

**The Cranbrook House and Gardens:
East Pavilion (Thistle Shop)**

**39221 Woodward Avenue, Bloomfield Hills
Oakland County, MI. 48303**

Alana Buynak

Joseph Machak

University of Detroit Mercy

School of Architecture

Historic Preservation 572

Instructor: Leslie Pielack

Fall 2010

TABLE OF CONTENTS

INTRODUCTION	1
 I. DEVELOPMENTAL HISTORY	
Historical Background and Context	3
Historical Overview	
Architectural Description and Contextual History	
Building Chronology	
Existing Conditions	4
Surrounding Site	
Exterior Conditions	
Interior Conditions	
Building Systems: Structural, Mechanical, and Electrical	
Photographic Documentation	7
 II. TREATMENT AND USE	
Statement of Historical and Architectural Significance	12
Statement of Architectural Integrity	12
Future Use of the Building	13
Standards, Preservation Guidelines, & Treatment	15
Recommendations	
Exterior: Rehabilitation and Preservation	
Interior: Rehabilitation and Preservation	
Architectural Drawings	18
Inventory	23
 III. NOTES, BIBLIOGRAPHY AND APPENDICES	24
Appendix 1	
Appendix 2	
Bibliography	

[INTRODUCTION]

The Cranbrook House and Gardens: East Pavilion (Thistle Shop)
39221 Woodward Avenue, Bloomfield Hills 48303
Oakland County, MI
Website: <http://www.cranbrook.edu/housegardens/default.asp?bhcp=1>

Alana Buynak
Joseph Machak
University of Detroit Mercy
School of Architecture
Historic Preservation 572
Instructor: Leslie Pielack
Fall 2010

The intention of this project is to update the east pavilion for its new use which will be called "The Thistle Shop". The gift shop will become a destination spot for guests visiting the Cranbrook House and its Gardens.

Statement of Purpose:

1. To assess and describe the condition of the structure to aid in a possible rehabilitation and insertion of a new function suitable to the existing structure.
2. To understand the building's structure, materials, and probable evolution over time.
3. To ascertain relevant historical context and past use as a component of recommendations for treatment, and to determine if any alterations are necessary.
4. To seek preliminary estimates and possible funding for the project, as decided by the Cranbrook House and Gardens Auxiliary

Summary of Related/ Past studies:

The Cranbrook House and Gardens is a registered property on the 1989 Register of Historic Landmarks report. However, there is also actual documentation found in the material inventory kept by George Booth from the years 1915 and 1921. There is also mention of the use of the pavilion and alterations made to it in Henry Booth's personal memoirs. Construction documents and drawings from the original structure as well as the alterations are still available and accessible.

Field Investigation and Methodology Used:

Dates of Investigation: 10/10/2010 as a general site visit. 10/26/2010 the structure was accessed and documented. Archives were also visited for the procurement of any documentation available. 11/04/2010 the site was visited once again, and the building was more thoroughly measured and

documented. Archives were also visited again and the rest of any available documentation was copied and procured.

Environmental conditions: Weather conditions ranged from high 30''s (degrees) to low 60's. There was heavy rainfall on the final visit on 11/04/2010. The structure is not heated and has no plumbing, but does have electrical systems, much of which remains functioning.

Measurements and notes: Both authors as well as the advisor participated in the measurement, using a 35' tape measure, a 3-foot-level, and a right angle.

Historic Research Investigation:

Cranbrook Archives provided the majority of information and documentation, including material inventories (1915 and 1921), photographs, memoirs (Historical Notes, the Studio Herb Garden Pavilion), and architectural drawings and documentation (1908 and 1919).

[DEVELOPMENTAL HISTORY]

Historical Background and Context:

The Cranbrook Residence was the home of Ellen Scripps, of the Scripps responsible for founding the Detroit News, and George Booth. The couple was married on June 1, 1887 and they established their home on Trumbull within the city. However, because they wanted to simultaneously enjoy the country, they purchased, 174 acre run-down farm in Bloomfield Hills. The property was named after the town in England where the Booths were originally from, and was used predominantly as the family's summer home. After minor changes to the landscaping and structure, it was decided after the death of James Scripps in 1906 that they should make Cranbrook their permanent home.

