

DOCUMENTATION OF HISTORIC AND EXISTING CONDITIONS WITH
RECOMMENDATIONS FOR CONSERVATION PLANNING:
VIZCAYA MUSEUM AND GARDENS
MIAMI, FLORIDA



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**UNIVERSITY OF PENNSYLVANIA
ARCHITECTURAL CONSERVATION
RESEARCH CENTER**

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With the Support of the Miami-Dade County Board of Commissioners

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1.0 EXECUTIVE SUMMARY

The Documentation of Historic and Existing Conditions – Conservation Planning for Vizcaya Museum and Gardens was developed as a three phase project including classroom training (phase 1), fieldwork (phase 2), as well as analysis and reporting (phase 3).

This document is the result of the completion of Phase 3: Analysis and interpretation of data collected during Phase 2. It is also the result of a collaborative effort between the Architectural Conservation Laboratory (ACL) at the University of Pennsylvania - Graduate Program in Historic Preservation, Ceo & Nardi Inc., and Saldana Design & Preservation Inc. Guidelines for Historic Structures Reports as defined by the National Park Service (NPS 28) have been referred to for the final formatting of this report.

The research conducted to produce this document took place at Vizcaya Museum and Gardens. The Training Program, which was the first phase of the project, occurred between January and May of 2003. The Training Program was conducted primarily to educate students at the University of Miami School of Architecture about the conservation of historic sites and structures and to provide on-going training during Phase 2. A staff of eight was hired to perform work during the second phase comprised of university undergraduates, graduates, and post graduate students.

The majority of research and architectural recording was conducted during Phase 2: Field Work and occurred during the months of June, July, and August of 2003. The focus of this phase was to record the historic and existing conditions of the villa and garden. The ACL performed a condition survey and assessment of the villa and gardens. Ceo & Nardi Inc. performed the research and recording of the rose and marine gardens. Saldana Design & Preservation Inc. performed the research and recording of the villa. The project schedule and scope of work limited the team(s) to record specific features and elements representative of both villa and gardens. The general condition of the villa exterior was evaluated to be less critical than that of the above gardens with regard to immediate conservation needs. As a result, the majority of detailed conditions survey and assessment work was executed in the rose and marine gardens.

The archives of Vizcaya are considered to be an extremely valuable resource for the proper stewardship of the villa and gardens. Research of this resource is considered a prerequisite to the subsequent treatment of the site and provides a basis for solid decision-making by its caretakers.

The Villa

Vizcaya's villa has survived remarkably intact since its completion. Only the addition of the glass skylight over the courtyard and the glass enclosures of the east and west loggias have intruded on the original design. The villa was conceived as a courtyard building, highly adapted to its tropical setting. It is understood, that the decision to install these additions and enclosures was based on providing climate control for the decorative arts collection and to extend the use of the villa for museum functions. In addition to the skylight, the associated climate control system may be contributing to water penetration observed at the window openings on the east elevation. There is also evidence of water staining and possibly rot from rain penetration at the wood roof structure of the gallery. A change to the original design of the east elevation that occurred during construction may also be contributing to water penetration at the second level rooms facing Biscayne Bay.

The current storm shield system was installed as a means of protection against violent storms produced by hurricanes on an annual basis. This new system is visually intrusive and ignores the original shutter system that provided similar protection when engaged but was concealed when not in use. This system may also be a source of recurrent damage to the original stone window enframements.

Interviews held with staff and a consultant indicate that there may be concern for the condition of the structural steel in the floor system above the pool and that previous conservation treatments have occurred at various exterior locations. Photographic records that illustrate past treatments have been located, however, descriptions of the conditions and the treatments have not been found. In addition, there are also concerns about cracking that has occurred in the columns of the east loggia. Photographic records have also been located that identify work related to this area, however, no description of the work performed is available. Lack of documentation of past treatments severely limits the proper conservation management of the villa.

With the exception of a \$350,000 grant for the current renovation of the garage and blacksmith's shop of the farm village, Vizcaya has not received a significant level of funding from the State of Florida since 1981 when the Dade County Legislative Delegation secured \$450,000 to implement the climate control system. Identifying sources that would provide funds to conduct conservation work could supplement the current operating budget and assist management with the implementation of needed work.

The Gardens

Unlike the villa, the historic gardens have undergone significant changes since their completion in 1922. The outer gardens and the agricultural landscape that surrounded the farm village have all but disappeared due to selling of the land in the mid 20th century to keep pace with the spiraling costs of maintenance. However the periodic impact of tropical storms and hurricanes on the property have created ongoing conservation concerns that continue to impact the remaining property, suggesting that without immediate attention continued loss of historic fabric is inevitable.

The focus of this study was to select representative examples of the existing formal garden that might provide a model for future documentation and reveal the depth of study required for the conservation of the garden as a whole. Moreover the team chose areas closest to Biscayne Bay in order to assess the impact past storms have had on two gardens most at risk to irreparable damage in future storms.

The Rose Garden

The rose garden has been significantly impacted by the loss of architectural elements such as the Samuel Yellin wrought iron gates at its perimeter, as well as the lattice swing and the historic plantings. The garden has been most impacted by its loss of a functioning infrastructure and the degradation of surfaces from past restoration efforts. The loss of the water from the fountains and canals and the absence of a supporting landscape have significantly compromised the integrity of this garden's original design. Current visitors to the site see nothing of the magnificence the garden once exhibited. Additionally, connecting features such as access to the mangrove hammock and servants' beach are currently not accessible and could extend the interpretation of the villa and gardens if recovered.

The Marine Garden

The marine garden which is currently closed to visitors due to unsafe conditions, contains most of its original fabric, (on the north pool), and could be replanted like the rose garden to recover its landscape. This garden is most negatively impacted by the fact that its southern half is now on private property owned by La Salle Academy. The marine garden presents a special challenge in designing a partnership for its conservation that could be mutually beneficial to both entities.

Both of these gardens embody seminal attitudes for their time about building in a sub-tropical landscape. The design and construction of these two gardens created by Chalfin and Suarez with consultation of the best botanists and naturalists from the period represent how early formal ideas of the landscape were adapted to native local conditions in the choice of plant and building material. The study of these two gardens has deepened our understanding of the significance of Vizcaya at a local and national scale and underscores its need for conservation and ongoing documentation and assessment.

The villa and gardens require immediate, near future and long term conservation planning and implementation. Refer to Section 5.0 – Recommendations for a description.

2.0 ADMINISTRATIVE DATA

2.1 NAMES, NUMBERS, AND LOCATION DATA

- Name of Property: Vizcaya Museum and Gardens
- Street & Number: 3251 South Miami Avenue
- City: Miami
- State: Florida
- County: Miami-Dade County
- Zip Code: 33129
- Contact: Joel Hoffman, Executive Director
(305)-250-9133 x 2222

2.2 RELATED STUDIES

- Vizcaya Museum & Gardens - Strategic Plan 2000 – 2005, prepared by members of Vizcaya Museum and Gardens Trust, Vizcaya Volunteer Guides, The Vizcayans, Foundation for Villa Vizcaya, and Vizcaya Museum and Gardens Staff with Museum Management Consultants, Inc., San Francisco, California.
- Interpretive Plan for Vizcaya Museum & Gardens, by Margot Ammidown, David Burnett, and Maria Nardi.

2.3 CULTURAL RESOURCE DATA

- Listed on the National Register September 29, 1970 (National Register Number: 78003193)
- National Historic Landmark (NHL) Nomination Form prepared October 27, 1993 by Carolyn Pitts, Architectural Historian for the National Park Service.

2.4 DATA STORAGE

Data generated from the production of this report include field notes, photographs, digital images, measured drawings, conditions survey and assessment documents. All data should be inventoried and properly stored. Any data that may be eligible should be submitted to the Library of Congress.

3.0 THE VILLA

3.1 HISTORICAL BACKGROUND AND CONTEXT

The focus of this section concerns the design and construction of the villa as well as its past and current conditions. Much has been written about the history of the Deering family and the James Deering Estate. This section provides a summary of the Deering family history and a description of the evolution of the estate. It also presents detailed accounts of the concerns of Deering related to the design of the villa.

For a more in-depth history of Deering and of the social and cultural influences that led to the construction of the villa refer to the sections of the Interpretive Plan for Vizcaya Museum & Gardens by Margot Ammidown. For a more in-depth history of the gardens and village, refer to the sections in the same document by Maria Nardi and Margot Ammidown.

3.1.1 THE DEERING FAMILY

James Deering was born November 12, 1859 to Clara Cummings Hamilton and William Deering. His younger sister Abby was born in 1867. His older brother Charles was born in 1852 by Abby Reed Barbour, William Deering's first wife. William Deering moved his family to Evanston, Illinois when James was fifteen. At this time Charles Deering had just graduated from the Annapolis Naval Academy and began serving time in the Navy.

William Deering moved to Illinois to embark on a business adventure involving the production of agricultural machinery.¹ During this time James was educated at Northwestern University and Massachusetts Institute of Technology before joining the Deering Harvester Company. William Deering retired from active business and left the Deering Company in the hands of his sons James, Charles, and his brother-in-law Richard F. Howe. Together the three partners were responsible for the amalgamation of the McCormick, Deering and other companies into the International Harvester Company in 1902.

¹ James Deering: His Life and Times, by Margot Ammidown (VA).

James Deering built his winter home in Miami adjacent to Coconut Grove between 1914 and 1922. He retired from his position as vice-president of International Harvester in 1919. James Deering died September 21, 1925 aboard the steamship Paris on his way home to the United States from Europe.²

3.1.2 THE JAMES DEERING ESTATE, A HISTORICAL DESCRIPTION

The following general description of the boundaries of the property is based on a 1922 plan of the estate produced by Paul Chalfin. These boundaries include the intersection of Jennings Street and Brickell Avenue to the north, a southern boundary approximately 2100 feet from this intersection, approximately 1800 feet of the Biscayne Bay shoreline to the east, and a portion of the Florida East Coast Railway to the west. Miami Avenue running north and south bisected the property. The overall estate consisted of two primary features: the villa and its gardens, and a village. The villa and its gardens were located to the east of Miami Avenue and the village to the west (refer to Section 3.3.2 Historic Drawing Digital File - Sheet No. 00 – Site Plan).

The Villa

The villa was located approximately 500 feet south of Jennings Street, 475 feet east of Miami Avenue, and 200 feet west of the Biscayne Bay shoreline. Three masonry terraces oriented to the north, south, and east surrounded the villa and a forecourt and smaller entry terrace were located to the west. An island constructed of masonry was built in the bay approximately 150 feet from the east loggia and was aligned with the central axis of the villa.

The villa was built over a basement as a series of rooms around an open courtyard with two open air loggias and was comprised primarily of three levels including the first floor (courtyard level), second floor (gallery level), and a third floor. The third floor was limited to two towers located at the north and south corners of the east façade facing Biscayne Bay. In addition to these levels, there was a mezzanine level located in the composition of the building section. This level accommodated the working and living quarters of Deering's servants.

² Harvester World, A Tribute to James Deering, by Cyrus h. McCormick (VA).

Although the villa contained architectural features that addressed the entrance drive and forecourt to the west, and the less formal landscape to the north, the villa was more consciously developed and oriented toward two primary landscape features: Biscayne Bay to the east and the formal gardens to the south.

The features of the villa that were oriented to Biscayne Bay include the upper terrace, lower terrace, north and south sea arms, a boat landing, tea house, and center island commonly referred to as “the barge”. These combined features represented a point of arrival and departure for the villa and estate by boat. Lying roughly 700 feet to the south of the lower terrace was a boathouse which provided storage of Deering’s power boats. A channel built by Deering as part of this overall composition ran east to west for approximately 5000 feet from the boat (center) island out into Biscayne Bay.

The Gardens

The formal gardens began immediately south of the south terrace and extended approximately 2100 feet in the same direction. Their primary features included a secret garden, parterres, a reflecting pool, a theatre garden, a maze garden, a mound with casino, various fountains, a rose garden, a footpath to the servants’ beach, a marine garden, and tennis courts. These features of the garden were bounded on the south by a causeway which ran east / west. At the western end of the causeway was a building known as the “casbah” with a plaza pool. At the eastern end of the causeway was Deering’s boathouse.

Beyond the causeway and to the most southern boundary of the estate was a lake, various bridges, an island (said to have been occupied by monkeys), and a circular landscape element whose purpose has not been defined. (*Fig. 1*)

The Village

The village was located to the west of the villa, its gardens and Miami Avenue. The village may be described as a cluster of 1 – 2 story masonry structures finished with stucco and clay tile roofs. The primary cluster included a gate lodge, machine shop, garage, wagon shed, superintendent's house, staff residence, dairy, shed, stable, and chicken house. A second cluster included a propagation house, green house, carpenter and paint shop, and storage shed. Two other structures located to the south of both clusters included a cow shelter and pump house.

The village provided a domestic setting for Deering's chauffer, superintendent, and workers who supported the daily operation of the estate. In addition the farm village supported the production of dairy milk, the propagation of flowers, and eggs from chickens.

3.1.3 THE VILLA IN A SUB-TROPICAL SETTING

Correspondence indicates that Deering was very aware of the implications of building in the sub-tropical setting of Miami. This was addressed through the planning of the villa and attention to architectural details. Planning efforts included the proposal, design development and eventual construction of a courtyard building with two open loggias, one of which would immediately face Biscayne Bay and its breezes. Deering planned the villa in response to the climate of South Florida and included details related to ventilation and the application of a fabric velarium to shade the courtyard. (A velarium is a large awning originally designed to be suspended over a Roman theater or amphitheater.)

It is not known exactly how Deering made his decision to build a villa with a courtyard and loggias; however, Chalfin has been cited as providing sources for the design of the villa.³ In February of 1914 Chalfin wrote a letter to Hoffman following a visit to Whitehall, the mansion built by Henry Flagler in Palm Beach. The content of the letter suggested that Chalfin was interested in evaluating the design of the house in regard to how it responded to the climate of South Florida.

But let me speak for a moment as if I had been only a casual guest staying overnight at the house, and with no special inquiry to make. I should have found a house which, while outwardly

³ The section dealing with the Architecture of Vizcaya – The Courtyard by Margot Ammidown.

suggestive of a certain tropical fitness, and indeed, on one court provided with loggia adapted only to warm climates, was never the less in all essentials a palatial residence, within, quite such as one might build on Mr. Schwab's land on Riverside Drive, and no less provided against the conditions of an ordinary winter. In other words the plan provides nothing for keeping especially cool, nothing for outdoor life, and shows no devices of resisting dampness, heat, insects, torrential rains or hurricane tides, uneven temperatures or any other of those special conditions which have made the development of our plans complicated and so lengthy.⁴

In a letter dated April 9, 1913 to Hoffman, Deering expressed specific considerations for ventilation in each room of the villa:

Every closet should have slat doors to provide ventilation. Every bedroom should have slat doors in addition to the usual doors, the slats, of course, turning up. Every bedroom having doors giving a space exposed to the open air should have fly screen doors. This will give you with some reason to the problem of the three doors. You know from your experience of hot climates how valuable a slat door can be.⁵

In a later letter dated September 26, 1913 from Deering to Hoffman, Deering expressed his interest in windows and the ability to control light:

The question of how the windows can be shaped so as to let in as much air as possible and keep out as much light as possible is to me very important indeed.⁶

Deering and Chalfin would discuss the necessity to provide shade for the courtyard in detail. Correspondence indicates that the precise location, material and even the color of a velarium for the courtyard were discussed. This suggests that Deering anticipated various activities would take place in the courtyard and would require shade from the intense South Florida sunlight (refer to Section 3.2.4 of this report for a more detailed account of the velarium).

⁴ Letter dated February 12, 1914 from Chalfin to Hoffman, (VA).

⁵ Letter dated April 9, 1913 from James Deering to Hoffman, (VA).

⁶ Letter dated September 26, 1913 from James Deering to Hoffman, (VA).

The villa when viewed from the bay appears to be resting on the center island. This suggests that the intended view of the villa was from the water. This aspect of the planned perception of the villa combined with Deering's concern for the success of the east elevation (refer to Section 3.2.3) indicates that this was the front of the house and was also considered to be the point of arrival to the estate. A more practical but no less critical concern was the location of the center island. Although specific evidence has not been found to define the historic or original function of the center island as a breakwater, when viewed in its context, the center island may be considered to have a distinct role in the composition of the lower terrace and sea arms for providing protection against tidal surges. The center island was also planted with palm trees and various plants and shrubs. It also contained a wood frame and lattice summerhouse.

3.1.4 HISTORICAL DESCRIPTIONS OF THE VILLA AND ITS CONSTRUCTION

Building Materials

The following description of building materials is based on those made by Hoffman in a letter to Deering regarding proposed materials during the preconstruction period of 1913.⁷ A description of the structural design is based on a 1919 report by Wig & Hollister.⁸

- Walls - All exterior walls and some interior cross walls, which are used either to tie the building together, or to furnish bearing for steel beams, will be of masonry, that is, either concrete or rubble stone.
- Floors - All floors will be constructed of steel and concrete although in some cases the finish of these floors may be of wood laid over the concrete in such a manner as to leave no void below.
- Roof - The structural members of the sloping roofs will be of wood covered with clay tile.
- Windows - All windows, window frames, doors, and doorframes, will be of wood.
- Stair Case - The construction of all staircases will be of fireproof materials, although the finish of some may be of wood.

⁷ Letter dated October 23, 1913 from Hoffman to James Deering, (VA).

⁸ Report on the Conditions of Concrete Structures on the Estate of James Deering, Esq., Miami, Florida, Wig & Hollister, Engineers, Philadelphia, (VA).

- Walls Enclosing Stairs - The walls enclosing all stairs, staircases, elevator shafts, and similar spaces that communicate between two floors will be of terra cotta block or other fire proof material.
- Furring - The furring of all walls both exterior and interior will be of wood.
- Interior Partitions - All interior partitions other than those mentioned above to be of fireproof materials, would be constructed of wood.
- Lathing - All lathing will be of metal. (Fig. 2)
- Trim - All interior trim and finish except where we have decided to use tile or marble will be of wood.
- Plaster - All plastering will be of usual type and not cement plastering. (Fig. 3)
- Doors - Certain interior doors leading into staircases and elevators may be covered with metal to make them fire proof.
- Beams - The exposed beams of the ceiling over the second floor gallery around the court will be of wood.
- Wiring - All electric wiring will be carried in metal conduits.

If the house were to be made entirely fire proof the only wood which would be used would be for the floors and the sleepers to which the wood floors would be attached and for the interior doors, trim, and finish, and other parts above noted as being now of wood, would be made either of metal, terra cotta block, or other fire proof materials.⁹

Structural Design

The walls are un-reinforced concrete with stucco on the surface and native stone trimmings. Reinforcing rods were placed in the concrete over the window heads. These rods are protected by 2 inches of concrete and 1 inch of waterproofed stucco or where the stucco is omitted a minimum of 4 inches of native limestone is used. Floor construction throughout is of structural steel with reinforced concrete slabs between beams, and where the slabs are over corridors, courts, etc. open to the air, there is an additional protection on the under side of hung plaster ceilings with an air space between the ceiling and slab.¹⁰

Building Materials According to Original Architectural Drawings

The following description of building materials is based on a "Key to Materials" located on original architectural drawings.¹¹ (Fig. 4)

⁹ Ibid.

¹⁰ Ibid.

¹¹ Residence for James Deering Esq., Miami, Florida, First Floor Plan, F. Burrall Hoffman Architect, Building 84, Sheet No. 2, February 14, 1914, (VA).

- Concrete - walls including courtyard.
- Imitation Stone - Columns and pilasters.
- Native Stone - Window and door openings.
- Brick - Circular stair, fireplaces and flues.
- Terracotta - Stair halls and various partitions.
- Stud Partition - Various interior locations.

3.1.5 PHYSICAL DESCRIPTION OF THE VILLA, GARDENS AND VILLAGE

Today the villa still retains its general historical character and is described in greater detail below (*see section 3.2.8 for a Summary of Alterations to the Villa*). The gardens have been significantly altered due to the sale of a major portion of the estate by the heirs of Deering, as well as subsequent development. The historic property, beginning from the garden mound and the south stair landing of the peacock bridge to the historic southern boundary has been lost due to this development. This portion of the estate is now occupied by a high school, church, and a hospital. Very few features of this historic landscape built by Deering remain with the exception of the original walls of the estate along Miami Avenue (now South Bayshore Drive), fragments of the south pool of the marine garden, and the casbah. The bridge of the causeway that provided access to the boathouse remains buried in its original location. The site of the boathouse now hosts a memorial chapel.

The historic village to the west of South Miami Avenue has also been significantly altered due to the sale and redevelopment of a portion of the estate. Remaining today are the following structures: the primary cluster including the gate lodge, machine shop, garage, superintendent's house, farm house, dairy, shed, stable, chicken house. These structures are not occupied, are in disrepair, and may be seen from South Miami Avenue. Exception to this is the garage and machine shop which are currently undergoing restoration.

