

FMBrew Campus

Section 19, Township 45 South, Range 26 East
Lee County, Florida

Lee County Indigenous Area and Protected Species Management Plan

September 2022

Prepared for:

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Introduction

The 22.16± acre project is located within a portion of Section 19, Township 45 South, Range 26 East, Lee County, Florida. The parcel is bordered to the north by an industrial park, Daniels State Preserve, and open pasture, to the east, south, and west by Daniels Parkway.

The 7.07± acre preserve area consists primarily herbaceous and forested wetlands invaded by melaleuca (*Melaleuca quinquenervia*) (Figure 1). The goal of the indigenous vegetation preserve is to enhance the existing wetlands via exotic control. This will also result in improved wildlife habitat including potential foraging habitat for a variety of listed and non listed wading bird species. The enhancement activities described in this plan are based on the best available information and are subject to adaptive management as additional information becomes available.

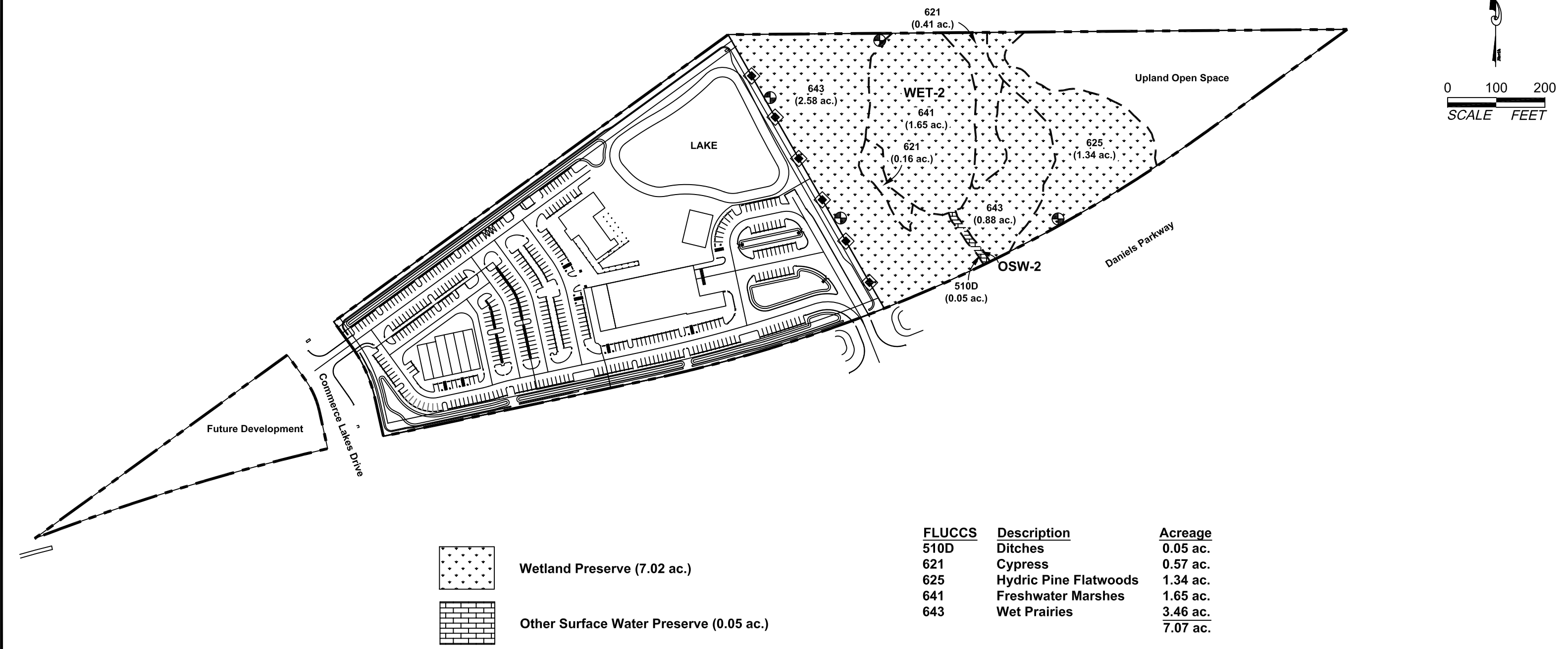
Removal and Control of Exotic and Nuisance Vegetation

