Feasibility of an Inland Logistics Center at Ocala, Florida

Final Phase II Environmental Analysis

Prepared for:

The City of Ocala and the Florida Department of Transportation

Prepared by:

Greenman Pedersen, Inc.

Under contract to:

Parsons Brinckerhoff, Inc.

August 10, 2016

Table of Contents

About this Report 1

Attachment A – Environmental Screening

Attachment B – Stormwater Analysis

About this Report

The purpose of this Phase II environmental analysis is to build upon the results of Phase I (Market Analysis) with additional investigations. Phase II includes two tasks: (1) Preliminary Environmental Analysis and (2) Preliminary Engineering Analysis. This report documents the Preliminary Environmental Analysis.

The Preliminary Environmental Analysis consists of two separate but related tasks:

- Environmental Screening; and
- Stormwater Analysis

The environmental analysis was performed by Greenman Pedersen, Inc. under contract to Parsons Brinckerhoff, Inc. The findings were documented in two technical memos, which were delivered to Parsons Brinckerhoff and provided to the City of Ocala for review and comment. No changes were recommended to these technical memos, which are reproduced in their original form in this report, the Environmental Screening as Attachment A and the Stormwater Analysis as Attachment B.

Phase III of the project consists of a financial analysis, and is documented separately.

Attachment A – Environmental Screening

TECHNICAL MEMORANDUM

DATE: December 8, 2015

TO: Alan Meyers, P.E.
WSP Parsons Brinckerhoff

FROM: Joel Johnson
Greenman-Pedersen, Inc.

SUBJECT: Feasibility of an Inland Logistics Center, Phase II
Marion County, Florida
DRAFT Preliminary Environmental Screening Analysis

Greenman-Pedersen, Inc. (GPI) has completed a desktop and field assessment of the City of Ocala Inland Logistic Center in Marion County, Florida. The purpose of this memorandum is to document the findings of the analysis regarding the potential for jurisdictional wetlands and surface waters and protected species occurrence within the project area, specifically within the project boundary. The contents of this memorandum include a summary of publicly-available data, brief description of existing conditions, representative photographs, and aerial maps.

Methods

The site is approximately 160 acres including the Pine Oaks Municipal Golf Course and other parcels described in further detail in this report. Adjacent to the east side of the project area is a functioning CSX railroad and to the north an electrical power transmission line easement.

Prior to initiating a field visit, the following Geographic Information System (GIS) resources were reviewed:

- Florida Fish and Wildlife Conservation Commission (FWC) Terrestrial Resources GIS (TRGIS) database
- Florida Fish and Wildlife Conservation Commission (FWC) Marine Resources GIS (MRGIS) database
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) database
- United States Fish and Wildlife Service (USFWS) wildlife shapefiles
- National Resource Conservation Service (NRCS) Soil Survey Geographic (SSURGO) database
- Southwest Florida Water Management District (SWFWMD) Florida Land Use and Cover Classification System (FLUCCS) database

Following review of available GIS data, a pedestrian survey of the project area was conducted on October 28, 2015 and October 29, 2015 by GPI staff scientists to verify site characteristics and identify use by protected species. Upland, wetland, and other surface water area estimates within the project

boundary were delineated using GIS technology. All direct observations or evidence (e.g., burrows, tracks, calls, scat, nests) of protected species were recorded and locations recorded using a handheld global positioning system (GPS) unit capable of sub-meter accuracy. Representative photographs are shown in Appendix B.

Results

Soils

Soil types were classified according to the SSURGO soil survey geodatabase as provided by Natural Resources Conservation Service. The project comprises six soil types (**Table 1**). No hydric soils were present (**Figure 2**). The areas with soil coverage within the project area, including depth to seasonal high water table, are briefly described below.

Table 1. Soil Types within Project Boundary

Soil Name	Soil ID	Status	Acres	Absolute Coverage
ARREDONDO SAND, 0 TO 5 PERCENT SLOPES	9	Non-hydric	27.62	17.19%
CANDLER SAND, 0 TO 5 PERCENT SLOPES	22	Non-hydric	99.78	62.12%
FELLOWSHIP GRAVELLY LOAMY SAND, GRAVELLY SUBSOIL VARIANT, 5 TO 8 PERCENT SLOPES	32	Non-hydric	9.71	6.05%
MICANOPY FINE SAND, 2 TO 5 PERCENT SLOPES	50	Non-hydric	15.82	9.85%
SPARR FINE SAND, 0 TO 5 PERCENT SLOPES	65	Non-hydric	4.38	2.73%
ZUBER LOAMY SAND, 5 TO 8 PERCENT SLOPES	78	Non-hydric	3.31	2.06%

Arredondo Sand, 0 to 5 percent slopes

Arredondo sand (MUID 9) is a well drained soil found on hills and ridges on marine terraces. Slopes are 0 to 5 percent and a depth to water table of more than 72 inches. The typical profile of this soil type is a surface layer of dark grayish brown sand about 7 inches thick with a subsurface layer approximately 11 inches thick with mixed yellowish brown and dark yellowish brown sand. Arredondo sand consists of several substratum layers, beyond the typical profile, yellowish brown sand with medium strong brown mottles (18 to 46 inches), strong brown sand with fine white mottles (46 to 65 inches), strong brown loamy sand with fine white mottles and streaks of uncoated sand grains (65 to 70 inches), and strong brown fine sandy loam with moderate medium granular and weak medium subangular blocky structure. Associated natural vegetation includes forests of slash pine, loblolly pine, longleaf pine, live oak, laurel oak, water oak, hickory, sweetgum, and dogwood. Most areas are cleared and are used for cultivated crops and improved pasture.

Candler Sand, 0 to 5 percent slopes

Candler sand (MUID 22) is a nearly level to gently sloping, excessively drained sandy soil that has thin lamellae of loamy sand within a depth of 60 to 80 inches. It occurs as small and large areas on sandy ridges in uplands. The water table is at a depth of more than 72 inches. The typical profile of this soil type is a surface layer of dark gray sand about 5 inches thick underlain by 62 inches of yellow sand. Candler sand consists of several substratum layers of dark gray sand (0 to 5 inches), yellow sand single grained with few fine and medium roots (5 to 27 inches), yellow sand single grained loose with few roots (27 to 67 inches), very pale brown sand with few fine and medium distinct white mottles (67 to 95

inches), very pale brown sand with few fine and medium distinct white mottles (95 to 109 inches), and brownish yellow sandy loam (109 to 115 inches). Associated natural vegetation includes turkey oak, bluejack oak, post oak, sand live oak, and longleaf pine and an understory of mostly pineland three-awn and, in some areas, lichens. Cleared areas typically support citrus or improved pasture.

Fellowship gravelly loamy sand, gravelly subsoil variant, 5 to 8 percent slopes

Fellowship gravelly loamy sand, gravelly subsoil variant (MUID 32) is a sloping to strongly sloping, poorly drained soil that occurs as small and large areas on sharp-breaking slopes and long, wet hillsides of uplands. Wetness is caused by hillside seepage and the slowly permeable material, which severely restricts internal drainage. The water table is perched in the surface layer and the upper part of the subsoil. It is within 10 inches of the surface for 1 month to 4 months during wet periods. Surface runoff is rapid, and the hazard of erosion is severe. The typical profile of this soil type is a surface layer of 11 inches of black loamy sand followed by 7 inches of dark gray sandy loam. Fellowship gravelly loamy sand, gravelly subsoil variant consists of several substratum layers, beyond the typical profile, gray sandy clay loam with fine distinct yellowish brown mottles (18 to 25 inches), gray sandy clay with few to common fine distinct yellowish brown mottles (25 to 32 inches), gray clay with few prominent strong brown and few medium prominent yellowish red mottles (32 to 42 inches), light gray clay (42 to 62 inches), and light greenish gray clay (62 to 83 inches). Associated natural vegetation includes slash pine, loblolly pine, sweetgum, hickory, and magnolia and an understory of native shrubs and grasses.