The structure of the second cluster remaining today includes the carpenter shop. This structure is occupied by the Miami Museum of Science and contains a collection of reptiles and birds. The mentioned museum is currently operating on a regular basis and is located approximately 200 feet south of the primary cluster and superintendent's house (*refer to Section 3.3.5 Morphological Development - Sheet No. C00 – Site Plan*).

Existing Conditions

The general character, building materials and architectural composition of the villa do not differ in any significant way from when the structure was originally constructed between 1914 and 1917 with the exception to the addition of a glass skylight over the courtyard.

The villa is a three-story structure with a square shaped plan and central courtyard with two loggias located to the east and west. (*Fig. 5*) There are towers at each corner of the structure with hipped roofs finished with clay tiles. The villa is constructed of concrete, steel structural members, and finished with stucco and native limestone and imitation stone (pre-cast). Stylistically the villa exhibits influences of Italian Renaissance, Mannerist, and Baroque periods.¹²

The architectural compositions of the facades of the villa are independent of each other with the east façade being the most prominent of the four. The north façade includes an exterior double stair that provides access to the first floor of the villa. (*Fig. 6*) The south façade includes a loggia enclosed with a leaded glass door and window system which opens onto a terrace overlooking the formal gardens. (*Fig. 7*) The east façade facing Biscayne Bay is composed of a two story central gabled façade with a loggia flanked by two three story towers to the north and south. (*Fig. 8*) The west façade consists of a single story central loggia flanked by two 3-story towers to the north and south. (*Fig. 9*)

At one time the courtyard and loggias of the villa provided an open flow of air and view of the sky and were an example of the villa's adaptation to its setting. (*Fig. 10-11*) In the late 1980's the courtyard was covered over with a glass skylight and the loggias were treated with aluminum frame and glass panels. (*Fig. 12-13*) Sometime after 2000 the window and door openings were fitted with a storm shield system. (*Fig. 14-15*)

¹² Interpretive Plan for Vizcaya Museum and Gardens, Ammidown.

Existing Building Materials

The following summary description of existing building materials is based on observations made during the Fieldwork Phase. No major differences in materials occur between the historic descriptions and existing building. There are minor differences such as in the case of doors installed at the east loggia sometime after 1985. Further reference may be made to the measured drawings for specific locations of those materials listed here.

- Base, Steps, and Detailing - Limestone
- Walls - Stucco
- Columns & Pilasters - Imitation Stone (pre-cast)
- Doors - Aluminum and glass
- Windows - Wood
- Balustrade - Iron, bronze, and stone.
- Gutters & Downspouts - Copper
- Cornices - Limestone
- Roof - Clay tile
- Weather Vane - Bronze

3.1.6 CONSERVATION ASSESSMENT SUMMARY

Glass Skylight of the Courtyard and Glass Enclosure of the Loggias

These features have significantly altered the historical integrity of the villa. They do not appropriately interpret the original design intent of the owner and architect. These features also prohibit the visitor from understanding that the villa was conceived and built with particular consideration to its setting (*refer to sections 3.1.3 – The Villa in a Sub-Tropical Setting and 3.1.5 – Villa / Current Conditions*).

The addition of the glass skylight has added significantly more surface area to the roof of the villa than what was originally intended. This contributes to the additional collection of rainwater. Observations have been made of this roof feature during a downpour of rain during a typical summer storm. The rainwater cannot be contained by the current disposal system and has been observed to flow directly over the gutters onto the clay tiles of the surrounding original roof and the service area. As a result, stucco behind the associated downspouts located at the west (entry) loggia show signs of moisture build up and biological growth including wood rot.

Climate Control System

The production of cool air from the climate control system may be contributing to the build up of moisture at various interior window locations. Evidence of water penetration, water damage, and wood rot has been observed at various windows of the interior of the east façade. (*Fig. 16*)

Wood Roof Structure

Evidence of water damage and wood rot has been located at various locations of the wood roof structure over the gallery level. This may be due to the ability for water to penetrate the current roof tiles and its substrate or the above mentioned condition of the glass skylight water disposal system. The current gutter system located at the end of the wood rafters is leaking in various locations. (*Fig. 17*)

East Façade Windows and Door

A visual survey of interior conditions was conducted of all windows and doors of the east façade. Visible evidence existed of damage in various areas including wood rot and loss of hardware. (*Fig. 18-19*)

East Façade Parapet Condition

Changes made to the original eave overhang as described in Section 3.2.3 created a condition behind the parapet wall where standing water collects. This condition may be the cause of the water damage to interior wall surfaces of rooms located at the second (gallery) level facing Biscayne Bay. (*Fig. 20-21*)

Storm Shield System

The storm shield system was installed as a means of storm protection; however, it has also significantly altered the historic integrity of the villa in a similar manner as the glass skylight and enclosure of the east and west loggia.

Visible evidence suggests that the installation of this system may have caused damage to the native stone trimming at various window and door openings. (*Fig. 22*) Corrosion was also present on the screen of various shields.

East Loggia Columns

Evidence suggests that cracking occurred in the past and may be active on the east loggia columns facing Biscayne Bay. Recent photographic records and interviews with staff members indicate that work was performed in the area above the columns to correct structural problems. Very little documentation exists which described the work that was executed in this area.

Steel Structure Over Pool

Staff members have indicated that work was performed on the structural steel located over the pool area in the floor slab of the living room to correct corrosion or structural problems.

Ceiling Mural of Pool Area

The ceiling mural is blistering, cracking, and detaching resulting in material loss.

3.2 CHRONOLOGY OF DEVELOPMENT AND USE

3.2.1 PRECONSTRUCTION PERIOD OF 1913 TO 1914

Correspondence conducted between Deering, Hoffman, Chalfin and site superintendents in Miami during this period, indicate a concern for the location of the house in regards to the high water line and its foundations. Questions were raised as to the location, depth, and compressive strength of the bedrock. Deering also considered the opinion of his future Miami neighbors regarding the same issues. Kirk Munroe of Coconut Grove wrote a letter to James Deering to express his concern for the proposed location of the house.

Yesterday I went with Mr. McDonald to your place to note the result of soundings that he is having made to ascertain the depth of the rock deposit on the front. I was amazed to note that in one spot, about the center of your proposed building site, the distance to solid rock was 38 feet 6 inches; for I had not supposed that any such bed of muck existed on this coast. At the same time, owing to a high autumnal tide, the whole of the building site was under water. I sincerely wish you would come down for a day, and take another look at the place, before final orders are given for the work to begin as now planned. If you could see it now I am firmly convinced that you would move your building site back 200 feet from its present location.¹³

In a letter attributed to Paul Chalfin dated October 3rd, 1913, Joseph McDonald was asked to provide boring tests to identify the location and depth of solid rock.

Make additional tests for level of rock as follows: Starting at the front door at four of house at four fifty foot intervals each side of house on lines parallel to Miami Avenue. Starting at second of these latter one each side one hundred feet toward Miami Avenue. Telegraph results as soon as possible.¹⁴

In the same letter Chalfin expressed concern about the type of rock and tests being conducted on it.

I wish you would explain to me further, what kind of tests you made, that is, whether they were merely rod tests or if they were borings.

Also how sure are you that the rock is ledge in some cases, crust in others, and possibly crust still in others?

¹³ Letter dated October 3, 1913 written by Kirk Munro to James Deering, Vizcaya Archives (VA).

¹⁴ Letter dated October 3, 1913 written by Chalfin to Joseph McDonald. (VA)

*Did you in any case go through any of the crust, or into the ledge, and if so, what did you find regarding the character of the ledge or the thickness of the crust and the material underlying the crust?*¹⁵

These questions led to the consideration of the type of foundations that would be appropriate for the house. Would it be necessary to utilize concrete piles or could wood piles be used instead to maintain reasonable costs? In a letter to James Deering from Ingalls dated October 17, 1913 the decision to build the house on its original site using concrete piles was confirmed and a telegram was sent to McDonald in Miami:

*Having definitely decided to build the house on site originally selected. Proceed with preliminary clearing dredging, filling etc. as per my letter of October third. House to be carried on piles for which foundation plan is being prepared. Further information following.*¹⁶

In a letter addressed to James Deering from F. B. Hoffman Jr. dated December 2nd 1913, the architect described results of additional test borings which showed that the weight of the house could be carried on concrete spread footings rather than piles.

I have just received the results of the two test holes which I had dug on the site of the house to determine the character of the soil underlying the location more accurately than obtainable from previous information.

These tests show on the face that the underlying soil about 2' to 4' below the surface is of decomposed rock which closely resembles a good sand and that this strata is in the neighborhood of at least ten feet in depth.

*From this information it would seem that the house could be carried on spread footings instead of on piles and considerable money might be saved in this manner.*¹⁷

As indicated in another letter from Hoffman to Deering dated January 5th, 1914, results of further testing were telegraphed from Miami to Hoffman. Hoffman forwarded these results and his own conclusions to Deering recommending that work proceed.

I received on Saturday from Mc Donald the following day letter:

"Eight inch pier test complete as per your instructions including fifteen hours on last test the result is absolutely no settlement. I strongly advise you your personal observation for any further information."

This is most encouraging and practically decides definitely the question as to the type of foundations which it will be best to use.

¹⁵ Ibid.

¹⁶ Letter dated October 17, 1913 written by Ingalls to James Deering, Esq. (VA)

¹⁷ Letter dated December 2, 1913 from Hoffman to Deering, (VA).

*We are, therefore now proceeding with the completion of the foundation plan on the basis of the house resting on the decomposed rock strata with footings of a proper spread to carry the loads involved.*¹⁸

3.2.2 CONSTRUCTION PERIOD OF 1914

May 5 to August 29

Clarification of the role that the Fred T. Ley Company and the George Sykes Company would have in the execution of work in Miami was described in the following letter dated May 5th 1914, addressed to Deering from an unknown source:

*Mr. H.A. Ley of the Fred T. Ley Company, which you will remember is financing the George Sykes Company for the execution of the work at Miami, has submitted to me a proposition in regard to the bond which the George Sykes Company is required by the specifications to furnish, which proposition I should like to submit to you herewith for your disposition.*¹⁹ (Fig.23)

The amount of the bond called for is one half of the contracts now awarded to the George Sykes Company for the House and Terraces, which contracts to the amount to about \$367,000.00 In other words the bond is about \$184,000.00 on which the Sykes Company is to pay a premium of 1/2 of one percent of \$367,000.00 or about \$1800.00.

Also during this time, various activities related to site preparation took place on the grounds of the estate. Among these activities were photography, surveying, excavation and the pouring of concrete for foundations of the villa. One of the first structures to be built was a wooden tower located in the proximity of the villa with platforms corresponding to the future floor heights of the villa. Photographs were taken from this tower to record the general condition of the site and construction activity. (Fig. 24-26)

Another early structure built for the transportation of building materials was a wooden trestle. The trestle was erected from a clearing west of Brickell Avenue to the base of the tower. The clearing was also the location of the stone plant presumably for the production of aggregate to be used in the concrete mixture for the villa and gardens and for gravel. (Fig. 27-28)

In July formwork for concrete walls was erected and walls of the villa basement level were poured in place. Structural steel members were later introduced to provide support and strength to the concrete floor slabs. In August stonemasons came on site carving stone into column shafts and a column of Nassau stone was erected presumably as a test. (Fig. 29-32)

¹⁸ Letter dated January 5, 1914 from Hoffman to Deering, (VA).

¹⁹ Letter dated May 5th 1914, from unknown source to Deering, (VA).

Historic records indicate that the type of stone to be used in the construction of the villa was of considerable interest for Deering, Hoffman and Chalfin. Correspondence suggests that stone could have been quarried locally from sites in Miami owned by Deering as well from the Florida Keys. In a stone report, produced by site representative P.E. Paiste, records of the weekly and monthly cubic feet consumption indicated that native or quarry key stone was used.²⁰

In a letter addressed to Deering on January 3, 1914 that has been attributed to Hoffman, imitation stone was discussed regarding its load bearing capacity compared to natural stone.

*Regarding the parts marked "Imitation Stone" on the drawings, this is a point which I thought we had discussed as we have talked it over much here in the office and with Mr. Chalfin. We would all very much prefer that all stone should be real native stone, but as you know we had it tested for strength and found it rather weak. Furthermore investigations in Miami show that it is very difficult to carve ornamentation and moldings in the stone if any degree of firmness is required. It therefore looks as though it might be necessary to make columns which are carrying loads of imitation stone, likewise for the finer molded and ornamented parts. This letter is owing to the fact that the stone is very soft in some places and flinty in others, resulting in serious breaking and chipping when worked with a tool in fine lines. The imitation stone, which we have contemplated would be made from native rock and would imitate it so closely the difference could hardly be told.*²¹

September 12 / November 29

By September 1914 the terrace, first floor walls, and scaffolding were photographed 1000 feet off the shore of the estate from Biscayne Bay. (Fig. 33)

Sample roof features were constructed using tile from an unknown source that had arrived on October 31 aboard the sailing vessel "Clara". Stonemasons were seen actively carving and installing various architectural details including the columns of the tearoom and arches of the courtyard. (Fig. 34-37)

During the month of November the pool began to take form. Structural steel members were installed above the east loggia, concrete was poured in place for the third floor slab, brick chimneys were near completion, and the south elevation was photographed from the location of the future formal gardens. (Fig. 38-41)

²⁰ Stone Report, Month of [] 19 [], P.E. Paiste, (VA).

²¹ Letter dated January 3, 1914 to Deering and attributed to Hoffman.

3.2.3 CONSTRUCTION PERIOD OF 1915

January 24 / May 28

During this period excellent progress was made toward the completion of the shell of the villa, including exterior walls, stone arches of the courtyard, stone detailing of columns, pediments and cornices, and roof framing which included the second floor gallery. (Fig. 42-44)

By February the east elevation facing Biscayne Bay was clearly visible behind wood scaffolding and by March the other three primary elevations were also visible behind the scaffolding. A majority of roof framing was in place and roof tiles were installed at various locations including roof vents and chimneys. By May stone details for the window openings of the north and south towers were installed. (Fig. 45-47)

Correspondence during the month of April indicated that the design of the villa's east façade was reconsidered and changes were planned at the central gable. In a telegram from Hoffman to James Deering dated April 20th, 1915, Hoffman requested approval of Deering to move forward:

Increased price one thousand nine hundred fifty dollars restudied design east central gable results from all study and changes made since original drawing stop. This checked now by Chalfin who is satisfied stop. Sykes states must have decision today or price increased as work delayed stop. Will you telegraph me what to do?²²

Review of the historic photographs during this time did not reveal any evidence that changes were made as indicated by the telegram from Hoffman to Deering.

Correspondence during the month of May indicated that a source for the roof tiles may have been identified. Following approval by Deering, a letter dated May 6, 1915 from Hoffman to [Mr. Curtis] at a Chicago address, specifying costs to purchase roof tiles:

With Mr. Deering's approval the George Sykes Company were instructed to purchase 16,000 additional Cuban roof tiles and to transport the same to Mr. Deering's property, paying freight and duty charges, etc. on same.

The cost of these tiles is \$1101.55 as per bill and requisition received from Sykes today.²³

²² Confirmation of Telegram addressed to James Deering from F. B. Hoffman, April 20, 1915 (VA).

²³ Letter dated May 6, 1915 from Hoffman to Curtis, (VA).

The role of Curtis is uncertain, however in consideration of the type of correspondence, he may have been a secretary or bookkeeper of Deering's. This letter also indicated that the first shipment of tiles unloaded in October of 1914 from the ship "Clara" may also have been from a Cuban source.

June 15 / November 23

During this period stonework was installed at the gallery and all exterior stuccowork appears to have been completed. Scaffolding was taken down from the east façade. Statuary that would later be placed on the parapet of the east elevation was uncrated. Cracking of the stucco between the central gable and the north tower was also recorded. Deering's balcony was constructed and much attention continued to be given to the east façade. (Fig. 48-51)

In a Western Union Telegram to Deering dated July 23rd 1915, Chalfin sent a brief message:

*Not satisfied with east façade.*²⁴

Deering sent the following message on July 27th shortly after receiving the telegram from Chalfin:

*I have your favor of the 23rd [inst.], enclosing photographs, for which I thank you. I am, as you conjecture, particularly interested in the front façade. There, it seems to me, lies the question of the chief artistic success or failure of the house.*²⁵

Review of photographs taken during the month of July 1915 showed that at one time there were two roof overhangs on either side of the central gable of the east façade of equal dimension and material. Hand written notations on an undated photograph of the same time period read "proposed changes E elevation." This photograph showed that the overhang to the left of the central gable was cut back to the face of the wall, while the overhang to the right of the central gable remained unaltered. Changes continued to be a concern into the month of October and scaffolding was re-erected to implement changes.

In a letter to Deering that has been attributed to Chalfin, specific reasons for the changes to the east elevation were stated:

I telegraphed you on July 29th that I was not satisfied with the east façade of the house, and offered to write. The overhanging eaves are evidently a great mistake; I have always been

²⁴ Western Union Telegram dated July 23, 1915 from Chalfin to Deering, (VA).

²⁵ Telegram draft to Hoffman from Deering dated July 27, 1915, (VA).

opposed to them, but not for the reason which makes them now so seriously wrong. I was opposed to them because I did not see any need of them on the façade; I am opposed to them because they cast a shadow at certain times of the day to the ground, leaving the part of the facade under the middle motif free of shadow, and thus dividing the whole façade into five parts, viz – the two parts which are without shadow, the central portion of the main house without shadow, and two portions under these projecting eaves with shadow²⁶. (Fig. 52)

Also during this time Chalfin commented on the quality of the villa in regards to its climate:

I do not know what to answer to you about the occupancy of the house, and shall not think of it until I have had your reflections on my last letter. I will say this to you, that everybody who works down there is astonished and enchanted with the coolness of the house, even in summer. Sykes says that it is the coolest place in Florida, and if he goes again he will try to sleep in one of the towers. We all feel you have unwittingly built yourself a great summer residence, and that you will inevitably desire in the future to protract your stay longer in the spring.²⁷

3.2.4 CONSTRUCTION PERIOD OF 1916

January 15 / June 31

During this period the east loggia was near completion and in preparation for interior finishing and decorating. The courtyard stucco had been whitewashed and all of its stonework elements were in place with the exception of the paving. (Fig. 53-54)

In a letter to Chalfin from Deering, the consideration of installing an awning in the courtyard was discussed:

When we spoke last of the subject you made the suggestion that a silk awning over the courtyard would be too costly. I fear this is true but since you do not intend to cover the entire courtyard, why should you not find out the approximate cost of one such silk awning. This I think without doubt should be the one we propose to make pink or rose silk.²⁸

In a letter to Deering that has been attributed to Chalfin, more discussion of a covering for the courtyard was expressed and referred to as a velarium:

You want trees in the court, but not very high trees, and not too many, that is understood. You also want a velarium. Now this velarium must hang from the base of the columns of the gallery. It cannot be any higher because the north side of the court is not closed any higher than the east and west side ...²⁹

²⁶ Letter dated August 5, 1915 from Chalfin to Deering, (VA).

²⁷ Letter dated August 2, 1915 attributed to Hoffman written to Deering, (VA).

²⁸ Letter dated March 21st 1916 to Chalfin from Deering, (VA).

²⁹ Letter dated May 20, 1916 to Deering attributed to Chalfin, (VA).

During this time window systems were installed in the south elevation facing the formal gardens. This included the tearoom leaded glass door and transom window system. In a photograph, Sykes was seen standing in front of the skylight of the circular stair with the primary roof in the background complete with roof tiles, roof vents and chimneys. The weathervane which was also photographed sometime in June further indicated that the roof was near completion. (Fig. 55-56)

Correspondence conducted in the previous year between Hoffman and Deering indicated that the original desire of Deering to install a caravel-like weathervane was not realized. Instead a sea horse motif was installed. In a letter from Deering to Hoffman dated October 19 Deering wrote:

*There is no reason why there should not be on the house, if it is decided that it would be artistic, a weathervane, which might, it seems to me, be very well made in the form of a caravel, this weathervane being part of the ornamentation of the façade and put at the front of the house.*³⁰

Later correspondence between Hoffman and Chalfin indicated that drawings were submitted to the appropriate parties for the construction of a weathervane. Hoffman wrote to Chalfin:

*I acknowledge receipt of your official photograph of the sea horse and also three prints of revisions of part of drawing 401 for registers, #401-A. I am transmitting this to the proper parties.*³¹ (Fig. 57)

Work was also underway on the construction of the north stair. Earlier correspondence conducted between Deering and Chalfin during the summer of 1915 indicated that the north stair was of some concern regarding the amount of light it would offer to the bowling alley bar. In a telegram to Deering Chalfin wrote:

*Hoffman returns with drawings of the bowling alley bar which he informs me you saw and approved. I desire emphatically to disapprove these drawings because they give insufficient light in the bowling alley and bar.*³²

Deering replied to Chalfin in a telegram regarding the matter of the north stair:

Some misunderstanding about the bowling alley and den I have never seen drawings Hoffman gave me all descriptions of his ideas when in Miami subject has not been mentioned since that I

³⁰ Letter dated October 19 from Deering to Hoffman, (VA).

