

PRESERVE AREA MANAGEMENT PLAN/ ABBREVIATED PRESERVE AREA MANAGEMENT PLAN

MARTIN COUNTY GROWTH MANAGEMENT DEPARTMENT ENVIRONMENTAL DIVISION



Cove Royale

1550 SE Cove Road

Stuart, 34997

Parcel Control Numbers:
34-38-41-001-000-00090-3;
34-38-41-001-000-00010-1



Approved by/Date : _____

C165-003
RECORD NUMBER

APPROVED BY:
Shawn McCarthy

PART I

ENVIRONMENTAL ASSESSMENT

PART II CONDITIONS

A. RECORDING

This Preserve Area Management Plan (PAMP) will be recorded by the Martin County Clerk of Courts and labeled with the appropriate O.R. Book and Page Number. One copy of the recorded document will be provided to the Martin County Environmental Planning Administrator within thirty (30) days of the Recording date. This PAMP may be altered or amended only with the agreement of the Martin County Environmental Planning Administrator and the owner/developer and with the approval of the Martin County Board of County Commissioners. If the PAMP is altered or amended, the revised document will be recorded by the Martin County Clerk of Courts and one copy of the revised document will be provided to the Martin County Environmental Planning Administrator within thirty (30) days of the Recording date.

B. COMPLIANCE

The owner(s) of the lands to be preserved/maintained by this Preserve Area Management Plan (PAMP) and the developer(s) of the property described in this PAMP, their successors and assigns, and their environmental consultants and contractors, will implement and comply with all portions of this PAMP.

C. MONITORING AND REPORTING

Compliance with the terms of this PAMP includes submittal of Monthly Monitoring Reports on PAMP compliance throughout all phases of project construction and submittal of an Annual Monitoring Report each year for a period of five years following completion of project construction, pursuant to Section 10.17 of the Martin County Land Development Regulations. The owner(s) of the lands to be preserved shall have ultimate responsibility for the submittal of all Monitoring Reports.

Annual monitoring will be conducted by a qualified environmental professional no later than November 30 of each year following issuance of a Certificate of Occupancy for development described in the PAMP. A report presenting the results of the annual monitoring will be submitted by the environmental professional to the Martin County Environmental Planning Administrator within thirty days of the completion of the monitoring. Included in the Annual Monitoring Report will be a list of any violations of the PAMP during the previous year, with recommendations for, and a schedule of, remedial actions and any enhancement activities proposed for the coming year. All Annual Monitoring Reports are due no later than December 31 of the year they are to be submitted. After the first five-year monitoring period, the Preserve Areas may be subject to further monitoring and maintenance to ensure environmental integrity and consistency with the provisions of the Plan. A copy of the suggested template for the Annual Monitoring Report is attached to this PAMP as an Appendix.

D. TRANSFER OF OWNERSHIP

The Martin County Environmental Planning Administrator shall be notified in writing within thirty (30) days of transfer of ownership of any lands preserved by this PAMP. Failure to notify will be considered as a non-compliance with the terms of this PAMP.

E. SITE PLAN

The Site Plan included as an appendix to this PAMP will be developed in 2 separate phases (Phase I and Phase II) illustrates all preserve areas, right-of-ways and easements, proposed structures, with distances to on- and off-site upland preserves, wetlands and wetland buffers, proposed final grade of developed area, and location of permanent preserve area signs. Included on the Site Plan will be a summary of the following: total acreage of the Site; acreage of wetland habitats under preservation; acreage of native and common upland habitats under preservation; acreage of upland buffer on-site; acreage of on-site wetland mitigation areas; and total acreage under preservation. The Site Plan will contain the notation: **"PRESERVE AREAS ARE NOT TO BE ALTERED WITHOUT WRITTEN PERMISSION OF THE MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS."**

F. PRESERVE AREA SURVEYING REQUIREMENTS

All Preserve Areas will be surveyed and marked with permanent monuments at each corner and at other sites necessary for locating the boundary of the Preserve Area. These permanent monuments will be constructed under the supervision of a Registered Land Surveyor and will be shown on the Site Plan. Map coordinates of each Preserve Area will be provided to the Martin County Environmental Planning Administrator in a form compatible for use in the County's GIS mapping system.

G. PRESERVE AREA SIGNAGE REQUIREMENTS

Preserve Areas will be posted with permanent signs. These signs will be at least 11 x 14 inches in size and will be posted in conspicuous locations along the Preserve Area boundary, at a frequency of no less than one (1) sign per 500 feet. Boundary Markers will be placed at the corners of residential lots abutting Preserve Areas. All signs and boundary markers will be approved by the Martin County Environmental Planning Administrator and will be in place prior to issuance of a building permit for construction on the site. An example of the Preserve Area Sign is appended to this Plan.

H. SITE CLEARING

The project will be constructed in 2 separate phases with Phase I being the first and Phase II being the second. Phase I includes 23.59 acres of wetlands, 9.53 acres of wetland buffer, and 5.54 acres of upland preserve (see Appendix, Phasing Plan). Phase II includes 11.58 acres of wetlands, and 4.63 acres of wetland buffer and upland preserve. The Land Clearing/Erosion Control Plan appended to this PAMP contains information on land clearing to be conducted, existing vegetation to be retained, location of construction barricades around preserve areas, procedures for debris removal and soil stabilization, and location of silt fences. Where clearing of vegetation is proposed (i.e. building envelope, utilities, drainage, road right-of-way, etc.), the developer will ensure that all Preserve Areas and buffers are protected with construction barricades and erosion control devices in accordance with the following guidelines.

Construction barricades will be placed at least 10 feet outside of all Upland Preserve Areas, or at the dripline of the canopy trees, whichever is greater. Barricades will be inspected by County Environmental Division staff prior to work approval. Barricades will consist of high-visibility orange safety fence extending from the ground to a height of at least 4 feet and will not be attached to vegetation. Removal of the barricades will be approved only after issuance of a Certificate of Occupancy.

All native vegetation not slated for removal as part of the development plans will be retained in its undisturbed state and will be barricaded at or outside the dripline of the trees. Wetlands will be protected from possible surface water and sediment runoff by the placement of erosion control devices

(e.g., silt screens, hay bales or other turbidity control measures) at least 5 feet outside the perimeter of the wetland buffer.

All barricades, silt screens and other erosion control devices will be upright and maintained intact for the duration of construction.

The owner/developer is required to inform all contractors of site clearing requirements. Failure to comply with these requirements will be considered a violation of the Site Plan approval. Work on the project may be stopped until compliance is achieved.

I. ACTIVITIES ALLOWED IN PRESERVE AREAS

Property owners are encouraged to enjoy the natural beauty of their Preserve Areas. Although development of Preserve Areas is not allowed, passive uses, such as bird-watching and other non-destructive uses of natural areas are encouraged, as long as they do not affect the hydrology or vegetative cover of a Preserve Area.

Firewise Community: Cove Royale is a Firewise Community and according to the Florida Forest Service (FFS) criteria for firewise landscaping, the following practices will be implemented within the 25' wide defensible space located at the edge of the upland preserve that is adjacent to all home sites in the community (see Appendix for Firewise Plan).

1. Thin trees so that the crowns (tree tops) are 10 to 15 feet apart.
2. Remove any "ladder fuels". Ladder fuels are vines and shrubs that can carry a ground fire up into the treetops.
3. Remove dense fuels, trim overhanging branches, and carefully plan your landscaping within 30 feet of homes.
4. Prune tree limbs so the lowest branches are 6 to 10 feet from the ground.
5. Remove any large groupings of plants like saw palmetto, yaupon, wax myrtle and gallberry, especially if the plants are close to the home, adjacent decks or porches or under eaves or overhangs.
6. Instead of flammable mulch like bark or wood chips, use lava stone or coarse gravel around any shrubbery that is within 5 feet of the structure.

ALLOW NO FLAMMABLE VEGETATION IN CONTACT WITH THE STRUCTURE.

7. Remove highly flammable plants characterized by resinous sap and waxy leaves. These include: saw palmetto, wax myrtle, yaupon, red cedar, cypress and young pine trees.
8. Locate firewood and propane gas tanks at least 50 feet from the structure.
9. Keep 100 feet of hose readily available at a faucet away from the structure.
10. Select less-flammable plant species to plant within the zone of defensible space.

If any replanting/restoration planting is required within the boundaries of the upland preserve area, then less flammable trees and shrubs should be utilized as recommended by FFS and the Firewise Landscaping program.

Native Trees	Native Shrubs
Oaks	Coontie
Maple	Beautyberry
Magnolia	
Sea grape	
Elm	
Red bay	
Green buttonwood	

See <https://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/For-Communities/Firewise-Communities/Firewise-Landscaping> for further details.

It must also be noted that the adjacent Atlantic Ridge State Park will conduct periodic prescribed burns in order to control exotic and nuisance plant species and the reduction of fuel load as part of a regular management tool of these conservation lands.

J. ACTIVITIES PROHIBITED IN PRESERVE AREAS

Activities prohibited in Preserve Areas or easements within Preserve Areas include, but are not limited to: construction; dumping or placing building materials, soil, garbage, trash, or dead vegetation on or above the ground; removal or destruction of native trees, shrubs or other native vegetation; excavation or dredging of soil; diking or fencing; vehicular traffic including use by non-motorized vehicles, recreational vehicles and off-road vehicles; permanent irrigation; trimming, pruning, or fertilization; and any other activities detrimental to drainage, flood control, water conservation, erosion control or fish and wildlife conservation and preservation.

No hazardous material other than fuel for refueling on-site equipment may be stored during construction. On-site fuel tanks may not be located within twenty-five (25) feet of any Preserve Areas and will be removed upon completion of construction work.

Buildings proposed to be located adjacent to Preserve Areas will be set back a minimum of ten (10) feet to allow for construction and maintenance without encroaching into the Preserve Area. All other structures (e.g. pools, sheds, decks, fences) shall be set back a minimum of five (5) feet from the Preserve Area boundary.

Development activities such as the construction of building pads for associated structures, swales, or culverts for surface water management shall not alter the hydrology of adjacent Preserve Areas. Nor shall any activities increase non-point source pollution in Preserve Areas.

Grazing of cattle and horses or other livestock in Preserve Areas, while not prohibited, is discouraged. Over-grazing can result in destruction of habitat, loss of top soils and changes in hydrology of the area as a result of the loss of ground cover material, increased fertilization from animal droppings, and contamination of surface waters. These and other effects of over-grazing will be considered violations of this PAMP and will be addressed as any other PAMP violation.