Micanopy Fine Sand, 2 to 5 percent slopes

Micanopy fine sand (MUID 50) is a gently sloping, somewhat poorly drained soil that occurs as small areas in uplands. The water table is perched between depths of approximately 20 and 60 inches for periods of 2 to 5 months during most years. It recedes to a depth of more than 60 inches during dry periods. The typical profile of this soil type is a surface layer of very dark gray fine sand about 5 inches thick with a subsurface layer approximately 10 inches thick of brown loamy fine sand. Micanopy fine sand consists of several substratum layers, beyond the typical profile, yellowish brown sandy clay loam (15 to 20 inches), mottled yellowish brown sandy clay loam (20 to 26 inches), mottled gray sandy clay (26 to 45 inches), mottled gray clay (45 to 53 inches), and gray sandy clay mottled with strong brown and dark red (53 to 57 inches). Associated natural vegetation includes slash pine, loblolly pine, water oak, laurel oak, white oak, sweetgum, and hickory and an understory of wax myrtle and grasses. Most areas are cleared and are in improved pasture.

Sparr Fine Sand, 0 to 5 percent slopes

Sparr fine sand (MUID 65) is a nearly level to gently sloping, somewhat poorly drained soil that occurs as small and large areas in flatwoods and uplands. The water table fluctuates between 30 and 60 inches for 1 month to 4 months during most years. For brief periods it is at a depth of about 20 to 30 inches. During dry periods it is at a depth of more than 60 inches. The typical profile of this soil type is a fine sand surface layer about 8 inches thick. Sparr fine sand consists of several substratum layers, beyond the typical profile, very pale brown fine sand mottled with gray (8 to 39 inches), yellowish brown fine sand mottled with light gray (39 to 48 inches), yellowish brown sandy loam with yellowish red and gray mottles (48 to 56 inches), mottled gray sandy clay with 2 percent plinthite (56 to 72 inches), and mottled gray sandy loam with lenses of sandy loam (72 to 99 inches). Associated natural vegetation includes live oak, water oak, post oak, sweetgum, slash pine, and longleaf pine and an understory of wax myrtle and grasses. Most areas are cleared and used for cultivated crops and improved pasture.

Zuber Loamy Sand, 5 to 8 percent slopes

Zuber loamy sand (MUID 78) is a sloping, well-drained soil that occurs as small areas of upland. Surface runoff is rapid, and the hazard of erosion is severe. The water table is at a depth of more than 72 inches. The typical profile of this soil type is a surface layer of dark grayish brown loamy sand about 7 inches thick with a subsurface layer approximately 8 inches thick with yellowish brown loamy sand sand. Zuber loamy sand consists of several substratum layers, beyond the typical profile, dark yellowish brown sandy clay loam (15 to 20 inches), dark yellowish brown sandy clay (20 to 54 inches), yellowish brown sandy clay (54 to 70 inches), and yellowish brown clay (70 to 77 inches), light gray clay (77 to 82 inches). Associated natural vegetation includes slash pine, loblolly pine, oak, dogwood, sweetgum, and hickory. Most areas are cleared and in improved pasture.

Land Use

Land use cover types were delineated according to the Southwest Florida Water Management District (2011) and modified by GPI staff following field verification. The project area is a combination of golf courses, improved pastures, row crops, hardwood conifer mixed, reservoirs, electrical power transmission lines, mixed rangeland, disturbed land, low density residential, woodland pastures, and wetland scrub (**Figure 3**). The absolute coverage by cover type is summarized below in **Table 2**. The areas with cover of vegetation within the project area are briefly described below. The natural areas are composed of habitat fringes that have been impacted to varying degrees by development. Two parcels of public land were identified within the project boundary and immediate surroundings: Pine Oaks of Ocala Municipal Golf Course and Lillian Bryant Park (**Figure 5**).

Table 2. Land Cover Types within Project Boundary

FLUCCS Description	FLUCCS Code	Acres	Absolute Coverage
RESIDENTIAL, LOW DENSITY	111	0.97	0.60%
GOLF COURSES	182	79.00	49.18%
IMPROVED PASTURES	211	22.10	13.76%
WOODLAND PASTURES	213	0.30	0.19%
ROW CROPS	214	21.41	13.33%
MIXED RANGELAND	330	2.93	1.82%
HARDWOOD - CONIFEROUS MIXED	434	14.67	9.13%
RESERVOIRS	530	10.54	6.56%
WETLAND SCRUB	631	0.29	0.18%
DISTURBED LAND	740	1.87	1.17%
ELECTRICAL POWER TRANSMISSION LINES	832	6.54	4.07%

Residential, low density

Residential, low density (FLUCCS 110) is described as low density rural areas characterized by less than two dwelling units per acre. This cover type is represented by a small area adjacent to NW 27th Avenue that is continuous with off-site residential properties. Vegetation within this land cover type consists of landscaping and sodded grasses, predominately Bahiagrass (*Paspalum notatum*). Approximately 5% of

this habitat classification is covered by nuisance exotic plant species listed by the Florida Exotic Pest Plant Council (FLEPPC) as a threat to natural areas. This type accounts for 0.60 percent of the project area.

Golf courses

Golf courses (FLUCCS 182) are described as recreational areas are those areas whose physical structure indicates that active user-oriented recreation is or could be occurring within the given physical area. A regularly maintained golf course covers most of the project site. Vegetation within this habitat is predominately Bermudagrass (*Cynodon dactylon*). There are many large trees surrounding the greens. Most of the trees are laurel oak (*Quercus laurifolia*), with some live oak (*Q. virginiana*), and slash pine (*Pinus elliottii*) and a few scattered cabbage palm (*Sabal palmetto*). Approximately 5% of this habitat classification is covered by nuisance exotic plant species listed by the Florida Exotic Pest Plant Council (FLEPPC) as a threat to natural areas. This type accounts for 49.18 percent of the project area.

Improved pastures

Improved pastures (FLUCCS 211) are described as areas composed of land which has been cleared, tilled, reseeded with specific grass types and periodically improved with brush control and fertilizer application. Water ponds, troughs, feed bunkers and, in some cases, cow trails are evident. This cover type is a former improved pasture which has been converted to a reclaimed water sprayfield on the northeast portion of the project area. Vegetation within this habitat type is predominantly Bahiagrass, with large patches of Spanish needles (*Bidens alba*), Cogon grass (*Imperata cylindrica*), John Charles (*Condea verticillata*), Florida betony (*Stachys floridana*), Asiatic dayflower (*Commelina communis*), and elephant grass (*Pennisetum purpureum*). There are many trees scattered throughout the former pasture. Most of the trees are mature laurel oak, live oak, and camphortree (*Cinnamomum camphora*). Approximately 10% of this habitat classification is covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas. This type accounts for 13.76 percent of the project area.

Woodland pastures

Woodland pastures (FLUCCS 213) are described as areas of forest lands used as pastures. Strong evidence of cattle activity, such as trails to feed bunkers, salt licks and watering areas is required. The woodland pastures cover type borders the project in the northwest corner and is continuous with adjacent land uses. Approximately 1% of this habitat classification is covered by nuisance exotic plant species listed by the Florida Exotic Pest Plant Council (FLEPPC) as a threat to natural areas. This type accounts for 0.19 percent of the project area.

Row crops

Row crops (FLUCCS 214) includes agricultural land which is managed for the production of row crops. Rows remain well defined even after crops have been harvested. This land use occurs on the east side of the project area and is almost completely surrounded by a dense band of mature paper mulberry trees (*Broussonetia papyrifera*). Approximately 20% of this habitat classification is covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas. This type accounts for 13.33 percent of the project area.

Mixed rangeland

Mixed rangeland (FLUCCS 330) is described as an area where more than one-third intermixture of either grassland or shrub-brushland range species occur. Mixed Rangeland consists of an intermixture of grasses, grasslike plants, forbs and shrubs. A thin strip of this habitat type occurs along the northwest

border of the project area. A dirt road runs through the center, which is immediately surrounded by bahiagrass, which grades into taller forbs and shrubs along the outer edges. The most common forbs are goldenrod (*Solidago* sp.), tall elephantsfoot (*Elephantopus elatus*), and Florida betony. The most common shrubs are winged sumac (*Rhus copallina*), young black cherry (*Prunus serotina*), and paper mulberry. Approximately 20% of this habitat classification is covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas. This type accounts for 1.82 percent of the project area.