³¹ Letter dated May [], 1915 from Hoffman to Chalfin, (VA).

³² Western Union Day Letter dated July 6, 1915 to Deering from Chalfin, (VA).

remember I desire all the light possible so please inform Hoffman and make plans accordingly.³³

July 17 / December 28

Paving of the courtyard commenced and work was completed by August 17th. The installation of the fountain adjacent to the west loggia was also installed. At the same time paving was laid at the south terrace. Stonework of the forecourt pond was in place and landscape elements were introduced to the forecourt and courtyard. The east terrace was paved and planted with grass. (Fig. 58-62)

Review of a document entitled “List of Work to be Done and Missing Pieces”, dated November 4th, 1916, indicated that interior finish materials of the villa were being installed including trim, wall coverings, mirrors, floor finish, doors and grilles for wall registers.

3.2.5 CONSTRUCTION PERIOD OF 1917

During this period most of the work was focused on the completion of terrace details and the gardens including the casba to the south of the formal gardens. Work was also progressing on the construction of the summerhouse located on the center island. The boathouse was photographed from a vantage point which appears to have been from the center island. (Fig. 63-67) Following this period a majority of the construction activity was focused on the finished interiors of the villa, the gardens, and the village.

3.2.6 CONSTRUCTION PERIOD OF 1917-1922

March 1917 / March 20

A document entitled “Report on the Conditions of Concrete Structures on the Estate of James Deering Esq., Miami, Florida” was issued by Wig and Hollister Engineers from Philadelphia. The report identified areas for future concern.³⁴

³³ Western Union Day Letter dated July 7, 1915 to Chalfin from Deering. (VA).

³⁴ Report on the Conditions of Concrete Structures on the Estate of James Deering Esq., Miami, by Wig & Hollister Engineers, November 1919 (VA).

Work was performed in general for the following:

- Boathouse
- Canals
- Interiors
- Roadway east of South Miami Avenue
- Walls ³⁵
- Barge (Center Island)
- Casba and Plaza
- Formal Gardens
- Lake
- Monkey Island
- Mound stairways, walls, plantings.
- Road west vista
- Venetian water landing
- Secret Garden
- Walls of South Miami Avenue ³⁶
- Fountains
- Pavilions ³⁷
- Sculpture
- Mound (near completion)
- Mound Casino
- Propagation House ³⁸

March 1920 / March 1921

Work was performed in general for the following:

- Causeway
- Formal garden grottos, pavilions, terraces
- Fountain gardens
- Lake
- Peacock bridge ³⁹
- Dredging and filling of land and waterways south of mound. ⁴⁰

³⁵ Index to the Photographic Albums on the Building Vizcaya, Volumes 1 – 12, 1914 – 1922 published in 1955 (VA).

³⁶ Ibid.

³⁷ Ibid.

³⁸ Index to the Photographic Albums on the Building Vizcaya, Volumes 1 – 12, 1914 – 1922, published in 1955 (VA).

³⁹ Ibid.

⁴⁰ Ibid.

3.2.7 THE POST- CONSTRUCTION PERIOD OF 1925-1992

1925

James Deering died September 21. Deering's death was announced in a newspaper clipping from the *Chicago Tribune*:

*Aboard steamship Paris en route to New York, Sept. 21 – James Deering of Chicago, former president of International Harvester Company died from a complication of disease shortly after daybreak this morning as the Paris, with the Caillaux mission aboard, was pounding through a thick fog off the banks of New Foundland.*⁴¹

1926

A Hurricane resulted in significant damage to the estate which was recorded by an unknown photographer. Images indicate that most damage occurred in the garden. Wood elements of the pergola between the villa and laundry building are not visible and columns may be seen resting on the ground. The summerhouse of the center island is no longer visible.⁴²

1930 to 1940

Chalfin was hired by family and returned to direct the restoration of the villa and grounds. The family makes an effort to run the estate as a museum without success.⁴³ A driving tour map was published during this time for visitors to view the estate from their automobiles.⁴⁴

1940 to 1950

The Deering family visited off and on.⁴⁵

41 Newspaper clipping copyright 1925 by The Chicago Tribune Co. (VA).

42 Hurricane Damage Files, (VA).

43 Lives of Vizcaya by Harwood.

44 Vizcaya Archives.

45 Oral history provided by Richard Farwell, September 4, 2003.

1950

Hurricane produced damage to the estate, recorded by an unknown photographer. Areas affected included the east gates and gate lodge, entrance walk and fountain, maze and theater gardens, mound stair and north pool of marine garden.⁴⁶

1952

Acquisition by county in 1952. In 1953 Vizcaya opened as a museum.⁴⁷

Restoration of the general collection was initiated and continues into the following decade.⁴⁸

1965

Hurricane Betsy damaged the estate. An unknown photographer recorded the damage. Areas affected included the center island, as well as the pools and statuary of the gardens and grounds.⁴⁹

1978

A \$6000 Historic Preservation grant was obtained through the Florida Department of State and the U.S. Department of the Interior to help restore the lintels of the villa.⁵⁰

1980

A third Historic Preservation grant of \$51,000 was obtained to assist with structural repairs in the basement of the villa.⁵¹

46 Hurricane Damage Files, (VA).

47 Miami Herald newspaper clipping dated November 1, 1952, (VA).

48 Oral history provided by Richard Farwell and Restoration files, (VA).

49 Hurricane Damage Files (VA).

50 Fundraising document produced by Vizcaya Foundation date unknown, (VA).

51 Ibid.

1981

The Dade County Legislative Delegation secured a \$450,000 special appropriation from the State of Florida to begin the climate control system.⁵²

1982 / 1985

Bird is director of the Parks and Recreation Department.

Weinhart is executive director of Vizcaya and moves to the Miami Art Museum.

House pressure washed and painted using lime based paints under directorship of Weinhart. Color analysis by E. Cianfoni to match original scheme. Pigment proved to be problematic and there were also aesthetic concerns. (1983)

Focused effort to implement a good business plan and hire a new director. Richard Gray was hired and served 14 months.

Venetian blinds restored.

East loggia floor restored.

Barge restored.

Richard Farwell takes over directorship.⁵³

1986

Climate control project implemented including installation of the glass canopy and fire protection system.⁵⁴

Not all rooms were open during this time. 1917 documentation provided evidence for decision making.⁵⁵

⁵² Ibid.

⁵³ Oral history provided by Richard Farwell.

⁵⁴ Construction documents issued by Wolfberg Alvarez and Associates, November 18, 1985, (VA).

⁵⁵ Oral history provided by Richard Farwell.

1992 to 2004

Hurricane Andrew caused 5 feet of flooding in the basement of villa.

Water level estimated to be a higher level in the gardens.

Flooding produced major problems with electrical and climate control systems. As a result significant sum of funds are spent on the basement.

Michele McDonald Curator of Vizcaya records the damage caused by Hurricane Andrew.⁵⁶

A 14-hour process was required to apply plywood shutters to all windows of the villa. Metal shutters were applied at the loggias.

1995 to 2000

Exterior copper gutters repaired.

Copper mesh pigeon proofing installed in exterior eaves.

Waterproofing, metal reinforcing and masonry conservation take place. Window sills are removed, metal reinforcing treated, sills put back or replaced and caulking applied. The most problematic area is the north side particularly over the pool.

The balusters over the pool are treated. The I-beams that run north and south over the pool are treated for corrosion.

The parapets and windows have always been a source of water penetration.

Re-caulking of glass canopy over courtyard.

Chimneys, structural work, barge, casino, grottos, and secret garden were restored by Walter Lista.

⁵⁶ Hurricane Damage Files (VA).

Washington University Technical Association performed work on the fountains. The fountain water system was non-circulating and emptied into the bay. Metal pipes were replaced, general cleaning and consolidation of fountains, and installation of re-circulating system.

A hurricane mitigation project including storm shields for door and window openings, a flood proof system with back up pumps for basement are installed with FEMA money and implemented by the Park and Recreation Department.

Structural problems identified and corrected at the east loggia columns and arches. Walter Lista provides treatment services.⁵⁷

Marina Korolyova Restorers & Associates Inc. hired to treat stone and paint in the following areas:

- Cascading Water Fountain
- Center Island Balustrade and Obelisks
- Courtyard
- East and South Terraces
- Forecourt Balustrade
- Interior Limestone Details of Main Entrance
- Sculpture at Entrance Plaza
- Stairs and Columns of Orchidarium
- Stone Grape Planter⁵⁸

2003

Richard Farwell retires from directorship.

Existing and historic conditions of the villa and gardens are recorded by a team of academics and professionals. Project funded by the Getty Grant Program and Vizcaya Museum and Gardens.

2004

Joel Hoffman takes over position of executive director for Vizcaya Museum and Gardens.

⁵⁷ Oral history provided by Richard Farwell.

⁵⁸ Korolyova Restorers & Associates Founded in 2000. Company portfolio.

3.2.8 SUMMARY OF ALTERATIONS TO THE VILLA 1913-2003

Preconstruction, Construction, and Post Construction Periods

Changes made to the villa during pre–construction, construction, and post construction periods were identified through observations of historic photographs, correspondence, original architectural drawings, and physical investigation.

The pre–construction period of 1913 to 1914 has been determined by dated letters of correspondence, dates located on original architectural drawings and historic photographs. This period focused on design related issues of the villa. Original architectural drawings produced by F. Burrall Hoffman included a date of February 21, 1914 in the drawing title block.⁵⁹ This date suggests that the design process began prior to 1914 and perhaps as early as 1913. Historic photographs of plaster study models of the villa are associated with the year 1914; however, when compared to the architectural drawings and current conditions it is more evident that the models may have been produced prior to February 1914 and as early as 1913.⁶⁰ Correspondence during this time revolved around planning of the villa and its terraces.⁶¹ It is also evident from review of original architectural drawings that the earliest issued set of drawings was made in February of 1914. The same drawings were revised and re-issued in May of 1914 and again in June of the same year.⁶²

The construction period of 1914 to 1917 has been identified by dated correspondence and historic photographs. In July of 1915 a telegram sent by Chalfin to Deering initiated changes to the east elevation of the villa.⁶³ Historic photographs produced during this time indicate that the east elevation of villa was constructed according to architectural drawings produced by Hoffman and eventually changed according to the influence of Chalfin and Deering.⁶⁴

⁵⁹ First Floor Plan, Bldg. No. 84, Sheet No. 2. Vizcaya Archives (VA).

⁶⁰ Building Vizcaya, Vol. 1 and Drawing Archives, (VA).

⁶¹ Construction File 1913, (VA).

⁶² First Floor Plan, Bldg. No. 84, Sheet No. 2. Vizcaya Archives, (VA).

⁶³ Western Union Telegram dated July 25, 1915 from Chalfin to Deering, (VA).

⁶⁴ Building Vizcaya, Vol. 3, (VA).

The post-construction period of 1917 to 2003 has been defined by the time of Deering's arrival and the report date. Historic photographs indicate that Deering first arrived at his winter home sometime around December 25, 1916. Photographic documentation pertaining to the construction of the villa was nearly stopped after Deering's arrival and was focused on the grounds and gardens. Most photographic images of the villa following 1916 depict decorated interiors and images of the villa exterior portray a finished appearance.⁶⁵ Events that occurred during this period have been identified through secondary sources and oral history.⁶⁶

Preconstruction Period of 1913 - 1914

Architectural study models built by the Menconi Brothers reveal various changes in the design for the villa.⁶⁷ Conditions described in the models differ between two versions of study models and the construction and post-construction periods. The most significant are seen in views of the north, east, and west elevations. These changes are considered significant because they indicate that original or early design proposals for the villa were distinctly different from architectural drawings or the final construction.

View of the North Elevation

Version 1 - This version of the study model includes a three-story north tower, an exterior stair with a circular plan composition, and articulation of a three story northwest corner. (*Fig. 68*)

Version 2 - This version includes a four-story north tower, the same exterior stair, and a four-story northwest corner element. The introduction of a basement or lower level of the north tower was made and articulated with three arcuated openings. The northwest corner was also articulated with a basement or lower level also with three window openings. (*Fig. 69*)

Versions 1 and 2 differ primarily in the articulation of window openings and version 2 suggests the addition of a swimming pool similar to the current condition. The architectural drawings indicate fewer arcuated openings expressed at the swimming pool area as well as the northwest corner element and more closely resemble current conditions than what is seen in version 2.

⁶⁵ Building Vizcaya, Vol. 8, (VA).

⁶⁶ The Lives of Vizcaya by Harwood, and oral history provided by Richard Farwell, September 4, 2003.

⁶⁷ The Menconi brothers model of villa and terraces, Building Vizcaya, Vol.1, (VA).

View of the East Elevation

Version 1 - In this version of the model the north and south towers are identical. Both are articulated as three story structures with a hipped roof. The first and second levels include single window openings located along the vertical centerline of each tower. The first level opening includes a balustrade at the sill of the opening and a pediment at the head of the opening. The second level opening includes a balcony with balustrade and a cornice at the head of the opening. In both towers, at the third level, there are two window openings of identical size on either side of a circular motif expressed at the surface of the wall resembling a relief.

The central elevation between the north and south towers is represented as a two-story façade with a central gable flanked by roof overhangs. The first story or ground level is composed of a loggia with paired columns and pilasters and is flanked by single window openings. These openings include a balustrade at the sill and a cornice at the head of the opening. Above each window is a circular ornamental feature set into the wall. The second story is composed of a central arcuated opening with balcony and balustrade flanked by three window openings to the left and right. The window openings are a group of three with a smaller opening located at the center of the group. Above the second story is a central gable with a broken pediment. (*Fig. 70*)

Version 2 - In this version of the model both the north and south towers are represented in the same manner as the first version. The first story or ground level is also represented in the same manner. Changes that occur are located at the second level and central gable. Window openings that flank the central arcuated opening with balcony and balustrade are identical in size and finished at the sill with a continuous horizontal moulding. The central gable with broken pediment is ornamented with a relief below its cornice and a continuous horizontal moulding is added which terminates at the flanking roof overhangs. (*Fig. 71*)

Version 2 differs from version 1 primarily in the articulation of window openings at the second level and the central gable. Comparison of both versions with the architectural drawings indicate that version 2 more closely resembles the architectural drawing of the east elevation produced by Hoffman in February of 1914. (*Fig. 72*)

View of the West Elevation

Version 1 - This version of the study model describes the west elevation area of the villa with a forecourt comprised of two walls with a circular plan composition attached to two pavilion structures to the north and south along the same axis. A two-story structure with arcuated openings at the ground level and a gallery with a pitched and flat roof at the upper level is seen attached to the villa at its southwest corner. (*Fig. 73*)

Version 2 - In this version of the model, the arms and pavilions of the forecourt have been replaced by what appears to be lower walls with vegetation and two portal structures to the north and south. The two-story structure located at the southwest corner has been replaced by a pergola and a lower two-story structure with a hipped roof. (*Fig. 74*)

Versions 1 and 2 differ primarily in the articulation of the forecourt area. Comparison of version 2 with the architectural drawings indicates a change in the composition and number of window openings of the west façade which also more closely resembles current conditions.

3.2.9 CONSTRUCTION PERIOD OF 1914-1917

Changes that occurred during this period have been identified through observations of historic photographs, review of historic correspondence, and review of original architectural drawings. There are three significant changes that occurred during this period. Those made to the north exterior stair, the east elevation, and the height of the building above the second level. Changes that occurred to the north stair and east elevation are clearly documented in historic photographs and correspondence between Chalfin and Deering. The changes to the building height above the second level were identified during the Field Work Phase at the time of recording existing conditions.

Less significant changes that most likely occurred during this period include the configuration of interior stairs located at the entrance loggia, the addition of columns in the east loggia, and the elimination of a door at the reception room. Although there is no supporting documentation to suggest that these less significant changes definitely occurred during this period, as is the case with the north stair and east elevation. These changes, as in the case of the building height, were also identified during the Field Work Phase.

Exterior Stair at the North Façade

The plan of the exterior stair located at the north façade of the villa originally represented a combination of circular and rectangular geometries. (Fig. 75) During the construction of the stair Chalfin argued that its form would limit the amount of natural light entering the billiard room below the stair.

In a Western Union Day Letter from Chalfin to Deering, Chalfin expressed his desire to make changes:

Hoffman returns with drawings of the bowling alley bar which he informs me you saw and approved. I desire emphatically to disapprove these drawings because they give insufficient light in the bowling alley and bar. Will not accomplish what you desire. Ask you to empower me to demand change of plan so as properly to light these rooms, present plan being based on economy in using foundations already laid for outside staircase.⁶⁸

Deering replied to Chalfin in a Western Union Day Letter regarding the matter of the north stair:

Some misunderstanding about the bowling alley and den I have never seen drawings Hoffman gave me all descriptions of his ideas when in Miami subject has not been mentioned since that I remember I desire all the light possible so please inform Hoffman and make plans accordingly.⁶⁹

Deering also wrote to Hoffman and expressed the necessity of light in the billiard room:

Dear Mr. Hoffman:

I have your favor of the 9th [inst.] in reference to the north circular staircase. I am sorry to say that when you wrote referring to this subject before I could not think what you meant to refer to. I received from Mr. Chalfin word on this subject, in which he referred at once agreed we should have all the light here possible.⁷⁰

This correspondence indicates that the concern for light entering the billiard room and changes to the north stair to accommodate this concern were initiated by Chalfin and eventually confirmed by Deering. In correspondence later that year between Hoffman and Deering there is indication that a new scheme had been initiated:

68 Western Union Day Letter dated July 6, 1915 from Chalfin to Deering, (VA).

69 Western Union Day Letter dated July 7, 1915 from Deering to Chalfin, (VA).

70 Letter dated July 12, 1915 from Deering to Hoffman, (VA).

Replying further to your letter of September 22nd, concerning the new scheme for the north exterior stairway, I would say that as far as I can determine this new scheme is costing no more at the present time than it would have cost if originally designed ...⁷¹ (Fig. 76)

Eave Overhangs of the East Elevation

Review of correspondence between 1915 and 1916 indicates that the east façade was constructed initially in a manner closely resembling original architectural drawings and then changed during the construction process. (Fig. 77-78) The earliest known record related to this matter is a copy of what appears to be a telegram written by Hoffman to Deering:

The revised scheme and detail of the central gable third story east front as studied by Chalfin and me cost one thousand nine hundred fifty dollars extra stop. Chalfin and Sykes can explain details stop. Please telegraph approval or otherwise tonight as Sykes needs decision before proceeding with completion this part.⁷²

The second earliest known record related to the revised scheme is a telegram sent by Chalfin to Deering:

Not satisfied with east façade. Will write you.⁷³

Shortly after receiving this telegram Deering would send a telegram to Hoffman on July 27, 1915 expressing his interests in the front façade:

I have your favor of the 23^d inst., enclosing photographs, for which I thank you. I am, as you conjecture, particularly interested in the front façade. There, it seems to me, lies the question of the chief artistic success or failure of the house.⁷⁴

Two days following Deering would send a letter to Chalfin expressing similar interests:

I telegraphed you the other day, asking if you were satisfied with the east façade of the house, and received on the 27th your answer reading as follows:

"Not satisfied with east façade. Will write you."

I shall be greatly interested in what you have to say, for here lies the success or failure of the house almost more than everywhere else put together.⁷⁵

71 Letter dated October 20, 1915 from Hoffman to Deering, (VA).

72 Telegram draft dated April 13th, 1915 from Hoffman to Deering, (VA).

73 Western Union Telegram dated July 26, 1915 from Chalfin to Deering, (VA).

74 Letter dated July 27, 1915 from Deering to Hoffman, (VA).

75 Letter dated July 29, 1915 from Deering to Chalfin, (VA).

Chalfin wrote a letter to Deering on August 5, 1915 elaborating on his reasons for not being satisfied with the east façade. His greatest concern for the façade was the overhanging eaves. He indicated that the overhangs produce a series of shadows that divided the façade into five parts. Chalfin also expressed concern for the “large volutes of the big gable” explaining to Deering that models were not made and submitted to him for his approval prior to the installation of the full size stone volutes. He also suggested that by treating these elements of the façade without the use of models would invite failure.

Correspondence was maintained between Deering, Chalfin, and Hoffman through the remainder of 1915. Most correspondence was focused around what to do with the problem of the overhanging eaves and Deering’s request for his review of the overhang on site. Eventually Hoffman would cut off the eaves raising concerns by Deering that the rest of the eaves would need to be cut to the same extent or possibly replaced. In a letter dated October 2, 1915, that may be attributed to Chalfin, a reply to Deering’s concern was made:

Answering your letter of September 29th regarding Hoffman’s experiment with the rafters, I think I can assure you that the rafters which he has taken off are extremely easy to replace, as projecting rafters are usually attached separately to that part of the main roof which does not overhang, thus if you desire to have the rafters as at present those half dozen rafters, which he removed, could easily be put back readily⁷⁶. (Fig. 79)

The last known record related to the revisions made to the east façade is a letter from Fred T. Ley & Co., Inc. to Chalfin indicating estimated costs associated with the “alterations and changes to be made in the East façade of the Deering Residence.”