K. RESTORATION AND MAINTENANCE ACTIVITIES

Except for approved restoration and maintenance activities, Preserve Areas will be left undisturbed. All maintenance of Preserve Areas will be in accordance with this PAMP. Maintenance and management activities will be performed by or under the supervision of a qualified environmental professional and must be approved by the Martin County Environmental Planning Administrator. A description of all proposed restoration and maintenance activities to be conducted on the site will be included in the Restoration/Mitigation Planting Plan prepared as part of the EA. The following restoration and maintenance activities may be allowed within Preserve Areas with prior written approval from the Environmental Planning Administrator: exotic plant removal; revegetation with native plants; removal of plant material that is dead, diseased, or considered to be a safety hazard; and controlled burns.

Exotic Plant Removal - Exotic vegetation shall be removed from Phase I of the Preserve Areas by the least ecologically-damaging method available. Such methods include hand pulling, hand spading, cutting with hand or chain saws and in-situ treatment with appropriate herbicides. No debris, including dead plants, plant clippings or wood scraps, shall be allowed in Preserve Areas. In addition, all dead plant material and exotic plant debris removed from Preserve Areas shall be disposed of in a County-approved recycling facility.

Revegetation - Any revegetation which might be necessary during the construction of Phase I as a result of exotic vegetation removal or site construction activities shall consist of native plant species representative of the existing native plant community. This will ensure that the Preserve Areas maintain indigenous plant associations. Revegetation plans shall be included in the Restoration/Mitigation Planting Plan prepared as part of the EA.

Native Revegetation Plant Schedule

Common Name	Botanical Name	Size & Spacing	Habitat
Wire grass	<i>Aristida stricta</i>	1 gallon; 2' on center	Upland
Sand cord grass	<i>Spartina bakeri</i>	1 gallon; 2' on center	Upland
Saw palmetto	<i>Serenoa repens</i>	1 gallon; 2' on center	Upland
American beautyberry	<i>Callicarpa Americana</i>	1 gallon; 2' on center	Upland
Myrsine	<i>Rapanea punctata</i>	1 gallon; 2' on center	Upland
Dahoon holly	<i>Ilex cassine</i>	3 gallon; 5' on center	Upland
Slash pine	<i>Pinus elliotti</i> var. densa	3 gallon; 5' on center	Upland
Duck potato	<i>Sagittaria latifolia</i>	Bare root; 2' on center	Wetland
Pickernelweed	<i>Pontederia cordata</i>	Bare root; 2' on center	Wetland
Spikerush	<i>Ellyiocharis interstincta</i>	Bare root; 2' on center	Wetland
Spatterdock	<i>Nuphar luteum</i>	Bare root; 2' on center	Wetland
Saw grass	<i>Cladium jamaicense</i>	Bare root; 2' on center	Wetland

All monitoring provisions necessary to assure the survivorship and maintenance responsibility for the reclamation areas of littoral and upland transition zone buffer areas around lakes constructed on the site managed by this PAMP shall be identified in the Restoration/Mitigation Planting Plan included in the EA for this site.

Vegetation Removal - Dead or diseased plant material shall be removed from Preserve Areas in Phase I upon approval by the Martin County Environmental Planning Administrator. Revegetation may be required for any removed plant material. No debris, including dead plants, plant clippings or wood scraps, shall be allowed in Preserve Areas. All dead plant material and debris removed from Preserve Areas shall be disposed of in a County-approved recycling facility.

Prescribed Burns - Martin County considers prescribed burns an acceptable habitat management tool. When approved by the Martin County Environmental Planning Administrator, prescribed burns may be conducted by a certified burn manager who will be responsible for obtaining all appropriate permits from State and local agencies.

Again, it must also be noted that the adjacent Atlantic Ridge State Park will conduct periodic prescribed burns in order to control exotic and nuisance plant species and the reduction of fuel load as part of a regular management tool of these conservation lands.

Other Restoration and Maintenance Activities - Alternative and innovative management techniques, which may provide for the long-term viability and habitat value of the Preserve Areas and for protection against imminent threats to public health and safety, may be approved by the Martin County Environmental Planning Administrator.

L. SITE HYDROLOGY

Previous or potential drainage impacts will be corrected to the extent technically feasible. Water quality and the rate, timing, and volume of run-off shall recreate natural conditions for the benefit of onsite wetlands and other waterbodies. Wetlands and waterbodies on adjacent properties shall be protected from adverse impacts.

M. PROTECTED SPECIES

If a protected species survey conducted as part of the Environmental Assessment of the project site indicates the presence of protected plant or animal species, the Environmental Assessment will include a Protected Species Management Plan. This Plan will include the results of the protected species survey; a listing and description of protected species occurring on, or utilizing, the site; documentation of the protection status of each species; a map of active and inactive burrows, nests, cavity trees, etc. found as part of the survey; a description of the protective measures being provided for each listed species found on the site; and copies of all correspondence with applicable state and federal agencies regarding the protection of listed species.

N. INSPECTIONS AND ENFORCEMENT

Martin County is authorized to inspect any County regulated site or appurtenance. Duly authorized representatives of Martin County may, at any time, upon presenting proper identification, enter upon and shall be given access to any premises for the purpose of such inspection. Martin County shall have the right to enforce the provisions of this PAMP through any available administrative or civil proceeding, which may result in penalties. Restoration of habitat and other remedies, such as fines and fees covering staff time, may be required of any person, corporation or other entity found in violation of any of the provisions of this PAMP or of Article 10 of the Martin County Land Development Regulations.

APPENDICES

Annual Monitoring Report Template

Example of Preserve Area Sign

Environmental Assessment

Site Plan – Phasing

Firewise Plan

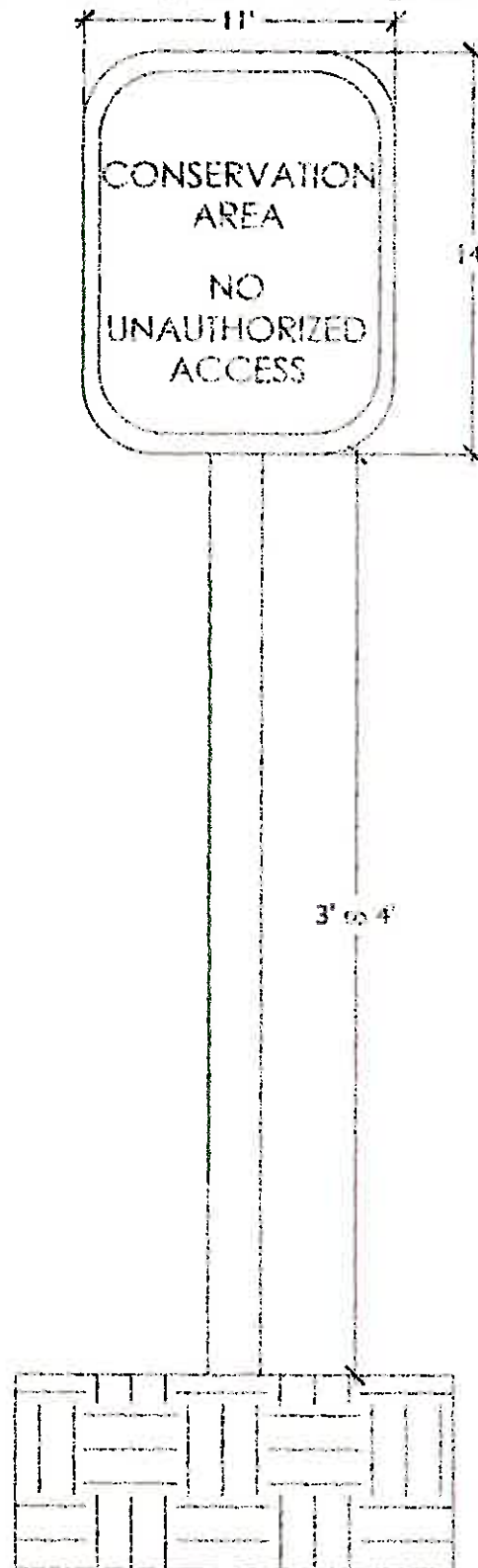
Land Clearing/Erosion Control Plan

Restoration/Mitigation Planting Plan

Protected Species Management Plan

15% Gopher Tortoise Burrow Survey

TYPICAL SIGNAGE DETAIL



*Note: Sign to be installed 500' on center around preservation and conservation areas unless otherwise shown.



**Cove Royale
Martin County
Environmental Assessment Report**

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Revised September 12, 2018

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**Cove Royale Property
Environmental Assessment Report
Martin County – Section 34, Township 48S, Range 41E
Revised September 12, 2018**

INTRODUCTION

The intent of this Environmental Assessment Report is to provide a preliminary assessment of natural features located within the boundaries of the subject property (assessment area) including wetlands, upland habitat, protected trees and other vegetation, and potential for listed species (flora and fauna).

The subject property is 97.06 acres in size and is comprised of vacant land that is mostly wooded with native plant communities and a large freshwater marsh wetland system that runs through the central portion of the assessment area, connecting to the Atlantic Ridge Preserve State Park to the south. The subject property is located on the south side of Cove Road, approximately 1.4 miles east of Kanner Highway, Martin County (Section 34, Township 38 South, Range 41 East). The subject property is bound to the east by undeveloped land, to the west by a private youth facility, to the north by residential development, and to the south by the Atlantic Ridge Preserve State Park.

METHODOLOGY

This Environmental Assessment Report is based on aerial (2018) photographic interpretation, review of Soil Survey of Martin County Area (USDA, Natural Resource Conservation Service, (Web Soil Survey) and field investigations. Ecotone Services, Inc. (ES) staff performed site visits on numerous occasions during 2016-2018. An aerial photograph (Scale: 1" = 400') was used to attain a general indication of the natural features of the parcel and to indicate specific points of interest. An on-site review of the subject property conditions was performed by walking transects through the site while noting plant species, ecosystems and habitats, and potential use by listed animal and plant species.

SITE CONDITIONS

The subject property is comprised of 2 undeveloped parcels that feature pine flatwoods and freshwater marsh wetlands. The condition of these ecosystems and communities are of a relatively undisturbed condition, however, exotic and nuisance plant species are beginning to have a significant impact on portions of the upland sections of the subject property. Overall, the wetland and upland ecosystems and habitats are in a healthy condition.

There are several pedestrian and apparent off-road vehicular trails on the subject property including a large 30' wide earthen access road that goes east to west through the center of the subject property. This was apparently used by previous landowners to access the eastern portion of the subject property for recreational intent, including hunting.



There are a couple areas of soil excavation that was probably in part used for the construction of the central access road. An approximate 40' wide swath of soil excavation is located from the west side of the access road to the south property boundary. A large spoil pile is located at the south end of this excavated area and is 10-15' tall in profile.

Please refer to the Florida Land Use Cover Classification System (FLUCCS) map included with this package.

UPLAND ECOSYSTEM

Nearly the entire upland portion of the subject property is comprised of pine flatwood community along with several pedestrian trails and the large east/west access road.

