APPLICATION FOR A COMPREHENSIVE PLAN AMENDMENT - MAP

Project Name: **Daniels South**

Project Description: **Amendments to the Future Land Use Map, Lee County Utilities Service Area Maps and the Private Recreation Facilities Overlay for a 1,233 ac property. Approximately 153.7 acres of DR/GR FLU will be amended to Sub-Outlying Suburban FLU. Approximately 1,148.5 acres will be added to the Lee County Utilities Service Area. Any portion of the property within the Private Recreation Facilities Overlay will be removed.**

Map(s) to Be Amended: **1-A, 1-F, 4-A, 4-B**

State Review Process: ☐ Small-Scale Review ☐ State Coordinated Review ☐ Expedited State Review

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1. **Name of Applicant:** **Lennar Corporation, Inc. c/o Barry Ernst**
   Address: 1042 Six Mile Cypress Parkway
   City, State, Zip: Fort Myers, FL 33966
   Phone Number: _____ E-mail: Barry.Ernst@Lennar.com

2. **Name of Contact:** **Tina M. Ekblad, MPA, AICP**
   Address: 106 E Collage Ave, Suite 700
   City, State, Zip: Tallahassee, FL 32301
   Phone Number: 850-354-7624 E-mail: tekblad@stearnsweaver.com

3. **Owner(s) of Record:** **Jared Holes Trust for Land Trust Number 5018**
   Address: 2500 Tamiami Trail N Suite 214
   City, State, Zip: Naples, FL 34103
   Phone Number: _____ E-mail: _____

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4. **Property Location:**
   1. Site Address: Please see attached Property Location Chart
   2. STRAP(s): Please see attached Property Location Chart

5. **Property Information:**
   Total Acreage of Property: 1,233 Total Acreage Included in Request: 1,233 acres
   Total Uplands: 714 acres Total Wetlands: 519 acres Current Zoning: AG-2
   Current Future Land Use Category(ies): Central Urban, DR/GR, Wetland
   Area in Each Future Land Use Category: Central Urban 84.5 acres, DR/GR 629.5 acres, Wetland 519 acres
   Existing Land Use: Agriculture

6. **Calculation of maximum allowable development under current Lee Plan:**
   Residential Units/Density: 934.1 Commercial Intensity: 1 Mill SF Industrial Intensity: _____

7. **Calculation of maximum allowable development with proposed amendments:**
   Residential Units/Density: 1,600 Commercial Intensity: 1 Mill SF Industrial Intensity: _____

Public Facilities Impacts

NOTE: The applicant must calculate public facilities impacts based on the maximum development.

1. **Traffic Circulation Analysis**: The analysis is intended to determine the effect of the land use change on the Financially Feasible Highway Plan Map 3A (20-year plus horizon) and on the Capital Improvements Element (5-year horizon). Toward that end, an applicant must submit a Traffic Impact Statement (TIS) consistent with Lee County Administrative Code (AC)13-17.

   a. Proposals affecting less than 10 acres, where development parameters are contained within the Traffic Analysis Zone (TAZ) or zones planned population and employment, or where there is no change in allowable density/ intensity, may be eligible for a TIS requirement waiver as outlined in the Lee County TIS Guidelines and AC-13-17. Identification of allowable density/intensity in order to determine socio-economic data for affected TAZ(s) must be coordinated with Lee County Planning staff. Otherwise a calculation of trip generation is required consistent with AC-13-17 and the Lee County TIS Guidelines to determine required components of analysis for:

      i. Total peak hour trip generation less than 50 total trip ends – trip generation.

      ii. Total peak hour trip generation from 50 to 300 total trip ends – trip generation, trip distribution and trip assignment (manual or Florida Standard Urban Transportation Modeling Structure (FSUTMS) analysis consistent with AC-13-17 and TIS Guidelines), short-term (5 year) and long-range (to current Lee Plan horizon year) segment LOS analysis of the nearest or abutting arterial and major collector segment(s) identified in the Transportation Inventory based on the trip generation and roadway segment LOS analysis criteria in AC-13-17. A methodology meeting is recommended prior to submittal of the application to discuss use of FSUTMS, any changes to analysis requirements, or a combined CPA and Zoning TIS short term analysis.

      iii. Total peak hour trip generation is over 300 total trip ends - trip generation, mode split, trip distribution and trip assignment (manual or FSUTMS analysis consistent with AC-13-17 and TIS Guidelines), short-term (five-year) and long-range (to current Lee Plan horizon year) segment LOS analysis of arterial and collector segments listed in the Transportation Inventory. LOS analysis will include any portion of roadway segments within an area three miles offset from the boundary of the application legal description metes and bounds survey. LOS analysis will also include any additional segments in the study area based on the roadway segment LOS analysis criteria in AC-13-17. A methodology meeting is required prior to submittal of the application.

   b. Map amendment - greater than 10 acres -Allowable density/intensity will be determined by Lee County Planning staff.

2. **Provide an existing and future conditions analysis for the following (see Policy 95.1.3):**
   a. Sanitary Sewer
   b. Potable Water
   c. Surface Water/Drainage Basins
   d. Parks, Recreation, and Open Space
   e. Public Schools

   Analysis for each of the above should include (but is not limited to) the following (see the Lee County Concurrency Management Report):

   a. Franchise Area, Basin, or District in which the property is located
   b. Current LOS, and LOS standard of facilities serving the site
   c. Projected 2030 LOS under existing designation
   d. Projected 2030 LOS under proposed designation
   e. Existing infrastructure, if any, in the immediate area with the potential to serve the subject property
   f. Improvements/expansions currently programmed in 5 year CIP, 6-10 year CIP, and long range improvements
   g. Provide a letter of service availability from the appropriate utility for sanitary sewer and potable water

In addition to the above analysis, provide the following for potable water:

a. Determine the availability of water supply within the franchise area using the current water use allocation (Consumptive Use Permit) based on the annual average daily withdrawal rate.
b. Include the current demand and the projected demand under the existing designation, and the projected demand under the proposed designation.
c. Include the availability of treatment facilities and transmission lines for reclaimed water for irrigation.
d. Include any other water conservation measures that will be applied to the site (see Goal 54).

3. Provide a letter from the appropriate agency determining the adequacy/provision of existing/proposed support facilities, including:

a. Fire protection with adequate response times
b. Emergency medical service (EMS) provisions
c. Law enforcement
d. Solid Waste
e. Mass Transit
f. Schools

In reference to above, the applicant must supply the responding agency with the information from application items 5, 6, and 7 for their evaluation. This application must include the applicant's correspondence/request to the responding agency.

Environmental Impacts

Provide an overall analysis of the character of the subject property and surrounding properties, and assess the site's suitability for the proposed change based upon the following:

1. A map of the Plant Communities as defined by the Florida Land Use Cover and Classification system (FLUCCS).
2. A map and description of the soils found on the property (identify the source of the information).
3. A topographic map depicting the property boundaries and 100-year flood prone areas indicated (as identified by FEMA).
4. A map delineating the property boundaries on the most recent Flood Insurance Rate Map.
5. A map delineating wetlands, aquifer recharge areas, and rare & unique uplands.
6. A table of plant communities by FLUCCS with the potential to contain species (plant and animal) listed by federal, state or local agencies as endangered, threatened or species of special concern. The table must include the listed species by FLUCCS and the species status (same as FLUCCS map).

Impacts on Historic Resources

List all historic resources (including structure, districts, and/or archaeologically sensitive areas) and provide an analysis of the proposed change's impact on these resources. The following should be included with the analysis:

1. A map of any historic districts and/or sites listed on the Florida Master Site File which are located on the subject property or adjacent properties.
2. A map showing the subject property location on the archaeological sensitivity map for Lee County.

Internal Consistency with the Lee Plan

1. Discuss how the proposal affects established Lee County population projections, Lee Plan Table 1(b) and the total population capacity of the Lee Plan Future Land Use Map.
2. List all goals and objectives of the Lee Plan that are affected by the proposed amendment or that affect the subject property. This analysis should include an evaluation of all relevant policies under each goal and objective.
3. Describe how the proposal affects adjacent local governments and their comprehensive plans.

State Policy Plan and Regional Policy Plan

List State Policy Plan and Regional Policy Plan goals, strategies and actions, and policies which are relevant to this plan amendment.

Justify the proposed amendment based upon sound planning principles

Support all conclusions made in this justification with adequate data and analysis.

Planning Communities/Community Plan Area Requirements

If located within a planning community/community plan area, provide a meeting summary document of the required public informational session [Lee Plan Goal 17].

Sketch and Legal Description

The certified legal description(s) and certified sketch of the description for the property subject to the requested change. A metes and bounds legal description must be submitted specifically describing the entire perimeter boundary of the property with accurate bearings and distances for every line. The sketch must be tied to the state plane coordinate system for the Florida West Zone (North America Datum of 1983/1990 Adjustment) with two coordinates, one coordinate being the point of beginning and the other an opposing corner. If the subject property contains wetlands or the proposed amendment includes more than one land use category a metes and bounds legal description, as described above, must be submitted in addition to the perimeter boundary of the property for each wetland or future land use category.

SUBMITTAL REQUIREMENTS

Clearly label all submittal documents with the exhibit name indicated below.

For each map submitted, the applicant will be required to submit a 24"x36" version and 8.5"x11" reduced map for inclusion in public hearing packets.

MINIMUM SUBMITTAL ITEMS (3 Copies)

☐	Completed Application (Exhibit – M1)
☐	Disclosure of Interest (Exhibit – M2)
☐	Surrounding Property Owners List, Mailing Labels, and Map For All Parcels Within 500 Feet of the Subject Property (Exhibit – M3)
☐	Existing Future Land Use Map (Exhibit – M4)
☐	Map and Description of Existing Land Uses (Not Designations) of the Subject Property and Surrounding Properties (Exhibit – M5)
☐	Map and Description of Existing Zoning of the Subject Property and Surrounding Properties (Exhibit – M6)
☐	Signed/Sealed Legal Description and Sketch of the Description for Each FLUC Proposed (Exhibit – M7)
☐	Copy of the Deed(s) of the Subject Property (Exhibit – M8)
☐	Aerial Map Showing the Subject Property and Surrounding Properties (Exhibit – M9)
☐	Authorization Letter From the Property Owner(s) Authorizing the Applicant to Represent the Owner (Exhibit – M10)
☐	Proposed Amendments (Exhibit – M11)
☐	Lee Plan Analysis (Exhibit – M12)
☐	Environmental Impacts Analysis (Exhibit – M13)
☐	Historic Resources Impact Analysis (Exhibit – M14)
☐	Public Facilities Impacts Analysis (Exhibit – M15)
☐	Traffic Circulation Analysis (Exhibit – M16)
☐	Existing and Future Conditions Analysis - Sanitary Sewer, Potable Water, Surface Water/Drainage Basins, Parks and Rec, Open Space, Public Schools (Exhibit – M17)
☐	Letter of Determination For the Adequacy/Provision of Existing/Proposed Support Facilities - Fire Protection, Emergency Medical Service, Law Enforcement, Solid Waste, Mass Transit, Schools (Exhibit – M18)
☐	State Policy Plan and Regional Policy Plan (Exhibit – M19)
☐	Justification of Proposed Amendment (Exhibit – M20)
☐	Planning Communities/Community Plan Area Requirements (Exhibit – M21)

APPLICANT – PLEASE NOTE:

Changes to Table 1(b) that relate directly to and are adopted simultaneously with a future land use map amendment may be considered as part of this application for a map amendment.

Once staff has determined the application is sufficient for review, 15 complete copies will be required to be submitted to staff. These copies will be used for Local Planning Agency hearings, Board of County Commissioners hearings, and State Reviewing Agencies. Staff will notify the applicant prior to each hearing or mail out to obtain the required copies.

If you have any questions regarding this application, please contact the Planning Section at (239) 533-8585.

AFFIDAVIT

I,_____, certify that I am the owner or authorized representative of the property described herein, and that all answers to the questions in this application and any sketches, data, or other supplementary matter attached to and made a part of this application, are honest and true to the best of my knowledge and belief. I also authorize the staff of Lee County Community Development to enter upon the property during normal working hours for the purpose of investigating and evaluating the request made through this application.

_____ _____
Signature of Applicant Date

_____
Printed Name of Applicant

STATE OF FLORIDA
COUNTY OF LEE

The foregoing instrument was sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization on_____(date) by _____
(name of person providing oath or affirmation), who is personally known to me or who has produced _____(type of identification) as identification.

_____
Signature of Notary Public

_____
(Name typed, printed or stamped)

APPLICATION FOR A COMPREHENSIVE PLAN AMENDMENT - TEXT

Project Name: **Daniels South**

Project Description: **An amendment to Policy 33.2.2 to permit lands in Southeast Lee adjacent to a Community Mixed-Use Activity Center in Lehigh Acres to aggregate and reallocate density across the entire 1,233 acre property.**

State Review Process: ☐ State Coordinated Review ■ Expedited State Review ☐ Small-Scale Text*

***Must be directly related to the implementation of small-scale map amendment as required by Florida Statutes.**

APPLICANT – PLEASE NOTE:
A PRE-APPLICATION MEETING IS REQUIRED PRIOR TO THE SUBMITTAL OF THIS APPLICATION.

Submit 3 copies of the complete application and amendment support documentation, including maps, to the Lee County Department of Community Development.

Once staff has determined that the application is sufficient for review, 15 complete copies will be required to be submitted to staff. These copies will be used for Local Planning Agency, Board of County Commissioners hearings, and State Reviewing Agencies. Staff will notify the applicant prior to each hearing or mail out to obtain the required copies.

If you have any questions regarding this application, please contact the Planning Section at (239)533-8585.

1. **Name of Applicant:** Lennar Corporation, Inc. c/o Barry Ernst
   Address: 10482 Six Mile Cypress Parkway
   City, State, Zip: Fort Myers, FL 33966
   Phone Number: 239-278-1177 E-mail: Barry.Ernst@Lennar.com

2. **Name of Contact:** **Tina M. Ekblad, MPA, AICP**
   Address: 106 E. College Avenue, Suite 700
   City, State, Zip: Tallahassee, FL 32301
   Phone Number: 850-354-7624 E-mail: tekblad@stearnsweaver.com

3. **Property Information:** Provide an analysis of any property within Unincorporated Lee County that may be impacted by the proposed text amendment. See attached supporting narratives.

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4a. **Does the proposed change affect any of the following areas?**

If located in one of the following areas, provide an analysis of the change to the affected area.

- ☐ Public Acquisition [Map 1-D]
- ☐ Agricultural Overlay [Map 1-G]
- ☐ Airport Mitigation Lands [Map 1-D]
- ☐ Airport Noise Zones [Map 1-E]
- ☐ Southeast Lee County Residential Overlay [Map 2-D]
- ☐ Mixed Use Overlay [Map 1-C]
- ☐ Community Planning Areas [Map 2-A]
- ☐ Urban Reserve [Map 1-D]
- ☐ Water-Dependent Overlay [Map 1-H]
- ■ Private Recreational Facilities Overlay [Map 1-F]

4b. Planning Communities/Community Plan Area Requirements

If located in one of the following planning communities/community plan areas, provide a meeting summary document of the required public informational session [Lee Plan Goal 17].

☐ N/A	☐ Bayshore [Goal 18]	☐ Boca Grande [Goal 19]	☐ Buckingham [Goal 20]
☐ Caloosahatchee Shores [Goal 21]	☐ Olga [Goal 22]	☐ Captiva [Goal 23]	☐ Greater Pine Island [Goal 24]
■ Lehigh Acres [Goal 25]	☐ North Captiva [Goal 26]	☐ NE Lee County [Goal 27]	☐ Alva [Goal 28]
☐ North Olga [Goal 29]	☐ North Fort Myers [Goal 30]	☐ Page Park [Goal 31]	☐ San Carlos Island [Goal 32]
■ Southeast Lee County [Goal 33]	☐ Tice [Goal 34]		

Public Facilities Impacts

NOTE: The applicant must calculate public facilities impacts based on a maximum development scenario.

1. **Traffic Circulation Analysis**: Provide an analysis of the effect of the change on the Financially Feasible Transportation Plan/Map 3-A (20-year horizon) and on the Capital Improvements Element (5-year horizon).

2. **Provide an existing and future conditions analysis for the following (see Policy 95.1.3):**
   a. Sanitary Sewer
   b. Potable Water
   c. Surface Water/Drainage Basins
   d. Parks, Recreation, and Open Space
   e. Public Schools

Environmental Impacts

Provide an overall analysis of potential environmental impacts (positive and negative).

Historic Resources Impacts

Provide an overall analysis of potential historic impacts (positive and negative).

Internal Consistency with the Lee Plan

1. Discuss how the proposal affects established Lee County population projections, Lee Plan Table 1(b) and the total population capacity of the Lee Plan Future Land Use Map.
2. List all goals and objectives of the Lee Plan that are affected by the proposed amendment. This analysis should include an evaluation of all relevant policies under each goal and objective.
3. Describe how the proposal affects adjacent local governments and their comprehensive plans.
4. List State Policy Plan goals and policies, and Strategic Regional Policy Plan goals, strategies, actions and policies which are relevant to this plan amendment.

Justify the proposed amendment based upon sound planning principles

Support all conclusions made in this justification with adequate data and analysis.

SUBMITTAL REQUIREMENTS

Clearly label all submittal documents with the exhibit name indicated below.

MINIMUM SUBMITTAL ITEMS

☐	Completed application (Exhibit – T1)
☐	Filing Fee (Exhibit – T2)
☐	Pre-Application Meeting (Exhibit – T3)
☐	Proposed text changes (in strike through and underline format) (Exhibit – T4)
☐	Analysis of impacts from proposed changes (Exhibit – T5)
☐	Lee Plan Analysis (Exhibit – T6)
☐	Environmental Impacts Analysis (Exhibit – T7)
☐	Historic Resources Impacts Analysis (Exhibit – T8)
☐	State Policy Plan Analysis (Exhibit – T9)
☐	Strategic Regional Policy Plan Analysis (Exhibit – T10)

STEARNS WEAVER MILLER
WEISSLER ALHADEFF & SITTERSON, P.A.

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106 E. College Avenue, Suite 700
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(850) 354-7624
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Daniels Parkway South
Comprehensive Plan Amendment
Project Narrative & Comprehensive Plan Consistency

March 9, 2023

The Property subject to the Comprehensive Plan Amendment is approximately 1,233 acres including STRAPS: 09-45-26-00-00003.0000, 08-45-26-00-00001.0030, 17-45-26-00-00001.0010, 16-45-26-00-00001.0000, 21-45-26-00-00001.0000, located at the southeast corner of Daniels Parkway and SR 82 (the "Property"). Currently the Property is within the DR/GR, Wetlands and Central Urban future land use categories as well as the Southeast Lee County and Lehigh Acres Community Planning Areas, which govern future development of the Property. This location is adjacent to two arterial roadways, the platted neighborhood of Lehigh Acres, and the Southwest Florida International Airport. As a result of the Property's size and configuration, the Property is within urban service boundaries for Lehigh Acres and Southeast Lee County.

SUMMARY OF AMENDMENTS

- Amend the Future Land Use Map to allocate 153.7 acres into the Sub-Outlying Suburban Category.
- Amend the Lee County Utilities Future Water and Sanitary Sewer Areas (Maps 4-A & 4-B) to add 1,148 acres to the Lee County Utilities Service Area.
- Amend the Private Recreational Facilities Overlay (Map 1-F) to remove the portion within the Property boundary.
- Amend Lee Plan Policy 33.2.2 to add language permitting property adjacent to a Lehigh Acres Community Mixed Use Activity Center to aggregate and allocate density across multiple FLU categories when a Planned Development is used and 60% open space is provided.

PROJECT LOCATION

- The proposed text amendment to Policy 33.2.2 will apply to the Southeast Lee County Community Plan area.
- The proposed amendment to the Future Land Use Map is specific to the property shown on the map below.
- The proposed amendment to the Lee County Utilities Future Water & Sanitary Sewer Service Areas (Lee Plan Maps 4A and 4B) is specific to property shown below.
- The proposed amendment to the Private Recreational Facilities Overlay (Lee Plan Map 1-F) is specific to the Property shown on the map below.

Figure 1. Aerial of Subject Property

CONCURRENT APPLICATION REVIEW

The applicant has filed a companion rezoning application (DCI2022-00002) that is being reviewed concurrently with this plan amendment application pursuant to Chapter 163.33184(12), F.S,

The concurrent rezoning required is to rezone 1,233 acres from Agricultural (AG-2) to Mixed Use Planned Development (MPD) to allow the development of a clustered mixed use development containing up to 350,000 square feet of commercial uses and 1,600 dwelling units.

If the Board of County Commissioners amends the Lee Plan to incorporate the proposed amendments, the requested MPD must demonstrate consistency with the Lee Plan, as amended, prior to approval of the rezoning.

SURROUNDING PROPERTIES

The Property is surrounded by a mix of uses in an area of Lee County that has significant residential and airport related development as well as vacant land and preservation areas.

Southwest

Immediately to the southwest of the subject property is a ±485-foot wide FPL easement on lands owned by the Jared Holes Trust which abut county-owned lands servicing Southwest Florida International Airport. The airport occupies a majority of land southeast of Daniels Parkway and the I-75 exchange. According to the Airport Layout Plan, the development of the airport will take place in two phases and is expected to extend into the year 2025. The Airport Layout Plan indicates that, at some point in the future, an expansion will occur for a second runway to be located south

of the current runway. In addition, commercial, retail and industrial flex uses are proposed to be added to the airport in the future. Most of these services will be located along the northern boundary of the airport adjacent to Daniels Parkway, with a minor amount located adjacent to the Daniels Preserve center north of Daniels Parkway. As a result of the airport's proximity to the subject property, the existing 10,000' Hazardous Wildlife Buffer around the airport encumbers part of the south end of the subject property. Within this area only specifically approved species of vegetation may be utilized and water management lakes must be constructed to specific standards to discourage wildlife and reduce habitat in proximity to the airport.

Northwest

Immediately to the northwest is Daniels Parkway, a controlled access roadway from the segment commencing at US 41 and terminating at SR 82 per Resolution 16-04-08. This designation restricts the number and location of permanent access points along the roadway. The concurrent master concept plan accounts for this designation and aligns the proposed access points of the subject property with the approved access points as demonstrated in Resolution 16-04-08. Further northwest, across Daniels Parkway, is Timber Creek RPD and MPD which is currently under construction. Timber Creek is located within the Six Mile Cypress watershed and was approved via Resolution #Z-17-019 for up to 1,315 dwelling units within the RPD portion, as well as 50 multi-family dwelling units, 250,000 square feet of commercial floor area, and 150 hotel rooms to be located within the MPD portion of the project.

North

The subject property is bounded to the north by SR 82, a 200-foot wide state-maintained arterial roadway. The SR 82 and Daniels Parkway intersection is the location of Florida's first Continuous Flow Interchange (CFI). North of SR 82, is the platted community of Lehigh Acres. A majority of the properties adjacent to SR 82 are zoned for commercial uses but have not been constructed. The remaining portion of Lehigh in this general vicinity is scattered residential development on the existing platted lots.

URBAN SERVICES

The Property is within an area of the County that has been designated for urban services. A majority of the urban services are adjacent to or within the vicinity and available to serve the proposed development.

Utilities (Public sewer and water)

The Property is partially within the service area for Lee County Utilities and adequate capacity is available to serve the Property and companion proposed development. A map amendment is requested to extend the Lee County Utilities Service area across the entire property to provide central water and sewer services to the proposed development. Existing utility infrastructure exists along Daniels Parkway and is currently extended to service the Timber Creek community.

Public Safety (Police, Fire, and EMS)

The Property is able to be served by multiple providers for Emergency Medical Services, Fire and Police. Lee County Emergency Medical Services is the primary EMS transport for the subject property. However, the Property is also within the Lehigh Acres Fire District which provides

medical transport as well. Both service providers would work together to serve the subject property. Lee County EMS does not have a resource in this area, but the concurrent planned development includes land area to facilitate future expansion of service.

The Property is served by two Fire Districts, the South Trail and Lehigh Acres Fire Districts. The South Trail Fire District would serve the southern portion of the Property from Station 63 located at 5531 Halifax Ave. The Lehigh Acres Fire District would serve the northern portion of the Property from the location at 636 Thomas Sherwin Ave. S.

The Property is located wholly within the service area for the Lee County Sheriff. The Central District Station located at 14750 Six Mile Cypress Parkway is responsible for providing service to the subject property.

Schools
The Property is within the Lee County School District East Zone, E2. There is capacity within the entire school district to accommodate the additional children.

Solid Waste
The Property is within the Lee County Solid Waste Franchise and is served through Lee County's franchised hauling contractor. Disposal of waste generated from the subject property will be accomplished at the Lee County Resource Recovery Facility and the Lee-Hendry Regional Landfill. Service is available to the subject property and plans have been established that target growth and long-term disposal capacity for this particular area.

MAP AMENDMENT
The Property is within two community planning areas and three future land use categories. The portion of the Property within the Southeast Lee County community planning area has uplands within the DR/GR future land use category. The Property's wetlands are within the Wetlands future land use category. The DR/GR future land use category is described in Policy 1.4.5 provided in part, below.

> ***POLICY 1.4.5:*** *The Density Reduction/Groundwater Resource (DR/GR) future land use category includes upland areas that provide substantial recharge to aquifers most suitable for future wellfield development. These areas also are the most favorable locations for physical withdrawal of water from those aquifers. Only minimal public facilities exist or are programmed.*

The underlying objective for creating the DR/GR future land use category was to protect the County's shallow aquifers. The category was incorporated into the Lee Plan as part of the implementation of the 1990 Stipulated Settlement Agreement between Lee County and the Florida Department of Community Affairs (now known as Department of Economic Opportunity). The Settlement Agreement required that the Future Land Use Map be amended to change density in the new water resource category to one dwelling unit per ten acres in three specified areas of the County. In Southeast Lee County the DR/GR lands were described as: most non-urban land east of Interstate-75, southeast of the airport, and south of State Route 82. Since the Property was

contiguous, under one ownership and located in a non-urban land use category, east of I-75 and south of State Route 82, it was included in the DR/GR future land use category. This general location descriptor did not take into account specific property characteristics and whether or not the properties truly aligned with the DR/GR FLU category. Since the original implementation of the DR/GR, several similarly situated properties have been removed from the DR/GR FLU within Southeast Lee County. Currently there are 82,560 acres of DR/GR FLU within the Southeast Lee Community Planning Area, including the Property. However, due to the existing physical conditions of the Property, only the eastern portion (as delineated by the existing north/south farm road) demonstrates the necessary characteristics to be within the DR/GR FLU in Southeast Lee County. As described below, the western portion of this Property was part of the Six Mile Cypress sub-basin watershed and was historically connected physically and hydrologically to the property adjacent to the west side of Daniels Parkway, now the Timber Creek community.

The Property has been significantly disturbed over the last several decades by the on-going agricultural use. As noted, like the property making up the Timber Creek community, the western portion of the Property is separated from the majority of the DR/GR future land use category by an internal farm road as well as berms and other improvements on the western portion of the property. These improvements ensure that water does not freely flow to provide larger regional hydrological connections across the Property into the larger Southeast Lee Community Planning Area and the DR/GR and Wetlands future land use categories to the southeast. In recognition of the separation of the Property by these existing features and characteristics, the applicant is requesting 153.7 acres of the upland property be reallocated to the Sub-Outlying Suburban Future Land Use category.

The Sub-Outlying Suburban future land use category is described in the Lee Plan as follows:

> ***POLICY 1.1.11:*** *The Sub-Outlying Suburban future land use category is characterized by low density residential areas. Generally the infrastructure needed for high density development is not planned or in place. This future land use category will be placed in areas where higher densities would be incompatible or where there is a desire to retain a low-density community character. Industrial land uses are not permitted. The standard density range is from one dwelling unit per acre (1du/acre) to two dwelling units per acre (2 du/acre). Bonus densities are not allowed.*

The Wetlands future land use category is described in the Lee Plan as follows:

> ***OBJECTIVE 1.5: WETLANDS.*** *Designate on the Future Land Use Map those lands that are identified as Wetlands in accordance with 373.019(27), F.S. through the use of the unified state delineation methodology described in Fla. Admin, Code R. 62-340, as ratified and amended in 373.4211, F.S.*
>
> ***POLICY 1.5.1:*** *Permitted land uses in Wetlands consist of very low density residential uses and recreational uses that will not adversely affect the ecological functions of wetlands. All development in Wetlands must be consistent with Goal 124. The maximum density is one*

dwelling unit per twenty acres (1 du/20 acres) except as otherwise provided in Table 1(a) and Chapter XII.

A formal determination of wetlands and other surface waters on-site was requested of the South Florida Water Management District (SFWMD) pursuant to Rule 62-330.201 Florida Administrative Code. A site visit and wetland limits were verified on January 14, 20 and 21, 2022 by the SFWMD and established 532.51 acres of wetlands. The SFWMD issued a jurisdictional determination in May of 2022. Using the unified state delineation methodology and the administrative process described in Objective 1.5, there are 519.1 acres of Wetlands on the Property. The requested amendments only redesignate the upland portions of the property from DR/GR to Sub-Outlying Suburban west of the internal farm road and associated with the Six Mile Cypress sub-basin watershed similar to the Timber Creek property. The areas delineated as wetlands using the unified state delineation methodology will remain in the Wetlands future land use category. Lee Plan Policy 1.5.1 permits low-density residential and recreational uses within the Wetland Future Lane Use category. However, development may not negatively affect ecological functions and the maximum permitted density is on dwelling unit per 20 acres (1 DU/20 AC).

A Text Amendment to Policy 33.2.2 is proposed to accompany the map amendments to permit the density to be aggregated and allocated across the multiple future land use categories across the property to implement the companion Mixed Use Planned Development.

LEE PLAN ANALYSIS

The applicant is requesting to add approximately 153.7 acres to the Sub-Outlying Suburban future land use category and amend Policy 33.2.2 for the Property within the Southeast Lee Community Planning Area.

Southeast Lee County

The Property has been included within the Southeast Lee County Community Planning Area since the Planning Community was originally acknowledged in the June 1998 Lee Plan. Goal 33 establishes the vision for this planning community.

> ***GOAL 33: SOUTHEAST LEE COUNTY.*** *Protect Southeast Lee County's natural resources through public and private acquisition and restoration efforts. Development incentives will be utilized as a mechanism to preserve, enhance and protect natural resources, such as regional flow-ways and natural habitat corridors in the development of privately owned land. Allowable land uses will include conservation, agriculture, public facilities, low density or clustered residential, natural resource extraction operations, and private recreation facilities; allowable land uses must be compatible with protecting Southeast Lee County's environment.*

One of the primary functions of the DR/GR future land use category within the Southeast Lee County Community Planning area is the ability to provide recharge areas for groundwater resources and potential development of wellfields. The Property has an internal farm road running north to south that has existed on-site since at least 1958, altering the flow and drainage of water

on-site for an extended period of time. Currently, surface water west of the farm road drains into the Six Mile Cypress Sub-watershed rather than the Estero River watershed shared with the greater Southeast Lee County.

Figure 1. 1958 Aerial of Subject Property with Historic Farm Road

The existing and historic agricultural operations on-site have established internal drainage ditches that also reduce water table elevations and the opportunities for recharge on-site. Additionally, the Property does not have a high potential for wellfield development, nor does it provide substantial recharge benefits similar to other areas of Southeast Lee County due to differences in the Property's hydrogeology as compared to the areas in closer proximity to the existing Lee County wellfields. The existing conditions of the Property have negatively impacted nearby wetlands and significantly limited the opportunity for recharge as compared to the larger DR/GR and Southeast Lee County.

Amending the Future Land Use Map from DR/GR to another land use category requires evaluation of Policies 2.3.1 and 2.3.2.

> ***POLICY 2.3.1***: *All proposed changes to the Future Land Use Map in critical areas for future potable water supply (Lehigh Acres as described in Policy 54.1.9; and all land in the Density Reduction/Groundwater Resource land use category) will be subject to a special review by the staff of Lee County. This review will analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water sources, and will assess whether the proposed land uses would cause any significant impact on present and future water resources. If the Board of County Commissioners wishes to approve any such changes to the Future Land Use Map, <u>it must make a formal finding that no significant impacts on present or future water resources will result from the change. [Emphasis Added]</u>*

> ***POLICY 2.3.2:*** *Future Land Use Map amendments to the existing DR/GR areas south of SR 82 east of I-75, excluding areas designated by the Port Authority as needed for airport expansion, which increase the current allowable density or intensity of land use will be discouraged by the county. It is Lee County's policy not to approve further urban designations there for the same reasons that supported its 1990 decision to establish this category. In addition to satisfying the requirements in 163 Part II Fla Stat., the Strategic Regional Policy Plan, the State Comprehensive Plan, and all of the criteria in the Lee Plan, applicants seeking such an amendment must:*
>
> 1. *analyze the proposed allowable land uses to determine the availability of irrigation and domestic water sources; and,*
> 2. *identify potential irrigation and domestic water sources, consistent with the Regional Water Supply Plan. Since regional water suppliers cannot obtain permits consistent with the planning time frame of the Lee Plan, water sources do not have to be currently permitted and available, but they must be reasonably capable of being permitted; and,*
> 3. *present data and analysis that the proposed land uses will not cause any significant harm to present and future public water resources; and,*
> 4. *supply data and analysis specifically addressing the urban sprawl.*
>
> *During the transmittal and adoption process, the Board of County Commissioners must review the application for these analytical requirements and make a finding that the amendment complies with all of them.*

The 2022 Lower West Coast Water Supply Plan (LWCWSP) encourages a number of water supply strategies to help conserve and sustain traditional groundwater supplies within Lee County. To protect water resources in fast growing regions, the LWCWSP promotes the implementation of alternative water supply sources such as the use of reclaimed water, seasonal surface water usage, and water conservation measures to reduce overall demand. Because reclaimed water for irrigation is unavailable, the proposed amendment (along with the concurrent rezoning) will satisfy many of the LWCWSP's goals and objectives through the following methods:

- The conjunctive use of surface water (storm water) and seasonal use of groundwater for irrigation reduces stress to the water resources. During periods of high demand and/or the dry season, the temporary and limited use of groundwater for pond augmentation (i.e., from the Sandstone Aquifer) is anticipated to also improve overall surface water quality. Similar practices are being implemented in the vicinity of the subject property.
- The centralized master control of the irrigation delivery system that prevents individual homeowners from initiating irrigation events (water conservation/demand management). Irrigation demands are expected to be met using withdrawals from the internal storm water management system ponds by a master-controlled irrigation system. This system will regulate both the timing and duration of irrigation events in order to maximize conservation of water supplies. The withdrawal and recycling of storm water for irrigation is also anticipated to reduce nutrient loading of the County's MS4 system.

Further benefits to the water resources will be achieved by plugging and abandoning the flowing artesian well onsite. Plugging of the existing wells is anticipated to reduce the potential for adverse impacts to nearby wetlands, environmental systems, and improve groundwater recharge potential to the Surficial Aquifer System. The future development of the Property will also promote the removal of the existing agricultural ditches and berms to match adjacent grade, removal of exotic vegetation and planting of native vegetation.

To demonstrate that future development will not have an adverse impact on water resources and natural systems within Southeast Lee County an integrated surface and groundwater model specific to the Property is required as part of the comprehensive plan amendment and rezoning applications.

> ***POLICY 33.1.7:*** *Impacts of proposed land disturbances on surface and groundwater resources will be analyzed using integrated surface and groundwater models that utilize site-specific data to assess potential adverse impacts on water resources and natural systems within Southeast Lee County. Lee County Division of Natural Resources will determine if the appropriate model or models are being utilized, and assess the design and outputs of the modeling to ensure protection of Lee County's natural resources.*

Due to the existing internal farm road, there are no indigenous habitat or wetland connections across the watershed basin divide in the current condition. Additionally, the Property's proximity to the SWFIA and the 10,000' Hazardous Wildlife Buffer prohibits the creation of wetland habitat to provide a wetland interconnection. As a result, to continue to mimic the historic flow patterns across the Property a physical infrastructure improvement is proposed to recreate more historic flow patterns between the two watershed basins during periods of high rainfall. This physical connection will interconnect two short hydroperiod wetland habitat types (i.e., hydric pine and mixed wetland hardwoods). Reflecting historic hydrology, the overflow will only occur during peak wetland water levels or after large storm events. When combined with the proposed removal of the existing agricultural berms and filling of the agricultural ditches on-site to match existing grade, these activities will maintain existing water levels and eliminate exotic vegetation while achieving the objective of interconnecting wetlands, re-establishing historic flow patterns and improving water flow off-site. A detailed Drainage Report with the required integrated model has

been included in the concurrent applications demonstrating the conditions of the current and proposed surface and groundwater systems and that no adverse impacts will occur.

Specifically the physical hydrological connection is proposed as a 24-inch piped connection is proposed to restore the historic interaction between the 2 on-site watershed basins. This buried connection is specifically designed to eliminate wildlife attractants. On the west side of the property (Six Mile Cypress Watershed) a water control structure, i.e., weir, will be constructed on the upstream side of the 24" buried pipe in order to selectively convey stormwater towards the Estero River Watershed only during high rainfall events. High rainfall events, for purposes of this application, are defined as those in excess of a 10-year, 1-day storm. Multiple scenarios are included in the integrated model analysis to demonstrate the existing and proposed conditions expected. Specifically, 4 design storms are provided:

- 2.33-year, 1-day
- 10-year, 1 day
- 25-year, 3-day
- 100-year, 3-day

These design storms demonstrate that the man-made hydraulic connection proposed to interconnect the existing two on-site watershed basis will only occur during high rainfall events. A control structure wier is proposed and is set at an elevation above the Wet Season Water Table (WSWT) to ensure drawdown does not occur in nearby wetland habitat and prevents surface water discharging to the west (Six Mile Cypress basin) during low rainfall events. Note that the water elevation of the Six Mile Cypress Basin is slightly higher than the Estero Basin, again ensuring the flow of surface water only occurs during high rainfall events.

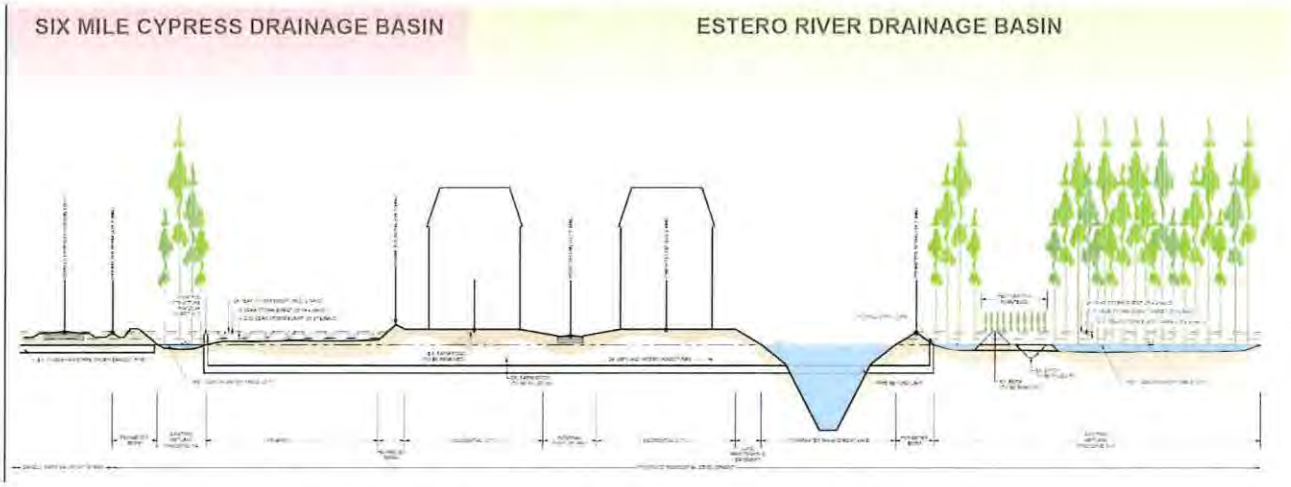

Figure 5. Typical Cross-Section for Man-man Hydraulic Connection

The proposed design accomplishes a several important objectives:

- Sets the control structure weir at an elevation that ensures that surrounding wetland areas do not experience adverse drawdown.
- Addresses varying wet season elevations within the on-site wetlands

- Prevents surface water from discharging into the Six Mile Cypress during low rain fall events.
- Connects the watersheds during high rainfall events to interconnect the on-site wetlands and re-establish historic flow patterns across the property.
- Controls the flow of surface water across the property to ensure that no adverse impacts to adjacent properties occurs.

While not a natural flowway (due to the constraints of the SWFIA proximity), the proposed improvements take into account the unique conditions of the property necessary to achieve the overall objective of interconnecting wetlands, re-establishing historic flow patterns, while ensuring that no adverse impacts to adjacent properties will occur, as compared to existing conditions consistent with the DR/GR Future Land Use, Policy 33.1.7 and the proposed map amendment to Sub-Outlying Suburban.

Based on the information provided, it is demonstrated that no significant impacts on present or future water resources will result from the proposed map amendment to Sub-Outlying Suburban.

Six Mile Cypress Watershed:
The restoration of the Estero River and the Flint Pen/Imperial River watersheds is an important aspect of the DR/GR future land use category and Southeast Lee County community planning area. Lee Plan Policy 126.1.8 provides that Lee County should protect the Flint Pen as an area for water retention and aquifer recharge. However, unlike the majority of properties within Southeast Lee County, the subject property does not lie entirely within the Imperial or Estero River watersheds. The Property has been hydrologically divided into east and west sections due to the existing north/south internal farm road that supports the existing agricultural operations. As part of the management of surface water related to the existing and historical agricultural operations, an extensive network of ditches and berms have been constructed on the property leading to division of the existing on-site wetlands. These features promote drainage for the agricultural operations but reduce water table elevations and lower recharge potential. Due to the north/south internal farm road and internal agricultural ditches and berms, the historical path of surface water across the Property is bifurcated. This same internal farm road has been used by the SFWMD to represent the division between the Estero River and Six Mile Cypress watershed sub-basins.

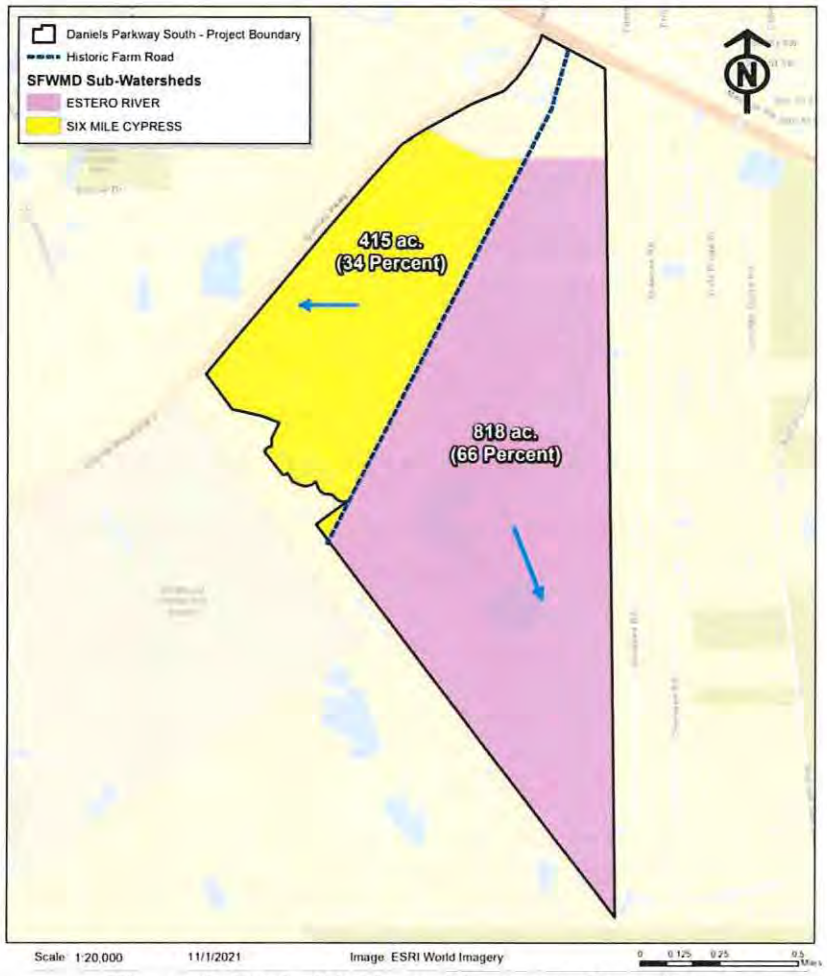

Figure 3. Basin Divide and Property Boundary

The Property west of the internal farm road exhibits generally higher topographic elevations and is bisected by a historic, north-south farm road which coincides with the sub-basin divide. An analysis of historical aerial photographs (1944 and 1958), National Resources Conservation Service soils data, and LiDAR Digital Elevation Model imagery of the historic flow-way connections demonstrates this western portion of the Property is isolated from the balance of the DR/GR and Southeast Lee Community Planning area to the east. Removing the 153.7 acres from the DR/GR future land use category will not impact the surface water flow on the eastern portion of the Property and the remainder of Southeast Lee County.

Proposed Future Land Use Category – Sub-Outlying Suburban:
The subject property is bordered on three sides by Future Urban and Suburban land use categories. These include Lehigh Acres within the Central Urban future land use category which permits up to 15 units per acre including bonus density. Along the eastern property boundary is Daniels Parkway and the Timber Creek development in Central Urban and Sub-Outlying Suburban which permits 15 and 2 dwelling units per acre respectively. A portion of the third boundary is adjacent to the Tradeport future land use. In light of the characteristics of the surrounding land uses,

hydrogeology and public facilities, the 153.7 acres subject to the map amendment are not consistent with the existing DR/GR future land use category.

Approximately 153.7 acres are proposed to be reallocated to the Sub-Outlying Suburban future land use; which is described as:

> ***POLICY 1.1.11:*** *The Sub-Outlying Suburban future land use category is characterized by low density residential areas. Generally the infrastructure needed for high density development is not planned or in place. This future land use category will be placed in areas where higher densities would be incompatible or where there is a desire to retain a low-density community character. Industrial land uses are not permitted. The standard density range is from one dwelling unit per acre (1du/acre) to two dwelling units per acre (2 du/acre). Bonus densities are not allowed.*

The descriptor policy clarifies that the areas subject to this FLU category contain predominately low-density residential development as is being proposed by the applicant in the companion MPD rezoning. The Sub-Outlying Suburban FLU will provide a transition from the Central Urban FLU (15 du/ac) in Lehigh Acres to the north and the existing Sub-Outlying Suburban FLU (2 du/ac) to the west to the lower density DR/GR FLU (1du/10ac) to the east and southeast.

The development patterns that can be promoted by each future land use category are dramatically different. The Central Urban area, which is also within one of the mixed use overlays, can establish a clustered development pattern with higher densities and intensities served by central water and sewer. Only the Central Urban portion of the property is within the Lee County Utilities Future Service Area. Conversely, the DR/GR area can only establish 88.2 large lot single family development with well and septic. The pattern of development and use of 88 individual wells and septic systems conflicts with the desire to maintain the quality and quantity of surface and groundwater as envisioned by Lee Plan policy 1.4.5 for the Density Reduction/Groundwater Resource future land use. Additionally the property is within the Private Recreational Facilities Overlay. This Overlay is for properties that are located in areas characterized as "predominately impacted with agricultural, mining or other permitted uses, large lot single or limited ownership patterns and with direct access to existing roadways" in addition to being outside prioritized preservation areas. This Overlay precludes residential uses but permits ancillary commercial uses to a golf course, horse stable and camping facility. These uses also seem to conflict with the desire to maintain the quality and quantity of surface and groundwater as envisioned by Lee Plan policy 1.4.5.

As a result of these dramatically different development patterns for the subject property if developed independently, a map and text amendment with a concurrent planned development are proposed to establish a development strategy and design that promote a comprehensive master plan with unified commercial and residential development enhancing the vision and goals of each planning community, preserves and restores 676.10 acres of wetland and upland habitat (including 58 acres of Rare and Unique Uplands), establishes historic flow paths across the Property and promotes the responsible development of the Property in a manner that cannot be achieved under the existing Lee County requirements.

TEXT AMENDMENT

As part of an evolving regulatory strategy for the Southeast Lee Community Planning Area, an amendment to the Lee Plan was adopted in 2010 that established Objectives 33.2 and 33.3 with their supporting polices and adopted Map 2-D identifying existing development types within the Southeast Lee Community Planning Area. An accompanying amendment was made to the Lee County Utilities Service Area to bring central utilities to specific locations. Map 2-D and Objective 33.3 identified existing residential areas and concentrated existing development rights on large tracts of land identified as Mixed Use Communities.

Since the initial implementation of the Mixed Use Communities, Map 2-D and associated utility service areas, along with Objectives 33.2 and 33.3 and their supporting policies have been amended. Today there are 5 types of residential communities described in the Lee Plan and depicted on Map 2-D. Collectively, the strategies associated with these various communities have established a framework for development in the Southeast Lee Community Planning Area balancing residential and commercial development with environmental preservation and hydrologic improvements.

The intent of the amendment to Policy 33.2.2 is to balance the development that can occur on the Property within the Future Urban and Suburban land use categories and the remaining DR/GR. The Property is under unified ownership adjacent to a mixed use community within the Lehigh Acres Community Planning Area. As a result, it is permitted to aggregate the available density across the multiple future land use categories to promote a consistent and clustered development design that achieves 60% open space. While the amendment permits density to be aggregated and allocated across the contiguous future non-urban area, the overall maximum cannot exceed the total of the dwelling units for each land use category.

> ***POLICY 33.2.2:*** *Map 2-D identifies future locations for Mixed-Use Communities where development rights can be concentrated from large Southeast Lee County tracts into Traditional Neighborhood Developments. The preferred pattern for residential development is to cluster density within Mixed-Use Communities along existing roads and away from Future Limerock Mining areas.*
>
> 1. *Southeast Lee County Mixed-Use Communities must be concentrated from contiguous property owned under single ownership or control. Residential density is calculated from the upland and wetland acreage of the entire contiguous Southeast Lee County property. Increases in residential densities may be approved through incentives as specified in the LDC for permanent protection of indigenous native uplands on the contiguous tract (up to one extra dwelling unit allowed for each five acres of preserved or restored indigenous native uplands) and through the acquisition of TDUs from TDR sending areas within Southeast Lee County as provided in Objective 33.3.*
>
> a. *The maximum gross density is 5 dwelling units per acre of total land designated as a Mixed-Use Community when TDUs are used.*
>
> b. *Properties that concentrate development rights and/or use TDUs created from Southeast Lee County within the Mixed-Use Communities identified on Map 2-D will be allowed to*

develop using permitted uses and the property development regulations for the C-2A zoning district.

2. *Contiguous property under the same ownership may be developed as part of a Mixed-Use Community, provided it does not extend more than 400 feet beyond the perimeter of the Mixed-Use Community as designated on Map 2-D.*

3. *Central water and wastewater services are required to develop a Mixed-Use Community.*

4. *Commercial uses developed as part of a Mixed-Use Community will be consistent with Policy 33.2.5 and will not exceed the allowable total square footage for commercial uses in Southeast Lee County.*

5. *Southeast Lee County property adjacent to and including a Lehigh Acres Mixed-Use Activity Center may sum density across the entire property. Density may be allocated across the property regardless of the underlying future land use category when:*
   i. the project is developed as a Planned Development;
   ii. the project develops with central water and wastewater services;
   iii. a minimum of 60 percent open space is provided; and
   iv. the number of dwelling units for the entire project does not exceed the sum of the allowable dwelling units from all land use categories.

In support of the primary Map and Text Amendments, additional Map Amendments are proposed to extend the Lee County Utilities Service area across the 1,148 acres within Southeast Lee County. The requested extension of the service area will permit the future development on the property to connect to central water and sewer, eliminating individual potable water wells and septic systems. This will further the protection of groundwater resources consistent with the intent of the DR/GR FLU and Southeast Lee County community planning area. Reclaimed water is not currently available in this area of the County; however when available, infrastructure can be extended.

A companion MPD application (DCI2022-00002) has been filed and is being reviewed by Lee County Staff concurrent with the proposed comprehensive plan amendments. The property is within 3 future land use categories that would yield 1,626 dwelling units. The MPD limits the residential density to 1,600 dwelling units; which are proposed to be clustered throughout the property. At the intersection of Daniels Parkway and SR 82 the proposed development plan includes 350,000 square feet of commercial uses are proposed to support the future residents as well as the existing residents in the surrounding communities. The MCP promotes a clustered development pattern enabling the preservation of 60% of the Property as open space. A significant portion of the provided open space, approximately 55%, is indigenous upland and wetland habitat that will be preserved and restored consistent with the intent of the DR/GR FLU.

The supporting map amendments and companion planned development application is consistent with the proposed text amendment to Policy 33.2.2

Additional Lee Plan Consistency Analysis

Growth Management
The proposed amendments promote a contiguous and compact growth pattern and transition density consistent with the existing residential neighborhoods in the surrounding area, including Lehigh Acres, Timber Creek and Shawnee Road as desired by Lee Plan Objective 2.1 and 2.2.

> ***GOAL 2: GROWTH MANAGEMENT.*** *To provide for an economically feasible plan which coordinates the location and timing of new development with the provision of infrastructure by government agencies, private utilities, and other sources.*
>
> ***OBJECTIVE 2.1: DEVELOPMENT LOCATION.*** *Contiguous and compact growth patterns will be promoted through the rezoning process to contain urban sprawl, minimize energy costs, conserve land, water, and natural resources, minimize the cost of services, and prevent development patterns where large tracts of land are by-passed in favor of development more distant from services and existing communities.*
>
> ***OBJECTIVE 2.2: DEVELOPMENT TIMING.*** *Direct new growth to those portions of the future urban areas where adequate public facilities exist or are assured and where compact and contiguous development patterns can be created. Development orders and permits (as defined in Section 163.3164(7), F.S.) will be granted only when consistent with the provisions of Sections 163.3202(2)(g) and 163.3180, F.S. and the concurrency requirements in the Land Development Code.*

The Property is located along a unique stretch of Daniels Parkway – the *only* property abutting Daniels Parkway with a Non-Urban future land use. All other properties abutting Daniels Parkway are within Future Urban land use categories. The request utilizes the map and text amendments to establish a density (1.3 DU/AC) which is less than the existing surrounding residential developments and provides a transition between the exiting communities within the Future Urban land use categories, the 2 to 5 acre residential lots to the east, and undeveloped lands to the south. The proposed text amendment will promote the establishment of a master planned mixed use community through the concurrent planned development. The master concept plan clusters the residential density on the Property in a pattern that is consistent with the other properties within Urban FLU categories along Daniels Parkway and the compatible with estate residential lots to the east.

Compatibility – Southwest Florida International Airport
The future development to occur on the Property will be located in an area with supporting urban services, access to two arterial roadways and provide variety in the type of housing as well as commercial and light industrial uses consistent with Lee Plan Goal 5 Residential and Goal 6 Commercial. As part of the companion mixed use planned development, the requested 1,600 dwelling units and 350,000 square feet of commercial uses meets the threshold requirements for a Development of County Impact and requires a planned development rezoning. A concurrent mixed use planned development (MPD) has been submitted with the requested comprehensive plan amendments consistent with Policies 5.1.1 and 6.1.3.

In consideration of the Property's location near the Southwest Florida International Airport, the Master Concept Plan demonstrates the proposed development has been clustered away from the airport property in consideration of Policy 5.1.2 and Objective 47.2 and its supporting policies.

> ***POLICY 5.1.2:*** *Prohibit residential development where physical constraints or hazards exist, or require the density and design to be adjusted accordingly. Such constraints or hazards include but are not limited to flood, storm, or hurricane hazards; unstable soils or geologic conditions; environmental limitation; aircraft noise; or other characteristics that may endanger the residential community.*

Goal 5 requires sufficient land be provided in appropriate locations on the Future Land Use Map to accommodate the projected population of Lee County. The requested amendments and concurrent planned development allow a suburban level of density consistent with the existing surrounding residential developments as well as the provisions of Policy 5.1.1. Additionally, no residential development is proposed within an area which is deemed a hazard or physically constraining – the residences proposed are to be located outside of Airport Noise Zone B consistent with Policies 5.1.2 and 5.1.4.

> ***OBJECTIVE 47.2:*** *DEVELOPMENT COMPATIBILITY IN VICINITY OF AIRPORTS. Evaluate development proposals for property located within the vicinity of existing or planned aviation facilities to ensure land use compatibility, to preclude hazards to aircraft operations, and to protect airport capacities and facilities.*
>
> ***POLICY 47.2.1:*** *Land use compatibility will be considered when reviewing development proposals within the vicinity of existing or planned aviation facilities.*
>
> ***POLICY 47.2.3:*** *Utilize the currently adopted Airport Master Plans, rules of Chapter 333, F.S., and the Southwest Florida International Airport FAR Part 150 Study, including updates, as a basis to amend the Lee Plan and the Land Development Code to prohibit development that is incompatible with the Southwest Florida International Airport or Page Field Airport; and, to ensure future economic enhancement consistent with Objective 47.1.*
>
> ***POLICY 47.2.5:*** *The safety of aircraft operators, aircraft passengers, and persons on the ground will guide the Port Authority's airports operations. Hazardous wildlife attractants within 10,000 feet of a Port Authority airport's Air Operations Area (AOA) will be avoided by minimizing and correcting any wildlife hazards arising from wetlands or water bodies in accordance with FAA AC 150/5200-33B, or as otherwise amended. Site improvements on or near the Port Authority's airports must be designed to minimize attractiveness to wildlife of natural areas and man-made features such as detention/retention ponds, landscaping, and wetlands, which can provide wildlife with ideal locations for feeding, loafing, reproduction and escape.*

The concurrent planned development includes a detailed master concept plan that identifies the various land use restrictions related to the Southwest Florida International Airport (SWFIA). These restrictions have been taken into account with the Schedule of Deviations, Property Development Regulations, and Schedule of Uses as well as the layout of the development footprint. Of particular note are the Airport Noise Zones and 10,000' Hazardous Wildlife Buffer. Since the initial submittal of the planned development, the proposed area for residential development has been significantly reduced, no residential lots occur in Noise Zone B, and several deviations are requested to promote compatibility with the lake bank slope construction and littoral plantings due to the proximity of the airport. Consistent with the requirements of the Land Development Code, the applicant acknowledges the property's proximity to the SWFIA and a required disclosures will be provided on plats and association documents. Finally, the applicant has drafted and submitted proposed conditions as part of the planned development requiring landscape plans at the time of Development Order to reflect 100% native vegetation and compliance with the Lee County Port Authority recommended planting list and outlining additional best management practices to be considered during construction to address site related improvements and residential construction. Given the commitments the applicant has made to continue to work with the Lee County Port Authority, to notify future property owners, and inform the County and LCPA of construction standards, the project is consistent with Policy 5.1.2., Objective 47.2 and Policies 47.2.1, 47.2.3 and 47.2.5.

The portion of the Property within the Central Urban FLU is proposed through the MPD to have 350,000 square feet of commercial uses and a multi-family unit types. This commercial/multi-family portion of the property is within the Lehigh Acres community planning area and is identified for intense community supporting commercial uses and has access to all urban services consistent with Policies 6.1.4 and 6.1.7. Locating these proposed uses at the intersection of Daniels Parkway and SR 82 will promote internal capture for the future residences of the proposed development as well as walkable services to the existing and future residential use of the surrounding area including the communities of Gateway, Timber Creek, Lehigh Acres and Shawnee Road. Consistent with Policy 6.1.5 providing commercial uses in a location east of I-75 within Lehigh Acres will reduce vehicular trips heading west past I-75 for goods and services.

The Property's eastern boundary is adjacent to existing estate residential lots along Shawnee Road the Lee Plan seeks to protect this community from external impacts via Policy 33.2.1.

> ***POLICY 33.2.1:*** *Existing acreage subdivisions are shown on Map 2-D. These subdivisions should be protected from adverse external impacts.*

Future development of the Property is proposed to utilize the Sandstone Aquifer for irrigation wells to prevent adverse impacts to the nearby existing residential wells. A Sandstone Aquifer monitoring well has been installed across Daniels Parkway on the Timber Creek property and the applicant has agreed to a second monitoring well on the Daniels South property. Groundwater level readings will be taken from each well. When combined with the existing USGS Sandstone Monitoring well L-729, Lee County will have significant data to monitor groundwater levels and ensure the proposed development has no negative and adverse impacts to the existing subdivisions relying upon wells.

The existing monitoring of the Sandstone Aquifer at Timber Creek demonstrates groundwater elevation levels are increasing with the onset of the rainy season. Therefore, while Sandstone Aquifer groundwater levels in certain areas of Lee County have been impacted due to over extraction, the area in which the subject property is located appears to have significantly better water resource conditions.

It is important to note that the nearest irrigation well is approximately 3,000 feet (0.6 miles) from Lehigh Acres. Additionally, the irrigation system is proposed to combine the use of surface and groundwater sources to reduce overall reliance on groundwater supplies, consistent with Policy 33.2.1. As a result of this design, the overall use of groundwater is anticipated to be greatly reduced, and at times intermittent to nonexistent, since the primary source of irrigation supplies is stormwater. The irrigation demands used in a groundwater modeling analysis were based on a 1-in-10 drought frequency, i.e., drought conditions and assumes zero surface water quantities being derived from the project's stormwater wet detention lakes, a condition considered virtually impossible since it is predicated upon the wet detention lakes being completely empty for a duration of 90 days; these assumptions are considered highly conservative. Despite these conservative assumptions, the modeling indicates that the maximum month (dry season) drawdown from the operation of the irrigation running continuously for 90-days, with no recharge, is less than 1 foot at the project's eastern property boundary. *As a result, there are no adverse impacts anticipated to occur to nearby existing legal users.*

It is expected that a Water Use Permit (WUP) will be requested from the South Florida Water Management District (SFWMD) meeting the criteria of Chapter 373.223(1) Florida Statutes. This section of Statute establishes that WUP applicants must demonstrate any requested use of water is reasonable and beneficial and will not interfere with any existing legal use of water and is consistent with the public interest. Therefore, adverse interference to existing Sandstone Aquifer users will not be authorized.

Surface Water Management

The Property will have a centralized surface water management system that takes into account the existing natural features. Restoration of these features is proposed to promote interconnectivity and address the impacts of on-going agricultural activities on-site.

> ***GOAL 60:*** *COORDINATED SURFACE WATER MANAGEMENT AND LAND USE PLANNING ON A WATERSHED BASIS. To protect or improve the quality of receiving waters and surrounding natural areas and the functions of natural groundwater aquifer recharge areas while also providing flood protection for existing and future development.*
>
> ***POLICY 60.1.1:*** *Require design of surface water management systems to protect or enhance the groundwater.*
>
> ***POLICY 60.1.2:*** *Incorporate, utilize, and where practicable restore natural surface water flowways and associated habitats.*

POLICY 60.1.3: *Examine steps necessary to restore principal flow-way systems to assure the continued environmental function, value, and use of natural surface water flow-ways and associated wetland systems.*

The Property's existing conditions has created a hydrological separation between the lands west of the basin divide (internal farm road) making it an orphan from the balance of the DR/GR. Natural flows from the west also appear constrained from Daniels Parkway. In contrast to the historical imagery of the Property from the 1950s, Lee County's Historic Flowways Map indicates historic flow-way connections existing internal to the property. Due to the Property's location proximate to the Southwest Florida International Airport the creation of additional wetland habitat to restore the historic flowway identified by Lee County cannot be accommodated. To provide an interconnection between the two watershed basins as identified on the historic flowway map, an underground physical infrastructure improvement is proposed as part of the companion mixed use planned development. A 24-inch buried piped connection is proposed to interconnect the two on-site watershed basins and associated wetlands. While not a natural flowway, the proposed improvements take into account the unique conditions of the property to achieve the overall objective of interconnecting wetlands, re-establishing historic flow patterns across the property and ensuring no adverse impacts to adjacent properties will occur, (compared to existing conditions) and is consistent with Objective 60.1 and Policies 60.1.1, 60.1.2 and 60.1.3.

OBJECTIVE 60.3: *CRITICAL AREAS. The Six Mile Cypress Basin (as defined in Chapter 10 of the Land Development Code) and the Density Reduction/Groundwater Resource land use category are both identified as "critical areas for surface water management." The county will maintain existing regulations to protect the unique environmental and water resource values of these areas.*

A surface water quality monitoring program is proposed to ensure that surface water entering and exiting the future development meets all SFWMD ERP guidelines as well as all applicable requirements of Chapter 62-302, FAC. The program includes a single set of background samples after the completion of the surface water management lakes, three sampling events during the wet season, and continuous monitoring for 5 years. Monitoring is proposed to be discontinued after 5 years if surface water quality is demonstrated as being consistent with State standards. An annual report summarizing all monitoring activity will be provided by March 1 of each year. The proposed conditions included in the concurrent planned development outline the timing of the sampling, the parameters to be tested during sampling and the requirement for continuous monitoring for 5 years. Additionally all data will be provided to Lee County Division of Natural Resources in electronic format for utilization in larger countywide studies. Additional coordination is expected through the review of the requested comprehensive plan amendments and planned development applications to ensure the project's consistency with Objective 60.3.

GOAL 61: *PROTECTION OF WATER RESOURCES. To protect the county's water resources through the application of innovative and sound methods of surface water management and by ensuring that the public and private construction, operation, and maintenance of surface water management systems are consistent with the need to protect receiving waters.*

POLICY 61.1.6: *When and where available, reuse water should be the first option for meeting irrigation needs of a development. Where reuse water is not available, surface water or low quality groundwater should be utilized for irrigation. All other potential water sources must be eliminated prior to selecting potable water as the sole source for meeting the irrigation needs of a development. New developments will coordinate with county staff regarding the source of irrigation water.*

Reclaimed water lines are not available in proximity to the Property. Therefore, a mix of surface water from the on-site management system and supplies from the confined Sandstone Aquifer are proposed to be utilized consistent with Objective 61 and Policy 61.16. Additionally, the Draft Enhanced Lake Monitoring Plan outlines a proposed Water Quality Monitoring program to ensure that surface water entering and leaving the subject property meet State standards and protect receiving waters consistent with Goal 61.

Lehigh Acres Community Plan

The Lehigh Acres Community Plan is outlined by Goal 25; establishing the future vision for the entire community of Lehigh Acres, including the 84.5 acres of the Property within the Central Urban FLU at the intersection of Daniels Parkway and SR 82. The concurrent Mixed Use Planned Development proposes 350,000 square feet of commercial uses and multi-family residential unit types to be located within this area further fostering the development of a vibrant commercial area consistent with Goal 25.

GOAL 25: *LEHIGH ACRES COMMUNITY PLAN. Ensure that continued development and redevelopment converts this largely single use, antiquated pre-platted area into a vibrant residential and commercial community consisting of: safe and secure single family and multi-family neighborhoods; vibrant commercial and employment centers; pedestrian friendly mixed use activity centers and neighborhood nodes; and, adequate green space and recreational opportunities.*

OBJECTIVE 25.1: *SPECIALIZED MIXED USE NODES. To create mixed use nodes that contribute the uses needed to support the Lehigh Acres Community Plan area shown on Map 1, Page 7.*

POLICY 25.1.2: *New development and redevelopment are encouraged to integrate a mixture of at least two or more varied uses, such as retail, office, residential, or public. All developments within the Specialized Mixed Use Nodes must be consistent with Table 1(c).*

POLICY 25.1.3: *In order to promote a sustainable urban form, these areas are expected to develop at the higher end of the density and intensity ranges, including bonus density.*

POLICY 25.1.4: *Developments in these areas are encouraged to share required features such as parking, stormwater detention and management areas, open space and other civic areas.*

POLICY 25.1.8: *Establish comprehensive stormwater management areas within the Specialized Mixed Use Nodes to achieve an efficient use of property.*

The potion of the Property within Lehigh Acres is also within the Specialized Mixed Use node that has been designated for the property. The companion Master Concept Plan demonstrates a higher concentration of both density and intensity within the node consistent with Policies 25.1.2 and 25.1.3. The master concept plan demonstrates shared features such as unified parking, stormwater management areas, and open space which is consistent with policies 25.1.4 and 25.1.8. The stormwater management lakes proposed within the Lehigh Acres community planning area will be interconnected with the larger system in the Southeast Lee community planning area. The conclusions of the required integrated model confirm the proposed project "will attenuate the 25-year, 3-day rainfall event within the proposed onsite water management system and reduce peak runoff discharge rates from the project limits." As a result of reducing the peak runoff rate, downstream properties will receive surface water flow at a slower rate, reducing the potential of flood conditions and demonstrating consistency with the DR/GR Future Land Use and the Lehigh Acres community planning area.

The Lehigh Acres community plan further breaks down the mixed use nodes into types. The 84.5 acres of the Property in Central Urban is within a Community Mixed Use Activity Center demonstrated on Lee Plan Map 2-B and outlined by Objective 25.3 and its supporting policies.

OBJECTIVE 25.3: *COMMUNITY MIXED USE ACTIVITY CENTERS. To provide the uses needed to support all of the Lehigh Acres Community Plan area including: residential; public and private education; live-work; retail; office; medical; entertainment; light industrial; commercial/public parking; parks; and, other civic uses.*

POLICY 25.3.1: *Identify those areas within Lehigh Acres that have sufficient vacant or undeveloped land to accommodate the community-scale development that will balance the land uses and provide opportunities to diversify the economic base of the community.*

POLICY 25.3.2: *Future developments that provide employment opportunities mixed with facilities offering goods and services that support the wider community are encouraged.*

The area will feature a mixture of commercial uses which are identified in the companion schedule of uses which furthers the intent of Objective 25.3. Additionally, the Property is one of only a handful of large properties in Lehigh Acres with a single entity owner; and therefore one of the few areas able to accommodate community-scale development that will diversify the community's economic base consistent with Policies 25.3.1. and 25.3.2.

OBJECTIVE 25.8: *TRANSPORTATION, PARKING, AND TRAFFIC CIRCULATION. To improve transportation, parking, and circulation within the Lehigh Acres Community Plan area.*

POLICY 25.8.2: *All connections to SR 82 must be consistent with the Florida Department of Transportation Corridor Access Management Plan for SR 82.*

POLICY 25.8.7: *New single-family model homes are prohibited within 300 feet of arterial and collector roads.*

The concurrent planned development demonstrates consistency with the transportation policies of the Lehigh Acres community plan outlined by Objective 25.8 and its supporting policies. The Master Concept Plan (MCP) features a concentration of commercial uses at the intersection of SR 82 and Daniels Parkway significantly reducing the need for residents of the surrounding area to travel further west to meet their commercial needs. No access to SR 82 is proposed. Connections to Daniels Parkway are consistent with the Corridor Access Management Plan. Therefore the proposed site design is consistent with Policy 25.8.2. The proposed MCP also demonstrates no single family residential within the Lehigh community ensuring consistency with Policy 25.8.7.

OBJECTIVE 25.9: *SEWER AND WATER. Expedite the staged extension of water and sewer systems, connect lots previously served by on-site septic and wells, and discourage additional development that is reliant upon on-site well and septic systems.*

POLICY 25.9.2: *Direct new development and redevelopment in Lehigh Acres to areas that can be reasonably expected to receive urban services and infrastructure during the planning horizon.*

The 84 acres of the subject property within Lehigh Acres is already within the Lee County Utilities Service Area for central water and sewer service consistent with Objective 25.9 and 25.9.2. The proposed map amendments include a request to extend this service area to the remainder of the property to establish the entire future community on central water and sanitary sewer service.

POLICY 25.10.1: *Lee County will encourage on-site preservation of indigenous plant communities and listed species habitat. Any required mitigation will be of similar habitat, and provided, whenever possible, within the Lehigh Acres Community Plan area. Development must also be consistent with Goal 77 and Objective 77.3.*

The portion of the property within Lehigh Acres has been cleared and utilized for agricultural activities. The Protected Species Survey submitted with the concurrent planned development demonstrates the northern portion of the property is disturbed lands, ditches, berms and cow pond. Therefore there are no on-site indigenous plant communities or listed species habitat on-site within the Lehigh Acres Community Planning Area to preserve. However, there are indigenous plant communities and listed species habitat within the Southeast Lee Community Planning Area, of which 55% is proposed to be preserved and restored. The restoration activities proposed will promote the historic flow of surface water while also addressing historical impacts associated with decades of historical agricultural ditching and draining. The Master Concept Plan for the concurrent planned development does commit to providing 10% open space at the time of local development order within the Lehigh Acres community planning area ensuring consistency with Goal 77 and Objective 77.3.

Transportation

The Property is adjacent to Daniels Parkway and SR 82. Recently this intersection was improved with a continuous flow intersection and Daniels Parkway is subject to a Continuous Access Management Plan. The transportation analysis submitted to support the requested comprehensive plan amendments included long term (20-year horizon) and short term (5-year horizon) impacts of the proposed development.

> ***OBJECTIVE 37.1: GENERAL STANDARDS.*** *Monitor non-regulatory LOS standards outlined in Policy 95.1.3. on county and state transportation facilities within Lee County. Cooperate with municipalities on the facilities maintained by Lee County within the municipalities and with FDOT on state transportation facilities.*
>
> ***POLICY 37.1.1:*** *Lee County will develop multi-modal service volumes (capacities) based on local Lee County conditions for determination of the LOS of transportation facilities.*

SR 82 and Daniels Parkway will not fall below the recommended minimum acceptable Level of Service thresholds and therefore is consistent with Objective 37.1 and Policy 37.1.1.

> ***OBJECTIVE 39.2: TRANSPORTATION AND LAND USE PLANNING.*** *Develop and maintain transportation planning tools and strategies to coordinate land use development with planned transportation facilities appropriate to future urban areas, future suburban areas, or future non-urban areas as defined. Include road designs and street modifications to accommodate significant truck traffic on freight corridors identified in the MPO Freight Mobility Study and for transit, bicycle and pedestrian facilities where indicated on the transportation map series and Map 4-E, Lee County Greenways Master Plan.*
>
> ***POLICY 39.2.1:*** *Future urban areas will have a balanced emphasis on automobile, freight, transit, pedestrian, and bicycle modes of transportation by:*
>
> - *Promoting safe and convenient street, bicycle and pedestrian facilities connectivity for easy access between modes.*
> - *Utilizing short block lengths within urban Mixed Use Overlay areas.*
> - *Providing transit service within an emphasis on urban Mixed Use Overlay areas.*
> - *Incentivizing infill and redevelopment, mixed uses, pedestrian friendly design, and higher density in areas served by transit.*
> - *Providing sidewalks along all roads and streets in urban areas, except where prohibited.*
>
> ***POLICY 39.2.3:*** *Future non-urban areas are planned primarily for motor vehicle transportation by:*
>
> - *Limiting transit service and provision of separate pedestrian facilities in the Mixed Use Overlay areas unless otherwise stated in the LDC.*

- *Accommodating bicycle usage on bicycle lanes, paved shoulder or multi-use recreational trail facilities.*

The Property is within a Future Urban and a Future Non-Urban land use location at the intersection of two major arterial roadways in Lee County, Daniels Parkway and State Road 82. The traffic analysis demonstrates adequate capacity to serve the proposed development. Sidewalks are provided along the SR 82 frontage and will be provided consistent with LDC Chapter 10 along Daniels Parkway during construction of the residential development. The concurrent planned development will demonstrate internal roadway cross sections consistent with LDC Chapter 10 with pedestrian facilities internal to the proposed development for connectivity across the 1,233 acre property. The future proposed development will be consistent with Objective 39.2 and Policies 39.2.1 and 39.2.3

> ***POLICY 39.2.5:*** *Establish connection separation standards in the LDC based on functional classification and future urban, suburban, or non-urban area designation. Designate by Board action, certain roadways as "controlled access," to which permanent access points are restricted to locations established and set by a specific access plan adopted by Board resolution.*

The Property fronts on SR 82 (which is a controlled access facility) and Daniels Parkway. The concurrent planned development will demonstrate access to the proposed subdivision consistent with the appropriate locations for each roadway and Policy 39.2.5.

Daniels Parkway South
Comprehensive Plan Amendment
Proposed Text Amendment

March 9, 2023

POLICY 33.2.2: Map 2-D identifies future locations for Mixed-Use Communities where development rights can be concentrated from large Southeast Lee County tracts into Traditional Neighborhood Developments <u>or contiguous Lehigh Acres Community Mixed-Use Activity Center clustered development according to Policy 33.2.2.3 below</u>. The preferred pattern for residential development is to cluster density within Mixed-Use Communities along existing roads and away from Future Limerock Mining areas.

1. Southeast Lee County Mixed-Use Communities must be concentrated from contiguous property owned under single ownership or control. Residential density is calculated from the upland and wetland acreage of the entire contiguous Southeast Lee County property. Increases in residential densities may be approved through incentives as specified in the LDC for permanent protection of indigenous native uplands on the contiguous tract (up to one extra dwelling unit allowed for each five acres of preserved or restored indigenous native uplands) and through the acquisition of TDUs from TDR sending areas within Southeast Lee County as provided in Objective 33.3.

    a. The maximum gross density is 5 dwelling units per acre of total land designated as a Mixed-Use Community when TDUs are used.

    b. Properties that concentrate development rights and/or use TDUs created from Southeast Lee County within the Mixed-Use Communities identified on Map 2-D will be allowed to develop using permitted uses and the property development regulations for the C-2A zoning district.

2. Contiguous property under the same ownership may be developed as part of a Mixed-Use Community, provided it does not extend more than 400 feet beyond the perimeter of the Mixed- Use Community as designated on Map 2-D.

3. Central water and wastewater services are required to develop a Mixed-Use Community.

4. Commercial uses developed as part of a Mixed-Use Community will be consistent with Policy 33.2.5 and will not exceed the allowable total square footage for commercial uses in Southeast Lee County.

5. <u>Southeast Lee County property adjacent to and including a Lehigh Acres Mixed-Use Activity Center may sum density across the entire property. Density may be allocated across the property regardless of the underlying future land use category when:</u>
    i. <u>the project is developed as a Planned Development;</u>
    ii. <u>the project develops with central water and wastewater services;</u>
    iii. <u>a minimum of 60 percent open space is provided; and</u>
    iv. <u>the number of dwelling units for the entire project does not exceed the sum of the allowable dwelling units from all land use categories.</u>

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Daniels Parkway South
Comprehensive Plan Amendment
Public Facilities Impact Analysis – Exhibit M14
Existing and Future Conditions Analysis – Exhibit M16

June 10, 2022

The Property for the proposed development is located in Future Urban and Non-Urban Area. More specifically an amendment from Central Urban to Intensive Development is proposed with the remainder of the property staying within the DR/GR and Wetlands categories. However, the property is within an area of the County that has been designated for urban services. A majority of the urban services are adjacent to or within the vicinity of the subject property and available to serve the property and its residents/occupants. Copies of all Letters of Availability from each service provider are attached to the application for reference. The impacts of the requested amendments on public facilities are evaluated by comparing the existing development to the proposed development per the comprehensive plan amendments and concurrent rezoning.

Utilities (Public sewer and water)
The subject property is partially within the service area for Lee County Utilities and a Letter of Availability has been included in the application materials to demonstrate adequate capacity is available to serve the proposed development and will be provided by the Corkscrew Water Treatment Plant and Gateway Water Treatment Plant. A map amendment is requested to extend the Lee County Utilities Service area across the entire property to provide central water and sewer services to the proposed development. While the proposed amendments would increase the available density on the subject property, the requested commercial square footage is currently permissible within the existing Central Urban FLU.

Per Lee Plan Policy 95.1.3, an average treatment and disposal capacity of 250 gallons per day per Equivalent Residential Connection (ERC) for potable water is required. The 2021 Concurrency Report indicated that Potable Water is available at a capacity of 314 gallons per day per ERC; which exceeds the required LOS. The 2021 Concurrency Report also confirms that all wastewater systems are operating within capacity and meet the LOS standard for unincorporated Lee County.

Potable Water
Existing Maximum Residential per Central Urban, DR/GR and Wetlands FLUs:
933.4ERC X 250 GPD = 233,350 GPD

Proposed Impact of Residential within Overlay:
1,859ERC X 250 GPD = 464,750 GPD

Sanitary Sewer
Existing Maximum Residential per Central Urban, DR/GR and Wetlands FLUs:
933.4 ERC X 200 GPD = 186,680 GPD

Proposed Impact of Additional Residential within Overlay
1,859 ERC X 200 GPD – 371,800 GPD

Public Safety (Police, Fire, and EMS)
The subject property is able to be served by multiple providers for Emergency Medical Services, Fire and Police. Lee County Emergency Medical Services is the primary EMS transport for the subject property. However, the property is also within the Lehigh Acres Fire District which provides medical transport as well. Both service providers would work together to serve the subject property. Lee County EMS does not have a resource in this area, but the concurrent planned development includes land area for future expansion of service.

The subject property is also served by two Fire Districts, the South Trail and Lehigh Acres Fire Districts. The South Trail Fire District would serve the southern portion of the property from Station 63 located at 5531 Halifax Ave. The Lehigh Acres Fire District would serve the northern portion of the property from the located at 636 Thomas Sherwin Ave. S. The agency is capable of providing services to the subject property as it falls within the boundaries of the fire district.

The subject property is located wholly within the service area for the Lee County Sheriff. The Central District Station located at 14750 Six Mile Cypress Parkway is responsible for providing service to the subject property.

Schools
The subject property is within the Lee County School District East Zone, E2. According to the Letter of Availability from the Lee County School District the proposed development will generate 475 school-age children. There is capacity within the entire school district to accommodate the additional children.

Any deficit created at the middle school level will be addressed via the opening of the new LAMS campus (middle school MM) in the 2021-2022 school year which will add 1,210 seats of permanent capacity.
1,210 [proposed new seats in MM] – 1,108 [existing deficit] = 102 seats [capacity].

Any deficit created at the high school level will be addressed via the opening of the Gateway High School campus during the 2021-2022 school year which will add 1,475 seats in additional capacity.
1,475 [proposed new seats at Gateway High] – 469 [existing deficit] = 1,006 seats [capacity]

Solid Waste
The property is within the Lee County Solid Waste Franchise and is served through Lee County's franchised hauling contractor. Disposal of waste generated from the subject property will be accomplished at the Lee County Resource Recovery Facility and the Lee-Hendry Regional Landfill. Service is available to the subject property and plans have been established that target growth and long term disposal capacity for this particular area.

LOS Standard = 7 lbs/day/capita OR 990,405 tons/year
Current Capacity = 7.9 lbs/day/capita OR 1,134,667 tons/year

Existing Maximum Residential Impact per DR/GR & Wetlands FLUs
88.9 dwelling units X 2.64 persons per unit = 234.69 persons
234.7 persons X 7lbs./day = 1,642.8 lbs./day
1,642.8 lbs./day X 365 days = 599,648.28 lbs./year
599,648.28 lbs./year = 299.8 tons/year

Proposed Impact of Additional Residential per Overlay
1,600 dwelling units X 2.64 persons per unit = 4,224
4,224 persons X 7lbs./day = 29,568 lbs./day
29,568 lbs./day X 365 days = 10,792,320 lbs./year
10,792,320 lbs./year = 5,396.16 tons/year

Surface Water/Drainage Basins
The regulatory standards described in Policy 95.1.3(4)(c) require new development to be designed to South Florida Water Management District (SFWMD) standards to detain or retain excess stormwater to match the predevelopment discharge rate for the 25-year, 3-day storm event. Additionally, it requires that the stormwater system must prevent the flooding of designated evacuation routes on the Lee Plan Map 15 from the 25-year, 3-day storm event for more than 24 hours. (The Lee Plan no longer has a Map 15 and the current evacuation routes are identified in Lee Plan Map 3J which identifies both Daniels Parkway and SR 82 as being evacuation routes.) The proposed text amendment and concurrent planned development will be consistent with the requirements of Lee Plan Policy 95.1.3 (including Map 3J) and an ERP permit is required to be obtained for the proposed development prior to construction commencement.

Parks, Recreation, and Open Space
The non-regulatory standards described in Policy 95.1.3(6)(a & b) require six (6) acres of developed regional park land open for public use per 1,000 total seasonal county population for all of Lee County and .8 acres of developed community park land open for public use per 1,000 unincorporated Lee County permanent population.

Regional Parks Level of Service
867,000 [seasonal county population] X (6 acres/1,000 population) = 5,202 acres
The 2020 Lee County Concurrency Report indicates that there are a total required 5,202 acres of regional parks and that the available capacity lists 7,051 acres of regional parks therefore there is available capacity to meet the adopted LOS standard.

Additionally, the 2021 Concurrency Report states that the existing inventory meets the regional park level-of-service standard in the County for the year 2020 and will continue to do so at least through the next five years of the capital improvement plan (CIP).

