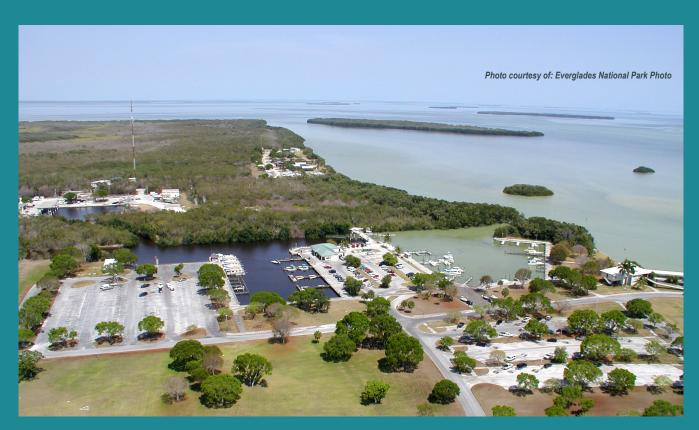
Appendix D

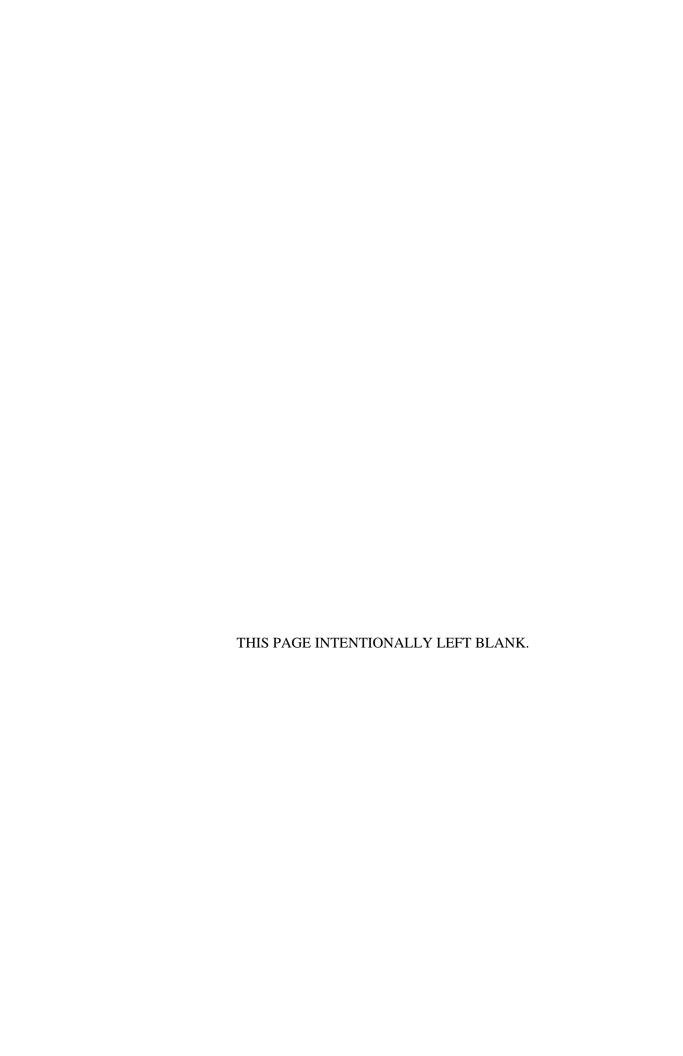
HNTB Transportation Plan



EVERGLADES NATIONAL PARK DRAFT

FLAMINGO COMMERCIAL SERVICES PLAN/ENVIRONMENTAL ASSESSMENT







Transportation Planning in Support of the Commercial Services Plan

Prepared by

HNTB Corporation

for the National Park Service

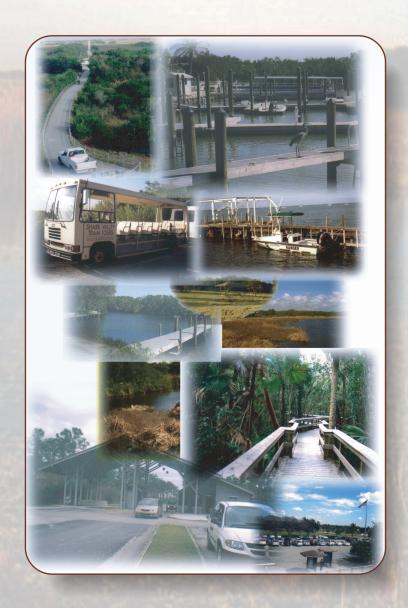




TABLE OF CONTENTS

1.	OVERVIEW	2
1.1.	Description of Commercial Services Plan	2
1.2.	Description of Transportation Analysis	3
2.	EXISTING CONDITIONS	4
2.1.	Existing Facilities	4
2.2.	Parking Supply	4
2.3.	Roadway System	9
3.	FUTURE CONDITIONS	12
3.1.	Alternative Facility Configurations	12
3.2.	Transportation Infrastructure	13
	re 2-1 Flamingo Area Parking Inventory	
	re 3-1 Visitation by Month of Year	
-	re 3-2 Visitation by Day of Peak Month	
. igui		
	LIST OF TABLES	
Table	e 2-1 Existing Parking Inventory	5
Table	e 3-1 Proposed Facilities under Alternative Concepts	13
Table	e 3-2 Parking Demand – Alternative A	14
Table	e 3-3 Parking Demand – Alternative B	15
Table	e 3-4 Parking Demand – Alternative C	15
Table	e 3-5 Average and Peak Parking Demand by Alternative	19



1. OVERVIEW

Everglades National Park has initiated a Commercial Services Plan (CSP) to formulate a suite of facilities for use by park visitors and which will be commercially viable for a concessioner. The damage caused by the hurricanes of 2005 and the long-term aging of Flamingo have created a need for improvements to meet the needs of today's visitors and to create a vibrant park in which the natural resources can be fully appreciated.

The commercial services plan is examining alternative facilities, both in numbers and activities that they would support. The emphasis is on creating facilities that are economically viable. This study supports that effort by enhancing understanding of the transportation and parking implications for those facilities.

Today, Flamingo's commercial services are comprised of lodging in the form of RV and tent sites (Flamingo Lodge has been closed for more than two years but had historically offered motel-like lodging accommodations), recreational, and retail operations supported by a limited network of roads and parking lots. Use of the transportation infrastructure has evolved over time. New standards apply and vehicle requirements have changed. For example, boats launched at Flamingo today are appreciably larger than when Flamingo was built more than 40 years ago and parking spaces for boat trailers are no longer sufficient. Legal traffic movements and roadway pavement are no longer consistent with new traffic patterns.

