Miami Circle
The discovery of the Miami Circle archeological site on Brickell Point in downtown Miami, Florida, in 1998 created interest both within the archeological community and the general public. The circle is characterized primarily by a patterned group of large and small holes cut into the subsurface limestone bedrock. The holes collectively form a circle approximately 38 feet in diameter. The features comprising the circle are arranged in a readily discernible pattern alternating between relatively large oval and quasi-rectangular “basins” and smaller oval and round holes. The cut holes vary in size and shape and were filled with “black earth midden” material. Marks left by cutting tools can often be observed on the sides of the holes. Research suggests that the Miami Circle represents the “footprint” of a prehistoric structure, and further analysis of the site and associated cultural materials may help broaden our understanding of American Indian architecture and long-distance exchange networks.

Speculation about age, origins, and use of the Miami Circle made it a common topic in newspapers and magazines. A movement began in the community to protect the site. Citizens and politicians worked together to raise funds to purchase the property. With a combination of primarily state and county funds, the State of Florida purchased the land in November 1999. On October 3, 2003, Congress, through Public Law 108-93, directed the Secretary of the Interior to conduct a special resource study to determine the national significance, suitability, and feasibility of including the Miami Circle archeological site in the national park system as part of Biscayne National Park.

There are two ways that a site may be added to the national park system. It may become a new unit, or it may be added to an existing park system unit that is nearby. To become a new unit of the system, the site must meet the following set of criteria: national significance, suitability, and feasibility. To be added to an existing unit, significance, suitability, and feasibility must be met, and the addition must be related to the reason Congress established the original park unit.

The State of Florida submitted a National Historic Landmark (NHL) nomination for Miami Circle to the National Park Service (NPS) Advisory Board in 2004. The NPS Advisory Board did not determine that the site is nationally significant. As a result the NPS does not consider the site to be nationally significant. The site is suitable because it represents the only known preserved stone post-hole pattern of a circular prehistoric structure in south Florida that has potential for public accessibility, display, and interpretation. Although common urban obstacles to access and parking exist for the site, the site could accommodate public use. There are different options (and costs) for providing visitor use and resource protection. However the Miami Circle site does not meet the purpose of Biscayne National Park, which was established to protect natural resources. While being considered both suitable and feasible, the Miami Circle site has not been determined to be nationally significant, and therefore does not meet the criteria for inclusion in the national park system.

The State of Florida owns and is responsible for managing the Miami Circle site. The NPS will not likely have a role in future management efforts, but has developed several visitor use scenarios and resource treatments that future managers may wish to consider. The management options for the site range from proposing a minimal level of development, keeping the circle buried, and not staffing the site but having occasional interpretive presentations, to having the circle exposed (possibly covered with a shelter or building) and providing a staffed interpretive center on the site with a small amount of parking. Other ideas in the management options include the addition of one or more of the following facilities:

1. A replica, representation, or “ghosting” of the Miami Circle to be placed over the feature (if it were
covered with soil); (2) a building to house visitor contact facilities, restrooms, drinking fountains, and/or a museum; (3) a security fence; (4) small-scale parking facility; and/or (5) an observation platform.

All management options assume minor development costs such as construction of an interpretive trail, waysides, a kiosk, and other interpretive media. Management of the site would entail landscape maintenance and maintenance of the seawall (which will soon be repaired/replaced by the State of Florida). Long-term costs could also include, depending on the management option chosen, facility maintenance, on-site personnel and routine law enforcement (see appendix B).

To complete the study, the National Park Service is asking for your input and comments on what you believe is the best management option for the future of the Miami Circle site after you have read this study. It will be helpful to us to know not only which option you believe is the best, but also, what aspects of the option you like and dislike and why.

The responses we receive from you will be considered and summarized with the other responses we receive. The study, along with the summary of the responses and the NPS findings, will be forwarded to the Secretary of the Interior, who will then transmit the study to Congress.

Your comments and the summary will be given to the State of Florida so that the state, or any future manager of the site, will have the benefit of your comments. A mail-back comment form has been included with this document for your convenience. You may also e-mail your comments to <Miami_Circle@nps.gov> or send them to:

Denver Service Center
National Park Service
Miami Circle Study / Terri Urbanowski
12795 West Alameda Parkway
P.O. Box 25287
Denver, CO 80225

Information on this project is available at <http://parkplanning.nps.gov>

Click on PLANS link, then click on the Special Resource Studies link, and then click on Biscayne NP, FL Miami Circle SRS.
Why Is The National Park Service Doing This Study?

The Miami Circle site on Brickell Point in downtown Miami, Florida, is a 2.2-acre parcel on the south bank of the Miami River where it flows into Biscayne Bay — in one of the city’s most prominent locations. The site abuts the Icon Brickell complex to the south, the Miami River to the north, the Brickell Avenue Bridge to the west, and Biscayne Bay to the east. The Brickell Point parcel is on the Atlantic Coastal Ridge, a limestone formation that underlies all of Miami.

Before purchase by a developer in 1998 to construct two high-rise apartment buildings, the site had six 2- and 3-story apartment buildings that were built in 1950. After demolition of these buildings, a required archeological survey of the site indicated significant archeological deposits, including the series of holes in the limestone bedrock that became known as the Miami Circle.

The discovery created interest both within the archeological community and the general public. Speculation about age, origins, and use of the Miami Circle made it a common topic in newspapers and magazines. A movement began in the community to protect the site. Citizens and politicians worked together to raise the funds to purchase the property. With a combination of primarily state and county funds, the land was purchased in November 1999. Title to the property is held by the state, and the property is leased to the Florida Division of Historical Resources. Following public sentiment and the identification of the site’s potential for archeological significance, federal legislation was passed to study the inclusion of the Miami Circle site as part of Biscayne National Park.

On October 3, 2003, Congress, through Public Law 108-93, directed the Secretary of the Interior to conduct a special resource study to determine the national significance, suitability, and feasibility of including the Miami Circle archeological site in the national park system as part of Biscayne National Park. Furthermore, the legislation stated that the study should include the analysis and recommendations of the Secretary on

1. any areas in or surrounding the Miami Circle that should be included in Biscayne National Park;
2. whether additional staff, facilities, or other resources would be necessary to administer the Miami Circle as a unit of Biscayne National Park; and
3. any effect on the local area from the inclusion of the Miami Circle in Biscayne National Park.

What Is The Miami Circle And Why Is It Important?

The Miami Circle was discovered during archeological salvage excavations at Brickell Point in 1998 while sifting through the layers of dense, intact “black earth” midden material. (A midden is an archaeological deposit that preserves food debris, broken tools, house floors, remains of structures, and other evidence of human activity). The circle is a patterned group of large and small holes cut into the subsurface limestone bedrock. The holes collectively form a circle approximately 38 feet in diameter. The features comprising the circle are arranged in a readily discernible pattern alternating between relatively large oval and quasi-rectangular “basins” and smaller oval and round holes, many of which contain smaller secondary holes within them. Many of the basins contained limestone cobbles, which may have been used as wedges to secure wooden structural elements.