Community Parks Level of Service
361,315 [permanent unincorporated county population] X (0.8 acres/1,000 population) = 289 acres

The 2021 Lee County Concurrency Report indicates that there are a total required 289 acres of community parks and that the available capacity lists 832 acres of community parks therefore there is available capacity to meet the adopted LOS standard.

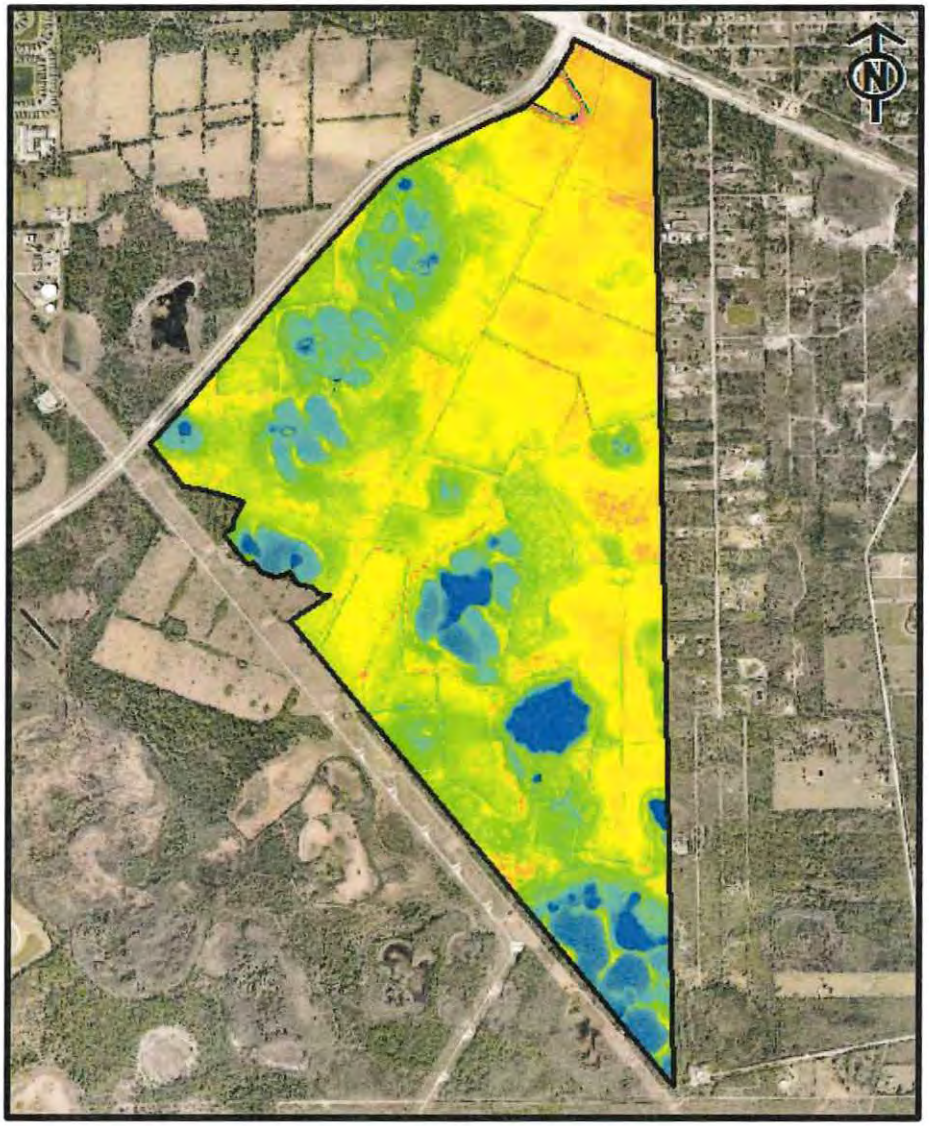
Additionally, the 2021 Concurrency Report states that the existing inventory meets the regional park level-of-service standard in the County for the year 2020 and will continue to do so at least through the next five years of the capital improvement plan (CIP).

Ground and Surface Water Resources Due Diligence

Daniels Road South – Lennar Corporation

Lee County, Florida

June 2022



Progressive Water Resources

Integrated Water Resource Consultants

6561 Palmer Park Circle Suite D Sarasota, Florida 34238 (941) 552-5657

Executive Summary

Lennar Corporation is interested in the potential purchase and subsequent development of a property, herein referred to as "Daniels Road South", located south of State Highway 82 (Immokalee Road) and east of Daniels Parkway, approximately five miles east of Interstate 75 in Lee County, Florida. The property is northeast of the Southwest Florida International Airport and is bounded on the south by a Florida Power & Light (FP&L) powerline easement. According to the Lee County Property Appraiser, the subject property is owned by Jared F. Holes, Trustee of Land Trust Number 5018. The proposed project area encompasses approximately 1,215 acres, as indicated in the preliminary conceptual layout provided by Morris Depew Associates, Inc. An analysis of recent aerial imagery indicated that approximately 495 acres (approximately 41 percent) of improved pasture, currently utilized for livestock grazing, exist within the project boundary. The subject property has been used for farming over the last several decades and is bisected by numerous agricultural ditches and historic farm roads.

The remainder of the property is composed of pine and oak forest, palmetto prairie, hydric pine, wet prairies and cypress heads. Onsite observations indicate some areas the property are heavily infested with invasive plants, namely Melaleuca and Brazilian Pepper. The northern section of the property includes a raised earthen berm, associated with historic military training exercises, that was subsequently bisected by the construction of Daniels Parkway. Similar earthen berm features were located on Lennar's Timber Creek property, located west of Daniels Parkway. Approximately 1,132 acres (93 percent) of the subject property is located within Lee County's Density Reduction/Groundwater Resource (DR/GR) area. The remaining 83 acres, outside of the DR/GR and south of State Highway 82, are within the Central Urban Land Use Category.

The entirety of the subject property is within the South Florida Water Management District (SFWMD) and currently has a Water Use Permit (WUP), No. 36-08396-W, for livestock water supply. One of the WUP's authorized withdrawals, a single 6-inch diameter well [District Identification (DID) No. 3], is located on the northern section of the site. DID No. 3 is currently capped and appears to have no pumping infrastructure, as observed during recent site investigations. Evidence observed onsite indicated that the well has been historically used to fill an excavated cattle-watering hole adjacent to the raised earthen berm referenced above.

Lennar Corporation is considering transitioning the site into a residential development, and a preliminary conceptual layout provided by Morris Depew Associates, Inc. indicates a desire for single-family and multi-family residences, residential amenity areas, and commercial development. The conceptual plan, along with the assumption that 50 percent of the plan's single-family, multi-family, amenity, and commercial areas will be landscaped, indicates that approximately 162.75 acres would need to be irrigated. Using the estimated landscaped area, SFWMD's irrigation allocation spreadsheet yields a demand of approximately 209.03 million gallons per year, or approximately 572,700 gallons per day. The current permit for livestock water supply authorizes a total of 1.31 million gallons per year, however only one (1) of the WUP's three (3) wells is located within the proposed project boundary. Consequently, one-third of the permitted

quantities, or 0.43 million gallons per day, are allocated to the project location. Therefore, a significant portion of the proposed landscape irrigation quantities will be considered new quantities and will require groundwater flow modeling to ascertain if the requested irrigation use will adversely impact existing legal users, largely composed of nearby domestic self-supply wells.

In order to meet the proposed irrigation demands it may be necessary to seasonally offset groundwater supplies with an integrated ground and surface water irrigation system, whereby groundwater quantities would be used to supplement surface water supplies within dedicated stormwater-irrigation supply ponds. Irrigation quantities could then be withdrawn from the ponds by a centrally-controlled irrigation system and used to irrigate the proposed development. The conjunctive use of both ground and surface water supplies could significantly reduce groundwater withdrawals and reduce impacts to nearby wells, particularly when adequate surface water supplies are available (i.e., post-rainy season).

The subject property exhibits generally higher topographic elevations in the northern section of the site, near Highway 82, and is bisected by a historic, north-south trending farm road that constitutes the surface water divide between the Six Mile Cypress Sub-Watershed and Estero River Sub-Watershed. The western side of the site flows westerly and is therefore isolated from the balance of the DR/GR by the aforementioned basin divide and is further restricted by Daniels Parkway to the west. East of the basin divide, Lee County's Historic Flow-Ways Map indicates three (3) historic flow-way connections along the eastern and southeastern sections of the property. The map therefore depicts hydraulic connections between the eastern portion of the property and the balance of the DR/GR to the east and southeast.

Given that the subject property is within the DR/GR, requirements within the Lee Plan will necessitate the restoration or reconnection of historic surface water flow-ways, connections and features. However, an analysis of historical aerial photographs (1944 and 1958), National Resources Conservation Service soils data, and LiDAR Digital Elevation Model imagery of the historic flow-way connections does not appear to support the features as depicted on Lee County's Historic Flow-Ways map. It may be possible to use these combined data sources to collaboratively work with Lee County staff in order to more accurately depict historic flow-way connections to advantageously influence the level of hydraulic restoration necessary to support the desired residential and commercial development. It also may be possible to leverage the isolated, western portion of the property (west of the basin divide) to enhance restoration opportunities and help streamline the development entitlement process.

1.0 Introduction

Lennar Corporation is interested in the potential purchase and subsequent development of the Daniels Road South property, located south of State Highway 82 (Immokalee Road), east of Daniels Parkway and approximately five miles east of Interstate 75 in Lee County, Florida. More specifically, the site is located within Sections 8, 9, 16, 17 and 21, Township 45 South, Range 26 East and encompasses approximately 1,215 acres, of which approximately 495 acres (41 percent) are currently utilized as improved pasture. The project site has a long history of farming and has been used for agricultural purposes since the late

1950s. In addition, the northern section of the site was also part of a large World War II military training facility that constructed multiple triangularly-shaped bermed areas south of Highway 82. These features, along with those associated with historic farming operations, contribute to the highly-disturbed nature of the site.

As shown in **Figure 1**, the subject property is located within the DR/GR, or Density Reduction/Groundwater Resource land-use category, which was applied to Lee County's Comprehensive Plan (The Lee Plan) in 1990. In accordance with The Lee Plan, proposed Planned Developments within the DR/GR must demonstrate the protection, preservation and enhancement of groundwater resources and environmental (wetland) systems. The term "Groundwater Resource" was included in the land use category to emphasize the need to protect the County's Surficial Aquifer System (i.e., the Water Table Aquifer or shallow aquifer), particularly in regards to existing and future drinking water supplies. However, the DR/GR designation has been applied to areas which exhibit significantly different hydrogeologic characteristics, particularly near its boundaries.

Approximately 538 acres of the project site are located within the northwestern corner of the DR/GR, 594 acres are within wetlands and the remaining 83 acres are included in the Central Urban Land Use Category, as shown in **Figure 2**. Please note these areas were derived from the Lee County Future Land Use classification. It is important to note that a surface water basin divide bisects the subject property from north to south, with the western section of the property within the Six Mile Cypress Sub-Watershed and the eastern side within the Estero River Sub-Watershed, as shown in **Figure 3**. The boundary between these Sub-Watersheds roughly aligns with a historic, elevated farm road, as shown on **Figure 4**. Lennar is exploring the possibility of transitioning the property into a Planned Development, therefore it is critical to understand the property's past and current land use as well as associated water resource characteristics in order to ascertain the presumed difficulty of the entitlement process.

2.0 Property Setting

Prior to agricultural development, the subject property was predominately characterized as open rangeland and pine flatwoods, interspersed with shallow freshwater forested/shrub and emergent wetlands. Review of historic aerial photographs from 1944 indicate the site as undisturbed and exhibiting multiple isolated and semi-connected wetland features, as shown in **Figure 5.** Development of agricultural operations at the project site began in the early 1950s, as evidenced in the historic aerial photography provided in **Figure 6**, and featured the construction of several northeast-southwest and northwest-southeast oriented drainage ditches, as well as a historic elevated farm road (basin divide) that bisects the property in a north-south fashion. Such drainage features are typical of agricultural operations in south Florida as they expedite the removal of excess surface water and enable the cultivation of crops that are vulnerable to overly-saturated soils. Several historical connecting ditches are evident in onsite wetland areas and were presumably used to reduce standing water and further facilitate drainage. The existing onsite drainage ditches thereby reduce water table elevations and subsequently lower recharge potential. Depending on the ditch characteristics, such features can negatively impact nearby

environmental features (wetlands) and consequently the water resources of the DR/GR. A Florida Land Use Cover and Classification System (FLUCCS) map obtained from the SFWMD is provided as **Figure 7**.

The project site generally exhibits a flat topographic relief, with the highest naturally occurring land surface elevation of approximately 27 feet NAVD88 located on the northeastern portion of the property, immediately south of Highway 82. The lowest land surface elevations within the project boundary are located to the south and southeast and are associated with isolated wetlands at approximately 21 feet NAVD88. A Digital Elevation Model (DEM) produced by Lee County LiDAR data is included as **Figure 8** and portrays the gentle southeastern topographic gradient of the subject property. Although research indicates that detailed flood maps have not yet been produced for the project site, the Federal Emergency Management Agency's (FEMA) National Flood Hazard Map indicates that the property lies within Flood Zone X, as shown in **Figure 9**, which is defined as an area of minimal flood hazard. As shown on **Figures 5**, **6** and **7**, numerous shallow depressional and interconnected wetlands occur onsite which are further illustrated by the National Wetland Inventory (NWI) classified wetland locations included as **Figure 10**.

The subject property is located within the Immokalee Rise Physiographic Province, which has been described as a submarine shoal with weak relict shoreline features due to the low energy conditions that existed as the shoal emerged under receding sea levels. The location of the subject property within the Immokalee Rise Physiographic Province is illustrated on **Figure 11**. The lack of relict shoreline features contributes to the site's generally flat topographic expression. The site exhibits many different soil types with the predominant soil type identified as *Pompano Fine Sand* followed by *Immokalee Sand,* as shown on the soils map provided as **Figure 12**. The National Resources Conservation Service (NRCS) defines *Pompano Fine Sand* and *Immokalee Sand* both as very deep, very poorly-drained soils commonly found in flatwoods, low broad flats and, to a lesser extent, depressions, drainageways and flood plains. These soils exist primarily within the wetland features depicted in **Figure 10**.

The subject property is located within the State of Florida's Water Body Identification (WBID) No. 3258C, as shown in **Figure 13.** A WBID represents a sub-watershed delineated by the Florida Department of Environmental Protection (FDEP) and is based on the United States Geological Survey (USGS) Hydrologic Use Code (HUC). Through evaluation of surface water quality data collected within WBID No. 3258C, the FDEP has determined that the WBID is verified impaired for Chlorophyll-a, which is associated with excessive algal growth and eutrophication, typically caused by excess nutrients. Given heightened concerns with surface water quality, the Chlorophyll-a impairment may require a net water quality improvement (i.e., nutrients are presumed as the causative agent) for the proposed development.

3.0 Existing Groundwater Resources

There are three (3) principal aquifer systems underlying the subject property: 1) the unconfined Surficial Aquifer System (SAS), 2) the confined Intermediate Aquifer System (IAS), and 3) the confined Upper Floridan Aquifer System (UFAS). Please note that, in order to simplify the nomenclature used in this report, the colloquial term "Water Table Aquifer" will be used interchangeably to describe the SAS, and the term

"Sandstone Aquifer" will be used to describe the upper producing unit of the IAS. In central Lee County, groundwater quality decreases rapidly with depth and potable supplies are generally found less than 300 feet below land surface (bls). Below these depths, groundwater becomes highly mineralized, saline, and is typically artesian. Consequently, groundwater is primarily withdrawn above a depth of 300 feet bls.

Suitable water quality for agricultural or residential irrigation at the project location is available from both the Water Table Aquifer and Sandstone Aquifer. Yield in the Water Table Aquifer is considered low and may only be acceptable for low volume livestock watering. As indicated on the SFWMD livestock-watering Water Use Permit included in **Appendix A,** the onsite 6-inch diameter well is believed to be finished into the shallow Water Table Aquifer. Please note that the well's depth has not been confirmed to definitively identify the aquifer system in which it penetrates. Since the well does not exhibit artesian flow, it can be surmised that it does not penetrate into the lower Intermediate Aquifer or underlying Floridan Aquifer Systems.

3.1 Surficial Aquifer System (Water Table Aquifer)

The unconfined SAS (Water Table Aquifer) originates at land surface, with its uppermost portion composed of approximately 8 to 17 feet of unconsolidated surficial deposits consisting of gray to dark-brown finely grained silty quartz sand with minor shell content. Below the surficial sands, thin discontinuous deposits of clayey sands can sometimes overlay the uneven upper contact of limestones associated with the Tamiami Formation. Consistent with the stratigraphic delineations in the Florida Geological Survey (FGS) Open File Report No. 37, the Tamiami Formation includes the Ochopee and Buckingham Limestone Members as well as the Pinecrest Sand Member.

In some areas of Lee County, sediments of the Tamiami Formation can be subdivided into "Upper" and "Lower" units that are separated by low permeability (i.e. clayey) sediments. When present, only the Upper unit is described as occurring within the Water Table Aquifer. Please note that review of Well Completion Reports and stratigraphic descriptions of cores, proximal to the property, from the Florida Geological Survey (FGS) does <u>not</u> indicate the presence of a consistent confining unit separating the Upper and Lower units of the Tamiami Formation.

Where present onsite, the sands and marls of the Tamiami Formation extend from approximately 17 to 30 feet bls, which is significantly thinner than the Formation's vertical extent found throughout the DR/GR areas located to the south and southeast (FGS Information Circular Report No. 103). Further indication of the differences of the geology onsite as compared to DR/GR areas located to the south and southeast is the lack of nearby active mining operations which excavate the thicker sequences of the upper Tamiami Formation's limestone to depths of approximately 100 feet below land surface (bls). These observations support the aforementioned contrast of the relatively thin nature of both the Tamiami Formation and the Water Table Aquifer at the project location as compared to the bulk of the DR/GR.

The limestones of the Tamiami Formation can serve as a major regional source of groundwater supply in Lee County due to its shallow depth and high transmissivity. Historically, agricultural operations and other water users have taken advantage of the ease at which water supplies can be developed in the near-surface Tamiami Formation when thick limestones are present. However, due to its relatively thin vertical extent onsite, groundwater withdrawals from the unconfined Water Table Aquifer are more likely to have a greater impact on wetlands and existing legal users than withdrawals from deeper sources. The proposed groundwater withdrawals which utilize the deeper, confined Sandstone Aquifer have been found to exhibit virtually no impact on Water Table Aquifer water levels and environmental systems and therefore provide protection to the shallow water resources of the DR/GR.

The Lee Plan's DR/GR Land Use Category also includes areas that have been designated as important recharge areas for the shallow Water table Aquifer. As shown on **Figure 14**, the reported recharge rate to the SAS is estimated to be between one and ten inches per year (Source: USGS/SFWMD report entitled *Recharge to the Surficial Aquifer System in Lee and Hendry Counties, Florida, 1995)*. However, given the existing onsite internal drainage ditches, the opportunity for recharge to the underlying SAS at the project location is considered relatively low. If residential and commercial development are pursued, the stormwater management system necessary for the new land use is anticipated to enhance recharge potential for the Water Table Aquifer.

3.2 Intermediate Aquifer System (Sandstone Aquifer)

Immediately beneath the Tamiami Formation are relatively thick sequences of low permeability clayey sediments that separate the Water Table Aquifer from the underlying Sandstone Aquifer. Based upon well construction reports and geological logs proximal to the project site, the top of the Sandstone Aquifer occurs at depths of approximately 70 feet. However, the extent of the sandstone unit appears to be highly variable, with thickness ranging from approximately 30 to 230 feet. Locally, the producing zone of the Sandstone Aquifer appears to occur between approximately 70 and 120 feet bls.

The Sandstone Aquifer is comprised of predominantly clastic sediments consisting of sandy limestone, cemented sands (sandstone), sandy dolomite and calcareous sands. These sediments are associated with the Peace River Formation of the Hawthorn Group (FGS Information Circular No. 103, 1986). Due to the occurrence of low permeability sediments separating the Sandstone Aquifer from the overlying Water Table Aquifer, the potential for groundwater withdrawals from the Sandstone Aquifer to produce drawdown in the Water Table Aquifer is substantially reduced as compared to those that would occur from direct Water Table Aquifer withdrawals. Due to the reduction in potential withdrawal-related impacts, the SFWMD prefers that new wells be completed into the Sandstone Aquifer in order to reduce or potentially eliminate drawdown upon wetland systems. It is important to note that records indicate that a majority of the residential domestic self-supply wells in Lehigh Acres and areas to the east are finished into the Sandstone Aquifer.

A flowing artesian well was identified within the FP&L easement, approximately 4,600 feet southeast of Daniels Parkway, and appears to also be used for livestock watering. However, uncontrolled (un-valved) artesian wells are forbidden by Chapter 373.209 Florida Statutes, which states "No owner, tenant, occupant, or person in control of an artesian well shall knowingly and intentionally allow the well to flow continuously without a valve or mechanical device for checking or controlling the flow." Given that the well is artesian indicates that it may penetrate into the lower IAS or possibly the underlying upper Floridan Aquifer.

4.0 Regulatory Authorizations

4.1 Water Use Permit No. 36-08396-W

Water Use Permit (WUP) No. 36-08396-W was issued by the SFWMD and relates to the project site. The WUP boundary extends both north and south of Daniels Parkway and encompasses approximately 2,775 acres, extending beyond the limits of the Daniels Road South project site as shown in **Figure 15**. WUP No. 36-08396-W was issued on June 2, 2015 to Jeff Flint of Flint Cattle to supply water to 300 head of beef cattle. The permit was corrected by SFWMD staff on March 31, 2017 to reduce permitted quantities, but retained the expiration date of June 2, 2035. As shown, the WUP area still covers the Timber Creek project to the west of Daniels Parkway and should be updated and modified to exclude that property since development activities have commenced. The total permitted quantities for WUP No. 36-08396-W are presented below in **Table 1**.

Table 1 – Summary of Permitted Quantities for WUP No. 36-08396-W

WUP Area	2,775 acres
Permitted Groundwater Quantities	1.31 million gallons (mg) annually / 3,589 gpd
Aquifer System	Water Table Aquifer

WUP No. 36-08396-W authorizes the use of groundwater for agricultural purposes from three (3) existing withdrawal facilities that reportedly utilize the Water Table Aquifer, with 6-inch casing diameters and reported total depths of approximately 35 feet bls. DID Nos. 2 and 3 are reportedly cased to 10 feet and Well No. 1 is cased to an unknown depth. One (1) of the three (3) groundwater wells associated with the WUP is located within the Daniels Road South project boundary (DID No. 3). DID No. 1 is located on the Timber Creek project to the west and is listed as the primary well, while DID Nos. 2 and 3 are categorized as standby withdrawals. Please note that the reported well construction characteristics (well casing and total depths) may not be correct based on field observations and the onsite well (DID No. 3) may actually extend into the underlying Sandstone Aquifer.

5.0 Preliminary Groundwater Flow Analysis

In order to preliminarily review possible groundwater withdrawal related drawdowns, a single layer groundwater flow model was run utilizing the same aquifer parameters as in the analyses performed for Timber Creek. The preliminary conceptual site plan provided as **Figure 16**, as well as an assumption that 50 percent of the plan's single-family, multi-family, amenity, and commercial areas will be landscaped, indicates that approximately 162.75 acres would need to be irrigated. Using the estimated landscaped area, SFWMD's Blaney-Criddle irrigation allocation spreadsheet yields a demand of approximately 209.03 million gallons per year, or approximately 572,700 gallons per day. A copy of the Blaney-Criddle output is provided in **Appendix B**.

Assuming a minimum of three (3) equally spaced Sandstone Aquifer irrigation wells and the maximum month irrigation quantity of 28.09 million gallons, as determined by the SFWMD's irrigation allocation spreadsheet, the total approximate drawdown resulting from the 90-day model simulation is provided in **Figure 17.** As shown, the predicted drawdown at the adjacent existing legal users to the east resulting from the total Maximum Month irrigation quantities is between approximately 1.25 and 1.5 feet and is not anticipated to cause adverse impacts. However, similar to Timber Creek, it is anticipated that Lee County may require monitoring of water levels to provide additional assurance that drawdowns will not be adverse.

6.0 Consistency with the Lee Plan

The proposed Planned Development, including single-family and multi-family residences as well as amenity and commercial areas, will require that a rigorous set of criteria be successfully met as outlined in the Lee Plan. In respect to this Ground and Surface Water Resources Due Diligence report, the aspect of flow-ways and flow-way connections appears to be a primary consideration. As shown on **Figure 18,** three (3) flow-way connections have been identified on Lee County's Major Flow-Ways Map: two (2) historic flow-way connections are identified on the eastern side of the property and a single (1) historic connection on the south side which transects the FP&L easement.

A detailed review of historical aerial imagery (1944 and 1958), NRCS identified soils, and LiDAR imagery does not support the connections as shown by Lee County. Historic aerials appear to indicate that the Lee County flow-way connections are inconsistent with identifiable sloughs or conveyances. In addition, the features appear to cross upland areas between wetlands. LiDAR imagery and soils data further discounts the presence of the flow-way connections identified by Lee County.

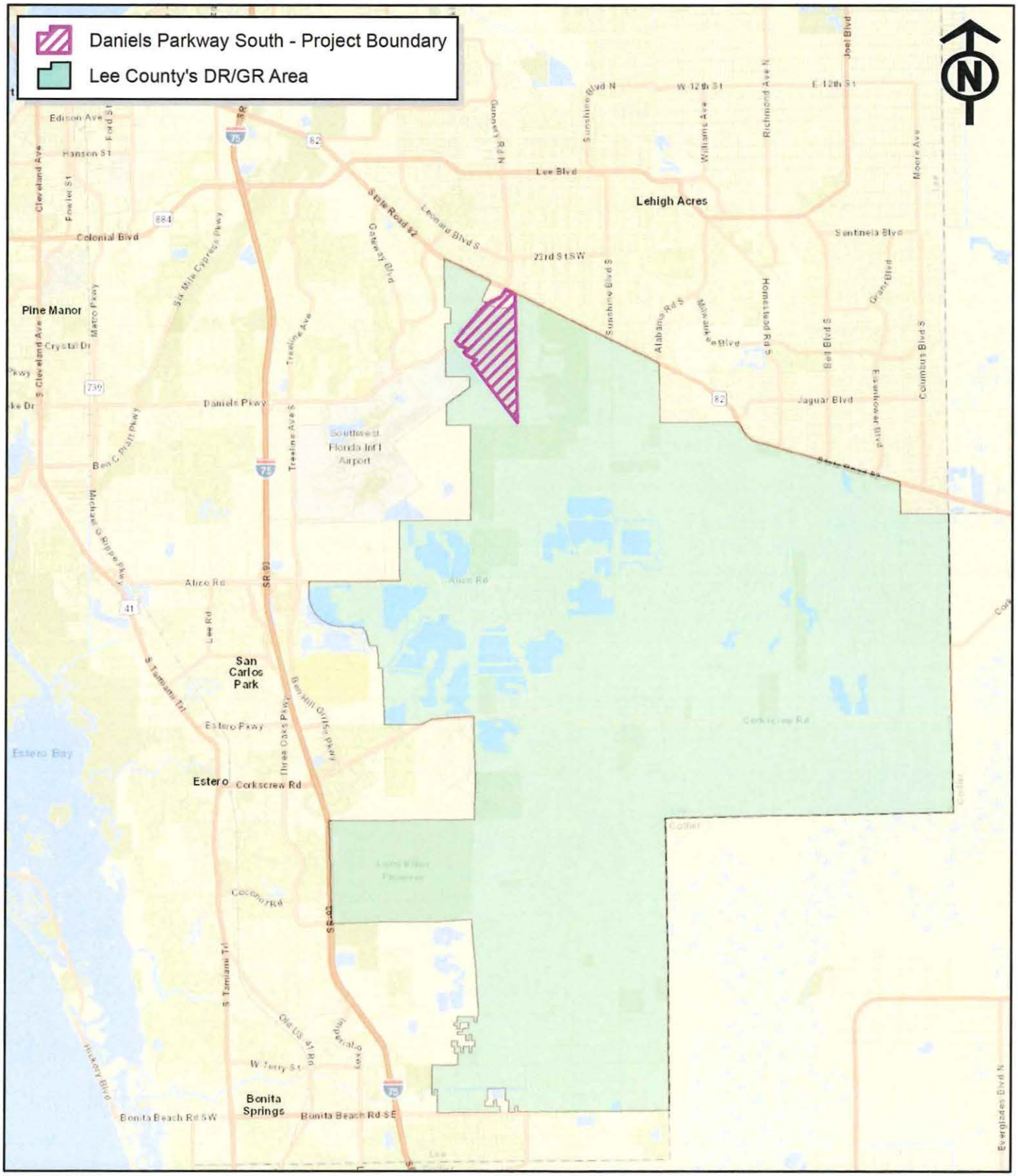
Given the Lee Plan's importance of re-establishing historic hydrologic connections in the DR/GR, it is recommended that basic discussions be timely initiated with Lee County staff to gauge the ability to clarify the inconsistences described herein. It may be possible to utilize the data sources described above to collaboratively work with Lee County staff to more accurately depict historic flow-way connections and features in order to advantageously influence the level of hydraulic restoration necessary to support the desired residential and commercial development. It also may be possible to leverage the isolated, western

portion of the property (west of the basin divide) to enhance restoration opportunities and further assist the residential development entitlement process.

7.0 Recommendations and Conclusion

Lennar is considering transitioning the subject property into a residential development and the preliminary conceptual layout provided by Morris Depew Associates, Inc. indicates a desire for single-family and multi-family residences, residential amenity areas, and commercial development. Given that a majority of the property is within the DR/GR with two (2) sub-watersheds (Six Mile Cypress and the Estero River), numerous wetlands, and up to three (3) identified flow-way connections, this presents challenges that will likely result in an extremely detailed and rigorous review by Lee County Natural Resources Staff. It is highly probable that these water resource elements, in addition to other aspects of the Lee Plan, will increase the timeframe and complexity of obtaining entitlements and influence the overall design and developable acreage of the site.

Figures



Scale: 1:165,000 11/1/2021 Image: ESRI World Street Map

0 1.25 2.5 5 Miles

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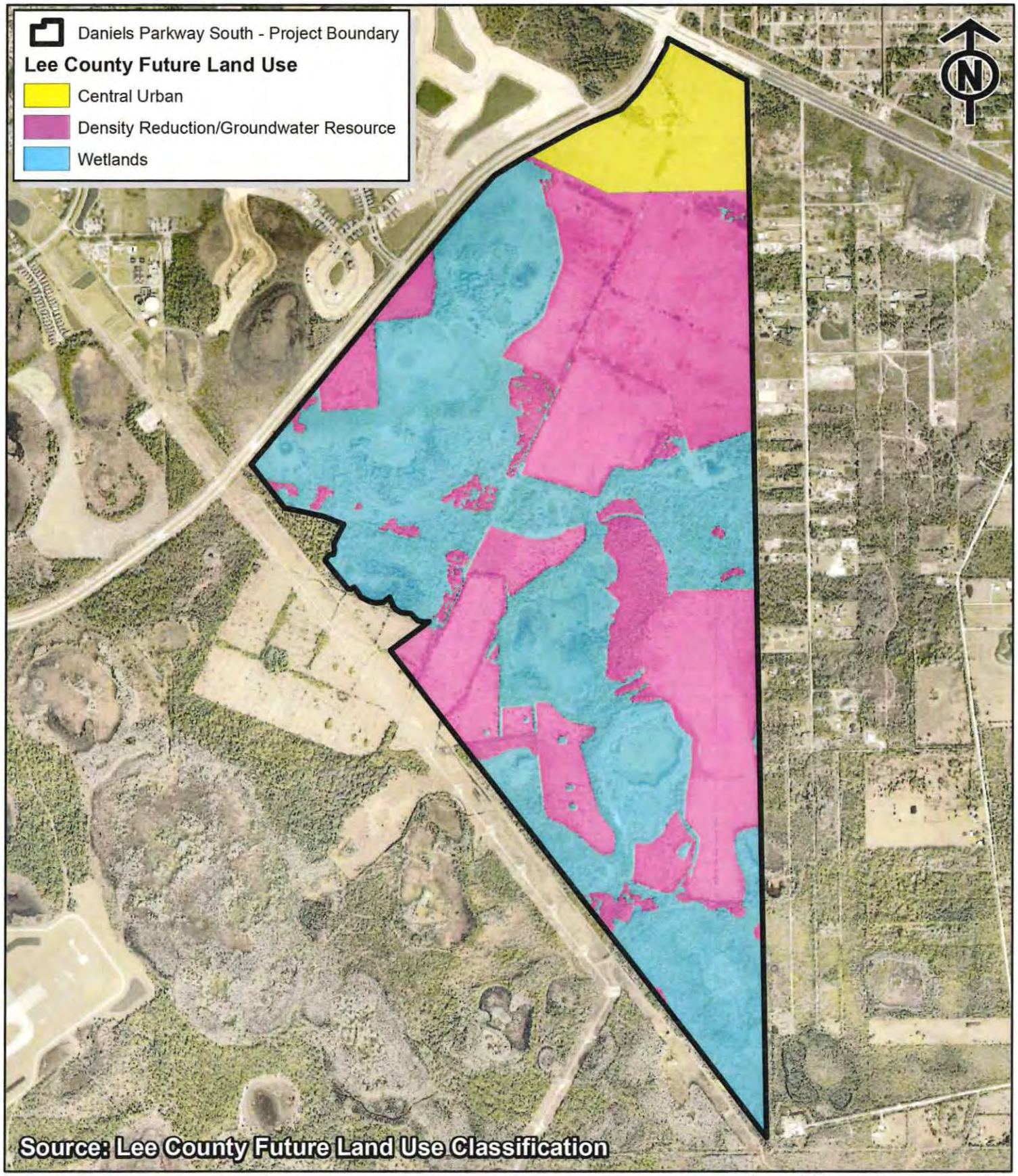
Figure 1
Daniels Parkway South
and the DR/GR
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:20,000 6/16/2022 Image: ESRI World Imagery and Lee County Future Land Use 0 0.15 0.3 0.6 Miles

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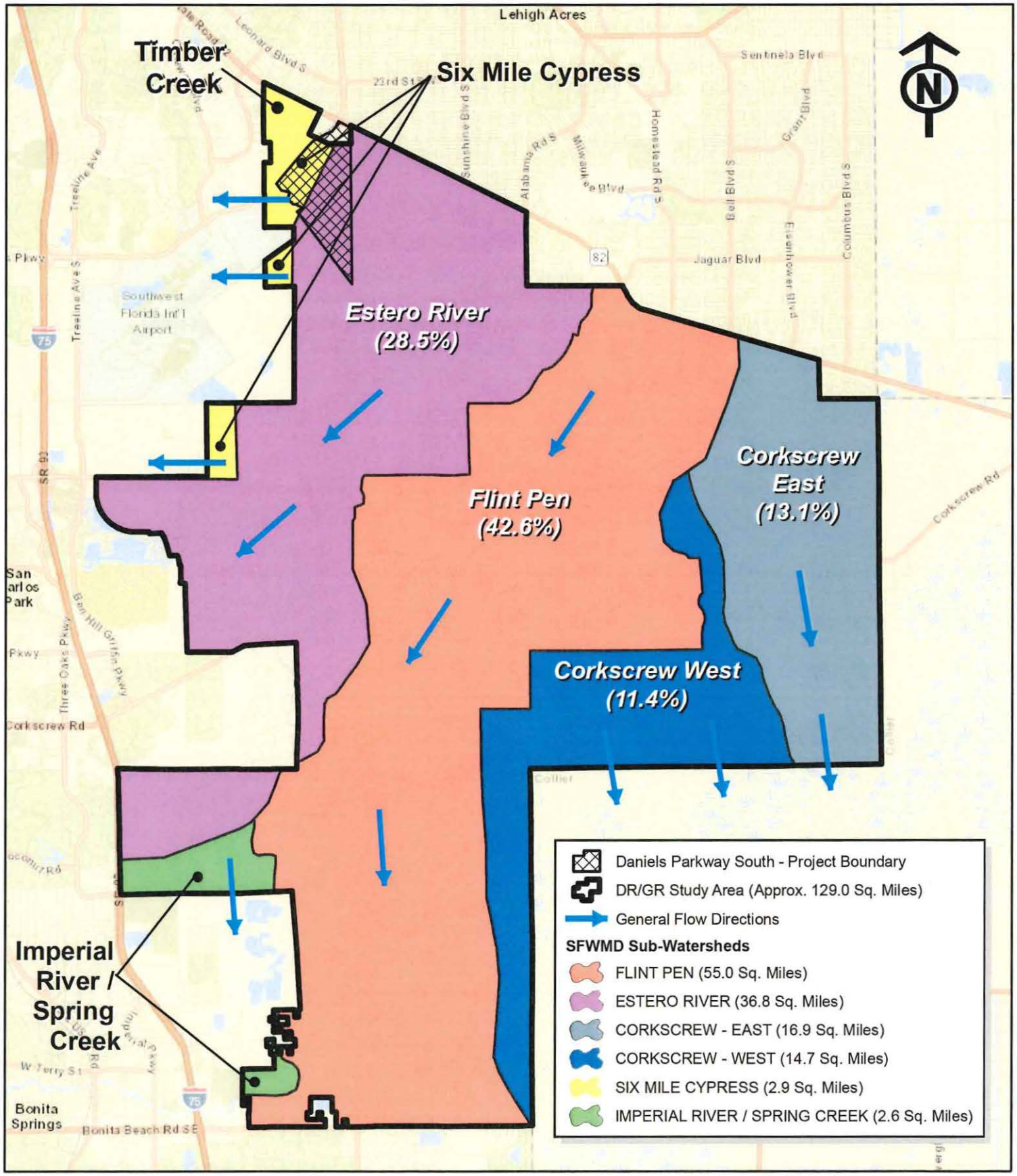
Figure 2
Lee County Future Land Use
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:135,000 11/1/2021 Image: ESRI World Imagery 0 0.5 1 2 3 Miles

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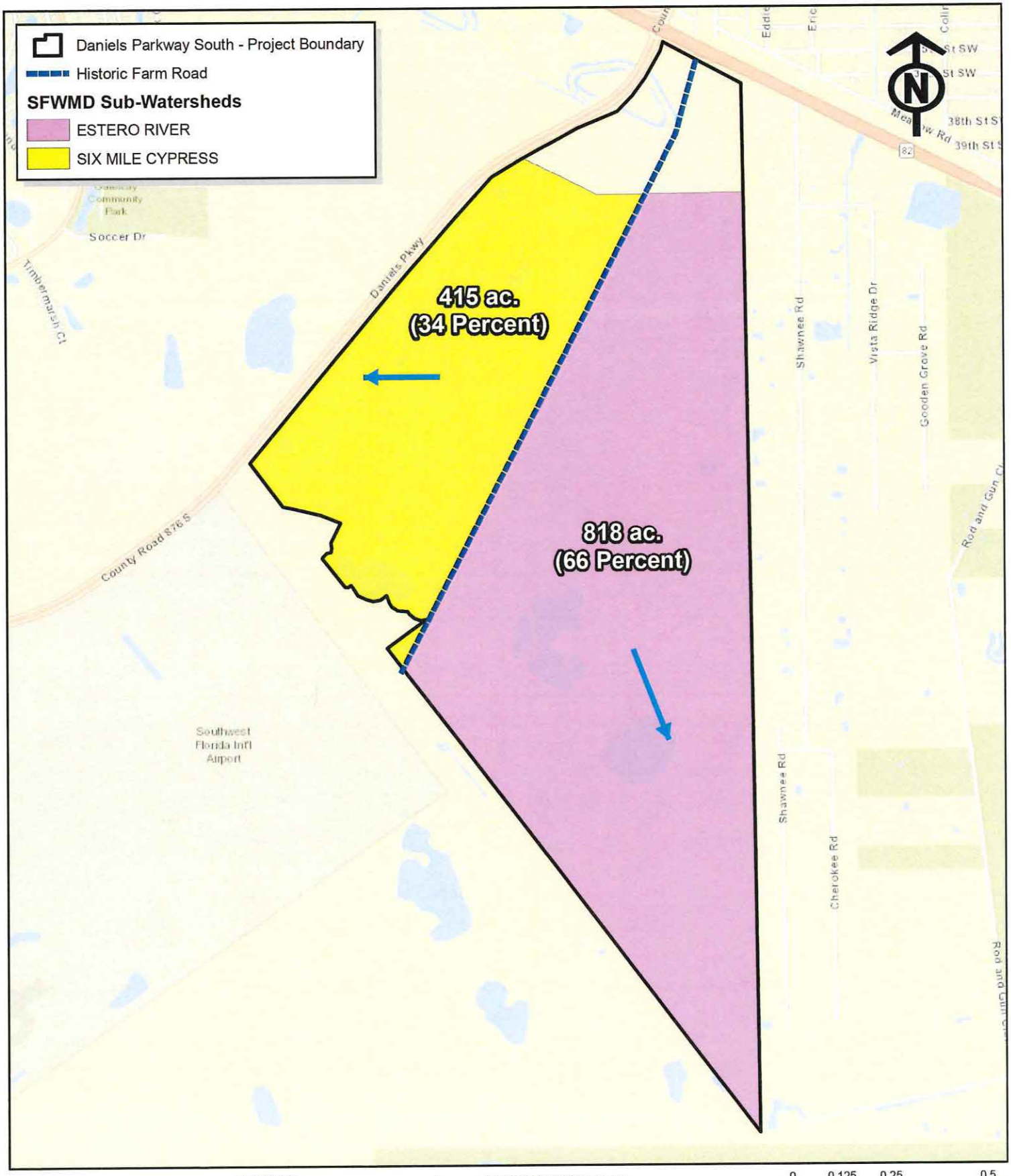
Figure 3
DR/GR Sub-Watersheds
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:20,000 11/1/2021 Image: ESRI World Imagery 0 0.125 0.25 0.5 Miles

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Figure 4
Historic Farm Road
and DR/GR Sub-Watersheds
Daniels Parkway South
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants

Scale: 1:20,000 11/1/2021 Image: UFDC 1944 Historic Aerial Imagery

0 0.15 0.3 0.6 Miles

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Figure 5
1944 Historic Aerial Imagery
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants

Scale: 1:20,000 11/1/2021 Image: UFDC 1958 Historic Aerial Imagery 0 0.125 0.25 0.5 Miles

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Figure 6
1958 Historic Aerial Imagery
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
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Scale: 1:20,000 11/1/2021 Image: 1999 Google Earth Imagery

0 0.125 0.25 0.5 Miles

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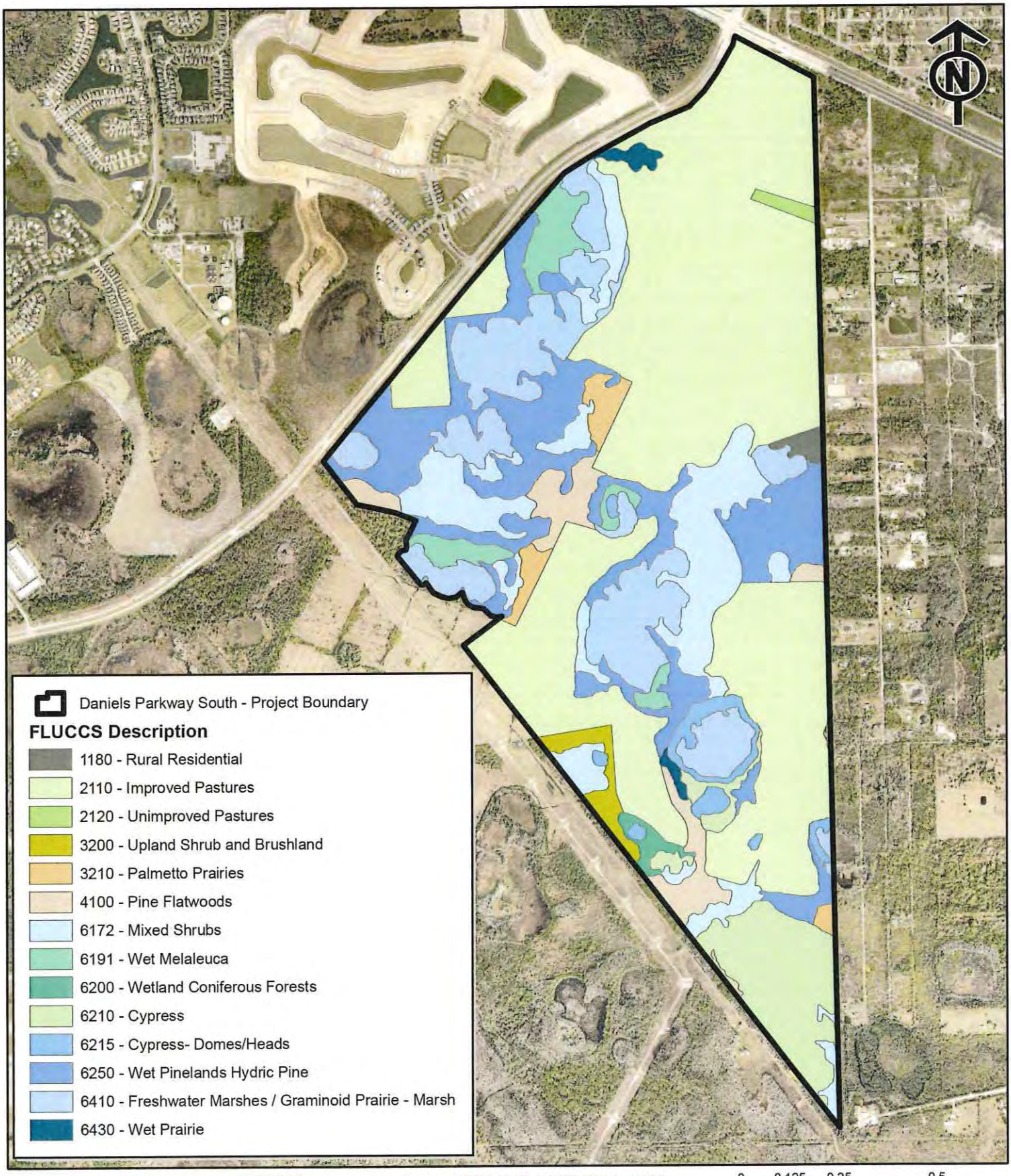
Figure 7
1999 Historic Aerial Imagery
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:20,000 11/1/2021 Image: SFWMD FLUCCS 2014 - 2016

0 0.125 0.25 0.5 Miles

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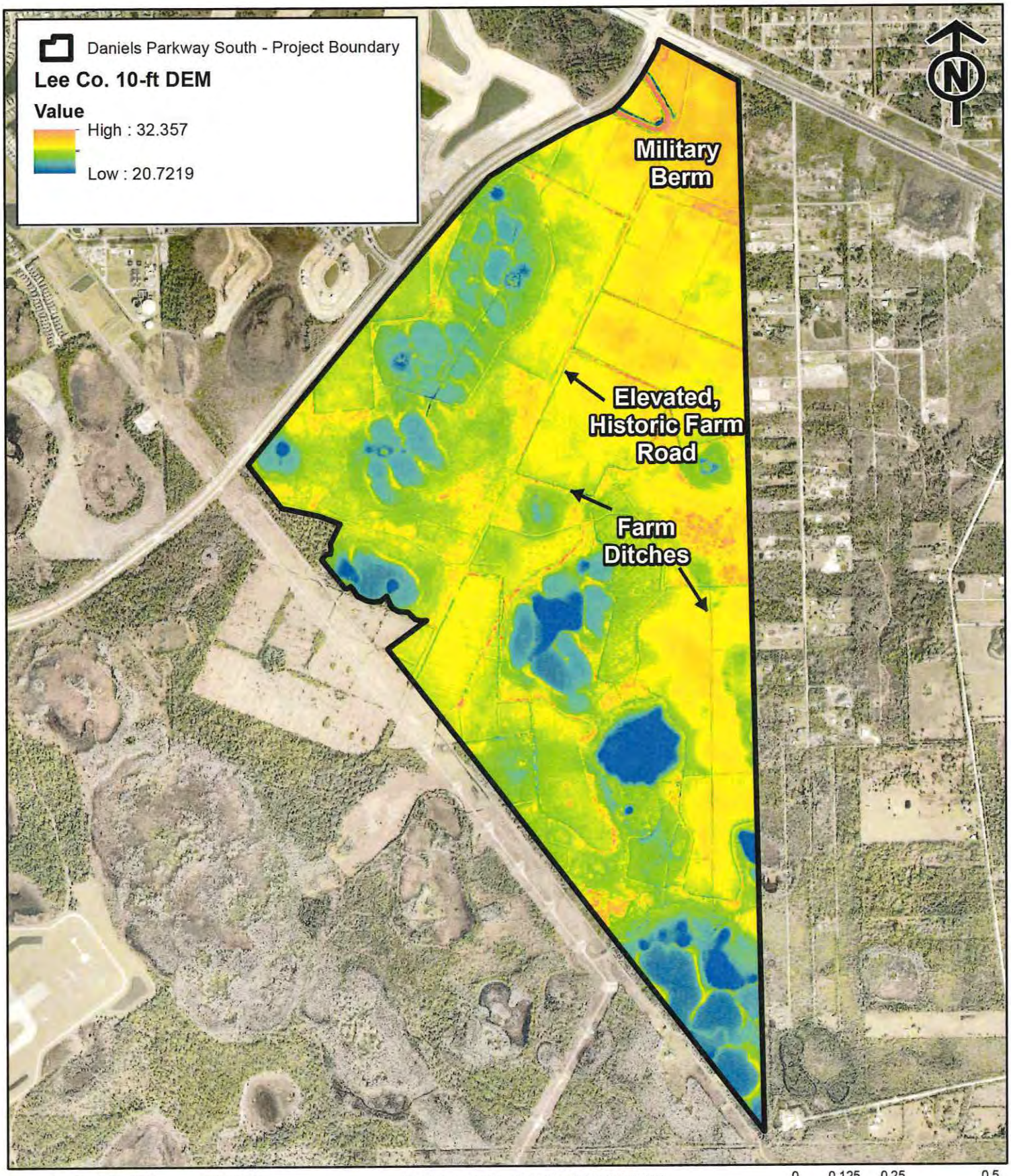
Figure 8
SFWMD FLUCCS
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:20,000 11/1/2021 Image: Lee Co. 10-ft DEM (ft NAVD88)

0 0.125 0.25 0.5 Miles

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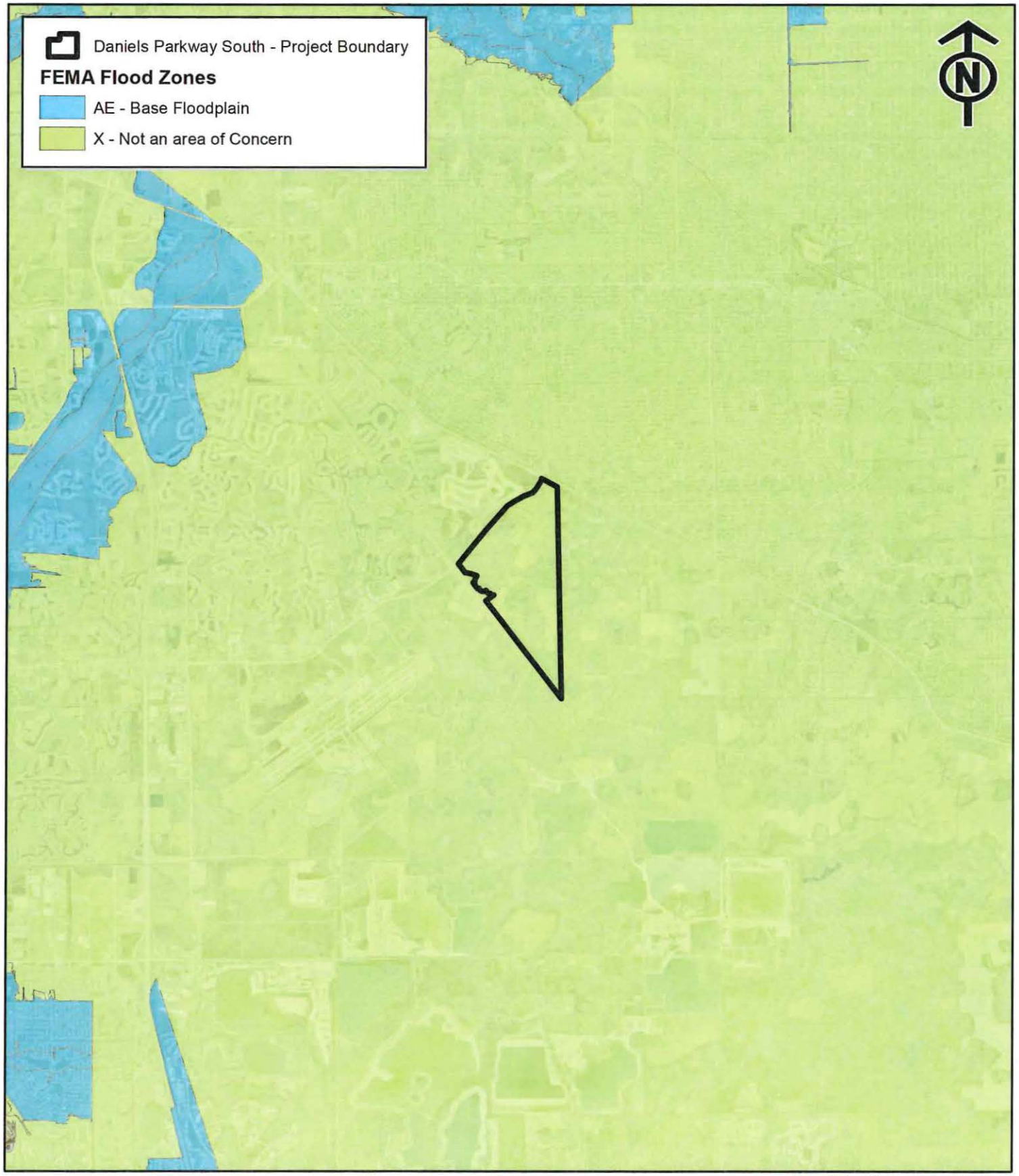
Figure 9
LIDAR Imagery
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:100,000 11/1/2021 Image: FEMA Flood Zones & ESRI World Imagery 0 0.5 1 2 Miles

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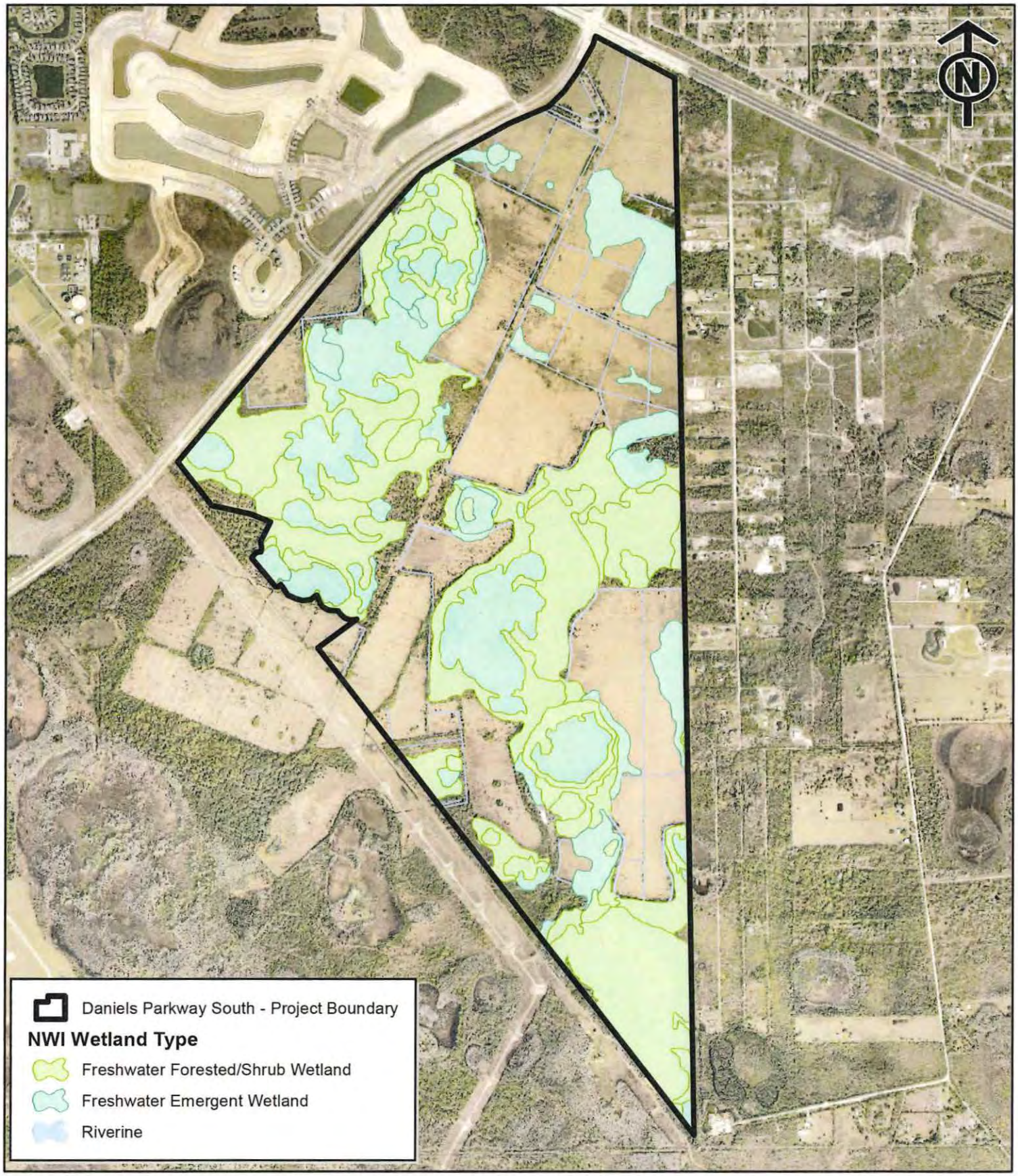
Figure 10
FEMA Flood Zones
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:20,000 11/1/2021 Image: ESRI World Imagery 0 800 1,600 3,200 Feet

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Figure 11
NWI Wetlands
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
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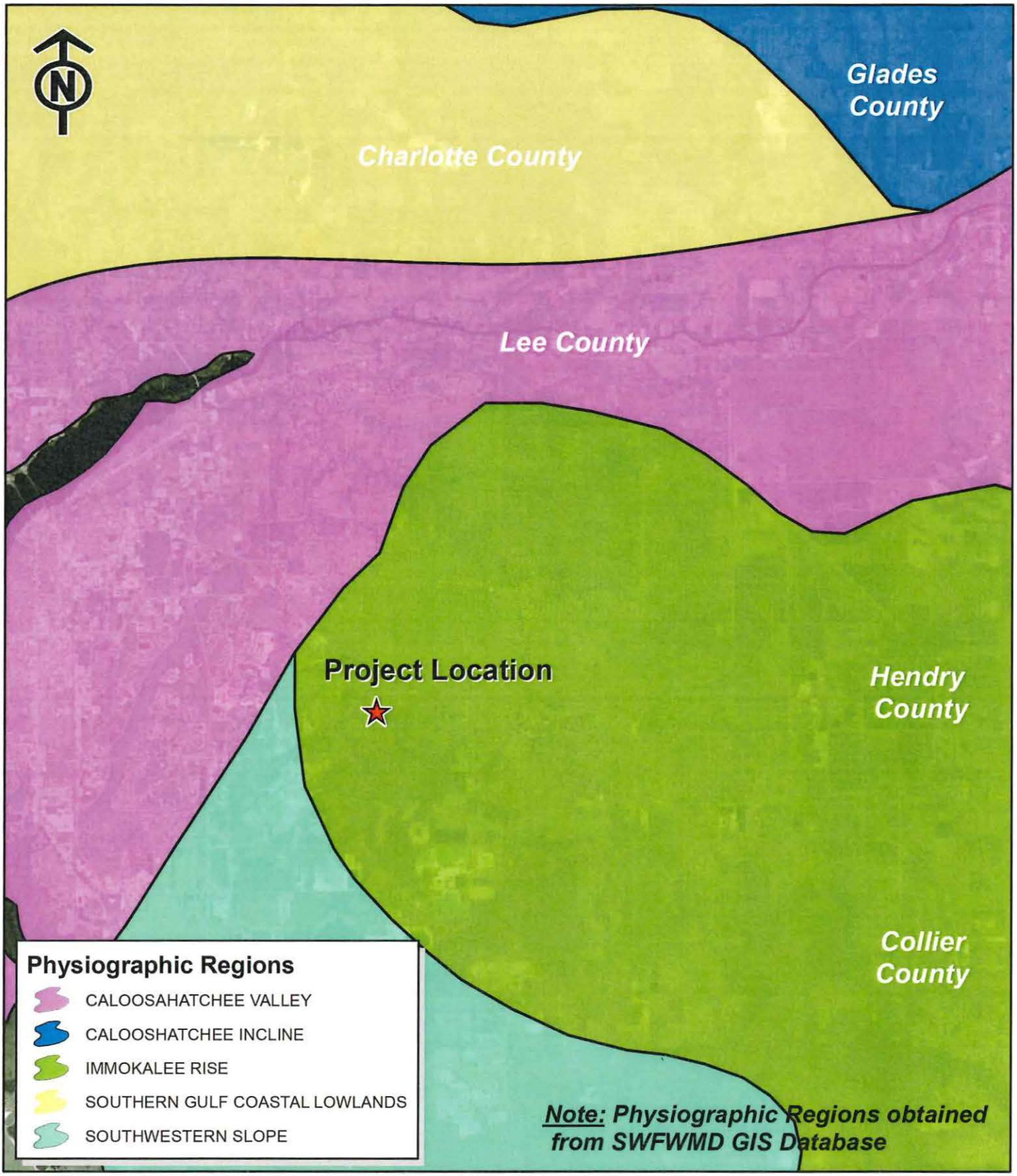

Scale: 1:220,000 11/1/2021 Image: ESRI World Imagery 0 1.75 3.5 7 Miles

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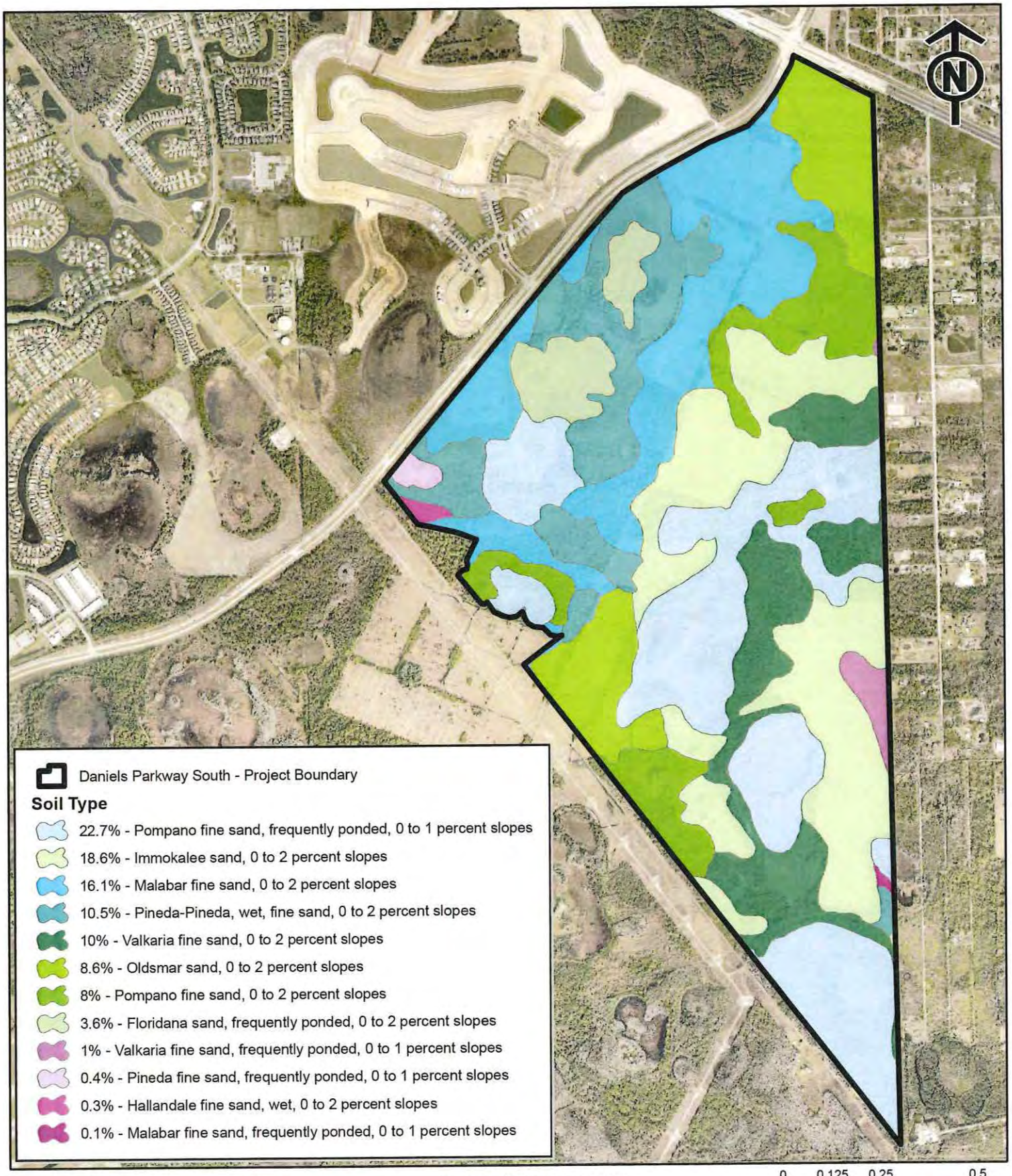
Figure 12
Physiographic Regions
Daniels Parkway South
Lennar Corporation
Lee County, FL

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:20,000 11/1/2021 Image: ESRI World Imagery

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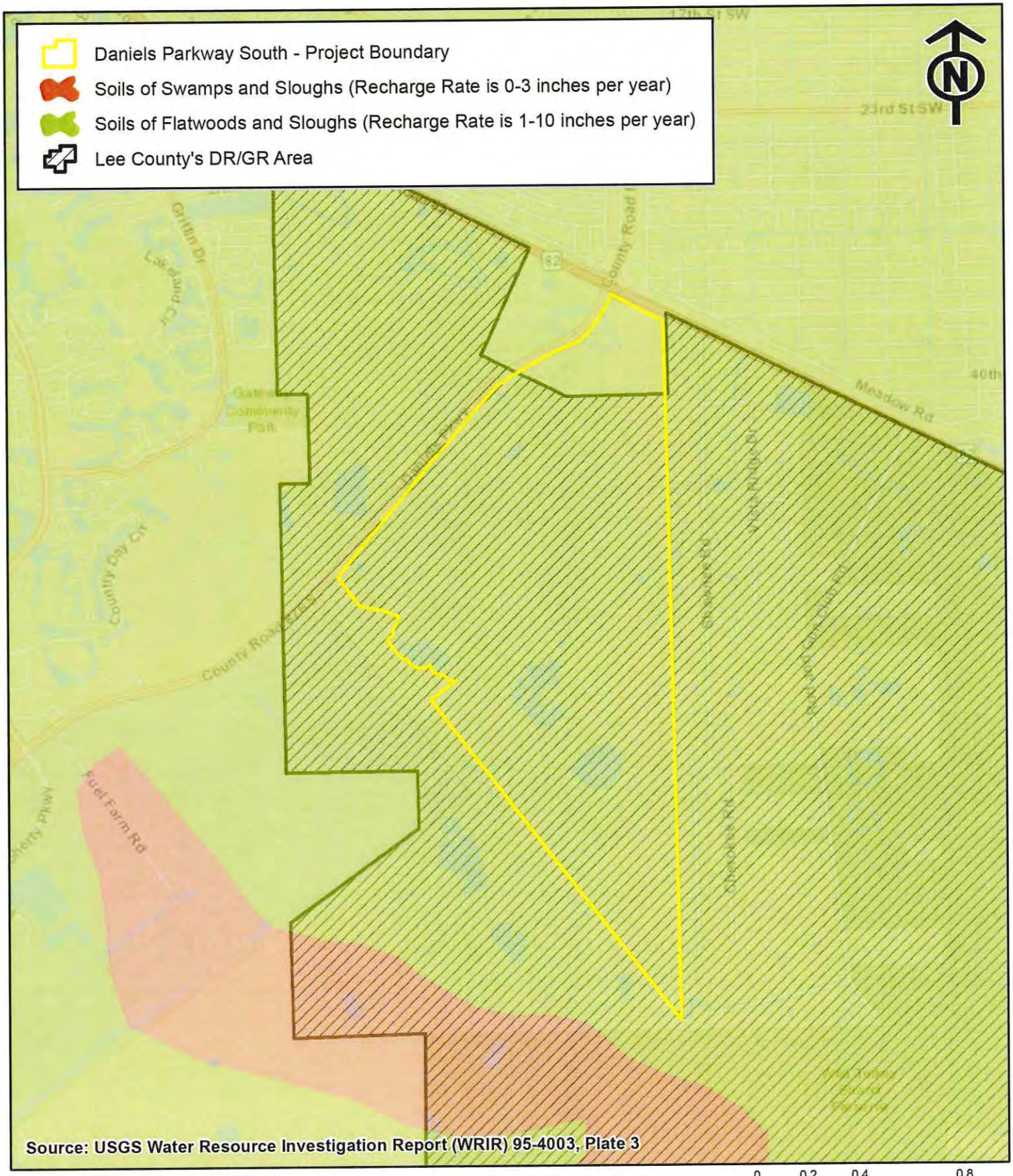
Figure 13
NRCS Soils Map
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
Integrated Water Resource Consultants



Scale: 1:30,000 11/1/2021 Image: ESRI World Street Map 0 0.2 0.4 0.8 Miles

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Figure 14
General Soil Characteristics
and Recharge Rates
Daniels Parkway South
Lennar Corporation
Lee County, Florida

Progressive Water Resources
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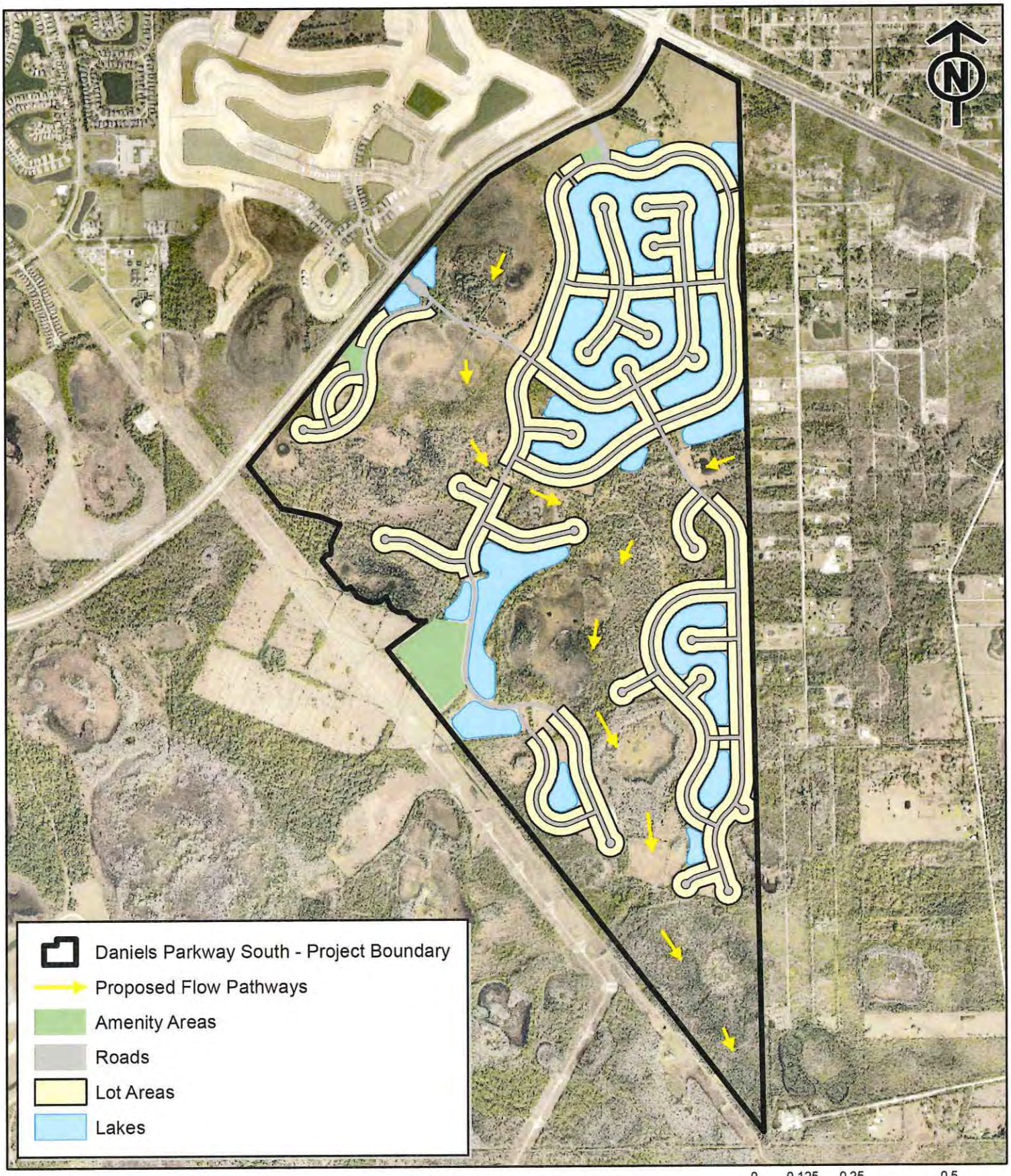

Scale: 1:20,000 11/1/2021 Image: 1999 Google Earth Imagery 0 0.125 0.25 0.5 Miles

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Figure 15
Conceptual Development Layout
Daniels Parkway South
Lennar Corporation
Lee County, Florida

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Drainage Report

Amended August 2022

Daniels South

Fort Myers Florida, Florida

Prepared for:

Lennar Homes

10541 Ben C Pratt Six Mile Cypress Pkwy

Fort Myers, FL 33966

Prepared By:

Mark Howell, PE # 63086

&

Ryan M. Shute, PE # 54597

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10. Peak Stage Comparison
11. 2.33 Year Peak Stage Comparison

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EXECUTIVE SUMMARY

Daniels South is a proposed 1,233-acre residential and commercial development located southeast of the intersection of Daniels Parkway and SR 82. The property spans multiple future land use categories and community planning areas. As a result, a text and map amendment to the Lee Plan and concurrent Mixed Use Planned Development are proposed to establish a uniform development pattern for the overall project.

Due to the proposed amendments within the Density Reduction/Groundwater Resource Future Land Use and Southeast Lee Community Planning Area an integrated surface and groundwater model has been developed to evaluate the current conditions of the property and proposed development. Historic flow patterns in this area were altered by the construction of a farm road during previous agricultural operations on the property. The farm road is a basin divide that hydrologically bisects the property into basins either heading west towards Six Mile Cypress or east and south towards the Estero River. As detailed in the following report, the proposed development provides a hydrologic benefit to the region by providing a man-made conveyance connection between the Six Mile Cypress and Estero River Watersheds. This connection will restore historic surface water flow patterns during high rainfall events, which is consistent with Policy 33.1.4 of the Lee County Comprehensive Plan. The connection will be made via a proposed control structure and 24" conveyance pipe between the two watersheds.

Due to the proximity of the property to the Southwest Florida International Airport and their prohibition on wildlife attractants, large scale flow-way restoration is not proposed. Rather, the existing and extensive network of ditches and berms that partition the wetland systems on-site and a historic farm road which bisects the property and reduces hydrologic connectivity are proposed to be removed within the development area. After removal of the berms and ditches, the former farming infrastructure will be re-graded to match the adjacent natural grade and planted with native vegetation.

To evaluate the surface water conditions for the project, pre-development and post development surface water analysis were developed for 2.33 year, 10 year, 25 year, and 100 year rainfall events. The conclusions of the integrated model demonstrate that there is capacity for the project to convey stormwater during events that exceed the SFWMD 10-year 1-day storm event and in a direction that reflects historic flow patterns. Historic flow patterns would have allowed the surface flow to cross watershed basin divides during high rainfall events. The maximum discharge rate of the entire site will be reduced while maintaining historic flow patterns ensuring no adverse impacts to nearby properties. The 2.33-year 1-day modeling shows that wetland hydroperiods will not be impacted by the proposed project. Additionally, the recharge conditions of the integrated model for the proposed project are greater than Existing Conditions by 94 acre-feet; enhancing water resources through increased groundwater recharge. Therefore, the project is consistent with Lee Plan Policy 1.4.5 and 33.1.7.

INTRODUCTION

Daniels South is a proposed 1,233-acre property located southeast of the intersection of Daniels Parkway and SR82 in Lee County, Florida. At full buildout, the project will consist of a residential community, multiple commercial properties, amenity areas and supporting infrastructure. The existing parcels are composed of existing agricultural lands. Approximately 679.10 acres will be preserved and/or restored to natural upland and wetland habitat. The property is bordered on the north by SR82 which is a defined as an upper end watershed boundary for both the Six Mile Cypress and Estero River watersheds. An existing farm road within the project defines the watershed divide between the two watersheds. The project is further bounded on the west by Daniels Parkway, the east by existing residential lots, and the south by Southwest Florida International Airport.

As a requirement of the concurrent Comprehensive Plan Amendment (CPA2021-00017 & 2021-00018) and Mixed Use Planned Development (DCI2022-00002) applications and to demonstrate consistency with Density Reduction Groundwater Resources Future Land Use, the project must be designed to provide a hydrologic model and report demonstrating interconnecting basins to re-establish historical hydraulic flow-ways. Per Policies 1.45 and 33.1.7 of the Lee Plan, the project must demonstrate potential impacts on surface and groundwater resources have been analyzed utilizing an integrated surface and groundwater model with site specific data. This integrated model has been prepared by Progressive Water Resources and is included as Appendix L of this report.

The design of the proposed development includes a man-made hydraulic connection at the middle of the project's basin divide line between Six Mile Cypress and Estero River Basins. The connection is intended to partially restore flow patterns that were altered by the construction of a farm road used for agricultural activities in the project area. The farm road was constructed along a slightly higher land feature that divided the two watersheds and altered the elevations of the area from historic natural ground conditions. In natural ground conditions, surface water would have the ability to flow across the higher land feature thereby connecting the watersheds during larger rainfall events. This improvement will provide additional flow to the Estero Basin during high run off rainfall events by installing a control structure with a conveyance pipe that will allow surface water to flow across the watershed basin divide. The control structure is set at an elevation above the wet season water table to ensure that wetland surface elevations do not decrease from existing conditions in compliance with policy 126.1.4.

The detailed analysis for the proposed flow-path system considers this man-made hydraulic connection, which is discussed in the Daniels South Proposed Conditions Flow Path Analysis. To evaluate the proposed hydrologic and hydraulic condition of a flow path and the proposed design for those areas, the following hydrological models were conducted:

- **Existing Conditions Hydrologic/Hydraulic 1D Model:**

  The purpose of this model was to determine the existing surface water that discharges off the existing site to the current outfall locations (Six Mile Cypress & Estero River). The Existing Conditions model was established using the Interconnected Channel and Pond Routing, Version 4.07.08, software and simulates the following design storms:

  - 2.33-year 1-day
  - 10-year, 1 day
  - 25-year, 3-day
  - 100-year, 3-day

- **Proposed Conditions Hydrologic/Hydraulic 1D Model:**

  The purpose of this model is to determine the effects of the proposed development to the existing parameters established in the existing model. The model will compare its results to the Existing Conditions model which include max discharge rates, max stages, and flow path conveyance from the Six Mile Cypress Basin to Estero River Basin. The Proposed Conditions model simulates the following design storms:

  - 2.33-year 1-day
  - 10-year, 1 day
  - 25-year, 3-day
  - 100-year, 3-day

MODELING SOFTWARE AND HYDRAULIC/HYDROLOGIC PARAMETERS

The software used to create the hydrologic and hydraulic models is Interconnected Channel and Pond Routing, Version 4.07.08, known as ICPR4. ICPR4 is a fully integrated 1D/2D surface and groundwater modeling platform. ICPR4 is widely used and accepted modeling platform throughout Florida for simulating hydrologic and hydraulic analyses. The ICPR4 platform is not limited with the number of model elements and is therefore well suited to utilize for a detailed model of the existing and proposed infrastructure systems within the Daniels South project boundaries.

Topographic Data Existing Conditions

The first parameter for review is the topographic data available and used for the modeling application. The Existing Conditions model relied on both field surveying using GPS equipment and the latest LIDAR available from Lee County GIS. Elevations within the project boundaries range from 20.24 to 29.08 NAVD. Higher elevations occur on the north side of the project that runs adjacent to SR82 and lower elevations occur in the wetlands. Topographic data indicates that the project area conforms with the watershed delineation for the project area and that the project does not receive discharge from the SR 82 which is the common upstream watershed boundary for the Estero River and Six Mile Cypress watersheds. The topographic data also shows an existing farm road bisecting the project area, which acts as a basin divide between the Estero River and Six Mile Cypress watersheds.

For the Proposed Conditions model, proposed grading for the basins was utilized along with the preliminary grading for the development ponds, including the internal lake excavation areas and detention areas within the development ponds.

Land Use/Land Cover Data

Currently, Daniels South's existing drainage basin is comprised mostly of agricultural fields and as well as forested wetland and indigenous areas which are included with the land use calculations and determination. Overall, the total Existing Conditions basin contains homogenous land use/land cover.

For the Proposed Conditions ICPR model, the land use/land cover data file was defined by the proposed land used based upon the Master Concept Plan for the Daniels South Mixed Use Planned Development Application. The land use/land cover categories include Residential, Commercial, Right-of-Way, Wetlands, Lakes, and Uplands. Although the commercial areas are included within the model, it should be noted that the commercial areas are proposed within the Intensive Development Future Land Use category, which does not require an integrated surface and groundwater model,

Runoff Curve Number

A curve number, which represents the ability of soil to store water, was developed for each existing and proposed drainage basin. The curve number method is a product of the SCS runoff equation, developed by the US Soil Conservation Service, which is the predecessor of the NRCS. The runoff equation takes the total rainfall depth and removes the soil storage using an empirically derived formula to predict how much water will run off of a defined basin. It has many parameters including the depth of the water table with respect to average ground elevation, soil type, compaction and the inclusion of impervious areas. TR-55 is a document produced by SCS that equates certain land uses to certain Curve Numbers based on four categories of soil types and is typically used in most of the country to predict generalized soil storage estimates. In areas governed by the South Florida Water Management District, however, SCS and the District realized that the relatively high water tables encountered in Florida meant that the CN by landuse method from TR-55 was not adequate estimate soil storage. This method normally produced higher values for water storage in soil than were actually being encountered. This lead SCS to develop an alternate method to determine a local CN value that relies on a series of soil storage curves to be used within SFWMD service areas instead. These include soil storage curves for "sandy soils", "flatwoods soils" and "depressional soils". The current process of determining soil storage therefore involves determining the average elevation of that portion of existing ground above the wet season high water table, subtracting that elevation from the WSHWT elevation and applying the resulting depth to one of

three soil storage curves. The resultant curve number from this exercise is then further evaluated against totally impervious areas within the basin to achieve a weighted value that averages areas in the basin that are both pervious and impervious.

Daniel's South Existing and Proposed Conditions curve numbers can be found in Tables 1 & 2 below:

Table 1: Daniels South Existing Conditions Curve Numbers

DANIELS SOUTH EXISTING CONDITIONS CURVE NUMBERS		
BASIN NAME	SOIL STORAGE (INCHES)	CURVE NUMBER
WETLAND 1	0.03	99.71
WETLAND 2	0.01	99.95
WETLAND 3	0.00	99.98
WETLAND 4	0.00	99.99
WETLAND 5	0.00	99.97
WETLAND 6	0.00	99.96
WETLAND 7	0.05	99.48
DS NORTH	0.08	99.16
DS WEST	0.02	99.79
DS EAST	0.11	98.94

Table 2: Daniels South Proposed Conditions Curve Numbers

DANIELS SOUTH PROPOSED CONDITIONS CURVE NUMBERS		
BASIN NAME	SOIL STORAGE (INCHES)	CURVE NUMBER
BASIN CN	0.56	94.67
BASIN 1	0.83	92.32
BASIN 2	0.94	91.43
BASIN 3	0.94	91.43
BASIN 4	0.82	92.41
BASIN 5	0.90	91.70
BASIN 6	0.86	92.07
BASIN 7	0.91	91.66
BASIN 8	0.97	91.20
BASIN 9	0.84	92.26
BASIN 10	0.75	93.02
BASIN 11	0.88	91.92
BASIN 12	1.17	89.54
BASIN 13	0.77	92.83
BASIN 14	0.74	93.11
BASIN 15	0.00	99.98
PRESERVE 1A	0.07	99.28
PRESERVE 1B	0.10	98.99
BASIN 15	0.00	99.98
PRESERVE 2	0.31	96.99
PRESERVE 2+3	0.41	96.05
PRESERVE 3	0.22	97.83
PRESERVE 4	0.22	97.83
PRESERVE 5+6+7	0.22	97.83
PRESERVE 5	1.26	88.83

In Table 1 of the Existing Conditions, soil storage of the existing wetlands was defined by first determining the area above the wet season water table (WSWT) within the Wetland Basin. This area was

then defined with an average elevation which then was used to define the available soil storage per the USDA's Method. In Table 2 of the Proposed Conditions, since it is assumed, the soil will be compacted, soil storage has been reduced by 25% which is consistent with the methodology requested by SFWMD applicant's handbook.

