

MARTIN COUNTY, FLORIDA

PRESERVE AREA MANAGEMENT PLAN

For:

PALM PIKE CROSSING

Martin County

Section 24, Township 38S, and Range 40E

Prepared by:

EW Consultants, Inc.

Approved by/Date: _____

A Preserve Area Management Plan (PAMP) is required of all applicants for development approval on sites which contain wetland or upland preserve areas, pursuant to provisions of Section 4.36.A.1 of the Martin County Land Development Regulations, Martin County Code.

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1.0 GENERAL

The owner of the lands to be preserved and maintained by this Preserve Area Management Plan (PAMP) and the developer of *Palm Pike Crossing* successors and assigns, and their environmental consultants and contractors, will implement and comply with all portions of this PAMP.

Compliance with the terms of this PAMP includes submittal of all Monthly Monitoring Reports on PAMP compliance throughout all phases of project construction and submittal of all Annual Monitoring Reports following completion of project construction, pursuant to Section 10.17 of the Martin County Land Development Regulations. The owner of the lands to be preserved/maintained shall have ultimate responsibility for the submittal of all Monthly and Annual Monitoring Reports, according to the format and schedule requirements of Section 10 of this PAMP.

As noted in Section 9 of this PAMP, the Martin County Environmental Planning Administrator shall be notified in writing within thirty (30) days of transfer of ownership of any lands to be preserved/maintained under the terms of this PAMP. Failure to notify shall be considered as non-compliance with the terms of this PAMP

This PAMP will not be altered or amended by either Martin County or the owner/developer of *Palm Pike Crossing*, except by an alteration or amendment agreed to by both the Martin County Environmental Planning Administrator and the owner/developer of *Palm Pike Crossing*. Such alterations and amendments shall be inserted into the PAMP and the final revised document shall be recorded by the Martin County Clerk of Courts. The revised PAMP will be labeled with the appropriate O.R. Book and Page Number. Three copies of the revised document shall be provided to the Martin County Environmental Planning Administrator within thirty (30) days of the Recording date.

2.0 ENVIRONMENTAL ASSESSMENT

The *Palm Pike Crossing* site is located in Palm City, in unincorporated Martin County, FL. The property covered by this Environmental Assessment is comprised of 28 +/- acres located east of Florida's Turnpike, south of Martin Highway (CR714), west of High Meadow Avenue, and north of undeveloped lands, within Section 24, Township 38S, and Range 40E. A Location Map and 2019 Aerial Photo are provided in the Environmental Assessment included as Appendix A to this PAMP.

The Environmental Assessment (EA) provided in Appendix A to this PAMP includes maps and text which accurately depict the site location, soils, wetlands, uplands, listed species, previous impacts, and any other significant environmental features.

2.1 Location – A location map is provided in the attached EA.

2.2 Soils – Soil types on the property were classified using the a Soils Report produced using the Web Soil Survey of the United States Department of Agriculture/Natural Resources Conservation Service website application. A copy of the soils report can be found the EA.

- 2.3 Habitats –Vegetative community classifications were mapped based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS) developed by the Florida Department of Transportation. Field Reconnaissance and aerial photograph interpretation were employed in the mapping effort. No native habitat is present on the subject property. A complete description of the land cover types and vegetation communities found on the subject property is presented in the attached EA.
- 2.4 Listed Species Evaluation - No listed wildlife was observed on site during any of the site assessments. The disturbed nature of the upland land cover severely limits the habitat opportunities preferred by listed wildlife species. Please refer to the EA provided as attachment to this PAMP for a detailed evaluation of potential listed species present on site.

Gopher Tortoise

The gopher tortoise, listed as a Threatened species by the State of Florida, may be found foraging and burrowing in disturbed areas if sufficient gopher tortoise habitat exists in the vicinity. As the adjacent lands to the south of the property exhibit native pine flatwoods, gopher tortoises may be present or foraging on the subject property. While no signs of gopher tortoise activity or presence were observed on or near the property during field reconnaissance, a full survey of the site will be required immediately prior to the commencement of construction activities to identify any gopher tortoise burrows or individuals that may be present on the site at that time. Potential impacts will be addressed through a permit application in accordance with Florida Fish and Wildlife Conservation Commission (FFWCC) requirements.

Water birds

Most of the listed species potentially utilizing the subject property are wading bird species, however, the dense melaleuca tree coverage in the wetland greatly reduces accessibility for larger species of water birds. These species are likely to utilize the site for foraging, an activity that is transient in nature. No nesting or roosting areas have been observed within the site.

- 2.5 Previous Impacts - The entire property was previously altered by clearing and conversion to crop fields and pasture in the 1950s. The agricultural activities removed native vegetation and resulted in the current dominant coverage by invasive non-native species.

Agricultural activities on the property appear to have ceased in the mid-1990s and the property was left vacant and fallow. As a result, over time, invasive nuisance and exotic vegetation has become the dominant vegetation cover with monocultures of Australian pine, Brazilian pepper, strawberry guava, lygodium, and melaleuca. While some native vegetation remains in the form of isolated native trees, no intact native upland habitat remains on the property.

- 2.6 Agency Correspondence - A request for due diligence review of the property and proposed impacts was submitted to the Department of State, Florida Division of Historical Resources. The State Historic Preservation Officer (SHPO) concluded based on the information received that the proposed impacts were unlikely to affect historic properties.

An informal wetland determination was completed by South Florida Water Management District on August 7, 2019, and a preliminary jurisdictional determination was obtained from the US Army Corps of Engineers, both agreeing to the same wetland boundary on the site. Copies of the approved determinations are provided in the EA.

3.0 IDENTIFICATION OF PRESERVE AREAS

There are no native uplands present on the site, thus no upland preserve area is required. The existing wetland requires a 50 foot wide upland buffer which totals approximately 1.5 acres based on the SFWMD approved wetland delineation limits. The upland buffer required for the wetland will require restoration to native upland habitat through removal of exotic vegetation and replanting with native canopy, understory, and ground cover species.

The proposed site plan includes a roadway access from High Meadow Avenue at SW 39th Street that requires crossing of the southern portion of the wetland for construction of this public right of way. As a result, 0.35 acres of wetland impacts and 0.21 acres of upland buffer impact are proposed for construction of SW 39th Street in public right of way. This proposed impact is was addressed in a Wetland Waiver request.

The wetland and upland buffer impact areas will be replaced through wetland and upland habitat creation in currently disturbed upland areas. The details of the wetland and upland buffer creation are presented in the Supplement to Preserve Area Management Plan, provided as an attachment to the PAMP.

- 3.1 Site Plan - All Preserve Areas, right-of-ways and easements are shown on the *Palm Pike Crossing* Site Plan, a copy of which is included in this PAMP. The Site Plan includes a summary of the following: wetland preservation acreage and upland buffer under preservation; and total acreage of the site.

The Site Plan contains the notation: "PRESERVE AREAS ARE NOT TO BE ALTERED WITHOUT WRITTEN PERMISSION OF THE MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS."

- 3.2 Legal Recording – Upon final approval, the final *Palm Pike Crossing* Site Plan will be recorded with the PAMP by the Martin County Clerk of Courts. The Site Plan and the PAMP will be labeled with the appropriate O.R. Book and Page Number and copies of each recorded document will be provided to the Martin County Environmental Planning Administrator within thirty (30) days of the Recording date.

4.0 SURVEYING, MARKING AND BARRICADING REQUIREMENTS

All Preserve Areas shown on the Site Plan for *Palm Pike Crossing* will be surveyed and marked in the field with appropriate survey markers and signage. During the clearing and construction phases of the project, Preserve Area boundaries will be marked by physical barriers. No native plant material will be removed from the Preserve Areas to facilitate surveying, fencing or soil boring/sampling without prior permission from the Martin County Environmental Planning Administrator.

- 4.1 Preserve Area Surveying Requirements – Each Preserve Area 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 Professional Surveyor and Mapper 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.
- 4.2 Preserve Area Boundary Markers and Signs - Preserve Areas will be posted with permanent signs and boundary markers. 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 sign per 500 feet. All boundary markers and signs will be approved by the Martin County Environmental Planning Administrator and they will be in place prior to issuance of a certificate of occupancy for the facilities on the site. Illustrations of the signs and markers to be used for this project are included as an Appendix to this PAMP.
- 4.3 Barricading Requirements - Prior to clearing, the developer will ensure that all Preserve Areas are protected with physical barriers during all clearing and construction activities in accordance with the following guidelines. Barricades will be inspected by County Environmental Division staff prior to proceeding with clearing and earthwork activities on the site. Removal of the barricade materials will be done upon issuance of the final Certificate of Occupancy with authorization from appropriate County staff.

Barricades (not including turbidity screens) will be high-visibility orange safety fence extending from the ground to a height of at least four feet. Barricades will not be attached to vegetation. All barricades and turbidity screens will be upright and maintained intact for the duration of construction.

Where areas are proposed for clearing (i.e. building envelope, utilities, drainage, road right-of-way, etc.) the bright orange barricades and silt fences will be offset at least five feet outside the Preserve Area or placed at the dripline of the canopy trees, whichever is greater. 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. Cut or fill will meet existing grade without encroaching into Preserve Areas.

It is the responsibility of the owner and developer of *Palm Pike Crossing* to inform all contractors of these Marking and Barricading Requirements. Failure to comply with these Marking and Barricading Requirements will be considered a violation of the Site Plan approval. Further work on the project may be stopped until compliance with the Marking and Barricading Requirements is achieved, and the owner or developer may be required to appear before the Code Enforcement Board.

5.0 USE OF PRESERVE AREAS

- 5.1 Activities Allowed In Preserve Areas – Activities allowed in preserve areas are bird watching, interpretive signs, and nature enjoyment.
- 5.2 Activities Prohibited In Preserve Areas - Activities prohibited in Preserve Areas include: construction or placing of building materials on or above the ground; dumping or placing soil or other substances such as garbage, trash, and cuttings; removal or destruction of native trees, shrubs or other native

vegetation; excavation, dredging or removal of soil materials; 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 heavy equipment will be stored during the construction phases. On-site temporary fuel tanks shall not be located within twenty-five (25) feet of any Preserve Area boundary and shall be removed upon completion of construction work.

Buildings proposed to be located adjacent to Preserve Areas shall 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.

6.0 RESTORATION AND MAINTENANCE ACTIVITIES

Except for approved wetland creation, upland and wetland restoration, and habitat maintenance activities, Preserve Areas will be left undisturbed. All maintenance of Preserve Areas will be in accordance with this PAMP and Supplement to Preserve Area Management Plan for *Palm Pike Crossing*.