The cut holes vary in size and shape and are filled with black earth midden material that overlies the circle feature. Marks left by cutting tools can be observed on the sides of the holes. Holes in various stages of manufacture also suggest a human origin. During summer 2002 archeologists surveying the cut basins and holes mapped 870 cut features in the limestone. Studies of the surface of the limestone by state geologists confirmed the
One interesting discovery was the identification of what appeared to be two entrances to the circle, which is significant in interpreting the Miami Circle as an American Indian structure.

Research at the site documented the limestone formation with cut holes on about 70% of the property and intact accretionary midden deposits on at least 35% of the property. Research suggests that the Miami Circle represents the “footprint” of a prehistoric structure, and further analysis of the site and associated cultural materials may help broaden our understanding of American Indian architecture and long-distance exchange networks.

One method to determine the cultural significance of the post-hole pattern at the Miami Circle is to compare it to other sites with similar features. For these purposes, it is important to examine not only the site’s architectural features but also indicators of age — including animal interments and artifacts. Use of the site has been shown through archeological research to extend back 2,000 years and longer. The site may have been used for ceremonial purposes, and this use may have spanned the period from when the Miami Circle was built to a later period of habitation.

Radiocarbon dating along with recovered artifacts indicates that the black earth midden at the Miami Circle was deposited between ca. 500 BC to AD 900. The artifacts are typical of American Indian sites in the Everglades region, and it is possible that they have a direct historical connection with the Tequesta Indians.

Tequesta Indians occupied the area during the European contact era (AD 1513-1763). The Miami Circle may have been part of a much larger Tequesta village site that occupied both sides of the Miami River. The inhabitants of this larger village were contacted by the Spanish in the 16th century for missionary purposes. The Miami Circle site may be part of the earliest occupation of the area, though the animal interments indicate that the Miami Circle site was used later in time as well. The Tequesta likely were there for almost 200 years after arrival of the Spanish. Archeological remains south of the Miami Circle site included a sand mound, burial mound, and a cemetery, all likely associated with the Miami Circle. Unearthed portions of the large village on the north bank of the Miami River have been, or will be, destroyed by modern development.

Because of the problems associated with dating the Miami Circle (all dates are associated with midden materials overlying the circle, which may or may not be associated with the post holes), it may be impossible to determine which culture is associated with its construction and the time period in which it was built.

Descriptions by archeologists in the 1940s and 1950s mention a large village on the north bank of the Miami River and another on the south bank at Brickell Point that may have extended as far as a quarter mile to the west. Information from Brickell Point and the Miami Circle feature may complement or supplement data from other sites (see appendix A). Comparison of all the related sites suggests that their inhabitants were part of the same cultural complex. Representation from ceramic sherds found at Brickell Point suggests that the site may have been the major focus of occupation during the time period ca. 500 BC to AD 900.

How Was The Miami Circle Site Evaluated?

How are national parks and park sites created? What qualities make an area eligible to be a national monument, historic site, recreation area, or other units of the national park system? These questions are frequently asked by people throughout the country. Some people think a scenic part of their community deserves to be a national park. Others want national recogni-
tion for their favorite historic house or geological formation. These sites may deserve to be protected, but how is it determined if action should be taken at the state or local level instead of by the federal government, and if federal action is appropriate what agency should take the lead?

The number and diversity of units within the national park system has expanded since the establishment of the first national park. Today, there are 391 units in the national park system. Each of the units represents some nationally significant aspect of our natural or cultural heritage. Together they represent cumulative expressions of a single national heritage. The units within the system are chosen to represent the most outstanding examples of the nation’s natural and cultural resources. Potential additions to the national park system should contribute to their own special way to the broad spectrum of natural and cultural resources that characterize our nation.

The National Park Service (NPS) has established criteria for national significance, suitability, feasibility, and management that help answer these questions. There are two ways that a site may be added to the national park system. It may become a new unit, or it may be added to an existing park system unit that is nearby. To become a new unit of the system, the site must meet the following set of criteria: significance, suitability, and feasibility. To be added to an existing unit, significance, suitability, and feasibility criteria must be met, and the addition must be related to the reason Congress established the original park unit.
Images of the Miami Circle and artifacts, clockwise from upper left: view of Miami Circle property; galena bead (two views); cut hole; 3D laser scanning project; bone pendant; flowers at candlelight vigil; shell pendant.
There are two ways a site may be added to the national park system. It may become a new unit, or it may be added to an existing park system unit that is nearby. The first analysis evaluates the Miami Circle site as an independent unit of the national park system.

**National Significance**

As stated in the NPS Management Policies 2006, national significance for cultural resources will be evaluated by applying the National Historic Landmarks criteria contained in 36 CFR Part 6 (Code of Federal Regulations). Six criteria may be considered when evaluating a cultural resource that is nominated for landmark designation.

**Analysis**

In 2004 the Miami Circle site at Brickell Point was nominated by the State of Florida as a potential National Historic Landmark (NHL), as a nationally significant example of an Accretionary midden. It was nominated under Criterion 6, a criterion usually applied to archeological resources. Criterion 6 refers to properties “that have yielded, or may be likely to yield, information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation over large areas of the United States.”

One of the most significant aspects of the site is the presence of architectural features, carved into the soft oolitic limestone bedrock. Research at the site since the discovery of intact deposits and features in 1998 has produced an impressive body of data, which will likely make it one of the most intensively studied sites in south Florida.

According to the draft NHL nomination, the Miami Circle site at Brickell Point contains early and late components of the primary village settlement of the Tequesta ancestors, who were one of the first native North American groups encountered by Spanish explorer Juan Ponce de Leon in 1513. Furthermore, the nomination states that the “site’s significance lies in well-preserved evidence of American Indian architecture, considerable materials related to patterns of regional and long-distance exchange, elements of ceremonialism involving animal interments, and association with the Tequesta people, who are significant because of their cultural persistence following European Contact and their association with the unique environment of the Everglades.”

During its spring meeting on April 20-21, 2005, the Landmarks Committee of the National Park System Advisory Board reviewed the nomination. In the review, a few questions remained unanswered. The committee stated that while the archeological record suggests that the circular pattern of post holes represents a rare example of Tequesta architecture, the evidence was not conclusive. The committee voted to defer consideration of the site’s NHL nomination until further research was conducted to address comments and concerns raised by the NHL archeology subcommittee and professionals of the larger archeological community. Based upon this inconclusive outcome the NPS does not have adequate information to find the site nationally significant as defined in its Management Policies 2006.

