

RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

WHEREAS, Waldrop Engineering, LLC., filed an application on behalf of the property owner, Johnson Sam TR for Jerry Johnson Trust, to rezone a 88.3± acre parcel from Agricultural (AG-2) and Residential Planned Development (RPD) to RPD in reference to 31 Oaks RPD; and

WHEREAS, a public hearing before the Lee County Zoning Hearing Examiner, Donna Marie Collins, was advertised and held on May 18, 2023; and

WHEREAS, the Hearing Examiner gave full consideration to the evidence in the record for Case #DCI2021-00051 and recommended APPROVAL of the Request; and

WHEREAS, a second public hearing was advertised and held on August 2, 2023 before the Lee County Board of Commissioners; and,

WHEREAS, the Lee County Board of Commissioners gave full and complete consideration to the recommendations of the staff, the Hearing Examiner, the documents on record and the testimony of all interested persons.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS:

SECTION A. REQUEST

The applicant filed a request to rezone a 88.3± acre parcel from AG-2 and RPD to RPD to allow 265 single family residential dwelling units, or 342 townhouse dwelling units, or a combination of those units.

The property is located in the Suburban and Wetlands Future Land Use Categories and is legally described in attached Exhibit A. The request is APPROVED, SUBJECT TO the conditions and deviations specified in Sections B and C below.

SECTION B. CONDITIONS

All references to uses are as defined or listed in the Lee County Land Development Code (LDC).

1. Master Concept Plan (MCP). Development must be consistent with the two-page MCP entitled "31 Oaks Master Concept Plan" prepared by J.R. Evans Engineering., dated May 16, 2023, except as modified by the conditions below (MCP - Exhibit C).

Compliance with Lee Plan and Land Development Code (LDC). Development must comply with the Lee Plan and LDC, except where deviations are approved herein. Changes to the MCP or conditions of approval may require further development approvals.

Approved Development Parameters. The project is approved to construct up to 265 single family dwelling units or 342 townhouse dwelling units, or a combination thereof subject to conditions herein.

2. Schedule of Permitted Uses and Property Development Regulations

a. Schedule of Uses

Accessory uses, buildings, and structures

Dwelling unit:

Single-Family

Townhouse

Entrance gates and gatehouse

Essential services

Essential service facilities:

Group I

Excavation:

Water retention

Excess Spoil Removal

Fences, Walls

Models:

Display Center/Sales Center

Model Home

Model Unit

Real Estate Sales Office

Recreation facilities:

Personal

Private on-site

Signs

Temporary Uses:

Sales Office, Construction Office, Construction Related Storage

b. Site Development Regulations

	Single-Family Detached	Townhouse	Recreation/Clubhouse
Minimum Lot Size	4,000 sq. ft.	1,800 sq. ft.	N/A
Minimum Lot Width	40 feet	18 feet	N/A
Minimum Lot Depth	100 feet	100 feet	N/A
Maximum Lot Coverage	60 percent	65 percent	50 percent
Maximum Building Height	35 feet	35 feet	35 feet
Maximum Building Separation	10 feet	15 feet	10 feet
Setbacks			
Street (public roads)	25 feet	20 feet	N/A
Street (private roads)	20 feet/10 feet ¹	20 feet/10 feet ¹	20 feet
Side	5 feet ⁶	5 feet/0	10 feet ⁶

		feet ^{2, 6}	
Rear (Principal)	10 feet	5 feet	10 feet
Rear (Accessory)	5 feet/0 feet ³	5 feet/0 feet ³	5 feet
Perimeter	15 feet	15 feet ⁴	15 feet
Waterbody	20 feet	20 feet	20 feet
Preserve	20 feet ⁵	20 feet ⁵	20 feet ⁴

¹ 20 feet for front loaded garages, 10 feet for side loaded garages and secondary street setbacks on corner lots.

² No side setback is required from common lot line for townhouse units.

³ 5 feet (0 feet where lot abuts lake maintenance easement).

⁴ 15 feet or ½ building height (whichever is greater).

⁵ 30 feet for indigenous plant communities subject to fire.

⁶ Equipment pads may encroach up to 4.5 feet into a side setback subject to Deviation #4.

3. Mix of Permitted Dwelling Types

The first development order must establish the proposed mix of dwelling units and quantify the number of units for each dwelling unit type.

The dwelling unit mix may not exceed a total weekday PM peak hour trip generation of 265 single-family dwelling units per the latest edition of the ITE Trip Generation Manual, nor may the dwelling unit mix exceed available capacity of the potable water and wastewater system serving the development.

4. Open Space

Development order plans must depict 45 percent (39.43 acres) of open space.

5. Indigenous Open Space

Development order plans must depict 18.38 acres of indigenous open space in substantial compliance with the MCP, consistent with the following distribution:

- a. Preserve: 18.38 acres
 - i. Indigenous Wetland: 13.48 acres
 - ii. Wetland Creation: 4.48 acres
 - iii. Rare and Unique: 0.42 acres
- b. Other open space: 11.15 acres
- c. Buffers: 1.06 acres
- d. Lakes: 8.83 acres

6. Indigenous Open Space Restoration and Management

Development order plans must substantially comply with the Indigenous Restoration and Management Plan attached as Exhibit D.

7. Indigenous Phasing Schedule

The first development order must include a phasing schedule that requires removal of exotics and indigenous restoration and management areas to commence concurrently with land improvements, to ensure completion of preservation and restoration activities within five years following approval of the first development order.

8. Indigenous Monitoring Plan

- a. If the proposed restoration plantings fail in the wet season, then prior to the issuance of a Certificate of Completion for the indigenous wetland creation areas, developer must provide temporary above ground irrigation. The irrigation type is subject to approval by Community Development staff.
- b. Developer must submit an indigenous monitoring report every year for ten years following the initial report.

9. Vegetation Removal Permit

The Vegetation Removal Permit application must include a map depicting mechanical and hand-removal areas for exotic vegetation removal within preserve and restoration areas. Mechanical clearing must be limited to non-indigenous preserve areas. Native vegetation must be protected by tree barricades.

10. Recording of Conservation Easement

- a. Upland Preserves: Developer must submit copies of proposed conservation easements over upland indigenous preservation areas depicted on the MCP with the first development order application. Conservation easement(s) must be dedicated to Lee County and recorded prior to issuance of the Certificate of Compliance for the infrastructure.
- b. Wetland Preserves: Developer must submit copies of proposed conservation easement(s) over wetland indigenous preservation areas depicted on the MCP with the first development order application. Conservation easement(s) must be dedicated to the South Florida Water Management District, granting third party enforcement rights to Lee County, and recorded prior to issuance of the Certificate of Compliance for the infrastructure.

11. Floodplain Storage

Development order submittals must include a Stormwater Report containing the following information:

- a. Pre-Development Drainage Analysis including:
 - i. Drainage Map for all contributory areas, including offsite inflow areas,
 - ii. Flow-paths,
 - iii. Existing structures,
 - iv. ICPR Modeling of 5yr-24hr, 10yr-24hr, 25yr-3day, 100yr-3day storm events; and

- v. Pre-development stormwater conditions.
- b. Post Development Drainage Plan including:
 - i. Drainage Map for all contributory areas with proposed upland improvements, wetland and upland creation areas, proposed grading elevations, and construction details of all structures and pipes.
 - ii. Structures, weirs, pipes, and swales to maintain a viable hydroperiod in the conservation area.
 - iii. ICPR Modeling of 5yr-24hr, 10yr-24hr, 25yr-3day, 100yr-3day storm events; and
 - iv. Post-development stormwater conditions.
- c. Profiles and Sections Plans demonstrating compliance with the following criteria:
 - i. Existing offsite flows through the project must be maintained during and following construction.
 - ii. Development provides SFWMD-required water quantity in the lake system and not in the conservation easement areas; and
 - iii. Proposed engineering systems (e.g., wet-retention and dry-detention areas, structures, weirs, pipes, swales, and other conveyances) ensure a hydroperiod in the conservation easement suitable to meet stormwater needs of the plant community.

12. North and East Property Line Buffers

If townhouse units abut the property line, Development order plans must depict an enhanced 15-foot-wide Type B buffer consisting of five trees per 100 linear feet with staggered double hedge row including an eight-foot-high solid wall or opaque fence.

If single family homes abut the property line, development order plans must depict an enhanced ten-foot-wide buffer consisting of five trees per 100 linear feet with staggered double hedge row including a six-foot-high solid wall or opaque fence.

Landscape vegetation must be specified on the development order plans to comply with LDC §10-420.

13. State Road 31 Townhouse Buffer

Development order plans must depict a 15-foot-wide Type D buffer along State Road 31 consisting of five trees per 100 linear feet and a double staggered hedge if townhouse lots are proposed along State Road 31. If preservation and/or creation areas are used to meet buffer requirements, upland and wetland restoration plants within the buffer area must meet installation specifications established in LDC §10-420.

14. Lake Bank Slopes

Development order plans must include detailed drawings of the 4:1 lake bank slope stabilization methods with compensatory littoral plantings consistent with LDC requirements. Developer must provide compensatory littoral plantings regardless of the lake bank slope stabilization method implemented at development.

15. Dead-End Streets

Developer must provide a letter of no objection from the Fort Myers Shores Fire Department with the development order application depicting the dead-end roadway.

16. State and Federal Permits

- a. Generally. County development permits do not create rights to obtain permits from state or federal agencies and do not create liability on the part of the County if applicant fails to obtain requisite approvals or fulfill obligations imposed by state/federal agencies or if applicant undertakes actions resulting in a violation of state or federal law. Applicant must obtain applicable state/federal permits prior to commencing development.
- b. State Wetland Permits. Developer may not commence construction on development impacting wetlands until issuance of required state permits. Development activity must comply with state wetland permits and applicable local development permits.

If the State does not approve wetland impacts or if State wetland permits are not consistent with proposed wetland impacts reflected in County development permits, then Developer must amend County development permit approvals consistent with state wetland permits and Lee Plan/LDC regulations on development within wetlands.

SECTION C. DEVIATIONS

1. Excavation Setback. Deviation (1) seeks relief from the LDC §10-329(d)(1)a.3, which requires water retention or detention excavations to be set back a minimum of 50 feet from private property lines under separate ownership, to allow a minimum of 25 feet set back from private property lines. This deviation is APPROVED, SUBJECT TO Condition 12.
2. Excavation Bank Slope. Deviation (2) seeks relief from the LDC §10-329(d)(4), which requires lake banks to be sloped at a 6:1 ratio from the top of bank to water depth of two feet below the dry season water table, to allow for a minimum ratio of 4:1 slope. This deviation is APPROVED, SUBJECT TO Condition 14.
3. Dead End Street Configuration. Deviation (3) seeks relief from the LDC §10-296(k)(1), which requires dead-end streets to be closed at one end by a circular turnaround for vehicles, to allow two dead-end streets to be hammerhead design as depicted on the MCP. This deviation is APPROVED, SUBJECT TO Condition 15.
4. Permitted Setback Encroachments. Deviation (4) seeks relief from the LDC §34-2191(5), which allows equipment pads/platforms to encroach into side, rear or waterbody setbacks up to three feet, to allow equipment pads/platforms encroachments up to 4.5 feet. This deviation is APPROVED.