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. The following restoration and maintenance activities may be allowed within Preserve Areas with prior written approval from the Environmental Planning Administrator: exotic plant removal, re-vegetation or planting native vegetation, and removal of dead, diseased, or safety hazard plant material.

- 6.1 Exotic Vegetation Removal – Exotic vegetation shall be removed from 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. Due to the density of existing invasive species in the wetland and surrounding upland buffer, initial restoration of these areas may entail use of mechanized clearing equipment. No debris, including dead plants, plant clippings or wood scraps, shall be disposed of in Preserve Areas. In the event that dead plant material or exotic vegetation debris is removed from Preserve Areas it shall be disposed of in a County-approved recycling facility. Please refer to the Supplement to the Preserve Area Management Plan, attached to this PAMP for detailed exotic vegetation removal specifications.
- 6.2 Re-vegetation - Any re-vegetation which may be necessary as a result of exotic vegetation removal, habitat creation, 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. Re-vegetation plans shall be submitted to the Martin County Environmental Planning Administrator for approval prior to implementation.

- 6.3 Vegetation Removal - Dead or diseased plant material may be removed from Preserve Areas upon approval by the Martin County Environmental Planning Administrator. Re-vegetation may be required for any removed plant material. No debris, including dead plants, plant clippings or wood scraps, shall be disposed of in Preserve Areas. In the event that dead plant material and debris is removed from Preserve Areas, it shall be disposed of in a County-approved recycling facility.
- 6.4 Prescribed Burns - Martin County considers prescribed burns an acceptable habitat management tool. When approved by the Martin County Environmental Planning Administrator, they will be conducted by a certified burn manager who will be responsible for obtaining all appropriate permits from State and local agencies.
- 6.5 Hydrology - Previous or potential drainage impacts will be corrected to the extent technically feasible. Wetlands and water bodies on adjacent properties shall be protected from adverse impacts. The project will require the construction of drainage outfall(s) connecting the surface water management system of the site to adjacent wetlands in order to provide delivery of treated runoff to maintain the hydrology of the wetland systems. Once the construction of the outfall structure(s) is completed, the disturbed area(s) will be planted with native herbaceous vegetation species consistent with the specifications in the attached PAMP Supplement which addresses upland and wetland re-vegetation activities.
- 6.6 Wetland Creation – The site plan includes impacts to wetlands and associated upland buffer at the southeastern end of the wetland within a public right of way. This wetland impact is proposed under an environmental waiver for the construction of a public road right of way. Wetland creation will be required to replace the areal extent of impacted wetlands and wetland function. The details of the wetland creation are presented in the Supplement to Preserve Area Management Plan, provided as an attachment to the PAMP.

7.0 PROTECTIVE MEASURES FOR LISTED SPECIES

- 7.1 Gopher Tortoises: In Florida, gopher tortoises are protected as Threatened. Under Florida law, no person may take, possess, transport or sell a listed species. No gopher tortoises or signs thereof have been observed on site during preliminary surveys and assessments. A 100% survey of the site will be completed before any clearing activities. No land clearing or construction shall occur until all gopher tortoises which may be impacted are relocated to off-site receiver areas as permitted by the FFWCC. Gopher tortoises inhabiting burrows in areas to be developed will be captured and relocated following guidelines set forth below.

Tortoise burrows may be bucket trapped or excavated using a methodology approved by the Florida Fish and Wildlife Conservation Commission and conducted by a Licensed Gopher Tortoise Agent possessing a valid relocation permit. During clearing and grubbing operations, equipment operators will be notified of the potential occurrence of gopher tortoises on site and instructed to observe for roaming and foraging individuals. Should gopher tortoises be seen during the clearing and grubbing, all equipment operations will be stopped and the gopher tortoises will be captured and relocated in accordance with FFWCC permit requirements. Once the tortoise(s) have been safely relocated, equipment operations can resume.

- 7.2 Commensal Species – If necessary, all gopher tortoise relocation efforts will include trapping of protected burrow commensal species. These commensal species include but are not limited to the Florida mouse (*Peromyscus floridana*), gopher frog (*Rana areolata*) and Eastern indigo snake (*Drymarchon corias couperi*).
- 7.3 Relocation of Gopher Tortoises - If gopher tortoise relocation is necessary, the Martin County Environmental Planning Administrator will be notified and will be provided with a copy of the Gopher Tortoise Relocation Permit from the Florida Fish and Wildlife Conservation Commission. All relocations shall be carried out by an FFWCC Authorized Gopher Tortoise Agent licensed for gopher tortoise relocations.

8.0 MISCELLANEOUS PROVISIONS AND RESTRICTIONS

None

9.0 TRANSFER OF RESPONSIBILITIES

The property owner(s) and developers of *Palm Pike Crossing* are responsible for implementation of all requirements of this Preserve Area Management Plan until such time as the responsibility is transferred to a successor. The Martin County Environmental Planning Administrator will be notified in writing within thirty (30) days of transfer of ownership of any lands to be preserved under this PAMP. Failure to notify will be considered as non-compliance with the terms of this PAMP.

At such time as the owner is preparing to transfer control of the *Palm Pike Crossing* to a successor, an environmental professional shall certify, in writing, to the Martin County Environmental Planning Administrator, that the Preserve Areas are in full compliance with this PAMP.

The successor will be responsible for maintaining the Preserve Areas in their existing natural condition with the periodic removal of invasive exotic vegetation. After transfer of responsibilities, funding for all maintenance and management programs will be the responsibility of all successors.

10.0 MONITORING, REPORTING AND INSPECTIONS

- 10.1 Monthly Construction Reports – During construction of *Palm Pike Crossing*, the developer will be responsible for submitting a monthly report on the progress of *Palm Pike Crossing*, which will address all aspects of the site construction relative to the Preserve Areas. Information regarding construction and maintenance of the Preserve Areas, such as placement of barriers and signage, removal of exotic vegetation, re-vegetation, prescribed burns, etc. will be described and supported with photographs, where appropriate.
- 10.2 Annual Monitoring Reports – Monitoring and reporting will be conducted annually by a qualified environmental professional for a period of five years from the date of completion of the project. Annual monitoring will be conducted at the end of the wet season (usually by November 30) and a report of the monitoring will be submitted to the Martin County Environmental Planning Administrator within 30 days of the completion of the monitoring. Please refer to the Supplement to

the Preserve Area Management Plan, in the Appendix, for a detailed account of the proposed monitoring.

The Annual Monitoring Reports will document changes in vegetation including encroachment and/or overgrowth of noxious or exotic vegetation. Fixed-point panoramic photos of all Preserve Areas will be included in each report. The reports will include recommendations for exotic vegetation removal, re-vegetation, and any additional enhancement activities necessary to maintain the Preserve Area. A timetable for action within 90 days of the report will be prepared and followed.

A copy of the proposed Annual Monitoring Report format is attached to this PAMP as an Appendix. This format may be modified separately from the PAMP, as necessary, upon written approval from the Martin County Environmental Planning Administrator.

Upon request, Martin County Environmental Planning staff may meet with the responsible parties to review the annual monitoring report findings and supply technical assistance and support for stewardship.

The first Annual Monitoring Report due in compliance with this PAMP will be submitted to the Martin County Environmental Planning Administrator within one year of receiving the first certificate of occupancy. Subsequent Annual Monitoring Reports will be due on the same date for the next four years.

After the initial five-year monitoring period, the Preserve Areas may be subject to periodic review and, if conditions warrant, will be subject to further monitoring and maintenance to ensure environmental integrity, consistent with the provisions of this Plan.

- 10.3 Inspections – Martin County is authorized to inspect any County regulated site or appurtenance. Duly authorized representatives of Martin County may, at any reasonable time, upon presenting proper identification, enter upon and shall be given access to any premises for the purpose of such inspection.

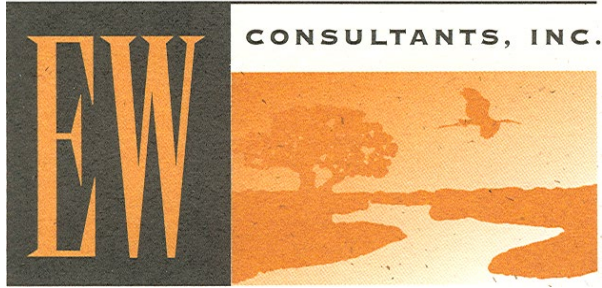
11.0 ENFORCEMENT

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.

APPENDIX A

ENVIRONMENTAL ASSESSMENT

EW Consultants, Inc.
Natural Resource Management, Wetland, and Environmental Permitting Services



PALM PIKE CROSSING

ENVIRONMENTAL ASSESSMENT REPORT

Prepared for:

PALM PIKE CROSSING, LLC

Prepared by:

EW CONSULTANTS, INC.

September 2019

Introduction

The 28 +/- acres property covered by this Environmental Assessment, referred to as Palm Pike Crossing, is located in Palm City, in unincorporated Martin County within Section 24, Township 38S, and Range 40E. A Location Map and 2019 Aerial Photograph are provided in the Appendix as Figures 1 and 2, respectively. The subject property is an undeveloped parcel located east of Florida's Turnpike, south of Martin Highway (CR714), and west of High Meadow Avenue.

Property Description

The property is bounded to the north by Martin Highway (CR714) and multi-family residential development, to the west by Florida's Turnpike and the Palm City exit, to the east by High Meadow Avenue and agricultural lands, and to the south by undeveloped lands.

While the subject property is currently undeveloped, it is in a disturbed state and has been subject to past clearing and improvements that progressively converted the site for agricultural use through the 1990s. The property was subsequently left fallow and the fields have grown back with an assemblage of primarily invasive exotic and nuisance vegetation. The southeastern portion of the property contains a melaleuca dominated wetland that, based on site observations was likely impacted by excavation activities in the past. As a result, despite the presence of occasional native trees and shrubs throughout the property, there is no native upland habitat on the site. A more detailed description of the habitats and land cover types is provided in the Natural Communities and Land Cover section of this report.

Soils

A Soils Report produced by the United States Department of Agriculture/Natural Resources Conservation Service is provided in the Appendix of this report. The soils report identifies two soil types on the site. The boundary between these soil types follows the approximate wetland/upland boundary observed on the site. Both are poorly drained sandy soils. The soil types present on the site include Nettles sand, approximately corresponding to the upland portion of the site and Floridana fine sand corresponding to the wetland portion of the property.

Natural Communities and Land Cover

The following is a summary of the land cover and vegetation communities found on the subject site. Land cover and vegetative community classifications were mapped based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS) developed by the Florida

Department of Transportation. Field reconnaissance and aerial photograph interpretation were employed in the mapping effort of the vegetative communities on the subject property.