**Conclusion**

NPS management policies require cultural resources to meet NHL criteria before they are considered nationally significant. The State of Florida submitted a National Historic Landmark (NHL) nomination for Miami Circle to the National Park Service (NPS) Advisory Board in 2004. The NPS Advisory Board did not determine that the site is nationally significant. As a result the NPS does not consider the site to be nationally significant.
Suitability

Definition

To be suitable for inclusion in the national park system an area must represent a natural or cultural theme or type of resource that is not already adequately represented in the system or is not comparably represented and protected for public enjoyment by another land managing agency. This is determined by comparing the area to other units in the system for differences or similarities in the character, quality, quantity, or combinations of resources, and opportunities for public enjoyment.

Analysis

Analysis and evaluation of similar hole patterns found throughout the southeastern United States from a variety of temporal contexts show that circular structures are common in the region, with some being about the same size as the Miami Circle. Circular American Indian (both prehistoric and historic) architectural formations, such as Mission San Luis near Tallahassee, Florida, and Sewee Shell Ring along the South Carolina coast, are open and interpreted to the public, but represent different architectural types from the Miami Circle. The size or shape does not make the Miami Circle unique or significant; the preservation of the holes cut in stone does. In 2004 excavation work associated with urban development on the north side of the Miami River led to the discovery of another circle feature with holes in stone, but that site will be lost as a result of development.

Comparison of the Miami Circle site with other significant national park system archeological sites in south Florida leads to the conclusion that there are few, if any, comparative sites. Currently, 104 properties in south Florida, including three individual sites and four archeological districts, are listed in the National Register of Historic Places under the “Archeological Resources of Everglades National Park” multiple property documentation form. None of these properties contains a well-preserved circular architectural feature, and no distinguishable pattern of post holes has been documented at any of these sites. Although many of these archeological sites have significant preserved architectural features, such as massive shell work sites, mounds, and canals, and most have well-preserved midden and unexcavated, preserved deposits, none of these sites are open, accessible, or interpreted to the public.

Within Biscayne National Park, known prehistoric archeological sites in the park consist of marine shell midden deposits, earthen middens, and rock mounds located in relatively inaccessible areas on the keys. These sites are currently not interpreted. There is no known site in the park comparable to the Miami Circle.

Conclusion

Currently, the Miami Circle site represents the only known preserved stone post-hole pattern of a circular prehistoric structure in south Florida that has potential for public accessibility, display, and interpretation. Based on National Park Service criteria and current information, the Miami Circle site appears to be suitable.

Feasibility

Definition

To be feasible to manage the Miami Circle site as part of the national park system, the site’s natural systems and/or historic settings must be of sufficient size and appropriate configuration to ensure long-term protection of the resources and to accommodate public use. Feasibility factors include landownership,
acquisition costs, accessibility, threats to the resource, administra-
tive costs, and staff or development requirements.

Analysis

The 2.2-acre Miami Circle site at Brickell Point is large enough
to be administered by itself, i.e., without being attached to
Biscayne National Park. Because the state currently owns the
property no costs associated with its acquisition would be
anticipated. The Miami Circle site could also be made accessi-
table to the public.

The management options for the site, which are presented later
in this document, range from proposing little development,
keeping the circle buried, and not staffing the site but having
occasional interpretive presentations to having the circle
unburied (possibly covered with a shelter or building) and pro-
viding a staffed interpretive center on the site with a small
amount of parking.

All management options assume basic development costs for
construction of an interpretive trail, interpretive panels, a kiosk,
and other interpretive media. Management of the site would
entail landscape maintenance and maintenance of the seawall
(which will soon be repaired/replaced by the State of Florida).
Additional long-term development costs could also be incurred
with the addition of any of the following facilities:

1. replica, representation, or "ghosting" of the Miami
Circle to be placed over the feature (if it were
buried);
2. a building to house visitor contact facilities, rest-
rooms, drinking fountains, and/or a museum;
3. a security fence;
4. a small-scale parking facility; and/or
5. an observation platform.

Long-term costs would include facility maintenance, on-site
personnel, and routine law enforcement. Estimated costs of the
management options are included in appendix B.

There is potential to offset some construction and long-term
costs by establishing partnerships with surrounding property
owners and/or local governmental and community groups to
provide for access, various property management and visitor
services, on-site personnel presence, viewing facilities, and
parking. The state has requested that the adjacent developer
donate visitor center space and parking in its development, and
funding to offset costs; a favorable response was received,
including an offer to provide restrooms and an interpretive
kiosk on the Icon Brickell property.

Conclusion

Common urban obstacles to access and parking exist for the
site. The site could accommodate public use. Different options
for providing visitor use and resource protection offer a range
of costs. (See Appendix B.) Based on National Park Service cri-
teria and current information, the Miami Circle site appears to
be feasible.

Overall Conclusion

While being considered both suitable and feasible, the Miami
Circle site has not been determined to be nationally significant,
and therefore does not meet the criteria for inclusion in the
national park system.

Analysis of the Miami Circle Site as An Addition to
Biscayne National Park

The second way a site may be added to the national park system
is by adding it to an existing unit. Significance, suitability and
feasibility must be met, and the addition must be related to the
reason Congress established the original park unit.
The National Park Service has authority to study potential adjustments to the boundaries of existing parks. Boundary adjustments may be recommended if a site meets any of the following criteria:

- It would protect significant resources and values, or enhance opportunities for public enjoyment related to park purposes;
- It would address operational and management issues, such as the need for access or the need for boundaries to correspond to logical boundary delineations such as topographic or other natural features or roads; or
- It would protect resources that are critical to fulfilling park purposes.

In addition, all recommendations must meet all of the following criteria:

- Lands will be feasible to administer, considering size, configuration, ownership, costs, and other factors; and
- Other alternatives for management and resource protection are not adequate.

Analysis

The primary criterion of adding to an existing park unit is whether the site being considered relates to the park purpose. Park purpose is the reason Congress created the park and is usually stated in the legislation that established the park.

The purpose of Biscayne National Park is to preserve and protect for the education, inspiration, recreation, and enjoyment of present and future generations a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty. (Public Law 96-287)

The issue of operational and management issues relates to situations in which boundary changes are needed for access or ease of management. An example is a boundary that cuts through a mountain making boundary identification and management difficult. This particular criterion does not apply to the Miami Circle site.

The feasibility of managing the area was discussed previously. The State of Florida, Miami-Dade County, the City of Miami, or a consortium of various state and local governmental agencies, tribal governments, cultural institutions, and private organizations could potentially manage the Miami Circle site at Brickell Point. None appear, however, either singly or collectively, to envision long-term development, operation, and management of the property. At present, neither the City of Miami nor Miami-Dade County has expressed interest in providing for resource protection, interpretation, and visitor use and enjoyment of the site. The state currently holds the deed to the land, but, has no office or staff based in the Miami area.

Conclusion

The Miami Circle site does not meet the purpose of Biscayne National Park, which was established to protect natural resources and therefore does not meet the criteria for inclusion in the park.
To complete the study, the State of Florida is asking for your input and comment on what you believe is the best management option for the future of the Miami Circle site. It will be helpful to know not only which option you believe is the best, but also what aspects of the option you like and dislike and why.