Eventually all rafters were cut back and a parapet wall was constructed in the place of the overhang. (Fig. 80) In addition to the changes made to the overhanging eaves of the east façade the following features were added or changed during the construction process:

- Blind windows at the north and south towers
- Balustrade of second level balcony at the north and south towers
- Statuary and urns placed on top of the parapet
- Sundial added to area below cornice of central gable
- Figural relief added above the central arcuated opening and balcony
- Columns of central balcony
- Blind window added between the east loggia and north tower

⁷⁶ Letter dated October 2, 1915 to Deering attributed to Chalfin, (VA).

Height of the Villa Towers – Building Section & Valet Room

No known records describe the differences found in the original architectural drawing of the building section and what was actually built. During the Field Work Phase a visual assessment of the east façade of the villa provided evidence that the existing condition of the north and south towers differed from the original drawings.

By counting the total number of quoins located at the corner of each tower it was learned that a total number of 37 existed. Drawings by Hoffman specify a total of 36. The average overall dimension of the height of the quoins was determined to be 1 foot 2 inches as they vary in height up to an inch.

Further examination of the building elements described in the building section in the field provided evidence that the total number of risers for the stair running from the gallery level to the valet room is 22. When compared to the total number of risers specified in the original architectural drawings a difference of 2 risers was found. (*Fig. 81-82*)

This suggests that revisions were planned by the architect and made by the builder in the field. It may also suggest that conditions encountered on the construction site caused these revisions to be made. For example the addition of a 500-gallon salt-water tank in the valet room may have been the cause for the re-specification of a steel structural element installed for support. The vertical dimension of this structural member was larger and therefore the height from floor to floor was increased explaining the addition of 2 risers.

The association between the additional quoins at the towers and the additional risers between the gallery and valet room stair landing cannot be clearly defined but observations made in the field do reveal that changes were made to the overall height of the towers and floor level of the valet room.

Entrance Loggia

The original architectural drawing for the first floor plan includes an entrance loggia approximately 12 by 44 feet in plan. This plan also included two stairs at the north and south ends of the loggia. The plan of each stair was identical and rectangular in geometry. Today the stairs reflect a circular geometry. It is not known when this change occurred however some evidence suggests that it may have taken place during the construction period as there is nothing to suggest it may have occurred after Deering's death. (*Fig. 83*)

3.2.10 POST CONSTRUCTION PERIOD OF 1917 - 2003

Changes that occurred during this period have been identified through observations made from historic photographs, correspondence, original architectural drawings, and the Field Work Phase. The most significant changes that have occurred during this period include replacement of the original awning blinds, the improvements made to the environmental control of the villa, and the addition of storm shields.

1934 / Villa and Gardens Opened to Public

Heirs of Deering opened the villa and garden to the public on January 27, 1934.⁷⁷ A map of the estate depicting the villa, gardens, and village was published. Arrows graphically depict a route to be traveled through the estate.⁷⁸ This suggests that there may have been a self-guided tour available to the public.

Sometime between 1934 and 1935 Chalfin arrived in Miami by invitation of the estate's new owners to assist in the restoration of the villa and gardens.⁷⁹ Chalfin issued a list of proposed restoration efforts during this time; however, very little evidence exists to confirm any changes were made.⁸⁰

⁷⁷ The Lives of Vizcaya, by Harwood.

⁷⁸ Map of Vizcaya, Home of the Late James Deering of Chicago and Miami, (VA).

⁷⁹ The Lives of Vizcaya, by Harwood.

⁸⁰ Outline for Program of Work – Summer of 1934, attributed to Chalfin (VA).

1952 / Deering Estate Purchased by County

In 1952 Dade County (now Miami-Dade County) purchased the estate and opened the villa and gardens as the County Art Museum.⁸¹

1960-70 / Replacement of Original Awning Blind System & Clay Roof Tiles

Oral history indicates that the original awning blind systems installed at each window and door opening of the villa were removed and replaced with a similar blind system sometime between 1960 and 1970.⁸² Review of advertisements during the period shortly after the completion of the villa indicates that the original blinds were provided by The J.G. Wilson Corporation of New York. The blinds are described in the following manner:

*The selection of the Wilson Awning Blinds for the Deering residence was made only after the most thorough investigations. These blinds furnish the desirable element of both blind and awning. They control light, secure perfect ventilation, and regulate the temperature of a room. They are easily and simply operated from within the room without opening the sash. They are a permanent and attractive feature in any building.*⁸³

The advertisement is also illustrated with a photograph of the villa and its east terrace. The original “awning blind” may be seen in all of the window openings of the villa. Combined with historic photographs of the villa under construction this illustration provides clear evidence that the original system has been replaced. (Fig. 84-86)

⁸¹ Miami Herald newspaper clipping of November 11, 1952 (VA).

⁸² Oral history provided by Richard Farwell.

⁸³ The Architectural Review, Vol. V No. VII, July 1917 (VA).

Oral history also indicates that new clay roof tiles were applied to the roof of the villa sometime during this period. It is also not clear whether this roof replaced the original roof or was a subsequent installation. During the fieldwork phase, observations of the roof tiles showed two distinct types. Type one, which constitutes the majority of roof tiles around the glass skylight over the courtyard, is considered a recent application, sharing form, texture, and coloration consistent with other contemporary industry products. The second type located at the chimney and roof vents is more weathered and share a form, texture, and coloration that is distinctly different from type one. This second type is also particularly evident at the skylight of the circular stair and may be original roof tiles from a Spanish source purchased through Cuba.⁸⁴ (*Fig. 87-88*)

1985 / Addition of a Glass Skylight and Environmental Control Systems

Architectural documents were produced and issued in November of 1985 by Wolferg Alvarez and Associates to renovate and improve the climatic conditions of the villa. This included the installation of new architectural, structural, fire protective, mechanical, and electrical systems to the interior and exterior of the villa.⁸⁵

Most evident is the steel and glass skylight over the courtyard and its supporting concrete columns. In addition, both east and west loggias have been treated with glass panel systems. Combined with the skylight this new system effectively creates a seal between the interior and exterior climates. (*Fig. 89-90*)

2002 / Installation of a Storm Shield System

Following the events of Hurricane Andrew in 1992 funds were made available through the Federal Emergency Management Agency (FEMA) for improvements to the storm protection systems of the villa. Most evident are the black perforated metal panel system installed at each window opening. (*Fig. 91*)

⁸⁴ Correspondence of April 27, 1917 between Paiste and Chalfin indicating source of roof tiles, (VA).

⁸⁵ Construction Documents of 1985 (VA).

The same effort included installation of a water pumping system in the basement of the villa for the protection against flooding caused by the rise in the high water line associated with hurricanes and tropical storms.⁸⁶

3.3 DRAWINGS

3.3.1 HISTORIC IMAGE FILES

Original architectural drawings produced by F. Burrall Hoffman were located in the archives under the supervision of the curator at Vizcaya. These drawings are predominantly black ink and graphite on linen sheets oriented horizontally. The approximate dimensions of each sheet are 36 inches in height and 48 inches in width. Each is noted with an original issue date of February 21, 1914 and later revision dates of May and June of 1914.

These drawings are presumed to be part of a larger set based on a break in the numerical sheet sequence. Review of historic records indicates that Hoffman presented “tracings” to Vizcaya in 1967. A list of sheet numbers and their descriptions further indicate that the original set is incomplete.

These “tracings” are referred to by the team as the original architectural drawings mentioned above and include the following:

- North Elevation
- South Elevation
- West Elevation
- First Floor Plan
- Second Floor Plan
- Mezzanine and Third Floor Plan
- Section J - K Looking West
- Section A - B Looking South
- Section L - M Looking West
- Section E - F Looking North
- Section C - D Looking South
- Section N - O Looking West
- Section G - H Looking East

⁸⁶ Oral history provided by Richard Farwell.

Reproductions of the above mentioned original drawings utilized during the fieldwork phase and presented in this section include:

- North Elevation
- South Elevation
- West Elevation
- First Floor Plan
- Section C – D

Record of the “tracings” presented by Hoffman to Vizcaya indicates that the east elevation was not included; however, a blueprint of this elevation was located during the research phase. In addition, a site plan of the estate drawn by Chalfin in 1922 was also located both of which are presented in this section.

These original drawings and blueprints were copied using a large format flat bed scanner. Full size reproductions were printed from the scans and used as reference in the production of measured drawings. These reproductions provided the team with a high-resolution image of primary source material without further handling of the original drawings or blueprints.

The digital image files may be utilized for future educational or professional purposes. Vizcaya staff can now share high-resolution images of original drawings with individuals and institutions for associated research interests. Vizcaya may also choose to adopt the reproduction process to continue with digital storage of archives (*Fig. 91-98*).

3.3.2 HISTORIC DRAWINGS DIGITAL FILES

Due to the limited time available for reproduction only a select set of the scanned image files were converted to digital drawings for the purposes of recording existing conditions. The selected drawings for this portion of the fieldwork phase include:

- 1922 Estate Site Plan
- First Floor Plan
- East Elevation
- South Elevation
- Section C – D

Although the digital drawings were used for recording existing conditions, in the future Vizcaya could use them as baseline documentation for conservation work. For example, a digital conditions drawing of the east elevation could be used to estimate costs for repairing areas of the façade subject to water penetration or deterioration of native stone. Similarly, a digital drawing of the building section could be used to indicate areas where water penetration is known to have occurred and to better understand the water disposal system. A digital drawing file of the first floor plan could be used to calculate square area and volume of the villa for purposes related to engineering of the climate control system.

Each of the historic architectural drawings was recreated using the scanned files as well as the full size prints as reference. Tracing of the scanned images was not possible due to dimensional inaccuracies which varied in some cases up to a foot. These inconsistencies in the dimensions could have been the result of human error involved in manual drafting, the shrinking and swelling of the linen sheets over time, or with the scanning process.

For the drawing process, dimensions noted on the original drawings were used to lay out basic configurations. Dimensions taken from field measuring of window and door openings and their respective location in the rooms were then applied to the drawing. Each drawing was then taken into the field by the team to verify accuracy before arriving at the final product. In addition to the plan of the villa, the building section, as well as the east and south elevation drawings were also redrawn utilizing a similar method.

The method for reconstructing the estate site plan differed from that used for the drawings of the villa primarily due to the lack of noted dimensions. The production of this drawing relied on both overall dimensions as well as tracing of the historic image file. Discrepancies found in the site plan were corrected until the team arrived at an acceptable level of accuracy. This drawing was not taken into the field to verify accuracy due to the need of a professional surveyor to provide reliable data (a service outside the project scope of work). The process of reconstructing the historic drawings resulted in the first architectural drawings produced since the originals by Hoffman in 1914 as well as the first digital versions.

The new drawings may be utilized as reference for historic conditions of the villa. The associated reconstruction process may be used for continued documentation of historic and existing conditions of the villa that were not recorded during the course of the project. (Fig. 99– 103)

3.3.3 FIELD NOTES

The production of the new digitized drawings utilized the existing historic drawing files, however where historic drawing files were not available for recording and verification, field notes were necessary. The hand drawn field notes were executed (approximately 165 in total) following Historic American Building Survey (HABS) format and standards established by the National Park Service in the 1930's. In the future these drawings may be used to educate students and professionals regarding format for the proper recording of historic fabric. (Fig. 104 – 113)

The digital files of historic conditions, printed at full-size (1/4"=1'-0") and twice-full size (1/2"=1'-0"), were taken into the field for comparison with existing conditions as well as for dimensional verification of each room on the first floor. The full size prints were used for general observations while the twice-full size prints were used for notating changes or differences observed. This included, but was not limited to, general room configuration, addition and deletion of doors and partitions, as well as floor-to-floor heights.

Changes of exterior conditions were recorded in the same manner. In addition photographs were taken to assist in the accurate interpretation of these changes during the production of the measured drawings. Accessing exterior areas by way of roofs and balconies allowed for accurate hand measuring of features. Recording data for inaccessible areas required the use of high resolution photographs provided by the team photographer, which were digitally imported into AutoCad and then traced.

3.3.4 MEASURED DRAWINGS – EXISTING CONDITIONS

The measured drawings of historic conditions provided the base line documentation for the development and final production of measured drawings of the existing conditions.

The above-mentioned field notes were recorded on a daily basis by the team. Generally two members worked in the field while other team members worked with digital drawing production. This system of recording activity was conducted for approximately 12 weeks and varied only when workloads demanded more members to be in the field or at the computer. (Fig. 114 – 120)

3.3.5 MORPHOLOGICAL DEVELOPMENT BETWEEN 1913 AND 2003

The measured drawings of existing conditions provided the base line documentation for the development and production of a set of measured drawings that describe the physical alterations that have occurred to the villa between 1913 and 2003.

Existing conditions drawings and the chronology of development and use of the villa between the preconstruction and post construction periods were utilized in the development of these drawings. The intent of these drawings is to graphically represent the intentional changes that have occurred to the estate and villa.

The site plan drawing represents two images. A current aerial view of Vizcaya Museum and Gardens with the surrounding context that was once part of the original estate and the 1922 estate site plan produced during the process of reconstructing the historic drawings. The aerial view is represented as a gray tone raster image while the 1922 estate site plan is represented as a color overlay. These combined images show the relative extent of the original estate compared to the current site with a dashed line representing an approximate overall area including the villa, the formal gardens, the village, and the site of the Miami Museum of Science. Some misalignment between the rectified photograph and the line drawing may be seen resulting from inaccuracies associated with data from the original historic drawing. (Fig. 121-127)

4.0 THE GARDENS

The gardens mentioned in the text that follows refer to the rose garden (also known as the fountain garden) and the marine garden which are the two gardens which served as the focus of this study.

Both of these gardens are situated along the eastern edge of the property closest to the mangrove hammock and bay. The rose garden consists of the Sutri fountain, canals, statuary gates and planting beds. The marine garden situated just south of the rose garden includes the north pool, peacock columns, wrought iron railings, bridge and bridge landings. The marine garden's south pool and landing are currently off Vizcaya's property on land occupied by the La Salle Academy.

4.1 ROSE GARDEN

4.1.1 HISTORICAL BACKGROUND AND CONTEXT

Idea and Planning

When Chalfin and Suarez began thinking about the gardens, early information about planting and maintaining the new tropical landscape including negotiating the mosquitoes, land crabs, hurricanes and high water had to be culled from the expertise of locals, many of whom had only recently arrived in South Florida. (Fig. 128) Because of this, information was sometimes based on limited experience or even local lore. A letter dated March 2, 1914 makes reference to John Gifford the noted naturalist and early founder of American Forestry, it states:

He [Gifford] says that there is great exaggeration about the height to which the hurricane tides go. He says that Mr. Matheson has filled in about 18" which does not protect him from hurricane tides but Dr. G is sure that no hurricane would go more than two feet above mean high tide.⁸⁷

This attitude is extended to the knowledge of local plants especially in reference to planting so close to the bay. The rose garden represents from its inception, a problem of siting and sustainability given its proximity to the bay. Deering's interest in flowers and providing a proper setting for the Bassano di Sutri fountain helped inspire a plan that would generate ongoing concern over its viability, as found in letters between Deering and Chalfin. Early in the design of the garden Chalfin discussed about its location and theme:

What strikes me in your letter as a discrepancy between your ideas and mine is your speaking of separate distinct gardens; the rose garden, the gardenia garden, etc. as well as the flower garden, with another garden in the woods. You will see when you are in New York how our garden, now under drafting, is an alternation of parterres, some green and some very gay with flowers and another alternation of dryland spaces and water features. In these flower parterres, some of which are quite separate from the main disposition of the garden, that is to say our small gardens thrown out on the side, such things as gardenias, oranges and roses might be put if it were desirable but as the rose and the gardenia are neither of them very prepossessing in Florida even when healthy, I am disposed to put both in the pine land and as oranges will be used purely for decorative effect they will be largely kept in pots.⁸⁸

⁸⁷ Letter between Deering and Chalfin, March 02, 1914. Vizcaya Archives.

⁸⁸ Letter to Deering from Chalfin, December 11, 1914. Vizcaya Archives.

From this passage it is clear that the rose garden was one of the earliest concerns of Chalfin and that if it was to be accommodated, it would have to be “thrown out to the side” of the main axis of the formal plan, how far off this axis is difficult to tell. Chalfin also expressed doubt as to the viability of flowers in general so close to the bay and suggested planting the roses and oranges in the pineland on higher ground. Chalfin also showed a preference for the placement and preservation of the parterres in the plan. In the original design by Suarez, which did not include the mound, it can be assumed the garden was to be more compact, perhaps impacting the hammocks less. With the revision of the original design to include the mound and casino to block the afternoon sun off the lake, the flanking eastern axis was splayed out in a ‘V’ shape perhaps pushing the gardens “thrown out to the side” closer to the bay.

By the end of 1914 it appears that the overall plan for the garden was set. By late July the form of the rose garden was more defined:

Adjoining the eastern fan vista there is a large semi-circular garden, for an effect of informal, planting, occupied largely by roses, or almost entirely by roses; small rivulets or ditches run through the system of beds which water plants that flourish in flowering water are proposed to be placed. Pots of plants occupying the paths throughout this rose garden, and few statues to occupy niches on its circumference against the woods, will be some features here. From this garden there is access [sic] to a maze and the verdure theatre, and back again to the garden by means of the two terraces which flank the space between the mound and the house.⁸⁹

By this time Chalfin had hired a number of associates to work in his office, one such individual was Warren Chapin whose name appears on many of the garden drawings alongside Chalfin’s name. Chapin’s engineering skills proved essential in designing the superstructure for the fountain and its foundation of piles which cantilever the perimeter of the lower basin.

⁸⁹ Letter to Deering from Chalfin and Chapin, July 29, 1915. Vizcaya Archives.

Bassano di Sutri Fountain

In March of 1915 Deering was receiving letters as to the status of his recently purchased fountain for the rose garden. It was shipped in 28 crates on the freight line J. Friedenberg & Co. arriving in New York on or near April 21, 1915 where it was stored through May. A letter of July of 1915 from I.N. Court, Vizcaya's superintendent, to Burrall Hoffman in New York City suggests that the fountain had arrived in Miami sometime in early July 1915.⁹⁰ The fountain represents a significant connection to the villa in terms of design approach. Both villa and gardens were designed settings for the artifacts collected by Deering and Chalfin. The baroque fountain is one of the most startling and largest of items in the collection. (Fig. 129)

The original Bassano di Sutri fountain is a travertine fountain containing two primary basins. Chalfin directed the design of a third, lower basin based on the geometry of the primary basin of the antique fountain. Additionally Chalfin added the two bronze standing lions at the fountain's summit perched on top of a coral rock bracket in the top basin. The whole fountain became under Chalfin a kind of assemblage, in which its original proportions were vertically elongated through the introduction of cut coral rock blocks made from casts of the existing profiles of the eight sided travertine mass, and the grotesque masks sitting in the basin. The fountain was to command its site and be seen both from the mound and casino, and from the top of the bridge in the marine garden. The addition of these stone bases and additional third basin made the fountain a hybrid of antique forms and newly made pieces modeled to fit a new formal context.

The new additions to the fountain came with an added expense and Chalfin discussed with Deering his desire to keep these modifications:

In going back over your letter, I see that you do not realize that the fountain in the rose garden is not to be set up as we bought it, but has considerable additions arranged as to make the old fountain higher and more commanding. I do not very well see how these additions could be left off, but if they were, (and of course it is possible to leave them off,) another \$5,000 could easily be saved.⁹¹

⁹⁰ Letter to F. Burrall Hoffman Jr. from I.N.Court, July 7, 1915. Vizcaya archives.

⁹¹ Letter to Deering from Chalfin, January 28, 1919. Vizcaya Archives.

The fountain costs were high given that each of the edges were not equal and plaster casts needed to be made of each of the edges to guide the stone carvers. Additionally the increase in the size of the fountain would require more piling to support the outer lower basin and more material for stone copings whose profile would need to work with the existing lines and proportions of the fountain. (Fig. 130) Deering was always concerned about costs but trusting of Chalfin's judgment and in the end willing to support his vision of the gardens. Deering was more likely to raise questions in the functioning of certain elements of the design rather than their premise, sometimes suggesting solutions that were less than aesthetically pleasing. Deering's frustrations with the rose garden paralleled his frustrations with the marine garden. Deering wanted a marine garden for fish and a rose garden for roses. In the end it appears that these two programs were not to be accommodated in the final design. What Deering saw was a simple program to be accommodated, Chalfin saw the formal components as an aesthetic piece to a puzzle in which the initial motivations should be noted but were not essential to the final outcome. Chalfin's vision of Vizcaya was outside Deering's practical minded vision, as suggested by a letter dated March 1919 from Deering to Chalfin:

I do not know exactly what your scheme is for the rose garden. It seems to me that it should provide for a high hedge running north and south in the middle, to protect the roses west of this (these) hedges. As to protecting the parterres, I think this question will have to be studied. It is my impression that east of the little terrace taller trees than are now there or that are now planned to be there will have to be placed. It is my impression, also, that a high hedge or something similar will have to run down the middle of the formal gardens to protect the western half of it...I have known before but certainly have not fully realized the difficulties of growing things in the immediate vicinity of the sea. In any case, it seems to me that we shall have to give all the protection we can and perhaps even start with those things that we know grow vigorously here, and any other things that we can learn are willing to stand not only wind but salt air.⁹²

⁹² Letter to Chalfin from Deering, March 17, 1919. Vizcaya Archives.

