TRANSIT COMMITTEE

October 10, 2007

Prepared by: Nelson Diaz

EXHIBITS LIST

NO.	DATE	ITEM #	DESCRIPTION
1	10/10/2007		Memorandum from County Manager re: Changes to the Agenda
2	10/10/2007		Memorandum from Commissioner Heyman re: Absence from meeting
3	10/10/2007	2D	Observation Wheel Analysis
4			
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6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Memorandum

MIAMI-DADE COUNTY

Date: October 10, 2007

To: Honorable Chairperson and Members
Transit Committee

From: George M. Burgess
County Manager

Subject: Requested Changes to the
Transit Committee Agenda

Additions

8G SUPPLEMENT

073024 SUPPLEMENTAL REPORT RE: AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE AT MIAMI-DADE TRANSIT (MDT) BUS STOPS AND PASSENGER SHELTERS

Deferrals

4I

072979 RESOLUTION APPROVING AN AMENDMENT TO THE BOARD REQUESTED MAJOR ROADWAY AND NEIGHBORHOOD IMPROVEMENT PROJECTS LIST IN EXHIBIT 1 OF THE PEOPLE'S TRANSPORTATION PLAN TO DELETE THE SW 87 AVENUE, FROM SW 216 STREET TO SW 168 STREET PROJECT AND ADD THE OLD CUTLER ROAD, FROM SW 97 AVENUE TO SW 87 AVENUE AND CARIBBEAN BOULEVARD, FROM CORAL SEA ROAD TO SW 87 AVENUE PROJECTS (Public Works Department)

MEMORANDUM
BOARD OF COUNTY COMMISSIONERS
COMMISSIONER SALLY A. HEYMAN
DISTRICT 4

TO: Honorable Dorrin D. Rolle, Chairperson and Members of the Transit Committee

DATE: October 11, 2007

SUBJECT: Absence from Transit Committee, Wednesday, October 10, 2007

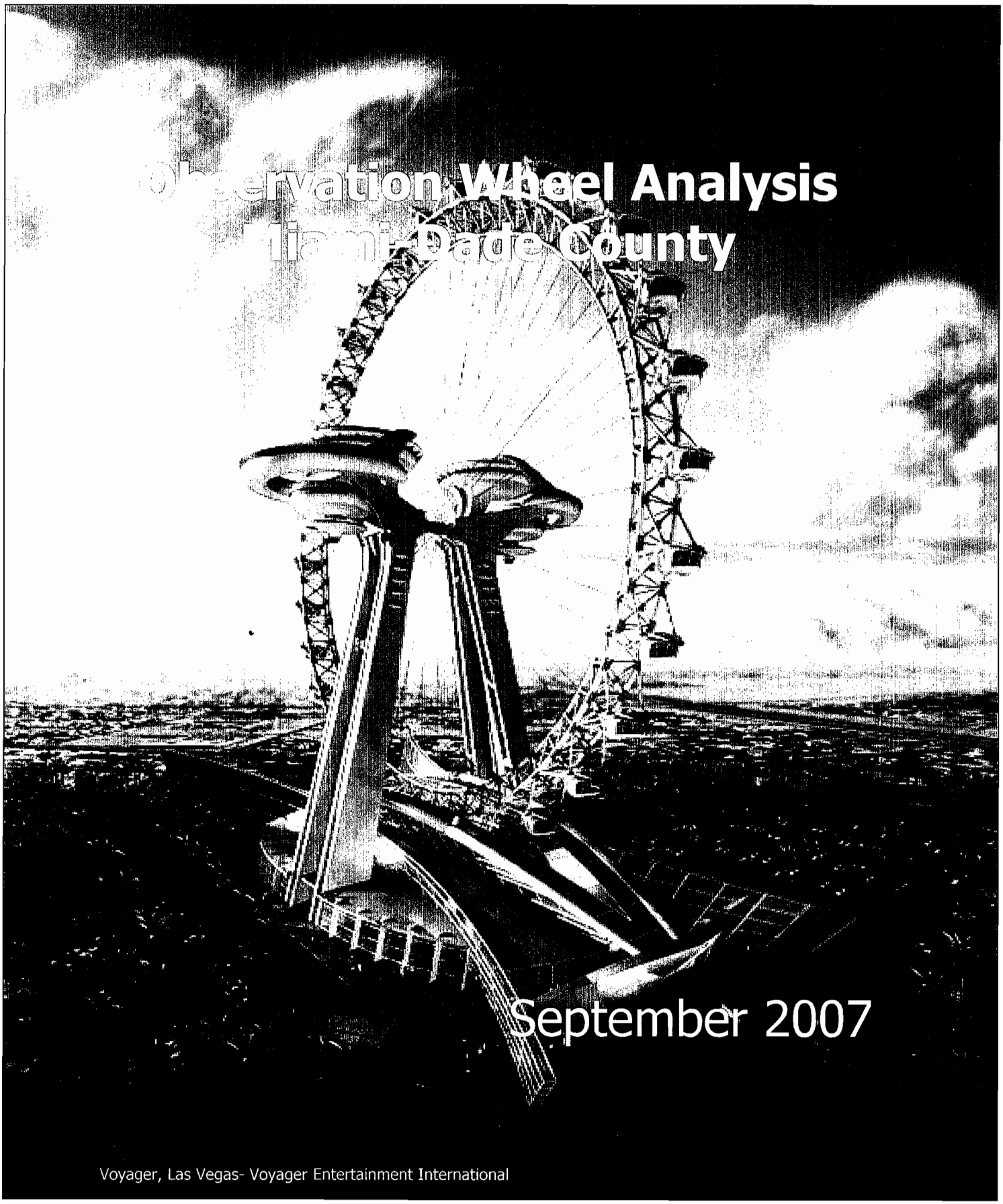
FROM: Mary Ferreiro
Office Manager
District 4

Please be advised that due to medical reasons Commissioner Heyman will not be able to attend the Transit Committee Meeting, Wednesday, October 10, 2007.

Sorry for the inconvenience. Thank you for your attention in this matter.

Cc: Honorable Carlos Alvarez, Mayor
Honorable Bruno A. Barreiro, Chairperson
George Burges, County Manager
Robert Cuevas, County Attorney
Kay Sullivan, Clerk of the Board
Diane Davis, Agenda Coordinator

Observation Wheel Analysis
Miami-Dade County



September 2007

Voyager, Las Vegas- Voyager Entertainment International

Table of Contents

Executive Summary

The success of the London Eye, a 443 feet high Ferris Wheel, in increasing tourism and spurring economic grow in London has created a wave of similar developments around the world. It has been reported that numerous other Observation Wheels (the original name for the wheel built by George Ferris in 1893) are being developed in Singapore, China, Berlin, Dubai, and Orlando, Florida. Since their inception in 1893, these Observation Wheels (Wheels) have been big business generators. George Ferris' Wheel became the centerpiece in the Chicago Columbian Exhibition and provided a 90% return on investment in the exhibition's short timeframe. On average, about 3.5 million people a year, or 10,000 a day, pay approximately $30 for a half hour spin on the London Eye. It is estimated that the Singapore Flyer, currently under construction, will carry about 27,000 people a day at $30 a ride. These new Wheel developments are not only being built based on the success and strengths of the London Eye, but are also working to avoid some of its weaknesses. The new developments try to avoid the slow queue lines that snake around the London Eye by providing additional amenities such as retail shops, restaurants, and other entertainment options for visitors to enjoy while they wait for their flights.

The Great Wheel Corporation is a global venture headquartered in London with offices in Beijing, Shanghai and Dubai. The Great Wheel Corporation, a primary developer of these projects throughout the world, was the only respondent to our requests for information, possibly since our inquiry was presented in very general terms. Nonetheless, we were able to use the general information they provided to conduct some preliminary analysis of locations in Miami Dade County.

Based on the gathered information from the Great Wheel Corporation and additional research performed on similar developments around the world, it is a reasonable assumption that a Wheel would be just as successful in Miami-Dade County through a public/private partnership. The aforementioned ongoing attractions are being privately financed in exchange for the operational rights and associated revenues. The current estimates for these projects range from $10 to $60 million for just a Wheel, to $100 to $200 million for a full development including the Wheel, retail shops, restaurants, and other amenities.

The preliminary analysis of possible locations in Miami-Dade County was based on some basic factors; panoramic views, accessibility to Metrorail/Metromover, availability of bus service, accessibility to major highways, proximity to hotels, and to existing amenities such as restaurants, retail shops, entertainment, etc. One of the most vital factors in the preliminary selection of sites was the type of panoramic view. The importance of location cannot be understated; the view from the Wheel is actually deemed to be more significant than the flight itself. The sites that were identified for possible development are in close proximity to each other and are located within the Downtown Miami and South Beach areas, thereby offering visitors magnificent views of the Ocean and the City skyline.

Introduction

The successful impact of the London Eye on tourism and in reviving London's South Bank has spurred a number of Cities worldwide to give such an attraction great consideration. This report serves to provide some preliminary information as to the viability of constructing a similar project within Miami-Dade County.

General Objectives:

- Provide information regarding existing and planned Wheel developments.
- Delineate the basic elements for determining a proper site for such an attraction.
- Identify and analyze possible sites for the development of a Wheel attraction within Miami-Dade County.