Hardwood conifer mixed

Hardwood conifer mixed (FLUCCS 434) is described as an area of forested areas in which neither upland conifers nor hardwoods achieve a 66 percent crown canopy dominance. A wide strip of this upland forest habitat type is present along the northwest border of the golf course. The area slopes downward from west to east. The dense forested canopy is mostly composed of mature laurel oak with many loblolly pines (*Pinus taeda*), and a few sweetgum (*Liquidambar styraciflua*), and persimmon mixed in. Live oak and cabbage palm are more common at the bottom of the slope. The understory is very open with dense leaf litter, a few shrubs [American beautyberry (*Callicarpa americana*) and paper mulberry], and patches of Boston fern (*Nephrolepis cordifolia*), saw greenbriar and skunkvine. Approximately 20% of this upland forest strip is covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas.

There are two tree islands of this upland forest habitat type in the middle of the improved pasture on the northeast corner of the project area. These tree islands mostly contain the invasive species camphortree, with many slash pine, paper mulberry, and flamegold tree. The trees are very dense, and there is little understory. Approximately 60% of these upland forest islands are covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas. This type accounts for 9.13 percent of the project area.

Reservoirs

Reservoirs (FLUCCS 530) are described as an artificial impoundments of water. They are used for irrigation, flood control, municipal and rural water supplies, recreation and hydro-electric power generation. Dams, levees, other water control structures or the excavation itself usually will be evident to aid in the identification. There are five large artificially created ponds within the golf course. The banks of the ponds are regularly mowed and there is very little vegetation within the ponds, except for some torpedograss (*Panicum repens*). Approximately 10% of this habitat classification is covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas. This type accounts for 6.56 percent of the project area.

Wetland scrub

Wetland scrub (FLUCCS 631) is associated with topographic depressions and poorly drained soil. A small patch of this wetland habitat type occurs within the powerline corridor at the bottom of the slope of the hardwood – conifer mixed habitat along the northwest border of the golf course. The soils appear to consist of grayish clay. Carolina willow shrubs are present within the opening created by the powerline corridor, with Asiatic dayflower and denseflower knotweed (*Polygonum glabrum*) dominant in the groundcover, and large clumps of soft rush (*Juncus effusus* subsp. *solutus*). The wetland extending into the shaded hardwood habitat on either side of the powerline corridor has very little shrub cover or understory. Approximately 5% of this habitat classification is covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas. This type accounts for 0.18 percent of the project area.

Disturbed land

Disturbed land (FLUCCS 740) is described as a those areas which have been changed due primarily to human activities other than mining. In Florida, these areas may be rather extensive and often appear outside of urban areas. This land use is found on the western border of the improved pasture, and is primarily dominated by invasive paper mulberry trees. Approximately 90% of this habitat classification is covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas. This type accounts for 1.17 percent of the project area.

Electrical power transmission lines

Electrical power transmission lines (FLUCCS 832) are described as a utility and related facilities such as transmission lines for electric generation plants. Small facilities or those associated with an industrial, commercial or extractive land use are included within these larger respective categories. There is a large power line that was constructed through the hardwood – conifer mixed habitat along the northwest border of the golf course. The power line also traverses through the improved pasture to the east, and off the property. The powerline right-of-way (ROW) within the hardwood – conifer mixed and improved pasture habitats consisted of a dirt road with bahiagrass on either side. There was a small area of cleared land within the powerline ROW on the eastern border of the property within the row crop land use that had not been planted. This area contained a variety of weedy [particularly sweetbroom (*Scoparia dulcis*), camphorweed (*Heterotheca subaxillaris*), and hairy indigo (*Indigofera hirsuta)*] and sandhill groundcover species [including yaupon blacksenna (*Seymeria cassioides*), tall elephantsfoot, and slimleaf pawpaw (*Asimina angustifolia*)]. There were no rare species. Approximately 20% of this habitat classification is covered by nuisance exotic plant species listed by the FLEPPC as a threat to natural areas. This type accounts for 4.07 percent of the project area.

Wetland Communities

Wetland types were classified according to the National Wetlands Inventory as provided by the U.S. Fish and Wildlife Service (2014). No NWI wetlands were located within the project area (**Figure 2**). A field review found that one wetland (FLUCCS 631) existed in the northwest part of the electrical power transmission line easement (FLUCCS 832) as shown in **Figure 3**. The wetland makes up 0.18 percent of the project area (**Table 2**). Five surface waters were identified on property and consist of 10.54 acres or 6.56% of the project area (**Table 2**).

Protected Species

The following is a brief discussion of protected species that are known to occur in similar conditions in Marion County, have the potential to occur within the project area, or have mapped occurrence records or Consultation Areas (CA) in the vicinity of the project (**Figure 4**).

Sherman's Fox Squirrel

Sherman's fox squirrel (*Sciurus niger shermani*) is listed by the FWC as species of special concern. Sherman's fox squirrels are known to utilize sand hill, pine flatwoods, pastures, and other ruderal habitats with scattered oaks and pines. The FWC is currently reviewing the regulatory status and management plan for this species.

Interviews with golf course staff indicated the likely presence of Sherman's fox squirrels within the project area however, none were observed during field surveys of the project. Nest surveys for the

Sherman's fox squirrel are recommended prior to any clearing during the nesting season. Updates to the Sherman Fox Squirrel Species Action Plan by the FWC are anticipated within the next two years.

Red-cockaded Woodpecker

The Red-Cockaded Woodpecker (*Picoides borealis*) is listed as endangered by both USFWS and FWC. Red-Cockaded utilize longleaf pine forests and occasionally loblolly, shortleaf, and slash pines. The project is not located within the USFWS Consultation Area for the Red-Cockaded Woodpecker.

No Red-Cockaded Woodpeckers were observed during field surveys of the project and therefore no impact is anticipated.

Florida Scrub-jay

The Florida scrub-jay (*Aphelocoma coerulescens*) is listed as threatened by both USFWS and FWC. Florida scrub jays utilize sand pine and xeric oak scrub, and scrubby flatwoods. The project is located within the USFWS consultation area for the Florida scrub jay.

No Florida scrub-jay were observed during field surveys of the project and therefore no impact is anticipated.

Wood Stork

The wood stork (*Mycteria americana*) is listed as threatened by both the USFWS and FWC. Wood storks are known to utilize freshwater marshes, swamps, lagoons, ponds, flooded fields, depressions in marshes and brackish wetlands, open pine-cypress wetlands, and man-made wetlands (i.e., ditches, canals, stormwater retention ponds). These highly mobile birds utilize wetlands of varying hydroperiods during different times of the year. The project is not located within the wood stork core foraging area (CFA).

The following wetland dependent birds are listed as species of special concern with the FWC: limpkin (*Aramus guarana*), little blue heron (*Egretta caerulea*), roseate spoonbill (*Platalea ajaja*), snowy egret (*Egretta thula*), tricolored heron (*Egretta tricolor*), and white ibis (*Eudocimus albus*).

A single wood stork and multiple wading birds were observed during field surveys of the project. It is recommended further surveys of the project area should be conducted to identify any rookeries for wood storks or other protected wetland dependent bird species.

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is not listed by the USFWS or FWC as threatened or endangered; however the bald eagle and their nests are protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act (MBTA) by the USFWS and in Florida by the Bald Eagle rule (FLA. ADMIN. CODE R. 68A-16.002). Bald eagles utilize forested areas for roosting and nesting habitat and forage in shallow freshwater water or saltwater habitats. Development activities within 660 feet of an active bald eagle nest are restricted. There are no mapped bald eagle nests within the project area or within a two mile buffer. However, a bald eagle was observed flying over the project area during a field visit and there were multiple reports of at least two bald eagles foraging in reservoirs and perching on trees located on the golf course.

Further field surveys of the project area should be conducted to identify breeding territories and the location of any active nests within the project area.