SECTION D. EXHIBITS

The following exhibits are attached to this resolution and incorporated by reference:

- Exhibit A: Legal description of the property
Exhibit B: Zoning Map (with the subject parcel indicated)
Exhibit C: The Master Concept Plan
Exhibit D: Indigenous Restoration and Management Plan

SECTION E. FINDINGS AND CONCLUSIONS

Based upon its review, the Board of County Commissioners adopts the recommendation of the Hearing Examiner, including the following findings and conclusions:

1. The requested 31 Oaks RPD is consistent with the Lee Plan. Lee Plan Goals 2, 4, 5, 60, 61, 77, 124, 125; Objectives 1.5, 4.1, 5.1, 60.1, 61.2, 77.1, 77.3, 123.2, 123.4, 123.8, 126.2, and Policies 1.1.5, 1.5.1, 2.2.1, 5.1.5, 124.1.1, 135.1.9, 135.9.6, 158.2.1, 160.1.3; Lee Plan Maps 1-A, 1-B, 4-A, 4-B, and Table 1(a).
2. As conditioned, the RPD zoning designation:
 - a. Is consistent with the Land Development Code or qualifies for deviations. LDC Chapters 2, 10, and 34;
 - b. Is compatible with existing or planned uses in the surrounding area. Lee Plan Policies 1.1.5, 5.1.5, 135.1.9, 135.9.5, 135.9.6; LDC §§ 34-411, 34-413, and
 - c. Will not adversely affect environmentally sensitive areas or natural resources. Lee Plan Goals 60, 61, 101, 123, 125, Objectives 60.1, 60.4, 61.2, 123.1, 123.2, 123.3, 123.4, 123.8, 124.1, 126.2, Policies 1.5.1, 60.1.1, 60.1.2, 60.4.1, 60.4.2, 60.4.3, 61.1.1, 61.2.4, 61.3.6, 61.3.8, 61.3.11, 77.3.1, 101.1.1, 101.1.2, 123.2.3, 123.2.4, 123.2.6, 123.2.8, 123.2.15, 123.3.1, 123.4.4, 123.8.1, 124.1.1, 125.1.2, 125.1.3, 126.1.4, 126.2.1, and Standard 4.1.4.
3. There is sufficient road access to support the proposed development intensity.
4. The expected impacts on transportation facilities will be addressed by County regulations and conditions of approval. Lee Plan Objective 39.1, Policies 38.1.1, 38.1.5, 39.1.1; LDC §§ 2-261 *et seq.*, 34-411(d) and (e).
5. Public services and infrastructure will be available to serve the development. Goal 4, Objectives 2.1, 2.2, 4.1, Policies 2.2.1, Standards 4.1.1, 4.1.2.
6. The proposed uses are appropriate at the subject location. Lee Plan Goals 2, 5; Policies 1.1.5, 124.1.1, 135.9.5, 135.9.6.
7. The County regulations and recommended conditions of approval provide sufficient safeguards to protect the public interest. Lee Plan Policies 5.1.2, 5.1.5, 61.3.8, 123.2.8, 123.2.9, 135.9.6; LDC §§ 34-377(a)(3), 34-411.
8. The recommended conditions reasonably relate to the impacts expected from the proposed development. Lee Plan Policies 5.1.2, 5.1.5, 77.3.1, 123.2.15, 123.8.1, 135.9.6; LDC §§ 34-145(d)(4) a.2.(b), 34-411, and 34-932(c).

9. Deviations recommended for approval enhance the planned development and preserve the intent of the LDC to protect the public health, safety, and welfare. LDC §§ 34-373(a)(9), 34-377(a)(4).

SECTION F. SCRIVENER'S ERRORS

The Board intends that this resolution can be renumbered or relettered and typographical errors that do not affect the intent and are consistent with the Board's action can be corrected with the authorization of the County Manager or his designee, without the need for a public hearing.

Commissioner Greenwell made a motion to adopt the foregoing resolution, seconded by Commissioner Pendergrass. The vote was as follows:

Adopted by unanimous consent.

Kevin Ruane	Aye
Cecil L Pendergrass	Aye
Raymond Sandelli	Aye
Brian Hamman	Aye
Mike Greenwell	Aye

DULY PASSED AND ADOPTED this 2nd day of August 2023.

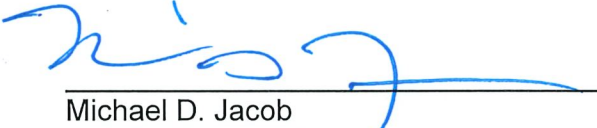
ATTEST:
KEVIN KARNES, CLERK

BY: 
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

BY: 
Brian Hamman, Chair

APPROVED AS TO FORM FOR THE
RELIANCE OF LEE COUNTY ONLY


Michael D. Jacob
Deputy County Attorney
County Attorney's Office



RECEIVED
MINUTES OFFICE
MB
2023 AUG 24 PM 12:05

EXHIBIT A

RHODES & RHODES LAND SURVEYING, INC.

28100 BONITA GRANDE DRIVE #107 NAPLES, FLORIDA 34135
PHONE (239) 405-8166 FAX (239) 405-8163

BEING A PORTION OF GOVERNMENT LOTS 2 AND 3, OF SECTION 30, TOWNSHIP 43 SOUTH, RANGE 26 EAST, A PORTION OF SECTION 30, TOWNSHIP 43 SOUTH, RANGE 26 EAST, LEE COUNTY, FLORIDA AND A PORTION OF LOT 1, FORT MYERS SHORES UNIT NO. 4, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 11, PAGE 28, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.

BEGINNING AT THE NORTHWEST CORNER OF TRACT C-1, GORDON CENTER, ACCORDING TO THE PLAT THEREOF AS RECORDED IN INSTRUMENT NUMBER 2019000142301, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE NORTH 00°42'50" WEST ALONG THE EAST RIGHT-OF-WAY OF STATE ROAD 31 (A 100.00 FOOT RIGHT-OF-WAY), A DISTANCE OF 1,322.18 FEET TO NORTHWEST CORNER OF GOVERNMENT LOT 3, THE SAME BEING THE SOUTHWEST CORNER OF GOVERNMENT LOT 2, OF SECTION 30, TOWNSHIP 43 SOUTH, RANGE 26 EAST; THENCE SOUTH 88°18'44" EAST LEAVING SAID EAST RIGHT-OF-WAY LINE OF STATE ROAD 31, ALONG SAID BOUNDARY LINE OF GOVERNMENT LOT 2 AND 3, A DISTANCE OF 332.63 FEET; THENCE NORTH 00°42'19" WEST LEAVING SAID BOUNDARY LINE OF GOVERNMENT LOT 2 AND 3, A DISTANCE OF 100.09 FEET; THENCE NORTH 88°18'44" WEST, A DISTANCE OF 332.63 FEET TO A POINT ON THE SAID EAST RIGHT-OF-WAY STATE ROAD 31; THENCE NORTH 00°42'22" WEST ALONG SAID EAST RIGHT-OF-WAY OF STATES ROAD 31, A DISTANCE OF 422.05 FEET; THENCE SOUTH 88°18'41" EAST LEAVING SAID EAST RIGHT-OF-WAY OF STATE ROAD 31, A DISTANCE OF 1,195.78 FEET; THENCE NORTH 01°36'03" WEST, A DISTANCE OF 800.34 FEET TO A POINT ON THE BOUNDARY LINE OF FORT MYERS SHORES UNIT NO. 4, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 11, PAGE 28, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE SOUTH 88°18'30" EAST ALONG SAID BOUNDARY LINE OF FORT MYERS SHORES UNIT NO. 4, A DISTANCE OF 875.35 FEET; THENCE NORTH 01°41'30" EAST LEAVING SAID BOUNDARY LINE OF FORT MYERS SHORES UNIT NO. 4, A DISTANCE OF 76.59 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF DE MOYA DRIVE (A 70.00 FOOT RIGHT-OF-WAY), FORT MYERS SHORES UNIT NO. 4. ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 11, PAGE 28, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE SOUTHERLY ALONG SAID SOUTH RIGHT-OF-WAY OF DE MOYA DRIVE THE FOLLOWING 2 COURSES, COURSE (1) SOUTH 43°18'30" EAST, 19.95 FEET TO A POINT OF CURVATURE; COURSE (2) SOUTHEASTERLY, 71.28 FEET ALONG THE ARC OF A CIRCULAR CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 145.00 FEET, THROUGH A CENTRAL ANGLE OF 28°09'50" AND BEING SUBTENDED BY A CHORD THAT BEARS SOUTH 57°23'25" EAST, 70.56 FEET TO THE NORTHEAST CORNER OF LOT 1, OF SAID FORT MYERS SHORES UNIT NO. 4; THENCE SOUTH 01°30'00" EAST ALONG SAID BOUNDARY LINE OF LOT 1 FORT MYERS SHORES UNIT NO. 4, A DISTANCE OF 26.28 FEET TO THE SOUTHEAST CORNER OF SAID LOT 1, FORT MYERS SHORES UNIT NO. 4 AND THE SOUTHWEST CORNER OF LOT 105, FORT MYERS SHORES UNIT NO. 2, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 10, PAGES 7 THROUGH 9, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE SOUTH 88°18'30" EAST ALONG SAID BOUNDARY LINE OF SAID LOT 105 FORT MYERS SHORES UNIT NO. 2, A DISTANCE OF 300.46 FEET TO THE NORTHEAST CORNER OF THE SOUTHEAST ¼ OF THE NORTHWEST ¼ OF SAID SECTION 30; THENCE SOUTH 01°30'00" EAST ALONG SAID BOUNDARY LINE OF

Z:\31 OAKS AKA (MAGNUS)\SKETCH AND DESCRIPTION\2021-541 BNDY

LEGAL.docx

RHODES & RHODES LAND SURVEYING, INC.