The following descriptions include the Florida Land Use, Cover and Forms Classification System (FLUCCS) incorporated by the Florida Department of Transportation (FDOT).

411 – Pine flatwoods (60.32 acres)

This FLUCCS assessment is very common in the region and constitutes the largest acreage of habitat on the subject property. Vegetation coverage is dominated by a slash pine canopy with an understory of dahoon holly, saw palmetto, galberry, and various woody exotic vegetation.

The following is a list of the dominant native and non-native plant species identified on the subject property located within this assessment area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
Slash pine	<i>Pinus elliotti var. densa</i>	Native
Live oak	<i>Quercus virginiana</i>	Native
Dahoon holly	<i>Ilex cassine</i>	Native
Cabbage palm	<i>Sabal palmetto</i>	Native
Saw palmetto	<i>Serenoa repens</i>	Native
Rusty lyonia	<i>Lyonia ferruginea</i>	Native
Galberry	<i>Ilex glabra</i>	Native
Wax myrtle	<i>Myrica cerifera</i>	Native
Crowfoot grass	<i>Dactyloctenium aegyptium</i>	Native
Spanish needles	<i>Bidens alba</i>	Native
Grape vine	<i>Vitis rotundifolia</i>	Native
Catbrier	<i>Smylax spp.</i>	Native
Caesars weed	<i>Urena lobata</i>	Non-native
Brazilian pepper	<i>Schinus terebinthifolius</i>	Non-native
Strawberry guava	<i>Psidium cattleianum</i>	Native
Earleaf acacia	<i>Acacia auriculiformis</i>	Non-native
Carrotwood	<i>Cupaniopsis anacardioides</i>	Non-native



8146 – Trail (1.58 acres)

This FLUCCS assessment areas consists of land that is part of a series of primitive trails used for footpaths and off-road vehicular use. The most significant trail runs from west (connecting to SE Trover Lane) to east, including the large road that crosses through the center of the large freshwater marsh wetland. Generally, there are no native or non-native plant species associated with this trail/road system as it is well used, worn, and comprised of mostly exposed soil.

WETLAND ECOSYSTEM

Wetland protection is mandated under both federal and state regulations. The U. S. Army Corps of Engineers (USACE) regulates activities in Waters of the United States pursuant to the Clean Water Act (PL92-500, Section 404) as further defined in the ACOE regulatory program (33 CFR 320-330).

The State of Florida Department of Environmental Protection (FDEP) has established wetland identification and permitting processes at Chapter 62-330, and 62-340, and 62-312 of the Florida Administrative Code (FAC). Current federal and state wetland definitions are derived from the original definition found in 33 CFR 328.3, identifying wetlands as “those areas that are inundated, or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions”.

Delineation of federally regulated jurisdictional wetlands is determined by the *Corps of Engineers Wetlands Delineation Manual* (USACE Waterways Experiment Station Environmental Laboratory, 1987). Delineation of wetlands regulated by FDEP and South Florida Water Management District (SFWMD) is done according to Chapter 62-340 FAC, Delineation of the Landward Extent of Wetlands and Surface Waters. The *Florida Wetlands Delineation Manual* (Gilbert et al, 1995) serves as a guide to Chapter 62-340. Both manuals, which emphasize the identification of hydric soils, hydrophytic vegetation, and wetland hydrologic conditions in making wetland determinations, were used as a general guide in this investigation.

This report is not to be considered a wetland jurisdictional determination.

There 6 individual wetlands located on the subject property, with the largest being the freshwater marsh that runs north and south, connecting to Atlantic Ridge State Park. Both USACE and SFWMD have performed their wetland jurisdictional determinations in 2017. In addition, USACE has issued their No Permit Required for the proposed project as no wetland impacts will occur. SFWMD (application no. 170321-S) has resolved most of the outstanding wetland protection related issues for the Environmental Resource Permit (ERP) application. At this time there are several surface water management related issues that are in the process of getting resolved so that the ERP for this project can be issued.

The following is the FLUCCS category for this assessment area:



Ecotone Services, Inc. 13945 89th Street Fellsmere, FL 32948 Phone: 772-453-3339
Email: ecotoneservices@gmail.com

641 – Freshwater marsh (35.17 acres)

This FLUCCS assessment area is comprised of 6 individual wetland areas with the largest portion including the wetland ecosystem that runs north to south through the central portion of the property and connecting to the Atlantic Ridge State Park. One of the wetlands (identified as Wetland #3) appears to be an excavated area used for fill to develop SE Trover Lane, and is currently a monoculture of cattail. Otherwise, the remaining freshwater marsh wetlands are healthy systems that have limited amounts of exotic and nuisance plant infestation. Although, significant amounts of *Melaleuca* is located in the north section of Wetland #1, adjacent to the existing residential development.

The following is a list of the dominant plant species identified as part of this assessment area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
St. Johns wort	<i>Hypericum</i> spp.	Native
Pickerelweed	<i>Pontederia cordata</i>	Native
Sawgrass	<i>Cladium jamaicense</i>	Native
Duck potato	<i>Sagittaria latifolia</i>	Native
Cattail	<i>Typha</i> spp.	Native
Maidencane	<i>Panicum hemitomon</i>	Native
Red root	<i>Lachnanthes caroliniana</i>	Native
Pipewort	<i>Lachnocaulon</i> spp.	Native
Corkwood	<i>Stillingia aquatic</i>	Native
White top sedge	<i>Rhynchospora colorata</i>	Native
Carolina willow	<i>Salix caroliniana</i>	Native
Yellow eyed grass	<i>Xyris</i> spp.	Native
Pennywort	<i>Hydrocotyle</i> spp.	Native
Pond cypress	<i>Taxodium ascendens</i>	Native
Melaleuca	<i>Melaleuca quinquenervia</i>	Non-native
Primrose willow	<i>Ludwigia peruviana</i>	Non-native
Brazilian pepper	<i>Schinus terbinthifolius</i>	Non-native

SOILS

The following are the soils and their descriptions found throughout the project site according to the Martin County Soil Survey. Please see attached Exhibit C, Soil Survey.

04 – Waveland sand: This is nearly level soil is poorly drained and in broad areas of flatwoods. The water table is at a depth of 10 inches for 2 to 4 months and at a depth of 40 inches for 6 months or more in most years. Natural vegetation is slash pine, saw palmetto, galberry, fetterbush, running oak, and dwarf huckleberry. Grasses are pineland three awn, bluestem, and panicum.



05 – Waveland sand, depressional: This is a poorly drained soil in depressions in flatwoods. The soil is ponded for 6 to 9 months in most years. The natural vegetation is St. John's wort, needlerush, pipewort, ferns, panicums, maidencane and other water tolerant grasses.

RESTORATION/MITIGATION PLANTING PLAN

Any revegetation which might be necessary as a result of exotic vegetation removal or site construction activities shall consist of native plant species representative of the existing native plant community. This will ensure that the Preserve Areas maintain indigenous plant associations. Revegetation plans shall be included in the Restoration/Mitigation Planting Plan prepared as part of the EA.

Native Revegetation Plant Schedule

Common Name	Botanical Name	Size & Spacing	Habitat
Wire grass	<i>Aristida stricta</i>	1 gallon; 3' on center	Upland
Sand cord grass	<i>Spartina bakeri</i>	1 gallon; 3' on center	Upland
Saw palmetto	<i>Serenoa repens</i>	1 gallon; 3' on center	Upland
American beautyberry	<i>Callicarpa Americana</i>	1 gallon; 3' on center	Upland
Myrsine	<i>Rapanea punctata</i>	1 gallon; 3' on center	Upland
Dahoon holly	<i>Ilex cassine</i>	3 gallon; 10' on center	Upland
Slash pine	<i>Pinus elliotti</i> var. densa	3 gallon; 10' on center	Upland
Duck potato	<i>Sagittaria latifolia</i>	Bare root; 2' on center	Wetland
Pickrelweed	<i>Pontederia cordata</i>	Bare root; 2' on center	Wetland
Spikerush	<i>Ellyiocharis interstincta</i>	Bare root; 2' on center	Wetland
Spatterdock	<i>Nuphar luteum</i>	Bare root; 2' on center	Wetland
Saw grass	<i>Cladium jamaicense</i>	Bare root; 2' on center	Wetland

THREATENED AND ENGANGERED SPECIES

The State of Florida Fish and Wildlife Conservation Commission (FWC) regulates protected species according to Rule 68A-27.001(3), Florida Administrative Code (FAC). The plant and animal species regulated by FWC are managed according to the federal Endangered Species Act of 1973. On the federal level, the U. S. Fish and Wildlife Conservation Commission (FWS) is the regulatory agency that oversees this program.

The following table is a list of potential species that may inhabit the region that the subject property is located, but do not necessarily inhabit the subject property due to historic land alterations, current site conditions, and the surrounding environment and adjacent property conditions.

A. Amphibian

Common Name	Scientific Name	Protected Species	
		State	Federal
Gopher frog	<i>Rana capito</i> (3)	SSC	



B. Birds

Common Name	Scientific Name	Protected Species	
		State	Federal
Southeastern American Kestrel	<i>Falco sparverius paulus</i> (4)	ST	
Bald eagle	<i>Haliaeetus leucocephalus</i> (3)		
Red-cockaded woodpecker	<i>Picoides borealis</i> (3)	FE	E
Wood stork	<i>Mycteria americana</i> (4)	FE	E
Everglades snail kite	<i>Rosthamus sociabilis</i> (3)	FE	E

C. Mammals

Common Name	Scientific Name	Protected Species	
		State	Federal
Florida bonneted bat	<i>Eumops floridanus</i> (3)	FE	E

D. Reptiles

Common Name	Scientific Name	Protected Species	
		State	Federal
Florida pine snake	<i>Pituophis melanoleucus mugitus</i> (3)	SSC	
Eastern indigo snake	<i>Drymarchon corais couperi</i> (2)	FT	
Gopher tortoise	<i>Gopherus polyphemus</i> (*)	ST	T
American alligator	<i>Alligator mississippiensis</i> (1)	FT (S/A)	T (S/A)

E. Plants

Common Name	Scientific Name	Protected Species	
		State	Federal
Four-petal pawpaw	<i>Asimina tetramera</i> (3)	FE	E

*: Observed on site

FT: Federally-designated Threatened

FE: Federally-designated Endangered

FT(S/A) Federally-designated Threatened species due to similarity of appearance

ST: State-designated Threatened

SSC: Species of Special Concern

A 15% gopher tortoise burrow survey was performed in September 2017 and identified as many as 36 potentially active and inactive burrows located throughout the upland portions of the subject property. Prior to site development, a 100% gopher tortoise burrow survey will be performed and at that time determine if a permit will be required by FWC according to potential site development impacts.