All exotics (defined as Lee County LDC Section 10-420(f) exotic species (melaleuca, Brazilian pepper, Australian pine (*Casuarina* spp.), earleaf acacia (*Acacia auriculiformis*), downey rose-myrtle (*Rhodomyrtus tomentosus*), and tropical soda apple (*Solanum khasianum*)) or Category I species on the Florida Invasive Species Council's List of Invasive Species, (excluding Caesars weed)) within the indigenous vegetation preserve will be treated (Figure 1). Exotics may be mechanically removed and treated from wetland areas that are currently dominated by exotics (greater than 75 percent aerial coverage) and therefore have very few native species present (i.e. the polygons mapped as FLUCCS Code 619 on the existing conditions Vegetation Map, Figure 2). The limits of the areas from which exotics may be mechanically removed will be determined based on site specific conditions at the time of clearing. Mechanical work will be conducted only during times of dry soil conditions to minimize ground disturbance. All vegetative debris resulting from this mechanical activity will be removed from the preserve.

This mechanical exotic removal may result in temporary disturbance to the soil. Once the initial exotic control is completed, ruts caused by the use of heavy equipment will be graded to blend with adjacent grades. This will result in slight depressions which will effectively concentrate wading bird prey (i.e. small fish and amphibians). In the event mechanical removal of exotics is not deemed to be practicable, exotics within these areas will be treated as described below. Access to the mechanical removal areas will be from existing trails within the preserve.

In areas where mechanical removal is not undertaken, exotic trees and shrubs will be cut just above natural grade and the stump treated with an appropriate herbicide suitable for aquatic application. The resulting vegetative material will