Time of Concentration

Time of Concentration is another parameter needed to establish the stormwater characteristics of the Project. Time of Concentration is the time required for runoff to travel hydraulically from the most distant point in the watershed to the outlet. Time of concentration vary depending on land characteristics within the respective basin which includes, slope and character of the defined flow path. Time of concentration was established using the Kirpich Equation which studies the flow path length and slope. The Kirpich Equation is as follows:

$$T_c = \frac{0.0078L^{0.77}}{S^{0.385}}$$

Where:
Tc = Time of Concentration (minutes)
L = Length of Flow Path (feet)
S = Slope

Using the above equation Time of Concentration was established for both the Existing and Proposed Conditions and can be shown in Tables 3 & 4:

Table 3: Existing Conditions Time of Concentration

EXISTING TIME OF CONCENTRATION CALCULATION - KIRPICH EQ.						
BASIN	KIRPICH CONSTANT	LENGTH OF FLOW PATH	UPSTREAM ELEVATION	DOWNSTREAM ELEVATION	SLOPE	TIME OF CONCENTRATION
N/A	UNITLESS	(feet)	(feet)	(feet)	(ft/ft)	(minutes)
BASIN NORTH	0.0078	5,387	26.54	25.31	0.00023	147.00
DS WEST	0.0078	3,413	26.21	25.64	0.00017	116.87
DES EAST	0.0078	5,506	25.67	25.36	0.00006	257.81
WETLAND 1	0.0078	5,954	225.14	24.77	0.03365	23.22
WETLAND 2	0.0078	1,715	25.70	24.25	0.00085	36.74
WETLAND 3	0.0078	2,557	25.25	24.12	0.00044	64.16
WETLAND 4	0.0078	1,854	25.31	24.98	0.00018	70.73
WETLAND 5	0.0078	2,364	25.05	24.59	0.00019	83.22
WETLAND 6	0.0078	1,226	25.62	24.89	0.00059	32.57
BASIN 15	0.0078	2,593	25.00	24.89	0.00004	158.89
WETLAND 7	0.0078	3,426	24.65	23.59	0.00031	92.39

Table 4: Proposed Conditions Time of Concentration

PROPOSED TIME OF CONCENTRATION CALCULATION - KIRPICH EQ.						
BASIN	KIRPICH CONSTANT	LENGTH OF FLOW PATH	UPSTREAM ELEVATION	DOWNSTREAM ELEVATION	SLOPE	TIME OF CONCENTRATION
N/A	UNITLESS	(feet)	(feet)	(feet)	(ft/ft)	(minutes)
PRESERVE 1A	0.0078	2,129	25.47	25.31	0.00007	111.37
PRESERVE 1B	0.0078	3,265	25.49	25.29	0.00006	165.86
BASIN 15	0.0078	1,070	25.67	25.36	0.00029	38.87
PRESERVE 2	0.0078	1,187	24.92	24.77	0.00013	57.44
PRESERVE 2+3	0.0078	2,304	24.51	24.25	0.00011	100.38
PRESERVE 3	0.0078	1,837	24.27	24.12	0.00008	94.87
PRESERVE 4	0.0078	2,653	25.12	24.98	0.00005	147.70
PRESERVE 5+6+7	0.0078	5,201	24.72	24.59	0.00002	335.20
PRESERVE 5+6+7	0.0078	2,593	25.00	24.89	0.00004	158.89

Rainfall Data and Design Storms

Precipitation depths for the 10-year 1 day, 25-year 3 day and 100-year 3-day storm events were obtained specifically for the subject watershed area using the South Florida Water Management Districts Applicants Handbook and applicable Isohyet Curves. The design storm rainfall amounts are shown in the following table:

Table 5: Rainfall Data for Design Storm Events

MODELED RAINFALL DEPTHS		
100y-3d Storm	13.90	inches
25y-3d Storm	10.60	inches
10y-1d	6.50	inches
2.33y-1d	4.50	inches

DANIELS SOUTH EXISTING CONDITIONS MODELING ANALYSIS

As mentioned above, the Project is comprised of existing wetlands and agriculture fields. The various agriculture fields include dividing berms and irrigation ditches that both isolate wetland areas and direct runoff through the site. The Project's existing hydrology conveys stormwater from North to South with the North/South basin divide delineating the stormwater west or east to their respective basin, Six Mile Cypress and Estero River Watersheds.

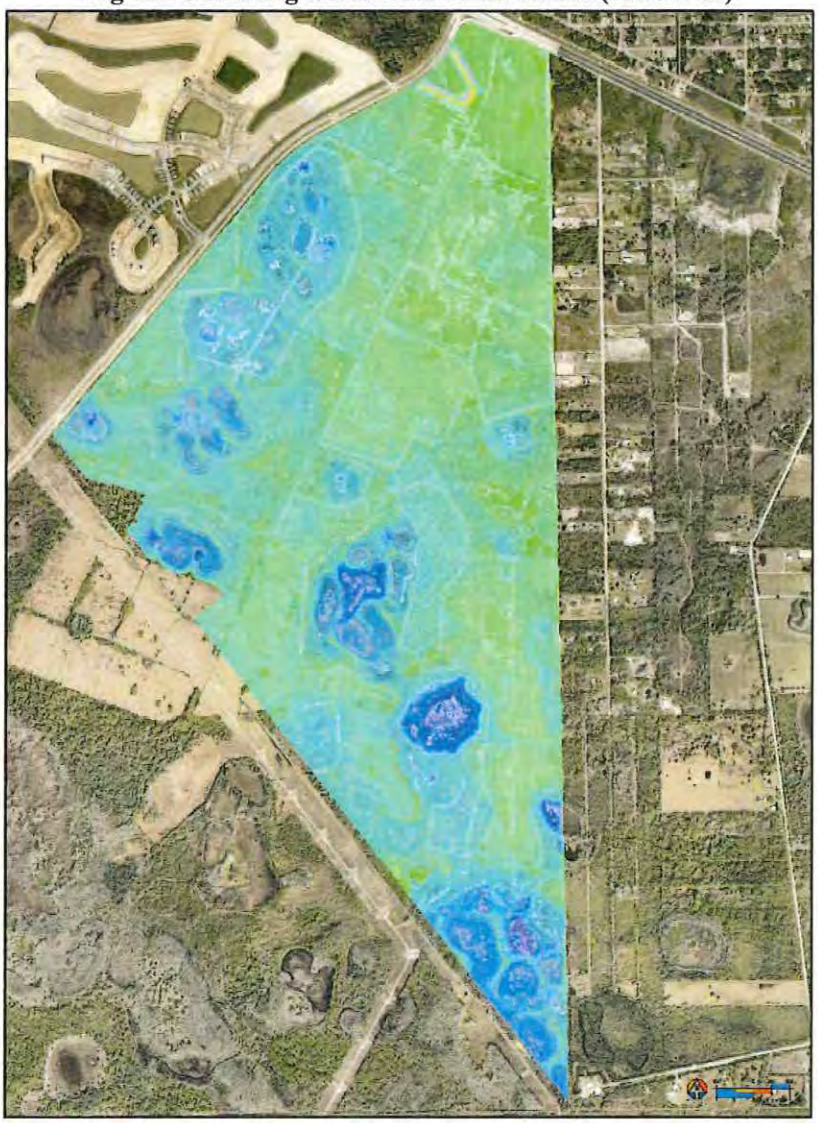
Using field data, LIDAR data, current aerial photographs, on-site observations and SFWMD permit files, the existing property was delineated into sub-basins. A total of 10 sub-basins were established via delineation.

Once the sub-basins were defined, hydrologic characteristics of each basin were defined and quantified, which included land use, curve numbers, time of concentration and surface storage capacity. All the listed items along with rainfall depths were used to establish a rainfall-runoff model for each basin using Interconnected Pond Routing (ICPR4) Software.

ICPR4 Modeling

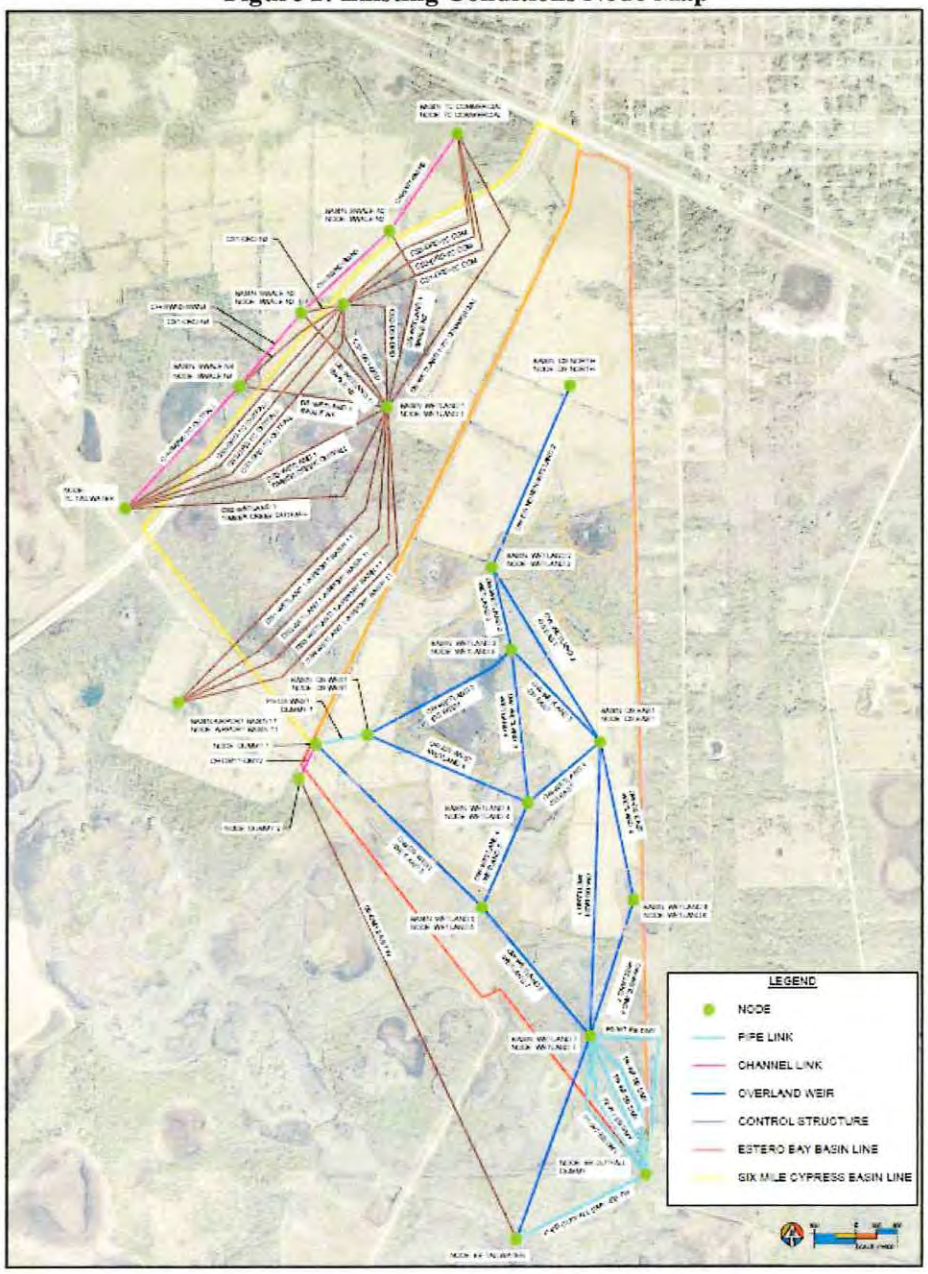
The ICPR4 software was utilized to perform the hydrologic analysis of Daniels South Existing Conditions drainage basin. The modeled rainfall events include the 2.33-year 1-day, 10-year, 1-day, 25-year, 3-day and 100-year, 3-day. Each of the (10) basins were modeled as sperate nodes and were characterized by their determined properties: area, CN, and Time of Concentration. In review of the existing topographic data, it was determined that the sub-basins had areas of run-off storage at specific elevations. The stage-storage volumes were input into the basin characteristics of each of the nodes. Figure 1 provides a graphic of the digital elevation model (DEM) used for the Existing Conditions Analysis where blue colors represent areas below the WSWT, and greens represent areas above the WSWT:

Figure 1: Existing Conditions DEM Model (NAVD 88)



To further analyze the hydrologic conditions of the project, routings were incorporated into the ICPR4 model. Previous SFWMD files for the surrounding parcels along with field reconnaissance and current survey data was used to establish hydraulic networks between each of the sub-basins. Figure 2 below shows the Existing Conditions Node Map (also included in Appendix B):

Figure 2: Existing Conditions Node Map



Outfall Tailwater Conditions

The Existing Conditions model includes (12) offsite connection of which (2) connect to Estero River Watershed and the remaining (10) connect to Six Mile Cypress Watershed. The 2 connections to Estero River Watershed occur on the Southern property line with (1) just east of the basin divide line and the

other at the eastern most point of the property. The connections to Estero River Watershed include existing reinforced concrete pipes that convey stormwater to the offsite wetlands, where stormwater is ultimately conveyed to Estero River.

The Six Mile Cypress Watershed connections consist of existing reinforced concrete pipes and control structures currently in place. The conveyance structures discharge both to the western side of Daniels Parkway to improvements provided by Timber Creek and south to the Airport Basin. From these connection points, the stormwater ultimately discharges to Six Mile Cypress Watershed through a series of existing conveyance ditches and storm pipes.

The boundary nodes for each outfall were set as Time/Stage nodes. The boundary conditions for each Time/Stage node were defined by the Existing Conditions established in existing SFWMD permits for both the Estero River Watershed and the Six Mile Cypress Watershed. The features for the boundary nodes will remain the same in the post development conditions. As such, the defined Time/Stage node for the outfalls will remain consistent in the Proposed Conditions.

ICPR Modeling 1D Results

Based on the modeling results of the Existing Conditions of Daniels South, the peak discharge leaving the site for the 25-year, 3-day storm event was defined as 1019.15 cfs. The maximum discharge rate equates to 921.06 cfs discharging to Estero River Watershed and 98.08 cfs discharging to Six Mile Cypress Watershed. Results are shown in Table 6:

Table 6: Existing Conditions Model Discharge Results

Watershed	Peak Discharge Rate (cfs)
Six Mile Cypress	98.08
Estero River	921.06
Total Peak Discharge	1019.15

The actual peak discharge from the existing property may vary from the modeled results due to the nature of the available data for analysis. In additional, the capacity of the downstream conveyance systems must be a considered factor when evaluating and estimating the existing flows leaving the Project.

DANIELS SOUTH PROPOSED CONDITIONS FLOW PATH ANALYSIS

The surface water management system is designed based on the criteria of the South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP) program and is consistent with the criteria of Part IV of Chapter 373 of the Florida Statutes. The proposed master drainage plan (Appendix A) consists of 14 lakes interconnected to each to other totaling 117 acres of surface area. The proposed lakes attenuate water quantity within the site and provide water quality treatment including reducing nutrient loading of the proposed development. The water quality treatment provide by the lakes will prevent the project from degrading surface water quality and reduce nutrient loading from Existing Conditions which meet the requirements of Policy 125.1.2 and Policy 125.1.3 of the Lee County Comprehensive Plan. The lake elevations have been designed to match or exceed the existing wet season

water elevations as determined by the consulting ecologist for the project, so as to not impact adjacent onsite wetland preserve areas. The water management system discharges in 5 locations into the onsite wetland preserve areas through weirs that control the maximum discharge rate from the developed areas.

The five lakes within the 10,000-foot airport wildlife buffer have been designed to incorporate hardened shorelines and 4:1 slopes without littoral plantings, to minimize wildlife attractive vegetation in those areas which benefits the Southwest Florida International Airport (SWFIA). These five lakes will discharge to lakes outside the 10,000-foot wildlife buffer to ensure that adequate water quality treatment is provided for all areas of the site prior to discharging to the onsite wetlands.

In addition to the water management system, an onsite flow path is proposed for the project area. The proposed flow-path creation plan consists of a piped connection to be located approximately in the middle of the project area currently defined as an existing farm road that divides the Six Mile Cypress watershed from the Estero River watershed. The 24" pipe connection is intended to reestablish a historic flow path that interconnects the two watersheds as identified Lee County's Comprehensive Plan, connecting the two watersheds.

The proposed man-made flow-path connection will allow flow to occur from Six Mile Cypress Watershed to Estero River Watershed in storm events that exceed the 10-year, 1-day storm event. The proposed flow-path connection will allow (restore) stormwater flows from the Six Mile Cypress watershed into the Estero River Watershed during high rainfall events.

The initial step of the analysis involved designing sub-basins within each of the watersheds and identifying where a connection point could occur based on the varying WSWT elevations within each of the Wetlands. The sub-basins that were identified for connection are from "Wetland Preserve 1B" (See Appendix G Proposed Node Map for node locations) in the Six Mile Cypress Watershed to "Preserve 2+3" in the Estero River Watershed in the Proposed Conditions. Wetland Preserve 1B has a control elevation of 25.50' while Preserve 2+3 has a control elevation of 25.32'.

The proposed connection of the man-made flow-path will consist of a control structure weir set at elevation 25.84' on the Six Mile Cypress Watershed side. The proposed connection will be a closed system (i.e. piped), consistent with the request of the SWFIA/Port Authority. The control structure will discharge via a 24" buried pipe to Preserve 2+3 which is on the Estero River watershed side of the project. This proposed buried pipe will not create habitat that could attract wildlife and be aesthetic in character. The control structure elevation is set above the WSWT so as to not draw down the wetland areas (thereby maintaining the wetland hydroperiod) and to prevent surface water from discharging into the Six Mile Cypress basin in low volume rain events. In high rain fall events, the Six Mile Cypress Basin water elevation stages to an elevation slightly higher than the Estero Basin water elevation which is when flow will start occurring into the Estero River Basin. The control structure elevation of 25.84', was determined as the defined elevation of the 10-year, 1 day storm event for the proposed project in Preserve 1B. Figure 4 -Wetland Connection Exhibit, is a schematic depiction of the pipe connection between the watersheds.

Per the above provided information, the proposed flow-path connection discharges when storm events exceed the 10-year, 1 day storm event of elevation of 25.84'. ICPR4 routings of the 25-year, 3-day storm event define a discharge rate of 3.46 cfs of peak flow discharged from the 24" conveyance pipe

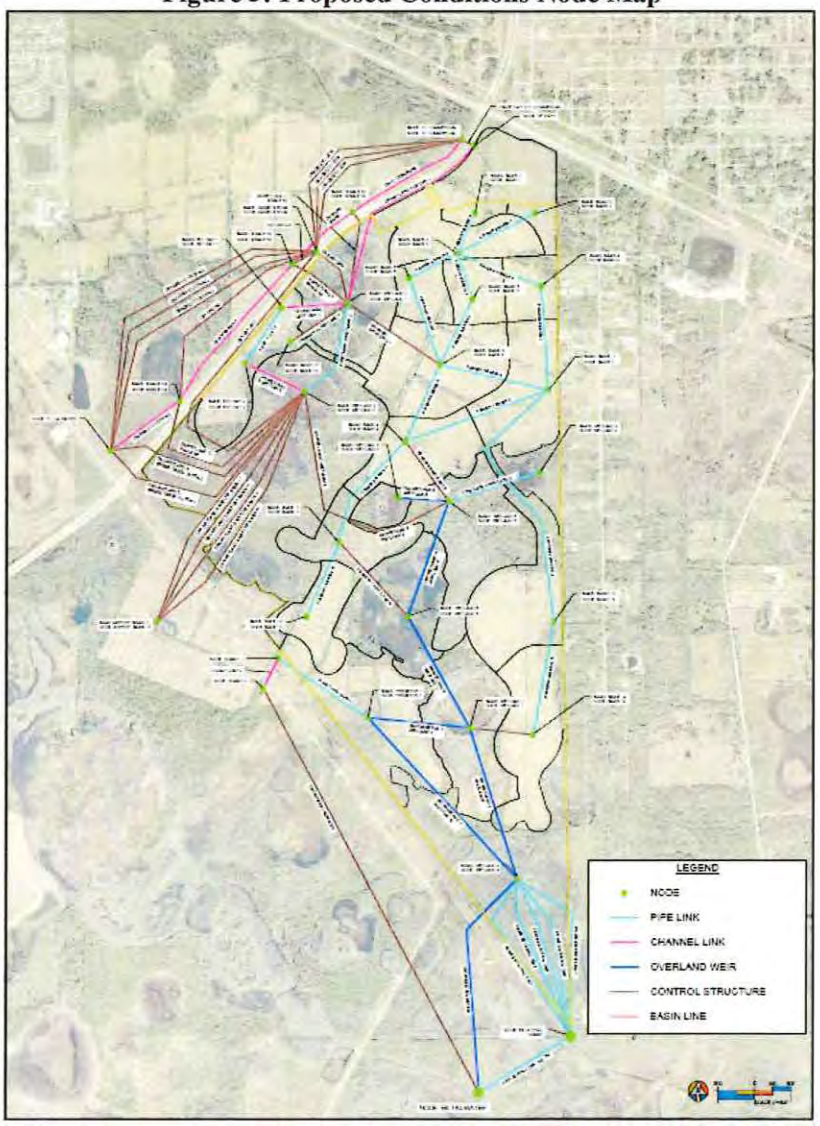
DANIELS SOUTH PROPOSED CONDITIONS MODELING ANALYSIS

ICPR4 software was used to perform hydrologic and hydraulic analysis of the Daniels South Proposed Conditions for the various basins. The modeled rainfall events include the 10-year 1-day, 25-year 3-day, and 100-year, 3-day storm events. Water elevation stages were evaluated for all the above storm events, as well as the peak flow discharge rates of the 25-year, 3-day storm event, which is the criteria of the South Florida Water Management District.

To determine Stage/Storage relationships in each of the defined basins, the environmental professional involved with the project provided wetland elevation data to ensure the proposed project's storage is starting at or above a water elevation consistent with the adjacent wetlands. The onsite portion of the project discharges via 5 discharge points to the various offsite wetlands. Two locations will discharge to the Six Mile Cypress Watershed and three locations discharge to the Estero River Watershed. Various ponds on site within their respective sub-basins will be interconnected by reinforced concrete pipes. Due to the design the lakes within 10,000 Foot airport wildlife buffer, not having littoral plantings, the southern 2 control structures that discharge to Estero River will not begin to discharge to the offsite wetlands until water quality requirements for the project are met in the other lakes of the system.

A Proposed conditions Node Map of Daniels South is shown in Figure 3 (Also included in Appendix G) to better displays the above information:

Figure 3: Proposed Conditions Node Map



As shown in Figure 3, the proposed system incorporates, reinforced concrete pipe, control structures, channels and overland weirs to accurately define the proposed hydrologic and hydraulic conditions.

ICPR Modeling 1D Results

Based on the modeling results of the Proposed Conditions of Daniels South, the peak discharge leaving the site for the 25-year, 3-day storm event was defined as 420.26 cfs. The maximum discharge rate equates to 350.09 cfs discharging to Estero River Watershed and 70.17 cfs discharging to Six Mile Cypress Watershed. Results are shown in the following table:

Table 7: Proposed Conditions Model Discharge Results

Watershed	Peak Discharge Rate (cfs)
Six Mile Cypress	70.17
Estero River	350.09
Total Peak Discharge	**420.26**

The discharge rates in the above table include the wetlands that will remain outside of the proposed developments stormwater management system. Additionally, stages were defined as part of the ICPR4 modeling effort, and the results can be shown in the following table:

Table 8: Proposed Conditions Model Stages

Critical Storm Event Stages		
10 YEAR 1-DAY STORM EVENT		
Basin Name	**Peak Stage (ft. NAVD)**	**Comment**
BASIN 1-9	27.13	MIN. ROAD CROWN 27.14'
BASIN 10	27.65	MIN. ROAD CROWN 27.65'
BASIN 11-12	26.97	MIN. ROAD CROWN 26.97'
BASIN 13-14	27.56	MIN. ROAD CROWN 27.56'
25 YEAR 3-DAY STORM EVENT		
Basin Name	**Peak Stage (ft. NAVD)**	**Comment**
BASIN 1-9	27.79	MIN. BERM ELEV. 27.79'
BASIN 10	28.06	MIN. BERM ELEV. 28.06'
BASIN 11-12	27.67	MIN. BERM ELEV. 27.67'
BASIN 13-14	27.93	MIN. BERM ELEV. 27.93'
100 YEAR 3-DAY STORM EVENT		
Basin Name	**Peak Stage (ft. NAVD)**	**Comment**
BASIN 1-9	28.15	MIN. FF ELEV. 28.38'
BASIN 10	28.31	MIN. FF ELEV. 28.67'
BASIN 11-12	28.04	MIN. FF ELEV. 28.38'
BASIN 13-14	28.23	MIN. FF ELEV. 28.45'

As shown in Table 8, the Proposed Conditions of the onsite development remain consistent with similar projects within the respective Basins the site discharges to. The required elevations shown in Table 8 are consistent with the requirements set forth by South Florida Water Management District and Lee County Land Development Code. The Proposed Project is located within FEMA Flood Zone X; therefore, no minimum elevation is required for the Finish Floors of the future proposed buildings.

EXISTING / PROPOSED CONDITION RESULTS COMPARISON PEAK FLOWS

As indicated previously, the project area is located at the upper end of both the Six Mile Cypress and Estero River watersheds and does not receive flows from upstream properties. As such the proposed project will not cause flooding or other negative impacts to upstream areas consistent with Policies 1.4.5 and 33.1.7.

To evaluate downstream potential impacts, a peak discharge comparison for the Existing Conditions and Proposed Conditions is shown in Table 9 below. The comparison shows that the proposed project will attenuate the 25-year 3-day rainfall event within the proposed onsite water management system and reduce the peak runoff discharge rate from the project limits. By reducing the peak runoff rate, downstream properties from the project will receive flow from the project limits at a slower rate, thereby decreasing the potential of flood conditions and demonstrating consistency with Policies 1.4.5 and 33.1.7

Table 9: Peak Flow Model Discharge Comparison

Watershed	Existing Project Limits - Peak Discharge Rate (cfs)	Proposed Project Limits - Peak Discharge Rate (cfs)
Six Mile Cypress	98.08	70.17
Estero River	921.06	350.09
Total Peak Discharge	**1019.15**	**420.26**

To further demonstrate the proposed project will not increase the potential of flood conditions downstream of the project, a comparison of the 25 year- 3-day peak stage elevations on locations of wetlands area at the south end of the project limits is presented in Table 10 below. The elevations show that stages will not increase in the post development condition and that peak stages in wetland areas near the site discharge location on the site will not increase prior to discharging off site which meets policy 126.1.4.

Table 10: Peak Stage Comparison

Node**	Existing Project Limits Stage Elev (NAVD)	Proposed Project Limits -Stage Elev (NAVD)
Wetland 7 (Exist) Preserve 5+6+7 (Prop)	25.92	25.92

*** Note - wetland areas were relabeled in the model from the Existing Conditions and Proposed Conditions due to Proposed Conditions design creating wetland subbasins. The descriptions in the Table 10 represent the same location on the site.*

WETLAND HYDROPERIOD MODELING

A comparison of wetland hydroperiod stages analysis was prepared based on methodology accepted by the SFWMD. The SFWMD allows for the analysis of wetland areas based on a 2.33 year – 1 day design storm. This storm is intended to more closely mimic the frequent rainfall events that occur annually during the rainy season of this vicinity of Florida. A comparison of pre-development wetland basin peak storm elevations was made with the post-development conditions in the undeveloped wetland areas. The results indicate that a negligible change in peak elevation (less than 0.1 feet) in the post development conditions and this change will not increase the hydroperiod of the wetland system. Wetland hydroperiods for different types of wetlands have durations of 30-180 days. Small changes in the stages of wetland peak storm events will not affect the long hydroperiod of the wetland systems as the peak stages recover to wet season water table over a period of 24-48 hours and the each actual rainfall event varies from year to year.

As previously indicated, the proposed weir that controls surface water discharge between watersheds via a proposed 24" pipe, is set at the stage of the 10-year 1- day storm event. This stage is higher than the 2.33 year 1-day hydroperiod model. As such, runoff will not discharge via the proposed weir for lower rainfall events and therefore the proposed 24" pipe watershed connection will not affect the wetland hydroperiods.

A comparison for peak stages of the wetland areas is in Table 11 below

Table 11: 2.33 Year Peak Stage Comparison Wetland Areas

Node**	Existing 2.33-Year 1-ay Peak Elev (NAVD)	Proposed 2.33 Year-1-Day Stage Elev (NAVD)
Wetland 1 (Exist) Preserve 1A (Prop)	25.75	25.69
Wetland 1 (Exist) Preserve 1B (Prop)	25.75	25.67
Wetland 2 (Exist) Preserve 2-3 (Prop)	25.65	25.56
Wetland 3 (Exist) Preserve 3 (Prop)	25.56	25.53
Wetland 4 (Exist) Preserve 4 (Prop)	25.55	25.49
Wetland 5 (Exist) Preserve 5 (Prop)	25.56	25.48
Wetland 6 (Exist) Preserve 5+6+7 (Prop)	25.55	25.46
Wetland 7 (Exist) Preserve 5+6+7 (Prop)	25.52	25.46
Basin 15 (Exist) Basin 15 (Prop)	25.65	25.68

INTEGRATED MODEL ANALYSIS
DANIELS SOUTH

Prepared for:
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700 N.W. 107th Avenue Suite 400
Miami, FL 33172

Prepared by:
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Integrated Water Resource Consultants
a Division of RESPEC Company, LLC

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- Existing conditions input data
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Appendix B
- Proposed conditions input data
- Proposed conditions recharge volume summary
- Proposed conditions recharge volume vs time graph

Progressive Water Resources

Integrated Water Resource Consultants

a Division of RESPEC Company LLC

TECHNICAL MEMORANDUM

Date: May 20, 2022

To: Russell Smith, Division Manager Lennar Homes, LLC

From: Peter A. Brown, P.E. & David J. Brown, P.G.

Re: Daniels South Integrated Model Analysis

BACKGROUND

Progressive Water Resources (PWR), a division of RESPEC Company, LLC was engaged by Lennar Homes, LLC (Client) to develop an integrated groundwater / surface water model to assess pre- and post-development groundwater recharge for the proposed Daniels South residential development project. The integrated model is a requirement of The Lee Plan Policy 33.1.7 which states that impacts of proposed land use disturbances on surface and groundwater resources will be analyzed by means of an integrated surface and groundwater model that utilizes site-specific data to assess potential adverse impacts on water resources and natural systems.

The subject property on which the modeling was performed encompasses approximately 1,230-acres and is located at the intersection of Daniels Parkway and State Road 82. Please note that where appropriate, input data used in the integrated model is consistent with the stormwater design parameters utilized by the Engineer of Record (Morris Depew).

ANALYSIS METHODOLOGY

ICPR Version 4.07.08 software was utilized to compare existing and proposed conditions for the project to demonstrate that no adverse impacts on water resources are anticipated to occur. The Existing Conditions model consists of a mixture of upland and wetland areas with no impervious area. Onsite soil parameters were obtained from the Natural Resources Conservation Service (NRCS) soil survey for Lee County with topographic information included in the model based on Lee County LIDAR.

The Proposed Conditions model assumes that 70% of the developable area will be impervious with 29.8% being Directly Connected Impervious Area (DCIA). The Lee County Lidar was updated in the Proposed Model to incorporate the conceptual grading of the stormwater lakes and developable area. As previously stated, the input data for nodes and links are based on the 1D ICPR model developed by the Engineer of Record.

The Green Ampt Method was utilized for onsite basins to integrate surface and groundwater characteristics for both existing and proposed conditions. Simplifications were made to the recharge areas (i.e., stormwater ponds and wetlands) as recommended by the software developer (Streamline Technologies) in order to optimize the triangulation mesh of the 2D overland and 2D groundwater regions. **Figure 1A** below depicts the triangulation mesh for both overland (blue mesh) and groundwater (pink mesh) regions for the Existing Conditions Model along with the onsite ICPR basins and LIDAR terrain. Similarly, **Figure 1B** illustrates the corresponding information for the Proposed Conditions Model. Please note that LIDAR symbology differs in **Figure 1B** due to the incorporation of proposed onsite regrading. However, elevations of undisturbed areas

are the same as Existing Conditions. A 25-year, 3-day event was used to model both conditions (i.e., pre- and post- development) for a simulation time period of 360 hours. ICPR input and summary results are provide in **Appendices** A and B.

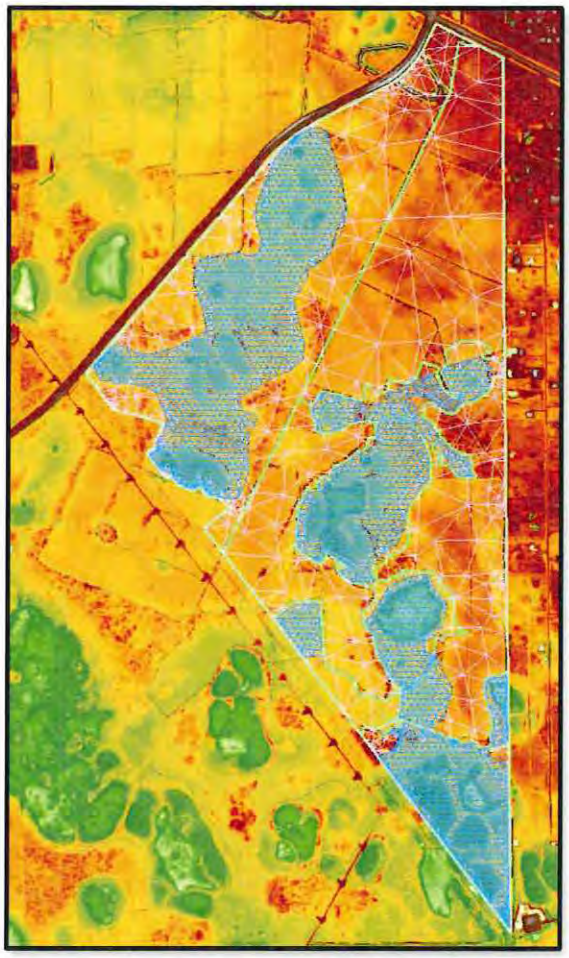


Figure 1A – Existing Conditions Triangulation Mesh

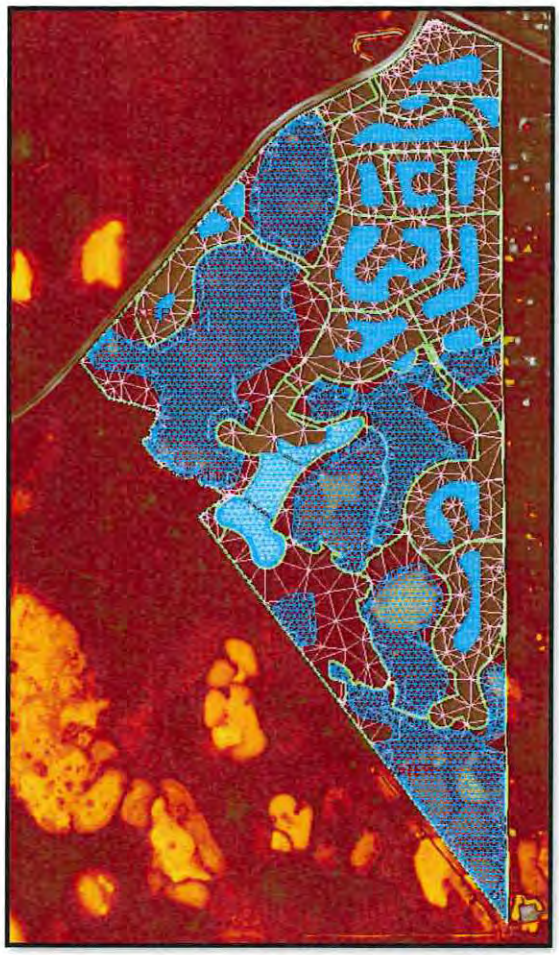


Figure 1B – Proposed Conditions Triangulation Mesh

RESULTS

Based on the results of the ICPR 4 Green Ampt analysis for a 25-year, 3-day rainfall event, the groundwater recharge volume simulated in the Proposed Conditions model is greater than existing conditions. This result indicates a beneficial increase in recharge to the underlying Water Table Aquifer. The existing conditions model simulates approximately 1,403 acre-ft over a duration of 360 hours, while the Proposed Conditions Model anticipates 1,497 acre-ft (net increase of 94 acre-ft). A comparison hydrograph is provided in **Figure 1** below. The results of this integrated analysis demonstrate that over time, the addition of stormwater lakes (wet detention areas) associated with the Daniels South project will enhance water resources by providing a net benefit in groundwater recharge.

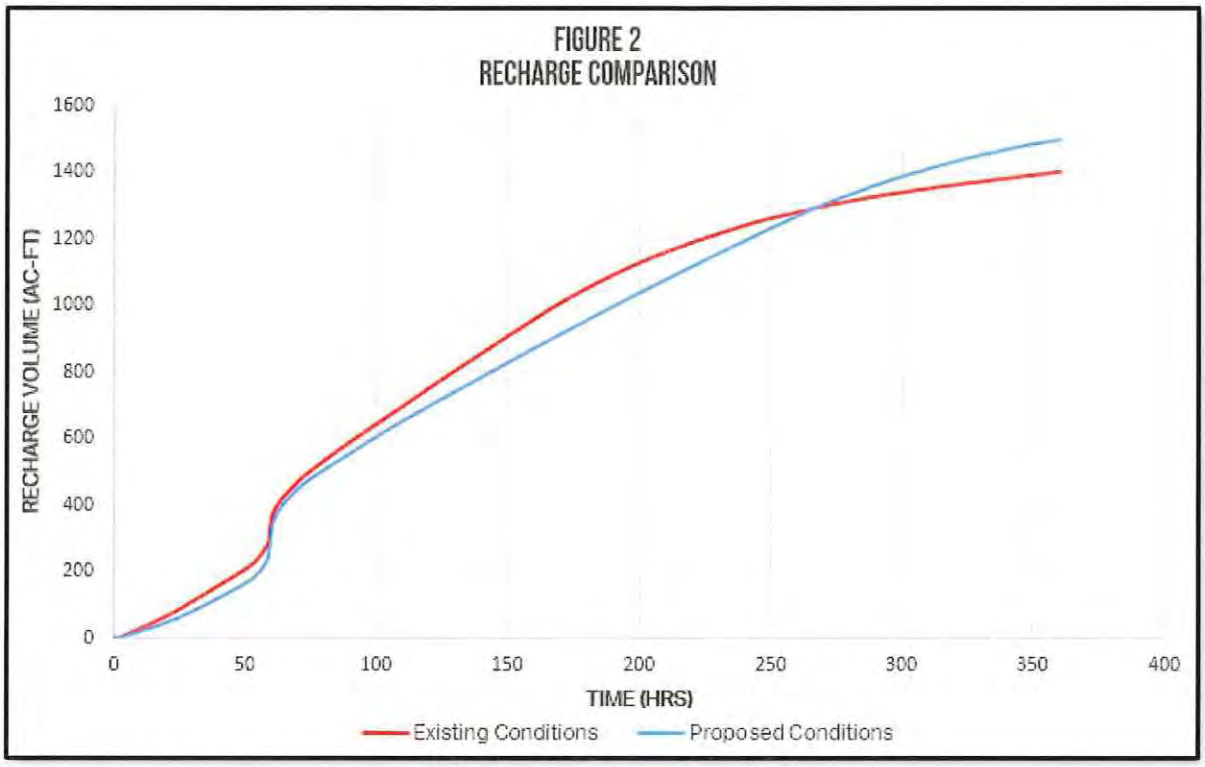
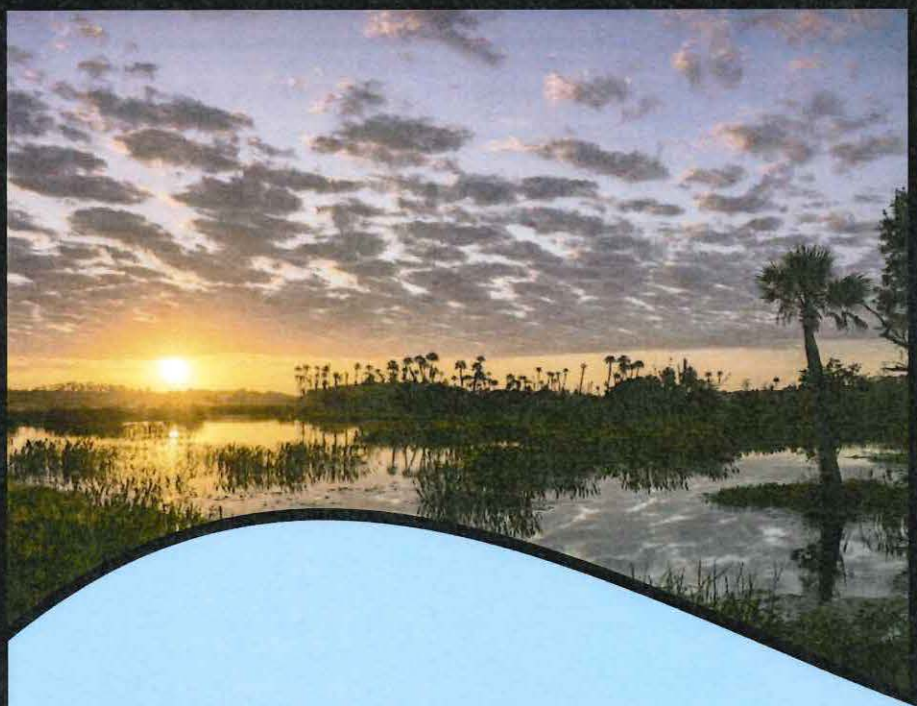


FIGURE 2
RECHARGE COMPARISON
RECHARGE VOLUME (AC-FT)
1600
1400
1200
1000
800
600
400
200
0
0
50
100
150
200
250
300
350
400
TIME (HRS)
Existing Conditions
Proposed Conditions



Enhanced Lake Management Plan

Daniels Road South

Lee County, Florida

Prepared By:

Progressive Water Resources, a Division of

RESPEC Company, LLC

August 2022

Daniels Road South – Enhanced Lake Management Plan
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Appendix A	Example of Deep Lake Aeration Device	Attached
Appendix B	Lee County Fertilizer Ordinance No. 08-08	Attached

Introduction

The proposed Daniels Road South residential development encompasses approximately 1,233 acres and offers a unique opportunity to enhance water resource benefits within the highly disturbed project site. Currently, approximately 553 acres (45 percent) of the property was historically used for farming but is currently characterized as improved pasture and is currently utilized for livestock grazing, while the remainder of the property is composed of pine and oak forest, palmetto prairie, hydric pine, wet prairies and cypress heads. Onsite observations indicate many areas are heavily infested with invasive plants, namely Melaleuca and Brazilian Pepper. Of the 1,233-acre property, approximately 1,149 acres (93 percent) is located within Lee County's Density Reduction/Groundwater Resource (DR/GR) area, as shown in **Figure 1**. The remaining 84 acres, outside of the DR/GR and south of State Highway 82, are within the Central Urban Land Use category. The property is also located north and west of Lee County's Wild Turkey Strand Preserve.

The property has a long history of farming and has been used for agricultural purposes since the late 1950s, resulting in the creation of numerous historic farm roads and agricultural ditches which facilitated drainage of wetlands and other low-lying areas. In addition, the northern section of the site was part of a large World War II military training facility (Buckingham Army Airfield) that constructed multiple triangular-shaped earthen berms located south of Highway 82 that were part of facility's aerial gunnery ranges. One of the earthen WWII features occurs on the northern section of property and, along with alterations associated with historic farming operations, contributes to the highly-disturbed nature of the site.

As part of the historic farming operations, a prominent northeast-southwest trending elevated dirt road was constructed that resulted in bifurcating the property's drainage, with the western side of the site draining towards the Six Mile Cypress watershed and the eastern side draining towards the Estero River watershed. Onsite observations indicate that the area west of the divide, constituting approximately 415 acres, or 34 percent, remains hydrologically separated from lands to the east and can conceivably be considered as "orphaned" from the balance of the DR/GR. Natural surface water flows originating from the western section of the property also appear constrained by Daniels Parkway. Given the totality of hydrologic alterations that have occurred onsite, the proposed Daniels Road South development offers a unique opportunity to re-establish hydrologic connections that will facilitate hydrologic communication between the orphaned western section of the property with the balance of DR/GR to the east.

Consistent with the proposed hydrologic restoration of the site, the development's proposed irrigation system will seasonally offset proposed groundwater use with surface water stored in dedicated stormwater-wet detention lakes. Irrigation quantities are proposed to be regulated by a centrally-controlled irrigation system whereby individual homeowners are prevented from altering the initiation and duration of irrigation events. The conjunctive use of both ground and surface water supplies significantly reduces groundwater demands when adequate surface water supplies are available (i.e., post-rainy season). Achieving the hydrologic restoration of the property, while conserving water resources, is consistent with Lee Plan policies and goals, and when coupled with the management practices proposed herein, provides a framework of protection measures that enhance and safeguard the water resources of the DR/GR.

In accordance with Lee County's Comprehensive Plan (The Lee Plan), proposed developments within the DR/GR must demonstrate the protection, preservation, and enhancement of groundwater resources and environmental (wetland) systems. As demonstrated herein, the Daniels Road South project offers several important water resource protection measures that will result in the following Water Resource Benefits to the DR/GR:

Water Resource Benefits

- The total proposed lawn and landscape area within the Daniels Road South development is approximately 95 acres and represents a decrease of approximately 458 acres (79 percent reduction) as compared to existing livestock areas.

- The Daniels Road South development will utilize both groundwater and captured stormwater for irrigation, whereby groundwater quantities from the Sandstone Aquifer are used to supplement surface water irrigation supplies within the project's stormwater management system lakes. Irrigation quantities will then be withdrawn from the lakes to irrigate lawn and landscaped areas. The proposed conjunctive use of both ground and surface water is anticipated to conserve groundwater supplies that would otherwise have to be withdrawn from the Sandstone Aquifer. When adequate surface water supplies are available, groundwater usage will be reduced, or possibly eliminated, thereby furthering the project's resource benefits within the DR/GR.

- The project includes a master-controlled irrigation system that will regulate the initiation and overall duration of irrigation events in order to increase irrigation water use efficiency and enhance water conservation (i.e., no individual homeowner will have access to irrigation timers). Evapotranspiration sensors are also proposed for each irrigation pump station and future plans may include an integrated communication system between the controller clocks and the irrigation pump station(s).

- Currently there is little, if any, stormwater attenuation or treatment onsite. Improved surface water quality is anticipated through the creation of numerous interconnected stormwater management system lakes.

- Integrated surface and groundwater modeling indicates that the proposed stormwater management system enhances recharge to the underlying aquifers thereby improving hydrologic conditions within the DR/GR.

- Only professional landscape businesses registered with Lee County will be allowed to perform their services at the Daniels Road South development. Proof of completion of a Lee County-approved Best Management Practices (BMP) training program will be required.

- To further protect the water resources, the Daniels Road South project includes surface water quality monitoring of the proposed internal stormwater lakes to document that no adverse surface water quality conditions will occur as a result of the proposed change in land use.

Collectively, these Water Resource Benefits represent a high level of water resource and environmental protection and, in many cases, exceeds the future land use requirements contemplated by Lee County's Comprehensive Plan. For ease of use and understanding, the contents of the Daniels Road South ELMP contain Sections that address key water resource protection elements, with each of the main ELMP Sections in turn having Subsections that provide specificity regarding the management actions necessary to safeguard the water resources. Where applicable, BMPs are provided to highlight specific water resource protection measures.

Proposed Deviations from Lee County Land Development Code

A portion of the subject property is within the 10,000-foot Airport Wildlife Hazard Protection Zone for the Southwest Florida International Airport. FAA Advisory Circular 150/5200-33B, published August 28, 2007, provides guidance on land uses that have the potential to attract hazardous wildlife on or near public airports and requires 10,000 feet of separation are provided from hazardous wildlife attractants. The advisory also states under the summary for "New storm water management facilities" that "to facilitate the control of hazardous wildlife, the FAA recommends the use of steep-sided, rip-rap lines, and narrow, linearly shaped water detention basins." In addition, the summary states "all vegetation in or around detention basins that provide food or cover for hazardous wildlife should be eliminated." Therefore, the following deviations are incorporated into the ELMP.

1. Deviation from Section 10-329(d)(4) which requires the shorelines of excavations for retention and detention areas to be sloped at a ratio not greater than six horizontal to one vertical from the top of bank to a water depth of two feet below the dry season water table TO PERMIT the shorelines of excavations for retention and detention areas within the Airport Wildlife Hazard Protection Zone ("AWHPZ") to be sloped at a ratio of four horizontal to one vertical from the top of bank to a water depth two feet below the dry season water table with enhanced slope protection measures to be proposed by the project engineer at the time of development order to prevent erosion and scouring. Within the AWHPZ acceptable enhanced slope protection measures may include, but are not limited to, use of an appropriate geosynthetic turf reinforcement mat or similar shoreline stabilization technique and might include hardened structures such as those identified in Section 10-418(3). The design technique(s) used will be determined at the time of development order by the project engineer upon approval by the Director based upon evaluation of site-specific conditions at that time.

2. Deviation from Section 10-418(2) & (3) which require a planted littoral shelf for all surface water management systems to mimic the function of natural systems TO PERMIT those surface water management systems within the Airport Wildlife Hazard Protection Zone to eliminate the planted littoral shelf requirement.

3. Deviation from Section 10-418(2)(d)(3) which limits substitution of native wetland trees to 25 percent of the required number of herbaceous plants TO PERMIT substitution for 100 percent of the required number of herbaceous plants to be native wetland shrubs.

4. Deviation from Section 10-418(3) which limits Bulkheads, Geo-textile tubes, riprap revetments or other similar hardened shoreline structures to 20 percent of an individual lake shoreline and these structures cannot be used adjacent to single-family residential uses TO PERMIT that Bulkheads, Geo-textile tubes, riprap revetments or other similar hardened structures may be used for 100 percent of an individual lake shoreline and may be used adjacent to single-family uses.

Section 1. Historic Surface Water Hydrology

To better understand the proposed water resource management actions contained within this ELMP, it is important to provide a basic context of the historic, pre-development surface water flows on the property. The project site generally exhibits a relatively flat topographic relief, with the highest naturally-occurring land surface elevation of approximately 27 feet NAVD88 located on the northeastern portion of the property, immediately south of Highway 82. The lowest land surface elevations are located to the south and southeast at approximately 21 feet NAVD88.

Prior to agricultural development, the subject property was predominantly characterized as open rangeland and pine flatwoods, interspersed with shallow freshwater forested/shrub and emergent wetlands. Prior to any anthropogenic disturbances, 1944 historic aerials indicate the presence of semi-connected wetland features as shown in **Figure 2**. Development of agricultural operations at the project site began in the early 1950s and farming activities necessitated the construction of a grid pattern of drainage ditches that eliminated the naturally occurring surface water flow paths as shown in **Figure 3**. In addition, a well-defined access road was constructed to provide year-round access to the farm fields and was significant enough to be identified by the South Florida Water Management District (SFWMD) as a surface water basin divide.

In addition, several historical connecting ditches are evident in and around onsite wetlands and were presumably used to shorten hydroperiods and further facilitate drainage. The existing onsite drainage ditches were used to reduce water table elevations and subsequently lower recharge potential. Depending on the ditch characteristics, such features can negatively impact nearby environmental features (wetlands) and consequently the water resources within the DR/GR. Hydrologic alterations can also favor the growth of exotic and nuisance plant species.

Please note that the Daniels Road South property occurs within a single Water Body Identification (WBID) No. $3258D_3$ (Estero River), which is not impaired as reported by the Florida Department of Environmental Protection (FDEP). It is important to note that the FDEP places the entire property within the Estero River WBID and does not differentiate the site into eastern and western sections.

Given the totality of hydrologic alterations that have occurred onsite, the proposed Daniels Road South development offers a unique opportunity to re-establish hydrologic connections that will facilitate hydrologic communication of the orphaned western section of the property with the balance of DR/GR. The proposed flow-pathway will preferentially allow movement of seasonally high surface waters to be conveyed towards the southeast corner of the property as occurred historically. In addition, the Daniels Road South project aims to eliminate wetland rim-ditching to help restore the wetland systems' hydroperiods.

Section 2. Proposed Water Resources Best Management Practices

As the Daniels Road South project evolves from predominately a "construction phase" to "partial construction" and ultimately to a "post-construction" residential phase, the BMPs must also evolve to maintain water resource protection. Construction completion of the proposed development may take between 5 and 10 years, depending on market conditions. However, the initiation of construction is anticipated to commence prior to the end of 2023. At the onset of development construction, all cattle are proposed to be removed from the site.

A. Construction Phase BMPs

During construction of the proposed development, the greatest potential for impacts is associated with increased turbidity and/or potential spills of fuels/oils (hydrocarbons), otherwise known as Volatile Organic Compounds (VOCs) used to power earthmoving equipment, etc. Specific BMPs associated with the construction phase are provided below. The Developer will be responsible for maintaining compliance with all ELMP BMP requirements until such time that control of the development is transitioned to the Homeowner's Association (HOA) and/or Community Development District (CDD).

1. The site's general contractor shall be responsible for assuring that each contractor or subcontractor evaluates the work area before construction is initiated to determine if site conditions may pose particular problems for the safe and secure handling of any regulated substances.

2. If any regulated substances are stored on the construction site during the construction process, they shall be stored in a location and manner which will minimize any possible risk of release to the environment. There will be no intention to use, handle, produce or store regulated substances in violation of the Lee County Land Development Code Section 14-477, Stormwater Pollution Prevention Plan (SWP3) criteria.

3. Each contractor/subcontractor shall familiarize themselves with the manufacturer's safety data sheet supplied with each material containing a regulated substance and shall be familiar with procedures required to contain and clean up any releases of a regulated substance. Any tools or equipment necessary to accomplish the same shall be available in case of an accidental release.

4. In the event of a spill of a regulated substance, the contractor/subcontractor will immediately notify the Developer, who will in turn notify the Lee County Division of Natural Resources Director at (239) 533-8109 and the Florida Department of Environmental Protection (FDEP) South District Office at (239) 344-5600. Additional measures, such as those described in this ELMP's Section 4 (Part A), may also apply.

5. Upon completion of construction, all unused quantities of regulated substances and their containment systems shall be completely removed from the construction site.

6. Proper turbidity abatement measures, as required by the SFWMD, the Florida Stormwater Sedimentation Control Inspector's Manual standards, and the FDEP National Pollutant Discharge Elimination System (NPDES) permit criteria, will be maintained while construction is ongoing or

until adequate vegetation or other stabilization measures have been established.

B. Post-Construction Phase BMPs

After the Lee County Certificate of Compliance or the SFWMD stormwater management system certification is completed for a particular phase of the development, the primary focus of the ELMP will be maintaining the stormwater management system lakes since all internal runoff will be routed to these features for treatment. It is also anticipated that the Developer will establish and create an HOA and/or a CDD that will be responsible for the operation and maintenance of all aspects of the stormwater management system including the lakes, associated stormwater conveyance and control components, and the flow-path connection in perpetuity. At a minimum, the operation and maintenance of the stormwater management and flow-path system will require compliance with the terms and conditions contained within this ELMP. Additional details on BMPs, including monitoring of surface water, are provided in **Section 3** below.

Section 3. Lake Maintenance

A. General Provisions

Proper lake maintenance is an integral aspect of this ELMP since internal stormwater runoff is directed to these features for treatment and attenuation. As an added protection to underlying groundwater resources, the excavation of the lakes will not penetrate any continuous impervious layer of clay or rock. In addition, the groundwater withdrawn from the proposed (new) onsite Sandstone Aquifer wells will be used to replenish a subset of stormwater lakes as needed for use in the master irrigation system.

As shown in the conceptual layout provided as **Figure 4**, surface water irrigation pumps will "repump" groundwater supplies and retained stormwater (surface water) for the irrigation of the residential development. The recycling of surface water quantities is expected to further improve water quality on the property and maintain high water quality in the lakes. The stormwater lakes must be maintained in perpetuity and the following management actions are proposed. Specific post-construction BMPs are also provided.

B. Deep Lake Management

If any of the Daniels Road South stormwater management lakes are proposed to be constructed deeper than 12 feet in depth. In accordance with Lee County Land Development Code Section 10-329(d) (3), these lakes are designated as "deep lakes" and are subject to specific criteria. Based on Lee County Code, the proposed deep lakes will satisfy the following criteria:

1. The stormwater management deep lakes will not exceed a maximum water depth of 20 feet and will not penetrate any continuous impervious layer of clay or rock.
2. A destratification (i.e., aeration) system will be installed in any lake that exceeds a 12-foot water depth. Documentation that the proposed destratification system is adequately-sized and designed for each lake deeper than 12 feet will be submitted to Lee County for approval. An example of a deep lake aeration device is provided as **Appendix A**.
3. Native shade trees meeting the specifications of Lee County Land Development Code Section 10-420 will be planted around each deep lake perimeter at approximately one tree per 100 feet of lake shoreline measured at the detention lake's water level control elevation. Trees and other plants may be grouped or clustered together around the lake perimeter.
4. The deep lake management techniques, including operation of the destratification system, will be maintained for the life of the stormwater management system and will be recorded in the development's covenants, in accordance with the County Attorney's Office.
5. A post-construction bathymetric survey verifying each deep lake's finished water depth, sealed by a professional surveyor and mapper, will be submitted to Lee County for approval.

C. Nuisance and Exotic Vegetation Control

The HOA and/or CDD will be responsible for the removal (in perpetuity) of all nuisance and exotic vegetation from the stormwater management system as defined by the Lee County Land Development Code.

1. Lakes must be inspected annually and any prohibited vegetation must be removed by the use of hand-clearing or appropriate chemical treatment. Only aquatic- approved compounds may be utilized in the stormwater management system lakes.

2. Herbicides and/or algaecides may only be applied by a licensed professional applicator who meets the requirements of Lee County, and in accordance with manufacturer specifications. All applicable local, state and/or federal guidelines and requirements will also be followed.

D. Littoral Vegetation Preservation

Littoral zone vegetation is required to be installed by the Developer and maintained by the HOA and/or CDD (in perpetuity). Littoral zones provide habitats for wading birds, fish and aquatic invertebrates and also help to stabilize shorelines and reduce lake bank erosion.

1. Littoral plants that die will be replaced in accordance with Lee County Land Development Code requirements. The presence of littoral plants throughout the lakes is desirable and may also help to improve the water quality within the lakes.

2. The spread of littoral plants will be encouraged throughout the designated littoral areas.

3. Mechanical trimming or the use of land-based herbicides on desirable littoral plants is prohibited. Any trimming or removal of vegetation required to promote the survival and viability of littoral vegetation will be performed by hand or by approved aquatic herbicides and methods.

E. Fertilizer Application

Strict adherence will be maintained with Lee County's Fertilizer Ordinance. Individual lot owners are prohibited from applying fertilizer to their lots. Any person(s) applying fertilizers must have received a limited certification in compliance with Florida Statute 482.1562 prior to application of any and all fertilizers. Additionally, fertilizer content and application rate must be in compliance with Lee County's Fertilizer Ordinance. The Lee County Fertilizer Ordinance No. 08-08 is provided as **Appendix B**.

1. All professional landscape businesses must register with Lee County prior to performing landscape fertilization services within unincorporated Lee County.

2. At least one (1) employee of a firm employed to perform landscape fertilization services must be a Certified Professional Landscaper.

3. Proof of completion of a Lee County-approved BMP training program must be provided to the Division of Lee County Natural Resources.

4. At least one (1) BMP-trained employee must be onsite while fertilizers are applied. A registration decal provided by the division must be displayed on all company vehicles.

F. Erosion Protection and Lake Bank Maintenance

Lake banks are susceptible to erosion due to overland flow of stormwater runoff, wave action, and the natural seasonal fluctuation of water levels. Accordingly, lake banks within the project are designed to minimize this potential for erosion.

1. Lake banks will be inspected annually to identify areas of erosion. Once identified, the erosion will be repaired and the source of erosion shall be eliminated, if possible.

2. Where excessive erosion occurs, repair of the lake banks and/or enhancement of stabilization measures may be necessary.

3. No motorized boats will be allowed within any of the onsite stormwater management lakes.

G. Lake Education Program

A narrative explaining the benefits of littoral vegetation, lake maintenance and surface and groundwater quality will be made available to residents.

1. Lake experts will be encouraged to attend the HOA and/or CDD meetings annually to discuss the lake system operation and maintenance requirements.

2. Homeowners will be informed that they are prohibited from removing or trimming littoral vegetation.

3. Additionally, the homeowners will be made aware of the extreme importance regarding any introduction of hazardous materials or substances into the lakes.

H. Pesticide, Herbicide or Fungicide Applications

All applications of pesticides, herbicides, algaecides and/or fungicides shall be applied by a licensed professional applicator, meet the requirements of Lee County, be applied in accordance with the manufacturer's specifications, and shall meet all applicable local, state and/or federal guidelines and requirements. Only approved aquatic herbicides may be used to treat the stormwater management system.

1. Homeowners shall be prohibited from applying pesticides, herbicides and/or fungicides to their lots. These activities will only be performed by certified contractors approved by the HOA and/or CDD.

2. The use of any chemical product in a manner that will allow airborne or waterborne entry of such products into the stormwater management system is prohibited. This requirement shall not apply to the use of chemical agents by certified lake management specialists for the control of algae and nuisance vegetation within the stormwater management system lakes. However, application of such agents shall be in compliance with the requirements of Lee County, applied in accordance with the manufacturer's specifications, and meet all applicable local, state and/or federal guidelines and requirements.

3. Pesticides, fungicides and herbicides will be used only in response to a specific problem and in the manner and amount recommended by the manufacturer. Broad application of pesticides, fungicides and herbicides as a preventative measure is prohibited.

I. Southwest Florida International Airport Land Use Restrictions

As mandated by Lee County Land Development Code, no proposed land use changes can interfere with the safe operation of aircraft originating from, or flying into, the Southwest Florida International Airport, located to the southwest of the subject property. (See the proposed deviations from Lee County's Land Development Code included herein).

1. No land use alterations are allowed within the designated airport exclusion zone that will produce a wildlife attractant hazard that is considered greater than the existing, historic conditions. If such an attractant is identified by the Lee County Port Authority, the landowner will have the full and sole responsibility of eliminating the hazardous situation at their expense.

2. All stormwater management ponds, lakes, canals, conveyances, and other features are to be designed and constructed in accordance with Federal Aviation Administration (FAA) recommendations that discourages wildlife.

3. The use of rock-lined, steep-sided stormwater basins is required within the airport exclusion zone to facilitate the control of potentially hazardous wildlife. The rocks help to hide the water during periods of low inundation and help discourage shoreline vegetation and wildlife foraging along shorelines. Stormwater lakes located within Southwest Florida International Airport's 10,000-foot Hazardous Wildlife Buffer will be maintained free of emergent and submergent vegetation. Vegetation management techniques may include, but are not limited to, hand pulling of vegetation, herbicide application and removal with mechanical equipment.

J. Commercial Area Adjacent to State Highway 82

The lake maintenance requirements and BMPs described within this Section also pertain to the commercial development area located along State Highway 82.

Section 4. Wellfield Protection

A. Green Meadows Wellfield Protection

The Daniels Road South development is located approximately 0.1 miles north of the nearest Lee County Wellfield Protection Zone associated with the Green Meadows Wellfield, located adjacent to the Florida Rock Properties, Inc.'s mining operation, as shown in **Figure 5**. Therefore, additional measures regarding Wellfield Protection are not applicable to this ELMP. The level of water quality assurance offered by this ELMP offers abundant assurance that, in the unlikely event that degradation of water quality or contamination occurs, ample time exists to initiate remedial measures and safeguard Lee County's nearest wellfield. In addition, surface water quality monitoring is also proposed for the Daniels Road South project, as shown in **Figure 6**.

Section 5. Surface Water Quality Monitoring Program

A. General Data Quality Objectives

All surface water quality samples will be collected in accordance with Chapter 62-160, Florida Administrative Code (F.A.C.), and the FDEP's Standard Operating Procedures (SOPs) DEP-SOP-001/01 FQ 1000 Field Quality Control Requirements and FDEP-SOP-001/01 FS 2100 Surface Water Sampling. A summary of the proposed surface water sampling schedule is provided in the attached **Table 1**.

B. Surface Water Monitoring Goals

The purpose of the surface water monitoring program is to assure that surface water coming onto, originating within, and leaving the project meet all applicable requirements of the SFWMD Environmental Resource Permit (ERP) program authorized pursuant to Part IV of Chapter 373, F.S. and all applicable requirements of Chapter 62-302, F.A.C., Surface Water Quality Standards. Additionally, water quality monitoring of the designated stormwater management lakes will verify the efficiency of the ELMP management actions and assure the lakes' health for the residents' enjoyment. Additional surface water quality parameters may be required if the FDEP determines that the sub- watershed or FDEP WBID No. $3258D_3$ becomes impaired. Please note that a single set of project background samples are proposed once the stormwater lakes are constructed and rehydrated. Future monitoring of the proposed stormwater lakes will be compared to and contrasted with the initial background testing results.

C. Surface Water Quality Monitoring

Surface water quality grab samples will be collected per FDEP protocol and analyzed by a NELAC/TNI-certified laboratory. The surface water quality parameters to be tested are listed below and summarized in the attached **Table 2.** In addition, the attached **Table 2** also includes the laboratory's Accuracy, Precision and minimum Method Detection Limit (MDL). Please note that the Practical Quantitation Limit (PQL) for each parameter varies between laboratories, however the PQL typically equates to four times the MDL.

- **Field Parameters – Depth of Water, Dissolved Oxygen, pH, Temperature, Total Dissolved Solids, Turbidity and Specific Conductivity**

- **Lab Parameters – Total Nitrogen, Nitrate and Nitrite, Ammonium, Ammonia, Total Kjeldahl Nitrogen, Total Phosphorus, Chlorophyll-a, and Ortho-phosphate.**

Surface water quality monitoring shall be continued for a minimum of five (5) years after operational completion of the stormwater management system. After five (5) consecutive years of testing, a request for discontinuation or reduction in the monitoring requirements will be proposed to the Lee County Natural Resources Department if it can be demonstrated that the surface water quality is being maintained within applicable State standards.

Section 6. Water Quality Data Reporting and Analysis

Surface water quality data will be submitted to the Lee County Natural Resources Department staff in an approved electronic format within 30 days of receiving results from the contract laboratory if an issue has been detected. Otherwise, data will be submitted annually. The submittal will include all field notes, field and laboratory water quality data results and all previously collected (i.e., period of record) water quality data. The submittals will also include a brief narrative on the most recent sample collection, sample chain of custody, descriptions of any re-testing of erroneous values, and any water quality exceedances.

By **March 1 of each year**, a Water Quality Summary Report for the preceding calendar year shall be supplied to Lee County Natural Resources staff which summarizes the surface water testing results for the development. The results will include a summary table that lists all the field and laboratory parameters for the monitoring locations. Laboratory parameter concentrations that fall below the PQL for that parameter will be reported with no value; however, a value qualifier of "I" (i.e., between the MDL and PQL) or "U" (below the MDL) will be included in the summary table.

All water quality data for the analytes listed in the attached **Table 2** that are detected in concentrations above the laboratory PQL will be reviewed, graphed and statistically analyzed for trends and exceedances above two (2) standard deviations of the mean of all values. Any reported concentrations above the MCL will be clearly identified, as well as remedial actions which were used to timely reduce that particular analyte's concentration. Where appropriate, testing results for constituents already proposed, i.e., Dissolved Oxygen, pH, and Specific Conductance can be compared to Chapter 62-302.530 criteria for Class III waters.

Section 7. Remedial Actions

In the unforeseen event that any significant surface and/or groundwater impacts are identified as a result of a hydrocarbon spill or pesticide/herbicide application at the subject property, the Developer or designee of the HOA and/or CDD will notify the Director of the Lee County Natural Resources Division within no more than 12 hours (or next business day). If a spill or release "presents an immediate threat to human health and/or the environment" then the FDEP Office of Emergency Response (OER) will be contacted within 24 hours. Guidance outlining the definition of a release as well as reporting procedures is presented in the OER webpage located at:

http://www.dep.state.fl.us/per/reportable incident.htm.

The Developer or their successor(s) will coordinate contamination assessment and remediation efforts with Lee County and will comply with applicable local, state and federal permitting requirements. The initial phase of the remediation plan will consider the actions outlined in Section 4 and may consist of additional temporary monitoring wells installed for the short-term temporal monitoring of potential subsurface impacts and to evaluate the horizontal and the vertical distribution of the impacted area. Based on the findings of the initial phase, if necessary, a more comprehensive assessment may be required.

Section 8. In Conclusion

The information and technical requirements in this ELMP are provided to the Developer or designee of the HOA and/or CDD to assist with understanding the importance of a well-maintained and fully-functioning stormwater management system. The stormwater management system lakes within the development are not only required by State law but can also be a source of beauty and enjoyment for the residents while maintaining the value and integrity of the water resources. The Daniels Road South recreated flow-path will enhance and promote increased recharge to the shallow Water Table Aquifer. Therefore, the groundwater resource benefits and the management actions required herein demonstrate an exceptional level of protection, preservation and enhancement of groundwater and surface water resources within the DR/GR.

Table 1

Water Quality Sampling Schedule

Date	Sample Type	Sample Location
January-31	N/A	N/A
February-28	N/A	N/A
March-31	N/A	N/A
April-30	N/A	N/A
May-31	Surface Water	6 Locations
June-30	N/A	N/A
July-31	Surface Water	6 locations
August-31	N/A	N/A
September-30	Surface Water	6 locations
October-31	N/A	N/A
November-30	N/A	N/A
December-31	N/A	N/A

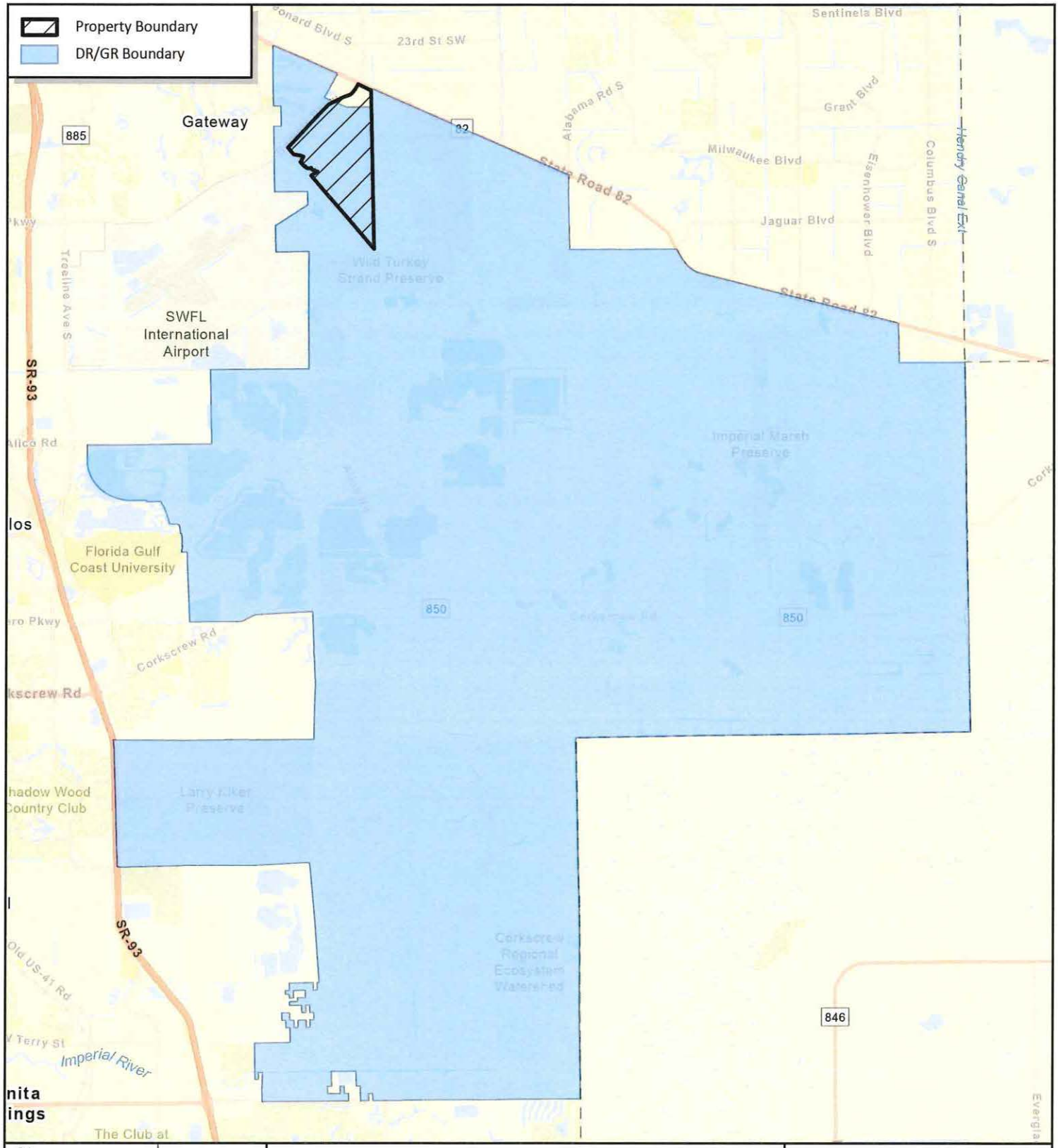
*See Figure 6 for surface water quality sampling locations

Table 2

Surface Water Quality Analytes

Field Parameters					
Parameter	**Units**	**Precision (%RPD)**	**Accuracy (%Recovery)**	**MDL**	**Sampling Frequency**
Depth of Water	Feet	0.01	NA	NA	3 times per year
Dissolved Oxygen	mg/L	FT 1000-1	FT 1000-1	NA	3 times per year
pH	SU	FT 1000-1	FT 1000-1	NA	3 times per year
Temperature	Deg C	FT 1000-1	FT 1000-1	NA	3 times per year
Total Dissolved Solids	mg/L	FT 1000-1	FT 1000-1	NA	3 times per year
Specific Conductivity	µS/cm	FT 1000-1	FT 1000-1	NA	3 times per year
Laboratory Parameters (Nutrients)					
Total Nitrogen	mg/L	CALC	CALC	CALC	3 times per year
Nitrite + Nitrate	mg/L	5	90-110	0.004	3 times per year
Ammonium	mg/L	CALC	CALC	CALC	3 times per year
Ammonia	mg/L	17	90-110	0.008	3 times per year
Total Kjeldahl Nitrogen	mg/L	11	90-110	0.05	3 times per year
Total Phosphorus	mg/L	10	90-110	0.008	3 times per year
Chlorophyll-a	mg/L	20	93-108	0.25	3 times per year
Ortho-phosphate	mg/L	10	88-118	0.002	3 times per year

Notes:



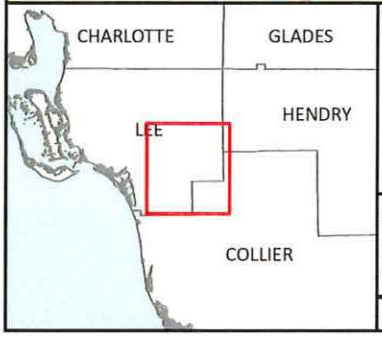


Figure 1
Daniels Road South and the DR/GR
Lee County, Florida

N

0 0.5 1 2 Mi

Scale: 1:140,000

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4/15/2022

Image: ESRI World Street Map

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Integrated Water Resource Consultants
a Division of RESPEC Company LLC

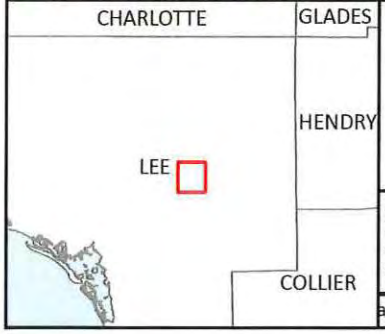

Figure 2
Daniels Road South
1944 Historic Aerial Imagery
Lee County, Florida

N

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Scale: 1:22,000

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ıge: UFDC 1944 Historic Aerial Imagery

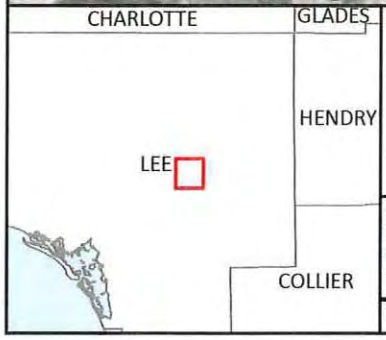

Figure 3
Daniels Road South
1958 Historic Aerial Imagery
Lee County, Florida

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Scale: 1:22,000

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4/18/2022

Image: UFDC 1958 Historic Aerial Imagery

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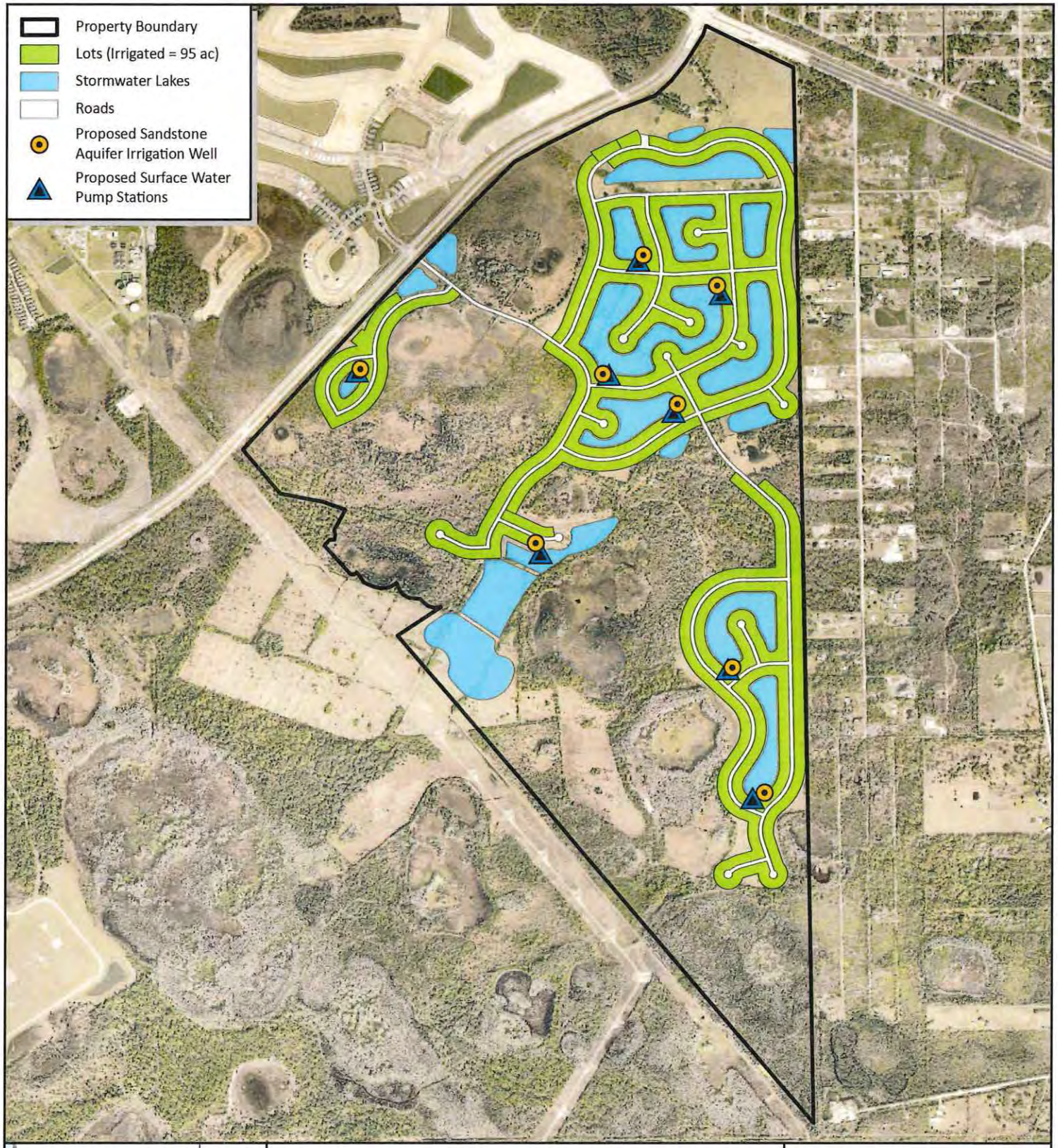

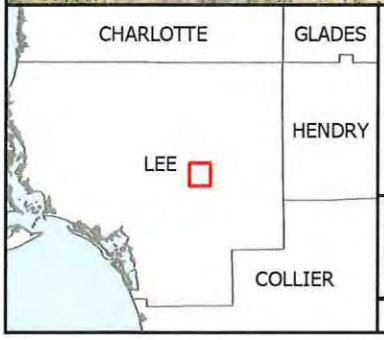

Figure 4
Daniels Road South
Conceptual Layout and
Proposed Withdrawals
Lee County, Florida

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Image: ESRI World Imagery

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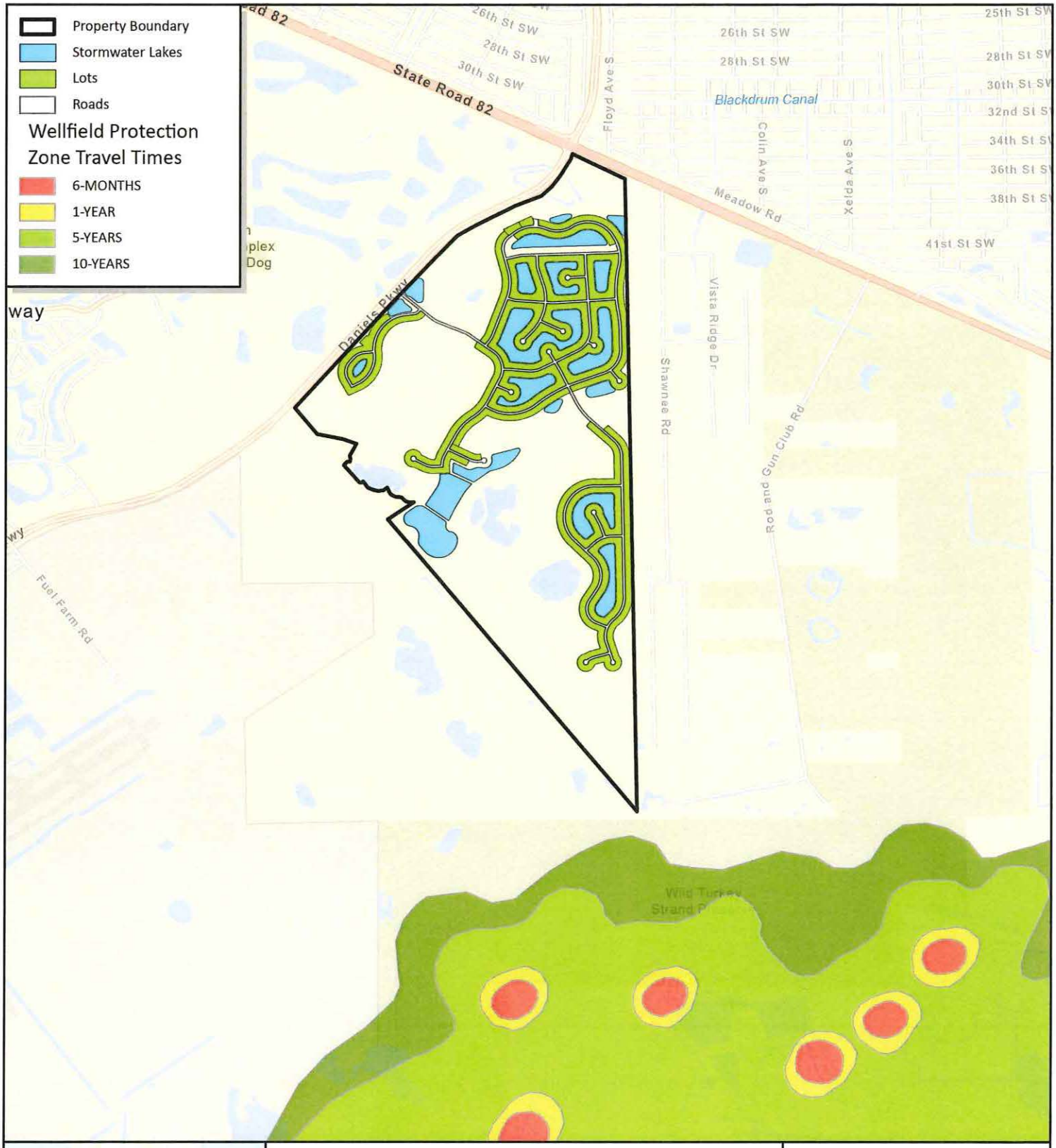

Figure 5
Daniels Road South
Proximity to Lee County
Wellfield Protection Zone
Lee County, Florida

N

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Scale: 1:35,000

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Image: ESRI World Imagery

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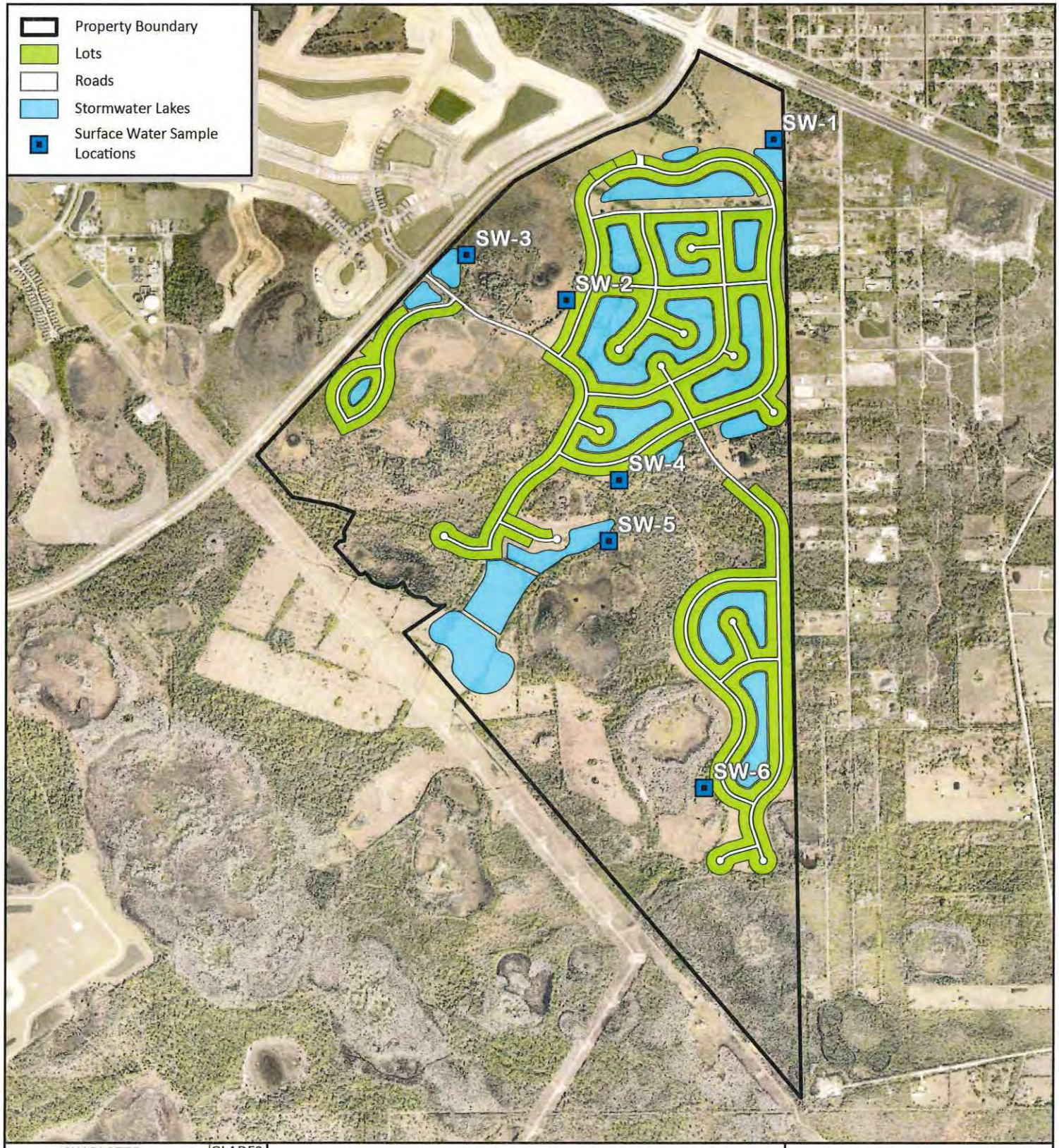

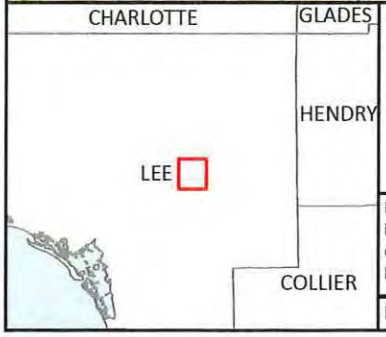

Figure 6
Daniels Road South
Proposed Surface Water Sampling Locations
Lee County, Florida

N

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Scale: 1:22,000

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8/16/2022

Image: ESRI World Imagery

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Integrated Water Resource Consultants
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APPENDIX A

Example of Deep Lake Aeration Device

Vertex Water Features
Pond and Lake Aeration
BOTTOM AERATION

With Vertex MicronBubble™ Technology

AIR3 XL2™

The Vertex Air3 XL2™ pond aerator is a super-efficient, affordable and safe system. In a typical pond, an Air3 XL2™ can aerate approximately 3-4 acres depending on shape, slope, oxygen demand and other factors. A 1/2hp (0.37kW) Brookwood™ SafeStart™ compressor, housed in our rustproof aluminum outdoor cabinet, feeds three bottom mounted CoActive AirStations™ utilizing Vertex's MicronBubble™ technology. The rising force of millions of bubbles circulates the entire water column, entraining bottom water up to the surface allowing vital oxygen to be absorbed and poisonous gasses expelled. With no electricity in the water, Vertex's aeration systems are safe for any type of water recreation.