Is should be noted that while an effort was made to contact individuals and companies with relevant experience, knowledge, and information relating to the implementation of a Wheel, it is emphasized that this report is limited in its content, since minimal technical, engineering, or scientific analysis was provided from the contacted individuals. The general information presented in the report was gathered through immediate available resources, as no personal interviews, field visits or inspections were conducted in order to serve the preliminary purpose of this report.

Observation Wheel Background

Past

Ferris Wheel

The Ferris Wheel was conceived, designed, and built by George Gale Ferris (1859-1896). At the time, he was working as a Civil Engineer in Pittsburgh specializing in constructing steel frameworks for bridges and tunnels. When the World's Columbian Exhibition of 1893 was being planned in Chicago, the exhibition's planners wanted something original, daring, and unique with the hope of building a structure to rival the Eiffel Tower which was the centerpiece of the Paris Exhibition of 1889. Inspired, Mr. Ferris sketched a huge, revolving Wheel, which done on a napkin, contained every detail right down to the ticket price. The Wheel, 264 feet high and supported by towers 140 feet high, was modeled after a bicycle wheel. The Wheel would carry 36 passenger cars, each of which could carry 40 to 60 people. Reviewing the design and based on the size of his Wheel, the exhibition's committee dismissed Mr. Ferris as a lunatic. It wasn't until Mr. Ferris found other engineers to endorse his structure as safe and buildable, as well as identified a group of local investors to cover the $400,000 cost of construction, that his plan was accepted. The Wheel became the centerpiece of the exhibition carrying over 1.5 million visitors, which at 50 cents a ride resulted in a $350,000 profit.

The Ferris Wheel would be replicated throughout the world over the next century. The centerpiece of fairs and entertainment grounds, the Ferris Wheel became known as the slow leisure ride at the fair with an aerial view of the area. Preferring to develop more thrilling rides and attractions than the leisure Ferris Wheels, modern day theme parks have bypassed this attraction. As such, neither Disneyland nor Disney World ever planned for a Ferris Wheel. Innovations in technology and structures have allowed roller coasters to go higher and faster than ever before, therefore, these have become the most popular attractions at amusement parks.

Present

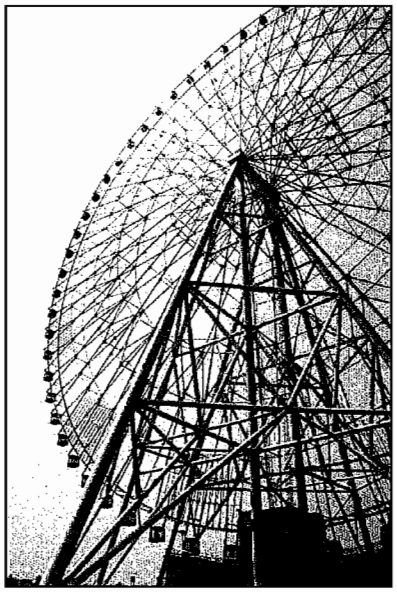
The Millennium Wheel – The London Eye

Although, Londoners like to emphasize that their Wheel is not a Ferris Wheel but rather an observation wheel, its development very much parallels that of George Ferris' Wheel. In the early 1990's, planners in London decided to create a competition for the design of a millennium landmark. Sitting at their kitchen table, husband and wife architects David Marks and Julia Barfield developed their first drawings onto scraps of paper for what would later become the London Eye. Paris' most famous landmark, the Eiffel Tower, the iconic structure which was erected to commemorate the 1889 Paris Exhibition would once again prove to be inspirational. Although the Millennium Contest had no winner and was later scrapped; the Barfield's vision had captured the imagination of many. The couple's idea was simple, yet it would provide London a structure that was both physically beautiful and technologically innovative. The Millennium Wheel would be the largest Observation Wheel to be built at 443 feet high and the only cantilevered structure of its kind. "The Wheel, a universally recognized symbol of time and regeneration, would be a powerful metaphor for the turning of the century and millennium. 'From the beginning we wanted to create something uplifting- something that would delight'."[1] The project, at a cost of $40 million, would take 7 years to complete from the moment its vision was put to paper at the Barfield's kitchen table. The actual construction of the Wheel would last approximately 18 months. Although built against considerable odds and criticism, the London Eye was christened by Prime Minister Tony Blair on New Year's Eve 1999, though it would not be opened to the public until March 2000.

[1] "Vision." London Eye <http://www.londoneye.com>

The enhanced Wheel with 32 air conditioned passenger capsules, each holding 25 passengers carries approximately 3.5 million passengers each year. The attraction rotates at a rate of about 1 mph completing a full revolution in about 30 minutes. The Wheel does not stop to take on passengers; as it rotates at such a slow speed that passengers can easily walk on and off the moving capsules at ground level. However, it is stopped on occasions in order to allow disabled or elderly passengers time to safely board and disembark. The London Eye is operated by Merlin Entertainment and owned by the Toussard Group. British Airways, which provided the original financing for the project, still maintains its corporate sponsorship. As of July 2007, a standard adult ticket cost £15.00 ($30), a child aged 5 to 15 tick cost £7.50 ($15), and children under 5 ride free. There have been several group packages developed to cater to corporate hospitality, weddings and special occasions costing £299 ($595). A "champagne capsule" can be booked, offering exclusive use of one of the capsules together with a host and drinks. The London Eye also caters to weddings, at a cost starting at £1700 ($3375).

The London Eye "has transformed the London skyline and played an important economic role in regenerating the South Bank and maintaining tourism for London."[2] The economic impact of the London Eye translates into attracting approximately 1.5 million additional visitors per year to London, creating over 1000 new jobs and over 30 new businesses. Providing an aerial view of London and its landmarks, it has become the most popular paid for attraction in the world. Like the Eiffel Tower, the London Eye was originally planned to be in place for only a few years, however it has been granted a long term lease and its place among iconic landmarks. The London Eye has become "the way the world sees London."[3]



Star of Nanchang

The ShangHai Amusement Machine Engineering Co., Ltd (SAMECO) has designed and built the Star of Nanchang in the eastern Chinese City of Nanchang, the provincial capital of Jiangxi Province. The Star, currently the world's largest Ferris Wheel, is 82 feet taller than the London Eye, standing at 525 feet. The Star's design is more in line with that of the traditionally known Ferris Wheel; it contains 60 compartments, each carrying 8 people, a total capacity of 480 riders. The total project cost was 57 million yuan ($7.3 million), with the price of

[2] Akwagyiram, Alexis. "History of the London Eye" BBC NEWS. (May 21, 2005)
[3] Ibid

admission at 50 yuan ($6). The Star, which is operated by the Nanchang City Investment and Development Company, opened in May 2006 to very long lines, proving this venture again to be highly successful.

Niagara SkyWheel

Built halfway up Clifton Hill in Niagara Falls, Canada, the tallest Wheel in North America offers the most spectacular view of the Horseshoe and American Falls. The SkyWheel, which opened in June of 2006, stands at 175 feet in height, and

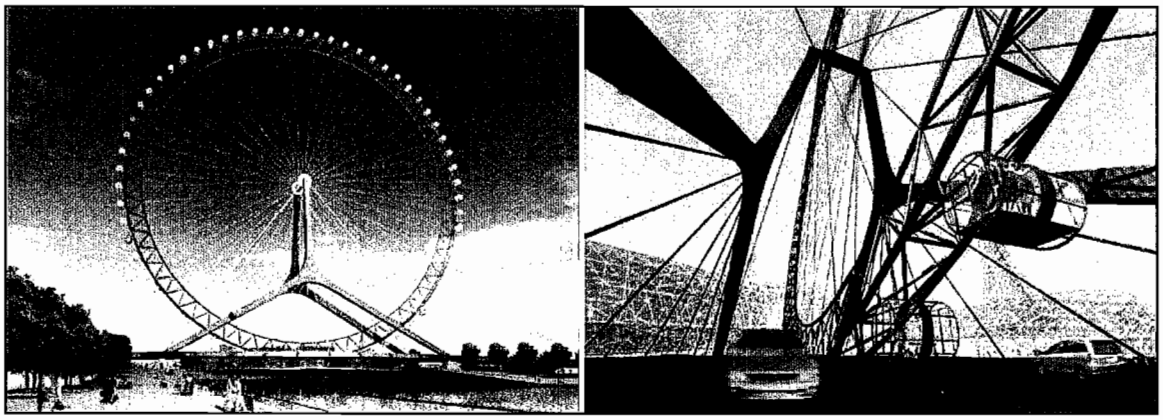
has 42 enclosed and air conditioned gondolas, each holding 6 passengers. The ride lasts twelve minutes with the price of admission being $9.99 for Adults and $5.99 for children. The SkyWheel is located within the Great Canadian Entertainment and Hotel development, which includes a hotel/resort, two water parks, and more than 20 amusement rides. The entire development by Hoco Entertainment and Resorts is approximately at $100 million which includes the construction of the SkyWheel at approximately $10 million.

Future

The success of the London Eye is greatly recognized around the world. There continues to be a growing movement to develop similar projects throughout the United States and Europe.