SECTION: 19
TOWNSHIP: 45 S
RANGE: 26 E

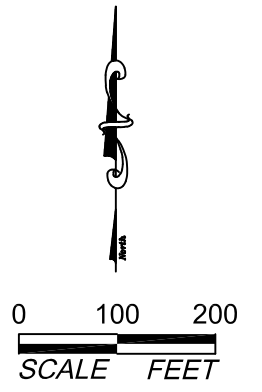
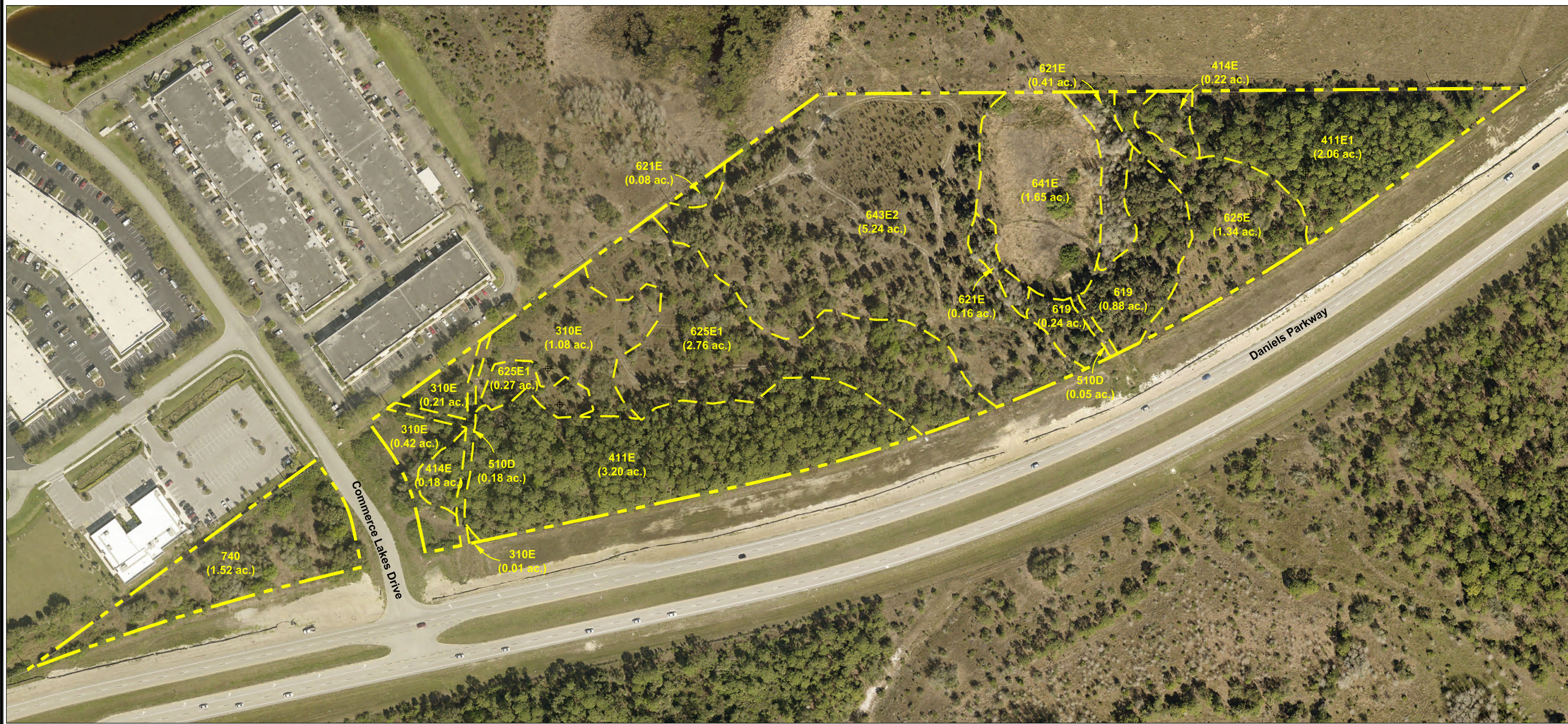


Notes:
1. Property boundaries, surveyed wetland lines, and site plan provided by Waldrop Engineering.
2. Mapping based on photointerpretation of 2018 aerial photography and ground truthing in February 2019.
3. Delineation of jurisdictional wetlands on east parcel field reviewed/approved by SFWMD (App No. 190319-1262).
4. Delineation of jurisdictional wetlands on west parcel is preliminary and subject to field review/approval by applicable regulatory agencies.

Photo Station (4)
Preserve Sign (6)

PERMIT USE ONLY
NOT FOR CONSTRUCTION
September 13, 2022 2:16:43 p.m.
Drawing: RWJG2PROPCON.DWG

SECTION: 19
TOWNSHIP: 45 S
RANGE: 26 E



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FLUCCS	Description	Acreage
310E	Dry Prairie Invaded by Exotics (5-9%)	1.72 ac.
411E	Pine Flatwoods Invaded by Exotics (5-9%)	3.20 ac.
411E1	Pine Flatwoods Invaded by Exotics (10-25%)	2.06 ac.
414E	Pine - Mesic Oak Invaded by Exotics (5-9%)	0.40 ac.
510D	Ditches	0.23 ac.
619	Exotic Wetland Hardwoods	1.12 ac.
621E	Cypress Invaded by Exotics (5-9%)	0.65 ac.
625E	Hydric Pine Flatwoods Invaded by Exotics (5-9%)	1.34 ac.
625E1	Hydric Pine Flatwoods Invaded by Exotics (10-25%)	3.03 ac.
641E	Freshwater Marshes Invaded by Exotics (5-9%)	1.65 ac.
643E2	Wet Prairies Invaded by Exotics (26-50%)	5.24 ac.
740	Disturbed Land	1.52 ac.
		22.16 ac.