Tourism is expected to continue to grow in Florida and Everglades National Park will see an increasing number of visitors. Ideally, additional visitors can be accommodated without an increase in pavement, either for roads or parking. This study examines the requirements for efficient transportation and traffic operations at Flamingo, including maximizing the utility of any impermeable surface and the best means of reducing future requirements.

1.1. Description of Commercial Services Plan

Everglades, as is true of all National Parks, operates with the goal of managing the resources within the park. The plan, currently in development, will likely reinforce the natural environment and seek means to open this unique setting to visitors in a manner that preserves the resources. Visitors would be able to enjoy the park from many vantage points and at various levels of depth.

The commercial services plan becomes more specific in the types of facilities that will occur within the Flamingo Area, just one portion of the park. The commercial services plan is currently examining three alternatives.



<u>Alternative A – No Action</u> – This plan assumes that concessioner facilities are not rebuilt and minimal reinvestment is made. The concessioner would operate existing camping, marina, and tour facilities and make minor repairs.

<u>Alternative B – Updated and Sustainable Approach</u> – The main components of Flamingo are similar to the pre-hurricane conditions but innovative and sustainable design and operations approaches will be applied. Significant capital investment will be applied to the rebuilt facilities.

<u>Alternative C – Enhanced Flexibility of Concessions Operations</u> – This alternative is intended to account for the seasonality of the area and appeal to a broader audience of visitors.

Regardless of the outcome of the Commercial Services Plan, the goals of this project are to:

- Determine the appropriate overall mix of necessary and appropriate commercial services.
- Establish the framework for future decisions and implementation of the CSP.
- Establish the character and level of activity within the Flamingo area based on need, expectation, economic feasibility, and resource implications.
- Continue a wide range of related visitor experiences.
- Provide specific information necessary to develop and issue concession contract(s) at Flamingo.

