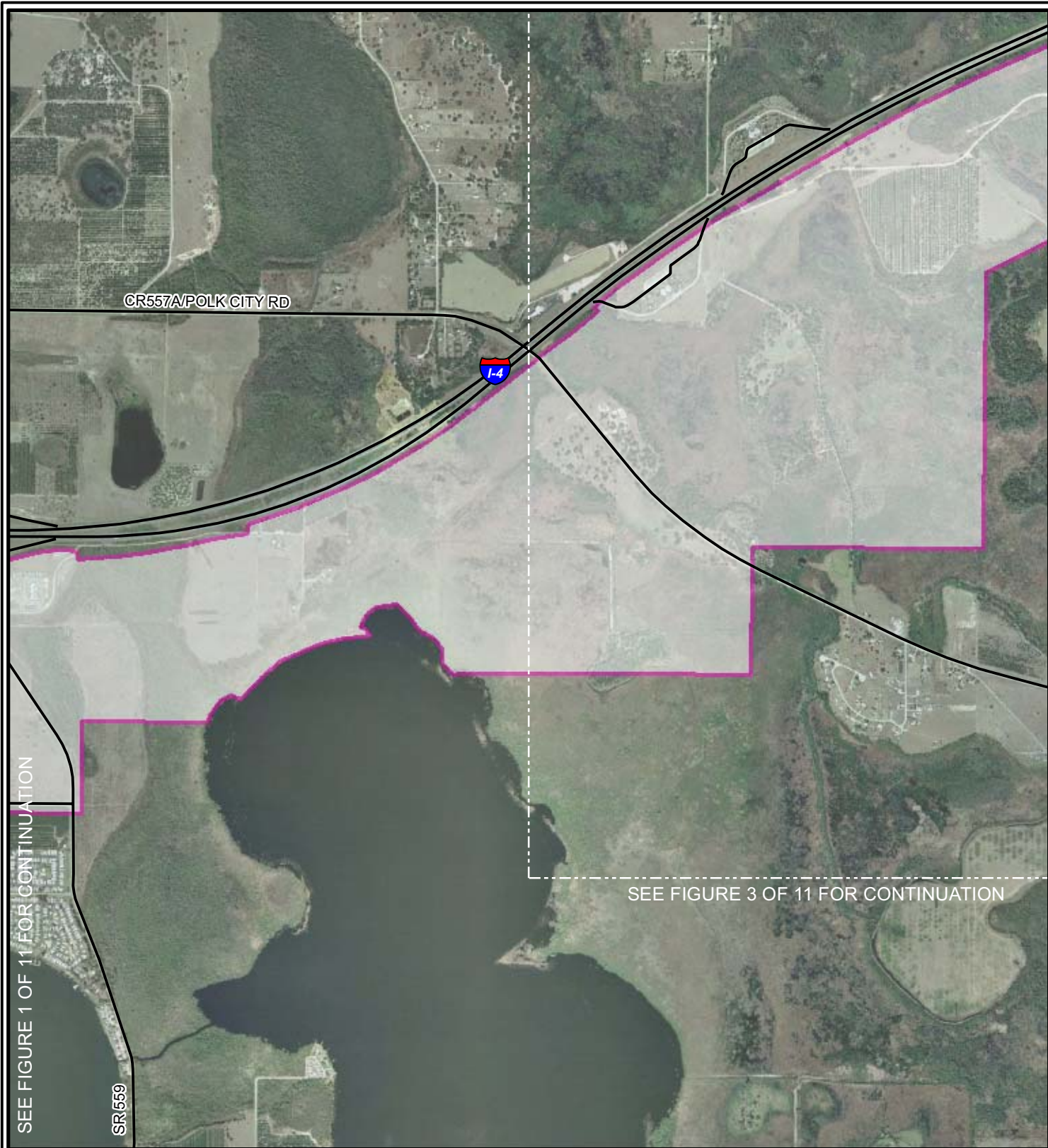
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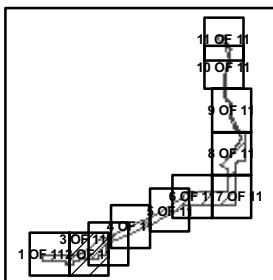
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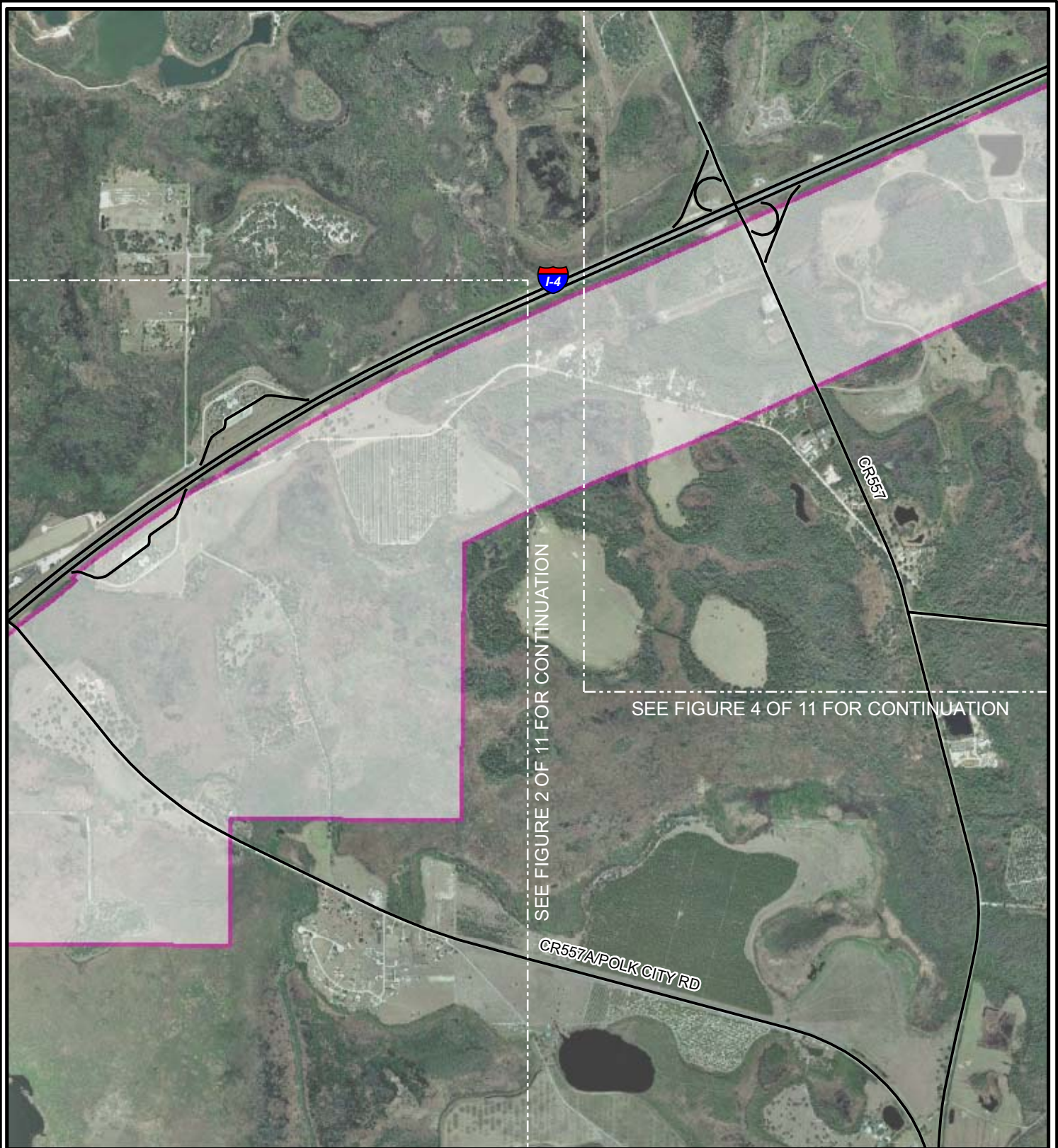
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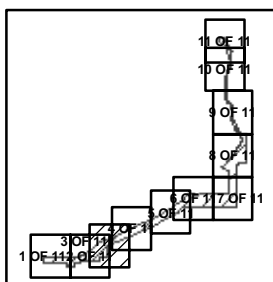


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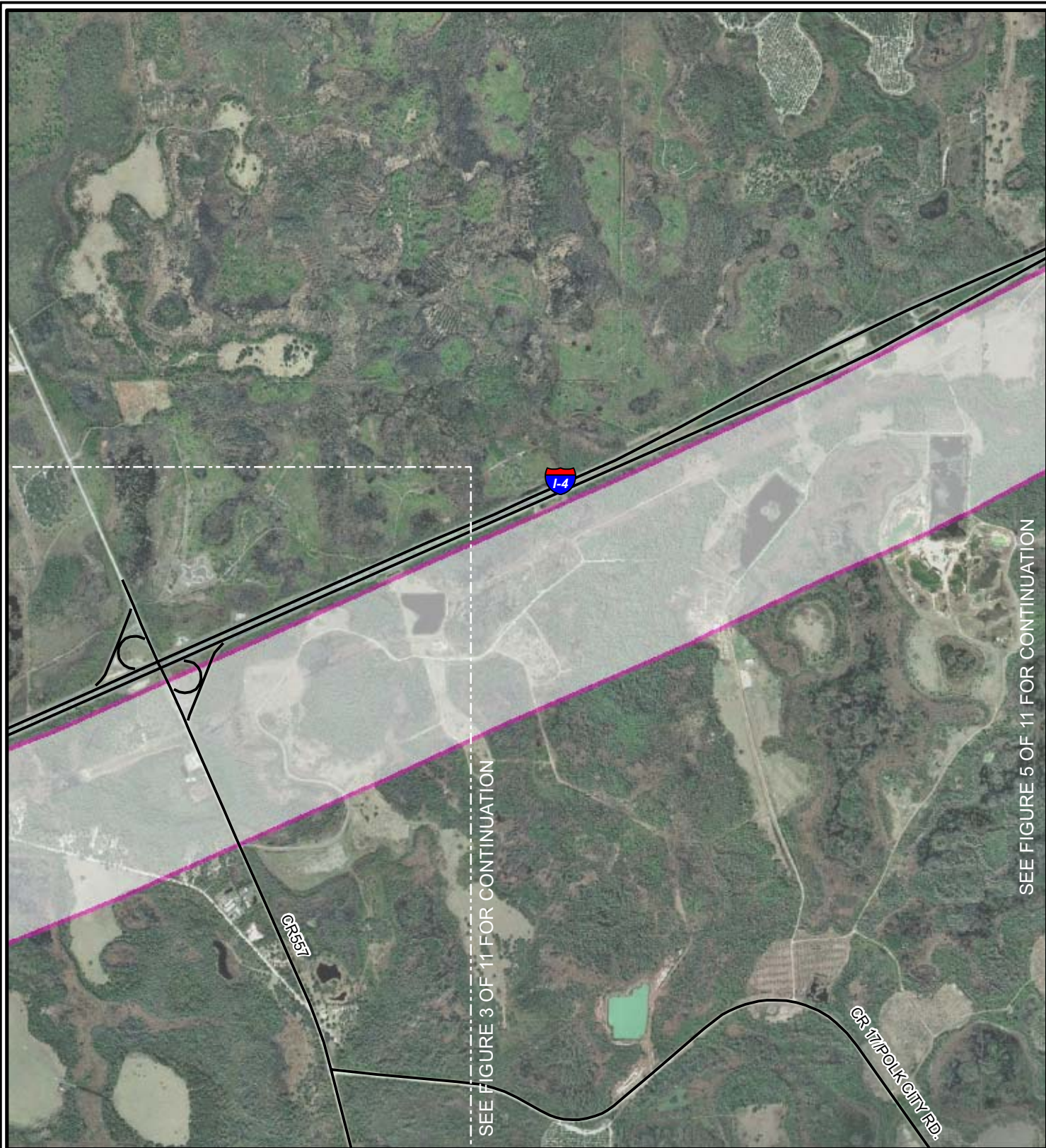
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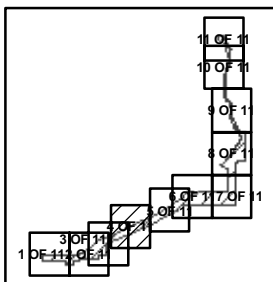


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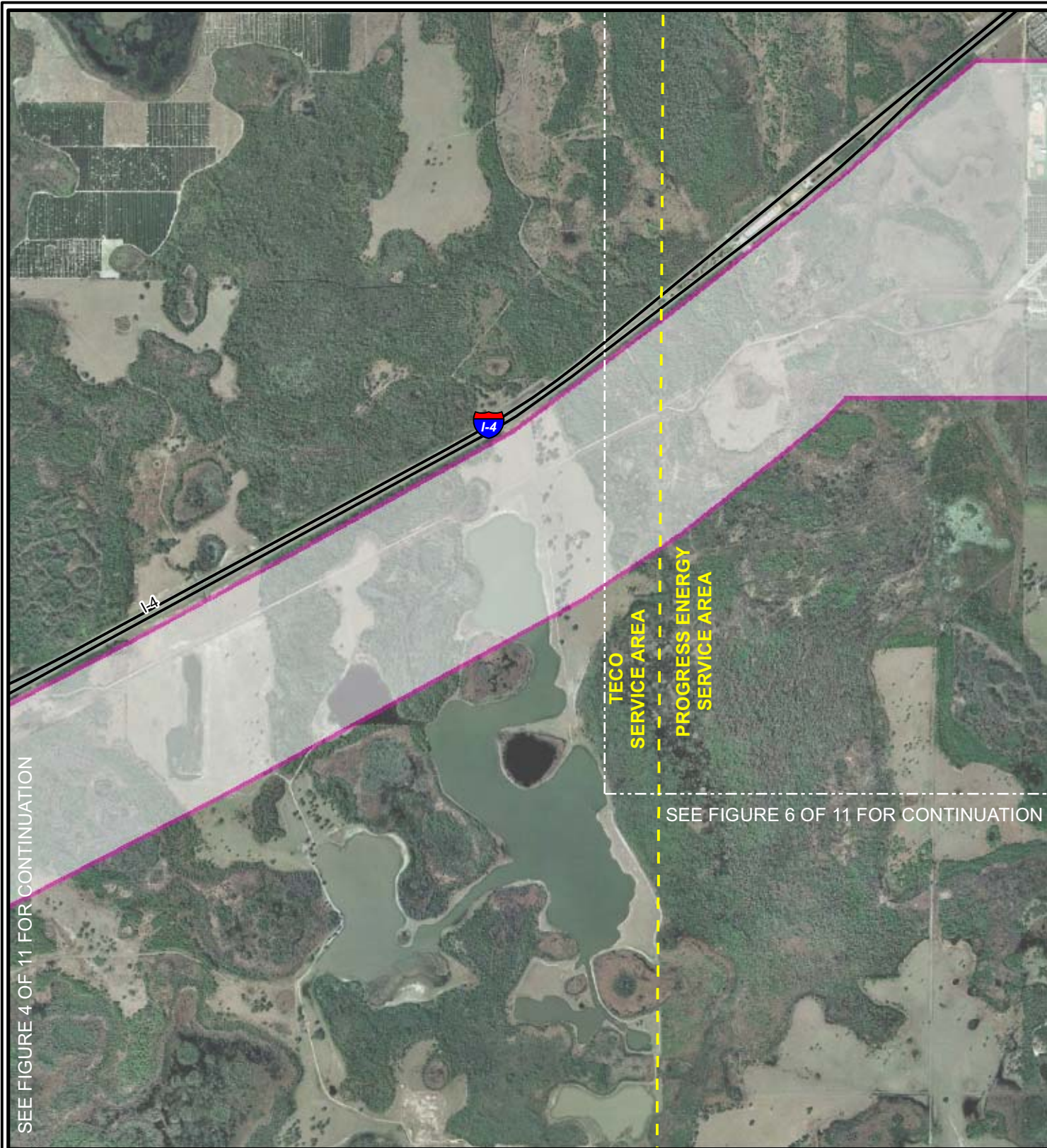
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SEE FIGURE 4 OF 11 FOR CONTINUATION

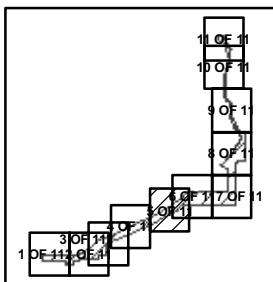
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LEGEND

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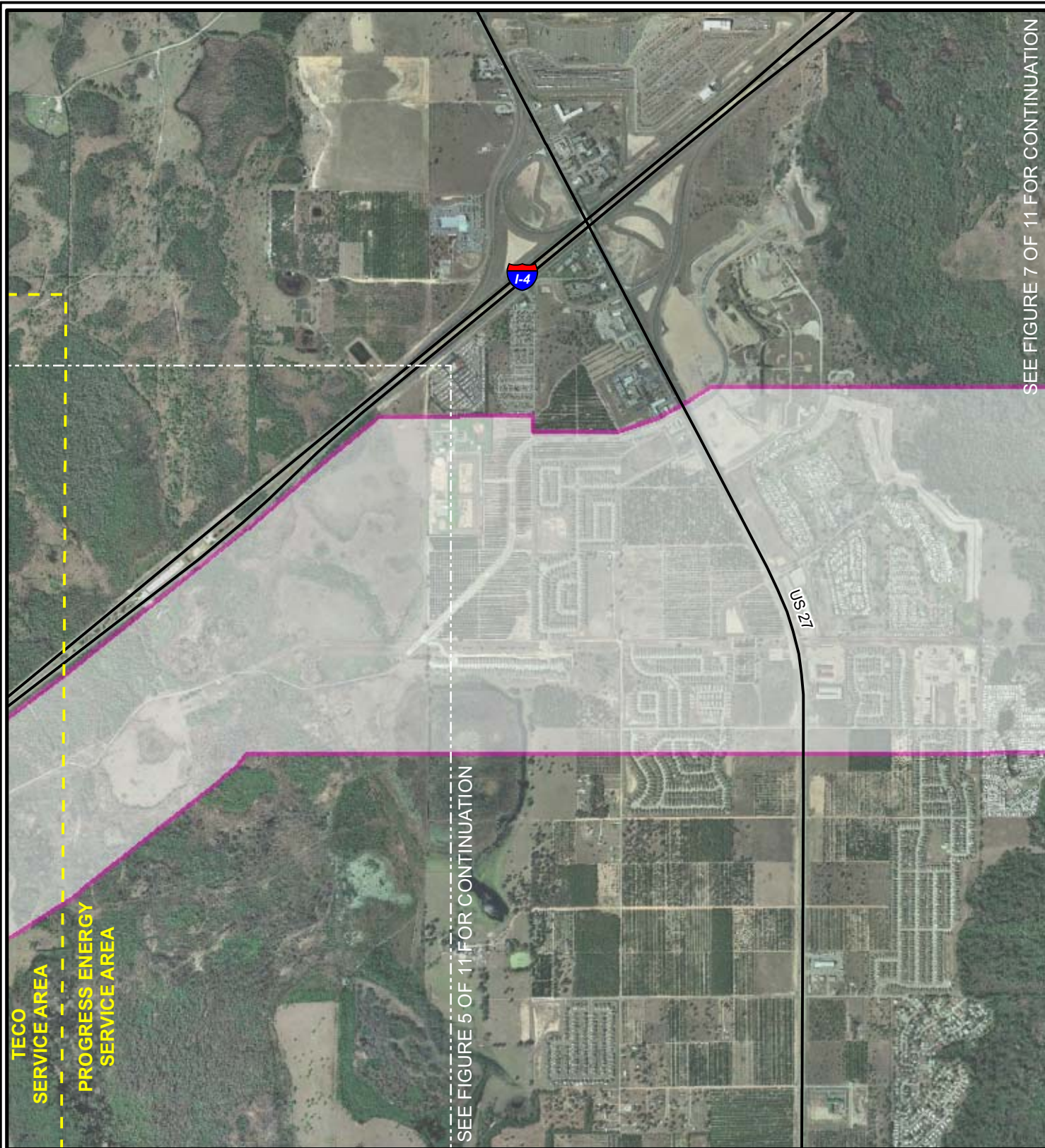
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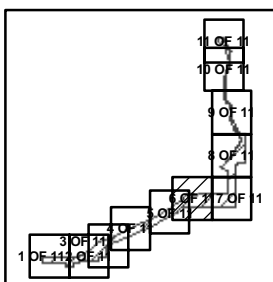


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SEE FIGURE 8 OF 11 FOR CONTINUATION

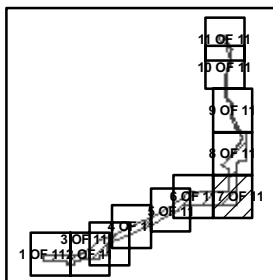
SEE FIGURE 6 OF 11 FOR CONTINUATION

LEGEND

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REVIEW	MM	12/3/2007		

SEE FIGURE 9 OF 11 FOR CONTINUATION

TRICOUNTY RD

GOODMAN ROAD

MASTERS BLVD

OLD LAKE WILSON ROAD

CHAMPIONS GATE BLVD.

OSCEOLA COUNTY

OSCEOLA-POLK LINE RD

POLK COUNTY

LOUGHMAN RD/CR54

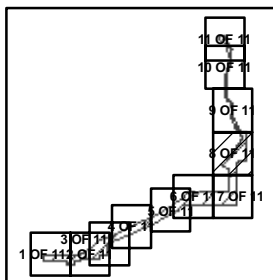
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LEGEND

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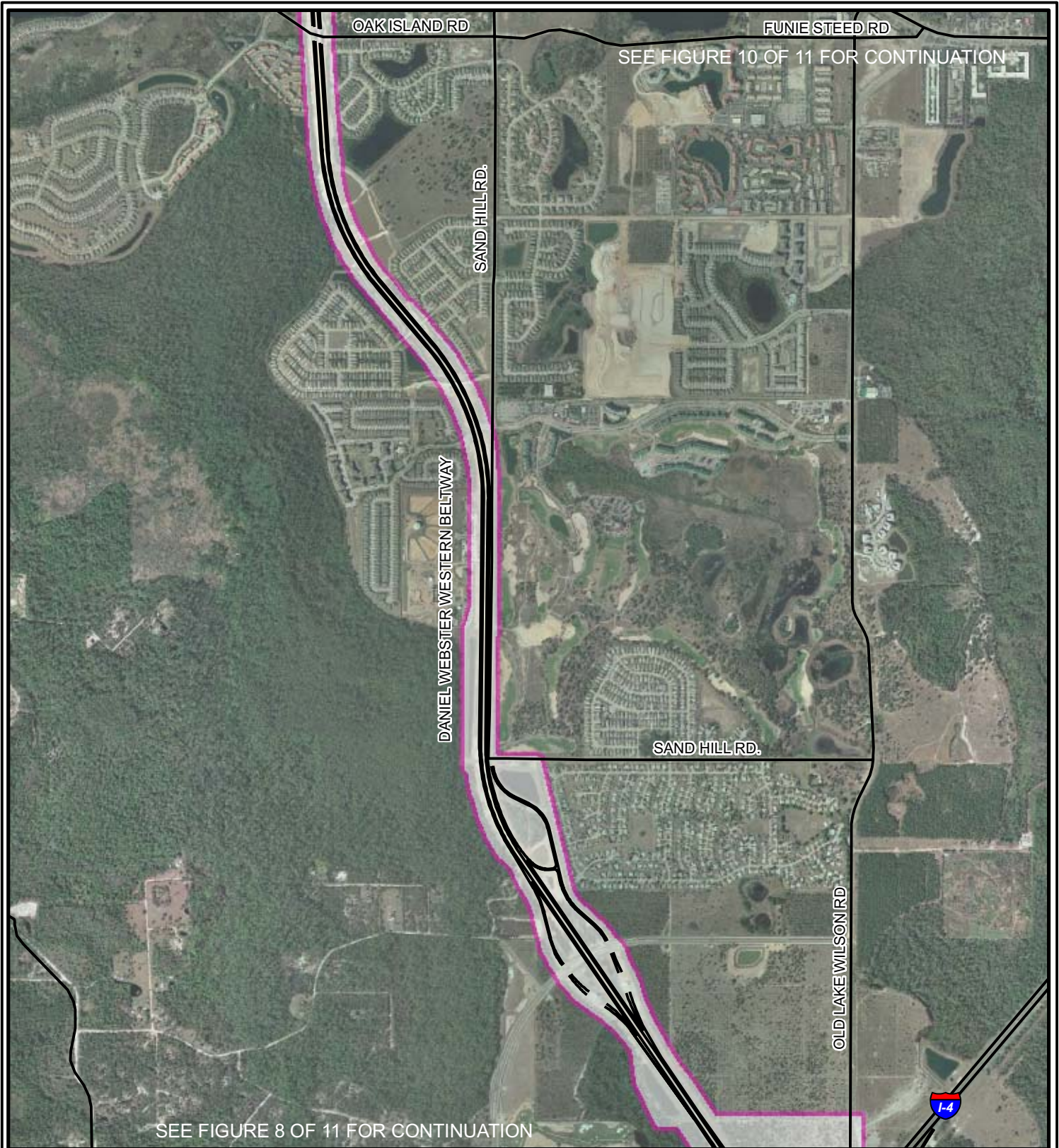
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8 OF 11

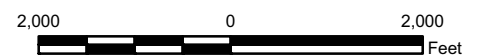
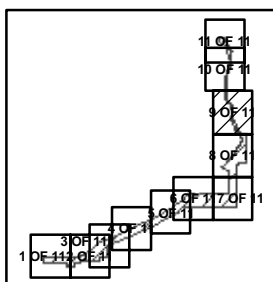


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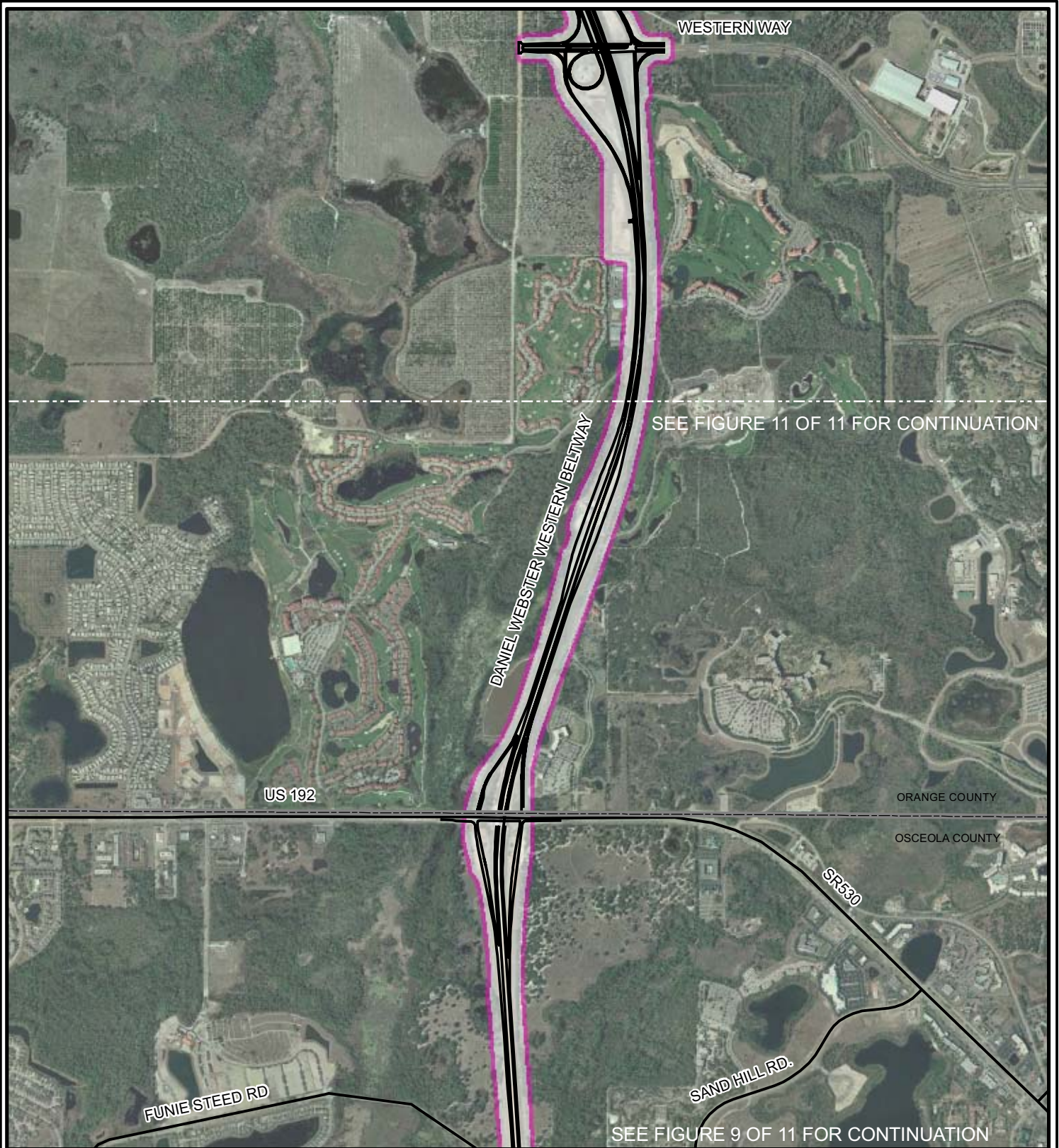
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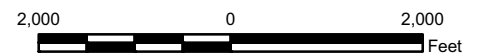
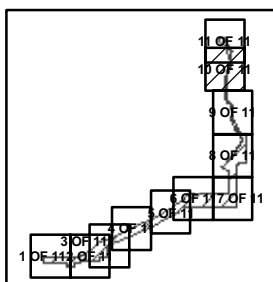


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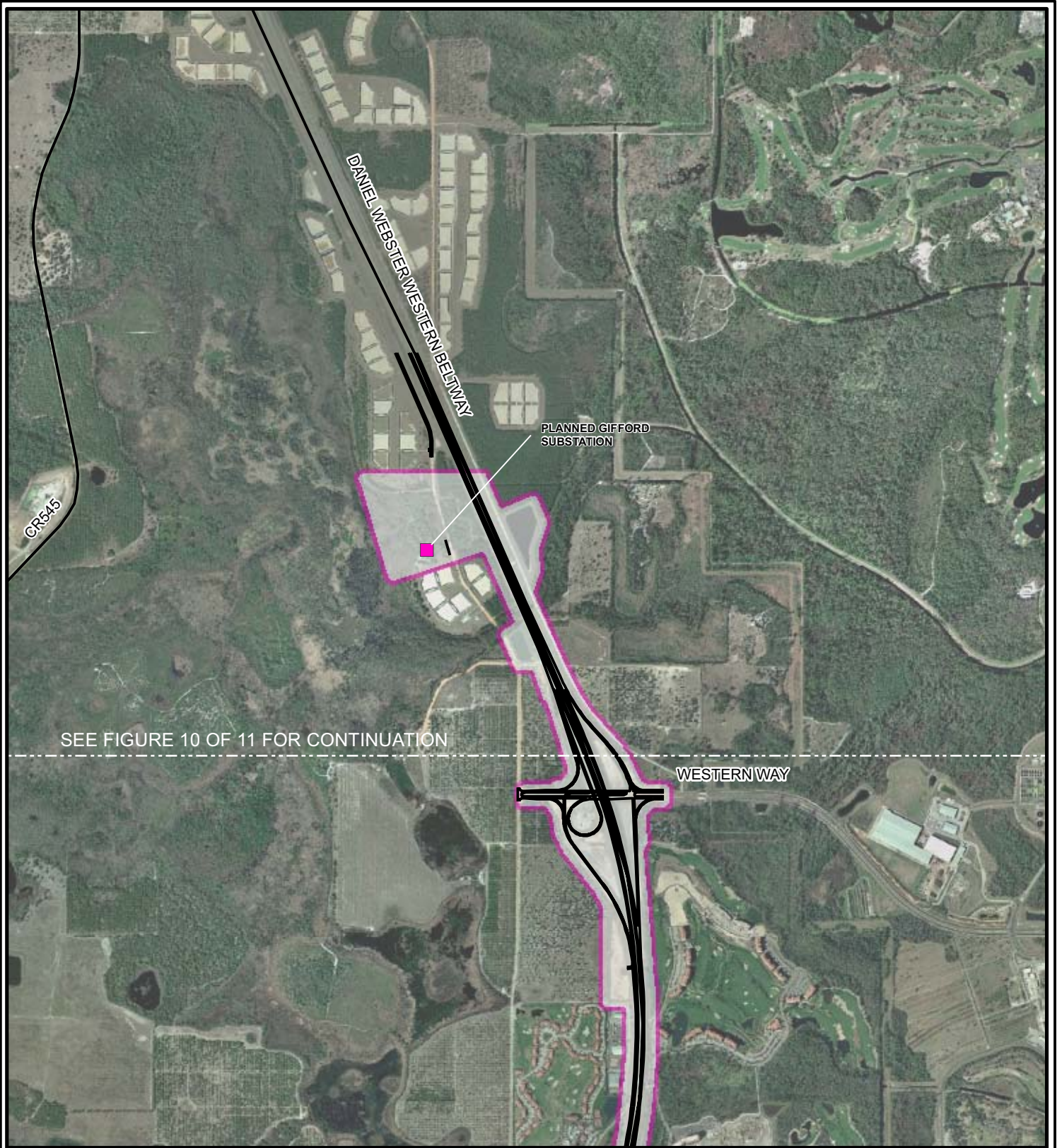
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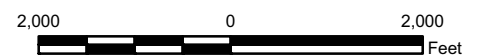
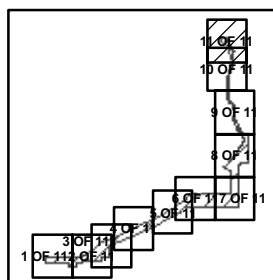


LEGEND

- Existing substation —+— Railroads
- Planned substation — Major roads
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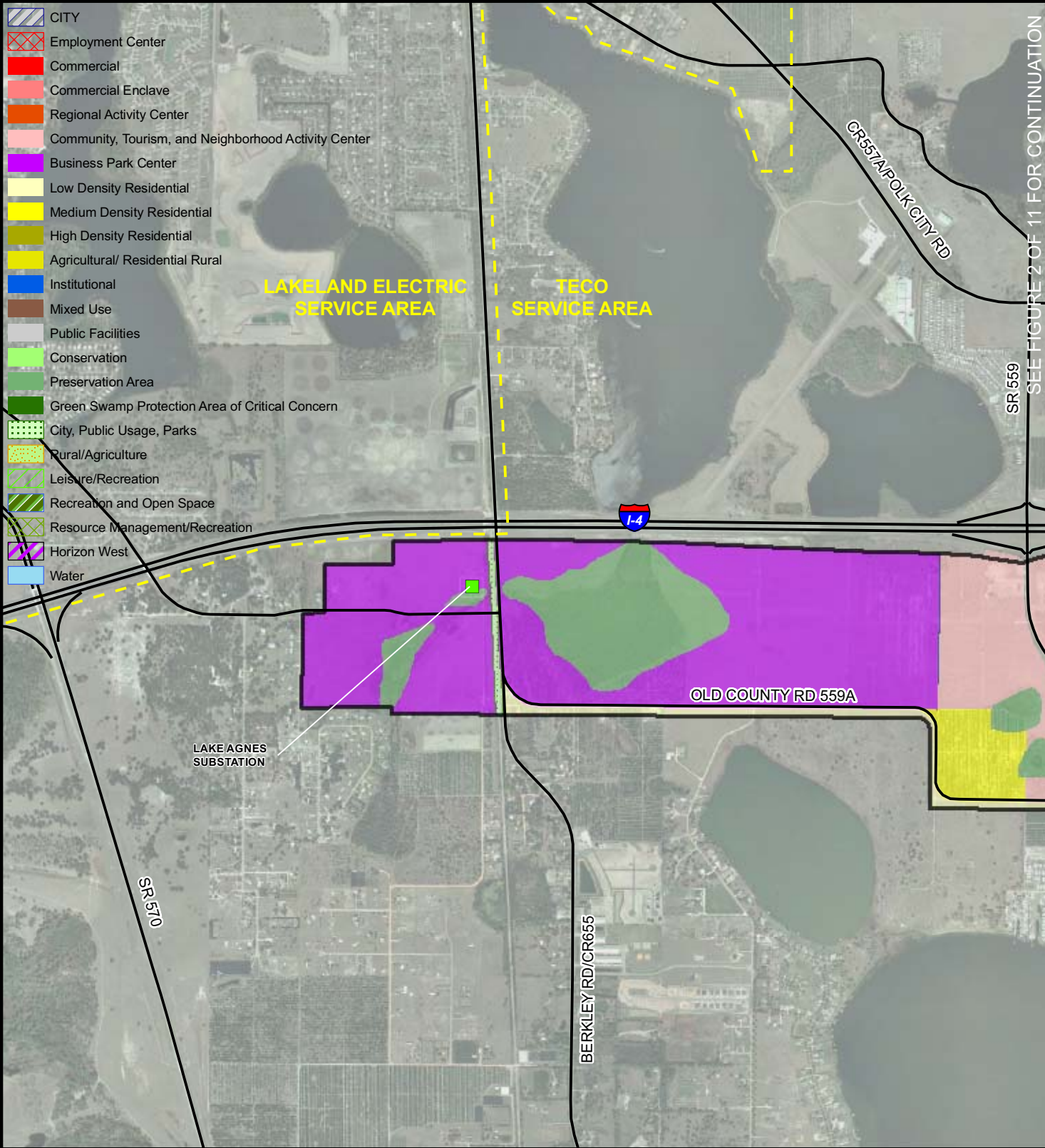
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AERIAL PHOTOGRAPH



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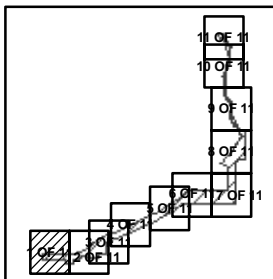
SEE FIGURE 2 OF 11 FOR CONTINUATION