There are seven different FLUCFCS categories currently present on the site and all of those are disturbed land covers. There are no intact native upland or wetland habitats on site. The dominant land cover on the site is a disturbed land cover comprised of scattered remnant trees with thick underbrush of invasive nuisance and exotic vegetation. There are two other major upland disturbed land cover types that are characterized by monocultures of Australian pines and Brazilian pepper trees. The wetland land cover is dominated by exotic melaleuca trees and nuisance levels of Carolina willow. These species indicate a highly disturbed wetland system.

The extent of the wetland and surface waters was field reviewed by the South Florida Water Management District (SFWMD) on August 6, 2019, and SFWMD issued an Informal Wetland Determination for the property dated August 7, 2019. A copy of the approved informal wetland determination from SFWMD is provided in the Appendix. The US Army Corps of Engineers (USACE) issued a Preliminary Jurisdictional Determination (PJD) for the property on October 29, 2014, and the wetland boundary is identical to the one established by the SFWMD. A copy of the USACE PJD is provided in the Appendix.

A land cover map of the observed community types is included as Figure 3 in the Appendix of this report. The land cover types observed on the property are described as follows:

Uplands

The uplands observed on the subject property are comprised of a vegetative assemblage typical of lands that have been disturbed by clearing and subsequently left to re-vegetate. A detailed description of these land cover types is provided below.

422 Brazilian pepper

This category includes all areas that are dominated by a monoculture of Brazilian pepper. The dense canopy cover of this non-native invasive species prevents plant diversity and as a result, only other invasive nuisance or exotic vegetation species are found including Caesar weed and sword fern.

437 Australian pine

This category includes areas that are dominated by a monoculture of Australian pine. The dense canopy cover and resultant thick needle mat from this invasive non-native species has excluded nearly all other vegetation from these areas. This land cover is found along the western property boundary, along Florida's Turnpike and in the south-central portion of the site where structures previously occurred.

740 Disturbed lands

This category includes all herbaceous areas that are the result of the past clearing for the widening of Martin Highway (CR714). These areas have been stabilized with sod (bahia grass) and are regularly mowed. These areas also include ruderal plant species including flatsedges, pusley, crowfoot grass, and Caesar weed.

741 Rural lands in transition

This category includes all areas that were formerly part of the farm fields and areas along the wetland boundary that exhibit a similar vegetation composition. As the agricultural use of the property appears to have ceased at some time in the 1990s, the area was left to re-vegetate for the past 20 +/- years. The result is an assemblage of mostly invasive exotic vegetation and scattered native trees. The canopy is comprised of invasive exotic Australian pine, Brazilian pepper, and earleaf acacia trees along with scattered slash pine and laurel oak trees. The sub-canopy is dominated by strawberry guava, Caesar weed, wax myrtle, wild grape, and lygodium. Ground cover is sparse and when not dominated by wild grapes or lygodium, exhibits occasional native ferns and grasses.

Wetlands

The wetlands observed on the subject property are part of one larger wetland system that extends off the site. This wetland is currently dominated by large melaleuca trees and Carolina willow. The vegetative assemblage is described in the section below:

619 Exotic Hardwood Wetland

A large wetland comprises the southeast portion of the subject property and extends off site to the north. This area appears to have been cleared in the past, and has subsequently become infested with melaleuca trees. Carolina willow is also present in this wetland system. There are patchy areas where the melaleuca cover is absent and herbaceous species comprise the ground cover. Species present include arrowhead, pickerelweed, sawgrass, button bush, and various wetland ferns. Lygodium has also invaded these areas devoid of canopy trees and is often covering the aforementioned native wetland species.

Waterbodies

510 Ditches

A surface water conveyance ditch exists on the property and extends westerly from the off site portion of the wetland to the east, into the subject property. The ditch does not connect to any other wetland or surface water.

Listed species

No listed wildlife was observed on site during site reconnaissance conducted over more than five years. The disturbed nature of the upland land cover severely limits the habitat opportunities preferred by listed wildlife. One possible exception would be gopher tortoises. The gopher tortoise, listed as a Threatened species by the State of Florida, may be found foraging and burrowing in disturbed areas if sufficient gopher tortoise habitat exists in the vicinity. As the adjacent lands to the south of the property exhibit some native pine flatwoods, gopher tortoises may be present or foraging on the subject property. While no signs of gopher tortoise activity or presence were observed on or near the property during previous assessments, a full survey of the site will be required immediately prior to the commencement of construction activities to identify any gopher tortoise burrows or individuals that may be present on the site at that time.

During field surveys, observations were made for the potential presence of listed species. Most of the listed species potentially utilizing the subject property are wading bird species however the dense melaleuca tree coverage greatly reduces accessibility for larger species of water birds. These species are likely to utilize the site for foraging, an activity that is transient in nature. No nesting or roosting areas have been observed within the site. No alligators were observed despite being relatively common in areas where wetlands and excavated water bodies are present. The state and/or federally listed wildlife species observed or potentially expected to occur on the subject site are summarized in the following table. The likelihood of occurrence has been indicated based on current and past field reconnaissance, species-specific evaluations, and best professional judgment. Likelihood of occurrence is noted as either observed during site review or likelihood of occurrence as high, medium or low.

Known and Potentially Occurring Listed Faunal Species

Common Name	Scientific Name	Preferred Habitat	Sampling Method	Occurrence*	Listed Status
					State/Federal
American alligator	<i>Alligator mississippiensis</i>	Wetland and aquatic habitat	Pedestrian transects	L	FT (S/A)
Audubon's Crested Caracara	<i>Caracara cheriway</i>	Open prairies and rangeland	Pedestrian transects	L	FT
Burrowing Owl	<i>Athene cunicularia</i>	Sandhills, ruderal communities, dry prairies	Pedestrian transects	L	ST
Eastern indigo snake	<i>Drymarchon corais couperi</i>	A diversity of upland/low land habitat	Pedestrian transects	L	FT

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Natural Resource Management, Wetland, and Environmental Permitting Services

Common Name	Scientific Name	Preferred Habitat	Sampling Method	Occurrence*	Listed Status
Florida Grasshopper Sparrow	<i>Ammodramus savannarum floridanus</i>	Open prairies and rangeland	Pedestrian transects	L	FE
Florida Sandhill Crane	<i>Grus canadensis pratensis</i>	Breed in emergent palustrine wetlands; forage in pastures/prairies	Pedestrian transects	L	ST
Gopher tortoise	<i>Gopherus polyphemus</i>	Sandhills, xeric oak scrub, sand pine scrub, scrubby flatwoods;	Preliminary burrow survey of suitable habitat	M	ST
Roseate Spoonbill	<i>Ajaia ajaja</i>	Breeding: marshes, swamps, ponds, estuaries, rivers; nest in shrubs and small trees	Pedestrian transects	L	ST
Southeastern American Kestrel	<i>Falco sparverius paulus</i>	Sandhill and open rangeland nest in cavities of dead trees and abandoned woodpecker nests	Pedestrian transects	L	ST
Tricolored Heron	<i>Egretta tricolor</i>	Breeding: marshes, swamps, ponds, estuaries, rivers; nest in shrubs and small trees	Pedestrian transects	L	ST
Wood Stork	<i>Mycteria americana</i>	Estuarine or freshwater wetlands; nest in tops of trees in cypress or mangrove swamps	Pedestrian transects	L	FT

¹ Observed transient

² Observed nesting and/or resident

*O= Observed; H= High probability; M= Medium; L= Low;

FE Federally-designated Endangered;

FT Federally-designated Threatened;

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

ST State-designated Threatened

Non-Listed Wildlife Species

The site observations are the result of surveys conducted in Summer and Fall 2014, Summer 2015, as well as Summer 2019. These surveys revealed that the following non-listed wildlife species are present on the subject site: rabbits, armadillos, squirrels, raccoon, common grackle, mocking bird, and blue jay.

Previous Impacts

Site observations indicate that there are no native upland habitats on site. A large portion of the site exhibits only scattered trees and ruderal ground cover indicative of previous clearing activities associated with the agricultural use of the property. There are also signs of previous excavation in the wetland as indicated by abrupt slope changes along the fringe of the wetland.

Summary

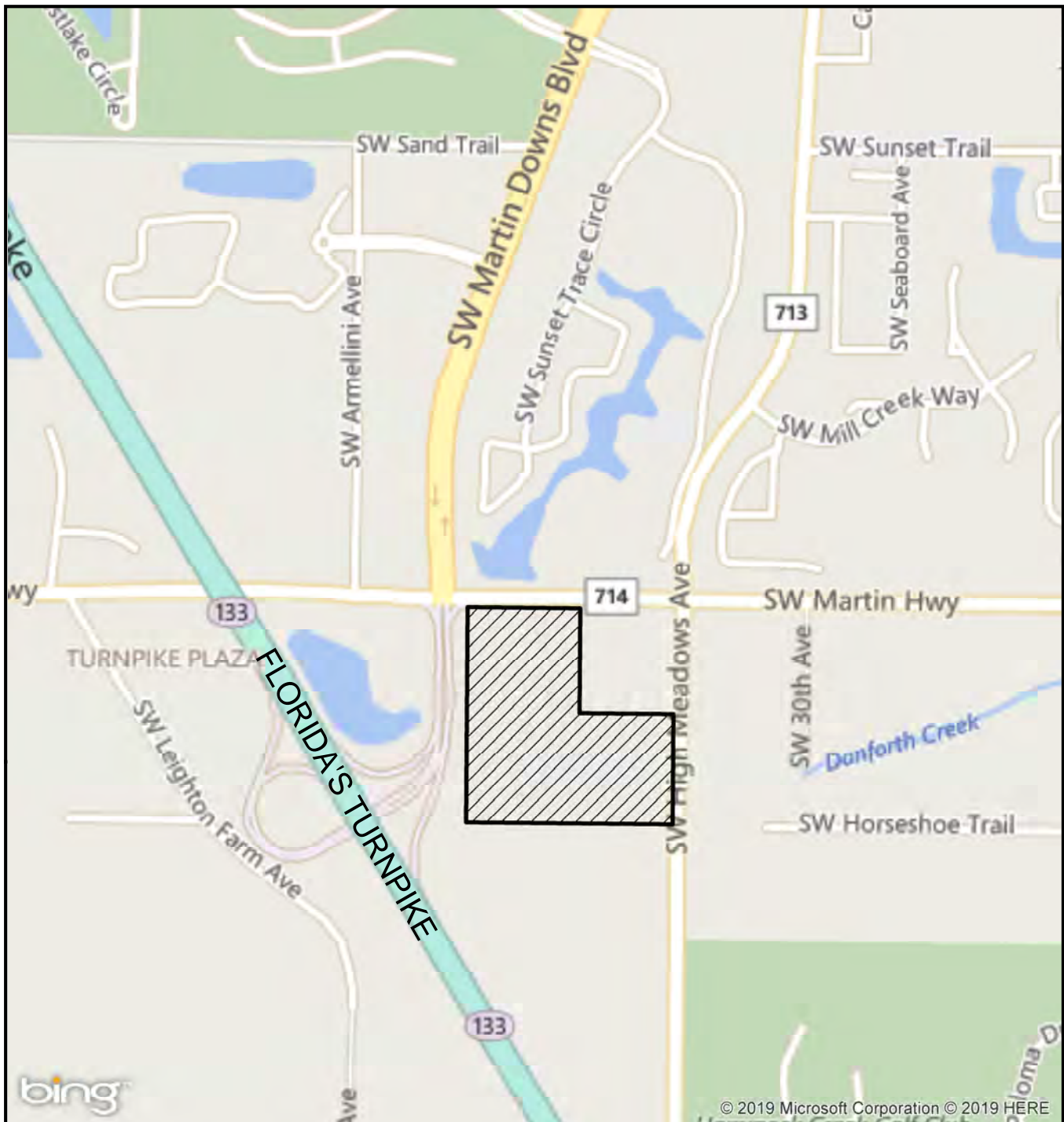
The subject property shows signs of occupation for over 60 years with the several structures visible in historic aerial photos from the 1950s. These historic aerial photos indicate that the entire property had been altered by the clearing, excavation, and the conversion of the property to a crop fields and pasture.