Tianjin Eye

There was minimal information found or available on the web with regards to the Tianjin Eye project. References to the project were located within articles found while researching other wheel projects. Various web searches resulted in the



finding of a single webpage, indicating only that there are plans for the construction of the Tianjin Eye.

"The construction is expected to be completed sometime next year. The Observation Wheel will be attached right in the middle of the proposed Chihai Bridge with cars passing by on both sides. It is the most technically challenging bridge to be ever built. The Wheel has a diameter of 110 meters (360 feet) and will carry 48 sealed and air conditioned passenger capsules. Each capsule will be capable of accommodating 8 persons. One revolution will take about 30 minutes to complete and upon reaching its peak, passengers will be able to view the surrounding area up to a distance of 40km (25 miles).It will be the world's first and only wheel being built on a bridge and is set to become a major landmark and tourist attraction in the City of Tianjin, China."[4].

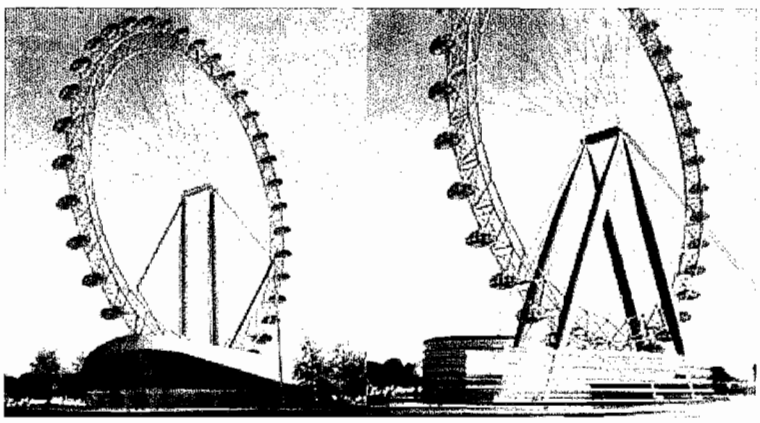
[4] "Worlds first observation wheel built on a bridge" Clipmarks.com (October 30, 2006)

Voyager

In 2002, Harrah's Entertainment in partnership with Voyager Entertainment International Inc. announced they would build the world's largest Ferris Wheel at the Rio hotel-casino off the Vegas Strip. The Ferris Wheel, named Voyager, would be 600 feet tall with 30 air conditioned luxury cars that carry 20 passengers each. Voyager would include a 20,000 square foot night club at its center, and 80,000 square feet of restaurants and shops at its base. Voyager is viewed has having enormous potential to boost tourism in Las Vegas. The project was slated to open in July 2005, however problems in financing the $86 million cost have delayed the project.

The Voyager Entertainment International Company's website indicates that similar projects are being considered in New York, United Arab Emirates, and Asia, although specific sites have not yet been identified or made public.

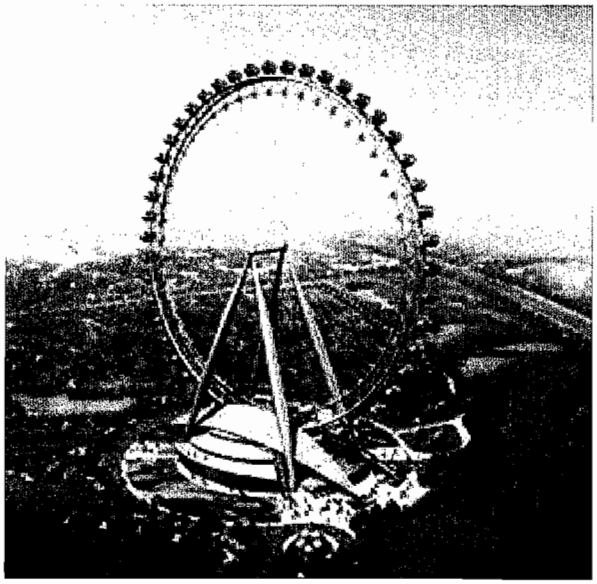
Great Berlin Wheel

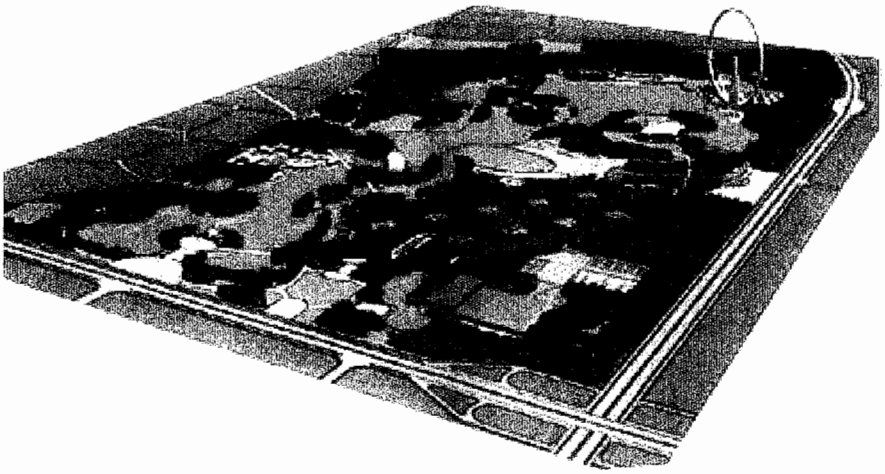


The Great Wheel Corporation has been granted the right to develop a Wheel in Berlin, Germany. This attraction will be 185 m (575 feet) high with 36 capsules each holding 40 passengers, and will be located in the Zoological Garden Area in the Western side of the City. The Great Wheel Corporation is projecting the attraction to open during the fourth quarter of 2009.

The Great Beijing Wheel

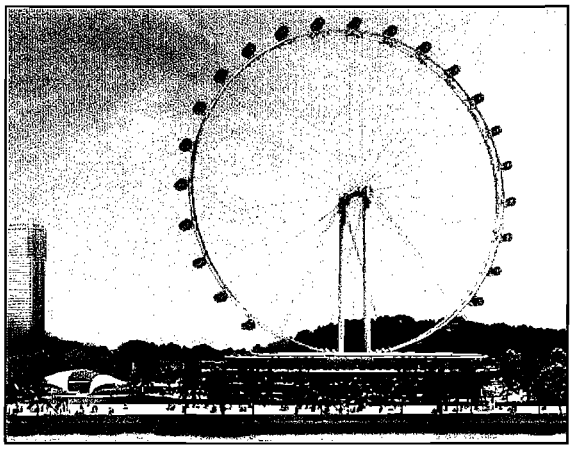
The Great Beijing Wheel is one of China's most prestigious government supported tourism projects. The 208 meter (628 feet) Wheel will contain 40 capsules each carrying 48 passengers. The project is being built in Chaoyang Park in the Chinese capital and upon completion will be the largest in the world. It is scheduled to open in August 1, 2008, in time for the Olympic Games being held in China. The key objective of the development is to position the Wheel as a Beijing Landmark with exciting and convenient supporting facilities. The project draws from a mixture of both traditional and recent successful leisure and entertainment models now operating throughout the United States and Europe. The wheel is complemented by an integrated retail center which will offer a range of retail shops, restaurants, and beverage facilities. The project is targeted to both overseas visitors, as well as the local population. Its placement within the Chaoyang Park, a popular place for Beijingers, will provide unique views over the lake, towards the city skyline and the countryside beyond.

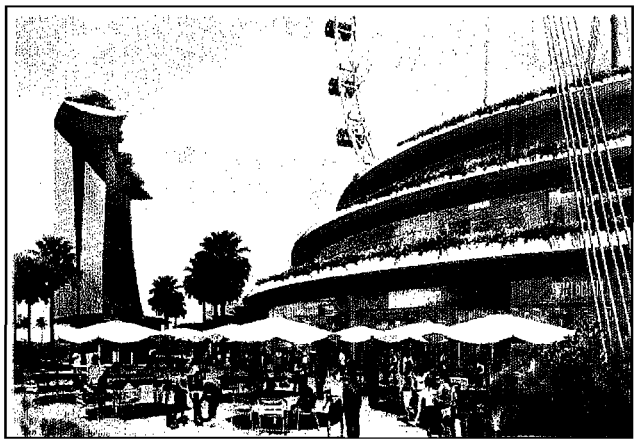




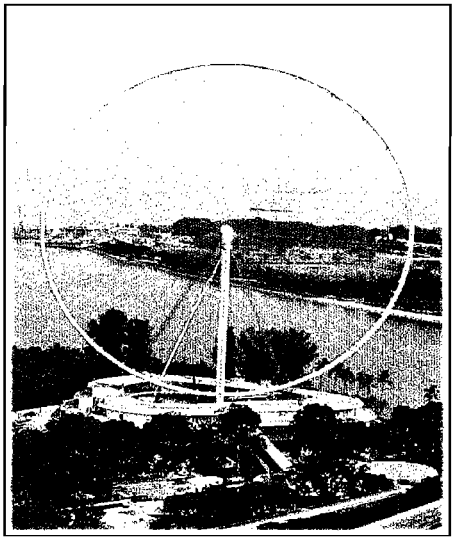
Singapore Flyer

Located in Marina Bay, the future downtown of Singapore, the Flyer is located on a prime waterfront Central Business District spot. The site is a short walk from four and five star hotels, the International Convention and Exhibition Centre, the