1.2. Description of Transportation Analysis

The transportation analyses in this report examines the transportation infrastructure — both roadway and parking — that would be needed to support the various CSP alternatives. Alternative transportation modes, as a means of reducing the needed for some roadway and parking, are also addressed.

The parking analysis identifies the number of parking spaces by use and therefore by location, that will support the average and peak period demand of the facilities within each alternative. Parking demand is based upon information in the CSP Financial Analysis, industry standards, and professional judgment of the study team.

The roadway analysis is a subjective assessment of the relative efficiency of the limited network in Flamingo. It examines the geometry but not pavement condition and seeks to reduce impermeable surface without inhibiting travel within the park.



2. EXISTING CONDITIONS

Flamingo is one of the key sites for visitors in the Everglades National Park that offers recreational activities such as camping, fishing, kayaking, canoeing, etc. Additional facilities such as the Flamingo Lodge and the Cottages were available for visitors staying overnight. These facilities were damaged significantly as a result of the Hurricanes Katrina and Wilma in the year 2005 and have not been operational since that time.

2.1. Existing Facilities

Prior to the hurricanes in the year 2005, Flamingo provided marked camp grounds (A Loop - 55 units, B Loop - 58 units, C loop - 56 units, Walk-ins - 65 sites, and Group - 3 sites), recreational vehicles (RV) sites (T Loop - 66 units), a Visitor Center that included a Restaurant and a Gift Shop, Flamingo Lodge (74 rooms), Cottages (24 units), and a Marina Store. Currently, the Flamingo Lodge, the restaurant, the gift shop, and the cottages are closed due to the damage caused by strong winds and storm surges from the hurricanes. The cottages are being demolished. The camp grounds and the Marina Store are operational.

2.2. Parking Supply

The existing parking supply at Flamingo was inventoried in July 2007 to estimate the available parking that may be useful for future development at this location. This inventory takes in to account the parking that was available for all the facilities that were present prior to the hurricane damage. Table 2-1 along with Figure 2-1 provides a summary of the parking inventory.



Table 2-1 Existing Parking Inventory

Existing Facility	# of Units	# of Regular Parking Spaces	# of Boat Trailer Parking Spaces	Paved Area with Landscap ing (square feet)	# of possible regular parking spaces =Area/ 350
Camping (A Loop)*	55	55			
Camping (B Loop)*	58	58			
Camping (C Loop)*	56	56			
RV Sites (T Loop)*	66	66			
Walk-in Sites†	65	100			
Group Sites†	3	100			
Flamingo Lodge†	74	120			
Cottages/Cabins†	24	30			
Total - Lodging	401	485			
Eco Pond†	-	25	-	-	-
Marina Parking	-	36	80	140,000	400
Visitor Center/ Restaurant/ Gift Shop	-	184	60	280,000	800
Total Day Activity Parking	_	245	140	420,000	1,200
Grand Total	401	730	140	420,000	1,200

^{*} Each camping space has its own parking space

Notes:

- 1. Total number of parking spaces at the visitor center and marina store that are being currently being used by the visitors of the park are 220 regular parking spaces that include 8 handicap parking spaces, 6 parking spaces reserved for National Park Service personnel and 140 Boat Trailer parking spaces.
- 2. Paved area with landscaping is the approximate area, calculated based on the aerial map, on which the parking lots of the corresponding facilities exist. The number of possible parking spaces is an approximate estimation of the parking spaces that can be accommodated in this area.
- 3. The typical regular parking space is 10 feet wide and 16 feet long. The trailer parking spaces near the visitor center were 12 feet wide and 37 feet long. The trailer parking spaces near the Marina were 10 fee wide and 48 feet long. All trailer parking spaces were angled.

[†] Approximate number of parking spaces computed based on the measurements of paved area in the vicinity of these sites.

HNTB Prepared for:
National Park Service





Typical parking space at the camp site in A, B and C loops.