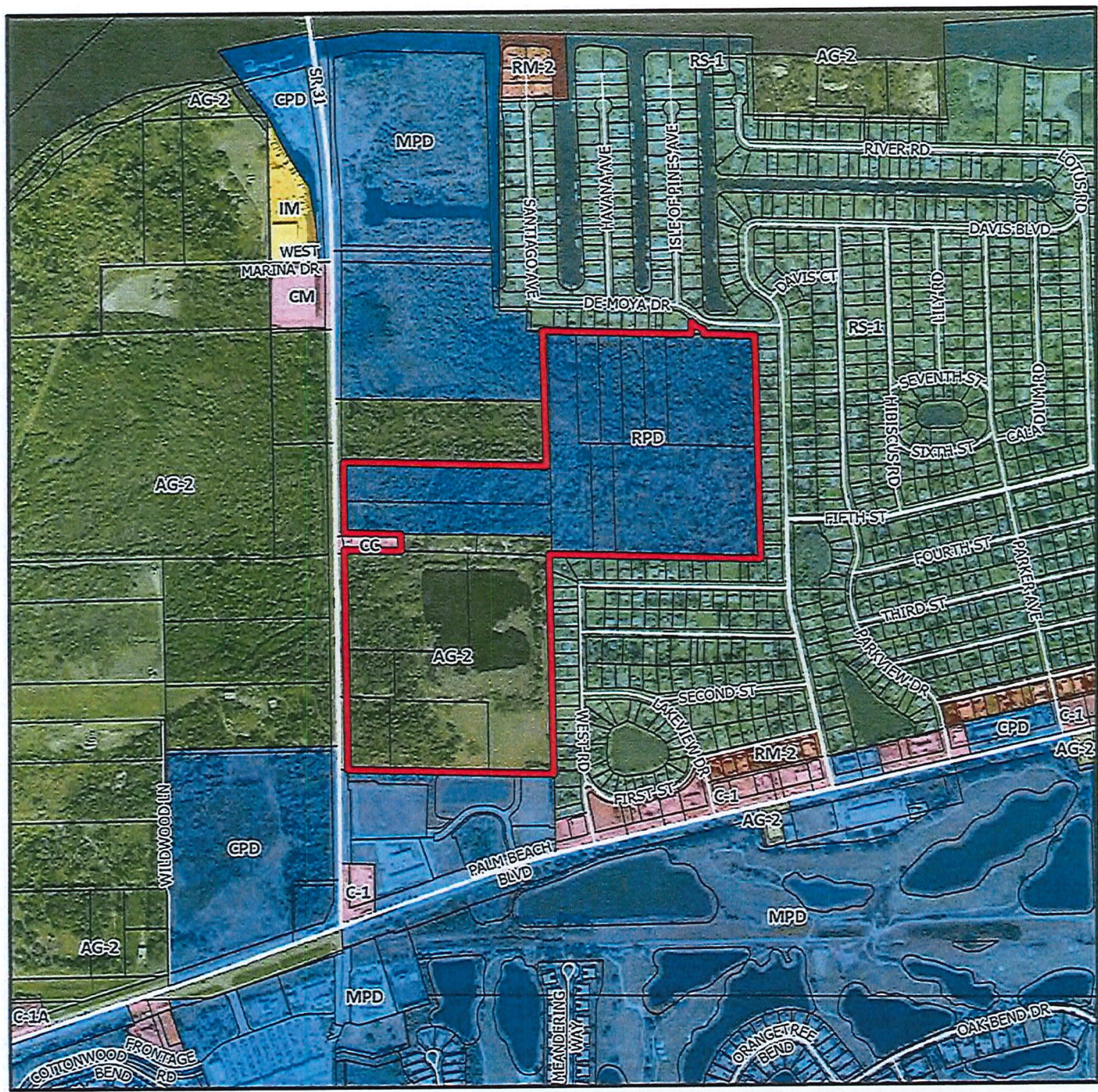
25100 DONITA GRANDI DRIVE #107 NAPLES, FLORIDA 34105
PHONE (239) 405-8160 FAX (239) 405-8163

LOT 105, FORT MYERS SHORES UNIT NO. 2 AND THE NORTHERLY PROLONGATION LINE OF THE BOUNDARY LINE OF FORT MYERS SHORES UNIT NO. 1, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 9, PAGES 151 THROUGH 154, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA, A DISTANCE OF 1,322.55 FEET TO THE SOUTHEAST CORNER OF THE NORTHWEST $\frac{1}{4}$ OF SAID SECTION 30; THENCE NORTH $88^{\circ}19'00''$ WEST ALONG THE BOUNDARY LINE OF SAID FORT MYERS SHORES UNIT NO. 1, A DISTANCE OF 1,249.82 FEET TO THE NORTHWEST CORNER OF LOT 43, SAID FORT MYERS SHORES UNIT NO. 1; THENCE SOUTH $01^{\circ}06'15''$ EAST ALONG THE BOUNDARY LINE OF SAID FORT MYERS SHORES UNIT NO. 1, A DISTANCE OF 1,321.93 FEET TO NORTHEAST CORNER OF TRACT F-3, GORDON CENTER, ACCORDING TO THE PLAT THEREOF AS RECORDED IN INSTRUMENT NUMBER 2019000142301, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA.; THENCE NORTH $88^{\circ}20'37''$ WEST ALONG THE BOUNDARY LINE OF SAID GORDON CENTER, A DISTANCE OF 1,212.93 FEET TO THE POINT OF BEGINNING.

CONTAINING 3,844,190 SQUARE FEET OR 88.250 ACRES, MORE OR LESS.

REVIEWED
DCI2021-00051
Rick Burris, Principal
Planner
Lee County DCD/Planning
2/22/2023

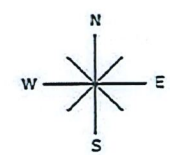
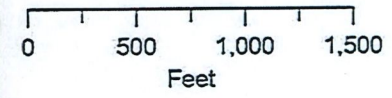
EXHIBIT B