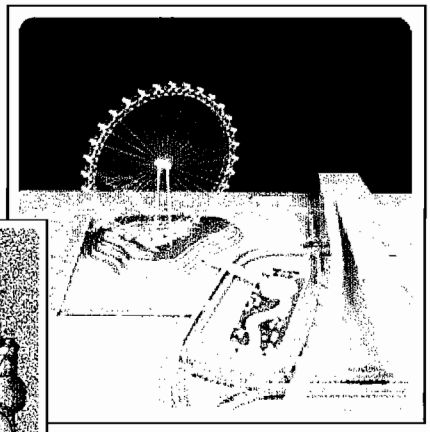


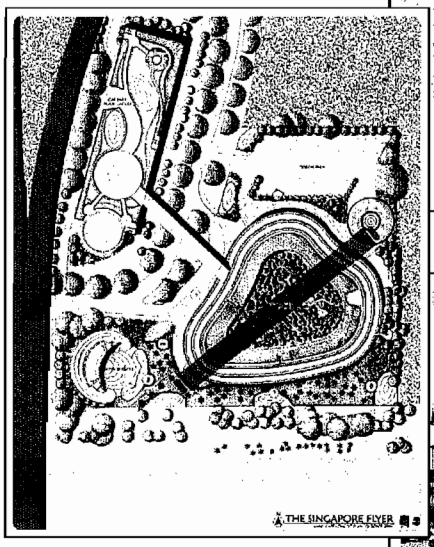


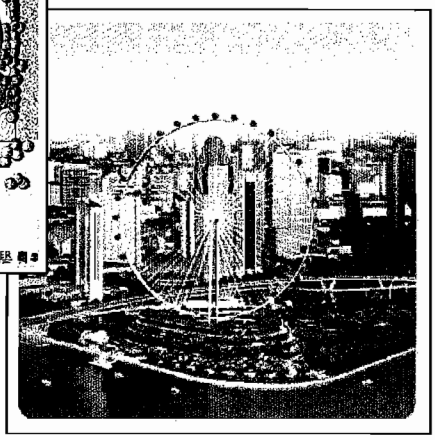
Esplanade Theatres on the Bay, and the New Performing Arts Centre. The Flyer, currently being constructed, is scheduled to open March 1, 2008. Its progress can be viewed on-line at the project website, www.singaporeflyer.com. The Flyer will have a height of 178m (585feet), equivalent to a 45- story building. The Wheel will be 150 m (490 feet) in diameter sitting on a 20m (75 feet) high three story terminal building. It will contain 28 air conditioned capsules, each carrying 38 passengers. The price of admission $29.50 for adults and $20.65 for Children ages 3 to 12. Like the London Eye, the Flyer will provide luxury and group packages; a signature cocktail flight which includes express boarding and a cocktail in a souvenir Flyer cocktail glass will cost $69.00 per person in a private capsule; for up to 30 passengers, will cost between $1000 and $1500 depending if it is within peak hours. Each flight is estimated to be 37 minutes in length. The terminal building on which the Wheel sits is comprised of three floors of commercial space, with an adjacent open air Greek-inspired amphitheatre along the waterfront and complimented by a jetty. The site is to be enhanced with luxurious landscaping, including roof gardens and a recreated rainforest in the terminal's atrium. An open bus park for 40 buses is located behind the building, and is connected to a covered 300 car multi-story parking garage.



The Singapore Flyer was first conceived in the early 2000s and formal planning commenced in 2002. German company Melchers Project Management (MPM) and Orient & Pacific Management (O&P) formed a new company, Singapore Flyer Pte Ltd, as the developer with MPM holding a 75% stake and the rest by O&P. The project was formally announced and endorsed by the Singapore Tourism Board (STB) with the signing of a Memorandum of Understanding (MOU) on June 27, 2003. The MOU stipulated the STB will purchase the plot of land in Marina Centre from the Singapore Land Authority, and lease it to Singapore Flyer Pte Ltd for 30 years with an option to extend the lease by another 15 years. The project was to grind almost to a halt when the developers faced difficulties in sourcing for funds to build the Wheel. Ultimately, funds were successfully sourced from two German banks. Delbrueck Bethmann Maffei, is to provide a maximum of $100 million and Bayerische Hypo- und Vereinsbank will provide $140 million. This investment of $240 million is the largest single foreign investment in the Singaporean entertainment industry. "The Flyer is expected to draw about 2.5 million visitors in its first year of operation, which will give its investors a net yield of about 13.4%. About 50% of its visitors are expected to be foreign tourists, helping to generate about $94 million in tourism receipts in its opening year."[5]







The Great Orlando Wheel

There are few published reports about the ongoing planning for a Wheel in Orlando. The published report found indicates that the Great Wheel Corporation plans to build a 400-foot-tall rotating Wheel with 24 air conditioned capsules each carrying 40 passengers, as part of a new International Drive resort complex. The Orlando Wheel will be the shortest of the proposed projects, at just under 400 feet tall to avoid any clearance issues with the Federal Aviation

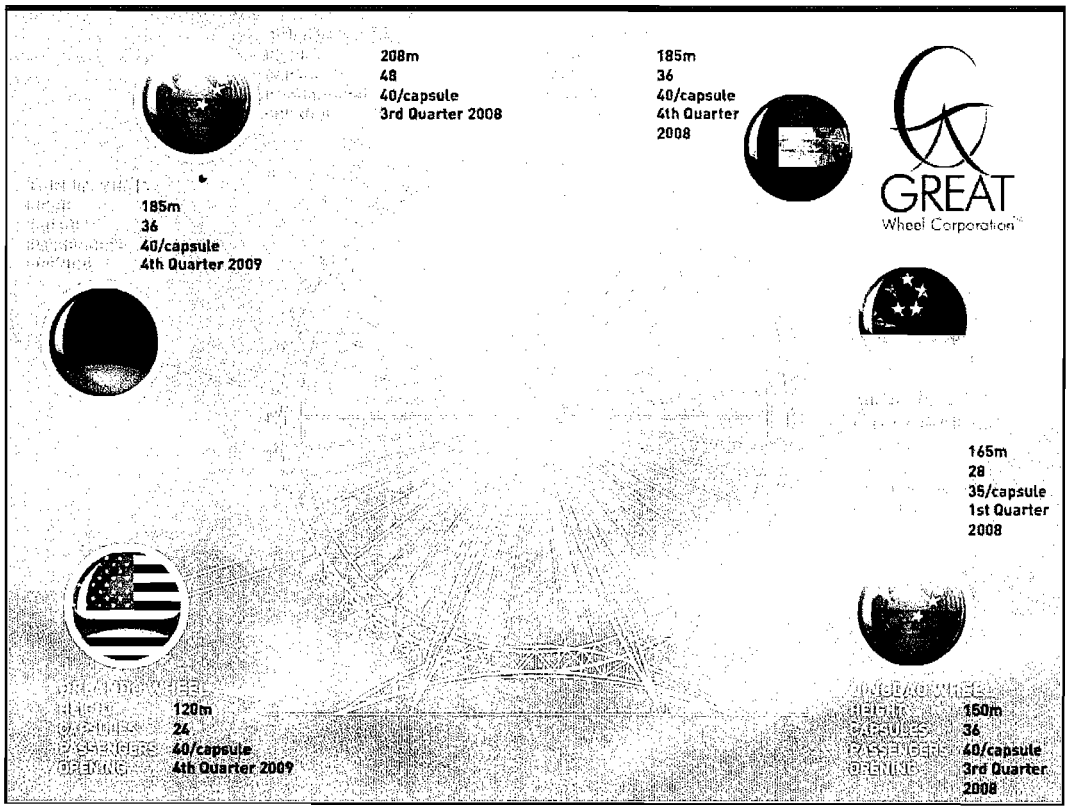
[5] Wong, Mun Wai. "Singapore Flyer may open to public earlier than scheduled", *Channel NewsAsia*, (August 3, 2007) August 27, 2008.

Administration (FAA). The Orlando attraction is scheduled to open in late 2009, on a parcel of land connected with the Orange County Convention Center by a bridge over the Beachline Expressway. Great Wheel's corporate partners for this project include Jones Lang LaSalle, a global real estate service company, and developer Shamanand "Sham" Maharaj, who's acquiring the land on which it would be built. The attraction is expected to cost between $40 million and $60 million. It will be part of two parcels at 6461 Westwood Blvd. totaling 37 acres, currently under contract for $37 million from Westwood Boulevard Ltd., a subsidiary of IAI Westwood Inc., both based in Winter Park. Orange County appraised the acreage at $11 million. Maharaj's company, Buena Vista Corp., is reported to be building a convention-oriented, Venetian-themed hotel resort there that would provide visitor traffic to the attraction.

Building a Wheel

In effort to more thoroughly determine the feasibility of developing an Observation Wheel, attempts were made to contact many of the parties involved in the development of the existing Wheels around the world; the ShangHai Amusement Machine Engineering Co, Barfield Architects, the Great Wheel Corporation, the Ride Trade International, and the Mitsubishi Corporation. International time zones restricted the abilities to reach the parties by phone, but each party was contacted by email or requests for information posted through their respective websites. At the time of this analysis, the only contact and exchange of information that has been made was with the Great Wheel Corporation. Responses to our emails have been received from Stephen Matter, CEO (Germany) and Joerg Lewejohann, Chief Development Officer (China).