Soon after this letter Chalfin mentioned planting a “Banyan tree” and another large “rubber tree” in the vicinity of the rose garden, suggesting the need for more protection from salt air and plantings that would provide a quick solution to the problem. Historic drawings show that what was planned, as the primary screen for the garden from the bay, was a perimeter hedge twelve feet high and three feet thick. The hedge was to be of *Causarina* known to be very salt tolerant. This hedge appears in historic photographs as three-gallon size plants planted at the perimeter of the rose garden and protected by a wood lattice. (Fig. 131) Given that the marine garden provided an almost direct conduit for breezes from the southeast, the new hedge would have been more successful as a formal foreground against the hammock and as a setting for the perimeter statuary rather than as a wind block for the roses.

In 1920 Deering's optimism for the rose garden's program was flagging. In a letter dated March 25, 1920 Deering wrote:

*It seems to me that we will have to give up the name of rose-garden for you and I agreed the other day that probably there will be few roses in it, and we would only make the place ridiculous by calling it by that name.*⁹³

Canals

The second most important feature of the garden was its system of canals. The canals extending toward and radiating from the fountain were originally to house water lilies and other flowering plants as suggested by Chalfin to Deering. According to Chalfin, Vizcaya's superintendent Sturrock was to be credited with this idea:

*The semi-circular garden has ditches for fresh water because there are many plants that do not grow in stagnant water or salt water, but on the edges of brooks and on stones, and it was Sturrock's idea that these should be planted in small ditches.*⁹⁴

⁹³ Letter to Chalfin from Deering, March 25, 1920. Vizcaya Archives.

⁹⁴ Letter to Deering from Chalfin, August 9, 1915. Vizcaya Archives.

If water plants in “ditches” were Sturrock’s idea, it was Suarez, Chalfin, and Chapin who finally gave it its final form and its Islamic references. The canals were to house flowers and, since they were fresh water, provide jets that might irrigate the planted roses. The original photographs show that there were narrow paths adjacent to the canals as opposed to the grass seen against its edge today. (*Fig. 132*) The small slabs of stone that cross the canals can now be understood more clearly given that they would connect to paths that edge the canals. The garden was a kind of water carpet where one could traverse its edges. The lone pool that sits left of the entrance to the marine garden seems to be motivated by a late design renovation to symmetrically flank the entrance as seen from a space immediately before the marine garden gates.

The addition of the canals to the smell of flowers in the rose garden give this particular garden a rich sensorial dimension now lost with the stagnation of the canals and the lack of water in the fountain.

Sculpture

The program of the sculpture like the fountain is essential in understanding the space as an outdoor room (*Fig. 133*). Sculpture lined the grass lawn into the space and its perimeter. The figure of Neptune reinforces the idea of water. There is however very little discussion about the role the sculpture was to play in the space from the point of view of its iconography. Subject selection appears eclectic and in the 1934 program of work for the rehabilitation of the garden Chalfin mentioned removing two Romanesque stone posts from the casino parterre and reassigning them to the rose garden, suggesting the sculpture’s more decorative role.⁹⁵

The figural sculpture includes: Jupiter and Neptune, Pomona and a Shepherd and Shepherdess listed in contemporary descriptions as from the 17th century. There are also two mythological figures possibly Minerva and Ceres also of the 17th century. At the entrance to the marine garden there is a 2nd century altar adorned with buchrana relief figures. There is a small carved stone sheep against the east vista lawn and columns, 10th or 11th century, square in plan with intricate Lombardic carving.

⁹⁵ Report by Chalfin to McCormick, summer of 1934, Vizcaya Archives.

Rose Garden Swing

One of the least documented features of the rose garden was a lattice covered swing that sat in the northwest corner of the rose garden just inside the wall. (*Fig 134*) Historic photographs and drawings appear to be the only documents that record its form and details. From a 36"x60" blueprint, G84 issued on Dec. 16, 1916 by Paul Chalfin, the swing was a classically inspired open wood lattice structure built over a steel frame. The support was made up of angles that approximate a five-inch column in plan. The structure terminated at the ground with brackets 1'-6" high depicted in the drawing at full scale. From this base of scrolls against a pedestal of lattice were two square lattice columns that terminated in a latticed ionic capital supporting a flattened arch entablature mounted by latticed finials. The scrolls, leaning in on each other create a kind of mannered pediment pierced by an open ellipse. From the entablature two steel or bronze elements hung to support the swing. In historic photographs from December 15, 1920 the swing is under construction. From post 1926 photographs and postcards as late as the 1930's the swing is in the garden, in its own landscaped enclosure, suggesting it met its demise sometime after this date. In its place today is a marble table. (*Fig. 135*)

Semi-circular Mer-boy Fountain

After the Bassano di Sutri fountain and the latticed swing, the semi-circular "mer-boy" fountain is the most prominent feature in the rose garden. (*Figs. 137 and 140*) The semi-circular fountain borders the space between the rose garden and the maze garden at its northern edge. The kneeling hermaphroditic figures, half human, half fish, support baskets above their heads and spray forth water from their mouths into the pool. These figures were carved by the Menconi Brothers after drawings made by Chalfin's office. The drawing G-129 shows the plan, elevations of the fountain and full scale details of stone profiles and the front and side elevation of the pedestal axially connected to the fountain, the source of its inspiration. (*Fig. 136*)

Surrounding the group was to be a ten-foot high hedge, three feet thick with an arched niche cut out for the pedestal. The enclosure and arched opening in the hedge created a view into the maze garden beyond. The hedge was drawn as a leafy mass, which may have been different from the Australian pine hedge that was ultimately planted on this site. A letter of August 20, 1920 from George Pearce the site superintendent to Paul Chalfin suggests that it was Pearce's idea for the plant material.⁹⁶ By October of 1920 the hedge is planted.

The design for the pedestal was borrowed formally from the highest section of the antique fountain in the center of the rose garden. Like the swing, the pedestal is composed of scrolls that bookend a classical pedestal. The design drawings do not indicate a sculpture for the pedestal but we know from later correspondence that the space was created as a setting for one. The 1934 program of work for the rehabilitation of the garden by Chalfin mentions new planting for the area behind the mer-boys and that the hedge should be clipped to open a view of the pedestal and the Narcissus statue. This lead statue presently occupies the site.

Wrought Iron Gates

One of the rose garden's most significant losses is the gates. From historic drawings it is clear that sets of gates once led to the maze garden and perimeter gates and grilles opposite the primary axis, (axis F) from the east lawn past the fountain due east into the mangrove hammock to the servants' beach. These gates designed and built by Samuel Yellin have all disappeared.⁹⁷ Historic drawing G250 drawn at $\frac{3}{4}$ " = 1'-0" shows a single swinging gate separated by a three foot hedge in plan on either side, then two fixed grilles approximately 5'-0" wide. The designs are beautifully constructed. Yellin's design appears to have been in part based on an antique grille as referenced in one of the drawings G300 which notes, "see old grilles AP162."⁹⁸

⁹⁶ Letter to Chalfin from Pearce, August 20, 1920. Vizcaya Archives.

⁹⁷ Letter to F. Ley from Samuel Yellin mentioning the shipment of the gates;"2 stationary grilles, 1 gate and 6 braces." January 06, 1921. Vizcaya Archives.

⁹⁸ Historic Drawing G300, November 15, 1920. Vizcaya Archives.

Perimeter Retaining Wall

One of the most interesting features of the rose garden is its retaining wall (*Fig. 138*). The wall is the end result of much research by both Deering and Chalfin as how to best control land crabs. In his book, *Ornamental Gardening in Florida*, written in 1916, Charles Torrey Simpson devotes a number of paragraphs to their habits under the title “Plant Enemies.”⁹⁹ The smooth surface of the perimeter retaining wall was in part a response to creating a surface that would be difficult to scale by land crabs. The wall has its sloped surface on the inside of the perimeter with the exterior perfectly vertical. When initially constructed, the retaining wall was four to five feet above the grade of the hammock with finished grade of the garden just three inches below the top of the wall. Today the interior of the rose garden is settling and the hammock continues to build land from the detritus produced by the mangroves and the seaweed trapped in its propped roots. The wall as designed was 2’-3” thick at its base extending a couple of feet into the soil sitting atop Dade county pine piles 20 feet deep, to discourage burrowing of crabs underneath. In letters between Deering and Chalfin, there is ongoing correspondence about the problem:

*I talked to Mr. Gratigny the other day about some of our problems with the following results: he thinks it quite possible that with a wall going deep below the surface and say 5ft. tall, made smooth, land crabs could not enter the premises. He believes, however, that poison is the effective remedy.*¹⁰⁰

Another letter mentions how a noted botanist, Charles Torrey Simpson, dealt with the problem suggesting that even the most sympathetic can be driven to drastic measures:

*I called on Charles T. Simpson who gave me the following information. There is nothing to do with land crabs but kill them. There is no given height to which they cannot go. In summer they cover the country, and that he has killed hundreds of them at one time on his porch, which as you know is high.*¹⁰¹

Indeed just about every naturalist was consulted about the problem, Commodore Matheson suggested “carbide” and “5-gallon fish pails set in the ground with holes in the bottom to let water out and old fish in the bottom to attract the crabs” to be “exterminated.” Commodore Monroe appears to have had the most benign solution although doubtful as to its effectiveness he proffered: “a very smooth wall might keep out land crabs.”

99 Simpson, Charles Torrey. *Ornamental Gardening in Florida*. 1916. p.46-47.

100 Letter to Chalfin from Deering, February 24, 1914. Vizcaya Archives.

101 Letter to Chalfin from Deering, February 26, 1914. Vizcaya Archives.

The perimeter wall was perhaps primarily to keep land in and “might” keep crabs out, however its smooth stucco finish in contrast to the rough oolitic and coral rock walls and details found elsewhere in the garden indicate the measures employed for dealing with a new landscape and its creatures.

Historic Landscape

The plantings in the rose garden appear to have been primarily designed to enclose the space, to provide a setting for the sculpture and gates, and to ornament the canals. The low perimeter retaining wall, used to create an edge to the mangrove hammock beyond, required a thick hedge to keep visitors from falling into the hammock below. The 10’ high Australian pine hedge planted at the perimeter created a dense mass, ideal for making a thick green wall for carving out windows, doors and niches for statuary.

Hedges were also made to line the edges of the small planting beds between the water canals. These hedges, also Australian pine, gave form to the planters, and defined the paths, protecting the flowers inside against the unrelenting sun, salt air and incessant breezes. The exact plant material for the planting beds in the garden is difficult to identify but must ultimately have been changed many times, possibly substituting heartier, locally grown material over imported material from other regions of the country. In 1934 Chalfin proposed plants for “experimentation” suggesting that much of the early planting was trial and error.

In 1934 Chalfin undertook perhaps some of the first major revisions to the plantings since the 1926 hurricane. The choices for the new plant material appear to have been inspired by a need to create greater height and enclosure at the perimeter and the need to stock hardy plant material to withstand the growing conditions near the bay. Chalfin recommended *Melaleuca cajeput* for the “swing garden” and a quantity of *Cunninghamia sinensis* (Chinese Fir) for hedges and specimens. He also mentioned planting six high *Cocos nucifera* (Coconut Palms) in the mangrove “to break [the] low sky line.” Under plants to “try” Chalfin mentioned *Cytisus* (Spanish Bloome) and *Cistus* (Sun Roses) although he did not specify in his report exactly where these were to be planted. He does mention a hedge of *Murreia* around the mer-boys, clipped “open to show pedestal of Narcissus statue.”¹⁰²

¹⁰² Report for “Program of Work-summer of 1934,” Paul Chalfin. Vizcaya Archives.

The last component of the historic plantings was to be the potted material lining the entrance to the garden, originally a grass lawn and now a curbed planter. These large terra cotta pots were bought in quantity and used throughout the garden to strengthen visual axes and ornament spaces with topiary.

4.1.2 PHYSICAL DESCRIPTION

Current Conditions

The loss of historic fabric such as the swing, wrought iron gates, and the interior plantings compromised the historical integrity of the garden. Additionally the poor condition of the fountain, the settling of the canals and its antiquated plumbing infrastructure has removed the fundamental appeal of this space, which is the sound and display of water. Much of the sculpture appears to be in its original location; however, past hurricanes and invasive plantings have taken their toll on the historic fabric causing damage to the sculptures.

Past maintenance standards for the care of large trees around the perimeter of the site may also have damaged stone sculptures. When trimmed tree limbs are cut in large sections, their fall can impact the sculptures. (*Fig. 139*) The stone coping around the canals has also been damaged where tools and service vehicles are rounding off corners and chipping profiles. On one occasion while measuring on site, the team witnessed a service vehicle fail to make a turn hitting a curved stonewall and chipping out a small chunk of the wall. Accidents of this type can be avoided by educating the maintenance crew of the importance and need to exercise care with the historic fabric. Allowing the grass to grow up to the stonework has allowed the stone around the canals to fall prey to weed-eaters and edgers that destroy its architectural lines.

Naturalized plantings can do their own damage to the site. The large Royal Palms, some of which were no doubt planted, others naturalized, towering over the mer-boy sculptures can drop palm fronds weighing 40 pounds or more from a height of 50 feet. (*Fig. 140*) These falling limbs can easily break off pieces of the sculpture even without a storm or high wind. Tree roots from the Rubber Tree and even Royal Palms can pitch sculpture, break walls, and invade plumbing and fountains. In the summer months wind blown seeds from *Ficus Aurea* can sprout on any pitted horizontal and vertical surface living off nutrients from the air as an epiphyte until aerial roots become terrestrial and begin thickening, cracking and spalling stone. Although this is difficult to control it needs a regular system of monitoring and maintenance to safeguard fabric from potential damage.

Current View Corridors

Axis 'A' to the Marine Garden

A large Live Oak to the west of the gate to the marine garden does not appear on any of the planting plans or historic drawings. This tree may have been planted later or may be naturalized. In addition to preserving historic fabric it is important to preserve historic view corridors. From the marine garden bridge we once had a wonderful view of the rose garden and villa beyond. (*Fig. 141*) The large banyan tree has blocked most of the villa; however, careful trimming of, or removal of the Live Oak could revive the view from the marine garden to the rose garden currently blocked by the tree's lower limbs. (*Fig. 142*) The extensive buttressing roots of the Live Oak are also causing the canal terminus below it to heave and the adjacent stone lantern to pitch to one side.

Axis 'F' to the Servants' Beach

The next important view is the recovering of the path to the servant's beach. A stone basin currently blocks the four stone stairs that exit the rose garden to the east from the mound axis. The settling of the site by almost 8" has made a curb at this point of exit/entry where originally there was none. (Fig 143) From this point there would have been the three wrought iron gates mentioned in the historic description. The center gate was operable with the two flanking grilles providing views into the mangrove hammock. The wide stair below is now approximately two feet below grade and heavily grown over with plants and small trees. The historic photographs show the stairs under construction. (Fig. 144) A good deal of organic material had to be removed to document this feature. The original stone risers are in place with flagging for two of the stairs. (Fig. 145)

The servant's beach brings the social hierarchy of the villa into the landscape complementing the rooms in the house that tell the story of the domestic service of Vizcaya. The servants' beach was accessed at this point in the garden by a trail through the mangroves to the bay. Additionally there was to be a trail from the teahouse on the bay through the mangroves to the canal near the marine garden complete with rustic bridges traversing small inlet creeks from the bay. Although this area was not documented, remnants of a rustic bridge were found along the way to the original beach. Additionally blocks of cut coral rock were found at the end of this beach suggesting there may have been some construction at this location as well. This feature is an important element of the formal garden as relief to its strict geometry and control. The dark tangle of the mangroves added a romantic and picturesque dimension to the site equal to the hardwood hammock that was the proscenium to the villa. Much work is needed here to explore and more fully document this rediscovered area of the garden.

Current Conditions

Planting Beds

The planting beds in general, lack definition and form and do not follow the original intent of the historic plan; in fact they have been reversed. Currently the planting beds are of St. Augustine grass where as they originally would have been planted with flowers, bordered by low hedges and finally encircled with narrow paths that took the geometry of the edges of the surrounding canal. The large central planter on Axis 'F' perpendicular to the east vista lawn was originally a grass lawn and not a planter as it is today. (Fig. 146) Access from the east vista lawn feels cramped as one is now presented with a large space, set of steps and view of the fountain, but are forced to the edges of a path that squeezes between the curbed plant bed and potted topiary. The current overall effect of the site is flat, monochromatic and without the cooling and acoustic dimension of the fountains and properly planted and functioning canals.

Semi-Circular Fountain

The small fountain, like other water features, is currently not operational. There is damage to the sculpture perhaps left unrepaired since past hurricanes. The existing profiles of the stone of the lower basin appear intact; however, the condition of the plaster of the basin interior and the condition of the water supply lines could not be evaluated without emptying the fountain and cleaning its surfaces. The plantings around the fountain appear to be Orange Jasmine which might achieve the height and thickness of the original plantings; however given that the rest of the perimeter is planted with cocoplum there will be a break in the continuity of the planting in terms of material at this point on the edge of the garden. The perimeter of Orange Jasmine around the fountain has no break for the stone pedestal and obscures the view of this element making it appear that the statue of Narcissus is outside the composition. (Fig. 147)

The kneeling mer-boy figures are in varying degrees of disrepair. All appear to have some damage and material loss, either missing arms, pieces of the basket above their heads, or possessing bad repairs.

Terra Cotta Potted Plants

The potted plants lining the main axis into the garden have been left to disrepair. All of the terra cotta pots have been broken and wired together. (Fig. 148) This is the result of the *Causarina* or Australian pine being left too long in their pots, becoming root bound, and the loss of their stone plinth upon which they once stood. The stone plinth would have kept the plants from rooting into the ground through openings in the bottom of the pots allowing for the roots to thicken and eventually break the pots. Additionally as the plants matured they would become top heavy and be more susceptible to being blown over in a storm also potentially breaking the pots. Stone plinths were found on site and at the base of the wall aligning the east lawn vista and could be restored to their original use. (Fig. 149)

Lanterns

The rose garden lighting was minimal and consisted of stone lanterns flanking important points of entry such as the marine garden gate. Just as in the marine garden the greatest damage to the lanterns appears to be their stone caps which can be knocked over and easily broken. In all cases the colored glass has been replaced with plastic colored panels. (Fig 150)

The Canals

The canals appear to be in reasonable condition with the exception that they will probably continue to settle since they were not built on piles. According to the historical documents, the canals settled below grade immediately after construction and had a brick layer added to them to bring them back up to grade. The northeast canal off Axis 'F' appears to have had more differential settlement than the others with the stone bridge pitching above the surrounding profiles. Additionally the basin flanking the east edge of the entrance to the marine garden displays substantial settling.

As mentioned, the corners and edges of the canals have suffered impact damage from debris in past tidal surges, and careless maintenance practices. The biggest problem for the existing canals is settlement which can cause cracks that are difficult to detect and repair. The canals also have layers of plaster on their interior including a new supply line for the water jets which are plastered over in place making the retrofitted character of the canals aesthetically unattractive.

Bassano di Sutri Fountain

The fountain has undergone a number of repairs and restorations. The fountain, as seen in photographs taken after Hurricane Andrew, appears to have suffered damage to the coping on the east edge of the lower basin possibly from tidal surge where eight pieces were broken away from the concrete basin wall. The west edge showed a deep washout possibly caused by the location of plumbing lines to the fountain and the inundation the site received during the hurricane. Additionally, bio-growth, staining, delamination, and other surface weathering will continue to have a negative impact on the fountain. Since this element is the centerpiece of the entire rose garden its conservation is essential to the entire garden.

4.1.3 CONSERVATION ASSESSMENT SUMMARY

General Description

The rose garden is characterized by several distinct architectural features and a collection of sculpture, architectural fragments and planting pots. The central focus of the garden is a limestone Renaissance fountain imported from Bassano di Sutri, Italy and enlarged for its new location. The fountain is circumscribed by a radial canal system which once supported aquatic plants and terminates in a series of small lunette basins. The garden's periphery is punctuated by a series of embellishments including statuary, urn planters, architectural fragments and a small lunette mer-boy fountain on the eastern edge adjacent to the Maze. An ornate iron screen separates and defines the stair entrance to the Marine Garden on the south.

The various feature types (in decreasing order of occurrence) are: vessels (pots and urns for planting) 37%, figurative sculpture-31%, utilitarian (lanterns and furniture)-15%, architectural-15%, and unique and supporting elements (e.g. bases)-2%. The dominant material is oolitic limestone (41%) which occurs almost exclusively in the local sculpture of the Menconi brothers, terra cotta (21%) of the large planting pots, and fine-grained limestone (17%) and marble (13%) for the imported sculpture.

