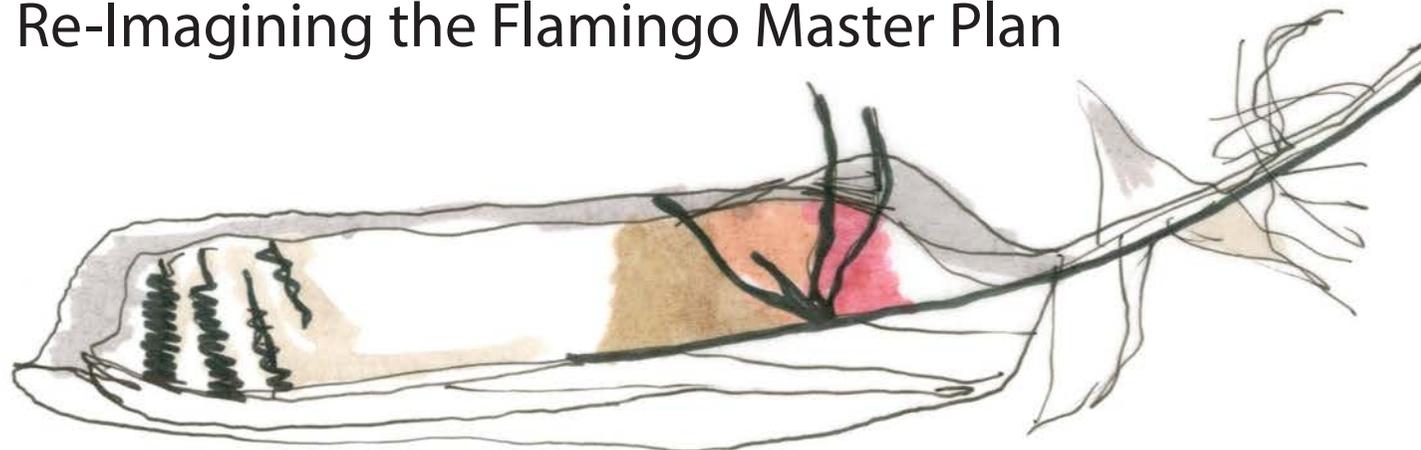




Ecotourism as a Planning Framework

Re-Imagining the Flamingo Master Plan



"In the end we will conserve only what we love. We will love only what we understand. We will understand only what we are taught."

– Baba Dioum

Ecotourism as a Planning Framework Re-Imagining the Flamingo Master Plan

A Senior Capstone Project

by
Hannah Plate

University of Florida
College of Design , Constrution, and Planning
Department of Landscape Architecture





Project Impetus

On my third trip to the same far away destination, I was invited to live with a local family in a traditional village up in the mountains. Immersed in a culture I did not recognize and a language I barely spoke, I began to pick up the subtle implications of body language, the richness of materials, and awareness for hierarchy in everyday life, all of which gave me satisfaction from their simplicity.

Over the course of my stay I traveled twice a day up and down the mountain and yet every time we descend, took a turn or climb about the mountain side, I could not help but continue to be mesmerized by the caverns, terracing landscapes, and lingering coconut palms trees carefully arranged about the always dramatic sky. On rare occasion the sky is a bright blue, like a freshly painted canvas. On the first turn into the ride, you can clearly see Mount. Agung, standing tall, dark, and defined in the lush landscape, uninhibitedly

breath taking. On other days the sky is cloudy and thick with the morning mountain haze, where only bits of the blue emerge through the mountain mist. The concealed mountain and hazy sky focuses your attention on the beautiful detailed vegetation, framing an intimate perspective of Bali. On some days the sky turns dark, fertile, with the source of life. The dark presence transforms the landscape into a classic Balinese puppet show where tall palm trees and the mountain seem like small detailed backdrops. At the same time the darkness is yet light and luminous, appearing to be back-lit by the gods. The storm overpowers the land and its people, but its thunderous voice and contrasting exposer, dramatize the island. The mountain weather changes fast and drastically, its ever changing skies send me into dreams of perfect lullabies. Ominous characters, mysterious cloaked heroins, and romantic spells converging to tell the classic tale of light and dark of good and evil.

I had the opportunity to look upon a landscape, seeing it in all its complexity and beauty as well as learn first hand about a local culture with a well established interpretation of its natural and cultural resources. It was a time for me where an accumulation of my experiences and knowledge intertwined, and before I knew it, I became invested in the place that I was visiting.

On rare occasion I would travel down to the more tourist parts of the area, but it was not the same. A separation existed between me and the tourist, I no longer associated with the average traveler. I saw past the superficial immediacy of 'attractions' and found value in the local community. I felt it was my responsibility to support sustainable, local, efforts, to have a soft impact on the environment, and be respectful of the people. A stark contrast presented itself between what I was experiencing, appreciating, and supporting with my money from what I saw

amongst the travelers. I began to wonder if there was a way that other travelers could gain a more sensitive experience. A single question persisted for the following year, how can planning and design influence the development of tourism, resulting in authentic, genuine, extensions of the place, its community, and environment.





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Project Background

This project explores how tourism development can meet the needs of tourist, while also being sensitive to place and supporting the local culture and issues. The project began with an investigation of the term ecotourism which is “responsible travel to natural areas that conserves the environment and improves the well-being of local people” (TIES). The success of sustainable tourism development often hinges in the initial process of site selection and the establishment of development criteria relevant to the site. As such the project used ecotourism to define a planning and design process, through the understanding of the relationships between interpretation, conservation, and community. Special consideration was taken in the selection of the site and in establishing a macro and micro development criteria.

In 2004 the United States was recognized as the main global market for ecolodges”

(IFC p.6). Americans enjoy traveling independently, without a travel agent, to their destinations, as ecolodges have the ability to market directly to the consumers. However the War of Terrorism in the United States along with various security and health in overseas destinations has had a significant change in the market, now days Americans are looking to travel to destinations closer to home.

This provides a phenomenal opportunity to explore ecotourism within the United States. The success of sustainable tourism development often hinges in the initial process of site selection and the establishment of development criteria relevant to the site. South Florida has an exemplary market holidays travel with its beautiful coastline subtropical environment. Travel to South Florida provides a subtropical coastal environment within the safety of the United States. There are no immediate

threats or political instability. Miami offers an international airport for those traveling from outside of the United States, as well as domestic flights.

Market research shows that 60 percent of ecolodges are located within or on the periphery of an established protected area (IFC p. 9). An hour and forty five minutes from Miami is the Everglades National Park which is recognized nationally and internationally as a significant natural and cultural resource, making it a prime location for ecotourism development.

The site is located within the Everglades National Park which is the largest designated subtropical wilderness reserve on the North American continent and the third largest National Park in the lower 48 States. It is the only place in the United States that is designated as a Wetland of International Importance, International Biosphere, and a

World Heritage Site. The Park is recognized nationally and internationally as a significant natural and cultural resource, making it a prime location for ecotourism development.

Forty miles into the Everglades National Park, through pine flatwoods, cypress swamp, sawgrass marsh, and mangrove swamp, rest Flamingo. Flamingo started as a small coastal farming settlement on the eastern end of Cape Sable, and today is the largest developed area within the park. Although Flamingo is situated in a spectacularly unique environment and is the largest developed area within the park, today it offers few visitor services and interpretation of both the immediate environment and the greater context of the Everglades National Park.

Historically, Flamingo has been the only area within the Park to provide overnight accommodations other than tent and recreational vehicle (RV) camping. In 2005,

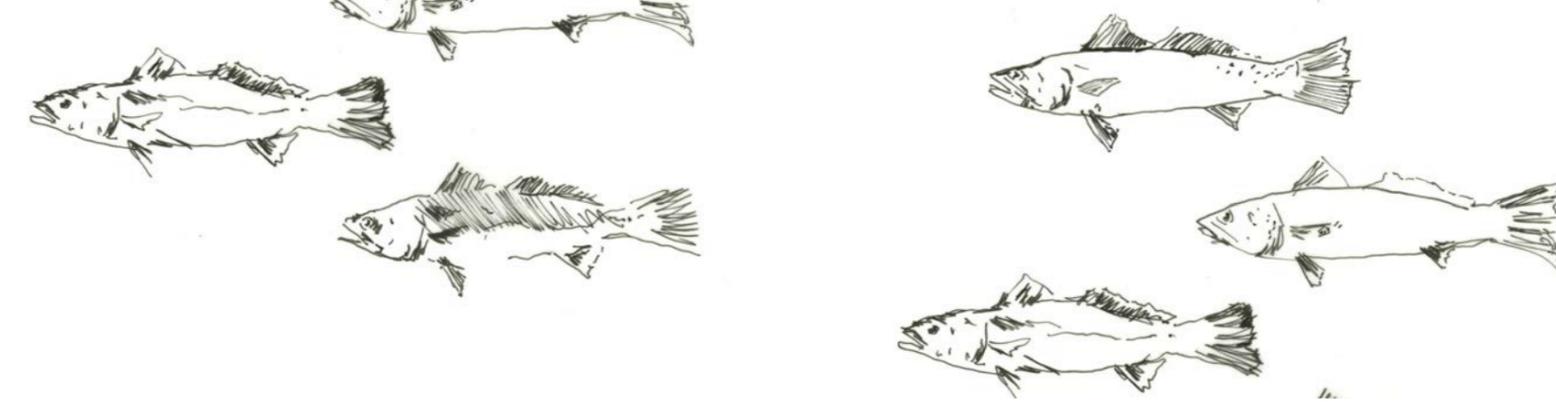
six-to-eight foot storm surges from hurricane Katrina and Wilma caused substantial damage to already aged Flamingo facilities. The Flamingo lodge, cottages, restaurant, and gift shop were shut down; where the houseboats, amphitheater, picnic and campground comfort stations, camp tenders residences and some staff residence buildings were completely destroyed.

This offers a prime opportunity to explore the role of ecotourism with in the National Park Service. An evaluation of the 2010 Flamingo Master Plan in conjunction with traditional site analysis resulted in an ecotourism master plan that compliments the efforts made by the Park Service and suggests further steps on how to develop Flamingo as an ecotourism destination.

Each National Park represents an important part of our collective identity and have been carefully managed to retain a

high degree of integrity, representing a true example of their particular resource(s) and offering numerous concessions within the park to bring recreation resorts and other compatible amenities to the public. Today the Park Service is on the front line of change, faced with challenges of the 21st century such as funding, potential political changes, growing development, up keep of natural resources, public access, and climate changes.

Flamingo is a prime example of many of the issues facing the Park Service as a whole. The hope is that ecotourism master plan will serve as a model of how the National Park service can successfully address the challenges of the twenty first century. The project process can help the National Park Service broaden its focus on existing and future concessions, incorporating new ideas, standards, and methods, making them part of the effort to solve economic problems and current issues.





Cabbage Palm

Ecotourism

The International Ecotourism Society (TIES) is an international, non-profit membership organization founded in 1990 to make ecotourism a tool for conservation and sustainable development. The Society provides professionals with the information and educational materials they need to plan and manage ecotourism in destinations worldwide. TIES publishes a quarterly newsletter, books, information packages, guidelines and fact sheets. The Society is recognized internationally as the leading authority for ecotourism and ecolodge development.

TIES defines ecotourism as “responsible travel to natural areas that conserves the environment and improves the well-being of local people” (TIES). The principles for ecotourism are as follows; minimize impact,

“Responsible travel to natural areas that conserves the environment and improves the well-being of local people.”

- The International Ecotourism Society

build environmental and cultural awareness and respect, provide positive experiences for both visitors and hosts, provide direct financial benefits for conservation, provides financial benefits and empowerment for local people, raise sensitivity to host countries political, environmental, and social climate. Essentially TIES definition and principles of ecotourism is about uniting conservation, communities, and interpretation through an economically sustainable means.

Although the principles begin to shape the definition of ecotourism, they convey loose interpretation on how to achieve ecotourism and leave room for a multitude of approaches. Additional exploration of ecolodge development, within ecotourism, revealed international guidelines which allocate the

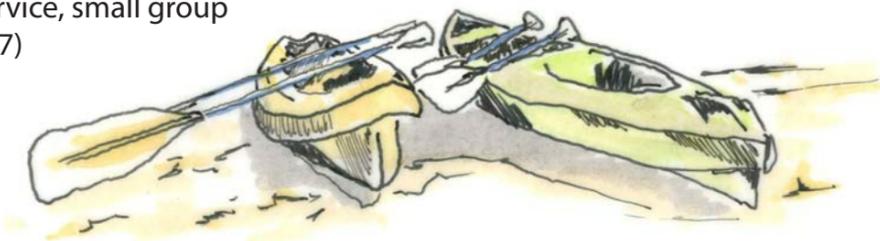
most complete set of guidelines for ecolodge development to date. The International Ecotourism Society defines ecolodges as including three main components: conservation of neighboring lands, benefits to local communities, and interpretation to both local populations and guests. Ecolodges are small, micro –enterprises that can produce a variety of positive economic development impacts in biodiverse areas.

Who Are Ecotourist

The publication *Ecolodges: Exploring Opportunities For Sustainable Business* produced by the International Finance Corporation (IFC) in 2004 summarizes the results of research on the triple bottom line, emphasizing environmental, social, and economic sustainability in the ecolodge sector. Section I and II reviews the ecolodge marketplace including the demographics of ecotourist, their activity and accommodation preference, and the global trends that influence the ecotourism market and demand for ecolodges.

In general ecotourist are looking for authentic natural and cultural experiences, selecting destinations based on “desired activities and then on accommodations” (IFC p. 4). Desired activities include viewing the

natural environment, experiencing place, and learning. There is great interest in “admiring scenery, viewing wildlife, hiking and walking, tour guided interpretive tours and visiting parks and protected areas” with special in bird watching (IFC p. 7). Ecotourist prefer staying in close proximity to wildlife or destinations with views to wildlife and provide their selected activity. “Access to the primary attraction or activity is a key factor in choosing accommodations, as are comfort, quality of interpretation guides, service, small group sizes and pricing.” (IFC p. 7)



Traditional Tourism vs. Eco-Tourism

	Traditional Tourism	Eco-Tourism
Awareness		
Marketing & Profit	Market within chain & Profit maximization based on high guest capacity, services and prices	Market (normally) independently & Profit maximization based on strategic design, location, low capacity, services, price
Community	Guest Oriented: Luxury & Comfort of the guest	Guest & Host Oriented: Encourages visitors and host communities to invest in the local community, culture, & way of life
	Concentration of high volume sales,	Balancing economic development, conservation, and community
Accommodations		
Lodging	Luxury, hotel suits	Comfortable conditions with basic needs
Micro Climate and Room Amenities	air conditioning, outlets for electronics, TV, room service	small ac units, fans, open units
Cuisine	national & international gourmet meals, service and presentation	regional hearty meals and service, often a cultural influence
Development	Enclave	Integrated with local environment
Style	Generic	Unique & Contextual History
Activities		
Interest	Relaxation Focused	Educational Focused
Key attractions	Facility and Surroundings	Surroundings and Facility
Physical Activities	Facility-based, e.g. golf, tennis, swimming pools, gymnasiums	Nature, Recreation, & Cultural-based, e.g. hiking, biking, camping, sea kayaking, local crafts
Employees	Facility based service employees	Guides & nature interpreters focus of operation

some of the information contained in this chart is derived from *The Ecolodge Sourcebook* p. x

Florida, United States of America
 Flamingo, Everglades National Park



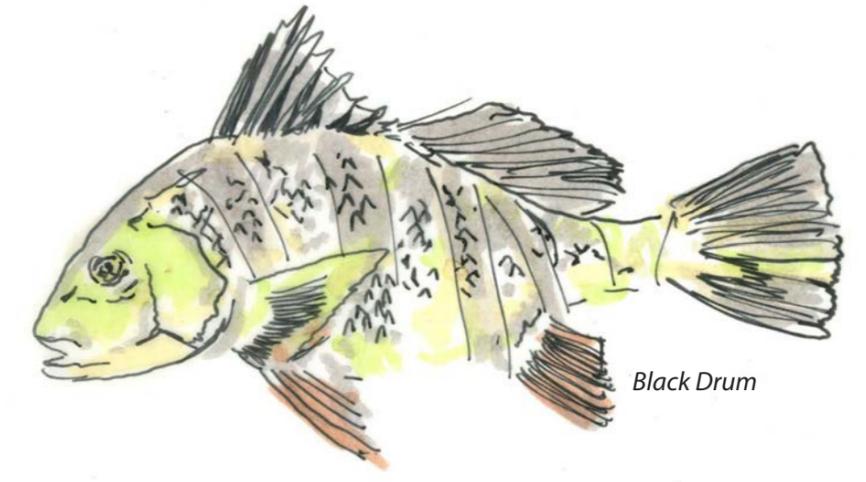
Site Analysis

The site analysis undertaken in this project focuses on the feasibility of developing an ecotourism destination in Florida, in specific regards to the Everglades National Park. The study began with an exploration of the growing concerns regarding the future of the National Park Service in order to understand how the ecotourism destination could potentially address some of the issues affecting the Park Service as a whole. Then the study looked at the Everglades National Park to see how the ecotourism destination could address the concerns of the immediate Park. Economic data researched from 2008 and 2010 revealed that the Park had significant impact on the economical gain of South Florida with 450 million dollars generated in 2009, yet the Park benefits from about 7% of this economic activity. A large

contributor to expenses out side of the Park are a result of the need for accommodations and dining not provided within the Park. The proposal of an ecolodge within the Park presents and opportunity to bring more revenue into the Park in a way that aligns with the Park Services 'dual mission' and principles of ecotourism.

The site analysis then sought to understand the existing conditions of the Everglades National Park as a whole and the area in which the Flamingo Visitor Center is contained. Information gained about the site reiterated the sensitive nature in which any form of development must take. Flamingo lies within a 100 year flood plain and is pron to high storm surges. The entire developed area is on fill dirt and all existing vegetation is

artificially maintained, consisting of mowed turf grass. Significant improvements can be made to the site in conjunction with the addition of structures that have minimal impacts on the land and can with stand high winds and storm surges.





Egret Feather

National Park Service: At a Glance

The project conducted a brief examination of the growing concerns regarding the future of the National Park Service. The issues discussed below would need further exploration in order to adequately address both aspects of the Park Services dual mission in regards to developing an ecotourism destination within the Park System. The proposed ecotourism destination would have to align with the principles of ecotourism without compromising the management of the Park.