Based on a September 12, 2018 telephone conversation with U. S. Fish & Wildlife supervisor Ms. Ashleigh Blackford, the project site has a lot of preservation areas (upland and wetland) that will allow for any EIS that may inhabit the subject property to move around, sustain its population, and even thrive. In addition to the on-site upland and wetland preservation areas,



Ecotone Services, Inc. 13945 89th Street Fellsmere, FL 32948 Phone: 772-453-3339

Email: ecotoneservices@gmail.com

there is abundant vacant land to the east and to the south (Atlantic Ridge State Park) that will provide significant future habitat for any EIS that may currently inhabit the project site. As a result, no Section 7 or Section 10 consultation is required for this project, nor is an Incidental Taking Permit required for this project.

Since no wetlands will be impacted for site development, and extensive upland preservation is occurring around and adjacent to the on-site wetlands, there is no expected affect on wading birds according to FWS guidelines.

There are no other listed plant or animal species identified on the subject property, and FWS and FWC have not provided concern over impact of any species other than what is discussed in this section (above).

CONCLUSION

According to Martin County Comprehensive Plan, there are no wetland impacts allowed. As a result, all 35.17 acres of wetlands will be preserved on the subject property. As required by the county, 25% of the quality upland habitat must be preserved on site. There is 60.32 acres of pine flatwood habitat on the subject property, and this would result in the preservation of 15.08 acres of upland preservation. The project will provide over and above acreage towards upland preservation that totals 19.7 acres or 32% of the total upland habitat on the project site. Both the wetlands and upland preservation areas will be placed under a conservation easement and managed in perpetuity according to both the Martin County Preserve Area Management Plan and the SFWMD Wetland Maintenance And Monitoring Plan.

A 100% gopher tortoise burrow survey will be required prior to site development. If burrows are identified in the proposed development area of the subject property then a taking permit may be required from FWC and off-site relocation to a conservation bank will be required. The current cost per tortoise by the recipient site will have to be determined at the time of permitting as these fees are constantly increasing as demand for space increases.

There are no federal (FWS) listed species concerns on the project site due to the high degree of upland and wetland preservation on-site and the significant vacant and natural wooded lands on the parcels to the east and south (Atlantic Ridge State Park) of the project site.

Protection of all on-site wetlands (35.17 acres), the 50' upland buffer provided around all wetlands, and the total of 19.7 acres of upland preservation will ensure that ecosystems, habitat, and wildlife protective measures will be implemented that provide the highest degree of protection and management practices.





Source: Google Earth

97 AC. COVE ROAD

PREPARED FOR BRIAN TUTTLE

LOCATION MAP



SCALE: NTS

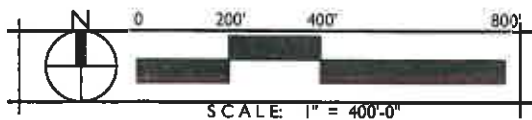
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DRAWING #

FILE #

DATE

5/29/2018



Source: LABINS.org

□□□□□S □□□□

411 □□ine □latwood □60.52 ac.

641 □□reshwater Marsh □□16 ac.

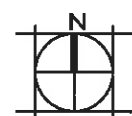
8146 □Trail □1.58 ac.

Total Acreage = 95.26

97 AC. COVE RD.

PREPARED FOR BRIAN TUTTLE

FLUCCS MAP



SCALE: 1" = 400'

DRAWN BY:

DRAWING #: Location, Soil Survey, FLUCCS Maps.dwg

FILE #:

XXXX

DATE:

05/11/2018



Soil Series

04 - Waveland fine sands

05 - Waveland fine sands, depressional

Source: USDA Soil Survey of Martin County

97 AC. COVE RD.

PREPARED FOR BRIAN TUTTLE

SOIL SURVEY



SCALE: NTS

DRAWN BY: : Location, Soil Survey, FLUCCS Maps.dwg

DRAWING #

FILE #:

XXX.X

DATE:

05/29/2018

Ecotone Services, Inc. 13945 89th Street Fellsmere, FL 32948 Ph: 722-453-3339



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Regulation Division

Delivered Via Email

April 20, 2016

Mr. Brian Tuttle
961 Hillsboro Mile
Hillsboro Beach, Florida 33062

**Subject: Application No. 160322-12
Cove Road Royale
Informal Wetland Determination No. 43-00054-IF
Martin County, S34/T38S/R41E**

Dear Mr. Tuttle:

The District offers the following in response to your request for a determination of wetland boundaries located within the subject property. Site visits were conducted by District staff on April 14, 2016 and on April 19, 2016. Based on the site visits, and other site-specific information, this 95 acre site contains wetlands as defined by Chapter 62-340 Florida Administrative Code (FAC). The approximate project boundaries are identified on the attached aerial photograph. The area considered wetlands is identified by the blue cross hatching.

This correspondence is an informal wetland determination pursuant to Chapter 373, Florida Statutes. It does not bind the District, its agents or employees, nor does it convey any legal rights, expressed or implied. Persons obtaining this informal wetland determination are not entitled to rely upon it for purposes of compliance with provision of law or District rules. A binding wetland determination may be obtained by petitioning the South Florida Water Management District for a wetland declaratory statement pursuant to FAC Rule 62-340 or by applying for an Environmental Resource permit.

The identified wetlands and, potentially other areas of the property not jurisdictional under State rules, may be wetlands and/or other waters of the United States under federal rules. Dredging or filling in such areas may require a Department of Army (DA) permit. Receipt of a state or local government permit does not obviate the need to obtain a DA permit prior to commencing work. For more information about the DA Regulatory Program, you may access the Corps' website at: www.saj.usace.army.mil/permit/index.html. You may also contact the local Corps regulatory office for additional information, at one of the following numbers: 561-472-3517, 561-472-3506, or 561-472-3514. If you have any further questions, please contact me at (863) 462-5260 x3636.

Mr. Tuttle

April 20, 2016

Subject: Application No. 160322-12 Cove Road Royale

Page 2

Sincerely,



Jose M. Vega
Environmental Analyst
Martin/St. Lucie Regulatory Office
South Florida Water Management District
863-462-5260 ext 3636
800-250-4200 ext 3636
3800 NW 16th Blvd. Suite A
Okeechobee, FL 34972

BC/jv- Attachments (Location Map, Soils Map, FLUCCS Map, Wetland Map)

Cc: Rick Harman - WGI
U.S. Army Corps of Engineers, Palm Beach Gardens
Shawn McCarthy – Martin County Growth Management

Mr. Tuttle

April 20, 2016

Subject: Application No. 160322-12 Cove Road Royale

Page 3

Addresses:

Rick Harman

WGI

2035 Vista Parkway

West Palm Beach, FL 33411

Rick.harman@waintnangroup.com

Shawn McCarthy

Martin County Growth Management Department

Martin County Administrative Center

2401 SE Monterey Road

Stuart, FL 34996

smccarth@martin.fl.us



Source: Google Earth

COVE ROYALE

PREPARED FOR BRIAN TUTTLE

LOCATION MAP



SCALE: NTS

DRAWN BY: RMH

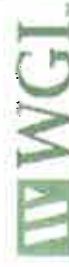
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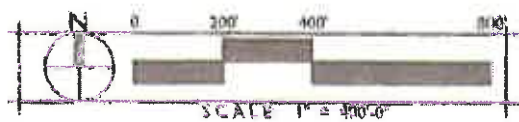
2101.01

DATE

09/15/2016



LAND DESIGN SERVICES DIVISION



Source: LADINS, Inc.

FLUCCS CODE

411 - Pine Flatwood - 58.59 ac.

641 - Freshwater Marsh - 35.17 ac.

8146 - Trail - 1.50 ac.

Total Acreage = 95.26

97 AC. COVE RD.

PREPARED FOR BRIAN TUTTLE

FLUCCS MAP



SCALE: 1" = 400'

WGI

LAND DESIGN SERVICES DIVISION

DRAWN BY: RMH

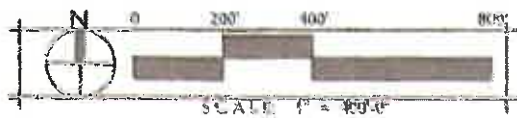
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FILE #: 2101.01

DATE: REVISED 04/19/2016



SFWMD File: 1807-0012
Date: 3/19/16
Reviewer: Jose Velez
County: Martin S 44 T 38 R 41



WETLAND & OSW ACREAGE

Wetland 1 - 17.36 ac.
Wetland 2 - 7.31 ac.
Wetland 3 - 0.61 ac.
Wetland 4 - 5.52 ac.
Wetland 5 - 3.86 ac.
Wetland 6 - 0.26 ac.
Total On-site Wetland Acreage = 35.12
Total OSW Acreage = 0.00

Scanner: 2.4M/VS.jpg

97 AC. COVE RD.

PREPARED FOR BRIAN TUTTLE

WETLAND BOUNDARY MAP



SCALE 1" = 400'

WGL

LAND DESIGN SERVICES DIVISION

DRAWN BY: RPH
DRAWING #: Location, Soil Survey, FUECCS Maps.dwg
FILE #: 1101.01
DATE: REVISED 04/19/2016

FUT
SIX
DESC

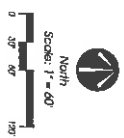
- Legend**
- Wetlands
 - Uplands & Wetland Buffers
 - Dry Retention
 - Sidewalk

FUTURE LAND USE:
RECREATIONAL
PR
STATE PARK
EXISTING ZONING:
EXISTING USE:

FUTURE LAND USE:
RECREATIONAL
PR
STATE PARK
EXISTING ZONING:
EXISTING USE:

FUTURE LAND USE:
RECREATIONAL
PR
STATE PARK
EXISTING ZONING:
EXISTING USE:

Final Site Plan



DATE	3/25/2010
DESIGNED BY	W. J. B. / W. J. B.
CHECKED BY	W. J. B. / W. J. B.
APPROVED BY	W. J. B. / W. J. B.
PROJECT NAME	COVE ROYALE
PROJECT ADDRESS	10000 S.W. 10th St., Fort Lauderdale, FL 33308
CLIENT	COVE ROYALE
DATE	3/25/2010

FUTURE LAND USE:
EXISTING ZONING:
EXISTING USE:

RURAL DENSITY
RE 2 A
SAMARITAN HOUSE

PROPOSED
EMERGENCY
ACCESS

1/2 TYPE 2
LANDSCAPE
BUFFER (12.5'
MINIMUM WIDTH)

50' Wetland Buffer
(Typ.)

1/2 TYPE 2
LANDSCAPE
BUFFER (12.5'
MINIMUM WIDTH)

Phase I
46.24 Acres

Wetland
5.52 Acres

Wetland
6.2 Acres

Dry Retention
5.50 Acres

Open Space
Density
Transition
Zone
(Typ.)