The responses we receive from you will be considered and summarized with the other responses we receive. The study, along with the summary of the responses, and the NPS recommendation for the future of the site, will be forwarded to the Secretary of the Interior, who will then transmit the study to Congress.

Your comments and the summary will be given to the state, so that the state, or any future manager of the site, will have the benefit of your comments.

A mail-back comment form has been included with this document for your convenience. You may also e-mail your comments to <Miami_Circle@nps.gov> or send them to:

Denver Service Center
National Park Service
Miami Circle Study / Terri Urbanowski
12795 West Alameda Parkway
P.O. Box 25287
Denver, CO 80225

Information on this project is available at <http://parkplanning.gov>

Click on PLANS link, click on the Special Resource Studies link, and then click on Biscayne NP, FL Miami Circle SRS.
What are the possibilities for the future of the Miami Circle site? Although the site does not meet the two sets of criteria to be added to the national park system, it is still considered to be an important archaeological site. Similar coastal “black earth” midden sites exist in Everglades, Big Cypress, and Biscayne national parks, but they are not as accessible for the public. NPS archaeologists concur, however, that the significance of the site lies in its “well-preserved evidence of American Indian architecture.” Thus, the Miami Circle site’s cultural significance lies in its ability to provide the public with a more comprehensive understanding of the region’s inhabitants. No other site in south Florida contains such circular formations that are preserved for public interpretation.

The NPS likely will not have a role in the future management of the site. The State of Florida is currently responsible for the long-term management of the site. Without administrative or physical presence in the Miami area, the state may consider partnerships or joint jurisdictions as a way to manage the site long distance.

Regardless of who manages the site, there are many issues and ideas that were raised by you, the public, that will need to be answered to ensure the future preservation and interpretation of the site. Some of these include the following:

• How will visitors get to the site?
• Where could visitors park?
• What facilities, if any, are needed on the site?
• Should the site be staffed or unstaffed?
• Should the site be fenced or should there be open access?
• Should the Miami Circle feature be unburied and viewable? Should it be buried for protection?

Following are four management options that offer a range of ways that these questions could be answered. The different options offer different experiences for visitors. They also have very different costs for construction and operation over time. (See Appendix B) Please read these and tell us what you would like to see happen at the Miami Circle site. A response form is included with this document.

Management Option 1 – Urban Open Space/Perimeter Interpretation

Under management option 1, the Miami Circle site at Brickell Point would provide passive recreational and educational opportunities within the context of urban “greenspace” for local city residents, tourists interested in the Miami Circle story, and those interested in the spiritual associations of the site.

Pedestrians would access the site via a new section of the Miami River Greenway, Brickell Park, or Brickell Avenue/Brickell Avenue Bridge. Existing transportation facilities in the vicinity, such as vehicle parking and the Metro Mover station three blocks west of the site, would provide access to the area.

The Miami Circle would be buried to ensure its preservation, and a form of surface marking (ghosting) would be placed over the feature to indicate its location. A security fence would be constructed around the entire site to afford protection.

No facilities would be constructed on the site, and the site would be accorded minimal maintenance, such as periodic lawn mowing and trash removal. The site would be unstaffed, although occasional interpretive presentations and guided tours would be provided.

Interpretation at the site would complement the Miami Circle exhibit at the Historical Museum of Southern Florida. Emphasis would be placed on visual and intellectual interpretation of the site. Interpretive panels along the Brickell Avenue Bridge and Miami River Greenway security fence would tell the...
Management Option 2 — Urban Activity Center / Symbolic Interpretation

Miami Circle

18
story of the site. Visitors would be afforded views of the site from the bridge and riverwalk. Opportunities for recreational activities would be afforded at Brickell Park.

Management Option 2 – Urban Activity Center / Symbolic Interpretation

Under management option 2, the Miami Circle site at Brickell Point would provide active recreational and educational opportunities within the context of an urban open space for local city residents, tourists, and those interested in the spiritual associations of the site.

Pedestrians would have unrestricted access to the site via a new section of the Miami River Greenway, Brickell Park, or Brickell Avenue/Brickell Avenue Bridge. A new small parking/drop-off facility at the west end of the site would provide vehicular access. Existing transportation facilities in the vicinity, such as vehicle parking and the Metro Mover station three blocks west of the site, would provide access to the area.

The Miami Circle would remain buried to ensure its preservation, and fencing or a plant barrier would be located around its perimeter for protection. A symbolic representation of the Miami Circle would be placed over the feature.

As in option 1, no facilities would be constructed on the site. Routine maintenance at the site, such as lawn mowing, landscape maintenance, and trash removal, would be provided. Staff presence at the site would be provided by a citizen support group. Regular, scheduled interpretive presentations and guided tours would be encouraged and scheduled regularly.

Interpretation at the site would complement the Miami Circle exhibit at the Historical Museum of Southern Florida. Interpretive panels would be placed around the Miami Circle feature to tell the story of the site, and benches would be interspersed between the panels to provide visitors with opportunities for contemplation.

Management Option 3 – Gateway to Biscayne Bay / Regional Interpretation

Under management option 3, the Miami Circle site at Brickell Point would serve as the gateway to Biscayne Bay regional educational efforts for tourists, those interested in the spiritual associations of the site, and those seeking information on the Miami Circle story within the context of southeastern Florida prehistory and history.

Primary entrance to the site would be provided via Brickell Avenue, although pedestrians would also be able to access the site via a new section of the Miami River Greenway, Brickell Park, or Brickell Avenue/Brickell Avenue Bridge. Existing transportation facilities in the vicinity, such as the Metro Mover station three blocks west of the site, would also provide access to the area.

The Miami Circle would be buried to ensure its preservation. A surface replica would be placed over the feature. Security fencing would also be installed along the riverwalk and the perimeter of the site for protection.

Space for a visitor center providing interpretation, restrooms, and staging for boat concession operations could be located within the Icon Brickell property, possibly near the eastern edge of the property. On-site paid parking could also be provided in that development. The water taxi dock along the riverwalk on Biscayne Bay would be used for interpretive boat tours of the bay as well as access to Biscayne National Park.

Routine maintenance at the site would include lawn mowing, trash removal, and general landscape maintenance. A two-three person on-site staff contingent would provide visitors with per-
sonal services, such as regularly scheduled interpretive presentations and guided tours. Interpretation at the site would complement the Miami Circle exhibit at the Historical Museum of Southern Florida.

Management Option 4 – See The Resource / Archeological Interpretation

Under management option 4, the Miami Circle site at Brickell Point would provide tourists, those interested in the spiritual associations of the site, and those seeking information on prehistoric and historic archeology with opportunities to see the Miami Circle and learn about local and regional archeology and history.