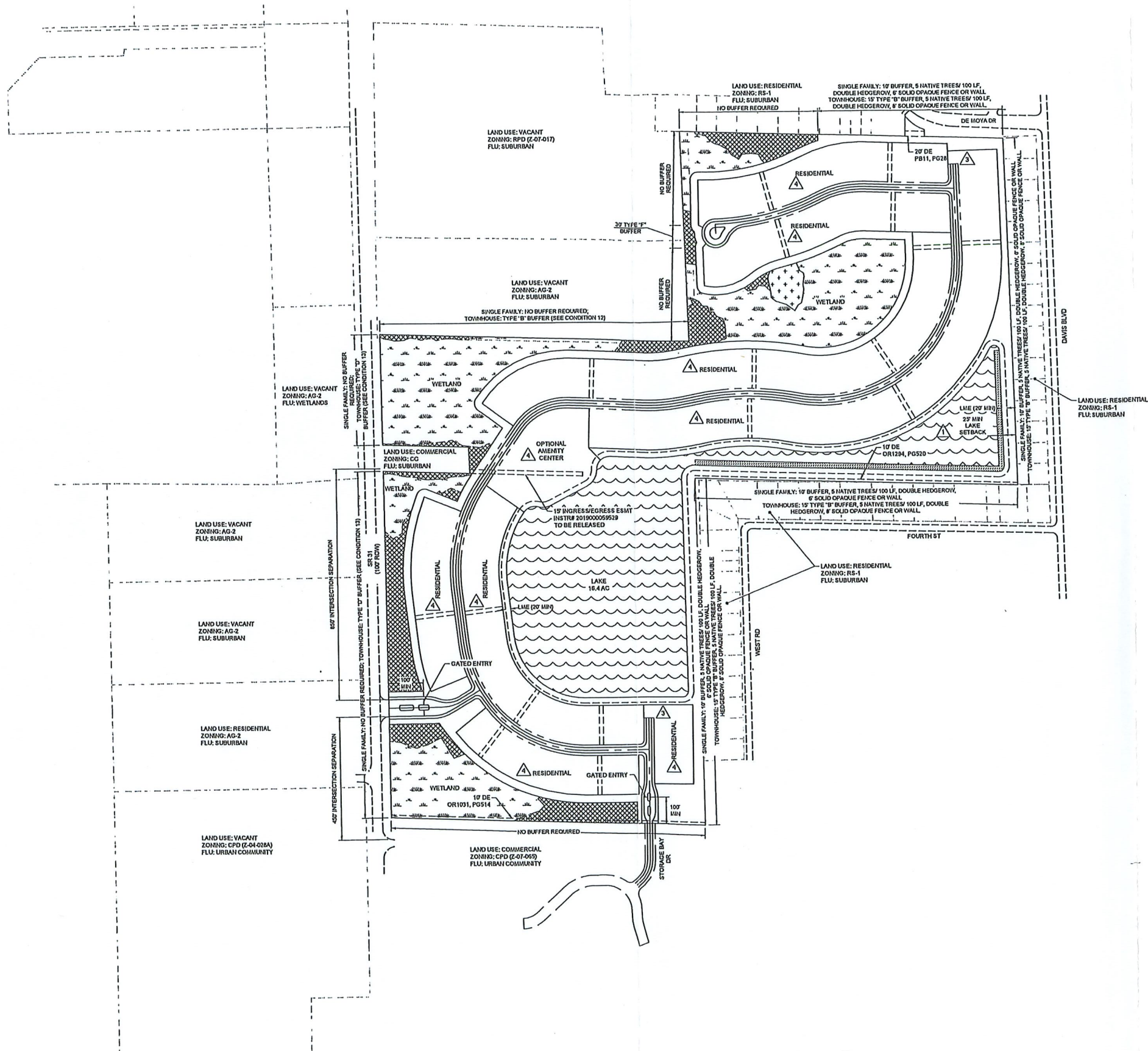


DCI2021-00051

Zoning

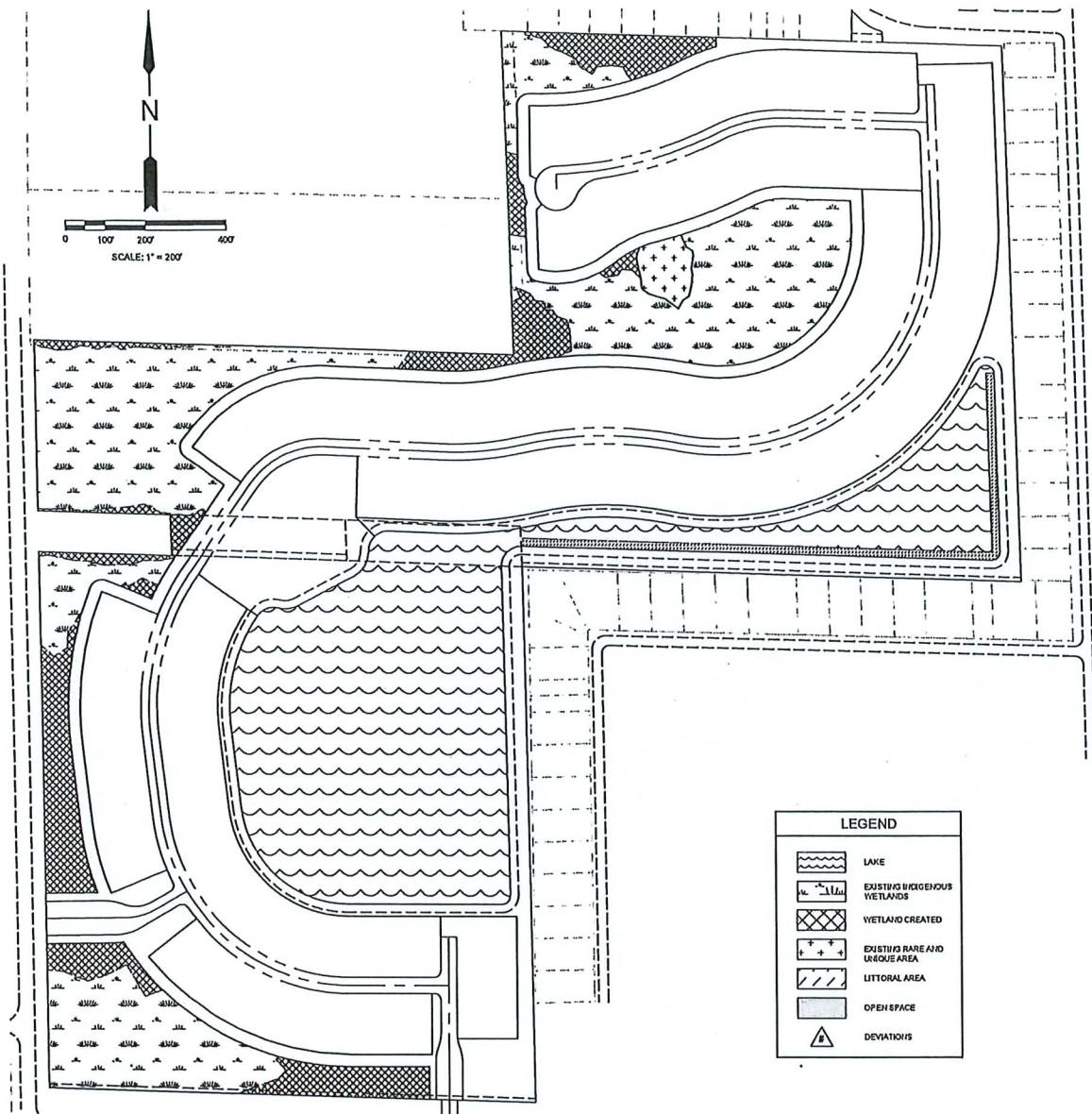
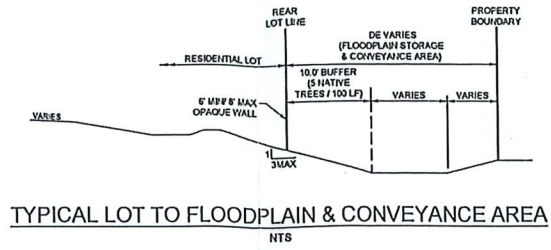
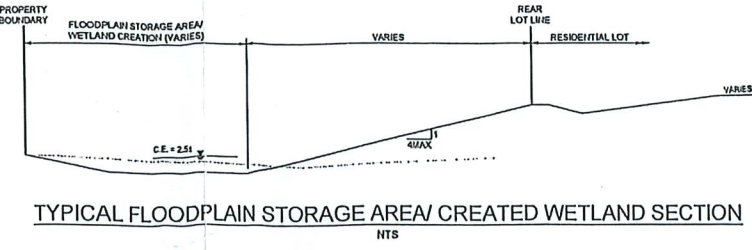
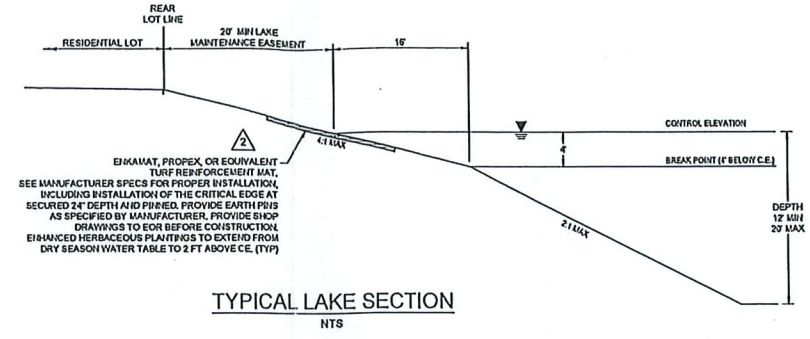
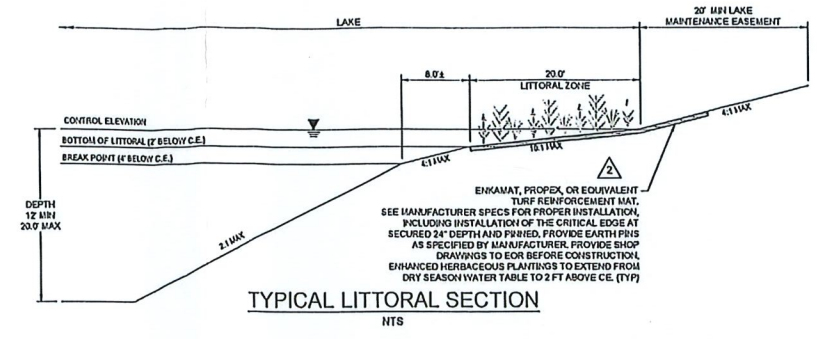
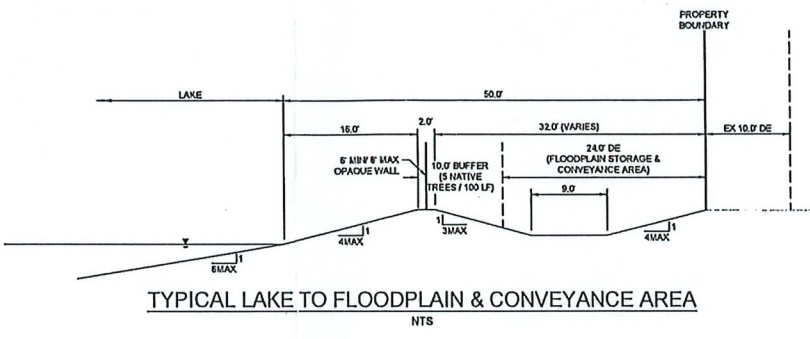
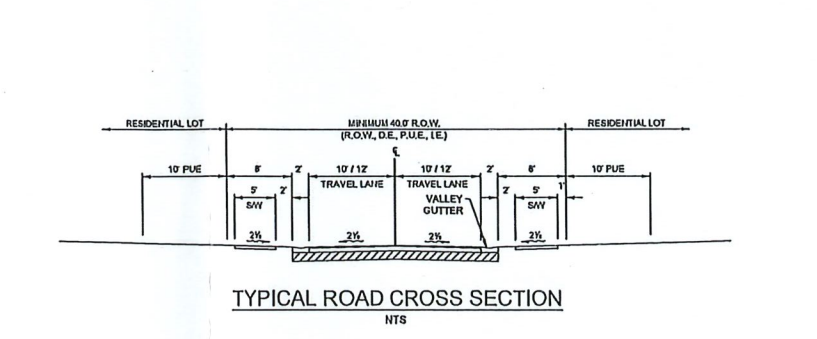
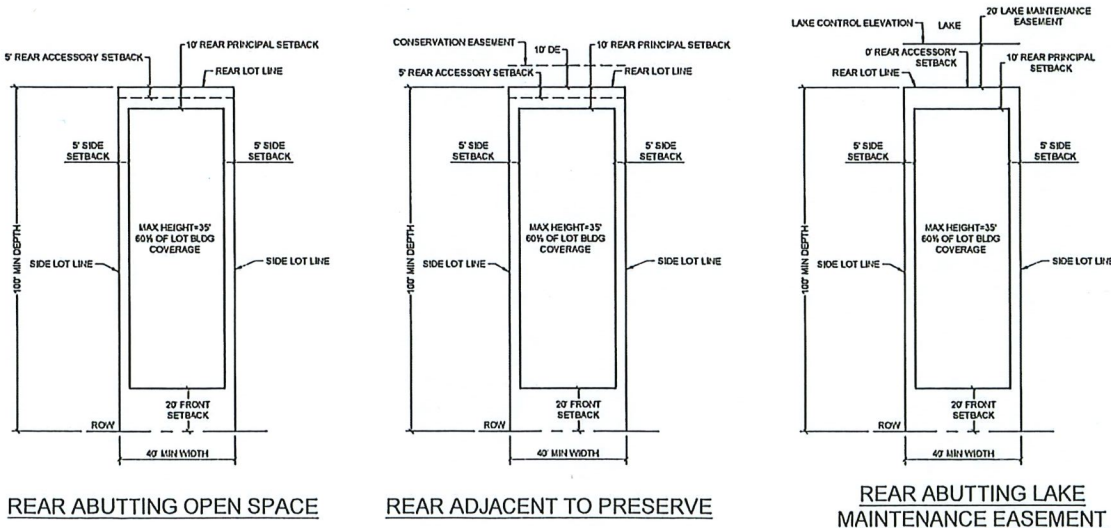
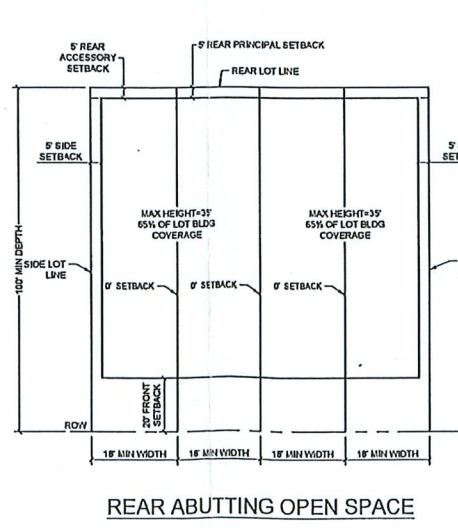
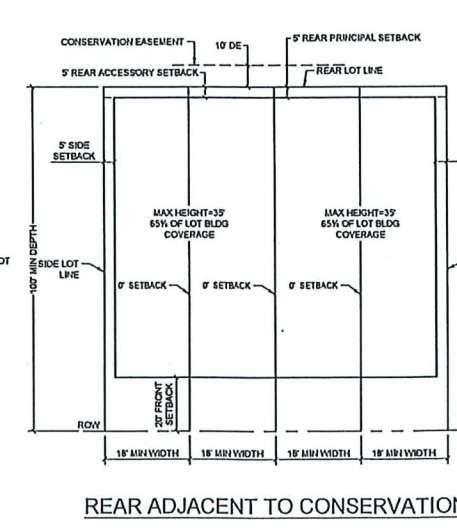
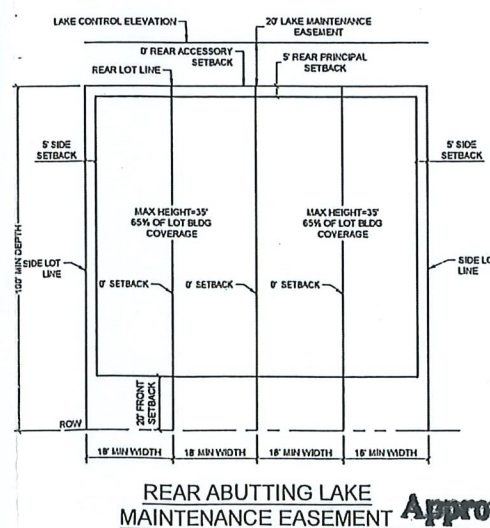
 Subject Property