Dry Retention
5.9 Acres

Phase II
50.82 Acres

Phase
Line

Temporary Culvert
(Phase I)

Phase
Line

Phase
Line

Dry Retention

20' of asphalt pavement with 2' curbing on
each side for a total road width of 24' (Typ.)

6' Sidewalk (Typ.)

29 Acres

10' Utility Easement (Typ.)

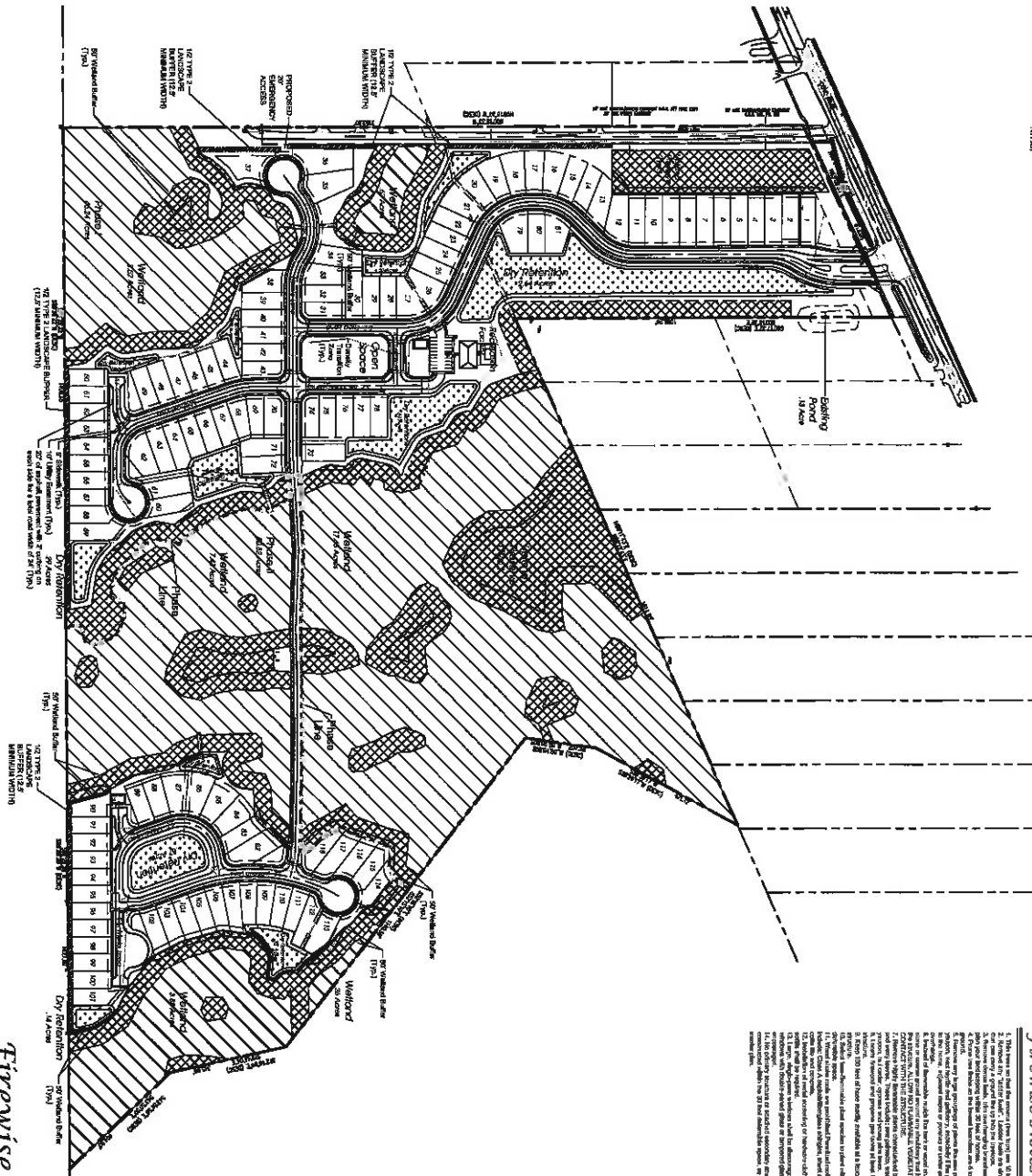
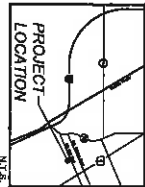
20' of asphalt pavement with 2' curbing on
each side for a total road width of 24' (Typ.)

Cove Royale
Martin County, Florida

Conceptual
Design
Group, Inc.
10000 S.W. 10th St., Fort Lauderdale, FL 33308
772.468.2200
www.conceptualdesigngroup.com

Sheet

3 of 3



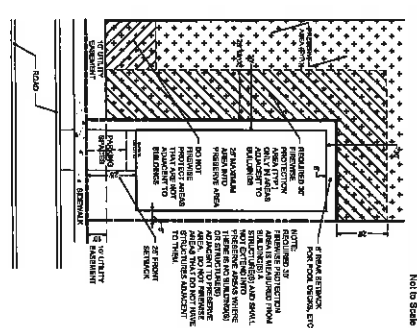
General Notes

1. The Firewise Plan is a conceptual plan and is not intended to be used as a final plan. It is intended to provide a general overview of the project and to show the location of the various firewise zones.
2. The Firewise Plan is based on the information provided in the project description and on the information available from the field. It is not intended to be used as a final plan.
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Firewise Notes

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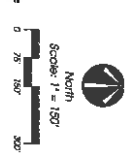
Typical Lot Firewise Detail



Legend

- Wetlands
- Uplands & Wetland Buffers
- Dry Retention
- Setback
- Firewise Areas

Firewise Plan



Conceptual Design

Group, Inc.
Landscape Architect - Site Planning
1000 West 10th Avenue, Suite 100
Tampa, Florida 33609
Tel: 813-288-1000

Cove Royale
Martin County, Florida

Job No.	16-002
Drawn By	11-02018
Submittal Date	8-2-2018
Revision	2-04-2020
Design Date	8-2-2018
Asst. Designer	2-04-2020

Drawn: [Signature]
Checked: [Signature]
Reviewed: [Signature]
Approved: [Signature]



10



MATCHLINE SEE SHEET 10



MATCHLINE SEE SHEET 9

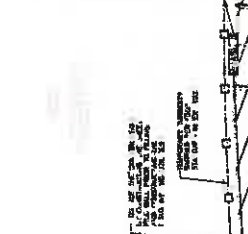
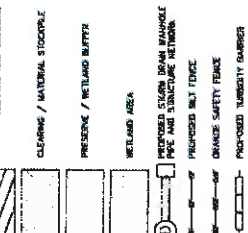
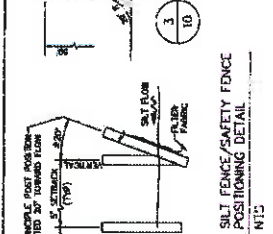
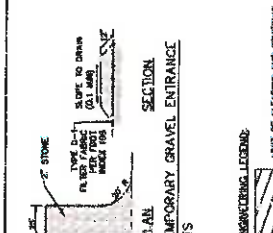
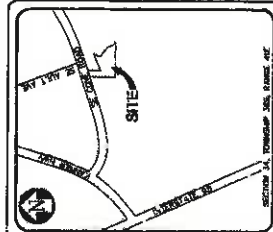
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2	02/01/12	REVISED TO ADD ELEVATION DATA
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4	04/01/12	REVISED TO ADD ELEVATION DATA
5	05/01/12	REVISED TO ADD ELEVATION DATA
6	06/01/12	REVISED TO ADD ELEVATION DATA
7	07/01/12	REVISED TO ADD ELEVATION DATA
8	08/01/12	REVISED TO ADD ELEVATION DATA
9	09/01/12	REVISED TO ADD ELEVATION DATA
10	10/01/12	REVISED TO ADD ELEVATION DATA

DESIGNED BY: J. L. BROWN
CHECKED BY: J. L. BROWN
DATE: 01/11/12
PROJECT: SALT FENCE / SAFETY FENCE
LOCATION: SALT FENCE / SAFETY FENCE

CREATING AND DESIGN CONTROL PLAN MARTIN COUNTY, FLORIDA TOWN OF LEO COVE NOVAE

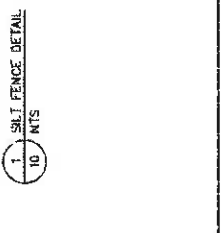
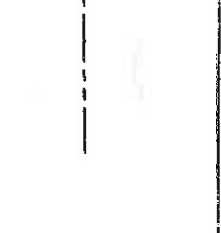
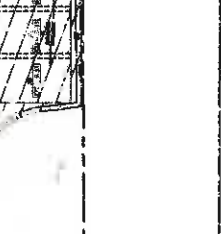
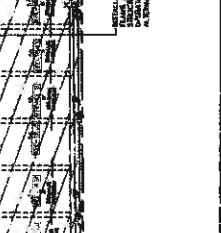
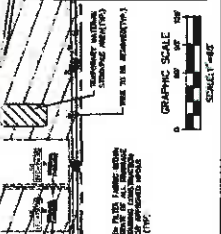
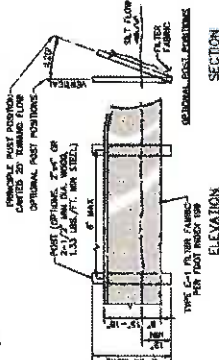
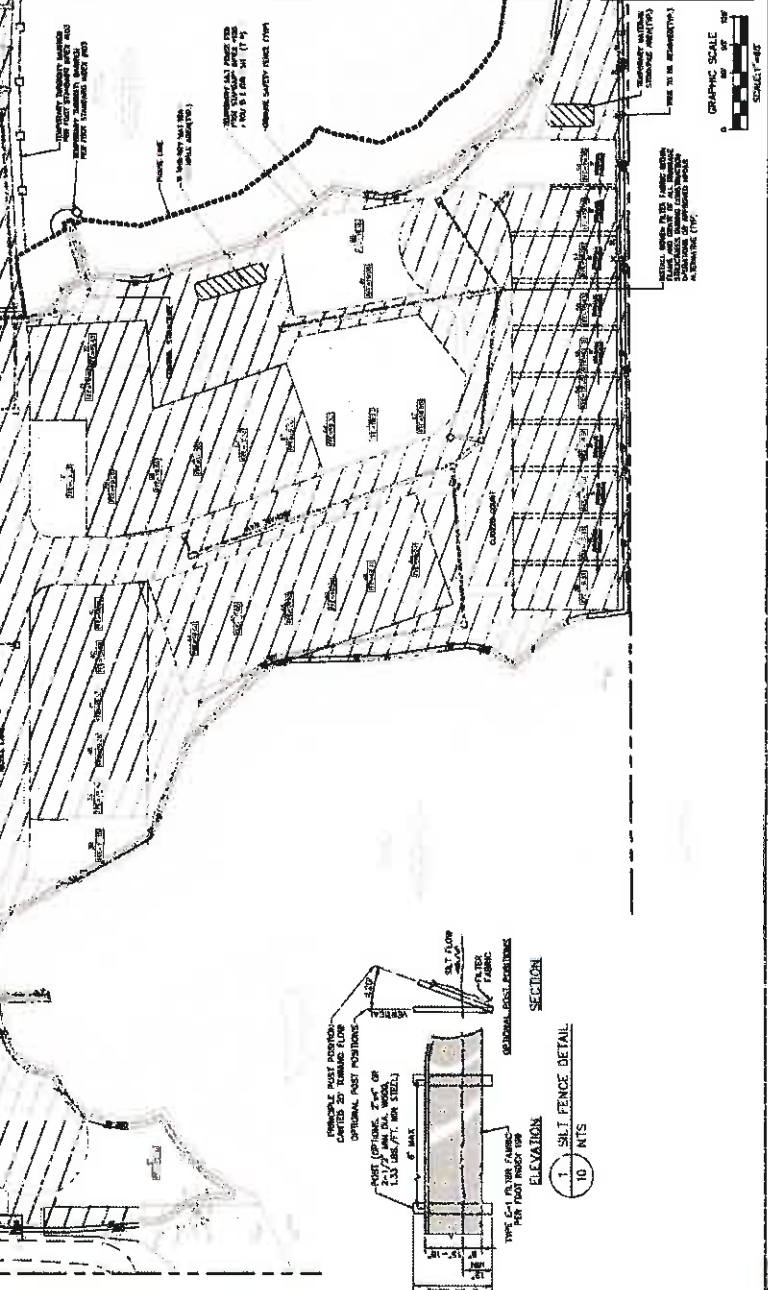
DESIGNED BY: J. L. BROWN
CHECKED BY: J. L. BROWN
DATE: 01/11/12
PROJECT: SALT FENCE / SAFETY FENCE
LOCATION: SALT FENCE / SAFETY FENCE