George Booth hired well-known Detroit architect (as well as his personal friend) Albert Kahn to develop drawings for the residence. Ground was broken in 1907. The home was constructed in the English Arts and Crafts Style, and would be a constantly growing and changing architectural masterpiece for the next 15 years, with numerous additions and alterations made. Over time, George Booth became one of the most influential leaders of the Arts and Crafts Movement within the city of Detroit. He personally commissioned local artisans to work on pieces within the Cranbrook Residence. The Booth home became a testament to his commitment to the movement.

After 1922, the family established six institutions at Cranbrook. Brookside School for children, Christ Church Cranbrook, Cranbrook School for Boys, Cranbrook Academy of Art, Cranbrook Institute of Science and College, as well as art and science museums and offices for the Detroit Symphony Orchestra. After the deaths of Ellen and George Booth, the Cranbrook Foundation was not particularly enthused about preserving the home, causing Henry Scripps Booth, their son and executive director of the Foundation at the time, to move back into the estate to establish his office.

In 1971, a garden auxiliary was organized to take care of the grounds of the Cranbrook house. In 1974 another auxiliary group was formed with the responsibility for the maintenance of the grounds. In 1977, the two organizations merged to form the Cranbrook House and Gardens Auxiliary. The organization consists mainly of volunteers, and funding is procured through their own events and fundraising.

This is the organization that is responsible for the consideration of the renovation of the estate's eastern pavilion into a gift shop. Therefore it is necessary to document the history and condition of this particular piece of architecture.

The pavilion was completed roughly at the same time as the rest of the house. Also designed by Albert Kahn, it was originally an open-air pavilion situated on the eastern side of the property, near what was originally the laundry part of the house but was later extended into the staff wing. It is located in the house's herb garden, and terminates what Henry Booth refers to in his writings as the "kitchen walk".

In keeping with the style of the rest of the estate, the pavilion is constructed in English Arts and Crafts style. The renovation was done to mimic the original style and was designed and executed by the

same architect, allowing it to appear seamless and the alteration unnoticeable. The pavilion is constructed of columns made from locally produced brick and stone. Celadon tiles are used as the roofing.

The building was originally used as a tea pavilion when it was open, and after it was enclosed it was used by Henry Booth as a summer studio for his work. It was in June of 1920 that Albert Kahn renovated the structure for this purpose. It was enclosed by two glass walls and two masonry walls, one of which had a fireplace.

The surrounding site has also developed through the years. Not only has the nearby wing of the house been added onto but its purpose has also changed, as previously described. The surrounding gardens have also adapted over time, with ground levels being altered and partitions and fences have been removed or restructured. The entrances to the pavilion have also changed levels. Where originally a staircase to access the pavilion from the east side, the only remaining entrance that remains is on the upper level.

The weathervane that is now perched atop the garden studio was installed in the late 80's or early 90's. In keeping with the Arts and Crafts tradition of the Estate, the piece was commissioned by auxiliary member Joan West. The angel is in memoriam of Joan's daughter, who had recently passed away.

Through the years, the House and Gardens Auxiliary has kept up the condition of the structure and the surrounding gardens they have also attempted to reinsert a function into the small building. The current plan is to convert the building into a gift shop for the Cranbrook Estate called "The Thistle Shop", after Henry Booth's nickname, Thistle.

Over the years, it has fallen into relatively minor disrepair. In the last 20 years, the House and Garden Auxiliary have attempted to reopen it, as a library. It has also been periodically used for auxiliary meetings. In 1998 and 1999 an event called Music in the Gardens was held at the estate; the auxiliary used the studio as part of the event.

In 2008, there were plans to renovate the existing structure, but it was abandoned due to cost estimates. Currently, it is used as storage for excess lawn furniture, some of which was originally located in the studio. Others have been moved from their original places within the house to their new home in the pavilion.

[Existing Conditions]

Surrounding Site:

The structure is currently in relatively good condition, and many of the repairs necessary do not entail extensive work or restoration. The original construction consists of cut stone pillars and bases, brick masonry, pine lumber, and Celadon roofing tile.