The previous agricultural activities removed native vegetation from the subject property and resulted in a highly disturbed state as indicated by the current dominant coverage by invasive non-native vegetation. Agricultural activities on the property appear to have ceased in the mid-1990s and the property was left vacant and fallow. As a result, over time, invasive nuisance and exotic vegetation has become the dominant vegetation cover with monocultures of Australian pine, Brazilian pepper, strawberry guava, lygodium, and melaleuca.


While some native vegetation remains in the form of isolated native trees, no intact native upland habitats remain on the property.

Usage of the property by listed species was not observed during any of the field assessments conducted for the preparation of this report and is highly unlikely due to the exotic vegetative cover composition. Gopher tortoises have the potential to be found in the uplands despite the disturbed nature of the habitat and listed species of water birds may utilize portions of the wetland for foraging.

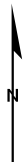
APPENDIX



LEGEND

 - SITE (27.5+/- AC)

0 1,000 Feet



PALM PIKE CROSSING LOCATION MAP



EW CONSULTANTS, INC.

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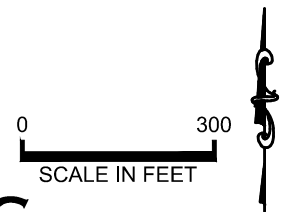
SEPT 2019

FIGURE

1



MARTIN COUNTY AERIALS DATED 2019



PALM PIKE CROSSING **AERIAL**

Palm Pike Crossing.dwg AERIAL

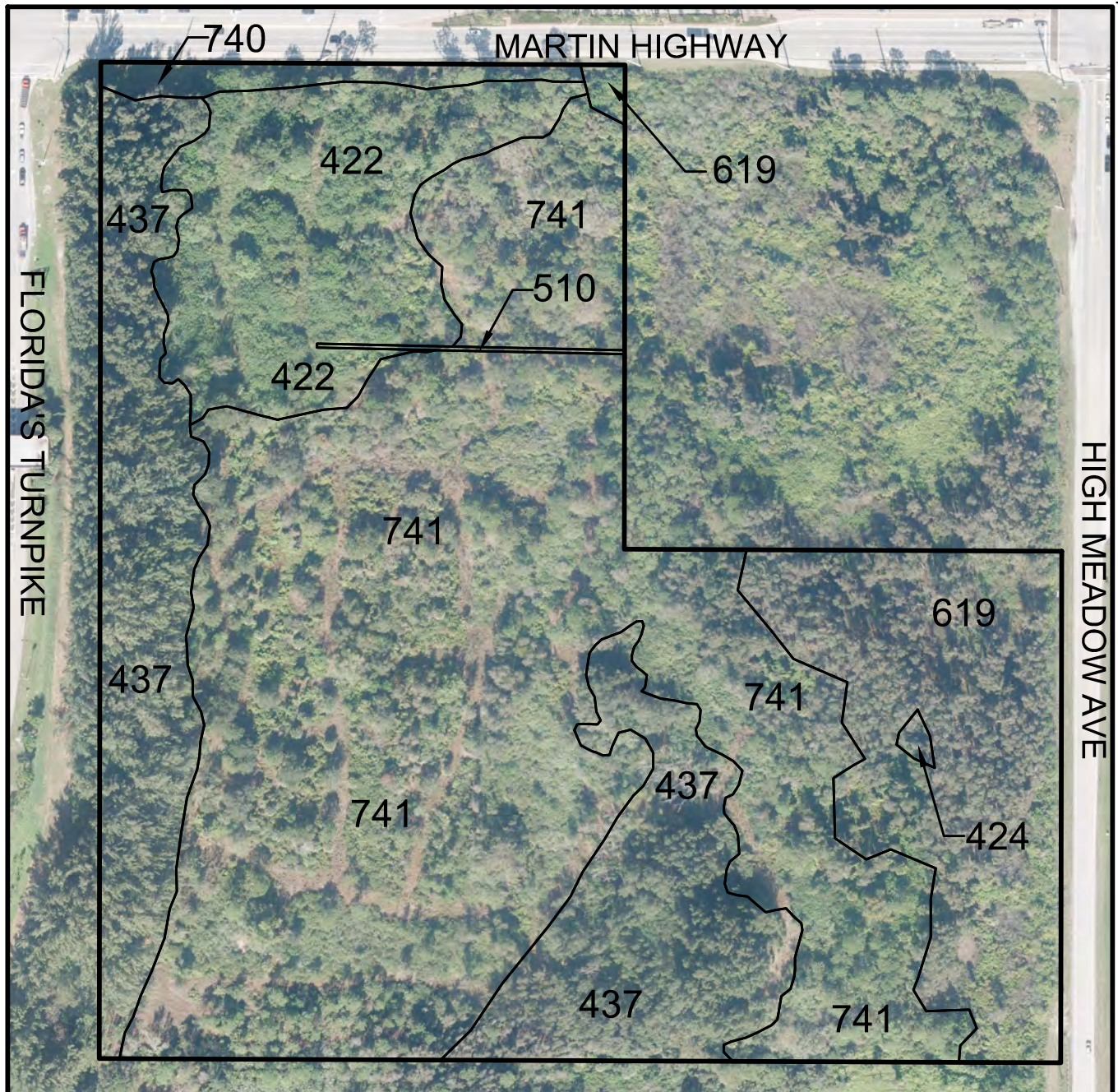


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FIGURE

2



MARTIN COUNTY AERIALS DATED 2019

LEGEND

422 - BRAZILIAN PEPPER (3.2± AC)
 424 - MELALEUCA (0.1± AC)
 437 - AUSTRALIAN PINE (5.4± AC)
 510 - DITCHES (0.1± AC)

510 - DITCHES (0.1± AC)
 619 - EXOTIC WETLAND HARDWOODS (3.8± AC)
 740 - DISTURBED LANDS (0.4± AC)
 741 - RURAL LANDS IN TRANSITION (14.5± AC)
TOTAL (27.5± AC)

0 200
 SCALE IN FEET

PALM PIKE CROSSING FLUCFCS

Palm Pike Crossing.dwg FLUCFCS



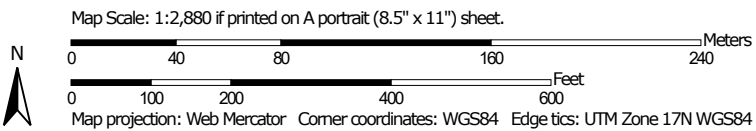
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FIGURE

3


Soil Map—Martin County, Florida
(Palm Pike Crossing)




Soil Map—Martin County, Florida
(Palm Pike Crossing)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Martin County, Florida

Survey Area Data: Version 17, Sep 17, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 14, 2015—May 8, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
38	Floridana fine sand, frequently ponded, 0 to 1 percent slopes	5.0	18.0%
63	Nettles sand	22.5	82.0%
Totals for Area of Interest		27.5	100.0%



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

August 7, 2019

** Delivered via email*

Charles Whittal *
Palm Pike Crossing, LLC
7940 Via Dellagio Way Suite 200
Orlando, FL 32819

**Subject: Palm Pike Crossing
Application No. 190701-1572
Informal Wetland Determination No. 43-101811-P
Martin County**

Dear Mr. Whittal:

The District reviewed your request for an informal determination of the jurisdictional wetland and other surface water boundaries within the subject property, which is located as shown on the attached Exhibit 1.0. A joint site inspection was conducted on August 6, 2019.

Based on the information provided and the results of the site inspection, jurisdictional wetlands and other surface waters as defined in Chapter 62-340, Florida Administrative Code, exist on the property. Exhibit 2.0, attached, identifies the boundaries of the property inspected and the approximate landward limits of the wetlands and other surface waters.

This correspondence is an informal jurisdictional wetland determination pursuant to Section 373.421(6), Florida Statutes, and Section 7.3 of Environmental Resource Permit Applicant's Handbook Volume I. It does not bind the District, its agents or employees, nor does it convey any legal rights, expressed or implied. Persons obtaining this informal jurisdictional determination are not entitled to rely upon it for purposes of compliance with provision of law or District rules.

Sincerely,

A handwritten signature in black ink that reads "Barbara Conmy".