Camp sites and RV sites (A Loop, B Loop, C Loop and T Loop) – Each site has one parking space. The angle parking space for each camp site and one-way roadway configuration leading to the parking space assumes that the vehicle will be parked front-in. This configuration may be backwards considering that campers may back their vehicles into the space to have an easy access to their vehicle trunks. The camp sites are located more than one-mile away from the visitor center complex and the marina. A majority of the recreational activities such as nature cruises, kayak rentals, etc. are

facilitated near the visitor center and the marina. This distance between the camp sites and the visitor center is likely to generate some internal auto trips increasing the parking demand at the visitor center. Alternatives such as bicycle facilities (including bike lanes) may be considered to reduce such auto trips.

Eco Pond – Paved area on the north side of the main park road accommodates approximately 25 parking spaces. There is no signage prohibiting parking on the south side of the road. During a peak season, there is a possibility that visitors will park in the grass area on the south side of the road when the parking area on the north side is fully occupied. The park should consider alternatives for handling such overflow parking.



The paved area on the right side is the parking available for eco pond.



The paved areas near the walk-in/group camp site locations.

Walk-in/Group Camp Sites – Paved areas on either side of this roadway seems to accommodate the parking requirements for these camp sites. These parking spaces are efficient considering each parking space is utilizing approximately 200 square feet compared to the typical 350 square feet used for estimating the number of parking spaces that can be accommodated in a given area.



Cottages – Approximately 30 parking spaces are available for the original 24 cottage units. Some of these cottages have already been demolished. The estimate of the parking spaces is based on the paved areas in the vicinity of the cottages. This parking seems to be more than adequate assuming that there is only one vehicle per cottage and all cottages are occupied. Approximately one parking space is required per hotel room based on the ITE Parking Generation Manual and approximately 1.25 parking spaces are required per room based on the ITE Transportation and Land Development Manual. Given the nature of activity in the park and the availability of parking within close proximity to the proposed site for the lodge and cottages, the more conservative 1.00 spaces per unit was selected for use in this analysis.



Excessive pavement on the western end of the Flamingo Lodge parking lot.

Flamingo Lodge – Approximately 120 parking spaces are available for the 74-room lodge. The estimate of the parking spaces is based on the paved areas in the vicinity of the lodge since spaces were not marked spaces and locked wheel stops that could be used to delineate the parking spaces. There is excessive pavement on the western end of the parking lot. There is also a paved loop that does not seem to serve anything.

Visitor Center Complex – There are two parking lots in front of the visitor center. The west parking lot is a parking lot for regular vehicles only. The east parking lot has a mix of regular parking and boat trailer parking. The boat trailer parking in this parking lot primarily serves the visitors that wish to launch their boats into Florida Bay. A segregation of the boat trailer parking and regular parking should be considered. These parking lots also include eight handicap parking spaces and six parking spaces reserved for the National Park Service.



East parking lot at the visitor center complex.

Marina – Approximately 36 regular parking spaces are provided in front of the marina store and about 80 boat trailer parking spaces are provided in the parking lot located just north of the marina. This boat trailer parking lot primarily serves the visitors that wish to launch their boat into Whitewater Bay.



Assuming that approximately 350 square feet of area is required for a typical regular parking space the number of regular parking spaces that can be accommodated in the parking lots near the visitor center and the marina were estimated. These estimates are also shown in Table 2-1. Figure 2-1 also shows the area that was used in calculation of these parking spaces. It can be clearly seen from the table that more regular parking spaces can be accommodated within these parking lots. The existing parking spaces are probably less in number because of bigger parking spaces, bigger parking aisles and large green areas.

The typical existing regular parking space is about 10 feet wide and 16 feet long. The typical boat trailer parking space near the Visitor Center is approximately 12 feet wide and 37 feet long. The typical boat trailer parking space near the Marina is approximately 10 feet wide and 48 feet long.

Anticipated boating use is not explicitly addressed in the ERA report. Instead, the report recognizes that some day and overnight visitors may haul boats, which will need to be parked within Flamingo. The adequacy of the current boat parking supply therefore, can only be subjectively assessed.

2.3. Roadway System

The Flamingo area is approximately 38 miles south of the park entrance. The park road leading to the Flamingo area is a two lane undivided roadway with a posted speed limit of 55 miles per hour (mph). The posted speed limit within the Flamingo area is 35 mph.