The Great Wheel Corporation



The Great Wheel Corporation was established to develop and operate Great Wheels and Observation Platforms worldwide. The Great Wheel Corporation is a global venture headquartered in London with offices in Beijing, Shanghai and Dubai. Its main purpose is to be creative in developing unique Wheels for

people to appreciate the magnificent views of each city and cater to the very basic desire in people, who enjoy admiring their surroundings. The company, holding all relevant international patents and copyrights, plans to develop into the leading state-of-the-art Wheel construction company in the world. The Great Wheel Corporation is developing Wheels throughout the world; Malaysia, Singapore, Australia, Berlin, Beijing, Dubai, United Arab Emirates, and Orlando, Florida.

Determining the Basics (Questions § Answers)

There are three (3) basic elements that need to be studied before an Observation Wheel can become a reality; location, appropriateness of design, and financing. In our correspondence with the Great Wheel Corporation, we posed a number of questions regarding these elements to which they provide the following answers (red) on August 22, 2007;

1. *Location Characteristics:*
    a. *Minimum Size of land required if;*
        i. *Ferris Wheel only.*
        ii. *Ferris Wheel plus parking.*
        iii. *Ferris Wheel plus other entertainment, restaurants, retail, and parking.*

    a: *GWC: The minimum land requirement for the development of a Great Wheel is 10,000 m²(2.5 acres). Our strategy is a stand-alone attraction that includes facilities such as Food & Beverage, small retail areas, merchandising etc. We are not providing a "Great Wheel Only" approach, since it doesn't represent our image. Depending on visitor numbers and the characteristics of the surroundings of the site, we can assess the need for additional parking.*

    b. *Recommended distance to tall buildings (hi-rises)*

    b: *GWC: A 100m (328 ft) wheel will be higher than most of high-rise buildings. However, GWC strives to locate the wheel into a flat area.*

    c. *Other Recommendations*

    c: *GWC: Other recommendations will be given after the site has been identified.*

2. *Design/Engineering Considerations*
    a. *How is the design of the wheel carried out? Is it local engineering/architect firm, entirely by your company and/or its partners, or a hybrid of both?*

    a: *GWC: The wheel design will be carried out by our nominated sub-contractors. We have worked with them on several projects worldwide and therefore use their experience gained. The building design is mostly done by local architects in order to secure the characteristics of a city's image.*

    b. *Can the wheel be designed to meet South Florida's physical environment?*
        i. *Hurricane Design Criteria 150mph winds*
        ii. *Flood Criteria*
        iii. *Corrosive environment due to proximity to bodies of water*
        iv. *Heat/Humidity*

    b: *GWC: Yes. We will assess the site characteristics and design the wheel according to it.*

3. *Financing*
    a. *Have the existing developments been undertaken as solely private ventures, solely public (government) ventures, or public/private partnerships?*

    a: *GWC: The existing developments have been financed through German closed-end funds (private limited liability funds). Our partner bank is Delbrück Bethmann Maffei, a subsidiary of ABN Amro.*

    b. *Estimated costs (excluding land)*
        i. *Planning*
        ii. *Design*
        iii. *Construction*
        iv. *Operation*
        v. *Maintenance*

    b: *GWC: Depending on height, location etc. we will be able to estimate the costs.*

4. *Timelines: Under the best case scenario, what is the typical amount of time it would take to develop such a project? Excluding administrative processes, what is the time it would take to design and physically construct a project?*

4: GWC: The development inclusive of construction takes between 24 to 36 months.

5. *Projected Economic Impact:*
    a. *Projected annual revenues based on existing or proposed estimates for other projects*

    a: GWC: Revenues are depending on visitor numbers, average ticket price, retail prices, merchandising etc. (see below)

    b. *Anticipated economic impact to areas.*

    b: GWC: Taking the London Eye as example, some of the economic impact for the surrounding area is:

    - *Attracts approximately 1.5million additional visitors per year to London*
    - *created over 1,000 new jobs and over 30 new businesses*
    - *fulfills an important economic role in the regeneration of the South Bank of River Thames*
    - *has become a landmark attraction of modern London to rival the Eiffel Tower*

Design and Financing

Taking into consideration the current preliminary knowledge for the development of an attraction such as this, the following assumptions regarding the design and financing aspects of this project can be made.

- Design: Based on the responses provided by the Great Wheel Corporation, the structural design for the Wheel would be contracted with an Architect/ Engineering firm of their choice, with experience in designing for diverse conditions and climates around the world, while the surrounding buildings would be designed by local firms in order to capture the areas' flavor. Therefore, it can be determined that a Wheel can be properly engineered and built to withstand our South Florida environment (i.e. hurricanes, flooding, heat, corrosion, etc.)

- Financing: A full project that includes the Wheel, retail shops, restaurants, parking facilities, etc. may cost in the range of $100 to $200 million[6]. A Wheel only project, as in Orlando, may cost in the range of $10 to $60 million. The level of financing needed can be achieved through a public/ private partnership. The underlying premise for this assumption is that the financing for the design, construction, marketing, and operation of an Observation Wheel would be through private partners. The County's involvement in the project would be limited to providing a suitable site for development; through leasing existing County/City land(s), acquiring land to lease to the project, and/or the preparation of a site for such a development (i.e. re-Zoning, re- Platting, infrastructure improvements, etc).

Location

The basic premise of any business venture is an ideal location. In an interview that was found through our research, Roy Vocking, Vice President of Ride Trade International, explained "At the end of the day, it all comes down to location. If you have the location and interesting iconic attraction which will enable you to have a birds-eye view of the area success is almost guaranteed."[7] To this end, the next stage of our analysis will be to identify sites that may yield the best results for such an attraction. Based on the parameters received from the Great Wheel Corporation, 7 Sites, all containing greater than 2.5 acres were preliminarily identified for evaluation. The following five (5) characteristics were utilized to analyze the development possibility of each site:

- Panoramic View
- Accessibility to Metrorail/Metromover
- Availability of bus service
- Accessibility to major highways
- Proximity to hotels; restaurants, retail shops, entertainment, etc.

Preliminary Site Identification
1. Bicentennial Park
2. Bayside Market Place
3. Bayfront Park
4. Parcel B of FEC Property
5. Penrod's/Nikki Beach
6. Miami Beach South Pointe Park
7. Watson Island

[6] In an interview, Roy Vocking, Vice President of Ride Trade International stated "big wheels over 120m (390ft) are costing around $100 to 200 million" Heingartner, Douglas. "Demand for Ferris wheels come back" International Herald Tribune (August 13, 2007)

[7] Heingartner, Douglas. "Demand for Ferris wheels come back" International Herald Tribune (August 13, 2007)

The following additional sites were preliminarily considered as they met the size requirements. However, based on the analysis of each site on the value of the existing surroundings and panoramic view, proximity to residential neighborhoods, the accessibility of visitors to transit facilities and/or lodging, no further analysis was conducted.

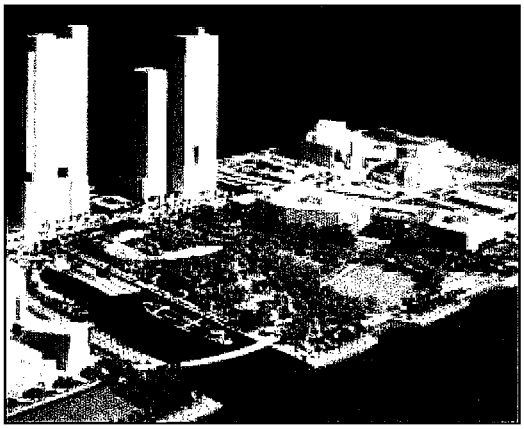
1. Black Pointe Marina
2. Coconut Grove Bayfront Park
3. Dinner Key Auditorium
4. Dodge Island
5. Dolphin Mall
6. Dolphin Stadium
7. Homestead Air Force Base
8. Homestead Speedway
9. Metro Zoo
10. Miami Marine Stadium
11. Miami Seaquarium
12. Southland Mall
13. Tropical Park

Possible Sites

Bicentennial Park

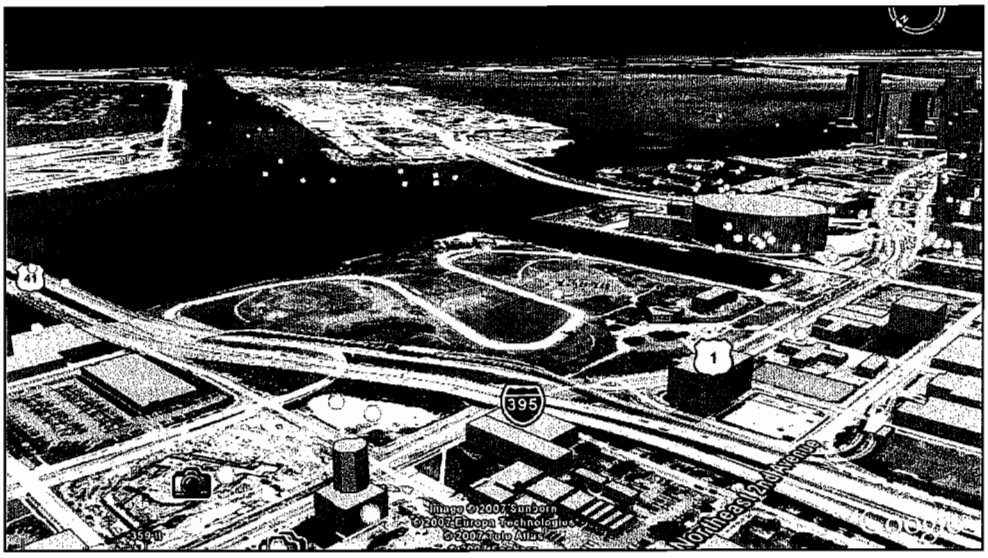
Bicentennial Park is a 30 acre park owned and operated by Miami Dade County. The Park's land was valued in 2006 by the County Appraiser's Office at $39.6 million, adjusting by 20% the market value of the Park is estimated at $47.5 million ($1.5M/Acre). The fiscal impact for land in the development of an Observation Wheel at this site would be approximately $3.9 million.