Primary entrance to the site would be provided by vehicular access from Brickell Avenue and a small parking facility at the west end of the site. Pedestrians would have unrestricted access to the site via a new section of the Miami River Greenway, Brickell Park, or Brickell Avenue/Brickell Avenue Bridge.

Existing transportation facilities in the vicinity, such as vehicle parking and the Metro Mover station three blocks west of the site, would provide access to the area.

An archeological interpretive center/museum, which could be open-air or an enclosed building, would be constructed around the Miami Circle feature for its protection. The Miami Circle feature would be viewable (possibly covered, but not buried), and most of the site (except for public walking areas) would be revegetated with prehistoric-era plantings. The water taxi dock along the riverwalk on Biscayne Bay would be used for interpretive boat tours of the bay as well as other sites.

Routine maintenance at the site would include trash removal and landscape preservation. A two-three person on-site staff contingent would provide visitors with personal services, such as regularly scheduled interpretive presentations and guided tours. Museum exhibits would interpret the Miami Circle story within the context of prehistoric and historic archeological research and study. Interpretation at the site would complement the Miami Circle exhibit at the Historical Museum of Southern Florida.
Miami Circle

Pedestrian Access

Pedestrian & Vehicular Access

Miami River

River Walk

Apartment Tower

Apartment Tower

Apartment Tower

Parking Garage

Archeological Interpretive Center

Miami Circle is viewable (possibly covered)

Prehistoric Landscaping

Boat Tours

Miami Circle

Management Option 4 — See The Resource / Archeological Interpretation

Pedestrian Access

Pedestrian & Vehicular Access
A meeting to discuss the future of the Miami Circle was held October 2004 in Miami with city, county, state, and federal managers of public lands. A meeting for the public was held that afternoon. Miami Circle Study Newsletter Number 1, dated March 2005, was sent to stakeholders and members of the public. During May 2005, five meetings with stakeholders were held in Miami, and a wide range of individuals, interest groups (such as nonprofit historic preservation and environmental conservation organizations), plus various municipal, county, and state agency representatives attended. A summary of meeting notes was sent to each participant in June 2005.

To complete the study, the National Park Service is asking for your input and comments on what you believe is the best management option for the future of the Miami Circle site after you have read this study. It will be helpful to us to know not only which option you believe is the best, but also, what aspects of the option you like and dislike and why.

Questions And Issues

The same main topics surfaced at each of the meetings as follows:

- What group/agency should manage the site?
- Is a facility or visitor center needed?
- Should the site be staffed or unstaffed?
- Should the site be fenced or have open access?
- Should the circle be buried or viewable by the public?

Summary Categories Of Comments Received

Public comments and questions fell into the following categories with examples given in Miami Circle Study Newsletter Number 1.

access to the site/context
- Miami Circle could serve as a northern access to Biscayne National Park and to Virginia Key, which could encourage inner-city residents to visit the park.
- Concessioners could be asked to contribute/donate a boat or a dock or some other substantial facility as part of a revived water taxi service.
- Convoy Point (Biscayne National Park headquarters and visitor center location) is isolated and one idea was to have part of the Biscayne National Park in downtown Miami in the form of the Miami Circle.
- Although ideas differ on the extent of parking, there is some agreement that some parking is needed for senior/handicap access.
- Miami Circle might be best a walking park.
- Miami Circle should have enough but not too much parking and facilities and adequate (not overwhelming) access to support creating the Miami Circle as an attraction.
- Think of the site as best approached and visited by water. Miami Circle is very accessible by water, and visitors could boat back and forth between it and Biscayne National Park via water taxi.
- If space in a neighboring building becomes available for a visitor center to accommodate visitors for orientation, interpretation, and education, will people come to the Miami Circle if they cannot park or have other means to conveniently access site?
- Could the Miami Circle function with highly limited vehicular access and with pedestrian and boat access as the main means to arrive at and visit the circle?

facilities appropriate for the site
- Establish a greenway trailhead to the riverwalk on the south side of the Miami River and establish as many greenway links as possible for connecting walks along the river and bay such as along the First
Presbyterian Church property adjacent to Brickell Park.

- Opinions differ about the need for interpretive panels and a building to serve as an orientation or visitor center.

**stories that might be told to visitors**

- Awareness of the historical and cultural importance of the Miami Circle would benefit not only cultural resource management and interpretation at the circle but also for Biscayne National Park in terms of better appreciation of people who were here before us.

**ways to tell the stories**

- Outreach and regular communication with the American Indian community, is needed, especially about the Miami Circle as a sacred site. What considerations are needed to convey sensitivity to visitors? What considerations are needed to convey sensitivity to visitors?
- A person on site to interact with visitors would be a great benefit and opportunity because Miami is a tourist city.
- Guided tours could stress various interpretations of what the circle might actually be.
- The site needs to be open in evening, especially with the extra daylight of summer, to add to the ambiance of downtown Miami along the river and bay.
- Do not limit interpretation to the prehistoric Tequesta and their ancestors and contemporaries. Interpretation should include associated cultural ecological relationships to the peoples and their environments over time.
- The idea of tying this site in different ways to other sites in the area is appealing. For example, Miami-Dade County operates such sites as the Deering Site, Arch Creek, Greynolds Park, and Matheson Hammock.

**visions for the site**

- Could Miami Circle become an urban art park, featuring local and American Indian art inspired by the Indian history associated with the circle? Florida tribes and tribal members could participate. Artists could interpret the site through painting and other art forms. It would be a good way to interpret the various story layers that exist at the Miami Circle with event-oriented activities.
- Use a viewing platform (no more urban paved areas) on the new building next door to emphasize the environmental importance of open green space as well as the archeological configuration of the site.
- Construct elevated observation points.
- Protecting the circle itself with fencing is okay, but find the right fence for protection and for aesthetics. The area would be more inviting as open space, with minimal structures or facilities and no museum on site. The nature of the site suggests open space, perhaps with guided tours for interpretation.
- Prehistoric types of vegetation could be planted and be part of the interpretation of the site and part of the park green space that is very important locally.
- A scaled replica located on the ground surface of the Miami Circle (buried) could reduce the need for security of the circle itself.
- The proximity of the Miami River and Biscayne Bay could lend the site to telling the broad story of peoples and the river and the bay over time, not just the story of the circle. Think about a small 1920s-era building as a visitor center, which would have nothing directly to do with the circle, but much to do with the Brickell settlement and Indian trading history.
If direct exposure of the site is not feasible, ghosting to represent the holes of the circle would be important to foster education about the circle.

**Visitor use and resource protection**
- Opinions differ about whether to keep the Miami Circle buried for protection or uncovered for more direct interpretation.
- If left uncovered, the holes in the limestone would be constantly filled with water.
- People should be able to see the circle, even with the water filling up the holes.
- The most important thing is to protect the circle.