31 OAKS

MASTER CONCEPT PLAN



**31 OAKS
LEE COUNTY INDIGENOUS PRESERVE RESTORATION AND
MANAGEMENT PLAN**

Revised January 2023

Prepared For:

*Neal Communities
28100 Bonita Grande Drive, Suite 106
Bonita Springs, Florida 34135
(239) 221-0446*

Prepared By:

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

EXHIBIT D

Project No. 21NCC3643

TABLE OF CONTENTS

	<u>Page</u>
1.0 Introduction.....	1
2.0 Indigenous Vegetation Preserve	1
2.1 Indigenous Wetlands.....	1
2.2 Indigenous Uplands	2
3.0 Existing Non-Indigenous Vegetation Preserve.....	3
3.1 Non-Indigenous Wetland Habitats.....	3
3.2 Non-Indigenous Upland Habitats	3
4.0 Methods to Remove and Control Exotic and Nuisance Plants	5
4.1 Method and Frequency of Pruning and Trimming	6
4.2 Debris Removal	6
5.0 Wetland Creation	6
6.0 Supplemental Planting	6
7.0 Maintenance.....	9
8.0 Monitoring Reports.....	9

LIST OF TABLES

	<u>Page</u>
Table 1. Prohibited Invasive Exotics	5
Table 2. Supplemental Wetland Plantings	7
Table 3. Supplemental Upland Plantings	8

LIST OF APPENDICES

	<u>Page</u>
Appendix A. Indigenous Preserve Plan.....	A-1

1.0 INTRODUCTION

The following outlines the Lee County Indigenous Preserve Management and Restoration Plan for 31 Oaks (Project) located in Section 30; Township 43 South; Range 26 East; Lee County.

The Project is bordered to the north by undeveloped, forested lands and single-family residential development; to the east by single-family residential development; to the south by cleared land and a gas station; and to the west by State Road 31.

The proposed Lee County indigenous preserve will contain the following elements:

- Preservation, enhancement, and restoration of 13.48± acres of indigenous and non-indigenous wetlands,
- Preservation, and enhancement of 0.42± acre of indigenous uplands; and
- Creation of 4.48± acres of indigenous wetland areas.

The indigenous preserve area will be protected in perpetuity via a conservation easement granted to Lee County.

2.0 INDIGENOUS VEGETATION PRESERVE

The Lee County Indigenous Preserve totals 18.38± acres and is comprised of 13.48± acres of wetlands and 4.90± acres of uplands. The location of the indigenous preserve is depicted in Appendix A.

The following are the existing indigenous on-site wetland and upland habitats proposed as indigenous vegetation preserve.

2.1 Indigenous Wetlands

Cabbage Palm, Hydric (25-49% Exotics) (FLUCFCS Code 4281 E2)

The canopy of this wetland habitat consists primarily of cabbage palm (*Sabal palmetto*) with few scattered laurel oak (*Quercus laurifolia*). The sub-canopy includes primarily cabbage palm with scattered myrsine (*Myrsine cubana*), Brazilian pepper (*Schinus terebinthifolia*), and wild coffee (*Psychotria nervosa*). The ground cover includes scattered swamp fern (*Telmatoblechnum serrulatum*), herb-of-grace (*Bacopa monnieri*), frogfruit (*Phylla nodiflora*), and giant leather fern (*Acrostichum danaeifolium*).

Cabbage Palm, Hydric (50-75% Exotics) (FLUCFCS Code 4281 E3)

The vegetative composition of this disturbed wetland habitat is similar to that of FLUCFCS Code 4281 E2; however, there is more Brazilian pepper and melaleuca (*Melaleuca quinquenervia*) in the canopy and sub-canopy strata.

Mixed Wetland Hardwoods, Disturbed (25-49% Exotics) (FLUCFCS Code 6179 E2)

The canopy of this wetland habitat includes laurel oak and cabbage palm with few scattered live oak (*Quercus virginiana*), melaleuca, and bishopwood (*Bischofia javanica*). The sub-canopy consists of scattered laurel oak, cabbage palm, bishopwood, and Brazilian pepper. The ground cover consists of swamp fern, muscadine grapevine (*Vitis rotundifolia*), giant leather fern, and American evergreen (*Syngonium podophyllum*).

Mixed Wetland Hardwoods, Disturbed (50-75% Exotics) (FLUCFCS Code 6179 E3)

The vegetative composition of this wetland habitat is similar to that of FLUCFCS Code 6179 E2; however, there is additional Brazilian pepper and melaleuca in the sub-canopy stratum.

Willow, Disturbed (50-75% Exotics) (FLUCFCS Code 6189 E3)

The canopy of this wetland habitat includes Carolina willow (*Salix caroliniana*), Brazilian pepper, and few cabbage palm. The sub-canopy includes Brazilian pepper and Carolina willow. The ground cover is primarily open with scattered swamp fern, fireflag (*Thalia geniculata*), and giant leather fern.

Freshwater Marsh, Disturbed (0-24% Exotics) (FLUCFCS Code 6419 E1)

The canopy of this wetland habitat is open. The sub-canopy includes scattered Brazilian pepper and Peruvian primrose willow (*Ludwigia peruviana*). The ground cover includes string-lily (*Crinum americanum*), swamp fern, and pickerelweed (*Pontederia cordata*).

Freshwater Marsh, Disturbed (25-49% Exotics) (FLUCFCS Code 6419 E2)

The vegetative composition of this wetland habitat is similar to that of FLUCFCS Code 6419 E1; however, there is additional Brazilian pepper in the sub-canopy stratum.

Freshwater Marsh, Disturbed (50-75% Exotics) (FLUCFCS Code 6419 E3)

The vegetative composition of this wetland habitat is similar to that of FLUCFCS Code 6189 E2; however, there is additional Brazilian pepper in the sub-canopy stratum.

2.2 Indigenous Uplands

Live Oak, Disturbed (25-49% Exotics) (FLUCFCS Code 4279 E2)

The canopy of this upland habitat consists of live oak. The sub-canopy includes scattered live oak, myrsine, gallberry (*Ilex glabra*), winged sumac (*Rhus copallinum*), Brazilian pepper, wild coffee, and coastal plain staggerbush (*Lyonia fruticosa*). The ground cover includes saw palmetto (*Serenoa repens*), muscadine grapevine, and shiny blueberry (*Vaccinium myrsinites*).

Hardwood/Conifer Mixed, Disturbed (50-75% Exotics) (FLUCFCS Code 4349 E3)

The canopy of this upland habitat includes live oak, slash pine (*Pinus elliottii*), laurel oak, and melaleuca. The sub-canopy includes Brazilian pepper, live oak, laurel oak, myrsine, wax myrtle, gallberry, winged sumac, wild coffee, and coastal plain staggerbush. The ground cover includes scattered saw palmetto, muscadine grapevine, and shiny blueberry.

3.0 EXISTING NON-INDIGENOUS VEGETATION PRESERVE

The non-indigenous upland and wetland are predominantly comprised of improved and unimproved pastures, mixed exotics, residential areas, melaleuca, Brazilian pepper, hardwood/conifer mixed, willow, and palmetto prairie habitat types that contain greater than 75 percent exotic vegetation. Listed below are the FLUCFCS descriptions of the non-indigenous areas on the Project site.

3.1 Non-Indigenous Wetland Habitats

Melaleuca, Hydric (FLUCFCS Code 4241)

This disturbed wetland habitat consists primarily of melaleuca in the canopy and sub-canopy. The ground cover is open.

Mixed Wetland Hardwoods, Disturbed (76-100% Exotics) (FLUCFCS Code 6179 E4)

The vegetative composition of this wetland habitat is similar to that of FLUCFCS Code 6179 E3; however, there is additional melaleuca in the canopy and sub-canopy strata.

Willow, Disturbed (76-100% Exotics) (FLUCFCS Code 6189 E4)

The vegetative composition of this wetland habitat is similar to that of FLUCFCS Code 6189 E3; however, there is additional Brazilian pepper in the canopy and sub-canopy strata.

Exotics Wetland Hardwoods (FLUCFCS Code 619)

The canopy of this wetland habitat is open. The sub-canopy includes Brazilian pepper, bishopwood, Java plum, Peruvian primrose willow, and scattered cabbage palm.

Cypress, Disturbed (76-100% Exotics) (FLUCFCS Code 6219 E4)

The canopy of this wetland habitat includes primarily bald cypress (*Taxodium distichum*) with scattered red maple (*Acer rubrum*), cabbage palm, and laurel oak. The sub-canopy includes bald cypress, Brazilian pepper, cabbage palm, red maple, and myrsine. The ground cover includes scattered swamp fern, herb-of-grace, creeping primrose willow (*Ludwigia repens*), and string-lily.

Freshwater Marsh, Disturbed (76-100% Exotics) (FLUCFCS Code 6419 E4)

The vegetative composition of this wetland habitat is similar to that of FLUCFCS Code 6189 E3; however, there is additional Brazilian pepper in the sub-canopy stratum.

3.2 Non-Indigenous Upland Habitats

Residential, Low Density (FLUCFCS Code 110)

This land use type consists of residential properties and dirt roadways. The canopy contains live oak and the sub-canopy is open. The ground cover is dominated by St. Augustine grass (*Stenotaphrum secundatum*).