PROS: The Park is currently under utilized with incredible potential. Its proximity to the bay and its setting between Downtown Miami and Miami Beach make it the perennial favorite for any public development. Any debate held among people with regards to the location for the possible construction of a baseball stadium for the Florida Marlins is surely to invoke Bicentennial Park. The County is currently moving forward with a $255 million plan to redevelop portions of the park with two new world class museums, Miami Science Museum and Miami Art Museum. This plan to redevelop the Park provides a window of opportunity to incorporate an observation wheel. The Park's location among the Carnival Center of the Performing Arts, American Airlines Arena, and Bayside Market Place further enhances its appeal for an Observation Wheel.



The Park has access to the highway, I-395, making it relatively easy for travelers staying on Miami Beach to visit the site. Additionally, the existing Metro-Mover stop gives travelers staying at any of the four and five star hotels on Brickell a readily available mode of transportation. Should plans for a water taxi/bus service come to fruition it would provide an additional mode of transportation for visitors to the site. The combination of an Observation Wheel and a water taxi/ bus

combination may serve to enhance the Port of Miami's economic role as a port of call for cruise ships by attracting more visitors to the area.



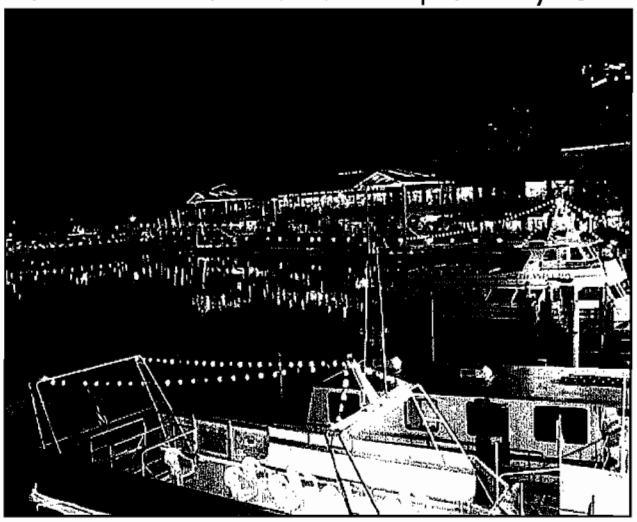
CONS: Parking in the area is problematic, and is an issue that must be addressed. One of the major obstacles for any development in the Park is environmental. The historical use of the site prior to becoming a park in the mid 1970's, was as a petroleum storage facility operated by Belcher Oil. The extent and limits of contamination are not readily available. The cost of an environmental cleanup may be substantial. The extent of a western view from atop an observation wheel is questionable. The ongoing planning and construction of hi-rises in Downtown Miami may limit any western views. Miami currently ranks first in the United States and second in the world behind Dubai for the most buildings that will be over 492 feet tall. With over 80 buildings taller than 500 feet that are either built, under construction, approved, or proposed, Miami is expected to have one of the largest skylines in the world by 2010. Additionally, the height of the Wheel may be impacted by the Federal Aviation Administration (FAA) Flight Path Restrictions. Flight Path Restrictions have impacted the design of a few proposed hi-rises in the Downtown area.

Bayside Marketplace/ Bayfront Park

These are two parcels of land totaling 56 acres, 14.8 and 41.6 respectively. Bayside Marketplace is owned and operated by the Bayside Center Limited Partnership, and the Park is owned and operated by the City of Miami. The properties' land values in 2006 by the County Appraiser's Office were a total of $93.5 million, adjusting by 20% the total market value of the sites is estimated at $112.2 million ($2.0M/Acre). The fiscal impact for land in the development of an Observation Wheel at this location would be approximately $5.0 million.

Located on Biscayne Boulevard, overlooking Biscayne Bay, Bayfront Park is the oldest park in the City of Miami. The Park, which first opened to the public in 1926, has undergone numerous restorations. Serving as Miami's "front porch" the Park has been host to bands and orchestras since its opening. In undergoing its most recent revival in the 1980's, the Park includes Bayside Marketplace which opened to the public in 1983, and is one of Miami's primary tourist attractions in its Downtown District. Located on 16 acres adjacent to the northern end of the Park, it includes over 150 shops, restaurants and outdoor cafes, and features a pedestrian link to the American Airlines Arena, home of the Miami Heat and host of numerous concerts, Award shows the likes of the MTV Video Awards and the Latin Grammys. The Bayside Marketplace caters to a variety of retail styles; it is home to a number of American and international retail stores. It hosts an eclectic mix of restaurants and cafes including: Bubba Gump Shrimp Co., Los Ranchos, Chili's and Hard Rock Café. In addition, Bayside Marketplace also offers live music events, making the retail experience much more unique and exciting. Bayside Marketplace also serves as home to a number of sightseeing adventures; El Loro (pirate ship), Heritage of Miami (Tall ship/Sightseeing) and Captain Jimmy's Fiesta (Party Cruise).

PROS: Bayside Marketplace and Bayfront continue to draw large numbers of people, residents and tourists alike, to the Downtown area. Its proximity to the bay, the Port of Miami and Miami Beach allow it to remain a top destination for travelers. The Marketplace and the Park stand to gain more visitors by the continual redevelopment of the area; the AAA Arena, the Carnival Center of the Performing Arts, two new world class museums, and numerous new hi-rises, as well as the plan to reopen the historic Miami Freedom Tower. An Observation Wheel at this site may be developed at a lower cost since many of the amenities (restaurants, shops, parking) already exist, it may only be a matter of finding the proper way to incorporate it into the existing surrounding area.

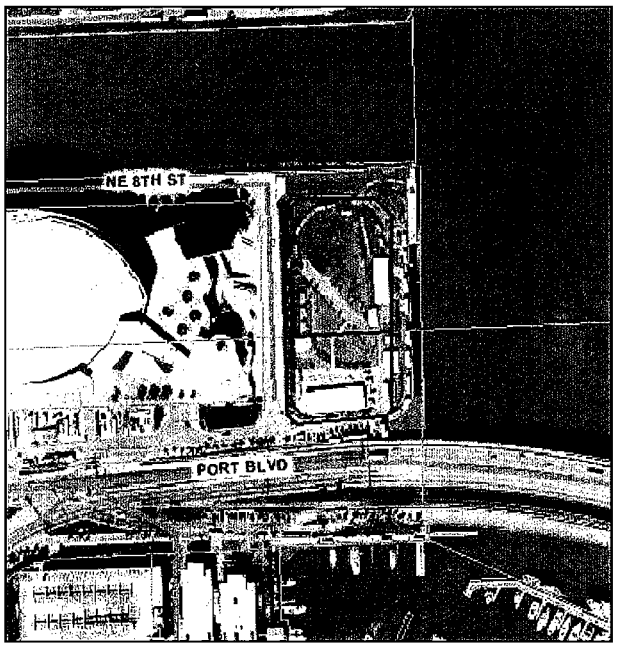


The Bayside and the Park have reasonable access to the highway, I-395, making it relatively easy for travelers staying on Miami Beach to visit the site. Additionally, the existing Metro-Mover stop gives travelers staying at any of the four and five star hotels on Brickell a readily available mode of transportation to the site. Like Bicentennial Park, should plans for a water taxi/bus service come to fruition it would provide an additional mode of transportation for visitors to reach this site. The Marketplace currently serves those cruise passengers that pass through Miami, however the addition of an Observation Wheel would further enhance the attraction of the Port of Miami as a port of call for cruise ships.

CONS: The ongoing planning and construction of hi-rises in Downtown may limit the western views for this site. The height of the Wheel may be impacted by the Federal Aviation Administration (FAA) Flight Path Restrictions. Flight Path Restrictions have impacted the design of a few proposed hi-rises in the Downtown area.