Our systems have a full 3-year Vertex warranty, excluding wearable parts (air filters and compressor maintenance kits) plus a Limited Lifetime warranty against rust and corrosion on the cabinet, 5-year warranty on the AirStations™ and a 15-year warranty on BottomLine™ supply tubing.

FEATURES

AIRSTATIONXL2™

- Total pumping capacity of up to 11,400 GPM
- Six 9" flexible membrane discs with MicronBubble™ technology
- Shallow water Airstation optional for depths lower than 8'
- Self-cleaning, low maintenance
- Powder-coated stainless steel self-sinking base unit designed to prevent sinking into soft bottom sediments
- 5-year "No Questions" warranty

BROOKWOOD™ COMPRESSOR

- 3-year Vertex warranty, excluding wearable parts (air filters and compressor maintenance kits)
- Vertex SafeStart™ Technology
- UL, 115v or 230v, 35 Max PSI
- Thermal overload protection
- 1/2hp (0.37kW): low electrical costs
- 2-3 year extended duty cycle between scheduled maintenance

QUIETAIR™ CABINET

- Class "A" GFCI protection on all 115v circuits
- Powder coated aluminum for a durable attractive finish
- High capacity 290 CFM fan
- Easy access design with cam lock
- Easy plug-in connection to waterside electrical service
- Disconnect switch
- Heavy duty, light weight mounting pad included
- Sound dampening kit optional
- Limited lifetime warranty against rust

BOTTOMLINE™ TUBING

- Over-sized I.D. for high flow
- Self-weighted for easy installation
- Available in 100' and 500' increments
- 15-year Vertex warranty

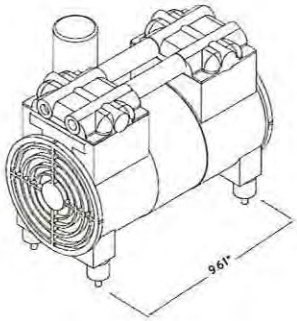
BENEFITS TO THE LAKE

- High pumping rate easily penetrates stratification layers
- Circulates entire water column
- Increases oxygen levels throughout water column
- Promotes beneficial bacteria growth
- Prevents low oxygen fish kills
- Reduces nutrient levels and associated algae growth
- Oxidizes/reduces bottom muck
- Expands oxygenated habitat for improved fisheries
- Reduces aquatic midge and mosquito insect hatches
- Eliminates foul odors from undesirable dissolved gases
- Safe entry – no electricity in the water
- Extremely energy efficient

SPECIFICATIONS: AIR3 XL2™ LAKE AERATION SYSTEM

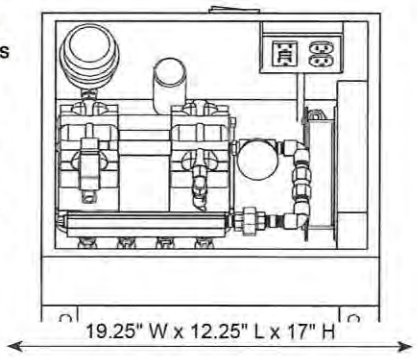
BROOKWOOD™ COMPRESSOR

1/2hp (0.37kW), 115v or 230v, Single Phase piston type compressor. Built for continuous 24/7 operation and equipped with Vertex SafeStart™ technology allowing auto restart under maximum rated pressure without motor damage. Super-duty Brookwood™ compressors incorporate upgraded rotors, stators, valve plates, bearings and capacitors and are thermally protected, oil-free, and require no lubrication; just periodic cleaning of included washable air filter. Extended duty cycle is approximately 2 to 3 years for compressor maintenance, about 2 to 3 times the duty cycle of ordinary piston and rotary vane compressors. All Brookwood™ SafeStart™ compressors carry a 3-year Vertex warranty, excluding wearable parts (air filters and compressor maintenance kits).



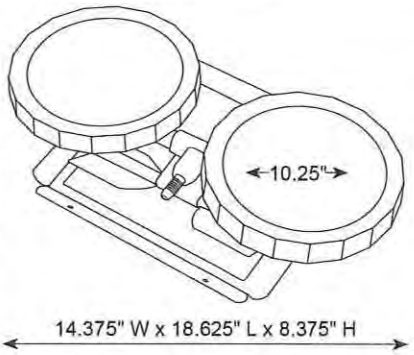
QUIETAIR™ CABINET

Enclosure comes equipped with cam lock for security, fully gasketed and constructed of aluminum with gray electrostatically-bonded powder coating to provide Limited Lifetime warranty against cabinet rust and corrosion. Enclosure furnished with stamped ventilation grills to insure forced air circulation and an integral cooling fan with thermal protection, producing 290 CFM to guard against excessive compressor operating temperatures. Cabinet provided with HDPE mounting pad. Enclosure comes with class a GFCI protection on both the compressor and fan circuits. Quick disconnect switch included. Side mounted muffler box and additional insulation optional for quiter operation.



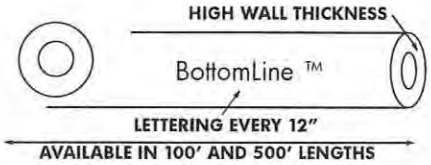
AIRSTATION XL2™ ASSEMBLY

Diffuser station consists of two self-cleaning, 9" diameter, flexible membrane diffusers of EPDM compound with 100% rebound memory, each producing millions of fine 500 to 3000 micron bubbles – the majority 500 to 1000 microns. Each diffuser station base unit is made of powder-coated stainless steel and designed to prevent settling into soft bottom sediments. AIRSTATION™ is designed with adjustable diffuser riser to accommodate any site requirements. AirStations are independently tested and verified to provide stated pumping rates. 5-year warranty.



BOTTOMLINE™ SUPPLY TUBING

Self-weighted, direct burial submersible tubing for connection from compressor to diffuser stations. Tubing is flexible PVC composite construction for use with standard PVC solvent weld cement and insert fittings. Tubing has 0.58" I.D. and high wall thickness for long term durability and protection against punctures. Remains flexible in cold temperatures.



Vertex Water Features
Pond and Lake Aeration

(844) 432-4303 • info@vertexwaterfeatures.com
www.vertexwaterfeatures.com

Install all electrical equipment in accordance with Article 682 of the National Electrical Code and all local codes. Vertex Water Features reserves the right to improve and change our designs and/or specifications of our aerators without notice or obligation.

©Vertex Water Features rev.051116

APPENDIX B

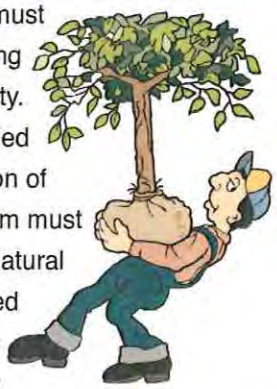
Lee County Fertilizer Ordinance No. 08-08

LEE COUNTY FERTILIZER ORDINANCE (08-08)

APPLICATION: This ordinance applies to anyone performing lawn care and maintenance on turf and/or landscape plants within unincorporated Lee County as a "professional landscape business" or an "institutional landscaper". This ordinance does not apply to individual homeowners who perform their own landscape maintenance.

EFFECTIVE DATE: This ordinance goes in to effect on May 13, 2009.

REGISTRATION:



- All professional landscape businesses must register with Lee County prior to performing landscaping within unincorporated Lee County. At least one (1) employee must be a Certified Professional Landscaper. Proof of completion of a Lee County approved BMP training program must be provided to the Division of Lee County Natural Resources. At least one (1) BMP trained employee must be on site while fertilizers are applied. A registration decal provided by the division must be displayed on all company vehicles. NOTE: An example of a professional landscape business is any company you hire to perform landscaping at your home.
- All institutional landscapers must follow the same registration guidelines as professional landscape businesses with the exception of displaying a registration decal on company vehicles. NOTE: An example of an institutional landscaper is the in-house landscape maintenance staff at Shadow Wood.

TRAINING & CERTIFICATION:

- Florida Green BMP training & certification can be completed through the Lee County Extension Service. This must be done prior to registration.
- Non-professional landscapers are not required to complete the Florida Green BMP training & certification, but are strongly encouraged to participate in the University of Florida IFAS Florida Yards & Neighborhoods Outreach & Public Education Program. This applies to individual owners of single-family residential units who perform lawn care and maintenance on turf and/or landscape plants.

TIMING OF FERTILIZER APPLICATION: Fertilizers containing Nitrogen (N) and/or Phosphorus (P) may not be applied on turf and/or landscape plants from June 1 through September 30.

FERTILIZER CONTENT/APPLICATION RATE:

- Phosphorus (P) in any fertilizer may not exceed a rate of 0.25 lb. per 1,000 sq. ft. per application.
- Phosphorus (P) in any fertilizer may not exceed a rate of 0.50 lbs. per 1,000 sq. ft. per year.
- All fertilizers applied must contain at least 50% slow release nitrogen (N).
- Nitrogen (N) in any fertilizer may not exceed a rate of 4 lbs. per 1,000 sq. ft. per year.

IMPERVIOUS SURFACES: No fertilizers should be deposited, intentionally or accidentally, on an impervious surface such as a driveway, sidewalk or street.

BUFFER ZONES: No fertilizers shall be applied on turf and/or landscape plants within ten (10) feet of a water body, seawall or wetland. (See Florida DEP chapter 62-340)

MODE OF FERTILIZER APPLICATION: When using a rotary spreader, use of a deflector shield is required to deflect fertilizers away from water bodies, seawalls and wetlands.

LOW MAINTENANCE ZONES (NO MOW): A voluntary six (6) foot low maintenance zone is strongly recommended from any water body, seawall or wetland.

GRASS CLIPPINGS/VEGETATIVE MATERIAL: No grass clippings or vegetative materials shall be deposited into storm drains, ditches, water bodies, roadways or other impervious surfaces.

EXEMPTIONS (ordinance does not apply to):

- New landscaping in place for less than sixty (60) days.
- Vegetable gardens as long as they are not within fifteen (15) feet of a water body, seawall or wetland.
- Yard waste, compost or mulches applied to improve the soil.
- Reclaimed water used for irrigation which usually contains high amounts of nitrogen and phosphorus.
- Farm operations.
- Pastures used for grazing livestock.
- Golf courses.
- Specialized turf areas (parks, cemeteries, athletic fields, golf practice areas).

ENFORCEMENT & PENALTIES:

- This ordinance shall be enforced by designated Lee County officials and/or inspectors.
- First violation...$100.00
- Second violation...$250.00
- Third and subsequent violations...$500.00

DANIELS PARKWAY SOUTH INDIGENOUS PRESERVATION, RESTORATION, AND MANAGEMENT PLAN

Revised September 2022

Prepared For:

Lennar
10481 Ben C. Pratt/Six Mile Cypress Parkway
Fort Myers, Florida 33966
(239) 278-1177

Prepared By:

Passarella & Associates, Inc.
13620 Metropolis Avenue, Suite 200
Fort Myers, Florida 33912
(239) 274-0067

Project No. 19LLL3192

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1.0 INTRODUCTION

The following outlines the Lee County Indigenous Preservation, Restoration, and Management Plan for Daniels Parkway South (Project). The Project site totals 1,233.08± acres and is located in Sections 8, 9, 16, 17, and 21; Township 45 South; Range 26 East; Lee County (Appendix A). The Project proposes to establish on-site conservation areas totaling approximately 679.10± acres. The proposed conservation areas will contain the following elements:

- Preservation and enhancement of 295.80± acres of indigenous wetlands and uplands (existing forested and herbaceous habitats with less than 75 percent exotics);
- Restoration of 359.60± acres of indigenous wetlands and uplands through the removal of exotic vegetation (existing forested and herbaceous habitats with greater than 75 percent exotics) and supplemental planting;
- Backfilling 6.90± acres of Other Surface Waters (OSW) and replanting with native wetland and upland vegetation; and
- Removal of 16.80± acres of berms and planting with native wetland and upland vegetation.

Thus, the Project proposes 679.10± acres of conservation area that will be placed under conservation easement with inspection, enforcement, and approval rights granted to Lee County and the South Florida Water Management District (SFWMD). The preserve areas utilized to meet the buffer requirements are depicted on Morris Depew's Master Concept Plan (MCP) which is provided under separate cover. A discussion of the buffer planting requirement is provided in Section 6.0 below. The preservation and enhancement areas include 58.1± acres of mature pine flatwoods (Florida Land Use, Cover and Forms Classification System (FLUCFCS) Codes 4119 E1 and E2) which is considered a rare and unique upland habitat type according to the Lee County Comprehensive Plan. A map showing the location of the 58.1± acres of rare and unique upland habitat is included as Appendix B.

A portion of the Project is located within the Southwest Florida International Airport (SWFIA) 10,000-Foot Hazardous Wildlife Buffer (Buffer) which includes 543.90± acres of preserve area. Table 1 below provides a summary of the preserve acreages that are within and outside of the Buffer.

Table 1. Preserve Acreage Summary

Activity Type	Acreage		
	Within Buffer	**Outside Buffer**	**Total**
Indigenous Wetland Preserve and Enhancement	181.05	24.65	**205.70**
Indigenous Wetland Restoration	229.79	71.71	**301.50**
Indigenous Upland Preserve and Enhancement	60.79	29.31	**90.10**
Indigenous Upland Restoration	53.88	4.22	**58.10**
OSW to be Restored to Indigenous Wetlands	1.77	0.73	**2.50**
OSW to be Restored to Indigenous Uplands	4.03	0.37	**4.40**
Berms to be Restored to Indigenous Wetlands	7.84	3.36	**11.20**

Table 1. (Continued)

Activity Type	Acreage		
	Within Buffer	Outside Buffer	Total
Berms to be Restored to Indigenous Uplands	4.75	0.85	**5.60**
Totals	**543.90**	**135.20**	**697.10**

Due to the Project's proximity to SWFIA, two specific management activities will be applied to preserve areas within the Buffer that are not required for preserve areas located outside the Buffer. This includes like-for-like habitat restoration and adhering to Lee County Port Authority's (LCPA) Compatible Native Landscape List. Details of these management activities are provided in Section 5.0.

2.0 EXISTING INDIGENOUS VEGETATION HABITATS

Pursuant to Land Development Code (LDC) Section 10-1, indigenous native vegetation means those plant species that are characteristic of the major plant communities of the County. Native habitats where invasive exotic vegetation has exceeded 75 percent coverage are not considered to be indigenous vegetation.

The proposed conservation areas include 295.80± acres (combined pre-development wetland and upland acres) of existing indigenous native vegetation. The indigenous areas to be preserved consist of wetland and upland forested and herbaceous habitats with less than 75 percent coverage by exotics. These indigenous areas are adjacent to improved pasture that has a perimeter berm and ditch system. An aerial with Florida Land Use, Cover, and Forms Classification System (FLUCFCS) is attached as Appendix C and depicts the existing indigenous wetland and upland vegetation communities.

The indigenous wetland habitats within the conservation areas total 205.70± acres and consist mostly of remnant cypress, hydric pine, mixed wetland hardwood habitats, and freshwater marsh. Hydric cabbage palm, wetland shrub, and wet prairies occur to a lesser extent. The indigenous uplands within the conservation areas total 90.1± acres and consist mostly of palmetto prairie, pine flatwoods, pine, cabbage palm, and hardwood/conifer, mixed habitats adjacent to the on-site wetland areas. Listed below are the FLUCFCS (Florida Department of Transportation 1999) descriptions of the indigenous wetland and upland habitats proposed for preservation and enhancement.

2.1 Indigenous Wetland Habitats

<u>Cabbage Palm, Hydric (50-75% Exotics) (FLUCFCS Code 4281 E3)</u>
The canopy of this habitat type includes cabbage palm (*Sabal palmetto*). The sub-canopy contains cabbage palm, wax myrtle (*Morella cerifera*), and scattered melaleuca (*Melaleuca quinquenervia).* The ground cover includes torpedograss (*Panicum repens*), Wright's nutrush (*Scleria lacustris*), little blue maidencane (*Amphicarpum muehlenbergianum),* saw palmetto (*Serenoa repens*), swamp flatsedge (*Cyperus ligularis*), Asiatic pennywort

(*Centella asiatica*), marsh pennywort (*Hydrocotyle umbellata*), broomsedge (*Andropogon virginicus*), and dog fennel (*Eupatorium capillifolium*).

Mixed Wetland Hardwoods, Disturbed (0-24% Exotics) (FLUCFCS Code 6179 E1)
The canopy of this habitat type includes laurel oak (*Quercus laurifolia*), cabbage palm, slash pine (*Pinus elliottii*), and scattered bald cypress (*Taxodium distichum*). The sub-canopy contains laurel oak, myrsine (*Myrsine cubana*), wax myrtle, Brazilian pepper (*Schinus terebinthifolia*), saltbush (*Baccharis halimifolia*), cabbage palm, and buckthorn (*Sideroxylon reclinatum*). The ground cover includes marsh pennywort, sawgrass (*Cladium jamaicense*), frog fruit (*Phyla nodiflora*), witchgrass (*Dichanthelium* sp.), false fennel (*Eupatorium leptophyllum*), broomsedge, little blue maidencane, climbing hempvine (*Mikania scandens*), earleaf greenbrier (*Smilax auriculata*), Asiatic pennywort, Wright's nutrush, and gulfdune paspalum (*Paspalum monostachyum*).

Mixed Wetland Hardwoods, Disturbed (25-49% Exotics) (FLUCFCS Code 6179 E2)
This habitat type is similar to FLUCFCS Code 6179 E1, but with 25 to 49 percent melaleuca in the canopy and Brazilian pepper in the sub-canopy.

Mixed Wetland Hardwoods, Disturbed (50-75% Exotics) (FLUCFCS Code 6179 E3)
This habitat type is similar to FLUCFCS Code 6179 E2, but with 50 to 75 percent melaleuca in the canopy and Brazilian pepper in the sub-canopy.

Cypress, Disturbed (0-24% Exotics) (FLUCFCS Code 6219 E1)
The canopy of this habitat type includes bald cypress. The sub-canopy contains bald cypress, wax myrtle, and scattered Brazilian pepper and melaleuca. The ground cover includes sawgrass, marsh pennywort, little blue maidencane, and scattered West Indian marsh grass (*Hymenachne amplexicaulis*), and torpedograss.

Cypress, Disturbed (25-49% Exotics) (FLUCFCS Code 6219 E2)
This habitat type is similar to FLUCFCS Code 6219 E1 but contains 25 to 49 percent Brazilian pepper in the sub-canopy and torpedograss and West Indian marsh grass in the ground cover.

Cypress, Disturbed (50-75% Exotics) (FLUCFCS Code 6219 E3)
This habitat type is similar to FLUCFCS Code 6219 E2 but contains 50 to 75 percent Brazilian pepper and melaleuca in the canopy and sub-canopy and torpedograss and West Indian marsh grass in the ground cover.

Pine, Hydric, Disturbed (0-24% Exotics) (FLUCFCS Code 6259 E1)
The canopy of this habitat type includes slash pine and widely scattered cabbage palm and melaleuca. The sub-canopy contains slash pine, wax myrtle, melaleuca, and scattered cabbage palm. The ground cover includes rush fuirena (*Fuirena scirpoidea*), little blue maidencane, gulfdune paspalum, Asiatic pennywort, sawgrass, Wright's nutrush, corkwood (*Stillingia aquatica*), jointed spikerush (*Eleocharis interstincta*), musky mint (*Hyptis alata*), yellow-eyed grass (*Xyris* sp.), Southern beaksedge (*Rhynchospora microcarpa*), rayless goldenrod (*Bigelowia nudata*), and torpedograss.

Pine, Hydric, Disturbed (25-49% Exotics) (FLUCFCS Code 6259 E2)
This habitat type is similar to FLUCFCS Code 6259 E1, but with 25 to 49 percent melaleuca in the canopy and sub-canopy and Wright's nutrush and torpedograss in the ground cover.

Pine, Hydric, Disturbed (50-75% Exotics) (FLUCFCS Code 6259 E3)
This habitat type is similar to FLUCFCS Code 6259 E2, but with 50 to 75 percent melaleuca in the canopy and sub-canopy and Wright's nutrush in the ground cover.

Wetland Shrub, Disturbed (25-49% Exotics) (FLUCFCS Code 6319 E2)
The canopy of this habitat type includes scattered melaleuca. The sub-canopy contains wax myrtle, saltbush, and scattered bald cypress and melaleuca. The ground cover includes little blue maidencane, spreading beaksedge (*Rhynchospora divergens*), slender spikerush (*Eleocharis baldwinii*), Tracy's beaksedge (*Rhynchospora tracyi*), and rush (*Juncus* sp.).

Freshwater Marsh, Disturbed (0-24% Exotics) (FLUCFCS Code 6419 E1)
The canopy of this habitat type is primarily open with scattered bald cypress and scattered melaleuca on the edges. The sub-canopy contains scattered wax myrtle, corkwood, bald cypress, melaleuca, and widely scattered Carolina willow (*Salix caroliniana*). The ground cover includes dotted smartweed (*Persicaria punctata*), shortleaf spike sedge (*Cyperus brevifolius*), witchgrass, spikerush (*Eleocharis cellulosa*), sawgrass, maidencane (*Panicum hemitomon*), fireflag (*Thalia geniculata*), sand cordgrass (*Spartina bakeri*), torpedograss, pickerelweed (*Pontederia cordata*), soft rush (*Juncus effusus*), Wright's nutrush, and West Indian marsh grass.

Freshwater Marsh, Disturbed (25-49% Exotics) (FLUCFCS Code 6419 E2)
This habitat type is similar to FLUCFCS Code 6419 E1, but with 25 to 49 percent torpedograss, Wright's nutrush, and West Indian marsh grass in the ground cover.

Freshwater Marsh, Disturbed (50-75% Exotics) (FLUCFCS Code 6419 E3)
This habitat type is similar to FLUCFCS Code 6419 E2, but with 50 to 75 percent torpedograss, Wright's nutrush, and West Indian marsh grass in the ground cover.

Wet Prairies, Disturbed (50-75% Exotics) (FLUCFCS Code 6439 E3)
The canopy and sub-canopy of this habitat type include scattered melaleuca. The ground cover contains torpedograss, Wright's nutrush, broomsedge, and Southern beaksedge.

2.2 Indigenous Upland Habitats

Palmetto Prairie, Disturbed (0-24% Exotics) (FLUCFCS Code 3219 E1)
The canopy of this habitat type is primarily open with scattered melaleuca on the edges. The sub-canopy contains saw palmetto and scattered Brazilian pepper. The ground cover includes carpetgrass (*Axonopus* sp.), chocolateweed (*Melochia spicata*), saw palmetto, and grass-leaved goldenrod (*Euthamia graminifolia*).

Palmetto Prairie, Disturbed (25-49% Exotics) (FLUCFCS Code 3219 E2)
This habitat type is similar to FLUCFCS Code 3219 E1, but with 25 to 49 percent melaleuca in the sub-canopy.

Palmetto Prairie, Disturbed (50-75% Exotics) (FLUCFCS Code 3219 E3)
This habitat type is similar to FLUCFCS Code 3219 E2, but with 50 to 75 percent Brazilian pepper and melaleuca in the sub-canopy.

Pine Flatwoods, Disturbed (0-24% Exotics) (FLUCFCS Code 4119 E1)
The canopy of this habitat type includes slash pine and live oak (*Quercus virginiana*). The sub-canopy contains saw palmetto, muscadine grapevine (*Vitis rotundifolia*), slash pine, scattered laurel oak, and widely scattered wax myrtle and melaleuca. The ground cover includes bahiagrass (*Paspalum notatum*), false fennel, chocolateweed, live oak, little blue maidencane, muscadine grapevine, spermacoce (*Spermacoce verticillata*), broomsedge, and scattered saw palmetto.

Pine Flatwoods, Disturbed (25-49% Exotics) (FLUCFCS Code 4119 E2)
This habitat type is similar to FLUCFCS Code 4119 E1, but with 25 to 49 percent Brazilian pepper in the sub-canopy.

Pine Flatwoods, Disturbed (50-75% Exotics) (FLUCFCS Code 4119 E3)
This habitat type is similar to FLUCFCS Code 4119 E2, but with 50 to 75 percent melaleuca and Brazilian pepper in the canopy and sub-canopy.

Pine, Disturbed (0-24% Exotics) (FLUCFCS Code 4159 E1)
The canopy of this habitat type contains slash pine and scattered cabbage palm, live oak, and melaleuca. The sub-canopy consists of slash pine, cabbage palm, laurel oak, and widely scattered melaleuca and Brazilian pepper. The ground cover is primarily open with widely scattered spermacoce, muscadine grapevine, and carpetgrass.

Pine, Disturbed (25-49% Exotics) (FLUCFCS Code 4159 E2)
This habitat type is similar to FLUCFCS Code 4159 E1, but with 25 to 49 percent melaleuca and Brazilian pepper in the canopy and sub-canopy and spermacoce in the ground cover.

Pine, Disturbed (50-75% Exotics) (FLUCFCS Code 4159 E3)
This habitat type is similar to FLUCFCS Code 4159 E2, but with 50 to 75 percent earleaf acacia (*Acacia auriculiformis*), Java plum (*Syzgium cumini*), and Brazilian pepper in the sub-canopy and caesarweed (*Urena lobata*) in the ground cover.

Live Oak, Disturbed (0-24% Exotics) (FLUCFCS Code 4279 E1)
The canopy of this habitat type includes live oak and widely scattered slash pine. The sub-canopy contains scattered saw palmetto, live oak, and American beautyberry (*Callicarpa americana*). The ground cover is primarily open with scattered basketgrass (*Oplismenus* sp.) and caesarweed.

Hardwood/Conifer Mixed, Disturbed (0-24% Exotics) (FLUCFCS Code 4349 E1)
The canopy of this habitat type includes slash pine, live oak, laurel oak, cabbage palm, and widely scattered melaleuca. The sub-canopy contains laurel oak, wax myrtle, Java plum, cabbage palm, slash pine, saw palmetto, live oak, Brazilian pepper, rusty staggerbush (*Lyonia ferruginea*), and widely scattered melaleuca. The ground cover includes carpetgrass, cabbage palm, muscadine grapevine, Asiatic pennywort, caesarweed, earleaf greenbrier, saw palmetto, dog fennel, broomsedge, and spermacoce.

Hardwood/Conifer Mixed, Disturbed (25-49% Exotics) (FLUCFCS Code 4349 E2)
This habitat type is similar to FLUCFCS Code 4349 E1, but with 25 to 49 percent Brazilian pepper in the sub-canopy.

Hardwood/Conifer Mixed, Disturbed (50-75% Exotics) (FLUCFCS Code 4349 E3)
This habitat type is similar to FLUCFCS Code 4349 E2, but with 50 to 75 percent Brazilian pepper in the sub-canopy and caesarweed in the ground cover.

Mixed Hardwoods, Disturbed (0-24% Exotics) (FLUCFCS Code 4389 E1)
The canopy of this habitat type includes live oak, laurel oak, and scattered cabbage palm. The sub-canopy contains live oak, laurel oak, cabbage palm, and scattered myrsine (*Myrsine cubana*). The ground cover is primarily open with scattered live oak.

3.0 EXISTING NON-INDIGENOUS VEGETATION

Approximately 359.60± acres (53.2 percent) of the proposed conservation areas consist of vegetation communities that do not meet the LDC's definition of indigenous vegetation. Existing non-indigenous wetlands within the conservation areas total 301.50± acres and consist primarily of disturbed native wetland habitats with greater than 75 percent coverage by exotics, such as Brazilian pepper, melaleuca, torpedograss, and Wright's nutrush. Non-indigenous uplands within the conservation areas total 58.10± acres and consist primarily of improved pasture. Non-indigenous areas also include 6.90± acres of OSW and 16.80± acres of berms that will be removed and replanted with native wetland and upland plantings. The non-indigenous wetland and upland vegetation communities and surface waters are identified in Appendix C. Listed below are the FLUCFCS descriptions of the non-indigenous habitats on the Project site.

3.1 Non-Indigenous Wetland Habitats

Low Pasture (FLUCFCS Code 262)
The canopy and sub-canopy of this land use type are open. The ground cover includes torpedograss, witchgrass, dog fennel, marsh pennywort, Wright's nutrush, yellow-eyed grass, melaleuca, and Asiatic pennywort.

Melaleuca, Hydric (FLUCFCS Code 4241)
The canopy of this habitat type includes melaleuca. The sub-canopy contains melaleuca, Brazilian pepper, and cabbage palm. The ground cover includes little blue maidencane, broomsedge, torpedograss, sawgrass, swamp fern (*Telmatoblechnum serrulatum*), swamp

flatsedge, Southern beaksedge, Wright's nutrush, false hop sedge (*Carex lupuliformis*), and widely scattered maidencane.

Mixed Wetland Hardwoods, Disturbed (76-100% Exotics) (FLUCFCS Code 6179 E4)
This habitat type is similar to FLUCFCS Code 6179 E3, but with 76 to 100 percent Peruvian primrose willow (*Ludwigia peruviana*) in the sub-canopy.

Cypress, Disturbed (76-100% Exotics) (FLUCFCS Code 6219 E4)
This habitat type is similar to FLUCFCS Code 6219 E3, but with 76 to 100 percent melaleuca in the canopy and sub-canopy and torpedograss and West Indian marsh grass in the ground cover.

Pine, Hydric, Disturbed (76-100% Exotics) (FLUCFCS Code 6259 E4)
This habitat type is similar to FLUCFCS Code 6259 E3, but with 76 to 100 percent melaleuca and Brazilian pepper in the canopy and sub-canopy.

Freshwater Marsh, Disturbed (25-49% Exotics) (FLUCFCS Code 6419 E4)
This habitat type is similar to FLUCFCS Code 6419 E3, but with 76 to 100 percent torpedograss, Wright's nutrush, and West Indian marsh grass in the ground cover.

Wet Prairies, Disturbed (76-100% Exotics) (FLUCFCS Code 6439 E4)
This habitat type is similar to FLUCFCS Code 6439 E3, but with 76 to 100 percent torpedograss and Wright's nutrush in the ground cover.

Disturbed Land, Hydric (FLUCFCS Code 7401)
The canopy of this land use type includes scattered melaleuca, slash pine, and laurel oak. The sub-canopy contains scattered melaleuca and wax myrtle. The ground cover includes torpedograss, yellow-eyed grass, and acute spikerush (*Eleocharis acutangula*).

3.2 Non-Indigenous Upland Habitats

Improved Pasture (FLUCFCS Code 211)
The canopy of this land use type is primarily open with scattered cabbage palm and melaleuca. The sub-canopy contains scattered wax myrtle, live oak, cabbage palm, and Brazilian pepper. The ground cover consists of bahiagrass, carpetgrass, broomsedge, dog fennel, grass-leaved goldenrod, bermudagrass (*Cynodon dactylon*), and tropical soda apple (*Solanum viarum*).

Palmetto Prairie, Disturbed (76-100% Exotics) (FLUCFCS Code 3219 E4)
This habitat type is similar to FLUCFCS Code 3219 E3, but with 76 to 100 percent Brazilian pepper and melaleuca in the canopy and sub-canopy.

Pine Flatwoods, Disturbed (76-100% Exotics) (FLUCFCS Code 4119 E4)
This habitat type is similar to FLUCFCS Code 4119 E3, but contains 76 to 100 percent melaleuca and Brazilian pepper in the canopy and sub-canopy.

Pine, Disturbed (FLUCFCS Code 4159 E4)
This habitat type is similar to FLUCFCS Code 4159 E3 but with 76 to 100 percent melaleuca in the canopy and sub-canopy.

Brazilian Pepper (FLUCFCS Code 422)
The canopy and sub-canopy of this habitat type contain Brazilian pepper and scattered melaleuca. The ground cover is primarily open and includes earleaf greenbrier and muscadine grapevine.

Melaleuca (FLUCFCS Code 424)
The canopy of this habitat type includes melaleuca and scattered Java plum. The sub-canopy contains Brazilian pepper, melaleuca, Java plum, and widely scattered slash pine, wax myrtle, and cabbage palm. The ground cover includes broomsedge, bahiagrass, dog fennel, spermacoce, cabbage palm, little blue maidencane, and scattered saw palmetto.

Hardwood/Conifer Mixed, Disturbed (76-100% Exotics) (FLUCFCS Code 4349 E4)
This habitat type is similar to FLUCFCS Code 4349 E3, but with 76 to 100 percent earleaf acacia in the canopy and Brazilian pepper in the sub-canopy.

Disturbed Land (FLUCFCS Code 740)
The canopy of this land use type is primarily open with scattered slash pine and cabbage palm. The sub-canopy contains scattered wax myrtle, slash pine, saw palmetto, and Brazilian pepper. The ground cover includes bahiagrass, chocolateweed, lovegrass (*Eragrostis* sp.), broomsedge, and dog fennel.

Spoil Area (FLUCFCS Code 743)
The canopy of this land use type is open. The sub-canopy contains Brazilian pepper. The ground cover includes bahiagrass, dog fennel, and spermacoce.

Berm (FLUCFCS Code 747)
The canopy of this land use type includes live oak, cabbage palm, slash pine, melaleuca, and Brazilian pepper. The sub-canopy includes live oak, slash pine, Brazilian pepper, and saw palmetto. The ground cover contains caesarweed, muscadine grapevine, dog fennel, cabbage palm, and broomsedge.

3.3 Non-Indigenous Surface Waters

Ditch (FLUCFCS Code 514)
The canopy of this land use type is open. The sub-canopy contains Brazilian pepper, cabbage palm, live oak, and slash pine along the edges. The ground cover includes dotted smartweed (*Persicaria punctata*), torpedograss, Asiatic pennywort, Gulf Coast spikerush, dwarf papyrus (*Cyperus haspan*), frog fruit, Mexican clover (*Richardia* sp.), and small-fruit primrose willow (*Ludwigia microcarpa*).

Ditch, Hydric (FLUCFCS Code 514 H)
This habitat type is similar to FLUCFCS Code 514 H with a higher prevalence of wetland vegetation species such as torpedograss.

Cow Pond (FLUCFCS Code 525)
The canopy and sub-canopy of this land use type are open. The ground cover includes scattered torpedograss along the edges.

4.0 INDIGENOUS VEGETATION PRESERVATION AND ENHANCEMENT

A total of 295.80± acres (205.70± acres of wetlands and 90.10± acres of uplands) with less than 75 percent existing exotic vegetation will be preserved and enhanced by the hand-removal/treatment of exotic and nuisance vegetation. The locations of the indigenous preservation areas are shown on Appendix D.

4.1 Methods to Remove and Control Exotic and Nuisance Plants

Exotics to be eradicated include, but are not limited to, the 21 species of prohibited invasive exotic species listed in Section 10-420(h) of the LDC (Table 1).

Table 2. Prohibited Invasive Exotics

Common Name	Scientific Name
Air potato	*Dioscorea alata*
Australian pines	All *Casuarina* species
Bishopwood	*Bischofia javanica*
Brazilian pepper	*Schinus terebinthifolia*
Carrotwood	*Cupaniopsis anacardioides*
Chinese tallow	*Sapium sebiferum*
Cork tree	*Thespesia populnea*
Cuban laurel fig	*Ficus microcarpa*
Downy rose-myrtle	*Rhodomyrtus tomentosus*
Earleaf acacia	*Acacia auriculiformis*
Japanese climbing fern	*Lygodium japonicum*
Java plum	*Syzygium cumini*
Melaleuca	*Melaleuca quinquenervia*
Murray red gum	*Eucalyptus camaldulensis*
Old World climbing fern	*Lygodium microphyllum*
Rose apple	*Syzygium jambos*
Rosewood	*Dalbergia sissoo*

Table 2. (Continued)

Common Name	Scientific Name
Tropical soda apple	*Solanum viarum*
Wedelia	*Wedelia trilobata*
Weeping fig	*Ficus benjamina*
Woman's tongue	*Albizia lebbeck*

Exotic and nuisance vegetation removal will be conducted primarily by hand methods. Hand treatment will be either by the felling of exotic trees, hand-removal, and herbicide treatment of the tree stumps; or by hand-pulling and removal. The treatment of exotic and nuisance vegetation will include one or more of the following methods: (1) cut exotics within 12 inches of ground elevation, hand-remove cut vegetation, and treat the remaining stump with approved herbicide; (2) foliar application of approved herbicide or hand pulling of exotic seedlings; and (3) foliar application of approved herbicide to nuisance grasses.

4.2 Debris Removal

Exotic vegetative debris that is cut will be removed from the indigenous preserve areas. Exotic debris may be stacked in the adjacent agricultural lands for disposal but shall not be burned. The preserve areas will be inspected annually for trash/garbage. Any trash/garbage located within the preserve areas will be removed and disposed of by hand.

4.3 Method and Frequency of Pruning and Trimming

Exotic removal within the existing indigenous habitats is scheduled to begin after development order approval. After completing the initial exotic removal, semi-annual inspections of the preserves will occur for the first two years. During these inspections, the conservation areas will be traversed by a qualified ecologist. Locations of nuisance and/or exotic species will be identified for immediate treatment with an appropriate herbicide. Any additional potential problems will also be noted, and corrective actions will be taken. Once exotic/nuisance species levels have been reduced to acceptable limits, inspections of the conservation areas will be conducted a minimum of once every two years.

After the initial exotic removal, all subsequent exotic maintenance will be hand-removal only. Maintenance will be conducted in perpetuity to ensure that the conservation areas are free of exotic vegetation, including the prohibited invasive exotic species listed in Section 10-420(h) of the LDC (Table 1).

5.0 INDIGENOUS VEGETATION RESTORATION

Restoration and re-establishment of indigenous vegetation communities will be conducted in areas with greater than 75 percent coverage by exotic vegetation within the conservation areas. Restoration activities will include 359.60± acres of exotic removal and supplemental plantings in

existing forested and herbaceous habitats with greater than 75 percent exotics. Additionally, 6.90± acres of OSW will be backfilled and 16.80± acres of berms within the conservation areas will be removed and replanted with native wetland and upland vegetation. The locations of the various types of restoration areas are shown on Appendix D.

The restoration activities will result in the re-establishment of indigenous vegetation communities throughout the Project site. Due to the proximity to SWFIA, the restoration activities within the Buffer will include like-for-like habitat restoration to maintain similar structural characteristics within the preserve areas and minimize wildlife attractants. For example, a melaleuca forest will be replaced with native trees and an exotic-infested marsh will be replanted with herbaceous vegetation. Photographs providing examples of like-for-like habitat restoration are included as Appendix E. Plantings within the Buffer will be consistent with LCPA's Compatible Native Landscape List (Appendix F). The location of the Buffer is shown on Appendix D. In addition to the re-establishment of indigenous vegetation, extensive berm removal activities will restore the hydrologic connectivity that historically existed among the on-site wetland communities.

5.1 Removal of Exotics and Supplemental Plantings

Approximately 359.60± acres (301.50± acres of wetlands and 58.10± acres of uplands) with greater than 75 percent exotics will be enhanced by removing exotic species and supplemental plantings of native vegetation. This includes 229.79± acres of wetlands and 53.88± acres of upland located within the Buffer that will be subjected to like-for-like habitat restoration and compliance with LCPA's Compatible Native Landscape List. Mechanical equipment may be utilized to assist in the removal of exotic species in these areas. The mechanical removal areas will be flagged in the field and approved by Lee County Department of Community Development (DCD) staff prior to issuance of a vegetation removal permit. Cut vegetative debris will be removed from these areas to allow for successful supplemental plantings. All efforts will be made to preserve native trees when conducting the exotic removal with mechanized equipment. To minimize adverse impacts to the ground surface, machinery that exerts a relatively low impact on the ground surface (i.e., tracked skid steer, feller-buncher) will be utilized within the mechanical removal areas. To prevent ground disturbance, mechanical equipment will not be utilized in areas of the preserve that are saturated or inundated. If rutting occurs, the ground surface will be restored to natural grade with the use of low impact equipment or by hand methods such as raking.

Following the removal of exotics, supplemental wetland plantings will be installed in the 301.50± acres of wetland habitats. Wetland plantings will be selected based on the type of native vegetation that occurs in the adjacent or nearby wetland habitats. Tree and ground cover species will be planted according to the specifications in Table 2. A minimum of three tree species and three ground cover species will be planted. The species selected for planting will depend on market availability at the time the plantings are to occur. Additional tree and ground cover species may be included in the planting table with approval from Lee County staff.

Plant material installed in wetland restoration areas located within the Buffer (229.79± acres) will adhere to the LCPA Compatible Native Landscape List (Appendix F).

Table 3. Supplemental Wetland Plantings[1]

Common Name	Scientific Name	Minimum Height	Container Size	Planting Instruction (On Center)
Trees (minimum three species)				
Bald cypress*	*Taxodium distichum*	2 to 5 ft.	BR to 3 gal.	20 ft.
Dahoon holly (male only)*	*Ilex cassine*	2 to 5 ft.	BR to 3 gal.	20 ft.
Laurel oak*	*Quercus laurifolia*	2 to 5 ft.	BR to 3 gal.	20 ft.
Pond apple	*Annona glabra*	2 to 5 ft.	BR to 3 gal.	20 ft.
Pop ash	*Fraxinus caroliniana*	2 to 5 ft.	BR to 3 gal.	20 ft.
Red maple	*Acer rubrum*	2 to 5 ft.	BR to 3 gal.	20 ft.
Slash pine*	*Pinus elliottii* var. *densa*	2 to 5 ft.	BR to 3 gal.	20 ft.
Swamp bay*	*Persea palustris*	2 to 5 ft.	BR to 3 gal.	20 ft.
Ground Cover (minimum three species)				
Alligator flag*	*Thalia geniculata*	12 in.	2 in.	3 to 5 ft.
Arrowhead	*Sagittaria lancifolia*	12 in.	2 in.	3 to 5 ft.
Blue maidencane	*Amphicarpum muhlenbergianum*	12 in.	2 in.	3 to 5 ft.
Dense-flower knotweed	*Polygonum glabrum*	12 in.	2 in.	3 to 5 ft.
Fakahatchee grass*	*Tripsacum dactyloides*	12 in.	2 in.	3 to 5 ft.
Golden canna	*Canna flaccida*	12 in.	2 in.	3 to 5 ft.
Gulfdune paspalum	*Paspalum monostachyum*	12 in.	2 in.	3 to 5 ft.
Maidencane	*Panicum hemitomon*	12 in.	2 in.	3 to 5 ft.
Muhly grass*	*Muhlenbergia capillaris*	12 in.	2 in.	3 to 5 ft.
Pickerelweed	*Pontederia cordata*	12 in.	2 in.	3 to 5 ft.
Sand cordgrass*	*Spartina bakeri*	12 in.	2 in.	3 to 5 ft.
Sawgrass	*Cladium jamaicense*	12 in.	2 in.	3 to 5 ft.
Soft-stem bulrush	*Scirpus validus*	12 in.	2 in.	3 to 5 ft.
Spikerush*	*Eleocharis interstincta*	12 in.	2 in.	3 to 5 ft.
Swamp lily	*Crinum americanum*	12 in.	2 in.	3 to 5 ft.
Wiregrass*	*Aristida stricta*	12 in.	2 in.	3 to 5 ft.

BR – Bare root
[1]Plantings to be installed in Indigenous Wetland Restoration (301.50± acres)
*Compatible with LCPA plant list.

Following the removal of exotic vegetation, supplemental upland plantings will be installed in 58.10± acres of upland habitats. Upland plantings will be selected to replace the type of native vegetation that occurs in the adjacent or nearby upland habitats. Tree plantings will include primarily slash pine, although other tree species listed in Table 3 may be utilized. Upland tree and ground cover plantings will be installed according to the specifications listed in Table 3. A minimum of two tree species and three ground cover species will be planted. The species selected for planting will depend on market availability at the time the

plantings are to occur. Additional tree and ground cover species may be included in the planting table with approval from Lee County staff.

Plant material installed in upland restoration areas located within the Buffer (53.88± acres) will adhere to the LCPA Compatible Native Landscape List (Appendix F).

Table 4. Supplemental Upland Plantings[1]

Common Name	Scientific Name	Minimum Height	Minimum Container Size	Planting Instruction (On Center)
Trees (minimum two species)				
Laurel oak*	*Quercus laurifolia*	2 to 5 ft.	BR to 3 gal.	20 ft.
Live oak	*Quercus virginiana*	2 to 5 ft.	BR to 3 gal.	20 ft.
Slash pine*	*Pinus elliottii* var. *densa*	2 to 5 ft.	BR to 3 gal.	20 ft.
Ground Cover (minimum three species)				
Blue maidencane	*Amphicarpum muhlenbergianum*	12 in.	2 in.	3 to 5 ft.
Broomsedge	*Andropogon virginicus*	12 in.	2 in.	3 to 5 ft.
Fakahatchee grass*	*Tripsacum dactyloides*	12 in.	2 in.	3 to 5 ft.
Gulfdune paspalum	*Paspalum monostachyum*	12 in.	2 in.	3 to 5 ft.
Muhly grass*	*Muhlenbergia capillaris*	12 in.	2 in.	3 to 5 ft.
Sand cordgrass*	*Spartina bakeri*	12 in.	2 in.	3 to 5 ft.
Saw palmetto*	*Serenoa repens*	12 in.	1 gal.	8 ft.
Wiregrass*	*Aristida stricta*	12 in.	2 in.	3 to 5 ft.

[1]Plantings to be installed in Indigenous Upland Restoration (58.10± acres)
*Compatible with LCPA planting list.
BR – Bare root

5.2 OSW Backfilling, Berm Removal, and Supplemental Plantings

Historic aerials show the property was formerly used for agricultural operations. As part of the historic agricultural surface water management, an extensive network of ditches and berms have been constructed on the property which has led to the partitioning of wetland systems within the site. This includes a historic farm road that bisects the site and precludes hydrologic connectivity between wetland systems located in the northern and southern portions of the property. This road has been used by the SFWMD to represent the dividing line between the Estero River and Six Mile Cypress sub-watersheds.

To restore the hydrologic connectivity that historically existed among the on-site wetland communities, 16.80± acres of berms will be removed and 6.90± acres of OSW (i.e., agricultural ditches) will be backfilled using the berm material. This includes 13.7± acres of OSW and berm material that will be restored to wetlands and 10± acres of OSW and berm material that will be restored to uplands. Of the 13.7± acres of OSW and berm that will be restored to wetlands, 9.61± acres are located within the Buffer and will be subjected to like-for-like habitat restoration and compliance with LCPA's Compatible Native Landscape List (Appendix F). Similarly, of the 10± acres of OSW and berm that will be

restored to uplands, 8.78± acres located within the Buffer will be subjected to like-for-like habitat restoration and compliance with LCPA's Compatible Native Landscape List (Appendix F). These areas will be regraded to match adjacent natural grade and planted with native vegetation according to the specifications listed in Tables 2 and 3.

The proposed hydrologic restoration activities are designed to reconnect the Project's wetland systems and are not anticipated to increase wetland hydroperiods. Activities that could increase wetland hydroperiods, such as excavating/lowering the ground surface or creating impoundments, are not proposed as they could potentially attract hazardous wildlife. The main objective of the hydrologic restoration is to facilitate the north to south flow of water through the Project site that existed historically while maintaining existing wetland hydroperiods. It is anticipated that cypress and freshwater marsh systems will maintain long hydroperiods (approximately 180-270 days) while hydric pine and mixed wetland hardwood hammocks will maintain short hydroperiods (approximately 30-60 days), consistent with SFWMD habitat characterizations (SFWMD 2007).

A flow path will be established in the central portion of the site which will facilitate a hydrologic connection between the Estero River and Six Mile Cypress sub-watersheds. Per coordination with LCPA staff, the flow path was designed to be a closed (i.e., piped with no open standing water) system so it would not function as a wildlife attractant. The location of the flow path is shown on Appendix D. A cross-section showing how the flow path is intended to function is provided as Appendix G. The flow path will connect two short hydroperiod wetland habitat types (i.e., hydric pine and mixed wetland hardwoods); therefore, hydrologic connection between these systems is anticipated to occur only during peak wetland water levels or after large storm events.

6.0 BUFFER REQUIREMENTS

The MCP indicates that portions of the indigenous preserve and restoration areas will be utilized to meet Type D buffer requirements. The Type D buffer area is approximately 1,320 linear feet; therefore, this area must contain 66 trees and 872 shrubs per LDC requirements. If sufficient native vegetation does not exist within the preserve area to meet the Type D requirement, tree and shrub plantings will be installed in accordance with Table 5. Plant material installed will adhere to the LCPA Compatible Native Landscape List (Appendix F).

Table 5. Buffer Plantings

Common Name	Scientific Name	Minimum Height	Container Size
Wetland Trees[1]			
Bald cypress*	*Taxodium distichum*	10 ft.	15 gal.
Dahoon holly (male only)*	*Ilex cassine*	10 ft.	15 gal.
Laurel oak*	*Quercus laurifolia*	10 ft.	15 gal.
Pond apple	*Annona glabra*	10 ft.	15 gal.
Pop ash	*Fraxinus caroliniana*	10 ft.	15 gal.

Table 5. (Continued)

Common Name	Scientific Name	Minimum Height	Container Size
Wetland Trees[1]			
Red maple	*Acer rubrum*	10 ft.	15 gal.
Slash pine*	*Pinus elliottii* var. *densa*	10 ft.	15 gal.
Swamp bay*	*Persea palustris*	10 ft.	15 gal.
Wetland Shrubs			
Pitchapple*	*Clusia rosea*	24 in.	3 gal.
Wax myrtle	*Myrica cerifera*	24 in.	3 gal.
Gallberry*	*Ilex glabra*	24 in.	3 gal.
Myrsine*	*Myrsine cubana*	24 in.	3 gal.
Buttonbush	*Cephalanthus occidentalis*	24 in.	3 gal.
Cocoplum	*Chrysobalanus icaco*	24 in.	3 gal.
Upland Trees			
Laurel oak*	*Quercus laurifolia*	10 ft.	15 gal.
Live oak	*Quercus virginiana*	10 ft.	15 gal.
Slash pine*	*Pinus elliottii* var. *densa*	10 ft.	15 gal.
Upland Shrubs			
Wax myrtle	*Myrica cerifera*	24 in.	3 gal.
Pitchapple*	*Clusia rosea*	24 in.	3 gal.
Bahama cassia*	*Cassia bahamensis*	24 in.	3 gal.
Gallberry*	*Ilex glabra*	24 in.	3 gal.
Rusty lyonia*	*Lyonia ferruginea*	24 in.	3 gal.
Firebush*	*Hamelia patens*	24 in.	3 gal.
Saw palmetto*	*Serenoa repens*	24 in.	3 gal.
Myrsine*	*Myrsine cubana*	24 in.	3 gal.
Cocoplum	*Chrysobalanus icaco*	24 in.	3 gal.

[1]Tree Plantings must have a minimum four-foot spread and two-inch caliper width.
*Compatible with LCPA planting list.

7.0 RESTORATION ACTIVITY SCHEDULE

Site development and restoration may occur in phases. Details of phasing will be addressed at the time of Development Order. Restoration activities in each phase (e.g., Phases 1, 2, etc.) will be completed within ten years or sooner from the date of issuance of the first development order for that phase. The initial Development Order must include all indigenous vegetation preservation, enhancement, and restoration, and hydrologic restoration to support the phased site plan and corresponding density.

8.0 SUCCESS CRITERIA

8.1 Indigenous Wetland and Upland Preservation and Enhancement

The following are the success criteria for the indigenous preserve areas:

1) Initial eradication of exotic and nuisance vegetation will be completed; and
2) The preserve areas will be maintained free from exotic vegetation. Exotic vegetation species include, but are not limited to, the 21 species of prohibited invasive exotic species listed in Section 10-420(h) of the LDC (Table 1).

8.2 Indigenous Wetland and Upland Restoration

The following are the success criteria for the indigenous wetland and upland restoration areas:

1) Initial eradication of exotic and nuisance vegetation will be completed;
2) Removal of berms and backfilling of ditches will be completed;
3) Supplemental plantings will be completed in the indigenous restoration areas;
4) A minimum 80 percent survival of tree and ground cover plantings after five years; and
5) The preserve areas will be maintained free from exotic vegetation. Exotic vegetation species include, but are not limited to, the 21 species of prohibited invasive exotic species listed in Section 10-420(h) of the LDC (Table 1).

9.0 MAINTENANCE

After completing the initial exotic removal, semi-annual inspections of the conservation areas will occur for the first two years. During these inspections, the conservation areas will be traversed by a qualified ecologist. Locations of nuisance and/or exotic species will be identified for immediate treatment with an appropriate herbicide. Any additional potential problems will also be noted, and corrective actions will be taken. Once exotic/nuisance species levels have been reduced to acceptable limits, inspections of the conservation areas will be conducted annually.

After the initial exotic removal, all subsequent exotic maintenance will be hand-removal only. Maintenance will be conducted in perpetuity to ensure that the conservation areas are free of exotic vegetation, including the prohibited invasive exotic species listed in Section 10-420(h) of the LDC (Table 1).

10.0 MONITORING REPORTS

Monitoring will be conducted annually for the conservation areas. Annual reports documenting the achievement of the success criteria outlined in Section 8.0 will be submitted to Lee County DCD staff. Annual monitoring reports will be provided for five years after the Certificate of Compliance has been issued by the DCD or until 80 percent survivability is reached. Monitoring

will typically be conducted during the height of the growing season (August to October), with annual reports submitted by January 15. The timing of monitoring may be adjusted based on environmental conditions.

Annual monitoring reports will be provided as described above. The monitoring reports will include documented exotic and nuisance species, mortality of vegetation, estimated causes of mortality, growth of the vegetation, wildlife observed, photographs, and factors that demonstrate the functional health of the conservation areas. A brief description of anticipated maintenance work to be conducted over the next year will also be included. Periodic inspections will be conducted by DCD staff to ensure the accuracy of the monitoring reports.

11.0 LONG-TERM MANAGEMENT AND MONITORING

The conservation areas will be placed in a conservation easement granted to Lee County and the SFWMD with third-party enforcement rights to the Florida Department of Environmental Protection and U.S. Fish and Wildlife Service. The conservation easement will prevent the encroachment of future development as well as activities that are incompatible with the goal of sustaining the preserved and restored conservation areas in good ecological health. Responsibility for long-term management of the conservation areas will shift to the Community Development District or Homeowners' Association following the completion of enhancement and restoration activities on-site. Long-term management of exotic and nuisance vegetation, debris removal, and methods and frequency of trimming and pruning will adhere to the requirement outlined in Section 4.0 of this plan.

12.0 PRESERVE SIGNAGE AND COMMUNITY EDUCATION PLAN

Signs identifying the preserve as a "nature preserve area" will be installed along the boundary of the conservation areas. The signage will include language stating, "No dumping allowed." The signs will be spaced a maximum of 300 feet apart. The signs will be no closer than ten feet from residential property lines and be limited to a maximum height of four feet and a maximum size of two square feet. A typical preserve sign is attached as Appendix H.

Community informational and educational brochures, such as those describing the benefits of preserve areas, may be created and provided as needed to keep residents in compliance with conservation easements, wildlife regulations, etc. Continued education will ensure that the community is well-informed regarding the preserves and wildlife coexistence. A separate Protected Species Management and Human-Wildlife Coexistence Plan has been prepared to address human-wildlife conflicts.

13.0 REFERENCES

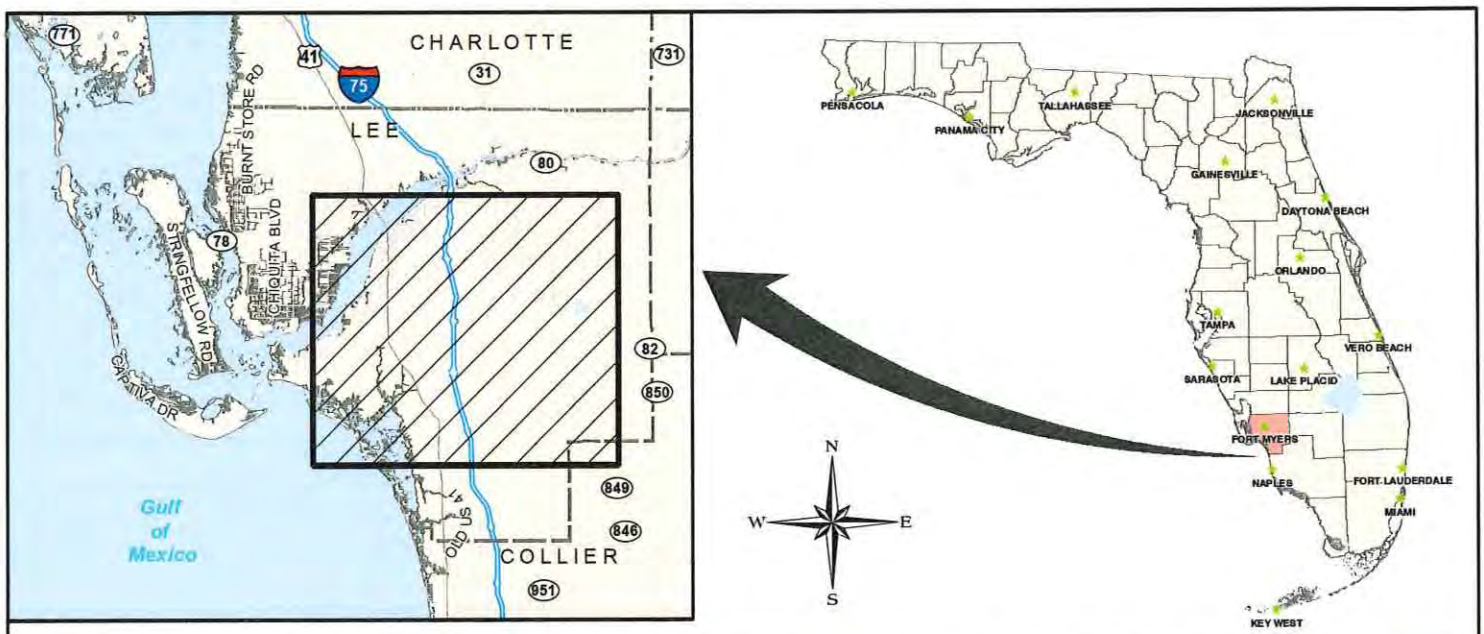
Florida Department of Transportation. 1999. Florida Land Use, Cover and Forms Classification System (FLUCFCS). Procedure No. 550-010-001-a. Third Edition.

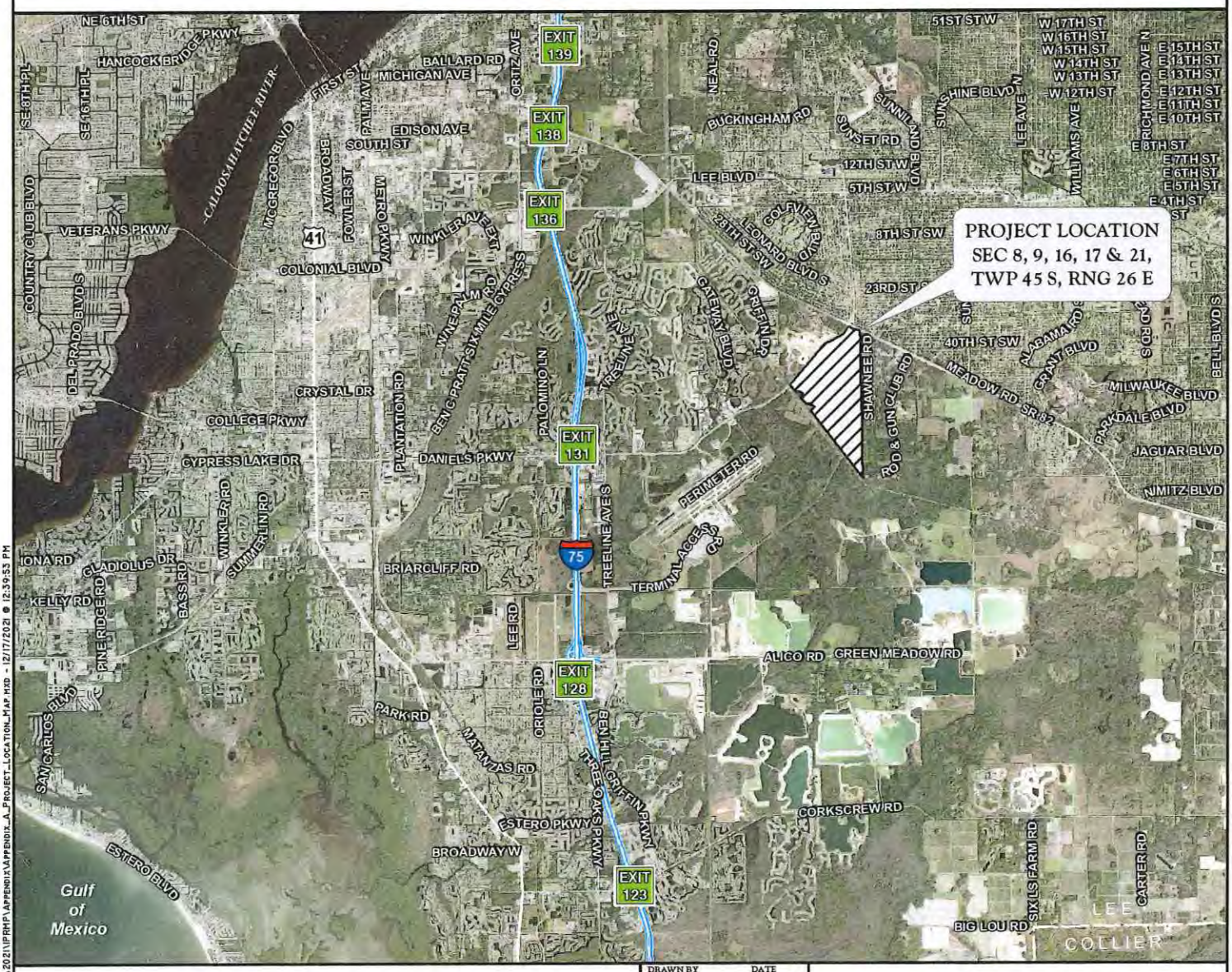
Florida Natural Areas Inventory. 2010. Guide to the Natural Communities of Florida: 2010 Edition. Florida Natural Areas Inventory, Tallahassee, Florida.

South Florida Water Management District. 2007. Pre-Development Vegetation Communities of Southern Florida. Technical Publication HESM-02.

APPENDIX A

PROJECT LOCATION MAP





APPENDIX A. PROJECT LOCATION MAP
DANIELS PARKWAY SOUTH

DRAWN BY	DATE
P.F.	11/10/21
REVIEWED BY	DATE
C.R.	11/10/21
REVISED	DATE

PASSARELLA & ASSOCIATES INC.
Consulting Ecologists

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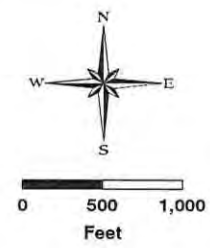
APPENDIX B

RARE AND UNIQUE UPLAND PRESERVE MAP



ON-SITE EXAMPLE OF RARE AND UNIQUE UPLAND:
MATURE PINE FLATWOODS HABITAT

LEGEND

- Daniels Parkway South
- Indigenous Upland Preserve Enhancement (90.1 Ac.±)
- Rare and Unique Upland Preserve and Enhancement (58.1 Ac.±)
- Southwest Florida International Airport 10,000' Hazardous Wildlife Buffer
- Approximate Location of Flow Path
- Approximate Location of Culvert Connection

NOTES:

PROPERTY BOUNDARY AND PRESERVE AREA PER MORRIS DEPEW DRAWING No. PRESERVE BOUNDARIES & PROPERTY BOUNDARY.DWG DATED MAY 2, 2022.

SITE PLAN PER MORRIS DEPEW DRAWING No. 21008-01 PARCELS.DWG DATED MAY 3, 2022.

SWFIA 10,000' HAZARDOUS WILDLIFE BUFFER PER MORRIS DEPEW DRAWING No. 21008-01 X-102 OPEN SPACE.DWG DATED APRIL 25, 2022.

FLUCFCS LINES ESTIMATED FROM 1"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS WERE FIELD REVIEWED AND APPROVED BY SFWMD STAFF ON JANUARY 14, 20, AND 21, 2022.

J:\2019\19LLL3192\GIS\2022\LEE_CO_ZONING_RESPONSES\FIGURES\APPENDIX_B_RARE_AND_UNIQUE_UPLAND_PRESERVE.MXD - 8/22/2022 @ 3:59:06 PM

DRAWN BY	DATE
T.S.	8/12/22
REVIEWED BY	DATE
S.J.	8/12/22
REVISED	DATE

13620 Metropolis Avenue
Suite 200
Fort Myers, Florida 33912
Phone (239) 274-0067
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Passarella & Associates, Inc.
Consulting Ecologists

DANIELS PARKWAY SOUTH
RARE AND UNIQUE UPLAND PRESERVE MAP

DRAWING No. 19LLL3192

SHEET No. APPENDIX B

APPENDIX C

AERIAL WITH SFWMD FLUCFCS AND WETLANDS MAP

LEGEND:

- SFWMD WETLANDS (532.51 Ac.±)
- SFWMD "OTHER SURFACE WATERS" (30.93 Ac.±)
- SURVEYED WETLAND LINE

FLUCFCS CODES	DESCRIPTIONS	ACREAGE	% OF TOTAL
211	IMPROVED PASTURE	473.76 Ac.±	38.4%
262	LOW PASTURE	27.96 Ac.±	2.3%
3219 E1	PALMETTO PRAIRIE, DISTURBED (0-24% EXOTICS)	3.13 Ac.±	0.3%
3219 E2	PALMETTO PRAIRIE, DISTURBED (25-49% EXOTICS)	4.15 Ac.±	0.3%
3219 E3	PALMETTO PRAIRIE, DISTURBED (50-75% EXOTICS)	2.11 Ac.±	0.2%
3219 E4	PALMETTO PRAIRIE, DISTURBED (76-100% EXOTICS)	0.73 Ac.±	0.1%
4119 E1	PINE FLATWOODS, DISTURBED (0-24% EXOTICS)	53.32 Ac.±	4.3%
4119 E2	PINE FLATWOODS, DISTURBED (25-49% EXOTICS)	28.79 Ac.±	2.3%
4119 E3	PINE FLATWOODS, DISTURBED (50-75% EXOTICS)	2.64 Ac.±	0.2%
4119 E4	PINE FLATWOODS, DISTURBED (76-100% EXOTICS)	2.87 Ac.±	0.2%
4159 E1	PINE, DISTURBED (0-24% EXOTICS)	11.18 Ac.±	0.9%
4159 E2	PINE, DISTURBED (25-49% EXOTICS)	2.76 Ac.±	0.2%
4159 E3	PINE, DISTURBED (50-75% EXOTICS)	2.07 Ac.±	0.2%
4159 E4	PINE, DISTURBED (76-100% EXOTICS)	1.51 Ac.±	0.1%
422	BRAZILIAN PEPPER	3.67 Ac.±	0.3%
424	MELALEUCA	2.93 Ac.±	0.2%
4241	MELALEUCA, HYDRIC	133.24 Ac.±	10.8%
4279 E1	LIVE OAK, DISTURBED (0-24% EXOTICS)	1.20 Ac.±	0.1%
4281 E3	CABBAGE PALM, HYDRIC (50-75% EXOTICS)	11.15 Ac.±	0.9%
4349 E1	HARDWOOD/CONIFER MIXED, DISTURBED (0-24% EXOTICS)	6.52 Ac.±	0.5%
4349 E2	HARDWOOD/CONIFER MIXED, DISTURBED (25-49% EXOTICS)	6.05 Ac.±	0.5%
4349 E3	HARDWOOD/CONIFER MIXED, DISTURBED (50-75% EXOTICS)	7.39 Ac.±	0.6%
4349 E4	HARDWOOD/CONIFER MIXED, DISTURBED (76-100% EXOTICS)	2.49 Ac.±	0.2%
4389 E1	MIXED HARDWOODS, DISTURBED (0-24% EXOTICS)	4.51 Ac.±	0.4%
514	DITCH	30.71 Ac.±	2.5%
514 H	DITCH, HYDRIC	8.14 Ac.±	0.7%
525	COW POND	0.22 Ac.±	0.0%
6179 E1	MIXED WETLAND HARDWOODS, DISTURBED (0-24% EXOTICS)	30.69 Ac.±	2.5%
6179 E2	MIXED WETLAND HARDWOODS, DISTURBED (25-49% EXOTICS)	1.77 Ac.±	0.1%
6179 E3	MIXED WETLAND HARDWOODS, DISTURBED (50-75% EXOTICS)	1.48 Ac.±	0.1%
6179 E4	MIXED WETLAND HARDWOODS, DISTURBED (76-100% EXOTICS)	3.35 Ac.±	0.3%
6219 E1	CYPRESS, DISTURBED (0-24% EXOTICS)	17.46 Ac.±	1.4%
6219 E2	CYPRESS, DISTURBED (25-49% EXOTICS)	48.22 Ac.±	3.9%
6219 E3	CYPRESS, DISTURBED (50-75% EXOTICS)	11.90 Ac.±	1.0%
6219 E4	CYPRESS, DISTURBED (76-100% EXOTICS)	8.66 Ac.±	0.7%
6259 E1	PINE, HYDRIC, DISTURBED (0-24% EXOTICS)	1.37 Ac.±	0.1%
6259 E2	PINE, HYDRIC, DISTURBED (25-49% EXOTICS)	11.69 Ac.±	0.9%
6259 E3	PINE, HYDRIC, DISTURBED (50-75% EXOTICS)	25.38 Ac.±	2.1%
6259 E4	PINE, HYDRIC, DISTURBED (76-100% EXOTICS)	1.72 Ac.±	0.1%
6319 E2	WETLAND SHRUB, DISTURBED (25-49% EXOTICS)	5.63 Ac.±	0.5%
6419 E1	FRESHWATER MARSH, DISTURBED (0-24% EXOTICS)	15.59 Ac.±	1.3%
6419 E2	FRESHWATER MARSH, DISTURBED (25-49% EXOTICS)	2.67 Ac.±	0.2%
6419 E3	FRESHWATER MARSH, DISTURBED (50-75% EXOTICS)	17.65 Ac.±	1.4%
6419 E4	FRESHWATER MARSH, DISTURBED (76-100% EXOTICS)	126.88 Ac.±	10.3%
6439 E3	WET PRAIRIES, DISTURBED (50-75% EXOTICS)	7.24 Ac.±	0.6%
6439 E4	WET PRAIRIES, DISTURBED (76-100% EXOTICS)	3.37 Ac.±	0.3%
740	DISTURBED LAND	6.47 Ac.±	0.5%
7401	DISTURBED LAND, HYDRIC	9.30 Ac.±	0.8%
743	SPOIL AREA	0.21 Ac.±	0.0%
747	BERM	39.18 Ac.±	3.2%
	TOTAL	**1233.08 Ac.±**	**100.0%**

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - MARCH 2021.

PROPERTY BOUNDARY PER MORRIS DEPEW DRAWING No. PRESERVE BOUNDARIES.DWG DATED MARCH 15, 2022.

SURVEYED WETLAND LINES PER MORRIS DEPEW DRAWING No. 21008 - 2022-02-07 WETLAND FLAG LOCATION TO PASSARELLA.DWG DATED FEBRUARY 11, 2022.

FLUCFCS LINES ESTIMATED FROM 1"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS HAVE NOT BEEN REVIEWED BY ANY REGULATORY AGENCY AND ARE SUBJECT TO CHANGE.

J:\2019\19LL3192\2022\LEE CO ZONING RESPONSES\APPENDIX C AERIAL WITH SFWMD FLUCFCS AND WETLANDS MAP 11x17 032222.DWG TAB: 11x17-C AUG 12, 2022 - 12:18PM PLOTTED BY: THONE

DRAWN BY	DATE
P.F./T.S.	3/22/22
REVIEWED BY	DATE
J.T./B.T.	3/22/22
REVISED	DATE

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Consulting Ecologists
PASSARELLA & ASSOCIATES INC.

DANIELS ROAD SOUTH

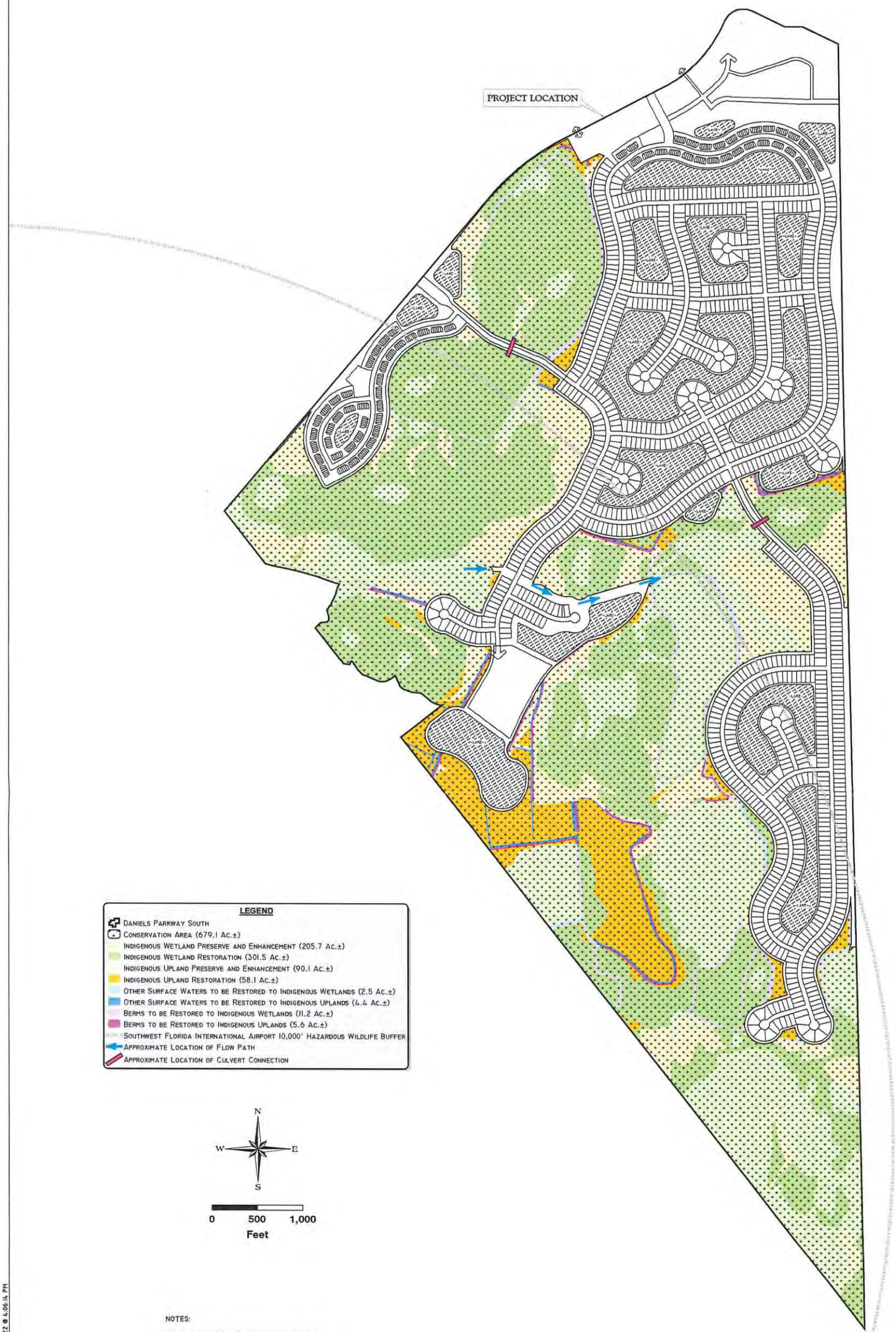
AERIAL WITH SFWMD FLUCFCS AND WETLANDS MAP

DRAWING No. 19LL3192

SHEET No. APPENDIX C

APPENDIX D

INDIGENOUS VEGETATION PRESERVATION, RESTORATION, AND MANAGEMENT PLAN



NOTES:

PROPERTY BOUNDARY AND PRESERVE AREA PER MORRIS DEPEW DRAWING No. PRESERVE BOUNDARIES & PROPERTY BOUNDARY.DWG DATED MAY 2, 2022.

SITE PLAN PER MORRIS DEPEW DRAWING No. 21008-01 PARCELS.DWG DATED MAY 3, 2022.

SWFIA 10,000' HAZARDOUS WILDLIFE BUFFER PER MORRIS DEPEW DRAWING No. 21008-01 X-102 OPEN SPACE.DWG DATED APRIL 25, 2022.

FLUCFCS LINES ESTIMATED FROM 1"=200' AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FDOT 1999).

UPLAND/WETLAND LIMITS WERE FIELD REVIEWED AND APPROVED BY SFWMD STAFF ON JANUARY 14, 20, AND 21, 2022.

J:\2019\19LLL3192\GIS\2022\LEE_Co_Zoning_Responses\Figures\Appendix_D_IPRMP_050322.mxd - 8/22/2022 @ 4:06:14 PM

DRAWN BY T.S.	DATE 11/11/21	13620 Metropolis Avenue Suite 200 Fort Myers, Florida 33912 Phone (239) 274-0067 Fax (239) 274-0069	PASSARELLA & ASSOCIATES INC Consulting Ecologists	DANIELS PARKWAY SOUTH INDIGENOUS VEGETATION PRESERVATION, RESTORATION, AND MANAGEMENT PLAN	DRAWING No. 19LLL3192
REVIEWED BY C.R.	DATE 11/11/21				SHEET No. APPENDIX D
REVISED T.S.	DATE 5/3/22				

APPENDIX E

LIKE-FOR-LIKE HABITAT RESTORATION EXAMPLES

Pre-restoration forested habitat containing dense exotic melaleuca trees.

Post-restoration forested habitat containing LCPA-compatible native cypress trees.

Pre-restoration freshwater marsh habitat containing a monoculture of exotic torpedograss.

Post-restoration freshwater marsh habitat containing a mixture of LCPA-compatible native ground cover species (e.g., alligator flag, spikerush, cordgrass).

APPENDIX F

LCPA COMPATIBLE AND NON-COMPATIBLE PLANT LIST

LCPA Compatible and Non-Compatible Plant List

LCPA worked in conjunction with a Federal Aviation Administration (FAA) Qualified Airport Wildlife Biologist and local landscape architects to develop compatible and incompatible plant lists. In general, the goal is to reduce or eliminate landscaping materials that would provide food, water, or shelter and/or a combination of these basic needs that attract either large flocks of birds or birds that pose a high risk to aviation. For example, flocks of blackbirds, large raptors, flocks of ducks, large wading birds, or flocks of shorebirds could pose a high risk to aviation.