**Partnering**
- There are many funding issues per different options about how the site might be managed and by whom.
- Partnering might produce space for interpreting and operating the Miami Circle in a neighboring building.
- Partnering should be considered to coordinate such matters as to how open space and green space involving the Miami Circle could work with the green space plans of the Miami River Commission.
Entities Represented At The Meetings

Individuals, organizations and agencies represented at the meetings included the following:

- Archaeological and Historical Conservancy
- Biscayne Bay Aquatic Preserve
- Brickell Homeowners Association
- Broward County Historical Commission
- City of Miami
- Dade Heritage Trust
- Florida Department of State
- Historical Museum of Southern Florida
- Janus Research Group
- Land Trust of Dade County
- Miami-Dade County
- Miami Police Department
- Miami River Commission
- Sierra Club
- South Florida National Parks Trust
- South Florida Water Management District
- The Related Group
- The Trust for Public Land
- Tropical Everglades Visitor Association
- Urban Environmental League
- Virginia Key Beach Park Trust

Consultation With Native Americans

From the inception of the Miami Circle study, the three American Indian tribes traditionally associated with Biscayne National Park were informed of the study by letter and with follow-up telephone calls. The three tribes are the Miccosukee Tribe of Indians of Florida, the Seminole Tribe of Florida, and the Seminole Nation of Oklahoma. Government-to-government consultations were requested by the park superintendent. The Miccosukee Tribe of Indians of Florida, the Seminole Tribe of Florida, and Native Americans with no local tribal affiliation have been involved throughout the planning process at both partner and public meetings. Additionally, government-to-government consultations with the Miccosukee Tribe are underway.
There is considerable evidence of 19th and 20th century disturbance at Brickell Point. Occupation of the property by the Brickell family included the construction of several buildings, driveways, and sea walls. Evidence of this occupation is found in artifacts and building debris, as well as postcard photographs, early city maps, and descriptions of the developing City of Miami.

Construction of the Brickell Point Apartments in 1950 probably led to the most significant alteration of the property. Archeological excavation shows that the natural topography was altered when portions of the black earth midden and limestone formation were cut away to create a level platform for construction of the six apartment buildings and swimming pool. This is most pronounced at the southern side of the property where the natural elevation of the limestone increased. Associated disturbances include excavation for septic tanks and related pipes, excavation for ornamental tree planting, and excavation of footing trenches for the buildings. In some cases these excavations disturbed midden deposits and removed parts of the limestone bedrock that held the carved and cut holes and basins.

Today the area lacks native vegetation, and filling and leveling have removed most traces of original topography as well as ornamental trees. A project conducted by the State of Florida and Miami-Dade County in May 2000 filled in many of the open excavation areas, leveled or removed spoil piles, and removed construction debris; since that time the Brickell Point property has developed a cover of grasses, sedges, and some native groundcovers such as railroad vine.

Because the significance of the Miami Circle site at Brickell Point lies in well-preserved evidence of American Indian architecture as well as considerable black earth accretionary midden materials, it represents archeological site types that supplement and complement those on Totten and Sands Keys, Biscayne National Park’s two most significant and well-preserved prehistoric and European Contact period archeological sites. These two sites, which appear to overlap with the time period of the Miami Circle site, are considered by professional investigators to be small “satellite” shellfish gathering and fishing sites, possibly associated with the prehistoric and historic American Indian village settlements along the mainland, such as the Granada site on the north side of the mouth of the Miami River and the Miami Circle site on the river’s south bank. The Granada site is a black earth midden with some shell dating primarily to the Glades II and III periods, ca. AD 500-1763.

Information from Brickell Point and the Miami Circle feature may complement or supplement data from the Granada site and more recent archeological finds on the north side of the mouth of the Miami River. The Granada site was first recorded in 1952 and extends across much of the north side of the Miami River. It encompasses city lots that included the now-destroyed Dupont Plaza and Royal Palm hotels and was named after the Granada Hotel that was torn down to make way for the Miami Convention Center. The Granada site also encompassed the present-day Hyatt Hotel lot and the recently discovered sites of a prehistoric circle and prehistoric cemetery.

Significant features of the archeological site on Totten Key include a rock mound and an extensive black earth midden. Although additional study of the site is necessary to answer questions relating to its features and functions, some
researchers consider it to be a ceremonial site as well as a burial mound that contains significant information on burial practices of the historic Tequesta peoples.

The multiple archeological sites on Sands Key, which the National Park Service intends to recommend for listing in the National Register of Historic Places as an archeological district, are currently considered to be the richest concentration of prehistoric terrestrial archeological resources in Biscayne National Park. The potential district includes the only preserved shellwork and midden site in the park and dates from at least 1,000 years ago.

A comparison of other NPS archeological sites in south Florida indicates that there are few, if any, sites similar to the Miami Circle. The "Archeological Resources of Everglades National Park" multiple property documentation form lists sites that include accretionary middens, shell or earth middens, and black earth middens, some of which are on tree islands. Earth middens are found in mangrove areas including Cape Sable, in coastal mangrove swamps, along some coastal rivers, and in the Shark River and Taylor sloughs.

Sites outside NPS areas include relict shell and beach ridges, burial mounds, eroded beaches and Gulf Island sites, and inundated sites that were once terrestrial. Although extremely rare, prehistoric earthworks that were constructed for a particular purpose, such as house structure foundations or temple mounds, also have been found. However, none of the sites listed above have a well-preserved circular architectural feature, and no distinguishable pattern of post holes has been demonstrated at any of the sites.
Costs will be a consideration in the selection of a future management direction for the Miami Circle site. For the purpose of comparison, very general cost estimates have been developed for the range of management options presented in this plan. These costs are based on general assumptions, without more detailed consideration of needs, sizes, and materials of future development. They should be considered as ranges of costs and should not be used as the basis for funding requests.

Comparative costs for the different options include both initial developments costs (table B-1) and total life-cycle costs (table B-2). Initial development costs are the estimated construction costs of the option. Demolition, labor, and materials for buildings, roads, trails, exhibits, and parking are included. Estimated costs are based on costs for similar types of development in other units of the national park system. Life-cycle costs consider the costs of each alternative over a period of time. Life-cycle costs include the costs of operating buildings, the staffing required, maintenance, and replacement costs of alternative elements. The life-cycle costs are for an estimated 25-year period.