At the entrance to the Flamingo area, the roadway widens to a four lane roadway with grass median for about one-half mile. The lane widths are approximately 10.5 feet based on field measurements which are reasonable. Just past the Flamingo Lodge entrance, the roadway narrows back to a two lane undivided roadway. This section of the roadway past the entrance to the Flamingo Lodge primarily serves Eco Pond, the cottages, the camping sites and the RV site locations. The entrance to the general camping sites is more than one-mile to the west from the Marina Area and the Visitor Center Complex.

There are five driveways to the main park road that serve the parking lots to the Visitor Center Complex and the Marina. These driveways are all two lane two-way roadways. From the east, the first driveway provides a direct access to the boat trailer parking lot adjacent to the Marina store, the boat ramps into Whitewater Bay, and the fish cleaning station. The second driveway provides access to the Marina store, the east parking lot of the Visitor Center, and the boat ramps into Florida Bay. The third driveway



Driveway leading into the west parking lot.



provides access to the east parking lot of the Visitor Center. The fourth and fifth driveways provide access to the west parking lot of the Visitor Center. All these parking lots that serve the Visitor Center and Marina are internally connected typically with two lane two-way roadways.

The third and fourth driveways are lined with the buildings of the visitor center. This blocks the view of Florida Bay which may have been the purpose of these two driveways. Also, the roadway (see Figure 2, apparent superfluous roadway) around the parking lots is redundant. Connecting the east and the west parking lots in front of the visitor center may be considered to eliminate this extra pavement running along the full length of the visitor center frontage.

The paved loop at the end of the roadway leading to the walk-in/group camp sites to access the restrooms seems excessive. The pavement marking on the paved loop at the end of the roadway leading to the walk-in/group camp sites also violates the driver expectancy. This loop is also missing the oneway signs. In general, traffic signs should be erected in conformity with *Manual on Uniform Traffic Control Devices* (MUTCD). While the nature of travel within the park and aesthetics may influence selection and placement, conventional practice, as recommended in the MUTCD should be used to the extent



Paved loop at the end of the access road to the walk-in/group camp site locations.

practical. The roadway width of the access road to the walk-in/group camp locations is narrow. This two-way roadway is only 12 feet (two-way). The other two-way roadways in the Flamingo area are approximately 21 feet which is reasonable.



The intersection of the main park road at the access road to the walk-in/group camp site locations.

The intersection of the walk-in/group camp road and the main park road should preferably be a 90-degree T-intersection. This will reduce the excessive pavement as a result of the angle between the intersecting roadways. The configuration of roadways at the access into the camp sites and the RV sites results in excessive pavement. A new roadway configuration may be considered to reduce the pavement. Perhaps providing a direct access roadway running west into the RV site location may reduce some pavement considering that the vehicles accessing the RV sites will need greater turning radius.



At the west of the Flamingo Lodge parking lot, there is excessive pavement area which is almost 90 feet wide with 90-degree parking on only one side. At the eastern end of the same parking lot, it is 40 feet wide with parking on one side which is reasonable. Also, the paved loop at the west end of the lodge parking lot is redundant.

As previously mentioned, there is a half-mile four lane roadway section at the entrance to the Flamingo area. The four lane section seems to be excessive. To accommodate turning vehicles into the driveways, a three lane section with a center two-way left-turn lane or left turn bays in the median area may be considered. A portion of the four lane cross section can be retained as bike path while the remaining portion can be restored as non-paved area. An alternate to the bike path along the main roadway can also be considered along the Florida Bay to



Entrance to the Flamingo Area

provide for a scenic ride. Stabilization of the soil can be considered for this bike path along the bay to reduce environmental impacts. The park should reconsider the entrance treatment in light of UniGuide guidelines and local operational practices.



Road from T loop to A loop. Note the sign indicates no left turn, but that is not very clear.

The roadways in the camp site locations and the RV site locations (A Loop, B Loop, C Loop and T Loop) are not signed one-way but seems to be operating as one-way roads. Consider upgrading the signage in Flamingo Area to MUTCD standards.



3. FUTURE CONDITIONS

Three alternative configurations were developed for the Flamingo Area. Each represents a different mix of facilities and activities with differing requirements on the transportation infrastructure.