The landscape list categories are described below and a list of species for each category is provided in Table 1. The table provides a breakdown of each category by native and non-native trees/palms, shrubs, and grasses/groundcovers that are suitable for the southwest Florida environment. Please note that this list is provided for guidance only. Exception may be warranted due to additional requirements or site specific constraints.

Compatible – Group 1

Plant materials listed under this category are not known to attract high risk species or flocking birds. While all plants have the ability to provide some type of attractant to wildlife (including prey base for hazardous species), Group 1 species are considered compatible and can be used in any number, density, or arrangement. If a wildlife hazard attractant arises that could pose a threat to aviation, LCPA will work with Lee County staff and the landowner to determine if measures could be put in place to reduce the attractant.

Compatible – Group 2

Plant materials listed under this category may attract high risk species or flocking birds under certain circumstances. No large groupings of these species should be utilized in an effort to minimize their attractiveness to wildlife. The allowable size grouping of these species will vary based on the site setting and should be reviewed on a case by case basis. The corresponding note to the Group 2 species in Table 1 will explain restrictions or guidance on using the plant materials. If these plants are planned for use, LCPA staff should be included in review of the landscape plan. If a wildlife hazard attractant arises that could pose a threat to aviation, LCPA will work with Lee County staff and the landowner to determine if measures could be put in place to reduce the attractant.

Non-Compatible

Plant materials listed under this category are known to attract high risk species or flocking birds. Species on this list are not recommended for use.

Table 1: LCPA Landscape List (April 2016 Update)

Common Name	*Scientific Name*	Compatible		Incompatible
		Group 1	Group 2	
Native Trees / Palms				
Gumbo Limbo	*Bursera simaruba*	X		
Green Buttonwood	*Conocarpus erectus*	X		
Silver Buttonwood	*Conocarpus erectus var. sericeus*	X		
Orange Geiger	*Cordia sebestena*	X		
Loblolly Bay	*Gordonia lasianthus*	X		
Florida Anise	*Illicum floridanum*	X		
Swamp Bay	*Persea palustris*	X		
Jamaican Dogwood	*Piscidia piscipula*	X		
Mahogany	*Swietenia mahogany*	X		
Paurotis Palm	*Acoelorrhaphe wrightii*	X		
Royal Palm	*Roystonea regia*	X		
Jamacia caper	*Capparis cynophallophora*	X		
Sweetgum	*Liquidambar styraciflua*	X		
Florida Soapberry	*Sapindus saponaria*	X		
Florida Thatch Palm	*Thrinax radiata*	X		
Dahoon Holly (male only)	*Ilex cassine*		X	
Yaupon Holly (male only)	*Ilex vomitoria*		X	
Sweetbay Magnolia	*Magnolia virginiana*		X	
South Florida Slash Pine	*Pinus elliottii var. densa*		X	
Laurel Oak	*Quercus laurifolia*		X	
Cypress	*Taxodium spp.*		X	
Cabbage Palm	*Sabal palmetto*		X	
Red Maple	*Acer rubrum*			X
Pond Apple	*Annona glabra*			X
Satin Leaf	*Chrysophyllum oliviforme*			X
Pigeon Plum	*Coccoloba diversifolia*			X

Table 1: LCPA Landscape List (April 2016 Update)

Common Name	*Scientific Name*	Compatible		Incompatible
		Group 1	Group 2	
Sea Grape	*Coccoloba uvifera*			X
Florida Silver Palm	*Coccothrinax argentata*			X
Pop Ash	*Fraxinua caroliniana*			X
Southern Red Cedar	*Juniperus silicicola*			X
Mastic	*Mastichodendron foetidissimum*			X
Wax Myrtle	*Myrica cerifera*			X
Live Oak	*Quercus virginiana*			X
American Elm	*Ulmus americana*			X
Non-Native Trees/Palms				
Shady Lady / Black Olive	*Bucida buceras*	X		
Crapemyrtle	*Lagerstoemia spp.*	X		
Verawood	*Bulnesia arborea*	X		
Bismark Palm	*Bismarchia nobilis*	X		
Orange Geiger	*Cordia sebestena*	X		
Floss Silk Tree	*Chorisia speciosa*	X		
Gold Tabebuia	*Tabebuia chrysotricha*	X		
Purple Tabebuia	*Tabebuia impetiginosa*	X		
Montgomery palm	*Veitchia montgomeryana*	X		
Silver Thatch Palm	*Thrinax morrissi*	X		
Blue Atlas Cedar	*Cedrus atlantica* 'Glauca'	X		
Royal poinciana	*Delonix regia*	X		
Yellow Elder	*Tecoma stans*	X		
White Bird of Paradise	*Strelitzia reginae*	X		
Jaboticaba Tree	*Myrciaria cauliflora*	X		
Lignum Vitae	*Guaiacum sanctum*	X		
Bottlebrush	*Callistemon spp.*	X		
Chinese Fan Palm	*Livistona chinensis*	X		
Macarthur Palm	*Ptychosperma macarthurii*	X		
Native Shrubs				
Small Leaf Clusia	*Clusia guttifera*	X		
Blue Porterweed	*Statytarpheta urticifolia*	X		

Table 1: LCPA Landscape List (April 2016 Update)

Common Name	*Scientific Name*	Compatible		Incompatible
		Group 1	Group 2	
Bahama Cassia	*Cassia bahamensis*	X		
Pitch Apple	*Clusia rosea*	X		
Adam's Needle	*Yucca filamentosa*	X		
Coastal Sea Rocket	*Cakile lanceolata*	X		
Jamacia caper	*Capparis cynophallophora*	X		
Golden Dewdrop	*Duranta erecta*	X		
Coral Bean	*Erythrina herbacea*	X		
Wild Cotton	*Gossypium hirsutum*	X		
Wild Sage	*Lantana involucrate*	X		
Rusty Lyonia	*Lyonia ferruginea*	X		
Gallberry/Inkberry	*Ilex glabra*	X		
Maidenbush	*Heterosavia bahamaensis*	X		
Dwarf Yaupon Holly (male only)	*Ilex vomitoria*		X	
Firebush	*Hamelia patens*		X	
Yellow Necklacepod	*Sophora tomentosa var. truncata*		X	
Green Saw Palmetto	*Serenoa repens*		X	
American Beautyberry	*Callicarpa americana*			X
Cocoplum	*Chrysobalanus icaco*			X
Spanish Stopper	*Eugenia foetida*			X
Florida Privet	*Forestiera segregata*			X
Simpson Stopper	*Myrcianthes fragrans*			X
Myrsine	*Myrsine cubana*			X
Wild Coffee	*Psychotria nervosa*			X
Shiny Blueberry	*Vaccinium myrsinites*			X
Wild Lime	*Zanthoxylum fagara*			X
Walter's Viburnum	*Viburnum obovatum*			X
Non-Native Shrubs				
Golden Thryallis	*Galphimia gracillis*	X		
Ixora "Nora Grant"	*Ixora "Nora Grant"*	X		
Jatropha	*Jatropha integerrima*	X		

Table 1: LCPA Landscape List (April 2016 Update)

Common Name	*Scientific Name*	Compatible		Incompatible
		Group 1	Group 2	
Dwarf Poinciana	*Caesalpinia pulcherrima*	X		
Green Pitosporum	*Pittosporum tobira 'Wheeleri'*	X		
Blue Plumbago	*Plumbago auriculata*	X		
Yesterday-Today-Tomorrow	*Brunfelsia grandiflora*	X		
Native Grasses & Groundcover				
Sword Fern	*Nephrolepis exaltata*	X		
Leather fern	*Acrostichum danaeifolium*	X		
Sunshine mimosa, powderpuff	*Mimosa strigillosa*	X		
Coontie	*Zamia pumila*	X		
Chalky Bluestem	*Andropogon virginicus var. glaucus*	X		
Wiregrass	*Aristida beyrichiana*	X		
Muhlygrass	*Muhlenbergia capillaris*	X		
Grassleaf Golden Aster	*Pityopsis graminifolia*	X		
Dwarf Blue Porterweed	*Statytarpheta jamaicensis*	X		
Narrowleaf Blue-Eyed Grass	*Sisyrinchium angustifolium*	X		
Fakahatchee Grass	*Tripsacum dactyloides*		X	
Sand Cordgrass	*Spartina bakeri*		X	
Golden Creeper	*Ernodea littoralis*			X
Purple Love Grass	*Eragrostis spectabilis*			X
Gopher Apple	*Licania michauxii*			X
Non-Native Grasses & Groundcover				
Orange Bromeliad	*Aechmea blanchetiana*	X		
Imperial Bromeliad	*Aechmea imperialis*	X		
Dwarf Bougainvillea	*Bougainvillea sp.*	X		
Crinum Lily	*Crinum asiaticum*	X		
Purple Lantana	*Lantana montevidensis*	X		
Yellow Lantana	*Lantana camara*	X		
Variegated Ginger	*Alpinia zerumbet "Variegata"*	X		
Liriope "Emerald Goddess"	*Liriope muscari*	X		

Table 1: LCPA Landscape List (April 2016 Update)

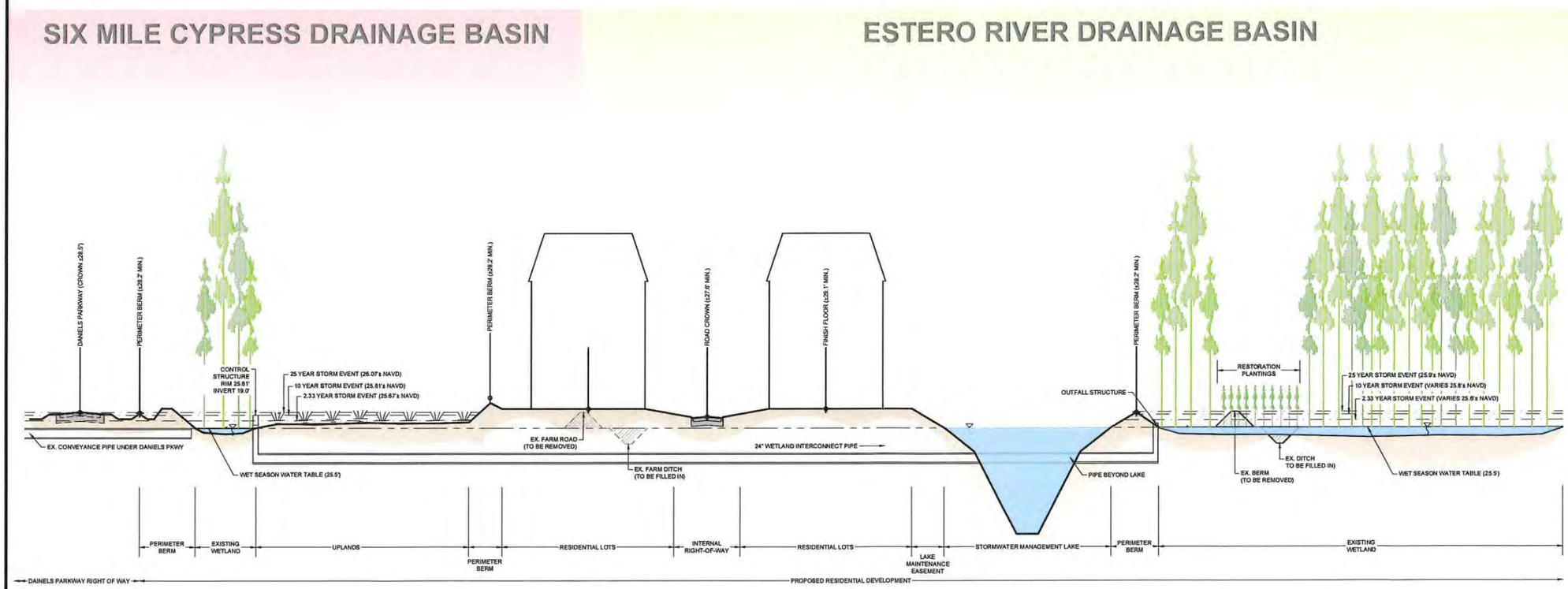
Common Name	*Scientific Name*	Compatible		Incompatible
		Group 1	Group 2	
Crown of Thorns	*Euphorbia milii*	X		
African Iris	*Dietes spp*	X		
Bulbine	*Bulbine frutescens*	X		
Lily of the Nile	*Agapanthus orientalis*	X		
Society Garlic	*Tulbaghia violacea*	X		
Blueberry Flax Lily	*Dianella tasmanicata 'Variegata'*	X		
Yellow Alder	*Turnera ulmifolia*	X		
Gulf Croton	Croton punctatus	X		
Ligustrum	*Ligustrum japonicum*			X
Fountain grass	*Pennisetum setaceum*			X
Indian hawthorn	*Rhaphiolepsis indica*			X
Parson's juniper	*Juniperus squamata expansa*			X
Perennial Peanut	*Arachis glabrata*			X
Native Wildflowers				
Butterfly Weed	*Asclepias tuberosa*	X		
Leavenworth's Tickseed	*Coreopsis leavenworthii*	X		
Button Snakeroot	*Eryngium yuccifolium*	X		
Blanket Flower	*Gaillardia pulchella*	X		
Florida Pennyroyal	*Piloblephis rigida*	X		
Wild Petunia	*Ruellia caroliniensis*	X		
Tropical Sage	*Salvia coccinea*	X		
Adam's Needle	*Yucca filamentosa*	X		
Beach Sunflower	*Helianthus debilis*		X	
Native Wetland Plants				
Lemon Bacopa	*Bacopa caroliniana*	X		
Water Hyssop	*Bacopa monnieri*	X		
String Lily	*Crinum americanum*	X		
Knotted Spikerush	*Eleocharis interstincta*	X		

Table 1: LCPA Landscape List (April 2016 Update)

Common Name	*Scientific Name*	Compatible		Incompatible
		Group 1	Group 2	
Perfumed Spiderlily	*Hymenocallis latifolia*	X		
Cinnamon Fern	*Osmunda cinnamomea*	X		
Alligator Flag	*Thalia geniculata*	X		
Black Needle Rush	*Juncus roemerianus*			X
Pickerelweed	*Pontederi cordata*			X
Arrowhead, Duck Potato	*Sagittaria spp.*			X

APPENDIX G

CROSS-SECTION OF PROPOSED FLOW PATH



PROJECT:

DANIELS PARKWAY SOUTH

LOCATION:

13400 DANIELS PKWY.
FORT MYERS, FL. 33913

CLIENT:

[redacted]

CONSULTANT:

MORRIS DEPEW

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PROJECT MANAGER:	RMS
DRAWING BY:	MGE
JURISDICTION:	LEE COUNTY
DATE:	8/19/2022

SHEET TITLE:

WETLAND CONNECTION EXHIBIT

SHEET NUMBER: 1 0F 1

40 0 20 40
SCALE 1"=40'

JOB/FILE NUMBER: 21008-03

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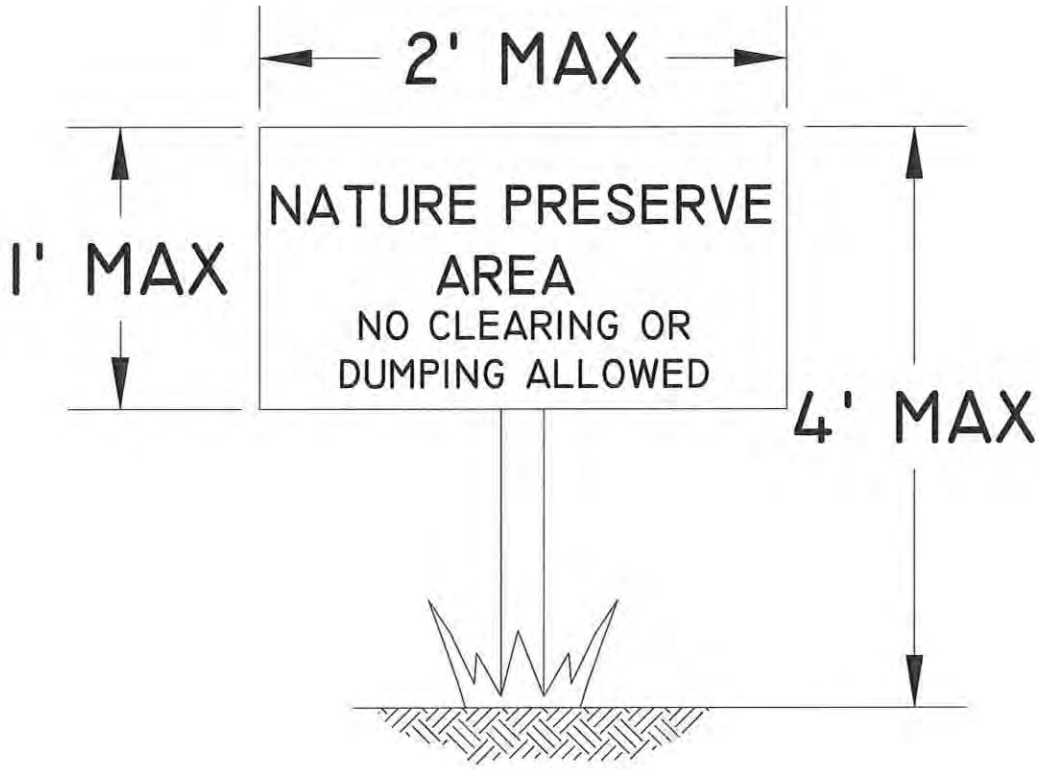
APPENDIX H

TYPICAL PRESERVE SIGNAGE



TYPICAL
PRESERVE SIGNAGE
N.T.S.

APPENDIX H. TYPICAL PRESERVE SIGNAGE
DANIELS PARKWAY SOUTH

DRAWN BY	DATE
P.F.	11/10/21
REVIEWED BY	DATE
C.R.	11/10/21
REVISED	DATE

PASSARELLA & ASSOCIATES INC
Consulting Ecologists

J:\2019\19LL3192\2022\Lee Co Zoning Responses\Appendix H Typical Preserve Signage.dwg Tab: 8X11-M Aug 12, 2022 - 12:21pm Plotted by: Thone

DANIELS PARKWAY SOUTH
PROTECTED SPECIES MANAGEMENT
AND HUMAN-WILDLIFE COEXISTENCE PLAN

Revised September 2022

Prepared For:

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Project No. 19LLL3192

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1.0 INTRODUCTION

This report documents the Protected Species Management and Human-Wildlife Coexistence Plan for Daniels Parkway South (Project). The management plan contained in this report pertains to the Eastern indigo snake (*Drymarchon corais couperi*), gopher tortoise (*Gopherus polyphemus*), American alligator (*Alligator mississippiensis*), crested caracara (*Caracara cheriway*), listed wading birds, Big Cypress fox squirrel (*Sciurus niger avicennia*), Florida black bear (*Ursus americanus floridanus*), and Florida panther (*Puma concolor coryi*).

The Project totals 1,233.08± acres and is located in Sections 8, 9, 16, 17, and 21; Township 45 South; Range 26 East; Lee County (Appendix A). The site is bordered to the north by Daniels Parkway, to the east by single-family residential development and undeveloped land, to the west by a Florida Power & Light (FPL) transmission line and undeveloped land, and to the south by Lee County's Wild Turkey Strand Preserve.

The property consists of large, continuous portions of herbaceous and forested upland and wetland habitats. These habitats include hydric melaleuca, freshwater marsh, pine flatwoods, cypress, and hydric pine with varying degrees of exotic vegetation. Improved pasture comprises the remaining balance of the property. Historic aerials show the property was formerly used for agricultural operations. As part of the historic agricultural surface water management, an extensive network of ditches and berms have been constructed on the property which has led to the partitioning of wetland systems within the site. This includes a historic farm road that bisects the site and precludes hydrologic connectivity between wetland systems located in the northern and southern portions of the property. This road has been used by the South Florida Water Management District (SFWMD) to represent the dividing line between the Estero River and Six Mile Cypress sub-watersheds.

2.0 LISTED SPECIES SURVEYS

Passarella & Associates, Inc. (PAI) conducted a Lee County protected species survey (PSS) on the Project site for ten days between May 11 and June 24, 2021. The survey was conducted to meet Lee County Land Development Code (LDC) Chapter 10, Article III, Division 8 (Protection of Habitat) standards. Six Lee County protected species and their signs (e.g., scat, tracks, nests, etc.) were documented during the PSS and other fieldwork conducted by PAI. The protected wildlife species directly observed by PAI included gopher tortoise, crested caracara, Florida sandhill crane (*Grus canadensis pratensis*), wood stork (*Mycteria americana*), and Big Cypress fox squirrel. In addition, a crested caracara nest was previously documented in the northern portion of the Project, and Florida panther tracks were also documented on the property. No other listed species nests or nesting activity were observed on the Project during the PSS or other fieldwork.

No Lee County protected plant species were observed on the property during the protected species survey. However, the giant wild pine (*Tillandsia utriculata*), common wild pine (*Tillandsia fasciculata*), Northern needleleaf (*Tillandsia balbisiana*), butterfly orchid (*Encyclia tampensis*), and rigid orchid (*Epidendrum rigidum*) were documented on the site. Although not listed as Lee

County protected species, these species are listed by the Florida Department of Agriculture and Consumer Services.

Table 1 summarizes the listed wildlife species that have been documented during the PSS and other fieldwork on the Project site.

Table 1. Listed Wildlife Species Documented

Common Name	Scientific Name	Listing Status	
		FWCC	USFWS
Reptiles			
Gopher tortoise	*Gopherus polyphemus*	ST	*
Birds			
Crested caracara	*Caracara cheriway*	FT	T
Florida sandhill crane	*Grus canadensis pratensis*	ST	-
Wood stork	*Mycteria americana*	FE	E
Mammals			
Big Cypress fox squirrel	*Sciurus niger avicennia*	ST	-
Florida panther (tracks)	*Puma concolor coryi*	FE	E

FWCC – Florida Fish and Wildlife Conservation Commission
USFWS – U.S. Fish and Wildlife Service
E – Endangered
FE – Federally Endangered
FT – Federally Threatened
ST – State Threatened
T – Threatened

3.0 CONSERVATION AREAS

The proposed conservation areas total 679.10± acres. The conservation areas will be maintained in accordance with the Indigenous Preservation, Restoration, and Management Plan (IPRMP) provided under separate cover. The conservation areas will be managed to provide habitat for listed species.

The Project has been designed to minimize impacts to the listed species that have been identified on the property and other listed wildlife species that could potentially utilize the site. The site plan minimizes impacts to existing native vegetation habitats and concentrates development primarily within the existing agricultural lands.

The indigenous vegetation enhancement and restoration activities within the conservation areas include:

- Preservation and enhancement of 295.80± acres of indigenous wetlands and uplands (existing forested and herbaceous habitats with less than 75 percent exotics);

- Restoration of 359.60± acres of indigenous wetlands and uplands through the removal of exotic vegetation (existing forested and herbaceous habitats with greater than 75 percent exotics) and supplemental planting;
- Backfilling 6.9± acres of other surface waters and replanting with native wetland and upland vegetation; and
- Removal of 16.8± acres of berms and planting with native wetland and upland vegetation.

The preservation, enhancement, and restoration of indigenous vegetation and removal of agricultural berms will facilitate the interconnection of historic flow-ways and wetland communities within the Project site. This includes a hydrologic connection between the two historically severed basins (i.e., Six Mile Cypress Sub-Watershed and Estero River Sub-Watershed), similar to what existed prior to the intensive agricultural land uses.

Due to the proximity to Southwest Florida International Airport (SWFIA), the restoration activities will include like-for-like habitat restoration to minimize wildlife attractants. For example, a melaleuca forest will be replaced with native trees and an exotic-infested marsh will be replanted with herbaceous vegetation. Plantings within the SFWIA 10,000-foot Hazardous Wildlife Buffer (Buffer) will be consistent with Lee County Port Authority's (LCPA) Compatible Native Landscape List. The planting details are provided in the IPRMP provided under separate cover.

The conservation areas will be managed for the listed species observed during the PSS and for listed species that could potentially utilize the Project site. Target listed species include the Eastern indigo snake, gopher tortoise, American alligator, crested caracara, listed wading birds, Big Cypress fox squirrel, Florida black bear, and Florida panther. To minimize potential wildlife attractants, enhancement and restoration activities will adhere to the hazardous wildlife protection measures included in Section 7.0 of this plan.

The conservation areas will be placed in a conservation easement with inspection, enforcement, and approval rights granted to Lee County and the SFWMD. The total preserve area to be placed under a conservation easement is 679.10± acres.

4.0 WILDLIFE CROSSINGS

To maintain internal connectivity for wildlife and promote the restoration of historic flow-ways through the property, wildlife crossings will be installed where the proposed internal roads cross the conservation areas. An aerial depicting the proposed location of the wildlife crossings is provided as Appendix B. The wildlife crossings will generally be designed to accommodate the passage of small mammals, reptiles, and amphibians. However, engineering and construction plans at the time of the Lee County Development Order application may reflect larger crossings designed to facilitate movement through the Project site by larger wildlife. As currently proposed, the wildlife crossing will be a culvert pipe or similar structure with the invert at natural grade. A section of low-level chain link fencing (i.e., three to four feet tall), or other structures approved by the Department of Community Development (DCD), will be installed on either side of the invert

to direct wildlife through the crossings. If utilized, larger crossings may consist of a bridge, large box culvert, or similar structure.

5.0 PERIMETER BUFFER LAKES AND FENCING

The Project site design includes perimeter buffer lakes and fencing between the residential development and conservation areas. The goal of the buffer lakes and fencing is to effectively deter Florida panther prey species (i.e., white-tailed deer (*Odocoileus virginiana*) and hog (*Sus scrofa*)) from entering residential areas. Deterring prey species form entering the development area will minimize the incentive for Florida panther to enter the Project area and reduce the potential for human-wildlife interactions. The wildlife fence and buffer lakes will also serve to accommodate the movement of wildlife among the conservation areas as described in Section 4.0 above.

The wildlife fencing will consist of a six-foot chain link fence which has previously been approved by the Florida Fish and Wildlife Conservation Commission (FWCC) for projects in Southwest Florida. The locations of the proposed buffer lakes and fencing are depicted on Appendix B.

6.0. COMMERCIAL USES

The Daniels Parkway South Master Plan includes dedicated commercial use adjacent to Daniels Parkway and State Road 82. To minimize potential human-wildlife interaction, educational brochures provided in this plan will be provided to commercial tenants. Commercial development will be required to minimize wildlife attractants by securing all exterior food and water sources.

Commercial uses, including restaurants, must secure exterior trash containers with locking lids and periodically clean cans to reduce residual odors. Grease traps will be located underground. Bear-resistant dumpsters will be used in areas where communal garbage is collected. A list of companies obtained from the FWCC that provide bear-resistant garbage containers for commercial use is provided as Appendix C. In consultation with the local waste disposal company, bear-resistant dumpsters will be purchased from one of the listed companies or another company that is able to provide bear-resistant dumpsters which are compatible with local equipment. The bear-resistant dumpsters will be incorporated at the time Lee County's waste collection sub-contractor makes them available for use.

7.0 HAZARDOUS WILDLIFE PROTECTION MEASURES

Due to the proximity to SWFIA, reducing human-wildlife interactions within the SWFIA Buffer is of paramount importance to the Project's restoration plan. Per communications with LCPA Staff and guidance from the Federal Aviation Administration (FAA) Advisory Circular (AC) No. 150/5200-33C regarding hazardous wildlife attractants on or near airports, the Project has incorporated multiple minimization measures within the Buffer, as described below.

Lakes developed for the Project's stormwater management system will incorporate a hardened shoreline (e.g., rip-rap) and/or steep slopes to minimize wading bird attractants. These lakes will also be maintained in a manner that keeps them free of both emergent and submergent vegetation such as pickerelweed (*Pontederia cordata*) and red ludwigia (*Ludwigia repens*). As required by the Lee Plan, the Project must preserve, enhance, and restore indigenous habitats. However, to avoid inconsistency with the LCPA's wildlife hazard deterrence efforts, the Project will not create wetlands within the Buffer. Existing wetland and upland habitats will be managed such that they are restored, where applicable, in a "like-for-like" manner as described in Section 3.0 above. In addition, plantings installed within the Buffer will adhere to the LCPA Compatible Native Plant List. Furthermore, the hydrologic restoration proposed within the conservation areas will be focused on interconnecting wetland systems and is not anticipated to increase wetland hydroperiods within the site.

Prior to construction, the applicant will coordinate a wildlife monitoring program with the LCPA and DCD staff. The monitoring program will consist of periodic observations within the development footprint and preserve areas by a qualified biologist to help identify and reduce potential wildlife hazards during construction activities, dewatering, exotic vegetation removal, and other site preparation activities. In addition, the monitoring plan will include specific construction-related Best Management Practices (BMPs) similar to what has been implemented for projects at Southwest Florida International Airport. The BMPs that will be incorporated into the wildlife monitoring program include, but are not limited to:

1. Construction contractors must carefully control and continuously remove waste or loose material that might attract wildlife.
2. Construction personnel must be aware of and avoid construction activities that can create wildlife hazards on airports.
3. Trash and food scraps from construction personnel activity must be collected and properly disposed of.
4. Except for stormwater management lakes and areas specifically designated for dewatering, large pools of water that collect within the development area shall be eliminated at the earliest opportunity to minimize wildlife attractants.
5. All turf grass replacement shall be completed via sodding. Seeding shall not be utilized.
6. Construction contractor shall communicate with the project biologist at least five days in advance prior to making any changes to hydrology in the construction area. Initiation of hydrologic changes shall be timed to minimize the attractiveness for dusk and dawn scavengers.
7. Construction and fill activities that turn-up organic materials, vegetation, or soils that contain food (crustaceans, invertebrates, fish, or others) should be minimized to the extent possible. Construction areas shall minimize the time that turned-up material is left exposed to the extent practicable.
8. Construction contractor shall allow wildlife the opportunity to move out of harm's way.
9. Construction contractor or another designated observer shall immediately dispose of carcasses found on site. This may occur by burying them at a depth of 36-inches or by another acceptable means of disposal.

Wildlife monitoring will occur a minimum of once per week during dewatering and initial exotic vegetation removal activities. However, monitoring may occur more frequently if potential wildlife hazards are identified. If wildlife hazards are identified within the Project, the Project team will coordinate with LCPA staff to immediately correct the issue(s). This may also involve coordination with local, state, and federal permitting agencies.

7.1 Lee Plan Consistency

Lee Plan Policy 47.2.5 states that "Hazardous wildlife attractants within 10,000 feet of a Port Authority airport's Air Operation Area (AOA) will be avoided by minimizing and correcting any wildlife hazards arising from wetlands or water bodies in accordance with FAA AC 150/5200-33B, or as otherwise amended. Site improvements on or near the Port Authority's airports must be designed to minimize attractiveness to wildlife of natural areas and man-made features such as detention/retention ponds, landscaping, and wetlands, which can provide wildlife with ideal locations for feeding, loafing, reproduction, and escape." Thus, Policy 47.2.5 is focused on compliance with the FAA AC on hazardous wildlife attractants on or near airports. The following demonstrates how the Project complies with the specific sections of the current FAA AC (150/5200-33C) with respect to minimizing wildlife attractants within the Buffer:

<u>FAA AC 150/5200-33C</u>

Section 2.3.2 – New Stormwater Management Facilities

This section of the AC states: "To facilitate the control of hazardous wildlife, the FAA recommends the use of steep-sided, rip-rap or concrete-lined, narrow, linear-shaped water detention basins." In addition, this section states that "All vegetation in or around detention basins that provide food or cover for hazardous wildlife should be eliminated." Furthermore, this section of the AC recommends designing surface water management features "so as not to create above-ground standing water". As outlined in Section 7.0 of this plan and in the IPRMP, the Project has incorporated the following design modifications to address these issues: 1) Stormwater management lakes located within the Buffer will incorporate hardened shorelines (e.g., rip-rap) and/or steep slopes (i.e., 4:1); 2) stormwater lakes will be maintained in a manner that keeps them free of both emergent and submergent vegetation; and 3) the open water flow path previously proposed to connect the Six Mile Cypress and Estero drainage basins within the Project has been redesigned to be a closed system (i.e., piped with no open standing water). Therefore, the proposed design modifications are consistent with Section 2.3.2 of the AC.

Section 2.4.1 – Existing Wetlands on or near Airport Property

This section of the AC states: "At public-use airports, the FAA recommends immediately correcting, in cooperation with local, state, and Federal regulatory agencies, any wildlife hazards arising from existing wetlands located on or near airports within five miles of the

aircraft operations area." As stated in Section 7.0, wildlife hazards identified within the Project will be coordinated with LCPA staff to immediately correct the issue(s). This may also involve coordination with local, state, and federal permitting agencies.

Section 2.4.3.2 – Off-Site Mitigation of Wetland Functions

This section of the AC states that "The FAA encourages landowners or communities supporting the restoration or enhancement of wetlands to do so only after critically analyzing how those activities would affect aviation safety. To do so, landowners or communities should contact the affected airport sponsor…" "Those parties should work cooperatively to develop restoration or enhancement plans that would not worsen existing wildlife hazards or create such hazards." "If parties develop a mutually acceptable restoration or enhancement plan, the landowner or community proposing the restoration or enhancement must monitor the restored or enhanced site. This monitoring must verify that efforts have not worsened or created hazardous wildlife attraction or activity. If such attraction or activity occurs, the landowner or community should work with airport sponsor…to reduce the hazard to aviation."

The applicant has had several meetings with LCPA staff to thoroughly vet the conceptual site plan and discuss opportunities to minimize wildlife attractants within the site. Based on these meetings, the applicant has incorporated multiple measures in this plan and in the IPRMP to minimize wildlife attractants per LCPA recommendations.

As demonstrated above, the Project is consistent with Sections 2.3.2, 2.4.1, and 2.4.3.2 of FAA AC 150/5200-33C; therefore, the Project is consistent with Lee Plan Policy 47.2.5.

8.0 EASTERN INDIGO SNAKE MANAGEMENT PLAN

The Eastern indigo snake has not been documented on-site; however, the following plan outlines the protection guidelines that will be implemented for the Eastern indigo snake during clearing operations for the Project. The plan provides educational material and guidelines for construction personnel to follow in the event they encounter an Eastern indigo snake. The plan has been prepared following the guidelines established by the U.S. Fish and Wildlife Service (USFWS). The Eastern indigo snake is a federally threatened species and is listed by the Endangered Species Act (ESA). It is unlawful for anyone to injure, harm, harass, or kill this species. Persons who knowingly violate provisions of the ESA that afford this species protection may be subject to a fine and/or imprisonment.

8.1 Biology

The Eastern indigo snake is a large, non-poisonous, glossy black snake with smooth iridescent scales. The chin and throat may be rusty or white-blotched. The juvenile snakes are similar to the adults, but may be lighter and exhibit a blotched dorsal pattern. Adults

can grow to lengths over eight feet. The Eastern indigo snake might be confused with the black racer (*Coluber constrictor*), but the black racer exhibits a white or brown throat and is smaller and lighter in build.

The Eastern indigo snake inhabits a range of habitat types including pine flatwoods and wet prairies. Individuals are wide ranging and may utilize an area of 250 acres or more. Eastern indigo snakes are known to shelter in gopher tortoise burrows. The Eastern indigo snake is diurnal (active only during the daytime) and will actively search for prey. Prey may include frogs, snakes, birds, and small mammals. Very little is known of the reproduction of this species in the wild. Breeding is believed to occur during the winter and early spring months with up to 11 large white eggs being deposited in late spring and early summer.

8.2 Management Plan

The USFWS' Standard Protection Measures for the Eastern Indigo Snake (2013) will be followed prior to and during construction activities. The Standard Protection Measures include the placement of posters at strategic locations on the construction site and along proposed access roads clearly visible to construction staff. The posters include a description and photograph of the Eastern indigo snake, its protection status, and instructions in the event that one is observed. In addition, informational brochures will be provided to all construction staff.

The Project will preserve, enhance, and restore 679.10± acres of existing vegetation on-site through the removal of exotic vegetation. The preserve areas will be maintained per the Project's IPRMP and will provide habitat for the Eastern indigo snake.

Problematic encounters between future residents and Eastern indigo snakes are not anticipated. Construction personnel, maintenance staff, and homeowners will be informed that the Eastern indigo snake is a protected species.

9.0 GOPHER TORTOISE MANAGEMENT PLAN

One gopher tortoise was observed on the Project site during the PSS. The following plan outlines the management activities that will be implemented for the gopher tortoise prior to the implementation of site clearing. The gopher tortoise is listed as threatened by the FWCC.

9.1 Biology

The gopher tortoise is a large, terrestrial turtle averaging 23 to 28 centimeters (9 to 11 inches) in shell length. Maximum length is around 38 centimeters (15 inches). The gopher tortoise is characterized by stumpy, elephantine hind feet and flattened, shovel-like forelimbs adapted for digging. The tan, brown, or gray carapace (top portion of the shell) is domed and oblong. The plastron (bottom portion of the shell) is somewhat concave in

males. Growth annuli may be conspicuous, particularly in juveniles. Hatchlings are approximately 4.4 centimeters (1.7 inches) in length and are yellowish orange in color.

The gopher tortoise occurs in the Southeastern Coastal Plain of the United States from Eastern Louisiana to Southeastern South Carolina and throughout Florida. In Florida, gopher tortoises occur in portions of all 67 counties. Gopher tortoises inhabit a wide variety of upland vegetative communities. Three environmental conditions are especially important for gopher tortoises: well-drained, sandy soil in which to burrow; adequate low-growing herbaceous ground cover for food; and relatively open, sunlit areas for nesting. The gopher tortoise is primarily associated with longleaf pine-scrub oak woodlands (sandhills), but it is also found in sand pine scrub, coastal strands, live oak hammocks, dry prairies, pine flatwoods, and mixed hardwood-pine communities. Disturbed habitats, such as roadsides, fencerows, clearings, and old fields, often support relatively high tortoise densities.

Gopher tortoises excavate burrows averaging 4.5 meters (14.8 feet) in length and 2 meters (6.6 feet) in depth and wide enough to allow them to turn around at any point. These burrows provide protection from temperature extremes, desiccation, and predators and serve as refuges for a variety of other animals. The placement and depth of burrows vary with the soil type, geographic location, and ground water levels. An individual tortoise may use more than one burrow and may excavate new burrows at any time during its life.

Gopher tortoise densities and movements are affected by the amount of herbaceous ground cover present. Generally, feeding activity is confined to within 50 meters (164 feet) of the burrow. Principal foods include grasses, legumes, and grass-like plants of the sedge and aster families. Legumes appear to be particularly important in the diet of juveniles. Fruits such as blackberries, pawpaws, gopher apples, and saw palmetto (*Serenoa repens*) berries are also consumed.

9.2 Management Plan

After construction is completed, the Project may not contain suitable gopher tortoise habitat within the conservation areas necessary for the long-term survivability of the species. No gopher tortoise burrows were located within the Project site during the PSS. However, if gopher tortoise burrows are located within the development footprint and it is not feasible to provide a minimum 25-foot buffer to the burrows, the applicant will obtain a permit from the FWCC to relocate gopher tortoise(s) to a protected recipient site prior to initiating construction activities. The recipient site will be approved by the FWCC and managed in perpetuity, consistent with FWCC's Gopher Tortoise Management Plan (2012).

10.0 AMERICAN ALLIGATOR MANAGEMENT PLAN

No American alligators were observed on-site during the PSS; however, potential nesting and foraging habitat (i.e., wetlands, and freshwater marshes) exists on-site. The following plan outlines the protection guidelines that will be implemented for the American alligator during clearing

operations for the Project. The American alligator is listed as threatened (due to similarity of appearance) by the USFWS and the FWCC.

10.1 Biology

The American alligator is a reptile with an elongated, armored, lizard-like body with a muscular flat tail. Adult alligators are dark with a pale underside while juveniles have bright yellow stripes and blotches. The average size for adults is 8.2 feet for females and 11.2 feet for males. The body weight can reach up to a half ton. American alligators inhabit all counties in the State of Florida and are most common in the major river drainage basins and large lakes in the central and southern portions of the state. They also can be found in marshes, swamps, ponds, drainage canals, phosphate-mine settling ponds, and ditches. Alligators are tolerant of poor water-quality and occasionally inhabit brackish marshes along the coast. A few even venture into saltwater. Individuals are wide ranging, and some males may utilize an area of two square miles or more. Individuals of both sexes are most likely to become more active and extend their ranges during the April to May courtship and breeding season. Prey may include frogs, snakes, birds, and small mammals, although alligators are opportunistic feeders and may prey on what is readily available. Larger individuals often prefer carrion to fresh meat.

10.2 Management Plan

The proposed Project will not impact the alligator. Alligators commonly move from water body to water body in response to factors such as season, disturbances, food supply, etc. The American alligator is listed as a federally threatened species due to similarity of appearance to the American crocodile (*Crocodylus acutus*). Only representatives of the FWCC are authorized to handle nuisance alligators. If an alligator is present within the limits of construction at the time of clearing, work within the immediate vicinity of the alligator will be halted and the animal will be allowed to move out and into safer territory. Once the alligator has moved, work can be restarted. If an active alligator nest is found, it will be temporarily protected with an adequate buffer zone until the hatchlings leave the nest.

Extensive, high quality American alligator habitat will be provided throughout the property through wetland preservation, enhancement, and restoration. This includes the removal of exotics in approximately 507.2± acres of existing wetlands on the property. These wetlands are predominantly hardwood/conifer, mixed, mixed wetland hardwoods, cypress forest, hydric pine forest, and freshwater marshes habitat types. Invasive exotic removal will result in wetland preserves that are more suitable to alligators and their prey species. The preserve areas will be maintained per the Project's IPRMP.

To avoid problematic encounters between future residents and American alligators, the FWCC's educational brochure entitled "A Guide to Living with Alligators" (Appendix D) will be provided to homeowners and maintenance staff (see Section 16.2).

11.0 CRESTED CARACARA MANAGEMENT PLAN

Two crested caracara were observed on the Project site during the PSS. In addition, a crested caracara nest was previously documented in the northern portion of the property. This nest was active during the 2020-2021 caracara nesting season. The following management plan outlines the protection guidelines that will be implemented for the crested caracara prior to clearing activities on the Project and addresses habitat enhancement and restoration on the site. The crested caracara is listed as threatened by the USFWS and the FWCC.

11.1 Biology

The crested caracara is a large, non-migratory raptor that feeds both on prey and carrion and is often found with flocks of turkey vultures (*Cathartes aura*) and black vultures (*Coragyps atratus*). The population of crested caracara found in peninsular Florida is genetically isolated from other populations of crested caracara subspecies found in the Southwestern United States and portions of Central and South America (USFWS 1999). While other subspecies of crested caracara are not listed as threatened or endangered, the crested caracara subspecies found in Florida was listed in July 1987 as threatened under the ESA.

Crested caracaras primarily use open habitats including native prairies; grasslands and pastures with their associated freshwater marshes; and small clumps of cabbage palms (*Sabal palmetto*), live oak (*Quercus* spp.) hammocks, and cypress (*Taxodium* spp.). Cabbage palms in open habitats are of high importance for nesting (Rodgers *et al.* 1996, Morrison 2001). The primary nesting season for the crested caracara is November through April. Egg laying typically occurs December through February. Clutch size is one to three eggs and incubation ranges from 28 to 32 days. Caracara young fledge at age seven to eight weeks, mostly in March and April (Wood 2001).

11.2 Management Plan

Since a caracara nest has been documented in the northern portion of the Project site, it is anticipated that removal of the nest tree(s) will be negotiated with the USFWS as part of the State 404 permitting process. Prior to clearing activities, a qualified ecologist will survey the construction impact area and adjacent habitats for the presence of crested caracara nests. The removal of any caracara nests located within the Project site will be coordinated with USFWS and DCD staff prior to initiation of construction activities.

The completed Project will preserve, enhance, and restore 679.10± acres of native habitat. The conservation areas will contain open freshwater marsh and pine habitat that will provide potential foraging opportunities caracaras.

Problematic encounters between future residents and crested caracaras are not anticipated. Should a caracara choose to nest adjacent to the community or close to approved access areas within the preserves, the nest will be left undisturbed. If unanticipated nest

disturbance is noted, then an appropriate no-entry buffer zone will be established around the nest with signage until the young fledge.

12.0 WADING BIRD AND FLORIDA SANDHILL CRANE MANAGEMENT PLAN

Although no nesting activity was observed, wood storks were observed on-site during the PSS. In addition, a Florida sandhill crane was also observed utilizing the Project site. It is anticipated that these birds and others, including limpkin (*Aramus guarauna*), little blue heron (*Egretta caerulea*), tri-colored heron (*Egretta tricolor*), and roseate spoonbill (*Platalea ajaja*) may utilize the wetlands and other native habitats on the property. The following management plan has been prepared for the purpose of addressing the management of potential wading bird and Florida sandhill crane habitat on the site.

12.1 Management Plan

Prior to clearing activities, a qualified ecologist will survey the construction impact area and adjacent habitats for the presence of Florida sandhill crane and state-listed wading bird nests. If there is evidence of Florida sandhill crane or listed wading bird nesting, the appropriate FWCC-recommended buffer will be provided around the nest site(s) to avoid disturbance by human activities. If Florida sandhill crane or listed wading bird nesting is discovered after construction has begun or if maintaining the buffers is not possible, the applicant will contact the FWCC staff to discuss potential permitting requirements.

The Project proposes preservation and enhancement of wading bird habitat. Foraging areas will be provided through the preservation, enhancement, and restoration of 507.2± acres of existing wetlands. To minimize potential wildlife attractants, enhancement and restoration activities will adhere to the hazardous wildlife protection measures included in Section 7.0 of this plan.

Problematic encounters between future residents and Florida sandhill cranes and wading birds are not anticipated. Construction personnel, maintenance staff, and homeowners will be informed that the wading birds are protected species. Additionally, informational pamphlets will be provided to homeowners and maintenance staff (Appendix E) (see Section 16.2).

13.0 BIG CYPRESS FOX SQUIRREL MANAGEMENT PLAN

During the PSS, the Big Cypress fox squirrel was observed utilizing forested and disturbed areas on-site. The following management plan has been prepared for the purpose of addressing the conservation of Big Cypress fox squirrel habitat on the Project site and outlines the protection guidelines that will be implemented for the Big Cypress fox squirrel prior to, during, and after construction of the Project. The Big Cypress fox squirrel is listed as threatened by the FWCC. There is no federal listing for the Big Cypress fox squirrel in Florida.

13.1 Biology

The Big Cypress fox squirrel lives and breeds in varied habitats in Southwest Florida including cypress swamps, pine flatwoods, tropical hardwood forests, live oak woods, mangrove forests, and suburban habitats, including golf courses, city parks, and residential areas in native vegetation (Humphrey 1992). Dense cypress/hardwood swamps are avoided. This may be due to the competition for food and habitat with the Eastern gray squirrel (*Sciurus carolinensis*). Little data is available on the preferred forage habitat of the Big Cypress fox squirrel. Big Cypress fox squirrels prefer to feed on the male and female cones of slash pine. Cabbage palm fruits, bromeliad (*Bromeliaceae* sp.) buds, and acorns are also important food items. A smaller percentage of the diet may consist of seasonal fruits, berries, and seeds (Humphrey 1992).

Big Cypress fox squirrels often form platform nests in pines and hardwoods, and moss and stick nests in cypress, tops of cabbage palms, and large clumps of bromeliads. Cabbage palms and bromeliads are especially important because they can provide immediate shelter, which allows the squirrel to travel over large areas without requiring a daily return to a permanent nesting facility (Humphrey 1992).

Big Cypress fox squirrels are solitary animals. Interaction between animals occurs primarily during mating season. Mating chases occur frequently throughout the months of May through August. During the non-mating season, interactions are infrequent and often occur around food sources. Young remain in the nest for approximately 90 days. Home ranges are 40 hectares (approximately 100 acres) for males and 20 hectares (approximately 50 acres) for females (Humphrey 1992).

13.2 Pre-Construction Surveys

A qualified ecologist will be on-site to supervise Big Cypress fox squirrel management and monitoring activities as detailed in this plan. Prior to clearing activities, the preserve areas will be staked in the field and clearly identified with silt fencing or an equivalent barrier. The fencing will be inspected by the preserve manager prior to clearing activities. The operation and storage of construction equipment and the stock-piling of fill and construction material will be prohibited within the fenced preserve areas. The fencing identifying the limits of the preserves will be maintained for the duration of construction activities.

Also, prior to commencement of clearing activities in the development area and removal of exotic trees within the preserve areas, a survey will be conducted by a qualified ecologist to identify potential Big Cypress fox squirrel nests. If potential nests are identified within the clearing limits or within the preserve areas, observations will be conducted to determine if the nests are being utilized by Big Cypress fox squirrels. The FWCC will be notified of nests determined to be utilized by Big Cypress fox squirrels. Active nests will be temporarily protected from clearing by a 125-foot radius undisturbed buffer until juvenile fox squirrels have vacated the nest(s), as confirmed by a qualified ecologist. After completion of nesting and observations documenting that juvenile fox squirrels have

vacated the nest(s), a written request to remove the nest tree(s) will be made to the FWCC. After receipt of the written authorization from the FWCC, the nest tree and buffer can then be cleared.

13.3 Management Plan

Enhancement and restoration of the preserve areas will be conducted as detailed in the IPRMP. The preserve areas will provide foraging and nesting habitats for Big Cypress fox squirrels.

Problematic encounters between future residents and Big Cypress fox squirrels are not anticipated. The typical nest location, high within the tree canopy, will ensure against disturbance to fox squirrel nests. Construction personnel, maintenance staff, and homeowners will be informed that the Big Cypress fox squirrel is a protected species.

14.0 FLORIDA BLACK BEAR MANAGEMENT PLAN

Though no Florida black bear or sign of Florida black bear was documented on the Project site during the PSS, it is anticipated that Florida black bears are within the general vicinity of the Project. The following habitat management plan has been prepared for the purpose of addressing the conservation of Florida black bear habitat on the Project site. The Florida black bear is not listed by the FWCC or the USFWS. However, the FWCC and the Lee County LDC have specific management activities for this species.

14.1 Biology

The Florida black bear is a subspecies of the American black bear (*Ursus americanus*). The Florida black bear is a solitary animal that inhabits heavily wooded terrain and is most often found in large tracts of swamp forest and undisturbed upland forest. Some of the most important habitat types for the Florida black bear include pine flatwoods, hardwood swamps, cypress swamps, cabbage palm forests, sand pine scrub, and mixed hardwood hammocks. Denning often occurs in remote swamps or thickets with dense vegetation. Adult females breed in alternating years during the months of June and July. In Florida, hibernation may be restricted to females producing cubs. Hibernation most often occurs during the winter months. The diet of Florida black bears is highly variable and includes both plants and animals including saw palmetto berries, honeybees (*Apis* sp.), ants (*Formicidae* sp.), armadillo (*Dasypus novemcinctus*), feral hog (*Sus scrofa*), and white-tailed deer (*Odocoileus virginianus*) (Humphrey 1992).

14.2 Management Plan

In order to deter the potential for interactions between humans and large mammals such as the Florida black bear, perimeter buffer lakes and fencing will be utilized between development and the conservation areas to deter large mammals from accessing the development areas.

The preserved, enhanced, and restored habitat within the conservation areas will provide habitat for the Florida black bear and associated prey species. Enhancement activities will provide higher quality habitat for the Florida black bear than what currently exists within the site.

To avoid problematic encounters between future residents and Florida black bears, the FWCC's educational brochure entitled "A Guide to Living in Bear Country" (Appendix F) will be provided to homeowners and maintenance staff (see Section 16.4).

15.0 FLORIDA PANTHER MANAGEMENT PLAN

No Florida panthers were observed on-site during the PSS; however, panther tracks were observed on-site. The property is located within both the USFWS' Primary and Secondary Zones for the Florida panther. In addition, FWCC Florida panther telemetry has been recorded on the Project site and adjacent properties. The following habitat management plan has been prepared for the purpose of addressing the conservation of Florida panther habitat on the Project site. The Florida panther is listed as endangered by the FWCC and the USFWS.

15.1 Biology

The Florida panther is a large, long-tailed cat with a great deal of color variation: pale brown or rusty upper parts; dull white or buff-colored under parts; and dark brown or blackish tail tip, back of ears, and sides of the nose. Mature males have an average weight range between 100 to 150 pounds and measure nearly seven feet from nose to tip of the tail. Females are considerably smaller with a weight range of 50 to 100 pounds and measuring about six feet (USFWS 1987). Panthers subsist on a variety of mammalian prey dominated by white-tailed deer, feral hog, and in some areas raccoon (*Procyon lotor*) (Maehr 1988*a*). Existing data on Florida panther reproduction indicates that breeding occurs throughout the year with a peak in the winter/spring period, a gestation period of around 90 to 95 days, litter sizes of one to four kittens, and a breeding cycle of two years for females successfully raising young to dispersal (which occurs around 18 to 24 months) (Belden 1988, Maehr 1988*b*).

In terms of population size and occupied range, the Florida panther population is at least stable, and at best expanding, as evidenced by natality rates exceeding mortality rates and by recent dispersals north of the Caloosahatchee River (Land *et al.* 2000). According to Maehr *et al.* (1991), home ranges average 200 square miles for resident adult males, 75 square miles for adult females, 241 square miles for transient males, and 69 square miles for sub-adult females. Florida panthers inhabit large remote tracts of land with adequate prey and cover and occupy a variety of habitat types including hardwood hammocks, pine flatwoods, mixed hardwood swamps, and cypress swamps. Appropriate cover is an important component of habitats used, especially during hunting, denning, and day-bedding. Recent information based on global positioning system (GPS) telemetry data collected during nocturnal and diurnal periods indicate that forests are the habitats selected by panthers (Land *et al.* 2008).

15.2 Management Plan

In order to deter the potential for interactions between humans and large mammals such as the Florida panther, perimeter buffer lakes and fencing will be utilized between development and the conservation areas to deter large mammals from accessing the development areas.

The preserved, enhanced, and restored habitat within the conservation areas will provide habitat and a wildlife corridor for the Florida panther and associated prey species. Enhancement activities will provide higher quality habitat for the Florida panther than what currently exists within the site.

To avoid problematic encounters between future residents and Florida panthers, the educational brochure entitled "A Guide to Living with Florida Panthers" (Appendix G), prepared by the FWCC and the USFWS, will be provided to homeowners and maintenance staff (see Section 16.5).

16.0 HUMAN-WILDLIFE COEXISTENCE PLAN

The following Human-Wildlife Coexistence Plans will be incorporated into the declaration of covenants of the Project's Homeowners Association or Community Development District documents.

16.1 Eastern Indigo Snake

As previously noted, the USFWS' Standard Protection Measures for the Eastern Indigo Snake (2013) will be followed prior to and during construction activities. The USFWS's Standard Protection Measures, including the poster and brochure, can be found at http://www.fws.gov/verobeach/listedspeciesreptiles.html. A copy of the brochure is provided as Appendix H.

16.2 American Alligator

Signs will be posted on the subject property to instruct on-site workers and homeowners not to feed or harass the American alligator. The signs will indicate that the offense is punishable by law. The typical signage is provided as Appendix I. The FWCC's educational brochure entitled "A Guide to Living with Alligators" (Appendix D) will be provided to homeowners and maintenance staff. The brochure can be found at http://myfwc.com/media/152524/Alligator_Brochure.pdf. Construction personnel and homeowners will be instructed that in the event there is a problem with a persistent nuisance alligator, they should contact the FWCC's Nuisance Alligator Hotline at 866-FWC-GATOR (866-392-4286). The FWCC is the only agency empowered to handle nuisance alligators.

16.3 Wading Bird

A wading bird informational brochure entitled "Wading Bird Informational Pamphlet" (Appendix E) will be provided to homeowners and maintenance staff. The brochure provides wading bird information and methods to prevent human-wading bird interactions. In addition, the brochure informs residents of the need to avoid disturbance around a nest(s), should a wading bird nest(s) be identified on the property in the future.

16.4 Florida Black Bear

Residents will be educated about the presence of black bears in their community. FWCC's educational brochure entitled "A Guide to Living in Bear Country" (Appendix F) will be provided to homeowners and maintenance staff. This brochure can be found at http://myfwc.com/wildlifehabitats/managed/bear/brochures/.

Garbage and recyclables will be stored in bear-resistant containers with appropriate locking mechanisms, and bear-resistant dumpsters will be used in areas where communal garbage is collected. A list of companies obtained from the FWCC that provide bear-resistant garbage containers for commercial and residential use is provided as Appendix C. Bear resistant receptacles will be required for each residential unit. Please note that Lee County Ordinance No. 11-27 requires individual trash receptacles for residential units of 40 gallons or less in size. In consultation with the local waste disposal company, bear-resistant dumpsters will be purchased from one of the listed companies or another company that is able to provide bear-resistant dumpsters which are compatible with local equipment. They will be incorporated at the time Lee County's waste collection sub-contractor makes them available for use. Units that have curbside garbage service will be required to place garbage containers curbside no earlier than the morning of the days of garbage pickup, and garbage containers will be returned to their permitted location no later than the evening of the days of garbage pickup. For units with curbside garbage service, all garbage, trash refuse, or rubbish will be required to be placed in appropriate garbage containers and stored inside an enclosed area except for the days when there is curbside garbage pickup service. For units without curbside garbage service, all garbage, trash refuse, or rubbish will be placed in bear-resistant dumpsters with the lid closed and secured.

16.5 Florida Panther

Residents will be educated about the presence of Florida panthers in their community. The educational brochure entitled "A Guide to Living with Florida Panthers" (Appendix G), prepared by the FWCC and the USFWS, will be provided to homeowners and maintenance staff. This brochure provides safety tips and instructions for panther encounters. The brochure can be found on the FWCC website located at http://myfwc.com/conservation/you-conserve/wildlife/panthers/.

17.0 PRESERVE SIGNAGE AND COMMUNITY EDUCATION PLAN

Signs identifying the conservation areas as a "nature preserve area" will be installed along the boundary of the preserve. The signage will include language stating, "No dumping allowed" (Appendix I). The signs will be spaced a maximum of 300 feet apart, will be no closer than ten feet from residential property lines, and will be limited to a maximum height of four feet and a maximum size of two square feet.

Periodic seminars may be held to further educate the community about the conservation areas, wetland benefits, and coexistence with and protection of wildlife. Continued education will ensure that the community is well informed regarding the preserves and wildlife coexistence.

18.0 REFERENCES

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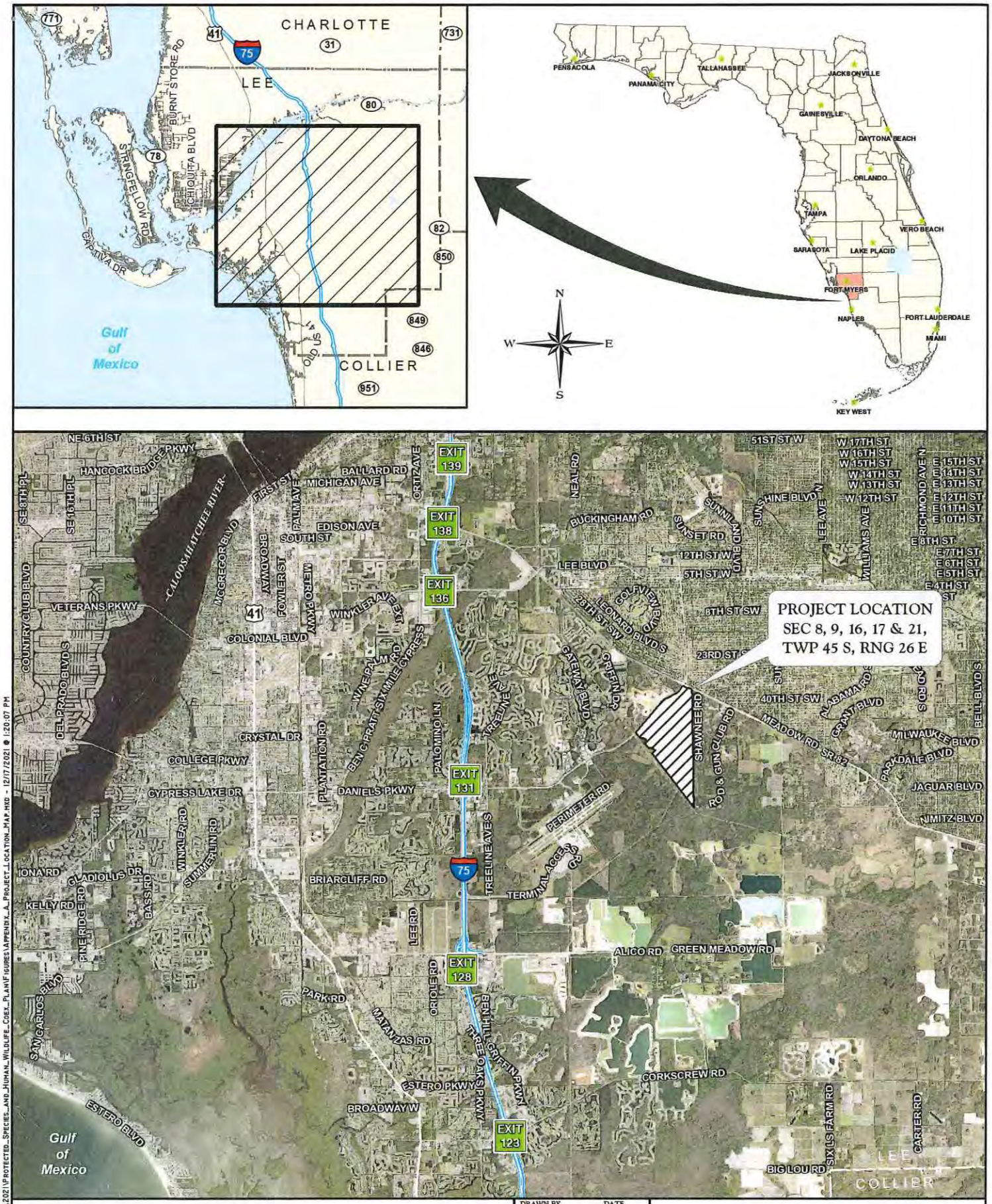
APPENDIX A

PROJECT LOCATION MAP



J:\2019\9LL3192\GIS\2021\PROTECTED_SPECIES_AND_HUMAN_WILDLIFE_CORR_PLAN\FIGURES\APPENDIX_A_PROJECT_LOCATION_MAP.MXD - 12/17/2021 @ 1:20:07 PM

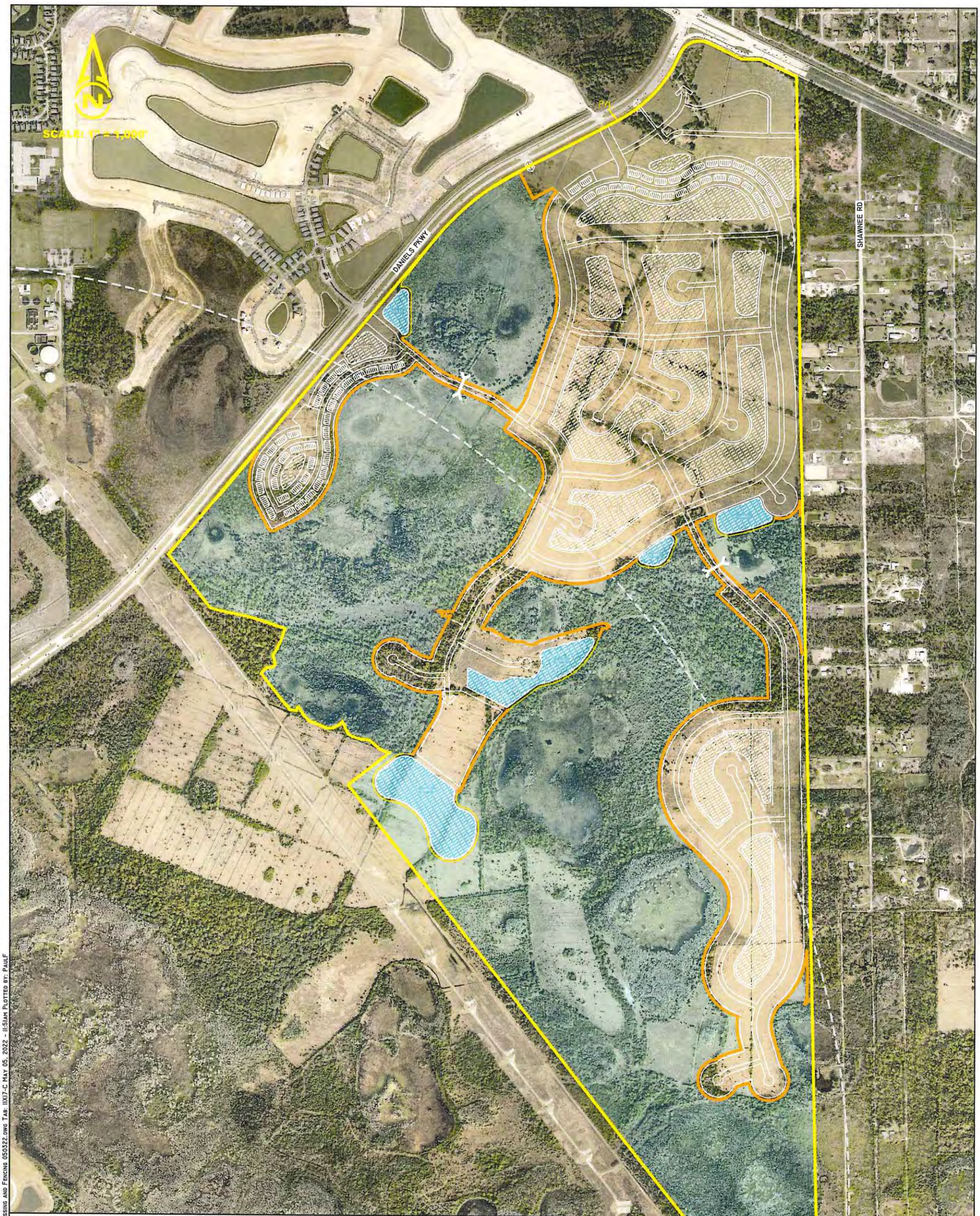
APPENDIX A. PROJECT LOCATION MAP
DANIELS PARKWAY SOUTH

DRAWN BY	DATE
P.F.	11/10/21
REVIEWED BY	DATE
C.R.	11/10/21
REVISED	DATE

PASSARELLA & ASSOCIATES INC
Consulting Ecologists

APPENDIX B

AERIAL WITH CONSERVATION AREAS AND PROPOSED LOCATIONS OF WILDLIFE CROSSINGS AND FENCING



LEGEND:

- CONSERVATION AREA
- BUFFER LAKE
- PROPOSED WILDLIFE FENCING
- WILDLIFE CROSSING
- SOUTHWEST FLORIDA INTERNATIONAL AIRPORT 10,000' HAZARDOUS WILDLIFE BUFFER

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE LEE COUNTY PROPERTY APPRAISER'S OFFICE WITH A FLIGHT DATE OF JANUARY - MARCH 2021.

PROPERTY BOUNDARY AND PRESERVE AREA PER MORRIS DEPEW DRAWING No. PRESERVE BOUNDARIES & PROPERTY BOUNDARY.DWG DATED MAY 2, 2022.

SITE PLAN PER MORRIS DEPEW DRAWING No. 21008-01 PARCELS.DWG DATED MAY 3, 2022.

SWFIA HAZARDOUS BUFFER PER MORRIS DEPEW DRAWING No. 21008-01 X OPEN SPACE.DWG DATED APRIL 25, 2022.

DRAWN BY T.S., P.F.	DATE 12/14/21
REVIEWED BY J.T.	DATE 12/14/21
REVISED T.S.	DATE 5/3/22

13620 Metropolis Avenue
Suite 200
Ft. Myers, FL 33912
Phone (239) 274-0067
Fax (239) 274-0069

PASSARELLA & ASSOCIATES, INC.
Consulting Ecologists

DANIELS PARKWAY SOUTH
AERIAL WITH CONSERVATION AREAS AND PROPOSED LOCATIONS OF WILDLIFE CROSSINGS AND FENCING

DRAWING No. 191113192

SHEET No. APPENDIX B

J:\2019\191113192\2022\LEE Co ZONING RESPONSES\APPENDIX B AERIAL WITH CA PROPOSED WILDLIFE CROSSING AND FENCING 050322.DWG TAB: 11X17-C MAY 05, 2022 - 11:51AM PLOTTED BY: PAULF

APPENDIX C

BEAR RESISTANT CONTAINER LIST

BEAR RESISTANT TRASH & RECREATIONAL STORAGE CONTAINERS

Residential Poly Carts and Cans

BearProofInc
234 S. Golden Dr.
Silt, CO 81652
Ph: (970) 309-2460
Fax: (970) 876-0420
E-mail: Info@BearProofInc.com
Website: http://www.bearproofinc.com/

Metal Roll Away Container
95 gallon

* Metal food and trash lockers also available

Bear Proofing-R-US
(no address available)
Ph: (865) 430-8902
E-mail: akruk@charter.net
Website: http://www.bearproofing-r-us.com/

Residential Street-side Trash Can
96 gallon
*dumpster lids, loaders, and bird feeders also available

Bear Proof Systems, LLC
7855 E. Lark Dr.
Parker, CO 80138
Phone: (303) 840-3390/1-800-944-7973
Fax: (303) 840-3460
E-mail: solidws@comcast.net
Website: http://www.bearproofsystems.com/

Curbside Carts
64 gallon
94 gallon
*Also make various metal containers

BearSaver – USA Sales

Steve Thompson

Ph: 1-800-851-3887
Fax: 909-605-7780
E-mail: sales@bearsaver.com
Website: http://www.bearsaver.com/

Bear Resistant Residential Poly Carts
Model PC-95
95 gallon (min order 24)
Model PC-65
65 gallon (min order 20)
Model PC-32
32 gallon (min order 20)
*Commercial Yard Dumpsters also available

BEAR RESISTANT TRASH & RECREATIONAL STORAGE CONTAINERS

Cascade Industries
The Learning Community
3400 Innovation Court SE
Grand Rapids, MI 49512-2085
Ph. (616)-975-4800

Fax: (616) 254-4174
E-mail: info@cascadeng.com
http://www.cascadeng.com/markets/waste/index.htm

"Cascade Cart"
35 gallons
64 gallons
96 gallons
Bear Resistant Cascade Cart
96 gallons

DAWG, Inc.
25 Lassy Court
Terryville, CT 06786
Phone: 1-800-YEL-DAWG (935-3294)
Fax: 1-800-LIL-PAWS (545-7297)
website: www.dawginc.com

Bearicuda Bin
"Critter Can" Model
Mobile Screw Top Model
Mobile Bearicuda Bin
BEARier Bins

Residential Trash Storage Containers

BearGuard Co. Ltd.
P.O. Box 89
Tahoe City, CA. 96145-0089
Phone/Fax (530) 581-2211
E-mail: **sales@BearGuardInfo.com**
Website: http://www.bearguardinfo.com/index.html

Green and Brown Containers
Various sizes

Carson Valley Welding
1046 Mallory Way
Carson City NV. 89701
PH: (775) 884-9353
Cell: (530) 318-1136
Fax: (775) 884-9354
Email:Don@nobearcan.com
Website: http://www.nobearcan.com/index.html

"No Bear Can"
Model B-5030 $999.00
Model B-5036 $1149.00

See also the following companies:
Bear Proof Inc.
Bear Proofing-R-US
Bear Proof Systems

Info. above

BEAR RESISTANT TRASH & RECREATIONAL STORAGE CONTAINERS

Animal Resistant Dumpsters

Capital Industries, Inc.
5801 Third Avenue South
Seattle WA 98108
Phone: (206) 762-8585/1-800-967-8585
FAX: (206) 762-5455
E-mail: sales@capitalind.com
Website: http://www.capitalind.com/main/

Bear Resistant
Metal Containers & Lids
Various designs

Haul-All Equipment Systems
(no address available)
Phone: 1-888-428-5255
Fax: (403) 328-9956
E-mail: solutions@haulall.com
Website: http://www.haulall.com/index.htm

Hyd-A-Way Model
Several options available for garbage disposal and storage

See also the following companies:
Bear Proof Inc.
Bear Proofing-R-US
Bear Proof Systems
BearSaver-USA Sales

Info. above

Recreational Storage Containers
Panniers (for cooler storage)

Bear-Aware
(no address available)
Phone: 800-568-8990 / 818-504-3518
Contact Jeff Berns
E-mail: jmberns@bear-aware.comor
Website: http://www.bear-aware.com/

Dry & Ice Panniers
24" Medium Dry
28" Large Dry
28" Slim Dry
24" Medium Ice
28" Large Ice

Outfitters Supply
7373 US Highway 2E
Columbia Falls, MT 59912
Phone: 888-467-2256/ 406-892-3650
Fax: 406-892-4234
E-mail: gopackn@outfitterssupply.com
Website: http://www.outfitterssupply.com/

Pack Panniers

Pack Saddle Shop
3071 West Twin Rd
Moscow Idaho 83843
Phone: 208-882-1791
E-mail: support@packsaddleshop.com
Website:
http://www.packsaddleshop.com/Bearpan.html

Aluminum Panniers
Medium
Large
Sold with and without hardware

BEAR RESISTANT TRASH & RECREATIONAL STORAGE CONTAINERS

Food Storage Lockers

See the following companies:
BearProofInc
BearSaver – USA Sales
Haul-All Equipment Systems (product shown)

Info. above

Ask your local waste service provider if they offer wildlife resistant canisters. For example, Waste Pro Inc. and Waste Management Inc. have offered wildlife resistant containers for both residential and commercial locations. In some areas the Waste Service Provider has retrofitted the existing dumpster to a wildlife resistant design.

All images/photos are copyright of their respective company/website.

APPENDIX D

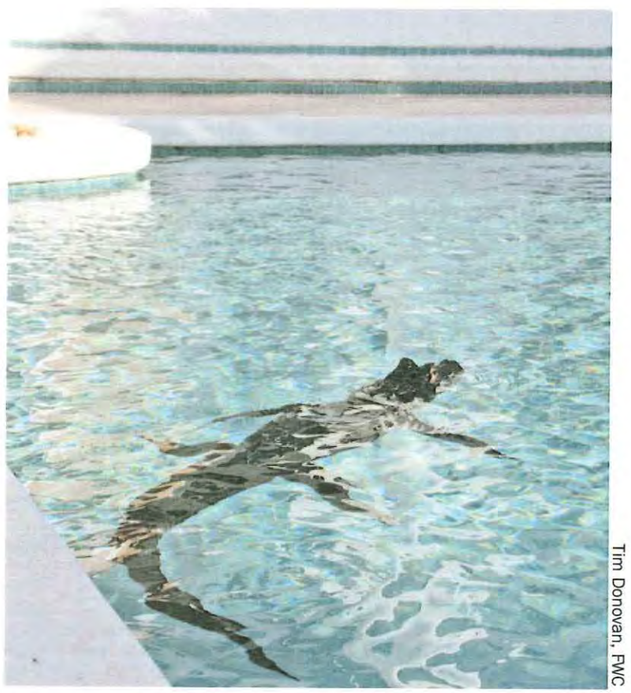
AMERICAN ALLIGATOR INFORMATIONAL PAMPHLET

- Never feed alligators – it's dangerous and illegal. When fed, alligators can overcome their natural wariness and learn to associate people with food. When this happens, some of these alligators have to be removed and killed.

- Dispose of fish scraps in garbage cans at boat ramps and fish camps. Do not throw them into the water. Although you are not intentionally feeding alligators when you do this, the result can be the same.

- Seek immediate medical attention if you are bitten by an alligator. Alligator bites can result in serious infections.

- Observe and photograph alligators only from a distance. Remember, they're an important part of Florida's natural history as well as an integral component of aquatic ecosystems.



Tim Donovan, FWC

Call 866-FWC-GATOR (392-4286) to report nuisance alligators.

Janice Plain

To report nuisance alligators call **866-FWC-GATOR (866-392-4286).**

MyFWC.com/Alligator

REWARD
Report Fish & Wildlife Violations
1-888-404-3922

Printed on recycled content. 02/2012

A Guide to Living with **Alligators**

Jamie Feddersen

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Lizabeth West, FWC

Do not swim outside of posted swimming areas or in waters that may be inhabited by alligators.

Living with Alligators

In Florida, the growing number of people living and recreating near water has led to a steady rise in the number of alligator-related complaints. The majority of these complaints relate to alligators being where they simply aren't wanted. Because of these complaints, the Florida Fish and Wildlife Conservation Commission's Statewide Nuisance Alligator Program permits the killing of approximately 7,000 nuisance alligators each year. Using this approach, and through increased public awareness, the rate of alligator bites on people has remained constant despite the increased potential for alligator-human interactions as Florida's human population has grown.

Alligators are an important part of Florida's landscape and play a valuable role in the ecology of our state's wetlands. Alligators are predators and help keep other aquatic animal populations in balance. A better understanding of the facts and information presented in this brochure will help ensure that people and alligators can continue to coexist.

Visit MyFWC.com/Gators for more information about alligators and the latest nuisance alligator program statistics.

Tim Donovan, FWC

Alligators and People

Alligators are a fundamental part of Florida's wetlands, swamps, rivers and lakes, and they are found in all 67 counties. Florida continues to experience human population growth. Many new residents seek waterfront homes, resulting in increased interactions between people and alligators.

Although most Floridians understand that we have alligators living in our state, the potential for conflict exists. Because of their predatory nature, alligators may target pets and livestock as prey. Unfortunately, people also are occasionally bitten. Since 1948, Florida has averaged about five unprovoked bites per year. During that period, a little more than 300 unprovoked bites to people have been documented in Florida, with 22 resulting in deaths.

In the past 10 years, the Florida Fish and Wildlife Conservation Commission has received an average of nearly 16,000 alligator-related complaints per year. Most of these complaints deal with alligators occurring in places such as backyard ponds, canals, ditches and streams, but other conflicts occur when alligators wander into garages, swimming pools and golf course ponds. Sometimes, alligators come out of the water to bask in the sun or move between wetlands. In many cases, if left alone, these alligators will eventually move on to areas away from people.

Safety Tips

- Generally, alligators less than four feet in length are not large enough to be dangerous unless handled. However, if you encounter any alligator that you believe poses a threat to people, pets or property, call the Nuisance Alligator Hotline at 866-FWC-GATOR (866-392-4286). Please be aware, nuisance alligators are killed, not relocated.

- Be aware of the possibility of alligators when you are in or near fresh or brackish water. Bites may occur when people do not pay close enough attention to their surroundings when working or recreating near water.

- Do not swim outside of posted swimming areas or in waters that might be inhabited by large alligators.

- Alligators are most active between dusk and dawn. Therefore, avoid swimming at night.

- Dogs and cats are similar in size to the natural prey of alligators. Don't allow pets to swim, exercise or drink in or near waters that may contain alligators. Dogs often attract an alligator's interest, so do not swim with your dog.

- Leave alligators alone. State law prohibits killing, harassing or possessing alligators. Handling even small alligators can result in injury.

Tim Donovan, FWC

A young alligator wanders onto a porch in a residential neighborhood.

APPENDIX E

WADING BIRD INFORMATIONAL PAMPHLET

Action to be taken if you observe someone harassing a wading bird:

Promptly notify the FWCC 1-888-404-FWCC

Tips for living with wading birds

- Do not feed wading birds.
- Keep out of vegetated areas surrounding lakes and marshes.
- Keep pets leashed to avoid coming into contact with wading birds.
- Properly dispose of fishing line to avoid bird entanglement.

Prepared By:

PASSARELLA & ASSOCIATES INC
Consulting Ecologists

13620 Metropolis Avenue, Suite 200
Fort Myers, Florida 33912
(239) 274-0067

WADING BIRD INFORMATIONAL PAMPHLET

Daniels Parkway South

Description:

Wading birds are a diverse group of birds which utilize shallow marsh areas as foraging and breeding habitats. They are typically characterized as having long necks, legs and bills, which allows them to feed in shallow water. Wading birds can be found in Florida year round. Examples of wading birds include: great egrets, great blue herons, white ibis', little blue herons and snowy egrets.

Habitat:

Wading birds inhabit all counties in the state of Florida and are most common in the shallow marsh or wetland areas throughout the state. They can also be found in both coastal and inland areas, salt marshes, swamps, ponds, drainage canals, and ditches. Wading birds breed and nest in colonies which consist of various species of other wading birds. Breeding generally occurs just prior to or during the wet season. Stick nests are built in trees or bushes near wetland areas and above the water line.

Wading birds feed in shallow water areas where prey is most concentrated. They feed by spearing prey with their bills or by straining small species out of the water and sediment. Prey may include small fish, invertebrates or other aquatic organisms. Wading birds have also been known to consume snakes, frogs and small rodents.

Protection:

Most wading birds are listed as species of special concern by the State of Florida. Some species such as wood storks are listed as endangered by both the State of Florida and the U.S. Fish and Wildlife Service. It is unlawful for anyone to disturb or take nests or eggs, feed, injure, harm, harass, or kill any wading birds species. Persons who knowingly violate the law may be subject to fines and/or jail time.

If wading birds form a nesting colony on the property in the future, avoid activities within 330 feet of the colony during the nesting season (March 1 to August 1).

APPENDIX F

FLORIDA BLACK BEAR INFORMATIONAL PAMPHLET

Eglin AFB

Secure your garbage

- Store garbage in a secure area, such as a sturdy shed or garage, until the morning of pickup, or
- Build a small shed to store trash cans. Be sure there are no gaps along the shed's edges and use screws. If the shed is curbside, call your waste service provider to ensure it will still service your trash cans, or
- Modify your regular trash can to make it bear-resistant by adding hardware. To be successful, the lid must not be flexible and the can must not collapse when you stand on its side. Call your waste service provider to ensure it will service a modified trash can, or
- Request a commercially manufactured bear-resistant trash can from your waste service provider. If they do not provide these cans, you can special order one from a hardware store, but ensure your waste service provider will service it.

Funds from Florida's "Conserve Wildlife" license plate help conserve bears and reduce human-bear conflicts. Buy one today through your local tax collector's office or online at BuyAPlate.com.

Mitt Fox

How FWC responds to conflicts

The FWC addresses human-bear conflicts in a variety of ways, including providing technical assistance over the phone, conducting an in-person visit with the resident, using deterrents (such as an electric fence), attempting to scare the bear away, or, in rare cases, attempting to trap the bear.

While most conflicts can be avoided by securing attractants, biologists assess each situation on a case-by-case basis and use FWC policies and guidelines to help decide on the most appropriate response.

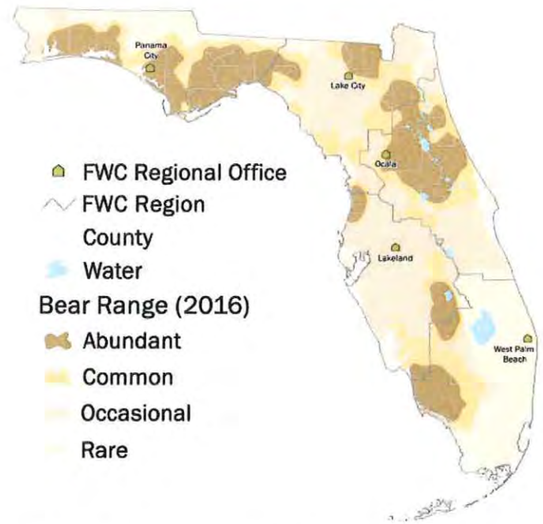
The earlier the FWC is notified, the more response options are available.

The longer a conflict situation continues, the more likely the bear will develop behaviors that present a risk to public safety, such as entering a dwelling, harming a leashed dog or injuring a person.

Once this happens, it is too late to try to change the bear's behavior and it must be humanely killed.

Warning! It is illegal to take, possess, injure, shoot, collect or sell black bears under Florida state law unless authorized by an FWC-issued permit. If you are found guilty, you could face fines and/or jail time.

Where bears live in Florida



If you are experiencing bear conflicts, please contact the nearest FWC regional office. The sooner the FWC knows about bear activity, the more options are available to prevent a bear from becoming a public safety risk.

North Central	**Lake City**	**(386) 758-0525**
Northeast	**Ocala**	**(352) 732-1225**
Northwest	**Panama City**	**(850) 265-3676**
South	**West Palm Beach**	**(561) 625-5122**
Southwest	**Lakeland**	**(863) 648-3200**

In an emergency or if you suspect illegal activity, call the Wildlife Alert Hotline at 888-404-FWCC (3922).