### Table B-1: Comparative Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Qty.</th>
<th>Cost / Unit</th>
<th>Net Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverwalk</td>
<td>square feet</td>
<td>2280</td>
<td>$9</td>
<td>$20,520</td>
</tr>
<tr>
<td>Fence</td>
<td>feet</td>
<td>1200</td>
<td>$41</td>
<td>$48,600</td>
</tr>
<tr>
<td>Interpretive Panels</td>
<td>each</td>
<td>7</td>
<td>$2,000</td>
<td>$14,000</td>
</tr>
<tr>
<td>Walkways</td>
<td>square feet</td>
<td>5400</td>
<td>$8</td>
<td>$40,500</td>
</tr>
<tr>
<td>Miami Circle Ghosting</td>
<td>square feet</td>
<td>1150</td>
<td>$80</td>
<td>$92,000</td>
</tr>
<tr>
<td>Landscaping</td>
<td>acres</td>
<td>1.99</td>
<td>$98,000</td>
<td>$195,020</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$410,640</strong></td>
</tr>
<tr>
<td>Regional Construction Factor</td>
<td></td>
<td></td>
<td>6%</td>
<td><strong>$24,638</strong></td>
</tr>
<tr>
<td>General Conditions</td>
<td></td>
<td></td>
<td>5%</td>
<td><strong>$20,532</strong></td>
</tr>
<tr>
<td>Design Contingencies</td>
<td></td>
<td></td>
<td>15%</td>
<td><strong>$61,596</strong></td>
</tr>
<tr>
<td><strong>Net Construction Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$517,406</strong></td>
</tr>
<tr>
<td>Construction Supervision</td>
<td></td>
<td></td>
<td>10%</td>
<td><strong>$51,741</strong></td>
</tr>
<tr>
<td>Construction Contingencies</td>
<td></td>
<td></td>
<td>8%</td>
<td><strong>$41,393</strong></td>
</tr>
<tr>
<td>Design Costs</td>
<td></td>
<td></td>
<td>17%</td>
<td><strong>$87,959</strong></td>
</tr>
<tr>
<td><strong>Preliminary Estimate for Site Development</strong> (including design and construction costs)</td>
<td></td>
<td></td>
<td></td>
<td><strong>$698,499</strong></td>
</tr>
</tbody>
</table>

**Cost estimate Range for Option 1**  $523,900 - $1,222,400
<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Qty.</th>
<th>Cost / Unit</th>
<th>Net Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverwalk</td>
<td>square feet</td>
<td>2280</td>
<td>$9</td>
<td>$20,520</td>
</tr>
<tr>
<td>Parking</td>
<td>space</td>
<td>10</td>
<td>$2,700</td>
<td>$27,000</td>
</tr>
<tr>
<td>Plaza</td>
<td>acre</td>
<td>1</td>
<td>$435,600</td>
<td>$435,600</td>
</tr>
<tr>
<td>Fence</td>
<td>line feet</td>
<td>200</td>
<td>$41</td>
<td>$8,100</td>
</tr>
<tr>
<td>Interpretative Panels</td>
<td>each</td>
<td>2</td>
<td>$2,000</td>
<td>$4,000</td>
</tr>
<tr>
<td>Benches</td>
<td>each</td>
<td>2</td>
<td>$1,000</td>
<td>$2,000</td>
</tr>
<tr>
<td>Trash Receptacles</td>
<td>each</td>
<td>4</td>
<td>$750</td>
<td>$3,000</td>
</tr>
<tr>
<td>Miami Circle Ghosting</td>
<td>square feet</td>
<td>1150</td>
<td>$80</td>
<td>$92,000</td>
</tr>
<tr>
<td>Landscaping</td>
<td>acres</td>
<td>1.03</td>
<td>$98,000</td>
<td>$100,940</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td>$693,160</td>
</tr>
<tr>
<td>Regional Construction Factor</td>
<td></td>
<td></td>
<td>6%</td>
<td>$41,590</td>
</tr>
<tr>
<td>General Conditions</td>
<td></td>
<td></td>
<td>5%</td>
<td>$34,658</td>
</tr>
<tr>
<td>Design Contingencies</td>
<td></td>
<td></td>
<td>15%</td>
<td>$103,974</td>
</tr>
<tr>
<td>Net Construction Costs</td>
<td></td>
<td></td>
<td></td>
<td>$873,382</td>
</tr>
<tr>
<td>Construction Supervision</td>
<td></td>
<td></td>
<td>10%</td>
<td>$87,338</td>
</tr>
<tr>
<td>Construction Contingencies</td>
<td></td>
<td></td>
<td>8%</td>
<td>$69,871</td>
</tr>
<tr>
<td>Design Costs</td>
<td></td>
<td></td>
<td>17%</td>
<td>$148,475</td>
</tr>
<tr>
<td><strong>Preliminary Estimate for Site Development (including design and construction costs)</strong></td>
<td></td>
<td></td>
<td></td>
<td>$1,179,065</td>
</tr>
</tbody>
</table>

**Cost estimate Range for Option 2** $884,300 - $2,063,065
<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Qty.</th>
<th>Cost / Unit</th>
<th>Net Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverwalk</td>
<td>square feet</td>
<td>2280</td>
<td>$9</td>
<td>$20,520</td>
</tr>
<tr>
<td>Walkways</td>
<td>square feet</td>
<td>1150</td>
<td>$8</td>
<td>$8,625</td>
</tr>
<tr>
<td>Fence</td>
<td>line feet</td>
<td>1200</td>
<td>$41</td>
<td>$48,600</td>
</tr>
<tr>
<td>Interpretive Panels</td>
<td>each</td>
<td>4</td>
<td>$2,000</td>
<td>$8,000</td>
</tr>
<tr>
<td>Benches</td>
<td>each</td>
<td>2</td>
<td>$1,000</td>
<td>$2,000</td>
</tr>
<tr>
<td>Trash Receptacles</td>
<td>each</td>
<td>4</td>
<td>$750</td>
<td>$3,000</td>
</tr>
<tr>
<td>Restrooms</td>
<td>square feet</td>
<td>800</td>
<td>$300</td>
<td>$240,000</td>
</tr>
<tr>
<td>Office</td>
<td>square feet</td>
<td>500</td>
<td>$200</td>
<td>$100,000</td>
</tr>
<tr>
<td>Interpretive Space</td>
<td>square feet</td>
<td>1,000</td>
<td>$340</td>
<td>$340,000</td>
</tr>
<tr>
<td>Exhibits</td>
<td></td>
<td></td>
<td></td>
<td>$100,000</td>
</tr>
<tr>
<td>Miami Circle Ghosting</td>
<td>square feet</td>
<td>1,150</td>
<td>$80</td>
<td>$92,000</td>
</tr>
<tr>
<td>Landscaping</td>
<td>acres</td>
<td>2.04</td>
<td>$98,000</td>
<td>$199,920</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$1,162,665</strong></td>
</tr>
<tr>
<td>Regional Construction Factor</td>
<td></td>
<td></td>
<td>6%</td>
<td>$69,760</td>
</tr>
<tr>
<td>General Conditions</td>
<td></td>
<td></td>
<td>5%</td>
<td>$58,133</td>
</tr>
<tr>
<td>Design Contingencies</td>
<td></td>
<td></td>
<td>15%</td>
<td>$174,400</td>
</tr>
<tr>
<td><strong>Net Construction Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$1,464,958</strong></td>
</tr>
<tr>
<td>Construction Supervision</td>
<td></td>
<td></td>
<td>10%</td>
<td>$146,496</td>
</tr>
<tr>
<td>Construction Contingencies</td>
<td></td>
<td></td>
<td>8%</td>
<td>$117,197</td>
</tr>
<tr>
<td>Design Costs</td>
<td></td>
<td></td>
<td>17%</td>
<td>$249,043</td>
</tr>
<tr>
<td><strong>Preliminary Estimate for Site Development</strong></td>
<td>(including design and construction costs)</td>
<td></td>
<td></td>
<td><strong>$1,977,693</strong></td>
</tr>
</tbody>
</table>