The National Park service spearheaded the swift progression of parks and recreation in the United States, representing an essential part of our collective identity. The National Park Service was organized in 1916 to conserve the resources of the Nation, through the founding of parks and the management of them for public use. Today as the National Park Service approaches its centennial in 2016, it is comprised of nearly 400 units that are symbols and evidence of our history and beliefs, revealing who we are and where we have been

Since its conception, the 'dual mission' has persistently been at conflict. The mission requires both preservation of resources and

the facilitation of public enjoyment of those resources. Over time the parks have been carefully managed to retain a high degree of integrity, representing the truest example of their particular resources and offering numerous concessions within the park to bring recreation, interpretation, lodging, and other compatible amenities to the public.

Development within the Park threatens its natural integrity and demands consistent responsible management and planning. In the desire to balance development while preserving the outstanding natural qualities for which each park has been designated, the Park Service established park development outlines and plans. The desired outcomes were to have development harmonize with nature and uphold the Services two fold responsibility for stewardship and visitor use. From this derived a cohesive style of landscape architecture design was forged from 1916-1942. Through time these styles have presented a unifying image within each park that inseparable from the parks natural identity.

A prime example of the Parks 'dual mission' conflict was during the Golden Anniversary, when the National Park Service turned 50,

where Mission 66 was instated. Conrad Wirth, a landscape architect, led an aggressive plan to update the National Parks in the 1950's. It proved to be an instrumental time in the National Park Service, with the onset of "changing values in the post World War II American Society". Faced with mounting backlog to improve facilities construction and maintenance and accommodating the increasing visitors, the National Park Service responded with program Mission 66. The program aimed to "redefine the image of the National Park Service (,) reflect(ing) the changing values" and "elevate the National Park to modern standards of comfort and efficiency, while also conserving the natural and cultural resources" (FMP p. 6).

Mission 66 "emphasized use over preservation" responding to the need to "improve and expand visitor services" through the development of interpretative programs, modern facilities, and the upgrade of existing roads, trails, and campgrounds (McClelland 463). Director Conrad Wirth stated in the foreword to the Mission 66 prospectus "the primary justification for a national Park System lies in its capacity to provide enjoyment in its best sense, now and in the future" (Wirth p.iii-iv). At the time National Park Service

managers saw the agency's problem as being mostly about not having adequate visitor facilities, but it did not address the need for the agency to reinvent its self intellectually in order to catch up with evolving scientific thought.

"Half a century later, the situation, the problem, and the opportunity appear much the same" (Tweed p. 3). Tweed suggests that in order for the Park Service to be capable of sustaining wilderness and meeting the needs of tourism a more complex management of the Parks must be implemented. Tweed goes on to explain " In a society where both public ideas and recreational lifestyles exists in a highly competitive marketing environment, national parks will only survive as significant institutions if they are appreciated and supported by an informed citizenry that understands their purpose and supports their management. Selling larger segments of society on the value of places where the long-advertised mission is no longer possible, where resources seem to be unraveling, where quality experiences require pre-acquired skills and knowledge to enjoy, and where significant blocks of time are required to recreate, will be anything but easy. Add the complication that this marketing must

speak to people who have little or no tradition of national park use and little interest in nature, and the challenge becomes daunting". Essentially the National Park Service needs to be adapt new goals and philosophies to meet the realities of today, while at the same time "convincing the public that the redefined national park have enduring social value" (Tweed).

Many of the complications facing the National Park Service can be seen in the Flamingo within the Everglades National Park. The Everglades National Park remained undeveloped prior to the 1950's until Flamingo was seen as an "ideal candidate to test the ideas on Mission 66, as the Park needed support and interpretive facilities" (FMP p.7). Plans for the area were drawn up by 1956 and today it is the largest developed area within the park. According to Conrad Wirth, any future plans for the park "Should permit the visitor to approach and observe at close range the resources of the 'glades' in order to understand the basic ecological relationships and the relationships of man to the Everglades" (Wirth p.15). Majority of the complaints surrounding Mission 66 and the problems facing the Park Service today can be seen at Flamingo today. In addition, even

though Flamingo is the third largest National Park east of the Rockies it lacks the cohesive design image of the traditional Parks in the west. Taking these concerns into account and addressing issues the Park Service has faced for decades is no easy feat. In tandem with an exploration of the feasibility of an ecotourism destination at Flamingo the capstone wishes to allude a solution, that in which the ideas and principles behind ecotourism could result in a logical solution to addressing the problems facing the Park Service as a whole. Once again the proposed ecotourism destination would have to align with the principles of ecotourism without compromising the management of the Park.





Seminole Indian

History: Everglades National Park

Many Indians found refuge in the endless shores of what is now known as the Everglades, they had a great respect and knowledge of the land which they called Pahayokee "Grassy water". But for hundreds of years men could hardly comprehend the Everglades, they struggled to describe them and figure out what use could be made of them. To those exploring Florida the land was 'mysterious' and was described as a "series of vast, miasmatic swamps, poisonous lagoons, huge dismal marshes without outlet, a rotting shallow, inland sea, or labyrinths of dark trees hung and looped about with snakes and dripping mosses, malignant with tropical fevers and malarias, evil to the white man." (Douglas p.6)

It was not until the nineteenth century that South Florida's Image began to change. With word spreading about Florida's natural resources, so did the interest in capitalizing on the untouched and wild environment. It became known for its natural beauty and outdoor recreation, appealing toward individuals whom were interested in hunting, fishing, and bird watching. Developers, railroad managers, artist, photographers, game hunters, sport fishermen, and naturalist arrived determined to establish a commercial image of Florida. Slowly Florida's natural

history began to tell a different story, one of captivity.

Prior to the 1940s, water from the Kissimme River once flowed freely into Lake Okeechobee and southward to the estuaries of Biscayne Bay, the Ten Thousand Islands, and Florida Bay. To early colonial settlers and developers the land that filtered this process was seen as potential for growing communities and farmland to meet the people's needs. The immense amount of water flowing was soon immersed in a new system of drains, by the early 1900's for the prospecting development. Today the Greater Everglades Ecosystem covers approximately 18,000 square miles of various land uses such as agricultural, industrial, residential, retail, recreation, and conservation. The ecosystem plays a vital role in the economy of the State of Florida in the United States of America, as it is the primary source of all water needs to a large part of South Florida.

A few interest groups began to recognize the negative impacts to the Everglades, establishing parameters for what would later become the Everglades National Park. The Audubon Society hired the first game warden in the country in 1902 to protect the Everglades from the mass killings of birds

by plume hunters. The Florida Federation of Women's Clubs lobbied for the establishment of Royal Palm State Park, which was established in 1917. The National Park Service supported increasing conservation efforts in the region and in 1928, the United States Congress passed legislation to investigate the feasibility of creating an Everglades National Park. The Park was authorized by Congress on May 30, 1934, but was not dedicated until 1947, as the authorization coincided with the arrival of the Great Depression and funding for land purchases for the Park was scarce. When the Park was established, it was explicitly stated that it was to be permanently reserved as a wilderness. The park was established to be "...a wilderness where no development...or plan for the entertainment of visitors shall be undertaken which will interfere with the preservation of the unique flora and fauna of the essential primitive natural conditions now prevailing in the area" (FMP p. 3).

Everglades National Park, approximately 2,400 square miles, is the largest designated subtropical wilderness reserve on the North American continent and the third largest National Park in the lower 48 States. The Park is recognized nationally and internationally as a significant natural and cultural resources.

It is the only place in the United States that is designated as a Wetland of International Importance, International Biosphere, and a World Heritage Site. The Everglades National park plays an important role in the hydrological processes of the state. The shallow water, slowly flowing southward, percolates the lands, creating a tableau of subtropical upland and marine ecosystems. Varieties include freshwater marshes, tropical hardwoods, rock pinelands, extensive mangroves and seagrass ecosystems. They glisten with the water that supports and connects them, Marjory Stoneman Douglas describes the Everglades...

"their vast glittering openness, wider than the enormous visible round of the horizon, the racing free saltiness and sweetness of their massive winds, under the dazzling blue heights of space... the diversity,... The miracle of the light pours over the green and brown expanse of saw grass and of water, shining and slow moving below, the grass and water that is the meaning and the central fact of the Everglades of Florida." – (Douglas p.5-6)



NPS.gov



Whitehouse.gov



photograph by Hannah Plate



Existing Conditions: Everglades National Park

Wildlife

The park supports more than twenty federal and seventy state listed rare, threatened, and endangered species. These include the green, ridley, hawksbill, and leatherback turtles, the Everglades snail kite, wood stork, west indian manatee, Florida panther, red-cockaded woodpecker, American crocodile, and bald eagle.

Nonnative Species

Invasive exotic species are seriously threatening the integrity of south Florida's native communities. Florida has favorable climate and landscape, where invaders can establish and compete over native species because their natural enemies aren't around. They can multiply unchecked, using up valuable resources, such as sunlight, water

and nutrients. Native species suffer from this intense competition. In the early 2008, Everglades National Park partnered with the Florida Fish and Wildlife Conservation Commission to launch Florida's Invaders in south Florida. This eight-page publication highlights impacts associated with nonnative species and gives readers a chance to get involved and help stop the invasion. Non-native species include; Lionfish and Burmese Pythons and the Brazilian pepper plant.

Visibility

Air pollution in the park has reduced the visibility range by more than fifty percent. The average natural visual range within the Park would be about one hundred miles but actual typical visual range is about forty miles and can drop down to less than twenty miles.

Air Quality

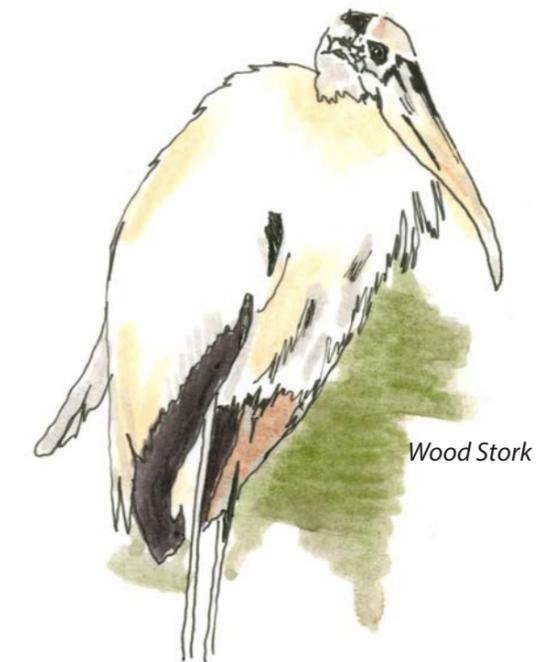
The National Atmospheric Depositions Program (NADP) is a cooperative effort between many different groups, including federal, state, tribal, and local government agencies, educational institutions, private companies, and non-governmental organizations.

Through the air quality monitoring programs in the National Park Service indicates that the Park air is not isolated from the byproducts of nearby urban, industrial, and agricultural lands. Air pollution affects natural and cultural resources through visibility reduction, biological and human health effects, and degradation of historic structures and artifacts.

Toxics: Mercury, Sulfur, and Nitrogen

Everglades National Park reports some of the highest mercury levels in the United States. Mercury occurs naturally in the environment and is an introduced contaminant from manmade pollution, deposited by rain or settle as dust into park ecosystems, where they accumulate in organisms. Sulfur in the form of sulfates plays a critical role in converting organic mercury into organic methylmercury. Methylmercury enters at the base of the Everglades food chain, slowly accumulating higher concentrations of mercury in fish and wildlife. Mercury levels may have increased a million times in top-level predator such as an endangered Florida panther.

Nitrogen and sulfur compounds deposited from air pollution and agricultural runoff can harm surface waters, soils, and vegetation. Nitrogen contributes to over enrichment and eutrophication, affecting wetland species that are adapted to the historic low-nutrient environment of the Everglades.



Wood Stork

Market: Seasonal Use and Weather

Economic Review:

The Everglades National Park has two distinct seasons, winter dry season (December-April) and summer wet season (May- November). The temperate seasons correlate with peak visitation numbers for the Park as well as revenues. Conditions are opportune in the winter dry season for visitation and park access while the summer wet season is predictably cumbersome for outdoor comfort and safety, due to annual thunder storms and hurricanes. Notice a correlation between high numbers of visitation in the winter than in the summer.

High Season: Winter

The Parks high season is from December to April when temperatures, humidity and rainfall decrease. The reduction of these factors result in increases visitor comfort, services, and wildlife viewing. Cold fronts make the South Florida temperature more enjoyable with minimal humidity and cool breezes. Decreased rainfall reduces the water levels in the park resulting in relief from nuisance insects such as mosquitoes and biting flies. Reduced water levels also attract a variety of wildlife which congregate around watering holes and provide wonderful nesting habitat for indigenous and migratory bird species. With improved weather conditions tours and programs can run more frequently, with little environmental inhibitors, therefore visitors have greater access to Park Service led and available facilities.

Winter Dry Season:

The winter dry season occurs from late fall through early spring (December –April). It is characterized by southeastward moving cold fronts that reduce the temperature and humid air. The cool, dry air suppresses showers and thunderstorms, thus any rainfall that takes place is quickly swept over the state with the southeastward wind and has little time to accrue volume.

Low Season: Summer

The Parks off season is from May to November when temperatures, humidity, rainfall, and tropical storms or hurricanes are at a high. As water levels increase so do insects but the animals disperse, making wildlife viewing sporadic. These factors impact visitor comfort and trip coordination. The weather conditions make it difficult for visitors to enjoy the park and for Parks to plan regular tours and programs. The inconsistency of visitors and services results in limited Park hours, closure of some fewer recreational opportunities.

Summer Wet Season:

The summer wet season occurs from late spring to early fall (May- November). It is characterized by an accrual of hot temperatures, high humidity, and frequent heavy thunderstorms. Hurricane season in June.

In 2010 the Everglades National Park had 915,538 visitors to the park. The visitors spent 135,499,000 and supported 1,956 jobs.



Market: Park Activities and Visitors Groups

Main Park Activities

There are five Visitor Centers throughout the Everglades National Park and 156 miles of trails including canoe trails and five elevated boardwalk trails. The largest visitor center in the Park, the Homestead Coe Visitor Center is located at the main entrance and is the starting point of the 38-mile main Park road of which trails and campgrounds are accessible. The terminus of the Park road is Flamingo which offers a number of activities, a visitor center, and overnight camping. The Coe Visitor Center addresses resources, visitor activities, and management issues park-wide. These same topics are addressed in a more localized way at Flamingo.

provide a range of guided and self-guided activities for visitors including a marina with boat and canoe/kayak rentals, bicycle rentals, and sightseeing tours. The most common self-guided activities in the Park include nature/bird watching, walking/hiking, and photography/painting/drawing. The most common guided activities include tram tour, boat tour, and airboat tour.

The Park operates with concessioners who

Sites Visited

The most commonly visited sites during the winter are as follows; Shark Valley Visitor Center (43%), Royal Palm Anhinga Trail (38%), and Flamingo (33%). In the summer they are as follows; Royal Palm Anhinga Trail (38%), Ernest Coe Visitor Center (37%), and Flamingo (33%).

Average Visitor Group Size:

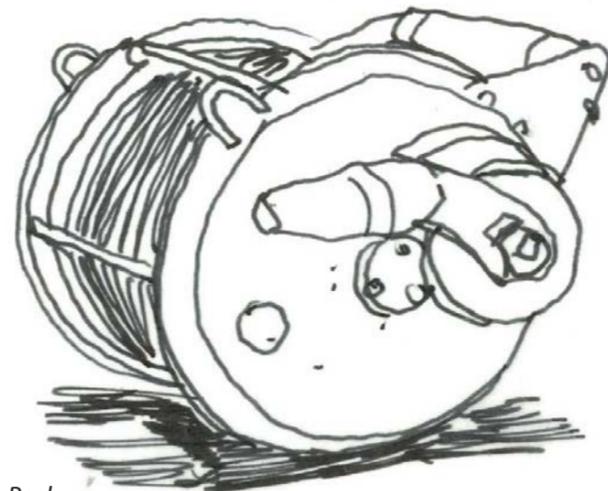
According to the 2010 Ramsar Case Study on Tourism and Wetlands in the Everglades National Park the average visitor group size was 2.7 people and the average length of stay in the local region was 3.5 nights. A closer visitor study conducted in 2008 by the University of Idaho revealed that more than 50% of visitor groups consisted of 2 people where 25% of visitor groups were in groups of 4 or more, of which 60% were family groups. 49% of visitors were 51-75 year age group and 10% of visitors were 15 or younger age group.

United States Visitors

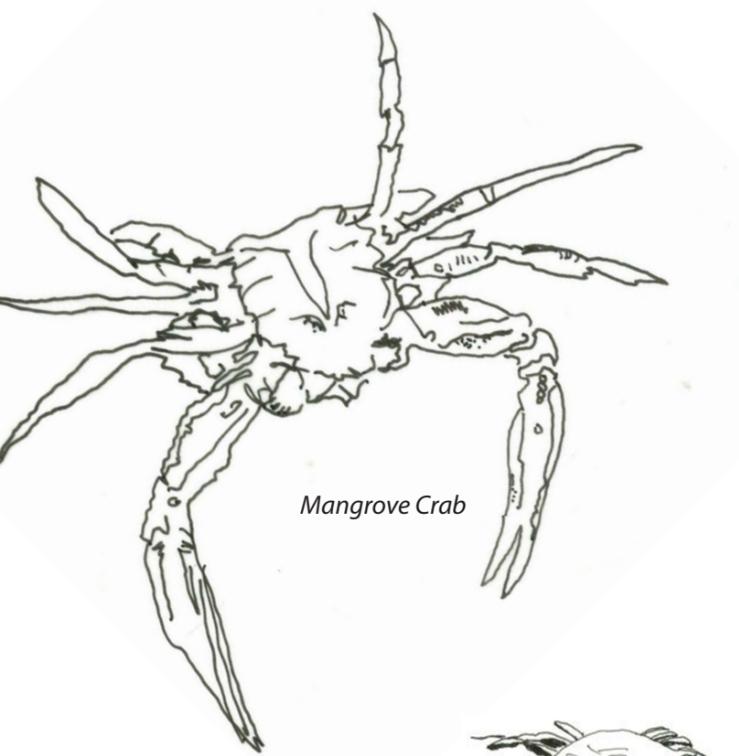
The highest proportions were Florida (34% year round), Pennsylvania (7% winter), California (8% spring), and Michigan (6% winter and 4% spring)

International Visitors

Winter :19 countries, represented 20% of winter visitation
Spring: 21 countries, represented 46% of spring visitation



Reel



Mangrove Crab



Market: Accommodations, Visitor Spending, and Concessions

Duration of Stay

In 2008 the average length of stay in the Park was 1.23 days in the winter and .6 day in the spring and in 2010 3.5 days for the year round. 66% of visitors stayed overnight away from home within the Everglades National Park and or in the surrounding areas (Florida Keys, Florida City, Homestead, Miami, Naples) The most common types of lodging used inside the park were tent camping in campgrounds 40% year round and RV/Trailer Camping 30% year round. The most common types of lodging used outside the park were lodges, hotels, cabins, rented condos, B&B, with 80-91% year round.