Alternative A represents the no-action alternative and assumes that the concessioner lodging, restaurant and retail facilities are not rebuilt. Only minimal investment is made in the area. Alternative B is an updated and more sustainable approach to Flamingo. The main components of this alternative would include those facilities that previously existed at Flamingo. Alternative C offers a new approach to Flamingo. The enhanced facilities would offer appeal to a broader audience, with flexibility built into the infrastructure.

The transportation infrastructure requirements for each of these scenarios are presented in the following sections.

3.1. Alternative Facility Configurations

The three alternatives, as described in the ERA Report entitled *Everglades National Park Commercial Services Plan – Financial Analysis*, are summarized in Table 3-1, below.



Table 3-1 Proposed Facilities under Alternative Concepts

	Alternative A	Alternative B	Alternative C	
	Number	Number	Number	Units
Lodging		40		
Lodge	0	40	30	Rooms
Cabins	0	36	24	Cabins
Tent Camp	237	100	130	Sites
RV w/electric	0	22	40	Sites
RV w/o electric	66	43	0	Sites
Eco-tent	0	0	40	Tents
Houseboat	6	6	6	Boats
Floating Camp	0	0	20	Sites
Total Lodging	309	247	290	Lodging Units
Retail				
Marina Store	1	1	1	Store
Gift Shop	0	1	1	Store
Total Retail	1	2	2	Store
Marina	17	25	25	Boat slips
Food Services				
Restaurant	0	1	1	Facility
Lounge	0	1	1	Facility
Snack Bar	1*	0	1	Facility
Total Food	1	2	3	Facilities
Tours				
Fishing Charter	0	1	1	Operation
Kayak/ Canoe Rental	1	1	1	Operation
Backcountry Outfitter	0	0	1	Operation
Sailing Cruise	1	1	1	Operation
Bicycle Rental	1	1	1	Operation
Snake Bight Tram	0	1	1	Operation
Total Tours	3	5	6	Operations

^{* -} Under Alternative A, the snack bar is contained within the marina store and is not a stand-alone operation.

3.2. Transportation Infrastructure

Each of these proposed facilities represents a different level of parking need, which is dependent both on the type of facility and the intensity of use. The ERA Financial Analysis and historic visitation levels were used as a basis for estimating visitation. Combined with industry sources and professional judgment, an estimate was made on the parking demand associated with each of these proposed facilities.

All activities at Flamingo are proposed to be open to the public year-round, with the exception of the new lodge and house boats, which are proposed for 6 months of operation per year. Occupancy rates at the lodging facilities vary between 30 and 70 percent, depending upon the particular facility. For all other activities, an average rate of use was estimated based upon revenues and average sales, if direct estimates of visitation were not available.



Table 3-2 shows the parking demand for each Alternative. This number includes the facility-specific parking demand as well as the demand estimated for non-overnight visitors, estimated by ERA at 90 percent of total visitation.

Overnight visitors are estimated to be approximately ten percent of all Everglades National Park visitors or approximately 40 percent of visitors to the Flamingo Area. Based upon these ratios, a total daily visitation to Flamingo was estimated.

The distribution of parking demand between the various day uses is shown in the same tables although it is understand that day visitors and some overnight visitors will participate in the activities at one or more of the facilities listed in the table. It is also understood that visitors will not make separate trips to each of these facilities. The tables below indicate the parking requirements for each operation as if it were a stand-alone facility. Shared use of the parking for the various facilities is presented in Table 3-5.

Table 3-2 Parking Demand – Alternative A

Alternative A	Vehicles/ day	Daily Turnover (vehicles per space)	Parking Demand	Comments
		'		Assume all lodging parking
Lodging	190	1	190	accommodated near lodging facilities
Retail	371	10	37	
Marina	1	1	1	Includes parking for boaters using the marina slips. While many boaters may enter Flamingo from the water, and therefore not bring a car, others will drive in towing a boat and park the car in the parking lot and the boat in the marina slip. The "worst case," shown here, assumes that boaters will park a car and use the slip.
Food Comices	40	_	20	Assumes all food services parking
Food Services	40	2	20	accommodated
Tours	59	2	30	Assumes half-day stay by tour visitors
Total	661	-	278	