Barbara Conmy
Section Leader

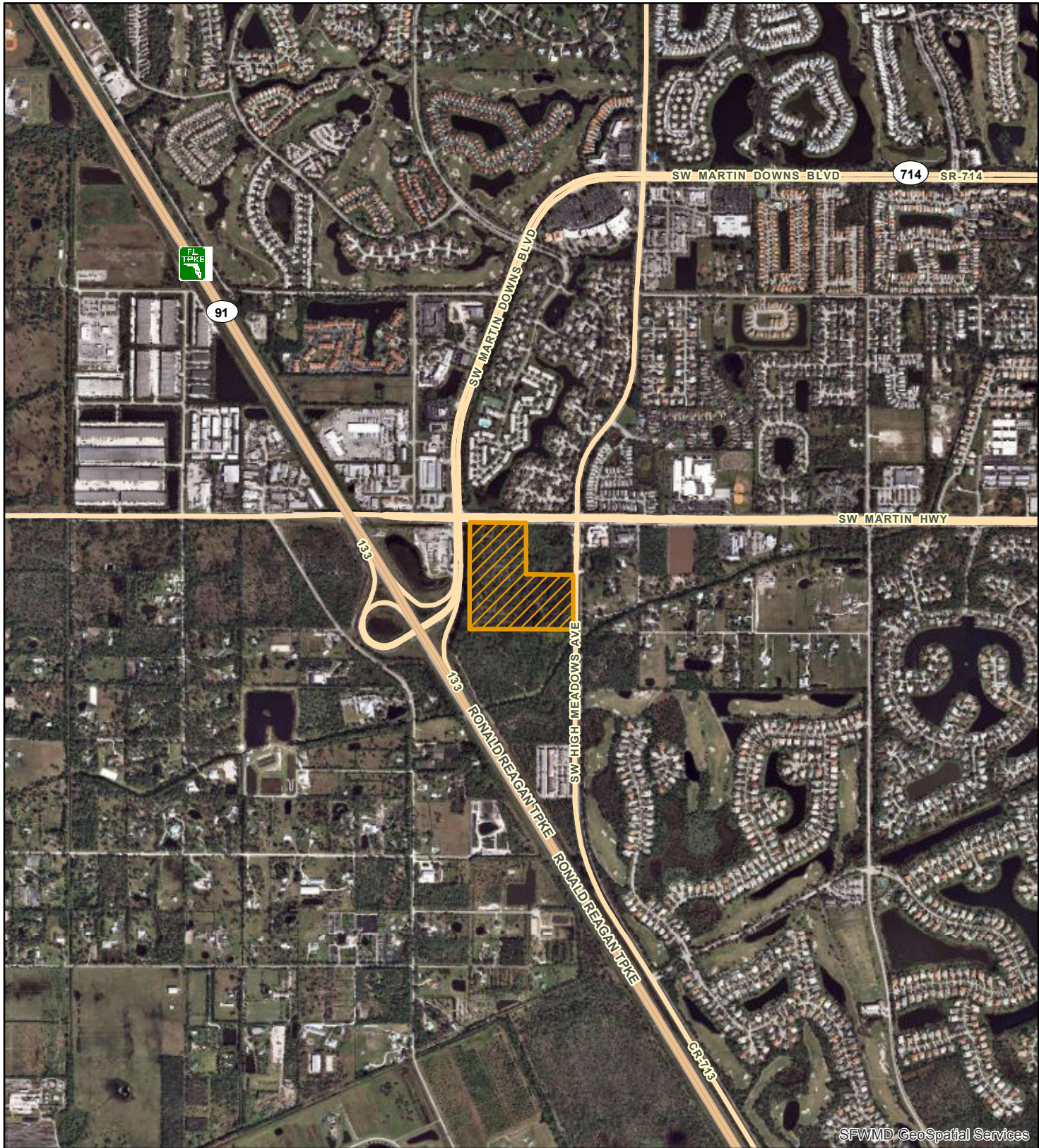
c: Arnaud Roux, EW Consultants, Inc *
Katie Bucher, Palm Pike Crossing, LLC *

Exhibits





The following exhibits to this permit are incorporated by reference. The exhibits can be viewed by clicking on the links below or by visiting the District's ePermitting website (<http://my.sfwmd.gov/ePermitting>) and searching under this application number 190701-1572.

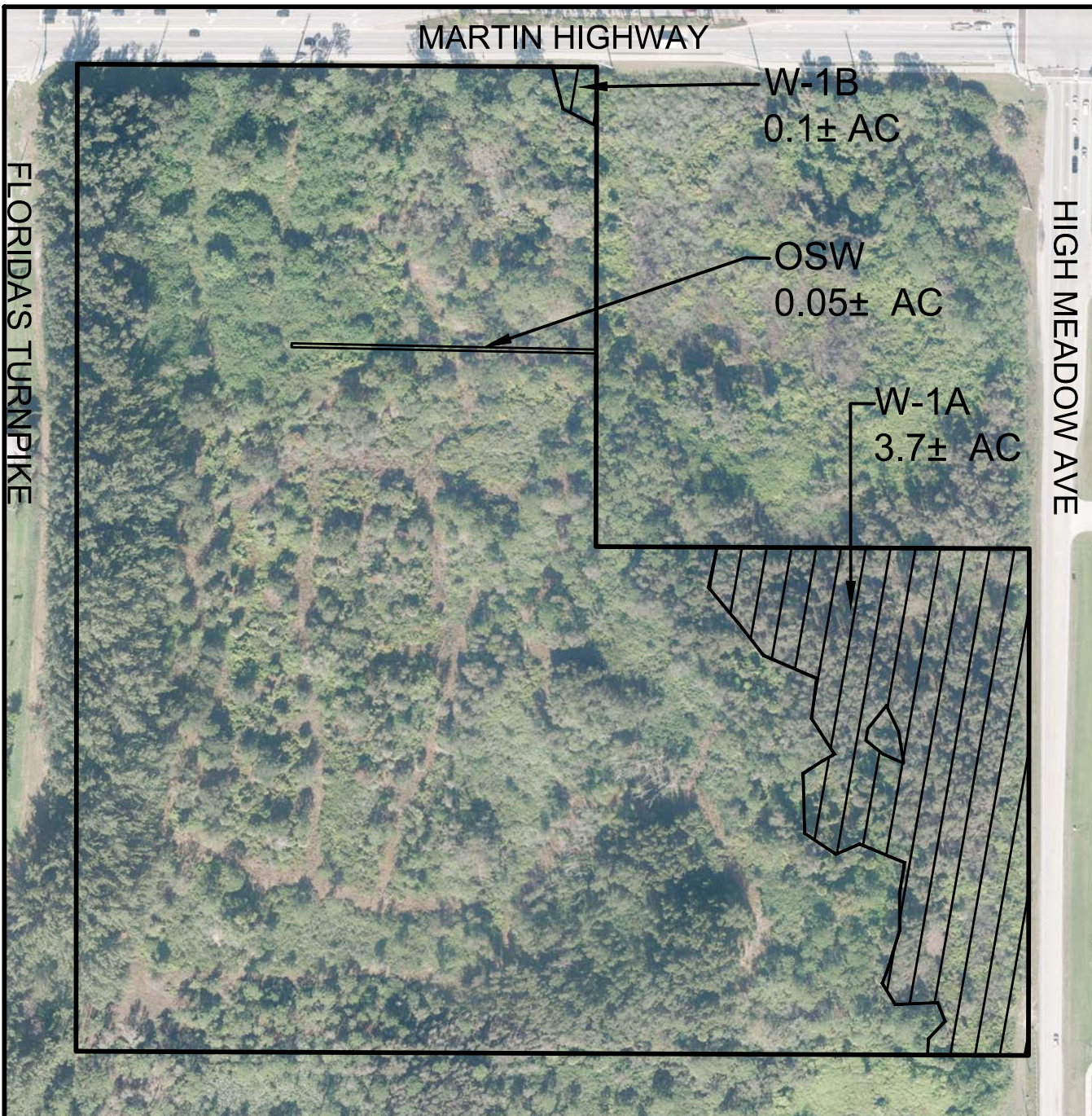
[Exhibit 1.0 - Location Map](#)

[Exhibit 2.0 - Wetland Locations](#)



SFWMD GeoSpatial Services

Exhibit No:1.0	Exhibit Created On: 2019-07-02	MARTIN COUNTY, FL	<div><div></div><div>Application</div></div> <div></div>
<div><div></div><div><div>REGULATION DIVISION</div><div>Project Name: Palm Pike Crossing</div></div><div><div><div>01,4502,900</div><div>Feet</div></div><div><div>N</div></div></div></div>			<div>Application Number: 190701-1572</div> <div><div></div><div>Created by IT GIS Section</div><div>South Florida Water Management District</div></div>



MARTIN COUNTY AERIALS DATED 2019

LEGEND

 - WETLAND (3.8± AC)

 - OTHER SURFACE WATER (0.05± AC)

0 200
SCALE IN FEET



PALM PIKE CROSSING

PRELIMINARY WETLAND & OSW



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JUNE 2019

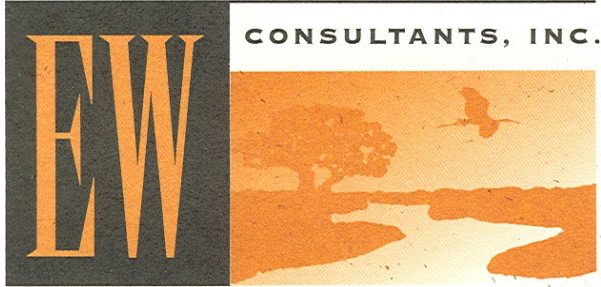
FIGURE

3

APPENDIX B

SUPPLEMENT TO PRESERVE AREA MANAGEMENT PLAN

EW Consultants, Inc.
Natural Resource Management, Wetland, and Environmental Permitting Services



PALM PIKE CROSSING

SUPPLEMENT TO THE PRESERVE AREA MANAGEMENT PLAN

Prepared for:

PALM PIKE CROSSING, LLC.

Prepared by:

EW CONSULTANTS, INC.

September 2019

INTRODUCTION

This document has been prepared as a supplement to the Preserve Area Management Plan (PAMP) for the Palm Pike Crossing project. This supplement provides the specifications for the creation, restoration, and enhancement of the wetlands and associated wetland buffer areas, along with monitoring and maintenance details for the preserve area.

WETLAND AND WETLAND BUFFER IMPACTS

The site plan includes proposed impacts to wetlands and adjacent uplands for right of way dedication and a turn lane on High Meadow Avenue and construction of SW 39th Street in a public right of way. The proposed impacts entail the placement of fill in the wetland to allow for the construction of the turn lane and SW 39th Street in public rights of way (High Meadow Avenue and SW 39th Street). The proposed wetland impact area totals 0.35 acres of fill in wetlands.

In addition, uplands that would correspond to the wetland buffers associated with the wetland area proposed for impact will also be impacted by clearing for the proposed access road in the public right of way. The site plan proposes to impact 0.21 acres of upland buffer area within public right of way.

Figure A in the Appendix depicts the wetland and upland buffer areas to be impacted.

RESTORATION

The current conditions in the onsite wetland are the result of previous impacts. The vegetation composition is colonized by melaleuca, an invasive exotic tree species. The native Carolina willow tree is also found in this wetland system at nuisance levels of coverage, also indicative of disturbed conditions. The disturbed upland areas west of and adjacent to the wetland area are also a result of historic activities including clearing and agricultural use.