Overnight Accommodations

Accommodations within the park are separated into Front Country Camping, comprised of two campgrounds providing a total of 400 camping spaces accessible by vehicles, and Back Country Camping, comprised of 48 designated campsites accessible by boat.

Average Spending

In 2008 the average visitor spent 84 USD\$, 107 USD\$ non-local visitors on a day trip, 117 USD\$ for visitors camping within the park and 654 USD\$ for visitors staying in traditional lodging outside the park. The 2008 visitor study highlights the proportions of total expenditures outside the park indicating that 5-7% of the visitors expenses went toward the Park, 44% toward traditional

lodges, hotels, motels, rented condos, cabins, etc, and 30% toward dining. Tourism around the Everglades National Park in 2009 generated USD 450 million in economic activity for the regional economy covering Miami-Dade, Monroe, and Collier counties of which 7% of this is from expenditures in the Park its self and 93% spent outside the Park on accommodations, meals, transport, and souvenirs by tourist coming to the Park. The greatest proportions of expenditures remained congruent with the 2008 findings. Overnight visitors staying in motels or lodges outside the Park accounted for 85% of the total spending.

This reveals that majority of people staying outside of the park are looking to stay in accommodations that provides climate

control and safety from wildlife. The spending report conveys that the average visitor is willing to spend more money on comforts of lodging and food that is not provided within the Park.

Concessions

The Everglades National Park can capitalize on this by providing the visitors needs within the Park. The Park benefits from the revenues it receives from entrance fees but more importantly from leases to tourism businesses. The Park operates with businesses that have leased concessions within the Park to provide visitor services. Although the National Park Service does not have any funding or mandate to run marketing programs, the tourism business that leases with in the Park could run a market campaign

in conjunction with input from the Park to draw attention to the new development in Flamingo. Currently the lease in Flamingo is up for re-contract. This is an opportune time to contract with a tourism group that has experience with ecotourism and can manage an ecolodge on the site.

1. A Ramsar Case Study on Tourism and Wetlands, Wetland Tourism: USA -- The Everglades National Park
2. Visitor Services Project, Everglades National Park Visitor Study.



Flamingo Visitor Center

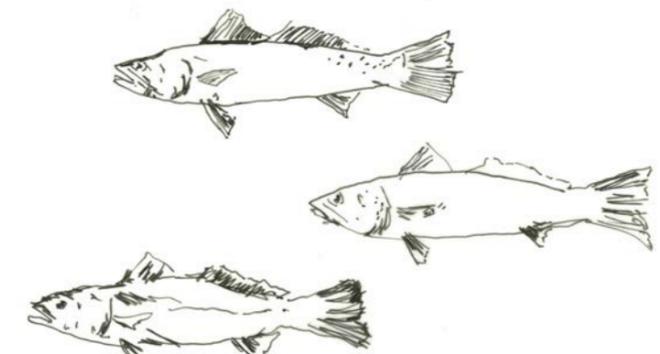
The Flamingo Visitor Center rests within the Everglades National Park but is not part of the Park's designated wilderness boundary and submerged marine resources of Florida Bay and the Park's backcountry.

Forty miles through pine flatwoods, cypress swamp, sawgrass marsh, and mangrove swamp rest Flamingo. The developed area is situated at the southernmost mainland point of the park at the end of a 38-mile road that extends southwest from the main visitor center, near Homestead Florida. Everglades National Park remained undeveloped prior to the 1950's flamingo was seen as an "ideal candidate to test the ideas on Mission 66, as the Park needed support and interpretive facilities" (FMP p.7). Plans for the area were drawn up by 1956 and today it is the largest developed area within the park. According to Conrad Wirth, landscape architect and proponent of the Mission 66 program, any

future plans for the park "Should permit the visitor to approach and observe at close range the resources of the 'glades' in order to understand the basic ecological relationships and the relationships of man to the Everglades." (Wirth p.15)

Today, Flamingo is the jumping off point in to the 'submerged Marine Wilderness' which accounts for more than half a million acres of navigable waters of the 1.5 million acres of the Park. Visitors can enjoy fishing, kayaking, and canoeing with access to back country water via the Buttonwood Canal and Ocean boating in the Florida Bay. Flamingo is also is the starting point for the 99-mile Wilderness Waterway canoe and kayak trail which takes visitors from Flamingo to Everglades City. The site looks out on to one of the longest remaining, relatively unaltered, mangrove forest in the western hemisphere, highlighting the hydrological connections between central Florida's freshwater and

marine ecosystems of the Florida Bay and Gulf of Mexico. This location offers a prime location for subtropical wilderness interpretation and a wide range of recreational activities including setting a president for one of the world's premiere fishing hotspots with game such as mangrove snapper, redfish, snook, and tarpon. The area surrounding Flamingo provides nesting ground for sea turtles, refuge for the threatened American Crocodile, and habitat for distinctive bird species, such as the Roseate Spoonbill, Reddish Egret, and Mangrove Cuckoo (FMP p. 7).





Soils Map

Topography, Geology, and Soils

The development area resides on low, relatively flat topography with elevations no greater than seven feet above sea level, and topographic variation not exceeding more than three feet. The Flamingo Developed Area has had topographic alterations through the introduction of fill material; oolite, lime rock, and gravel overburden. The development area is built on structural fill because the natural soils are not stable enough for construction. Areas constructed on fill include the visitor center and marina complex, maintenance and housing areas, the main park road roadbed, and camping loops.

The site consists of four non-fill soils: marl, peat, sand, and rock outcroppings, of which compaction, disturbance, and erosion are degrading. Degradation has occurred because of visitor use. Areas of highest degradation occur outside the designated site, such as the erosion of the shoreline due recreational and commercial boating. This erosion results in loss of habitat including loss of useable land, increased sedimentation, decreased water quality, and release of nutrients.

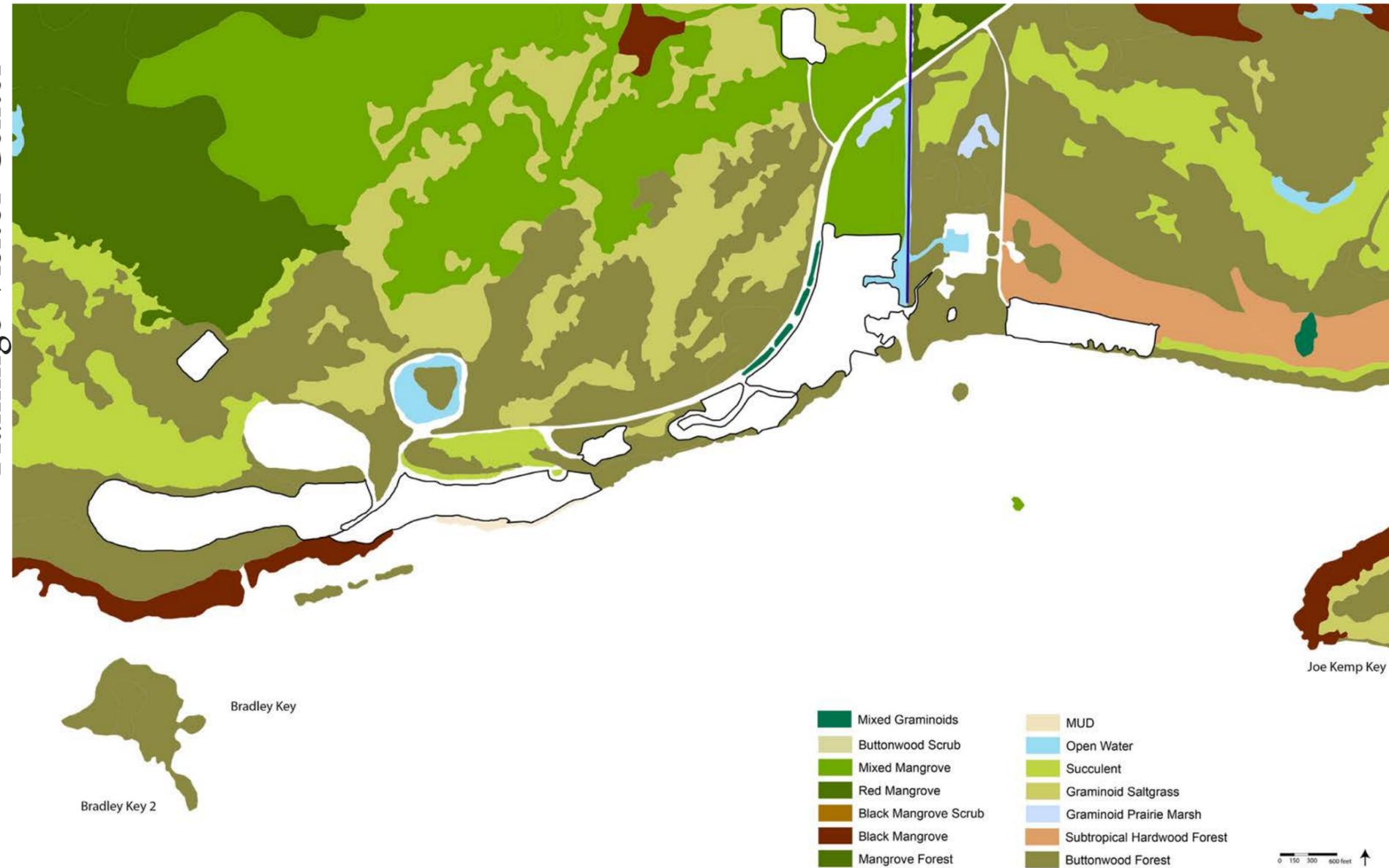
Water

The two principal watersheds within the Everglades, Shark River Slough and Taylor Slough, outlet near Flamingo. The fill soil in which the site is constructed protects the area from overland flows from these watersheds. Immediate surface water surrounding Flamingo includes Florida Bay, Buttonwood Canal, and Eco-Pond. Flamingo is the jumping off point in to the 'submerged Marine Wilderness' with access to the ocean via the Florida Bay and backcountry waters via the Buttonwood Canal. It also is the starting point for the 99-mile Wilderness Waterway canoe and kayak trail which takes visitors from Flamingo to Everglades City. The Eco-Pond is a ten acre artificial pond, which was built to treat wastewater but is now in the process of returning to a natural state. Groundwater exists in an unconfined aquifer that flows from the north."

Wetlands

Flamingo is surrounded by six types of wetlands: Estuarine intertidal wetlands, broad-leaved evergreen scrub shrub wetlands, emergent coastal prairie and salt marsh, broadleaved evergreen forested wetland, excavated permanently flooded palustrine wetland – unconsolidated bottom, and estuarine sub-tidal wetland. These wetland types are described in further detail in the Commercial Services Plan.

2010 Flamingo Master Plan and Design Program p. 13-14



Vegetative Communities

Vegetation

The Flamingo developed area comprises mostly of artificially maintained vegetation or mowed lawn. Unique tropical vegetation is found throughout Flamingo and surrounding areas, including sea grape, Jamaica dogwood, black ironwood, and manchineel.

Surrounding Context Wilderness and Vegetative Communities

The following plant and aquatic communities exist within the surrounding context of the Flamingo development area: coastal prairie, salt marshes, mangrove swamps, coastal strand, tropical hardwood hammocks, freshwater (Eco-Pond), and marine/estuarine. Primary vegetative communities consist of the following:

Succulent: salt tolerant species, including saltwaterort (Batis Martime), glasswort (Salicornia spp.), and sre purslane (Sesurium spp.).

Buttonwood Forest: including buttonwood (Conocarpus erectus), with variable mixtures of subtropical hardwoods.

Graminoid Saltgrass: including saltgrass (Distichlis spicata), smutgrass (Sporobolus spp.) and key grass (Monanthocloa littoralis)

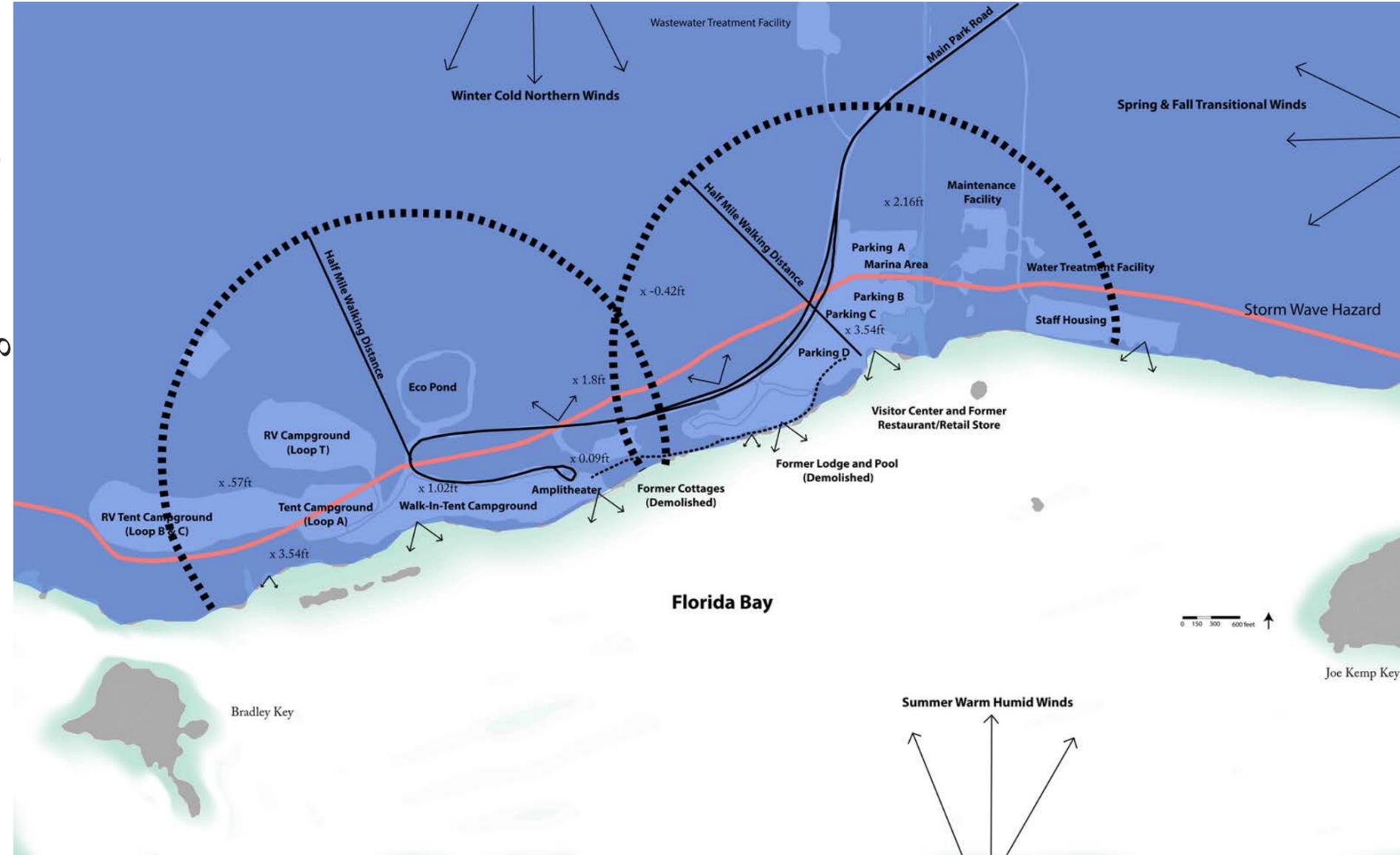
Subtropical Hardwood Forest: including lysiloma latisiliquum, Quericus virginanna, Bursera simaruba, Mastichodendrom foatidissimum, Swietenia mahagoni.

Mixed Mangrove, Black Mangrove, Mangrove Forest

Wildlife:

The Park provides habitat for more than four hundred species of birds of which the following can be seen from Flamingo, roseate spoonbill, reddish egret, mangrove cuckoo, white crowned pigeon, black crow, osprey, and buzzard. Marine wildlife to note includes the American crocodile, American alligator, manatees and sea turtles (Master Plan P. 7)

2010 Flamingo Master Plan and Design Program p. 13-14



Floodplains

The entire development area of Flamingo falls within the 100-year floodplain and is also considered a high hazard zone. There is a history of flooding in the area, most notably with the storms related to hurricanes in 2005. While hurricanes are a threat and affect the VE zone, the area can also be impacted by periodic storm surges not associated with hurricanes. Although the National Park Service is under executive order and policy to reduce or eliminate development in floodplain most all of the Everglades National Park is in the 100 year floodplain. Redevelopment of Flamingo must occur within the floodplain but the extent of development must be selected to minimize impacts.

Climate Change

Strong evidence suggests that deforestation and burning of fossil fuels has led to an increase in carbon dioxide (CO2). The buildup of CO2 in the atmosphere prevents heat from escaping. Sea level rise and increased hurricanes are expected effects of rising temperatures, which will have dramatic effects on the southern coast of Florida.

Views

The majority of the site offers expansive views of the Florida Bay as well as the interior areas of the Park. Views to the interior areas of the Park offer opportunity for watching wildlife, particularly birding.