LEGEND

- Existing substation
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- Major roads
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REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Future land use - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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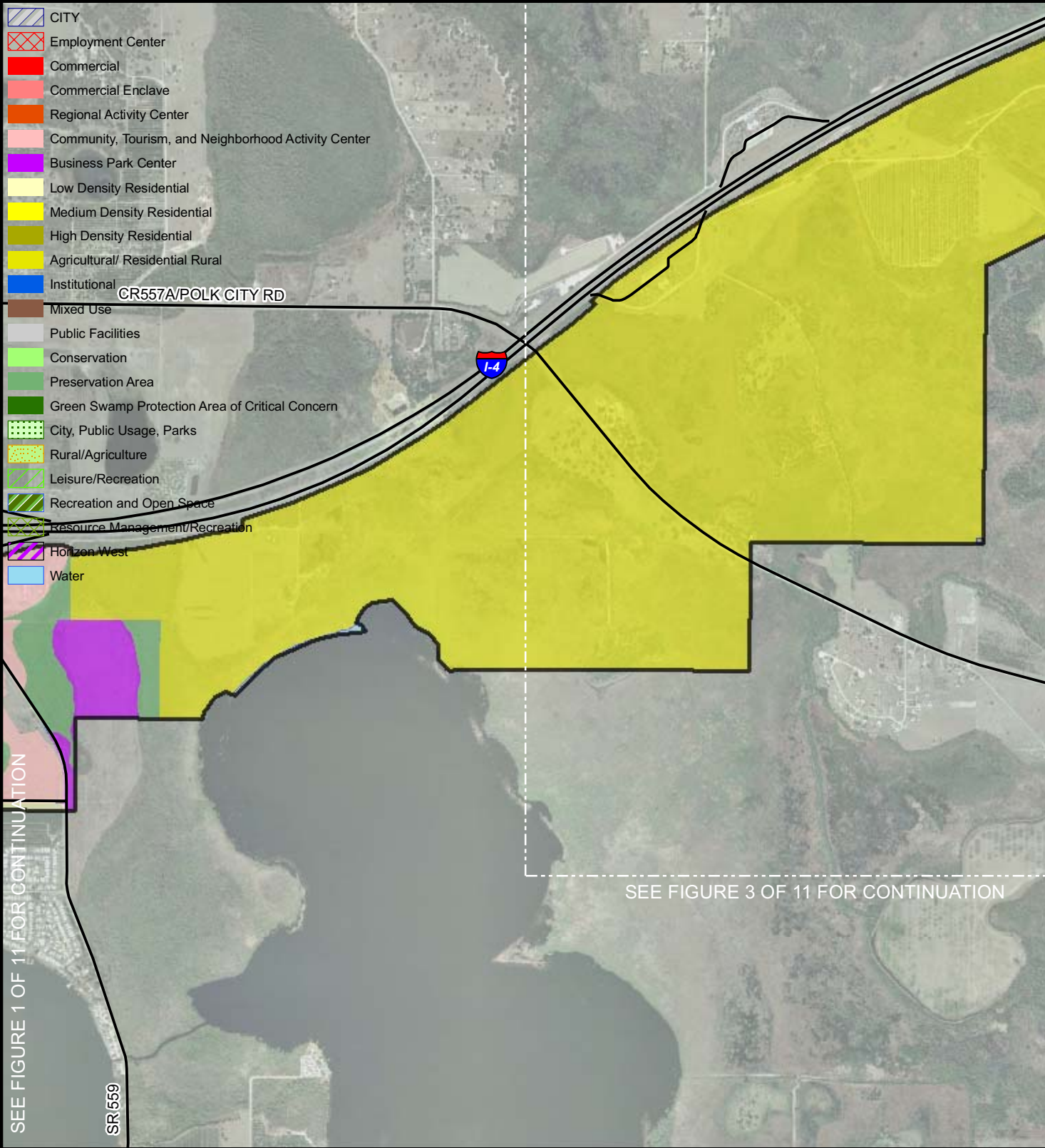
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PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
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TITLE

FUTURE LAND USE



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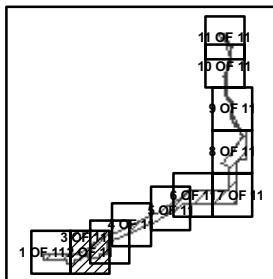


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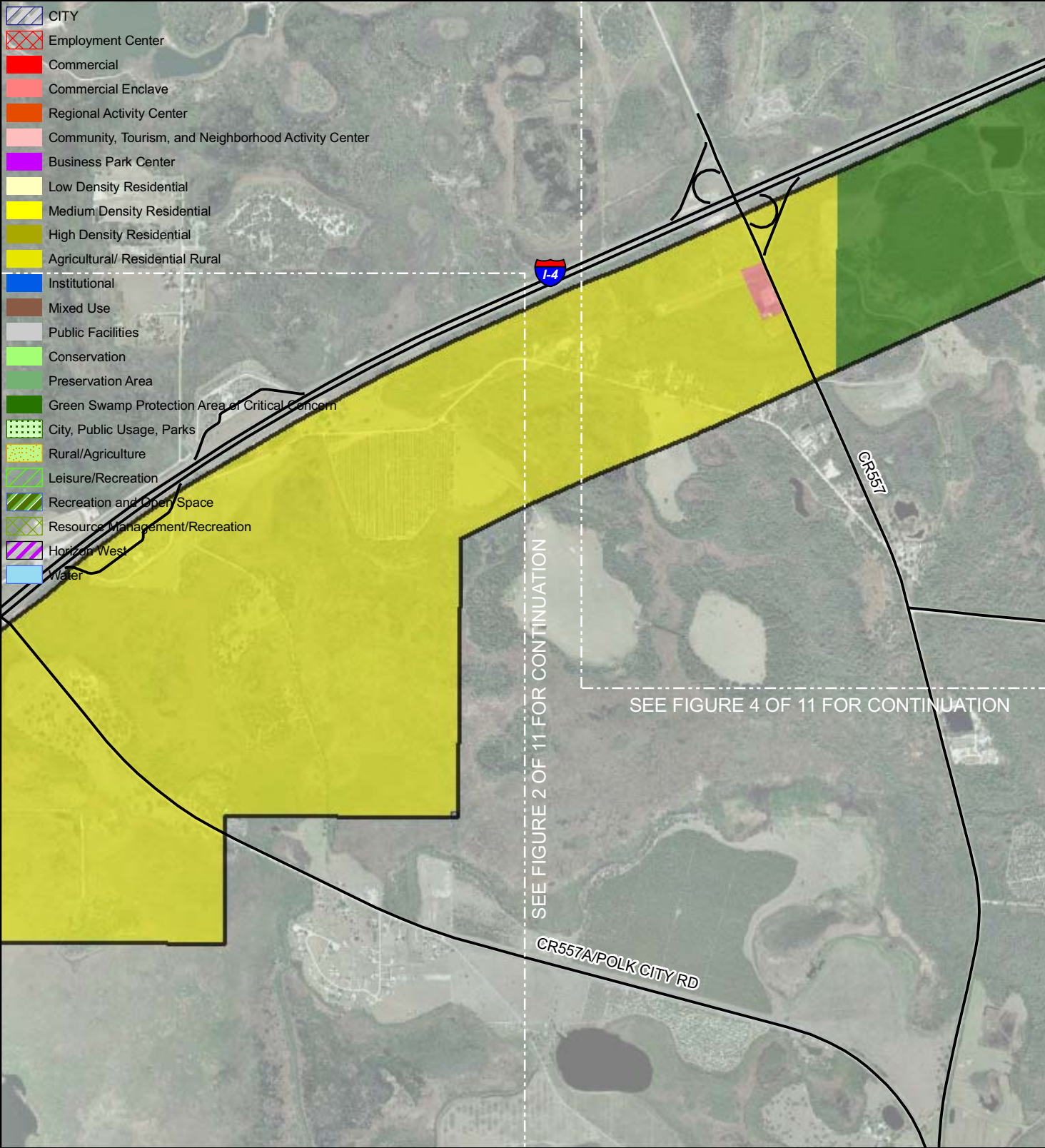
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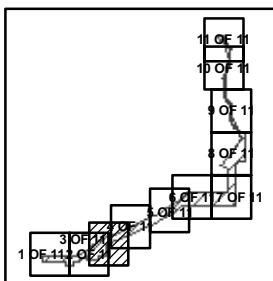


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4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

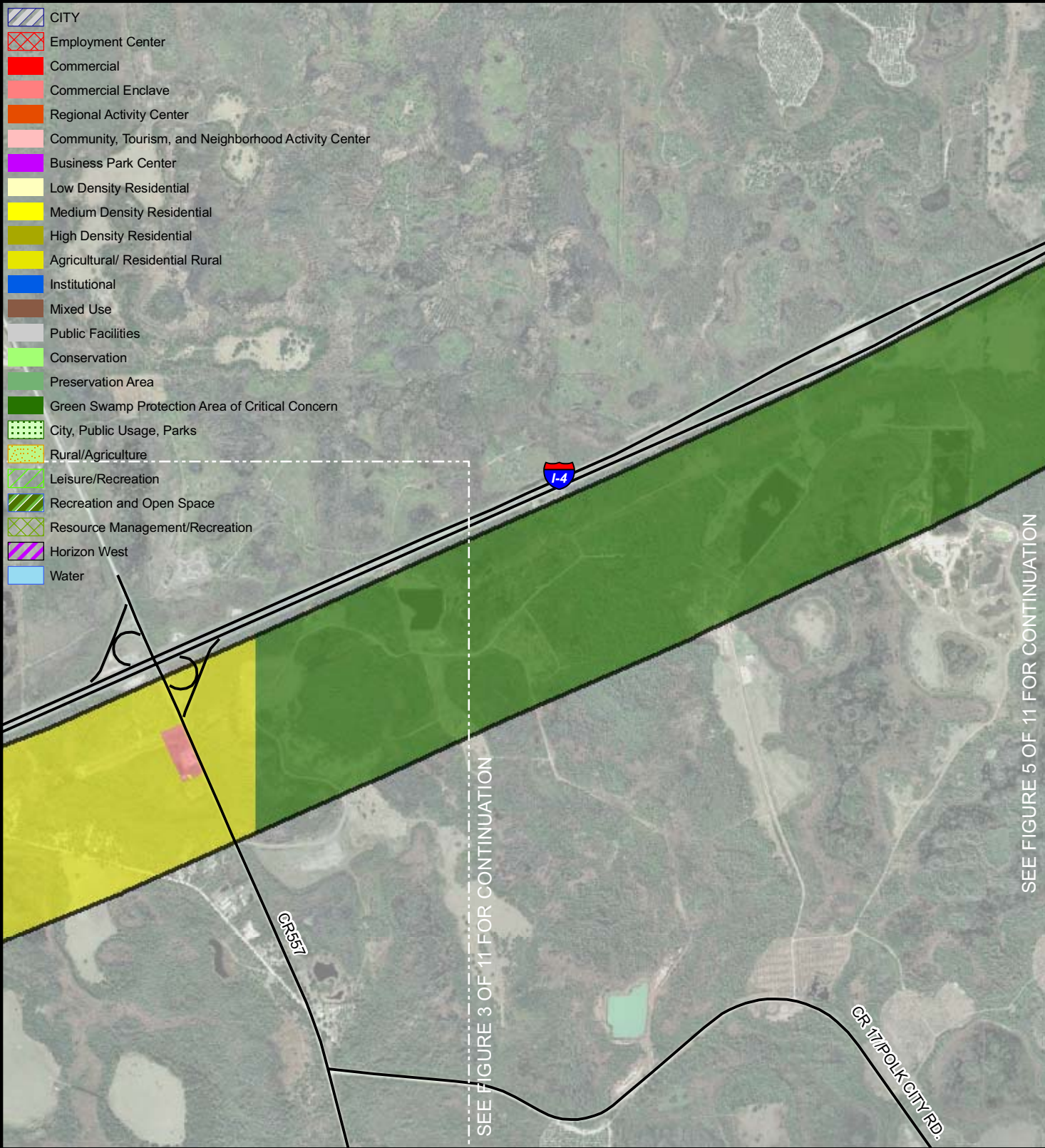
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FUTURE LAND USE



PROJECT No. 073-89532	SCALE AS SHOWN	REV. 0
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GIS	JWT	12/3/2007
CHECK	KK	12/3/2007
REVIEW	MM	12/3/2007

ATT 2-2
3 OF 11

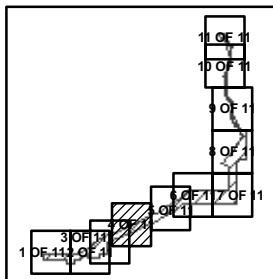


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Future land use - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

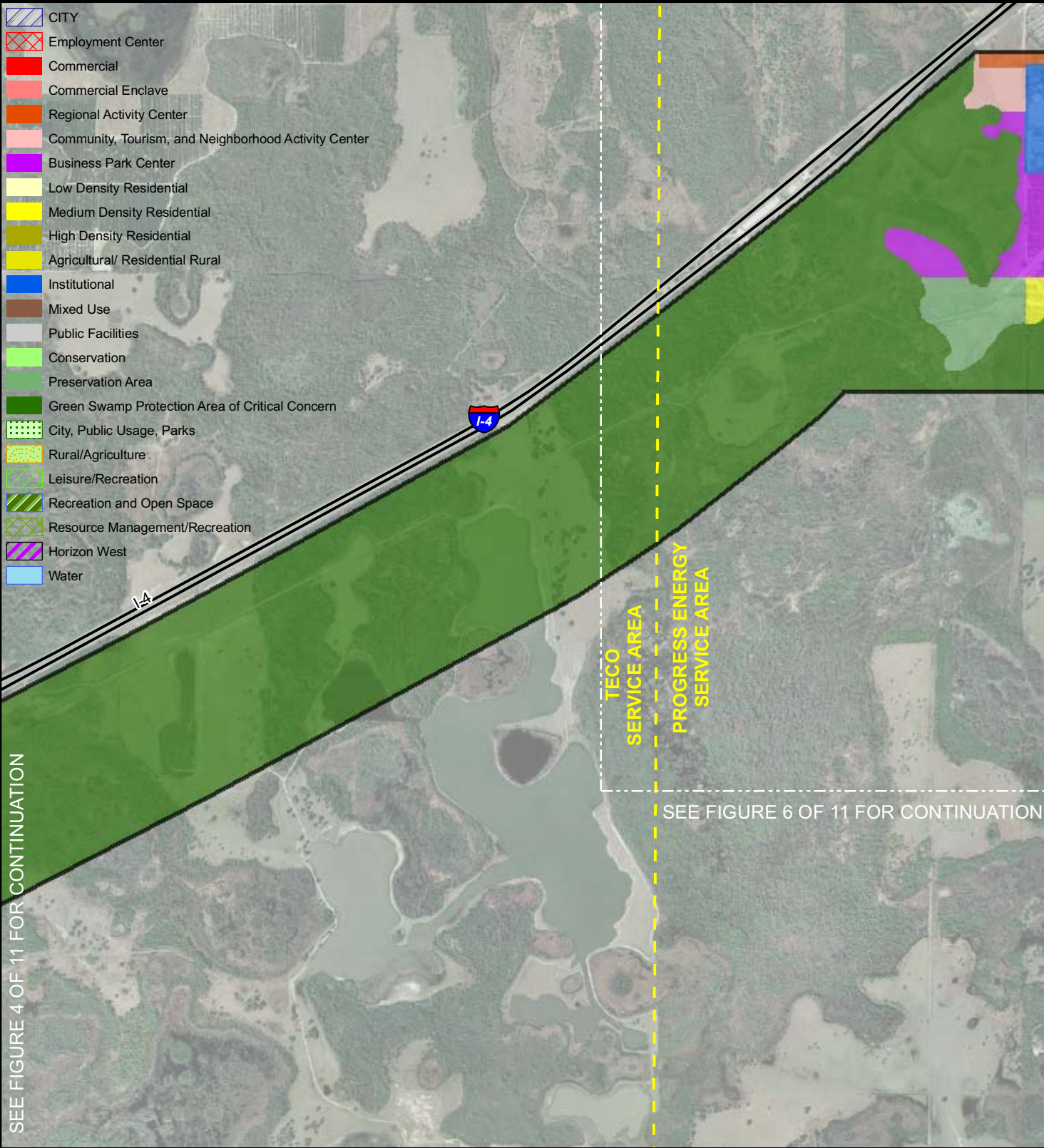
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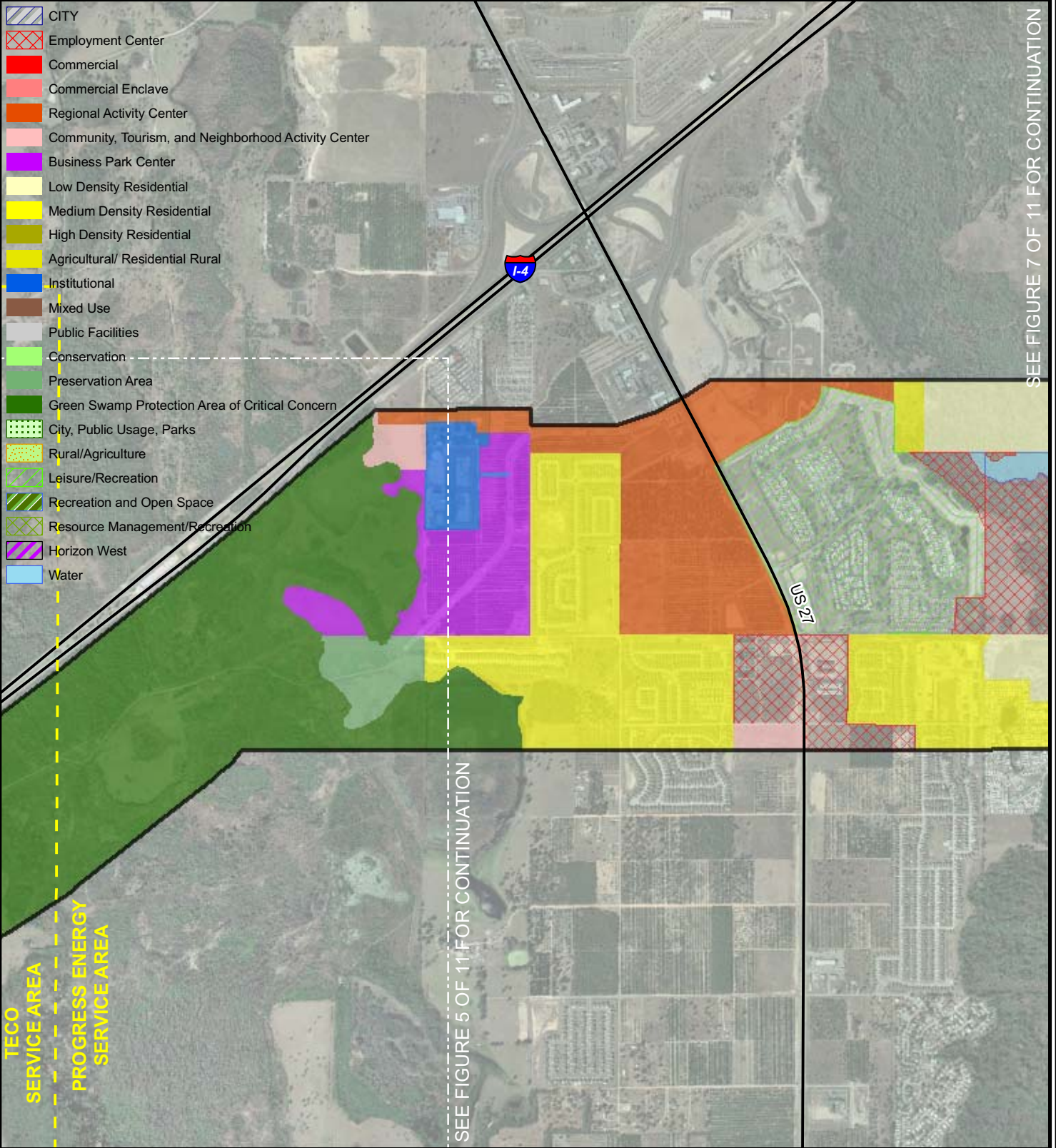
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GIS	JWT	12/3/2007
CHECK	KK	12/3/2007
REVIEW	MM	12/3/2007

ATT 2-2
4 OF 11



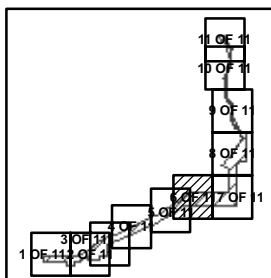


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- +— Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Future land use - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

FUTURE LAND USE



PROJECT No. 073-89532		SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	ATT 2-2 6 OF 11
GIS	JWT	12/3/2007	
CHECK	KK	12/3/2007	
REVIEW	MM	12/3/2007	

-  CITY
-  Employment Center
-  Commercial
-  Commercial Enclave
-  Regional Activity Center
-  Community, Tourism, and Neighborhood Activity Center
-  Business Park Center
-  Low Density Residential
-  Medium Density Residential
-  High Density Residential
-  Agricultural/ Residential Rural
-  Institutional
-  Mixed Use
-  Public Facilities
-  Conservation
-  Preservation Area
-  Green Swamp Protection Area of Critical Concern
-  City, Public Usage, Parks
-  Rural/Agriculture
-  Leisure/Recreation
-  Recreation and Open Space
-  Resource Management/Recreation
-  Horizon West
-  Water

SEE FIGURE 8 OF 11 FOR CONTINUATION

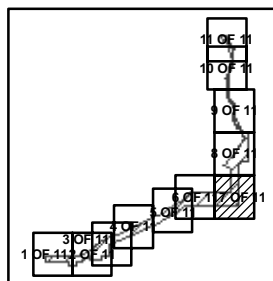
SEE FIGURE 6 OF 11 FOR CONTINUATION

LEGEND

-  Existing substation
-  Planned substation
-  Service territory
-  County boundaries
-  Railroads
-  Major roads
-  Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Future land use - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



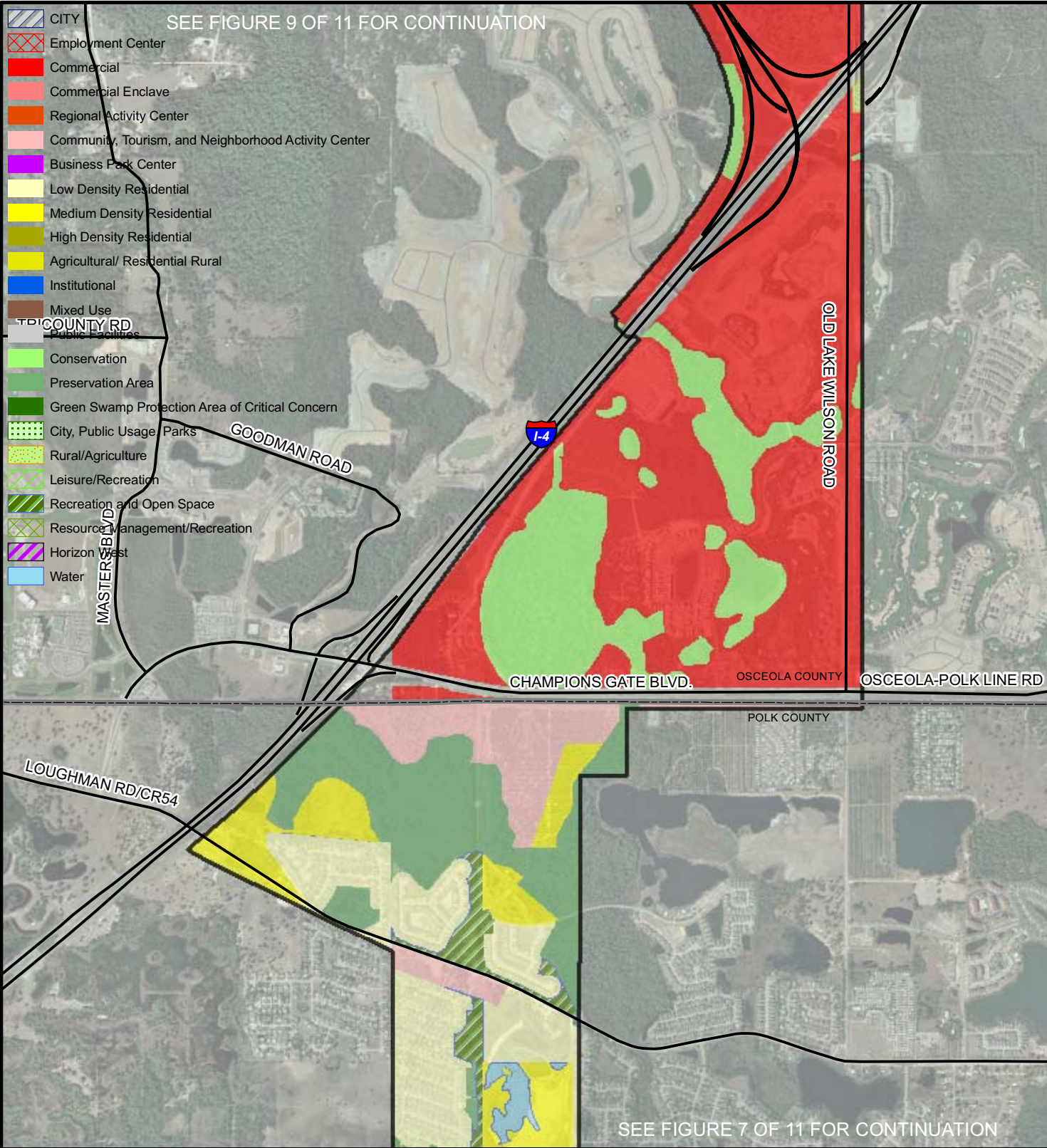
PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230KV JOINT TRANSMISSION LINE PROJECT

TITLE

FUTURE LAND USE



PROJECT No. 073-89532			SCALE AS SHOWN	REV. 0
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GIS	JWT	12/3/2007		
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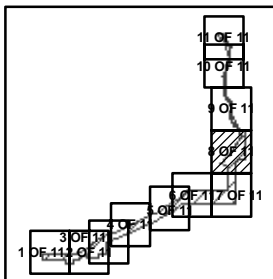


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Future land use - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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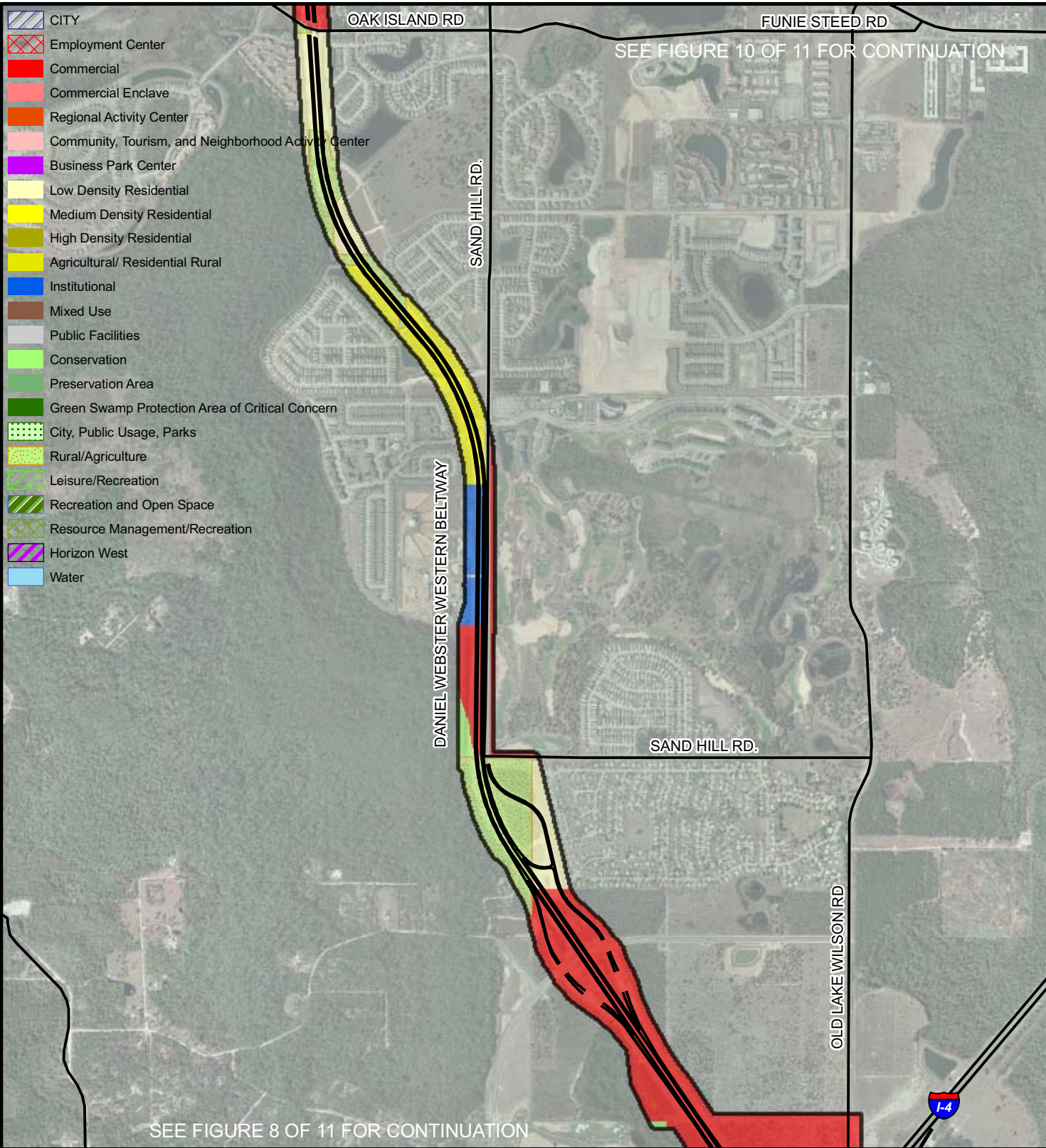
PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

FUTURE LAND USE



PROJECT No. 073-89532	SCALE AS SHOWN	REV. 0
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GIS: JMT 12/3/2007		
CHECK: KK 12/3/2007		
REVIEW: MM 12/3/2007		

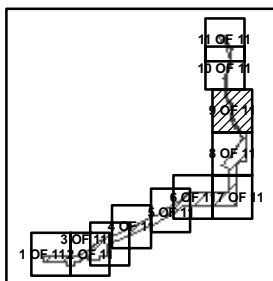


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Future land use - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

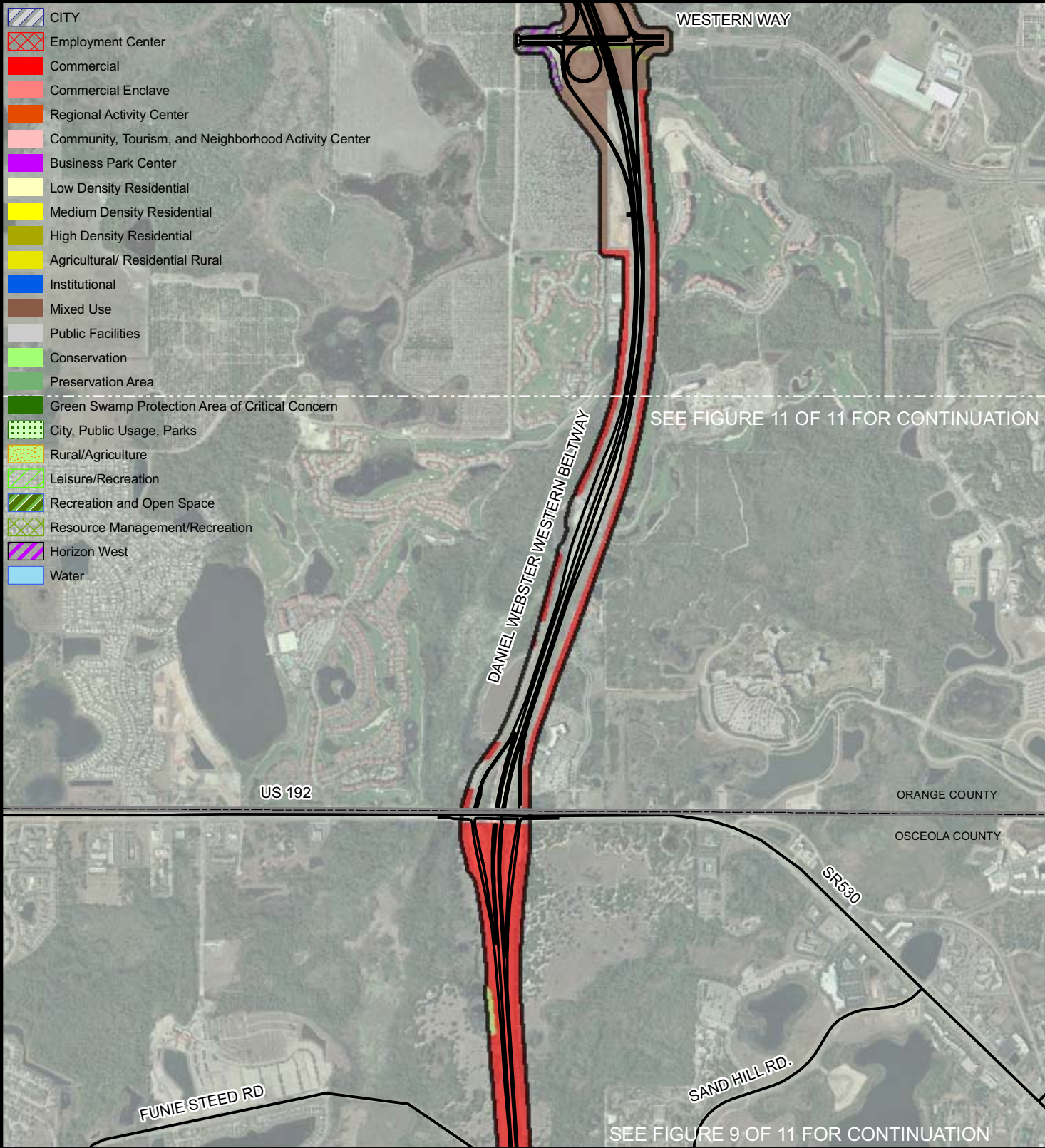
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FUTURE LAND USE



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GIS	JWT	12/3/2007
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ATT 2-2
9 OF 11

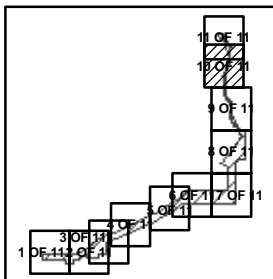


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Future land use - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

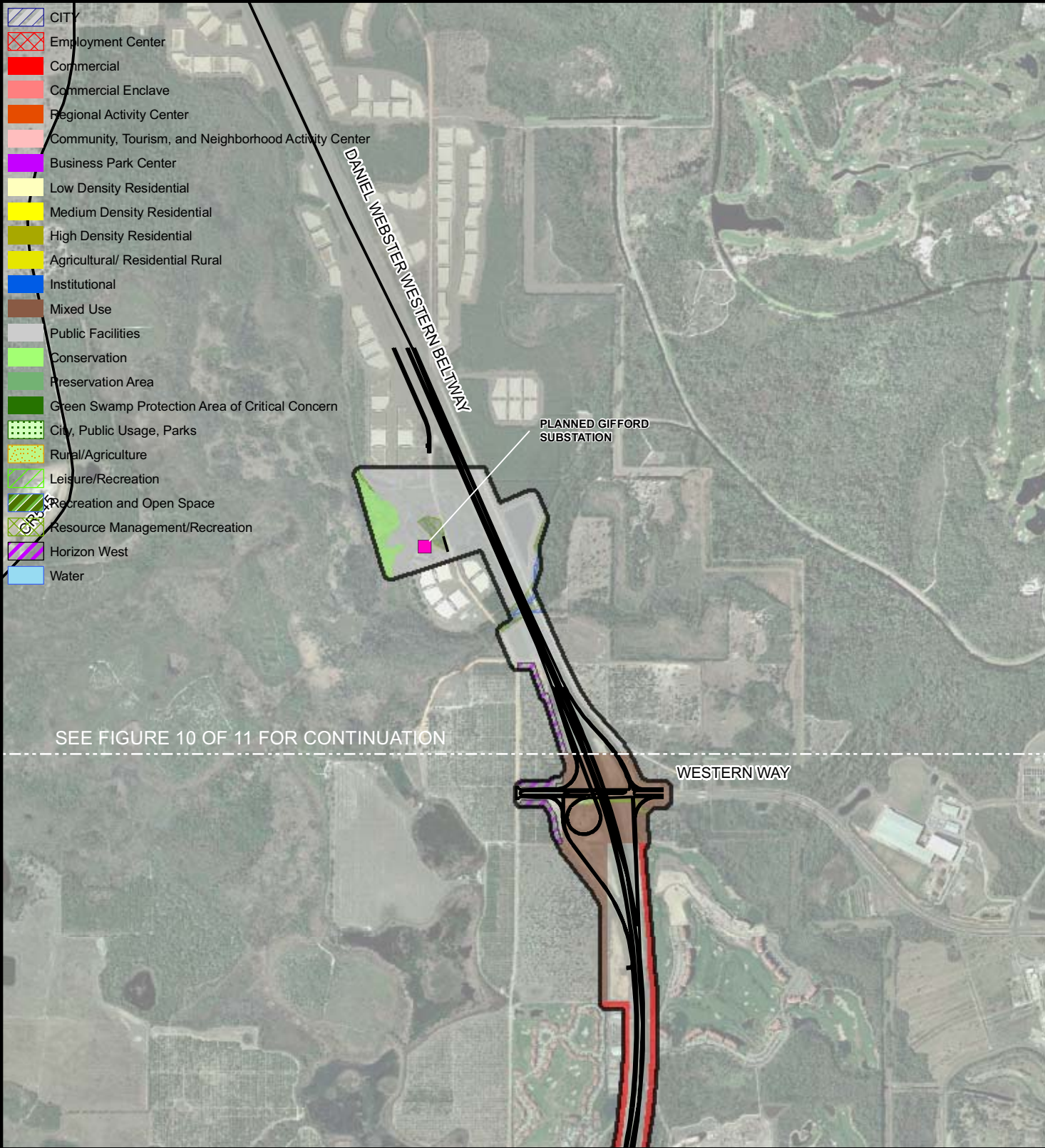
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FUTURE LAND USE



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CHECK	KK	12/3/2007
REVIEW	MM	12/3/2007

ATT 2-2
10 OF 11



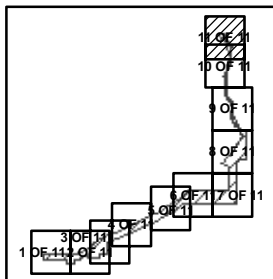
SEE FIGURE 10 OF 11 FOR CONTINUATION

LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Future land use - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