NO.	DATE	REVISIONS
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6	06/01/12	REVISED TO ADD ELEVATION DATA
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8	08/01/12	REVISED TO ADD ELEVATION DATA
9	09/01/12	REVISED TO ADD ELEVATION DATA
10	10/01/12	REVISED TO ADD ELEVATION DATA



GENERAL NOTES:

- ALL DISTANCES ARE GIVEN IN FEET AND INCHES. ALL DISTANCES ARE TO BE MEASURED FROM THE CENTERLINE OF THE ROAD OR FROM THE CENTERLINE OF THE CANAL.
- ALL DISTANCES ARE TO BE MEASURED FROM THE CENTERLINE OF THE ROAD OR FROM THE CENTERLINE OF THE CANAL.
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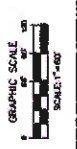
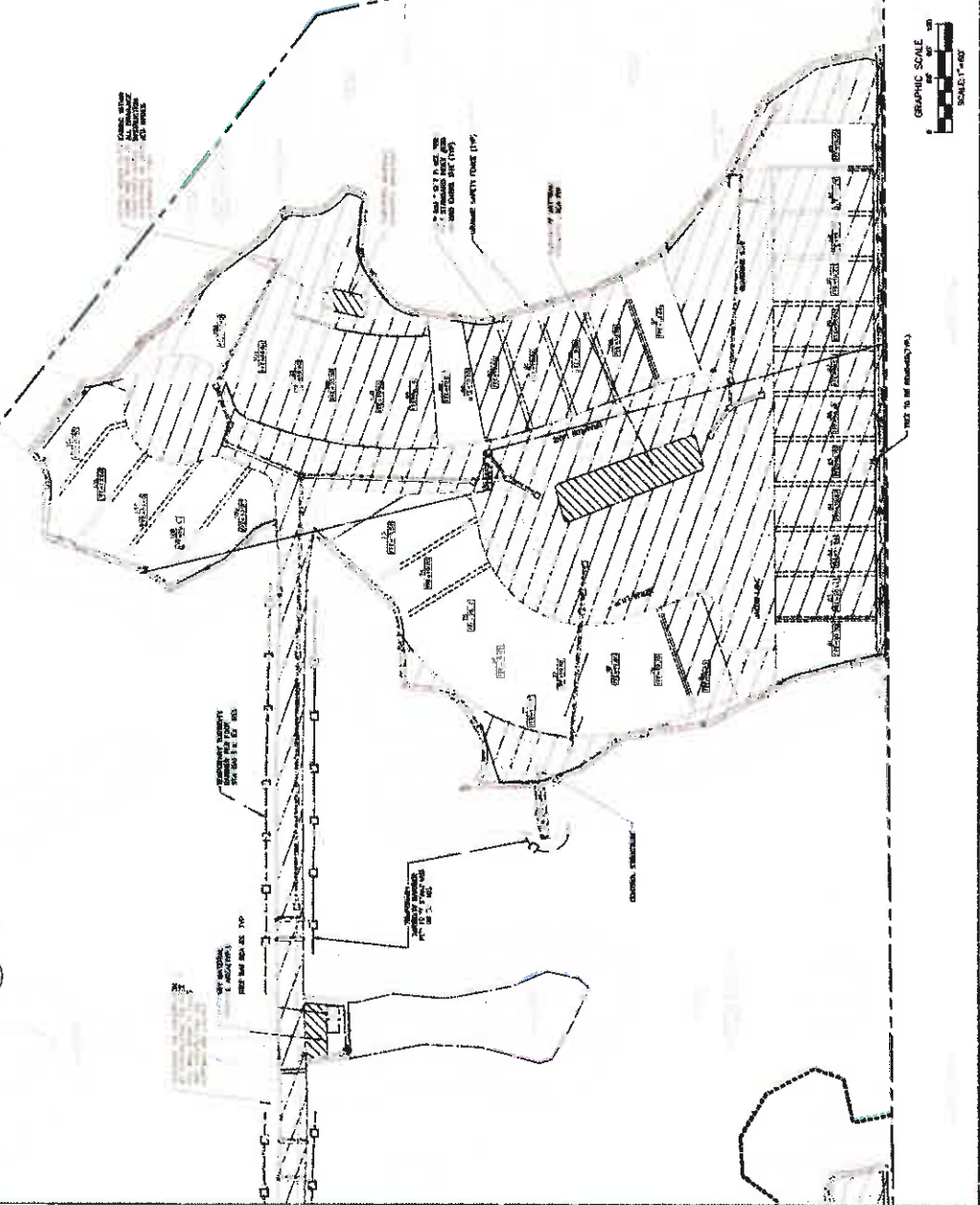
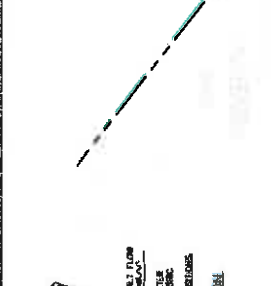
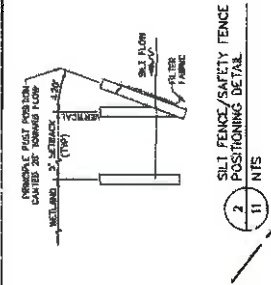
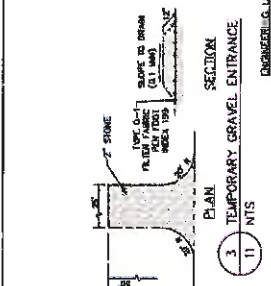
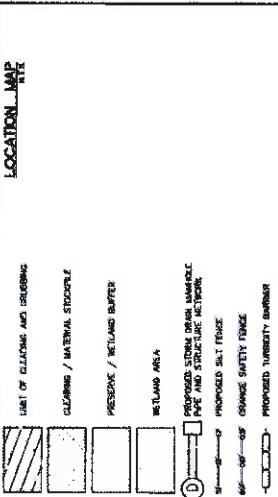
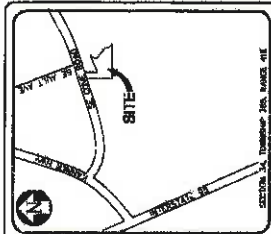
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7	REVISED FOR COMMENTS
8	REVISED FOR COMMENTS
9	REVISED FOR COMMENTS
10	REVISED FOR COMMENTS

NO.	REVISIONS
1	ISSUED FOR PERMIT
2	REVISED FOR COMMENTS
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9	REVISED FOR COMMENTS
10	REVISED FOR COMMENTS

CLEARING AND EROSION CONTROL PLAN MARTIN COUNTY, FLORIDA TIN-82 DOT, LLC COVE ROYALE

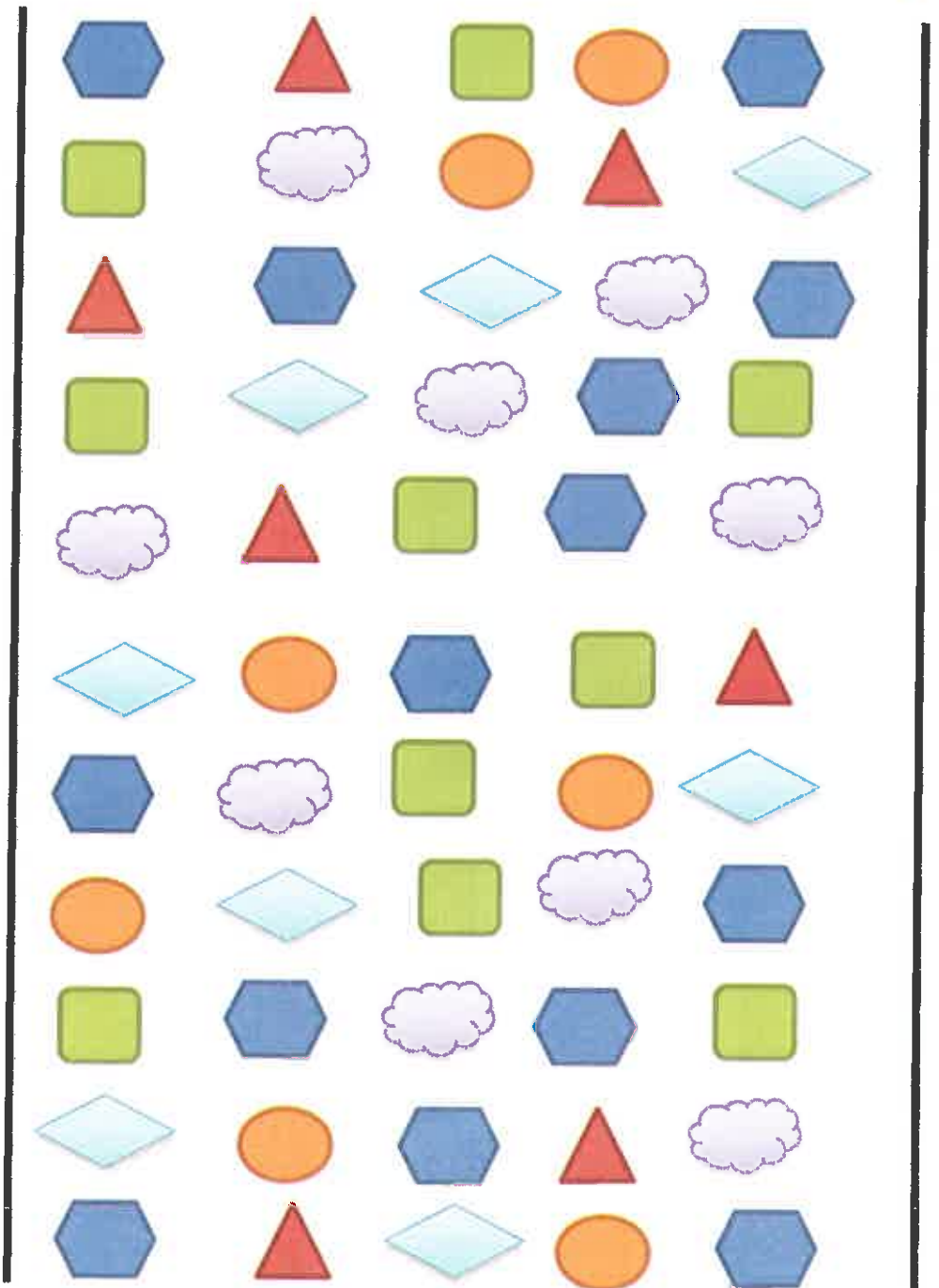
THIS PLAN IS A PART OF THE PERMIT APPLICATION FOR THE CONSTRUCTION OF THE PROJECT DESCRIBED IN THE PERMIT. IT IS TO BE USED IN CONJUNCTION WITH THE PERMIT AND THE OTHER PLANS AND SPECIFICATIONS. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE. THE ENGINEER ASSUMES NO LIABILITY FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED HEREON. THE USER OF THIS PLAN ASSUMES ALL LIABILITY FOR THE ACCURACY AND COMPLETENESS OF THE INFORMATION PROVIDED HEREON.