In addition to the bald eagle, the nests of other avian species are protected under the MBTA during their respective nesting season. These species include the osprey (*Pandion haliaetus*), burrowing owl (*Athene cunicularia*), and Florida sandhill crane (*Grus canadensis pratensis*). Should the project be initiated during or just prior to the nesting season, resurveying the impact area for nesting birds is suggested. Should a suspected nest be encountered during the course of the project, the nest and vicinity should be left undisturbed until a qualified biologist can observe the nest.

Florida Sand Skink and Bluetail Mole Skink

The Florida sand skink (*Neoseps reynoldsi*) and bluetail mole skink (*Eumeces egregius lividus*) are listed as threatened by both USFWS and FWC. Florida sand skinks are found only in seven Central Florida counties: Osceola, Polk, Lake, Highlands, Putnam, Orange, and Marion and utilize xeric landscapes, such as sand pine and oak scrubs, and scrubby flatwoods. The project is located within the USFWS consultation area for the Florida sand skink and bluetail mole skink, but not within the appropriate habitat.

No Florida sand skinks or bluetail mole skinks were observed during field surveys of the project and therefore no impact is anticipated.

Eastern Indigo Snake

The eastern indigo snake (*Drymarchon couperi*) is listed as threatened by both USFWS and FWC. The eastern indigo snake is a wide ranging snake that inhabit a habitats including pine forests, hardwood hammocks, scrub and other wetlands. They also rely heavily on a variety of wetland habitats for feeding and temperature regulation needs.

No eastern indigo snakes were observed during field surveys of the project. It is recommended the project adhere to the Standard Protection Measures for the Eastern Indigo Snake published by the USFWS.

Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is listed as threatened by FWC and a candidate species for listing by the USFWS. This species is known to utilize a variety of habitats including pine flatwoods and some rangeland communities, but prefers well-drained soils that enable burrowing and support a high diversity of low-growing forbs. As development pressure has increased, gopher tortoises have been documented within disturbed areas. A single gopher tortoise relocation permit (GTC-10-00002), submitted in 2009, was approved within a 2-mile buffer of the project area.

In addition to gopher tortoises, many animals utilize the gopher tortoise burrow as a refuge (i.e., commensal species). Protected species such as the eastern indigo snake, gopher frog (*Lithobates capito*), and Florida mouse (*Podomys floridanus*) are known to occur in gopher tortoise burrows. A Gopher Tortoise Relocation Permit from the FWC allows for the relocation of all the species listed above, with the exception of the eastern indigo snake.

No gopher tortoises or their burrows were observed during field surveys of the project and therefore no impact is anticipated.

Critical Habitat

Critical habitat was assessed according to 50 CFR Part 424 of the Endangered Species Act. Critical habitat is defined as identified areas that are or will be essential to a species recovery. No critical habitat is designated within the project area.

Resources

Thomas, B.P., L. Law, Jr., and D.L. Stankey. 1973. Soil Survey of Marion County Area, Florida. United States Department of Agriculture, Soil Conservation Service. pp. 148.

Carlisle, V.W. (ed.). 1990. Hyrdic Soils of Florida Handbook. Florida Association of Professional Soil Classifiers. pp. 145.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior / Fish and Wildlife Service. Washington, D.C. pp. 103.

FDOT. 1999. Florida Land Use, Cover and Forms Classification System, Third Edition. Surveying and Mapping Office Geographic Mapping Section. pp. 91.

FLEPPC. 2011. List of Invasive Plant Species. Wildland Weeds Vol. 14(3-4): 11-14.

Gruver, B.J. and C. Coffey. 2015. Florida's Endangered and Threatened Species. Florida Fish and Wildlife Conservation Commission. pp. 11

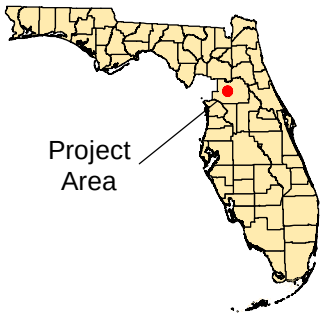


Figure 1

Map date: November 11, 2015
Prepared by: MS

Location Map

Feasibility of an Inland Logistics Center
Ocala, Florida

Legend

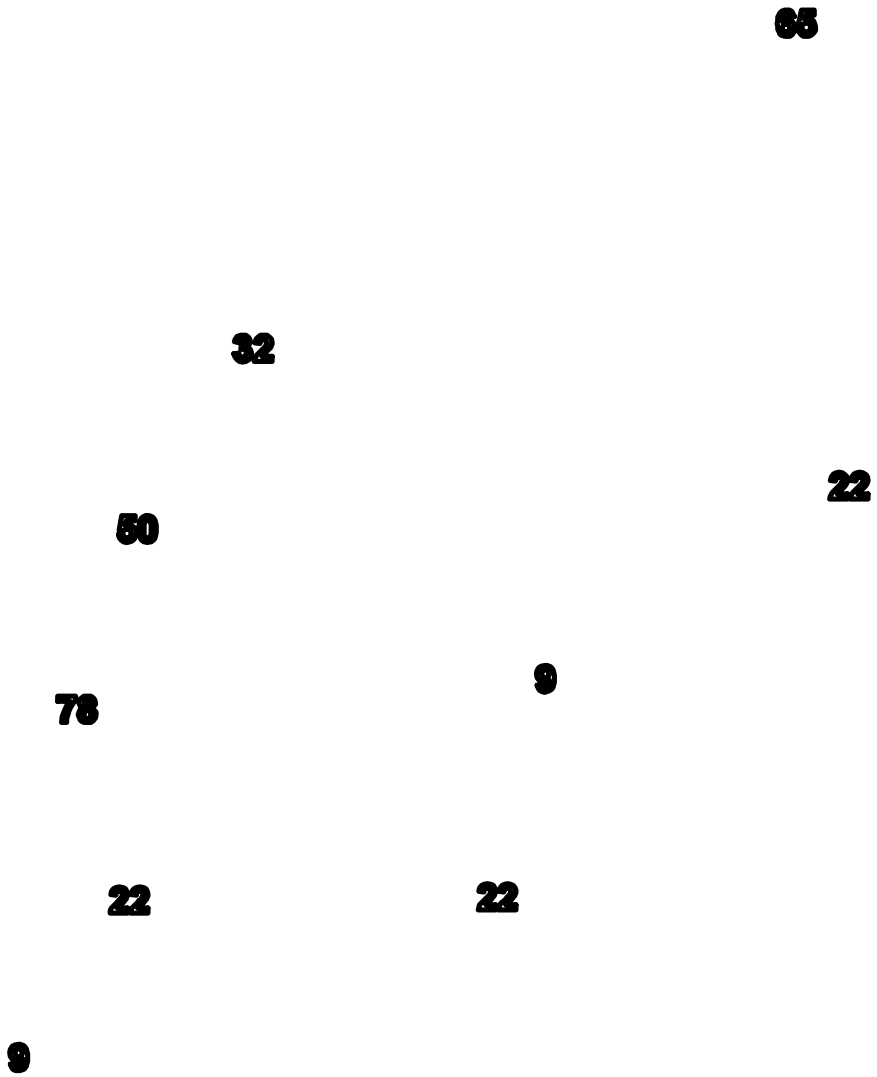
Project Boundary

GPI
1000 N. Ashley Drive
Tampa, FL 33602
(813) 632-7676
www.gpinet.com

0 0.75 1.5
Miles

N

Data Source: USGS Topo Basemap
provided by ESRI Online Services



MAP UNIT	NAME
9	ARREDONDO SAND, 0 TO 5 PERCENT SLOPES
22	CANDLER SAND, 0 TO 5 PERCENT SLOPES
32	FELLOWSHIP GRAVELLY LOAMY SAND, GRAVELLY SUBSOIL VARIANT, 5 TO 8 PERCENT SLOPES
50	MICANOPY FINE SAND, 2 TO 5 PERCENT SLOPES
65	SPARR FINE SAND, 0 TO 5 PERCENT SLOPES
78	ZUBER LOAMY SAND, 5 TO 8 PERCENT SLOPES