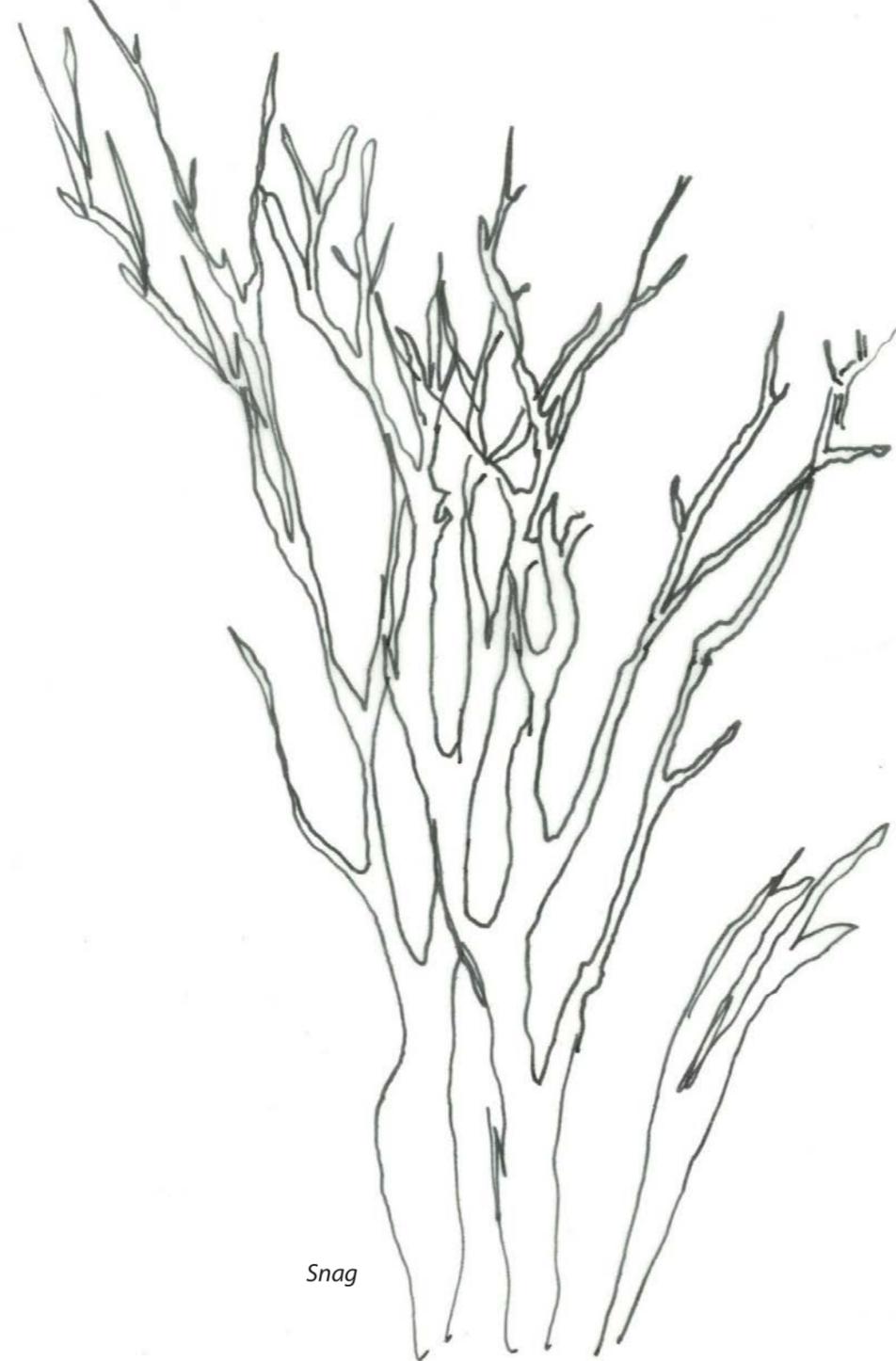
Winds

Winter Cold Northern Winds blow in from the north. Summer warm humid winds blow in from the south. Spring and Fall winds bow in from the east. Building orientations should capitalize on open air design from winter, spring and fall trade winds.

Walking

The walking distance from the furthest point west to the furthest point east is around 1 mile which should average a fifteen minute walk.

2010 Flamingo Master Plan and Design Program p. 13-14



Snag

2010 Master Plan Review

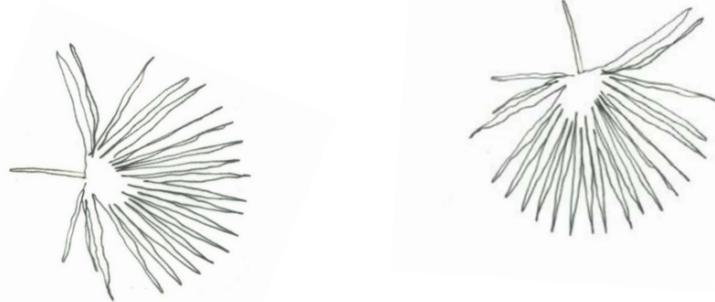
The 2010 Master Plan Review is intended to be a general assessment of the 2010 Flamingo Master Plan released by the National Park Service. The review is in tandem to the traditional site analysis, as a way to establish a baseline for the project and determine the desired development of the site. This revealed the National Park Services desires and their efforts to align the proposed development with the principles of ecotourism. Initially the project sought out to build upon the 2010 Flamingo Master Plan, but the study resulted in an entirely new master planning effort.

A macro and micro approach to ecotourism was established in the development of the criteria for reviewing the 2010 Flamingo master plan. The project adopted the principles of ecotourism and the

guidelines for ecolodges, which are intended to direct the evaluation of the 2010 plan. The principles of ecotourism were viewed as macro, providing broad criteria while the international guidelines for ecolodges were viewed as micro, providing site specific criteria to the development of Flamingo. The evaluation is setup to be pyramidal, where the micro determines the results of the macro.

The evaluation began with an overview of the documents desire, existing conditions, and environmental challenges. An exploration of the Master Plan revealed guiding principles of sustainability and ecotourism. To understand the overall plan, respective areas were reviewed to determine strengths, weaknesses, opportunities, and threats in their relationship to design and

international ecolodge guidelines. In order to understand how the plan better the information gained from the micro study informed the results and knowledge gained informed a macro review, which addressed how the 2010 plan aligns with the principles of ecotourism.



Current State of Flamingo

In 2005, strong winds and six-to-eight foot storm surges from hurricane Katrina and Wilma caused extensive damage to already aging Flamingo facilities. The consecutive storms led to the shut down of many of the visitor uses and services including the lodge, cottages, restaurant, gift shop, and cafe. Facilities include houseboats, amphitheater, picnic and campground comfort stations, camp tenders residences and some staff residence buildings were completely destroyed. Currently, Flamingo has limited visitor services and no longer provides overnight accommodations other than tent and RV camping due to damages sustained in 2005.

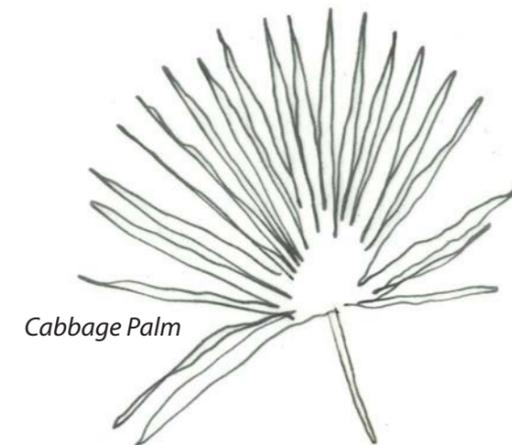
The National Park Service was asked by the public to accelerate the process for

determining the site's future. As a result, the park embarked on a planning process, through the development of a Commercial Service Plan and Environmental Assessment (CSP/EA), to identify options and make decisions about the future of Flamingo. The CSP/EA was released in 2007 for public review and did not identify a preferred alternative, but did include a statement of findings that covered all of the alternatives considered. Three alternatives were developed to either repair and or replace the damaged facilities. The alternatives will only affect previously disturbed or filled areas and provide restoration efforts.

The alternatives are described in detail and encompassed a full range of potential

development scenarios: Alternative A – No Action; Alternative B – Flamingo Rebuilt; Alternative C – Flamingo Redesigned. In 2008 Alternative D was selected from the Flamingo Commercial Services Plan, Finding of No Significant Impact. For a complete breakdown of the alternatives please see Appendix I,

Following receipt of public comment on the Draft EA, a preferred alternative was developed, Alternative D, which integrates components of both action alternatives from draft alternatives B and C. The selected alternative was developed in to the 2010 Flamingo Master Plan and Design Program in 2010. (ENP Flamingo Commercial Service Plan/Environmental Assessment p1)



Alternative D 2010 Flamingo Master Plan and Design Program

National Park Service Desire

The "primary mission of Everglades National Park is the conservation of natural and cultural resources. Flamingo has been developed to provide a destination for interpretive, educational, and recreational programs for the Parks Visitors." (AECOM p. 11)

Executive Summary

"The Master Plan provides guidance to establish a "New Flamingo" that is an eco-friendly destination with a greater variety of lodging experiences and visitor services. The vision of the selected plan integrates principles of sustainable design for facilities, compatibility with the site and landscape, and energy conservation while seeking ways to minimize adverse impacts to natural and cultural resources". (AECOM p. 1)

Project Purpose

The purpose of the master Plan is to guide redevelopment and restoration at Flamingo, consistent with the overall direction established by the Commercial Services Plan approved in 2008 (AECOM p.8). The Master Plan should guide planning, design, construction, restoration, and use of Flamingo for the next 50 years (AECOM p.1). The purpose of the design program is to outline facility improvements and uses, such as architecture, infrastructure, site and landscape, which will be incorporated into the Master Plan. (AECOM P.8). Review of the Master Plan Purpose and Objectives revealed to sets of guiding principles. The Project Purpose indicates "principles of sustainable design" as its primary framework and Project Objective V. indicates "Eco Tourism" Principles" as a secondary framework.



Mangrove Cuckoo

Summary of 2010 Master Plan

The proposed Master Plan project focuses on the critical facilities damaged in 2005 that are identified in the Flamingo Commercial Services Plan with the reconstruction of the lodge, pool, restaurant, cottages, and marina and the rebuilding and replacement of the amphitheater, NPS employee housing, maintenance facilities, concessioner housing, two backcountry campsites. Services to remain the same include the RV campsite in Loop T, the drive in camping in Loop A, the Eco pond, and Visitor Center. Overall, proposed construction and replacement of facilities would cover five acres of floodplain, with raised structures to reduce the impact on the environment and reduce the risk of flooding. In conjunction with the low impact structures efforts are made to restore fifty acres of land is set aside for restoration to

become part of the park's coastal prairie and mangrove ecosystems. The lodge and cottages are located in the area formerly occupied by the old lodge and the twenty two acres of the former cottages is set aside for restoration.

The Plan intends to improve circulation throughout the site, including increased parking spaces and a proposal system of pedestrian and bicycle access and circulation. A shuttle has been proposed to transport visitors to key destinations within the Flamingo area. A Yellow Bike System would provide overnight guests with enhanced access to the central facilities such as the lodging, marina, restaurant, and visitor center.



- 1. Flamingo Entry & Historic Mission 66 Service Station
- 2. Marina
- 3. Visitor Center
- 4. Lodge
- 5. Cottages
- 6. Amphitheatre
- 7. Group & Walk in Camping Area

- 8. Eco Tent Camping Area
- 9. Drive in Camping Loop 'A'
- 10. RV Drive in Camping Loop 'T'
- 11. Eco Pond
- 12. Coastal Prairie Trail

Re-Illustrated by Hannah Plate

The Framework: Macro

Principles of Ecotourism

The International Ecotourism Society (TIES) defines ecotourism as responsible travel to natural areas that conserves the environment and improves the well-being of local people.

TIES includes the following as Ecotourism Principles;

- I. Minimize impact
- II. Build environmental and cultural awareness and respect.
- III. Provide positive experiences for both visitors and hosts.
- IV. Provide direct financial benefits for conservation
- V. Provides financial benefits and empowerment for local people
- VI. Raise sensitivity to host countries political, environmental, and social climate.

Results:

Review of the Master Plan Purpose and Objectives revealed to sets of guiding principles. The Project Purpose indicates “principles of sustainable design” as its primary framework and Project Objective V. indicates “Eco Tourism” Principles” as a secondary framework. Results from the 2010 Master Plan Review indicated that the Project objectives revealed that the ecotourism principles were a way to achieve the project purpose, but were not the driving force of the project. Review of the plan revealed that a selection of ecotourism principles were taken into account and applied to the project with the hope to achieve sustainability through infrastructure technologies and standards. The plan takes into account bio-physical impacts and seeks to improve circulation. However the plan is difficult to review in terms of interpretation and community impacts as the master plan is post design-not construction. From what little can be discerned the plan focuses little on the interpretation and community aspects of ecotourism.



Entry, Marina, Visitor Center, Lodge and Cottages

Re-Illustrated by Hannah Plate

- High
- ◐ Medium
- Low

How the Plan Matches up to Ecotourism Principles

- Minimize impact,
- Build environmental and cultural awareness and respect,
- Provide positive experiences for both visitors and hosts,
- Provide direct financial benefits for conservation,
- ◐ Provide financial benefits and empowerment for local people,
- Raise sensitivity to host countries political, environmental, and social climate

The Framework: Micro

Ecolodge guidelines are needed in order to ensure that ecolodges meet the highest possible international standards, not the cost-saving eco-efficiency approaches being promoted by the mass tourism industry. Because ecolodges are so diverse in their local and regional geographic, socio-cultural and economic needs and realities, it is inappropriate to develop a single set of M & E indicators for all nature-based lodges (IFC_ Appendix A 3 p.1).

The International Ecolodge Guidelines produced by the International Ecotourism Society (TIES), OMT, WTO, and BTO provides guidelines for ecolodge development, covering site selection, planning and design, bio physical impacts, architectural design and cultural factors, and community participation. According to the document the “aim has been to provide a framework for the design, development and operations of future lodges such that they uphold the social and ecological integrity of their given environments, and thereby allow for sustained benefits from ecotourism without damaging or destroying the very natural resources on which they depend.” (TIES P. 5) The International Ecolodge Guidelines is intended to provide international guidelines and performance standard that would be flexible, hence adaptable to local situations

by the developer.

TIES defines an ecolodge as an “accommodation facility that satisfies at least five of the criteria listed below, three of which must embody the main principles of ecotourism; that of conservation of neighboring lands, benefits to local communities and interpretation to both local populations and guests”.

1. Helps in the conservation of the surrounding flora and fauna.
2. Endeavors to work together with the local community.
3. Offers interpretive programs to educate both its employees and tourists about the surrounding natural and cultural environments.
4. Uses alternative, sustainable means of water acquisition and reduces water consumption.
5. Provides for careful handling and disposal of solid waste and sewage.
6. Meets its energy needs through passive design and renewable energy sources.
7. Uses traditional building technology and materials wherever possible and combines these with their modern counterparts for greater sustainability.
8. Has minimal impact on the natural surroundings during construction.

9. Fits into its specific physical and cultural contexts through careful attention to form, Landscaping and color, as well as the use of vernacular architecture.

10. Contributes to sustainable local community development through education programs and research.
Mehta 1999

Micro: SWOT Analysis Overview

Strengths:

Preservation of Mission 66 historic structures
Implementation of a Park shuttle and bike system.
Raised structures
50 + acres set aside for restoration

Weaknesses:

Artificially maintained vegetation and mowed lawn
Prominent marina and lodge buildings
Vehicle accessibility
Architectural Style and material
Sense of arrival

Threats/Concerns:

Allowing the automobile to be the driving force of the entire plan.
Lack of wildlife habitat within the site/ Isolating
Placing function over experience
Development along the coastline

Planting Design:

“A commitment to habitat enhancement should be central to any ecolodge planning” as ecolodges can be a driver of ecological restoration especially on damaged sites (Baez p.28). Constructed features on disturbed sites can mimic ecological habitat and decrease life-cycle maintenance costs, enhance wildlife survival, and blend edges of adjoining natural and built areas. Planting design should have a positive effect on the surrounding ecosystem, integrating in with the native habitats. Avoid fragmenting or replacing native habitat with less diverse vegetation, as it can have severe impacts on wildlife habitat. ‘Landscaping’ in the traditional use has no place in ecolodge development, as it can fragment or replace native habitat with less diverse vegetation and have severe impact on wildlife habitat. The goal is to seamlessly integrate the structures into the wilderness in a way that makes them appear as organic and natural as the context they are in.

- Use endemic species and previously existing plant communities whenever possible, avoid the introduction of exotic species (Baez p.27).
- Landscape should be guided by the patterns of the existing natural landscape as much as possible, and native vegetation or hardscaping should be laid out in an informal, fractal, manner. Use a natural landscape approach and concentrate traditional ‘landscaping’ efforts adjacent to the lodge (Baez p.27).
- Avoid cutting down trees. All trees of site should be protected (Baez p.46).
- Expand buffer zone and/or biological corridors.
- Avoid ‘single species’ plantations set out in rows (Baez p.47).
- Minimize or better, eliminate the use of lawns. “Lawns are high-maintenance feature that require a lot of water and detract from the natural appearance of an ecolodge” (Baez p.27). Avoid creating incongruent and problematic artificial ‘touches’ such as formal lawns (Baez p.28).

Physical Structures Siting:

The ecolodge is an extension of the natural environment and thus should be planned around natural features, assimilating into the surrounding environment. “Buildings should not try to compete with the surrounding plant and landforms, which after all, are the main attractions” (Baez p.19).

- Build in previously altered areas, in areas of lesser vegetation, or in disturbed areas within dense vegetation (Baez p. 47).
 - o If the ecolodge is to be built in a place previously altered or damaged, then reforestation, restoration, and natural regeneration should be considered as an integral part of the project. This may also include soil enrichment.
- Redevelopment requires minimal disturbance of natural systems since the disturbed area may already be impacting the site. Suitable old or traditional buildings on the site should be restored and converted into ecotourism facilities. Conversion of existing facilities is one of the lowest impact design techniques because it follows the principles of reuse, recycle and considers how existing structures may speak to the history of the site/place (Baez p. 20).
- Cluster Buildings to consolidate functions or segment facilities to reduce foot prints of individual structures (Baez p. 20).
- Buildings should be inconspicuous from the air and also on the ground arrival. (3 Ecolodge guidelines nature conservancy)
- Space buildings to allow for animal movement, plant growth and integration with the existing site. If possible, raise the lodges structures to allow for animal movements and existing vegetation to grow and natural drainage and ventilation. (Baez p. 20,59)
- Orient the Buildings to capitalize on the shade and airflow for cooling in summer, and solar energy for heating and wind protection in winter (Baez p. 20).
- No coastal ecolodge should affect or modify the natural coastline in any way (Baez p.20)

Architectural Design:

Context and Aesthetics: An ecolodge should be designed within the natural physical context of the area in which it is situated. It should be designed in keeping with its natural surroundings and should not violate or intrude upon the physical landscape as a foreign structure.

Form: Buildings and other structures should not dominate the landscape and or surrounding vegetation, which constitute the main attraction, together with the local wildlife and local cultural environment. The shape of the roof should function with the site’s precipitation regime. Roof line should be as inconspicuous as possible from the air and boat. Avoid building high structures; a good rule to follow is to build no higher than the tree line.

Color: Color and texture of the exterior finishes are particularly important design elements for an ecolodge, and can enhance the feeling of harmony and unity between the final built form and the natural environment. Colors should be drawn from shades found in the surrounding elements. This helps to soften the presence of the built form within the environment. Use colors that blend with their surroundings

Cultural Context: The design of the ecolodge should be congruous with the cultural environment in which it operates, incorporating cultural motifs and traditional styles of vernacular architecture wherever possible. Base your design on local building technique and forms. Construction, interior furnishings and decorating should always take advantage of local materials and hand labor.