Condition Survey Methodology

A detailed conditions survey was executed in two formats depending on the nature and extent of the rose garden's architectural and sculptural components. A written and photo-illustrated inventory of individual "features" including sculpture and architectural elements was prepared as a relational database. (See section 6.0 Condition Survey Data) This was done to allow both a qualitative and quantitative assessment of the many distinct features using numerical ratings to better develop a priority strategy for further treatment recommendations and maintenance. The condition assessment of the Bassano di Sutri fountain was instead executed as a graphic recording of specific conditions on rectified photomontages of the stone surfaces. (See section 6.0 Condition Survey Data) The fountain's condition survey provides summary diagnosis and baseline information for future monitoring as well as quantification for future treatment estimates.

For both surveys, feature and conditions terminology were selected according to standard conservation nomenclature and the likelihood of remedial treatment or long-term monitoring. For each survey, illustrated glossaries of terminology were developed. Special attention was given to conditions that appeared active or chronic. Repairs were similarly studied to ascertain whether they were successful in addressing the deterioration or at worst, caused further or new deterioration.

General Conditions of Architectural Features

Garden entrance and retaining wall

The north entrance is constructed of stucco on brick with local coral limestone coping and ornamental details including the entrance pier finials. The west wall is constructed entirely of coral limestone surmounted by pairs of coral limestone obelisks, fine-grained limestone urns, and cast stone pedestal planters. The masonry has been repointed with unsightly grey cementitious mortar which is cracked and the joints open in many locations. The coral limestone displays the usual range of cavity erosion; conditions vary for each of the architectural wall embellishments (see individual feature survey).

The perimeter retaining wall appears to be stucco on brick and has been recently restuccoed and painted with a red limewash.

Canals

The sub-grade canals are poured-in-place concrete with brick tops and coral limestone coping. The canal masonry appears to be in generally sound condition despite early settling of the canal bed. Previous repairs to the limestone coping and mortar joints are unsightly and many joints are cracked and open.

Statuary and architectural elements

The Rose Garden's sculpture is a mixture of imported antique statuary and architectural fragments and locally carved figural sculpture and architectural elements. The imported statuary loosely relates to garden themes including figures of classical gods and goddesses (Jupiter, Neptune, Pomona, Minerva) and pastoral figures (Shepherd and Shepherdess). The architectural fragments are more varied and were probably selected based on their availability and size. The garden's sculpture was originally placed with some sense of visual and iconographic symmetry. New architectural elements include coral limestone pedestaled planters and terra cotta plant pots.

The sculpture appears to have been placed on shallow below-grade footings of brick and cement. Most of the sculpture, old and new, has been repaired in the past, the former possibly as early as during installation on site. Many of these repairs have failed, resulting in unsightly resin and cement mends and lost features. (See individual survey for details).

The mer-boy fountain was designed specifically for the garden and, like the pedestal planters, is carved of local coral limestone.

Detailed conditions for the statuary and architectural elements have been recorded as individual objects in a relational database survey. Summary quantitative data are provided at the end of the individual survey forms. However in general, 74% of all surveyed masonry features (sculpture and architectural fragments) display major to moderate weathering: 39% major losses (lacunae), and 22% insipient fragmentation, 57% possess incompatible repairs. On a comparative scale from 1-16, where 1 represents the lowest and 16 the highest threat, 44% of the masonry features are at low to moderate risk (1-8) whereas 56% suggest a high risk (8-16) due to poor and unstable conditions.

Fountain

Detailed conditions for the fountain have been recorded as a graphic survey on photo-rectified drawings of the masonry surfaces. A quantitative assessment (percentage of surface area or linear length) of individual conditions follows the graphic survey for each element and level.

A separate survey and assessment of the hydraulic system is required.

4.1.4 ROSE GARDEN AND FOUNTAIN CHRONOLOGY

This chronology was prepared using primary documentation in the form of letters, drawings, specifications, telegrams and historic photographs from Vizcaya's Archives.

1912

30 December- James Deering acquires 130 acres of bayfront property from Mary Brickell. The land is bounded on the west by the railroad siding, on the east by Biscayne Bay and Jennings Street to the north.

1913

04 October- Letter to B. Hoffman from Paul Chalfin about closing in on design of the garden.

1914

12 December – Letter to Deering from Chalfin mentioning design of rose garden, parterres, and small gardens, “thrown out on the side.”

19 December – Letter to Deering from Chalfin mentioning that he has instructed Suarez to draw the “roughest kind of a sketch of his disposition of the garden.”

1915

23 March – Letter to Galleria Simmonetti from Chalfin confirming his receipt of a cable that the fountain was shipped.

02 April – Letter to Deering from Chalfin confirming telegram of 25 March to complete full plans of the garden. Chalfin lays out his plan for his office structure in terms of staff and salaries.

07 April – Letter to Chalfin from Chapin mentioning Chapin’s fee for rough constructive work for “Mr. James Deering’s Italian Garden.”

06 May – Letter from Freight Line: J. Friedenbergl & Co. to Chalfin for bill for (28) cases of stone fountain.

07 July – Letter to Hoffman from I.N. Court informing Hoffman that Murtagh is measuring the large fountain. Court also suggests that Hoffman send a sketch of the fountain assembled and mentions the center portion might be raised to be as high as basin.

29 July – Letter to Deering from Chalfin describing the rose garden in Detail “Adjoining the eastern fan vista there is a large semi-circular garden, for an effect of informal planting, occupied largely by roses, or almost entirely by roses; small rivulets or ditches run through the system of beds which water plants that flourish in flowering water are proposed to be placed. Pots of plants occupying the paths throughout the rose garden, and few statues to occupy niches on its circumference against the woods, will be some features here.”

03 August – Letter to Chalfin from Deering mentioning rose garden as 150’ x 150’ for roses. Expresses concern that “Ditches of water” be salt instead of fresh water due to cost.

09 August – Letter to Deering from Chalfin confirming that the ditches will be fresh not saltwater given what will grow only in fresh water. Chalfin mentions this as Sturrock’s idea (fresh water).

15 November – Letter to Sturrock from Chapin on behalf of Chalfin. This letter mentions axis 'F' from the rose garden through the mangroves to a "point midway between the mangrove canal & shore" terminating in a small circular plaza surrounded by palms. He wanted to know if palms would grow in the mangroves.

1916

13 June- Photograph view of rose garden as rough fill. (VA historic photograph Vol. V pg. 76, #1028.)

18 December – Letter to F. Ley from FW Starbuck mentioning P. Paist as taking over work for him on Dec. 20. (Starbuck was leaving for the War.)

1917

29 March – Letter to Starbuck from Chalfin requesting that plaster casts be made of section of fountain and sent to Menconi Brothers.

28 April- Photograph showing the top pedestal of the Bassano di Sutri fountain sitting in the stone plant before installation. (VA historic photograph Vol. IX, pg. 27, #1548.)

11 September – Letter to Chalfin from Paist mentioning the erection of concrete foundation for antique fountain.

17 October – Estimate for 50 piles for central fountain received for \$5.00 each.

1918

18 March- Photograph showing concrete canals before backfilling sitting on compacted fill. Photograph 953 shows missing section of perimeter wall where change occurred. (VA historic photographs Vol. V, pg. 31 #950, #953.)

23 July – Letter to F. Ley from A. Orr Jr. regarding contract of April 30, 1918-April 30, 1919 for work for rose garden plumbing work. (cost 750.)

1919

28 January – Letter to Chalfin from Deering speaking of reducing features to the rose garden edge to save costs and the additions to the fountain as to “make the old fountain higher and more commanding.” Deering sees the latter expenses as unavoidable but expresses his concern over the cost.

17 March – Letter to Chalfin from Deering suggesting high hedges down the north and south (middle) direction of the rose garden to protect roses. He also suggests a tall hedge along west vista axis for same reason.

13 September – Letter to Deering from Chalfin. Chalfin mentions purchasing gates for a side entrance to the rose garden.

16 September – Letter to Paist from Chalfin confirming he needs him for the garden for “at least two years more work.”

1920

22 January – Letter to P.H. Ogden for P. Paist regarding work in place in the rose garden. “Concrete waterways and foundation for semi circular fountain.” Paist expresses his concern over settlement of tunnel and fountain. The basin is on “4'-0” of sand fill sitting on muck a tangle of mango roots, etc. quite spongy.”

27 January – Letter to P.H. Ogden from Paist mentioning rose garden fountain foundation, to rest on piles. (This suggests the orig. design might have assumed the basin was to act as a spread footing.)

17 February- Historic Drawing V-106, pencil on trace. The drawing shows a planting plan for the theatre garden and maze with edge of the rose garden and teahouse. The drawing shows a great deal of citrus intended for the space between the rose garden and maze garden. (VA)

01 March – Photograph showing formwork for fountain complete and concrete poured. (VA historic photograph, Vol. XI, pg. 07, 8x10 photograph.)

25 March – Letter to Chalfin from Deering expressing concern over the name “rose garden” given the difficulty of growing roses. Deering also laments possible failure of water plants.

01 April – Photograph showing formwork for fountain removed and piers and walls visible. (VA historic photograph Vol. XI, pg. 10, 8x10 photograph.)

28 April – Letter to F. Ley from P. Chalfin regarding revised rose garden grilles and coping.

21 May – Letter to P.H. Ogden from P. Paist expressing concern about settlement mentioning the fact that the concrete water channels went “down three or four inches and had to be built up with brick.”

01 June – Photograph showing stairs to servants’ beach from rose garden under construction. Photograph shows four stairs. (VA historic photograph vol. XI, pg. 22, 8x10 photograph.)

01 June – Photograph showing almost finished view of fountain only finial at the top is missing. (VA historic photograph Vol. XI, pg. 26, 8x10 photograph.)

01 July – Photograph showing lower basin built out and planting beds staked out. Additional photograph showing pipe chase to fountain with close up of fountain. Fountain reveals many nicks and patches at this early date. (VA historic photograph Vol. XI pg. 34, 8x10 images.)

20 August – Letter to Chalfin from G. Pearce suggesting planting Australian pine around beds in rose garden.

14 September – Photograph showing perimeter plants protected by wood lathing and shade cloth. (VA historic photograph Vol. XI pg. 48, 8x10 photograph.)

14 September – Photograph showing semi circular fountain nearly complete with mer-boys in place and planting bed soil in place. (VA historic photograph Vol. XI pg. 49, 8x10 photograph.)

07 October – Photograph showing *Causarina* hedges in place around planting beds. (VA historic photograph Vol. XI, pg. 62, 8x10 photograph.)

27 October – Letter to F. Ley from Chalfin approving payment of bills for rose garden grilles for \$1,000 of orig. amount of \$3,060 for Samuel Yellin.

16 November – Letter to F. Ley from Chalfin sending revised drawings for rose garden grilles and G300 (Letter designates garden drawings) for a new gate to be sent to Samuel Yellin.

15 December – Photograph showing rose garden swing in place. (VA historic photograph Vol. XI, pg. 81, 8x10 photograph.)

1921

07 January – Letter to F. Ley from Samuel Yellin mentions sending wrought iron for the rose garden “2 stationary grilles, 1 gate, 6 braces.” (This is most likely the gates and fixed grilles that lead to the servants’ beach.)

15 January – Photograph showing finial at top of fountain in place, all planters in, and a different border hedge planted, possibly Orange Jasmine. (VA historic photograph Vol. XI, pg. 90, 8x10 photograph.)

1922

14 February – Photograph showing grass lawn on axis from mound to fountain, which is currently occupied by a curbed planter. (VA historic photograph Vol. XII, pg. 28, 8x10 photograph.)

13 September – Diary of I.N. Court mentioning: “Began planting rose garden.”

1925

21 September – James Deering dies.

1926

06-22 September – Major hurricane strikes South Florida, Vizcaya badly damaged.

1934

Summer – An eight-page document by Chalfin outlining the revisions to the garden. The program of work includes: *Page 1*: “Benches and chairs needed in the Bassano di Sutri Garden. Remove two Romanesque posts to assigned spaces in Bassano di Sutri garden. Remove Persian fountain base to Bass. Di Sutri – as assigned.” *Page 4*: “Vines, Shrubs and Trees – to stock or experiment (with) Melaleuca Cajeput, Stock in quantity for Swing Garden...” *Page 5*: “The Bassano Di Sutri Garden:- Entourage. 6 High Coconut Palms are needed on mangrove to SE to break low sky line. Place Cunninghamia either side of spaces flanking each low vase- to clip to 12’ high hedge instead of present Aralia. Behind mer-boy fountain the hedge should be Murreia – open to show pedestal of Narcissus statue.” *Page 6*: “The Swing Close. – All the area should be planted with a Cajeput Trees behind a low hedge outlining the enclosures – as on original plan – with 9” edging clipped as in parterres. Jasminum Simp. Regrade with blue slate in rectangle. The Farnese Posts and Low Stair to Swing Close. (These are the posts surmounted by a stone fleur de Lys [Farnese] armorial charge). The flat parapets either side of the steps should be crowded with potted plants. The Romanesque Lion and the Roman Sarcophagus are assigned above also to these parapets.” (VA)

1935

02 February – Letter to Chauncey McCormick from Paul Chalfin outlining work completed after ‘18th week of our contract. Under "Rehabilitation" Chalfin mentions “regrading the rose garden, restoration of the priceless iron work screen to the peacock bridge.” Under beautification Chalfin mentions: “the selection and distribution of colored sands in the main garden, with metal reserves laid in the ground at innumerable points to divide colors.” (VA)

1945

Deering heirs sell south property to Roman Catholic Diocese.

1952

Dade County purchases house and remaining property for one million dollars.

1957

06 April – Vizcayans chartered. Following organization of the group in October of 1956 and founded in the Spring of 1957. The organization is formed to assist in providing restoration for Vizcaya. Its original committee was formed from volunteer members of the American Institute of Interior Designers.

1964

01 September – Hurricane Cleo hits South Florida, damage to Vizcaya.

1974

14 September – Diego Suarez dies.

1979

Foundation for Villa Vizcaya founded.

Marine garden is restored from 1979-1981 with the Edward P. Goodnow fund.

1980

F. Burrall Hoffman dies.

E. Cianfoni restores Sutri fountain.

Rose garden / marine garden iron grille replaced by P. Alfonso.

1984

January – Survey/Botanical Identification of the formal gardens by Roger L. Hammer, Director of Castellow Hammock Nature Center, Metro Dade Park and Recreation Department, for Vizcaya Museum and Gardens.

E. Cianfoni supervises Jefferies work on statue restoration in garden and Sutri fountain

1985

Report from Office of Productivity Management, Metro Dade Park and Recreation Department regarding replacing piping and jets and patching and sealing pools. Report includes estimate for work for Bassano di Sutri fountain, sealing, and canal work.

East terrace paved with stone by Dade County against opposition.

1987

15 June – Letter to Richard Farwell from Kathleen Shea [Director of Conservation Services – Washington University Technology Associates] suggesting start date for conservation work (June 15, 1987) contract. The cost would be \$202,000 to remove ferrous piping staining stone, filter water to remove metallic and calcium ions, routine maintenance, remove biological growth, ferns, small plants and atmospheric soiling. (to 1989)

1988

25 March – Letter to Richard Farwell from Kathleen Shea, for work done by Tracy Coffing and Joseph Kuicannon. Work for the Sutri fountain: “Cut out old cementitious repairs and other patches of non-marble [sic] material in the main fountain body and replace with travertine Dutchman or in the case of wide crack, mortar of a more homogeneous color. Restore the basic lines of the fountain body and eliminate as far as possible unsightly or unattractively colored patches. The four freestanding figures in the upper fountain pool will be restored.”

1990

The Foundation for Villa Vizcaya (originally a subcommittee of the Vizcayans) establishes itself as a separate 501(c)3 to raise endowment funds for Vizcaya.

1991

17 January – Letter to Richard Farwell from Anne Seaton, Documentation assistant for WUTA. The letter mentions that they would clean organic debris and silt annually from the fountain.

1992

24 August – Hurricane Andrew strikes South Florida, Vizcaya is badly damaged. The rose garden suffers damage to the three of the mer-boys in the semicircular fountain, individual sculptures, basins and urns due to high winds, tidal surge and flying debris. The Bassano di Sutri fountain loses a large section of coping on the eastern edge due to tidal surge and wash outs on its western edge. Much of the garden is impacted with many columns and urns toppled on the eastern edge of the property.

2002

June- Vizcaya Museum and Gardens awarded conservation grant from the Getty Institute for the documentation and conservation planning of the villa and gardens.

2003

01 June- Documentation of the marine garden and rose garden as part of a conditions assessment report for Vizcaya Museum and Gardens funded by the Getty Institute. The team worked on site from June 02, 2003 to August 10, 2003. The report was written from August 2003 – February 2004.

4.2 MARINE GARDEN

4.2.1 HISTORIC BACKGROUND AND CONTEXT

Design and Planning

The marine garden and peacock bridge sit southeast of the primary axis of the formal garden directly off the rose or fountain garden. (Fig. 151) The garden is one of a series of small gardens that stretches out along the mangrove hammock along the bay. Since access to the villa would have been for its owner, primarily by water, the boathouse and causeway would have figured as two of the earliest site improvements south of the casino and villa. It would only be a matter of time before a shorter route from the boathouse would have necessitated the need for a more direct link to the villa and formal gardens. Additionally the marine garden would serve as the primary link to the groves and outer islands to the south of the formal gardens. In a letter of March 27, 1915 from James Deering to Paul Chalfin, Deering reminded Chalfin of the idea of the fishing cage discussed at an earlier date. Deering's idea is for a tank for fish, that would be brought ashore alive by his boatman. Deering writes:

You will remember that I have wanted a fishing cage. My boatman will frequently be idle and could perfectly well go fishing and with the proper tank fish could be brought ashore alive and put into the fish cage and kept until wanted. It has occurred to me that this fish cage might be made a thing of interest by combining with it a small seagarden that is, bringing in from the sea gardens around Miami the curious things that make them interesting. I looked over the plan of your garden yesterday with Sturrock and Cort and we at once concurred that a section of the minor causeway or what we might call the esplanade running from your garden to the main causeway would be just the place to put this. It could extend from the opening into the lake from which it would receive its water thro a grating north as near to the garden as we wished. The space is about 40 ft. wide by 100 ft. long which is 2 if not 3 times as long as we would need. The cage could not be very large as if it were, it would be difficult perhaps if not impossible to catch the livelier fish.¹⁰³

¹⁰³ Letter from Deering to Chalfin, March 27, 1915. Vizcaya Archives.

The letter finishes with Deering promising to do some research on the subject and find out what would work in a garden of this type. This process informed much of the garden's design; that is ideas were generated by either Deering, Suarez or Chalfin and then researched in the form of conversations with naturalists, botanists or local residents and initiated to test the soundness of the original ideas or seek out better solutions. The letter also reveals that the idea for the marine garden was by Deering, however modest, and that its more generous final design was undoubtedly the product of Chalfin. The original tanks would have been much wider (40ft.) as opposed to what was built (12ft.) but substantially shorter (30-50ft.) instead of the (70-80ft.) tanks that were built.

Later correspondence between Chalfin and Deering indicates that Chalfin approved of the idea of the location of the fish tanks and suggested that there be two tanks so that the sea garden and fish holding tank might be separate.¹⁰⁴ Chalfin encouraged Deering to find out more about the specifics of a sea garden which Deering did by consulting with his boatman Bocker and a guide by the name of Kemp both of whom were from Key West and had extensive knowledge of the area.

Both men differed on the feasibility of such a project with Bocker being suspicious of the venture given the "muck bottom" and the "mud and silt which will inevitably be in our water (and) would both be fatal to the kind of life that makes the sea gardens interesting and prevent the objects being seen to advantage."¹⁰⁵ Kemp, however, thought that the idea was "entirely feasible," and said that; "if a blow on the bay should stir it up, there would be mud and silt, no doubt, but that he has seen the same thing in the sea gardens themselves and that with the cessation of bad weather, everything would be all right."¹⁰⁶ History would show that both were right. The continued construction activity and dredging of the lake would not allow the tanks to be sufficiently clear for a great deal of time.

104 Letter from Chalfin to Deering, April 02, 1915. Vizcaya Archives.

105 Letter from Deering to Chalfin, April 06, 1915. Vizcaya Archives.

106 Letter from Deering to Chalfin, April 06, 1915. Vizcaya Archives.

Deering gave up on the idea of ever keeping fish in the tanks for the table as witnessed in a letter to Chalfin on May 18, 1917 in which he stated: "I am fearful that two things are true, first, that what ever may be in them will be difficult to see because of murky water; second, I doubt very much if anything will live in them at all."¹⁰⁷ More than a year later in a more exasperated and final tone he wrote: "I believe I have never said so, in so many words, but I think you know that I have given up the idea of having a tank to keep edible fish alive and sea gardens with living things."¹⁰⁸ The final solution of ornamenting the apse ends of the tanks with conch shells and the underside of the landings flanking the arched bridge was an attempt to give some form to the idea of the sea garden. Today the tanks although laden with debris and algae are in fact clear enough to sea fish and the bottom of the tanks.