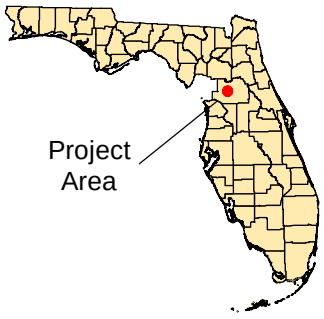


Figure 2

Map date: November 11, 2015
Prepared by: MS

Soils & Wetlands Map

Feasibility of an Inland Logistics Center
Ocala, Florida

GPI
1000 N. Ashley Drive
Tampa, FL 33602
(813) 632-7676
www.gpinet.com

0 0.05 0.1
Miles

N

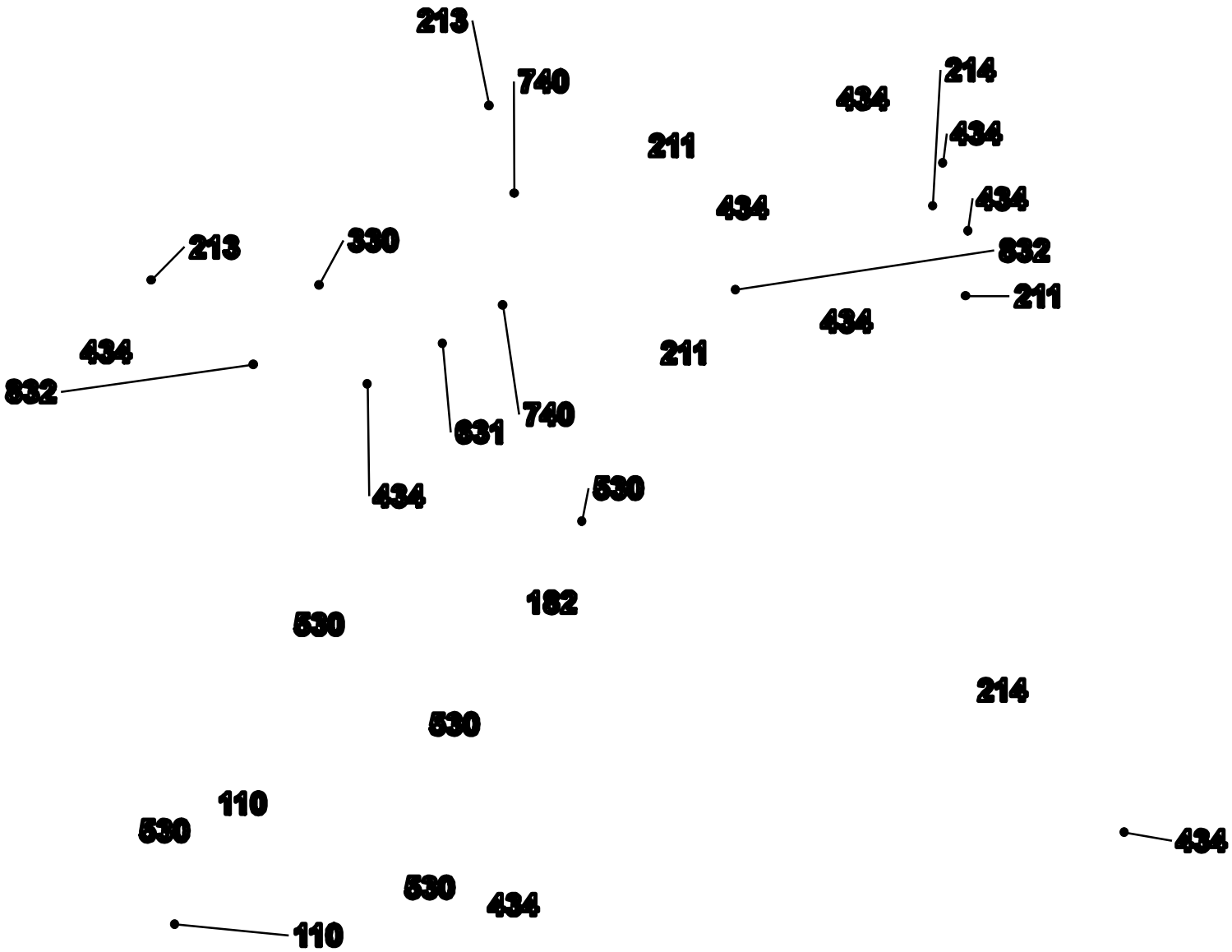
Legend

Project Boundary

SSURGO Soil Map Units

No NWI wetlands fall within the project boundary.

Data Source: 2014 1' imagery provided by FDOT (LABINS), SSURGO soil survey and NWI provided by SJRWMD



FLUCCS	LEVEL 3 DESCRIPTION
110	RESIDENTIAL, LOW DENSITY
182	GOLF COURSES
211	IMPROVED PASTURES
213	WOODLAND PASTURES
214	ROW CROPS
330	MIXED RANGELAND

FLUCCS	LEVEL 3 DESCRIPTION
434	HARDWOOD - CONIFEROUS MIXED
530	RESERVOIRS
631	SCRUB WETLAND
740	DISTURBED LAND
832	ELECTRICAL POWER TRANSMISSION LINES

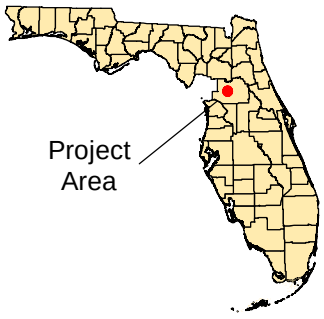


Figure 3

Map date: November 11, 2015
Prepared by: MS

Land Use Map

Feasibility of an Inland Logistics Center
Ocala, Florida

Legend

Project Boundary

FLUCCS

GPI
1000 N. Ashley Drive
Tampa, FL 33602
(813) 632-7676
www.gpinet.com

0 0.05 0.1
Miles

N

Data Source: 2014 1' imagery provided by FDOT (LABINS), FLUCCS provided by SJRWMD

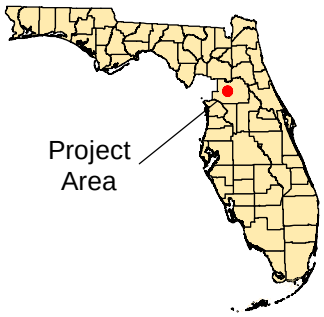


Figure 4

Map date: November 11, 2015
Prepared by: MS

Wildlife Occurrence Map

Feasibility of an Inland Logistics Center
Ocala, Florida

Legend

Project Boundary

Sand Skink Suitability

2 Mile Buffer

The project area falls within the Florida sand skink and Florida scrub-jay consultation areas; it is not within the red-cockaded woodpecker consultation area, wood stork core foraging area or a black bear management unit.

GPI
1000 N. Ashley Drive
Tampa, FL 33602
(813) 632-7676
www.gpinet.com

0 0.3 0.6
Miles

N

Data Source: 2014 1' imagery provided by FDOT (LABINS), species data provided by FFWCC

PINE OAKS OF
OCALA MUNICIPAL
GOLF COURSE

LILLIAN
BRYANT
PARK

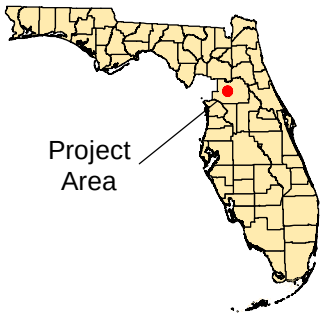


Figure 5

Map date: November 11, 2015
Prepared by: MS

Managed Lands Map

Feasibility of an Inland Logistics Center
Ocala, Florida

Legend

Project Boundary

Managed Lands

GPI
1000 N. Ashley Drive
Tampa, FL 33602
(813) 632-7676
www.gpinet.com

0 0.15 0.3
Miles

N

Data Source: 2014 1' imagery provided by FDOT (LABINS), land data provided by University of Florida

Photo 1	Feasibility of an Inland Logistics Center	P-1 facing west
Representative habitat; golfcourse interior		Golf course (FLUCCS 182)

Photo 2	Feasibility of an Inland Logistics Center	P-2 facing east
Representative habitat; golfcourse interior and treeline		Golf course (FLUCCS 182)