Improved Pasture (FLUCFCS Code 211)

This land use type consists of agricultural fields used for cattle grazing. The canopy is primarily open with widely scattered live oak and slash pine. The sub-canopy is primarily open with few scattered cabbage palm and Brazilian pepper. The ground cover includes bahiagrass (*Paspalum notatum*), spermacoce (*Spermacoce verticillata*), and dog fennel (*Eupatorium capillifolium*).

Unimproved Pasture (FLUCFCS Code 212)

The canopy is open and the sub-canopy includes widely scattered Brazilian pepper and few cabbage palm. The ground cover is primarily Guinea grass (*Urochloa maxima*), air potato (*Dioscorea bulbifera*), dog fennel, and St. Augustine grass.

Palmetto Prairies, Disturbed (76-100% Exotics) (FLUCFCS Code 3219 E4)

The canopy of this upland community is open. The sub-canopy is primarily open with scattered coastal plain staggerbush, gallberry, wax myrtle (*Morella cerifera*), melaleuca, myrsine, and tarflower (*Bejaria racemosa*). The ground cover is predominantly saw palmetto, with scattered sand blackberry (*Rubus cuneifolius*) and muscadine grapevine.

Brazilian Pepper (FLUCFCS Code 422)

This disturbed upland habitat consists primarily of Brazilian pepper in the canopy and sub-canopy. The ground cover is characteristically sparse.

Melaleuca, Hydric (FLUCFCS Code 4241)

This disturbed wetland habitat consists primarily of melaleuca in the canopy and sub-canopy. The ground cover is open.

Live Oak, Disturbed (76-100% Exotics) (FLUCFCS Code 4279 E4)

The vegetative composition of this upland habitat is similar to that of FLUCFCS Code 4279 E2; however, there is significantly more melaleuca in the canopy and sub-canopy strata.

Hardwood/Conifer Mixed, Disturbed (76-100% Exotics) (FLUCFCS Code 4349 E4)

The vegetative composition of this upland habitat is similar to that of FLUCFCS Code 4349 E3; however, there is additional Brazilian pepper, Java plum (*Syzygium cumini*), and melaleuca in the canopy and sub-canopy strata.

Mixed Hardwoods, Disturbed (76-100% Exotics) (FLUCFCS Code 4389 E4)

The canopy of this upland habitat includes a mixture of scattered live oak, laurel oak, Indian laurel fig (*Ficus microcarpa*), cabbage palm, and slash pine. The sub-canopy includes Brazilian pepper, live oak, laurel oak, cabbage palm, myrsine, and wild coffee. The ground cover includes American evergreen and swamp fern.

Exotic Hardwoods (FLUCFCS Code 439)

The canopy of this upland habitat includes scattered Brazilian pepper, Java plum, and common bamboo (*Bambusa vulgaris*). The sub-canopy contains Brazilian pepper. The ground cover contains scattered air potato and American evergreen.

Spoil Areas (FLUCFCS Code 743)

This land use type consists of a berm comprised of spoil material, including rock and concrete. The canopy of this land use type is open, and the sub-canopy consists of Brazilian pepper and cabbage palm. The ground cover primarily includes Burma reed (*Neyraudia reynaudiana*).

4.0 METHODS TO REMOVE AND CONTROL EXOTIC AND NUISANCE PLANTS

Exotic and nuisance vegetation within the 18.38± acres of indigenous preserve will be conducted 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.

The indigenous preserve will be maintained free of invasive exotics listed in Table 1 in perpetuity.

Table 1. Prohibited Invasive Exotics

Common Name	Scientific Name
Air potato	<i>Dioscorea bulbifera</i>
Australian pines	<i>Casuarina</i> spp.
Bishopwood	<i>Bischofia javanica</i>
Brazilian pepper	<i>Schinus terebinthifolia</i>
Carrotwood	<i>Cupaniopsis anacardioides</i>
Chinese tallow tree	<i>Sapium sebiferum</i>
Downy rose-myrtle	<i>Rhodomyrtus tomentosa</i>
Earleaf acacia	<i>Acacia auriculiformis</i>
Indian laurel fig	<i>Ficus microcarpa</i>
Japanese climbing fern	<i>Lygodium japonicum</i>
Java plum	<i>Syzygium cumini</i>
Melaleuca	<i>Melaleuca quinquenervia</i>
Murray red gum	<i>Eucalyptus camaldulensis</i>
Old World climbing fern	<i>Lygodium microphyllum</i>
Portia tree	<i>Thespesia populnea</i>
Rose apple	<i>Syzygium jambos</i>
Rosewood	<i>Dalbergia sissoo</i>
Tropical soda apple	<i>Solanum viarum</i>
Wedelia	<i>Wedelia trilobata</i>

Table 1. (Continued)

Common Name	Scientific Name
Weeping fig	<i>Ficus benjamina</i>
Woman's tongue	<i>Albizia lebbbeck</i>

4.1 Method and Frequency of Pruning and Trimming

Exotic removal within the existing indigenous habitats is scheduled to begin concurrently with the start of construction activities. 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.

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).

Heritage trees located within the upland and wetland indigenous preservation areas will be retained. Prior to the initiation of exotic removal activities, heritage trees within the upland and wetland indigenous preservation areas will be identified and flagged with orange survey ribbon.

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 development area and burned. No stacking of exotic debris will occur within the preserves. 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.

5.0 WETLAND CREATION

Approximately 4.48± acres of wetlands will be created from existing upland habitat on-site. Wetland creation activities will include hand removal/treatment of existing exotic vegetation, regrading to match adjacent wetland elevation, and replanting of wetland vegetation in accordance with Table 2 below, and ongoing maintenance and management. Prior to planting, an as-built survey will be conducted to ensure correct elevation has been achieved. The target habitat types for these are forested wetland areas with a mixture of pine, laurel oaks and other hardwood species, consistent with the existing wetland habitat types on-site. Wetland creation areas are depicted on Appendix A and on the MCP.

6.0 SUPPLEMENTAL PLANTING

Supplemental planting will occur within portions of the Lee County Indigenous Preserve where exotic vegetation currently exceeds 50 percent coverage in wetland creation areas. Trees and shrubs must be a minimum three-gallon and one-gallon size containers, respectively, and no single species may comprise more than 25 percent of the vegetation planted. The supplemental plantings will consist of tree, shrub, and ground cover species in accordance with Tables 2 and 3.

Table 2. Supplemental Wetland Plantings

Common Name	Scientific Name	Minimum Height	Minimum Container Size	Planting Density (On Center)
Tree Plantings				
Laurel oak	<i>Quercus laurifolia</i>	5 ft.	3 gal.	15 ft.
Dahoon holly	<i>Ilex cassine</i>	5 ft.	3 gal.	15 ft.
Red maple	<i>Acer rubrum</i>	5 ft.	3 gal.	15 ft.
Swamp bay	<i>Persea palustris</i>	5 ft.	3 gal.	15 ft.
Pop ash	<i>Fraxinus caroliniana</i>	5 ft.	3 gal.	15 ft.
Pond apple	<i>Annona glabra</i>	5 ft.	3 gal.	15 ft.
Bald cypress	<i>Taxodium distichum</i>	5 ft.	3 gal.	15 ft.
Swamp dogwood	<i>Cornus foemina</i>	5 ft.	3 gal.	15 ft.
American elm	<i>Ulmus americana</i>	5 ft.	3 gal.	15 ft.
Shrubs				
Buttonbush	<i>Cephalanthus occidentalis</i>	3 ft.	1 gal.	10 ft.
Cocoplum	<i>Chrysobalanus icaco</i>	3 ft.	1 gal.	10 ft.
Myrsine	<i>Myrsine cubana</i>	3 ft.	1 gal.	10 ft.
Wax myrtle	<i>Morella cerifera</i>	3 ft.	1 gal.	10 ft.
Walter's viburnum	<i>Viburnum obovatum</i>	3 ft.	1 gal.	10 ft.
Ground Cover				
Little blue maidencane	<i>Amphicarpum muhlenbergianum</i>	12 in.	2 in.	3 ft.
Gulfdune paspalum	<i>Paspalum monostachyum</i>	12 in.	2 in.	3 ft.
Cordgrass	<i>Spartina bakeri</i>	12 in.	2 in.	3 ft.
Muhlygrass	<i>Muhlenbergia capillaris</i>	12 in.	2 in.	3 ft.
Arrowhead	<i>Sagittaria lancifolia</i>	12 in.	2 in.	3 ft.
Golden canna	<i>Canna flaccida</i>	12 in.	2 in.	3 ft.
Maidencane	<i>Panicum hemitomom</i>	12 in.	2 in.	3 ft.
Pickernelweed	<i>Pontederia cordata</i>	12 in.	2 in.	3 ft.
Sawgrass	<i>Cladium jamaicense</i>	12 in.	2 in.	3 ft.
Soft-stem bulrush	<i>Scirpus validus</i>	12 in.	2 in.	3 ft.
Spikerush	<i>Eleocharis interstincta</i>	12 in.	2 in.	3 ft.

Table 3. Supplemental Upland Plantings

Common Name	Scientific Name	Minimum Height	Minimum Container Size	Planting Density (On Center)
Trees				
Slash pine	<i>Pinus elliotii</i>	5 ft.	3 gal.	15 ft.
Cabbage palm	<i>Sabal palmetto</i>	5 ft.	3 gal.	15 ft.
Live oak	<i>Quercus virginiana</i>	5 ft.	3 gal.	15 ft.
Laurel oak	<i>Quercus laurifolia</i>	5 ft.	3 gal.	15 ft.
Shrubs				
Wax myrtle	<i>Morella cerifera</i>	3 ft.	1 gal.	10 ft.
Myrsine	<i>Rapanea punctata</i>	3 ft.	1 gal.	10 ft.
Cocoplum	<i>Chrysobalanus icaco</i>	3 ft.	1 gal.	10 ft.
Saw palmetto	<i>Serenoa repens</i>	3 ft.	1 gal.	10 ft.
Gallberry	<i>Ilex glabra</i>	3 ft.	1 gal.	10 ft.
Ground Cover				
Gulfdune paspalum	<i>Paspalum monostachyum</i>	12 in.	2 in.	3 ft.
Little blue maidencane	<i>Amphicarpum muhlenbergianum</i>	12 in.	2 in.	3 ft.
Wiregrass	<i>Aristida stricta</i>	12 in.	2 in.	3 ft.
Gulf muhly	<i>Muhlenbergia capillaris</i>	12 in.	2 in.	5 ft.
Sand cordgrass	<i>Spartina bakeri</i>	12 in.	2 in.	5 ft.
Fakahatchee grass	<i>Tripsacum dactyloides</i>	12 in.	2 in.	5 ft.
Saw palmetto	<i>Serenoa repens</i>	12 in.	1 gal.	5 ft.
Lopsided Indian grass	<i>Sorghastrum secundum</i>	12 in.	2 in.	5 ft.
Florida coontie	<i>Zamia integrifolia</i>	12 in.	2 in.	5 ft.