Follow us on:

YouTube flickr

Florida Fish and Wildlife Conservation Commission
MyFWC.com/Bear

printed on recycled paper 8/2018

A guide to living in **bear country**

Ashley Hockenberry

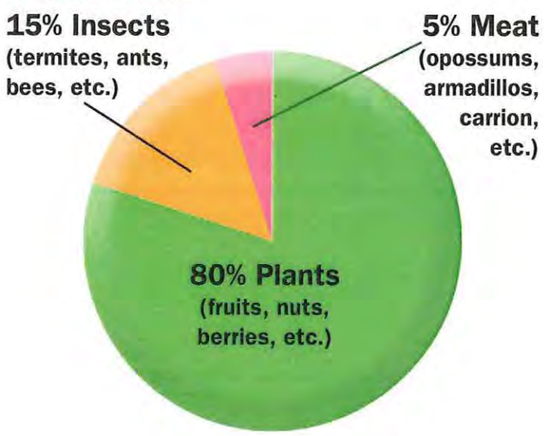
Florida Fish and Wildlife Conservation Commission
MyFWC.com/Bear

Ashley Hockenberry

The bear facts

- Black bears are the only species of bear in Florida.
- Biologists estimate approximately 4,000 black bears roam Florida today, compared to as few as 300 bears in the 1970s.
- Bears can pick up scents from over a mile away: that's seven times better than a bloodhound and the best of any land mammal.
- Adult bears typically weigh between 150 to 400 pounds, with males often twice the size of females.
- Females have their first litter around 3 years of age, with one to three cubs born every other year.
- Breeding occurs from June to August, with cubs born around February 1.
- On average, females range over 15 square miles and males range over 60 square miles.

A bear's diet



Bear behavior and you

Black bears are shy and generally not aggressive. When seen near homes or workplaces, bears are often just passing through. When frightened, bears typically run away or climb a tree. If a bear is in a tree, it is either feeding or trying to escape danger. Keep people and pets away, and the bear will leave on its own, usually after dark.

When a bear stands on its hind legs, it is trying to get a better view or scent. Black bears may huff, snap their jaws, swat the ground or "bluff charge" when cornered, threatened or defending food or young. If this happens, stop, hold your ground and then slowly back away.

Remember bears are large, powerful, wild animals that can act unpredictably and become dangerous. Bears who receive food from people may lose their natural fear of them and are more likely to damage property or become a public safety risk. NEVER feed or attract bears. If a bear is eating something on your property, take note of what it is and secure it after the bear has left the area.

Learn all about Florida's bears and being BearWise at *MyFWC.com/BearWise*.

BearWise tips:

- Never approach a bear. Keep as much distance between you and the bear as possible.
- If a bear changes its behavior because you're there, you are too close.
- If you encounter a bear at close range, stand with arms raised, back up slowly and speak to the bear in a calm, assertive voice.
- Do not turn your back, play dead or run from a black bear.
- Make sure you are in a secure area, such as a car or building, and the bear has a clear escape route, then scare the bear away with loud noises, like yelling, blowing a whistle, or using an air or car horn.
- Install a motion-activated device, such as flood lights, a water sprinkler or audio alarm, to scare a bear away from a location when you are not present.
- Report any bear threatening the safety of people, pets or livestock, or causing property damage, to the FWC (see back cover).
- Walk dogs on a non-retractable leash and be aware of your surroundings. Dogs can trigger defensive behaviors from bears.

Encourage your school system to use the *Florida Black Bear Curriculum Guide*. The guide is designed for grades 3 to 8 and is correlated to state education standards.

Avoid attracting bears

Bears do not hang around people if they do not find food. Properly storing or securing garbage and other attractants is a proven method of preventing bear conflicts. However, it takes a community-wide effort to keep bears wild and away from neighborhoods.

- Use electric fencing to protect gardens, garbage, compost piles, beehives, fruit trees and livestock.

John Bailey

- Keep garage doors closed when not in use.
- Feed pets indoors or bring food dishes (even empty ones) inside at night.
- Store pet and livestock feed in bear-resistant containers or inside a secure area.
- Remove or modify bird and wildlife feeders and ensure the ground is free of all feed debris.
- Properly harvest ripe nuts, fruits, and vegetables and remove rotten fruits and vegetables.
- Create an "unwelcome" mat by driving finishing nails, heads up, into a sheet of anchored plywood to keep bears away from a specific area, such as under a window, door or fence.
- Keep outdoor refrigerators and freezers in a secure location or lock up with super-adhesive anchors, like Marine Locks™.
- Clean meat smokers and barbeque grills with a degreasing detergent and store in a secure area. Dispose of food remnants/grease after each use.

A screened-in porch will not keep bears out!

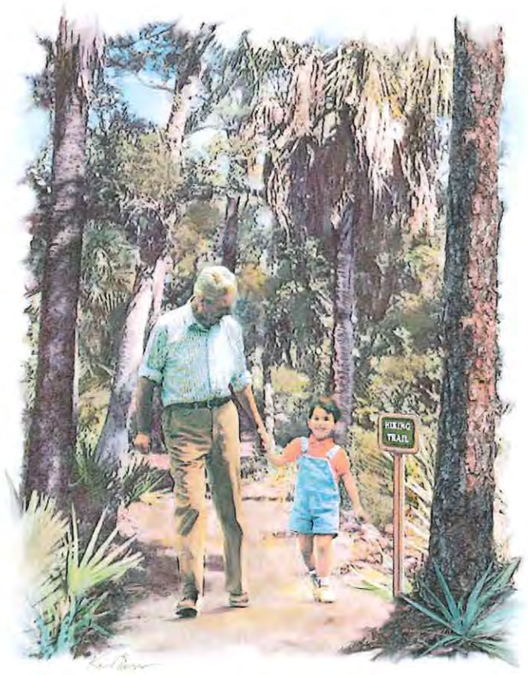
APPENDIX G

FLORIDA PANTHER INFORMATIONAL PAMPHLET

You live in Florida panther country

Florida panthers are reclusive and rarely seen by people. They normally live in remote, undeveloped areas. However, as the number of people in southern Florida grows, there is an increased chance of an encounter with a Florida panther.

This brochure contains some guidelines to help you live safely in Florida panther country.



Keep children within sight and close to you, especially outdoors between dusk and dawn.

If you feel threatened by a panther, or have lost pets or livestock to a panther, please call the Florida Fish and Wildlife Conservation Commission's Wildlife Alert Hotline at 1-888-404-FWCC (3922).

If you see a Florida panther

The Florida panther moves primarily at night. The chances of seeing a panther are slim. But if you live in Florida panther country, you need to know what to do if you see one.

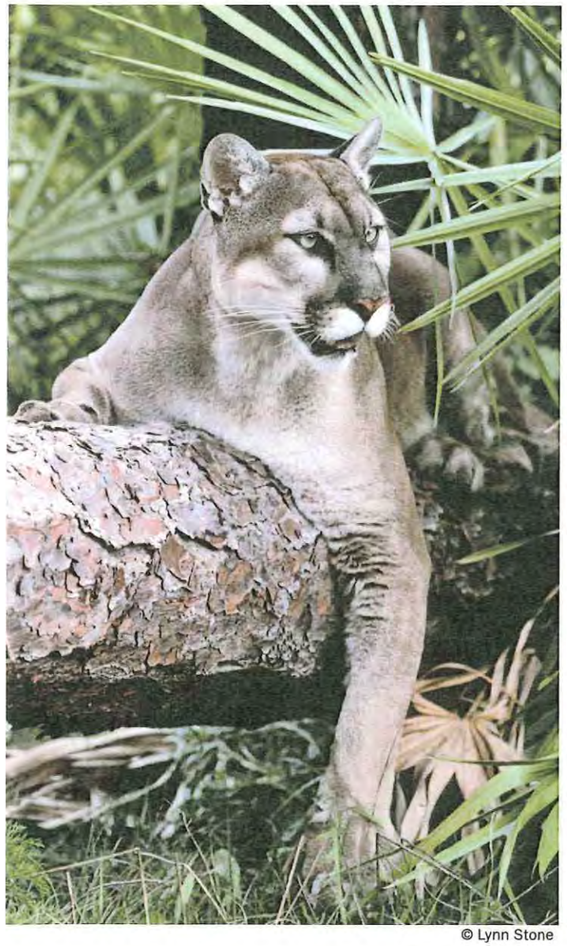
- **Keep children within sight and close to you.** Pick up any small children so they don't panic and run. Try to do this without bending over or turning away from the Florida panther.
- **Give them space.** Florida panthers typically will avoid a confrontation. Give them a way to escape.
- **Do not run.** Running may stimulate a panther's instinct to chase. Stand and face the animal. Make eye contact to let the panther know you are aware of its presence.
- **Avoid crouching or bending over.** Squatting or bending makes you look smaller, resembling a prey-sized animal.
- **Appear larger.** Make gestures that indicate you are not prey and that you may be a danger to the panther. Raise your arms. Open your jacket. Throw stones, branches or whatever you can reach without crouching or turning your back. Wave your arms slowly and speak firmly in a loud voice.
- **Fight back if attacked.** There has never been a reported panther attack in Florida. In western states, where attacks by cougars have occurred very rarely, potential victims have fought back successfully with rocks, sticks, caps, jackets, garden tools and their bare hands. Since large cats usually try to bite the head or neck, try to remain standing and face the animal.

Mark Lotz

printed on recycled paper

Florida Fish and Wildlife
Conservation Commission
620 S. Meridian Street
Tallahassee, FL 32399-1600
MyFWC.com/Panther

A guide to living with Florida Panthers



© Lynn Stone

MyFWC.com/Panther

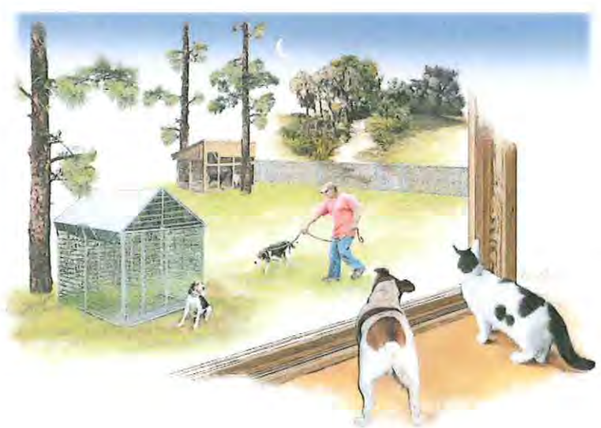
7 ways to live safely in Florida panther country

While these guidelines are meant to help you live safely in Florida panther habitat, they also apply to living with more commonly encountered wildlife, including raccoons, snakes, bears and alligators.

1. Be alert from dusk 'til dawn (and whenever deer are active)
Florida panthers primarily are active at night. Exercise more caution at dawn, dusk or dark.

2. Keep panther prey away
Deer, raccoons, rabbits, armadillos and wild hogs are prey for the Florida panther. By feeding deer or other wildlife, people inadvertently may attract panthers. Do not leave potential wildlife food outside, such as unsecured garbage or pet food. Consider fencing vegetable gardens.

3. Keep pets secure
Free-roaming pets, or pets that are tethered and unfenced, are easy prey for predators, including panthers. Bring pets inside or keep them in a secure and covered kennel at night. Feeding pets outside also may attract raccoons and other panther prey; do not leave uneaten pet food available to wildlife.



Keep your pets safe and secure. Bring pets inside or keep them in a secure and covered kennel at night.

Keep livestock safe and secure.

4. Keep domestic livestock secure
Where practical, place chickens, goats, hogs or other livestock in enclosed structures at night. Electric fencing can be an effective predator deterrent.

5. Landscape for safety
Remove dense or low-lying vegetation that would provide hiding places for panthers and other predatory animals near your house.

- Remove plants that deer like to eat.
- Choose plants that do not attract deer or other panther prey species. For information on plants that deer do not like to eat, visit edis.ifas.ufl.edu/UW137.
- Appropriate fencing will make your yard or play area uninviting to prey animals such as deer.

6. Consider other deterrents
Outdoor lighting, motion sensors and electric fencing also may deter prey animals and panthers from entering your yard. Outdoor lighting also will make approaching prey and panthers more visible to you.

7. Hike or bike with a friend
When recreating outdoors, it's a good practice to let friends or family know your whereabouts and when you expect to return. Better yet, take a friend with you!

Florida panther facts

- The Florida panther is a subspecies of puma, also known as a mountain lion or cougar. It is the last subspecies still surviving in the eastern United States.
- Biologists estimate roughly 100-160 adult and subadult Florida panthers remain in the wild. Most panthers live in southwest Florida, south of the Caloosahatchee River, although some panthers have been documented traveling as far north as central Georgia.
- The Florida panther's decline occurred prior to 1950, when it still was legal to hunt panthers. It was listed as endangered in 1967 and is protected under federal and state laws.
- Florida panther numbers declined to roughly 30 cats by the early 1980s. Severe inbreeding resulted in many health and physical problems. A genetic restoration project in 1995 was successful in improving the genetic health and vigor of the panther population.
- Florida panthers are found primarily in the Big Cypress/Everglades ecosystem in Collier, Lee, Hendry, Monroe and Miami-Dade counties.
- Florida panthers' home range sizes vary by sex and by individual. Female home ranges are typically 60-75 square miles whereas males' are typically 160-200 square miles.

FWC panther team

- There is no record of a Florida panther attacking a person. Florida panthers are rarely seen.
- The biggest threat to the future of the Florida panther is habitat loss. A number of panthers also die each year due to vehicle strikes on roadways.
- The Florida panther was chosen as the State Animal of Florida in 1982 by a vote of elementary school students throughout the state.

This brochure was produced through a partnership of the Audubon Society of Florida, Conservancy of Southwest Florida, Defenders of Wildlife, Florida Fish and Wildlife Conservation Commission, Florida Wildlife Federation, Friends of the Florida Panther Refuge, Mountain Lion Foundation, National Park Service, National Wildlife Federation, Seminole Tribe of Florida, University of Florida and the U.S. Fish and Wildlife Service.

Funding provided by the Florida Fish and Wildlife Conservation Commission, Friends of the Florida Panther Refuge and the National Fish and Wildlife Foundation.

APPENDIX H

EASTERN INDIGO SNAKE INFORMATIONAL PAMPHLET

Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

LEGAL STATUS: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses, if convicted.

August 12, 2013

ATTENTION:

THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!

Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site without interference.
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida ES Office – (904) 731-3336
Panama City ES Office – (850) 769-0552
South Florida ES Office – (772) 562-3909

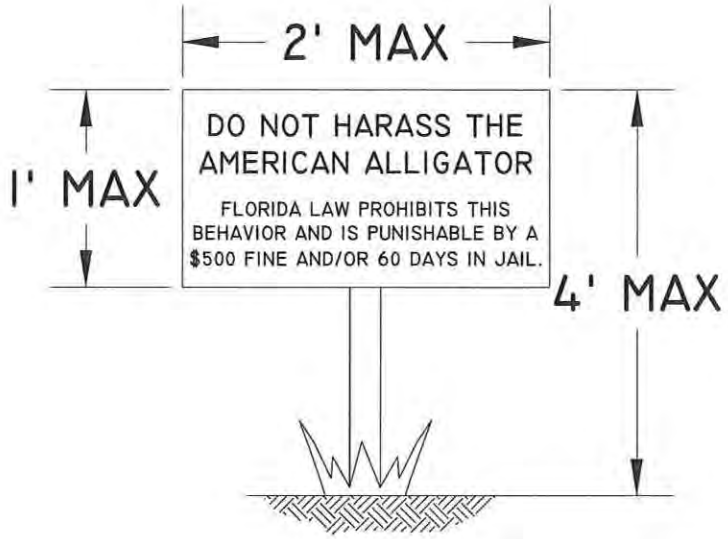
DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

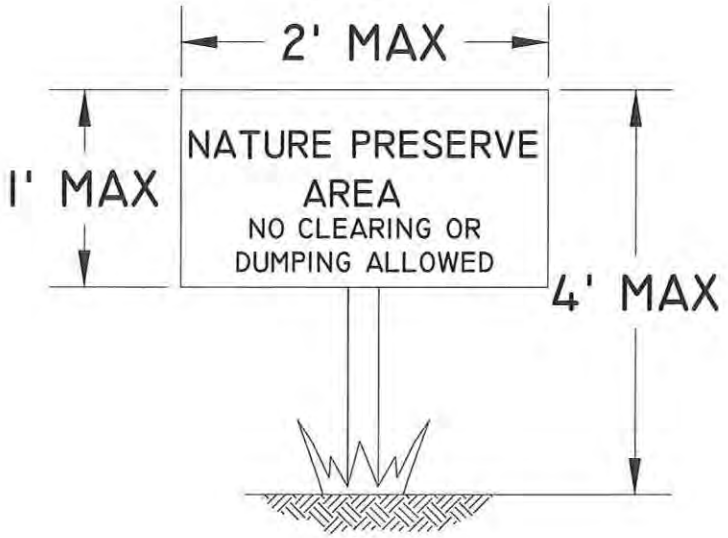
APPENDIX I

AMERICAN ALLIGATOR MANAGEMENT AND PRESERVE SIGNAGE



TYPICAL AMERICAN ALLIGATOR SIGNAGE

N.T.S.



TYPICAL PRESERVE SIGNAGE

N.T.S.

APPENDIX I. AMERICAN ALLIGATOR MANAGEMENT AND PRESERVE SIGNAGE
DANIELS PARKWAY SOUTH

DRAWN BY	DATE
D.B.	7/9/19
REVIEWED BY	DATE
S.J.	7/9/19
REVISED	DATE

PASSARELLA & ASSOCIATES INC
Consulting Ecologists

J:\2019\19LLL5192\2021\PROTECTED_SPECIES_AND_HUMAN_WILDLIFE_CORE_PLAN\APPENDIX I ALLIGATOR AND PRESERVE SIGNAGE.DWG TAB: 8X11-M MAY 05, 2022 - 11:55AM PLOTTED BY: PAULF

TR TRANSPORTATION CONSULTANTS, INC

2726 OAK RIDGE COURT, SUITE 503
FORT MYERS, FL 33901-9356
OFFICE 239.278.3090
FAX 239.278.1906

TRAFFIC ENGINEERING
TRANSPORTATION PLANNING
SIGNAL SYSTEMS/DESIGN

MEMORANDUM

TO: Mr. Barry Ernst
Lennar Homes

FROM: Yury Bykau, P.E.
Transportation Consultant

DATE: Revised: March 9, 2023

RE: Daniels South
Lee County Comprehensive Plan/Text Amendment
Lee County, Florida

TR Transportation Consultants, Inc. has completed a traffic circulation analysis for the proposed Comprehensive Plan/Text Amendment for approximately 1,233 acres of property located at the southeast corner of Daniels Parkway and SR 82 in Lee County, Florida. Based on the discussion with Morris-Depew Associates, approximately 84.5 acres of the site that is within the Central Urban Future Land Use (FLU) Category. A Map Amendment is being proposed to approximately 154.02 acres from DR/GR to Sub-Outlying Suburban (SOS) FLU. A companion Text Amendment is also being proposed for 1,148 acres of property that is within the Southeast Lee County Community Planning Area to permit a unified development using the maximum density from the Central Urban, Sub-Outlying Suburban, DR/GR and Wetlands Future Land Use Categories. The result of the proposed changes and companion Mixed Use Planned Development will be to permit up to 1,600 residential dwelling units.

This analysis will determine the impacts of the proposed Comprehensive Plan/Text Amendment to permit the development of entire subject property with up to 1,600 residential dwelling units. It is important to note that the proposed Text Amendment includes the ability to share density across multiple future land use categories on the subject site.

The transportation related impacts of the proposed Amendment to the Lee Plan were evaluated pursuant to the criteria in the application document. This included an evaluation of the long range impact (20-year horizon) and short range impact (5-year horizon) the proposed amendment would have on the existing and future roadway infrastructure.

Methodology meeting notes were exchanged with the Lee County Staff to discuss the requirements of the traffic study. The initial methodology meeting notes are attached to this Memorandum for reference.

Under the existing Central Urban Future Land Use Category (FLU), approximately 84.5 acres of property can be developed with up to 845 residential dwelling units (10 DU/Acre). It is important to note that a commercial development is also permitted within the Central Urban FLU. At 84.5 acres, the site may possibly yield up to 1 million square feet of commercial uses. The proposed Map Amendment to Sub-Outlying Suburban will permit up to 739 residential dwelling units (154.02 acres under SOS FLU at a density of 2 DU/AC and 215.52 acres under Wetlands FLU at the preservation density of 2 DU/AC).

Under the existing DR/GR and Wetlands Future Land Use Categories, the remaining 778.46 acres of property can be developed with up to 61 residential dwelling units (±461.47 acres under DR/GR FLU at a density of 1 DU/10 Acres & ±316.99 acres under Wetlands FLU at a density of 1 DU/20 Acres).

The Applicant is proposing a Text Amendment to permit properties adjacent to a Mixed Use Community in Lehigh Acres with the above mentioned Map Amendment to sum density across multiple future land use categories to support 1,600 residential dwelling units on the subject property.

Table 1 summarizes the residential intensities that could be developed under the existing land use designations and residential intensities as a result of the proposed Map and Text Amendment.

Table 1
Land Uses
Daniels South

Existing/ Proposed	Land Use Category	Intensity
Existing	Central Urban (±84.5 Acres)	845 Dwelling Units [1] (84.5 acres @ 10 DU/Acre)
	DR/GR & Wetlands (±1,148 Acres)	89 Dwelling Units (DR/GR ±630 Acres @ 1 DU/10 Acres & Wetlands ±518 Acres @ 1 DU/20 Acres)
	Total	934 Dwelling Units
Proposed	Central Urban (±84.5 Acres) Sub-Outlying Suburban & Wetlands (±369.54 Acres) DR/GR & Wetland (778.46 Acres)	Total 1,600 Dwelling Units [2]

1. At 84.5 acres, the site may also possibly yield up to 1 million square feet of commercial uses.
2. The proposed Text Amendment includes the ability to share density across multiple future land use categories on the subject site.

The trip generation for the with and without amendment scenarios was determined by referencing the Institute of Transportation Engineer's (ITE) report, titled ***Trip Generation Manual***, 11th Edition. Land Use Code 210 (Single-Family Detached Housing) was utilized for the trip generation purposes of the residential uses on the site. Note, the site may still be permitted to be developed with other residential options such multi-family as long as the total unit count does not exceed 1,600 dwelling units. However, to be conservative in terms of trip generation, the site was assumed to consist of all single-family residential uses. **Table 2** and **Table 3** outline the anticipated weekday AM and PM peak hour trip generation based on the existing and proposed future land use categories, respectively. The daily trip generation is also indicated in both tables. The trip generation equations utilized are attached to this Memorandum for reference.

Table 2
Trip Generation
Based on Existing Land Use Categories
Daniels South

Land Use	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	In	Out	Total	
Single-Family Housing (934 Dwelling Units)	148	421	569	511	301	812	7,882

Table 3
Trip Generation
Based on Proposed Land Use Categories
Daniels South

Land Use	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	In	Out	Total	
Single-Family Housing (1,600 Dwelling Units)	241	688	929	848	498	1,346	12,933

Table 4 indicates the trip generation difference between the proposed and existing land use categories (Table 2 vs Table 3). The resultant trip change in Table 4 indicates that the trip generation will be **increased** in the AM and PM peak hour conditions as a result of the proposed amendment.

Table 4
Trip Generation – Resultant Trip Change (Table 2 vs Table 3)
Daniels South

Land Use	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	In	Out	Total	
Proposed Land Use Designations (1,600 Dwelling Units)	241	688	929	848	498	1,346	12,933
Existing Land Use Designation (934 Dwelling Units)	-148	-421	-569	-511	-301	-812	-7,882
Resultant Trip Change	**+93**	**+267**	**+360**	**+337**	**+197**	**+534**	**+5,051**

Long Range Impacts (20-year horizon)

The Lee County Metropolitan Planning Organization's (MPO) 2045 Long Range Transportation Plan was reviewed to determine if any future roadway improvements were planned in the vicinity of the subject site. Based on the review, roadway improvements within the vicinity of the subject site shown on the 2045 Financially Feasible Plan were the widening of Daniels Parkway to a six-lane facility from SR 82 to Gateway Boulevard, widening of Sunshine Boulevard to a four-lane facility from SR 82 to Lee Boulevard as well as extension of Alico Road (new four-lane facility) from Green Meadow Road to SR 82. The Lee County 2045 Highway Cost Feasible Plan map is attached to this Memorandum for reference.

The subject property is encompassed by Traffic Analysis Zone (TAZ) No. 4426. The current 2045 FSUTMS District One Regional Planning Model accounted for approximately 250,000 square feet of industrial uses, 300,000 square feet of retail uses, and 445,000 square feet of office uses (total of ±995,000 square feet of commercial) as well as up to 1,019 single-family residential uses in this TAZ. Note, the aforementioned

floor areas were formulated based on the attached employment conversion factors provided by the Lee County Staff.

As initially discussed with the County Staff, since the existing TAZ No. 4426 already accounted for 1,019 single-family residential dwelling units and the proposed request is for up to 1,600 dwelling units, the analysis on the surrounding roadway network will be based on the net change of 581 dwelling units. Therefore, the long range transportation impact (20-year horizon) and the short range transportation impact (5-year horizon) will be evaluated based on the trip generation shown in **Table 5** below.

Table 5
Additional Trips Added to TAZ No. 4426
Daniels South

Land Use	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Daily
	In	Out	Total	In	Out	Total	(2-way)
Single-Family Housing (581 Dwelling Units)	96	273	369	327	192	519	5,093

The Lee County Metropolitan Planning Organization's (MPO) long range transportation travel model was also reviewed in order to determine the impacts the amendment would have on the surrounding area. The base 2045 loaded network volumes were determined for the roadways within the study area and then the PM peak hour trips to be generated by additional trips in Table 5 were added to the projected 2045 volumes. The Level of Service for the surrounding roadways was then evaluated. The Level of Service threshold volumes were derived based on the attached ***Lee County Generalized Peak Hour Directional Service Volumes*** table as well as ***FDOT's Generalized Peak Hour Directional Volumes***, Table 7.

The results of the analysis indicate that the addition of the trips as a result of the proposed amendment to the projected 2045 volumes will not cause any roadway link to fall below the recommended minimum acceptable Level of Service thresholds as recommended in Policy 37.1.1 of the Lee County Comprehensive Plan. Therefore, no changes to the adopted long range transportation plan are required as result of the proposed land use change. Attached **Table 1A** and **Table 2A** reflect the Level of Service analysis based on the 2045 conditions.

Short Term Impacts Analysis (2025)

The 2020/2021-2024/2025 Lee County Transportation Capital Improvement Plan and the 2022-2026 Florida Department of Transportation Adopted Work Program were reviewed to determine the short term impacts the proposed land use change would have on the surrounding roadways. The only project funded for construction in the Study Area is the extension of Alico Road (new four-lane facility) from Green Meadow Road to SR 82. There are no other programmed improvements in the vicinity of the subject site.

Table 4A and **Table 5A** attached to this report indicate the projected 5-year planning Level of Service on the surrounding roadways based on the additional trips shown in Table 5. The existing peak hour, peak season, peak direction traffic volumes on the various roadway links were obtained from the most recent Lee County ***Public Facilities Level of Service and Concurrency Report***. Due to insufficient traffic data for Griffin Parkway in the aforementioned report, the existing peak hour, peak season, peak direction traffic volume for this roadway was derived from the traffic count obtained from the Lee County's ***Traffic Count Database System*** (TCDS). Note, for the new Alico Road extension from Green Meadow Road to SR 82, the existing peak hour, peak season, peak direction traffic volume was assumed based on the volume for Alico Road segment from Ben Hill Griffin Parkway to Green Meadow Road as shown on the County's Concurrency Report.

The existing peak hour, peak season, peak direction traffic volumes were then factored by the appropriate annual growth rates in order to obtain the 2026 background traffic conditions on the area roadway network. The growth rates for each roadway were calculated based on historical traffic data obtained from the FDOT ***Florida Traffic Online*** resource as well as the traffic data from the latest ***Lee County Traffic Count Report***. Note, due to lack of historical traffic data for Gateway Boulevard and Griffin Parkway, a minimum annual growth rate of 2% was assumed. Based on the project traffic distribution illustrated within Table 4A, the roadway link data was analyzed for the year 2026 without the proposed amendment and year 2026 with the proposed amendment. Traffic data obtained from the aforementioned Lee County and FDOT resources is attached to this Memorandum for reference.

The results of the analysis indicate that the addition of the trips as a result of the proposed amendment to the projected 2026 volumes will not cause any roadway link to fall below the minimum acceptable Level of Service standards. It is important to note that there were several roadway segments that were shown to operate at a poor Level of Service in 2026 background (without the proposed amendment) traffic conditions. These roadway segments Daniels Parkway, Gunnery Road north of Lee Boulevard, and Lee Boulevard east and west of Gunnery Road. These roadways are considered as future pre-existing deficiencies that this project should not be held responsible for. Therefore, based on this analysis no modifications will be necessary to the Lee County or FDOT short term capital improvement programs.

Conclusion

The proposed Comprehensive Plan/Text Amendment is for approximately 1,233 acres of property located at the southeast corner of Daniels Parkway and SR 82 in Lee County, Florida. Based upon the roadway link Level of Service analysis conducted as a part of this Memorandum, the proposed amendment will not cause any roadway link to fall below the recommended minimum acceptable Level of Service thresholds as recommended in Policy 37.1.1 of the Lee County Comprehensive Plan. Therefore, no roadway capacity improvements will be warranted as a result of the additional traffic to be generated by the proposed amendment.

No modifications are necessary to the Short Term Capital Improvement Plan or the Long Range Transportation Plan to support the proposed Amendment. In addition, the proposed amendment will not significantly alter the socio-economic data forecasts that were utilized in the development of the Long Range Transportation Plan.

Attachments

METHODOLOGY MEETING NOTES

Yury Bykau

From: Yury Bykau
Sent: Monday, January 24, 2022 1:57 PM
To: Wu, Lili
Subject: RE: Traffic Study Methodology - SEC of Daniels Pkwy/SR 82

Wu,

As discussed today, we will be revising our CPA analysis for this one to be consistent with our application. Since the existing TAZ No. 4426 already accounted for 1,019 single-family residential dwelling units and the proposed request is for up to 1,600 dwelling units on the entire site, the long range and short range analysis on the surrounding roadway network will be based on the net change of 581 dwelling units as shown below.

Additional Trips Added to TAZ No. 4426
Daniels South

Land Use	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	In	Out	Total	
Single-Family Housing (581 Dwelling Units)	96	273	369	327	192	519	5,093

Thanks,

TR TRANSPORTATION CONSULTANTS, INC
Yury Bykau, P.E.
TR Transportation Consultants, Inc.
2726 Oak Ridge Ct. STE 503
Fort Myers, FL 33901
239-692-0589 (c)
239-278-3090 (o) ext. 3
239-278-1906 (f)
yury@trtrans.net

From: Yury Bykau
Sent: Thursday, October 14, 2021 9:04 AM
To: Wu, Lili <LWu@leegov.com>
Cc: Ted Treesh <tbt@trtrans.net>
Subject: RE: Traffic Study Methodology - SEC of Daniels Pkwy/SR 82

Wu,

The client is changing their request for this CPA application. The request is now to change the future land use on 84.5 acres portion of the property within Central Urban FLU (see below FLU map) to Intensive Development FLU to allow up to 1,183 residential units. We're going to assume these 1,183 units are all multi-family since you can't realistically fit that many SF units on this 84.5 acre tract. We are also proposing a text amendment on the 1,148 acres portion of the property that is currently within DR/GR & Wetlands to allow for 417 dwelling units (we will assume all single-family). So grand total of 1,600 Units will be permitted with this CPA application. See property boundary below (Figure 1). The trip gen for 1,600 units (1,183 MF + 417 SF) is also shown below for reference based on ITE Trip Generation Manual, 11th Edition.

Table 1
Trip Generation - Proposed

Land Use	Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	
Single-Family Detached Housing – 1,148 Acre (417 Dwelling Units)	239	141	380	3,753
Multi-Family Housing – 84.5 Acre (1,183 Dwelling Units)	333	196	529	7,658
Total (1,600 Dwelling Units)	**572**	**337**	**909**	**11,411**

Under the existing Central Urban FLU the 84.5 acres could be developed with up to 845 units (again going to assume all multi-family). Under existing DR/GR & Wetlands FLU the 1,148 acres could be developed with up to 89 units (again going to assume all units are SF). A total of 934 units (845 MF + 89 SF) is currently permitted based on County's FLU entitlements. Trip Gen for the currently permitted residential uses is shown Table 2. The net increase in trips is shown in Table 3 (Table 1 vs Table 2).

Table 2
Trip Generation - Permitted

Land Use	Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	
Single-Family Detached Housing – 1,148 Acre (89 Dwelling Units)	56	33	89	906
Multi-Family Housing – 84.5 Acre (845 Dwelling Units)	242	142	384	5,492
Total (934 Dwelling Units)	**298**	**175**	**473**	**6,398**

Table 3
Trip Generation – Proposed vs Permitted (Table 1 vs Table 2)

Land Use	Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	
Proposed Residential (1,600 Dwelling Units)	572	337	909	11,411
Permitted Residential (934 Dwelling Units)	-298	-175	-473	-6,398
Trip Change	+274	+162	+436	+5,013

However, this site is located within TAZ# 4426 (see TAZ boundary below which is labeled at TAZ #962 in Figure 2). The current 2045 District One Model already accounted for 474 industrial employees (250k SF), 759 commercial employees

(300k SF) and 1,477 service employees (445k SF per General Office – Average conversion) and up to 1,019 SF units in this TAZ. The only area in this TAZ that can be really developed with the 250k SF industrial, 300k SF retail and 445k SF office is the 84.5 acres under Central Urban FLU, which would generate more trips than the 1,183 units we're proposing on this portion of the site. So we're not technically increasing the intensity that was assumed in the model for the 84.5 acre portion.

Therefore the only trips that will be added to the roadway network in our CPA analysis (long range and short range) are those shown in Table 4, which is associated with the text amendment on the 1,148 acre portion of the property. Do you agree with this approach for our CPA TIS? Sorry if this is a little convoluted. Call me if you have questions.

Table 4
Trip Generation – Proposed vs Permitted on 1,148 acre

Land Use	Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	
Proposed FLU (417 SF Dwelling Units – 1,148 acres)	239	141	380	3,753
Current FLU DR/GR & Wetlands (89 SF Dwelling Units – 1,148 acres)	-56	-33	-89	-906
Trip Change *	**+183**	**+108**	**+291**	**+2,847**

***Trips to be added to our 2045 and 2026 link LOS analysis.**

Figure 1: Property Boundary

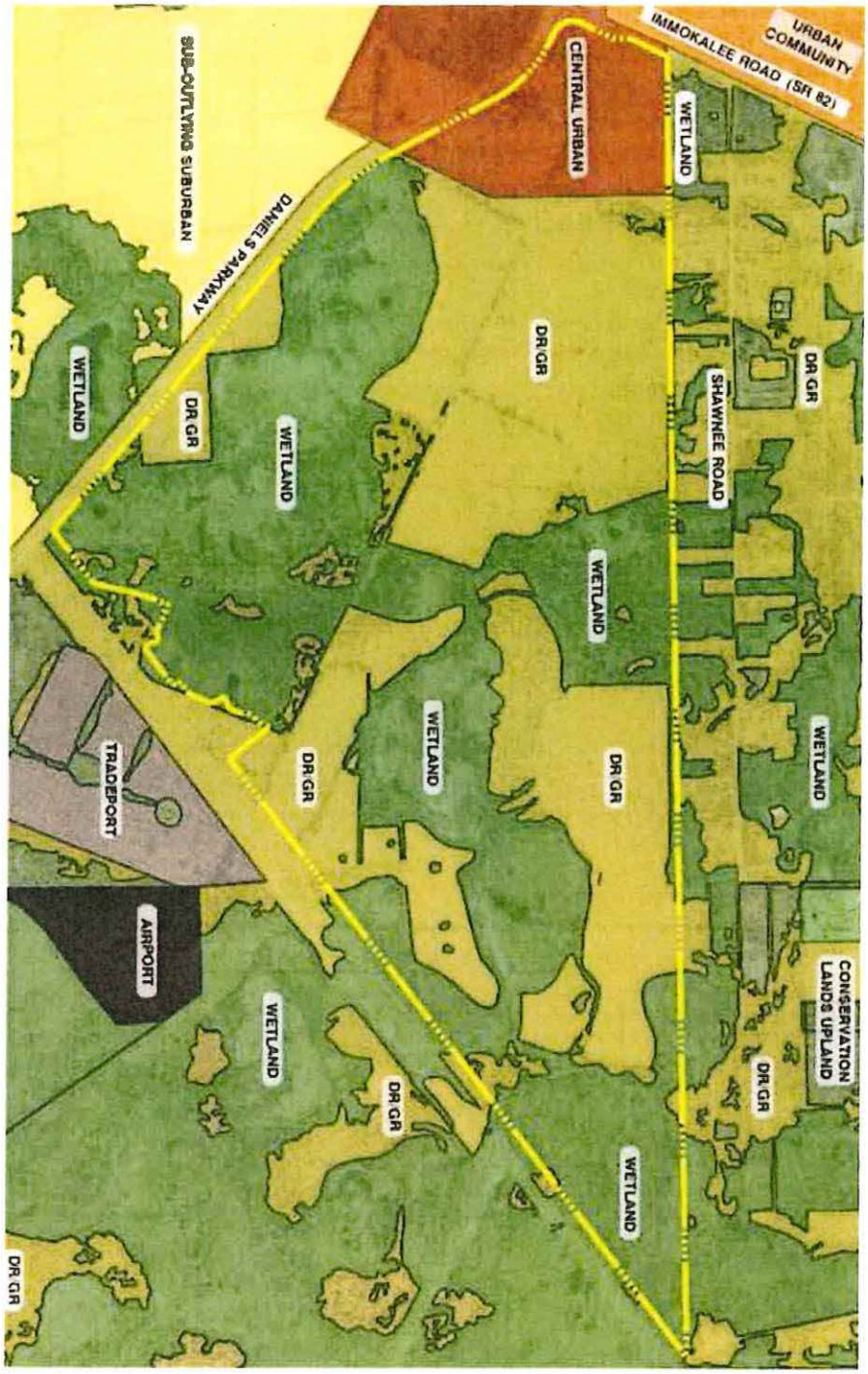
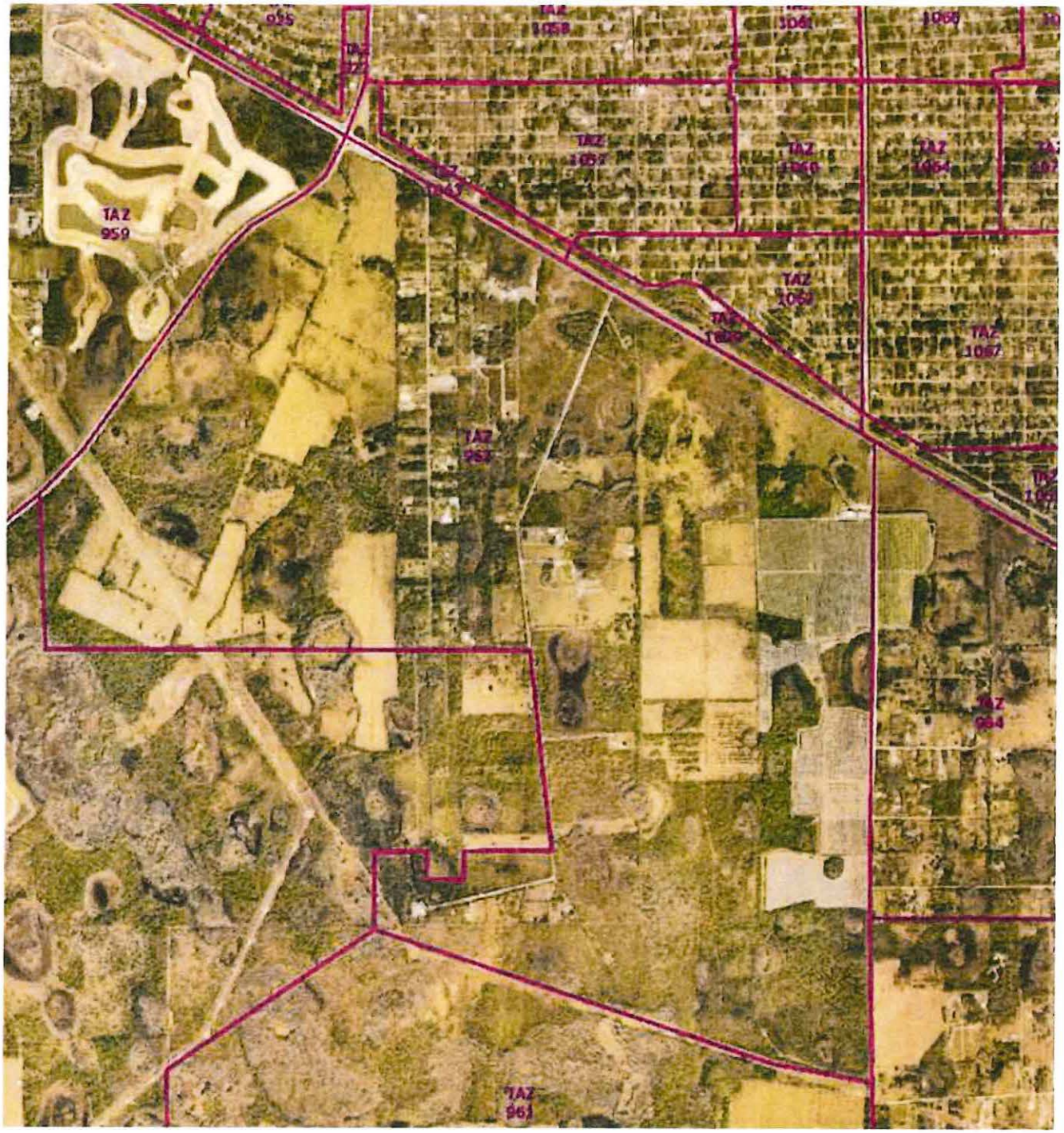


Figure 2: TAZ # 4426 Boundary



Thanks,

TR TRANSPORTATION CONSULTANTS, INC

Yury Bykau, E.I.
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2726 Oak Ridge Ct. STE 503
Fort Myers, FL 33901
239-692-0589 (c)
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TABLES 1A & 2A

2045 LOS ANALYSIS

TABLE 1A
LEVEL OF SERVICE THRESHOLDS
2045 LONG RANGE TRANSPORTATION ANALYSIS - DANIELS SOUTH

		2045 E + C NETWORK LANES		GENERALIZED SERVICE VOLUMES				
				LOS A	LOS B	LOS C	LOS D	LOS E
ROADWAY	ROADWAY SEGMENT	# Lanes	Roadway Designation	VOLUME	VOLUME	VOLUME	VOLUME	VOLUME
SR 82	E. of Sunshine Blvd	6LD	Arterial	0	2,700	3,900	4,920	5,600
	E. of Daniels Pkwy	6LD	Arterial	0	2,700	3,900	4,920	5,600
	W. of Daniels Pkwy	6LD	Arterial	0	0	3,087	3,171	3,171
	W. of Griffin Drive	6LD	Arterial	0	0	3,087	3,171	3,171
Daniels Pkwy	S. of SR 82	6LD	Controlled Access Facility	0	430	3,050	3,180	3,180
	S. of Gateway Blvd	6LD	Controlled Access Facility	0	430	3,050	3,180	3,180
Gunnery Rd	N. of SR 82	4LD	Arterial	0	250	1,840	1,960	1,960
	N. of Lee Blvd	2LU	Arterial	0	140	800	860	860
Sunshine Blvd	N. of SR 82	4LD	Arterial	0	250	1,840	1,960	1,960
Lee Blvd	W. of Gunnery Rd	6LD	Arterial	0	250	1,840	1,960	1,960
	E. of Gunnery Rd	6LD	Arterial	0	250	1,840	1,960	1,960
Alico Rd Ext.	S. of SR 82	4LD	Controlled Access Facility	0	270	1,970	2,100	2,100
Gateway Blvd	W. of Daniels Pkwy	4LD	Arterial	0	0	710	1,590	1,660
Griffin Dr	S. of SR 82	2LU	Collector	0	0	310	660	740

[ ] - Denotes the LOS Standard for each roadway segment

* Level of Service Thresholds for Lee County roadways were taken from the Generalized Peak Hour Directional Service Volume tables for Urbanized Areas (dated April 2016)
* Level of Service Thresholds for State mantained roadways were taken from FDOT's Generalized Peak Hour Directional Volumes for Florida's Urbanized Areas Table 7.

TABLE 2A
2045 ROADWAY LINK LEVEL OF SERVICE CALCULATIONS
DANIELS SOUTH

TOTAL PM PEAK HOUR PROJECT TRAFFIC = 519 VPH IN= 327 OUT= 192

ROADWAY	ROADWAY SEGMENT	2045 FSUTMS AADT	COUNTY PCS / FDOT SITE #	AADT BACKGROUND TRAFFIC	K-100 FACTOR	100TH HIGHEST HOUR PK DIR 2-WAY VOLUME	D FACTOR	PM PK HR PEAK DIRECTION	2045 PEAK DIRECTION TRAFFIC VOLUMES & LOS VOLUME	LOS	PROJECT TRAFFIC DIST.	PK DIR PM PROJ TRAFFIC	2045 BACKGROUND PLUS PROJ PEAK DIRECTION TRAFFIC VOLUMES & LOS VOLUME	LOS
SR 82	E. of Sunshine Blvd	62,607	120068	62,607	0.090	5,635	0.54	EAST	3,043	C	1%	3	3,046	C
	E. of Daniels Pkwy	66,063	126021	66,063	0.090	5,946	0.54	EAST	3,211	C	5%	16	3,227	C
	W. of Daniels Pkwy	25,743	120108	25,743	0.090	2,317	0.54	WEST	1,066	C	40%	131	1,197	C
	W. of Griffin Drive	32,674	120107	32,674	0.090	2,941	0.54	WEST	1,353	C	35%	114	1,467	C
Daniels Pkwy	S. of SR 82	67,923	48	67,923	0.107	7,268	0.63	NORTH	4,579	F	45%	147	4,726	F
	S. of Gateway Blvd	61,802	48	61,802	0.107	6,613	0.63	NORTH	4,166	F	35%	114	4,280	F
Gunnery Rd	N. of SR 82	39,412	124104	39,412	0.090	3,547	0.534	NORTH	1,894	D	10%	33	1,927	D
	N. of Lee Blvd	21,799	124104	21,799	0.090	1,962	0.534	NORTH	1,048	F	5%	16	1,064	F
Sunshine Blvd	N. of SR 82	29,145	124182	29,145	0.090	2,623	0.593	NORTH	1,555	C	2%	7	1,562	C
Lee Blvd	W. of Gunnery Rd	70,112	22	70,112	0.090	6,310	0.62	EAST	3,912	F	2%	7	3,919	F
	E. of Gunnery Rd	76,513	22	76,513	0.090	6,886	0.62	EAST	4,269	F	3%	10	4,279	F
Alico Rd Ext	S. of SR 82	44,682	53	44,682	0.101	4,513	0.52	NORTH	2,347	F	3%	10	2,357	F
Gateway Blvd	W. of Daniels Pkwy	14,709	48	14,709	0.107	1,574	0.63	WEST	582	C	5%	16	598	C
Griffin Dr	S. of SR 82	9,448	48	9,448	0.107	1,011	0.63	SOUTH	374	D	5%	16	390	D

* The K-100 and D factors for County mantained roadways were obtained from Lee County Traffic Count Report.
* The K-100 and D factors for FDOT mantained roadways were obtained from Florida Traffic Online resource.
* Due to lack of traffic data in the Lee County Traffic Count Report, the K-100 and D factors for Gunnery Road & Sunshine Boulevard were obtained from FDOT's Florida Traffic Online Webpage.
* Due to lack of traffic data for Gateway Boulevard and Griffin Drive, the K and D factors were used from Lee County's PCS #48.

Note: Remaining 5% of project traffic was assigned to/from Paul J. Doherty Pkwy.

TABLES 3A & 4A

5-YEAR LOS ANALYSIS

TABLE 3A
LEVEL OF SERVICE THRESHOLDS
DANIELS SOUTH

				GENERALIZED SERVICE VOLUMES				
				LOS A	LOS B	LOS C	LOS D	LOS E
ROADWAY	ROADWAY SEGMENT	# LANES	ROADWAY DESIGNATION	VOLUME	VOLUME	VOLUME	VOLUME	VOLUME
SR 82	E. of Sunshine Blvd	6LD	Arterial	0	2,700	3,900	4,920	5,600
	E. of Daniels Pkwy	6LD	Arterial	0	2,700	3,900	4,920	5,600
	W. of Daniels Pkwy	6LD	Arterial	0	0	3,087	3,171	3,171
	W. of Griffin Drive	6LD	Arterial	0	0	3,087	3,171	3,171
Daniels Pkwy	S. of SR 82	4LD	Controlled Access Facility	0	270	1,970	2,100	2,100
	S. of Gateway Blvd	6LD	Controlled Access Facility	0	430	3,050	3,180	3,180
Gunnery Rd	N. of SR 82	4LD	Arterial	0	250	1,840	1,960	1,960
	N. of Lee Blvd	2LU	Arterial	0	140	800	860	860
Sunshine Blvd	N. of SR 82	2LU	Arterial	0	140	800	860	860
Lee Blvd	W. of Gunnery Rd	6LD	Arterial	0	250	1,840	1,960	1,960
	E. of Gunnery Rd	6LD	Arterial	0	250	1,840	1,960	1,960
Alico Rd Ext.	S. of SR 82	4LD	Controlled Access Facility	0	270	1,970	2,100	2,100
Gateway Blvd	W. of Daniels Pkwy	4LD	Arterial	0	0	710	1,590	1,660
Griffin Dr	S. of SR 82	2LU	Collector	0	0	310	660	740

☐ - Denotes the LOS Standard for each roadway segment

* Level of Service Thresholds for Lee County arterials/collectors taken from the Generalized Peak Hour Directional Service Volume tables for Urbanized Areas (dated April 2016)
* Level of Service Thresholds for State mantained roadways were taken from FDOT's Generalized Peak Hour Directional Volumes for Florida's Urbanized Areas Table 7.

TABLE 4A
LEE COUNTY TRAFFIC COUNTS AND CALCULATIONS
DANIELS SOUTH

TOTAL PROJECT TRAFFIC AM =	369	VPH	IN =	96	OUT=	273
TOTAL PROJECT TRAFFIC PM =	519	VPH	IN=	327	OUT=	192

ROADWAY	ROADWAY SEGMENT	LCDOT PCS OR FDOT SITE #	BASE YR ADT	2020 ADT	YRS OF GROWTH.[1]	ANNUAL RATE	2019 PK HR PK SEASON PEAK DIR.[2]	2026 PK HR PK SEASON PEAK DIRECTION VOLUME	LOS	V/C Ratio	PERCENT PROJECT TRAFFIC	AM PROJ TRAFFIC	PM PROJ TRAFFIC	2026 BCKGRND + AM PROJ VOLUME	LOS	V/C Ratio	2026 BCKGRND + PM PROJ VOLUME	LOS	V/C Ratio
SR 82	E. of Sunshine Blvd	120068	10,300	11,600	15	2.00%	1,635	1,878	B	0.38	1%	3	3	1,881	B	0.38	1,881	B	0.38
	E. of Daniels Pkwy	126021	19,921	28,500	12	3.03%	1,635	2,015	B	0.41	5%	14	16	2,029	B	0.41	2,031	B	0.41
	W. of Daniels Pkwy	120108	10,700	21,000	15	4.60%	1,166	1,597	C	0.50	40%	109	131	1,706	C	0.54	1,728	C	0.54
	W. of Griffin Drive	120107	12,600	24,500	15	4.53%	1,166	1,590	C	0.50	35%	96	114	1,686	C	0.53	1,705	C	0.54
Daniels Pkwy	S. of SR 82	524	24,400	37,400	9	4.86%	1,726	2,406	F	1.15	45%	123	147	2,529	F	1.20	2,553	F	1.22
	S. of Gateway Blvd	524	24,400	37,400	9	4.86%	2,412	3,362	F	1.06	35%	96	114	3,458	F	1.09	3,477	F	1.09
Gunnery Rd	N. of SR 82	290	17,300	26,300	9	4.76%	965	1,337	C	0.68	10%	27	33	1,364	C	0.70	1,369	C	0.70
	N. of Lee Blvd	289	14,700	16,700	9	2.00%	773	888	F	1.03	5%	14	16	902	F	1.05	904	F	1.05
Sunshine Blvd	N. of SR 82	124182	4,100	7,400	9	6.78%	369	584	C	0.68	2%	5	7	590	C	0.69	591	C	0.69
Lee Blvd	W. of Gunnery Rd	22	28,600	36,500	9	2.75%	2,161	2,612	F	1.33	2%	5	7	2,618	F	1.34	2,619	F	1.34
	E. of Gunnery Rd	22	28,600	36,500	9	2.75%	2,131	2,576	F	1.31	3%	8	10	2,584	F	1.32	2,586	F	1.32
Alico Rd Ext.	S. of SR 82	53	26,200	20,200	9	2.00%	385	442	C	0.21	3%	8	10	450	C	0.21	452	C	0.22
Gateway Blvd	W. of Daniels Pkwy	536	N/A	N/A	N/A	2.00%	1,208	1,388	D	0.84	5%	14	16	1,401	D	0.84	1,404	D	0.85
Griffin Dr	S. of SR 82	534	N/A	N/A	N/A	2.00%	431	495	D	0.67	5%	14	16	509	D	0.69	511	D	0.69

1 AGR for roadways was calculated based the historical traffic data obtained from Florida Traffic Online webpage and Lee County Traffic Count Report.

* Due to lack of historical traffic data for Gateway Blvd and Griffin Dr, a minimum 2% AGR was assumed.

2 Current peak hour peak season peak direction traffic volumes for all County roadways were obtained from the 2020 Lee County Public Facilities Level of Service and Concurrency Report.

* For new Alico Road extension, the current peak hour peak season peak direction traffic volume was assumed based on the volume for Alico Road segment from Ben Hill Griffin Pkwy to Green Meadows Road as shown on the County's Public Facilities Level of Service and Concurrency Report.

* Due to lack of traffic data for Griffin Dr, the current peak hour peak season peak direction traffic volume was obtained from the traffic count from Lee County's Traffic Count Database System (TCDS).

LEE COUNTY GENERALIZED SERVICE VOLUME TABLE

Lee County
Generalized Peak Hour Directional Service Volumes
Urbanized Areas

April 2016 c:\input5

Uninterrupted Flow Highway

		Level of Service				
Lane	Divided	A	B	C	D	E
1	Undivided	130	420	850	1,210	1,640
2	Divided	1,060	1,810	2,560	3,240	3,590
3	Divided	1,600	2,720	3,840	4,860	5,380

Arterials

Class I (40 mph or higher posted speed limit)

		Level of Service				
Lane	Divided	A	B	C	D	E
1	Undivided	*	140	800	860	860
2	Divided	*	250	1,840	1,960	1,960
3	Divided	*	400	2,840	2,940	2,940
4	Divided	*	540	3,830	3,940	3,940

Class II (35 mph or slower posted speed limit)

		Level of Service				
Lane	Divided	A	B	C	D	E
1	Undivided	*	*	330	710	780
2	Divided	*	*	710	1,590	1,660
3	Divided	*	*	1,150	2,450	2,500
4	Divided	*	*	1,580	3,310	3,340

Controlled Access Facilities

		Level of Service				
Lane	Divided	A	B	C	D	E
1	Undivided	*	160	880	940	940
2	Divided	*	270	1,970	2,100	2,100
3	Divided	*	430	3,050	3,180	3,180

Collectors

		Level of Service				
Lane	Divided	A	B	C	D	E
1	Undivided	*	*	310	660	740
1	Divided	*	*	330	700	780
2	Undivided	*	*	730	1,440	1,520
2	Divided	*	*	770	1,510	1,600

Note: the service volumes for I-75 (freeway), bicycle mode, pedestrian mode, and bus mode should be from FDOT's most current version of LOS Handbook.

FDOT GENERALIZED PEAK HOUR DIRECTIONAL VOUMES

TABLE 7

TABLE 7

Generalized **Peak Hour Directional** Volumes for Florida's Urbanized Areas

January 2020

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	830	880	**
2	Divided	*	1,910	2,000	**
3	Divided	*	2,940	3,020	**
4	Divided	*	3,970	4,040	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	370	750	800
2	Divided	*	730	1,630	1,700
3	Divided	*	1,170	2,520	2,560
4	Divided	*	1,610	3,390	3,420

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
1	Divided	Yes	No	+5%
1	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding directional volumes in this table by 1.2

BICYCLE MODE[2]

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	150	390	1,000
50-84%	110	340	1,000	>1,000
85-100%	470	1,000	>1,000	**

PEDESTRIAN MODE[2]

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	140	480
50-84%	*	80	440	800
85-100%	200	540	880	>1,000

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
2	2,230	3,100	3,740	4,080
3	3,280	4,570	5,620	6,130
4	4,310	6,030	7,490	8,170
5	5,390	7,430	9,370	10,220
6	6,380	8,990	11,510	12,760

Urbanized

Lanes	B	C	D	E
2	2,270	3,100	3,890	4,230
3	3,410	4,650	5,780	6,340
4	4,550	6,200	7,680	8,460
5	5,690	7,760	9,520	10,570

Freeway Adjustments

Auxiliary Lane	Ramp Metering
+ 1,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
1	Undivided	580	890	1,200	1,610
2	Divided	1,800	2,600	3,280	3,730
3	Divided	2,700	3,900	4,920	5,600

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
1	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Implementation Office
https://www.fdot.gov/planning/systems/

TRAFFIC DATA

FDOT FLORIDA TRAFFIC ONLINE

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 12 - LEE

SITE: 0068 - SR 82, WEST OF BELL BOULEVARD S (LC212)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	11600 S	E 5700	W 5900	9.00	54.00	13.90
2019	11800 F	E 5800	W 6000	9.00	57.60	13.90
2018	11400 C	E 5600	W 5800	9.00	58.50	13.90
2017	12200 C	E 6100	W 6100	9.00	58.20	11.20
2016	10200 C	E 5100	W 5100	9.00	58.20	9.70
2015	10100 C	E 5000	W 5100	9.00	62.20	11.40
2014	10300 C	E 5200	W 5100	9.00	63.40	9.20
2013	8600 F	E 4300	W 4300	9.00	64.30	11.60
2012	8400 C	E 4200	W 4200	9.00	60.20	11.60
2011	9000 F	E 4500	W 4500	9.00	61.10	13.10
2010	8800 C	E 4400	W 4400	10.06	63.11	13.10
2009	9100 C	E 4600	W 4500	10.54	62.17	11.20
2008	8000 C	E 4000	W 4000	10.50	66.40	14.60
2007	10100 C	E 5200	W 4900	9.62	58.02	15.70
2006	10600 C	E 5400	W 5200	8.81	55.95	16.70
2005	10300 C	E 5300	W 5000	9.60	53.80	18.90

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 12 - LEE

SITE: 6021 - SR 82/IMMOKOLEE RD, 500' E OF GUNNERY RD, PTMS 101, LCPR 21

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	28500 X	0	0	9.00	54.00	7.70
2019	30000 T	0	0	9.00	57.60	9.50
2018	29000 S	0	0	9.00	58.50	9.40
2017	28500 F	0	0	9.00	65.10	7.30
2016	28137 C	E 14317	W 13820	9.00	65.10	6.00
2015	26771 C	E 13569	W 13202	9.00	65.10	7.70
2014	25227 C	E 12754	W 12473	9.00	66.20	8.40
2013	23844 C	E 12596	W 11248	9.00	68.60	5.40
2012	22000 F	E 0	W 0	9.00	66.60	7.40
2011	22182 C	E 11177	W 11005	9.00	66.60	9.10
2010	21207 C	E 10845	W 10362	9.51	66.56	6.80
2009	19500 F	0	0	9.96	65.45	7.80
2008	19921 C	E 10020	W 9901	9.96	65.45	9.90

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 12 - LEE

SITE: 0108 - SR 82, EAST OF COMMERCE LAKES DRIVE LC 222

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	21000 C	E 10500	W 10500	9.00	54.00	7.80
2019	19800 S	E 9800	W 10000	9.00	57.60	7.70
2018	19100 F	E 9400	W 9700	9.00	58.50	7.70
2017	18300 C	E 9000	W 9300	9.00	58.20	7.70
2016	17200 C	E 8600	W 8600	9.00	58.20	6.70
2015	15700 C	E 8000	W 7700	9.00	62.20	7.10
2014	15100 F	E 7700	W 7400	9.00	63.40	6.70
2013	14700 C	E 7500	W 7200	9.00	64.30	6.70
2012	12700 C	E 6300	W 6400	9.00	60.20	7.50
2011	13000 F	E 6500	W 6500	9.00	61.10	8.60
2010	12800 C	E 6400	W 6400	10.06	63.11	8.60
2009	12200 C	E 6100	W 6100	10.54	62.17	8.80
2008	11100 C	E 5600	W 5500	10.50	66.40	12.30
2007	13200 C	E 6800	W 6400	9.62	58.02	13.40
2006	13100 C	E 6600	W 6500	8.81	55.95	12.70
2005	10700 C	E 5400	W 5300	9.60	53.80	13.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 12 - LEE

SITE: 0107 - SR 82, EAST OF OWEN AVENUE SOUTH

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	24500 C	E 12000	W 12500	9.00	54.00	8.40
2019	22500 S	E 11000	W 11500	9.00	57.60	8.00
2018	21500 F	E 10500	W 11000	9.00	58.50	8.00
2017	20500 C	E 10000	W 10500	9.00	58.20	8.00
2016	18900 C	E 9500	W 9400	9.00	58.20	5.70
2015	17100 C	E 8600	W 8500	9.00	62.20	6.70
2014	17600 F	E 9000	W 8600	9.00	63.40	5.90
2013	17000 C	E 8700	W 8300	9.00	64.30	5.90
2012	14100 C	E 7100	W 7000	9.00	60.20	6.60
2011	15100 F	E 7600	W 7500	9.00	61.10	6.70
2010	14900 C	E 7500	W 7400	10.06	63.11	6.70
2009	14300 C	E 7300	W 7000	10.54	62.17	7.90
2008	12700 C	E 6500	W 6200	10.50	66.40	11.10
2007	15100 C	E 7900	W 7200	9.62	58.02	12.10
2006	15700 C	E 8000	W 7700	8.81	55.95	11.60
2005	12600 C	E 6200	W 6400	9.60	53.80	11.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 12 - LEE

SITE: 4104 - GUNNERY RD, NORTH OF LEE BLVD

YEAR	AADT	DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2020	17500 E	N	0	S	0	9.00	53.40	6.00
2019	17000 F	N		S		9.00	53.80	10.10
2018	16400 C	N	7900	S	8500	9.00	53.30	10.10
2017	15100 T	N	7300	S	7800	9.00	55.40	10.50
2016	14100 S	N	6800	S	7300	9.00	63.90	5.80
2015	13400 F	N	6500	S	6900	9.00	55.50	5.80
2014	12800 C	N	6200	S	6600	9.00	55.20	5.80
2013	17300 S	N	8600	S	8700	9.00	55.00	10.50
2012	17300 F	N	8600	S	8700	9.00	55.30	11.50
2011	17400 C	N	8600	S	8800	9.00	55.20	11.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 12 - LEE

SITE: 4182 - SUNSHINE BLVD., NORTH OF S.R. 82

YEAR	AADT	DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2020	7400 E		0		0	9.00	59.30	7.30
2019	7400 F	N		S		9.00	59.60	7.30
2018	7100 C	N	3700	S	3400	9.00	53.30	7.30
2017	6300 T	N	3300	S	3000	9.00	55.40	7.30
2016	5900 S	N	3100	S	2800	9.00	63.90	4.90
2015	5600 F	N	2900	S	2700	9.00	55.50	4.90
2014	5400 C	N	2800	S	2600	9.00	55.20	4.90
2013	4100 S		0		0	9.00	55.00	6.50
2012	4100 F		0		0	9.00	55.30	7.40
2011	4100 C	N	0	S	0	9.00	55.20	9.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

TRAFFIC DATA FROM LEE COUNTY

TRAFFIC COUNT REPORT

PCS 22 - Lee Boulevard west of Gunnery Rd

2020 AADT = 36,500 VPD

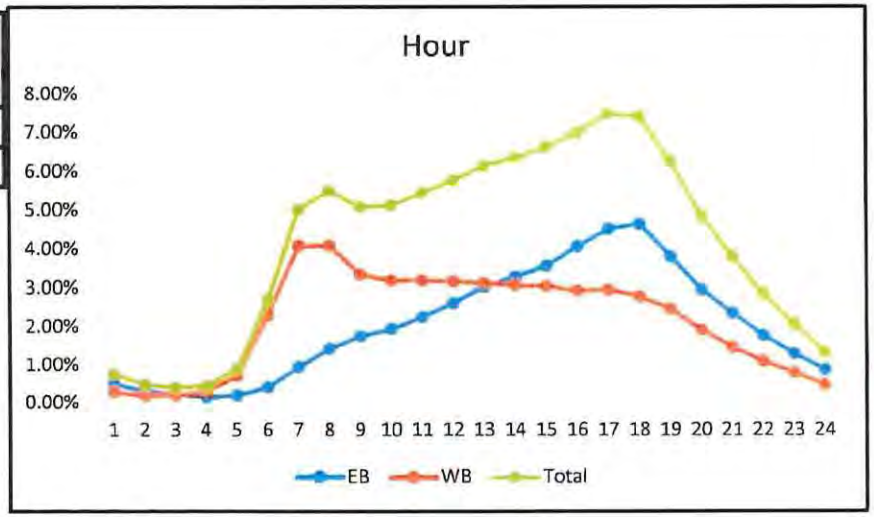
Hour	EB	WB	Total
0	0.48%	0.29%	0.77%
1	0.30%	0.19%	0.49%
2	0.22%	0.19%	0.41%
3	0.15%	0.30%	0.45%
4	0.19%	0.72%	0.90%
5	0.40%	2.31%	2.70%
6	0.94%	4.09%	5.02%
7	1.41%	4.10%	5.51%
8	1.74%	3.36%	5.09%
9	1.94%	3.20%	5.14%
10	2.25%	3.20%	5.45%
11	2.60%	3.18%	5.78%
12	3.03%	3.14%	6.16%
13	3.29%	3.08%	6.37%
14	3.57%	3.05%	6.63%
15	4.07%	2.93%	7.01%
16	4.53%	2.96%	7.49%
17	4.64%	2.78%	7.42%
18	3.81%	2.46%	6.27%
19	2.96%	1.91%	4.87%
20	2.35%	1.46%	3.81%
21	1.76%	1.09%	2.85%
22	1.28%	0.79%	2.07%
23	0.86%	0.47%	1.33%

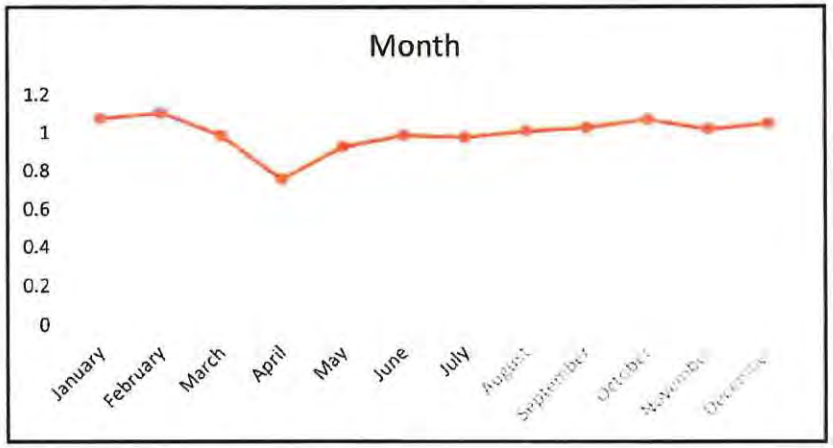
Month of Year	Fraction
January	1.08
February	1.11
March	0.99
April	0.76
May	0.93
June	0.99
July	0.98
August	1.01
September	1.03
October	1.07
November	1.02
December	1.05

Day of Week	Fraction
Sunday	0.75
Monday	1.02
Tuesday	1.06
Wednesday	1.05
Thursday	1.06
Friday	1.12
Saturday	0.93

Directional Factor		
AM	0.81	WB
PM	0.62	EB

Design Hour Volume		
#	Volume	Factor
5	3447	0.094
10	3425	0.094
20	3407	0.093
30	3373	0.092
50	3337	0.091
100	3274	0.090
150	3208	0.088
200	3126	0.086





PCS 53 - Alico Rd east of I-75

2020 AADT = 20,200 VPD

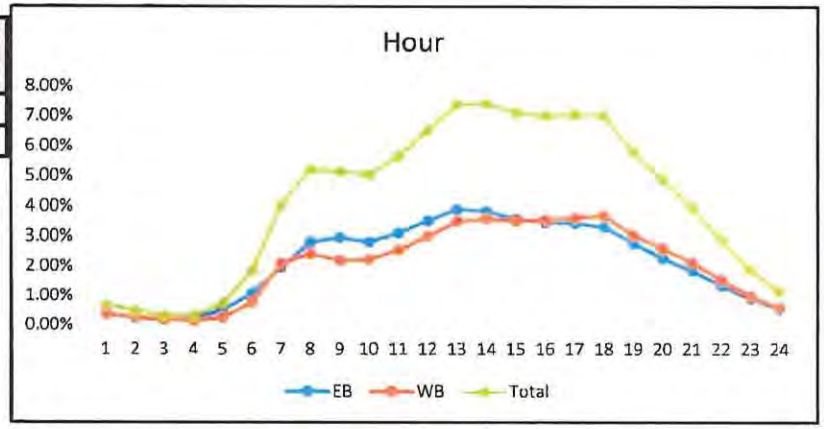
Hour	EB	WB	Total
0	0.33%	0.38%	0.71%
1	0.22%	0.26%	0.49%
2	0.15%	0.18%	0.33%
3	0.19%	0.13%	0.32%
4	0.50%	0.25%	0.74%
5	1.07%	0.77%	1.84%
6	1.96%	2.10%	4.06%
7	2.81%	2.42%	5.23%
8	2.96%	2.21%	5.16%
9	2.81%	2.24%	5.05%
10	3.12%	2.56%	5.67%
11	3.52%	3.01%	6.53%
12	3.91%	3.51%	7.41%
13	3.84%	3.59%	7.43%
14	3.61%	3.52%	7.13%
15	3.47%	3.56%	7.03%
16	3.45%	3.63%	7.08%
17	3.33%	3.70%	7.04%
18	2.79%	3.06%	5.85%
19	2.28%	2.61%	4.90%
20	1.85%	2.14%	4.00%
21	1.36%	1.56%	2.92%
22	0.91%	1.00%	1.91%
23	0.55%	0.61%	1.16%

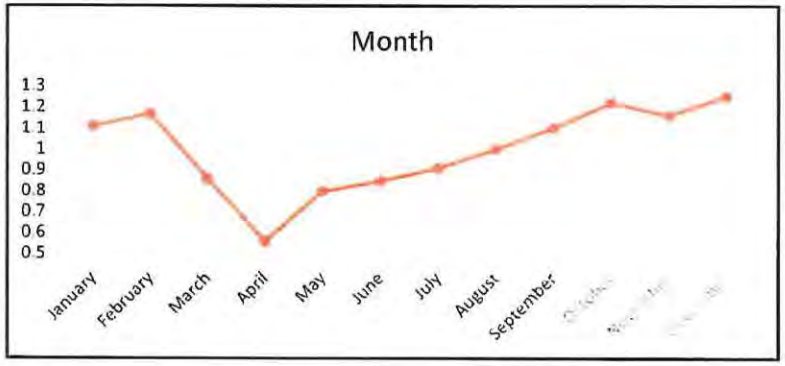
Month of Year	Fraction
January	1.11
February	1.17
March	0.86
April	0.56
May	0.8
June	0.85
July	0.91
August	1
September	1.1
October	1.22
November	1.16
December	1.25

Day of Week	Fraction
Sunday	0.7
Monday	1.03
Tuesday	1.09
Wednesday	1.08
Thursday	1.09
Friday	1.13
Saturday	0.87

Directional Factor		
AM	0.53	EB
PM	0.52	WB

Design Hour Volume		
#	Volume	Factor
5	2339	0.116
10	2288	0.113
20	2253	0.112
30	2203	0.109
50	2137	0.106
100	2041	0.101
150	1992	0.099
200	1955	0.097





PCS 48- Daniels Pkwy east of Chamberlin Pkwy

2020 AADT = 40,600 VPD

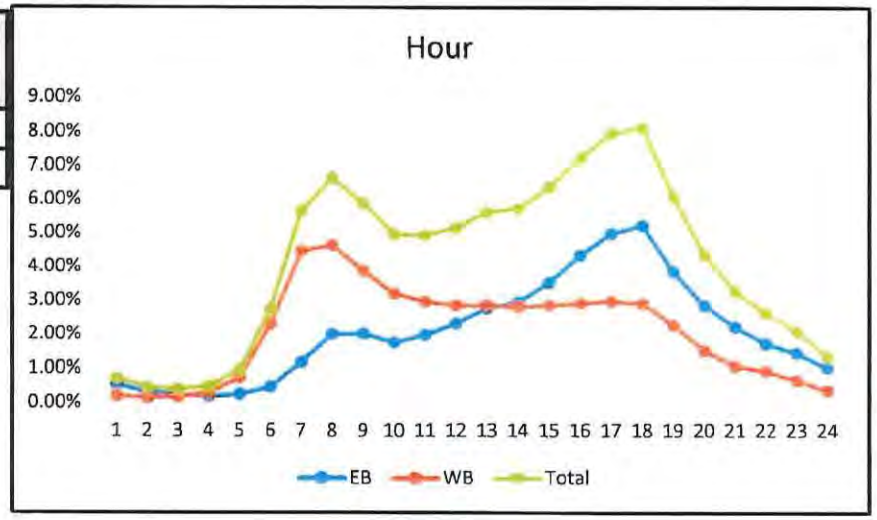
Hour	EB	WB	Total
0	0.51%	0.21%	0.72%
1	0.31%	0.16%	0.46%
2	0.23%	0.18%	0.40%
3	0.18%	0.31%	0.49%
4	0.25%	0.73%	0.97%
5	0.45%	2.30%	2.75%
6	1.18%	4.48%	5.67%
7	2.00%	4.65%	6.65%
8	2.01%	3.88%	5.89%
9	1.75%	3.21%	4.97%
10	1.98%	2.97%	4.95%
11	2.31%	2.86%	5.17%
12	2.77%	2.87%	5.64%
13	2.94%	2.81%	5.74%
14	3.53%	2.86%	6.38%
15	4.34%	2.92%	7.25%
16	4.99%	2.98%	7.96%
17	5.23%	2.91%	8.13%
18	3.86%	2.27%	6.12%
19	2.85%	1.52%	4.36%
20	2.21%	1.07%	3.27%
21	1.72%	0.92%	2.63%
22	1.44%	0.65%	2.08%
23	1.01%	0.35%	1.35%

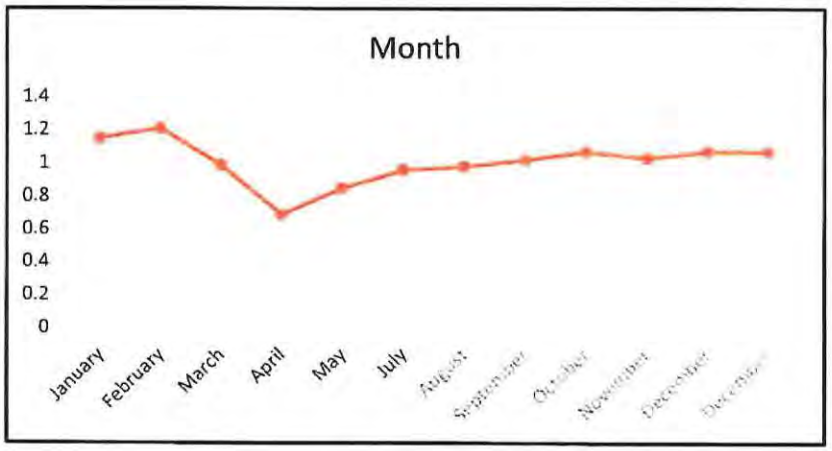
Month of Year	Fraction
January	1.15
February	1.21
March	0.99
April	0.69
May	0.85
July	0.96
August	0.98
September	1.02
October	1.07
November	1.03
December	1.07
December	1.07

Day of Week	Fraction
Sunday	0.65
Monday	1.04
Tuesday	1.11
Wednesday	1.1
Thursday	1.11
Friday	1.12
Saturday	0.85

Directional Factor		
AM	0.79	SB
PM	0.63	NB

Design Hour Volume		
#	Volume	Factor
5	48	0.001
10	4885	0.120
20	4730	0.117
30	4673	0.115
50	4516	0.111
100	4352	0.107
150	4198	0.103
200	4048	0.100





Updated 2/24/21

Daily Traffic Volume (AADT)

STREET	LOCATION	Station #	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
DANIELS PKWY	E OF SIX MILE PKWY	31	53600	52200	53200	51800	53200	59700		60700	62500	54100
DANIELS PKWY	W OF I - 75	264	58400	60900	48700	51500	60600		52400			
DANIELS PKWY	E OF I - 75	52	48000	49500	44800	47100	44200		52600	51800	54500	48400
DANIELS PKWY	E OF CHAMBERLIN PKWY	48	35700		35800	38100	37300	41900	45600	41400	41900	40600
DANIELS PKWY	W OF GATEWAY BLVD	89					35800	34500		35700	39000	
DANIELS PKWY	S OF IMMOKALEE RD	524	24400	29800	20600	28200	29000	33400	32100			37400
DANLEY RD	W OF METRO PKWY	518				4900		6300		6700		4500
DEL PRADO BLVD	S OF BEACH PKWY	86									25500	25500
DEL PRADO BLVD	S OF CORNWALLIS PKWY	2	37400	36600	37100	37800	38300			40700	40700	36000
DEL PRADO BLVD	S OF FOUR MILE COVE RD	40	48300	45200	45800	46500	45600	46500	46400	45200	45100	40400
DEL PRADO BLVD	E OF US 41	443			4700	5400	6000	6600	7200	7800	7800	8800

Updated 2/24/21

STREET	LOCATION	Station #	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
			Daily Traffic Volume (AADT)									
FOWLER ST	E OF US 41	511				20700		23300		22100		18800
FOWLER ST	S OF MORENO ST	28	19000	19400	21700	23000	24500	23700	24900	23900	27400	24800
FOWLER ST	S OF M.L.K. BLVD (SR 82)	119										14400
GASPARILLA BLVD	S OF CHARLOTTE CO. LINE	510				6500						
GATEWAY BLVD	S OF GRIFFIN	536									22460	
GLADIOLUS DR	E OF SAN CARLOS BLVD	284	10200		7600		13100		13100		11000	
GLADIOLUS DR	E OF PINE RIDGE	283										
GLADIOLUS DR	E OF A&W BULB RD	39	18600	19200	19800	20500	21900	22600	23000	22500	23200	19800
GLADIOLUS DR	W OF WINKLER RD	285										
GLADIOLUS DR	W OF US 41	46	37800	40800	37600	38900	40600	42000	42700	41500	43200	39000
GRIFFIN DR	S OF SR 82	534									8000	
GUNNERY RD	N OF IMMOKALEE RD	290	17300	20200	17600	18300	19100	21500	20400			26300
GUNNERY RD	N OF LEE BLVD (CR 884)	289	14700	15800	13600	13600	15100	14800	15500	15800	15700	16700
GUNNERY RD	S OF BUCKINGHAM RD						7800					
HANCOCK BRIDGE PKWY	W OF BEAU DR	17	20000	17900	18400	20600	21500	22000	22200	23700	22900	19700
HANCOCK BRIDGE PKWY	E OF ORANGE GROVE BLVD	116										15900
HANCOCK BRIDGE PKWY	W OF ORANGE GROVE BLVD	292	22500		20900	20900	20900	23800	21300	23800	23700	21400
HANCOCK BRIDGE PKWY	W OF NE 24 AVE	115										

Updated 2/24/21

STREET	LOCATION	Station #	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
			Daily Traffic Volume (AADT)									
IMPERIAL PKWY	N OF STRIKE LN	63	8300	9300	9900	11000	13200	13000	14200	14800	15000	11700
IMPERIAL PKWY	N OF BONITA BEACH RD	529										
IMPERIAL PKWY	S OF BONITA BEACH RD	492							22200		20200	
IONA RD	W OF McGREGOR BLVD	303	7400		6800		7100		7200		7000	
JOEL BLVD (CR 884)	E OF BELL BLVD	306	12500	14100	12700	13400	14100	14500	14100	13600	14800	13900
JOEL BLVD (CR 884)	N OF E 10TH ST	69						8900	9000	9400	9500	9100
JOEL BLVD (CR 884)	S OF PALM BEACH BLVD	305	7300	8100	7400	7600	8200	8800	9200	9200	11000	10900
JOHN MORRIS RD	S OF SUMMERLIN RD	497										
JOHN MORRIS RD	N OF SUMMERLIN RD	498	3600		3600		4500		4700		4800	
KELLY RD	W OF SAN CARLOS BLVD	308	3400		4300		5300		4500		4900	
DR. M. L. KING BLVD (SR 82)	E OF CRANFORD AVE	84					28500	26800	27600	28300	29100	27000
DR. M. L. KING BLVD (SR 82)	W OF I - 75	20			32100	35100	38600	41100	42200	43600	44400	40700
DR. M. L. KING BLVD (SR 82)	E OF I-75	68			29200	32200	35100	37800	39400	40300	41200	38600
LAUREL DR	E OF BUSINESS 41	309	5900		5500		5900		6500			
LEE BLVD(CR 884)	E OF IMMOKALEE RD	310			38100	42800		49500		44800		
LEE BLVD(CR 884)	W OF GUNNERY RD	22	28600	33800	31000	33500	35300	37400	37900	41300	41000	36500
LEE BLVD(CR 884)	E OF SUNNILAND BLVD	302										
LEE BLVD(CR 884)	E OF SUNSHINE BLVD	312	32300		29500		33100		32600		43300	
LEE BLVD(CR 884)	N OF LEELAND HEIGHTS	311	10500	11800	10400	10900	12100	12600	12600	12800		19300
LEE RD	S OF ALICO RD	313					10400					

Updated 2/24/21

Daily Traffic Volume (AADT)

STREET	LOCATION	Station #	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
A & W BULB RD	N OF GLADIOLUS DR	215	7700		6800		6600		7100		7700	
ALABAMA RD	N OF IMMOKALEE RD	201					6800		7100		6000	
ALABAMA RD	S OF HOMESTEAD RD	200	8800	11100	9000	9300	10300	11000		10200	10700	7900
ALICO RD	E OF US 41	204	21800	21700	23400	19900	21900	24100	22100	22800	24200	25600
ALICO RD	E OF LEE RD	207										
ALICO RD	W OF I - 75	10	25800	27200	29100	38400	41100	43600	44800	47900	49800	41900
ALICO RD	E OF I - 75	53	26200	26000	26900	28400	25600	24300	24600	26200	24200	20200
ALICO RD	E OF BEN HILL GRIFFIN PKWAY	205				7500		8500		8900		
BASS RD	N OF SUMMERLIN RD	216	8200		8400		8200		11500		11400	

TRAFFIC DATA FROM LEE COUNTY TRAFFIC COUNT DATABASE SYSTEM

LEE COUNTY

MS2

Traffic Count Database System (TCDS)

Volume Count Report

LOCATION INFO	
Location ID	534_NB
Type	SPOT
Fnct'l Class	-
Located On	Griffin Dr
Loc On Alias	
SOUTH OF	SR â€" 82
Direction	NB
County	Lee
Community	-
MPO ID	
HPMS ID	
Agency	Lee County

COUNT DATA INFO	
Count Status	Accepted
Start Date	Wed 2/3/2021
End Date	Thu 2/4/2021
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	lee
Station	000000000534
Study	
Speed Limit	
Description	
Sensor Type	Axle/Tube
Source	
Latitude,Longitude	