In addition to the question of size and placement of the tanks there was an ongoing dialogue about fish and curiosities for view, versus fish for the table, with Deering writing to Chalfin about enclosing a smaller area within the larger tanks so that fish for the table would be easy to catch. The practical concerns of Deering and the expansive vision of Chalfin seem not to have reached an impasse, however, Deering ultimately deferred to Chalfin's judgement. Deering did voice his concerns about the success of the design and the spiraling costs of its execution. In 1919 he wrote:

*Walking about the grounds yesterday I looked down into the bed of the sea gardens. One could not have seen a silver spoon two inches below the surface. I am willing to put a little, but very little, expense into making these attractive.*¹⁰⁹

¹⁰⁷ Letter from Deering to Chalfin, May 18, 1917. Vizcaya Archives.

¹⁰⁸ Letter from Deering to Chalfin, December 20, 1918. Vizcaya Archives.

¹⁰⁹ Letter from Deering to Chalfin, April 19, 1919. Vizcaya Archives.

Historical Condition

Scheme I

The design of the marine garden was executed in two phases, with the pools being designed and executed first with the north pool preceding the south pool. The original design to connect the two pools called for a rustic wood bridge asymmetrically spanning the canal and aligning with the eastern edge of the walks flanking the pools. This can be seen in a large-scale print dated February 10, 1918. The north pool is 73'-2" long and the south pool is drawn as 82'-11 ½" and approximately seven to eight feet deep. This is the scheme shown on most site plans and was built except for the central span. The additional length given to the south pool may have had to do with perspectival extension of the axis to appear more visually correct from the top of the bridge.

The reason the central span was changed may have had to do with the large amount of wall surface that would have been left exposed to accommodate the stair to the higher landing before crossing. The rustic bridge also may have been more sympathetic with the change in character of the garden marked by crossing the canal to the more picturesque landscape of islands, tropical groves, and the open landscape beyond.

Ultimately the rustic bridge put the pools in a less than favorable view and exposed a great deal of wall, making the pools, which were full at grade, appear half empty at the higher landing. (*Fig. 152*) This deficiency was corrected in the revised drawings of March 03, 1920 more than two years later by covering the higher edges with the landing and re-centering the bridge.

Scheme II

In the revised drawings for the center span the existing concrete structure was cut down from the middle of the first stair to the end of the stone ramp to receive a new concrete beam. (*Fig. 153 - 154*) The new plan would allow a ramped stair to be built over a portion of the tanks to re-center one on axis with the pools. This redesign also shows the carved columns, stone peacocks and new arched bridge of concrete and stone. The new design cleverly provides for an abutment that supports wood staging so that stone workers could face the concrete bridge with stone without having staging that would have to be supported by a barge or from the canal bed. (*Fig. 155*)

The new bridge design also underscored the importance of views to the site from the canal. Entering the lake from the bay one would traverse a dense mangrove hammock and viewing into the lake from just before the marine garden bridge, one has a splendid view of the lake, sea wall, and casino in the distance. Given that there were many gondola stops along the sea wall: the main villa, maze garden, the marine garden and finally the casino, one cannot help but think that the scale of the rustic bridge spanning massive abutments would be a less effective frame as seen from the water.

It appears that the discussion and design of the marine garden occurred primarily in 1915 with construction of the pools starting in the middle of 1916 and ending in the middle of 1917. At this time revisions to the original design were made and the walls cut down to receive the new scheme for the central span finishing toward the end of 1917. The years 1918 and 1919 were years for development of drawings and preparation for the new scheme for the center span. By April of 1920 piles were driven for the abutments for the center span and by June the formwork for the center span was complete. The redirection of work on the central span may also have followed changes occurring in the causeway bridge. In a letter from Chalfin to Deering in January of 1919, Chalfin informed Deering of his wish to modify the proposed iron suspension bridge of the causeway with "simple masonry construction"¹¹⁰ due to the high cost of construction. In the same letter Chalfin mentioned the new design for the central span of the marine garden bridge, perhaps proposing his cost saving for the changes to the suspension bridge as support for the more costly proposal for the marine garden.

Also during this period between June 1920 and February 1922 the peacocks were designed, executed, and installed along with the columns, plantings and railings. By March of 1922 the marine garden was complete with adornments such as the wrought iron railings, sarcophagus, plantings, and lanterns.

¹¹⁰ Letter from Chalfin to Deering, January 03, 1919. Vizcaya Archives

North Pool Landscape

The long and grand procession of the pools was masterfully set off by the site development in terms of landscaping. The long axis of the pools was tempered by the fact that the whole design sat lower than the rose garden. If the rose garden elevated the senses through the sound and site of the fountain and the pleasant perfume of roses, the marine garden was more of the earth being three feet lower than the rose garden and entered by stone stairs which flanked a Roman sarcophagus. (Fig. 156)

The retaining walls flanking the stone flagging surrounding the pools almost exposed the ground and pools between them by parting the decay and darkness of the mangrove hammock. This garden was of the place and focused attention to the ground where the landscape was held back to expose the trapped fish within their stone cages set in the ground. The effort to design smooth retaining walls to prevent the invasion of land crabs in other parts of the garden is here removed. The hammock cut back by a fifteen-foot swath of lawn is now allowed to meet the retaining walls flush. Here the visitor descends and ascends being provided a momentary view above the landscape only from the bridge. The site has the quality of the inevitability of death so present in the tangles of decaying matter washed up and trapped in the buttressing roots of the mangroves. (Fig. 157)

The primary feature of the landscape plantings is the three *Washingtonia robusta* that flank either side of the axis on either side of the pools. These excessively tall palms create the vertical axis as a contrast to the extended horizontal axis of the pools, walks and bridge. The trees with the pools create a room made of long thin dimensions with the palm's trunks providing a rhythm and measure to the tangled mass of the mangrove hammock and visible from some distance to the south in the tropical groves. These plantings were given foreground plantings of *Podocarpus macrophylla* clipped in columnar fashion rather than as a hedge. The planting of the abutments with agave and *Yucca aloifolia* has similar contrasts seemingly both protective and at the same time offering relief. The agave and *Yucca aloifolia* produce aromatic flowers at certain times of the years with the flowers of the *Yucca aloifolia* also being edible. Additionally there were plantings at the ends of the fish tanks and flanking the sarcophagus.

Boat Landing

The design of the boat landing may have been primarily as an access point for Deering's boatmen, providing a means to make a quick transfer of live fish from the boat to the tanks. The design is there in the first scheme and reappears in the second scheme it seems more picturesque in the later scheme perhaps suggesting a less purely functional role in the garden as the program of keeping fish for the table was reconsidered. The boat landing provides one of the few views of the bridge from land and provides another means of traversing the outer groves and islands by providing access by boat. The plantings contained within the space, made by the bridge and the retaining wall of the path, included *Yucca aloifolia* and one tall *Washingtonia robusta*. Given that most of the site had been clear for construction, the winding sea wall that picks up the stair of the boat landing would have led the eye down the seawall all the way to the casino.

Lighting

In both schemes as seen in drawing G170 dated February 13, 1918 and later in a revised drawings for the ramped stair and stone bridge drawings G261 and G262 dated March 3, 1920, the lighting is shown as being provided by stone lanterns asymmetrically placed at the beginning of a stair or path. In both schemes there are stone lanterns shown only on the north poolside with one located at the left side at the foot of the easternmost stair to the bridge, and facing the entrance to the boat-landing path on the left corner as one enters the path. The asymmetrical and minimal placement of lighting follows what occurs in other parts of the garden and is consistent with the way lights were placed in the hammock.

The lanterns were powered by a single bulb set inside a coral rock lantern with small inset panels of yellow and blue colored glass. The minimal number of lanterns and colored glass suggest that the darkness of the site, primarily lit by moonlight off the water and coral rock surfaces, was sufficient enough to find one's way through the site. The drawings also show only outlets and no lanterns located around the south pool.

Historic photographs indicate a more symmetrical placement of lanterns placed at mid points on the ground just outside the retaining walls along the paths at both the north and south pools. (*Fig. 158*) Additionally the south pool shows a stone lantern on the left corner of the center stair to the tennis courts. One can deduce from the 1922 construction photographs that the number of lamps increased from two to five and that the placement became generally more symmetrical while still being a minimal lighting scheme. The lighting like the lighting flanking the water chain at the entrance to the villa and even the lighting of Deering channel from the water became more formal and consistent with the axial disposition of the immediate plan.¹¹¹

4.2.2 PHYSICAL DESCRIPTION

The marine garden today is in great need of conservation and should be considered a priority given the condition of the historic fabric, damage from past storms and in some cases bad repairs and restoration efforts, and finally neglect caused by poor maintenance.

The north pool area is in much better condition than the south pool (no longer on Vizcaya Property) but is nevertheless in need of immediate attention. The north pool area consists of the wrought iron gate (shared by both the rose garden and marine garden), the entrance stair from the rose garden, the coral rock east and west retaining walls, the coral rock flagging, the wrought iron rails around the pool and the stone dies which hold them in place, the lanterns, the landscape and the entrance wall to the boat landing and finally the pool itself. Additionally one should bear in mind elements equally important but not immediately visible such as piling, foundations, electrical and plumbing lines, and surfaces in the pool and along the bridge that are below water, as well as view corridors from the site. The stair landing to the bridge, columns, peacocks and bridge itself will be dealt with separately.

¹¹¹ Map of James Deering Property, Miami, FL", by Biscayne Engineering. 1933. Vizcaya Archives.

The current gate, from conversations with the Director and from physical inspection, appears to be a reconstruction of the original. Starting with the decorative wrought iron gate separating the rose garden from the marine garden one finds 90 percent of the surface is rusted and pitted particularly at crucial points in the gate's intersection with the ground and between the panels. Large portions of the 'older' sections of the gate are completely lost with braces completely missing making the gate in great need of immediate stabilization before it falls over. This gate has undergone previous restoration and it has not yet been determined how much of the gate is original and how much was reconstructed. From observation the gate appears to be a reconstruction and is not consistent with the other work by Samuel Yellin found elsewhere on the grounds. Original drawings (VA) indicate that Samuel Yellin's design and construction of the gate included working with antique sections. The current gate is perhaps a hybrid of past restoration efforts. More research into past restoration efforts must be done to accurately identify what has been done. Existing historic drawings can be a great help in what will undoubtedly be in large part a reconstruction effort. These drawings may be in existence in the Yellin Archives at the University of Pennsylvania.

The flanking stairs have been undermined by tree roots and some plant growth that is compromising the surface of the stone. The landscape above and adjacent to the stairs has contributed to the plant growth by shading the stairs and the dropping of leaf litter, providing a perfect environment for this to occur. Planted or naturalized trees that differ from the historic plan have contributed to this condition and will be discussed under landscape.

The retaining walls on the west edge nearest the west stair have a great deal of plant growth in the form of ferns and seedlings such as *Ficus aurea* trees taking root in the crevices and pitted surface of the stone. Poor drainage, broken water lines and encroaching planting in this area can severely impact the stone. The soil side of the cap stone on the retaining walls is often chipped or broken, possibly from the shovels of maintenance crews removing and planting shrubs ground cover too close to the edge of the rock, or by falling tree limbs. Debris that washes up in hurricane tidal surges can also wreak havoc on an edge condition in areas close to the mangrove hammock. The build-up of the plant growth in the corners at the base of the wall has also affected the surface of the stone. Areas of the retaining wall exposed to greater light and free of shade have fared much better.

The coral rock flagging appears to be missing over approximately 25 percent of the ground in this area. Land crab burrowing, past storms, and settlement have put some areas of the pavement in danger. On the east edge of the north apse end of the pool, one can find holes made by land crabs that have provided a conduit for water and erosion. (*Fig. 159*) Overall most of the flagging appears to be in good condition and not in immediate danger.

The eighty-two linear feet of wrought iron railings with wood cap around the pool are somewhat protected by the painted coatings on their vertical surfaces however the absence of the oak rail on portions of the iron rail around the pool and the build up of water and debris at the base of the balusters is causing some deterioration of material. There is one section of the 18 sections around the pool that is completely missing. A large section of oak rail was found on the ground. Additionally the importance of the railing as being from the famous Philadelphia wrought iron master Samuel Yellin makes its stabilization and conservation a priority. From historic photographs it is clear that the railings were much lighter than the current color, possibly green or grey in color.

The stone dies that hold the wrought iron rails are mostly intact; however, there are incompatible repairs and numerous losses to the top corners of the stone. The depth and character of the stone loss should be carefully evaluated to determine what is natural and acceptable and what could lead to further damage. Simply re-introducing sharp edges of the original architectural lines of the cut edges should not be done given that the pitted quality of the coral rock by nature has inconsistent edges.

The north pool's interior surface was difficult to access without draining and examining its surface. (*Fig. 160*) The depth of the pool is shallower than what is indicated in the original drawings suggesting the pool may have as much as 2-3 feet of debris in its bottom. The build up of algae on the sides of the pool and bio-growth along its edges indicate that the pool should be drained and carefully documented for cracks, loss of material, settling and for the general condition of the interior plastering and shell and sea fan encrusted surfaces that are part of its decoration. Given that the pool was intended as a sea garden, the sides of the pool should be carefully restored and if possible the inlet to the canal maintained to allow this feature to return to its original condition.

Ramped Landing / North Pool

The railings around the ramped stair up to the first stair of the bridge include approximately 35 linear feet of railing. In this location approximately 23 percent of the railing is missing completely with 42 percent of the oak rail missing. The rails in this location suffer the same problems as those around the pool. Most significant to the remaining oak cap on the railings are the number of losses caused by the cutting back of the *Pandanus sanderi* away from the railing. The improper maintenance of this specimen has caused a great deal of damage to the rails. (Fig.161)

The stone risers to the ramped landings and the stone flagging have suffered from minor settling, and loss of fill between the stone flagging due to runoff and settling of the subsurface. At the top of the stair just past the column on the eastern most landing there is significant settlement of stone suggesting a break in the stonework or erosion of the sub-base material.

The stone peacock columns present some of the most serious concerns in this area. Poor repairs and conservation efforts in the form of incompatible patching of stone and reconstruction in cement have greatly altered the integrity of the original carved stone fabric. Columns vertical making them susceptible to toppling in storms from wind load and flying debris.

Current Conditions

North Pool Landscape

The landscape abutting the edges of the north pool has changed significantly from its original plan and intent. The changes have occurred due to a number of natural and man-made interventions. What is most immediately noticeable is the extent the landscape now encroaches upon the perimeter of the design. The original openness of the edges has been lost to the planting of *Scaevola taccada* along the east perimeter of the retaining wall and the abundant planting and invasive growth of the *Pandanus sanderi* on the western edge of the retaining wall and around the path to the boat landing. Some of the naturalized *Washingtonia robusta* might be from the original seed bank. There does appear to be one *Washingtonia robusta* at the boat landing that might be part of the original planting. What was found is a regular line of *Washingtonia robusta* stumps, which allows us to find the original distance of the planting from the retaining wall and the spacing of the plantings. From this planting line we can find that there were indeed three *Washingtonia robusta* on either side of the north pool for a total of six trees on either side of the canal.¹¹² (Fig. 162)

The area starting at the stair to the landing before the bridge ascent on both sides of the north pool appears to have been planted with *Yucca aloifolia* as seen in historical photographs. This area appears to now be occupied mostly by *Pandanus sanderi*, which although armed like the *Yucca aloifolia* has been more difficult to control and has assisted in the deterioration of the oak rails due to losses caused by tools used to cut the plants off the rail.

The last historic planting seen in existence are the remnants of a line of *Podocarpus macrophylla* shrubs, growing just inside the line of the *Washingtonia robusta*. On the east side one can find two specimens and on the west one. This plant, normally used as a hedge material today, does not seem to have been planted close enough to become a hedge in the historic photographs. What is more probable is that the plants would have been clipped more like topiary in a columnar form set just inside the mangroves at a closer spacing to create a different scale and rhythm in the foreground.

112 Historic Photograph, Vizcaya Archives.

Other more exotic species such as *Thespesia populnea*, *Roystonea elata*, and the *Latania loddigesii* may have been planted at a later date but it is difficult to know just how much of this planting was original. Out of these plantings the *Thespesia populnea* along with the *Pandanus sanderi* are the most invasive and have had the most negative impact on the built fabric of the site. The small grouping of *Washingtonia robusta* near the boat landing could be the naturalized offspring of the original trees and could be transplanted and used for replanting the original line of trees.

Bridge

The bridge area starts at the top of the ramped stair landing from either side and arrives at a thin landing approximately sixteen feet wide between rails and seven feet deep between stairs. There are sixteen steps to the top of the bridge putting the visitor approximately sixteen feet above the surface of the water.

Most noticeable here is the loss and detachment of the oak railing. There is approximately 42 linear feet of rail split evenly in quantity between the two sides. Approximately 50 percent of the oak cap is missing with sections of the railing detached.

Given the loss of protection from the oak cap these sections of railing are in greater danger given the exposure of the wrought iron top to standing water and salts from the bay. Much of the oak cap that is in place is missing its protective paint with the wood subject to rot and termite damage. Additionally much of the oak cap to the railing is nicked, gouged and missing much of its top profile and in some cases the oak rail has been provisionally strapped down with metal bindings to hold it to the wrought iron balusters. (Fig. 163) The iron braces have rusted at the point of attachment to the stone curbing and stone dies at the ends due to loss of protective paint and standing water. There is also a build up of efflorescence on the wrought iron from salt air which is deteriorating the paint and pitting the surface encouraging rust. The mangrove hammock in some areas is growing through and over the railing encouraging more loss of material to rot and unsympathetic maintenance practices. (Fig. 164)

The surface of the stone stairs, flagging, and dies and the re-pointing of the joints should be carefully evaluated and minor repairs made. The outside surface of the bridge has a great deal of plant growth in the crevices of the stone. The larger plants break apart the stone and begin to penetrate the concrete work with structural implications for the stone veneer and bridge structure itself if not monitored regularly and carefully removed.

South Pool

The south pool is outside the property of Vizcaya and is therefore outside the realm of our project. We documented this property with La Salle's permission to accurately depict the current condition of the whole site. The view from Vizcaya effectively dies into the arched wall of steps as seen from the north pool walks. It is only after mounting the bridge stair that one sees the south pool and recognizes this half of the property as outside of Vizcaya. Historically the south pool continued a long axis between two tennis courts eventually crossing the eastern stretch of the causeway and finally curving into the perimeter path of the outer gardens. (*Fig. 165*) This historic view is no longer possible given the current development of the site on the La Salle property. The description that follows acknowledges these realities.

The south pool and landing has suffered a great deal of loss of historic fabric including the stone columns and peacocks, stone flagging, most of the stone dies and wrought iron rails and caps. The south pool exists outside Vizcaya's property on a site now occupied by La Salle High School. The two halves are divided by the south bank of the canal given that at the foot of the bridge on the south side, a chain link fence that has been erected to control access to Vizcaya from La Salle High School.

The administration of La Salle was very generous in providing access to the site to document this side of the marine garden. Our communications were positive suggesting an interest in a collaborative effort for its conservation. A conversation with the grounds superintendent at the School revealed that the partially filled pool might contain a quantity of historic fabric. Additionally portions of the peacock columns from the south pool have been stored by Vizcaya in the Poultry Barn. More research should be conducted to accurately survey exactly what is contained in the pool, how much is original and its condition. If an agreement is reached, drainage and study of the interior of the pool should be considered a priority to retrieve any material that may reside there before it is further damaged.

Remarkably the landscape on this side of the marine garden was kept as a lawn and the maintenance of the *Washingtonia robusta* give this section a closer resemblance to the original landscape condition.

South Pool Landing

The south pool landing is missing 100 percent of its historic railing and a large portion of its stone flagging. The ground is covered with grass and has two large *Washingtonia robusta* palms growing opposite each other on the landing. There appears to be some stone flagging which a dense mat of grass has covered. The landings have substantial settling from erosion and are in need of immediate stabilization to prevent further damage. Given the height of the landings above grade and the absence of railings above the pool this is a hazard to anyone walking this edge of the property. Immediate measures should be taken so that no one is injured.

South Pool

The south pool is in part a ruin with virtually all of the iron rail and stone dies missing from the center perimeter. Additionally the stone lanterns and most of the landscape are absent and there is a large quantity of stone flagging missing and some stone treads and risers from the stairs that once led to the tennis court. (Fig. 166)

This section of the marine garden can and should be maintained like other remnants of the south portion of the Deering estate now on La Salle property such as the Casba or the stone pylons. There needs to be a discussion as to whether a partnership could be made for the conservation and preservation of the historic fabric, mutually beneficial to both, or perhaps the acquisition of the South Pool by Vizcaya to insure the future viability of the marine garden. Clearly the preservation of half a bridge is less desirable than the return of the whole to its past design.

4.2.3 CONSERVATION ASSESSMENT SUMMARY

General Description

The marine garden is located to the south of the rose garden and incorporates the wetlands of the mangrove hammock to the east and west. The garden is designed along a linear north-south axis with symmetrical rectangular pools connected by an arched masonry bridge which spans the waterway. The garden has been truncated in half by the sale of land to La Salle University to the south. The landing on each side of the bridge was originally demarcated by four decorated stone columns surmounted by a carved stone peacock. Only the north set of columns survives. Each composite order column is heavily ornamented with a foliated grape vine wound around the shaft.