Nature Trails:

Nature trails provide nature based activities for an ecolodge as well as connections throughout the ecolodge. Capture the “sense of place” and design the nature trail to be in harmony with its surrounding. The visitor should not feel that there is intrusion taking place; otherwise the feeling of wildness or sacredness will be lost. Trails are meant to be interpretive. Evaluate and determine the places and types of infrastructure that is needed to protect the environment while providing efficient access. “Make the most of interpretative opportunities. Nature trails can be a valuable aid to ecological education, interpretation and awareness” (Baez p.22).

- All trails respect wildlife movement patterns and habitat requirements, as well as location and growth and expansion patterns of the local flora.
- Trails should offer differing levels of physical ability with options to complete the full trail or take a short-cut to return early. Where possible form a closed loop, so that walkers return to the starting point without having to retrace their steps.
- In the case of sensitive environments such as mangroves or wetlands, use elevated boardwalks with handrails.

Nature Trail Signage:

- Include a sign with a map of your trail network in a conspicuous spot. Signposts should be clear yet sufficiently subtle so as not to ruin the feeling of being in naturally pristine environments
- Map the trail network, highlighting the starting and ending points, the distance to be covered and the degree of difficulty. The sign should include an explanation with photos or drawings of the local flora and fauna they may see.
- Indicate along the trail the remaining distances and the time based on normal walking speed.
- Place signs unobtrusively along the trail and closest to the ecolodge so as to familiarize your visitors with the trail system and species that they will later be encountering in the nature trails.

Entry & Service Station and Marina

1. Marina Building
2. Day Use Pavilions
3. Informal Mowed Turf Pedestrian Space
4. Enclosed Storage Area
5. Existing Boat Ramp
6. Marina Deck
7. Florida Bay Floating Dock- Canoe/Kayak Rental
8. Whitewater Bay/Backcountry Floating Dock- Canoe/Kayak Rental
9. Fish Cleaning House
10. Existing Historic Mission 66 Service Station
11. Entry Monument



Re-Illustrated by Hannah Plate

Entry & Service Station

The entry will be marked by a monument and signage as well as the rehabilitated Mission 66 Service Station. The signage will comply with National Park Service UniGuide Standards but not be bound by the NPS design traditions. The Service Station will be rehabilitated and used as the hub for vehicle fueling. New fueling pumps will be installed and circulation improved. Maintain and or recreate historic landscape patterns, through the screening of the Service Station from the rest of the Flamingo area and a large grassy multi-use space separates the service station, parking and main road.

Strengths: The rehabilitation of the historic Mission 66 service station preserves the history of the site and adds to the destinations cultural value. The service station is in a wonderful location for vehicle fueling as it is located adjacent to the primary circulation and with proximity to boat entries.

Weaknesses: The large grassy multi-use space is surrounded by vehicle road, acting as an island of open lawn with little tree coverage. The isolate lawn provides no connections to the surrounding area and wildlife.

Opportunities: Visitors will have traveled forty five minutes through the Everglades National Park before arriving at Flamingo, a unique scenic experience and that should be continued into the design on the entry and developed area.

Threats: Allowing the automobile to be the driving force of the entire plan.



<http://commons.wikimedia.org/>

Marina

The Marina will be redesigned as the hub for water based recreational activities. The current marina building will be replaced with a public space and the marina building will be shifted to provide for a gathering space and waterfront viewing area close to the canal. The new marina building is an elevated structure. Improved parking areas and pedestrian movement

Strengths: Increased public space and viewing opportunities onto the Buttonwood Canal and Florida Bay.

Weaknesses: The marina is a prominent aspect to the landscape which is counter to a natural, soft, image.

Opportunities: Provide a unique boat entry and simple jetty for small boats and canoes that provides the functions of a marina but is designed as a natural edge with minimal canopy openings for entry points and views.

Threats: Focusing on the function and use of the marina instead of experience and interpretation. Boats and activities associated in the marina can cause negative sound impacts in the area in association with the reduction of wildlife habitat as result of the stripped down, hard edge of the marina.



Existing Conditions



Visitor Center, Lodge and Cottages

1. Existing Elevated Historic Mission 66 Visitor Center
2. Visitor Center Parking
3. Visitor Center/Lodge/Restaurant Parking
4. Lodge Parking
5. Restaurant/Pool
6. Lodge Buildings
7. Screened Service Area
8. Cottage Buildings
9. Pedestrian/Bike Trail
10. Lodge/Plaza Drop-off Area
11. Existing Flag Pole



Re-Illustrated by Hannah Plate

Visitor Center

The facility will be renovated and continue to serve its historic use as the first stop and main facility for visitor information, interpretation, and check-in for overnight stays. The Flamingo Visitor Center represents the Park Service Modern architectural style and planning concepts that became standards in future Mission 66 projects. The architectural style explored advanced construction techniques, inexpensive contemporary materials and simplified design vocabulary. (FMP p.6) The renovation will also be in effect for the preservation and restoration of the historic landscape patterns associated with Mission 66 initiative.

Strength: The horizontal massing and pink toned building stands as an iconic landmark for Flamingo. The building is a beautiful representation of modern architecture, offers outstanding views onto Florida Bay.

Weakness: Although the visitor center is the main focus and clearly represents a main hub for Flamingo, it is framed with a formal 'mall' lawn and parking lots on either side of the building. This provides a sense of arrival that portrays mixed message. The arrival is formal, empty, compartmentalized, monolithic sterile environment. There is little vertical variation or diversity. It does not represent the character of the environment of which it is contained.

Opportunities: Capitalize on the entry drive by proposing naturalized planting that provides glimpses and subtle framing of the Visitor Center.

Threats: Lack of plant diversity detracts wildlife and does little to provide a sense of place. Allowing the automobile to be the driving force of the entire plan.



Existing Conditions



Lodge

Two new raised guest lodge buildings will replace the destroyed lodge. The two-story buildings accommodate thirty units in addition to management, maintenance, and guest amenity space. Adjacent to the lodges is a new one-story raised restaurant building and outdoor swimming pool. The restaurant can seat up to eighty people and will also serve as a public lounge and after hour check in for lodge guest. The pool will be placed on a raised earthen berm and will be fully screened for year round use with enclosed mechanical and guest amenity space.

Strengths: The two new raised lodges will capitalize on a previous market and current visitor trends by providing overnight accommodations other than tent and RV. The Lodge is built in a previously disturbed area of the site, previous lodge location developed area, and takes in to account the building foot print. The lodge is adjacent to the Visitor Center and comfortable walking distance to the marina, and amphitheater.

Weaknesses: Conflict between the restaurant, the marina, and visitor center as they are all acting as welcome centers and places for people to gather.

Opportunities: Previously disturbed area within the site, as existing road infrastructure as well as utility and water lines in place. Views onto Florida Bay.

Threats: The lodge structures dominate the landscape and surrounding vegetation, detracting from the main attraction of the site. This jeopardizes the visitors experience and understanding of the site.



Existing Conditions

Cottages

Twelve new raised duplex buildings will replace the destroyed cottages. The one-story buildings accommodate twenty four units; twelve one bedroom and twelve two bedroom. Each building provides four parking spaces and there are twelve boat trail space throughout the development area. The cottages are positioned within three culdesacs with a minimum of three duplexes. The culdesac closest to the coast line has six duplexes that have relatively excellent views of the Florida Bay.

Strengths: The twelve new raised duplexes will capitalize on a previous market and current visitor trends by providing overnight accommodations other than tent and RV. The cottages are built in a previously disturbed area a significant portion of the previous cottages and lodge land has been set aside for restoration. The buildings are located in close proximity to the lodge, visitor center, and marina. Vehicle accessibility is increased along with pedestrian connections.

Weaknesses: The ratio of open turf and 'landscaped' areas is disproportionate to the use. Due to the weather and insects open lawn space will not have a high use for recreation. It also is spread out and, inappropriate use of land that could be used for restoration.

Opportunities: Previously disturbed area within the site, as existing road infrastructure as well as utility and water lines in place. Views onto Florida Bay.

Threats: The lodge structures dominate the landscape and surrounding vegetation, detracting from the main attraction of the site. This jeopardizes the visitors experience and understanding of the site. The closest structure is one hundred and sixty feet from the coast line. The existing eighty foot mangrove buffer on the coast remains but there is no indication of an attempt to build up the buffer. The buffers reduce high winds and provide protection to the structure during storms.



Existing Conditions

Camp Planning and Reconstruction

E.P. Meinecke and Campground Planning

Emilio P. Meinecke, known as the founder of the modern campground, applied his understanding of plant ecology to the problems of campground planning and design. In the 1920s Meinecke discovered that human activities in the forest of California were killing the giant sequoias and redwoods, due to the compaction of soil and roots. These findings raised awareness on the environmental damages of automobiles and pedestrians on the natural vegetation of National Parks. As a result park planners and managers were looking for ways to improve park accessibility and mitigate negative impacts on the environment.

Meinecke produced camp planning and reconstruction standards and guidelines that stress the importance of campsites to be arranged "...based on the vegetation on the ground and on the preservation of its essential features..." (E.P. Meinecke p.10) This means that the type and distribution of vegetation influences the arrangement of campsites, "The natural, untouched vegetation in the forest is irregularly and unevenly distributed so that no two camping areas are alike. Each one has to be planned and arranged on its own merits, "a similar variety exists with regard to the composition of the forest cover" (E. P. Meinecke p.6).

Unfortunately park designers continued to have difficulties with campgrounds, as their application of the manual overlooked core ideas. Meinecke's believes that the wilderness character containing the camp is the core attraction for visitors, thus design must focus on the "protection of the woodland character..." in order to provide the idea visitor experience (E. P. Meinecke p.6). This is achieved through a "... a good deal of creative imagination", designers must be sensitive to place and realize that within a park setting traditional landscape architecture "...has no place" in camp planning and design (E. P. Meinecke 14), instead the development of a campsite relies on designing with natural processes.

There are two objectives of campground planning; "Fullest utilization of the limited space compatible with increased convenience and comfort of the camper" and "The permanent protection of the woodland character of the camp ground" (E. P. Meinecke p. 14).

Essential Components of the Arrangement of Campsites:

1. Natural Factors
2. Vegetation
3. Garage Spur
4. Screens and Natural Zones: Natural barriers should be placed between campsites, adjoining sites, and along roads to provide a natural setting that buffers sound, provides privacy, and protection from roads. Plants between campsite are "valuable assets, and its preservation must be made an integral part of any subdivision."
5. Circuation: The ideal configuration of roads is one-way roads that service lots on either side because they increased safety, wayfinding, and allows for development of the campground to be more compact minimizing the disturbance on the landscape.
6. Camp Reconstruction: Camp sites in need of restoring should be improved for future use through a system of rotations. Whereby grounds are temporarily withdrawn from use and planted with new trees and foliage to restore vegetation. The grounds are reopened for public use when vegetation recovers by natural processes or planting.

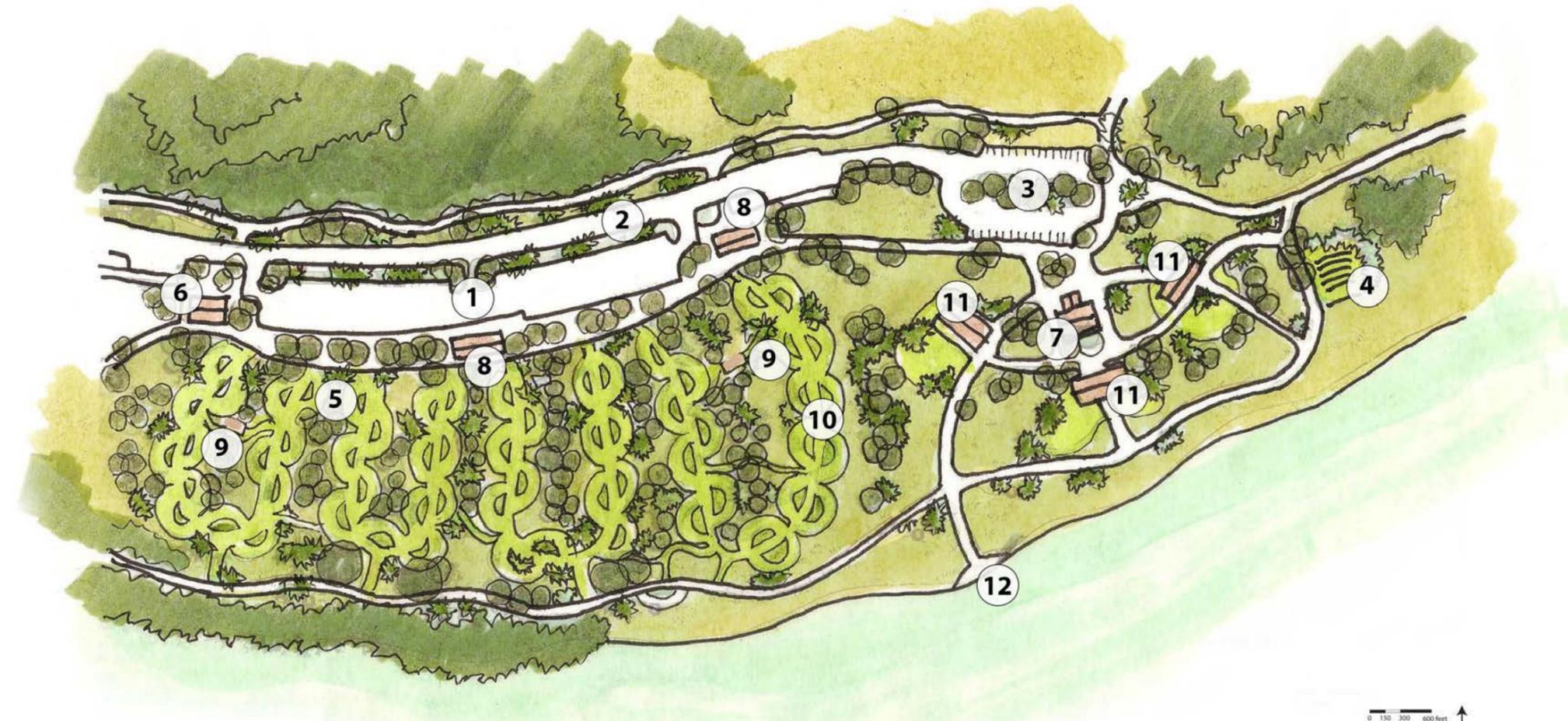
Eco Tents

1. Eco Tent Site
2. East Eco Tent Parking with Drop off
3. West Eco Tent Pacing with Drop off
4. Comfort t Station
5. Pedestrian/Bike Trail
6. Existing Comfort Station



Group and Walk-in Tent Camping

1. Walk In Tent Campground Parking
2. Large Vehicle Parallel Parking
3. Group and Amphitheater Parking
4. Existing Amphitheater
5. Walk In Tent Site
6. Existing Comfort Station
7. Existing Comfort Station (Group Area)
8. Comfort Stations
9. Common Buildings
10. Trail/Service Access
11. Group Camping
12. Walk-In Paddle Launch



Re-Illustrated by Hannah Plate



Group and Walk-in Tent Camping

Group Camping Areas

The group camping area consists of three camping sites that can accommodate up to fifteen people. Each camping site is configured with an open air common building to serve group activities, dining, and gatherings. An existing comfort station will be renovated to increase capacity and provide toilets, showers, lavatories, and dishwashing for the campsites. To the east of the group camping area is the amphitheater.

Walk-In Camping Areas

The walk-in camping area consists of four cells, comprised of sixty camp sites. Each cell is in the shape of an elongated horseshoe of which camp sites are position off of. The campsites contain new fire pits, spur markers, and picnic tables. As a result of the structured campground design, navigation is very easy. From the parking area, visitors' progress to the entrance, this is an enlarged paved concrete side walk with planters. From the entrance visitors are directed into the mowed turf path of the cell that loops back to the entrance and parking area. Connections between cells are at the southern side of the cells, where there is also connections to the coastal walkway. There are limited connections between cells. There are buffers between cell to cell.

Strengths: The campground and amphitheater are positioned on the coastline with expansive views of the Florida Bay. The camping sites follow E.P. Meineches campground planning parameters adopted by the Park Service in the early 1920s. Each site has privacy in the form of plant buffers, from structure to structure and campsite to campsite. The Amphitheater is buffered by vegetation on the west. Both camping areas use the existing roadways to access new parking areas. Compact development helps to conserve land and establishes a community of campers. The plan proposes increased pedestrian movement and places for people to gather.

Weakness: Although the campground follows the traditional planning methods of the Park Service the application overlooks core ideas Meineches campground theory. The theory states that the wilderness character containing the camp is the core attraction for visitors, thus design must focus on the protection of the woodland character in order to provide the ideal visitor experience. The campsites are situated on a defined, mowed, turf grass lawn, surrounded with native non-mowed tall grass and new shade tree plantings. The designed campground layout interprets a commercial image. Visitors are feed directly from the parking area into the turf trail, where upon

users can select a camp site. This provides no sense of exploration and discovery; instead users are feed through a comfortable cell that is set up like a structured suburban neighborhood.

Opportunity: The designated group and walk-in camp ground and amphitheater are located in a beautiful open area within the developed site. This area is isolated from the coastal prairie environment, to the north, by a large existing road. Currently the designated campground is a disturbed area with fill dirt and mowed turf grass, but there is an opportunity to improve the environment with soil enrichment and re-generation of the coastal prairie ecosystem.

Threats: The coastal walk is in close proximity to the coast line. At points the path is only twenty feet from the coast and at its furthest fifty feet from the coast. Majority of the area has been developed and the vegetation is completely landscaped. There has been no effort to stich things together except for the pedestrian path ways. no wilderness and wildlife connections.



Existing Conditions



Additional Areas Not Included in the SWOT Analysis

The remaining program areas from the 2010 master plan were not reviewed using the SWOT method.