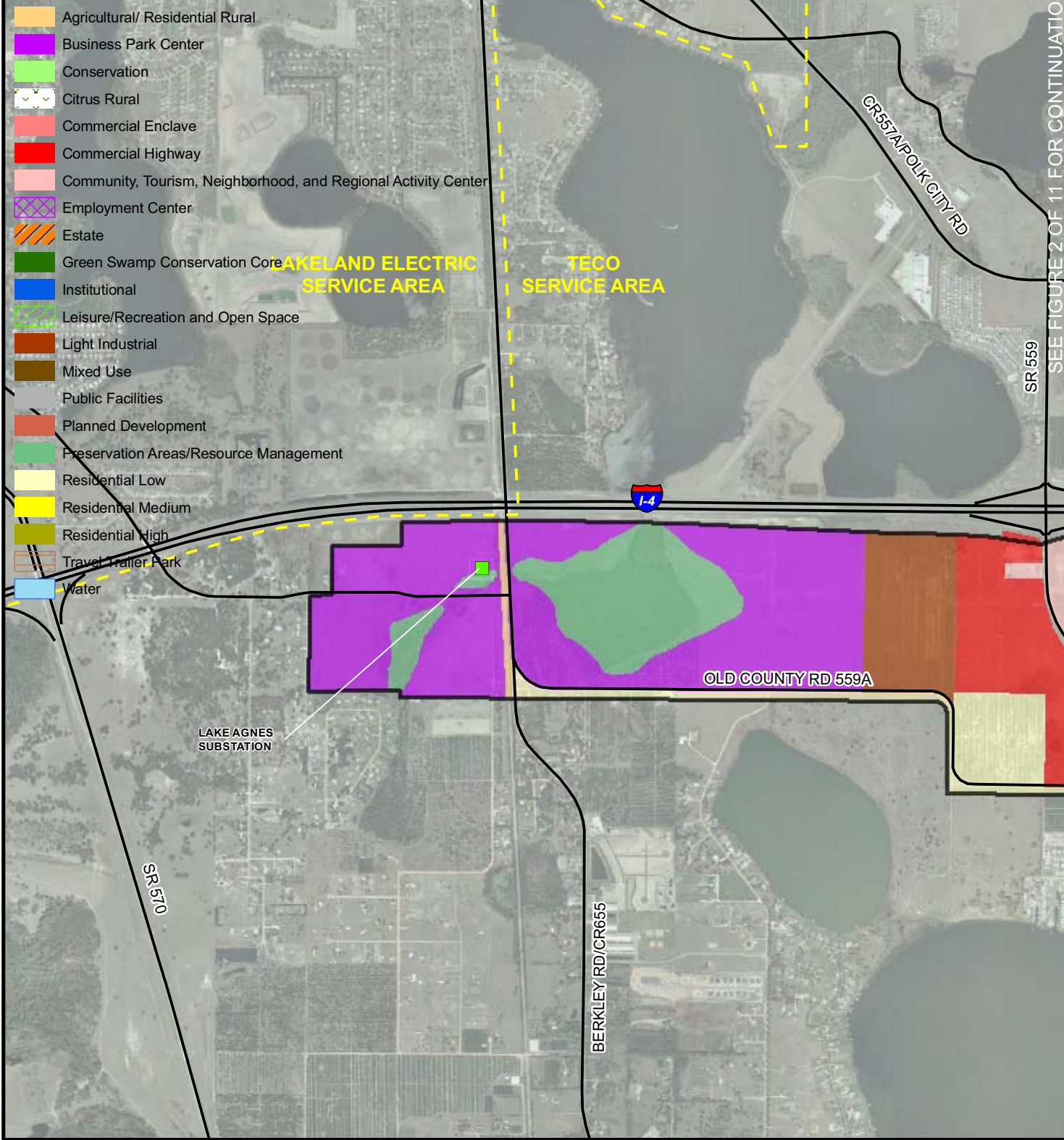
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FUTURE LAND USE



PROJECT No. 073-89532	SCALE AS SHOWN	REV. 0
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ATT 2-2
11 OF 11

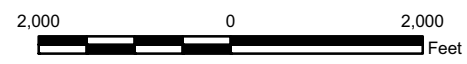
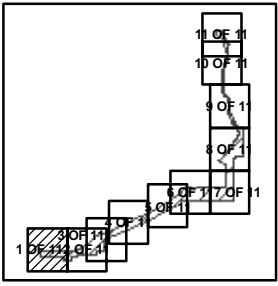


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

- Major roads - Florida Department Of Transportation, 4/2006
- County boundaries - US Census Bureau, 2000
- Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
- Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE			
ZONING			
Golder Associates Tampa, Florida		PROJECT No. 073-89532 DESIGN: JWT 8/22/2007 GIS: JWT 12/3/2007 CHECK: KK 12/3/2007 REVIEW: MM 12/3/2007	SCALE AS SHOWN REV. 0 ATT 2-3 1 OF 11

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SEE FIGURE 2 OF 11 FOR CONTINUATION

- Agricultural/ Residential Rural
- Business Park Center
- Conservation
- Citrus Rural
- Commercial Enclave
- Commercial Highway
- Community, Tourism, Neighborhood, and Regional Activity Center
- Employment Center
- Estate
- Green Swamp Conservation Core
- Institutional
- Leisure/Recreation and Open Space
- Light Industrial
- Mixed Use
- Public Facilities
- Planned Development
- Preservation Areas/Resource Management
- Residential Low
- Residential Medium
- Residential High
- Travel Trailer Park
- Water

CR55/APOLK CITY RD



SEE FIGURE 1 OF 11 FOR CONTINUATION

SR 559

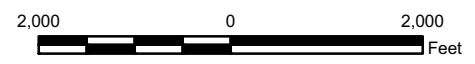
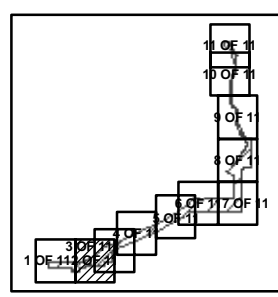
SEE FIGURE 3 OF 11 FOR CONTINUATION

LEGEND

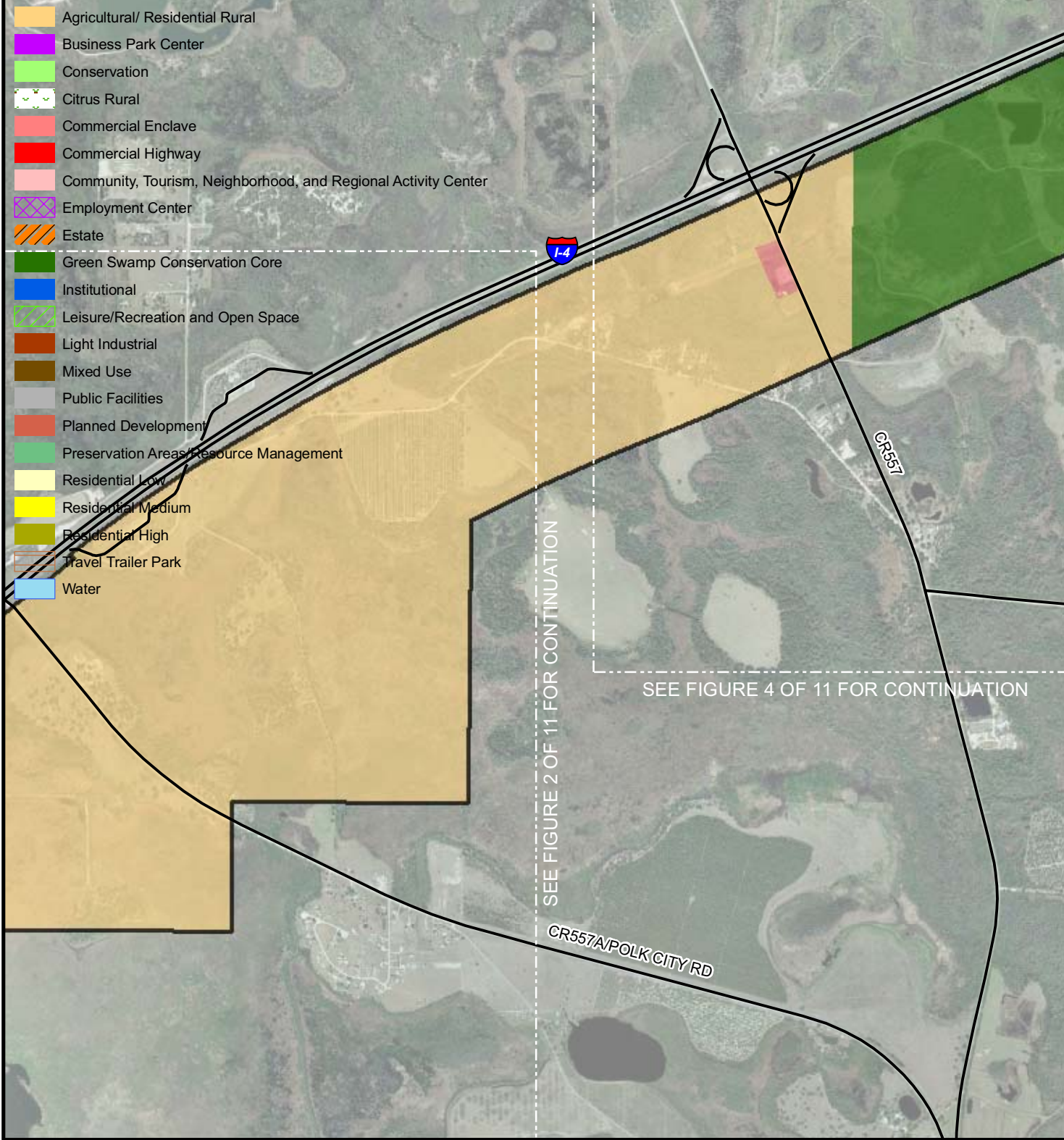
- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE			
ZONING			
 Tampa, Florida		PROJECT No. 073-89532 DESIGN JWT 8/22/2007 GIS JWT 12/3/2007 CHECK KK 12/3/2007 REVIEW MM 12/3/2007	SCALE AS SHOWN REV. 0 ATT 2-3 2 OF 11

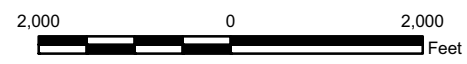
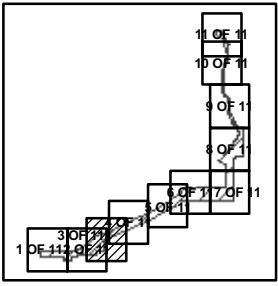


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

- Major roads - Florida Department Of Transportation, 4/2006
- County boundaries - US Census Bureau, 2000
- Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
- Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

ZONING

PROJECT No. 073-89532

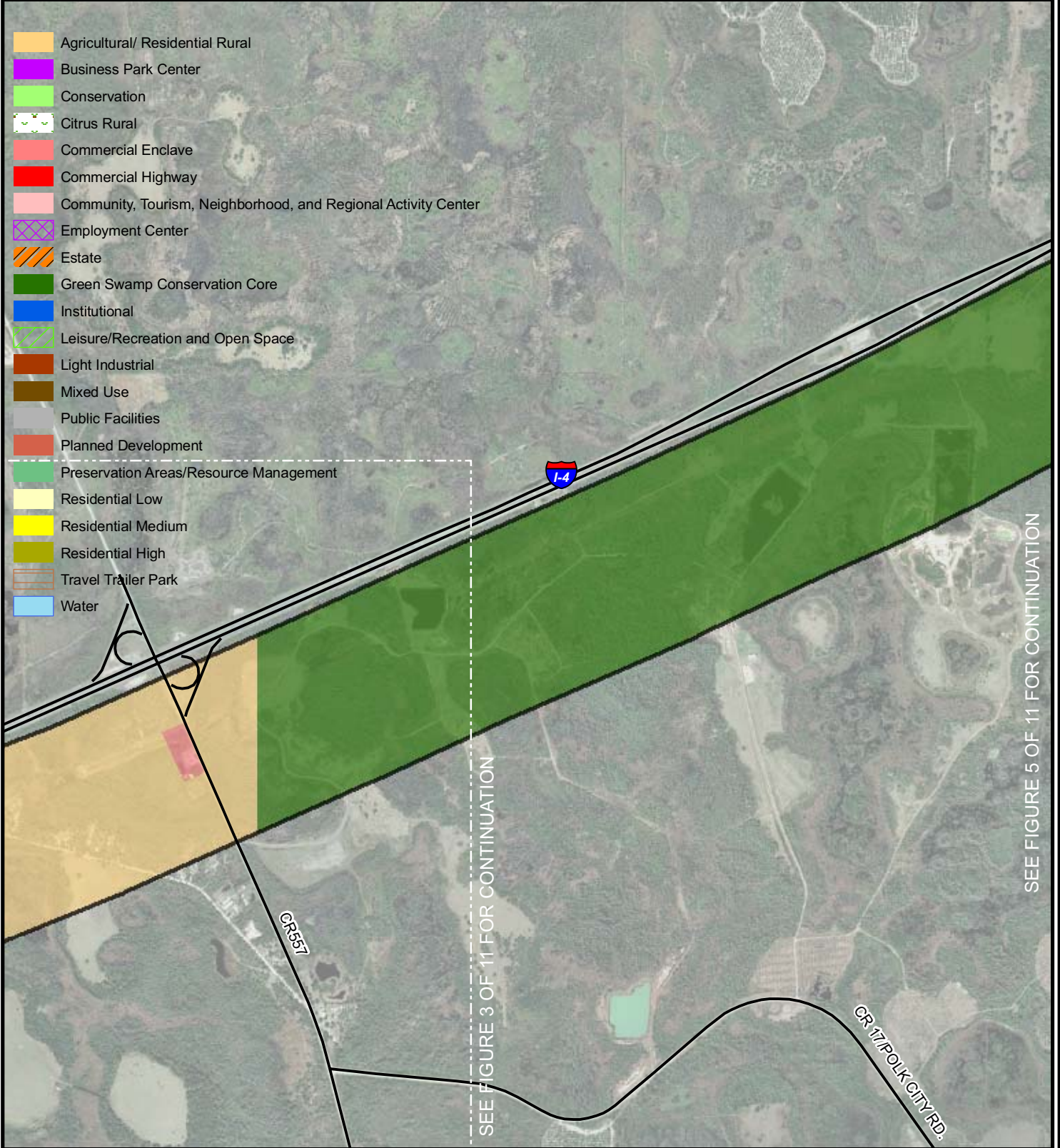
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GIS	JWT	12/3/2007
CHECK	KK	12/3/2007
REVIEW	MM	12/3/2007

SCALE AS SHOWN

REV. 0

ATT 2-3
3 OF 11

- Agricultural/ Residential Rural
- Business Park Center
- Conservation
- Citrus Rural
- Commercial Enclave
- Commercial Highway
- Community, Tourism, Neighborhood, and Regional Activity Center
- Employment Center
- Estate
- Green Swamp Conservation Core
- Institutional
- Leisure/Recreation and Open Space
- Light Industrial
- Mixed Use
- Public Facilities
- Planned Development
- Preservation Areas/Resource Management
- Residential Low
- Residential Medium
- Residential High
- Travel Trailer Park
- Water

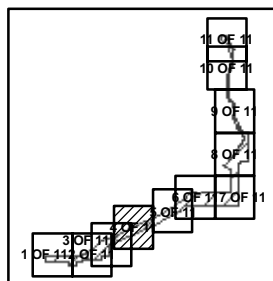


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
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3. Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
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PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE			
ZONING			
PROJECT No. 073-89532		SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	ATT 2-3 4 OF 11
GIS	JWT	12/3/2007	
CHECK	KK	12/3/2007	
REVIEW	MM	12/3/2007	



- Agricultural/ Residential Rural
- Business Park Center
- Conservation
- Citrus Rural
- Commercial Enclave
- Commercial Highway
- Community, Tourism, Neighborhood, and Regional Activity Center
- Employment Center
- Estate
- Green Swamp Conservation Core
- Institutional
- Leisure/Recreation and Open Space
- Light Industrial
- Mixed Use
- Public Facilities
- Planned Development
- Preservation Areas/Resource Management
- Residential Low
- Residential Medium
- Residential High
- Travel Trailer Park
- Water

SEE FIGURE 4 OF 11 FOR CONTINUATION

TECO
SERVICE AREA
PROGRESS ENERGY
SERVICE AREA

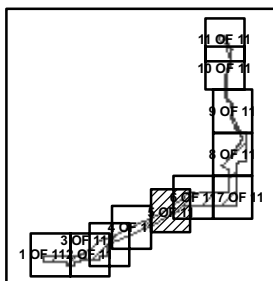
SEE FIGURE 6 OF 11 FOR CONTINUATION

LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



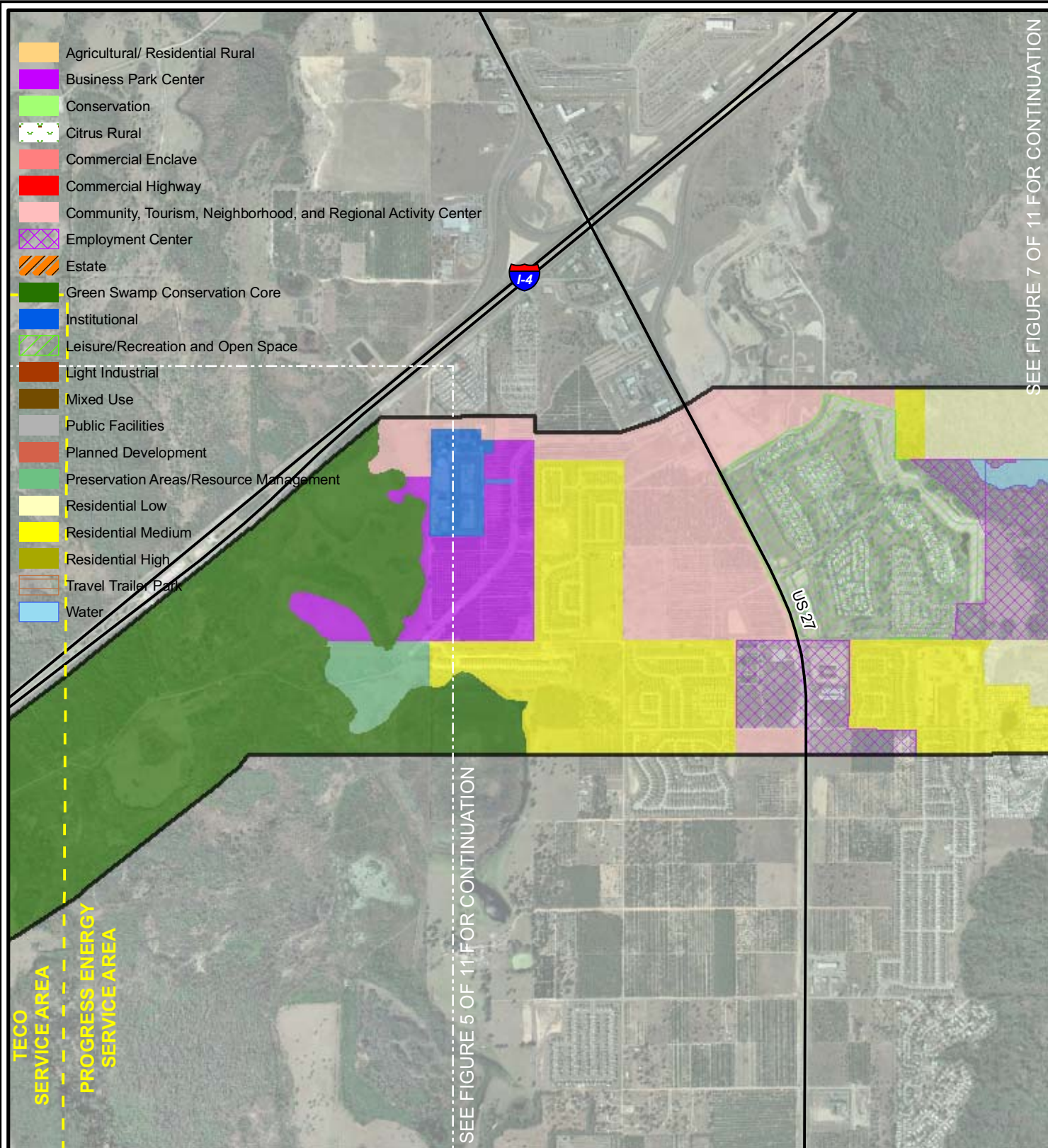
PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

ZONING



PROJECT No. 073-89532	SCALE AS SHOWN	REV. 0
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GIS: JWT 12/3/2007		
CHECK: KK 12/3/2007		
REVIEW: MM 12/3/2007		

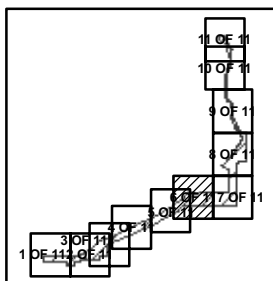


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- +— Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

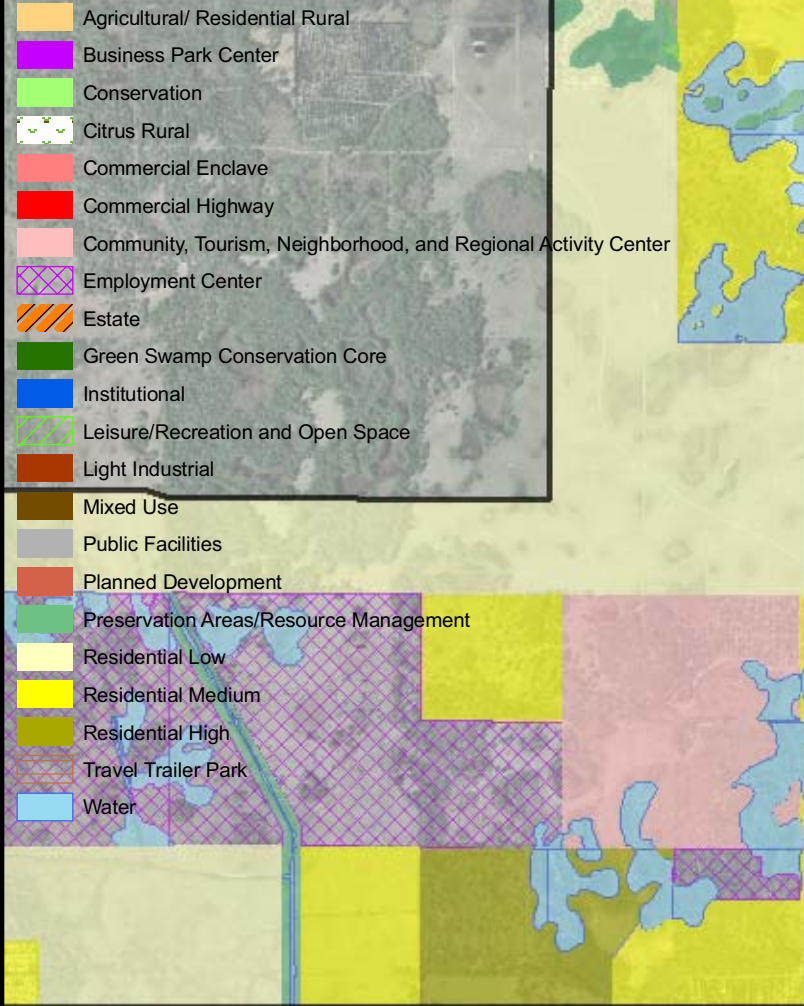
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DESIGN	JWT	8/22/2007	ATT 2-3 6 OF 11	
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CHECK	KK	12/3/2007		
REVIEW	MM	12/3/2007		

SEE FIGURE 8 OF 11 FOR CONTINUATION



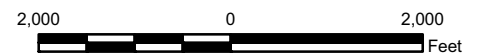
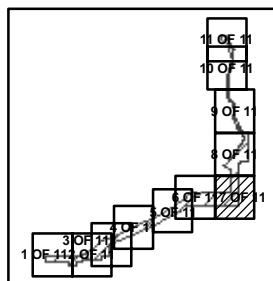
SEE FIGURE 6 OF 11 FOR CONTINUATION

LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

- Major roads - Florida Department Of Transportation, 4/2006
- County boundaries - US Census Bureau, 2000
- Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
- Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



PROJECT
 PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
 LAKE AGNES TO GIFFORD
 230kV JOINT TRANSMISSION LINE PROJECT

TITLE

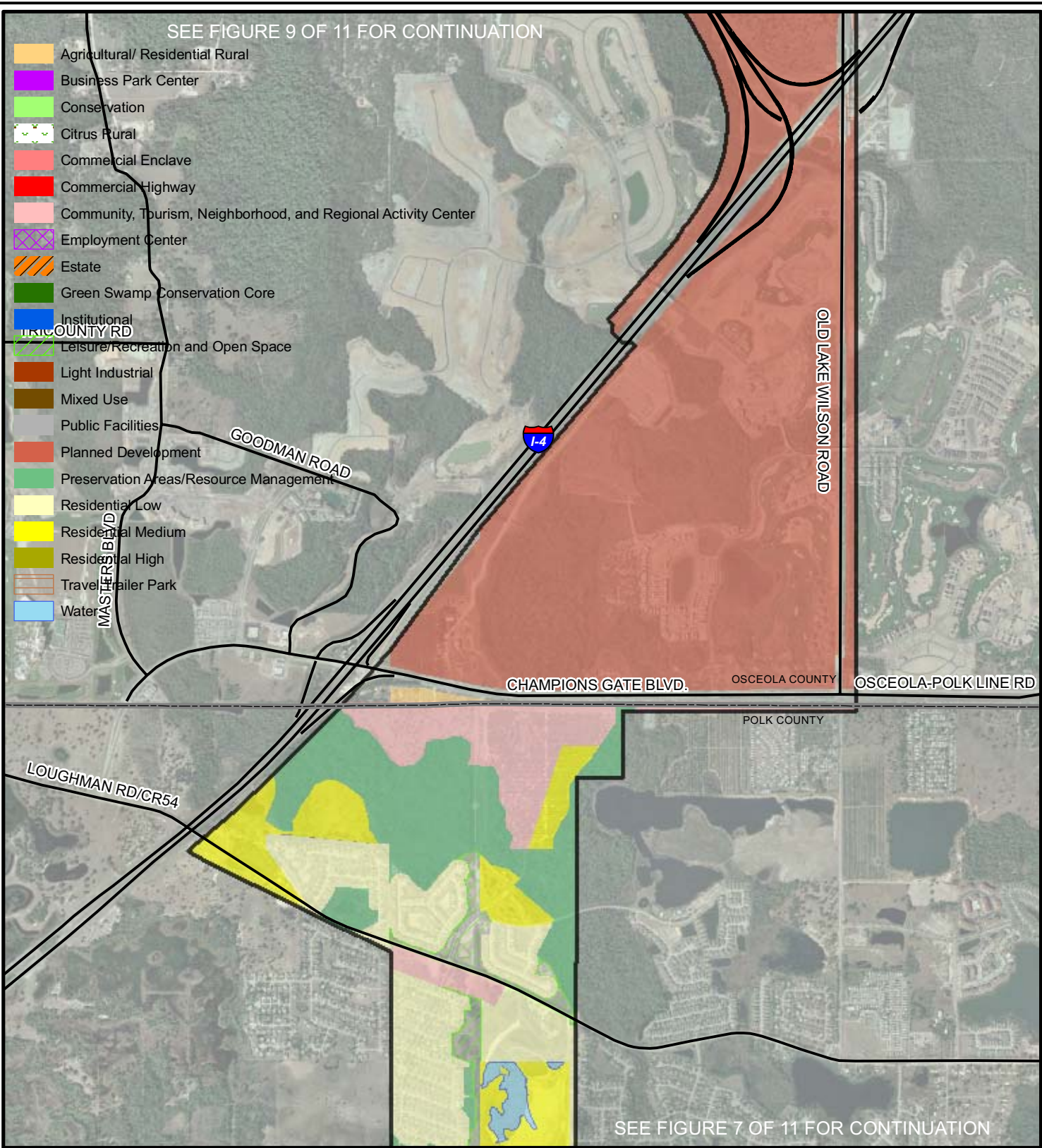
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DESIGN	JWT	8/22/2007	ATT 2-3 7 OF 11	
GIS	JWT	12/3/2007		
CHECK	KK	12/3/2007		
REVIEW	MM	12/3/2007		

SEE FIGURE 9 OF 11 FOR CONTINUATION

- Agricultural/ Residential Rural
- Business Park Center
- Conservation
- Citrus Rural
- Commercial Enclave
- Commercial Highway
- Community, Tourism, Neighborhood, and Regional Activity Center
- Employment Center
- Estate
- Green Swamp Conservation Core
- Institutional
- Leisure/Recreation and Open Space
- Light Industrial
- Mixed Use
- Public Facilities
- Planned Development
- Preservation Areas/Resource Management
- Residential Low
- Residential Medium
- Residential High
- Travel Trailer Park
- Water



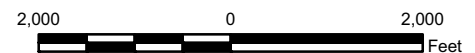
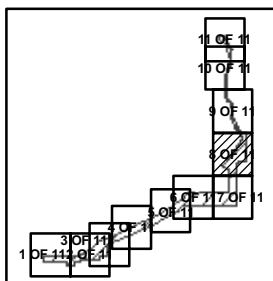
SEE FIGURE 7 OF 11 FOR CONTINUATION

LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

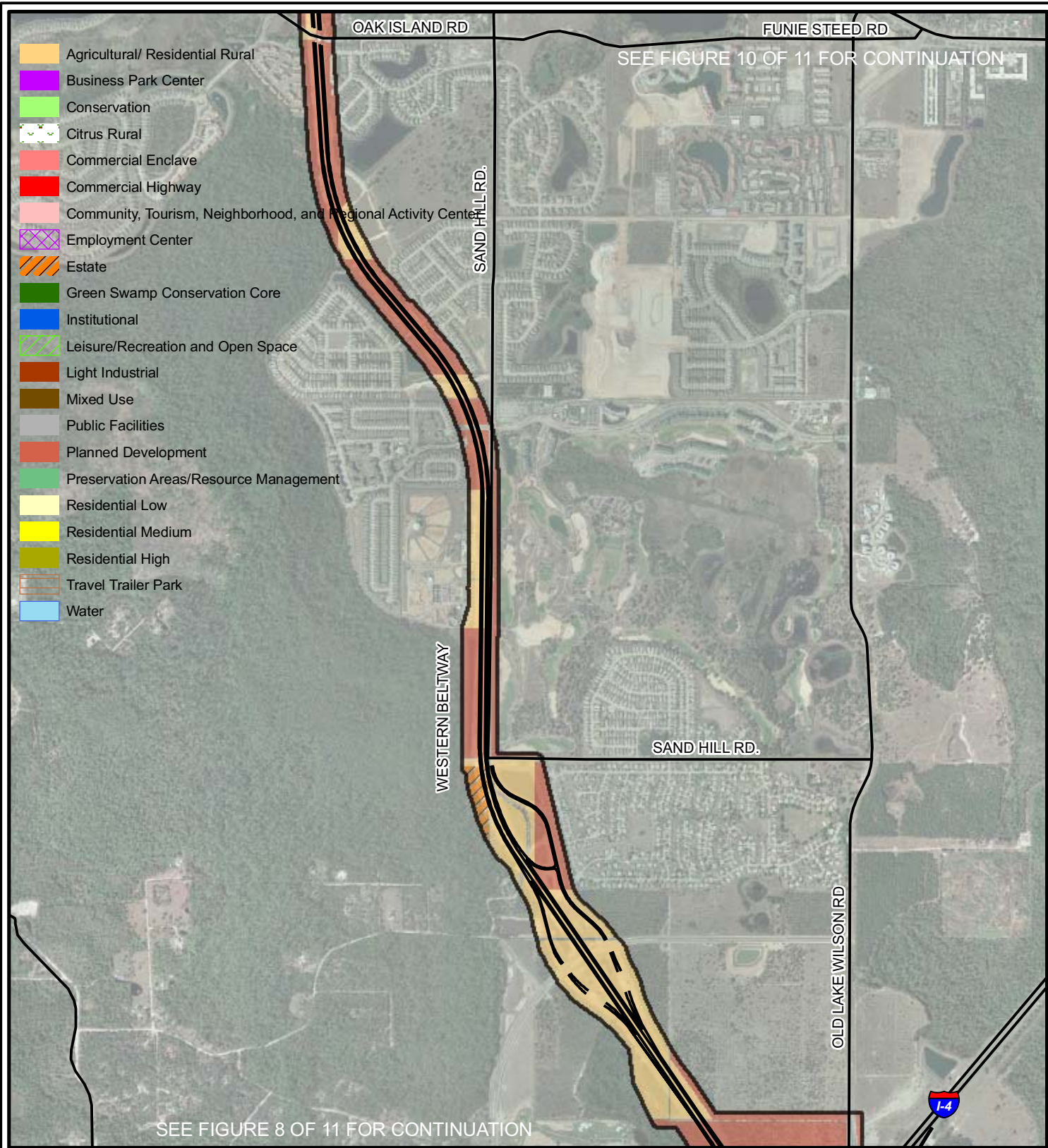
REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE			
ZONING			
PROJECT No. 073-89532		SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	ATT 2-3 8 OF 11
GIS	JWT	12/3/2007	
CHECK	KK	12/3/2007	
REVIEW	MM	12/3/2007	



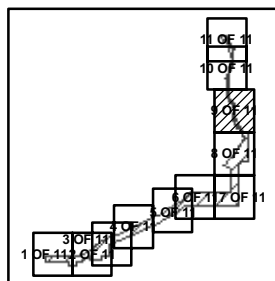


LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

- Major roads - Florida Department Of Transportation, 4/2006
- County boundaries - US Census Bureau, 2000
- Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
- Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE			
ZONING			
PROJECT No. 073-89532		SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	ATT 2-3 9 OF 11
GIS	JWT	12/3/2007	
CHECK	KK	12/3/2007	
REVIEW	MM	12/3/2007	



- Agricultural/ Residential Rural
- Business Park Center
- Conservation
- Citrus Rural
- Commercial Enclave
- Commercial Highway
- Community, Tourism, Neighborhood, and Regional Activity Center
- Employment Center
- Estate
- Green Swamp Conservation Core
- Institutional
- Leisure/Recreation and Open Space
- Light Industrial
- Mixed Use
- Public Facilities
- Planned Development
- Preservation Areas/Resource Management
- Residential Low
- Residential Medium
- Residential High
- Travel Trailer Park
- Water

DANIEL WEBSTER WESTERN BELTWAY

WESTERN WAY

SEE FIGURE 11 OF 11 FOR CONTINUATION

US 192

ORANGE COUNTY

OSCEOLA COUNTY

SR530

FUNIE STEED RD

SAND HILL RD.

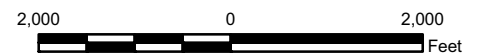
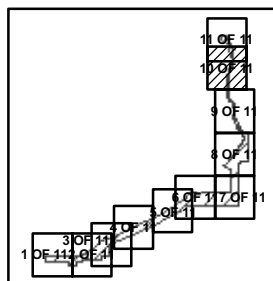
SEE FIGURE 9 OF 11 FOR CONTINUATION

LEGEND

- Existing substation
- Planned substation
- Service territory
- Preferred Corridor
- Railroads
- Major roads
- County boundaries

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

ZONING



PROJECT No. 073-89532		SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	ATT 2-3 10 OF 11
GIS	JWT	12/3/2007	
CHECK	KK	12/3/2007	
REVIEW	MM	12/3/2007	

- Agricultural/ Residential Rural
- Business Park Center
- Conservation
- Citrus Rural
- Commercial Enclave
- Commercial Highway
- Community, Tourism, Neighborhood, and Regional Activity Center
- Employment Center
- Estate
- Green Swamp Conservation Core
- Institutional
- Leisure/Recreation and Open Space
- Light Industrial
- Mixed Use
- Public Facilities
- Planned Development
- Preservation Areas/Resource Management
- Residential Low
- Residential Medium
- Residential High
- Travel Trailer Park
- Water

DANIEL WEBSTER WESTERN BELTWAY

PLANNED GIFFORD SUBSTATION

SEE FIGURE 10 OF 11 FOR CONTINUATION

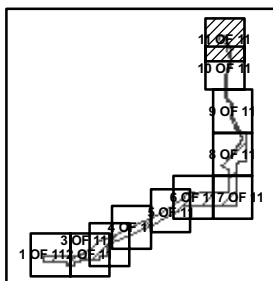
WESTERN WAY

LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Major roads
- Preferred Corridor

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006
2. County boundaries - US Census Bureau, 2000
3. Zoning - Polk, Osceola, and Orange Counties 2007; City of Auburndale 2007; Reedy Creek Improvement District 2007.
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online



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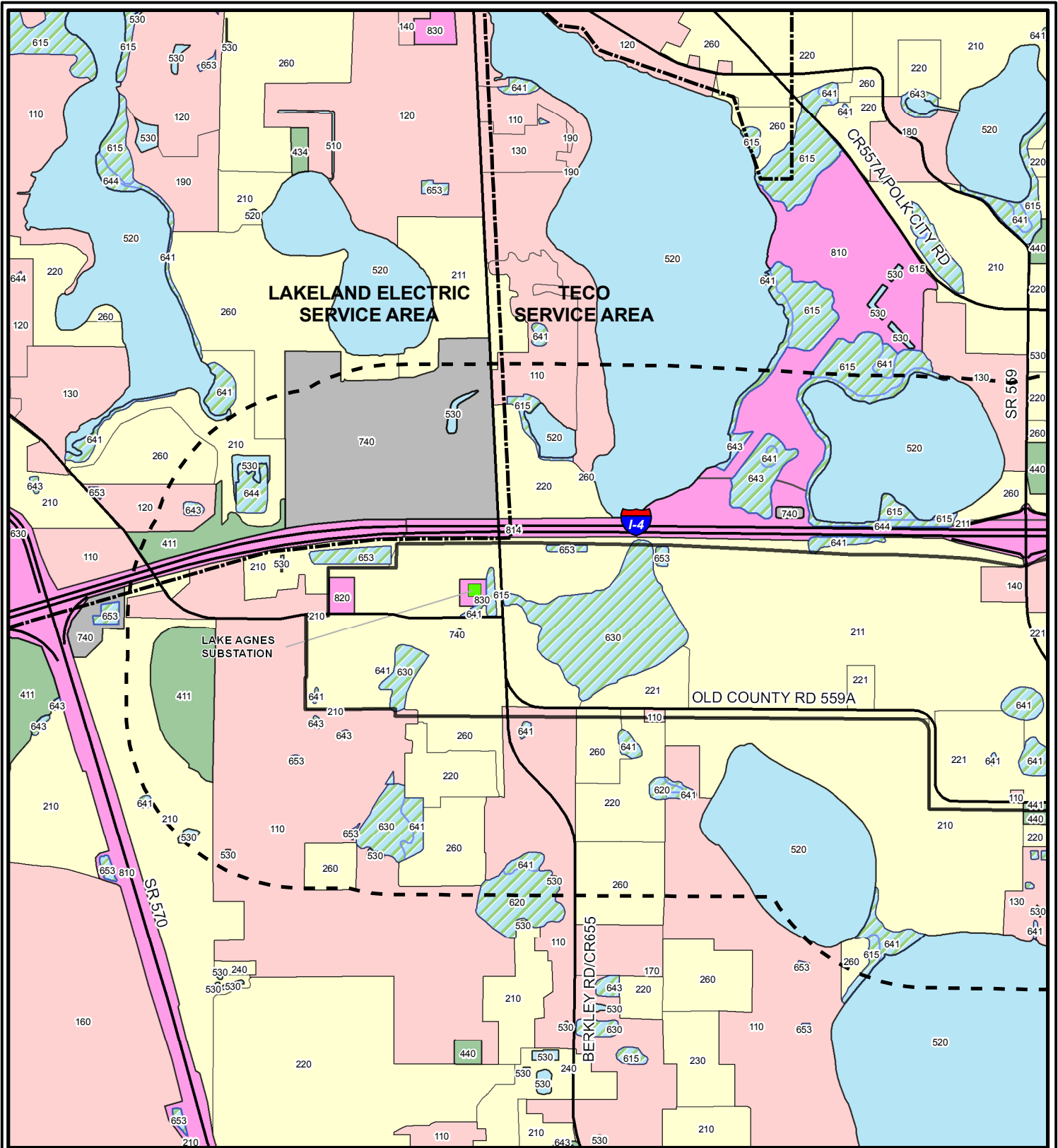
PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

ZONING



PROJECT No. 073-89532			SCALE AS SHOWN	REV. 0
DESIGN	JWT	8/22/2007	ATT 2-3 11 OF 11	
GIS	JWT	12/3/2007		
CHECK	KK	12/3/2007		
REVIEW	MM	12/3/2007		



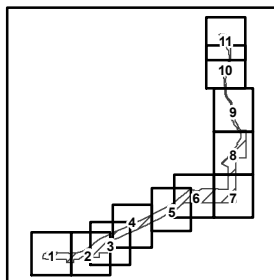
LEGEND

See Figure 12 for a detailed legend describing land use, cover and forms.