Parcel B of FEC Property

This 2.7 acre parcel of land located on the east side of the American Airlines Arena, on the western end of Bicentennial Park, has come to be known as Parcel B. The parcel of land is currently owned by Miami-Dade County. The development rights for the property, which were granted to the Miami Heat in 1996, are currently held by Miami-Dade County. The properties' land values in 2006 by the County Appraiser's Office were a total of $6.6 million, adjusting by 20% the total market value of the sites is estimated at $7.95 million ($2.9M/Acre). The fiscal impact for land in the development of an Observation Wheel at this location would be approximately $7.2 million. Additionally, the parcel is surrounded by 1.8 acres of public rights of way, which grants public access to the water front, essentially establishing approximately 4.5 acres of public lands.



The parcel, part of 29 acres purchased from the Florida East Coast Railway by the City of Miami for $23 million in 1972, was specifically intended to build a park. Throughout the years there have been numerous development plans for the parcel; In 1988, the Performing Arts Center Trust planned building the Performing Arts Center there. In 1992, Miami-Dade Seaport Director, Carmen Lunetta announced his intention to expand the Port by building four cruise-ship slips and terminals at the location. In 1996, the parcel was to be developed by the Miami Heat into a public park containing soccer fields and a scenic baywalk that connected to Bayside Marketplace by way of a pedestrian bridge. In 2004, the County, in partnership with the City of Miami, began holding public meetings to discuss the future of the parcel of land. At the September 4, 2007 Board of County Commissioners Meeting, a resolution was approved for a study to determine the feasibility of developing a Bay of Pigs Museum and Parking Garage on this parcel. This renewed effort to develop this site may create a window of opportunity for an Observation Wheel project at the location, particularly if the study, due in 90 days, determines that the proposed Museum is not feasible.

PROS: The Parcel's central location make it accessible for visitors to Bicentennial Park, the American Airlines Arena, Carnival Center of the Performing Arts, Bayside Marketplace and Bayfront Park, Miami Beach, and the Port of

Miami. An Observation Wheel at this site may be developed at a reduced cost since many of the amenities (restaurants, shops, and entertainment) already exist.

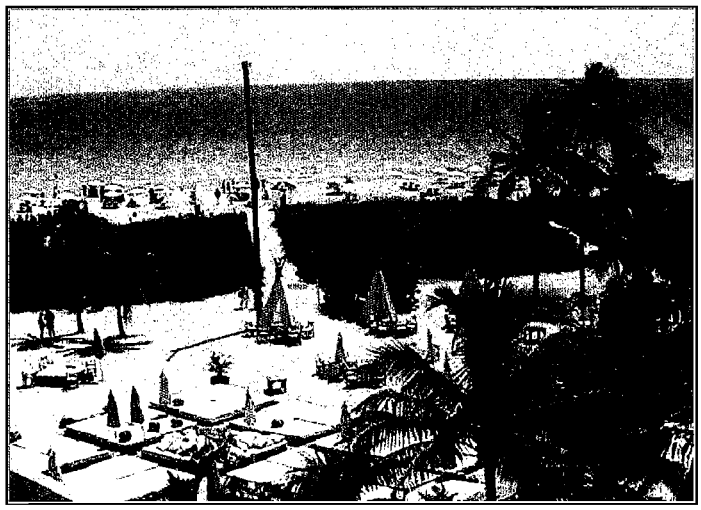
The Parcel has reasonable access to the highway, I-395, making it relatively easy for travelers staying on Miami Beach to visit the site. Additionally, there are four existing Metro-Mover stops a relatively short distance away that would give travelers staying at any of the four and five star hotels on Brickell a readily available mode of transportation to the site. Like Bicentennial Park, should plans for a water taxi/bus service come to fruition it would provide an additional mode of transportation for visitors to reach this site. And in conjunction with Bayside Marketplace it would create a wonderful visitors area to serve those cruise passengers that pass through Miami, greatly enhancing the attraction of the Port of Miami as a port of call for cruise ships.

CONS: The Parcel continues to garner a wide variety of opposition from local groups that wish to have the parcel developed as an open park. The man-made inlet serves as a barrier for pedestrians to easily travel between the site and Bicentennial Park. The ongoing planning and construction of hi-rises in Downtown may limit the western views for this site. The height of the Wheel may be impacted by Federal Aviation Administration (FAA) Flight Path Restrictions. Flight Path Restrictions have impacted the design of a few proposed hi-rises in the Downtown area.

Penrod's/Nikki Beach

This is a 3.12 acre parcel owned the City of Miami Beach and operated by the Nikki Beach Company. The site's land was valued in 2006 by the County Appraiser's Office at $8.9 million, adjusting by 20% the market value of the site is estimated at $10.8 million ($3.5M/Acre). The fiscal impact for land in the development of an Observation Wheel at this site would be approximately $8.6 million, however the commercial value would greatly inflate the price to buyout the lease held on the property.

Located right on the sand of 1st and Ocean, Nikki Beach Miami has become a landmark for the ultimate parties, celebrations, and entertainment in Miami, something of a nightlife landmark. The club attracts the wealthy and fun-loving from as far as Europe. Wealthy males and females come out in the afternoon to bronze on chaise lounges, dine under the palms and make the scene. At night, dance music plays and hut-like bars serve cocktails to the mingling elite. This is one of Miami's most exclusive nightclubs.



South Beach is a mecca for beautiful people, nightlife, sun, and celebration. It is the section of Miami Beach that stretches from 1st to 23rd Street. As a major international destination for entertainment, art and culture, tourists from around the world flock to South Beach Miami to stroll down Ocean Drive, dine at a Cuban café, sunbathe on one of the beautiful beaches, and party until dawn at one of the many famous clubs and party scenes of South Beach.

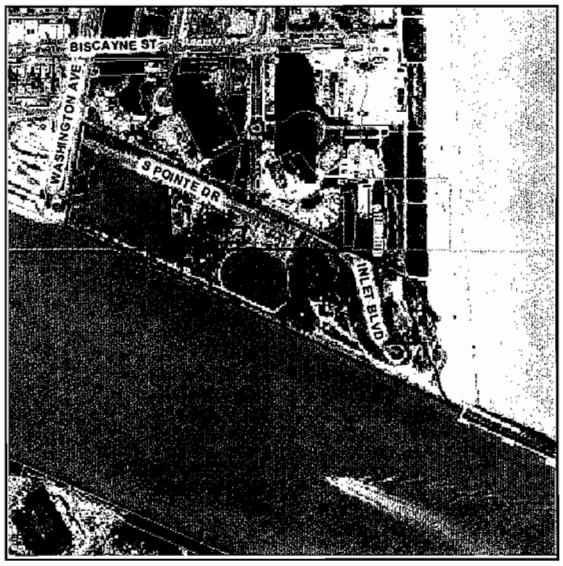
PROS: The sites can offer spectacular views of Downtown Miami, South Beach, and the Atlantic Ocean. South Beach is host to the greatest number of visitors to Miami Dade County, offering a wide variety of hotels, restaurants, nightlife, as well as the beach. An Observation Wheel at this site may be developed at a lower cost since many of the amenities (restaurants, shops, and entertainment) already exist. Additionally, a proposed Wheel would be taller than the existing buildings on the beach allowing for unobstructed views at the top of the Observation Wheel.

CONS: The terms of the lease with Nikki Beach is unknown, any development of an Observation Wheel would need to be carried out in partnership with the Nikki Beach Company or the lease would have to be bought out. The cost to buy out the lease and obtain the development rights for this parcel could be extremely high. Entering into a partnership with Nikki Beach for an observation wheel would be difficult given the image and culture that company markets. Additionally, Miami Beach Zoning regulations may not permit the Observation Wheel to exceed existing height restrictions in the City. The modes of transportation to the Park are limited, access to the McArthur Causeway is not easy and Ocean Drive does experience large volumes of vehicular traffic. Parking for visitors could also be a problem.

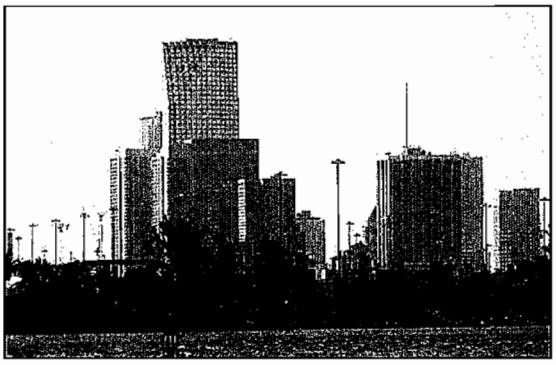
This site definitely needs further review due to the many concerns, which also include adjacent properties of a residential nature, environmental issues, coastal wind forces, beach erosion, storm surge and further limitations imposed by the Coastal Construction Line.

Miami Beach South Pointe Park

This is a 16.5 acre Park owned and operated by the City of Miami Beach. The Park's land was valued in 2006 by the County Appraiser's Office at $57.5 million, adjusting by 20% the market value of the park is estimated at $69.0 million ($4.2M/Acre). The fiscal impact for land in the development of a Wheel at this site would be approximately $10.5 million.