- 1. Eco Tents
- 2. Loop A
- 3. Loop T
- 4. Eco Pond

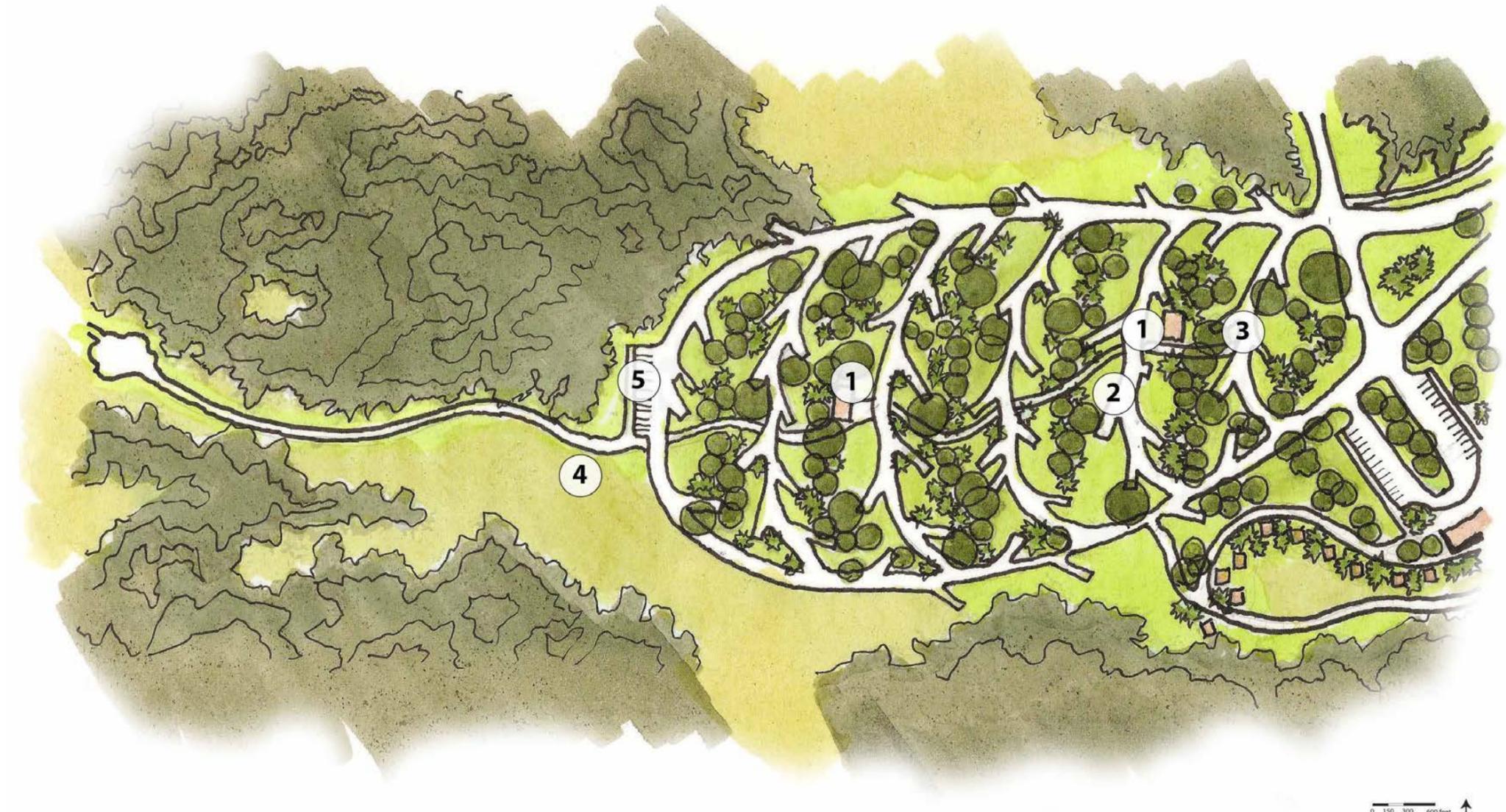


Tent Campground Loop A

- 1. Campground Comfort Station
- 2. Typical Camp Spur
- 3. Accessible Campground Trail
- 4. Connection to Coastal Prairie Trail and Potential Star-Gazing Site
- 5. Coastal Prairie Trail Parking



Existing Conditions

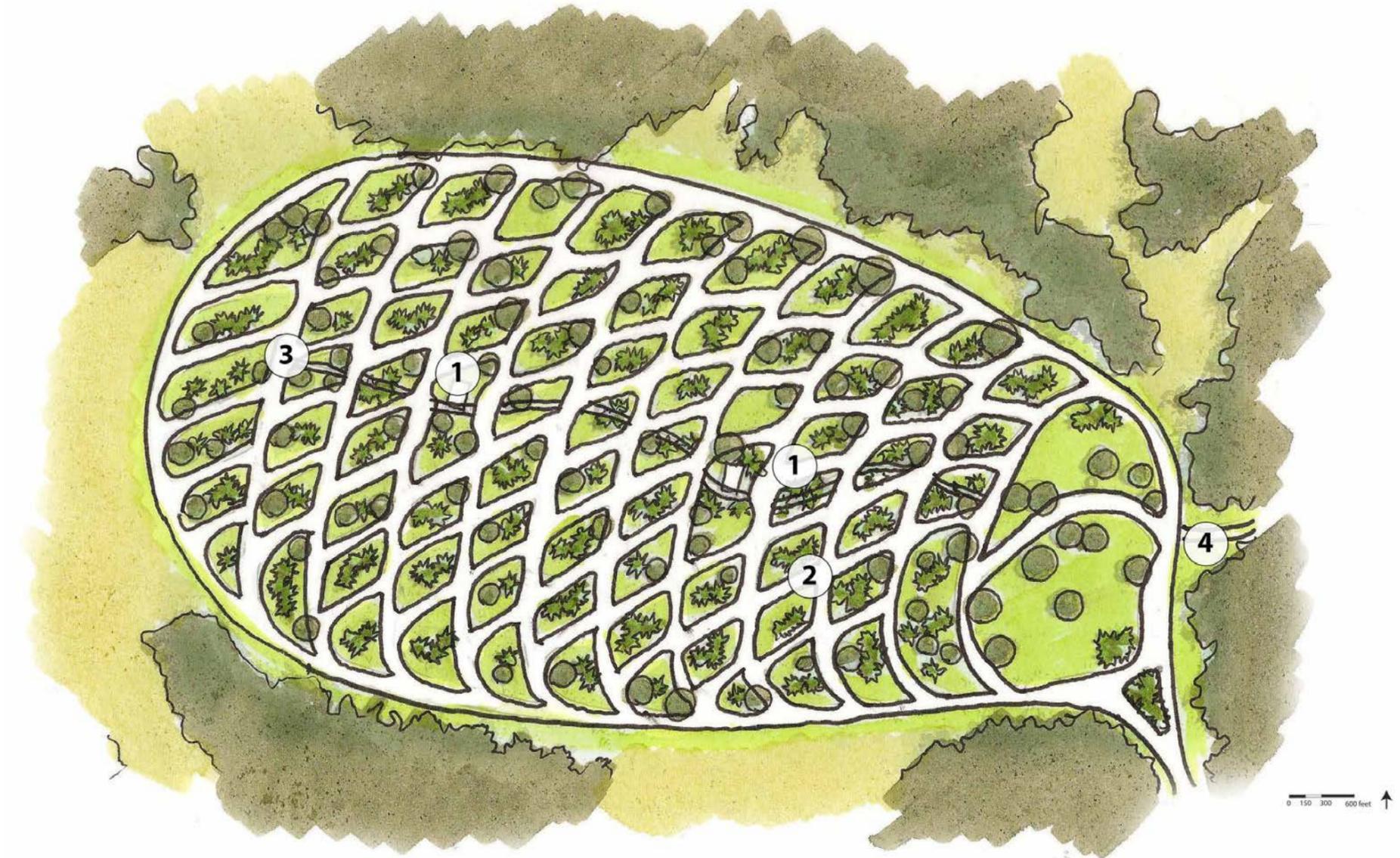


RV Campground Loop T

- 1. Comfort Station
- 2. Typical RV Spur
- 3. Accessible Campground Trail



Existing Conditions





Coast Line

Eco Pond



Ecotourism Alternative Concept Development

Results from the 2010 master plan review provided criteria in which the ecotourism alternative is based. A series of concepts were explored to ascertain a variety of ways to provide a unique wilderness/coastal ecolodge that is integrated into the Everglades National Park, concentrates development, and increases visitor activities and access. The concepts developed a hierarchy of organization, responding to the types of activities, variety of overnight accommodations, and type of visitor access. The hierarchy progress from high to low from east to west with the goal of reducing automobile access, providing integrated network of trails, and a wider range of overnight accommodations. Activity levels were determined 'high' around the marina and visitor center and progress into 'medium' with a newly proposed coastal prairie trail and canoe/kayak access taking visitors to Bradley Key, and 'low' with foot paths leading to Cape Sable. Visitor access correlates with the indicated activity levels where visitors have vehicle access to the marina and visitor center, a shuttle/tram operated by the Park to service those visitors staying overnight in conjunction with a two mile bike trail between the marina and furthest overnight accommodation to provide an alternative means to the shuttle. At the west portion of the site only pedestrian movement is allowed, through connecting foot paths. Overnight accommodations were clustered to establish a sense of community and organized from 'luxury' (east) to primitive camping (west).





Reddish Egret

Ecotourism Alternative The Rookery at Flamingo

The Rookery at Flamingo is a coastal ecolodge that sensibly restores the disturbed habitat of the largest developed area within the Everglades National Park. The ecolodge is named from the devastating history of the surrounding rookeries and Audubon Warden Guy Bradley, whose name marks the existing bike trail and nearby key. Guests are presented with a range of overnight accommodations, from eco-bungalow to primitive tent camping, with architecture references to the areas indigenous history of Calusa and Seminole Indians while also using the Park Service postmodern architecture of mission 66. Amenities include day use boat access, visitor center and lodge restaurant, interpretive trails, and kayak/canoe access to Bradley Key.

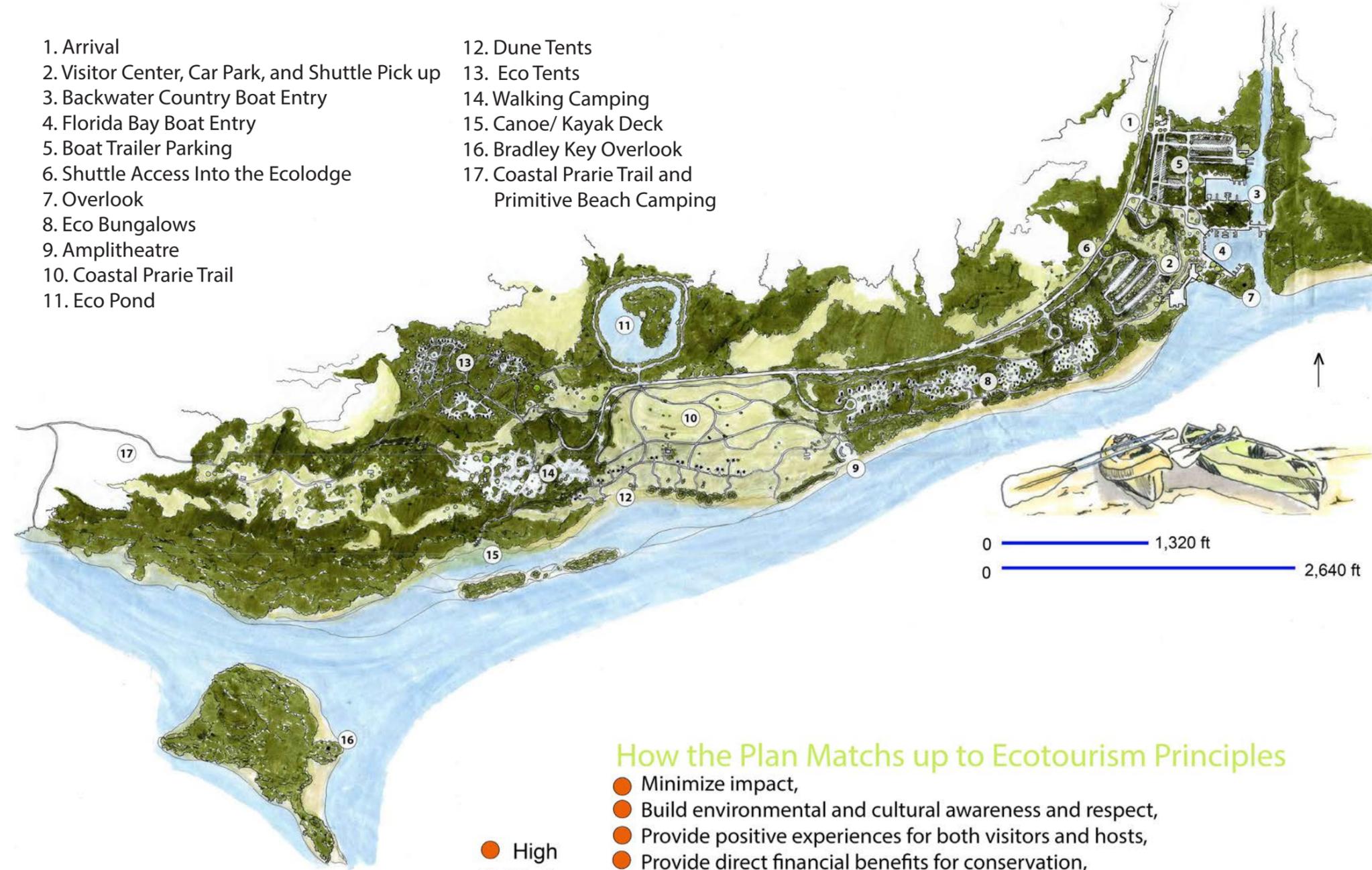
The name The Rookery at Flamingo is derived from the natural and cultural history of the site. In the late 19th and early 20th centuries plume hunters emptied whole rookeries and exterminated the entire population of reddish egrets in Florida. The Audubon Society advocated for the protection of the remaining rookeries and in 1902 the American Ornithologists Union hired Guy Bradley, a Monroe County Deputy, to protect south Florida's wading birds from plume hunters. Three years later

Bradley was shot and killed in the line of duty while arresting a well-known plume hunter for killing egrets on Cape Sable, just west of Flamingo.

The overnight accommodations are planned using a 'cluster design' approach, finding inspiration in the surrounding rookery habitats. The mangroves and nearby fresh water marshes provide plentiful food for coastal birds which nest in colonies otherwise known as rookeries. The habitat in which these birds organize influenced the arrangement of the varying lodges, which were seen as small communities that share a centralized kitchen and fire space.

1. Arrival
2. Visitor Center, Car Park, and Shuttle Pick up
3. Backwater Country Boat Entry
4. Florida Bay Boat Entry
5. Boat Trailer Parking
6. Shuttle Access Into the Ecolodge
7. Overlook
8. Eco Bungalows
9. Amplitheatre
10. Coastal Prarie Trail
11. Eco Pond

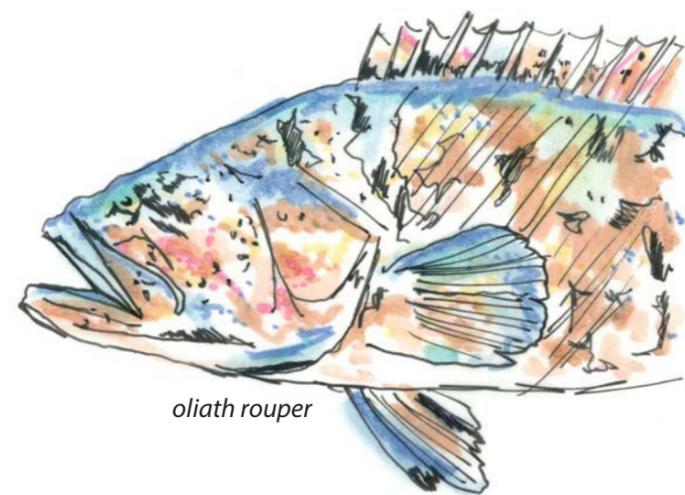
12. Dune Tents
13. Eco Tents
14. Walking Camping
15. Canoe/ Kayak Deck
16. Bradley Key Overlook
17. Coastal Prarie Trail and Primitive Beach Camping



- High
- ◐ Medium
- Low

How the Plan Matches up to Ecotourism Principles

- Minimize impact,
- Build environmental and cultural awareness and respect,
- Provide positive experiences for both visitors and hosts,
- Provide direct financial benefits for conservation,
- ◐ Provide financial benefits and empowerment for local people,
- ◐ Raise sensitivity to host countries political, environmental, and social climate



oliath rouper

The Roockery at Flamingo Day Use

The ecolodge has a designated day use entry which provides a common space for those visitors whose stay does not exceed 24 hours and guests arriving to stay for a longer portion of time. Visitors can enjoy boat access to the back country waters and Florida Bay through naturalized entry points and footpaths with artful fishing installation as well as the Mission 66 Historic Visitor Center which offers interpretation and dining. 'Gladesmen', local guides, will take small groups into the back country waters for a unique boating trip and floating house boat experience. The floating house boats will be positioned in various locations in White Bay and take design inspiration from the mangrove crab, a key stone specie for the ecosystem.

A fundamental aspect of the design of an ecolodge is the experience and sense of arrival. Flamingo offers a unique situation as guests have already been immersed in the beauty of the Park for over forty five minutes before they arrive at the site. The design of the entry and day use area desires to continue the experiential sense of arrival through a enriching the soils and regenerating the contextual vegetation to provide a natural setting rich in vertical vegetation and wildlife.

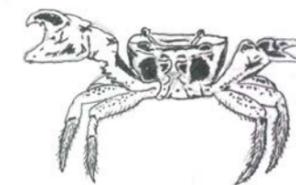
The design focuses on three areas of improvement; The amount of entry parking that frames the water and historic visitor center, the formal lawn in front of the visitor center, and the prominent marina.