**Cost estimate Range for Option 3** $1,483,300 - $3,461,000
### Option 4 – See The Source / Archeological Interpretation

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit</th>
<th>Qty.</th>
<th>Cost / Unit</th>
<th>Net Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riverwalk</td>
<td>square feet</td>
<td>2,280</td>
<td>$9</td>
<td>$20,520</td>
</tr>
<tr>
<td>Parking</td>
<td>space</td>
<td>10</td>
<td>$2,700</td>
<td>$27,000</td>
</tr>
<tr>
<td>Plaza</td>
<td>square feet</td>
<td>7,800</td>
<td>$10</td>
<td>$78,000</td>
</tr>
<tr>
<td>Fence</td>
<td>line feet</td>
<td>1,200</td>
<td>$41</td>
<td>$48,600</td>
</tr>
<tr>
<td>Interpretive Center</td>
<td>square feet</td>
<td>5,000</td>
<td>$340</td>
<td>$1,700,000</td>
</tr>
<tr>
<td>Trash Receptacles</td>
<td>each</td>
<td>3</td>
<td>$750</td>
<td>$2,250</td>
</tr>
<tr>
<td>Landscaping</td>
<td>acres</td>
<td>1.9</td>
<td>$108,000</td>
<td>$205,200</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td>$2,081,570</td>
</tr>
<tr>
<td>Regional Construction Factor</td>
<td></td>
<td></td>
<td>6%</td>
<td>$124,894</td>
</tr>
<tr>
<td>General Conditions</td>
<td></td>
<td></td>
<td>5%</td>
<td>$104,079</td>
</tr>
<tr>
<td>Design Contingencies</td>
<td></td>
<td></td>
<td>15%</td>
<td>$312,236</td>
</tr>
<tr>
<td><strong>Net Construction Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td>$2,622,778</td>
</tr>
<tr>
<td>Construction Supervision</td>
<td></td>
<td></td>
<td>10%</td>
<td>$262,278</td>
</tr>
<tr>
<td>Construction Contingencies</td>
<td></td>
<td></td>
<td>8%</td>
<td>$209,822</td>
</tr>
<tr>
<td>Design Costs</td>
<td></td>
<td></td>
<td>17%</td>
<td>$445,872</td>
</tr>
<tr>
<td><strong>Preliminary Estimate for Site Development</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$3,540,751</strong></td>
</tr>
<tr>
<td>(including design and construction costs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost estimate Range for Option 4</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$2,655,600 - $6,196,300</strong></td>
</tr>
</tbody>
</table>
### Table B-2 Life Cycle Costs

<table>
<thead>
<tr>
<th>Subject: Functional Component</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Quantity</td>
<td>UM</td>
<td>Unit Price</td>
<td>Est. PW</td>
</tr>
<tr>
<td>Construction Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Estimated Site Development</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>698,499</td>
</tr>
<tr>
<td>B.</td>
<td>1,977,693</td>
<td>1,977,693</td>
<td>3,540,751</td>
<td>3,540,751</td>
</tr>
<tr>
<td>C.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>D.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Initial Cost</td>
<td>698,499</td>
<td>1,179,065</td>
<td>1,977,693</td>
<td>3,540,751</td>
</tr>
<tr>
<td>Replacement Cost / Salvage Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Year</td>
<td>PW Factor</td>
<td>48,600</td>
<td>17,614</td>
</tr>
<tr>
<td>A. Fence</td>
<td>15</td>
<td>0.3624</td>
<td>48,600</td>
<td>17,614</td>
</tr>
<tr>
<td>B. Interpretive Panels</td>
<td>15</td>
<td>0.3624</td>
<td>2,000</td>
<td>724</td>
</tr>
<tr>
<td>C. Landscaping</td>
<td>10</td>
<td>0.5083</td>
<td>39,000</td>
<td>19,825</td>
</tr>
<tr>
<td>D. Benches</td>
<td>10</td>
<td>0.5083</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E. Trash Receptacles</td>
<td>10</td>
<td>0.5083</td>
<td>0</td>
<td>3,000</td>
</tr>
<tr>
<td>F. Shelters</td>
<td>1.0000</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>G.</td>
<td>1.0000</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Replacement Cost / Salvage Value</td>
<td>38,163</td>
<td>17,091</td>
<td>43,387</td>
<td>39,599</td>
</tr>
<tr>
<td>Annual Costs</td>
<td>Excl. %</td>
<td>PWA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Maintenance</td>
<td>0.000%</td>
<td>11.654</td>
<td>20,000</td>
<td>233,072</td>
</tr>
<tr>
<td>B. Operations</td>
<td>0.000%</td>
<td>11.654</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C. Staffing</td>
<td>0.000%</td>
<td>11.654</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>D.</td>
<td>0.000%</td>
<td>11.654</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Annual Costs (Present Worth)</td>
<td>233,072</td>
<td>291,340</td>
<td>3,845,682</td>
<td>3,845,682</td>
</tr>
<tr>
<td>Total Life Cycle Costs (Present Worth)</td>
<td>969,734</td>
<td>1,487,496</td>
<td>5,866,762</td>
<td>7,426,032</td>
</tr>
<tr>
<td>Total Life Cycle Costs (Annualized)</td>
<td>0.0858</td>
<td>83,213 Per Year</td>
<td>127,643 Per Year</td>
<td>503,430 Per Year</td>
</tr>
</tbody>
</table>

Miami Circle 33
Bawaya, Michael

Carr, Robert S., and John Ricisak

City of Miami, Planning and Zoning Department

Florida Bureau of Historic Preservation

Florida Department of State, Florida Division of Historical Resources
2003 “Mud Lake Canal (Draft).” National Historic Landmark nomination. Tallahassee, Florida.

Griffin, John W.

Levinson, Pamela G.

Means, Guy H., and Thomas Scott

Milanich, Jerald T.

National Park Service, U.S. Department of the Interior
Parks, Arva Moore

The Trust for Public Land

Weisman, Brent R., Herschel E. Shepard, and George Luer
2000 “The Origin and Significance of the Brickell Point Site (8DA12), Also Known as the Miami Circle.” *The Florida Anthropologist,* Vol. 53, No. 4, December, pp. 342-46.

Wheeler, Ryan J.
2006 State Archeologist and Chief, Bureau of Archaeological Research, e-mail to Margaret DeLaura of the National Park Service, May 2006.
As the nation’s principal conservation agency, the Department of the Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.