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NOT FOR CONSTRUCTION
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Figure 2. Vegetation Map

FMBrew Campus

be removed from the preserve. In the event that the physical removal is not feasible due to excessive damage to non-target species the resulting vegetative material will be disposed of by one or more of the following methods: 1) cut into 4 feet – 6 feet sections and stacked on the ground with alternating layers of trees at right angles to each other (log cabin) with the stacks no higher than 5± feet, 2) cut and placed into piles (tee-pee) with piles spaced a minimum of 100 feet apart, 3) where exotic density is less than 25% the exotics may be cut into 2 feet – 4 feet sections and scattered on the ground, and 4) large trees may be girdled and killed in place with a stump specific herbicide suitable for aquatic application. Herbicides will be used in strict accordance with label directions by trained applicators. Care will be taken to reduce damage to non-target native species to the maximum extent practical.

The Lee County Division of Environmental Sciences will be notified prior to any exotic vegetation treatment.

A routine maintenance plan will be initiated upon the completion of the initial exotic treatment. For the first two years following the initial treatment, the preservation area will be inspected twice a year (late spring and fall) and all exotic and/or nuisance species will be treated. During these inspections the preservation area will be qualitatively evaluated, potential problems (if any) identified, and corrective actions recommended. After the second year, inspections and treatments will be conducted annually during the dry season. The property owner's association will be responsible for long term management of the preserves.

Access to the indigenous vegetation preserve will be co-located with access points to the surface water management system or other common areas. No use of heavy equipment will be allowed once the initial treatment has been completed.

Coverage by exotic and nuisance vegetation within the indigenous vegetation preserve areas will be maintained below five percent aerial cover.

Supplemental Plantings

No supplemental plantings within the wetland preserve is proposed at this time. In the event that the South Florida Water Management District (SFWMD) requires supplemental plantings, all of the plants to be installed will be native species.

Protected Species Management

The August 2020 Protected Species Assessment did not reveal the presence of any listed species on-site. However, upon the completion of the enhancement plan described above, the wetland on-site may provide potential foraging habitat

for several listed wading bird species. This includes the little blue heron (*Egretta caerulea*), roseate spoonbill (*Ajaia ajaja*), tricolored heron (*Egretta tricolor*), and wood stork (*Mycteria americana*). These birds typically forage in freshwater wetlands throughout southwest Florida.

Florida black bears (*Ursus americanus floridanus*) are known to exist in the general vicinity of the project site. Measures will be taken to minimize bear attractants such as utilizing bear-proof dumpsters (if available). All grease traps will be located below ground. Educational kiosks will be located between public parking areas and pedestrian access points to development uses.

Potential habitat for the Florida bonneted bat (*Eumops floridanus*) and Big Cypress fox squirrel (*Sciurus niger avicenia*) occurs on-site. The August 2020 Protected Species Assessment did not reveal the presence of any potential Florida bonneted bat roost cavity trees or Big Cypress fox squirrel nests. Florida bonneted bat roost and Big Cypress fox squirrel nest surveys will be conducted prior to the issuance of the first vegetation removal permit. In the event a potential Florida bonneted bat roost cavity is found, the landowner will coordinate with the U.S. Fish and Wildlife Service and the Lee County Division of Environmental Sciences to determine additional protection measures or surveys that may be required. In the event a potential Big Cypress fox squirrel nest is found, the landowner will coordinate with the Florida Fish and Wildlife Conservation Commission and the Lee County Division of Environmental Sciences to determine additional protection measures or surveys that may be required.

Method and Frequency of Pruning and Trimming

No pruning or thinning of native vegetation within the 7.07± acres of indigenous vegetation preserve is proposed at this time. In the event that trimming becomes necessary to meet the ecological goals of this management plan, the trimming will be accomplished by hand using chain saws or machetes and will be restricted to no more than 25 percent of an area during any particular one year interval. Cut vegetation will remain on-site.