INTERVAL:15-MIN

Time	15-min Interval 1st	2nd	3rd	4th	Hourly Count
0:00-1:00	2	2	1	1	6
1:00-2:00	1	2	0	1	4
2:00-3:00	0	0	1	2	3
3:00-4:00	0	1	1	0	2
4:00-5:00	6	5	7	6	24
5:00-6:00	17	11	18	32	78
6:00-7:00	38	62	62	98	260
7:00-8:00	91	125	129	86	431
8:00-9:00	69	113	81	59	322
9:00-10:00	35	15	46	36	132
10:00-11:00	29	32	25	30	116
11:00-12:00	34	37	27	31	129
12:00-13:00	41	47	29	44	161
13:00-14:00	27	41	34	43	145
14:00-15:00	40	59	76	80	255
15:00-16:00	61	57	56	38	212
16:00-17:00	46	46	51	52	195
17:00-18:00	39	58	70	97	264
18:00-19:00	67	53	58	46	224
19:00-20:00	43	43	28	22	136
20:00-21:00	22	23	23	25	93
21:00-22:00	19	20	10	16	65
22:00-23:00	9	12	9	5	35
23:00-24:00	6	4	2	2	14
Total					3,306
AM Peak	06:45-07:45 443				
PM Peak	17:15-18:15 292				

LEE COUNTY

MS2

Traffic Count Database System (TCDS)

Volume Count Report

LOCATION INFO	
Location ID	534_SB
Type	SPOT
Fnct'l Class	-
Located On	Griffin Dr
Loc On Alias	
SOUTH OF	SR â€" 82
Direction	SB
County	Lee
Community	-
MPO ID	
HPMS ID	
Agency	Lee County

COUNT DATA INFO	
Count Status	Accepted
Start Date	Wed 2/3/2021
End Date	Thu 2/4/2021
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	lee
Station	000000000534
Study	
Speed Limit	
Description	
Sensor Type	Axle/Tube
Source	
Latitude,Longitude	

INTERVAL:15-MIN					
	15-min Interval				Hourly Count
Time	1st	2nd	3rd	4th	
0:00-1:00	2	0	4	3	9
1:00-2:00	0	1	1	0	2
2:00-3:00	1	1	1	2	5
3:00-4:00	0	0	2	0	2
4:00-5:00	3	0	1	4	8
5:00-6:00	2	3	18	13	36
6:00-7:00	23	31	38	36	128
7:00-8:00	35	42	41	50	168
8:00-9:00	42	33	69	61	205
9:00-10:00	36	28	31	22	117
10:00-11:00	13	28	29	26	96
11:00-12:00	28	28	31	41	128
12:00-13:00	28	27	30	34	119
13:00-14:00	27	38	29	27	121
14:00-15:00	33	31	41	42	147
15:00-16:00	44	81	71	39	235
16:00-17:00	33	42	41	32	148
17:00-18:00	27	42	34	31	134
18:00-19:00	40	33	23	28	124
19:00-20:00	40	31	38	18	127
20:00-21:00	30	35	16	23	104
21:00-22:00	23	11	7	3	44
22:00-23:00	10	7	3	7	27
23:00-24:00	5	7	4	2	18
Total					2,252
AM Peak	08:00-09:00 205				
PM Peak	14:45-15:45 238				

LEE COUNTY PUBLIC FACILITIES LEVEL OF SERVICE AND CONCURRENCY REPORT

5/25/2020

LEE COUNTY Road Link Volumes (County- and State-Maintained Roadways)

LINK NO.	NAME	ROADWAY LINK FROM	TO	ROAD TYPE	PERFORMANCE STANDARD LOS	PERFORMANCE STANDARD CAPACITY	2019 100TH HIGHEST HOUR LOS	2019 100TH HIGHEST HOUR VOLUME	FORECAST FUTURE LOS	FORECAST FUTURE VOLUME	NOTES
07400	CYPRESS LAKE DR	McGREGOR BLVD	SOUTH POINT BLVD	4LD	E	1,940	D	1,170	D	1,230	
07500	CYPRESS LAKE DR	SOUTH POINT BLVD	WINKLER RD	4LD	E	1,940	D	1,472	D	1,547	
07600	CYPRESS LAKE DR	WINKLER RD	SUMMERLIN RD	4LD	E	1,940	D	1,472	D	1,547	
07700	CYPRESS LAKE DR	SUMMERLIN RD	US 41	6LD	E	2,940	D	2,198	D	2,310	
07800	DANIELS PKWY	US 41	METRO PKWY	6LD	E	2,680	D	2,341	D	2,461	
07900	DANIELS PKWY	METRO PKWY	SIX MILE PKWY	6LD	E	2,680	D	2,109	E	2,520	Constrained
08000	DANIELS PKWY	SIX MILE PKWY	PALOMINO LN	6LD	E	3,040		3,094		3,121	Constrained
08100	DANIELS PKWY	PALOMINO LN	I-75	6LD	E	3,040		3,094		3,142	Constrained
08200	DANIELS PKWY	I-75	TREELINE AVE	6LD	E	3,260	B	2,698	B	2,835	
08300	DANIELS PKWY	TREELINE AVE	CHAMBERLIN PKWY	6LD	E	3,260	B	2,698	B	2,835	
08400	DANIELS PKWY	CHAMBERLIN PKWY	GATEWAY BLVD	6LD	E	3,260	B	2,412	B	2,535	
08500	DANIELS PKWY	GATEWAY BLVD	SR 82	4LD	E	2,160	B	1,726	B	1,870	SKY Walk *
08600	DANLEY DR	US 41	METRO PKWY	2LN	E	860	C	378	C	409	
08700	DAVIS RD	McGREGOR BLVD	IONA RD	2LN	E	860	C	15	C	29	old count projection(2010)
08800	DEL PRADO BLVD	CAPE CORAL PKWY	SE 46TH ST	6LD	E	2,660	C	1,404	C	1,586	old count projection(2009)
08900	DEL PRADO BLVD	SE 46TH ST	CORONADO PKWY	6LD	E	2,660	C	1,404	C	1,586	old count projection(2009)
09000	DEL PRADO BLVD	CORONADO PKWY	CORNWALLIS PKWY	6LD	E	2,660	D	2,000	D	2,102	
09100	DEL PRADO BLVD	CORNWALLIS PKWY	CORAL POINT DR	6LD	E	2,660	D	2,520	D	2,649	*
09200	DEL PRADO BLVD	CORAL POINT DR	HANCOCK B. PKWY	6LD	E	2,800	C	2,111	D	2,218	
09300	DEL PRADO BLVD	HANCOCK B. PKWY	SR 78	6LD	E	2,800	C	1,613	C	1,695	*
09400	DEL PRADO BLVD	US 41	SLATER RD	2LN	E	860	C	386		892	Crane Landing
09700	EAST 21ST ST	JOEL BLVD	GRANT AVE	2LN	E	860	C	30	C	31	*
09800	ESTERO BLVD	BIG CARLOS PASS BRIDGE	PESCADORA AVE	2LN	E	726	A	339	A	356	Constrained*
09900	ESTERO BLVD	PESCADORA AVE	VOORHIS ST	2LN	E	726	C	629	D	662	Constrained*
10000	ESTERO BLVD	VOORHIS ST	TROPICAL SHORES WAY	2LN	E	726	C	629	D	662	Constrained*
10100	ESTERO BLVD	TROPICAL SHORES WAY	CENTER ST	2LN	E	671		716		809	Constrained, old count(2010)
14400	ESTERO PKWY	US 41	THREE OAKS PKWY	4LD	E	2,000	B	790	B	1,083	East & West Cypress View*
14450	ESTERO PKWY	THREE OAKS PKWY	BEN HILL GRIFFIN PKWY	4LD	E	2,000	B	876	B	921	*
10200	EVERGREEN RD	US 41	BUS 41	2LN	E	860	C	100	C	116	old count projection
10300	FIDDLESTICKS BLVD	GUARDHOUSE	DANIELS PKWY	2LN	E	860	C	346	C	379	
10400	FOWLER ST	US 41	N AIRPORT RD	6LD	E	2,300	D	1,258	D	1,322	
10500	FOWLER ST	N AIRPORT RD	COLONIAL BLVD	6LD	E	2,300	D	1,504	D	1,581	
10800	GASPARILLA BLVD	FIFTH ST	COUNTY LINE	2LN	E	860	C	241	C	269	Constrained*
	GATEWAY BLVD	DANIELS PKWY	GATEWAY LAKES BLVD	4LD	E	1,790	C	1,208	C	1,269	
	GATEWAY BLVD	GATEWAY LAKES BLVD	SR82	2LN	E	860	C	505	C	531	
10900	GLADIOLUS DR	McGREGOR BLVD	PINE RIDGE RD	4LD	E	1,840	C	470	C	494	
11000	GLADIOLUS DR	PINE RIDGE RD	BASS RD	4LD	E	1,840	C	1,230	C	1,365	
11100	GLADIOLUS DR	BASS RD	WINKLER RD	6LD	E	2,780	C	1,230	C	1,292	
11200	GLADIOLUS DR	WINKLER RD	SUMMERLIN RD	6LD	E	2,780	C	1,230	C	1,292	
11300	GLADIOLUS DR	SUMMERLIN RD	US 41	6LD	E	2,780	B	1,977	C	2,078	
11400	GREENBRIAR BLVD	RICHMOND AVE	JOEL BLVD	2LN	E	860	C	75	C	80	*
11500	GUNNERY RD	SR 82	LEE BLVD	4LD	E	1,920	B	965	B	1,014	*
11600	GUNNERY RD	LEE BLVD	BUCKINGHAM RD	2LN	E	1,020	C	773	C	908	
11700	HANCOCK BRIDGE PKWY	DEL PRADO BLVD	NE 24TH AVE	4LD	E	1,880	B	1,017	B	1,069	*
11800	HANCOCK BRIDGE PKWY	NE 24TH AVE	ORANGE GROVE BLVD	4LD	E	1,880	B	1,478	B	1,554	
11900	HANCOCK BRIDGE PKWY	ORANGE GROVE BLVD	MOODY RD	4LD	E	1,880	B	1,529	B	1,607	
12000	HANCOCK BRIDGE PKWY	MOODY RD	US 41	4LD	E	1,880	B	1,529	B	1,607	
12100	HART RD	SR 78	TUCKER LANE	2LN	E	860	C	357	C	375	*
12200	HICKORY BLVD	BONITA BEACH RD	McLAUGHLIN BLVD	2LN	E	890	E	533	E	560	Constrained*
12300	HICKORY BLVD	McLAUGHLIN BLVD	MELODY LANE	2LN	E	890	E	533	E	560	Constrained*
12400	HICKORY BLVD	MELODY LANE	ESTERO BLVD	2LN	E	890	E	533	E	560	Constrained*
12480	HOMESTEAD RD	SR 82	MILWAUKEE BLVD	2LN	E	1,010	D	649	E	820	*
12490	HOMESTEAD RD	MILWAUKEE BLVD	SUNRISE BLVD	2LN	E	1,010	D	649	E	682	*
12500	HOMESTEAD RD	SUNRISE BLVD	LEELAND HEIGHTS	4LN	E	2,960	C	649	C	682	4 lane under construction
12600	HOMESTEAD RD	LEELAND HEIGHTS	LEE BLVD	4LN	E	2,960	D	1,257	D	1,353	
31800	I-75	BONITA BEACH RD	CORKSCREW RD	6LF	D	5,620	E	5,811	E	5,967	
31900	I-75	CORKSCREW RD	ALICO RD	6LF	D	5,620	E	5,758	E	5,981	
32000	I-75	ALICO RD	DANIELS PKWY	6LF	D	6,620	D	5,730	D	6,139	
32100	I-75	DANIELS PKWY	COLONIAL BLVD	6LF	D	5,620	D	5,309	D	5,499	
32300	I-75	M.L.K.(SR 82)	LUCKETT RD	6LF	D	5,620	D	5,072	D	5,204	
32400	I-75	LUCKETT RD	SR 80	6LF	D	6,620	C	4,940	C	4,933	
32500	I-75	SR 80	SR 78	6LF	D	6,620	B	3,804	B	3,791	
32600	I-75	SR 78	COUNTY LINE	6LF	C	4,670	B	3,082	B	2,726	
12700	IDLEWILD ST	METRO PKWY	RANCHETTE RD	2LN	E	860	C	201	C	212	*
13000	IMMOKALEE RD (SR 82)	E OF COLONIAL BLVD	GATEWAY BLVD	6LD	D	3,171	C	1,737	C	1,971	
13100	IMMOKALEE RD (SR 82)	GATEWAY BLVD	GUNNERY RD	6LD	D	3,171	C	1,166	C	1,245	
13200	IMMOKALEE RD (SR 82)	GUNNERY RD	ALABAMA RD	6LD	D	4,860	B	1,635	B	1,747	
13300	IMMOKALEE RD (SR 82)	ALABAMA RD	BELL BLVD	4LD	D	3,240	B	612	B	658	
13400	IMMOKALEE RD (SR 82)	BELL BLVD	COUNTY LINE	4LD	D	3,240	B	617	B	648	

5/25/2020

LEE COUNTY Road Link Volumes (County- and State-Maintained Roadways)

LINK NO.	NAME	ROADWAY LINK FROM	TO	ROAD TYPE	PERFORMANCE STANDARD LOS	CAPACITY	2019 100TH HIGHEST HOUR LOS	VOLUME	FORECAST FUTURE LOS	VOLUME	NOTES
21400	PINE ISLAND RD (SR 78)	CITY LIMITS E OF BARRETT RD	US 41	4LD	D	2,100	C	1,696	C	1,843	
21500	PINE ISLAND RD (SR 78)	US 41	BUS 41	4LD	D	2,100	C	1,690	C	1,750	
21600	PINE RIDGE RD	SAN CARLOS BLVD	SUMMERLIN RD	2LN	E	860	C	499	C	545	*
21700	PINE RIDGE RD	SUMMERLIN RD	GLADIOLUS DR	2LN	E	860	C	286	C	545	Heritage Isle*
21800	PINE RIDGE RD	GLADIOLUS DR	McGREGOR BLVD	2LN	E	860	C	286	C	301	
21900	PLANTATION RD	SIX MILE PKWY	DANIELS PKWY	2LN	E	860	C	288	C	417	Intermed Park
22000	PLANTATION RD	DANIELS PKWY	IDLEWILD ST	2LN	E	860	D	672	D	706	FDOT Metro Pkwy 6-laning
22050	PLANTATION RD	IDLEWILD ST	COLONIAL BLVD	4LN	E	1,790	C	841	C	884	
22100	PONDELLA RD	SR 78	ORANGE GROVE BLVD	4LD	E	1,890	B	736	B	774	*
22200	PONDELLA RD	ORANGE GROVE BLVD	US 41	4LD	E	1,890	B	1,164	B	1,239	
22300	PONDELLA RD	US 41	BUS 41	4LD	E	1,890	B	953	B	1,002	
22400	PRITCHETT PKWY	SR 78	RICH RD	2LN	E	860	C	73	C	541	old count, Stoneybrook North(2009)
22500	RANCHETTE RD	PENZANCE BLVD	IDLEWILD ST	2LN	E	860	C	93	C	98	
22600	RICH RD	SLATER RD	PRITCHETT PKWY	2LN	E	860	C	55	C	62	old count projection(2009)
22700	RICHMOND AVE	LEELAND HEIGHTS	E 12TH ST	2LN	E	860	C	79	C	91	*
22800	RICHMOND AVE	E 12TH ST	GREENBRIAR BLVD	2LN	E	860	C	79	C	83	*
23000	SAN CARLOS BLVD (SR 865)	MANTANZAS PASS B.	MAIN ST	2LD	D	970		1,055		1,176	Constrained
23100	SAN CARLOS BLVD (SR 865)	MAIN ST	SUMMERLIN RD	4LD	D	2,100	C	1,055	C	1,176	PD&E Study
23180	SAN CARLOS BLVD (SR 865)	SUMMERLIN RD	KELLY RD	2LD	D	970	C	744	C	847	
23200	SAN CARLOS BLVD (SR 865)	KELLY RD	GLADIOLUS DR	4LD	D	2,100	C	744	C	847	
23230	SAN CARLOS BLVD	US 41	THREE OAKS PKWY	2LN	E	860	C	427	C	449	*
23260	SANIBEL BLVD	US 41	LEE RD	2LN	E	860	C	484	C	508	
23300	SANIBEL CAUSEWAY	SANIBEL SHORELINE	TOLL PLAZA	2LN	E	1,140	E	944	E	992	
23400	SHELL POINT BLVD	McGREGOR BLVD	PALM ACRES	2LN	E	860	C	290	C	304	*
23500	SIX MILE PKWY (SR 739)	US 41	METRO PKWY	4LD	D	2,100	C	1,778	C	1,950	
23600	SIX MILE CYPRESS	METRO PKWY	DANIELS PKWY	4LD	E	2,000	B	1,398	B	1,469	
23700	SIX MILE CYPRESS	DANIELS PKWY	WINKLER EXT.	4LD	E	1,900	B	1,149	B	1,352	
23800	SIX MILE CYPRESS	WINKLER EXT.	CHALLENGER BLVD	4LD	E	1,900	B	1,050	B	1,104	
23900	SIX MILE CYPRESS	CHALLENGER BLVD	COLONIAL BLVD	6LD	E	2,860	A	1,050	A	1,104	
24000	SLATER RD	SR 78	NALLE GRADE RD	2LN	E	1,010	C	402	C	423	*
24100	SOUTH POINTE BLVD	CYPRESS LAKE DR	COLLEGE PKWY	2LD	E	910	D	644	D	67[illegible]	*
24200	SR 31 (ARCADIA RD)	SR 80	SR 78	2LN	D	970	C	543	C	610	PD&E/SEIR Study
24300	SR 31 (ARCADIA RD)	SR 78	COUNTY LINE	2LN	C	820	C	564	C	460	PD&E/SEIR Study
24400	STALEY RD	TICE	ORANGE RIVER BLVD	2LN	E	860	C	189	C	215	*
24500	STRINGFELLOW RD	1ST AVE	BERKSHIRE RD	2LN	E	1,060	B	315	D	672	Constrained
24600	STRINGFELLOW RD	BERKSHIRE RD	PINE ISLAND RD	2LN	E	1,060	B	315	C	448	Constrained
24700	STRINGFELLOW RD	PINE ISLAND RD	PINELAND RD	2LN	E	1,060	C	551	D	652	Constrained
24800	STRINGFELLOW RD	PINELAND RD	MAIN ST	2LN	E	1,060	C	551	D	648	
24900	SUMMERLIN RD	McGREGOR BLVD	KELLY COVE RD	4LD	E	1,980	A	1,243	A	1,306	
25000	SUMMERLIN RD	KELLY COVE RD	SAN CARLOS BLVD	4LD	E	1,980	A	1,243	A	1,306	
25100	SUMMERLIN RD	SAN CARLOS BLVD	PINE RIDGE RD	6LD	E	3,000	A	1,919	A	2,149	
25200	SUMMERLIN RD	PINE RIDGE RD	BASS RD	6LD	E	3,000	A	1,919	A	2,016	
25300	SUMMERLIN RD	BASS RD	GLADIOLUS DR	6LD	E	3,000	A	1,919	A	2,016	
25400	SUMMERLIN RD	GLADIOLUS DR	CYPRESS LAKE DR	4LD	E	1,900	C	1,454	C	1,552	
25500	SUMMERLIN RD	CYPRESS LAKE DR	COLLEGE PKWY	6LD	E	2,880	B	1,783	B	1,874	
25600	SUMMERLIN RD	COLLEGE PKWY	PARK MEADOW DR	6LD	E	2,880	B	1,916	B	2,014	
25700	SUMMERLIN RD	PARK MEADOW DR	BOY SCOUT	6LD	E	2,880	B	1,916	B	2,014	
25800	SUMMERLIN RD	BOY SCOUT	MATHEWS DR	4LD	E	1,820	D	1,260	D	1,324	
25900	SUMMERLIN RD	MATHEWS DR	COLONIAL BLVD	4LD	E	1,820	D	1,260	D	1,324	
26000	SUNRISE BLVD	BELL BLVD	COLUMBUS BLVD	2LN	E	860	C	42	C	53	
26100	SUNSHINE BLVD	SR 82	23RD ST SW	2LN	E	1,010	C	369	C	388	*
26150	SUNSHINE BLVD	23RD ST SW	LEE BLVD	2LN	E	1,010	C	369	C	388	*
26200	SUNSHINE BLVD	LEE BLVD	W 12TH ST	2LN	E	1,010	D	596	D	626	*
26300	SUNSHINE BLVD	W 12TH ST	W 75TH ST	2LN	E	860	D	623	D	655	
26400	SW 23RD ST	GUNNERY RD	SUNSHINE BLVD	2LN	E	860	D	650	D	683	
26500	THREE OAKS PKWY	COCONUT RD	ESTERO PKWY	4LD	E	1,940	B	1,230	B	1,413	
26600	THREE OAKS PKWY	ESTERO PKWY	SAN CARLOS BLVD	4LD	E	1,940	A	623	B	724	
26700	THREE OAKS PKWY	SAN CARLOS BLVD	ALICO RD	4LD	E	1,940	A	633	B	976	
26800	TICE ST	SR 80	ORTIZ AVE	2LN	E	860	C	163	C	171	old count(2010)
26900	TICE ST	ORTIZ AVE	STALEY RD	2LN	E	860	C	203	D	716	Elementry U
27000	TREELINE AVE	TERMIMAL ACCESS RD	DANIELS PKWY	4LD	E	1,980	A	1,272	A	1,510	Harley Davidson
27030	TREELINE AVE	DANIELS PKWY	AMBERWOOD RD	4LD	E	1,980	A	880	A	924	
27070	TREELINE AVE	AMBERWOOD RD	COLONIAL BLVD	4LD	E	1,980	A	880	A	924	
29800	US 41 (S TAMIAMI TR)	OLD 41	CORKSCREW RD	6LD	D	3,171	C	2,662	C	2,712	
29900	US 41 (S TAMIAMI TR)	CORKSCREW RD	SANIBEL BLVD	6LD	D	3,171	C	2,422	C	2,485	
30000	US 41 (S TAMIAMI TR)	SANIBEL BLVD	ALICO RD	6LD	D	3,171	C	2,623	C	2,686	
30100	US 41 (S TAMIAMI TR)	ALICO RD	ISLAND PARK RD	6LD	D	3,171	C	2,623	C	2,730	
30200	US 41 (S TAMIAMI TR)	ISLAND PARK RD	BRIARCLIFF RD	6LD	D	3,171	C	2,905	D	3,092	

5/25/2020

LEE COUNTY Road Link Volumes (County- and State-Maintained Roadways)

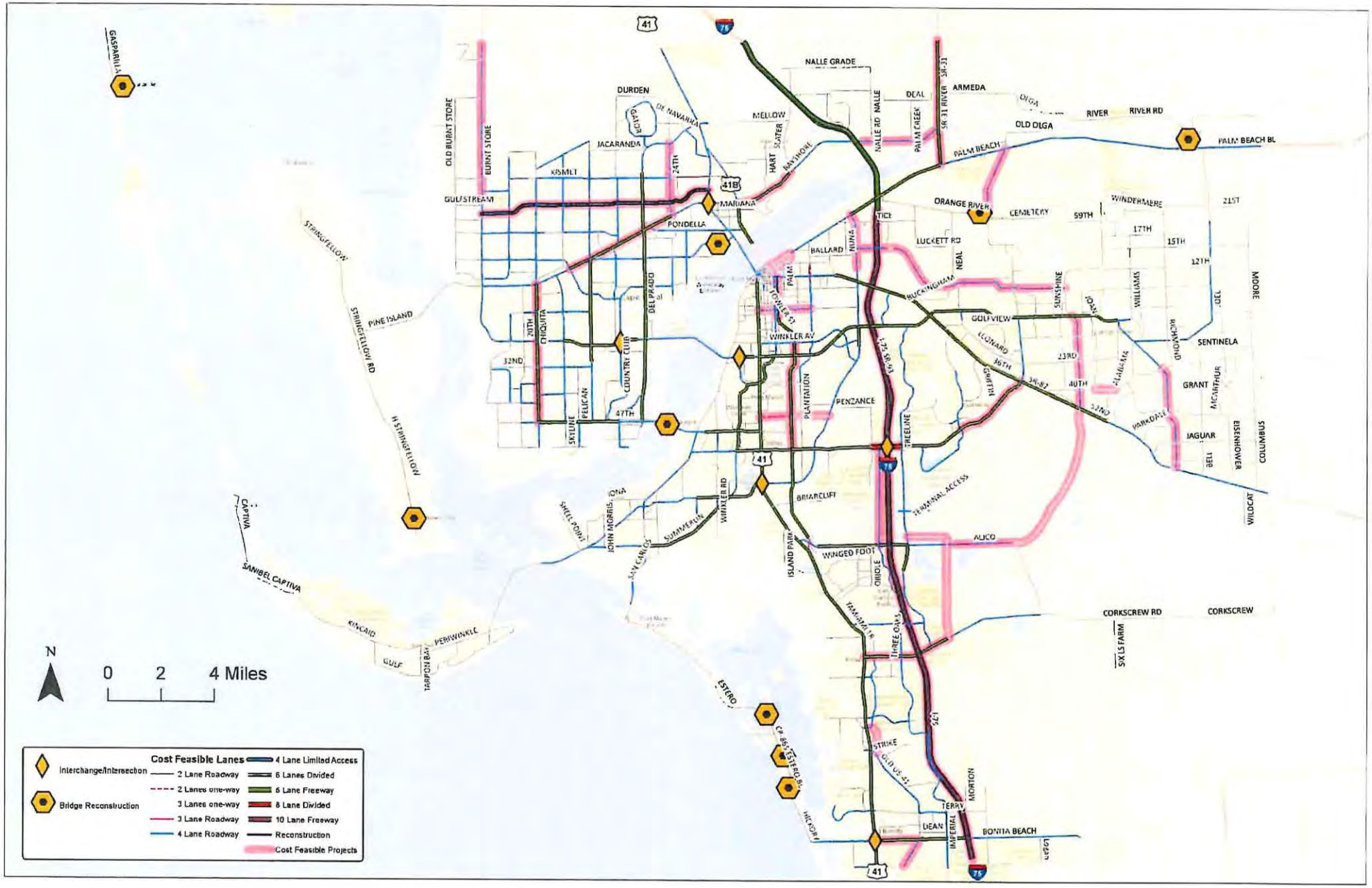
LINK NO.	ROADWAY LINK NAME	FROM	TO	ROAD TYPE	PERFORMANCE STANDARD LOS	PERFORMANCE STANDARD CAPACITY	2019 100TH HIGHEST HOUR LOS	2019 100TH HIGHEST HOUR VOLUME	FORECAST FUTURE LOS	FORECAST FUTURE VOLUME	NOTES
13500	IMPERIAL PKWY	COUNTY LINE	BONITA BEACH RD	4LD	E	1,920	B	1,017	B	1,069	*
13550	IMPERIAL PKWY	E TERRY ST	COCONUT RD	4LD	E	1,920	B	1,015	B	1,067	
13600	IONA RD	DAVIS RD	McGREGOR BLVD	2LN	E	860	C	381	C	400	
13700	ISLAND PARK RD	PARK RD	US 41	2LN	E	860	C	79	C	251	
13800	JOEL BLVD	BELL BLVD	18TH ST	4LN	E	2,120	B	660	B	876	Joel Blvd CPD
13900	JOEL BLVD	18TH ST	SR 80	2LN	E	1,010	D	495	D	520	
14000	JOHN MORRIS RD	BUNCHE BEACH	SUMMERLIN RD	2LN	E	860	C	62	C	72	old count projection
14100	JOHN MORRIS RD	SUMMERLIN RD	IONA RD	2LN	E	860	C	256	C	267	
14200	KELLY RD	McGREGOR BLVD	SAN CARLOS BLVD	2LN	E	860	C	277	C	291	
14300	KELLY RD	SAN CARLOS BLVD	PINE RIDGE RD	2LN	E	860	C	106	C	120	old count projection(2010)
14500	LAUREL DR	BUS 41	BREEZE DR	2LN	E	860	C	324	C	340	*
14600	LEE BLVD	SR 82	ALVIN AVE	6LD	E	2,840	B	2,202	B	2,318	
14700	LEE BLVD	ALVIN AVE	GUNNERY RD	6LD	E	2,840	B	2,161	B	2,340	
14800	LEE BLVD	GUNNERY RD	HOMESTEAD RD	6LD	E	2,840	B	2,131	B	2,240	
14900	LEE BLVD	HOMESTEAD RD	WILLIAMS AVE	4LD	E	1,980	B	630	B	662	
14930	LEE BLVD	WILLIAMS AVE	LEELAND HEIGHTS	2LN	E	1,020	B	630	B	665	
15000	LEE RD	SAN CARLOS BLVD	ALICO RD	2LN	E	860	C	544	D	614	old count projection(2015)
15100	LEELAND HEIGHTS	HOMESTEAD RD	JOEL BLVD	4LN	E	1,800	B	832	B	867	*
15200	LEONARD BLVD	GUNNERY RD	WESTGATE BLVD	2LN	E	860	D	650	D	706	
15300	LITTLETON RD	CORBETT RD	US 41	2LN	E	860	C	470	C	494	
15400	LITTLETON RD	US 41	BUS 41	2LN	E	860	C	417	C	439	*
15500	LUCKETT RD	ORTIZ AVE	I-75	2LN	E	880	B	326	B	401	4 Ln design & ROW
15600	LUCKETT RD	I-75	COUNTRY LAKES DR	2LN	E	860	C	273	C	287	
15700	MAPLE DR*	SUMMERLIN RD	2ND AVE	2LN	E	860	C	77	C	89	old count projection
15800	McGREGOR BLVD	SANIBEL T PLAZA	HARBOR DR	4LD	E	1,960	B	1,153	B	1,212	
15900	McGREGOR BLVD	HARBOR DR	SUMMERLIN RD	4LD	E	1,960	B	1,114	B	1,170	
16000	McGREGOR BLVD	SUMMERLIN RD	KELLY RD	4LD	E	1,960	A	964	B	1,022	
16100	McGREGOR BLVD	KELLY RD	GLADIOLUS DR	4LD	E	1,960	A	964	A	1,013	
16200	McGREGOR BLVD (SR 867)	OLD McGREGOR BLVD/GI	IONA LOOP RD	4LD	D	2,100	C	1,594	C	1,731	
16300	McGREGOR BLVD (SR 867)	IONA LOOP RD	PINE RIDGE RD	4LD	D	2,100	C	1,594	C	1,731	
16400	McGREGOR BLVD (SR 867)	PINE RIDGE RD	CYPRESS LAKE DR	4LD	D	2,100	C	1,832	D	2,082	
16500	McGREGOR BLVD (SR 867)	CYPRESS LAKE DR	COLLEGE PKWY	4LD	D	2,100	C	1,832	D	2,082	
16600	McGREGOR BLVD (SR 867)	COLLEGE PKWY	WINKLER RD	2LN	D	924	C	792	C	861	Constrained
16700	McGREGOR BLVD (SR 867)	WINKLER RD	TANGLEWOOD BLVD	2LN	D	970		1,187		1,260	Constrained
16800	McGREGOR BLVD (SR 867)	TANGLEWOOD BLVD	COLONIAL BLVD	2LN	D	970		1,187		1,260	Constrained
16900	METRO PKWY (SR 739)	SIX MILE PKWY	DANIELS PKWY	6LD	D	3,171	C	1,123	C	1,391	
17000	METRO PKWY (SR 739)	DANIELS PKWY	CRYSTAL DR	4LD	D	2,100	C	1,193	C	1,441	
17100	METRO PKWY (SR 739)	CRYSTAL DR	DANLEY DR	4LD	D	2,100	C	1,544	C	1,764	
17200	METRO PKWY (SR 739)	DANLEY DR	COLONIAL BLVD	4LD	D	2,100	C	1,615	C	1,845	
	MICHAEL RIPPE PKWY	US41	SIX MILES PKWY	6LD	D	3,171	C	1,381	C	1,945	
17600	MILWAUKEE BLVD	ALABAMA BLVD	BELL BLVD	2LN	E	860	C	171	C	180	
17700	MILWAUKEE BLVD	BELL BLVD	COLUMBUS BLVD	2LN	E	860	C	171	C	183	
17800	MOODY RD	HANCOCK B. PKWY	PONDELLA RD	2LN	E	860	C	182	C	206	old count projection(2009)
17900	NALLE GRADE RD	SLATER RD	NALLE RD	2LN	E	860	C	68	C	71	
18000	NALLE RD	SR 78	NALLE GRADE RD	2LN	E	860	C	114	C	134	
18100	NEAL RD	ORANGE RIVER BLVD	BUCKINGHAM RD	2LN	E	860	C	120	C	126	
18200	NO RIVER RD	SR 31	FRANKLIN LOCK RD	2LN	E	1,140	A	156	B	275	
18300	NO RIVER RD	FRANKLIN LOCK RD	BROADWAY RD	2LN	E	1,140	A	156	B	301	
18400	NO RIVER RD	BROADWAY RD	COUNTY LINE	2LN	E	1,140	A	108	A	141	
18900	OLGA RD*	SR 80 W	SR 80 E	2LN	E	860	C	82	C	95	old count projection
19100	ORANGE GROVE BLVD	CLUB ENTR.	HANCOCK B. PKWY	2LN	E	860	C	393	C	488	old count(2009)
19200	ORANGE GROVE BLVD	HANCOCK B. PKWY	PONDELLA RD	4LN	E	1,790	C	590	C	620	
19300	ORANGE RIVER BLVD	SR 80	STALEY RD	2LN	E	1,000	C	427	C	449	
19400	ORANGE RIVER BLVD	STALEY RD	BUCKINGHAM RD	2LN	E	1,000	C	427	C	461	
19500	ORIOLE RD	SAN CARLOS BLVD	ALICO RD	2LN	E	860	C	130	C	136	
19600	ORTIZ AVE	COLONIAL BLVD	SR 82	2LN	E	900	B	764	C	803	
19700	ORTIZ AVE	SR 82	LUCKETT RD	2LN	E	900	B	749	C	788	4 Ln design & ROW
19800	ORTIZ AVE	LUCKETT RD	SR 80	2LN	E	900	B	382	B	402	4 Ln design & ROW
19900	PALM BEACH BLVD (SR 80)	PROSPECT AVE	ORTIZ AVE	4LD	D	2,100	C	1,175	C	1,310	
20000	PALM BEACH BLVD (SR 80)	ORTIZ AVE	I-75	6LD	D	3,171	C	1,199	C	1,310	
20100	PALM BEACH BLVD (SR 80)	I-75	SR 31	6LD	D	3,171	C	1,701	C	2,056	
20200	PALM BEACH BLVD (SR 80)	SR 31	BUCKINGHAM RD	4LD	D	2,100	C	1,774	C	1,824	
20300	PALM BEACH BLVD (SR 80)	BUCKINGHAM RD	WERNER DR	4LD	D	3,280	B	1,361	B	1,421	
20330	PALM BEACH BLVD (SR 80)	WERNER DR	JOEL BLVD	4LD	C	1,607	C	1,180	C	1,254	
20400	PALM BEACH BLVD (SR 80)	JOEL BLVD	HENDRY CO. LINE	4LD	C	2,210	B	954	B	1,006	
20500	PALOMINO LN	DANIELS PKWY	PENZANCE BLVD	2LN	E	860	C	395	C	418	
20600	PARK MEADOWS DR	SUMMERLIN RD	US 41	2LN	E	860	C	197	C	207	
20800	PENZANCE BLVD	RANCHETTE RD	SIX MILE PKWY	2LN	E	860	C	173	C	185	
20900	PINE ISLAND RD	STRINGFELLOW RD	BURNT STORE RD	2LN	E	950	E	607	E	657	Constrained

5/25/2020

LEE COUNTY Road Link Volumes (County- and State-Maintained Roadways)

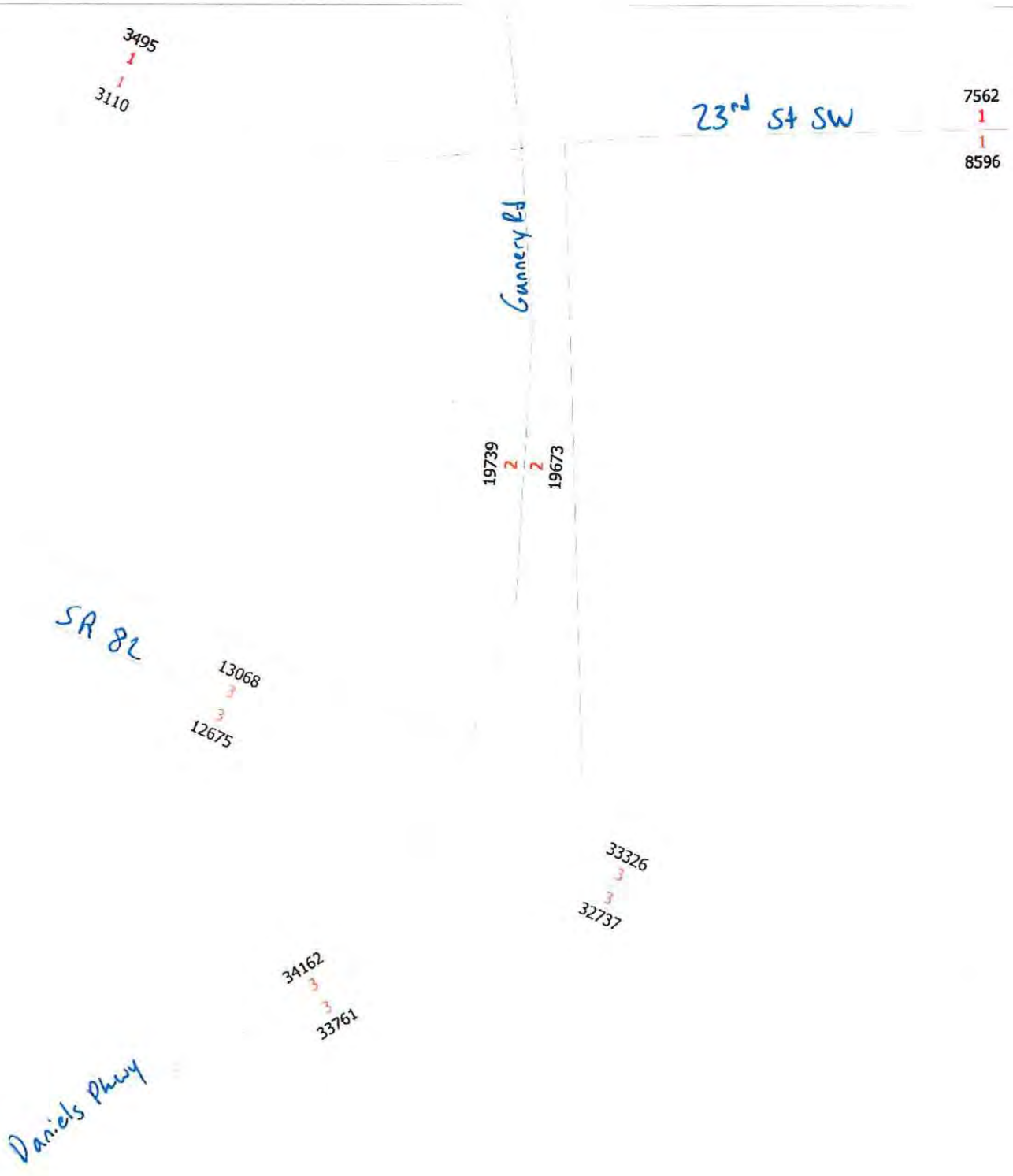
LINK NO.	NAME	ROADWAY LINK FROM	TO	ROAD TYPE	PERFORMANCE STANDARD LOS	CAPACITY	2019 100TH HIGHEST HOUR LOS	VOLUME	FORECAST FUTURE LOS	VOLUME	NOTES
00100	A & W BULB RD	GLADIOLUS DR	McGREGOR BLVD	2LN	E	860	C	380	C	399	
00200	ALABAMA RD	SR 82	MILWAUKEE BLVD	2LN	E	990	C	270	C	284	
00300	ALABAMA RD	MILWAUKEE BLVD	HOMESTEAD RD	2LN	E	990	D	481	D	506	
00400	ALEXANDER BELL	SR 82	MILWAUKEE BLVD	2LN	E	990	D	553	D	581	
00500	ALEXANDER BELL	MILWAUKEE BLVD	LEELAND HEIGHTS	2LN	E	990	D	553	D	626	Shadow Lakes
00590	ALICO RD	US 41	DUSTY RD	4LD	E	1,980	B	1,107	B	1,163	
00600	ALICO RD	DUSTY RD	LEE RD	6LD	E	2,960	B	1,107	B	1,468	Alico Business Park
00700	ALICO RD	LEE RD	THREE OAKS PKWY	6LD	E	2,960	B	1,107	B	1,355	Three Oaks Regional Center
00800	ALICO RD	THREE OAKS PKWY	I-75	6LD	E	2,960	B	2,438	B	2,563	EEPCO Study
00900	ALICO RD	I-75	BEN HILL GRIFFIN BLVD	6LD	E	2,960	B	1,246	B	1,393	EEPCO Study
01000	ALICO RD	BEN HILL GRIFFIN BLVD	GREEN MEADOW DR	2LN	E	1,100/1,840	C	385	E	789	4 Ln constr 2018, EEPCO Study*
01050	ALICO RD	GREEN MEADOW DR	CORKSCREW RD	2LN	E	1,100	B	131	B	224	EEPCO Study
01200	BABCOCK RD	US 41	ROCKEFELLER CIR	2LN	E	860	C	55	C	162	old count
01400	BARRETT RD	PONDELLA RD	PINE ISLAND RD	2LN	E	860	C	103	C	116	old count projection(2009)
01500	BASS RD	SUMMERLIN RD	GLADIOLUS DR	4LN	E	1,790	C	612	C	870	
01600	BAYSHORE RD (SR 78)	BUS 41	NEW POST RD/HART RD	4LD	D	2,100	C	1,690	C	1,750	
01700	BAYSHORE RD (SR 78)	HART RD	SLATER RD	4LD	D	2,100	C	1,703	C	1,831	
01800	BAYSHORE RD (SR 78)	SLATER RD	I-75	4LD	D	2,100	C	1,285	C	1,683	
01900	BAYSHORE RD (SR 78)	I-75	NALLE RD	2LN	D	924	C	710	C	678	
02000	BAYSHORE RD (SR 78)	NALLE RD	SR 31	2LN	D	924	C	515	C	520	
02100	BEN HILL GRIFFIN PKWY	CORKSCREW RD	FGCU ENTRANCE	4LD	E	2,000	B	1,402	B	1,474	
02200	BEN HILL GRIFFIN PKWY	FGCU BOULEVARD S	COLLEGE CLUB DR	4LD	E	2,000	B	1,402	B	1,505	
02250	BEN HILL GRIFFIN PKWY	COLLEGE CLUB DR	ALICO RD	6LD	E	3,000	B	1,127	B	1,219	
26950	BEN HILL GRIFFIN PKWY	ALICO RD	TERMINAL ACCESS RD	4LD	E	1,980	A	1,017	A	1,069	
02300	BETH STACEY BLVD	23RD ST	HOMESTEAD RD	2LN	E	860	C	346	C	548	
02400	BONITA BEACH RD	HICKORY BLVD	VANDERBILT DR	4LD	E	1,900	C	581	C	611	Constrained In City Plan *
02500	BONITA BEACH RD	VANDERBILT DR	US 41	4LD	E	1,900	C	1,530	C	1,608	Constrained In City Plan
02600	BONITA BEACH RD	US 41	OLD 41	4LD	E	1,860	C	1,167	C	1,318	Constrained, old count projection(2010)
02700	BONITA BEACH RD	OLD 41	IMPERIAL ST	6LD	E	2,800	C	1,864	C	1,959	Constrained In City Plan(2010)
02800	BONITA BEACH RD	IMPERIAL ST	W OF I-75	6LD	E	2,800	C	2,132	C	2,241	Constrained In City Plan
02900	BONITA BEACH RD	E OF I-75	BONITA GRAND DR	4LD	E	2,020	B	671	B	705	Constrained In City Plan
02950	BONITA BEACH RD	BONITA GRANDE DR	END OF CO. MAINTAINED	4LD	E	2,020	B	671	B	705	Constrained In City Plan
03100	BONITA GRANDE DR	BONITA BEACH RD	E TERRY ST	2LN	E	860	D	692	E	782	old count projection(2009)
03200	BOYSCOUT RD	SUMMERLIN RD	US 41	6LN	E	2,520	E	1,776	E	1,866	
03300	BRANTLEY RD	SUMMERLIN RD	US 41	2LN	E	860	C	276	C	290	
03400	BRIARCLIFF RD	US 41	TRIPLE CROWN CT	2LN	E	860	C	197	C	218	
03500	BROADWAY RD (ALVA)	SR 80	N RIVER RD	2LN	E	860	C	269	C	304	old count projection(2009)
03700	BUCKINGHAM RD	SR 82	GUNNERY RD	2LN	E	990	C	405	C	426	
03730	BUCKINGHAM RD	GUNNERY RD	ORANGE RIVER BLVD	2LN	E	990	C	423	D	445	
03800	BUCKINGHAM RD	ORANGE RIVER BLVD	SR 80	2LN	E	990	D	538		1,207	Buckingham 345 & Portico
03900	BURNT STORE RD	SR 78	VAN BUREN PKWY	4LD	E	2,950	B	942	B	990	
04000	BURNT STORE RD	VAN BUREN PKWY	COUNTY LINE	2LN	E	1,140	C	465	C	563	
04200	BUS 41 (N TAMIAMI TR, SR 7	CITY LIMITS (N END EDIS	PONDELLA RD	6LD	D	3,171	C	1,471	C	1,673	
04300	BUS 41 (N TAMIAMI TR, SR 7	PONDELLA RD	SR 78	6LD	D	3,171	C	1,471	C	1,673	
04400	BUS 41 (N TAMIAMI TR, SR 7	SR 78	LITTLETON RD	4LD	D	2,100	C	959	C	1,003	
04500	BUS 41 (N TAMIAMI TR, SR 7	LITTLETON RD	US 41	4LD	D	2,100	C	552	C	575	
04600	CAPE CORAL BRIDGE	DEL PRADO BLVD	McGREGOR BLVD	4LB	E	4,000	D	3,074	D	3,231	
04700	CAPTIVA DR	BLIND PASS	SOUTH SEAS	2LN	E	860	C	267	C	302	Constrained, old count(2010)
04800	CEMETERY RD	BUCKINGHAM RD	HIGGINS AVE	2LN	E	860	C	242	C	255	
04900	CHAMBERLIN PKWY	AIRPORT ENT	DANIELS PKWY	4LN	E	1,790	C	105	C	150	Port Authority maintained
05000	COCONUT RD	WEST END	VIA VENETTO BLVD	2LN	E	860	C	268	C	420	Estero maintains to east
05100	COLLEGE PKWY	McGREGOR BLVD	WINKLER RD	6LD	E	2,980	D	2,292	D	2,409	
05200	COLLEGE PKWY	WINKLER RD	WHISKEY CREEK DR	6LD	E	2,980	D	2,059	D	2,164	
05300	COLLEGE PKWY	WHISKEY CREEK DR	SUMMERLIN RD	6LD	E	2,980	D	2,059	D	2,164	
05400	COLLEGE PKWY	SUMMERLIN RD	US 41	6LD	E	2,980	D	1,825	D	1,918	
05500	COLONIAL BLVD	McGREGOR BLVD	SUMMERLIN RD	6LD	E	2,840		3,049		3,204	
05600	COLONIAL BLVD	SUMMERLIN RD	US 41	6LD	E	2,840		2,882		3,028	
06200	COLONIAL BLVD	DYNASTY DR	SR 82	6LD	D	3,040	B	2,117	C	2,225	*
06300	COLUMBUS BLVD	SR 82	MILWAUKEE BLVD	2LN	E	860	C	100	C	105	
06400	CONSTITUTION BLVD	US 41	CONSTITUTION CIR	2LN	E	860	C	217	C	245	old count projection(2010)
06500	CORBETT RD	SR 78 (PINE ISLAND RD)	LITTLETON RD	2LN	E	860	C	22	C	226	old count, added VA clinic(2009)
06600	CORKSCREW RD	US 41	THREE OAKS PKWY	4LD	E	1,900	C	1,007	C	1,272	Galleria at Corkscrew
06700	CORKSCREW RD	THREE OAKS PKWY	W OF I-75	4LD	E	1,900		2,129		2,386	Estero Crossing
06800	CORKSCREW RD	E OF I-75	BEN HILL GRIFFIN BLVD	4LD	E	1,900	C	1,194	C	1,255	
06900	CORKSCREW RD	BEN HILL GRIFFIN BLVD	ALICO RD	4LD	E	1,960	C	466	C	678	
07000	CORKSCREW RD	ALICO RD	COUNTY LINE	2LN	E	1,140	C	466	D	793	EEPCO Study, The Place
07100	COUNTRY LAKES BLVD	LUCKETT RD	TICE ST	2LN	E	860	C	143	C	293	old count projection(2010)
07200	CRYSTAL DR	US 41	METRO PKWY	2LN	E	860	C	496	C	521	
07300	CRYSTAL DR	METRO PKWY	PLANTATION RD	2LN	E	860	C	324	C	340	

LEE COUNTY MPO 2045 COST FEASIBLE HIGHWAY PLAN



N
0 2 4 Miles
Interchange/Intersection
Bridge Reconstruction
Cost Feasible Lanes
2 Lane Roadway
2 Lanes one-way
3 Lanes one-way
3 Lane Roadway
4 Lane Roadway
4 Lane Limited Access
6 Lanes Divided
6 Lane Freeway
8 Lane Divided
10 Lane Freeway
Reconstruction
Cost Feasible Projects
GASPARILLA
OLD BURNT STORE
BURNT STORE
DURDEN
DE NAVARRA
GATOR
JACARANDA
KISMET
GULFSTREAM
MARIANA
PONDELLA
MELLOW
HART
SLATER
BAYSHORE
NALLE GRADE
NALLE RD
DEAL
PALM CREEK
ARMEDA
OLGA
RIVER
RIVER RD
OLD OLGA
PALM BEACH
PALM BEACH BL
ORANGE RIVER
CEMETERY
59TH
WINDERMERE
21ST
17TH
15TH
12TH
LUCKETT RD
BALLARD
NUNA
NEAL
BUCKINGHAM
SUNSHINE
JOAN
WILLIAMS
MOORE
GOLFVIEW
LEONARD
36TH
23RD
40TH
52ND
PARKDALE
SENTINELA
GRANT
MCARTHUR
JAGUAR
BELL
EISENHOWER
COLUMBUS
WILDCAT
STRINGFELLOW
PINE ISLAND
STRINGFELLOW RD
H STRINGFELLOW
20TH
CHIQUITA
32ND
COUNTRY CLUB
DEL PRADO
SKYLINE
PELICAN
47TH
WINKLER AV
PLANTATION
PENZANCE
TREELINE
BRIARCLIFF
TERMINAL ACCESS
ALICO
WINGED FOOT
ORIOLE
ISLAND PARK
WINKLER RD
SUMMERLIN
SAN CARLOS
JOHN MORRIS
SHELL POINT
CAPTIVA
SANIBEL CAPTIVA
KINCAID
PERIWINKLE
GULF
TARPON BAY
ESTERO
ESTERO BL
HICKORY
STRIKE
OLD US 41
TERRY
MORTON
DEAN
IMPERIAL
BONITA BEACH
CORKSCREW RD
CORKSCREW
SIX LS FARM
41
41B
75

2045 E+C NETWORK VOLUMES



2045 LRTP COST FEASIBLE ROADWAY NETWORK AND VOLUMES

cube

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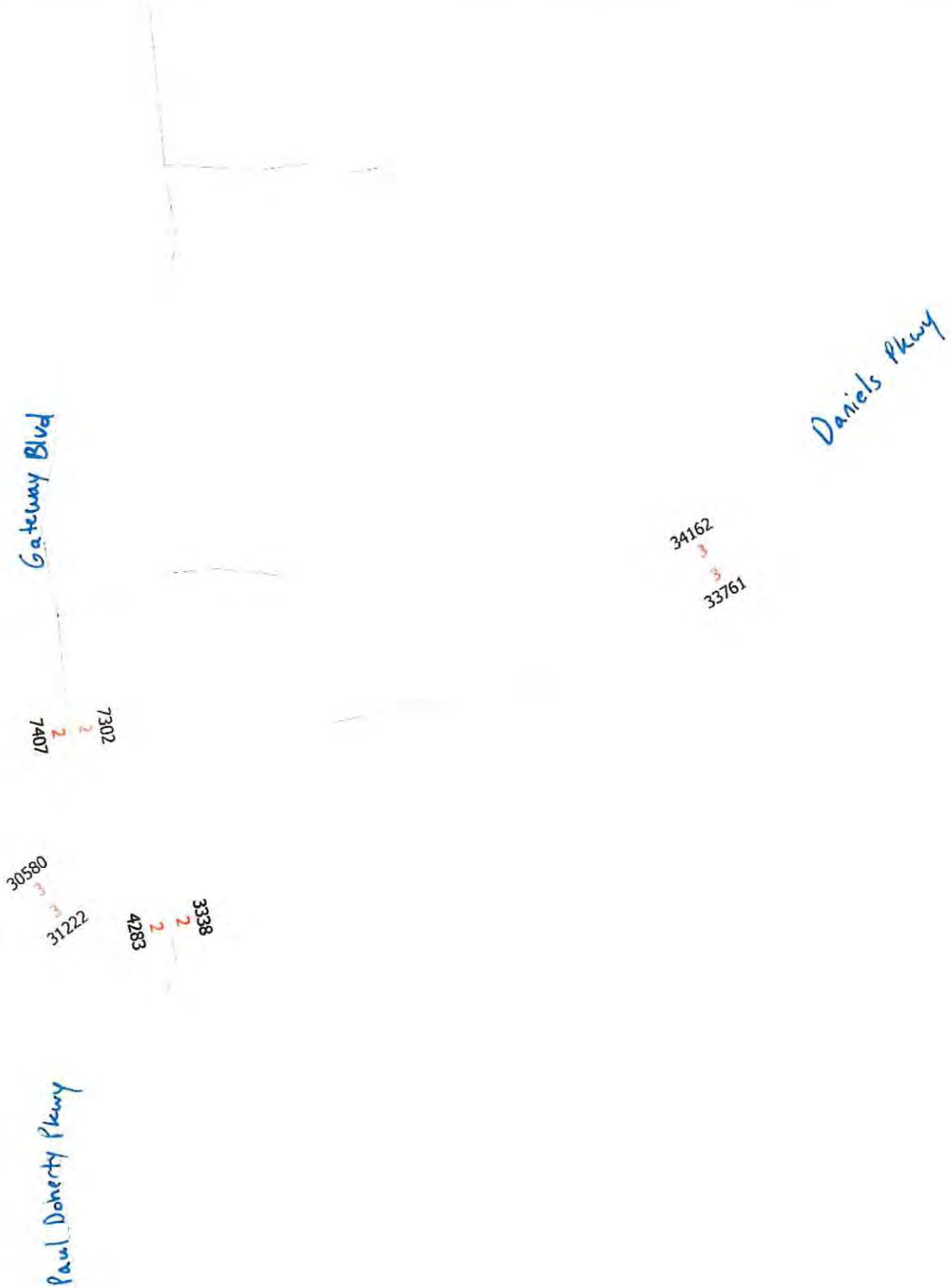

2045 LRTP COST FEASIBLE ROADWAY NETWORK AND VOLUMES

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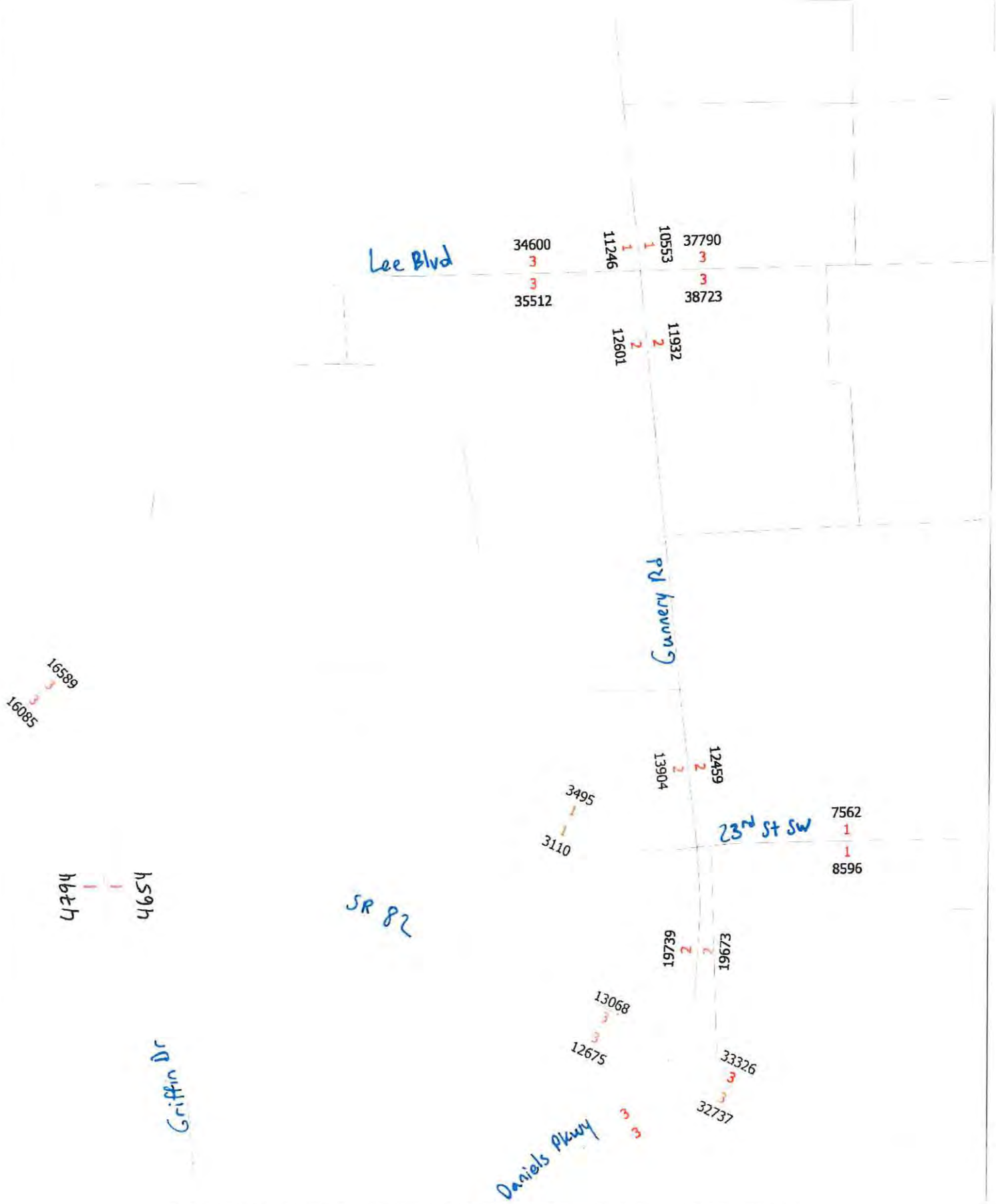

2045 LRTP COST FEASIBLE ROADWAY NETWORK AND VOLUMES

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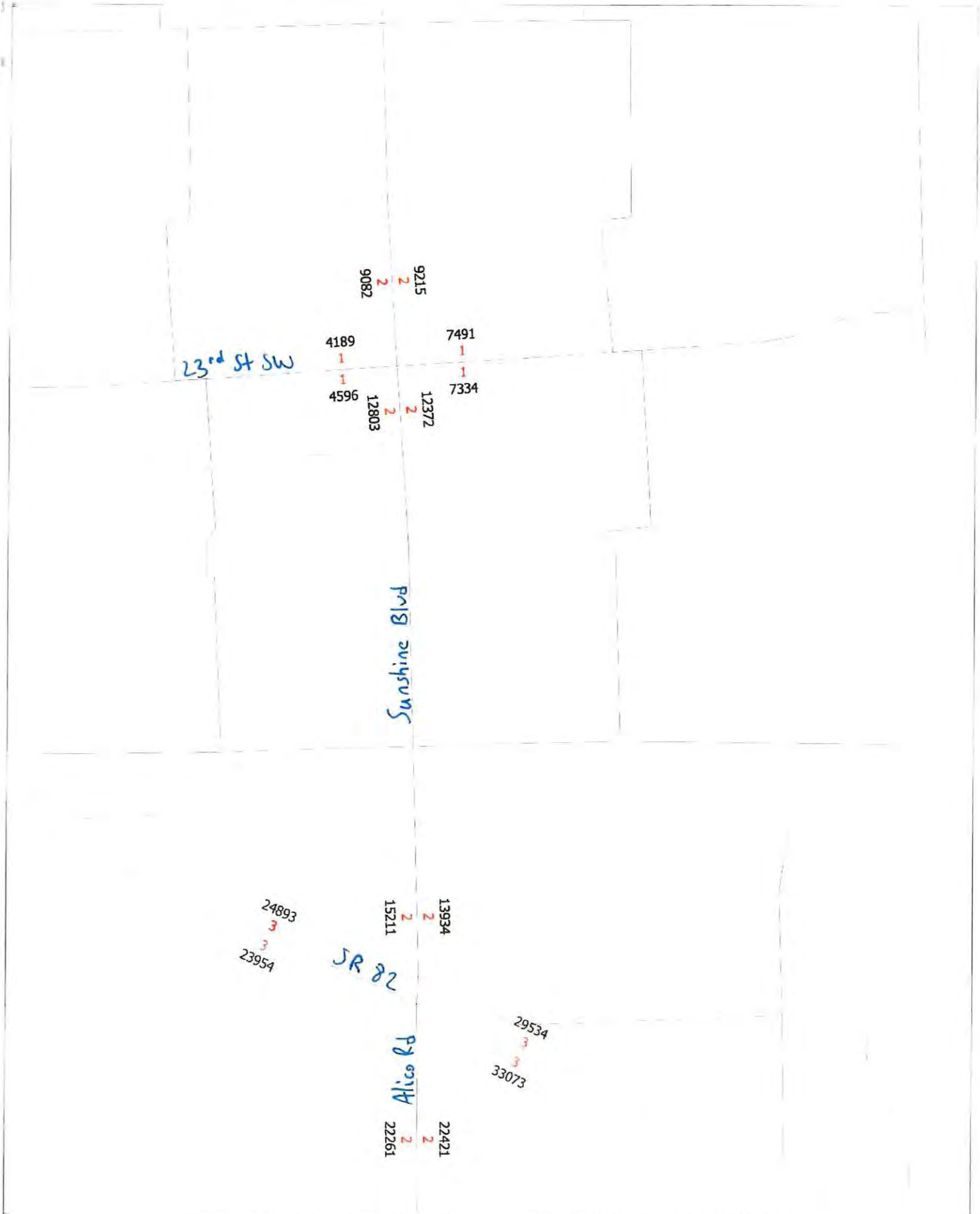

2045 LRTP COST FEASIBLE ROADWAY NETWORK AND VOLUMES

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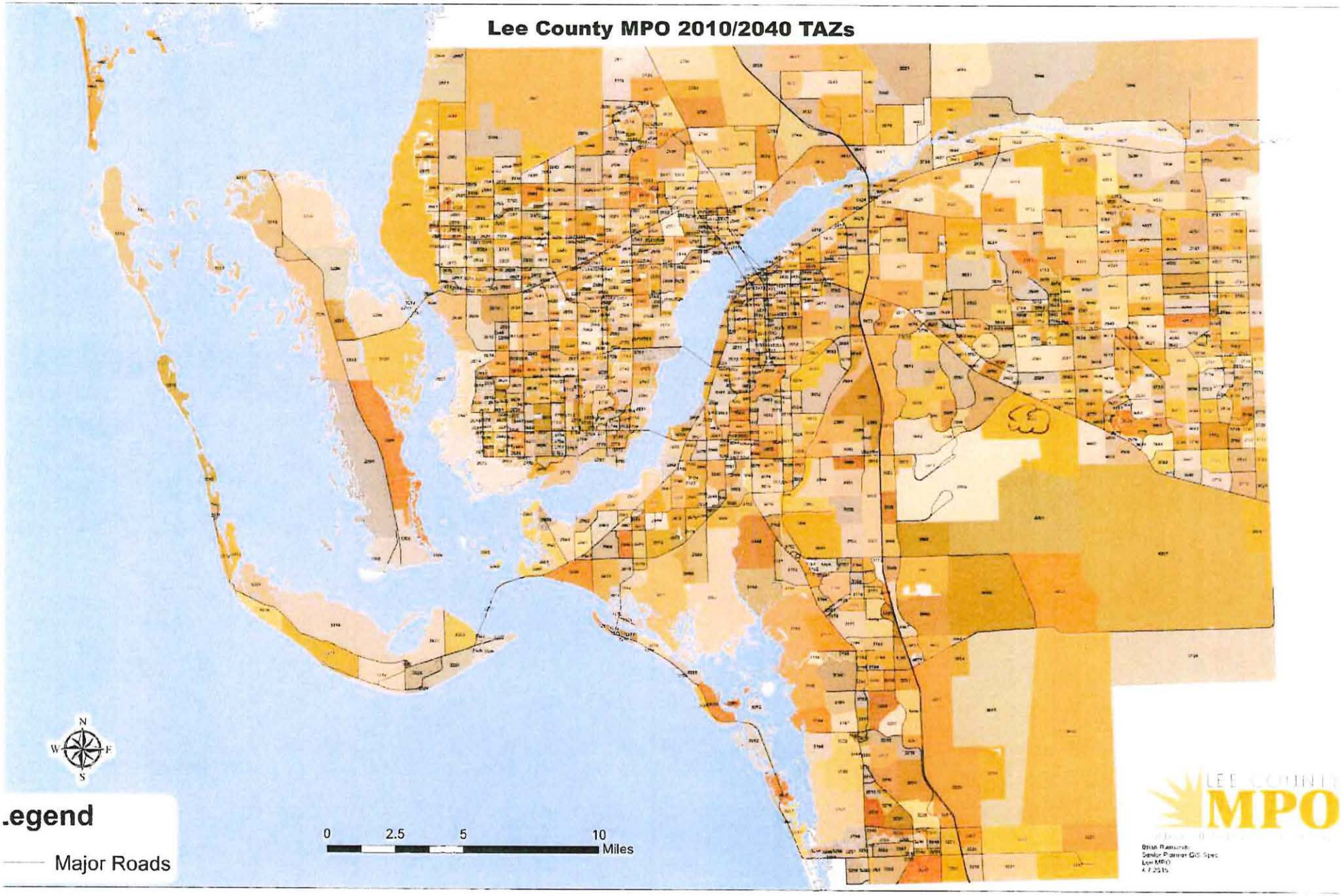
TAZ MAP

Lee County MPO 2010/2040 TAZs



LEE COUNTY CIP

DRAFT SUMMARY OF MAJOR ROAD PROJECTS PROGRAMMED BY LEE COUNTY - FY20/21TO FY 24/25

COMM DIST.	PROJ #	PROJECT NAME	DRIVER	LENGTH (MILES)	FY 98-19 PRIOR EXP.	19/20 BUDGET	20/21	21/22
		MAJOR PROJECTS						
2,5	209245	Alico Rd. Connector/Alico Rd. to SR 82 opposite Sunshine Blvd. Funds to purchase ROW through Florida Rock property prior to 12/31/2020 per purchase option agreement	People-to-jobs link, Daniels Pkwy. relief NM - Core Critical	9.00	3,936,886 ROW	7,240,686.00 ROW/DES	0	0 0
All	206002	Bicycle/Pedestrian Facilities Annual project for facilities on existing County-maintained roads ***Specific Projects:***	Implementation of bike-ped plan, BPAC priorities, Complete Streets principals		16,939,429	7,467,825	473,533	5,647,455
1		*Veterans Pkwy.SW 10th St. to Skyline Blvd.*	***2016 Priority #22***			*40,500 DES/SUR*	*232,850 CST/CEI*	0
1		*Veterans Pkwy.SW 3rd Pl to SW 2nd Ave*	***2016 Priority #23***			*44,910 DES/SUR*	*258,225* CST/CEI	0
		Hancock Bridge Pkwy Orange Grove to 4055 Hancock	***2017 Priority #4***				495,000 *ROW DES/SUR*	0
		Plantation *Daniels - Idlewild* *Daniels - Crystal* *Crystal Idlewild*	***2019 Priority #2***				*0*	0
4		*Hancock Bridge Pkwy. Sidewalk/North Side, NE 16th Pl. to SE 24th Ave.*	***2013 Priority #8***					
2		*Beacon Manor Dr. Sidewalk, US 41 to S. Danley Dr.*	***2014 Priority #1***			*0 DES/SUR*	*0 CST/CEI*	*0*
5		*Orange River Blvd. Palm Beach Blvd. to Lorraine Dr.*	***2016 Priority #4***				*0*	1,354,571 *DES/SUR/ ROW*
5		*Tice St. Sidewalk/South Side, Lynnede Ave. to Ortiz Ave.*	***2015 Priority #2***				*101,036 DES/SUR*	*580,968 CST/CEI*
5		*Tice St. Sidewalk/South Side, Ortiz Ave. to Lexington Ave.*	***2015 Priority #5***				*167,475 DES/SUR*	*962,979 CST/CEI*
5		*Bell Blvd. SR 82 to Sunrise*	***2016 Priority #3***				*0*	*623,080 DES/SUR*
2		*Alico Rd. Sidewalk/North Side, RR Crossing to Quaker Ln.*	***2015 Priority #27***				*0*	*1,139,782 DES/SUR/ ROW*
4		*Pine Rd. Allaire Ln to US 41*	***2016 Priority #28***				*0*	*0*
3		*Bonita Beach Road I-75 to Bonita Grande*	***2016 Priority #8***			*43,300 DES/SUR*	*205,020 CST/CEI*	*0*
3	205724	Big Carlos Pass Bridge Replacement of existing 2-lane bascule bridge with new 2-lane fixed span bridge across Big Carlos Pass	Age Condition of bridge (Bridge Health Index) Mandated		1,694,755 PD&E Study	7,274,803 PD&E Study DES/CST	0	47,810,820 CST/CEI

EMPLOYEMENT CONVERSION FACTORS

Land Use	Employees/ 1,000 Sq. Ft. [1]	Source [2]
Retail/Commercial		
Retail/Commercial 759 emp.	2.50 ≈ 300k SF	DCA
Specialty Retail Center	1.82	ITE, p. 1223
Discount Store	1.96	ITE, p. 1233
Quality Restaurant	7.46	ITE5, p. 1248
High-Turnover Restaurant	9.92	ITE5, p. 1267
Fast-Food Restaurant (with Drive-Thru)	10.90	ITE5, p. 1305
Walk-In Bank	3.52 (Estimate)	ITE, p. 1650
Drive-In Bank	3.64 (Estimate)	ITE, p. 1654
Hotel/Motel		
Hotel	0.90/room	ITE, p. 502
Business Hotel	0.80/room	ITE5, p. 539
Motel	0.44/room	ITE, p. 552
Resort Hotel	0.60/room	ITE5, p. 568
Recreational		
Golf Course	0.25/acre (Estimate) 1.74/hole (Estimate)	ITE, p. 675 ITE, p. 675
Racquet Club	0.86/court (Estimate) 0.36 (Estimate)	ITE, p. 760 ITE, p. 760
State Park	0.27/acre (Estimate)	ITE5, p. 612

#00582

TYPICAL EMPLOYMENT CONVERSION FACTORS

(June, 2001)

Land Use		Employees/ 1,000 Sq. Ft. (1)	Source (2)
Industrial			
Industrial	474 emp.	1.89 = 250k SF	DCA
General Light Industrial		2.31	ITE, p. 89
Industrial Park		2.08	ITE, p. 132
Warehousing		1.28	ITE, p. 188
Office			
General Office, Below 100,000		3.39 4.80	ITE5, p. 940 DCA
General Office, 100,000 - 200,000		3.84 4.40	ITE5, p. 940 DCA
General Office, 201,000 - 500,000		3.22 3.50	ITE5, p. 940 DCA
General Office, Above 500,000		2.88 3.50	ITE5, p. 940 DCA
General Office, Average	1,477 emp	3.32 = 445k SF 4.00	ITE, 1059 DCA
Medical-Dental Office Building		4.05	ITE, p. 1073
Office Park		3.26	ITE, p. 1134
Research and Development Center		2.93	ITE, p. 1156

Land Use	Employees/ 1,000 Sq. Ft. (1)	Source (2)
Amusement Park	9.09/acre (Estimate)	ITE, p. 744
Marina	0.01/berth (Estimate)	ITE4, p. 627-636
Recreational	0.16/acre (Estimate)	ITE4, p. 537-545
Park	0.13/acre (Estimate)	ITE4, p. 546-563
Institution		
Elementary School	0.078/student	ITE, p. 813
Private School	0.19/student	ITE5, p. 775
Day Care Center	0.145/student	ITE, p. 913
Library	1.11	ITE, p. 956
Hospital	2.28/bed	ITE, p. 977
Nursing Home	0.648/bed	ITE, p. 1005

Footnotes:

(1) Employees per 1,000 square feet Gross Floor Area (GFA), except as otherwise noted.

(2) SOURCE:
- ITE - Institute of Transportation Engineers, Trip Generation, Sixth Edition.
- ITE5 - Institute of Transportation Engineers, Trip Generation, Fifth Edition.
- ITE4 - Institute of Transportation Engineers, Trip Generation, Fourth Edition.
- DCA - Florida Department of Community Affairs. Draft report titled Housing Demand, Supply and Need Methodology (April 24, 1991), Appendix A.

TRIP GENERATION EQUATIONS

Single-Family Detached Housing
(210)

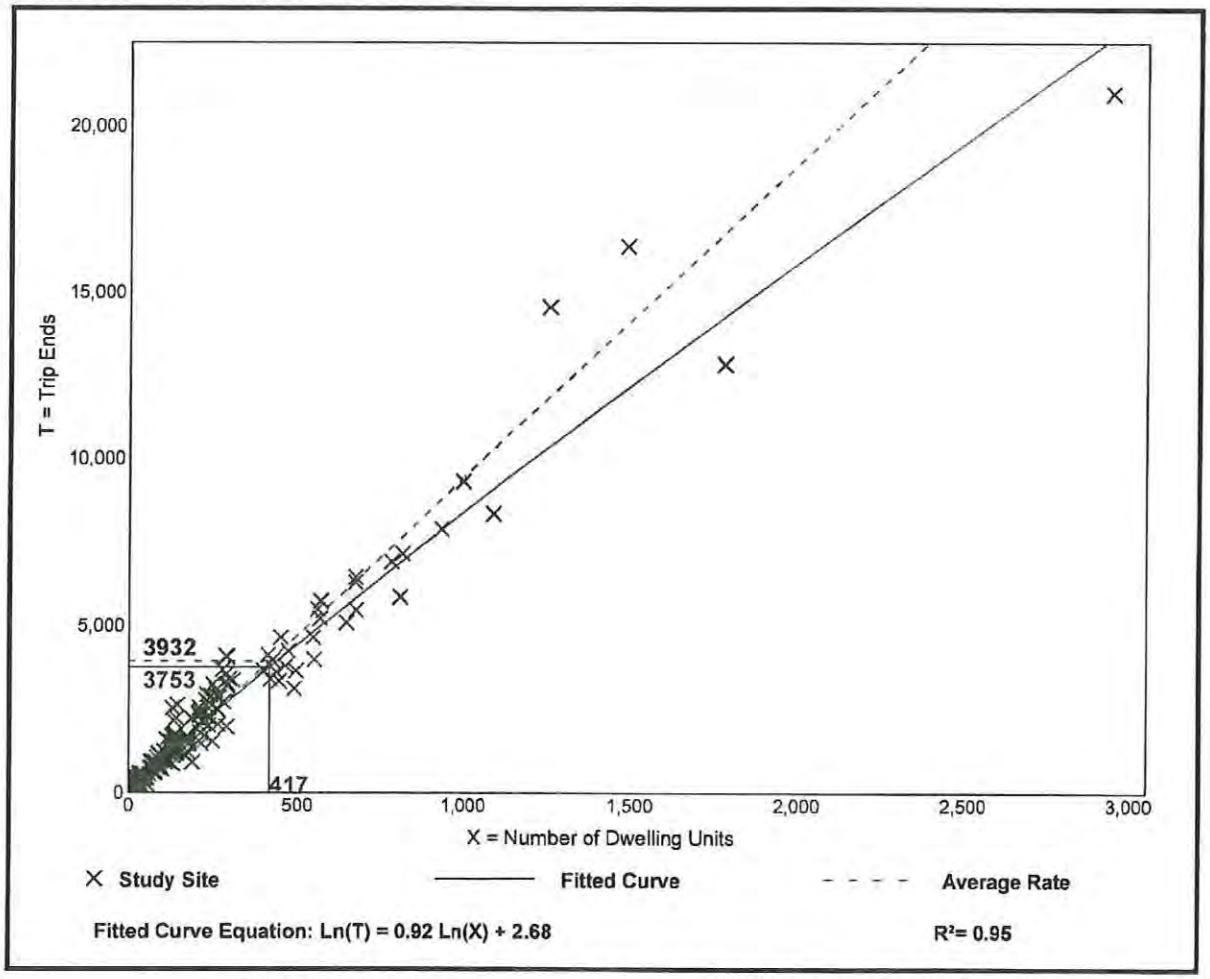
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68 **R^2= 0.95**

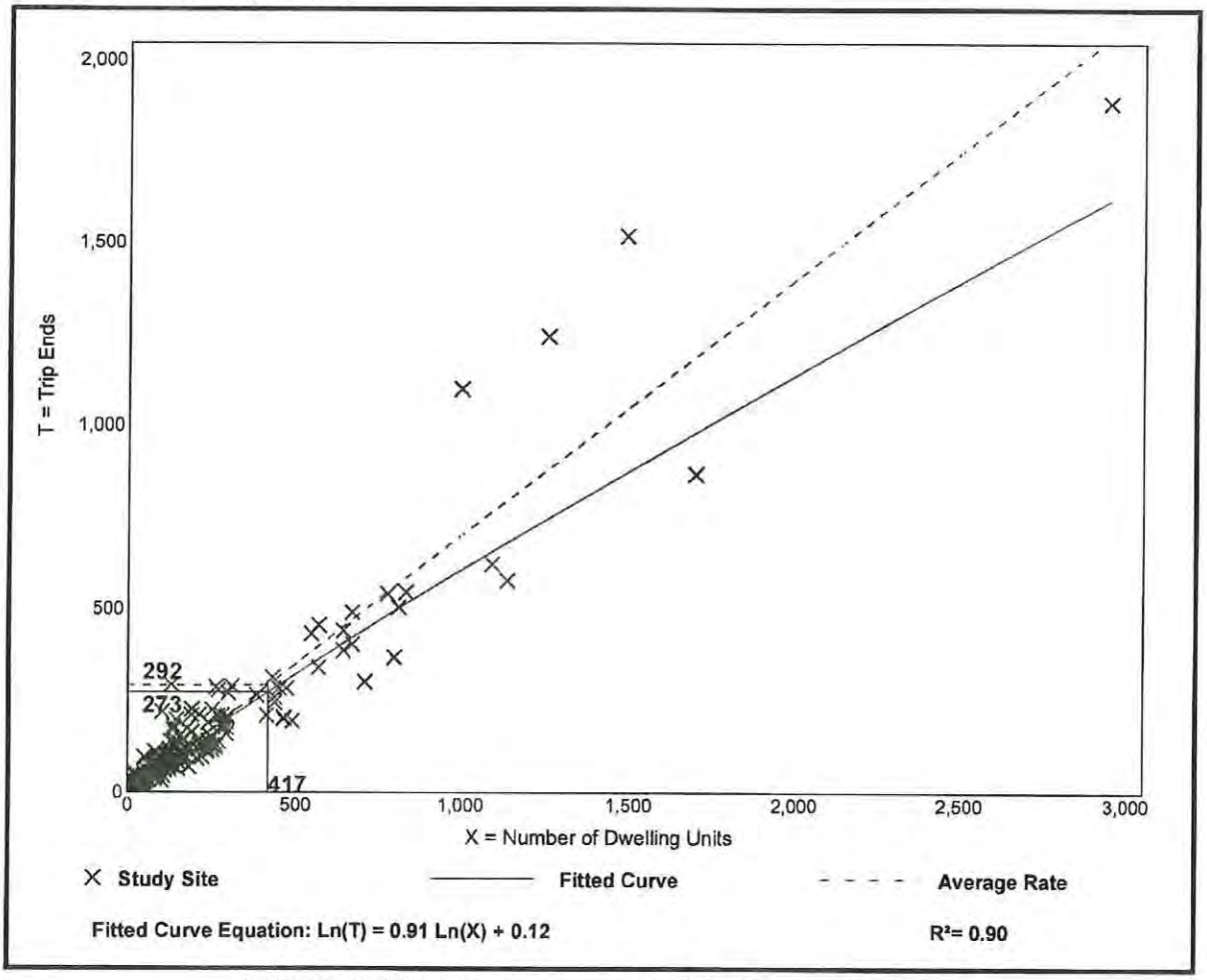
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	192
Avg. Num. of Dwelling Units:	226
Directional Distribution:	26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.70	0.27 - 2.27	0.24

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.91 Ln(X) + 0.12 **R^2= 0.90**

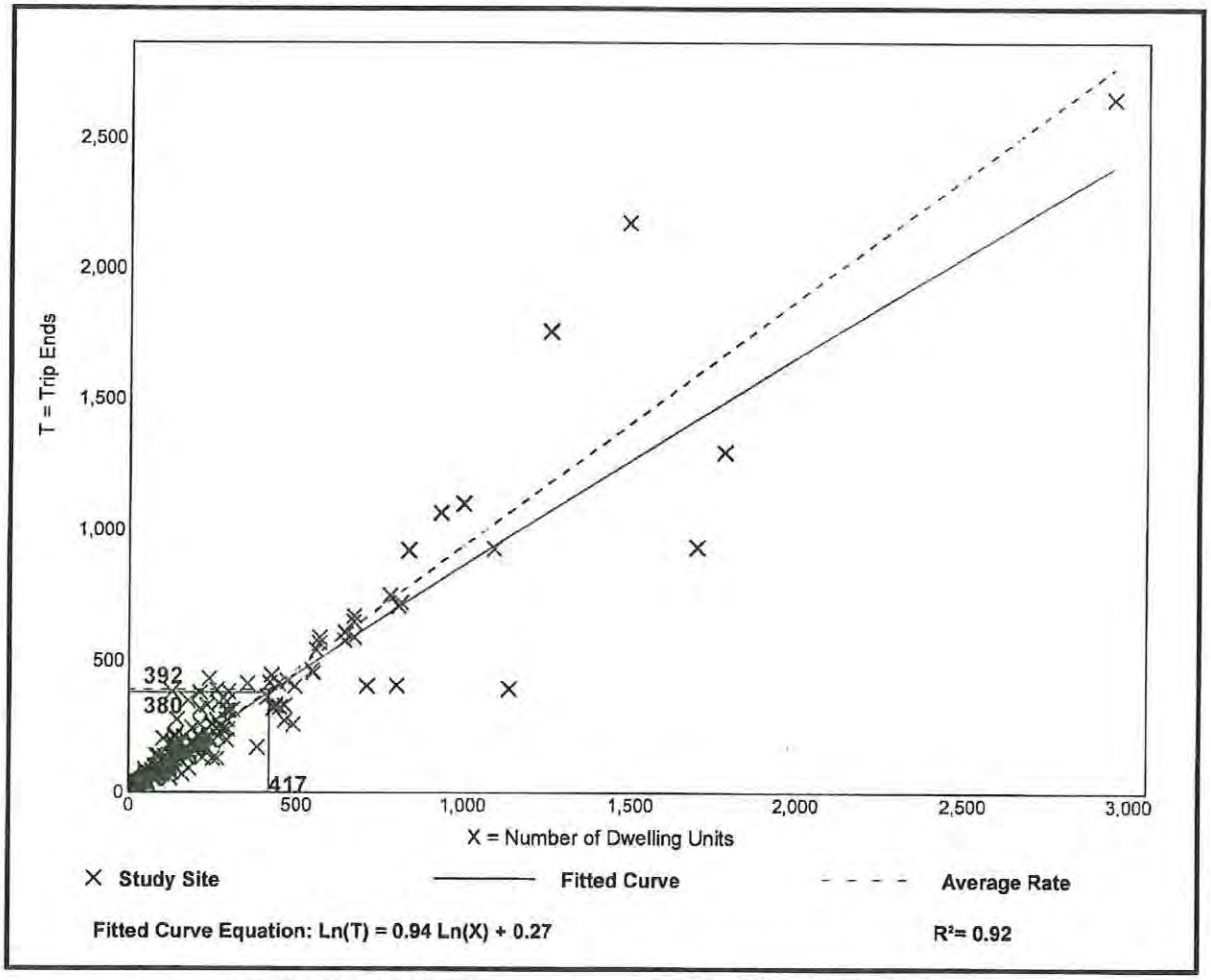
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.94 Ln(X) + 0.27 **R^2= 0.92**

Lee County
Southwest Florida

Board of County Commissioners

Kevin Ruane
District One

Cecil L Pendergrass
District Two

Ray Sandelli
District Three

Brian Hamman
District Four

Frank Mann
District Five

Roger Desjarlais
County Manager

Richard Wm. Wesch
County Attorney

Donna Marie Collins
County Hearing
Examiner

February 6, 2022

Cindy Leal Brizuela
Morris Depew
2914 Cleveland Ave.
Fort Myers, FL 33901

Re: Letter of Service Availability – Daniels Parkway South

Ms. Leal Brizuela,

I am in receipt of your letter requesting a Letter of Service Availability for the Daniels Parkway South development. This property consists of five STRAP numbers located south of Daniels Parkway adjacent to SR 82.