- County boundaries
- Service territory
- Railroads
- Existing substation
- Planned substation
- Half mile buffer
- Railroads
- Preferred Corridor
- Major roads

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Land use - SFWMD 1999/2004, SFWMD 2004, SJRWMD 2004, (2007 update by Golder within corridor).
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

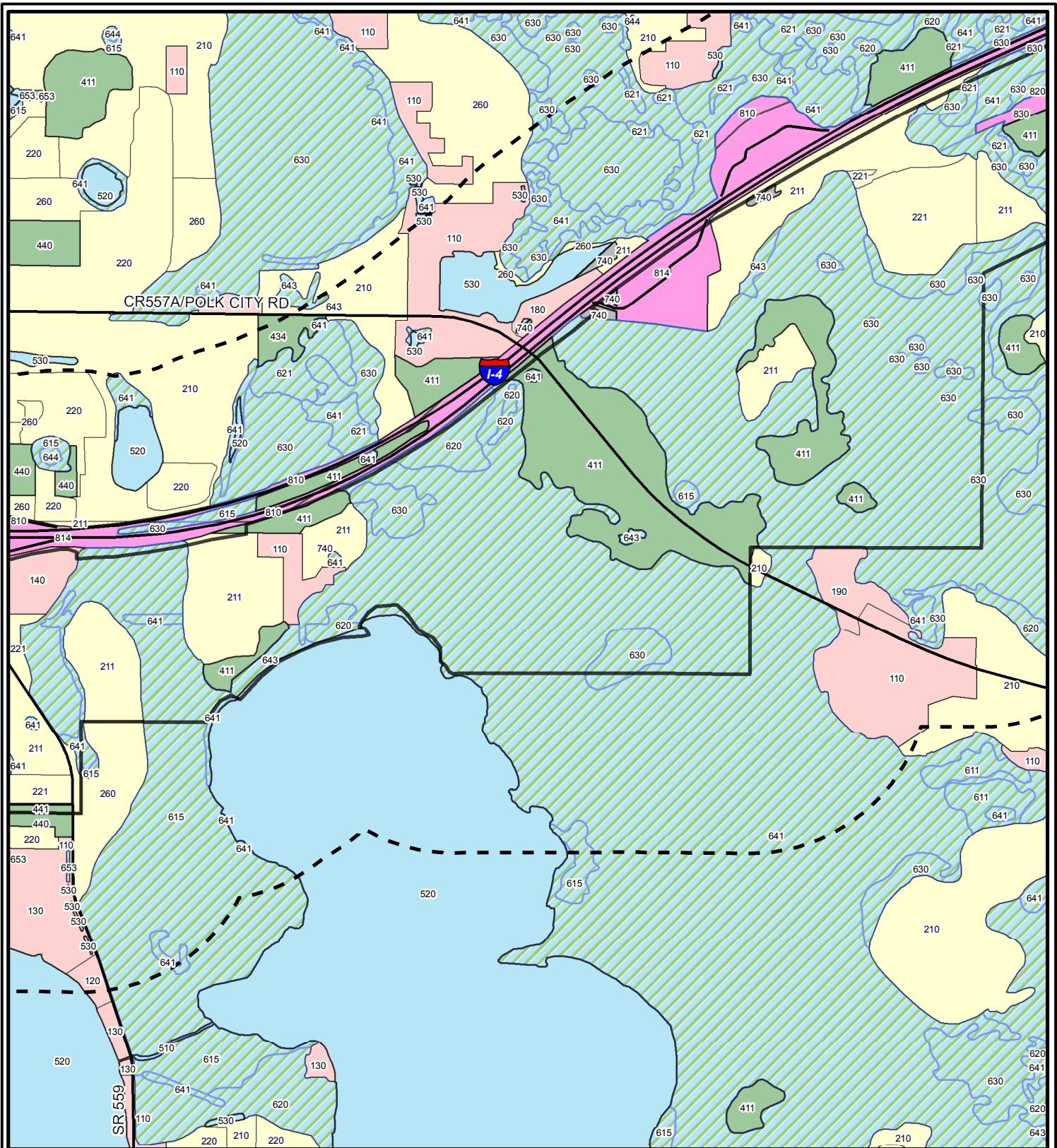
EXISTING LAND USE/VEGETATION



PROJECT No. 073-89532
DESIGN JMT 8/22/2007
GIS JMT 12/3/2007
CHECK KK 12/3/2007
REVIEW MM 12/3/2007

SCALE AS SHOWN REV. 0

ATT 2-4
1 OF 12



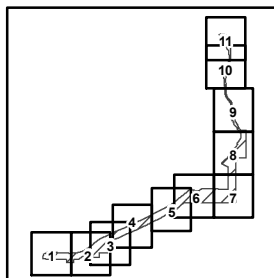
LEGEND

See Figure 12 for a detailed legend describing land use, cover and forms.

- County boundaries
- Service territory
- Railroads
- Existing substation
- Planned substation
- Half mile buffer
- Railroads
- Preferred Corridor
- Major roads

REFERENCE

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2. County boundaries - US Census Bureau, 2000.
3. Land use - SFWMD 1999/2004, SFWMD 2004, SJRWMD 2004, (2007 update by Golder within corridor).
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

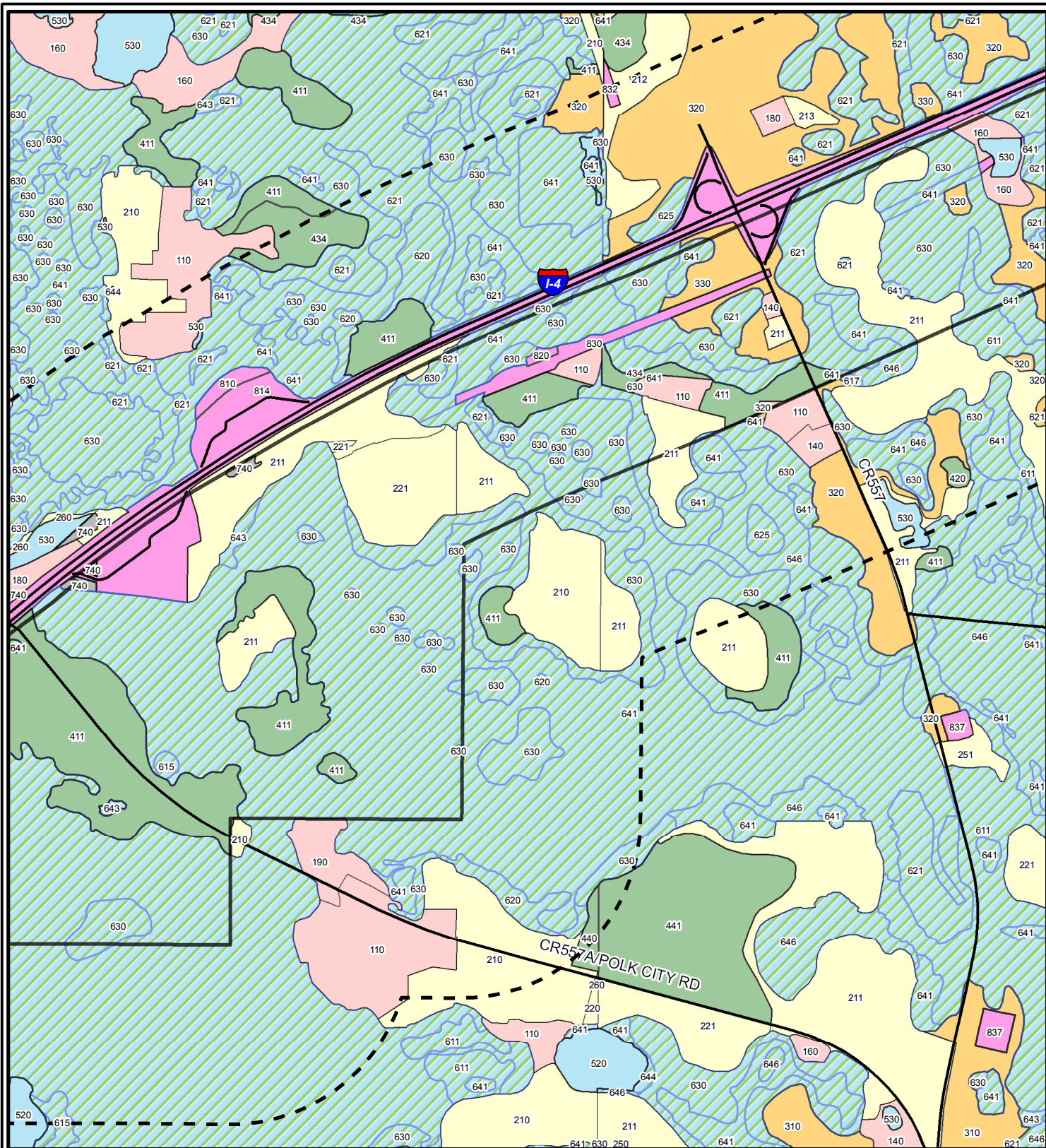
EXISTING LAND USE/VEGETATION



PROJECT No. 073-89532
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GIS JMT 12/3/2007
CHECK KK 12/3/2007
REVIEW MM 12/3/2007

SCALE AS SHOWN REV. 0

ATT 2-4
2 OF 12



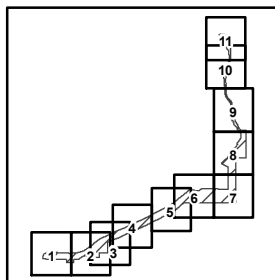
LEGEND

See Figure 12 for a detailed legend describing land use, cover and forms.

- | | |
|---------------------|--------------------|
| County boundaries | Half mile buffer |
| Service territory | Railroads |
| Railroads | Preferred Corridor |
| Existing substation | Major roads |
| Planned substation | |

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Land use - SFWMD 1999/2004, SFWMD 2004, SJRWMD 2004, (2007 update by Golder within corridor).
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

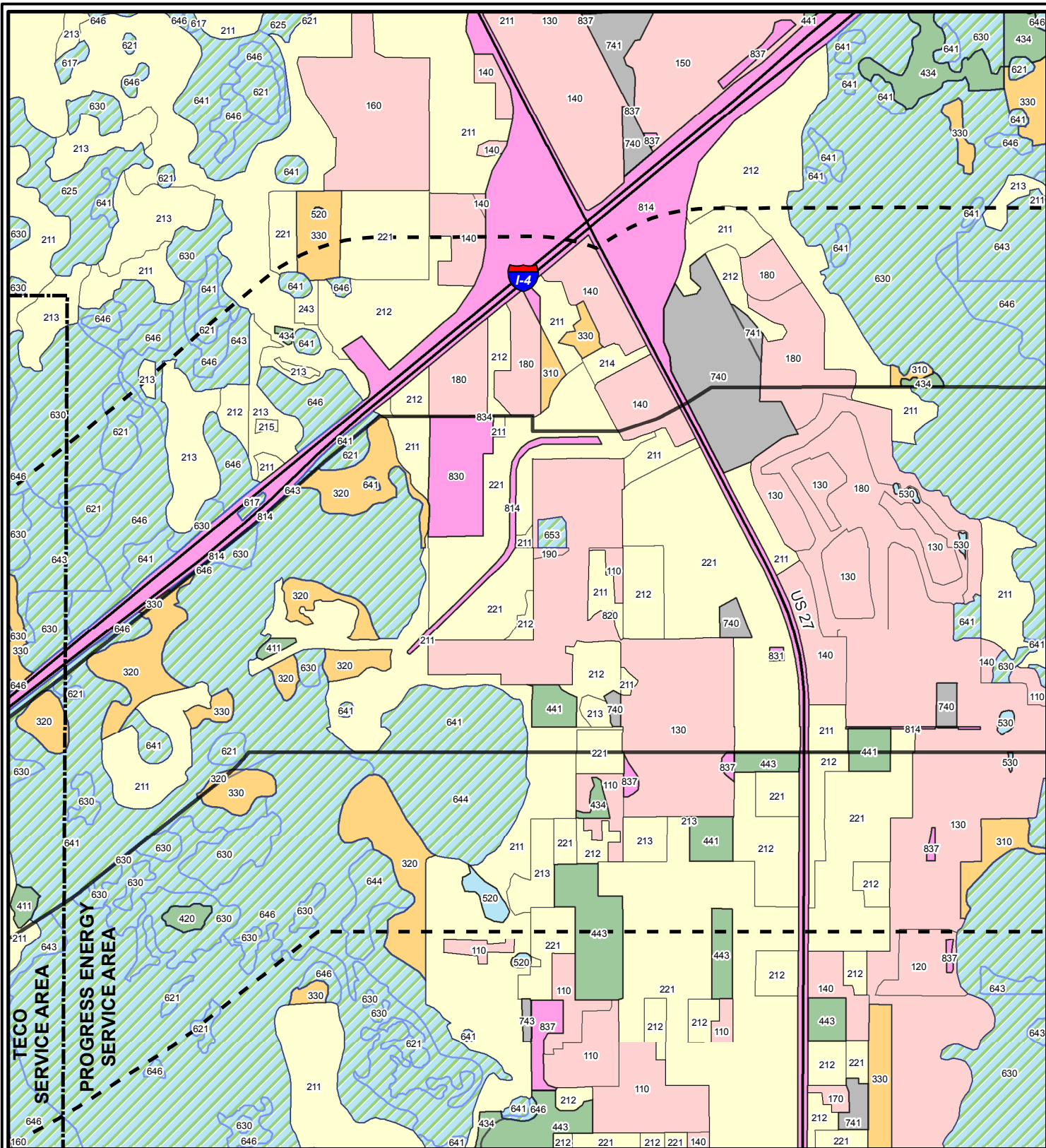
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EXISTING LAND USE/VEGETATION



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REVIEW: MM 12/3/2007		

ATT 2-4
3 OF 12



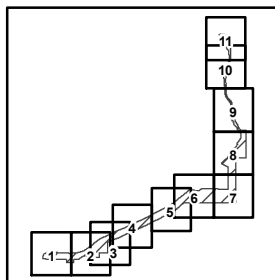
LEGEND

See Figure 12 for a detailed legend describing land use, cover and forms.

- County boundaries
- Service territory
- Railroads
- Existing substation
- Planned substation
- Half mile buffer
- Railroads
- Preferred Corridor
- Major roads

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Land use - SFWMD 1999/2004, SFWMD 2004, SJRWMD 2004, (2007 update by Golder within corridor).
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

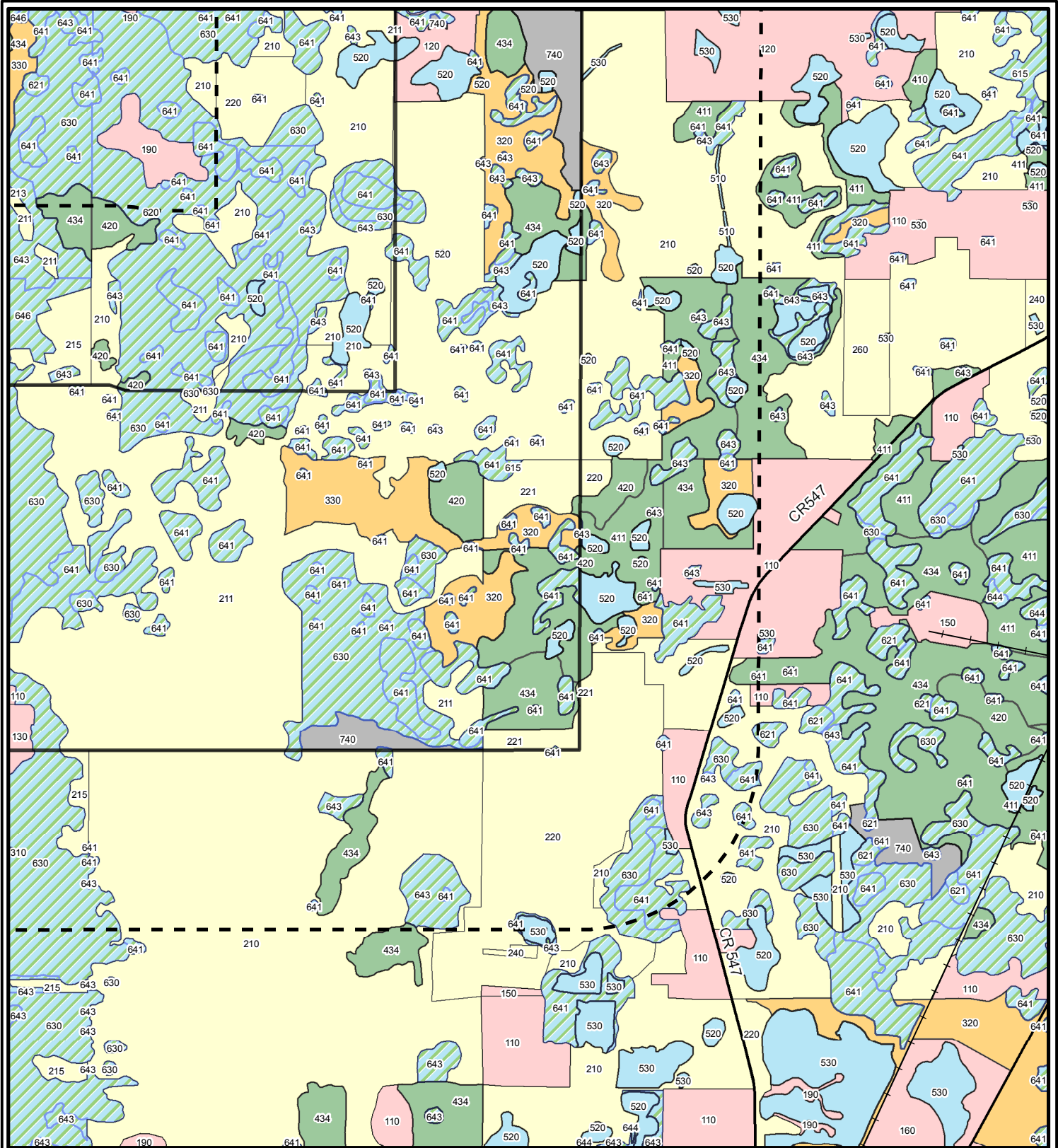
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EXISTING LAND USE/VEGETATION



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GIS: JMT 12/3/2007		
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REVIEW: MM 12/3/2007		

ATT 2-4
6 OF 12



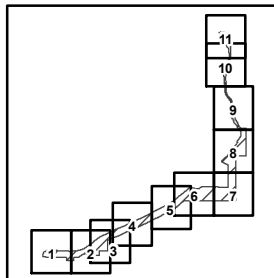
LEGEND

See Figure 12 for a detailed legend describing land use, cover and forms.

- County boundaries
- Service territory
- Railroads
- Existing substation
- Planned substation
- Half mile buffer
- Railroads
- Preferred Corridor
- Major roads

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Land use - SFWMD 1999/2004, SFWMD 2004, SJRWMD 2004, (2007 update by Golder within corridor).
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PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

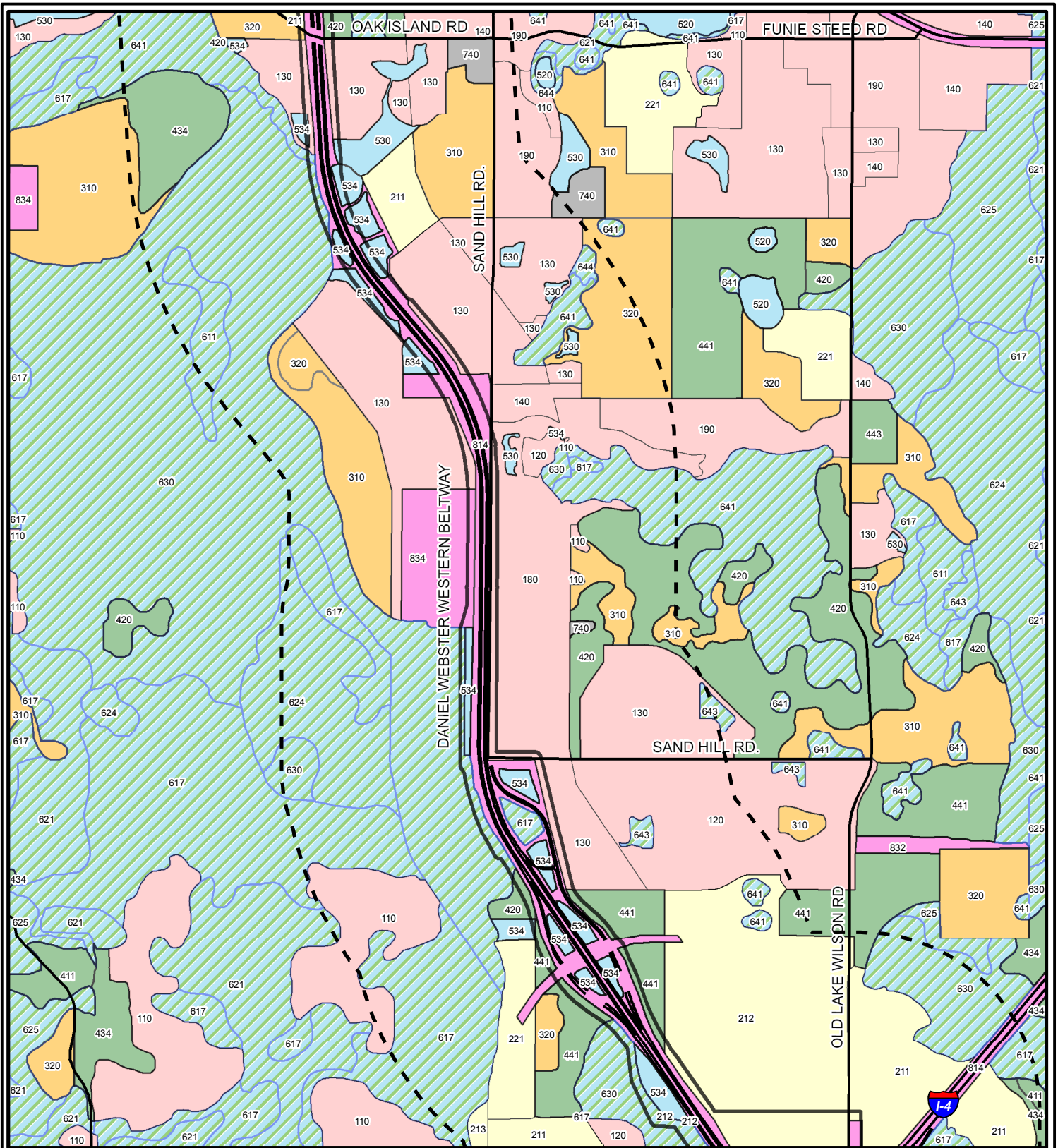
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EXISTING LAND USE/VEGETATION



PROJECT No. 073-89532	SCALE AS SHOWN	REV. 0
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GIS	JWT	12/3/2007
CHECK	KK	12/3/2007
REVIEW	MM	12/3/2007

ATT 2-4
7 OF 12



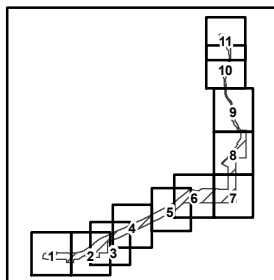
LEGEND

See Figure 12 for a detailed legend describing land use, cover and forms.

- County boundaries
- Service territory
- Railroads
- Existing substation
- Planned substation
- Half mile buffer
- Railroads
- Preferred Corridor
- Major roads

REFERENCE

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2. County boundaries - US Census Bureau, 2000.
3. Land use - SFWMD 1999/2004, SWFWMD 2004, SJRWMD 2004, (2007 update by Golder within corridor).
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



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Feet



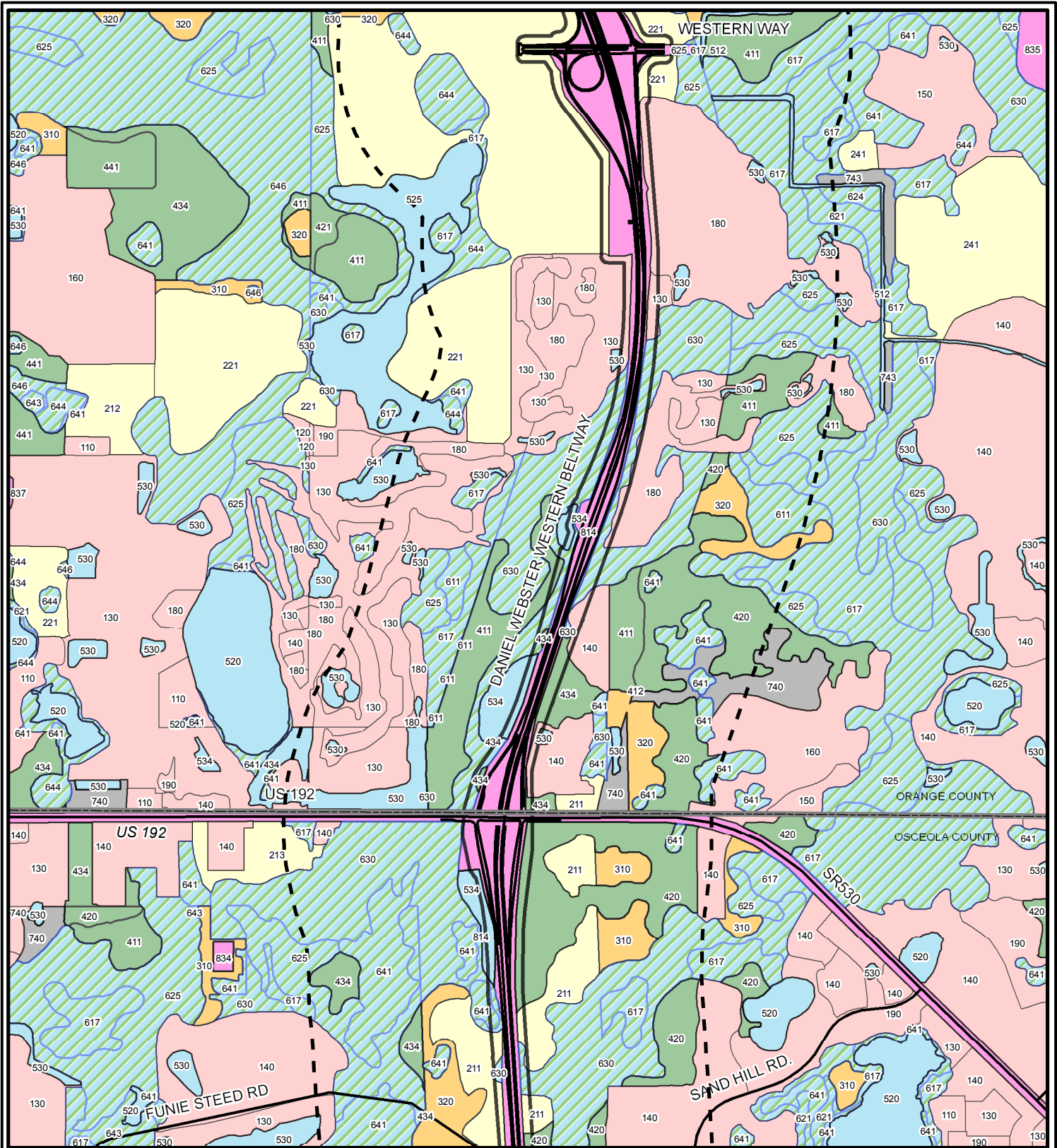
PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

EXISTING LAND USE/VEGETATION



PROJECT No. 073-89532	SCALE AS SHOWN	REV. 0
DESIGN: JMT 8/22/2007	ATT 2-4 9 OF 12	
GIS: JMT 12/3/2007		
CHECK: KK 12/3/2007		
REVIEW: MM 12/3/2007		



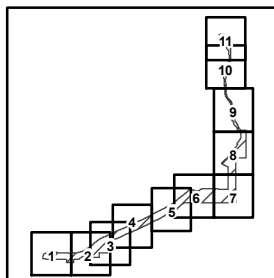
LEGEND

See Figure 12 for a detailed legend describing land use, cover and forms.

- County boundaries
- Service territory
- Railroads
- Existing substation
- Planned substation
- Half mile buffer
- Railroads
- Preferred Corridor
- Major roads

REFERENCE

1. Major roads - Florida Department Of Transportation, 4/2006.
2. County boundaries - US Census Bureau, 2000.
3. Land use - SFWMD 1999/2004, SFWMD 2004, SJRWMD 2004, (2007 update by Golder within corridor).
4. Aerial imagery - Aerials Express 1/2006 via ESRI ArcGIS Online.



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Feet



PROJECT
PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY
LAKE AGNES TO GIFFORD
230kV JOINT TRANSMISSION LINE PROJECT

TITLE

EXISTING LAND USE/VEGETATION



PROJECT No. 073-89532
DESIGN: JMT 8/22/2007
GIS: JMT 12/3/2007
CHECK: KK 12/3/2007
REVIEW: MM 12/3/2007

SCALE AS SHOWN REV. 0

ATT 2-4
10 OF 12

Florida Land Use, Cover and Forms Classification Codes

Urban & Built-Up

- 110 Residential, Low Density
- 120 Residential, Medium Density
- 130 Residential, High Density
- 140 Commercial & Services
- 150 Industrial
- 160 Extractive
- 170 Institutional
- 180 Recreational
- 190 Open Land

Agriculture

- 210 Cropland & Pastureland
- 211 Improved Pastures
- 212 Unimproved Pastures
- 213 Woodland Pastures
- 214 Row Crops
- 215 Field Crops
- 220 Tree Crops
- 221 Citrus Groves
- 223 Other Groves
- 224 Abandoned Groves
- 230 Feeding Operations
- 240 Nurseries & Vineyards
- 241 Tree Nurseries
- 242 Sod Farms
- 243 Ornamentals
- 250 Specialty Farms
- 251 Horse Farms
- 255 Other Specialty Farms
- 260 Other Open Lands
- 261 Fallow Crop Land

Rangeland

- 310 Herbaceous (Dry Prairie)
- 320 Shrub & Brushland
- 321 Palmetto Prairies
- 330 Mixed Rangeland

Upland Forest

- 410 Upland Coniferous Forests
- 411 Pine Flatwoods
- 412 Long Leaf Pine - Xeric Oak
- 413 Sand Pine
- 414 Pine - Mesic Oak
- 420 Upland Hardwood Forests
- 421 Xeric Oak
- 422 Brazilian Pepper
- 424 Melaleuca
- 427 Live Oak
- 428 Cabbage Palm
- 434 Hardwood - Coniferous Mixed
- 437 Australian Pine
- 440 Tree Plantations
- 441 Coniferous Plantations
- 443 Forest Regeneration Areas

Water

- 510 Streams & Waterways
- 520 Lakes
- 530 Reservoirs

Wetlands

- 610 Wetland Hardwood Forests
- 611 Bay Swamps
- 615 Stream & Lake Swamps (Bottomland)
- 617 Mixed Wetland Hardwoods
- 620 Wetland Coniferous Forests
- 621 Cypress
- 622 Pond Pine
- 624 Cypress - Pine - Cabbage Palm
- 625 Hydric Pine Flatwoods
- 630 Wetland Forested Mixed
- 641 Freshwater Marshes
- 643 Wet Prairies
- 644 Emergent Aquatic Vegetation
- 646 Treeless Hydric Savanna
- 653 Intermittent Ponds

Barren Land

- 720 Sand Other Than Beaches
- 740 Disturbed Lands

Transportation, Communication & Utilities

- 810 Transportation
- 820 Communications
- 830 Utilities

LEGEND

- Existing substation
- Planned substation
- Service territory
- County boundaries
- Railroads
- Railroads
- Major roads
- Half mile buffer
- Preferred Corridor

REFERENCE

1. Land use - SFWMD 1999/2004, SWFWMD 2004, SJRWMD 2004, (2007 update by Golder within corridor).



PROJECT PROGRESS ENERGY FLORIDA AND TAMPA ELECTRIC COMPANY LAKE AGNES TO GIFFORD 230kV JOINT TRANSMISSION LINE PROJECT			
TITLE EXISTING LAND USE/VEGETATION			
 Tampa, Florida		PROJECT No. 073-89532 DESIGN JWT 8/22/2007 GIS JWT 12/3/2007 CHECK KK 12/3/2007 REVIEW MM 12/3/2007	SCALE AS SHOWN REV. 0 ATT 2-4 12 OF 12

APPENDIX C

Public Outreach Program

Lake Agnes to Gifford - A Joint Transmission Line Project

Progress Energy Florida and Tampa Electric are both committed to providing safe, reliable, and affordable energy to our customers. We are working together to invest in a project that will help ensure a reliable supply of electricity to homes, schools, and businesses in your growing community.

Progress Energy and Tampa Electric plan to build a 230-kilovolt (kV) transmission line to meet the increasing demand of current and future customers. The proposed line will extend from Tampa Electric's Lake Agnes substation, in Polk County, to Progress Energy's planned Gifford substation, in southwest Orange County. The study area for this project includes portions of Lake, Orange, Osceola, and Polk counties.

The new transmission line corridor will be certified through the Florida Transmission Line Siting Act (TLSA). TLSA certification is generally required for transmission lines that are 230 kilovolts or larger, cross county lines, and are 15 miles or more in length. The procedures for this permitting process are outlined in Florida Statutes 403.52 to 403.5365.

Community Outreach

Both utilities will be working together with land owners, government officials, and regulatory agencies during the corridor selection and approval process. Open houses will be held to present the project and receive feedback from the public.

Thursday August 9, 2007
5:30 to 7:30 p.m.
Fantasy of Flight
Orlampa Conference Center
1400 Broadway Boulevard
Polk City, FL 33868

Monday, August 13, 2007
5:30 to 7:30 p.m.
Holiday Inn Express Hotel & Suites
17805 U.S. Highway 192
Clermont, FL 34714
(one-half mile east of U.S. 27
at the Summer Bay Resorts)

Wednesday August 15, 2007
5:30 to 7:30 p.m.
Holiday Inn Express Hotel & Suites
17805 U.S. Highway 192
Clermont, FL 34714
(one-half mile east of U.S. 27
at the Summer Bay Resorts)

Project Schedule

To meet the electrical needs of customers the transmission line must be in service by the summer of 2011. The project will follow this tentative timeline:

Determination of Need application submitted to PSC	August 1, 2007
Public Service Commission's	
Determination of Need Hearing	September 12, 2007
Community Outreach	August 2007
Corridor Selection Study	May to October 2007
TLSA application submitted to FDEP	October 1, 2007
Survey, Engineering, and	
Right-of-Way Acquisition	March 2008 to December 2009
Construction	2010 to June 2011

Stay Informed

Throughout the planning and decision-making process, both utilities will make information available online:

- www.progress-energy.com/transmission
- www.tampaelectric.com/infrastructure/lakeagnes

You may also leave a message at **888-455-0366**, and a utility representative will respond to your inquiry.



July 31, 2007

Dear Customer,

Progress Energy Florida and Tampa Electric are both committed to providing safe, reliable and affordable energy to our customers. We are working together to invest in a project to ensure a reliable supply of electricity to homes, schools and businesses in your growing community.

We plan to build a 230-kilovolt (kV) transmission line to meet the increased demand of existing and future customers.

The line will be about 35 miles long, beginning at Tampa Electric's Lake Agnes substation in Polk County, and ending at Progress Energy's planned Gifford substation, in southwest Orange County. The line will be complete by the summer of 2011. We will work together with land owners, elected officials and regulatory agencies during the route selection and approval process. We will consider environmental, land use, engineering and cost factors in our route selection.

Progress Energy and Tampa Electric have identified several potential routes and would like to hear from you. We will hold informational meetings in coming weeks, which will follow an informal open-house format, allowing you to ask questions directly to company representatives. Representatives from both utilities will provide information on the project, including aerial photographs, the need for the line and the construction schedule.

- **Thursday August 9**, 5:30 to 7:30 p.m., at the Fantasy of Flight, Orlampa Conference Center
1400 Broadway Boulevard, Polk City, FL 33868
- **Monday, August 13**, 5:30 to 7:30 p.m., at the Holiday Inn Express Hotel and Suites
17805 U.S. Highway 192, Clermont, FL 34714
(one-half mile east of U.S. 27)
- **Wednesday, August 15**, 5:30 to 7:30 p.m., at the Holiday Inn Express Hotel and Suites
17805 U.S. Highway 192, Clermont, FL 34714
(one-half mile east of U.S. 27)

If you are unable to attend the open houses, you can learn about the project, provide your feedback and ask questions by visiting us online at progress-energy.com/transmission or tampaelectric.com/infrastructure/lakeagnes. You also may leave a message at 1-888-455-0366.

Sincerely,

A handwritten signature in black ink that reads 'Tom Howard'.

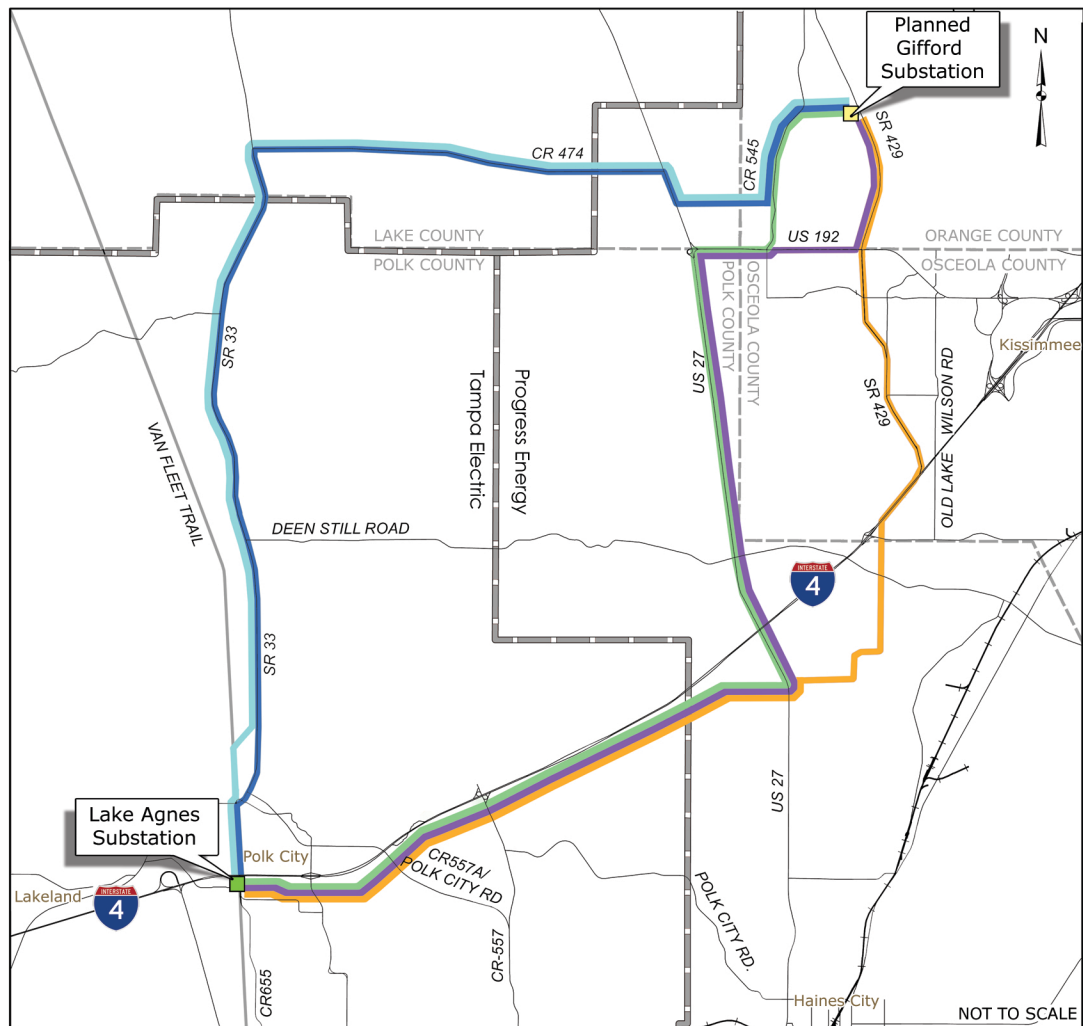
Tom Howard
Progress Energy Florida
Project Manager

A handwritten signature in black ink that reads 'Christopher A. Steele, P.E.'.