This restoration plan proposes to convert a portion of the disturbed uplands adjacent to and west of the wetland into a created wetland to replace the areal extent of wetlands lost for construction of the turn lane and SW 39th Street. Figure B in the Appendix depicts the proposed wetland creation area. The created wetland area will be constructed adjacent to and as an extension of the existing wetland area on the site. A native wetland buffer will be re-created around the existing and created wetland. The restored wetland, the created wetland, and the restored wetland buffers will constitute the preserve area on site.

Exotic vegetation eradication-

An initial restoration program will be implemented for the existing wetland preserve area within the Palm Pike Crossing site. The initial restoration will be comprised of invasive nuisance and exotic vegetation eradication from the existing wetland portions of the preserve area. Invasive nuisance and exotic vegetation species commonly encountered on the project site and targeted by this maintenance program include, but are not limited to, Australian pine, melaleuca, Brazilian pepper, earleaf acacia, and old world climbing fern. In addition, the native Carolina willow (*Salix caroliniana*) and wild grape (*Vitis rotundifolia*) are considered to be at nuisance levels of coverage in the wetland area and will be thinned as part of the eradication program.

All exotic vegetation as listed by the Florida Exotic Pest Plant Council at the time of the permit issuance will be eradicated from the existing wetland area. Native vegetation at nuisance levels of coverage (wild grape and Carolina willow) will be thinned to appropriate levels of coverage. This exotic and nuisance vegetation control will be conducted in accordance with the following specifications.

- Eradication will be through herbicide application, hand clearing, and where appropriate, removal of dead material off-site. Dense areas (>80% coverage) of invasive non-native species (primarily Brazilian pepper and melaleuca) may be removed by mechanized land clearing equipment.
- Eradication of woody exotics not removed by mechanized land clearing will be through the cutting/treatment of the trunk and/or stump with an appropriately labeled herbicide.
- Eradication of non-woody exotic vegetation will be through application of appropriately labeled herbicide.
- The criterion for acceptance of eradication of nuisance and exotic vegetation will be 100 percent kill immediately after the completion of the eradication activity. If initial eradication efforts do not achieve this criterion, follow up treatment will be conducted.

Herbicides are required for the treatment of all stumps/trunks of woody vegetation to prevent re-growth, and for eradication of non-woody exotic and nuisance vegetation.

- All herbicide application activity will be conducted under the supervision of a Florida Department of Agriculture licensed applicator, licensed for application of aquatic herbicides.
- All herbicides applied within the wetland area must be properly labeled for application in wetlands.
- All herbicide applied must include a visible tracer dye in the mix to facilitate observation of treated vegetation.

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Concurrent with the initial eradication, woody vegetative debris resulting from the exotic eradication activity will be removed from the area to be restored. The removal will be conducted in a manner that minimizes impacts to the natural grade and existing desirable native vegetation. Vegetative debris (tree trunks and large limbs) will be removed and disposed of off site in accordance with the PAMP.

Wetland creation-

The area designated for wetland creation (0.5 acres) will be cleared with heavy equipment and the substrate scraped down to approximately one foot below the current wetland normal pool elevation. The created wetland will be graded to re-establish a natural slope transition from the existing wetland to the wetland buffer line. The wetland area will be graded to remove any ruts prior to the installation of native vegetation. Figure C depicts the proposed specifications of the scrape down for the wetland creation.

Efforts will be made to conserve existing native trees located within the created wetland area where they can be incorporated into the created wetland system. During the clearing and scrape down, any native trees that occur within the wetland creation area will be barricaded and left in place in accordance with the requirements of the PAMP. Native vegetation to be installed in the created wetland will mimic a wet prairie plant composition. Figure D depicts the proposed typical planting plan specifications for the wetland creation area.

The following plants are proposed to be installed in the created wetland area:

<u>Plant Name/Species</u>	<u>Specification</u>	<u>Spacing</u>	<u>Quantity</u>
Button bush (<i>Cephalanthus occidentalis</i>)	1 gallon	15 feet o.c.	100
Maidencane (<i>Panicum hemitomon</i>)	Bare root	2 feet o.c.	650
Pickernelweed (<i>Pontederia cordata</i>)	Bare root	2 feet o.c.	600
Arrowhead (<i>Sagittaria lancifolia</i>)	Bare root	2 feet o.c.	600
Beaksedge (<i>Rhynchospora</i> spp.)	Bare root	2 feet o.c.	1,000
Sawgrass (<i>Cladium jamaicense</i>)	Bare root	2 feet o.c.	600
Swamp fern (<i>Blechnum serrulatum</i>)	Bare root	2 feet o.c.	300
Cord grass (<i>Spartina bakeri</i>)	1 gallon	2 feet o.c.	875
Muhly grass (<i>Muhlenbergia capillaris</i>)	1 gallon	2 feet o.c.	875

Wetland buffer creation-

The area designated as wetland buffer (minimum 50 feet from the created wetland line as well as minimum 50 feet from the existing wetland line) will be mechanically cleared of non-native vegetation and replanted with desirable native upland vegetation. Existing native trees located within the wetland buffer area to be restored will be preserved where practical for added diversity. Native vegetation to be installed in the restored wetland buffer will be typical of pine flatwoods habitat. Figure D depicts the proposed typical planting plan specifications for the wetland buffer creation.

Plant Name/Species	Specification	Spacing	Quantity
Slash pine (<i>Pinus elliottii</i> var. densa)	7 gallon	25 feet o.c.	80
Slash pine (<i>Pinus elliottii</i> var. densa)	15 gallon	25 feet o.c.	40
Saw palmetto (<i>Serenoa repens</i>)	3 gallon	6 feet o.c.	950
Galberry (<i>Ilex glabra</i>)	3 gallon	6 feet o.c.	950
Wax Myrtle (<i>Myrica cerifera</i>)	1 gallon	15 feet o.c.	150
Rusty lyonia (<i>Lyonia ferruginea</i>)	1 gallon	20 feet o.c.	90
Muhly grass (<i>Muhlenbergia capillaris</i>)	1 gallon	3 feet o.c.	2,000
Cord grass (<i>Spartina bakeri</i>)	1 gallon	3 feet o.c.	2,000
Love grass (<i>Eragrostis spectabilis</i> or <i>elliottii</i>)	1 gallon	3 feet o.c.	3,750

Vegetative Success Criteria

The vegetative success criteria for the creation/restoration areas includes the requirement for 80 percent survival of the installed vegetation for the first two years, 80% percent coverage of desirable vegetation after two years, coverage of exotic vegetation at zero percent immediately following maintenance activities, and nuisance vegetation limited to five percent or less.

If native vegetation has not achieved 80 percent coverage after the two year period, a replanting plan will be submitted to Martin County and supplemental vegetation will be planted in areas that remain below the 80 percent vegetation coverage criteria.

After five years, the wetland and wetland buffer will meet the vegetative success criteria of 100 percent coverage of desirable native vegetation and surface area coverage of invasive nuisance and exotic vegetation limited to five percent or less.

MAINTENANCE

A maintenance program will be established to prevent return of the exotic and nuisance vegetation. The specifications for this perpetual maintenance program will follow the specification detailed in the eradication of invasive nuisance and exotic vegetation in the above section of this supplement as well as the requirements of the PAMP.

MONITORING

Vegetative Cover/Ecological Conditions Data Collection –

This preserve area monitoring plan includes five monitoring transects established across the restored ecotones and habitat, originating from the restored upland, through the created wetland, and into the restored upland. A total of 14 data collection stations will be established across the restored area. As part of the baseline monitoring data collection, each data collection station will be marked in the field with a PVC pipe field marker and coordinates documented through use of handheld GPS.

The vegetative coverage will be measured as absolute coverage by visual observation in each of four quadrants from the fixed monitoring points. The vegetation will be measured in percent coverage of the canopy/subcanopy layer and ground cover. The total percent cover will not exceed 100 percent, and each species documented will be reported in both common and Latin names.

In addition to vegetative coverage documentation, the water level and/or soil saturation will be reported, as well as any observed wildlife utilization or indicators of wildlife (i.e. tracks, scat, etc.).

Photographic Data Collection –

A representative photograph will be collected from each of the established data collection points to provide documentation of vegetative coverage. These photos will provide a broad perspective view of the vegetative conditions to supplement the site-specific data collection station information.

Reporting –

Subsequent to collection of the field data and vegetative conditions described above, the information will be compiled into a monitoring report to document the preserve area ecological conditions. The report will provide a tabular compilation of the observed vegetation species. The report will include all photographic documentation from data collection stations.

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Monitoring/Reporting Frequency -

The field data collection for the Baseline monitoring will be conducted prior to the completion of the exotic eradication and habitat creation/restoration. The purpose of the Baseline monitoring report will be to document the site conditions prior to the completion of the initial exotic vegetation eradication, wetland creation, and wetland buffer creation activities. A Time Zero monitoring report will be prepared subsequent to the completion of the initial exotic vegetation eradication, wetland creation, and wetland buffer creation activities. Subsequent monitoring reports will be provided annually for a period of five years to evaluate the long term results of the invasive nuisance and exotic vegetation control treatments and the re-establishment of native habitats.

APPENDIX

FLORIDA'S TURNPIKE

MARTIN HIGHWAY

W-1B
0.1± AC

0 200
SCALE IN FEET





W-1A
3.7± AC

DISTURBED
UPLAND

HIGH MEADOW AVE

SITE PLAN BY:
THOMAS
ENGINEERING
GROUP

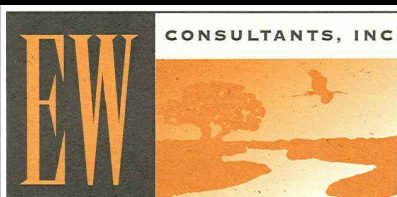
LEGEND

-  - WETLAND (3.8± AC)
-  - 50' WETLAND BUFFER (1.5± AC)
-  - WETLAND IMPACT (0.35± AC)
-  - 50' WETLAND BUFFER IMPACT (0.21± AC)