Supplemental plantings will consist of tree, shrub, and ground cover species. Tree and shrub plantings will consist of a minimum of four (per stratum) of the species listed in Tables 2 and 3 and ground cover plantings will consist of a minimum of four of the species listed in Table 2 and 3. 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 DCD staff.

All preserve enhancement, restoration, and creation activities will be completed in a single phase upon commencement of construction activities. The wetland and upland planting activities are anticipated to occur during the wet season (i.e., June through October). If plantings cannot be installed within this timeframe, irrigation will be utilized until the onset of the wet season (i.e., June) or until the vegetation has successfully established. Irrigation will be utilized on a temporary, as-needed basis, and will not be a required long-term activity.

7.0 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).

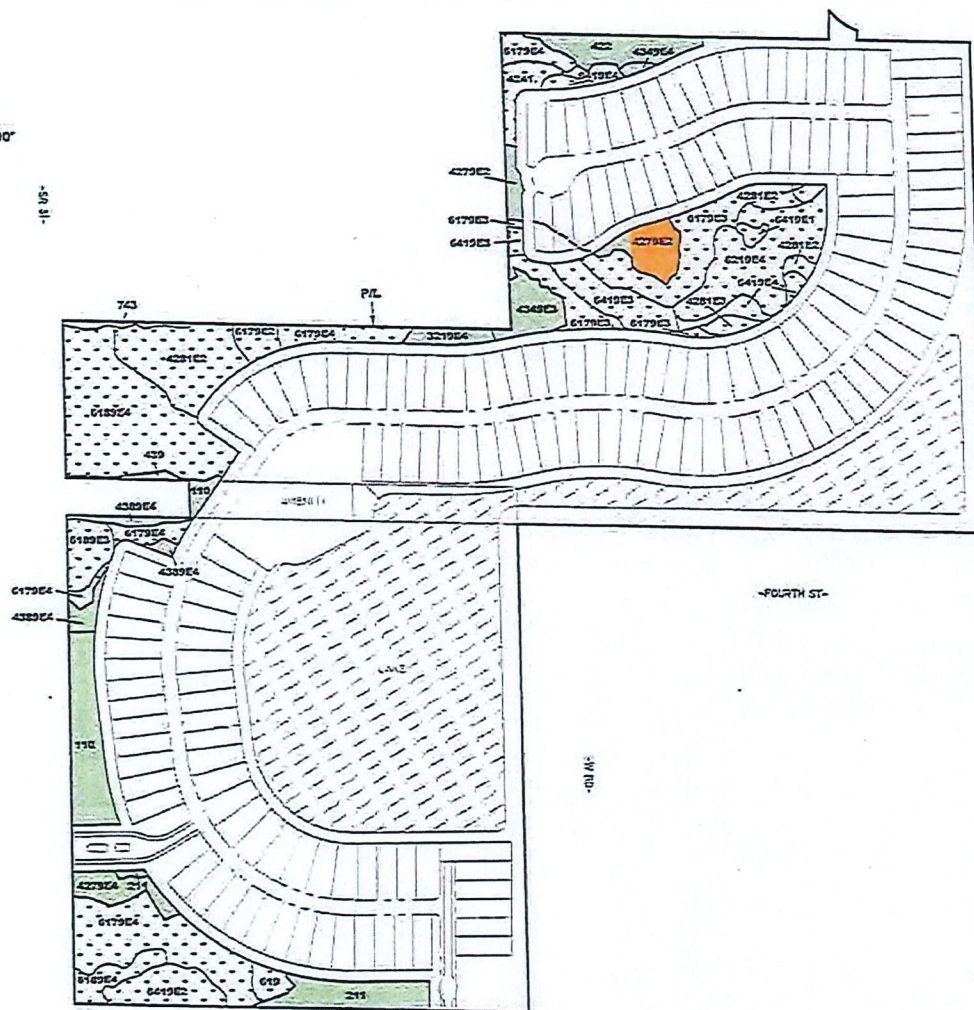
8.0 MONITORING REPORTS

Monitoring will be conducted annually for the conservation areas. Annual reports documenting the achievement of the enhancement, restoration, and creation activities will be submitted to Lee County's DCD. Annual monitoring reports will be provided for five years after the Certificate of Compliance has been issued by the DCD. The monitoring reports will include documented exotic and nuisance species, mortality of vegetation, estimated causes of mortality, growth of the vegetation, hydrologic conditions of the wetland preserve areas including monitoring well hydrographs, wildlife observed, photographs, and factors that demonstrate the functional health of the conservation areas. A brief description of the anticipated maintenance work to be conducted over the next year will also be included. In addition, monitoring reports will provide recommendations and/or corrective measures to address deficiencies observed, including impacts to wetland hydrology. Periodic inspections will be conducted by DCD staff to ensure the accuracy of the monitoring reports.

APPENDIX A
INDIGENOUS PRESERVE PLAN



57-31-



•DAVIS ELY

—Wm. Wm.

LEGEND:

- | | |
|---|-----------------------------|
|  | WETLAND INDIGENOUS PRESERVE |
|  | WETLAND CREATION |
|  | UPLAND INDIGENOUS PRESERVE |
|  | SURVEYED WETLAND LINE |

PLUGGERS CODES	DESCRIPTIONS
110	RESIDENTIAL LOW DENSITY
211	IMPROVED PASTURE
224S E4	PALMETO FRAMES, DISTURBED (50-100% EXOTICS)
225	GRASSLAND PEPER
227	MELALEUCA MYRICE
229 E2	LIVE OAK, DISTURBED (25-40% EXOTICS)
230	LIVE OAK, DISTURBED (70-100% EXOTICS)
231 E2	CABBAGE PALM, MYRICE (25-40% EXOTICS)
232	CABBAGE PALM, MYRICE (25-40% EXOTICS)
234 E3	HARDWOOD/CONIFER MIXED, DISTURBED (50-75% EXOTICS)
235 E4	HARDWOOD/CONIFER MIXED, DISTURBED (70-100% EXOTICS)
236 E4	HARDWOOD/CONIFER MIXED, DISTURBED (70-100% EXOTICS)
237	EXOTIC HARDWOODS
213 E2	MIXED WETLAND HARDWOODS, DISTURBED (25-40% EXOTICS)
213 E3	MIXED WETLAND HARDWOODS, DISTURBED (50-75% EXOTICS)
213 E4	MIXED WETLAND HARDWOODS, DISTURBED (70-100% EXOTICS)
214	YELLOW, DISTURBED (50-75% EXOTICS)
215 E4	YELLOW, DISTURBED (70-100% EXOTICS)
217	EXOTIC WETLAND HARDWOODS
219 E2	CYPRESS, DISTURBED (70-100% EXOTICS)
241 E1	FRESHWATER MARSH, DISTURBED (0-2% EXOTICS)
241 E2	FRESHWATER MARSH, DISTURBED (25-49% EXOTICS)
241 E3	FRESHWATER MARSH, DISTURBED (50-75% EXOTICS)
241 E4	FRESHWATER MARSH, DISTURBED (70-100% EXOTICS)
242	SOIL AREAS

NOTES:

PROPERTY BOUNDARY AND SITE PLAN PER J.R. EVANS,
INC. DRAWING No. 00635-00 SI C&G MCP-D.DWG DATED
NOVEMBER 2, 2022.

SURVEYED WETLAND LINES PER RHODES & RHODES, INC.
DRAWING No. 2021-541-WETLAND LINES.DWG DATED
NOVEMBER 3, 2021

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

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

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

REVISION	DATE	REVISION BY	DATE
Revised upland indigenous	6/03/22	H.H./T.S.	2/25/22
Revised plan	11/09/22	H.H./J.D.T.	2/25/22
Revised plan	11/15/22	B.B.	2/25/22

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



PASSARELLA
& ASSOCIATES

31 OAKS
INDIGENOUS PRESERVE PLAN

CRATING No.	21NCC3643
TRUCK No.	APPENDIX A

**31 OAKS
LEE COUNTY
PROTECTED SPECIES MANAGEMENT PLAN**

Revised November 2022

Prepared For:

*Neal Communities
28100 Bonita Grande Drive, Suite 106
Bonita Springs, Florida 34135
(239) 221-0446*

Prepared By:

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

Project No. 21NCC3643

TABLE OF CONTENTS

	<u>Page</u>
1.0 Gopher Tortoise Management Plan	1
1.1 Biology.....	1
1.2 Range	1
1.3 Habitat.....	1
1.4 Life History and Ecology.....	1
1.5 Gopher Tortoise Relocation.....	2
2.0 References.....	2

1.0 GOPHER TORTOISE MANAGEMENT PLAN

A protected species survey was conducted on the Project on October 22, 27 and November 3, 2021. The survey was conducted to meet Lee County LDC Chapter 10, Article III, Division 8 (Protection of Habitat) Standards. A total of five potentially occupied gopher tortoise (*Gopherus polyphemus*) burrows and one gopher tortoise were identified on-site during the survey.

1.1 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, with shovel-like forelimbs adapted for digging. The tan, brown, or gray carapace (top portion of shell) is domed and oblong. The plastron (bottom portion of 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 (Cox *et al.* 1987).

1.2 Range

The gopher tortoise occurs in the Southeastern Coastal Plain from extreme Eastern Louisiana to Southern South Carolina. In Florida, tortoises occur in all 67 counties (Cox *et al.* 1987).

1.3 Habitat

Three environmental conditions are especially important for gopher tortoises: well-drained, loose soil in which to burrow; adequate low-growing herbs for food; and open sunlit sites 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 (Ashton and Ashton 2002).

1.4 Life History and Ecology

Gopher tortoises excavate burrows averaging 4.5 meters (14.8 feet) in length and 2.0 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, as well as 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 (Ashton and Ashton 2002).

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 (*Rubus* sp.), pawpaws (*Asimina triloba*), gopher apples (*Geobalanus oblongifolius*), and saw palmetto (*Serenoa repens*) berries are also consumed (Ashton and Ashton 2002).

The gopher tortoise exhibits deferred sexual maturity, low reproductive potential, and a long-life span. Females mature sexually at 10 to 20 years of age, depending on latitude. The breeding season is usually from April to June, but males may attempt to mate throughout the activity season. Eggs are usually deposited in the burrow mounds from mid-May to mid-June. Only one clutch of eggs is produced annually. Clutch size usually ranges from 3 to 12 eggs, with an average of 6 eggs; however, a clutch of 25 eggs has been reported. The incubation period varies from about 80 to 110 days. Predation on eggs and hatchlings is heavy. Predators include raccoons, foxes, skunks, armadillos, snakes, and various raptors. Although some hatchlings immediately construct burrows, others may use burrows of adults or merely shelter opportunistically under sand or litter. Estimated life expectancy is 40 to 60 years (Cox *et al.* 1987).