Christopher A. Steele
Tampa Electric
Manager, Project Management

Legend

- Electrical Service
- Territory Boundary
- County Boundaries
- Planned Substation
- Existing Substation
- Alternate Corridor 1
- Alternate Corridor 2
- Alternate Corridor 3
- Alternate Corridor 4
- Alternate Corridor 5





SURVEY

Lake Agnes to Gifford – A Joint Transmission Line Project

Progress Energy and Tampa Electric have completed the preliminary analysis that has identified potential corridors and would like to hear from you. Below is a list of criteria that Progress Energy and Tampa Electric are considering in the corridor selection process.

Please rank the following criteria from “1 – Most Important” to “12 – Least Important”. ***Each number should be used only once.*** Your answers will help the study team understand public interests and concerns, and will allow the team to compile and analyze this information in the corridor selection process. Thank you for your input.

Rank	Criteria	Comment
	Minimize the number of residences within a corridor and 250 feet from a corridor boundary.	
	Minimize the corridor length through existing parks, recreation areas or other designated conservation lands.	
	Minimize the length of a corridor through cultural resources (i.e., historical and archaeological sites).	
	Minimize number of school properties within a corridor and 500 feet from a corridor boundary.	
	Maximize length of a corridor where public road right-of-way or established electrical utility corridors are available.	
	Maximize length of a corridor where another linear facility (i.e., water, sanitary sewer, natural gas lines) exists along which Tampa Electric/Progress Energy can locate.	
	Minimize number of parcels or lots crossed by a corridor.	
	Minimize length of forested wetlands crossed by a corridor.	
	Minimize length of herbaceous wetlands crossed by a corridor.	
	Minimize number of protected species within a corridor.	
	Minimize number of eagle nests within 0.5 mile of a corridor boundary.	
	Minimize cost of construction for our overall customer base.	

ALTERNATE CORRIDORS (see map)

The alternate corridor map identifies five potential corridors (1, 2, 3, 4, and 5). Please provide us any comments you may have on these identified corridor, including preference, issues, or information that you may have.



QUESTIONNAIRE

Lake Agnes to Gifford – A Joint Transmission Line Project

I. Project Need

Was the need for the Transmission project explained adequately? (Circle one)

Yes

No

Uncertain

In “no” or “uncertain”, what additional information would be helpful to you?

II. Who is your electrical service provider?

Progress Energy

Tampa Electric

Other _____

III. Additional Information

Which of the following describes your interest in the project? (Circle all that apply)

Home Owner

Business Owner

Other

Please explain:

Was the open house format helpful in presenting the project? (Circle one)

Yes

No

Uncertain

Feedback:

IV. Additional comments and questions of the corridor alternatives.

V. Contact Information (optional)

Name: _____

Phone: _____ Email: _____

Street Address: _____

City / State / Zip: _____



WE WANT YOUR INPUT

ON A NEW TRANSMISSION LINE PROJECT IN YOUR AREA

Progress Energy Florida and Tampa Electric are working together to build a 230-kilovolt (kV) transmission line from Tampa Electric's Lake Agnes substation, in Polk County, to Progress Energy's planned Gifford substation, in southwest Orange County. This project will help ensure the continued delivery of reliable and affordable electricity to the growing number of customers of both utilities.

Tampa Electric and Progress Energy will work with residents, community leaders, regulatory agencies and others during the corridor selection and siting process. Please plan to attend one of the open houses listed below to learn more about the project and how it may impact you:

Thursday, August 9, 2007

5:30 pm to 7:30 pm

Fantasy of Flight

Orlampa Conference Center

1400 Broadway Blvd.

Polk City, FL 33868

Monday, August 13, 2007

5:30 pm to 7:30 pm

Holiday Inn Express

Hotel and Suites

17805 U.S. Highway 192

Clermont, FL 34714

(one-half mile east of U.S. 27)

Wednesday, August 15, 2007

5:30 pm to 7:30 pm

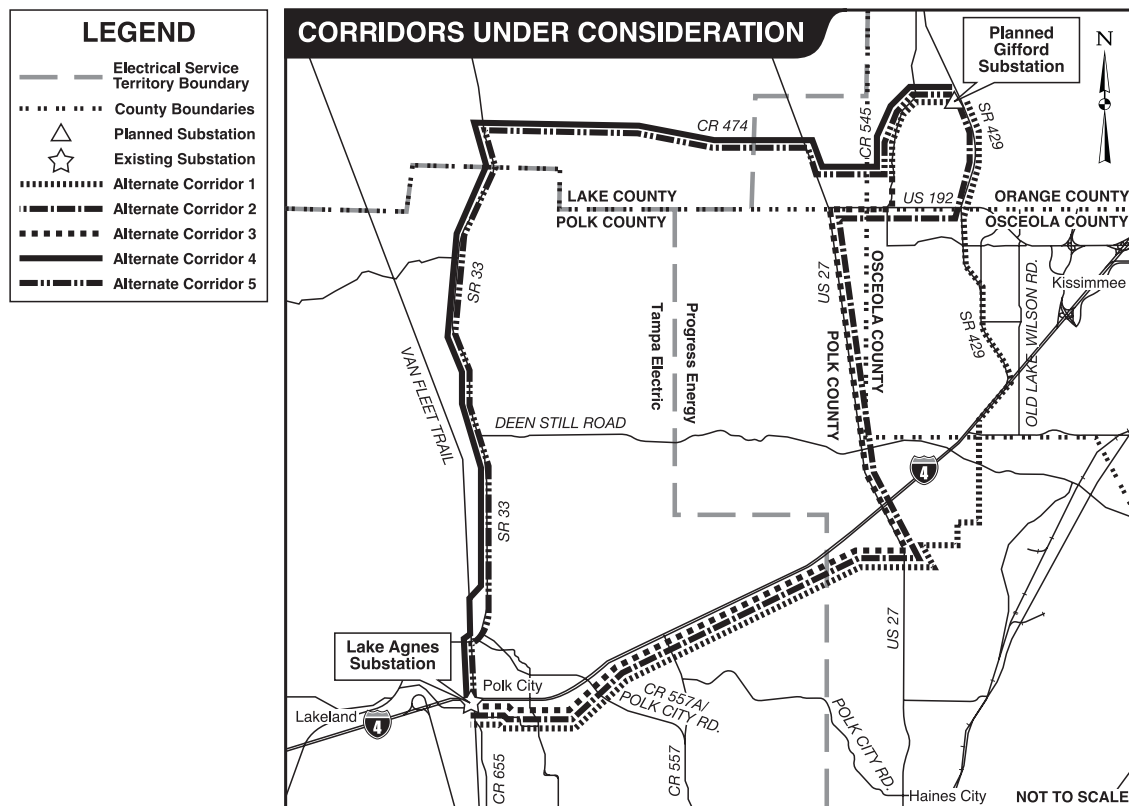
Holiday Inn Express Hotel
and Suites

17805 U.S. Highway 192

Clermont, FL 34714

(one-half mile east of U.S. 27)

If you can't attend one of the open houses and would like to learn more about the project, visit us online at www.progress-energy.com/transmission or www.tampaelectric.com/infrastructure/lakeagnes, or call our toll-free number: 1-888-455-0366.



SURVEY Results

Lake Agnes to Gifford – A Joint Transmission Line Project

Progress Energy and Tampa Electric have completed the preliminary analysis that has identified potential corridors and would like to hear from you. Below is a list of criteria that Progress Energy and Tampa Electric are considering in the corridor selection process.

Please rank the following criteria from “1 – Most Important” to “12 – Least Important”. ***Each number should be used only once.*** Your answers will help the study team understand public interests and concerns, and will allow the team to compile and analyze this information in the corridor selection process. Thank you for your input.

Rank	Criteria	Comment
1	Minimize the number of residences within a corridor and 250 feet from a corridor boundary.	45.90%
10	Minimize the corridor length through existing parks, recreation areas or other designated conservation lands.	19.35%
7	Minimize the length of a corridor through cultural resources (i.e., historical and archaeological sites).	21.31%
8	Minimize number of school properties within a corridor and 500 feet from a corridor boundary.	19.67%
5	Maximize length of a corridor where public road right-of-way or established electrical utility corridors are available.	23.73%
11	Maximize length of a corridor where another linear facility (i.e., water, sanitary sewer, natural gas lines) exists along which Tampa Electric/Progress Energy can locate.	18.97%
12	Minimize number of parcels or lots crossed by a corridor.	15.00%
8	Minimize length of forested wetlands crossed by a corridor.	19.67%
6	Minimize length of herbaceous wetlands crossed by a corridor.	23.33%
2	Minimize number of protected species within a corridor.	34.43%
3	Minimize number of eagle nests within 0.5 mile of a corridor boundary.	26.32%
4	Minimize cost of construction for our overall customer base.	25.00%

ALTERNATE CORRIDORS (see map)

The alternate corridor map identifies five potential corridors (1, 2, 3, 4, and 5). Please provide us any comments you may have on these identified corridor, including preference, issues, or information that you may have.

LAKE AGNES TO GIFFORD – A JOINT 230 KV TRANSMISSION LINE PROJECT

Agency/Stakeholder Contact list

	Name	Contact Means	Date
FEDERAL AGENCIES			
US Army Corp of Engineers	David Hobbie, Chief, Regulatory Division	Letter	Mailed 7/31/2007 & 12/14/2007
US Fish and Wildlife Service	David Hankla, Field Supervisor	Letter	Mailed 7/31/2007 & 12/14/2007
STATE OF FLORIDA			
Public Service Commission	Michael Cook, General Counsel	Letter	Mailed 7/31/2007 & 12/14/2007
Florida Department of Environmental Protection	Ann S. Seiler/Mike Halpin	Meeting and Letter	Meeting held 7/2/2007 and Letter mailed 7/31/2007 and 12/14/2007
	Mara Nasca	Letter	Mailed 7/31/2007 & 12/14/2007
	Jack Chisolm	Letter	Mailed 7/31/2007 & 12/14/2007
	James Bradner	Letter	Mailed 12/14/2007
Florida Fish and Wildlife Conservation Commission	Mary Ann Poole & Emily Norton/Esq	Phone, Letter and Meeting	Telephone conference July 25, 2007 Letter mailed 7/31/2007 & 12/14/2007 and Meeting held 9/24/2007
	Barabara Lenczewski	Phone	Telephone conference July 25, 2007
	Greg Holder, Regional Director	Letter	Mailed 7/31/2007 & 12/14/2007
Florida Department of Transportation	Sandra Whitmire, Esq	Letter	Telephone conference July 25, 2007 Mailed 7/31/2007
	Sheauching Yu, Esq	Letter	Mailed 7/31/2007 & 12/14/2007
	John Czerepak, District I	Email	September 18, 2007
	Leon Biegalski	Letter	Mailed 12/14/2007
Florida Department of Community Affairs	Paul Darst & Kelly Martinson/Esq	Phone & Letter	Telephone conference July 25, 2007 Mailed 7/31/2007 & 12/14/2007
Florida Department of State Division of Historical Resources	Attn: Frederick Gaske	Letter	Mailed 7/31/2007 & 12/14/2007
St. John's Water Management District	Attn. Vance Kidder	Letter	Mailed 7/31/2007 & 12/14/2007
Southwest Florida Water Management District	Dave Moore, Esq	Letter	Mailed 7/31/2007
	Jan Burke, PE Surface Water Manager	Letter	Mailed 12/14/2007
	Dave Carpenter	Letter	Mailed 12/14/2007
	Gina Sowders, Land Management	Letter	Mailed 12/14/2007
	Martha Moore, Esq	Letter	Mailed 12/14/2007
South Florida Water Management District	Jim Golden	Letter	Mailed 7/31/2007 & 12/14/2007
Eastern Central Florida Regional Planning Council	Phil Laurien	Letter	Mailed 7/31/2007 & 12/14/2007
Central Florida Regional Planning Council	Patricia M Steed, Executive Director	Letter	Mailed 12/14/2007

LAKE AGNES TO GIFFORD – A JOINT 230 KV TRANSMISSION LINE PROJECT

Agency/Stakeholder Contact list

	Name	Contact Means	Date
COUNTY - ELECTED OFFICIALS			
Polk County	Mike Herr	Meeting	July 31, 2007
	Bob English	Meeting	July 31, 2007
	Randy Wilkenson	Meeting	July 31, 2007
	Jack Myers	Meeting	July 31, 2007
	Jean Reed	Meeting	July 31, 2007
	Sam Johnson	Meeting	July 31, 2007
Orange County	Richard Crotty	email	August 9, 2007
	Teresa Jacobs	email	August 9, 2007
	Fred Brummer	email	August 9, 2007
	Mildred Fernandez	email	August 9, 2007
	Linda Stewart	email	August 9, 2007
	Bill Segal	email	August 9, 2007
	Tiffacy Moore	email	August 9, 2007
	Ajit Lalchandani	email	August 9, 2007
	Cindy Hall	email	August 9, 2007
	Jennifer Hill	email	August 9, 2007
	Elaine Renick	email	August 9, 2007
	Debbie Stivender	email	August 9, 2007
Lake County	Linda Stewart	email	August 9, 2007
	Welton Cadwell	email	August 9, 2007
	Michael Freilinger	email	August 9, 2007
	Paul Owen	email	August 9, 2007
	John Quinones	email	August 9, 2007
	Ken Shipley	email	August 9, 2007
	Ken Smith	email	August 9, 2007
	Bill Lane	email	August 9, 2007
COUNTY - DEPARTMENT CONTACTS			
Polk County	Transportation Engineering	email	August 8, 2007
	Utilities Department	email	August 8, 2007
	Natural Resources	email	August 8, 2007
	Polk County representatives	Meeting	project team met with representatives of Polk County on October 5, 2007
Orange County	Public Works/ Transportation Planning	meeting	July 23, 2007
	Department Utilities/ Utilities Engineering	Phone/e-mail	July 23, 2007
	Growth Management/ Planning and Zoning	meeting	July 23, 2007
	Community and Environmental Services/ Env. Protection	Phone/e-mail	July 23, 2007
	Orange County representatives	Meeting	project team met with representatives of Orange County on October 4, 2007
Lake County	Growth Management	e-mail	August 9, 2007
	Planning Division	e-mail	August 9, 2007
	Zoning Division	e-mail	August 9, 2007
	Public Works	e-mail	August 9, 2007
	Transportation	e-mail & telephone	August 9, 2007
	Environmental Services	e-mail	August 9, 2007
Osceola County	Engineering	Phone	September 10, 2007
	Planning Department	Phone	September 10, 2007
	Zoning and Code Enforcement Dept.	Phone	September 10, 2007
	Transportation Department	Phone	September 10, 2007
	Osceola County representatives	Meeting	project team met with representatives of Osceola County on September 28, 2007

LAKE AGNES TO GIFFORD – A JOINT 230 kV TRANSMISSION LINE PROJECT**Agency/Stakeholder Contact list****MUNICIPALITIES - MAYORS**

Municipality	Contact Means	Date
Reedy Creek Improvement District	Phone	September 5, 2007
City of Auburndale	email	August 8, 2007
City of Polk City	phone and email	8/6/2007 (phone) and June 11 (email)
City of Lakeland	phone/E-mail	August 8, 2007

UTILITIES

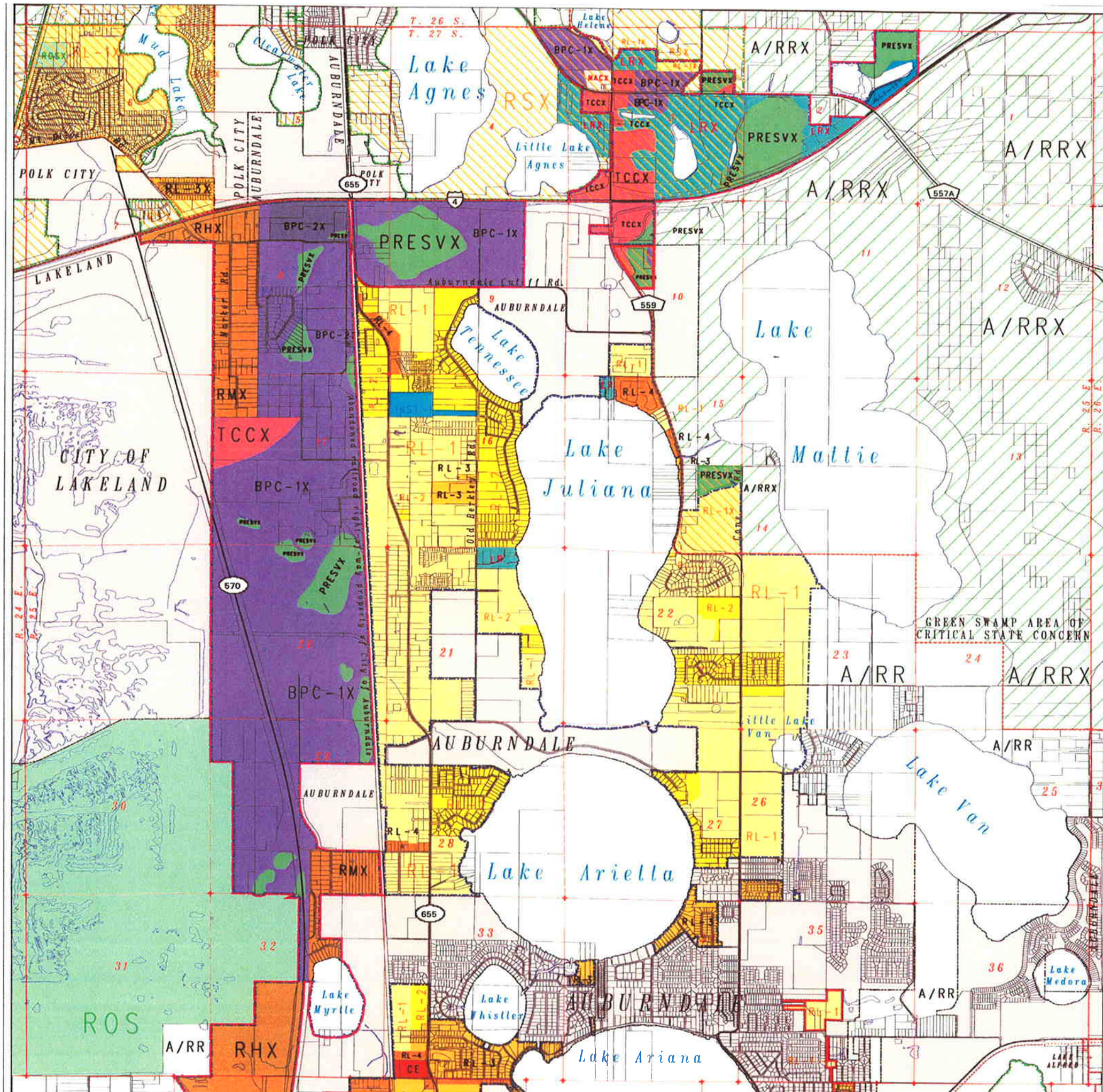
Utility	Contact Means	Date
Lakeland Electric	facsimile	August 8, 2007 (faxed)
Sumter Electric Cooperative, Inc (SECI)	Phone/email	July 2007 and emailed August 9, 2007
Orlando Utilities Commission (OUC)	Phone/Meeting	August 10, 2007.
Gulfstream Natural Gas	Phone and Emails	September 1, 2007

NEWSPAPERS

Name	Date
Lakeland Ledger	posted August 1 and August 5, 2007
Winter Haven News Chief	posted August 1 and August 5, 2007
The Reporter	posted August 2, 2007
West Orange Times	posted August 2, 2007
South Lake Press	posted August 3, 2007
Osceola News Gazette	posted August 2, 2007
Orlando Sentinel	posted August 1 and August 5, 2007

APPENDIX D

County and Municipal Future Land Use Maps (FLUM)



GENERALIZED 2020 FUTURE LAND USE/PARCEL BASE MAP

SECTIONS 1-36 TOWNSHIP 27, RANGE 25

- LAND USE LEGEND**
- Urban-Development Areas (UDA)
(Public Water & Sewer-Existing
and Proposed within 5 years)
 - Urban-Growth Areas (UGA)
(Public Water & Sewer
Proposed within 6-10 years)
 - Suburban-Development Areas (SDA)
(Non-Sewered)
 - Utility-Enclave Areas (UEA)
(Isolated Existing Sewered Areas)
 - Neighborhood Utility Service Area (NUSA)
(Existing Water & Proposed Sewer)
 - CC — Convenience Center
 - NAC — Neighborhood Activity Center
 - CAC — Community Activity Center
 - TC — Town Center
 - RAC — Regional Activity Center
 - HIC — High-Impact Commercial Center
 - TCC — Tourism Commercial Center
 - LCC — Linear Commercial Corridor
 - CE — Commercial Enclave
 - OC — Office Center
 - EC — Employment Center
 - BPC-1 — Business Park Center-Limited
 - BPC-2 — Business Park Center
 - IND — Industrial
 - PM — Phosphate Mining
 - LR — Leisure Recreation
 - INST-1/PI — Institutional-1/Professional Institutional
 - INST-2 — Institutional-2
 - ROS — Recreation and Open Space
 - PRESV — Preservation
 - CORE — CARMP Core
 - RCC — Rural-Cluster Center (Non-Residential)
 - RCC-R — Rural-Cluster Center (Residential)
 - RS — Residential-Suburban
 - RL-1 — Residential-Low
 - RL-2 — Residential-Low
 - RL-3 — Residential-Low
 - RL-4 — Residential-Low
 - RM — Residential-Medium
 - RH — Residential-High
 - A/RR — Agriculture/Residential-Rural
 - DRI — Development of Regional Impact
 - PRE-DRI — DRI Scale Projects
 - SPA — Ridge Special Protection Area
 - SPA — Rural Special Protection Area
 - SPA — Polk City Special Protection Area
 - SAP — Selected-Area Plan/Neighborhood Plan
 - X — Indicates Extra Dev. Std's (see text)
- GENERAL LEGEND**
- Incorporated Area
 - Interstate Highway
 - U.S. Highway
 - State Highway
 - County Roads
 - Polk County Boundary
 - Green Swamp Area of Critical State Concern Boundary
 - Edge of Pavement
 - Railroad Lines
 - Lakes/Water
 - Parcel Lines
 - Township/Range Locator Lines
 - Section Corners

NO.	CPA INDEX	DATE
93A-11	137 ACS FROM RS TO CE, CR 655 & LAKE MYRTLE, 33-27-25	25 MAY 93
93A-12	8.8 ACS FROM RS TO CE, CR 655 & LAKE MYRTLE, 33-27-25	25 MAY 93
93B-16	SPAs included in CARMP	31 JAN 94
98A-10	233.8 ACS FROM SDA/RSX TO RDAJA/RRX, BETWEEN I.R. JULIANA & MATTIE, 14 & 15-27-25	03 DEC 96
97A-13	MAP HATCHING ERROR CORRECTED IN 10-27-25	09 SEP 97
98A-04	STATE ROAD 559 SAP	19 OCT 99
00B-18	DEV. AREA CHANGE, OUTSIDE LAKELAND, AUBURDALE, WINTER HVN, HAINES CITY, APPROX 14,985 ACS	12 DEC 00
02B-07	152 AC FROM A/RRX TO 79 AC BPC-1X, 7 AC TCCX, 66 AC PRESV, E SR 653, S SR 540A, 10-27-25	18 DEC 02
02B-18	24 SITES CHANGING TO INST-1 FOR ELEM. & MIDDLE SCHOOLS, 18-27-25	18 DEC 02
04A-03	67 AC A/RRX TO RSX, 20 AC A/RRX TO PRESV, RDA TO SDA, RURAL SPA TO POLK CITY SPA, W OF CR 559 15-27-25	30 JUN 04
04A-08	1.5 AC A/RRX TO RL-1X, RURAL SPA TO POLK CITY SPA, RDA TO UGA, W OF SR 559 15-27-25	30 JUN 04
05B-09	66 AC RSX & SDA TO RL-1X & UGA, 3.3 AC A/RRX, RDA/RURAL SPA TO RL-1X/UGA/PCSPA, 15-27-25	07 DEC 06

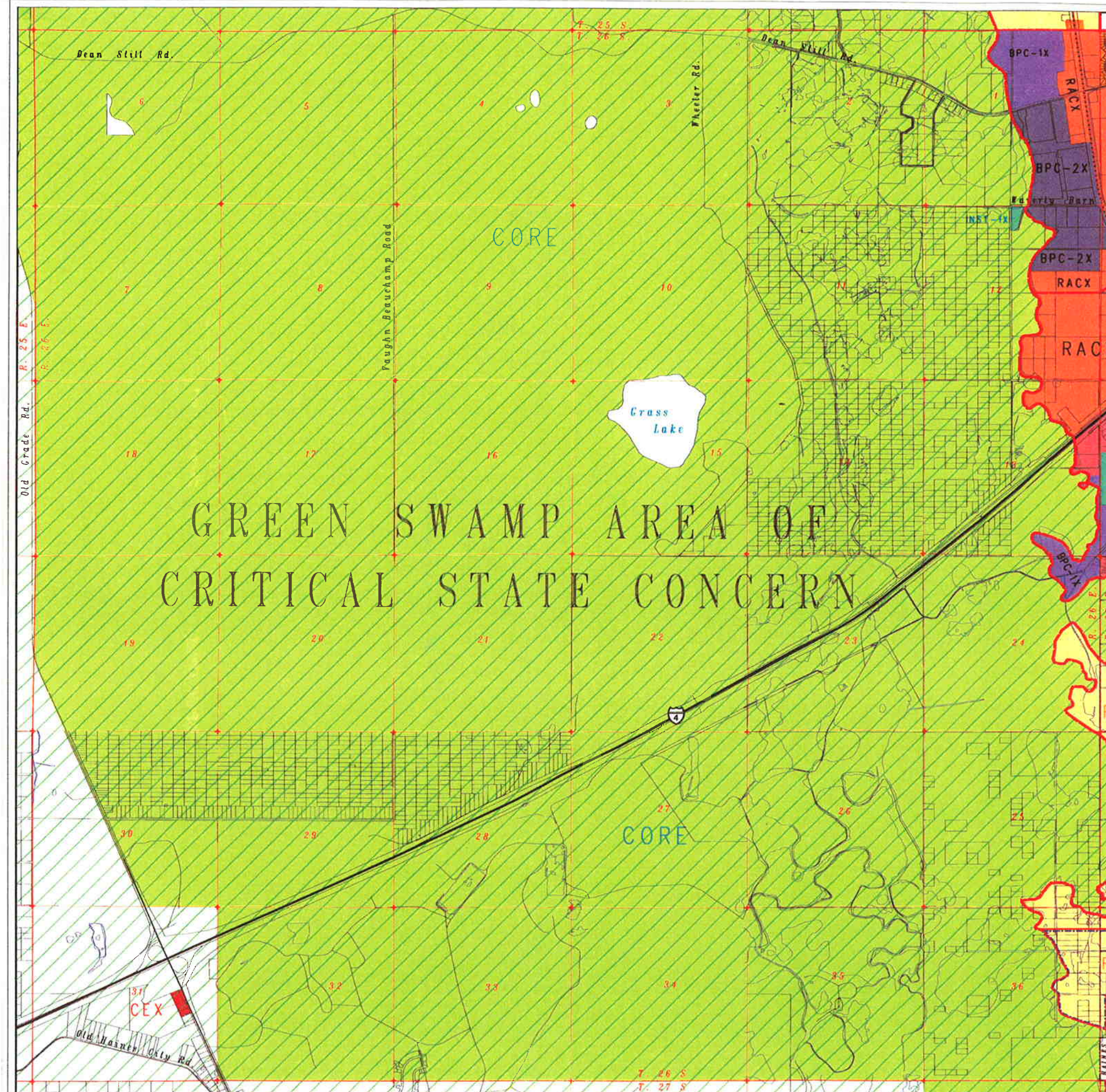
NO.	LDC INDEX	DATE
02T-10	INSTITUTIONAL TO INST-1 OR INST-2	24 JUL 02
05D-14	10 AC RL-1 TO RL-3, W OF OLD BERKLEY RD, N OF SUNRISE HILL, LA, S OF CHADWICK CT, 16-27-25	09 NOV 05



PREPARED BY THE
POLK COUNTY
BOARD OF COUNTY COMMISSIONERS
IT/GIS DIVISION

FILE NAME: c:\data\map\supershape.mxd





GENERALIZED 2020 FUTURE LAND USE/PARCEL BASE MAP

SECTIONS 1-36 TOWNSHIP 26, RANGE 26

LAND USE LEGEND

- Urban-Development Areas (UDA)
(Public Water & Sewer-Existing
and Proposed within 5 years)
- Urban-Growth Areas (UGA)
(Public Water & Sewer
Proposed within 6-10 years)
- Suburban-Development Areas (SDA)
(Non-Sewered)
- Utility-Enclave Areas (UEA)
(Isolated Existing Sewered Areas)
- Neighborhood Utility Service Area (NUSA)
(Existing Water & Proposed Sewer)
- CC — Convenience Center
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- CAC — Community Activity Center
- TC — Town Center
- RAC — Regional Activity Center
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- SAP — Selected-Area Plan/Neighborhood Plan
- X — Indicates Extra Dev. Std's (see text)

GENERAL LEGEND

- Incorporated Area
- Interstate Highway
- U.S. Highway
- State Highway
- County Roads
- Polk County Boundary
- Green Swamp Area of Critical State Concern Boundary
- Edge of Pavement
- Railroad Lines
- Lakes/Water
- Parcel Lines
- Township/Range Locator Lines
- Section Corners

GRAPHIC SCALE



PREPARED BY THE
POLK COUNTY
BOARD OF COUNTY COMMISSIONERS
IT/GIS DIVISION
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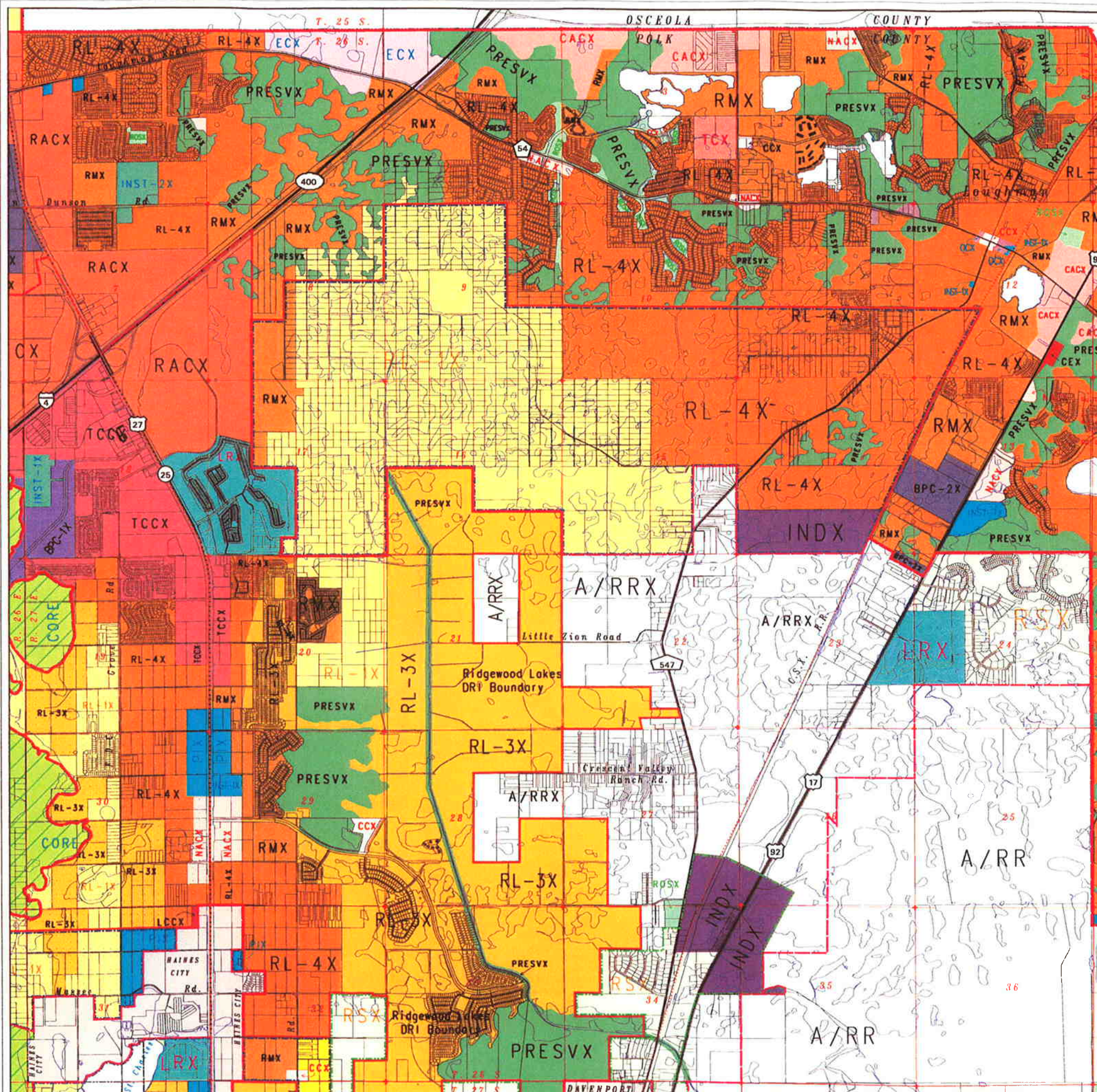
NO.	CPA INDEX	DATE
93B-16	SPAs included in CARMP	31 JAN 94
94A-12	REALIGN DEVELOPMENT AREA & CARMP MAP BOUNDARIES TO BE CONSISTENT	04 OCT 94
96A-09	MODIFICATION OF US HWY 27 SAP PROPOSED ROAD NETWORK	03 DEC 96
96A-12	DEVELOPMENT AREA CHANGE	19 DEC 96
99S-09	9 AC FROM RLX TO RACX, NE COR OF CR 54 & US HWY 27, 1-26-26	28 SEP 99
00B-19	107.96 ACS RMX TO BPCX, RMX & BPCX TO RACX, IN CR 54 SAP, US 27 & DEAN STILL RD, 1-26-26	12 DEC 00
01A-09	4.93 AC FROM A/RX TO CEX, NEAR SW CORNER AT INTERSECTION OF CR 567 & I-4, 31-26-26	11 JUL 01
01B-17	17172 AC NORTH RIDGE SAP, 12, 24, 25, 36, 26, 26, 1, 12, 27, 26, 7, 8, 15, 10, 35, 26, 27, 2, 10, 11, 15, 10, 21, 27, 27	19 DEC 01
02A-15	28 SITES OF EXISTING WTF & WWTF TO INST-2 12-26-26	18 DEC 02
03A-05	25 AC FROM RMX TO BPC-2X ON DEAN STILL ROAD WEST OF US 27, 01-26-26	09 JUL 03
05A-06	10,670 AC CR 54 SAP AMEND TO RONALD REAGAN SAP & UPDATE, E OF US 27, N OF I-4	13 JUL 05

NO.	LDC INDEX	DATE
02D-01	9 + 1 AC FROM BPC-1X TO BPC-2X, WEST OF US 27, S OF WAVERLY BARN RD, 12-26-26	19 JUN 02
02D-04	39 AC FROM BPC-1X TO BPC-2X ON WAVERLY BARN RD, WEST OF US 27, 12-26-26	18 DEC 02
05D-11	VARIOUS SUBDIVISION CHANGES FOR BPC, INST & RL IN RONALD REAGAN PKWY SAP	09 NOV 05



GENERALIZED 2020 FUTURE LAND USE/PARCEL BASE MAP

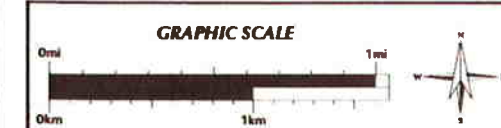
SECTIONS 1-36 TOWNSHIP 26, RANGE 27



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(Public Water & Sewer-Existing and Proposed within 5 years)
 - Urban-Growth Areas (UGA)
(Public Water & Sewer Proposed within 6-10 years)
 - Suburban-Development Areas (SDA)
(Non-Sewered)
 - Utility-Enclave Areas (UEA)
(Isolated Existing Sewered Areas)
 - Neighborhood Utility Service Area (NUSA)
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 - TCC - Tourism Commercial Center
 - LCC - Linear Commercial Corridor
 - CE - Commercial Enclave
 - OC - Office Center
 - EC - Employment Center
 - BPC-1 - Business Park Center-Limited
 - BPC-2 - Business Park Center
 - IND - Industrial
 - PM - Phosphate Mining
 - LR - Leisure Recreation
 - INST-1/PI - Institutional-1/Professional Institutional
 - INST-2 - Institutional-2
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 - SAP - Selected-Area Plan/Neighborhood Plan
 - X - Indicates Extra Dev. Sid's (see text)
- ### GENERAL LEGEND
- Incorporated Area
 - Interstate Highway
 - U.S. Highway
 - State Highway
 - County Roads
 - Polk County Boundary
 - Green Swamp Area of Critical State Concern Boundary
 - Edge of Pavement
 - Railroad Lines
 - Lakes/Water
 - Parcel Lines
 - Township/Range Locator Lines
 - Section Corners