The Lee County Division of Environmental Sciences will be notified prior to any preserve maintenance (other than routine annual exotic maintenance events).

Education Material and Signage

Signage will be posted every 100 feet along the development – preserve interface (Figure 1). The property owner will receive a brochure describing the purpose and function of the preserve. Please see Appendix A for a sample sign and educational materials.

Garbage Management

All garbage will be removed from the preserve prior to the issuance of the Certificate of Compliance for any part of the development. The preserve will be surveyed for garbage semi annually.

Monitoring Reports

A Baseline Monitoring Event will be conducted prior to exotic treatment activities within the indigenous vegetation preserves and report submitted to Lee County Division of Environmental Sciences prior to Development Order approval. A Time Zero Monitoring Event will be conducted after completion of those activities within the preserve and the report submitted to Lee County Division of Environmental Sciences prior to issuance of the Certificate of Compliance. In addition, a monitoring report will be submitted annually to the Lee County Division of Environmental Sciences for five consecutive years starting one year from the date of the Certificate of Compliance issued for the project's infrastructure. The reports will document the overall status of the habitat within the indigenous vegetation preserve area. The report will also include photographs documenting the condition of the preserves and any other information relevant to the continued function of the preserve areas.

Perpetual Preservation

The wetland and upland preserve area, as identified on Figure 1, will be platted as a conservation tract or will be placed under a conservation easement in favor of the South Florida Water Management District.

APPENDIX A

Sample Sign and Educational Materials

Preserve Area

Please Do Not Disturb

This Area is Managed for Native Plants and Wildlife

Example Preserve Educational Brochure

FMBrew Campus

Indigenous Preserve Area

In order to enhance and maintain indigenous habitats and associated native wildlife, a preserve area has been established within the FMBrew Campus. The indigenous vegetation preserve within the FMBrew Campus project consists of 7.02± acres of wetlands located in the eastern portion of the property. The goal of the indigenous vegetation preserve is to enhance the existing wetlands and uplands via exotic vegetation control. The preserve area shall be maintained in a natural state through the removal of exotic vegetation and periodic maintenance. This area can be identified by signs which denote it as "Preserve Area". Please do not disturb this area or plant any vegetation within its confines.

The forested wetland preserves consist of cypress and hydric pine communities which are vegetated by species such as cypress (*Taxodium* sp.), slash pine, laurel oak (*Quercus laurifolia*), wax-myrtle, carpet grass (*Axonopus* sp.), beakrush (*Rhynchospora* spp.), little blue maidencane, and yellow-eyed grass (*Xyris* sp.).



The herbaceous wetland preserves consist of wet prairie and freshwater marsh communities which are vegetated by species such as beakrush, maidencane (*Panicum hemitomon*), pickerelweed (*Pontederia* spp.), smartweed (*Polygonum* spp.), fire flag (*Thalia geniculata*), little blue maidencane, corkwood (*Stillingia aquatica*), and yellow-eyed grass.

These areas can provide a natural conveyance of surface waters and habitat for a variety of animals. Wildlife that may utilize these areas includes small animals such as the tree frog (*Hyla* spp.), pig frog (*Rana grylio*), and various snakes. A variety of birds including the red-shouldered hawk (*Buteo lineatus*), red-bellied woodpecker (*Melanerpes carolinus*), northern mockingbird (*Mimus*

polyglottos), northern cardinal (*Cardinalis cardinalis*), bluegray gnatcatcher (*Polioptila caerulea*), gray catbird (*Dumetella carolinensis*), and various warblers commonly occur within these wetlands at various times of the year.



Habitat is present on-site for a variety of state and federally protected wading birds including the snowy egret (*Egretta thula*), little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), wood stork (*Mycteria americana*), and white ibis (*Eudocimus albus*). These birds can be found feeding in freshwater wetlands, ditches, and along the edges of lakes. Please do not feed, harm or harass any wildlife.