Table 3-3 Parking Demand – Alternative B

Alternative B	Vehicles/ day	Daily Turnover (vehicles per space)	Parking Demand	Comments
				Assume all lodging parking
Lodging	138	1	138	accommodated near lodging facilities
Retail	825	10	82	
Marina	3	1	3	Assumes all-day stays by marina users
				Assumes all food services parking
Food Services	99	2	49	accommodated
Tours	95	2	47	Assumes half-day stay by tour visitors
Total	1,160	-	319	

Table 3-4 Parking Demand – Alternative C

Alternative C	Vehicles/ day	Daily Turnover (vehicles per space)	Parking Demand	Comments
		-		Assume all lodging parking
Lodging	139	1	139	accommodated near lodging facilities
Retail	862	10	86	
Marina	3	1	3	Assumes all-day stays by marina users
				Assumes all food services parking
Food Services	149	2	74	accommodated
Tours	139	2	70	Assumes half-day stay by tour visitors
Total	1,292	-	372	

Parking at Flamingo would best be accommodated by assuming that all parking associated with lodging will be accommodated at the various camping and room locations while all other visitors will be accommodated at the visitor and marina parking areas.

Good parking practices suggest that a maximum occupancy of 85 percent be assumed for planning purposes. While higher occupancy may occur during peak periods and peak seasons, this threshold would limit driver frustration and illegal parking.

Seasonal Variations

A review of visitation statistics over the past two decades indicates that visitation in the peak month of the year — typically January, February, or March — is approximately 150 to 175 percent of the average monthly visitation (see Figure 3-1). Creating sufficient parking during the peak month would entail more a combination of increasing the parking supply from the above estimates and increasing the maximum occupancy rate of the parking supply.



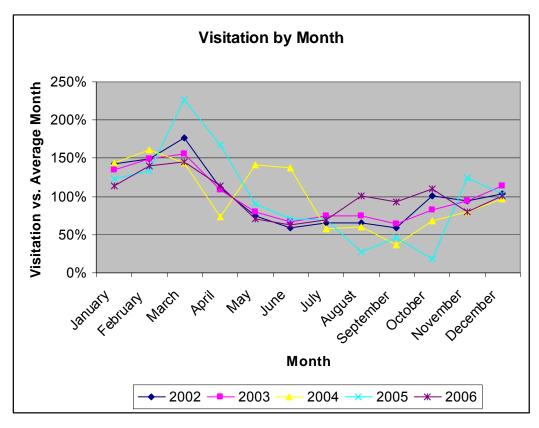


Figure 3-1 Visitation by Month of Year

Peak Day Variations

Given the seasonal nature of activities at the Park, visitation will vary throughout the year. Activity on the peak days of the year is appreciably higher than the average day. Parking must appropriately accommodate the peak demand in a manner that avoids adverse impact on the Park; visitors do not have alternative parking options, as might be true in an urban area.

Figure 3-2 shows that the peak days of the peak month represent approximately 150 percent of the average for the peak months of two recent years. See Figure 3-2.



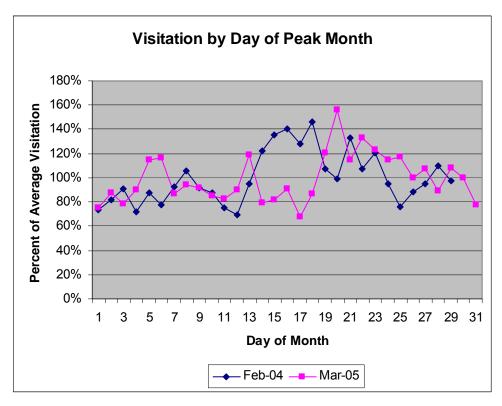


Figure 3-2 Visitation by Day of Peak Month

Taken in conjunction with the seasonal variations, it would appear that parking demand for the peak day of the peak month would represent more than two and one-half times the average day visitation.

Anticipated Growth in Visitation

Annual visitation to Everglades National Park exceeded one million annually, for many years prior to 2006. The effects of Hurricane Wilma had a significant effect on visitation; the alternative Flamingo concepts should reverse that trend. In fact, the ERA financial analysis suggests that overall visitation would increase by nearly 60 percent from the 2006 visitation by 2030.