NO.	REVISIONS
1	ISSUED FOR PERMIT
2	REVISED FOR COMMENTS
3	REVISED FOR COMMENTS
4	REVISED FOR COMMENTS
5	REVISED FOR COMMENTS
6	REVISED FOR COMMENTS
7	REVISED FOR COMMENTS
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9	REVISED FOR COMMENTS
10	REVISED FOR COMMENTS





10' Width (Typical)



Ecotone Services
13945 89th Street
Fellsmere, FL
32948
(772) 453-3339

Restoration/Mitigation Planting Plan

Cove Royale, Martin County

Trees (5' o.c.):



Groundcover (2' o.c.):



Project No: 100.07

Date: 10/27/2018

Drawn by: JWR
Checked by: TTR
Date: 10/27/2018

Scale: Not To Scale



**Cove Royale Property
Protected Species Management Plan
Martin County – Section 34, Township 48S, Range 41E
Revised September 12, 2018**

INTRODUCTION

The intent of this Protected Species Management Plan is to provide a status update with regards to the identified protected species on the subject property as a result of listed species surveys and coordination with regulatory agencies.

During the investigation of listed species survey and as part of the U. S. Army Corps of Engineers Section 404 wetland permitting process (No Permit Required issued by USACE), there were no federal protected species that will need to be addressed for protection as part of this project development and according to U. S. Fish and Wildlife Service (FWS). Gopher tortoise is a state protected species according to Florida Fish and Wildlife Conservation Commission (FWC), and is addressed as follows.

I. Gopher Tortoise

The gopher tortoise is listed as a Threatened Species in the State of Florida, and therefore, protected under regulations set forth in the Wildlife Code of the State of Florida, Chapter 39 FAC, Rule 39-4.001 and 39-25.002, as well as 39-27.

A 15% survey of on-site suitable gopher tortoise habitat within the entire survey area was performed by a registered Gopher Tortoise Agent during several days in September 2017. This survey methodology is the protocol as recommended in Ecology and Habitat Protection Needs of Gopher Tortoise Populations Found on Lands Slated for Large-scale Development in Florida; Non-game Wildlife Program, Technical Report #5, Florida Game and Fresh Water Fish Commission (FGFWFC) Tallahassee, December 1987 (biologically sound methodology, Per. FGFWFC guidelines) and Gopher Tortoise Permitting Guidelines, Florida Fish and Wildlife Conservation Commission, January 2017.

The results are as follows:

Four (4) Abandoned burrows

Thirteen (13) Potentially occupied burrows

Calculation of 15% Area to be Surveyed

61.79 acres of GT Habitat x 15% = 9.27 acres required to be surveyed

11.27 acres of GT Habitat were surveyed for this report

Calculation of Estimated GT Population

(13 Potentially occupied burrows/11.27 surveyed acres) x 0.50 = 0.58 Tortoises/Acre

0.58 Tortoises/Acre x 61.79 Acres of GT Habitat = 35.8 Tortoises

It is estimated 36 burrows exist on the site, and that a conservation permit will be necessary if more than 10 burrows will be affected. Within 90 days of relocating tortoises but no closer than 72 hours prior, a 100% burrow survey will need to be completed and submitted to FWC for review. Tortoises will be proposed to be relocated to an approved, long term protected recipient site.

CONCLUSION

The gopher tortoise protection measures will be implemented prior to site development, including the preparation of a 100% survey, and an application for a conservation permit if required. Off-site tortoise relocation to an approved conservation site will occur as needed based on final survey results. No coordination has occurred with FWC to this point as it is not required until the 100% survey and application for permit as required.

This is the only protected state or federal species identified on the project site and as concurred by FWC and FWS.





**COVE ROYALE
15% GOPHER TORTOISE (*Gopherus polyphemus*) BURROW SURVEY
October 4, 2017**

INTRODUCTION

The subject parcel is located on the south side of SE Cove Rd., approximately 1.4 miles east of Kanner Highway, Martin County (Section 34, Township 38 South, Range 41 East). The property is bound to the east by undeveloped land, to the west by a private school, to the north by residential development and to the south by the Atlantic Ridge Preserve State Park. The assessment area is 97.06 acres in size. Please see the included Location Map.

METHODOLOGY

On September 18 and 19, 2017, an Authorized Gopher Tortoise Agent visited the above referenced site to perform a site review for the presence of gopher tortoise or their burrows. The gopher tortoise is listed as a Threatened Species in the State of Florida, and therefore, protected under regulations set forth in the Wildlife Code of the State of Florida, Chapter 39 FAC, Rule 39-4.001 and 39-25.002, as well as 39-27. WGI biologists used the following methodology to review the site for the presence of gopher tortoises. WGI biologists walked the site in a serpentine search pattern covering 15 percent of on-site suitable gopher tortoise habitat within the entire survey area. Seven transect belts, each approximately 700' by 100', were inspected by three staff to cover the 15 percent minimum required for the survey. Located burrows were categorized as potentially occupied or abandoned. Potentially occupied and abandoned burrows were flagged and numbered with pink flagging tape. All burrow locations were marked on an aerial photograph of the site and GPS located. This survey methodology is the protocol as recommended in Ecology and Habitat Protection Needs of Gopher Tortoise Populations Found on Lands Slated for Large-scale Development in Florida; Non-game Wildlife Program, Technical Report #5, Florida Game and Fresh Water Fish Commission (FGFWFC) Tallahassee, December 1987 (biologically sound methodology, Per. FGFWFC guidelines) and Gopher Tortoise Permitting Guidelines, Florida Fish and Wildlife Conservation Commission, January 2017.

Note: As of July 1999 the FGFWFC was reorganized and is now the Florida Fish and Wildlife Conservation Commission (FFWCC).

The following are the results of the Gopher Tortoise burrow survey.

SITE DESCRIPTION

The subject property is made up of two undeveloped parcels featuring pine flatwoods and freshwater marshes. The condition of the communities are relatively undisturbed with few exotic species present and one all-terrain vehicle trail. Two areas have apparently been excavated previously, one is a rectangular shaped wetland located along SE Trover Lane on the west side of the property. The other is a channel cut into the large wetland located in the center of the property to the south of the main road. Spoil from this channel appears to have been piled along the western edge of the wetland as there are several 10' to 15' tall mounds.

Vegetation

The following plant species exist within the extents of the survey, both native and non-native:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Designation</u>
Slash pine	<i>Pinus elliottii</i>	Native
Live oak	<i>Quercus virginiana</i>	Native
Dahoon holly	<i>Ilex cassine</i>	Native
Cabbage palm	<i>Sabal palmetto</i>	Native
Saw palmetto	<i>Serenoa repens</i>	Native
Rusty lyonia	<i>Lyonia ferruginea</i>	Native
Wax myrtle	<i>Myrica cerifera</i>	Native
Caeserweed	<i>Urena lobata</i>	Native
Gallberry	<i>Ilex vomitoria</i>	Native
Crowfoot grass	<i>Dactyloctenium aegyptium</i>	Native
Virginia creeper	<i>Parthenocissus quinquefolia</i>	Native
Spanish needles	<i>Bidens alba</i>	Native
Broomsedge	<i>Andropogon spp.</i>	Native
Brazilian pepper	<i>Schinus terebinthifolius</i>	Non-native
Strawberry guava	<i>Psidium cattleianum</i>	Non-native

SOILS

The following are the soils and their descriptions found throughout the project site according to the Martin County Soil Survey from 1981. Please see attached Soil Survey.

04 – Waveland Sand:

This nearly level soil is poorly drained and in broad areas of flatwoods. The water table is at a depth of less than 10 inches for 2 to 4 months and within a depth of 40 inches for 6 months or more during most years. Natural vegetation is slash pine, saw palmetto, gallberry, fetterbush, running oak, and dwarf huckleberry. Grasses are pineland three awn, bluestem, and panicum.

05 – Waveland Sand, Depressional:

This poorly drained soil is in depressions in the flatwoods. The soil is ponded for 6 to 9 months or more in most years. The natural vegetation is St. John's wort, needlerush, pipewort, ferns, panicums, maidencane, and other water tolerant grasses.