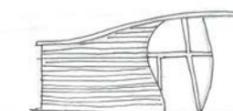
Dpcked House Boat



Plan view



Fron Elevation



Left Elevation



Floating river house boat, Washington



Entry Parking



Formal Lawn in front of visitor center



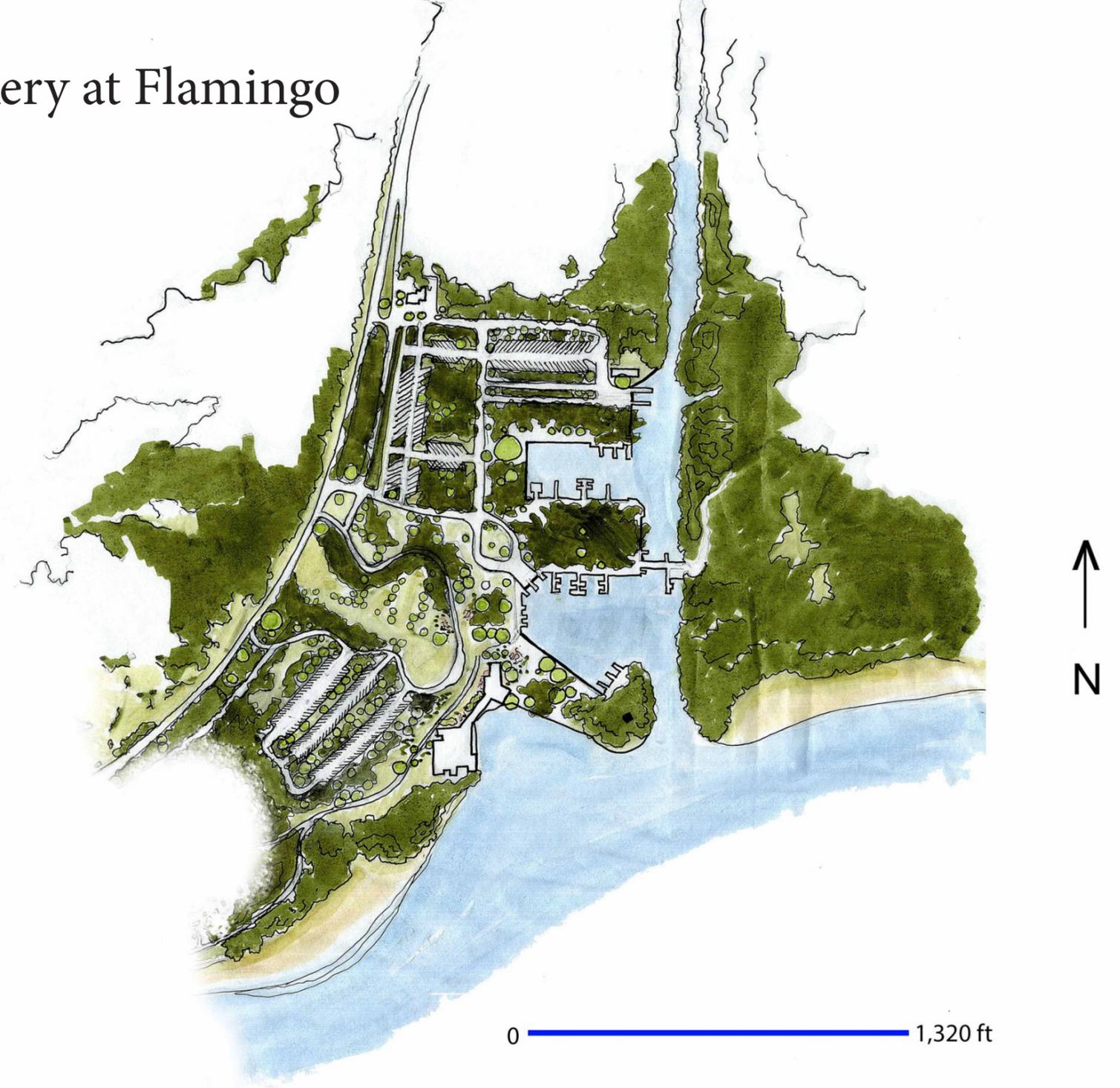
Prominent Marina



2010 Master Plan



The Rookery at Flamingo



0 1,320 ft

Florida Snowy Egret



The Roockery at Flamingo Overnight Accomidations

The remaining site is considered 'overnight' and is planned with a hierarchy of comfortable bungalows to primitive camping. All the overnight accommodations are planned using a 'cluster design' approach, finding inspiration in the surrounding rookery habitats. The mangroves and nearby fresh water marshes provide plentiful food for coastal birds which nest in colonies otherwise known as rookeries. The habitat in which these birds organize influenced the arrangement of the varying lodges, which were seen as all communities that share a centralized kitchen and fire space. The overnight accommodations are connected by a two mile bike loop and a multitude of foot paths and coastal prairie boardwalks. As well as an increase in the walkability of the site all the tails and foot paths will have

a variety of interpretation. The new coastal prairie trail will provide information of wildlife habitat such as species of plants and animals where the trail along the coast will have artful fishing installations, inspired from the history of fishing tools and methods. At the far west a new canoe/kayak deck will be built to provide visitors the opportunity to travel to Bradley key where there will be an overlook and small trail system. This allows visitors to have a fulfilling self-guided day trip.

The design focuses on three areas of improvement; protection of the coastline, the theory behind drive in tent camping, and the amount of mowed turf grass.



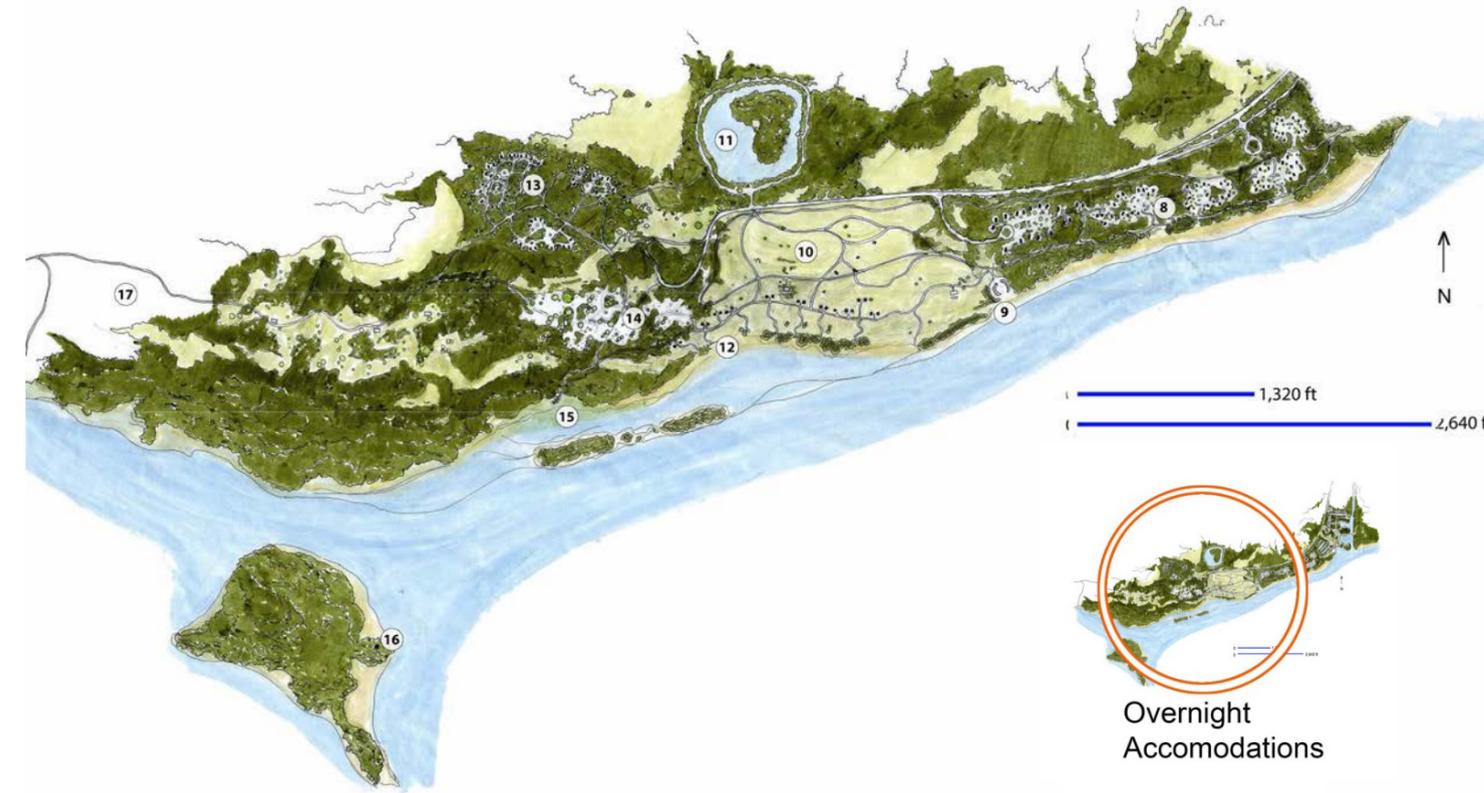
Coastline



Drive in tent camping



Mowed Turf Grass

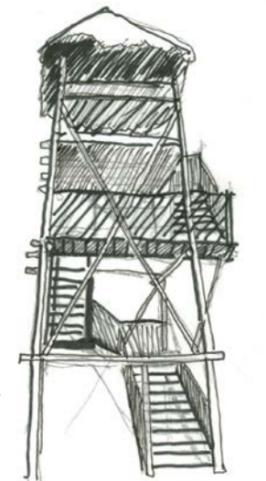


- 8. Eco Bungalows
- 9. Amphitheater
- 10. Coastal Prairie Trail
- 11. Eco Pond
- 12. Dune Tents
- 13. Eco Tents

- 14. Walk-in Camping
- 15. Canoe/Kayak Deck
- 16. Bradley Key Overlook
- 17. Coastal Prairie Trail and Primitive Camping



Overnight Accomodations

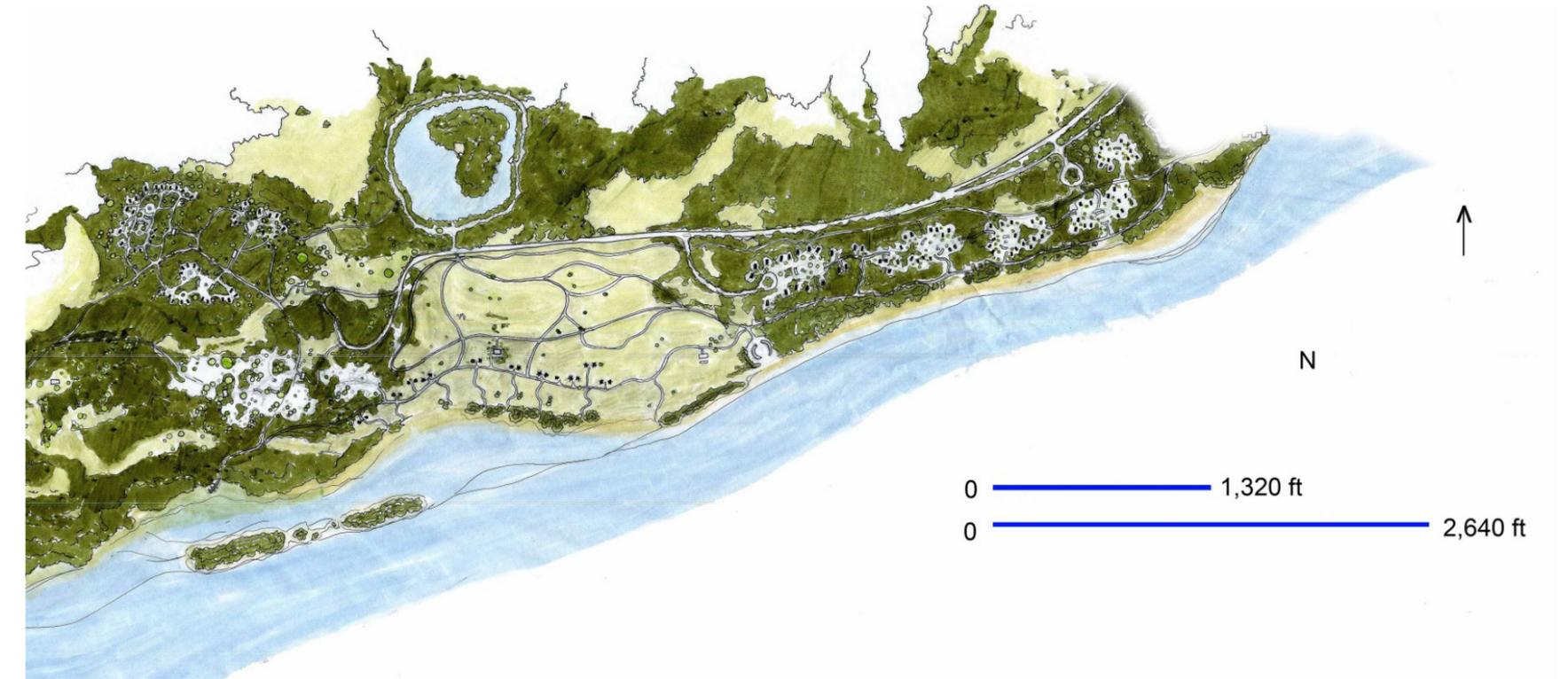


Bradley Key Overlook

2010 Master Plan



The Rookery at Flamingo



The Rookery at Flamingo

Eco Bungalows

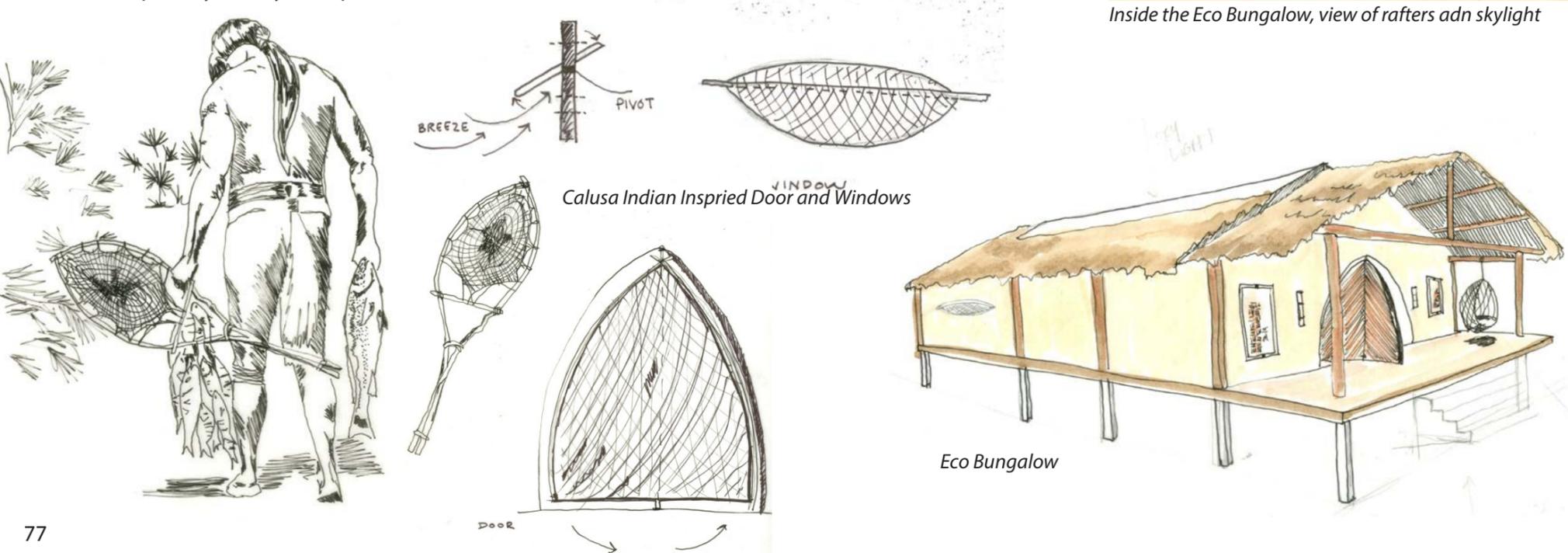
The eco bungalows are inspired from architectural influence of the Seminole Indian chickee, Calusa Indian fishing culture, and Post Modern architecture of the Park Service. Each unit will have a king sized bed or two fulls, an indoor living/dinning space, a front porch and private bathroom. The bungalows will be constructed from concrete where the structural pillars and rafters will be partly submerged into the stucco, as to still reveal the 'Chickee' skeletal frame. The units will have air conditioning for climate control and the neutral exterior paint colors to reduce heat absorption. The roof takes inspiration from the thatching of the indigenous techniques but a modern twist of a skylight has been interjected in the central rafters. This will provide visitors a unique view opportunity of the beautiful night sky. The doors and windows take inspiration from the Calusa Indian fishing culture. The dip nets used by the Calusa's helped catch small fish and remove large fish from nets. A design for a central door that swivels in the center was inspired from the net, its shape, and fixtures. The central door will be made out of woven material and allude to the dip net yet still provide privacy, safety, and protection from insects as well as weather.



Inside the Eco Bungalow, view of rafters and skylight



Existing Condition

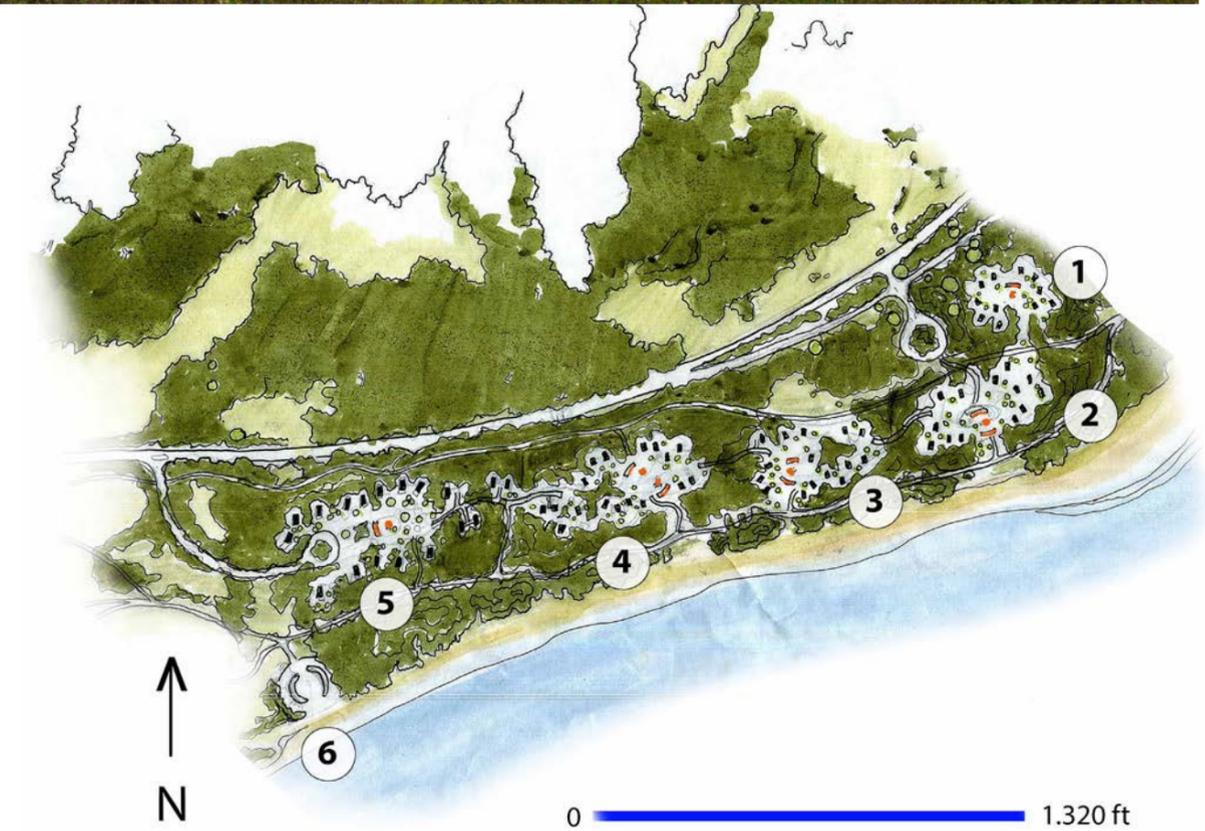


Calusa Indian Inspired Door and Windows

Eco Bungalow



Shared Kitchen Space, Cosat Rica



- Total Units: 73
- 1. 11 Units, 1 Common Kitchen, 1 Fire Pit
 - 2. 12 Units, 2 Common Kitchen, 1 Fire Pit
 - 3. 15 Units, 2 Common Kitchen, 1 Fire Pit
 - 4. 17 Units, 2 Common Kitchen, 2 Fire Pit
 - 5. 18 Units, 2 Common Kitchen, 2 Fire Pit