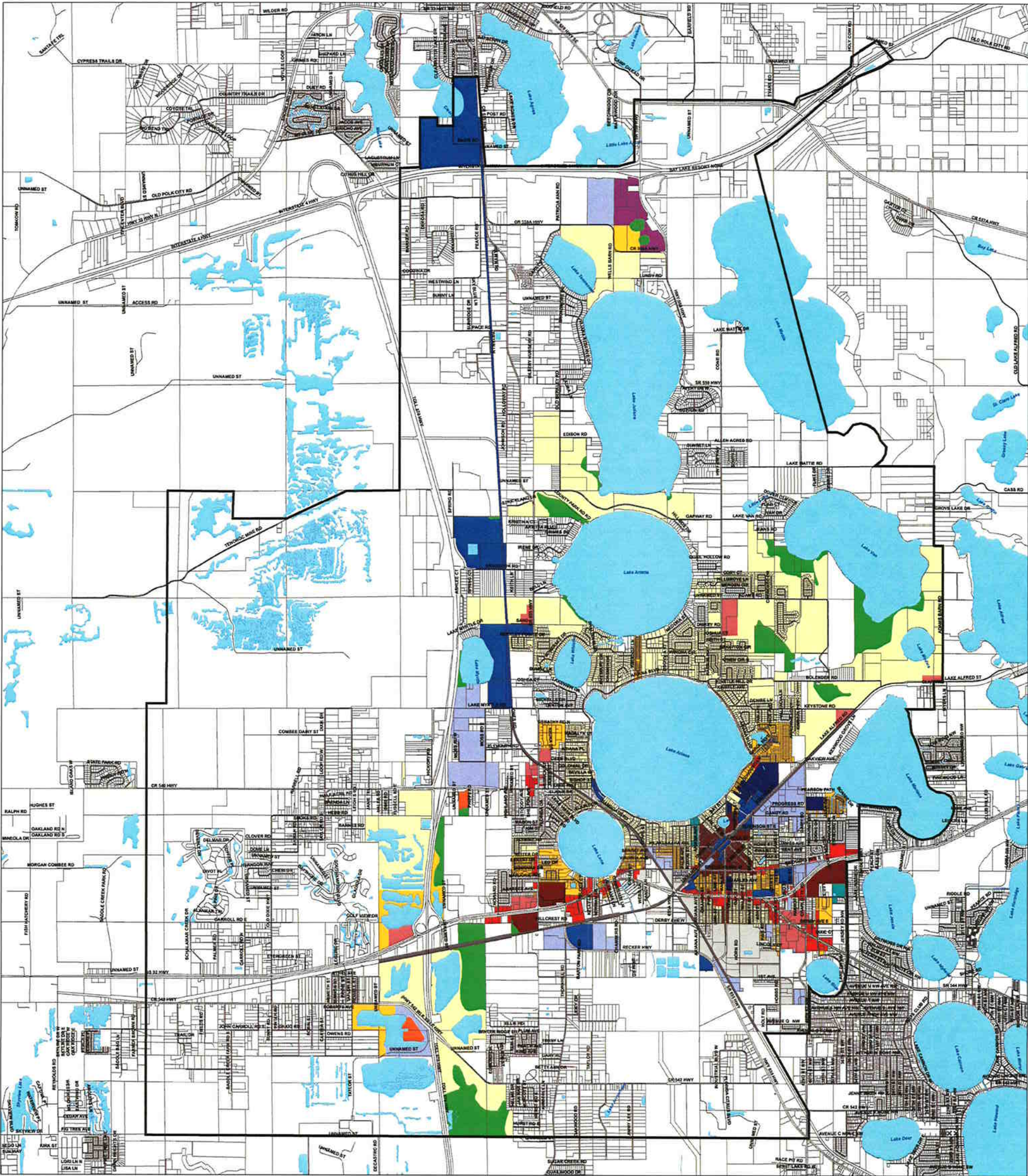
NO.	CPA INDEX	DATE
95S-05	8.4 ACRES FROM RL TO TCC, 20-26-27	18 MAY 95
95S-06	7.5 ACRES FROM RL TO CE, 32-26-27	16 MAY 95
96S-05	5.8 ACRES FROM DRI #2 TO CE, E SIDE US 17/92, 12-26-27	19 MAR 96
96A-12	DEVELOPMENT AREA CHANGE	19 DEC 96
97S-08	8 ACS FROM RM TO CE, E SIDE OF US 27, 29-26-27	18 MAR 97
98B-01	10 AC OF RLX TO TCCX, 1 MILE S OF SW COR OF I-4 & US-27, 19-26-27	17 DEC 98
99B-35	76.5 AC FROM PRESV AND TCCX TO RLX IN THE 54 SAP NORTH SIDE OF CR 54, 3-4-26-27	15 DEC 99
00B-18	DEV. AREA CHANGE, OUTSIDE LAKE LAND, ABRONDALE, WINTER HVN, HAINES CITY, APPROX 14,988 ACS	12 DEC 00
01S-08	7 AC FROM RMX TO ROSX, E OF OLD KISSIMMEE RD, W OF US 17/92, 12-26-27	25 JUL 01
01B-17	17172 AC NORTH RIDGE SAP, 12, 24, 25, 36, 28-26, 1, 12-27-26, 7, 8, 15 TO 35-26-27, 2, 10, 11, 15 TO 21-27-27	19 DEC 01
02A-15	28 SITES OF EXISTING WTF & WWTF TO INST-2 16-26-27	18 DEC 02
02B-18	24 SITES CHANGING TO INST-1 FOR ELEM & MIDDLE SCHOOLS, 6, 13-26-27	18 DEC 02
03A-03	10 AC FROM RL-4X TO TCCX ON MINUTE MAID ROAD WEST OF US 27, 19-26-27	09 JUL 03
03B-08	CR 54 SAP UPDATE, VARIOUS ACRES & CHANGES, E OF US 27, N OF I-4, 4 TO 7-26-27	17 DEC 03
04A-01	5 AC FROM RL-4X TO TCCX, W SIDE OF US 27, S OF MINUTE MAID RAMP ONE ROAD 19-26-27	30 JUN 04
04B-11	43 AC FROM INST 2a TO RL-1X ON DUNSON RD, E OF US 27, 06-26-27	30 NOV 04
05S-02	9.8 AC FROM A/RMX TO BPC-1X, SOUTH OF CR 54, WEST OF US 17/92, 13, 14, 23, 24-26-27	19 JAN 05
05A-02	17 AC FROM RMX & NACX TO CACX, NW CORNER OF US 17/92 & CR 54, 12-26-27	13 JUL 05
05A-03	87 AC FROM TCCX TO CACX & RMX, S OF CR 532, 1/2 MI E OF I-4, N OF CR 54, 3-26-27	13 JUL 05
05A-06	10,870 AC CR 54 SAP AMEND TO RONALD REAGAN SAP & UPDATE, E OF US 27, N OF M	13 JUL 05
05B-14	30 AC FROM TCCX TO RL-1X, W OF FDC GROVE RD, 5 MI W OF US 27, S OF I-4, 19-26-27	07 DEC 05
06A-12	41 AC FROM BPC-2X TO RMX ON THE W SIDE OF 17/92, S OF CR 54 13-26-27	26 JUL 06

NO.	LDC INDEX	DATE
05D-03	9.8 AC FROM BPC-1X TO BPC-2X, SOUTH OF CR 54, WEST OF US 17/92, 13, 14, 23, 24-26-27	19 JAN 05
05D-11	VARIOUS SUBDIVISION CHANGES FOR BPC, INST & RL IN RONALD REAGAN PKWY SAP	09 NOV 05
05D-08	38 AC FROM RL-1X TO RL-4X, W OF FDC GROVE RD, 5 MI W OF US 27, S OF I-4, 19-26-27	07 DEC 05
06D-01	126 AC RL-1X TO RL-3X, W OF FDC GROVE RD, W END OF HOLLY HILL GROVE RD #3 19, 30-26-27	25 JAN 06
06D-02	133 AC RL-1X TO RL-3X, S OF HOLLY HILL GROVE RD, W OF FDC GROVE RD, N OF MASSE RD 30, 31-26-27	25 JAN 06



PREPARED BY THE
POLK COUNTY
BOARD OF COUNTY COMMISSIONERS
IT/GIS DIVISION
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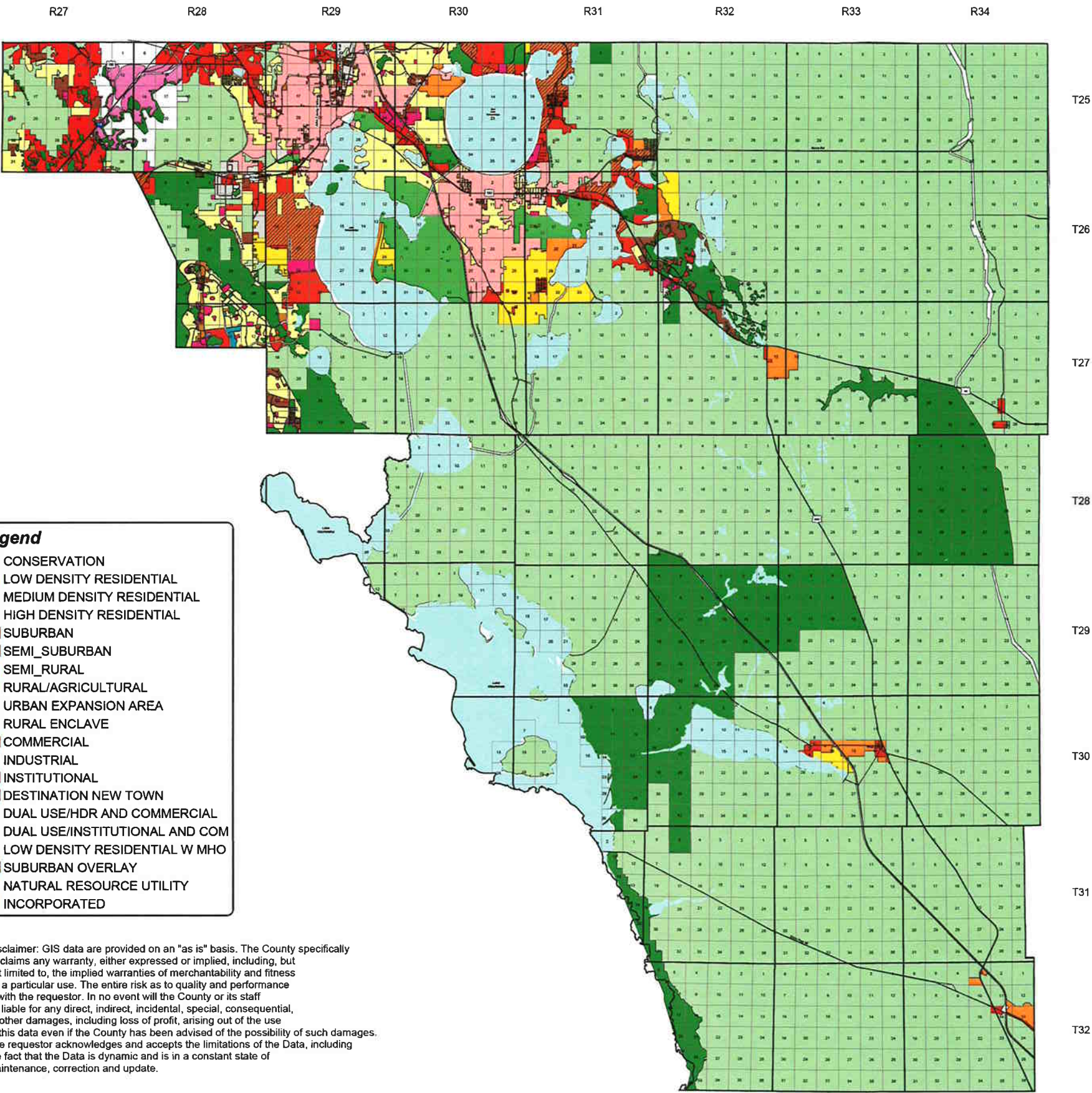


City of Auburndale Future Land Use Map

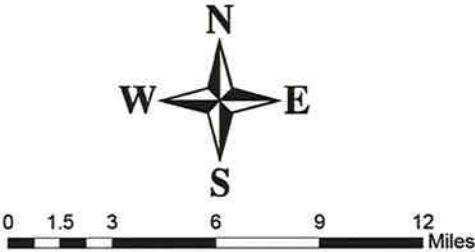
January 2006

- | | | |
|----------------------------|------------------------------|---------------------------|
| Utility Service Area | Neighborhood Activity Center | Lakes |
| Low Density Residential | Community Activity Center | Railroad Right of Way |
| Medium Density Residential | Industrial | Tourism Commercial Center |
| High Density Residential | Business Park | Inside City, No FLU |
| Institutional | City, Public Uses, Parks | |
| Commercial Corridor | Schools, Public and Private | |
| Commercial Enclave | Conservation/Wetlands | |
| Convenience Center | Agriculture | |

Osceola County Future Land Use



This Map Produced By:
Osceola County
Planning Department
GIS Section
18APR2007





Orange County, Florida 2000 - 2020 Comprehensive Policy Plan Future Land Use Map



Legend			
Rural	Traditional Neighborhood	Office	Conservation
Rural 1/1	Neighborhood Activity Corridor	Commercial	Rural Settlement
Rural 1/2	Neighborhood Center	Industrial	Urban Service Area
Rural 1/5	Neighborhood Residential	Institutional	Horizon West
Low Density Residential	Activity Center Residential	Parks/Recreation	TowncenterSAP
Low-Medium Density	Activity Center Mixed Use	Preservation	Bridgewater Village
Medium Density Residential	Community Village Center	Planned Development *	Lakeside Village
High Density Residential	Village	Water Body	Village H
			Econ Protection Area
			Growth Center
			PROPOSED Innovation Way Boundary**
			Wekiva Protection Area
			TosohatcheeStatePark
			Municipalities/Jurisdictions ***
			County Boundary
			Major Streets
			Township/Range

DISCLAIMER:

Data is provided "as is" without warranty of any representation of accuracy, timeliness, or completeness. The burden of determining accuracy, completeness, timeliness, merchantability and fitness for use rests solely on the requester. The County makes no warranties, express or implied, as to the use of the Data. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction, and update.

Not to be resold. Data, maps or digital files may not be resold without prior consent of the Orange County Board of County Commissioners.

Prepared by Orange County Growth Management Department, GIS Section
Initially Adopted: December 5, 2000
Last Amended: July 11, 2006
Effective: September 6, 2006

The Official version of the Orange County Future Land Use Map, as adopted on December 5, 2000, can be viewed at the Orange County Planning Division office at 201 South Rosalind Avenue, 2nd Floor, Orlando, Florida. This map only depicts properties within unincorporated Orange County as of the latest amendment date, but may include properties that have been annexed by various municipalities.

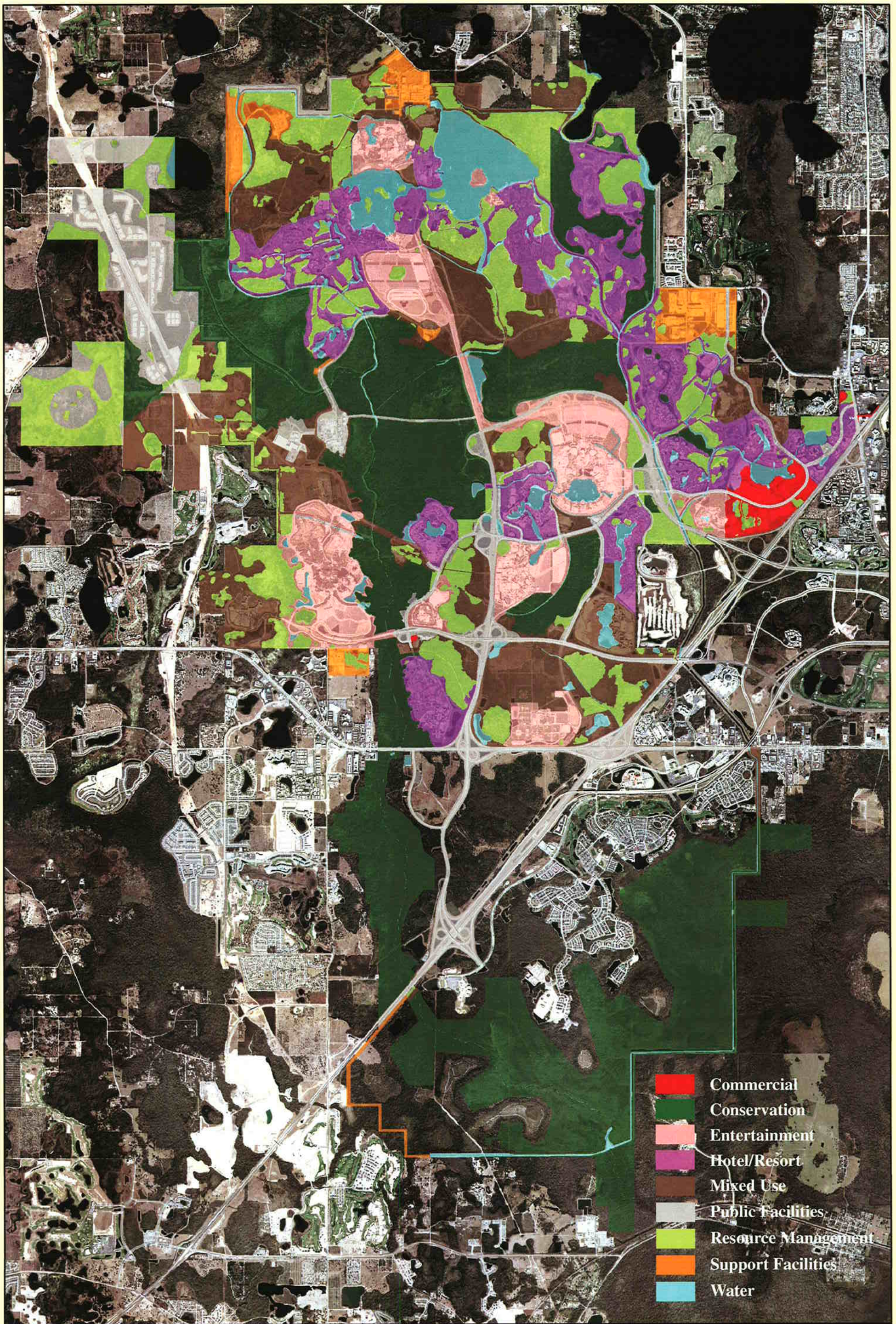
* For properties zoned Planned Development (PD), the approved P-D Land Use Plan (filed in the Orange County Zoning Division) should be consulted to determine the actual uses, densities, setbacks, and location of development.

** Adopted on June 11, 2006, but not effective.

*** City limits boundaries are subject to change and do not necessarily reflect annexations which have occurred.

These maps are for display purposes only. Consult the official Orange County Future Land Use Map Series on file in the Orange County Planning Division for precise Future Land Use configuration.





Reedy Creek Improvement District
Planning and Engineering
Aerial Photo Date: 11 February 2005
Exhibit Date: 8 June 2006

Future Land Use

0 4,500 9,000
Scale in Feet

Data and aerial photos are produced
for general planning purposes only.



APPENDIX E

Archaeological and Historic Resources



FLORIDA DEPARTMENT OF STATE

Kurt S. Browning

Secretary of State

DIVISION OF HISTORICAL RESOURCES

Ms. Kathleen S. Hoffman, Ph.D.
Janus Research – Tampa Bay
1300 North Westshore Boulevard, Suite 100
Tampa, Florida 33607

November 6, 2007

Re: DHR Project No.: 2007-7981
Date Received: October 3, 2007
Lake Agnes-Gifford Transmission Line
Desktop Analysis
Polk, Osceola and Orange Counties

Dear Dr. Hoffman:

Our office reviewed the referenced desktop analysis in accordance with Chapter 403, *Florida Statutes*, for possible impact to historic properties listed, or eligible for listing, in the National Register of Historic Places, or otherwise of historical, architectural or archaeological value. The State Historic Preservation Officer is to advise and assist state and federal agencies when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

Our review of the analysis provided indicates that significant cultural resources are recorded within the study area. In addition, some areas have never been subjected to systematic professional archaeological or historical investigations, or have not been within the last 10-15 years. Survey standards have changed, and properties not previously identified may now be 50 or more years of age. Many archaeological sites are recorded within or in nearby areas with similar environmental conditions as those found in the project area. For these reasons, it is the opinion of this office that a Phase I cultural resources survey should be conducted for the transmission line corridor.

The purpose of this survey will be to locate and assess all cultural resources that may be present. The resultant survey shall conform to the specification set forth in Chapter 1A-46, *Florida Administrative Code*, and be forwarded to this agency in order to complete the review process for this proposed transmission line project and its impacts. The results of the Phase I analysis should identify the potential for significant cultural resources that may be directly or indirectly impacted by this project. In addition, if significant resources are located, the data described in the report

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

☐ Director's Office
(850) 245-6300 • FAX: 245-6436

☐ Archaeological Research
(850) 245-6444 • FAX: 245-6436

☒ Historic Preservation
(850) 245-6333 • FAX: 245-6437

☐ Historical Museums
(850) 245-6400 • FAX: 245-6433

☐ Southeast Regional Office
(561) 416-2115 • FAX: 416-2149

☐ Northeast Regional Office
(904) 825-5045 • FAX: 825-5044

☐ Central Florida Regional Office
(813) 272-3843 • FAX: 272-2340

Dr. Kathleen S. Hoffman
November 6, 2007
Page 2

and the consultant's conclusions will assist this office in determining what measures that should be taken to avoid, minimize adverse impacts to archaeological sites and historical properties listed, or eligible for listing in the NRHP, or otherwise of significance.

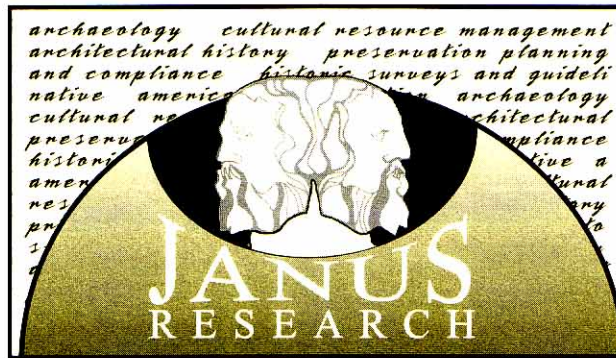
If you have any questions concerning our comments, please contact Laura Kammerer, Deputy State Historic Preservation Officer for Review and Compliance, by telephone at 850-245-6333, or by electronic mail at lkammerer at dos.state.fl.us. Thank you for your interest in protecting Florida's historic properties.

Sincerely,

A handwritten signature in black ink, reading "Frederick P. Gaske". The signature is written in a cursive style with a long horizontal line extending to the right.

Frederick P. Gaske, Director, and
State Historic Preservation Officer

1300 North Westshore Blvd., Suite 100
Tampa, FL 33607
Tel: 813.636.8200
Fax: 813.636.8212
janus@janus-research.com



JANUS SOUTH
1691 Michigan Avenue, Suite 225
Miami Beach, FL 33139
Tel: 305.535.0013
Fax: 305.535.0063
janus_south@janus-research.com

www.janus-research.com

Memo

To: Frederick Gaske, SHPO and Director, Florida Division of Historical Resources
From: Kathleen S. Hoffman, Janus Research
Date: 10/01/2007
Re: Lake Agnes – Gifford Transmission Line Corridor

Desktop Analysis of Lake Agnes - Gifford Project Corridor

Progress Energy and Tampa Electric are planning to build a 230-kilovolt (kV) transmission line to meet increased energy demand. The line will be approximately 35 miles long beginning at Tampa Electric's Lake Agnes substation in Polk County and ending at Progress Energy's proposed Gifford substation in southwest Orange County. Janus Research conducted a desktop analysis for the Lake Agnes - Gifford preferred route (project corridor) in September 2007. The purpose of this desktop analysis was to identify any cultural resources existing within the project corridor. Previously recorded archaeological sites and historic resources were identified. A search for *National Register of Historic Places (NRHP)* listed, eligible, or potentially-eligible resources was also conducted.

Project Area Location

The project area is located in portions of Orange, Osceola, and Polk Counties (Figure 1), and is situated in the following Townships, Ranges, and Sections on the Windermere (1980), Intercession City (1983), Davenport (1985), Gum lake (1980), and Polk City (1987) USGS Quadrangle maps:

Township 24 South, Range 27 East, Sections 16, 21, 28
Township 25 South, Range 27 East, Sections 4, 9, 15, 16, 21, 22, 26, 27, 33-35
Township 26 South, Range 25 East, Section 36
Township 26 South, Range 26 East, Sections 13, 22-24, 26-29, 31-33
Township 26 South, Range 27 East, Sections 2-4, 9, 10, 15-22
Township 27 South, Range 25 East, Sections 1-3, 8-12
Township 27 South, Range 26 East, Sections 6, 7

Previously Conducted Surveys within the Project Corridor

Eighty-five cultural resource assessment surveys have been previously performed within the project corridor. Those portions of the project corridor that have undergone a cultural resource assessment survey are displayed on USGS Quadrangle maps in Attachment A.

Previously Recorded Cultural Resources within the Project Corridor

A search of the Florida Master Site File (FMSF) was conducted to determine potential cultural resource issues regarding the Lake Agnes - Gifford project corridor. This information is based on the most current FMSF data, which is not a comprehensive inventory of cultural resources and their significance, and it may not reflect existing conditions.

Preliminary background research using the FMSF revealed that there are 181 previously recorded archaeological sites within the project corridor. Of these 181 sites, five were recorded as potentially-eligible for *NRHP* listing and three contained human remains. These 181 archaeological resources are presented in Table 1, and their locations are shown on USGS Quadrangle maps in Attachment B.

Preliminary background research using the FMSF indicated that there are 18 previously recorded historic structures within the project corridor. All of the 18 historic structures are ineligible for *NRHP* listing. These 18 historic structures are presented in Table 2, and their locations are seen on USGS Quadrangle maps in Attachment C. In addition, one historic cemetery (OS1925) and one historic bridge (OS134) are located within the project corridor. Both, however, have been deemed ineligible for *NRHP* listing. The location of the historic cemetery and historic bridge is displayed on USGS Quadrangle maps in Attachment C.

Table 1. Archaeological Sites Located within the Project Corridor

FMSF	Site Name	Description	NRHP Evaluation*
OR3218	Whittenhorse Creek 1	Prehistoric Campsite	Insufficient Information
OR3219	Whittenhorse Creek 2	Other	Ineligible
OR3220	Whittenhorse Creek 3	Artifact Scatter	Ineligible
OR3221	Whittenhorse Creek 4	Artifact Scatter	Ineligible
OR3222	Whittenhorse Creek 5	Prehistoric Campsite	Insufficient Information
OR3223	Whittenhorse Creek 6	Prehistoric Campsite	Ineligible
OR3527	Drainfield Scatter	Artifact Scatter	Ineligible
OR3528	Boggy Creek Scatter	Prehistoric Procurement Site	Ineligible
OR3529	Boggy Flake	Prehistoric Procurement Site	Ineligible
OR4300	Hognose Snake	Land-terrestrial	Ineligible
OR4301	Bear Bay Swamp	Land-terrestrial	Ineligible
OR6056	Boggy Creek Pond	Prehistoric Campsite	Ineligible
OR6057	Two Hills 1	Prehistoric Campsite	Ineligible
OR6058	Two Hills 2	Prehistoric Campsite	Ineligible
OR8142	Project H-11 #1	Land-terrestrial	Ineligible
OR8143	Project H-11 #2	Land-terrestrial	Ineligible
OR8144	Project H-11 #3	Land-terrestrial	Ineligible
OR8340	Boggy Cove	Land-terrestrial	Ineligible
OR8406	Overlook Camp	Prehistoric Campsite	Ineligible
OR8408	Hartzog Road	Prehistoric Campsite	Ineligible
OS100	Gasp	Prehistoric Lithic Scatter	Not Evaluated
OS103	Hexagon Center 1	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS104	Hexagon Center 2	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS105	Hexagon Center 3	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS106	Hexagon Center 4	Land-terrestrial	Ineligible
OS107	Hexagon Center 5	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS108	Hexagon Center 6	Land-terrestrial	Ineligible
OS109	Hexagon Center 14	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS110	Hexagon Center 8	Artifact scatter-low density (< 2 per sq meter)	Not Evaluated
OS111	Hexagon Center 9	Land-terrestrial	Ineligible
OS112	Hexagon Center 10	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS113	Hexagon Center 11	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS114	Hexagon Center 12	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS115	Hexagon Center 13	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS133	Disney 5000 12	Prehistoric Lithic Scatter/Quarry	Ineligible

FMSF	Site Name	Description	NRHP Evaluation*
OS135	World Golf and Tennis I	Artifact Scatter	Ineligible
OS136	World Golf and Tennis II	Artifact Scatter	Ineligible
OS137	World Golf and Tennis III	Artifact Scatter	Ineligible
OS138	World Golf and Tennis IV	Prehistoric Lithic Scatter/Quarry	Ineligible
OS139	World Golf and Tennis V	Prehistoric Lithic Scatter/Quarry	Ineligible
OS142	Stolen Battery	Artifact Scatter	Not Evaluated
OS1777	North Point	Land-terrestrial	Ineligible
OS1778	Boggy Swamp	Land-terrestrial	Ineligible
OS1779	Bunker Hill	Prehistoric Campsite	Ineligible
OS1780	Wetland Site	Prehistoric Campsite	Ineligible
OS1781	Upland Site	Prehistoric Campsite	Ineligible
OS1783	Lake Wilson	Prehistoric Campsite	Ineligible
OS1785	Felix 1	Land-terrestrial	Ineligible
OS1786	Felix 2	Land-terrestrial	Ineligible
OS1792	Lone Paw Paw	Land-terrestrial	Ineligible
OS1831	MP 0.5	Land-terrestrial	Ineligible
OS1840	JR178	Prehistoric Campsite	Ineligible
OS1845	JR184	Land-terrestrial	Ineligible
OS1856	Plow Site	Prehistoric Campsite	Ineligible
OS1857	Orange Site	Prehistoric Campsite	Ineligible
OS1858	Irrigation Site	Prehistoric Campsite	Ineligible
OS1867	JR220	Land-terrestrial	Ineligible
OS1868	Creek Ford	Historic Earthworks	Potentially Eligible
OS1901	Irrigation Site North	Prehistoric Campsite	Ineligible
OS1928	Windosor Hill Site	Prehistoric Lithic Scatter	Not Evaluated
OS1936	Fowler 1	Prehistoric Campsite	Ineligible
OS1937	Fowler 2	Prehistoric Procurement Site	Ineligible
OS2362	Kitchen Sink	Land-terrestrial	Ineligible
OS44	Fort Davenport	Historic Fort	Potentially Eligible
OS47	Disney World 3	Land-terrestrial	Ineligible
OS48	Disney World 4	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS49	Davenport Swamp	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS586	Heidrich Barn	Artifact Scatter	Ineligible
OS587	Burnt Grove	Artifact Scatter	Ineligible
OS588	Border Slough	Artifact Scatter	Ineligible
OS589	Swamp's Edge	Artifact Scatter	Ineligible
OS590	County Road Ridge	Artifact Scatter	Ineligible
OS591	Reedy Slough	Prehistoric Campsite	Ineligible
OS592	Piney Island	Artifact Scatter	Ineligible
OS593	Davenport Creek	Artifact Scatter	Ineligible
OS594	Creek Crossing	Prehistoric Campsite	Ineligible
OS595	North Point	Isolated Find	Ineligible
OS596	South Point	Isolated Find	Ineligible
OS597	Outparcel 2	Artifact Scatter	Ineligible
OS611	Cane Island 7	Prehistoric Campsite	Ineligible

FMSF	Site Name	Description	NRHP Evaluation*
OS612	Orange Sink	Artifact Scatter	Not Evaluated
OS613	Davenport Swamp	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS79	Tri-Pond Point	Prehistoric Lithic Scatter/Quarry	Not Evaluated
OS93	Osceola Point 1	Prehistoric Lithic Scatter	Not Evaluated
OS94	Osceola Point 2	Artifact Scatter	Ineligible
OS95	Osceola Point 3	Prehistoric Lithic Scatter	Not Evaluated
OS96	Osceola Point 4	Prehistoric Lithic Scatter	Not Evaluated
OS97	Osceola Point 5	Prehistoric Lithic Scatter	Not Evaluated
OS98	Osceola Point 6	Prehistoric Lithic Scatter	Not Evaluated
PO1035	Green Valley	Prehistoric Campsite	Not Evaluated
PO111	OLIVE	Land-terrestrial	Ineligible
PO112	Areas A & B	Prehistoric Campsite	Ineligible
PO2254	Stae Road 559 Interchange	Artifact Scatter	Ineligible
PO2255	Little Lake Agnes	Artifact Scatter	Ineligible
PO2256	Pretty Potsherd	Land-terrestrial	Ineligible
PO2257	Duck Pond	Prehistoric Lithic Scatter/Quarry	Ineligible
PO2714	I 4 Rest Area A	Prehistoric Lithic Scatter/Quarry	Not Evaluated
PO2715	I 4 Rest Area B	Isolated Find	Not Evaluated
PO3991	Bradley Babicz	Land-terrestrial	Insufficient Information
PO4038	Amebic Pond Site	Land-terrestrial	Ineligible
PO4039	Frozen Grove	Prehistoric Campsite	Ineligible
PO4040	Wet Site	Land-terrestrial	Not Evaluated
PO4041	Scrub Oak	Land-terrestrial	Not Evaluated
PO4042	Orange Knoll	Prehistoric Campsite	Ineligible
PO4095	George's Sherd	Prehistoric Procurement Site	Ineligible
PO4109	Osprey	Land-terrestrial	Ineligible
PO4113	Doug Gilmore	Land-terrestrial	Ineligible
PO4115	Doe	Land-terrestrial	Ineligible
PO4116	Lunch	Land-terrestrial	Ineligible
PO4117	Lothagam	Land-terrestrial	Ineligible
PO4118	Wildflower	Land-terrestrial	Ineligible
PO4119	Lost and Found Sherd	Land-terrestrial	Ineligible
PO4137**	Birchfield Mound	Land-terrestrial	Not Evaluated
PO4606	Broken Tool Site	Land-terrestrial	Not Evaluated
PO4607	Goat Milk Fudge	Land-terrestrial	Ineligible
PO4608	Pond M	Land-terrestrial	Not Evaluated
PO4618	Price	Artifact Scatter	Not Evaluated
PO4696	I-4 Pond #1 (ALT-3)	Land-terrestrial	Ineligible
PO4700	Barfield	Land-terrestrial	Not Evaluated
PO5353	Chan	Land-terrestrial	Potentially Eligible
PO5354	Dixie Boy	Prehistoric Campsite	Insufficient Information

FMSF	Site Name	Description	NRHP Evaluation*
PO5355	Lake Agnes South	Prehistoric Campsite	Ineligible
PO5357	McNabb	Prehistoric Campsite	Ineligible
PO5379	Victoria	Prehistoric Campsite	Ineligible
PO5380**	Rebecca	Prehistoric Campsite	Potentially Eligible
PO5431	Chip's Chip	Prehistoric Campsite	Ineligible
PO5432	Grove Edge	Prehistoric Campsite	Ineligible
PO5433	Lonely Lake	Prehistoric Campsite	Ineligible
PO6106	Saddle Creek I	Prehistoric Campsite	Ineligible
PO6112	JR 58	Prehistoric Campsite	Potentially Eligible
PO6113	JR11	Land-terrestrial	Ineligible
PO6114	JR12	Land-terrestrial	Ineligible
PO6117	JR15	Land-terrestrial	Ineligible
PO6118	JR16	Land-terrestrial	Ineligible
PO6119	JR17	Land-terrestrial	Ineligible
PO6120	JR-18	Prehistoric Campsite	Ineligible
PO6121	JR19	Land-terrestrial	Ineligible
PO6122	JR20	Land-terrestrial	Ineligible
PO6123	JR21	Land-terrestrial	Ineligible
PO6125	JR23	Land-terrestrial	Ineligible
PO6127	JR25	Land-terrestrial	Ineligible
PO6130	JR29	Land-terrestrial	Ineligible
PO6144	JR43	Land-terrestrial	Ineligible
PO6145	JR44	Land-terrestrial	Ineligible
PO6151	JR-63	Prehistoric Campsite	Ineligible
PO6154	JR72	Land-terrestrial	Ineligible
PO6168	JR 64	Land-terrestrial	Ineligible
PO6169	JR10	Land-terrestrial	Ineligible
PO6176	Lovers Lane I	Land-terrestrial	Ineligible
PO6178	Lake Marie NW	Prehistoric Campsite	Ineligible
PO6179	Lake Marie SLOUGH	Prehistoric Campsite	Ineligible
PO6180**	Isthmus Island	Land-terrestrial	Ineligible
PO6181	MP 25	Land-terrestrial	Ineligible
PO6182	Herty Fragment 1	Land-terrestrial	Ineligible
PO6183	Herty Fragment 2	Land-terrestrial	Ineligible
PO6184	Holly Hills North	Farmstead	Ineligible
PO6202	Lovers Lane 3	Land-terrestrial	Not Evaluated
PO6203	Lovers Lane 2	Land-terrestrial	Ineligible
PO6207	JR 101	Prehistoric Campsite	Ineligible
PO6209	JR-104	Land-terrestrial	Ineligible
PO6210	JR-105	Land-terrestrial	Ineligible
PO6220	JR 125	Land-terrestrial	Not Evaluated
PO6447	JR171	Land-terrestrial	Ineligible
PO6448	JR172	Prehistoric Campsite	Ineligible
PO6450	JR182	Land-terrestrial	Ineligible
PO6461	JR 191	Prehistoric Campsite	Ineligible
PO6462	JR 192	Prehistoric Campsite	Ineligible
PO6468	JR198	Prehistoric Campsite	Ineligible
PO6469	JR197	Land-terrestrial	Ineligible
PO6471	JR200	Prehistoric Campsite	Ineligible
PO6503	JR 223	Prehistoric Campsite	Ineligible
PO6504	JR 225	Prehistoric Campsite	Ineligible

FMSF	Site Name	Description	NRHP Evaluation*
PO6812	Duck Pond	Prehistoric Campsite	Ineligible
PO6814	Mount Olive Church	Prehistoric Campsite	Ineligible
PO6815	Frasier Rise	Prehistoric Campsite	Ineligible
PO6830	Want to be Glue Site	Land-terrestrial	Ineligible
PO6831	Broken Pine Site (Temp W4)	Land-terrestrial	Ineligible
PO6847	Lagniappe Site	Land-terrestrial	Ineligible
PO6848	Blissful Meadows	Artifact Scatter	Ineligible
PO6856	Tramonto 1	Artifact Scatter	Ineligible
PO986	Circus World	Prehistoric Lithic Scatter/Quarry	Ineligible

* As recorded in the FMSF; may require re-evaluation

** Contains human remains

Table 2. Historic Structures Located within Project Corridor

FMSF #	Name	Description	NRHP Evaluation*
OR5887	House on Proposed Haul Road	Unspecified	Ineligible
OS1784	Lake Wilson Boy Scout Camp	Other	Ineligible
OS1926	1525 Kemp Road	Private residence	Ineligible
OS2361	Martin-Ashebrook House	Private residence	Ineligible
PO4062	Aubumdale Road	Private residence	Ineligible
PO5328	Barn at 1733 Marker Road	Barn	Ineligible
PO5329	1699 Marker Road	Private residence	Ineligible
PO5330	Crews Residence	Private residence	Ineligible
PO5331	1574 Marker Road	Private residence	Ineligible
PO5332	1591 Pearce Road	Private residence	Ineligible
PO5333	Chan House	Private residence	Ineligible
PO5334	860 County Road 559A	Private residence	Ineligible
PO5350	Sonnistine House	Private residence	Ineligible
PO5351	Sonnistine Barn	Barn	Ineligible
PO6204	House Off CR559A	Private residence	Ineligible
PO6459	JR 189	Private residence	Ineligible
PO6842	Wells Road	Private residence	Ineligible
PO6977	Standard Sand and Silica Co. House	Private residence	Ineligible

* As recorded in the FMSF; may require re-evaluation

Attachment A:

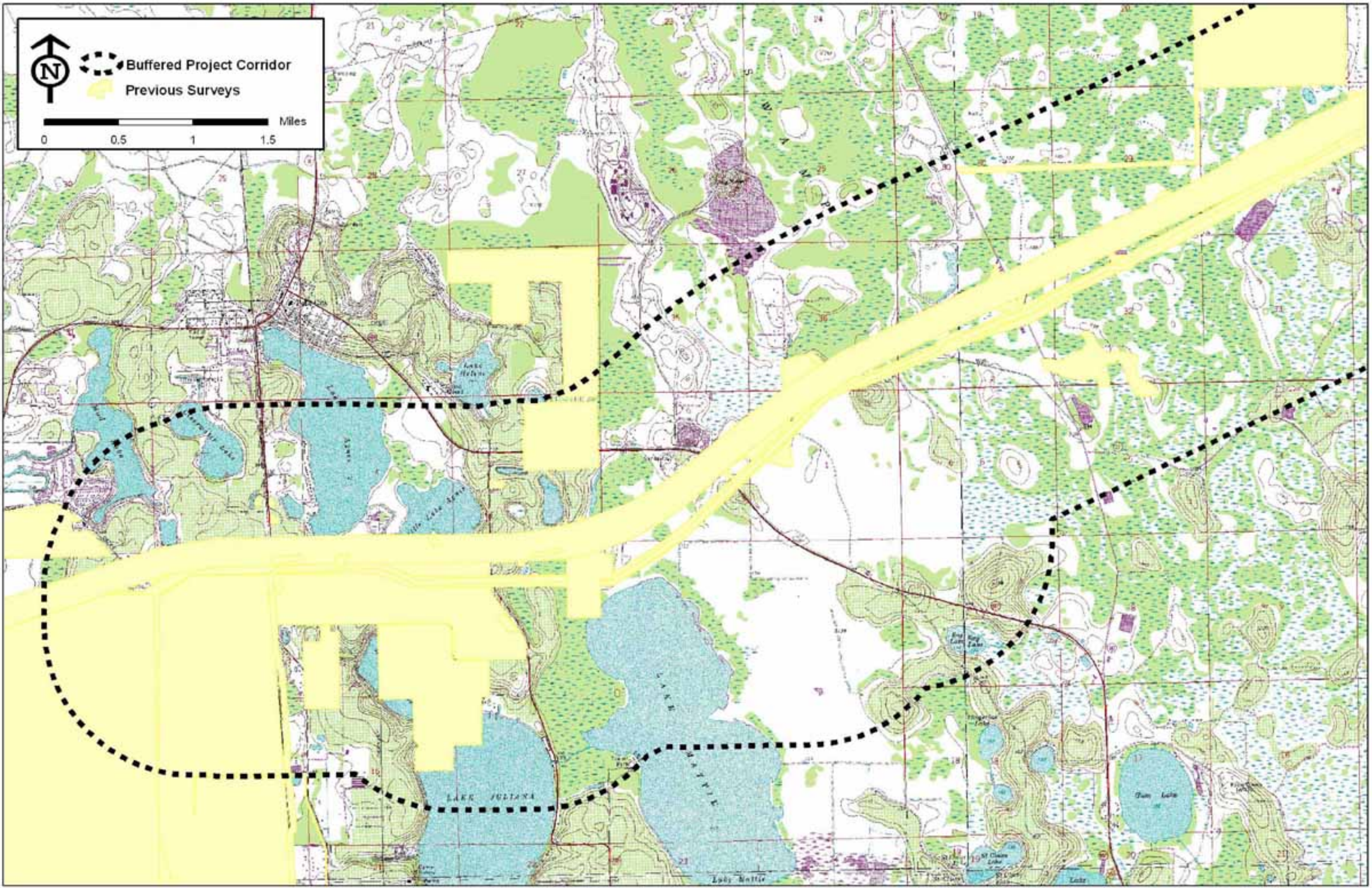
Previous Cultural Resource Assessment Surveys within the Buffered Project Corridor



Buffered Project Corridor
Previous Surveys



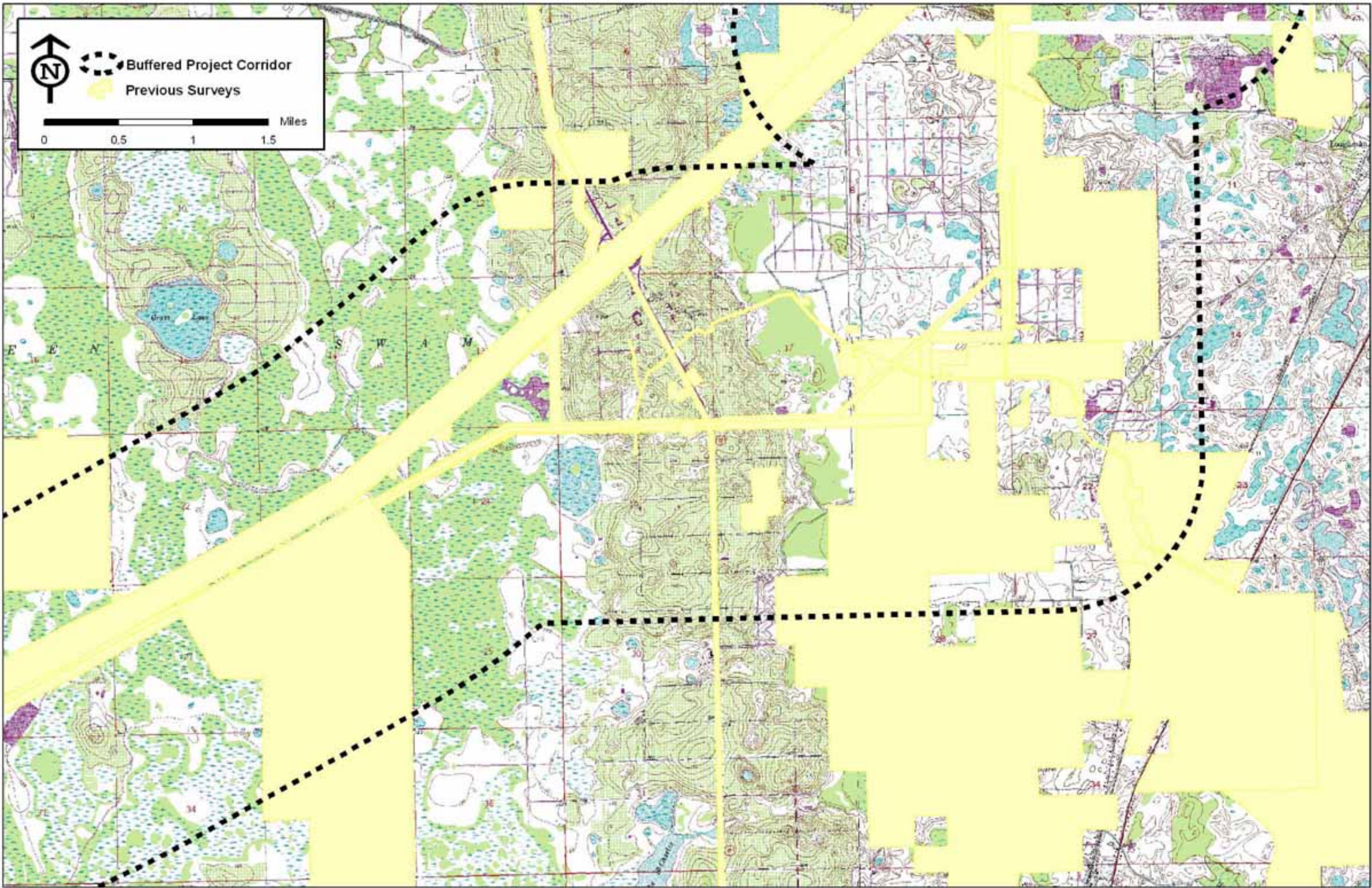
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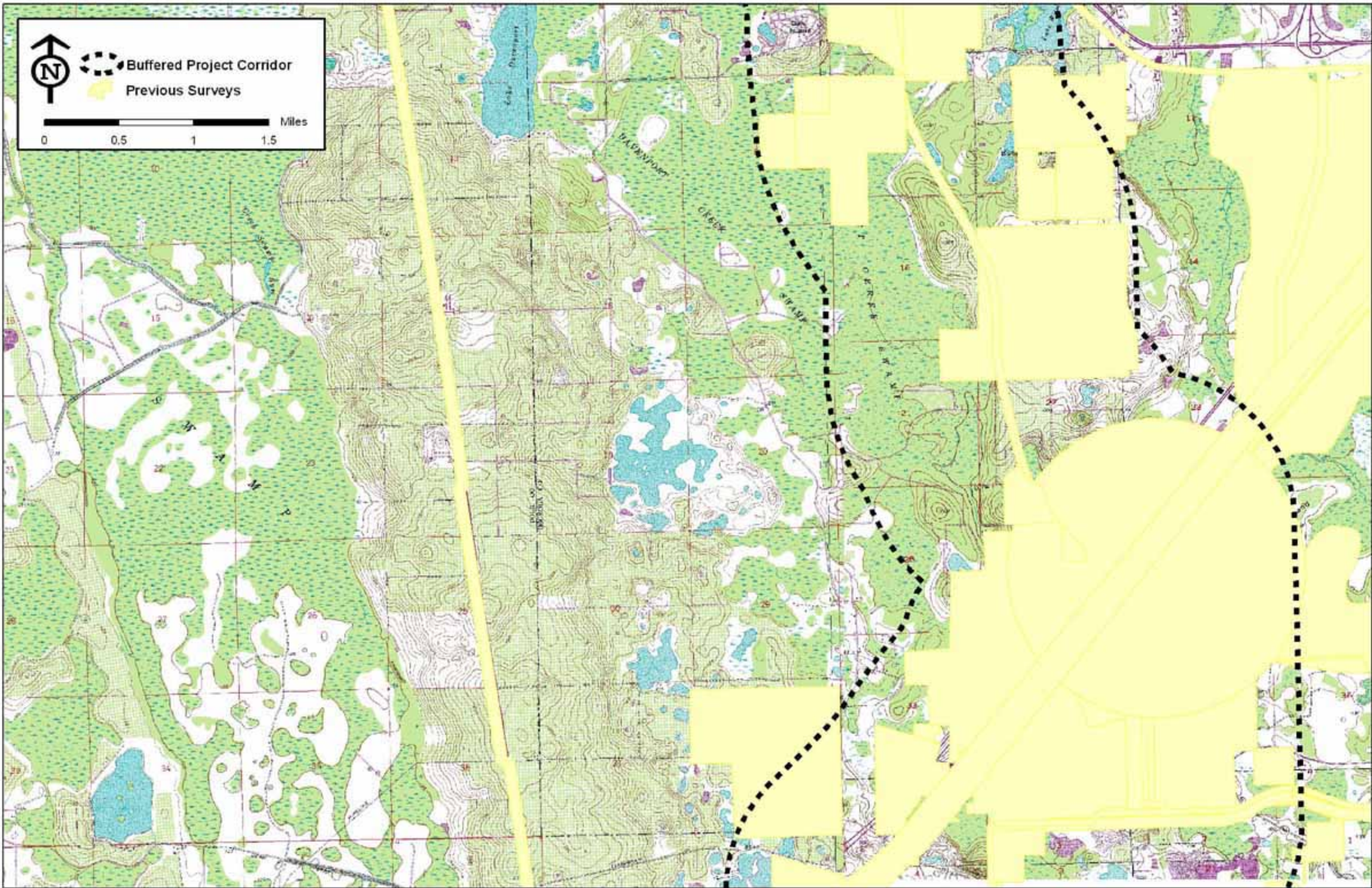


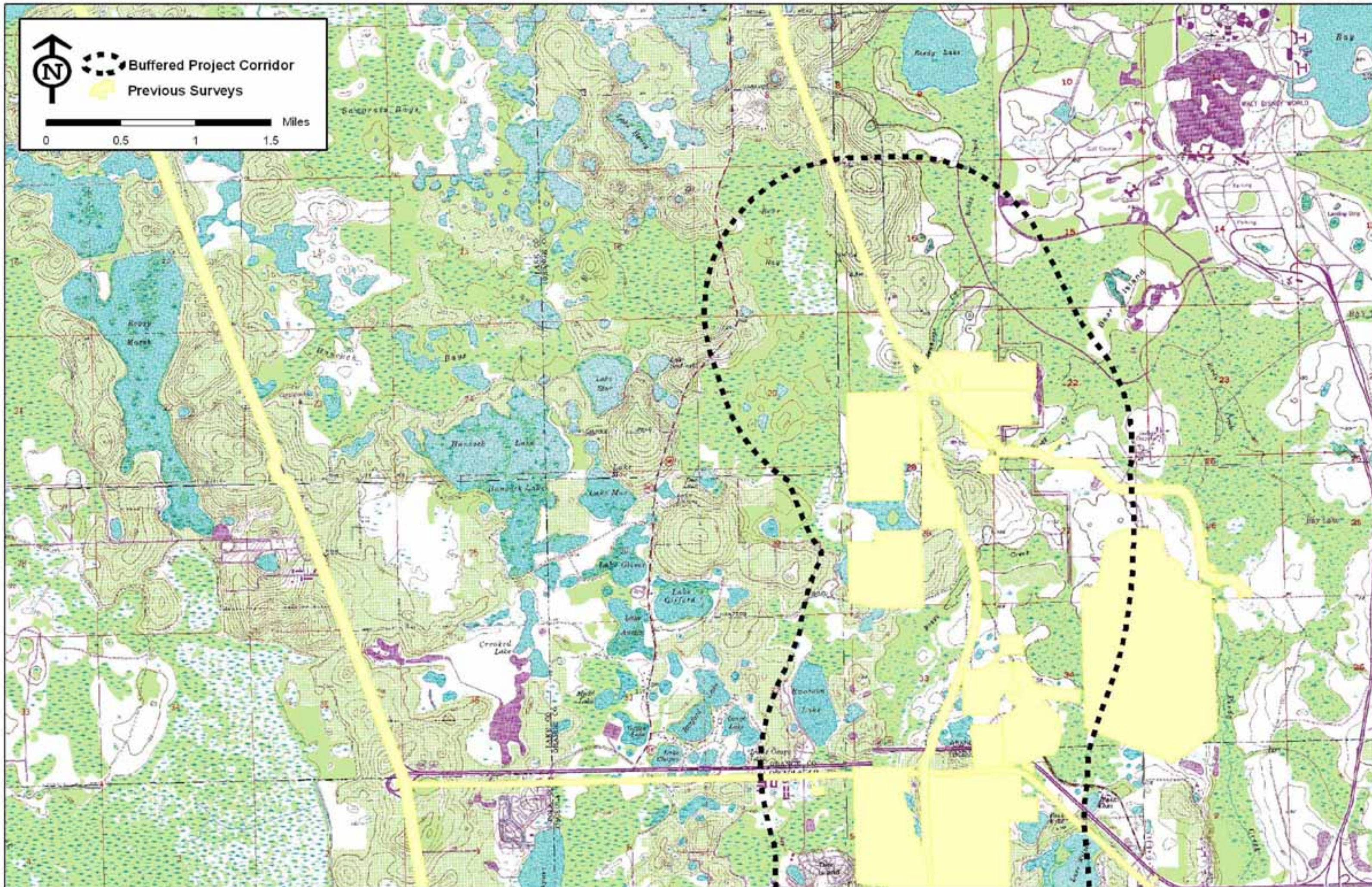
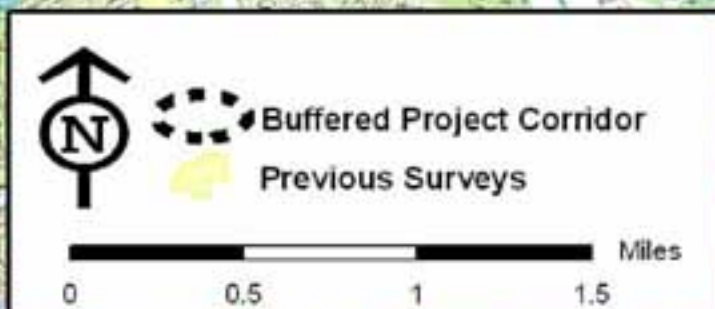


Buffered Project Corridor
Previous Surveys

0 0.5 1 1.5 Miles

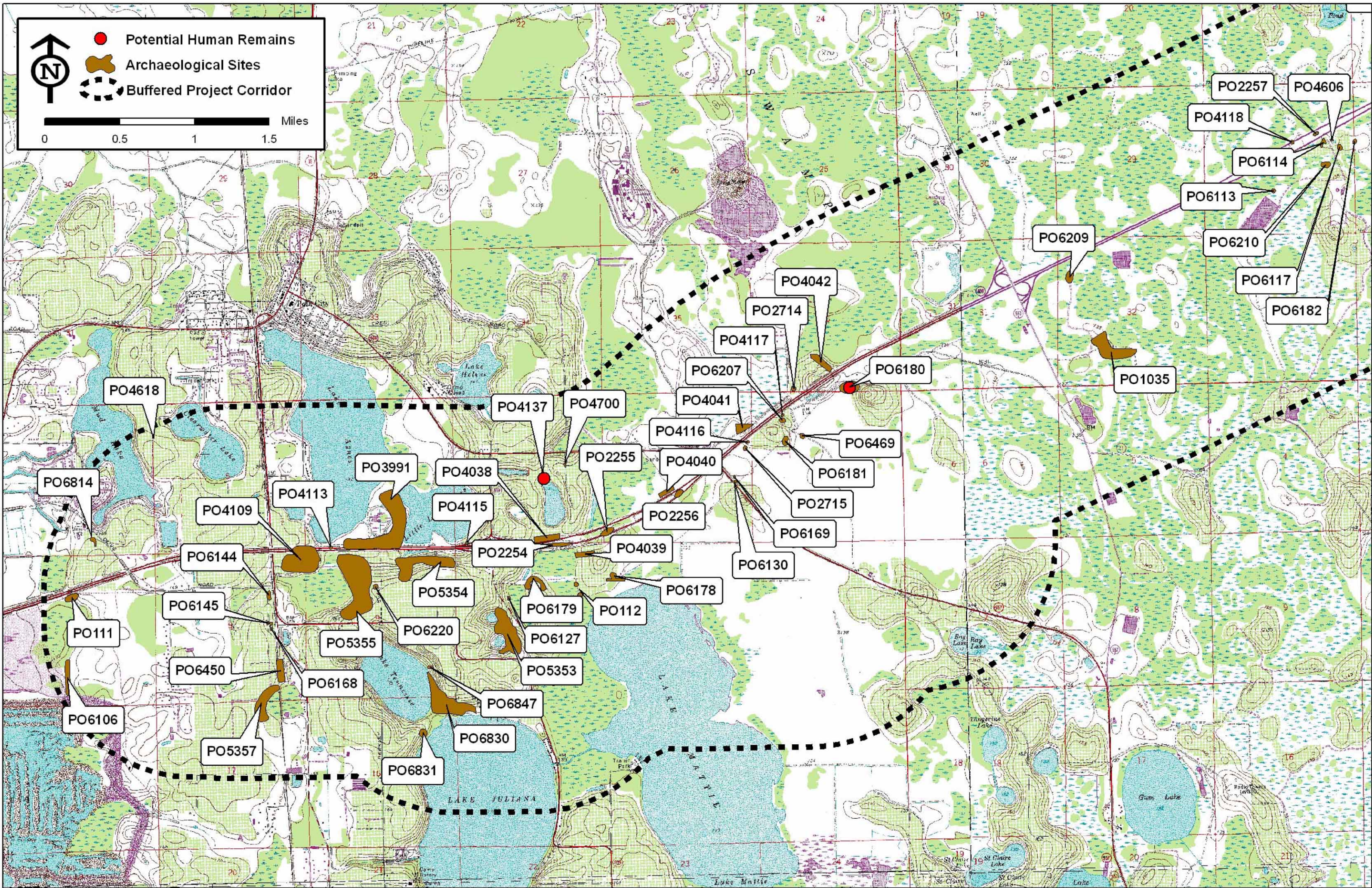






Attachment B:

Archaeological Sites Located within the Buffered Project Corridor



Potential Human Remains

Archaeological Sites

Buffered Project Corridor

0

0.5

1

1.5

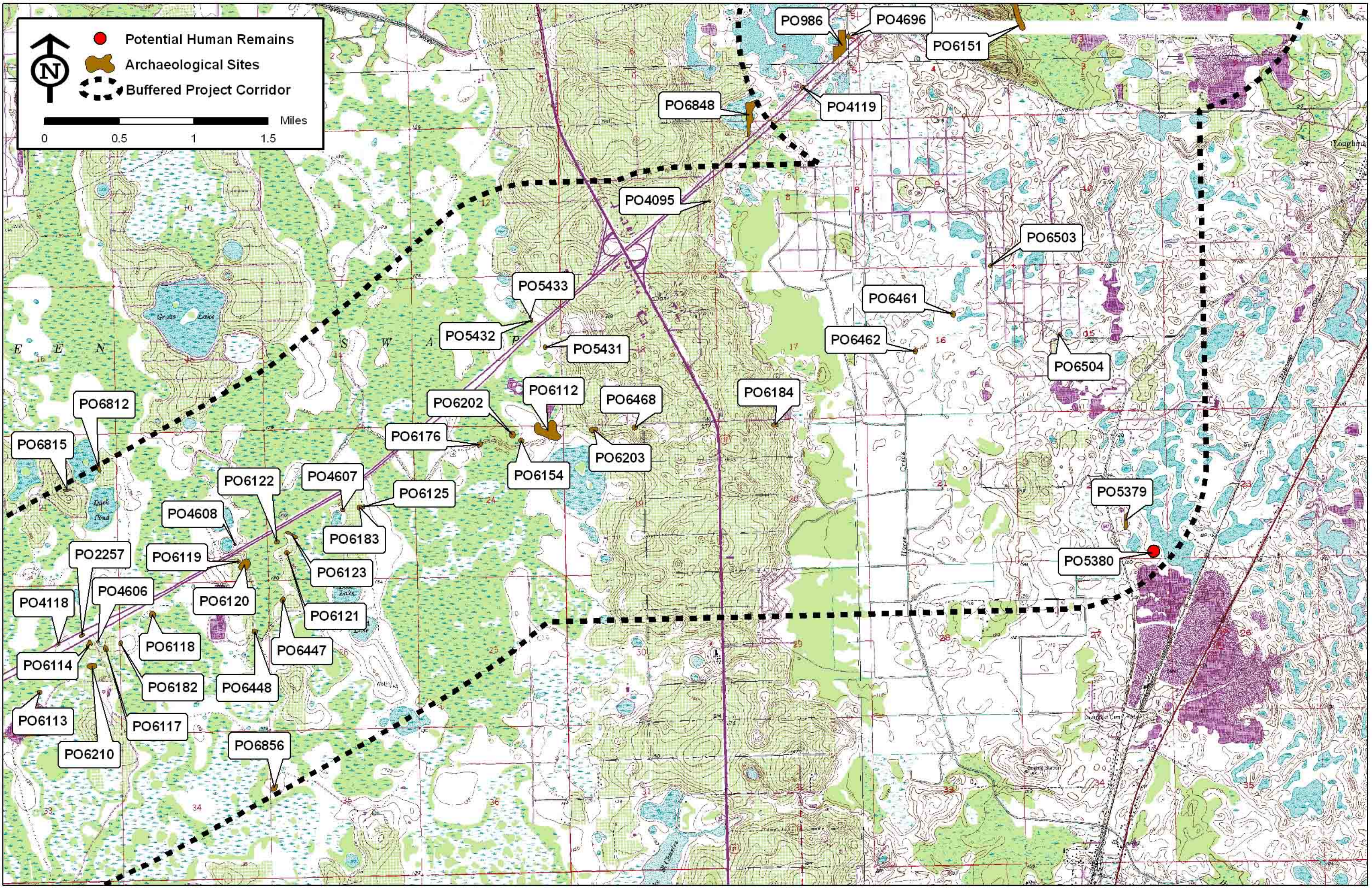
Miles

This topographic map displays a project area with a buffered project corridor, indicated by a dashed black line. The corridor runs generally from the northwest to the southeast, with a slight curve. Various archaeological sites are marked with brown dots and labeled with PO numbers. A red dot indicates potential human remains. The map includes a north arrow, a scale bar, and a legend.

Legend:

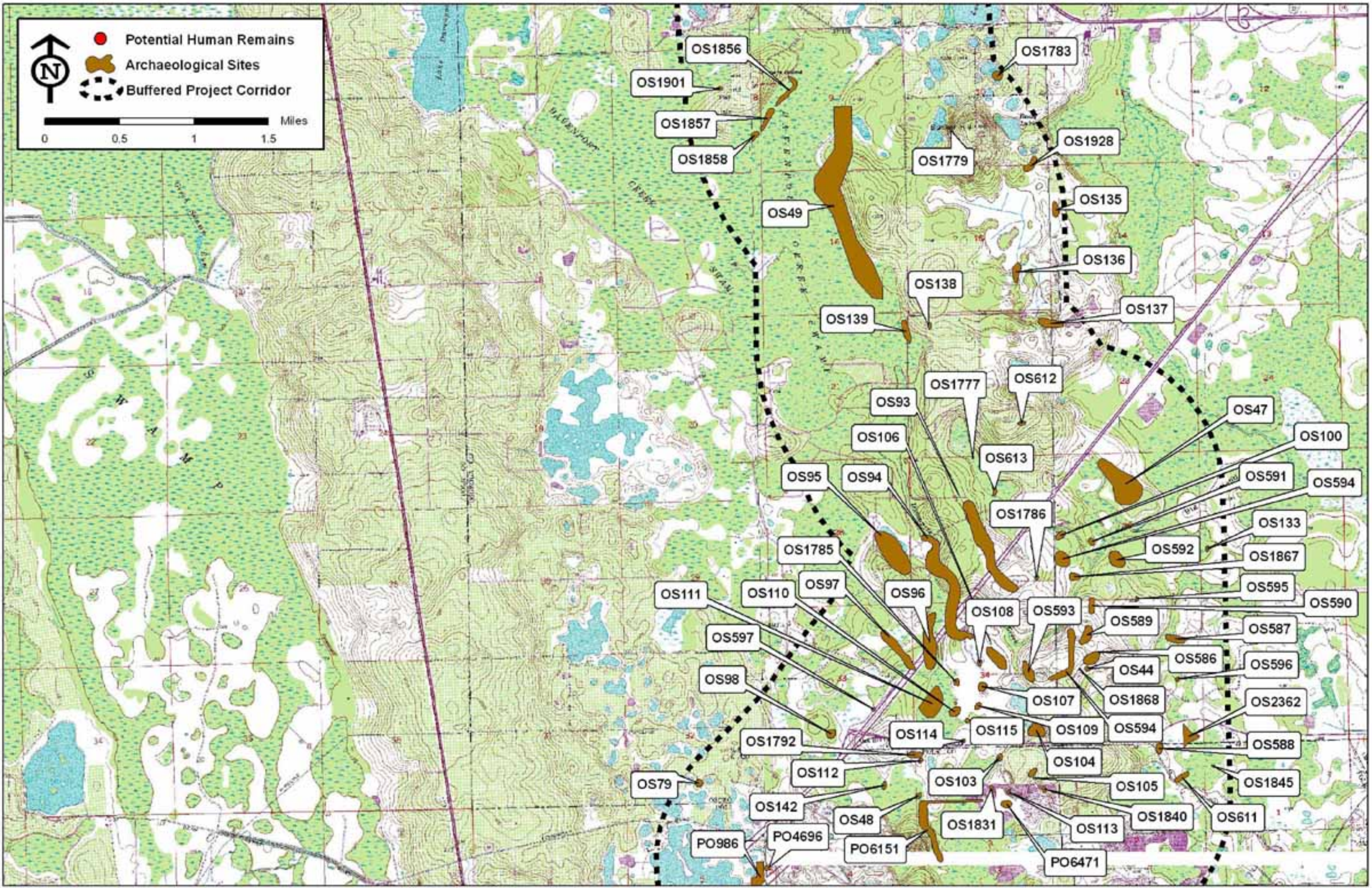
- Potential Human Remains (Red dot)
- Archaeological Sites (Brown dot)
- Buffered Project Corridor (Dashed black line)

Scale: 0 to 1.5 Miles



↑ N
● Potential Human Remains
■ Archaeological Sites
--- Buffered Project Corridor

0 0.5 1 1.5 Miles

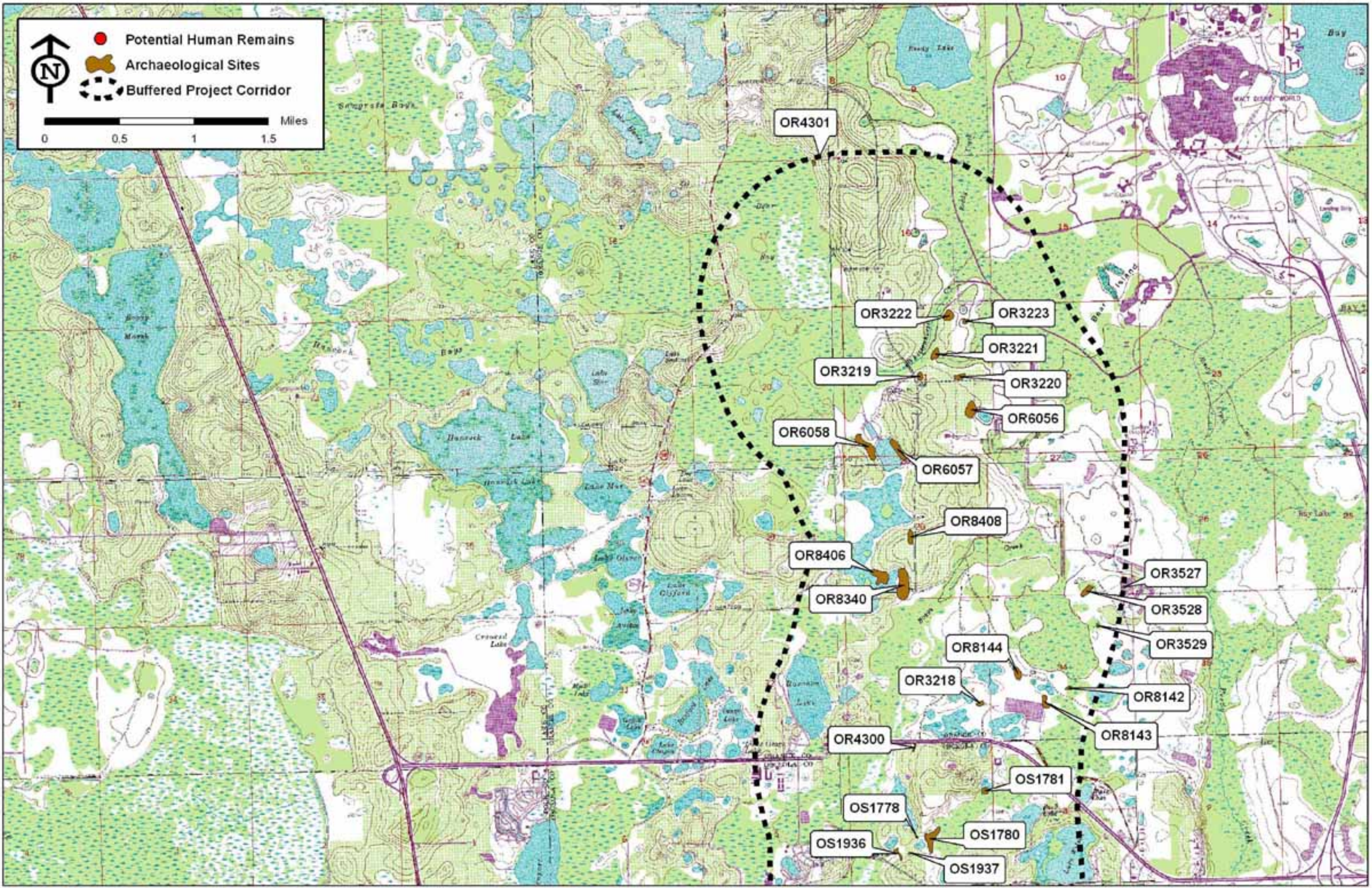




Potential Human Remains
Archaeological Sites
Buffered Project Corridor

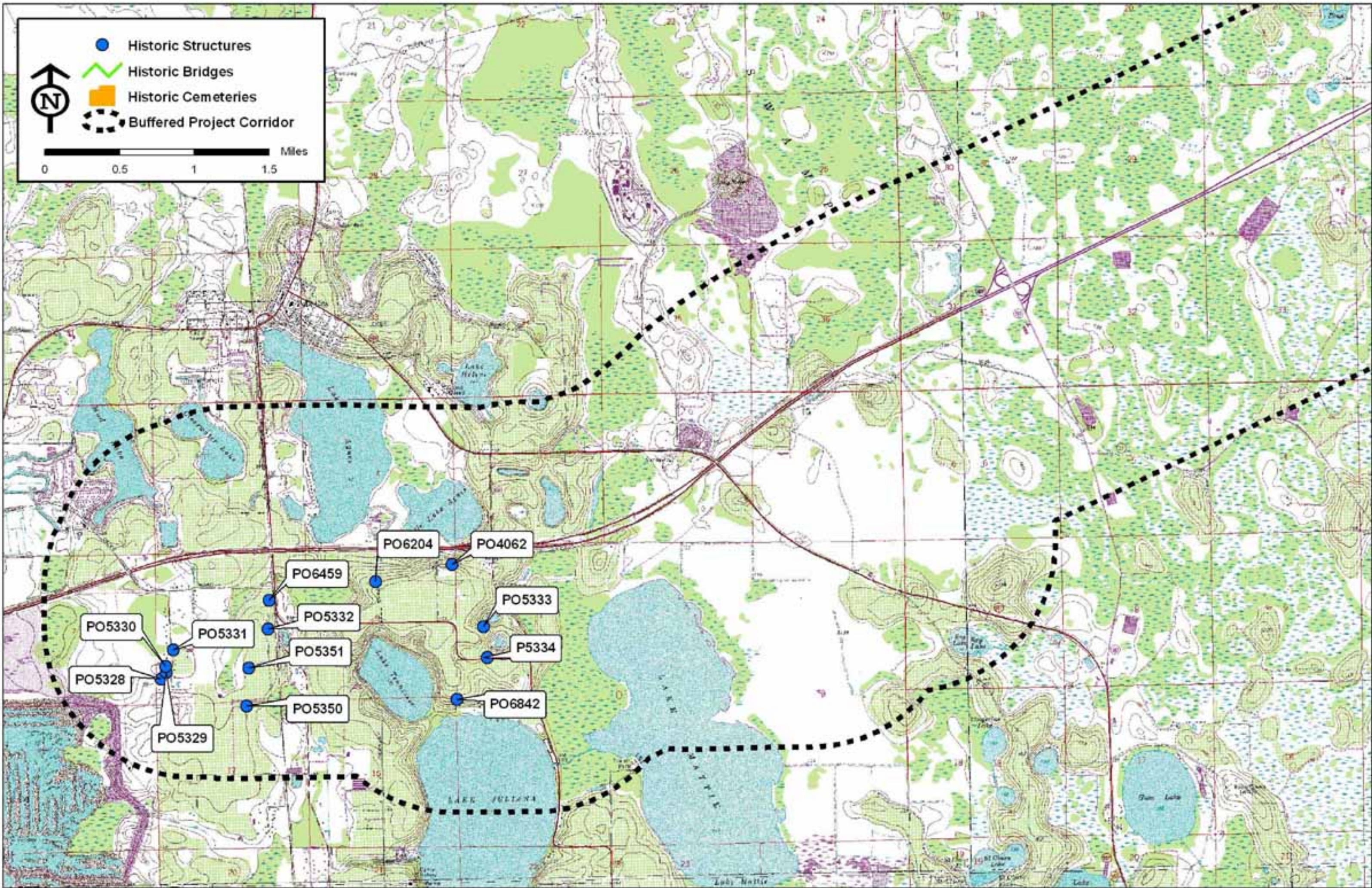
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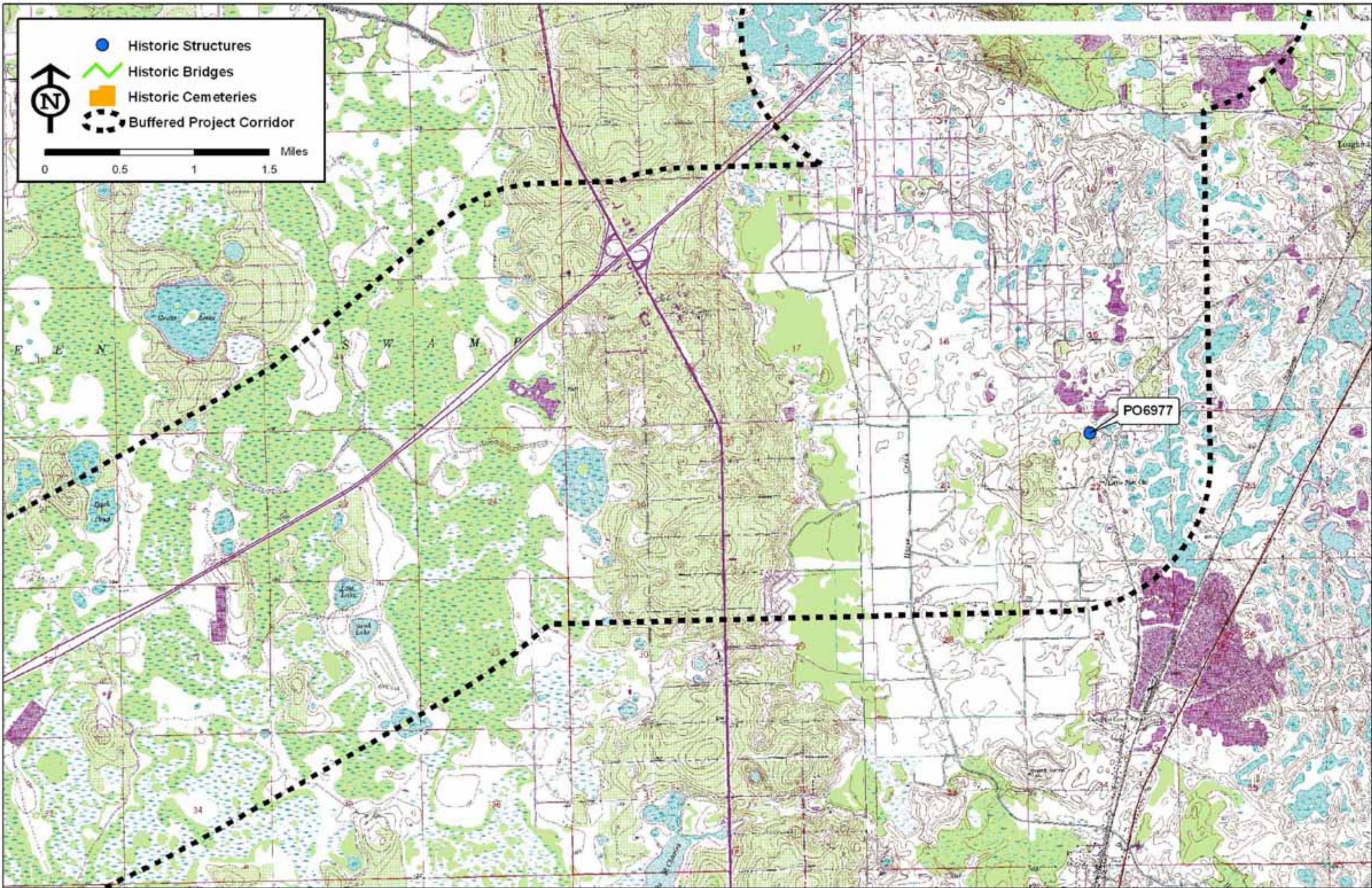
Miles



Attachment C:

**Historic Structures, Historic Cemetery, and Historic Bridge
Located within the Buffered Project Corridor**





Historic Structures

Historic Bridges

Historic Cemeteries

Buffered Project Corridor

N

0

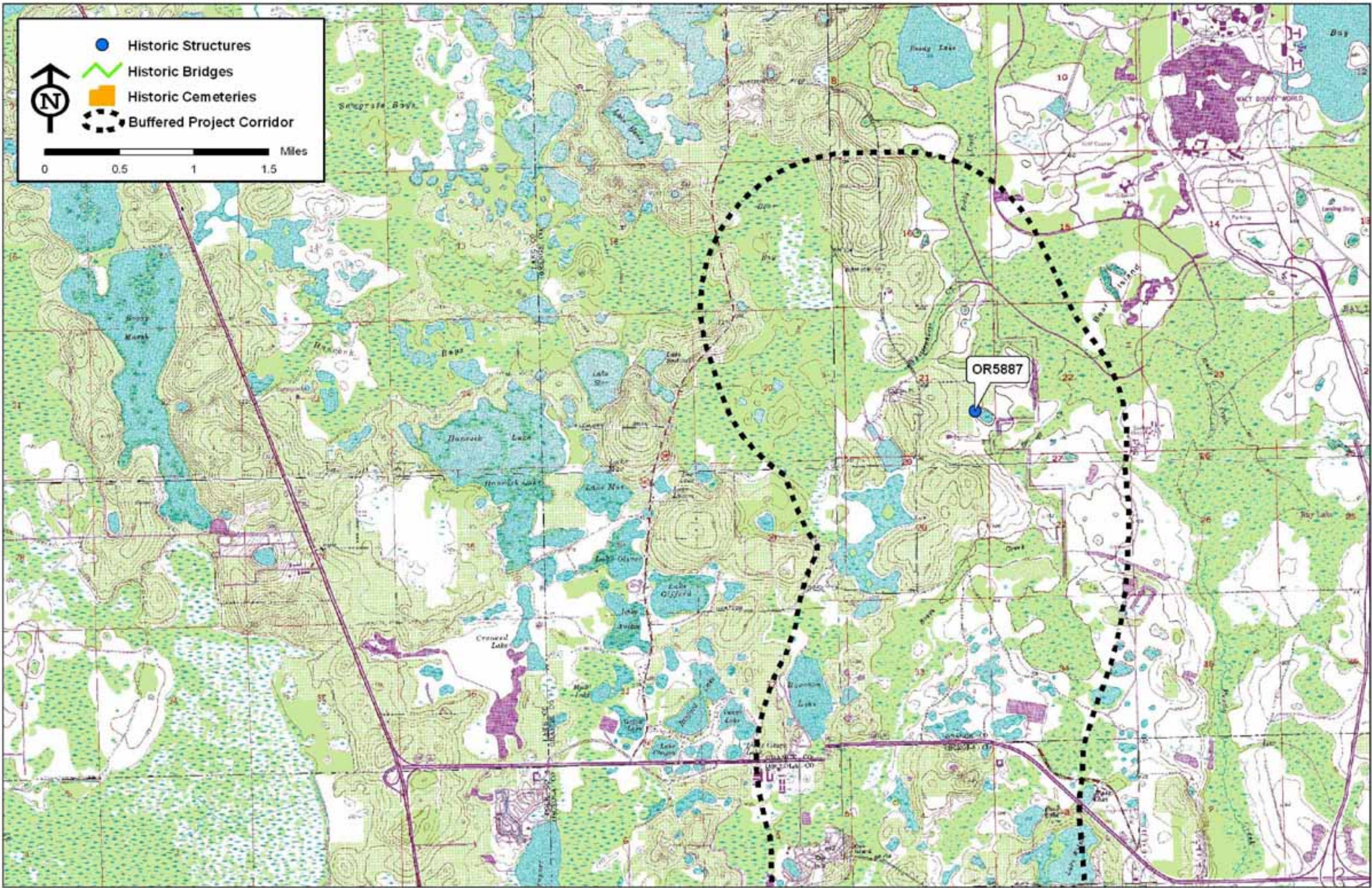
0.5

1

1.5

Miles

This topographic map displays a project area with a buffered project corridor indicated by a dashed black line. The corridor runs diagonally from the upper left towards the lower right. Several historic structures are marked with blue dots and labeled with callouts: OS1784 in the upper right, OS1926 in the lower center, OS1925 just below OS1926, OS2361 in the lower right, and OS134 further to the right. The map includes contour lines, water bodies (labeled 'Lake'), and various geographical features. A legend in the top left corner defines the symbols for historic structures, bridges, cemeteries, and the buffered project corridor, along with a north arrow and a scale bar from 0 to 1.5 miles.