Photo 3	Feasibility of an Inland Logistics Center	P-3 facing north
Surface water golfcourse interior		Reservoirs (FLUCCS 530)

Photo 4	Feasibility of an Inland Logistics Center	P-4 facing northeast
Surface water golfcourse interior		Reservoirs (FLUCCS 530)

Photo 5	Feasibility of an Inland Logistics Center	P-5 facing northeast
Surface water golfcourse interior		Reservoirs (FLUCCS 530)

Photo 6	Feasibility of an Inland Logistics Center	P-6 facing east
Surface water golfcourse interior		Reservoirs (FLUCCS 530)

Photo 7	Feasibility of an Inland Logistics Center	P-7 facing northeast
Edge of golfcourse		Golf course (FLUCCS 182)

Photo 8	Feasibility of an Inland Logistics Center	P-8 facing east
Potential bald eagle nesting habitat; local sightings in treeline		Golf course (FLUCCS 182)

Photo 9	Feasibility of an Inland Logistics Center	P-9 facing southeast
Potential bald eagle nesting habitat; local sightings in treeline		Golf course (FLUCCS 182)

Photo 10	Feasibility of an Inland Logistics Center	P-10 facing east
anhingas, cormorants, and black-bellied whistling duck		Reservoirs (FLUCCS 530)

Photo 11	Feasibility of an Inland Logistics Center	P-11 facing south
Squirrel nest in treeline		Golf course (FLUCCS 182)

Photo 12	Feasibility of an Inland Logistics Center	P-12 facing east
greater yellowlegs		Reservoirs (FLUCCS 530)

Photo 13	Feasibility of an Inland Logistics Center	P-13 facing east
wood stork		Reservoirs (FLUCCS 530)

Photo 14	Feasibility of an Inland Logistics Center	P-14 facing southeast
Overview from edge of golfcourse; recently tilled land		Row Crops (FLUCCS 214)

Photo 15	Feasibility of an Inland Logistics Center	P-15 facing northeast
Representative habitat; recently tilled land		Row Crops (FLUCCS 214)

Photo 16	Feasibility of an Inland Logistics Center	P-16 facing southeast
Representative habitat; recently tilled land		Row Crops (FLUCCS 214)

Photo 17	Feasibility of an Inland Logistics Center	P-17 facing east
Overview of habitat; recently tilled land		Row Crops (FLUCCS 214)

Photo 18	Feasibility of an Inland Logistics Center	P-18 facing southwest
In-progress construction of residence		Row Crops (FLUCCS 214)

Photo 19	Feasibility of an Inland Logistics Center	P-19 facing east
Debris pile at edge of row crop area		Outside of Project Area

Photo 20	Feasibility of an Inland Logistics Center	P-20 facing south
Railroad track adjacent to project area		Outside of Project Area

Photo 21	Feasibility of an Inland Logistics Center	P-21 facing east
Industrial factory from railroad track		Outside of Project Area

Photo 22	Feasibility of an Inland Logistics Center	P-22
Coyote den near railroad track		Outside of Project Area

Photo 23	Feasibility of an Inland Logistics Center	P-23 facing northeast
Overview of habitat from sprayfield		Hardwood- Conifer Mixed (FLUCCS 434)

Photo 24	Feasibility of an Inland Logistics Center	P-24 facing northeast
Representative habitat; observed species: pines, saw palmetto, and laurel oak		Hardwood – Conifer Mixed (FLUCCS 434)

Photo 25	Feasibility of an Inland Logistics Center	P-25 facing north
Representative habitat; observed species: pines, saw palmetto, and laurel oak		Hardwood – Conifer Mixed (FLUCCS 434)

Photo 26	Feasibility of an Inland Logistics Center	P-26 facing north
Representative habitat; sprayfield		Improved Pastures (FLUCCS 211)

Photo 27	Feasibility of an Inland Logistics Center	P-27
Sprinkler head in sprayfield		Improved Pastures (FLUCCS 211)

Photo 28	Feasibility of an Inland Logistics Center	P-28
Coyote scat		Improved Pastures (FLUCCS 211)

Photo 29	Feasibility of an Inland Logistics Center	P-29
Common pawpaw		Improved Pastures (FLUCCS 211)

Photo 30	Feasibility of an Inland Logistics Center	P-30 facing northeast
Overview of harwood conifer mix from utility easement		Electrical Power Transmission Lines (FLUCCS 832)

Photo 31	Feasibility of an Inland Logistics Center	P-31 facing north
Wetland located through utility easement		Scrub Wetland (FLUCCS 631)

Photo 32	Feasibility of an Inland Logistics Center	P-32 facing south
Wetland located through utility easement		Scrub Wetland (FLUCCS 631)

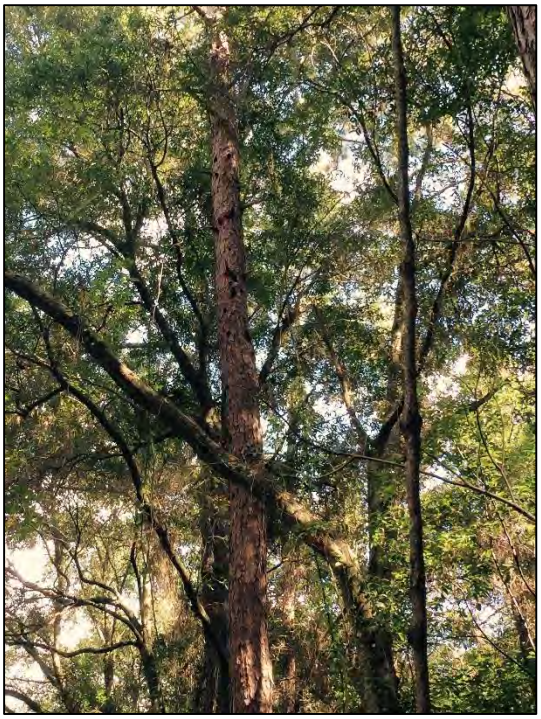


Photo 33	Boyd Hill Nature Preserve	P-33 facing west
Main trail bisecting wetland		Hardwood – Conifer Mixed (FLUCCS 434)

Photo 34	Boyd Hill Nature Preserve	P-34 facing northwest
Evidence of recent exotic vegetation control		Improved Pastures (FLUCCS 211)

Attachment B – Stormwater Analysis

TECHNICAL MEMORANDUM

DATE: December 8, 2015

TO: Alan Meyers, P.E.
WSP Parsons Brinckerhoff

FROM: Alan Garri PE
Greenman-Pedersen, Inc.

SUBJECT: Feasibility of an Inland Logistics Center, Phase II
Marion County, Florida
Draft Stormwater and Reuse Management Analysis

Greenman-Pedersen, Inc. (GPI) has completed a desktop and field assessment of the proposed City of Ocala Inland Logistic Center in Marion County, Florida. The purpose of this memorandum is to document the findings of the analysis regarding the potential adjustments that will need to be accounted for during design for impacts to the stormwater and reuse system in place in the project area.

Stormwater Analysis

Within the project boundary shown on the exhibits, there are currently 10 stormwater ponds that cover a total of approximately 19.50 (Ac). The storm water utilities in the project area include 10 storm water inlets, 3 mitered end sections, 1 storm manhole, and roughly 2,000' of storm pipe connecting the existing storm water structures. The existing storm water facilities are located on the Pine Oaks Golf course and service the area of the club house, the surrounding parking area, and the golf course. See the Reuse analysis for additional information.

The ILC area, which is comprised of the base development area, the potential expansion area, and the optional development area shown on the exhibits, will impact 4 stormwater ponds with a total acreage of approximately 6.75 acres. This existing stormwater capacity will not need to be accounted for in the proposed development of the ILC because the remaining stormwater facilities can provide storage for the remaining portions of the golf course. However, the ILC will need to provide attenuation for the stormwater associated with the proposed site.