PALM PIKE CROSSING

WETLAND IMPACTS

Palm Pike Crossing.dwg WETLAND IMPACTS



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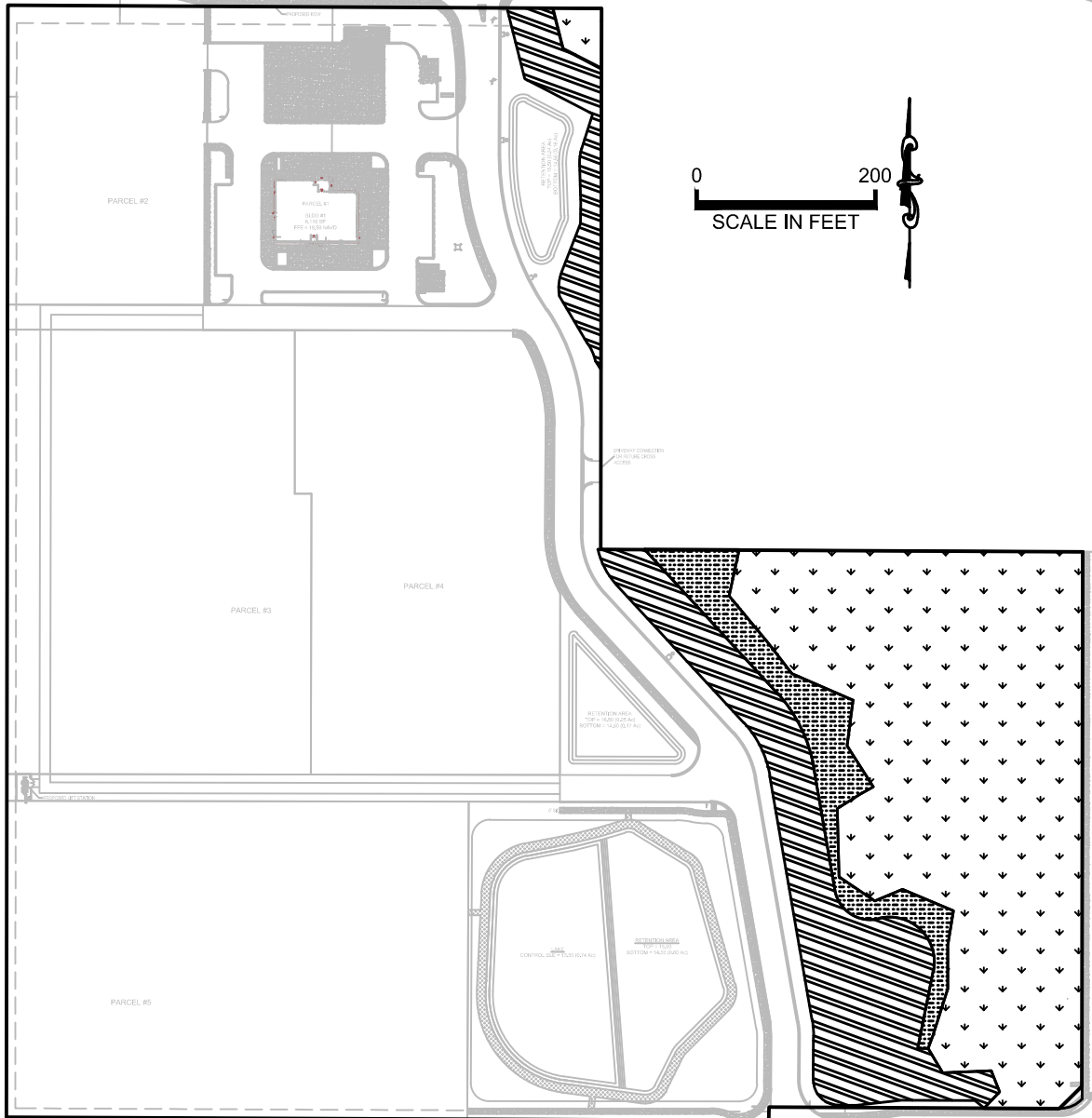
FIGURE

A

FLORIDA'S TURNPIKE

MARTIN HIGHWAY

HIGH MEADOW AVE



SITE PLAN BY:
THOMAS
ENGINEERING
GROUP

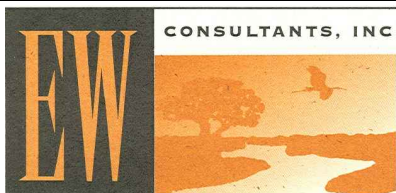
LEGEND

-  - WETLAND-RESTORATION (3.6± AC)
-  - WETLAND-CREATION (0.5± AC)
-  - RESTORED WETLAND BUFFER (1.6± AC)

PALM PIKE CROSSING

WETLAND & UPLAND CREATION

Palm Pike Crossing.dwg WET & UP CREATION



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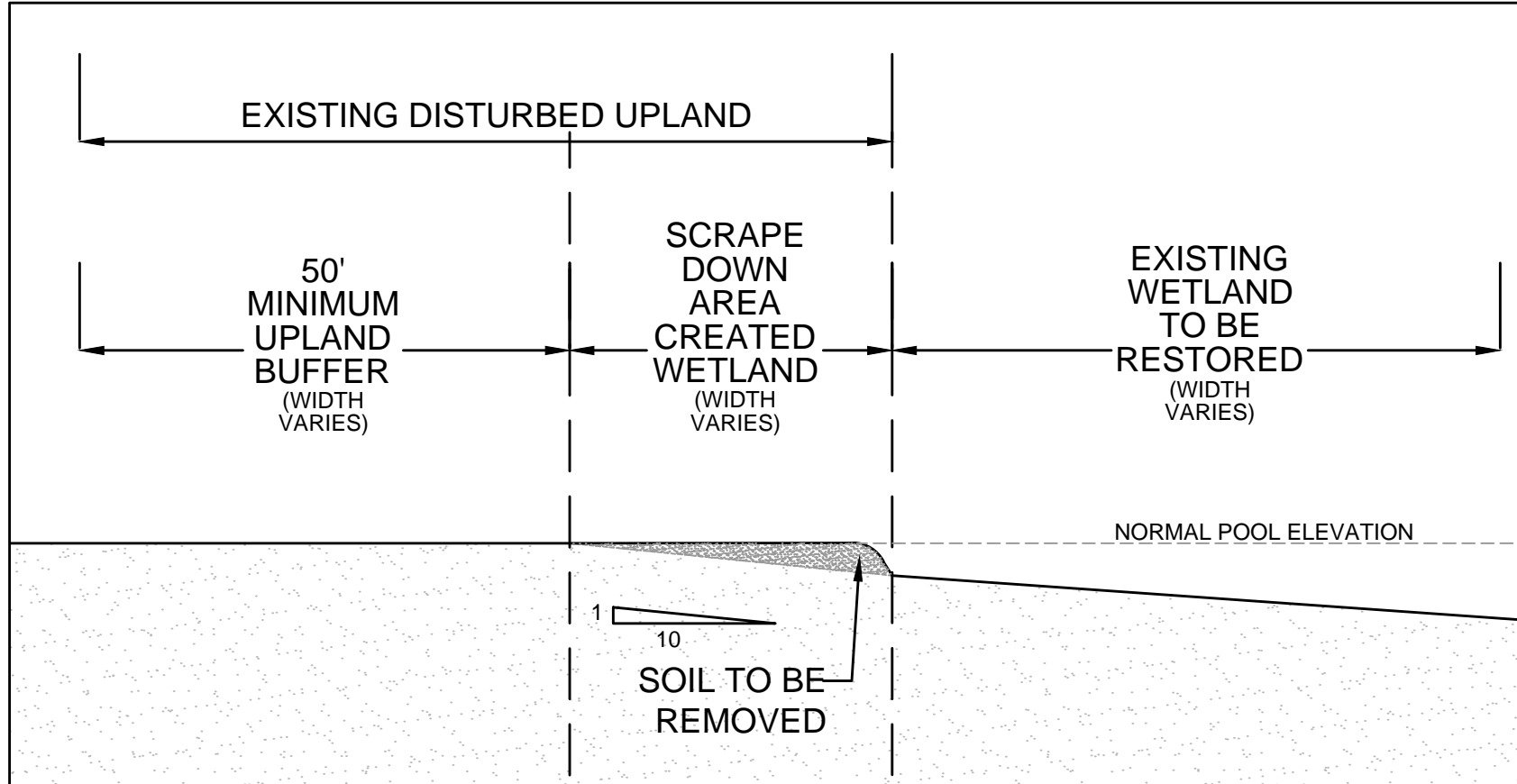
SEPT 2019

FIGURE

B

WETLAND AND UPLAND BUFFER CROSS SECTION

NTS



PALM PIKE CROSSING WETLAND CREATION SECTION

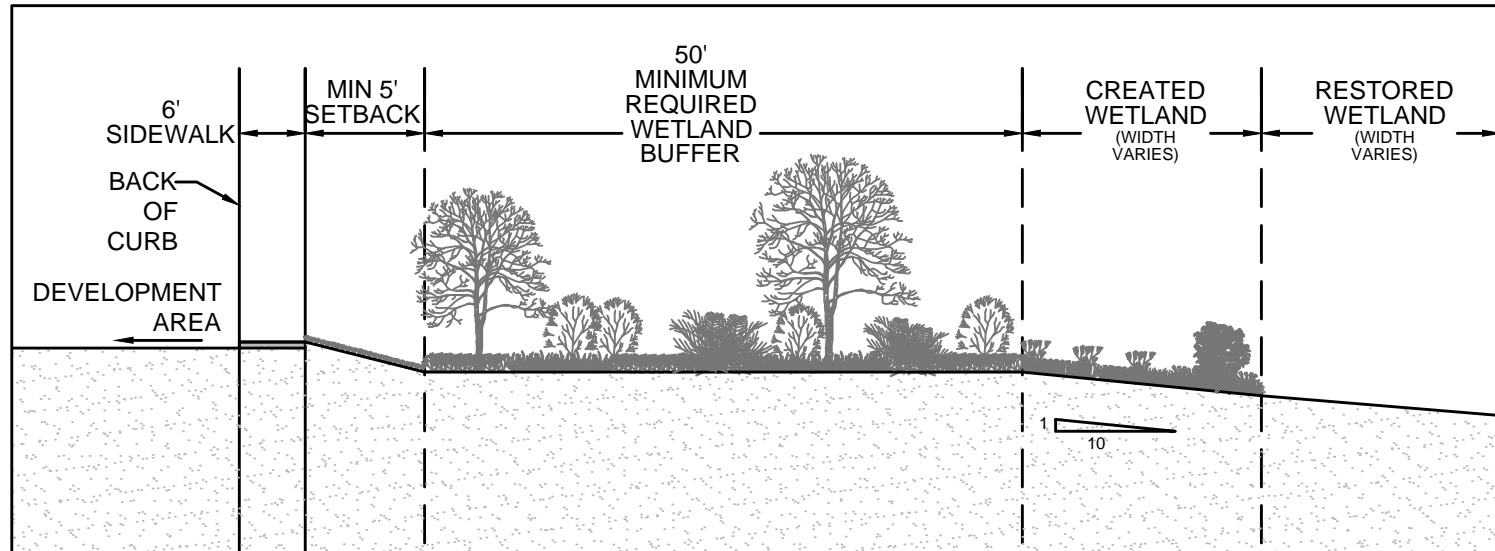


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www.ewconsultants.com

SEPT 2019
FIGURE
C

CREATED WETLAND & BUFFER PLANTING PLAN SECTION

NTS



CREATED WETLAND & BUFFER PLANTING PLAN VIEW MATERIALS & QUANTITIES

NTS

CREATED UPLAND BUFFER, 1.6 AC

CREATED WETLAND, 0.5 AC

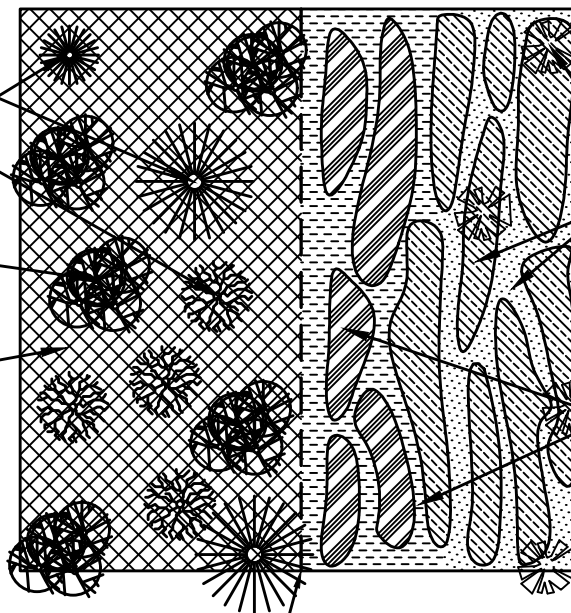
Canopy Trees (1-7gal, 6' min., 25' O.C.)
South FL slash pine - *Pinus elliottii* var. *densa*