APPENDIX F

Electromagnetic Field and Audible Noise Calculations

Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Report on Compliance with Electric and Magnetic Field (EMF) Standards

Agent/Facility Information

1.3-1 Typical Tangent Structure on New Easement

Name of Transmission Line/InterestPoint

Tampa Electric Company and Progress Energy Florida

Name and Address of Facility (Utility) Owner

Tampa Electric Company and Progress Energy Florida

Name and Address of Authorized Agent

September 13, 2007

Date of Proposed Construction

Randy Grass

14220 Ladue Rd

Chesterfield MO, 63017

Name and Address of Professional Engineer

Signature of Authorized Agent

Date

Signature and Seal of Professional Engineer

Date

Field Strength Information

Transmission Lines

Cross Section	Right-of-Way (ROW) Width (ft)	Maximum Calculated Fields and Distance From ROW Left					
		Electric				Magnetic	
		Within ROW		At Edge of ROW		At Edge of ROW	
		(kV/m)	(ft)	(kV/m)	(ft)	(mG)	(ft)
1.3-1	100	3.7	61	0.4	100	147.1	100

Substations

None

Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Details for CrossSection: **1.3-1- Typical Tangent Structure on New Easement**

1.3-1

Circuit Name

230 kV

Rated Voltage

NEW CIRCUIT

New/Existing

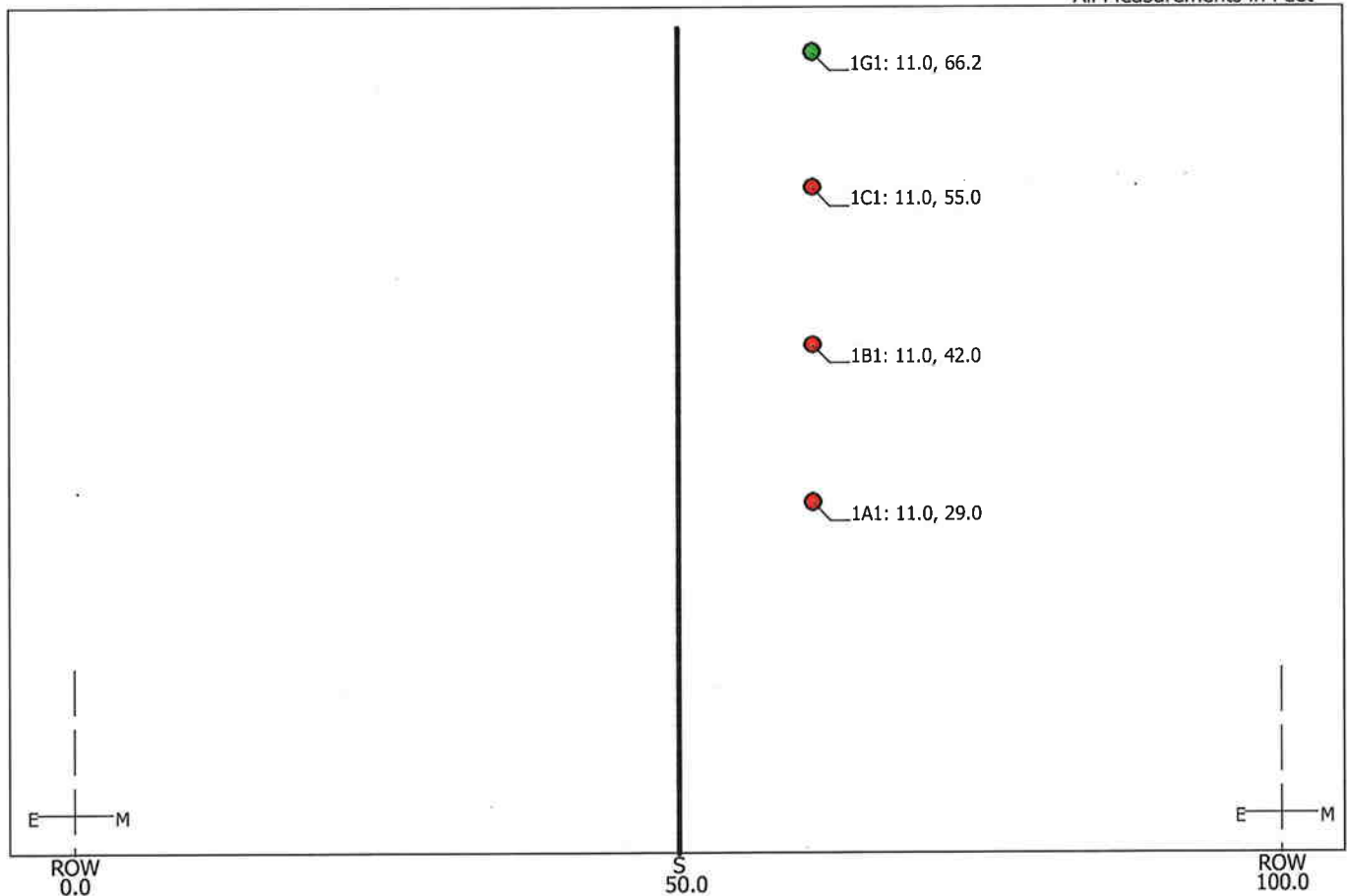
Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
1A1	61.00	11.00	29.00	2	1.08	18.00	241.0	0	3000
1B1	61.00	11.00	42.00	2	1.08	18.00	241.0	120	3000
1C1	61.00	11.00	55.00	2	1.08	18.00	241.0	240	3000
1G1	61.00	11.00	66.20	1	0.36	0.00	0.0	0	0

Points of Interest

None

Phase Configuration

All Measurements in Feet



Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Report on Compliance with Electric and Magnetic Field (EMF) Standards

Agent/Facility Information

1.3-2 Typical Tangent Structure Parallel to OUC

Name of Transmission Line/InterestPoint

Tampa Electric Company and Progress Energy Florida

Name and Address of Facility (Utility) Owner

Tampa Electric Company and Progress Energy Florida

Name and Address of Authorized Agent

September 13, 2007

Date of Proposed Construction

Randy Grass

14220 Ladue Rd

Chesterfield, MO 63017

Name and Address of Professional Engineer

Signature of Authorized Agent

Date

Signature and Seal of Professional Engineer

Date

Field Strength Information

Transmission Lines

Cross Section	Right-of-Way (ROW) Width (ft)	Maximum Calculated Fields and Distance From ROW Left					
		Electric				Magnetic	
		Within ROW		At Edge of ROW		At Edge of ROW	
		(kV/m)	(ft)	(kV/m)	(ft)	(mG)	(ft)
1.3-2	185	4.2	58	0.7	185	111.4	185

Substations

None

Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Details for CrossSection: **1.3-2- Typical Tangent Structure Parallel to Existing Lake Agnes - Osceola**

LAG

Circuit Name

230 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
4A1	60.00	-10.00	66.00	2	1.08	18.00	241.0	0	3000
4B1	60.00	-10.00	46.00	2	1.08	18.00	241.0	120	3000
4C1	60.00	-10.00	26.00	2	1.08	18.00	241.0	240	3000
4G1	62.00	-8.00	85.00	1	0.36	0.00	0.0	0	0

OUC

Circuit Name

230 kV

Rated Voltage

Existing Circuit

New/Existing

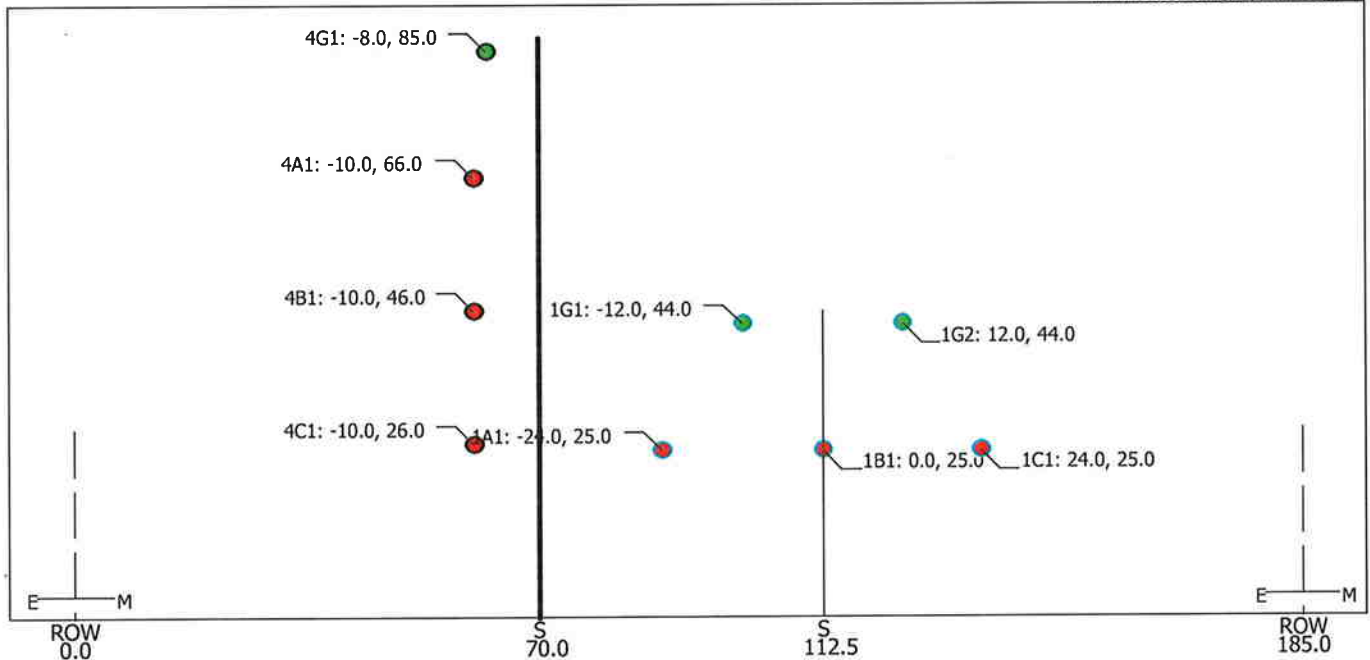
Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
1A1	88.50	-24.00	25.00	1	1.26	0.00	241.0	0	2000
1B1	112.50	0.00	25.00	1	1.26	0.00	241.0	120	2000
1C1	136.50	24.00	25.00	1	1.26	0.00	241.0	240	2000
1G1	100.50	-12.00	44.00	1	0.36	0.00	0.0	0	0
1G2	124.50	12.00	44.00	1	0.36	0.00	0.0	0	0

Points of Interest

None

Phase Configuration

All Measurements in Feet



Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Report on Compliance with Electric and Magnetic Field (EMF) Standards

Agent/Facility Information

1.3-3 Typical Tangent Structure on Road ROW

Name of Transmission Line/Interest Point

Tampa Electric Company and Progress Energy Florida

Name and Address of Facility (Utility) Owner

Tampa Electric Company and Progress Energy Florida

Name and Address of Authorized Agent

September 13, 2007

Date of Proposed Construction

Randy Grass

14220 Ladue Rd

Chesterfield, MO 63017

Name and Address of Professional Engineer

Signature of Authorized Agent

Date

Signature and Seal of Professional Engineer

Date

Field Strength Information

Transmission Lines

Cross Section	Right-of-Way (ROW) Width (ft)	Maximum Calculated Fields and Distance From ROW Left					
		Electric				Magnetic	
		Within ROW		At Edge of ROW		At Edge of ROW	
		(kV/m)	(ft)	(kV/m)	(ft)	(mG)	(ft)
1.3-3	75	2.2	26	1.1	0	146.1	0

Substations

None

Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Details for CrossSection: **1.3-3- Typical Tangent Structure on Road Right-of-Way**

1.3-3

Circuit Name

230 kV

Rated Voltage

NEW CIRCUIT

New/Existing

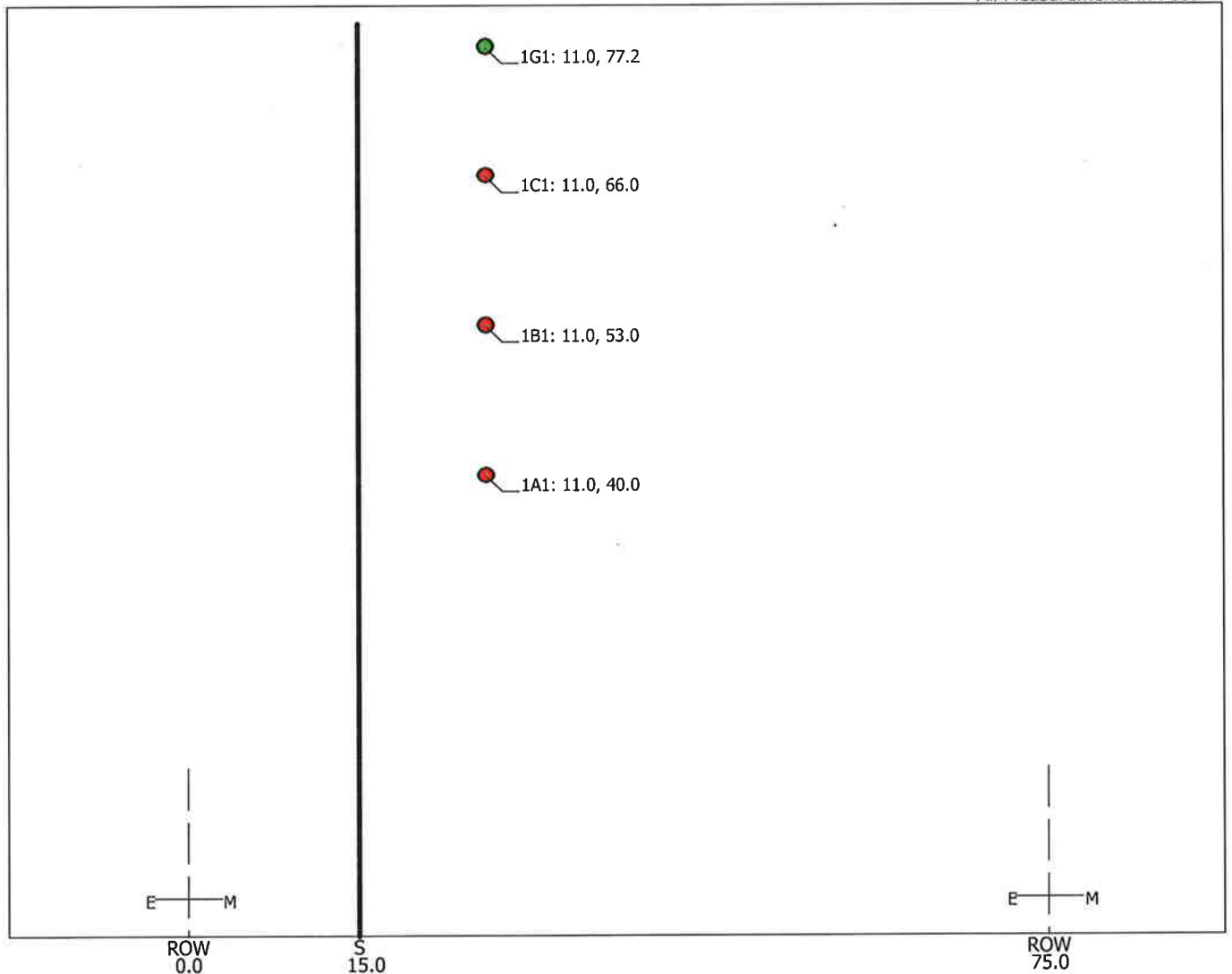
Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
1A1	26.00	11.00	40.00	2	1.08	18.00	241.0	0	3000
1B1	26.00	11.00	53.00	2	1.08	18.00	241.0	120	3000
1C1	26.00	11.00	66.00	2	1.08	18.00	241.0	240	3000
1G1	26.00	11.00	77.20	1	0.36	0.00	0.0	0	0

Points of Interest

None

Phase Configuration

All Measurements in Feet



Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Report on Compliance with Electric and Magnetic Field (EMF) Standards

Agent/Facility Information

1.3-4 Existing Tangent Structure on Road ROW

Name of Transmission Line/InterestPoint

Tampa Electric Company and Progress Energy Florida

Name and Address of Facility (Utility) Owner

Tampa Electric Company and Progress Energy Florida

Name and Address of Authorized Agent

September 13, 2007

Date of Proposed Construction

Randy Grass

14220 Ladue Rd

Chesterfield, MO 63017

Name and Address of Professional Engineer

Signature of Authorized Agent

Date

Signature and Seal of Professional Engineer

Date

Field Strength Information

Transmission Lines

Cross Section	Right-of-Way (ROW) Width (ft)	Maximum Calculated Fields and Distance From ROW Left					
		Electric				Magnetic	
		Within ROW		At Edge of ROW		At Edge of ROW	
		(kV/m)	(ft)	(kV/m)	(ft)	(mG)	(ft)
1.3-4	120	1.3	53	0.4	0	57.3	0

Substations

None

Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Details for CrossSection: **1.3-4- Existing Tangent Structure on Road ROW**

GFC

Circuit Name

69 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
3A1	56.00	6.00	23.00	1	1.26	0.00	72.0	0	2223
3B1	56.00	6.00	30.00	1	1.26	0.00	72.0	120	2223
3C1	56.00	6.00	37.00	1	1.26	0.00	72.0	240	2223

LAG

Circuit Name

230 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
4A1	39.00	-11.00	61.00	2	1.08	18.00	241.0	0	3000
4B1	39.00	-11.00	74.00	2	1.08	18.00	241.0	120	3000
4C1	39.00	-11.00	87.00	2	1.08	18.00	241.0	240	3000
4G1	39.00	-11.00	98.20	1	0.36	0.00	0.0	0	0

BMG

Circuit Name

69 kV

Rated Voltage

NEW CIRCUIT

New/Existing

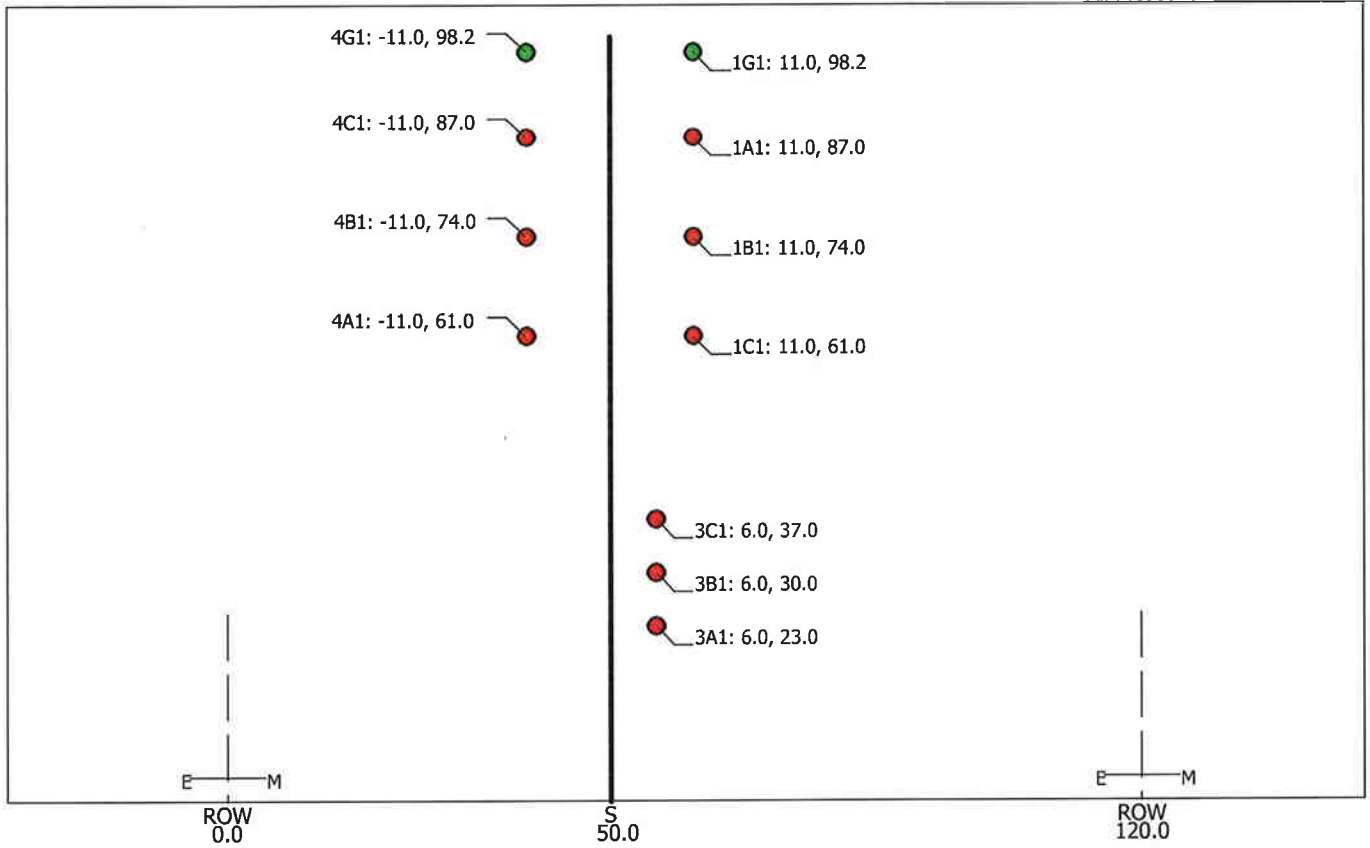
Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
1A1	61.00	11.00	87.00	1	1.26	0.00	72.0	0	2223
1B1	61.00	11.00	74.00	1	1.26	0.00	72.0	120	2223
1C1	61.00	11.00	61.00	1	1.26	0.00	72.0	240	2223
1G1	61.00	11.00	98.20	1	0.36	0.00	0.0	0	0

Points of Interest

None

Phase Configuration

All Measurements in Feet



Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Report on Compliance with Electric and Magnetic Field (EMF) Standards

Agent/Facility Information

Lake Agnes Substation

Name of Transmission Line/InterestPoint

Tampa Electric Company and Progress Energy Florida

Name and Address of Facility (Utility) Owner

Tampa Electric Company and Progress Energy Florida

Name and Address of Authorized Agent

October 09, 2007

Date of Proposed Construction

Randy Grass

14220 Ladue Rd

Chesterfield, MO 63017

Name and Address of Professional Engineer

Signature of Authorized Agent

Date

Signature and Seal of Professional Engineer

Date

Field Strength Information

Transmission Lines

Cross Section	Right-of-Way (ROW) Width (ft)	Maximum Calculated Fields and Distance From ROW Left					
		Electric				Magnetic	
		Within ROW		At Edge of ROW		At Edge of ROW	
		(kV/m)	(ft)	(kV/m)	(ft)	(mG)	(ft)

Substations

Substation Name	Maximum Calculated Fields and Distance from Left ROW			
	Electric	Distance	Magnetic	Distance
	(kV/m)	(ft)	(mG)	(ft)
Lake Agnes Substatio	0.35	430	112.5	430

Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Details for CrossSection: **Lake Agnes Substation- Lake Agnes Substation**

LAG

Circuit Name

230 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
2A1	277.00	-16.00	26.00	2	1.08	18.00	241.0	0	3000
2B1	293.00	0.00	26.00	2	1.08	18.00	241.0	120	3000
2C1	309.00	16.00	26.00	2	1.08	18.00	241.0	240	3000
2G1	264.00	-29.00	41.00	1	0.36	0.00	0.0	0	0
2G2	322.00	29.00	41.00	1	0.36	0.00	0.0	0	0

230612

Circuit Name

230 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
3A1	335.00	-16.00	26.00	1	1.08	0.00	241.0	0	3000
3B1	351.00	0.00	26.00	1	1.08	0.00	241.0	120	3000
3C1	367.00	16.00	26.00	1	1.08	0.00	241.0	240	3000
3G1	380.00	29.00	41.00	1	0.36	0.00	0.0	0	0

OUC

Circuit Name

230 kV

Rated Voltage

Existing Circuit

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
1A1	72.50	0.00	25.00	1	1.26	0.00	241.0	0	2000
1B1	72.50	0.00	35.00	1	1.26	0.00	241.0	120	2000
1C1	72.50	0.00	45.00	1	1.26	0.00	241.0	240	2000
1G1	70.50	-2.00	54.00	1	0.36	0.00	0.0	0	0
1G2	74.50	2.00	54.00	1	0.36	0.00	0.0	0	0

Points of Interest

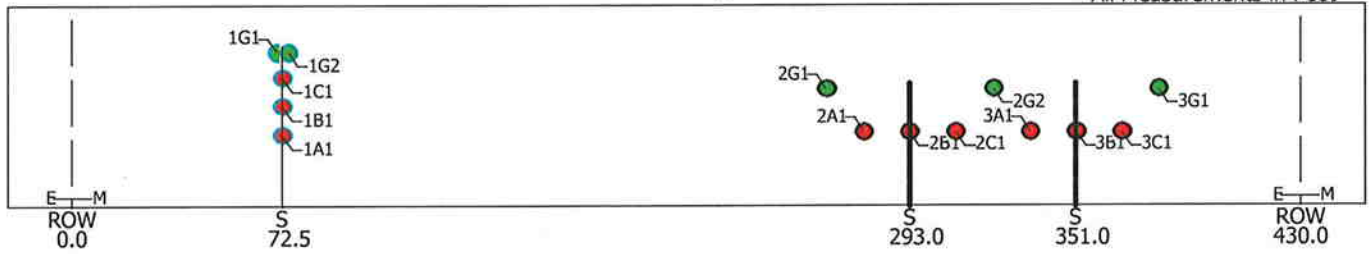
None

Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Phase Configuration

All Measurements in Feet



Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Report on Compliance with Electric and Magnetic Field (EMF) Standards

Agent/Facility Information

Gifford Substation

Name of Transmission Line/Interest Point

Tampa Electric Company and Progress Energy Florida

Name and Address of Facility (Utility) Owner

Tampa Electric Company and Progress Energy Florida

Name and Address of Authorized Agent

October 09, 2007

Date of Proposed Construction

Randy Grass

14220 Ladue Rd

Chesterfield, MO 63017

Name and Address of Professional Engineer

Signature of Authorized Agent

Date

Signature and Seal of Professional Engineer

11/12/07
Date

Field Strength Information

Transmission Lines

Cross Section	Right-of-Way (ROW) Width (ft)	Maximum Calculated Fields and Distance From ROW Left					
		Electric				Magnetic	
		Within ROW		At Edge of ROW		At Edge of ROW	
		(kV/m)	(ft)	(kV/m)	(ft)	(mG)	(ft)

Substations

Substation Name	Maximum Calculated Fields and Distance from Left ROW			
	Electric	Distance	Magnetic	Distance
	(kV/m)	(ft)	(mG)	(ft)
Gifford Substation	0.01	0	17.9	0

Florida Department of Environmental Protection

Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Details for CrossSection: **Gifford Substation- Gifford Substation**

230

Circuit Name

230 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
1A1	444.00	-16.00	26.00	2	1.08	18.00	241.0	0	3000
1B1	460.00	0.00	26.00	2	1.08	18.00	241.0	120	3000
1C1	476.00	16.00	26.00	2	1.08	18.00	241.0	240	3000
1G1	437.00	-23.00	41.00	1	0.36	0.00	0.0	0	0
1G2	483.00	23.00	41.00	1	0.36	0.00	0.0	0	0

LAG

Circuit Name

230 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
2A1	354.00	-16.00	26.00	2	1.08	18.00	241.0	0	3000
2B1	370.00	0.00	26.00	2	1.08	18.00	241.0	120	3000
2C1	386.00	16.00	26.00	2	1.08	18.00	241.0	240	3000
2G1	347.00	-23.00	41.00	1	0.36	0.00	0.0	0	0
2G2	393.00	23.00	41.00	1	0.36	0.00	0.0	0	0

GFC

Circuit Name

69 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
3A1	239.00	-11.00	23.00	1	1.26	0.00	72.0	0	2223
3B1	250.00	0.00	23.00	1	1.26	0.00	72.0	120	2223
3C1	261.00	11.00	23.00	1	1.26	0.00	72.0	240	2223
3G1	236.00	-14.00	36.00	1	0.36	0.00	0.0	0	0
3G2	264.00	14.00	36.00	1	0.36	0.00	0.0	0	0

BMG

Circuit Name

69 kV

Rated Voltage

NEW CIRCUIT

New/Existing

Id	Dist From Left ROW (ft)	Dist From Circuit CL (ft)	Minimum Height (ft)	SubConductors			Maximum Voltage (kV)	Angle (Degrees)	MCR (Amps)
				# of	Diameter (in)	Spacing (in)			
4A1	189.00	-11.00	23.00	1	1.26	0.00	72.0	0	2223
4B1	200.00	0.00	23.00	1	1.26	0.00	72.0	120	2223
4C1	211.00	11.00	23.00	1	1.26	0.00	72.0	240	2223
4G1	186.00	-14.00	36.00	1	0.36	0.00	0.0	0	0
4G2	214.00	14.00	36.00	1	0.36	0.00	0.0	0	0

Florida Department of Environmental Protection

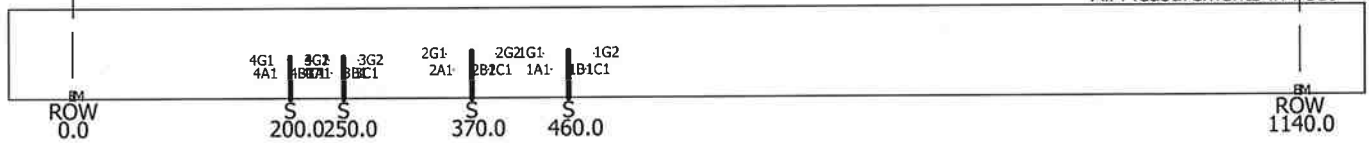
Twin Tower Office Bldg * 2600 Blair Stone Road * Tallahassee, Florida 32399-2400

Points of Interest

None

Phase Configuration

All Measurements in Feet



REFERENCES

- Florida Administrative Code, Chapter 9J-5, Minimum Criteria for Review of Local Government Comprehensive Plans and Plan Amendments, Evaluation and Appraisal Reports, Land Development Regulations and Determination of Compliance
- Florida Administrative Code, Chapter 62-17, Part II, Sections 62-17.510 – 62-17.760.
- Florida Administrative Code, Chapter 1A-46, Archaeological and Historical Report Standards and Guidelines.
- Florida Administrative Code, Chapter 62-814, Electric and Magnetic Fields.
- Florida Administrative Code, Chapter 25-6, Electric Service by Electric Public Utilities.
- Florida Statutes, Title XXIX, Chapter 403, Part II, Electrical Power Plant and Transmission Line Siting, (ss. 403.501-403.539)
- Florida Statutes, Title XI, Chapter 163, Part II, Growth Policy; County and Municipal Planning; Land Development Regulations (ss. 163.2511-163.3247).
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- Institute of Electrical and Electronics Engineers, Inc. National Electrical Safety Code, April 2006
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- Florida Fish and Wildlife Conservation Commission (FWC). November 2007. Florida's Endangered Species, Threatened Species, and Species of Special Concern.
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LAKE AGNES TO GIFFORD – A JOINT 230 KV TRANSMISSION LINE PROJECT

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Map data sources:

Progress Energy Florida existing transmission line and service area locations; 6/2007

Tampa Electric Company existing transmission line and service area locations; 6/2007

Sumter Electric Cooperative, Inc (SECO) service area locations; 6/2007

Lakeland Electric service area location and existing transmission lines; 6 & 9/2007

County Governmental Jurisdictional Boundaries - U.S. Census Bureau 2000; 6/2007

Committed major public roads – Florida Department of Transportation; 4/1/2006

Natural gas pipelines – USGS 1:24,000 scale digital line graphs; 1992

Existing railroads – USGS 1:24,000 scale digital line graphs; 1992

United State Geological Survey, 100K Series, Kissimmee, FL 1987

Parcels - Lake County Property Appraiser 3/2007 & 11/2007, Orange County Property Appraiser 7/2007 & 11/2007, Osceola County Property Appraiser 5/2007 & 11/2007, and Polk County Property Appraiser 7/2007 & 11/2007

Aerials – Aerials Express 1/2006 via ESRI ArcGIS Online

LAKE AGNES TO GIFFORD – A JOINT 230 KV TRANSMISSION LINE PROJECT

Future Land Use – Lake County Growth Management Dept, Orange County Growth Management Dept, Osceola County Community Development Dept, Polk County Growth Development Dept, City of Auburndale Community Development Dept, Polk City Community Development Dept, RCID Planning and Engineering Dept, City of Lakeland Community Development Dept; 5-11/2007

Zoning – Lake County Growth Management Dept, Orange County Growth Management Dept, Osceola County Community Development Dept, Polk County Growth Development Dept, City of Auburndale Community Development Dept, Polk City Community Development Dept, RCID Planning and Engineering Dept, City of Lakeland Community Development Dept; 5-11/2007

Major developments – Polk County Growth Management Department, 2007; Osceola County Growth Management Dept, 2007; Orange County Growth Management Dept, 2007; Lake County Growth Management Dept., 2007

Archeological Resources – Janus Research, 2007

Historical Resources – Janus Research, 2007

Florida Geographic Data Library (FGDL), 6/2007

- Public schools
- Proposed schools
- Community facilities
- Parks
- Conservation areas
- National Parks
- National Forests
- National wildlife refuges
- National memorials or monuments
- National landmarks
- Outstanding Florida waters
- Indian reservations
- Military reservations
- State parks - FGDL and Florida Managed Areas, 2007
- State forests - FGDL and Florida Managed Areas, 2007
- Areas of critical state concern – FGDL and Florida Managed Areas, 2007
- Aquatic preserves – FGDL and Florida Managed Areas, 2007
- Special management areas – FGDL and Florida Managed Areas, 2007

Florida Land Use, Cover and Forms Classification System (FLUCFS), 1999

Florida Natural Areas Inventory (FNAI), 2007

- T & E species – FNAI 2007
- Eagle nests – FNAI 2007, Florida FWC 2007
- Forested wetlands – SJRWMD 2004, SFWMD 1999, SWFWMD 2004
- Herbaceous wetlands– SJRWMD 2004, SFWMD 1999, SWFWMD 2004

LAKE AGNES TO GIFFORD – A JOINT 230 KV TRANSMISSION LINE PROJECT

Public Outreach – Community Notification

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LAKE AGNES TO GIFFORD – A JOINT 230 KV TRANSMISSION LINE PROJECT

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