RESULTS

WGI biologists conducted a 15 percent gopher tortoise survey on the site using biologically sound methodology as provided by FWC. Please see the Gopher Tortoise Survey Maps. The results of the survey are as follows:

Four (4) Abandoned burrows

Thirteen (13) Potentially occupied burrows

Calculation of 15% Area to be Surveyed

61.79 acres of GT Habitat x 15% = 9.27 acres required to be surveyed

11.27 acres of GT Habitat were surveyed for this report

Calculation of Estimated GT Population

(13 Potentially occupied burrows/11.27 surveyed acres) x 0.50 = 0.58 Tortoises/Acre

0.58 Tortoises/Acre x 61.79 Acres of GT Habitat = 35.8 Tortoises

The FWC upgraded the gopher tortoise listed status from species of special concern to a threatened species in September 2007. As a part of this status upgrade, a Gopher Tortoise Management Plan was devised whose goals are to improve carrying capacity on lands with existing or potential habitat, increase the amount of protected habitat, restock tortoises to protected and managed areas, and decrease tortoise mortality on lands proposed for development. These goals directed the development of a new permitting system made effective in April 2009 that no longer allows tortoise entombment and encourages the relocation of tortoises to protected, managed lands. The permitting options under the new system are as follows:

- 1.) *Activities that do not require a permit:* Activities occurring more than 25' from a gopher tortoise burrow entrance and provide suitable vegetative cover. Due to site planning constraints, impacts to the five potentially occupied burrows cannot be avoided and a permit will be required.
- 2.) *10 or Fewer Burrows Relocation Permit:* This permit is for site development activities that will impact 10 or fewer burrows. Onsite relocation does not require an Authorized Gopher Tortoise Agent (AGTA) but does require the applicant to take an online training course. Offsite relocation requires an AGTA and the recipient site must be certified as such by the FWC. The five potentially occupied burrows will be excavated and captured tortoises will be relocated to an approved long term protected recipient site under this permit track. A mitigation contribution of \$207 is required by FWC and the recipient site

will also require a recipient site fee that is normally between \$800 and \$1,200 per tortoise.

- 3.) *Conservation Permit:* For projects where more than 10 burrows will be affected, a conservation permit will be required. An AGTA will be required to perform any of the activities permitted under a Conservation permit. These activities include relocation either onsite or offsite into three possible recipient area classes, long term protected areas, short term protected areas, or unprotected areas. These classes are determined by specific criteria set forth in the Permitting Guidelines describing size, canopy coverage, protection measures, and soils. Mitigation contributions are based on the number of relocated tortoises and the class of the recipient site. Long term protected areas are \$203 for the first five tortoises and \$305 per tortoise thereafter. Short term protected areas are \$203 for the first five tortoises and \$3,047 per tortoise thereafter. Unprotected areas are \$3,047 per tortoise.

As there is an estimated 36 burrows on the site, a conservation permit will be necessary. Within 90 days of relocating tortoises but no closer than 72 hours prior, a 100% burrow survey will need to be completed and submitted to FWC for review. Tortoises will be proposed to be relocated to an approved, long term protected recipient site.

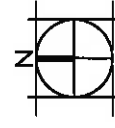


Source: Google Earth

COVE ROYALE

PREPARED FOR BRIAN TUTTLE

LOCATION MAP



SCALE: NTS

DRAWN BY: RMH

DRAWING #: Location, Soil Survey, FLUCCS Maps.dwg

FILE #: 2101.01

DATE: 09/15/2016

TWGL
LAND DESIGN SERVICES DIVISION

2035 VISTA PARKWAY • WEST PALM BEACH, FLORIDA 33411 • P: (561) 687-2220 • F: (561) 687-1110



Soil Series

04 - Waveland fine sands

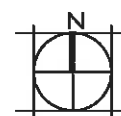
05 - Waveland fine sands, depressional

Source: USDA Soil Survey of Martin County

COVE ROYALE

PREPARED FOR BRIAN TUTTLE

SOIL SURVEY



SCALE: NTS

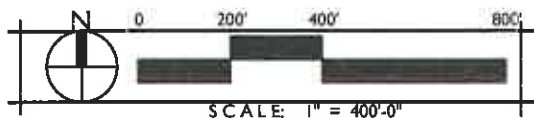


DRAWN BY: RMH

DRAWING #: Location, Soil Survey, FLUCCS Maps.dwg

FILE #: 2101.01

DATE: REVISED 09/15/2016



Source: LABINS.org

□□□□□S □□□□

411 □□line □latwood □60.29 ac.

641 □□reshwater Marsh □□5.19 ac.

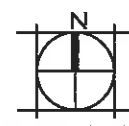
8146 □Trail □1.58 ac.

Total Acreage = 97.06

COVE ROYALE

PREPARED FOR BRIAN TUTTLE

FLUCCS MAP



SCALE: 1" = 400'

WGL

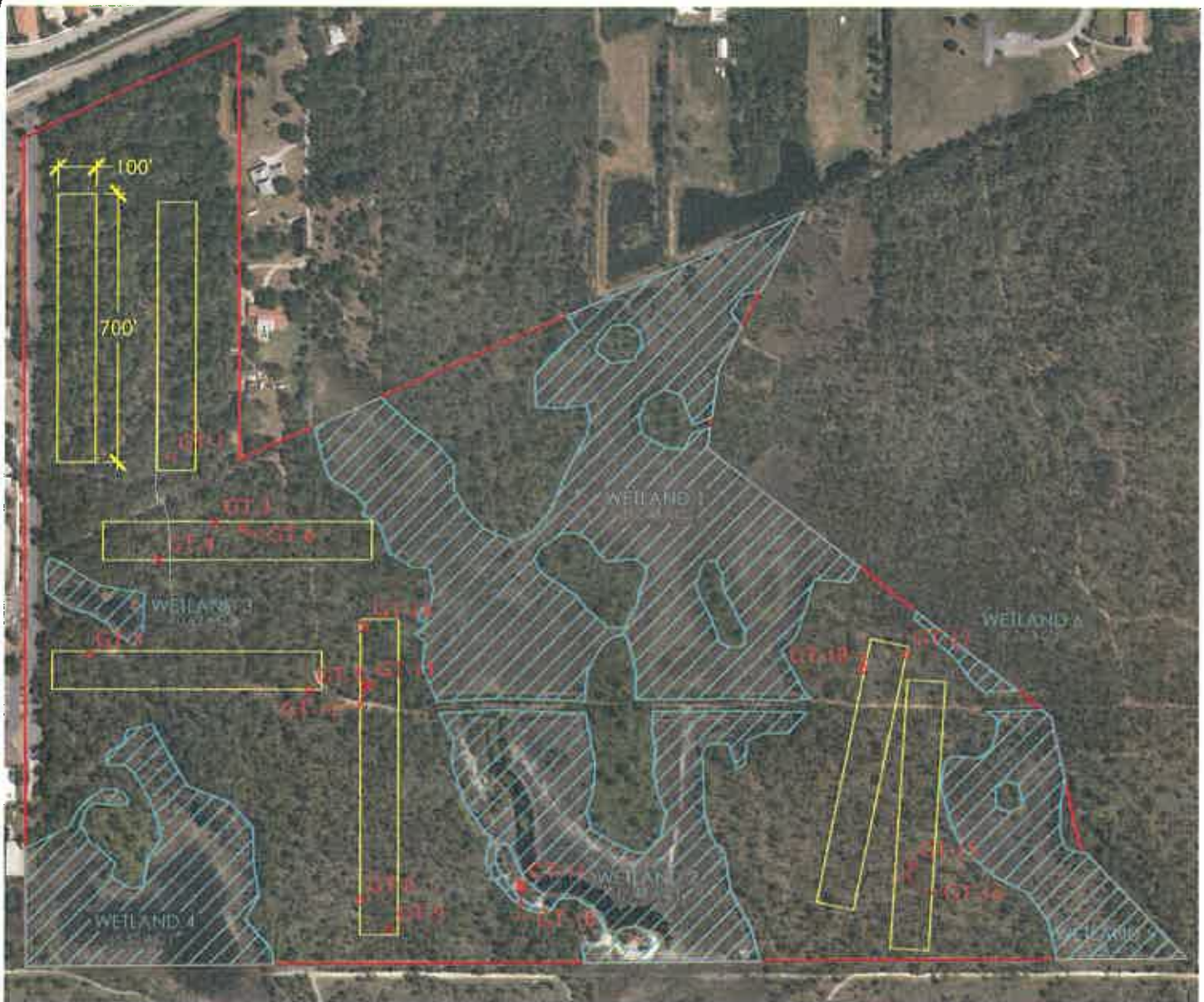
LAND DESIGN SERVICES DIVISION

DRAWN BY: RMH

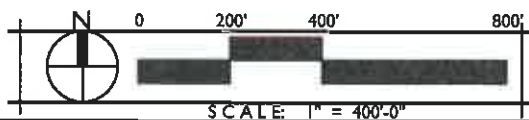
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FILE #: 2101.01

DATE: REVISED 09/15/2016

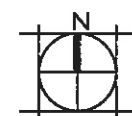


Site Acreage = 97.04 ac.
 Suitable Habitat = 61.79 ac.
 15% Surveyed Area Minimum = 9.27 ac.
 7 transects at 1.61 ac.* = 11.27 ac.
 11.27 ac. / 61.79 ac. = 18% Surveyed
 *Three observers walked each transect
 equidistant apart.



Source: FDOT Aerials GIS

COVE ROYALE GOPHER TORTOISE BURROW SURVEY



SCALE: 1" = 400'0"



DRAWN BY:	RMH
DRAWING #:	GT Transects and Burrows.dwg
FILE #:	2101.00
DATE:	09/27/2017

2101.00 Cove Royal
15% Gopher Tortoise Burrow Survey
September 27, 2017

BurrowNumber	Status	Notes	Longitude	Latitude
GT-1	Potentially Occupied		-80.2327985	27.12079457
GT-3	Abandoned		-80.23244489	27.12032394
GT-4	Abandoned		-80.23290279	27.12005477
GT-5	Potentially Occupied		-80.23346282	27.11938497
GT-6	Potentially Occupied		-80.23222943	27.1202873
GT-7	Potentially Occupied		-80.23169757	27.11911869
GT-8	Potentially Occupied		-80.23129376	27.1176167
GT-9	Potentially Occupied		-80.23105956	27.11741085
GT-10	Abandoned		-80.22999407	27.11771352
GT-11	Potentially Occupied	Juvenile	-80.22999894	27.11771268
GT-12	Potentially Occupied		-80.23124502	27.11914506
GT-13	Potentially Occupied		-80.23121835	27.11916315
GT-14	Abandoned		-80.23124695	27.11957731
GT-15	Potentially Occupied		-80.22684954	27.1178502
GT-16	Potentially Occupied		-80.22690177	27.11777606
GT-17	Potentially Occupied		-80.22689572	27.11936578
GT-18	Potentially Occupied		-80.22724691	27.11925484
*Coordinate System: NAD83 Florida State Planes, East Zone, US Foot				

(13 Potentially Occupied Burrows/11.27 Acres Surveyed Area) x 0.50 = 0.58 Tortoises/Acre

0.58 Tortoises/Acre x 61.79 Acres of GT Habitat = 35.8 Tortoises

36 Estimated Number of Gopher Tortoises Present