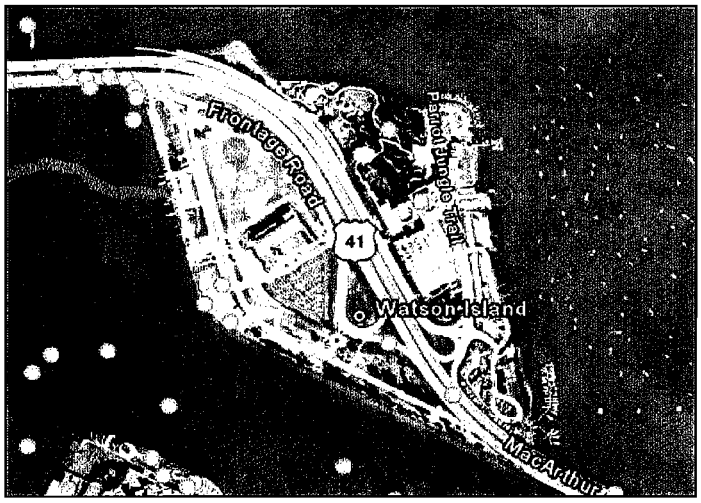
PROS: The Park offers spectacular views of Downtown Miami, South Beach, the Atlantic Ocean, and passing cruise ships. Miami Beach is host to the greatest number of visitors to Miami Dade County, offering a wide variety of hotels, restaurants, nightlife, as well as the beach. A proposed Wheel would be taller than the existing buildings on the beach allowing for unobstructed views at the top of this attraction.

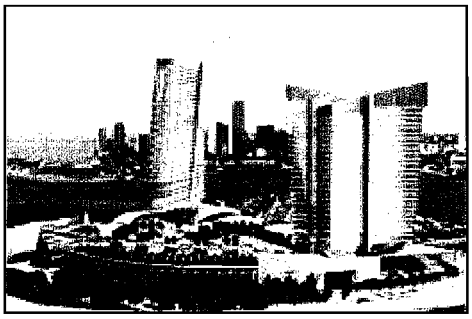


CONS: Zoning regulations may not permit the Wheel to exceed existing height restrictions on Miami Beach. Additionally, the immediate surrounding area is mostly residential and many may oppose the construction of the Wheel at the Park. The modes of transportation to the Park are limited, and access to the McArthur Causeway is not easy. Parking for visitors could also be a problem. Environmental concerns do exist at this site, including but not limited to the presence of preservation areas.

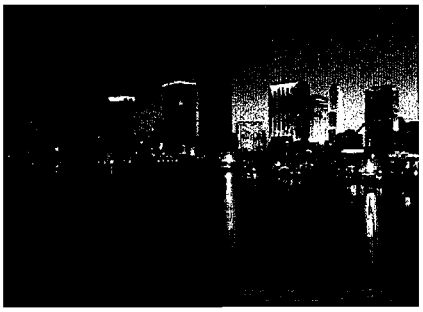
Watson Island

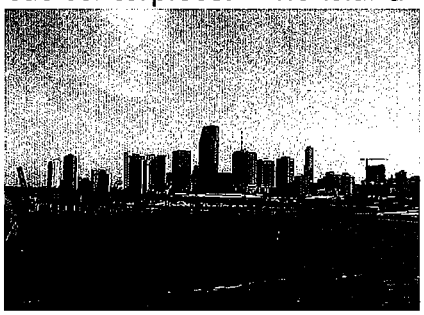
Watson Island is owned by the City of Miami, with a number of parcels having been leased to private developments. Most notably, the west side of the island has been leased to the Flagstone Group for a $575 million mixed use project. Flagstone Group's development includes a pair of hotel towers supported by ground-floor 221,000 square feet of retail space and a 50-slip mega-yacht marina that would accommodate yachts of up to 450 feet long. The project is targeted for completion in 2010. In addition to this development, the Miami Children's Museum and Jungle Island currently reside on the island. The City of Miami is also working to redesign and reopen the Ichimura Miami – Japanese Garden. The State of Florida, Miami Dade County, and the City of Miami are working to fund a Port Tunnel that would connect the McArthur Causeway to the Port of Miami.





PROS: The Island offers spectacular views of Downtown Miami, South Beach, the Atlantic Ocean, and arriving cruise ships. The majority of the images presented to the world of the Miami Skyline have been captured from Watson Island. The proposed developments on the Island will create a complete array of tourist venues; hotels, restaurants, retail shops, theme parks, and museum. The inclusion of an Observation Wheel would create a great centerpiece. The island has easy access to the McArthur Causeway and it is a short hop west over the bridge to planned museums at Bicentennial Park, the Carnival Center of the Performing Arts, Bayside Marketplace, and the AAA Arena.





Likewise, it would be a short drive East on the McArthur Causeway to South Beach. The development of a water taxi/bus service from Watson Island to Bayside, Bicentennial Park, and the Port of Miami would provide an easy mode of transportation for visitors to reach all the surrounding attractions and make this site the preferred destination for travelers.

CONS: The Flagstone development, as well as most developments that have taken place, continue to face opposition by conservationists and proponents for open public lands. The existence of a private development group with rights to the island may prevent or hamper efforts to develop an Observation Wheel. The height of the Wheel may be impacted by the Federal Aviation Administration (FAA) Flight Path Restrictions. Flight Path Restrictions have impacted the design of a few proposed hi-rises in the Downtown area.

Conclusion

In considering the development of an attraction such as the London Eye in Miami-Dade County, even through this very preliminary analysis, it becomes evident that this would be a highly worthwhile venture to explore.

Is it feasible to build? The simple answer is Yes. Although the Wheel is an open structure with less wind resistance than a regular building, the foundation of the structure, the capsules and their connections can be engineered to withstand hurricane force winds. Associated hurricane storm surge and flooding can also be mitigated through the proper engineering of the site.

Which is the best location? In researching the projects that are either existing or in the pipeline throughout the world, it became apparent that people are willing to pay not only to ride the Wheel, but most importantly for the panoramic view to be enjoyed from the Wheel. In considering numerous sites throughout the County, the Downtown Miami and South Beach areas inevitably make the top of the list as sites with the most potential for enjoyment from an elevated point of vision, as these locations would provide views of the ocean, the skyline, the big city lights, the cruise ships, etc. Furthermore, with museums, hotels, shops and restaurants, either existing or in the planning stages, the Downtown Bayfront area, in such close proximity to the Port of Miami would be the most appealing place for both tourists and residents alike.

Is the project worth exploring? Again, based on our preliminary review, our response to this is a resounding Yes. From a monetary perspective, all the current Observation Wheel developments around the world appear to be privately financed; the public entities' functions are limited to the leasing of public lands at a fair cost, and the preparation of the site for the attraction, in order for the project to be successful and cost effective with a high return on the investment. The rationale behind these types of projects appears to be the mutual advantages reaped from a fruitful partnership between private investors and local governments. For the governmental agency, in this case Miami-Dade County, these economic advantages would include revenues from the lease payments, generation of jobs, and the invaluable positive effect on this area's tourism. At this preliminary juncture, an accurate estimate of development costs to be assumed by the County (e.g. land, public hearings, water/ sewer/ road infrastructure, site cleanup, etc.) cannot be clearly determined until a specific site has been identified.

As an up-and-coming gateway to tourism and with its evolving culture, an important step for Miami-Dade County is to continue to mature in becoming more 'avant garde' in order to create the area's own history. The County has taken the first step in building a world class Performing Arts Center, is taking more steps in building the new Science and Art Museums, as well as the further expansion of the Metro Zoo. Therefore, the next rung of the ladder would be to create something unique and picturesque. This is true to any major metropolitan area, such New York, Chicago, San Francisco, London, Paris, Los Angeles, even St. Louis which have landmarks and icons that are instantly recognizable and draw millions of visitors every year. Nature has provided a magnificent canvas for us to paint a City full of life, beauty and amenities for all to enjoy, and this type of development will provide a unique opportunity to showcase our spectacular views.

Data Summary

Name	Location	Opening Date	Diameter of Wheel	Wheel Development	Financing	Ticket Cost (Adult)	Anticipated Visitors
London Eye	London, United Kingdom	March 2000	443'	$40M	Private: British Airways	$ 30.00	3.5M/year
Star of Nanchang	Nanchang, China	May 2006	525'	$7.3M	Private: Nanchang City Investment and Development Company	$ 6.00	No Estimates found
Niagara SkyWheel	Niagara Falls, Canada	June 2006	175'	$100M	Private: HOCO Entertainment and Resorts	$ 9.99	No Estimates found
Tianjin Eye	Tianjin, China	October 2008	360'	Not Reported	Government Project	Not Reported	No Estimates found
Voyager	Las Vegas, Nevada, USA	June 2009	492'	$86M	Private: Voyager Entertainment Int'l	$ 18.00	7.5M/year
Great Wheel Berlin	Berlin, Germany	October 2009	575'	$200M	Private: Great Wheel Corporation and Partners	Not Reported	2M/year
Great Wheel Beijing	Beijing, China	August 2008	628'	Not Reported	Government Project	Not Reported	No Estimates found
Singapore Flyer	Singapore	March 2008	490'	$240M	Private: German Banks: Delbrueck Bethmann Maffei and Bayerische Hypo- und Vereinsbank	$ 29.50	2.5M/year
Great Orlando Wheel	Orlando, Florida, USA	October 2009	400'	$40M - $60M	Private: Great Wheel Corporation and Partners	Not Reported	No Estimates found

Note: Rides vary from 12 to 37 minutes in length

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