The City of Ocala is currently proposing to construct a wetland recharge area on the Frisbee Golf Course. The proposed wetland recharge site is an approximately 60 acre site that the City of Ocala desires to have 3 million to 5 million gallons per day capacity. This wetland recharge area is a separate project by others. It is not known if the proposed capacity will be realized. However, the City has indicated that some of the stormwater from the ILC project site could be sent to the wetland recharge area. When design commences it should be determined what portion of the stormwater is able to be sent to the wetland recharge area.

Reuse Analysis

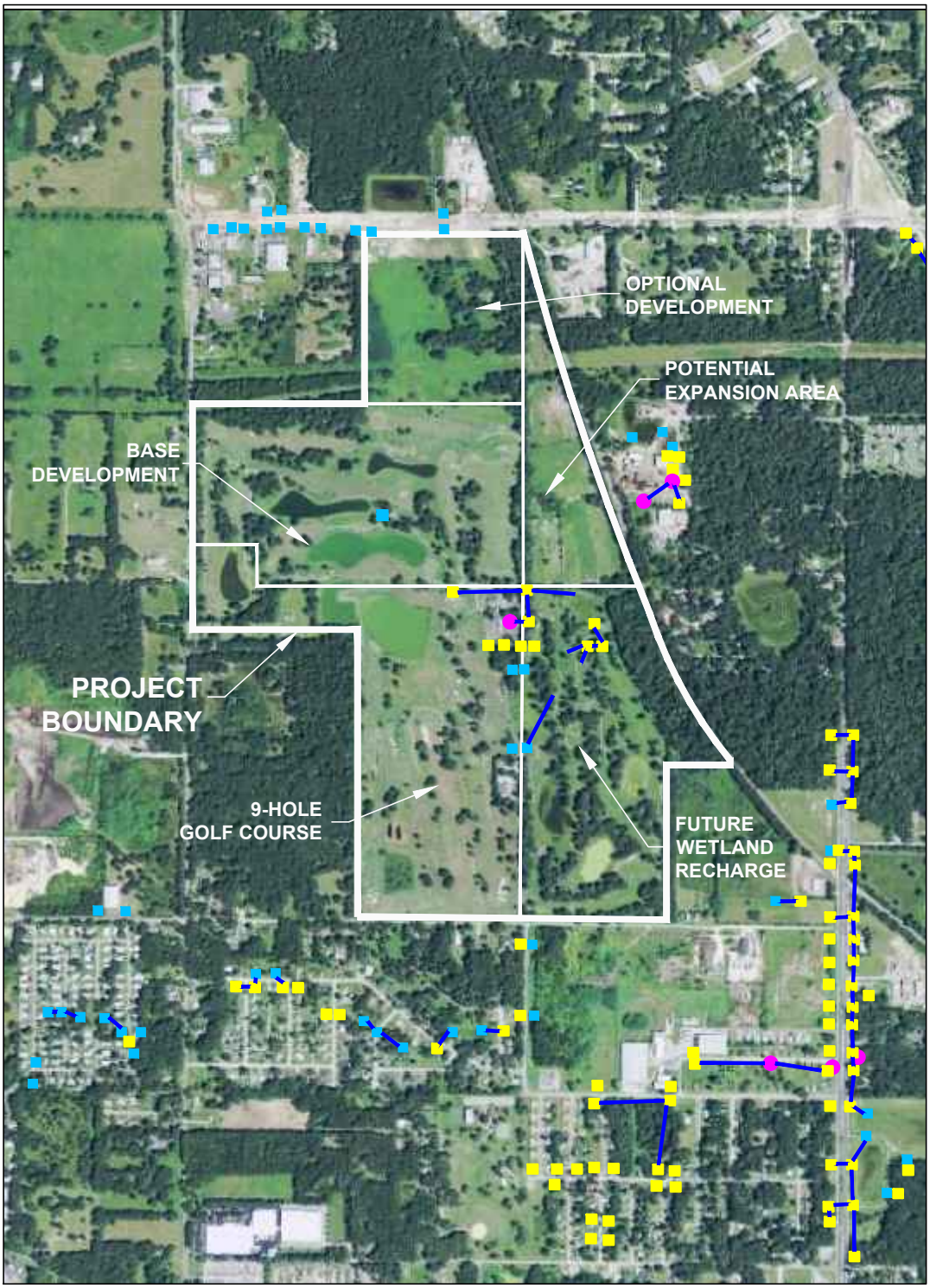
The Reuse lines enter the project boundary from two separate locations. There is a connection point on the north boundary line for reuse flow from WWTP 3. There is a second connection point on the east boundary line for flow from WWTP 1. The flow from both connection point flows to the same network of inter connected stormwater ponds. This network is being impacted by the proposed ILC project and the receiving point will need to be adjusted and accounted for in the future design for the ILC. The City has indicated that the proposed reuse receiving pond needs to be preserved in the proposed design for the ILC along with a new pump station. The piping to/from the pump station will also need to be rerouted. The existing network of receiving ponds and the proposed receiving pond are shown on exhibit C.

Once the reuse is in the receiving ponds it is pumped throughout the golf course to the other stormwater ponds to facilitate equalization and maximize available volume. The reuse is also pumped to a dedicated sprayfield to the north of the golf course. This sprayfield property will also be impacted by the proposed ILC development. The existing sprayfield is the optional development area for the ILC facility.

The reuse distribution and application is governed by a FDEP permit. The permitted rates for reuse application/distribution are as follows:

- 60 acre East Course/Frisbee Golf Course – 1.5 in/week, 0.349 MGD
- 70 acre South Course – 1.5 in/week, 0.407 MGD
- 75 acre North Course – 1.5 in/week, 0.436 MGD

The ILC project will impact the North Course and the sprayfield. However, the City of Ocala has indicated that they already have the replacement capacity for both these areas accounted for in the proposed wetland recharge area.



LEGEND

- STORM INLET
- MITRED END SECTION
- STORM MANHOLE
- STORM PIPE

0 0.125 mi. 0.25 mi.