Average daily visitation at Everglades National Park in 2006 was approximately 2,700 visitors. Based upon total visitation at the Park in 2006 and projected visitation in 2030, we can expect nearly 5,000 visitors on an average day. This exceeds the daily projections calculated above by as much as 20 percent but may be within the range of a reasonable forecast of future use within Flamingo.

Distribution of Parking Supply

The parking supply for overnight visitors should be sufficient to accommodate 100 percent occupancy at the respective lodging sites. Parking demand for the lodge and cabins is estimated to be 1.00 spaces per room. 100 spaces per unit will permit parking for a fully occupied lodge and cabins. Parking for any overlap between guest arrivals and departures would be accommodated in the parking lot by the marina.



The various camping units operate differently from hotel/motel facilities as a new guest cannot enter the camp site until the prior guest has decamped, loaded the vehicle, and departed. Overlap parking would need to be accommodated elsewhere in the park.

Parking for the other facilities should be sufficient such that average demand equals 85 percent of the parking supply and that peak demand equals 95 percent of the parking supply, exclusive of parking for overnight lodging.

Parking for Internally-Generated Trips

The distance between the westernmost camping facilities and the visitor center is sufficiently great such that many visitors may be inclined to make the trip by automobile. The result of this travel would be to increase the demand for parking as a space would be required both at the camping area and at the visitor center.

A shuttle bus service that travels around Flamingo could offer an alternative to the private automobile. Shuttle service would need to be frequent as visitors would not likely wait more than 10 minutes before making the trip by car. Shuttle service might not be needed as a means of reducing parking demand during off-peak season as the parking supply could be established to meet peak periods and therefore offer a surplus in off-peak times.

Another alternative for internal travel is a system of "yellow bikes," currently being considered by the Park. Either as part of the entry fee or for a separate rental fee, visitors could make use of a fleet of bicycles for use while staying at the Park. The distance across Flamingo and the level terrain is ideal for bicycles. Reductions in internal trips between the camping areas and other Flamingo facilities can be expected with the introduction of shuttle buses or bicycles. While no firm quantification is possible given the current level of detail for the facilities, visitor behavior, and service characteristics of the shuttle or bikes, a reduction on the order of 5 percent would be a reasonable estimate.

Table 3-5 shows the average day and peak day parking demand for overnight and day visitor parking. Overnight parking is based upon the average occupancy of each lodging facility within each alternative. Day visitor parking is based on the estimate that overnight visitors represent 40 percent of total visitors. The sum of these parking demands would cover the various demands generated by each of the activities within Flamingo, recognizing that most visitors will take advantage of more than one facility but park in only one parking space.

The peak parking demand estimates shown in Table 3-5 are based upon a requirement of 1.00 spaces per lodging unit rather than the industry standard of 1.25 parking spaces per lodging unit. Given the nature of activities in Flamingo, the lower requirement will suffice. It should be noted that the estimate



for lodging demand using the 1.00 spaces/unit requirement exceeds the increase in general visitation, ensuring adequate parking at the lodging facilities.

Table 3-5 Average and Peak Parking Demand by Alternative

	Alternative	Alternative	Alternative	
Parking	Alternative	Alternative B	C	Comments
Overnight (Lodging) Demand Day Visitor Parking	190	138	139	Based on average daily occupancy of all lodging facilities Assumes overnight visitors represent 40% of total
Demand	285	207	208	visitation
Peak Day Visitor Parking Accumulation	175	127	128	Maximum accumulation of day visitors – Average day
Total Parking Accumulation – Average Day (Overnight plus Peak Day Visitor Accumulation)	365	265	267	Maximum accumulation of daytime and overnight visitors on an average day
Peak Day Overnight (Lodging) Demand	309	247	290	Based on peak day of peak month occupancy of all lodging facilities
Peak Day Visitor Parking Demand	787	571	575	Assumes 75% increase in visitation during peak month and 50% increase in peak day of peak month; 95% rather than 85% occupancy as maximum occupancy.
Peak Day Visitor Parking Accumulation	483	350	353	Maximum accumulation of day visitors – Peak day of peak month
Total Parking Accumulation – Peak Day(Overnight plus Peak Day Visitor Accumulation)	792	597	643	Assumes full occupancy of all lodging units and maximum accumulation of daytime visitors for the peak day of the peak month.