Understory
Wax myrtle - *Myrica cerifera* (1 gal, 15' o.c.)
Rusty lyonia - *Lyonia ferruginea* (1 gal, 20' o.c.)

Understory 3 gal, 3' o.c., clustered
Saw palmetto - *Serenoa repens*
Galberry - *Ilex glabra*

Groundcover 1gal, 2' o.c.
Muhly Grass - *Muhlenbergia capillaris*
Sand Cordgrass - *Spartina bakeri*
Love grass - *Eragrostis spectabilis* or *elliottii*

NOTE:
- Native vegetation to be installed to mimic typical of pine flatwoods habitat plant composition
- Plant material may be substituted with other like native species.



TRANSITION FROM
CREATED WETLAND
TO UPLAND BUFFER

Understory 1 gal, 15' o.c.
Button bush - *Cephalanthus occidentalis*

Groundcover bare root, 2' o.c.
Maidencane - *Panicum hemitomon*
Pickerelweed - *Pontederia cordata*
Arrowhead - *Sagittaria lancifolia*
Beaksedge - *Rhynchospora* spp.
Sawgrass - *Cladium jamaicense*
Swamp fern - *Blechnum serrulatum*

1 gal, 2' o.c.
Cord grass - *Spartina bakeri*
Muhly grass - *Muhlenbergia capillaris*

NOTE:
- Native vegetation to be installed to mimic a wet prairie plant composition.
- Plant material may be substituted with other like native species.

PALM PIKE CROSSING CREATED WETLAND & BUFFER PLANTING PLAN



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FIGURE
D

APPENDIX C

Additional Information



Local Jurisdiction	Martin County			
Future Land Use	Industrial			
Current Zoning Classification	LI, Limited Industrial			
Flood Zone Classification	Flood Zone 'X' per map no. 12085C0141G, Dated: March 16, 2015			
Post Development Gross Site Area	1,196,907 sf	27.48 Ac	100%	
Created Wetland	22,854 sf	0.52 Ac	1.9%	
Existing Wetland	151,815 sf	3.49 Ac	12.7%	
Right of way dedication	32,667 sf	0.75 Ac	2.7%	
Upland	1,906 sf	0.04 Ac	0.2%	
Total Developable Site	987,665 sf	22.67 Ac	82.5%	
Lot 1	96,116 sf	2.21 Ac		
Lot 2	74,577 sf	1.71 Ac		
Lot 3	168,897 sf	3.88 Ac		
Lot 4	132,926 sf	3.05 Ac		
Lot 5	183,046 sf	4.20 Ac		
Common Area	332,103 sf	7.62 Ac		
Maximum building height	40'			
	Lot Area (19,000 sf min)	Max bulding coverage (40%)	Minimum open space (20%)	Minimum lot width (100')
Lot #1	96,116 proposed	38446 40%	19223 sf	280' provided
Lot #2	74,577 proposed	29831 40%	14915 sf	223' provided
Lot #3	168,897 proposed	67559 40%	33779 sf	237' provided
Lot #4	132,926 proposed	53170 40%	26585 sf	324' provided
Lot #5	183,046 proposed	73218 40%	36609 sf	355' provided

Post development Wetland	4.10 Ac
Wetland Impact	0.35 Ac
Wetland Creation	0.52 Ac
Wetland buffer	1.60 Ac
total preserve area	5.70 Ac

LOT 1	CONVENIENCE STORE WITH GAS
LOT 2	VEHICULAR SERVICE AND MAINTENANCE
LOT 3	RETAIL
LOT 4	RETAIL
LOT 5	RETAIL/HOTEL

MINIMUM SETBACKS FOR LI DISTRICT	
FRONT	15'FT MINIMUM
REAR	10'FT MINIMUM
SIDE	10'FT MINIMUM

- | | |
|--|---|
| | PROPOSED PROPERTY LINE |
| | PROPOSED INTERIOR LOT LINES |
| | EXISTING PROPERTY LINE |
| | PROPOSED HEAVY DUTY PAVEMENT |
| | PROPOSED ASPHALT PAVEMENT |
| | PROPOSED CONCRETE PAVEMENT |
| | PROPOSED STAMPED CONCRETE |
| | OPEN SPACE |
| | CREATED WETLAND |
| | WETLAND |
| | WETLAND BUFFER |
| | PROPOSED PARKING SPACE COUNT |
| | PROPOSED LIGHT POLE FOR PARKING AREA AND DRIVE AISLES |

1. ALL PAVEMENT DIMENSIONS SHOWN ARE SHOWN TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED, OPEN SPACE DIMENSIONS ARE SHOWN TO BACK OF CURB
2. ALL RADI DIMENSIONS ARE 3' UNLESS OTHERWISE NOTED.
3. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," LATEST EDITION; AND MARTIN COUNTY LAND DEVELOPMENT CODE.
4. FREE STANDING SIGNAGE SHOWN ONLY FOR REPRESENTATIONAL PURPOSES, AND SHALL BE PERMITTED SEPARATELY.
5. ALL WORK WITHIN THE MARTIN COUNTY R.O.W. SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) AND THE DESIGN STANDARDS (LATEST EDITION).
6. MAINTENANCE OF TRAFFIC PLAN FOR WORK ZONES SHALL BE IN CONFORMANCE WITH ALL APPLICABLE INDEXES OF THE FDOT DESIGN STANDARDS ALONG SW MARTIN HWY AND SW HIGH MEADOW AVE.
7. ANY DAMAGED SIDEWALK OR CURB WITHIN THE MARTIN COUNTY R.O.W. SHALL BE REMOVED AND REPLACED.
8. ALL SIDEWALKS WITHIN MARTIN COUNTY R.O.W. SHALL COMPLY WITH FDOT STANDARD INDEXES AND BE CONSTRUCTED OF A MINIMUM 8" THICK FDOT CLASS II NON-STANDARD 3000 RMP CONCRETE WITH FIBER MESH. ALL TRUNCATED DOWNS SHALL BE INSTALLED PER FDOT INDEXES
9. ALL DISTURBED AREAS WITHIN THE MARTIN COUNTY R.O.W. WILL BE SOODED.
10. ALL PROHIBITED EXOTIC PLANT SPECIES SHALL BE REMOVED FROM THE SITE PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY. PERPETUAL MAINTENANCE IS REQUIRED TO PROHIBIT THE REESTABLISHMENT OF INVASIVE EXOTIC SPECIES WITHIN PRESERVATION AREAS AND PLANTED LANDSCAPE OR LAKE LITTORAL AREAS AS PROVIDED ON THE PLANS APPROVED WITH THE DEVELOPMENT ORDER.
11. IT SHALL BE UNLAWFUL TO ALTER THE APPROVED SLOPES, CONTOURS, OR CROSS SECTIONS OR TO CHEMICALLY MECHANICALLY, OR MANUALLY REMOVE, DAMAGE, OR DESTROY ANY PLANTS IN THE LITTORAL OR UPLAND TRANSITION ZONE BUFFER AREAS OF CONSTRUCTED LAKE EXCEPT UPON THE WRITTEN APPROVAL OF THE GROWTH MANAGEMENT DIRECTOR, AS APPLICABLE. IT IS THE RESPONSIBILITY OF THE OWNER OR PROPERTY OWNERS ASSOCIATION, ITS SUCCESSOR OR ASSIGNS TO MAINTAIN THE REQUIRED SURVIVORSHIP AND COVERAGE OF THE RECLAIMED UPLAND AND PLANTED LITTORAL AREA.
12. PRESERVE AREAS ARE NOT TO BE ALTERED WITHOUT WRITTEN PERMISSION OF THE MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS

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PROJECT No.:	FJ190010
DRAWN BY:	MJL
CHECKED BY:	BMU
DATE:	3/8/2021
CAD I.D.:	FJ190010-SITE PLAN

SITE PLAN SET

Martin County Project #P175-001

FOR

**PALM PIKE
CROSSING, LLC**

**PALM CITY
FLORIDA**



PEBWORTH PROFESSIONAL PLAZA
125 W. INDIANTOWN RD, SUITE 206
JUPITER, FL 33458
PH: (561) 203-7503
FX: (561) 203-7721
www.ThomasEngineeringGroup.com



SHEET TITLE:

MASTER SITE PLAN

SHEET NUMBER:

SP-1

MARTIN COUNTY, FLORIDA
PRESERVE AREA MANAGEMENT PLAN
ANNUAL MONITORING REPORT FOR (Year)

- **Name and address of current owner of Preserve Area;**
- **Location of Preserve Area**
- **Date PAMP approved;**
- **Documentation of vegetation changes, including encroachment of exotic vegetation;**
- **Fixed-point panoramic photos of all Preserve Areas;**
- **Synopsis of maintenance activities conducted in compliance with the PAMP requirements such as exotic vegetation removal, re-vegetation, and additional enhancement activities necessary to maintain the Preserve Area;**
- **A timetable for action within 90 days of the report;**
- **A list of all violations of the PAMP; and**
- **Recommendations for remedial actions, with a proposed schedule for the coming year.**

Signature/Date : _____

Typed Name/Title : _____

Company Name (if applicable) : _____