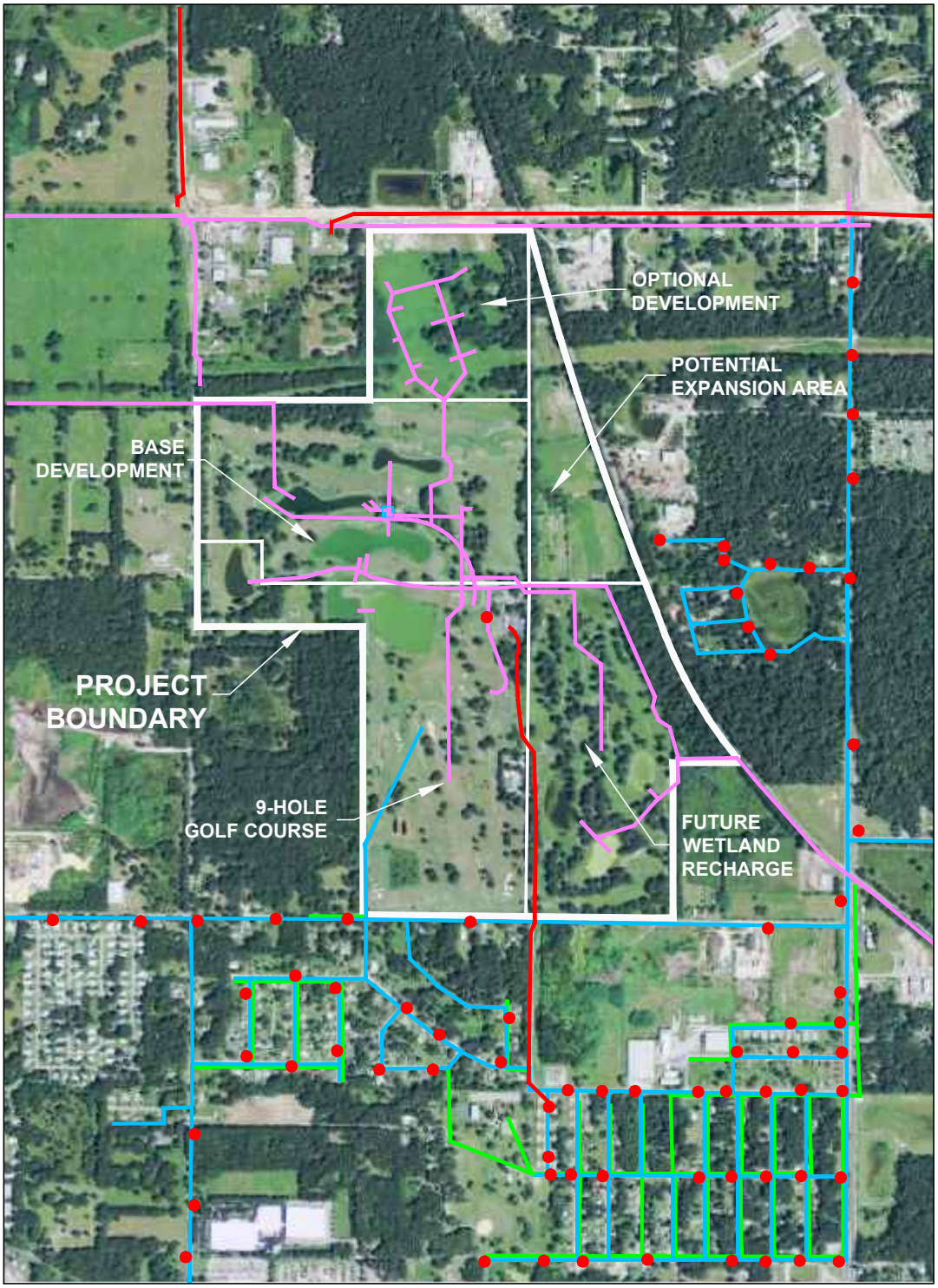
SCALE: 1"=0.25 miles

CITY OF OCALA
INLAND FREIGHT AND LOGISTICS CENTER

EXHIBIT: A
EXISTING STORM SYSTEM

GPI GREENMAN-PEDERSEN, INC.
328 N.E. 1st AVENUE, SUITE 200
OCALA, FLORIDA 34470
PHONE: (352) 368-5055 FAX: (352) 368-5063
CERTIFICATE NUMBER 27260

Alan Garri, P.E. P.E.# 70674



LEGEND

- CITY WATER MAINS
- REUSE MAINS
- FORCE MAINS
- GRAVITY MAINS
- FIRE HYDRANT

0 0.125 mi. 0.25 mi.

SCALE: 1"=0.25 miles

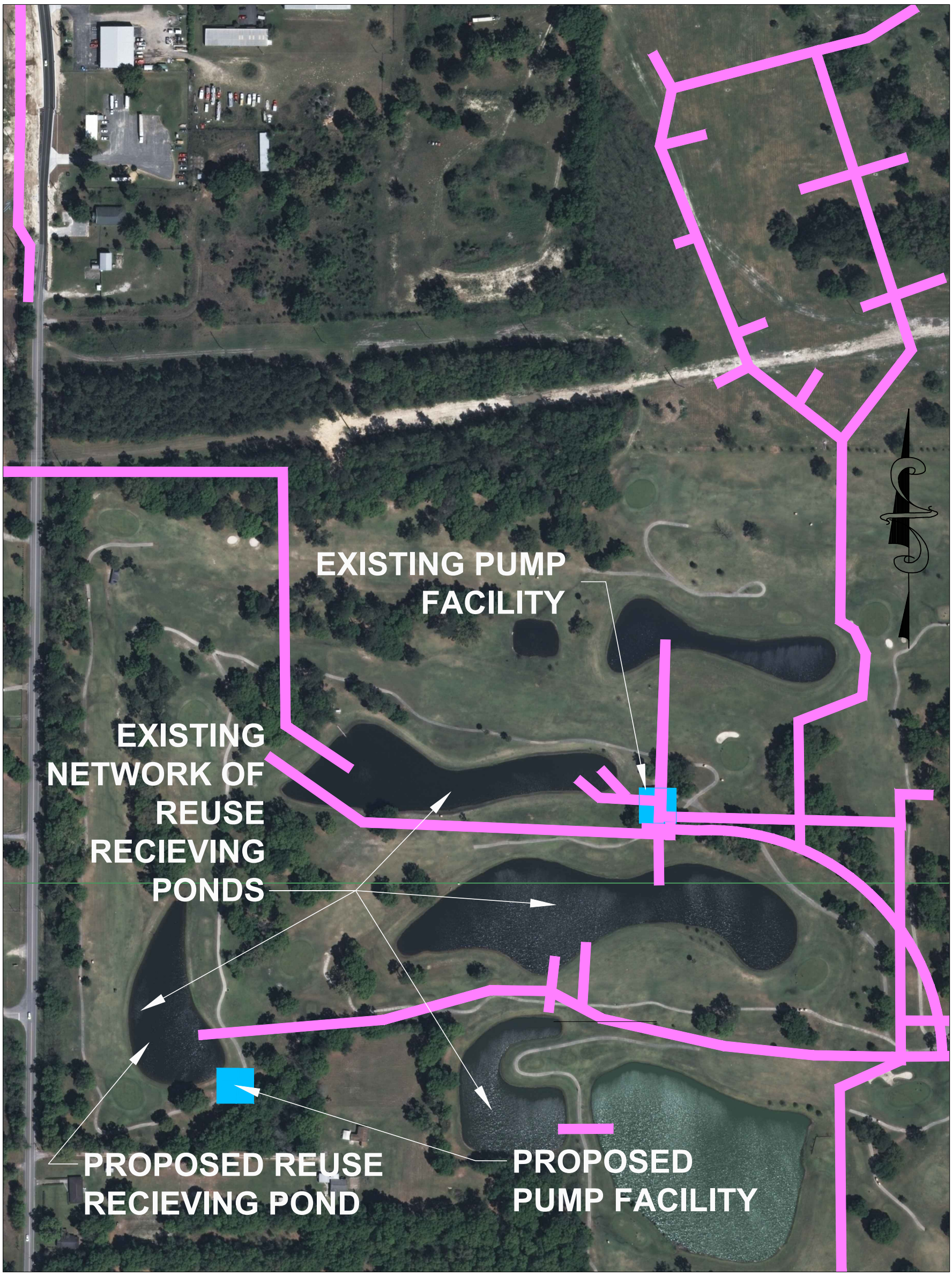
CITY OF OCALA
INLAND FREIGHT AND LOGISTICS CENTER

EXHIBIT: B
EXISTING REUSE/ RECLAIM

GPI GREENMAN-PEDERSEN, INC.
328 N.E. 1st AVENUE, SUITE 200
OCALA, FLORIDA 34470
PHONE: (352) 368-5055 FAX: (352) 368-5063
CERTIFICATE NUMBER 27260

Alan Garri, P.E. P.E.# 70674

Drawing Name: C:\Users\byancey\appdata\local\temp\AcPublish_6332\ILC Exhibit.dwg
Plot Date: Dec 08, 2015 – 6:15pm By: byancey Profile: FDOT2015C3D
LTScale=1 DimScale=1 Tab=EXHIBIT C



LEGEND

- STORM INLET
- MITRED END SECTION
- STORM MANHOLE
- REUSE MAINS

0 250' 500'
SCALE: 1"=250'

SHEET:
ILC EXHIBIT
JOB NO.: -
FILE NO.:
PROJECT NO.: FOC-2014304.00
DATE: 11/13/2015
MARION COUNTY, FLORIDA

GPI
GPI Southeast, Inc.
328 SE 1ST AVE., SUITE 200
OCALA, FLORIDA 34470
PH: (352) 368-5055 FAX: (352) 368-5063
CERTIFICATE NUMBER 27260

CITY OF OCALA
INLAND LOGISTICS & FREIGHT CENTER
EXHIBIT C: PROPOSED REUSE MAINS

MARION COUNTY, FLORIDA
SECTION 1 TOWNSHIP 15 SOUTH, RANGE 21 EAST

CHECKED BY: AG | DRAWN BY: BY | DATE: 11/13/2015 | SCALE: 1" = 1/16 MI.

NO.	DATE:	BY	REVISIONS:
1			
2			
3			
4			
5			
6			
7			

ALAN J. GARRI, P.E.
PROFESSIONAL ENGINEER NO. 70674
STATE OF FLORIDA