Lee County Emergency Medical Services is the primary EMS transport agency responsible for coverage at parcels on the western edge of the proposed project. These parcels have direct access from Daniels Parkway for multifamily development or are part of a restoration area.

Given the limited impact and the vast majority of the area we cover is planned for preservation, it is our opinion that the service availability for the proposed development of this property is adequate at this time. Should the plans change, especially the density, a new analysis of this impact would be required.

Sincerely,

Benjamin Abes
Director, Public Safety

Lehigh Acres Fire Control and Rescue District

636 Thomas Sherwin Avenue S. Lehigh Acres, Florida 33974
Phone: 239-303-5300 Fax: 239-369-2436

March 30, 2021

Ms. Cindy Leal Brizuela, Project Planner
Morris-Depew Associates, Inc.
2914 Cleveland Avenue
Fort Myers, FL 33901

RE: Letter of Service Availability

Dear Ms. Brizuela:

Please accept this correspondence as documentation that the Lehigh Acres Fire Control and Rescue District is capable of providing fire protection and EMS transport services to the parcels listed below which falls within the boundaries of our Fire District.

The following parcel (STRAP number) lies within the geographical boundaries of the Lehigh Acres Fire Control and Rescue District:

- 09-45-26-00-00003.0000
- 08-45-26-00-00001.0030
- 17-45-26-00-00001.0010
- 16-45-26-00-00001.0000
- 21-45-26-00-00001.0000

Please feel free to contact me if you have any questions and/or concerns.

Respectfully,

Robert Dilallo
Fire Chief

cc: Ken Bennett, Asst. Chief/Fire Marshal - LAFCRD

SOUTH TRAIL FIRE PROTECTION & RESCUE SERVICE DISTRICT

Established 1965

"Compassion, Commitment, Courage"

Board of Commissioners

Larry Hirshman
Chairman

Jeff Haugh
Vice Chairman

John F. Anderson II
Secretary-Treasurer

Ron Tarantino
Commissioner

Ken Brown
Commissioner

Administration

Gene Rogers
Fire Chief

Chris Wolfe
Assistant Chief

Dave Bollen
Assistant Chief

March 30, 2021

Morris-Depew Associates, Inc.:

The South Trail Fire & Rescue Service District has received your serviceability/availability request. The following parcels (contained within the request) are located within the South Trail Fire District:

- 08-45-26-00-00001.0030
- 17-45-26-00-00001.0010

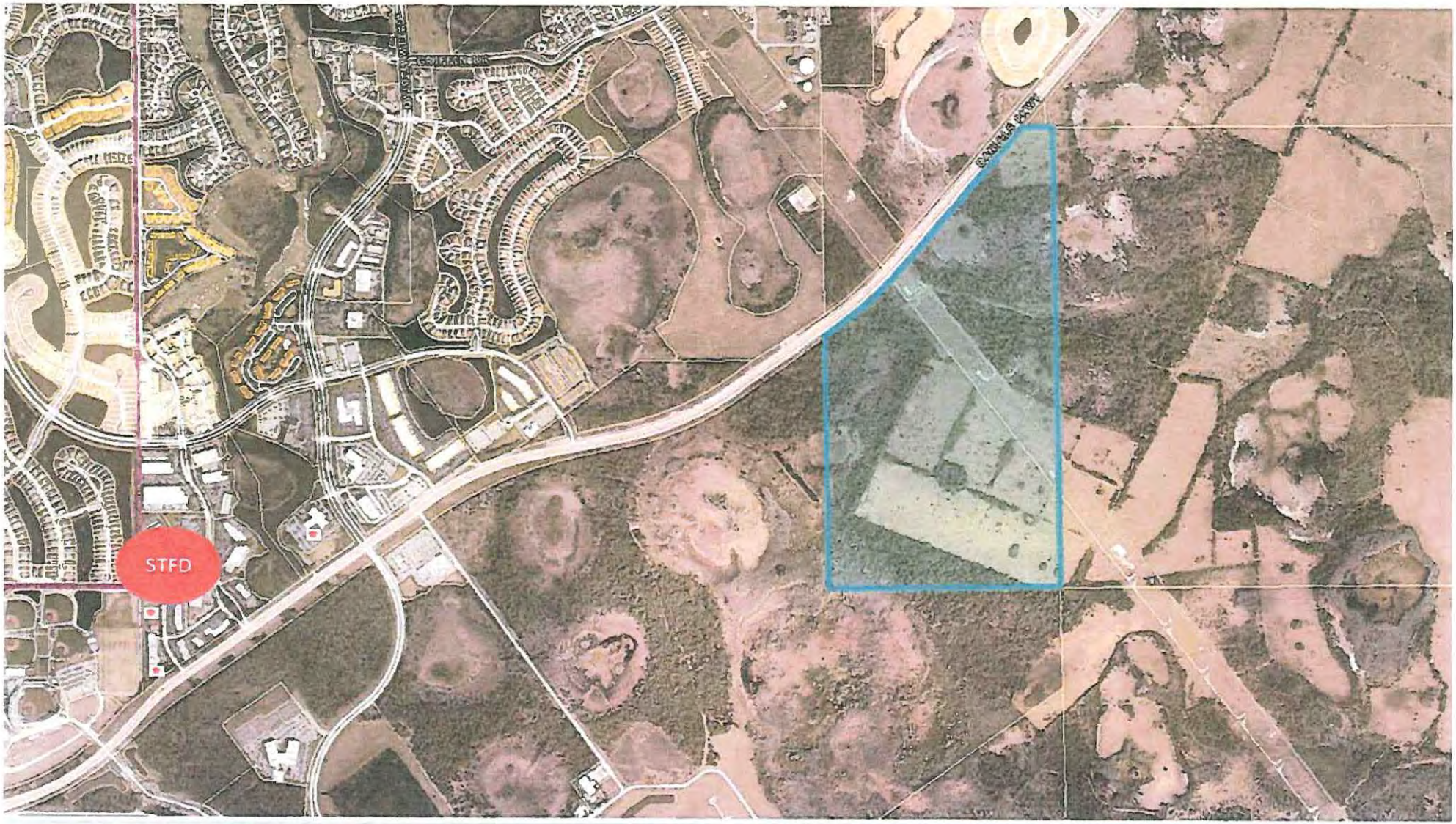
The South Trail Fire District is capable of servicing the above parcels utilizing our current service-delivery model, to include fire, life safety (EMS), and existing fire inspection services (based on the most current fee structure); provided that the approved density remains within the confines of the request letter provided which equals 350,000 SF of commercial and 1,600 residential units.

I have enclosed a screen shot of the two parcels as identified by the above strap numbers. I have also indicated the current location of our fire station, located at 12780 Commonwealth Drive, just off of Daniels Pkwy.

Please contact me with any questions, comments, or concerns.

Sincerely,

Gene Rogers
Fire Chief
GRogers@southtrailfire.org
South Trail Fire District
5531 Halifax Avenue
Fort Myers, FL 33912
Tel: (239) 433-0080



	Folio	Owner Name	Site Address	Last Trans. Date	Last Trans. Amt	Just Value	Taxable Value
.0010	10351015	HOLES JARED F TR	DANIELS PKWY, FORT MYERS	5-2013	$ 10	$ 2,384,890	$ 70,175

MORRIS DEPEW
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LANDSCAPE ARCHITECTS

2914 Cleveland Avenue | Fort Myers, Florida 33901
Phone (239) 337-3993 | Toll Free (866) 337-7341
www.morris-depew.com

March 30, 2021

Gene Rogers
Fire Chief
South Trail Fire Control and Rescue District
5531 Halifax Ave
Fort Myers, FL 33912
grogers@southtrailfire.org

RE: Letter of Availability Request

Chief Rogers,

We are requesting a Letter of Availability for a proposed text amendment which would allow for 350,000 SF of commercial and 1,600 residential units to be located within the following STRAPs;

- 09-45-26-00-00003.0000
- 08-45-26-00-00001.0030
- 17-45-26-00-00001.0010
- 16-45-26-00-00001.0000
- 21-45-26-00-00001.0000

The property is located south of Daniels Parkway and to the southwest of SR 82 and the subject area for future development consists of approximately ±1,233.08 acres. The subject property is zoned AG-2 and is identified as being within the Density Reduction/Groundwater Recharge (DR/GR), Wetlands, and Central Urban future land use designations. A portion of the project is within your service area whereas the remaining parcels are within the boundaries of the Lehigh Acres Fire & Rescue District.

For the purposes of determining availability, please assume all units will be single-family. Should you have any questions regarding this request please do not hesitate to reach out to me.

Thank you,
MORRIS-DEPEW ASSOCIATES, INC

Cindy Leal Brizuela
Project Planner

This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical Resources at CompliancePermits@dos.MyFlorida.com for project review information.

September 17, 2021

Bailey Schleifer
Assistant Planner
2914 Cleveland Ave
Fort Myers, FL 33901
(239) 337-3993 telephone

In response to your request on September 17, 2021, the Florida Master Site File lists one archeological site and one resource group found in a designated area within T45N R26E Sections 09, 08, 17, 16, 15, 21, 22, 27 in Lee County, Florida.

When interpreting the results of our search, please consider the following information:

- **This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.**
- **Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.**
- **While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.**
- **Federal, state and local laws require formal environmental review for most projects. This search DOES NOT constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at** CompliancePermits@dos.MyFlorida.com

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Sincerely,

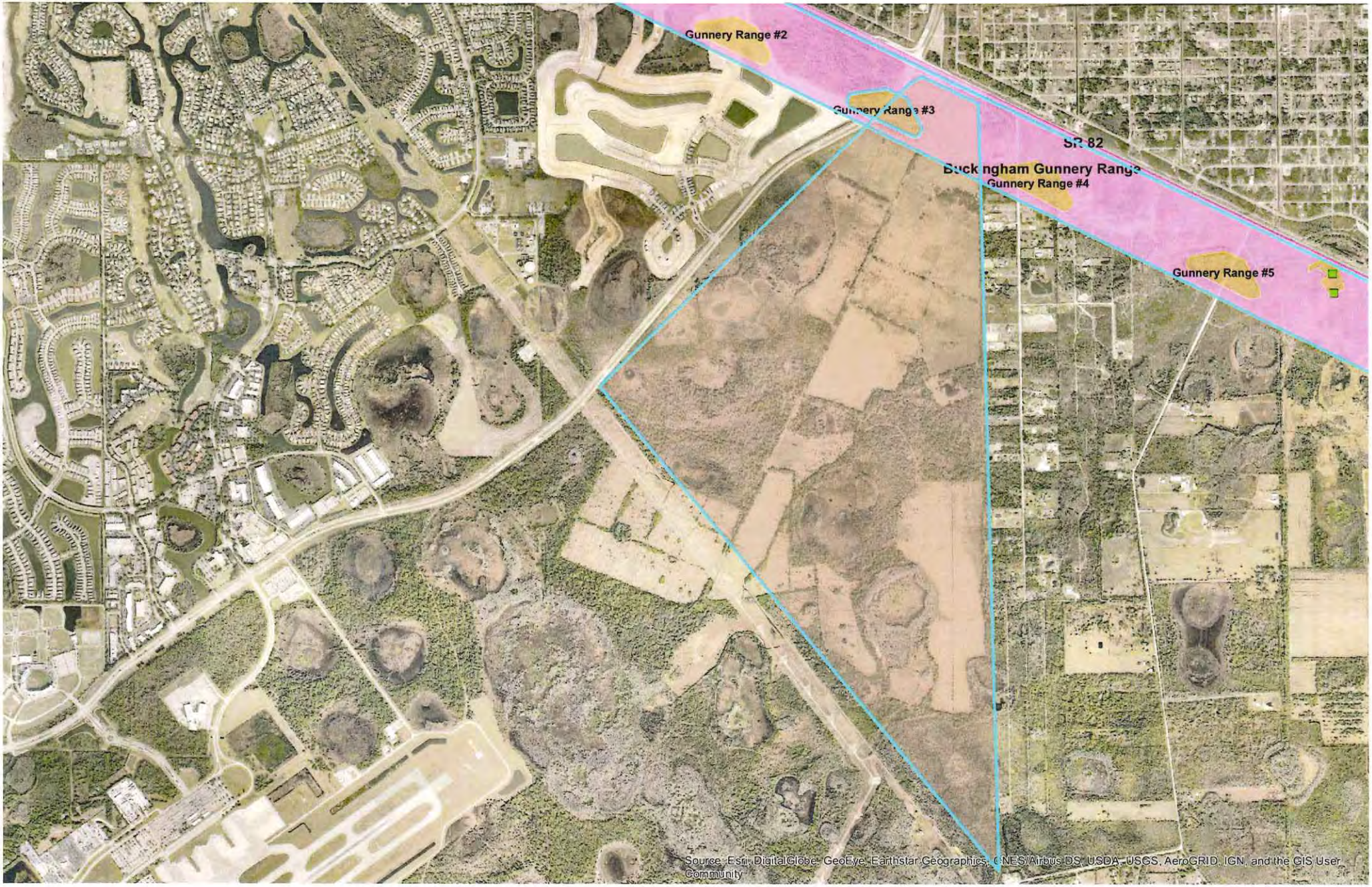
Eman M. Vovsi, Ph.D.
Florida Master Site File
Eman.Vovsi@DOS.MyFlorida.com

Exhibit M13

AR=1
SS=0
CM=0
RG=1
BR=0
Total=2

Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
LL02406	RG	Buckingham Gunnery Range	Lehigh Acres	Designed Historic Landscape - 5 Contrib Resources	Eligible	
LL02409	AR	Gunnery Range #3	Lehigh Acres		Not Eligible	


Gunnery Range #2
Gunnery Range #3
SR 82
Buckingham Gunnery Range
Gunnery Range #4
Gunnery Range #5
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

STEARNS WEAVER MILLER
WEISSLER ALHADEFF & SITTERSON, P.A.

Tina M. Ekblad, MPA, AICP
106 E. College Avenue, Suite 700
Tallahassee, FL 32301
(850) 354-7624
tekblad@stearnsweaver.com

November 10, 2022

VIA DIRECT UPLOAD

Brandon Dunn, Principal Planner
Department of Community Development, Zoning Section
Lee County
P.O. Box 398
Fort Myers, FL 33902-0398
BDunn@leegov.com

RE: Daniels South Comprehensive Plan Amendments
CPA2021-00017 & CPA2021-00018 – 3rd Insufficiency Response

Dear Mr. Dunn,

The purpose of this letter is to provide a response to the Lee County Department of Community Development's review comments dated October 28th, 2022, for the Comprehensive Plan Amendment applications referenced above. We are in receipt of the Serv-U File Share from Janet Miller on November 2, 2022 and have also provided copies of the requested electronic files to that link. We believe that with this additional information, the comprehensive plan amendment applications can be scheduled for consideration by the Local Planning Agency and Board of County Commissioners. However, we continue to welcome additional calls and emails from County Staff to address any substantive comments ahead of the public hearings.

1. The integrated surface and groundwater model files were not provided as part of the resubmittal. Please provide the model files to Lee County Division of Natural Resources. Please note Staff will run the models.

   Response: The requested digital model files have been uploaded through Lee County's Serv-U File system on November 3, 2022 and should be available to County staff.

   If there is any issue accessing the files, they are also available through Progressive Water Resources' (PWR) Sharefile link below. As indicated in the model output files previously submitted, Peter A. Brown, P.E., certified the results and if staff has any questions or comments, please do not hesitate to contact Peter directly at PWR's Sarasota office. Please note that during their development, the model files were reviewed by the firm that created ICPR4, Streamline Technologies, Inc. After review of the model files, Streamline was in agreement with both the approach and results determined by PWR.

   https://prowatersource.sharefile.com/d-sec48e31b96e7442ea021b450416c4aa7

2. On Page 2 of the Response Letter the applicant states "On June 28, 2022 a dry season groundwater level elevation was recorded in the monitor well at a depth of 20.96 feet below the measuring point". Lee County rain gauges at the Gateway Water Treatment Plant received 9.9 inches in May and 15.34 inches in June for a combined rainfall of 25.24 inches. This is

not considered an accurate account for a "Dry Season" data point. Please use a more accurate "Dry Season" water level reading from the months of February, March, or April. Please revise the groundwater model accordingly.

Response: Staff is correct in that rainfall amounts in Lee County are typically lower from January through May as compared to June and the amount of rain reported at the Gateway Water Treatment Plant for May and June 2022 was well above the 30-year mean for those same months. However, as staff is also aware there is a delay in which rainfall recharges (increases groundwater levels) within the underlying confined Sandstone Aquifer and records indicate that seasonal highs for the Sandstone Aquifer typically occur from September through November.

To provide additional assurance that the proposed project will not result in adverse impacts to the water resources, PWR looked at the period of record groundwater elevations recorded at USGS Sandstone Aquifer monitoring well L-729, located to the east, within Lehigh Acres. L-729 has been monitored since May 1977 and on April 15, 2017 (prior to Hurricane Irma) groundwater levels exhibited a period of record low of -3.74 feet NGVD or -4.94 feet NAVD. As previously provided, the Sandstone Aquifer at the Applicant's Timber Creek development located across Daniels Parkway occurs at elevation -55.45 feet NAVD. Therefore, the Maximum Developable Limit (MDL) in the vicinity of the proposed Daniels South development is anticipated to occur at approximately -35.45 feet NAVD. Assuming the highly conservative period of record low groundwater elevation recorded at monitor well L-729, Sandstone Aquifer groundwater levels would remain 30.51 feet above the MDL at the applicant's property.

As indicated in PWR's groundwater flow modeling, the Applicants' proposed use of the Sandstone Aquifer for irrigation is predicted to exhibit approximately 1-foot of drawdown at the property boundary. Using the same conservative approach described above, even under the worst-case scenario (using the period of record low from L-729) groundwater levels would remain approximately 29.51 feet above the MDL and 49.51 feet above the Sandstone Aquifer. Therefore, no adverse impacts to the water resources are anticipated. Please note that to date, groundwater levels collected at Timber Creek's Sandstone Aquifer monitoring well exhibits less variability, as compared to monitor wells within, or in close proximity to, Lehigh Acres. This is not surprising given the extraordinary number of Sandstone Aquifer wells within Lehigh Acres.

3. Please provide the groundwater model results including water level contours resulting from a maximum water withdrawal for 90 days with no recharge. Please detail which well and what qualifying dry season water level was used for the model.

Response: Please note that the 90-day Maximum Month groundwater flow modelling performed by PWR computes drawdown and is independent of groundwater levels. Once the model run is complete, the results are then superimposed on groundwater levels to determine potential impacts to the MDL, exiting egal users, etc. (see response to Question No. 2). Therefore, the model results previously submitted are still relevant.

We believe that the responses above and attached materials provide the information necessary to appropriately respond to the comments provided. Should additional information be necessary to find the application sufficient, please do not hesitate to contact me at 850-354-7624 or email me at tekblad@stearnsweaver.com.

Sincerely,

Tina M. Ekblad

Tina M. Ekblad, MPA, AICP
Director of Planning

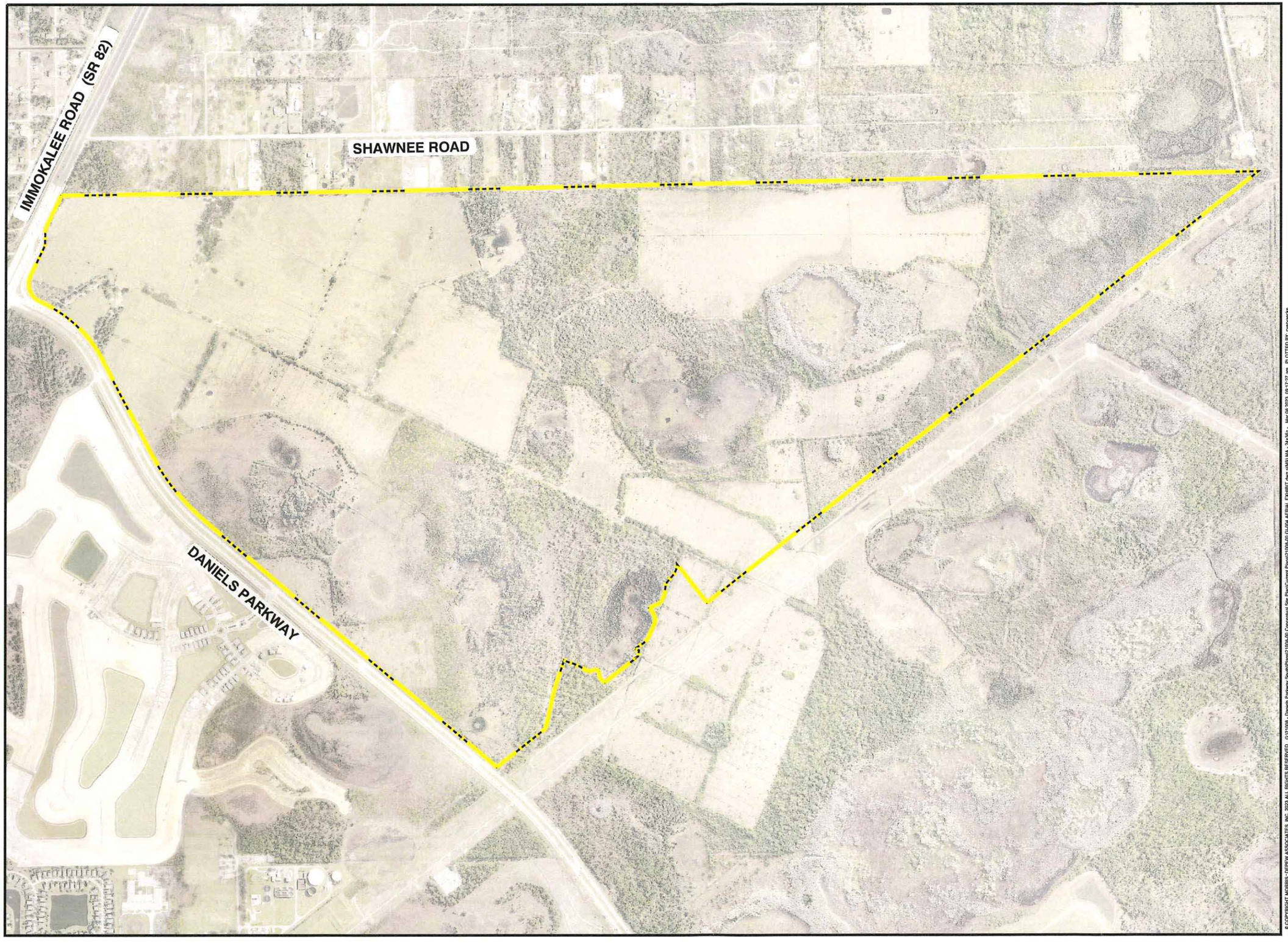
Cc: Russell Smith, Russell.R.Smith@lennar.com
Barry Ernst, Barry.Ernst@lennar.com
Lennar Homes, LLC

Steven C. Hartsell, SteveHartsell@paveselaw.com
Pavese Law Firm

David Brown, DBrown@prowatersource.com
Progressive Water Resources, LLC

Ryan Shute, RShute@m-da.com
Michael Ekblad, MEkblad@m-da.com
Morris-Depew Associates, Inc.

Shane Johnson, ShaneJ@passarella.net
Passarella & Associates, Inc.



PROJECT:

DANIELS
PARKWAY SOUTH
COMPREHENSIVE
PLAN AMENDMENT

LOCATION:

13400 DANIELS PARKWAY
FORT MYERS, FL 33913

CLIENT:

LENNAR

CONSULTANT:

MORRIS DEPEW

ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
FL CA NO. 6532 / FL CERT NO. L06891 / LC26000330

Fort Myers
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Fort Myers, Florida 33901
(239) 337-3993
Fax: (239) 337-3994
Toll free: 866-337-7341

Tallahassee
113 South Monroe Street
1st Floor
Tallahassee, Florida 32301
Toll free: 866-337-7341

Destin
5597 Highway 98
Unit 201
Santa Rosa Beach, Florida 32459
Toll free: 866-337-7341

PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

AERIAL EXHIBIT

SHEET NUMBER: (GI-004)

500 0 250 500
SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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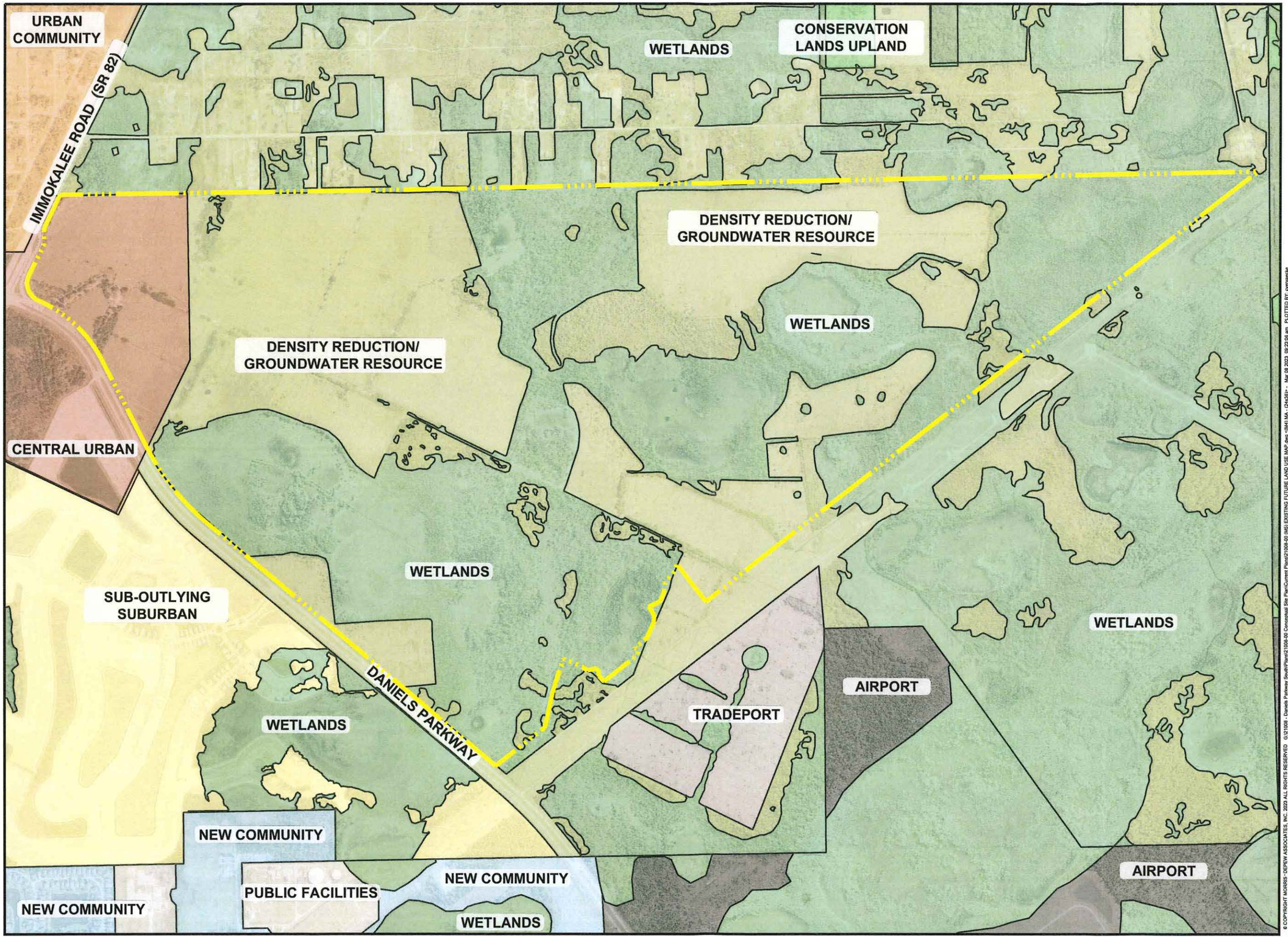

PROJECT:

DANIELS PARKWAY SOUTH COMPREHENSIVE PLAN AMENDMENT

LOCATION:

13400 DANIELS PARKWAY
FORT MYERS, FL 33913

CLIENT:

LENNAR

CONSULTANT:

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5597 Highway 98
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Santa Rosa Beach, Florida 32459
Toll free: 866-337-7341

PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

EXISTING FUTURE LAND USE MAP

SHEET NUMBER: EXHIBIT - M4 (1-A)

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SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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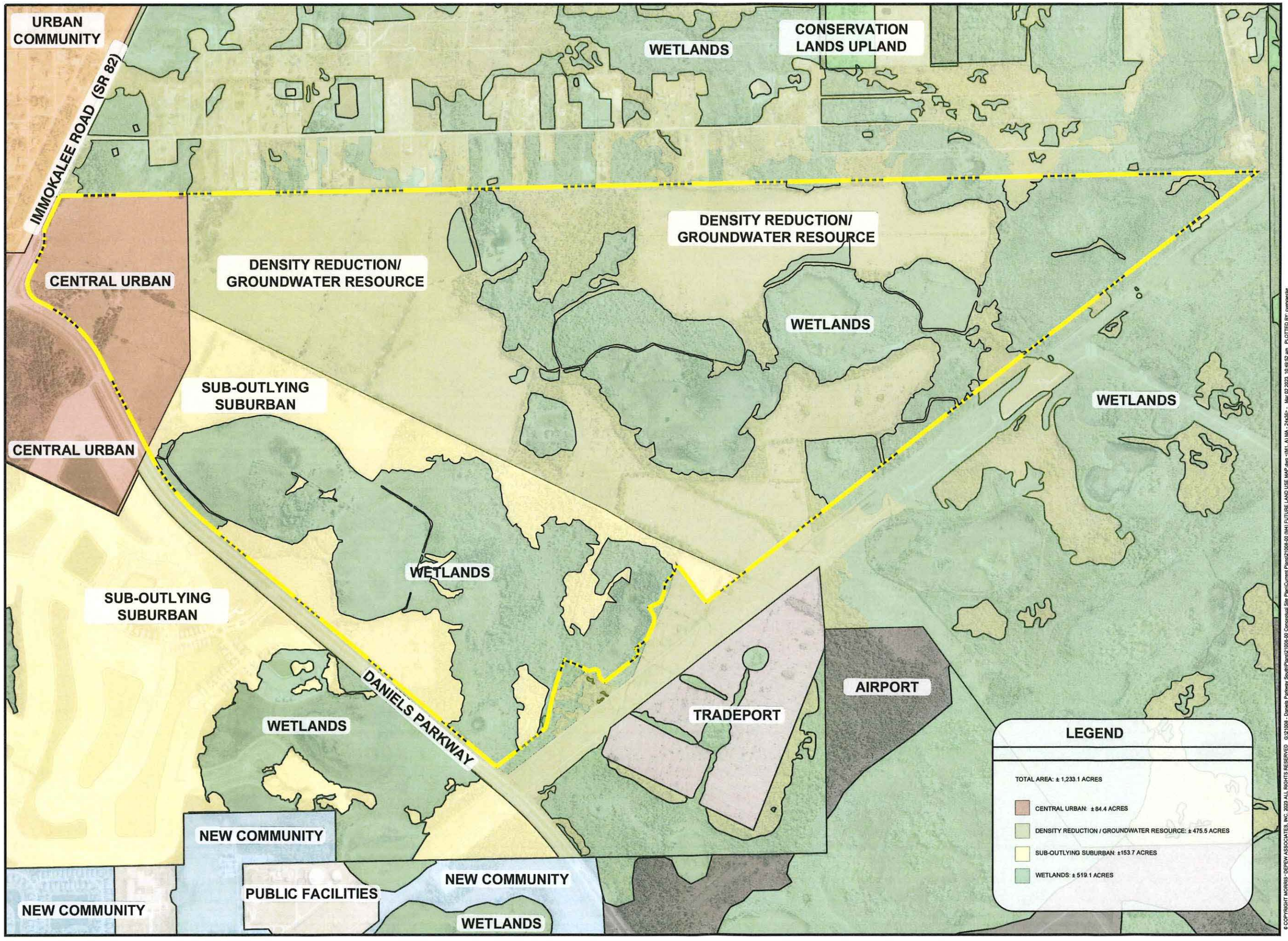

PROJECT:

DANIELS PARKWAY SOUTH COMPREHENSIVE PLAN AMENDMENT

LOCATION:

13400 DANIELS PARKWAY
FORT MYERS, FL 33913

CLIENT:

LENNAR

CONSULTANT:

MORRIS DEPEW

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Tallahassee, Florida 32301
Toll free: 866-337-7341

Destin
5597 Highway 98
Unit 301
Santa Rosa Beach, Florida 32459
Toll free: 888-337-7341

PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/2/2023

SHEET TITLE:

PROPOSED FUTURE LAND USE MAP

SHEET NUMBER: (M1. A)

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SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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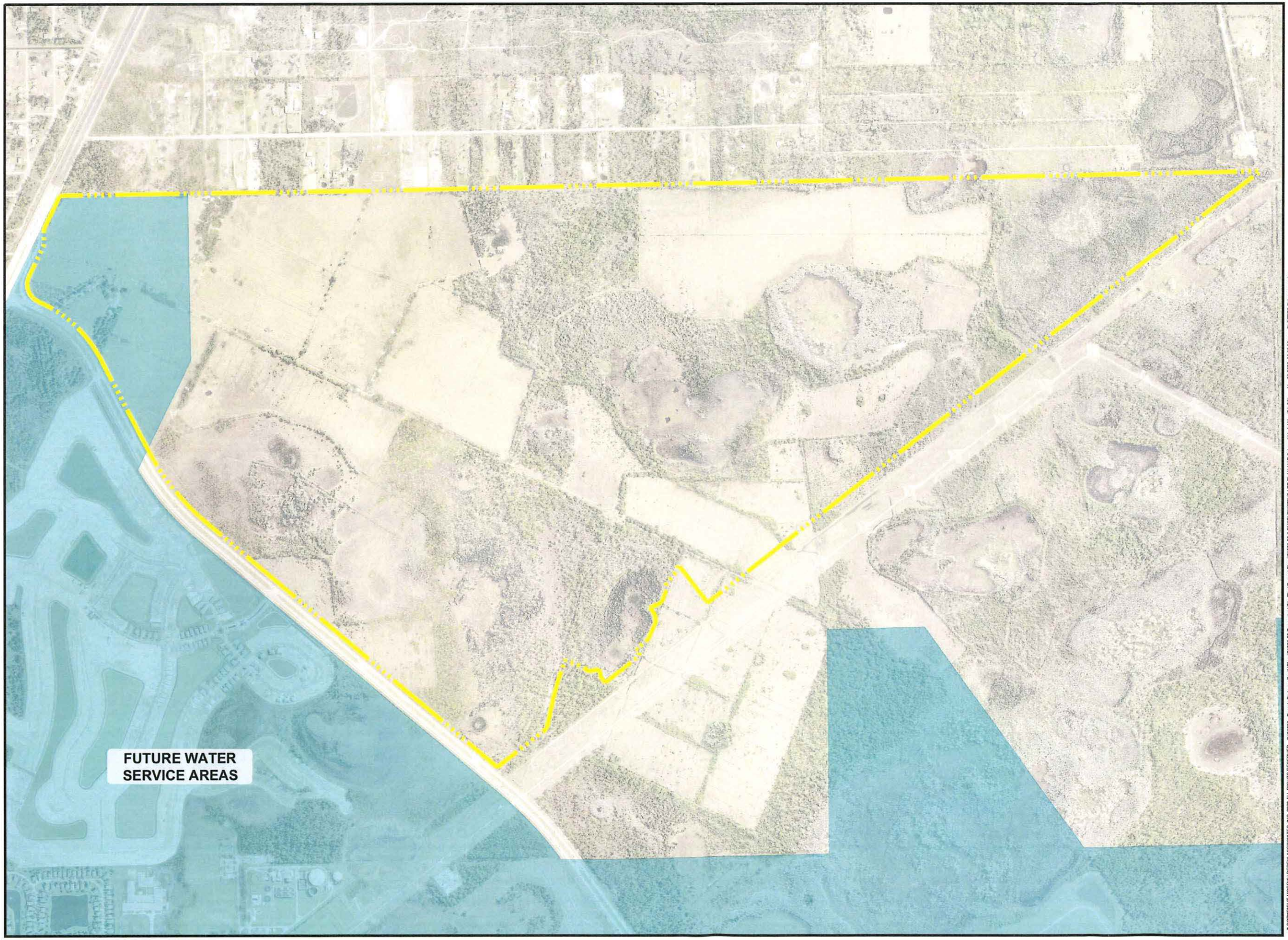

PROJECT:

DANIELS
PARKWAY SOUTH
COMPREHENSIVE
PLAN AMENDMENT

LOCATION:

13400 DANIELS PARKWAY
FORT MYERS, FL 33913

CLIENT:

LENNAR

CONSULTANT:

MORRIS DEPEW
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
FL CA NO. 6532 / FL CERT NO. LB6691 / LC26000330

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(239) 337-3993
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Toll free: 866-337-7341

Destin
5597 Highway 98
Unit 201
Santa Rosa Beach, Florida 32459
Toll free: 866-337-7341

PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

EXISTING LEE
PLAN MAP 4-A

SHEET NUMBER: (M4. A)

500 0 250 500
SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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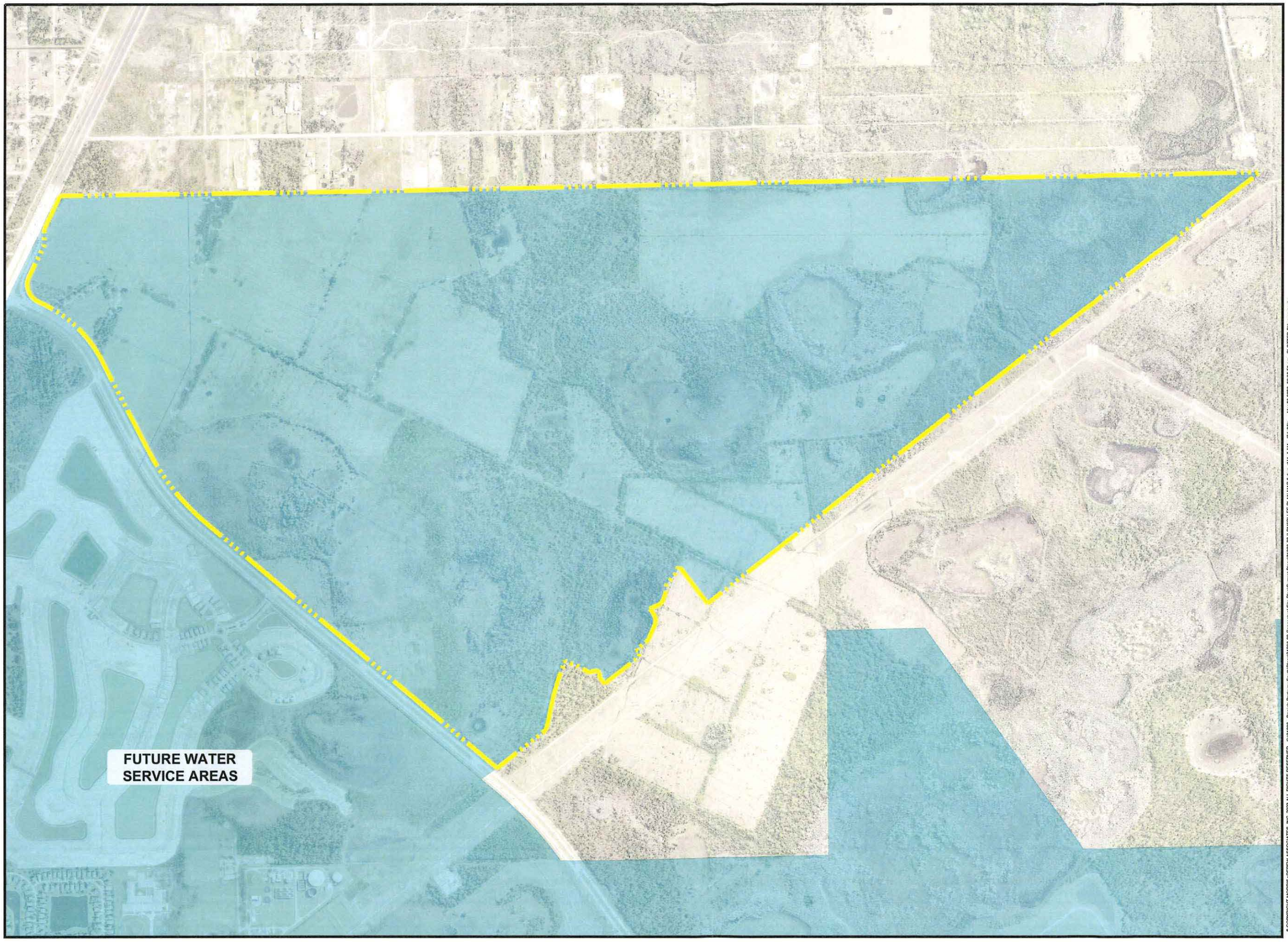

PROJECT:

DANIELS
PARKWAY SOUTH
COMPREHENSIVE
PLAN AMENDMENT

LOCATION:

13400 DANIELS PARKWAY
FORT MYERS, FL 33913

CLIENT:

LENNAR

CONSULTANT:

MORRIS DEPEW

ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS

FL CA NO 6632 / FL CERT NO L06691 / LC26000330

Fort Myers
2914 Cleveland Avenue
Fort Myers, Florida 33901
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Fax: (239) 337-3994
Toll free: 866-337-7341

Tallahassee
113 South Monroe Street
1st Floor
Tallahassee, Florida 32301
Toll free: 866-337-7341

Destin
5597 Highway 98
Unit 201
Santa Rosa Beach, Florida 32459
Toll free: 866-337-7341

PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

PROPOSED LEE
PLAN MAP 4-A

SHEET NUMBER: (M4. A)

500 0 250 500
SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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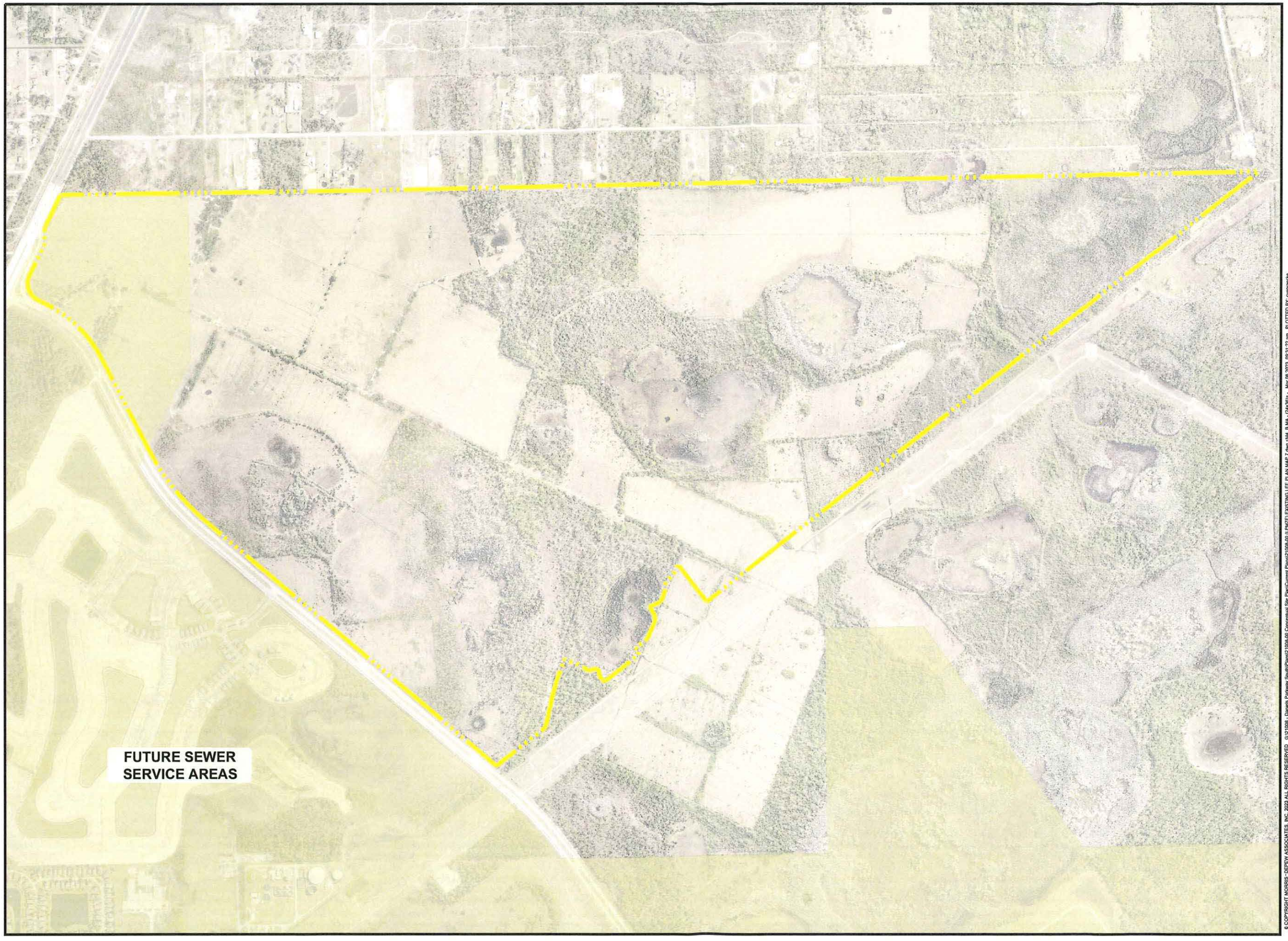

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PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

EXISTING LEE
PLAN MAP 4-B

SHEET NUMBER: (M4. B)

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SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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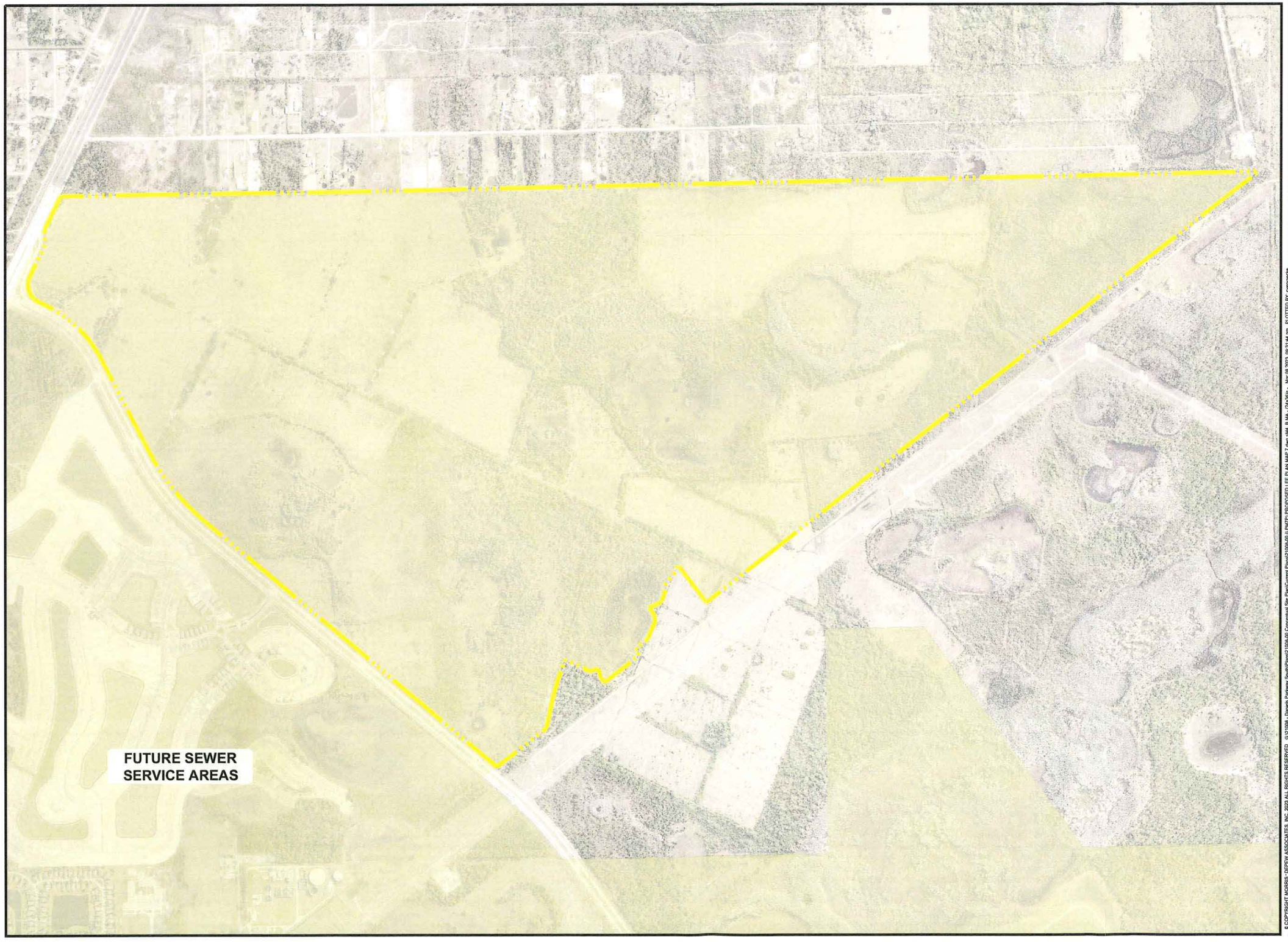

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LOCATION:

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CLIENT:

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PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

PROPOSED LEE
PLAN MAP 4-B

SHEET NUMBER: (M4. B)

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SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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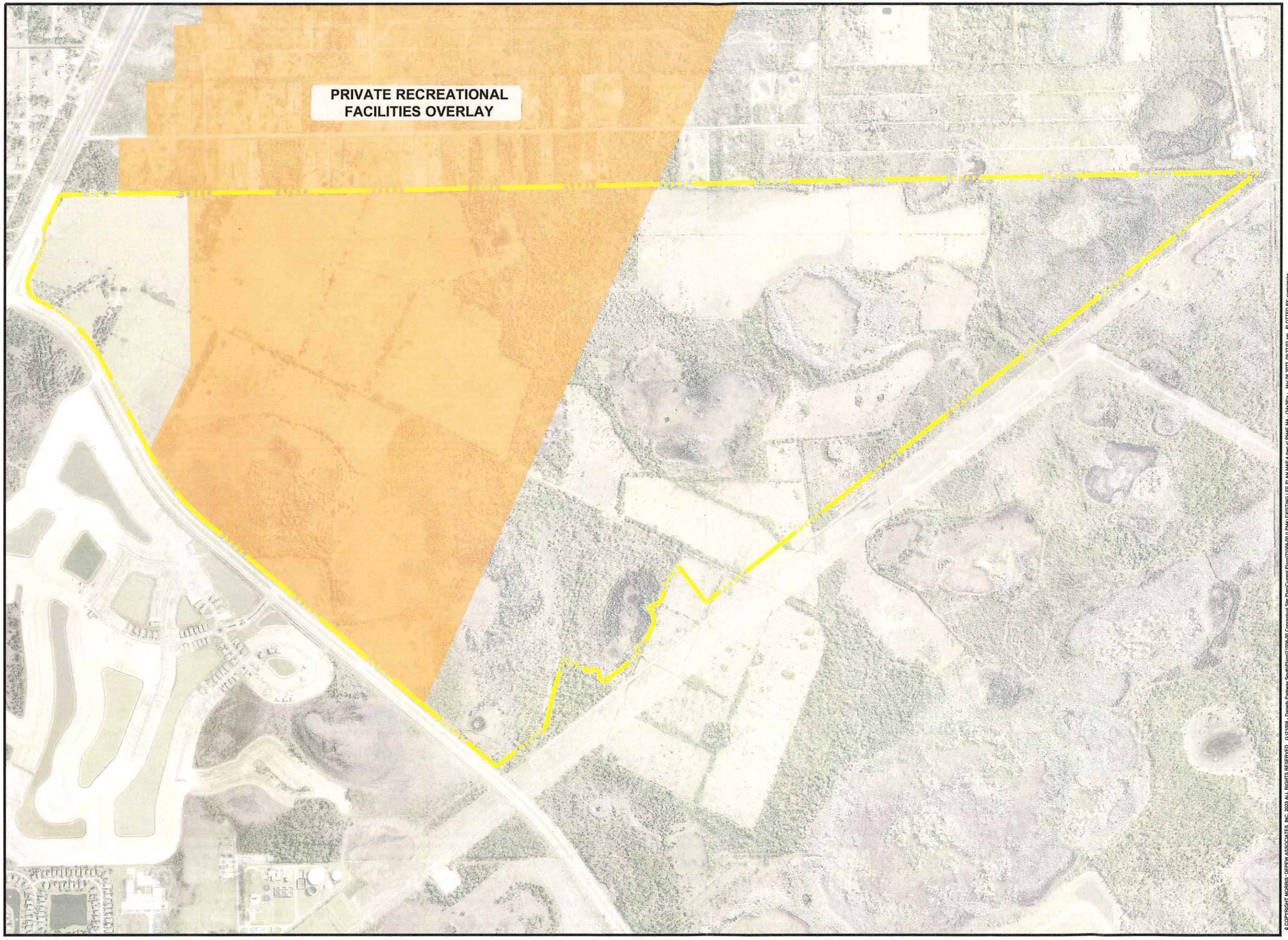

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PLAN AMENDMENT

LOCATION:

13400 DANIELS PARKWAY
FORT MYERS, FL 33913

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PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

EXISTING LEE
PLAN MAP 1-F

SHEET NUMBER: (M1. F)

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SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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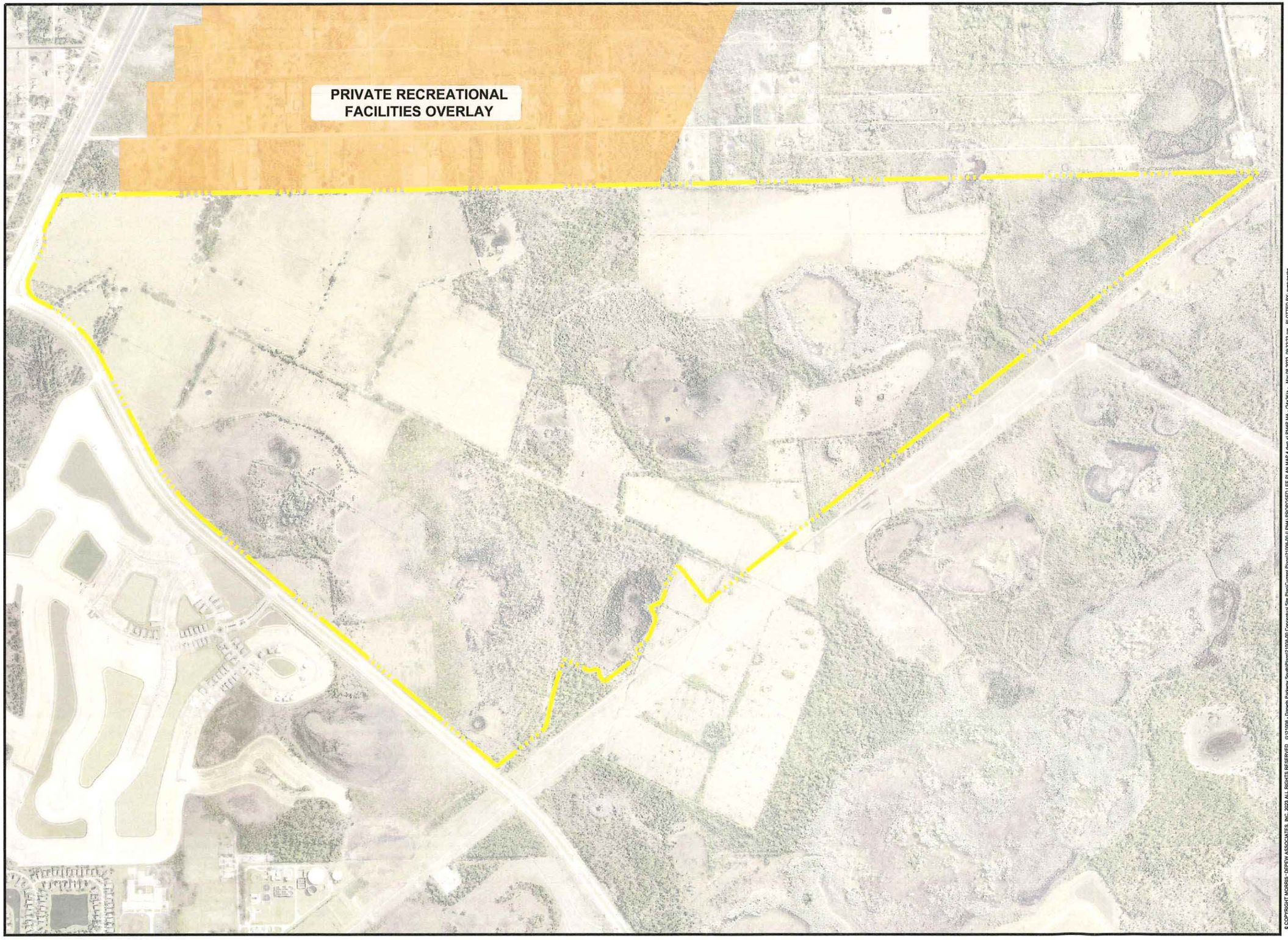

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DANIELS
PARKWAY SOUTH
COMPREHENSIVE
PLAN AMENDMENT

LOCATION:

13400 DANIELS PARKWAY
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PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

PROPOSED LEE
PLAN MAP 1-F

SHEET NUMBER: (M1. F)

500 0 250 500
SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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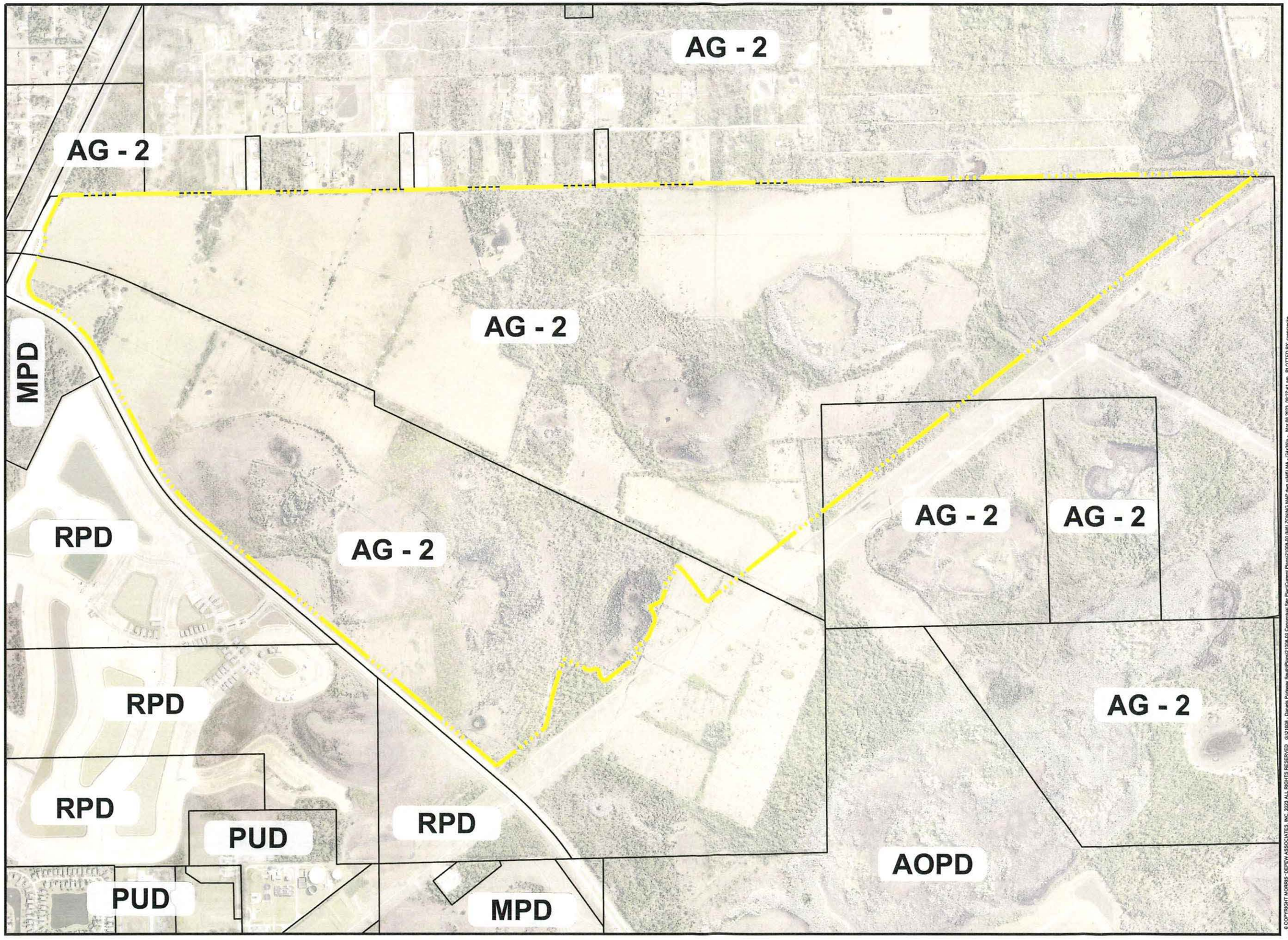

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PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

ZONING MAP

SHEET NUMBER: EXHIBIT - M6

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SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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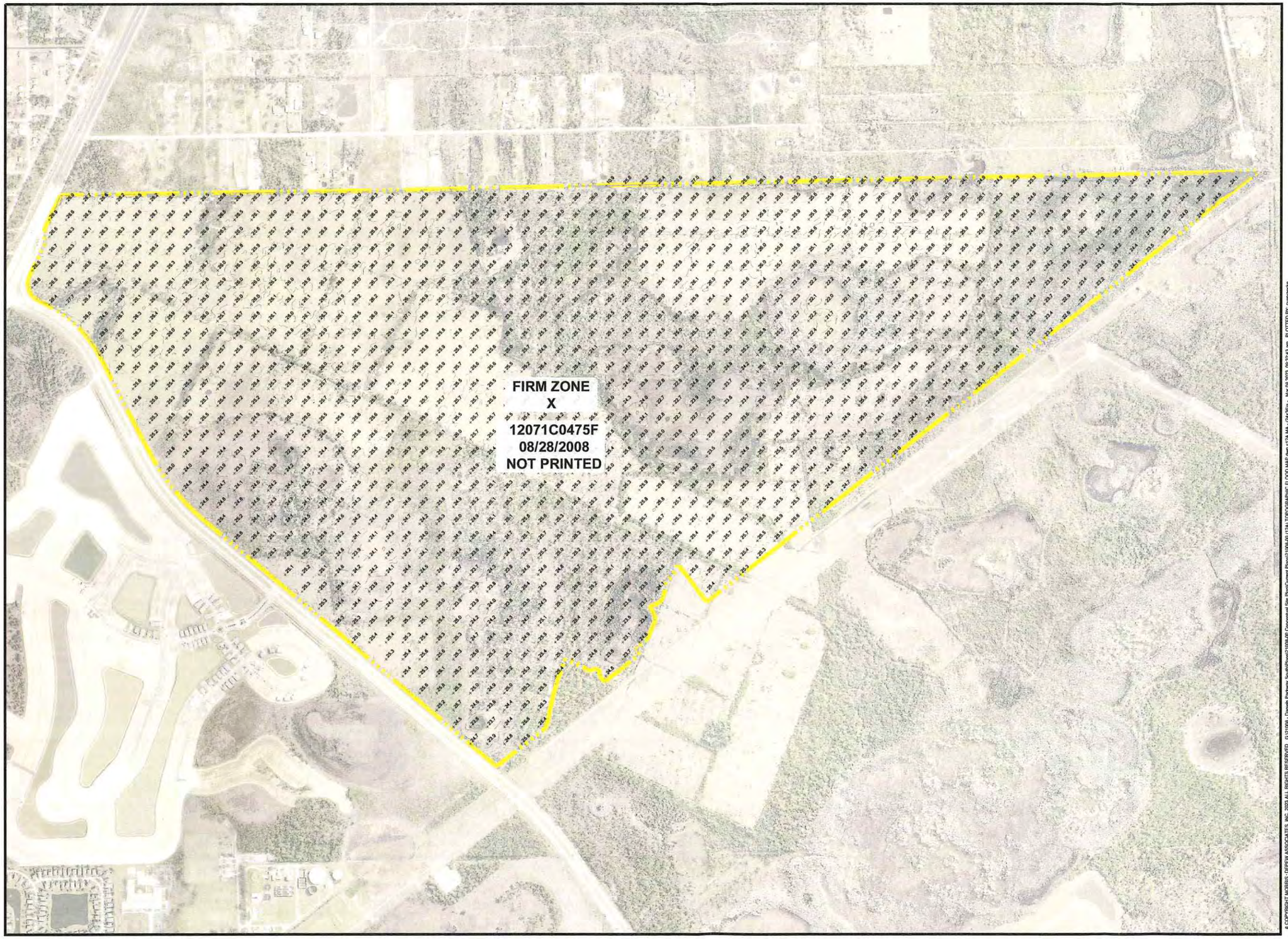

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DANIELS PARKWAY SOUTH COMPREHENSIVE PLAN AMENDMENT

LOCATION:

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PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER:	TME
DRAWING BY:	CJV
JURISDICTION:	LEE COUNTY
DATE:	3/8/2023

SHEET TITLE:

TOPOGRAPHIC FLOOD MAP

SHEET NUMBER: 12A

500 0 250 500
SCALE 1"=500'

JOB/FILE NUMBER: 21008-00

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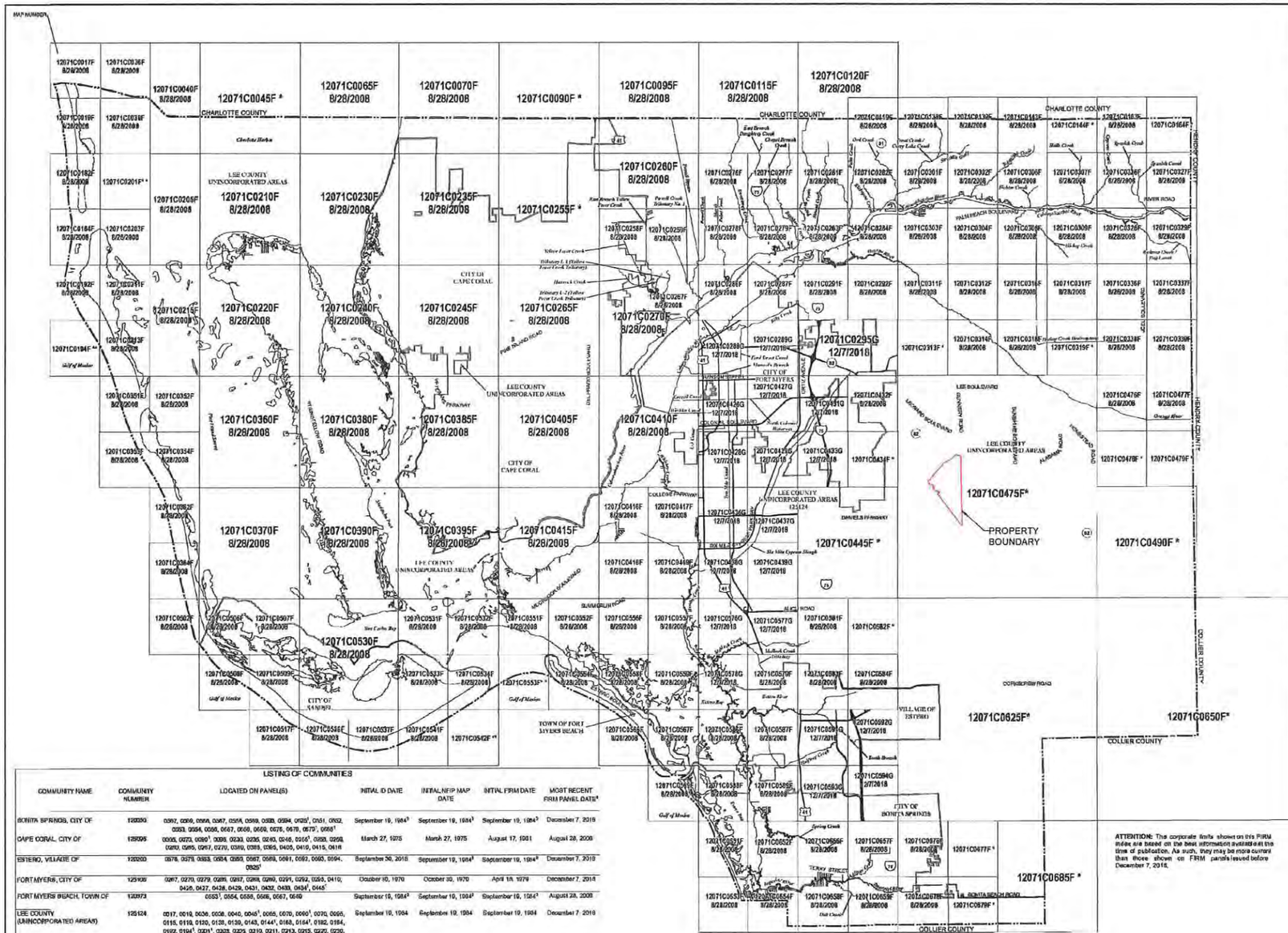

FIRM Panel Dates For Printed Panels of Lee County, Florida (And Incorporated Areas)					
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0040F	August 28, 2008	0259F	August 28, 2008	0477F	August 28, 2008
0045F	August 28, 2008	0260F	August 28, 2008	0478F	August 28, 2008
0065F	August 28, 2008	0270F	August 28, 2008	0479F	August 28, 2008
0070F	August 28, 2008	0276F	August 28, 2008	0480F	August 28, 2008
0090F	August 28, 2008	0277F	August 28, 2008	0481F	August 28, 2008
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0120F	August 28, 2008	0281F	August 28, 2008	0484F	August 28, 2008
0182F	August 28, 2008	0282F	August 28, 2008	0485F	August 28, 2008
0184F	August 28, 2008	0283F	August 28, 2008	0486F	August 28, 2008
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0203F	August 28, 2008	0288F	August 28, 2008	0491F	August 28, 2008
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0423F	August 28, 2008	0447F	August 28, 2008	0616F	August 28, 2008
0424F	August 28, 2008	0448F	August 28, 2008	0617F	August 28, 2008
0425F	August 28, 2008	0449F	August 28, 2008	0618F	August 28, 2008
0426F	August 28, 2008	0450F	August 28, 2008	0619F	August 28, 2008
0427F	August 28, 2008	0451F	August 28, 2008	0620F	August 28, 2008
0428F	August 28, 2008	0452F	August 28, 2008	0621F	August 28, 2008
0429F	August 28, 2008	0453F	August 28, 2008	0622F	August 28, 2008
0430F	August 28, 2008	0454F	August 28, 2008	0623F	August 28, 2008
0431F	August 28, 2008	0455F	August 28, 2008	0624F	August 28, 2008
0432F	August 28, 2008	0456F	August 28, 2008	0625F	August 28, 2008
0433F	August 28, 2008	0457F	August 28, 2008	0626F	August 28, 2008
0434F	August 28, 2008	0458F	August 28, 2008	0627F	August 28, 2008
0435F	August 28, 2008	0459F	August 28, 2008	0628F	August 28, 2008
0436F	August 28, 2008	0460F	August 28, 2008	0629F	August 28, 2008
0437F	August 28, 2008	0461F	August 28, 2008	0630F	August 28, 2008
0438F	August 28, 2008	0462F	August 28, 2008	0631F	August 28, 2008
0439F	August 28, 2008	0463F	August 28, 2008	0632F	August 28, 2008
0440F	August 28, 2008	0464F	August 28, 2008	0633F	August 28, 2008
0441F	August 28, 2008	0465F	August 28, 2008	0634F	August 28, 2008
0442F	August 28, 2008	0466F	August 28, 2008	0635F	August 28, 2008
0443F	August 28, 2008	0467F	August 28, 2008	0636F	August 28, 2008
0444F	August 28, 2008	0468F	August 28, 2008	0637F	August 28, 2008
0445F	August 28, 2008	0469F	August 28, 2008	0638F	August 28, 2008
0446F	August 28, 2008	0470F	August 28, 2008	0639F	August 28, 2008
0447F	August 28, 2008	0471F	August 28, 2008	0640F	August 28, 2008
0448F	August 28, 2008	0472F	August 28, 2008	0641F	August 28, 2008
0449F	August 28, 2008	0473F	August 28, 2008	0642F	August 28, 2008
0450F	August 28, 2008	0474F	August 28, 2008	0643F	August 28, 2008
0451F	August 28, 2008				

MAP REPOSITORIES

(Maps available for reference only, not for distribution)

BONITA SPRINGS, CITY OF
Administration Office
9101 Bonita Beach Road
Bonita Springs, Florida 34135

CAPE CORAL, CITY OF
Development Department
1015 Cultural Park Boulevard
Cape Coral, Florida 33990

ESTERO, VILLAGE OF
Community Development Department
9401 Corkscrew Palms Circle
Estero, Florida 34135

FORT MYERS, CITY OF
Development Department
1825 Hendry Street, Suite 101
Fort Myers, Florida 33901

FORT MYERS BEACH, TOWN OF
Council Chambers
2523 Estero Boulevard
Fort Myers Beach, Florida 33931

LEE COUNTY
(UNINCORPORATED AREAS)
Lee County Community Development Department
1500 Monroe Street, 2nd Floor
Fort Myers, Florida 33901

SANIBEL, CITY OF
Planning Department
800 Dunlop Road
Sanibel, Florida 33957

ATTENTION: The corporate limits shown on this FIRM index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before December 7, 2018.

LISTING OF COMMUNITIES

COMMUNITY NAME	COMMUNITY NUMBER	LOCATED ON PANEL(S)	INITIAL ID DATE	INITIAL NFIP MAP DATE	INITIAL FIRM DATE	MOST RECENT FIRM PANEL DATE[1]
BONITA SPRINGS, CITY OF	120680	0397, 0506, 0508, 0567, 0568, 0569, 0578, 0579, 0584, 0625[1], 0651, 0652, 0653, 0654, 0655, 0667, 0668, 0669, 0676, 0678, 0679[1], 0685[1]	September 19, 1984[3]	September 19, 1984[3]	September 19, 1984[3]	December 7, 2018
CAPE CORAL, CITY OF	125095	0005, 0070, 0080[1], 0085, 0230, 0235, 0240, 0245, 0255[1], 0258, 0259, 0260, 0265, 0267, 0270, 0289, 0289, 0290, 0405, 0410, 0415, 0418	March 27, 1975	March 27, 1975	August 17, 1981	August 28, 2008
ESTERO, VILLAGE OF	120200	0578, 0579, 0583, 0584, 0585, 0587, 0589, 0591, 0592, 0593, 0594, 0625[1]	September 30, 2016	September 19, 1984[3]	September 19, 1984[3]	December 7, 2018
FORT MYERS, CITY OF	125106	0267, 0270, 0279, 0281, 0287, 0289, 0290, 0291, 0292, 0303, 0410, 0426, 0427, 0428, 0429, 0431, 0432, 0433, 0434[1], 0445[1]	October 30, 1970	October 30, 1970	April 16, 1979	December 7, 2018
FORT MYERS BEACH, TOWN OF	120673	0553[1], 0554, 0555, 0556, 0557, 0569	September 19, 1984[3]	September 19, 1984[3]	September 19, 1984[3]	August 28, 2008
LEE COUNTY (UNINCORPORATED AREAS)	125124	0017, 0019, 0036, 0038, 0040, 0045[1], 0065, 0070, 0080[1], 0090, 0095, 0115, 0119, 0120, 0135, 0150, 0143, 0144[1], 0183, 0184[1], 0192, 0194, 0194[1], 0201[1], 0203, 0205, 0210, 0211, 0213, 0215, 0220, 0230, 0235, 0240, 0245, 0255[1], 0258, 0259, 0260, 0265, 0267, 0270, 0278, 0277, 0278, 0279, 0281, 0282, 0283, 0284, 0286, 0287, 0289, 0291, 0292, 0295, 0301, 0302, 0303, 0304, 0306, 0307, 0308, 0309, 0311, 0312, 0313[1], 0314, 0316, 0317, 0318, 0319[1], 0326, 0327, 0328, 0329, 0330, 0337, 0339, 0350, 0351, 0352, 0353, 0354, 0360, 0362, 0364, 0370, 0380, 0385, 0390, 0395, 0410, 0415, 0416, 0417, 0418, 0419, 0420, 0427, 0428, 0429, 0431, 0432, 0433, 0434[1], 0435, 0437, 0438, 0439, 0445[1], 0475[1], 0476, 0477, 0478[1], 0479[1], 0480[1], 0502, 0505, 0507, 0509, 0531, 0532, 0533, 0534, 0591, 0592, 0593[1], 0554, 0559, 0597, 0598, 0599, 0598, 0597, 0568, 0578, 0577, 0576, 0579, 0581, 0582[1], 0583, 0584, 0585, 0587, 0588, 0589, 0592, 0594, 0625, 0650[1], 0676, 0677[1], 0678, 0679[1], 0685[1]	September 19, 1984	September 19, 1984	September 19, 1984	December 7, 2018
SANIBEL, CITY OF	120402	0070, 0506, 0507, 0508, 0509, 0517, 0530, 0531, 0532, 0534, 0536, 0537, 0541, 0542[1]	July 23, 1976	July 23, 1976	April 16, 1979	August 28, 2008

[1]PANEL NOT PRINTED
[2]INCLUDES MOST RECENT MAP INDEX
[3]THIS COMMUNITY DID NOT HAVE A FIRM PRIOR TO THIS FIRST COUNTYWIDE FIRM. THE LAND AREA FOR THIS COMMUNITY WAS PREVIOUSLY SHOWN ON THE FIRM FOR THE UNINCORPORATED AREAS OF LEE COUNTY, BUT NOT IDENTIFIED AS A SEPARATE NFIP COMMUNITY. THEREFORE, THE DATES FOR THIS COMMUNITY WERE TAKEN FROM THE FIRM FOR LEE COUNTY.

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREA
** PANEL NOT PRINTED - OPEN WATER AREA

-NOTE-

DESIGNATED CBRS AREAS ARE LOCATED ON PANELS 0182, 0184, 0192, 0194[1], 0200, 0205, 0211, 0213, 0215, 0220, 0351, 0352, 0353, 0360, 0362, 0370, 0395, 0415, 0502, 0506, 0507, 0508, 0509, 0532, 0531, 0532, 0533, 0534, 0537, 0541, 0551, 0552, 0553[1], 0554, 0555, 0567, 0569, 0588, 0589, 0651, 0652, 0653, AND 0654.

[1]PANEL NOT PRINTED

NOTE TO USER

Future revisions to this FIRM index will only be issued to communities that are located on FIRM panels being revised. This FIRM index therefore remains valid for FIRM panels dated 12/7/2018 or earlier. Please refer to the "MOST RECENT FIRM PANEL DATE" column in the table to determine the most recent FIRM index date for each community.

MAP DATES

This FIRM index displays the map data for each FIRM panel at the time that this index was printed. Because this index may not be distributed to unaffected communities in subsequent revisions, users may determine the current map date for each FIRM panel by visiting the FEMA Map Information eXchange website at http://www.msc.fema.gov or by calling the FEMA Map Information eXchange (FMIX), toll free, at 1-877-FEMA-MAP (1-877-336-2627).

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current "FIRM Index". These may be ordered directly from the FEMA Map Service Center at the number listed above.

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

MAP INDEX

FIRM
FLOOD INSURANCE RATE MAP
LEE COUNTY
FLORIDA
AND INCORPORATED AREAS
(SEE LISTING OF COMMUNITIES TABLE)

MAP INDEX

PANELS PRINTED: 17, 19, 36, 38, 40, 65, 70, 80, 115, 119, 120, 135, 136, 143, 153, 182, 184, 192, 193, 200, 210, 211, 213, 215, 220, 230, 235, 240, 245, 258, 259, 260, 265, 267, 270, 275, 277, 278, 279, 281, 282, 283, 284, 286, 287, 288, 289, 291, 292, 295, 301, 302, 303, 304, 306, 307, 308, 309, 311, 312, 314, 316, 317, 318, 319, 326, 327, 328, 329, 336, 337, 338, 339, 351, 352, 353, 354, 360, 362, 364, 370, 380, 385, 390, 395, 410, 415, 416, 417, 418, 419, 420, 427, 428, 429, 431, 432, 433, 434, 435, 437, 438, 439, 475, 476, 477, 478, 479, 480, 502, 505, 506, 507, 508, 509, 517, 530, 531, 532, 533, 534, 535, 537, 541, 551, 552, 554, 555, 556, 557, 558, 559, 567, 568, 569, 576, 577, 578, 579, 581, 582, 583, 584, 585, 587, 588, 589, 591, 592, 593, 594, 651, 652, 653, 654, 655, 667, 668, 669, 676, 678, 679

MAP NUMBER
12071C1ND0B
MAP REVISED
DECEMBER 7, 2018

Federal Emergency Management Agency

PROJECT:

DANIELS PARKWAY SOUTH COMPREHENSIVE PLAN AMENDMENT

LOCATION:

13400 DANIELS PARKWAY
FORT MYERS, FL 33913

CLIENT:

LENNAR

CONSULTANT:

MORRIS DEPEW
ENGINEERS • PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
FL CA NO. 8532 / FL CERT NO. LB6891 / LC26000330

Fort Myers
2014 Cleveland Avenue
Fort Myers, Florida 33901
(239) 337-3993
Fax: (239) 337-3994
Toll free: 866-337-7341

Tallahassee
113 South Monroe Street
1st Floor
Tallahassee, Florida 32301
Toll free: 866-337-7341

Destin
5597 Highway 98
Unit 201
Santa Rosa Beach, Florida 32459
Toll free: 866-337-7341

PREPARED BY:

REVISIONS	DATE

PROJECT MANAGER: TME
DRAWING BY: CJV
JURISDICTION: LEE COUNTY
DATE: 3/8/2023

SHEET TITLE:

FLOOD INSURANCE RATE MAP

SHEET NUMBER: 12B

11000 0 5500 11000
SCALE 1"=11000'

JOB/FILE NUMBER: 21008-00

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Daniels South
Comprehensive Plan Amendment & Planned Development
Meeting Summary

On April 4th, 2022 a meeting was held at the East Lee County Regional Library, 881 Gunnery Road North, Fort Myers, FL beginning at 5:30 pm. No members of the public attended the meeting. Representatives from Lennar Homes LLC, Morris-Depew Associates, Inc., and Pavese Law Firm stayed at the meeting location from 5:15 pm to 6:00 pm.

Community Meeting For a Proposed Development

An informational meeting will occur on Monday April 4, 2022 at 5:30pm regarding an application to rezone property for a mixed use development to be located at the southeast corner of the intersection of SR 82 and Daniels Parkway. The meeting will be held at the East County Regional Library, 8881 Gunnery Road N., Lehigh Acres. Please contact Tina M. Ekblad, Director of Planning at Stearns Weaver Miller Law Firm for additional information, tekblad@stearnsweaver.com or 850-354-7624.

Daniels South

Comprehensive Plan Amendment & Planned Development

Meeting Summary

On April 5th, 2022 a meeting was held at Sunny Grove Landscaping & Nursery, 1511 South Mallard Lane, Fort Myers, FL beginning at 5:30 pm. No members of the public attended the meeting. Representatives from Lennar Homes LLC, Morris-Depew Associates, Inc., and Pavese Law Firm stayed at the meeting location from 5:15 pm to 6:00 pm.

An informational meeting will occur on Tuesday April 5, 2022 at 5:30pm regarding a comprehensive plan and rezoning for a mixed use development to be located at the southeast corner of the intersection of SR 82 and Daniels Parkway. The meeting will be held at Sunny Grove Landscaping & Nursery at 15111 S Mallard Lane Fort Myers, FL 33913 in the business conference room. Please contact Tina M. Ekblad, Director of Planning at Stearns Weaver Miller Law Firm for additional information. tekblad@stearnsweaver.com or 850-354-7624.
AD#5180583 March 25, 2022