1.5 Gopher Tortoise Relocation

Five gopher tortoise burrows are located on the Project site during the Lee County Protected Species Survey conducted in October and November 2021. An Florida Fish and Wildlife Conservation Commission (FWCC) Gopher Tortoise Relocation Permit will be obtained, and relocation activities will be conducted in accordance with FWCC Gopher Tortoise Permitting Guidelines (2020).

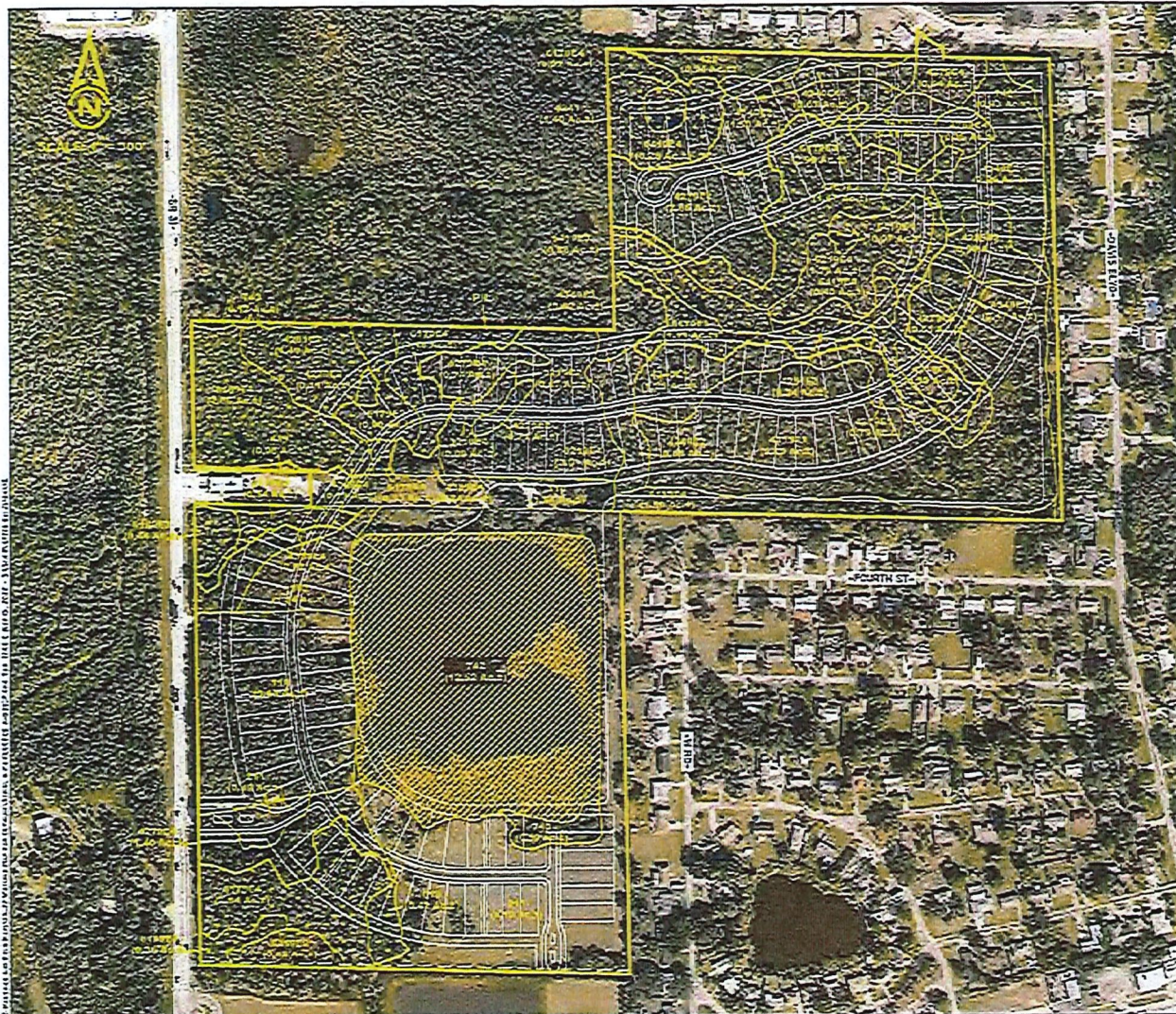
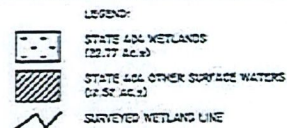
2.0 REFERENCES

Ashton, R and P. Ashton. 2002. Personal Communication.

Cox, J.D. Inkley, and R. Kantz. 1987. Ecology and Habitat Protection Needs of Gopher Tortoise (*Gopherus polyphemus*). Populations found on State Lands Slated for Large Scale Development in Florida. 69 pp.

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

FWCC Gopher Tortoise Permitting Guidelines July 2020



FLUCFCS CODES	DESCRIPTIONS	ACREAGE	% OF TOTAL
110	RESIDENTIAL, LOW DENSITY	7.27 AC.±	0.2%
211	IMPROVED PASTURE	0.29 AC.±	0.0%
212	UNIMPROVED PASTURE	1.34 AC.±	0.0%
3219 E2	PALMETTO PRAIRIES, DISTURBED (25-49% EXOTICS)	0.17 AC.±	0.0%
3219 E4	PALMETTO PRAIRIES, DISTURBED (75-100% EXOTICS)	0.17 AC.±	0.0%
4119 E1	PINE FLATWOODS, DISTURBED (0-24% EXOTICS)	0.29 AC.±	0.0%
4119 E4	PINE FLATWOODS, DISTURBED (75-100% EXOTICS)	1.80 AC.±	0.0%
422	GRASSLAND PERENNIAL	0.24 AC.±	0.0%
4221	MELALEUCA, HYBRID	1.40 AC.±	0.0%
4279 E1	LIVE OAK, DISTURBED (0-24% EXOTICS)	1.60 AC.±	0.0%
4279 E2	LIVE OAK, DISTURBED (25-49% EXOTICS)	0.59 AC.±	0.0%
4279 E4	LIVE OAK, DISTURBED (75-100% EXOTICS)	2.78 AC.±	0.0%
4281 E2	CABBAGE PALM, DISTURBED, HYBRID (25-49% EXOTICS)	0.24 AC.±	0.0%
4281 E4	CABBAGE PALM, DISTURBED, HYBRID (75-100% EXOTICS)	0.24 AC.±	0.0%
4282 E2	CABBAGE PALM, DISTURBED (25-49% EXOTICS)	0.24 AC.±	0.0%
4282 E4	CABBAGE PALM, DISTURBED (75-100% EXOTICS)	0.24 AC.±	0.0%
4340 E1	HARDWOOD/CONIFER MIXED, DISTURBED (0-24% EXOTICS)	1.28 AC.±	0.0%
4340 E2	HARDWOOD/CONIFER MIXED, DISTURBED (25-49% EXOTICS)	0.54 AC.±	0.0%
4340 E3	HARDWOOD/CONIFER MIXED, DISTURBED (50-74% EXOTICS)	0.24 AC.±	0.0%
4340 E4	HARDWOOD/CONIFER MIXED, DISTURBED (75-100% EXOTICS)	0.27 AC.±	0.0%
4340 E4	MIXED HARDWOODS, DISTURBED (75-100% EXOTICS)	1.12 AC.±	0.0%
434	EXOTIC HARDWOODS	0.24 AC.±	0.0%
4379 E2	MIXED WETLAND HARDWOODS, DISTURBED (25-49% EXOTICS)	0.24 AC.±	0.0%
4379 E3	MIXED WETLAND HARDWOODS, DISTURBED (50-74% EXOTICS)	0.24 AC.±	0.0%
4379 E4	MIXED WETLAND HARDWOODS, DISTURBED (75-100% EXOTICS)	0.24 AC.±	0.0%
4380 E3	WILLOW, DISTURBED (50-74% EXOTICS)	0.24 AC.±	0.0%
4380 E4	WILLOW, DISTURBED (75-100% EXOTICS)	0.24 AC.±	0.0%
438	EXOTIC WETLAND HARDWOODS	0.24 AC.±	0.0%
4380 E2	CYPRESS, DISTURBED (25-49% EXOTICS)	0.24 AC.±	0.0%
4380 E4	CYPRESS, DISTURBED (75-100% EXOTICS)	0.24 AC.±	0.0%
4419 E1	FRESHWATER MARSH, DISTURBED (0-24% EXOTICS)	0.24 AC.±	0.0%
4419 E2	FRESHWATER MARSH, DISTURBED (25-49% EXOTICS)	0.24 AC.±	0.0%
4419 E3	FRESHWATER MARSH, DISTURBED (50-74% EXOTICS)	0.24 AC.±	0.0%
4419 E4	FRESHWATER MARSH, DISTURBED (75-100% EXOTICS)	0.24 AC.±	0.0%
743	DISTURBED LAND	1.43 AC.±	0.0%
742	BORROW AREA	12.50 AC.±	0.0%
743	SPOIL AREAS	0.12 AC.±	0.0%
TOTAL		50.27 AC.±	100.0%

NOTES:

AERIAL PHOTOGRAPHS WERE ACQUIRED THROUGH THE FLA COUNTY PROPERTY APPRAISER'S OFFICE WITH FLIGHT DATES OF JANUARY - MARCH 2022.

PROPERTY BOUNDARY PER RW PLANNING PER DRAWING NO. 2022-01-28 1025182206.DWG DATED FEBRUARY 5, 2022.

SURVEYED WETLAND LINES PER RHODES & RHODES, INC. DRAWING NO. 2021-SAL-WETLAND LINES.DWG DATED NOVEMBER 3, 2021.

FLUCFCS LINES ESTIMATED FROM "A001" AERIAL PHOTOGRAPHS AND LOCATIONS APPROXIMATED.

FLUCFCS PER FLORIDA LAND USE, COVER AND FORMS CLASSIFICATION SYSTEM (FLUCFCS) (FOOT 1000).

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

REPORT NO.	DATE	PREPARED BY	DATE	13420 Metropolis Avenue Suite 200 Ft. Myers, FL 33912 Phone (239) 274-0087 Fax (239) 274-0069
T.S.	11/14/22			
B.B.	11/14/22			
B.B.	11/14/22			

PASSARELLA & ASSOCIATES

31 OAKS
AERIAL WITH FLUCFCS AND SITE PLAN

DRAWING NO.	21NCC343
DATE	