0 1.320 ft

The Rookery at Flamingo

Ponderous Tents

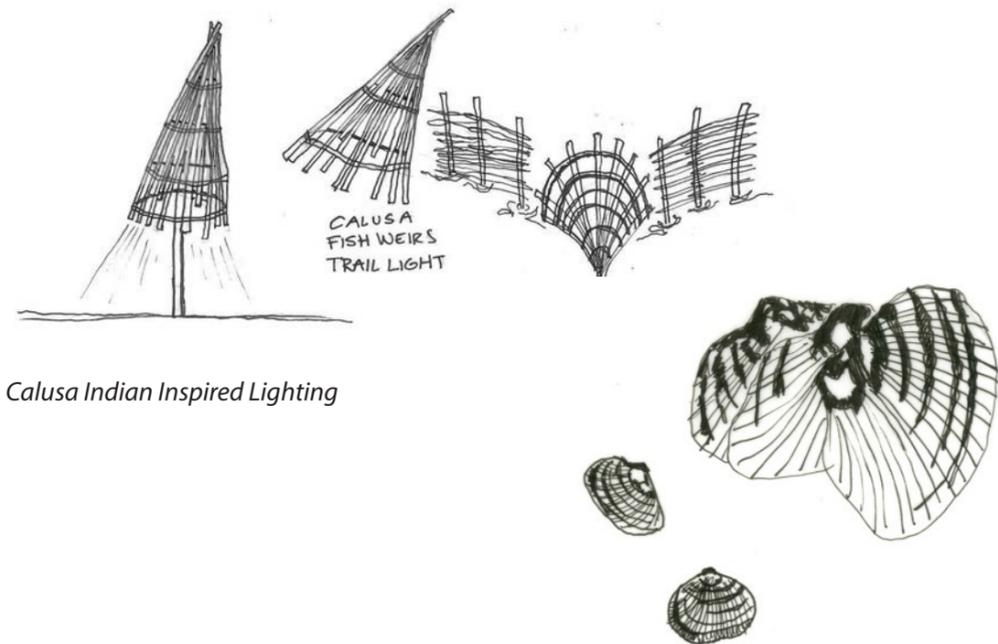
The ponderous tents take inspiration from the shapes found along the coastline. The Calusa Indians depended on fishing as their main diet and way of life, as such a variety of fishing tools and nets became part of their trade. The nets were made from materials found in the surrounding environment and weighed down with net weights made from sea shells. Thread was woven through a whole formed in the shell and then attached to the bottom of the net. Taking a closer look at the ponderous ark shells used in the net weights inspired the initial design of the tents. The ponderous ark is a very thick and heavy shell, with distinctive radiating ribs and a beautifully arched form. The canvas roofs of the tents will imitate the arched form and have radiating points that stretch out past the unity. From a distance the tents are to mimic the landforms found along the coast, beautifully integrated into its setting and subtly appearing from the coastal prairie environment. Each tent will be raised slightly from the ground with private boardwalk entrances marked by Calusa Indian influenced lighting. Each unit will have a queen sized bed or two fulls, an indoor living/dining space, and a front porch. The units will share two existing common buildings for bathroom needs and utility cleaning.



Sal Salis, Australia



Sal Salis, Australia



Calusa Indian Inspired Lighting

Dune Tent



Existing Condition



Total Units: 20
Common Buildings: 2

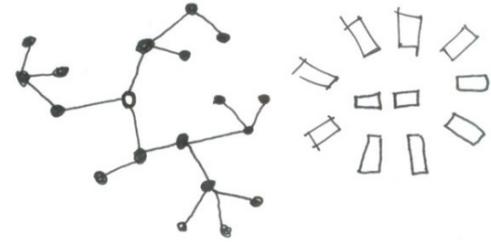
The Rookery at Flamingo

Eco Tents

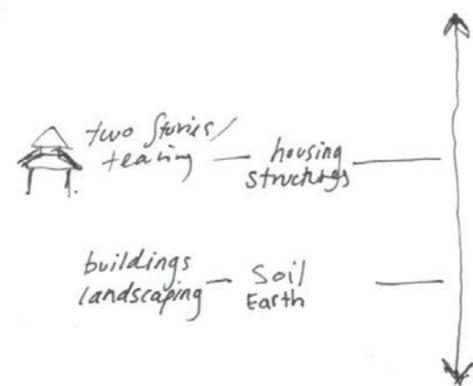
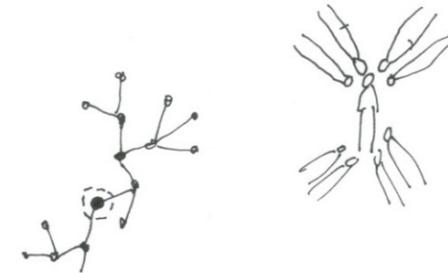
The Seminole Indians faced many conflicts with European settlers and eventually relocated to south Florida and the Greater Everglades area. Once they arrived they faced even more problems in learning how to adapt to the entirely new environment as a result the camps became significantly smaller and took refuge in the dense vegetation. A traditional Seminole camp is arranged with two cook houses, one for cooking and one for eating, encircled with an average of 10 sleeping chickees. The sleeping chickees have raised floors, approximately eighteen inches, and the cook houses have swept dirt floors. The floors are made from sawn boards or split logs, but are rather thick in their cut. The eco tents explored the construction of the Seminole Indian chickee, a simple framework of upright sable palm trunks firmly planted in the ground to support a peaked roof covered with palmetto thatch. The design of the eco tents deconstructed the chickee and developed two alternative overnight accommodations that are a synthesis of indigenous knowledge and modern technologies. Each unit will have a queen sized bed or two fulls, an indoor living/dining space, and a front porch. The units will share two existing common buildings for bathroom needs and utility cleaning. The layout of the eco tents was inspired by the physical layout of the Seminole camps as well as the matriarchal organization of them.



Parebark Tents, Australia



Existing Condition



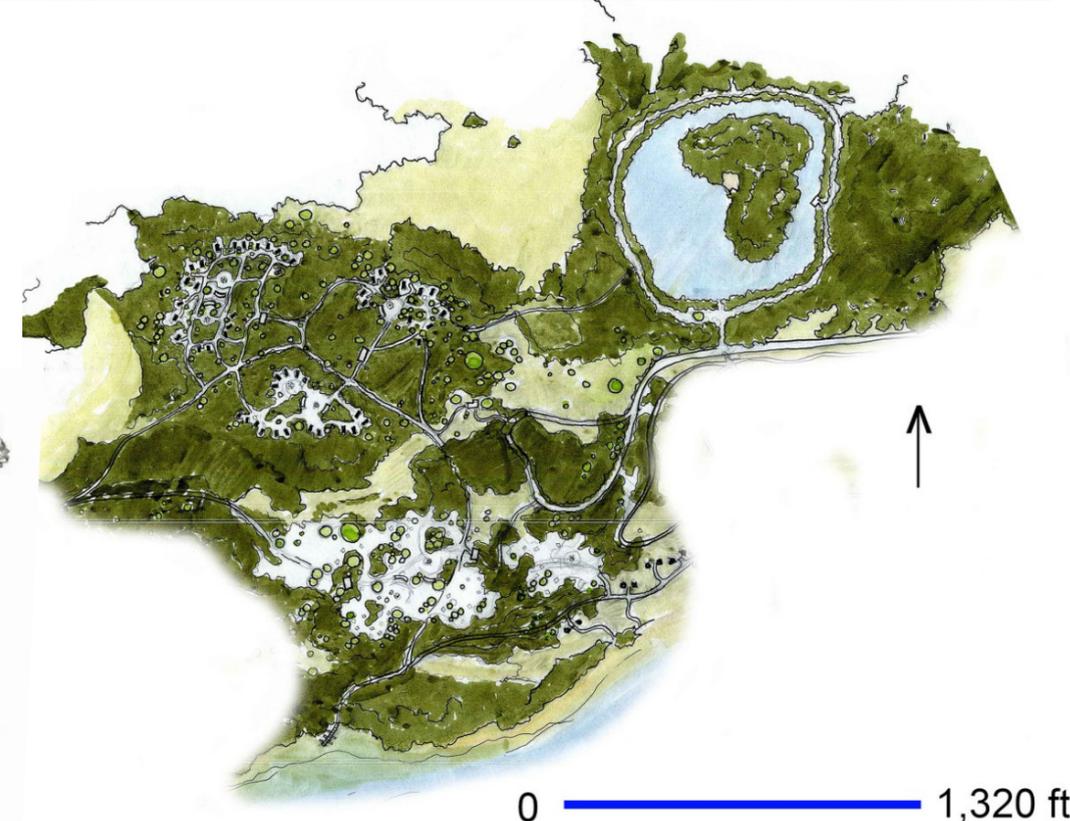
- hair. — Structured
- Neck. — Ornate
- Top. — Stacked
- Skirt. — Embelished Patterns / Patchwork represent life



Eco Tent



Deconstructed Chickee



0 1,320 ft

2010 Master Plan

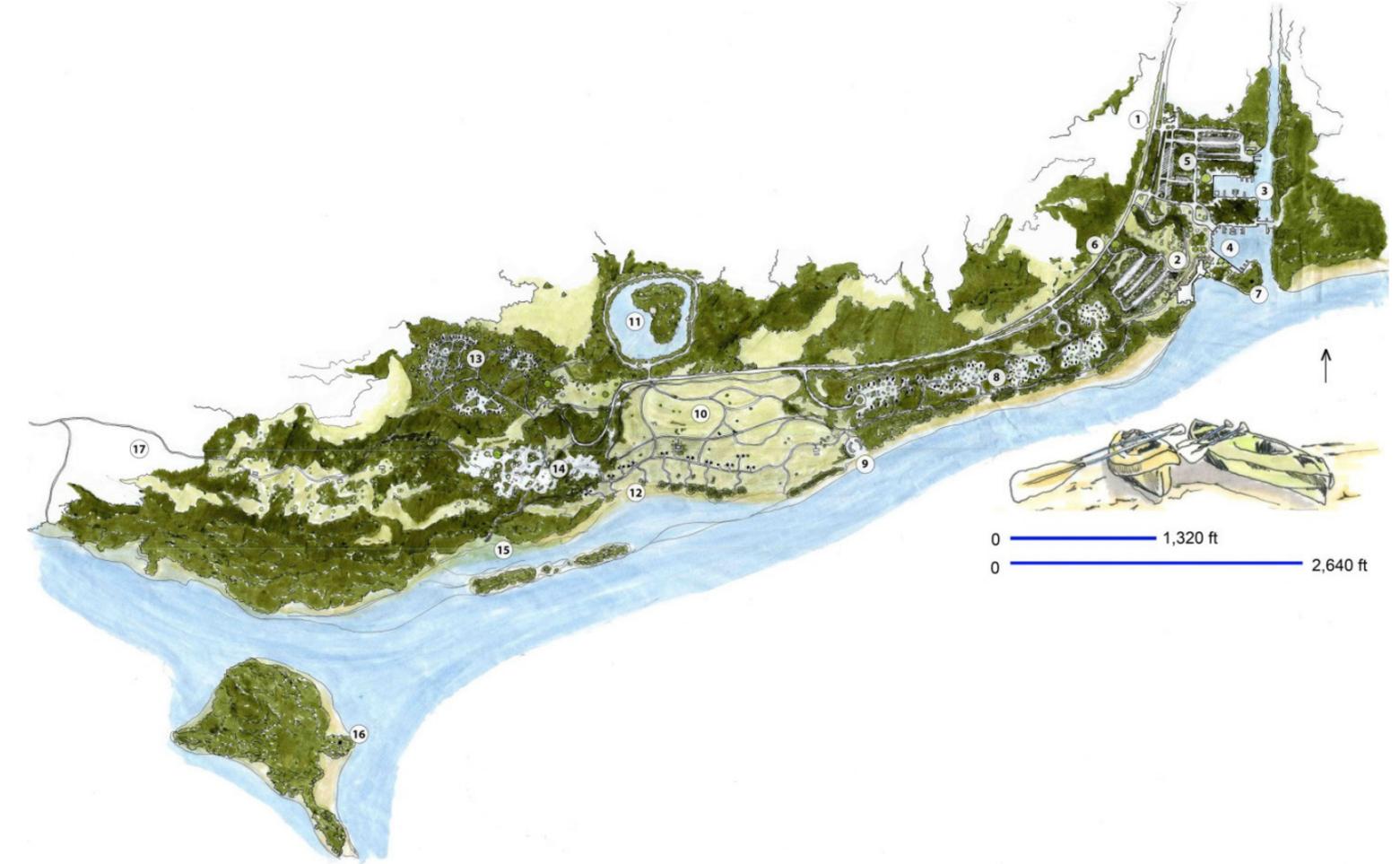


How the Plan Matches up to Ecotourism Principles

- High
- ◐ Medium
- Low

- Minimize impact,
- Build environmental and cultural awareness and respect,
- Provide positive experiences for both visitors and hosts,
- Provide direct financial benefits for conservation,
- ◐ Provide financial benefits and empowerment for local people,
- Raise sensitivity to host countries political, environmental, and social climate

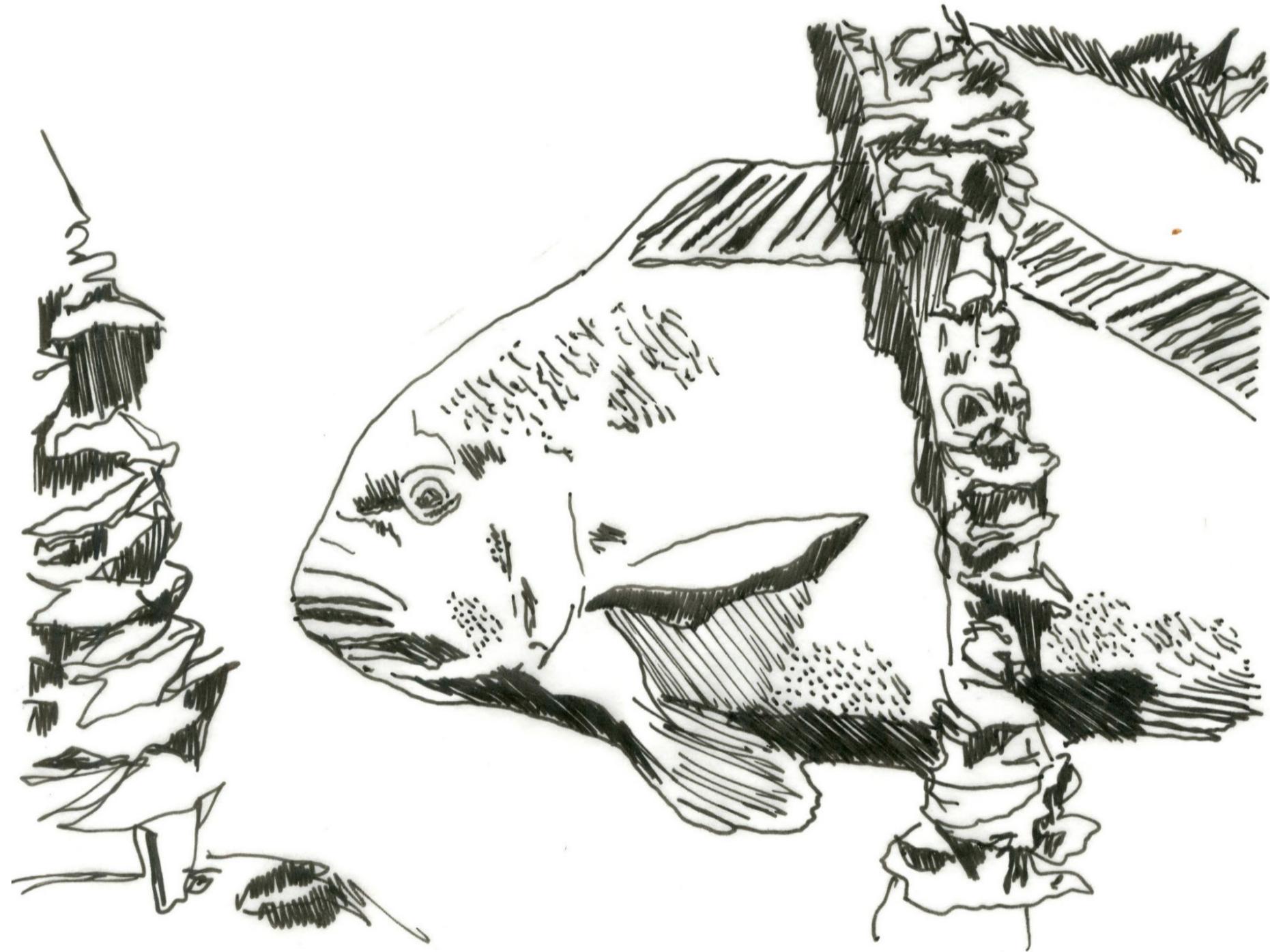
The Rookery at Flamingo



How the Plan Matches up to Ecotourism Principles

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Conclusion

Using ecotourism as a planning framework established a basis of principles and guidelines that influenced the 2010 master plan review as well as the ecotourism alternative. The 2010 master plan review revealed efforts made toward conservation with little regard for interpretation and community. The program areas studied help target specific concerns that ultimately lead to opportunities within the site.

The ecotourism alternative takes a more cohesive approach to the integration of conservation, interpretation, and community from a planning level. The alternative provides increased visitor service with the proposal of a new trail system and canoe/kayak access to Bradley Key, a wider range of overnight accommodations, and

preservation of the coastal wilderness environment through soil enrichment and vegetative restoration. The increased visitor services as well as unique ecolodge facilities will increase local job opportunities through the construction of the structures, the large undertaking of restoration on the site, and the additional ranger/concession positions with the running of the shuttle, the lodge, and canoe/kayak deck near the walk-in tents. Also potential positions could be walking guides that lead visitors to Cape Sable where they could then begin a guided boat tour and primitive camping experience or 'Gladesmen' local guides that take small groups into the back country waters for a unique boating trip and floating house boat experience.

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