The long rectangular apsidal-ended basins or “fish tanks” and the bridge are bordered by a balustrade of stone piers and flat iron balusters set in lead. The handrails are of wood. The basins and bridge are of poured-in-place concrete capped or veneered with coral limestone masonry. The apsidal end and under-bridge walls are decorated with applied shells, sea fan and mural paintings, now covered by water and debris.

The outer perimeter of the garden is defined by a low retaining wall of coral limestone laid in Portland cement mortar. The entire pavement throughout is of sawn, dry-laid rubble coral limestone. Two stone lanterns survive along the northern half of the garden.

The north entrance from the Rose Garden is enclosed by a free-standing ornamental iron fence (a poor replica of the original Yellin work) and an antique child’s marble sarcophagus on a modern limestone base.

Condition Survey Methodology

A mid-range graphic conditions survey of the architectural elements (masonry, wood, and iron) was conducted on the 2003 measured drawings prepared at 3/16” scale. The condition survey was executed to provide summary diagnoses and baseline information for future monitoring as well as quantification for treatment estimates and recording. (See section 6.0 Condition Survey Data)

The conditions of the four peacock columns were instead recorded as annotated observations on rectified photomontages of each column given the unique conditions and repairs of each.

Conditions identified for recording were selected according to standard conservation nomenclature and the likelihood of remedial treatment or long-term monitoring. Special attention was given to conditions that appeared active or chronic. Repairs were similarly studied to ascertain whether they were successful in addressing the deterioration or at worst, caused further or new deterioration.

The condition survey was conducted following the establishment of a descriptive conditions glossary. Conditions were recorded on both drawings (for masonry) and on rectified digital photomontages (for sculpture). Due to access problems, the “fish tank” pools were not survived.

General Condition of Architectural Elements

The overall masonry of the Marine Garden is in good condition: walls are plumb and repairs are minimal; some repointing has occurred. Numerous wall copings display heavy erosion from natural weathering. The most severe masonry wall damage occurs along the western path to the canal where root undermining has displaced and toppled walls.

The bridge masonry is in excellent condition although an eastern section of railing is missing and the wood handrail is rotted in locations. The west lantern is broken on the top and the east lantern is detached from its base.

General Condition of the Peacock Columns

By far the worst conditions are to be found in the four remaining peacock columns. These masonry elements have all been heavily repaired with hard cementitious mortars and resin-based fills, the majority probably during the 1979-81 restoration campaign and after 1992 from damage from Hurricane Andrew. Repairs vary in skill from carefully replicated details to cracked and detached patches. Through-column cracks have structurally compromised the monolithic shafts and the two eastern-most columns lean precariously. None of the peacocks are complete and range from total cast cement replacement to partial repair.

Detailed conditions are annotated on rectified photo-drawings of the masonry walls and peacock columns.

4.2.4 MARINE GARDEN CHRONOLOGY

This chronology was proposed using primary documents in the form of letters, drawings, specifications, telegrams and historic photographs from Vizcaya's archives.

1915

27 March – Letter to Chalfin from Deering reminding him of the idea of the “fish cage.” A site is chosen by Deering and Sturrock between the formal garden and esplanade.

02 April – Letter to Deering from Chalfin confirming the idea of a “fish cage” and “sea garden.”

06 April – Letter to Chalfin from Deering discussing the possibility of the sea garden and Deering's consultation with Bocker and Kemp about conflicting observations about the success of a sea garden.

25 April – Letter to Deering from Chalfin mentioning new garden drawing and individual “fish cage.”

29 July – Letter to Deering from Chalfin mentioning rustic bridge spanning mangrove canal and a second path through the mangroves to the teahouse.

03 August – Letter to Chalfin from Deering reminding Chalfin about problem of smaller tank in larger tank in order to facilitate the easy capture of fish for the table. Deering not sure about rustic bridge.

09 August – Letter to Deering from Chalfin reminding Deering that nothing is definite yet about fish tank and that he has all the “facts” but will take up special study.

11 August – Letter to Chalfin from Deering reminding him that sea garden water must have perfect circulation.

1916

27 May – Photograph showing the piling for the marine garden looking south. (Historic photograph Vol. V, pg. 81, #1045.)

14 June – Photograph showing the construction of the inner shell around the marine garden on north pool. (Historic photograph Vol. V, pg. 04, #1087 and #1088.)

16 June – Photograph of formwork for the south pool of the marine garden. (Historic photograph Vol. V, pg. 09, #1107 and #1106.)

06 July – Photographs of formwork for south pool abutment, formwork for the south pool removed, and formwork for the north pool removed. (Historic photographs Vol. V pgs. 33, 34, 35, #1124, #1125, #1126.)

27 July – Photograph showing north pool complete with all grading in place around pool. (Historic photograph Vol. V, pg.55, #1156.)

07 Octobe – Report by W. D. Sturrock to Chalfin discussing how a large quantity of dye placed in the pools has practically disappeared to show that the water is circulating. "There is a certain amount of settlement to the coloring matter used. This, of course, we had to make allowance for. I feel certain however, that there is circulation in these parts."

1917

17 January – Letter to Chapin from F. W. Starbuck stating that excavated material from the lake is being placed to form the foundation for the tennis courts and is being kept 18 inches from finished level.

06 March – Letter to H.R. Allen from Starbuck in reference to receiving estimates for stone from Marathon Key at seventy-five cents per cubic foot for stairs for the marine garden. Also that the estimates compare favorably with estimates from Florida Key Stone Co., and H.H. Steele at Palo Alto Key. Other estimates at a lower cubic foot price require furnishing a channeling machine by Deering which also affect the price if returned or kept by the companies.

14 April – Photograph showing formwork for tennis courts at the south end of the marine garden. (Historic Photograph Vol. IX pg. 21, #1527.)

21 April – Photograph showing formwork for stairs and retaining walls at south end of the marine garden. (Historic photograph Vol. IX, pg. 24, #1533.)

07 May – Telegram to W.D. Sturrock from Chalfin about planting 6 Washingtonia Palms on either side of marine garden near east fan vista.

18 May – Letter to Chalfin from Deering expressing doubts about the sea garden, that the water is too “murky”; he also mentions Sturrock’s idea of decorating the wall with curiosities not alive.

26 May – Letter to Chalfin from Phineas S. Paist noting cutting down wall in marine garden and location of “Royal Palm Trees” (this could be a mistake in identification by Paist. The trees were mentioned as Washington Palms in the Telegram of May 07.)

15 June – Letter to Chalfin from Paist mentioning that he is proceeding with the erection of the tennis court fences.

21 September – Letter to Chalfin from Paist noting revised marine garden drawings with small boat landing with steps to upper level.

17 October – Letter from Deering noting finished concrete in marine garden and temporary bridge over canal.

20 October – Letter to Chalfin from Paist mentioning north basin cut down and portion of south basin also cut down.

1918

28 March – Letter to Chalfin from Fred T. Ley & Co. detailing the cost for the “Japanese bridge” over the canal at the marine garden to be \$14,000.

13 February – 1st scheme drawn ¼” = 1’-0” marine garden bridge.

27 February – ¾” FSD (full scale drawing) drawings of marine garden and approaches

1919

20 December – Letter to Chalfin from Deering suggesting that the property south of the causeway be made “as attractive as possible with comparatively little expense, putting in clumps of trees, perhaps a few islands, also our bamboo forest at the south end; then, having made something as pretty as possible for our money, we could point to the saw-grass, etc., and call the land our Everglades.” (Deering also mentions small primitive log bridges, the remnants of which were found east of the marine garden in the mangrove hammock.)

1920

03 March – Marine garden plans for 2nd scheme.

24 March – Marine garden plans completed for 2nd scheme.

01 April – Photograph showing the building of landings and exterior walls for the marine garden and showing *Washingtonia robusta* planted on either side of the north pool, (four to a side.) The south pool is not yet planted. (Historic photograph Vol. XI pg 17, 8x10 image.)

02 April – Photograph showing piles being driven for the marine garden abutments for center span. (Historic photograph Vol. XI, pg. 08, 8x10 image.)

01 June – Photograph showing formwork for the center arch up and formwork for landings complete. (Historic photograph Vol. XI, pg. 24, 8x10 images.)

23 June – Letter to Chalfin from Lachaise with estimate for two peacocks out of plaster and models in plasticine for his criticism upon his return to New York in September. Lachaise also mentions that the plaster models will take one month after the plastilline models and that he will need additional compensation in Florida for two weeks work on site.

24 June – Lachaise reviews models by Menconi brothers.

01 July – Photograph showing the center arch for the marine garden bridge poured. (Historic photograph Vol. XI, pg. 35, 8x10 image.) South stone dies in place. (Historic photograph Vol. XI, pg. 44, 8x10 image.)

14 July – Louderback letter to Chalfin accepting peacock estimates.

20 July – Letter to Fred T. Ley from Samuel Yellin detailing the estimate for the wrought iron railing for the marine garden.

29 September – To Fred Ley from Chalfin accepting estimate for handrail for marine garden.

07 October – Photograph showing the sides of the arched center span getting stone veneer from a temporary wood bridge set up from the flat landings flanking the sides of the center span. (Historic photograph Vol. XI, pg. 61, 8x10 image.)

01 November – Letter to Chalfin from W.J. Louderback with check for second payment for the models for the Lachaise peacocks of 1/3 total cost.

02 November – Photograph showing the carving of the stone columns in situ on the north pool, one is finished four are still untouched. (Historic photograph Vol. XI pg. 70, image 8x10.)

13 December – Chalfin approves Lachaise models sent to Menconi Brothers.

1921

15 January – Photograph of the marine garden with all columns set and some railings still missing on the south pool and sections of the north pool as well. (Historic photograph Vol. XI pg. 87, 8x10 image.)

10 March – Photograph of small sarcophagus with altar behind and iron screen in place at the north end of the marine garden. (Historic photograph, Vol. XI, pg. 92, 8x10 image.)

12 May – Photograph showing the embankments planted out with Spanish bayonet and Agave and grass edges. All railings are in place with columns finished. (Historic photograph, Vol. XII, pg. 09, 8x10 image.)

10 June – Telegram to Deering from Paist stating that the ironwork for the gates between the rose garden and the marine garden have been set, and are being cleaned and painted. Paist notes that this is the last piece of ironwork.

1922

14 February – Photograph showing the north pool with peacocks on columns, lanterns shown at mid-point, and plantings around sarcophagus and apse end of north pool. (Historic photograph, Vol. XII pg. 25, 8x10 image.)

1926

06-22 September – Major hurricane strikes South Florida, Vizcaya badly damaged. Much of the garden is impacted by tidal surges and flying debris. There are no photographs of the marine garden in the 1926 documentation of Vizcaya's archives.

1934

Summer –Paul Chalfin in the summer of 1934, undertakes work in the garden representing one of the earliest revisions of the garden. The work is outlined in a 8 page typewritten report: *Page 6*-“Fish Tanks at bridge- introduce a rectangle of red sand in front of the sarcophagus. Corners at ends of balustrade (Fish Br.)- Introduce clumps of sun resisting crotons. Flat Beds along Parapet (Fish Bridge)- Introduce Crotons in clumps 2' back of parapet- and Yucca glor. In quantity behind Crotons. Flat Landings over Arches (Fish Bridge.) - Plants in pots to ramp to balustrade and to hang (reil) arches somewhat. E.g. yellow Thunbergia or young Allamanda” *Page 8*- “-that the iron fence to the peacock bridge will be repaired under supervision of P.C.”

1935

02 February – Letter to Chauncey McCormick from Paul Chalfin outlining work completed after the 18th week of our contract. Under “Rehabilitation Chalfin mentions “activities permitted the superintendence of the restoration of the priceless iron work screen to the peacock bridge.”

1945

Deering heirs sell south property to Roman Catholic Diocese.

1952

Dade County purchases house and remaining property for one million dollars.

1954

Volunteer guides group is formed to provide educational tours of the villa and gardens.

1957

06 April – Vizcayans chartered. The Vizcayans is organized on October of 1956 and founded in the spring of 1957. The organization is formed to assist in providing restoration for Vizcaya. Its original committee is formed from volunteer members of the American Institute of Interior Designers.

1959

February – Paul Chalfin dies.

1964

01 September – Hurricane Cleo hits South Florida, damage to Vizcaya.

1974

14 September – Diego Suarez dies.

1979

Foundation for Villa Vizcaya founded.

Restoration of the marine garden from 1979-1981 with the Edward P. Goodnow Fund.

1980

F. Burrall Hoffman dies.

1984

January – Survey/Botanical Identification of the formal gardens by Roger Hammer, director of Castellow Hammock Nature Center, Metro Dade Park and Recreation Department, for Vizcaya Museum and Gardens.

1990

The Foundation for Villa Vizcaya originally a subcommittee of the Vizcayans establishes itself as a separate 501(c)3 to raise endowment funds for Vizcaya.

1992

24 August – Hurricane Andrew strikes South Florida and the marine garden suffers substantial damage along its eastern edge. The wrought iron rails and stone dies are knocked over along the easternmost edge of the north pool due to tidal surge. The eastern most carved stone column and peacock are knocked into the hammock with a section of wall. The stone lanterns lose their tops. Some of the terra cotta pots are knocked over and broken. The pools are filled with debris, as is much of the site.

2002

June – Vizcaya Museum and Gardens awarded conservation grant from the Getty Institute for the documentation and conservation planning of the villa and gardens.

2003

01 June – Documentation of the marine garden and rose garden as part of a conditions assessment report for the Vizcaya Museum and Gardens funded by the Getty Institute. The team worked on site from June 02, 2003 to August 10, 2003. The report was written from August 2003 – February 2004.

4.3 GARDEN DRAWINGS

4.3.1 HISTORIC IMAGE FILES

Original drawings produced by Paul Chalfin, Warren Chapin, and Diego Suarez were located in the archives under the supervision of the curator at Vizcaya. These drawings are in a range of formats, media and methods of reproduction. Many of the drawings are large format 36" x 60" sheets horizontally composed. Original drawings are often pencil and ink on linen or pencil on trace paper with some drawings only in existence as blueprints. The drawings because of their age and size are quite fragile and in some cases were not scanned. The drawings range in date from 1914 – 1922. The drawings often list original issue date and dates of revision. The drawings for the rose garden and the marine garden often carry the names of Paul Chalfin and Warren Chapin; however, given the character and range of detail in the drawings they are undoubtedly the product of a number of individuals.

Given the large number of full scale drawings and highly detailed trace drawings one understands that every detail of the garden was studied and that drawings were produced according to the task at hand suggesting that the work progressed quickly with drawings often made when work was under production.

Selected drawings were digitally scanned using a large flat bed scanner, and recorded as tiff image files at full scale and with the highest resolution. These scans were then used to produce full size high quality prints that could be used as a reference in all facets of the production of existing conditions drawings, analysis of the site, and the production of the report.

4.3.2 FIELD NOTES

The research, documentation and production phases of the garden effort were a collaborative effort involving students from the University of Miami School of architecture. The students were fourth and fifth year architecture students who received background instruction about the nature of documental work and a range of techniques for its execution both on-site and in the studio. Given the special nature of this project we did, however, break some new ground in our level of documentation and the quality of the finished drawings, utilizing the best of both digital and hand drawn methods for construction of the drawings.

The drawing studio was set up on-site in the village allowing easy access to the gardens and cutting down on travel time to and from the site. Vizcaya graciously provided the space for our use for the duration of the summer months. The garden team of four students was divided into two teams to work on the two different gardens. Most of the first month was spent on site, drawing and preparing base information of existing conditions, for the measuring and recording of dimensions. Work typically went from 8:30 AM until 6:30 PM with a full eight hours of work each day. Given the hot humid conditions of the site, thick with mosquitoes from the mangroves, work was often draining and at times difficult.

In addition to the site drawing and measuring, hundreds of digital and print photos were made of the site. Objects such as the sculpture, urns, stone tables and basins required extensive use of corrected digital photography to create hard line drawings. Large format photography was the product of Roland Joynes who photographed the villa and gardens from both the land and from the water to HABS standards.

Students executed HABS format drawings and measuring techniques producing collectively 130 field notes. The field notes range in size from 11"x17" to 17"x22" and cover everything from the overall plans, sections, and elevations to the sculpture and plant material.

4.3.3 MEASURED DRAWINGS / EXISTING CONDITIONS

The production of the field notes was the first step in the production of the final measured documental drawings of the overall site and rose and marine gardens. Additionally digital files were given to the villa team for the production of the overall map of the site to define the site's original acreage. Given that the drawings were produced in AutoCAD, files could also be given to the conditions assessment team at the University of Pennsylvania to form the foundation for their work. The final drawings of the garden are a mixture of AutoCAD and hand drawn, ink on mylar sheets at a size (36"x60") that approximates the original drawings. The drawings form the base line documentation for any future conditions assessment of these gardens and set the standard for all future documentation of the site.

5.0 RECOMMENDATIONS

5.1 VILLA RECOMMENDATIONS

Immediate:

Conduct a Conditions Survey and Assessment for the following:

- All window and doors (at the building envelope)
- All window and door openings (at the building envelope)
- Roof and water disposal system
- Steel structure over pool
- Pool ceiling mural
- Columns of East Loggia
- Floor of breakfast room – cracking and heaving are present
- Wood roof structure of gallery – elements show signs of damage and rot
- All drawings in the archives should be inventoried and placed in proper storage

Near Future:

Develop a complete chronology for the years between 1917 and the present.

Produce measured drawings for the following:

- Basement level plan
- Second level
- Third level plan
- Roof plan
- Lateral Section
- Forecourt
- North Terrace
- South Terrace
- East Terrace
- West Terrace
- The Center Island

Long Term:

- Re-assessment of glass skylight over courtyard
- Re-assessment of environmental controls
- Re-assessment of storm shields

5.2 GARDEN RECOMMENDATIONS

5.2.1 GENERAL GARDENS

- Conduct a conditions survey and assessment for the rest of the garden. This should include: the casino and mound, barge, secret garden, theatre garden, maze garden, east fan vista and statuary walk, west fan vista and statuary walk, terraces, entrance court, canal and rapids, farm village, and vista gates on Bayshore Drive.

Note: See appendix for explanation of recommendation bullets.

5.2.2 ROSE GARDEN

Immediate:

- Implement conservation program based on current survey and assessment of architectural and sculptural elements and fountain -solicit proposals.
- Implement a maintenance education program focused on the care of built and natural historic fabric.
- Implement a volunteer program that could assist in labor-intensive maintenance.
- Restore terracotta pots and place pots on stone plinths.
- Implement a routine maintenance plan to eastern mangrove hammocks that removes debris that could harm historic fabric in a tidal surge.

Near Future:

- Study and assess hydraulic system for the fountain and canals and the general water system of the estate.
- Implement a planting conservation plan.
- Remove plantings inconsistent with the 1922 and 1934 intent of the original plans.
- Remove exotic pest plants that are not part of the historic 1922 and 1934 plans.
- Remove the planter on Axis 'F' and reconstruct the original lawn.
- Restore lost grade in the garden and remove concrete between basins and canals.
- Study feasibility of reconstructing original plantings and paths for the garden.

- Study the feasibility of reconstructing the garden's lost features: the lattice swing, and the wrought iron grilles and gates.
- Study the feasibility of recovery of the original axis to the servant's beach and rustic bridges in the mangrove hammock.

Long Term:

- Restore hydraulic system for the fountain and canals and the water system for the estate.
- Reconstruct the lattice swing and wrought iron gates and grilles.
- Recover the axis to the servants' beach, reconstruct missing elements in the mangrove hammock, and recover the stair.
- Return original plantings to the garden.
- Repoint and repair canals.

5.2.3 MARINE GARDEN

Immediate:

- Disassemble peacock columns and execute conservation plan including replication of replaced peacocks.
- Drain, clean and assess pool interior surfaces and their decoration.
- Stabilize existing wrought iron screen.
- Remove invasive plantings inconsistent with historic planting plans.
- Stabilize stonewalls at the boat landing from further loss from erosion from wave action and heaving from invasive plantings.
- Remove, clean and repaint existing wrought iron rails around pools and bridge.
- Conduct a complete inventory of all material in storage at the farm village and salvaged from the site for future use or proper storage.

Near future:

- Negotiate possible acquisition of the south pool property from La Salle High School to implement a conservation plan.
- Trim trees to recover view corridors from the marine garden to the rose garden and villa beyond.

- Replant historic plant material.
- Study existing electrical lines and fixtures to implement conservation plan for their recovery.
- Initiate a historic plant seedling program for future use in the garden and to preserve plantings from loss to future storms or disease.

Long Term:

- Drain, clean and assess south pool interior surfaces and their decoration for conservation plan.
- Restore south pool to original condition and enclose with hedges at south end to replicate original view corridor.
- Replant historic plants at the south pool.
- Repoint and repair masonry.