Exterior Conditions:

The roof is still intact and in very good condition, but will most likely need to be carefully cleaned in order to restore it to its original appearance. The interior plaster ceiling may have been damaged by water infiltration, evident by the existence of a minor hairline crack if it is not a result of settlement. The roof should therefore be accessed beforehand to fully evaluate the structural condition and to thoroughly discern what repairs, if any, are necessary.

Drainage is still provided by the original copper fixtures, and while they are still intact, one gutter has detached from the corner of the wall. It is necessary for this to be amended, as signs of water damage are prevalent throughout the structure and in all likelihood are the cause of much disrepair. The irrigation system, for example, is affecting not only the exterior structure but also the interior.

The direction of sprinklers in the surrounding herb garden has caused the expansion of mortar between bricks, the cracking of the threshold on the interior, and efflorescence on the interior. It is therefore necessary for flashing to be installed at the building's base for preventative measure after repairs complete, or for the sprinkler system to be redirected, which is probably the least costly solution.

The chimney is in poor condition. The mortar damage is most prevalent here. There is also weathering of the bricks on its upper reaches, above the roofline. Brick replacement may be necessary, but this can easily be done by the rearrangement of the bricks facing inward towards the roof.

The main door is still in working condition. Here, the only restoration necessary is a new paint job. However, the exterior screen door is in very poor condition. The frame and wire mesh need to be restored or replaced. The lighting fixture above also needs to be restored, as glass has been broken and/or removed over the course of time. Reference to materiality and style is easily available on the nearby addition to the house, as the exact same light is situated above the entry door.

From the exterior, the windows, which are still in good condition, would only need to be reframed and re-lead. The framing has rusted and corroded and lead moldings need to be redone. There are a select number of panes that have cracked and need to be replaced as well.

Photographic documentation shows the existence of awnings on the structure around the later 1920's, but they have now been removed. All that is left are the remnants of their supports, hinges, or attachments.

Interior Conditions:

As stated before, the interior is in relatively good condition. The walls should probably be repainted. The current paint is 36 years old, and it is undetermined as original or a modification carried out by the Auxiliary. There is also a layer of efflorescence in the southwest corner, due to water damage from the irrigation systems. The plaster is cracking and the paint has peeled away from the wall, therefore, repair is necessary.

The fireplace needs to be rehabilitated, as brick has been dismantled. It also requires extensive cleaning due to staining from previous use. The mortar between the bricks is cracking in multiple places as a result of the same misdirected irrigation system. Due to this the interior of the chimney is in need of repair. The functionality of the flue was not tested, but is most likely in working condition. The detail around the fireplace should be repainted as the craftsmanship seems similar quality to that of Henry Booth's decorative paintings within the Cranbrook House.

The threshold in the doorway has a large fracture, most likely due to drainage issues from the irrigation system affecting the foundation of the structure. The flooring is constructed of concrete blocks and is original, but shows signs of staining, speculated to be oil stains. The floors would therefore need to be cleaned. The construction has remained level however, and therefore no extensive repairs or replacement is necessary in terms of the foundation.

The interior framing and steel molding of the windows needs to be replaced in the same manner as mentioned for the exterior windows. Hardware systems are still in working condition, but hinges may need to be cleaned or replaced.

The only serious issue with the ceiling is that which was previously mentioned regarding the hairline fracture. An easy solution would be simple plaster patching, but as stated before, it is necessary to make sure the conditions which have caused the damage are not serious and do not require extensive alteration.

Building Systems: Structural, Mechanical, and Electrical:

The structural system of the building is in almost perfect condition, with all original elements still functioning. Stone elements are still in good condition without any noticeable signs of wear, and all masonry is the original Saginaw wire cut brick. The only damage to take note of is the previously mentioned cracking mortar, most likely due to water damage.

The irrigation system has directly affected the brick mortar as well the interior plaster walls and the stone threshold of the entrance. The foundation has remained unaffected and is still level. Although thorough inspection was not possible, it is assumed that all pine features from the original construction are in good condition as there are no signs of sagging or rot.

The electrical system is mainly characterized by an electrical conduit extending from the main house into the studio. Therefore, the installation of functioning electrical provisions should be easily resolved. The interior light fixtures still work, but there was suspicion that it was at one time painted and therefore it needs to be determined whether it only requires cleaning or if it needs to be repainted. The exterior fixture has fallen into disrepair but is still functioning. It does require some replacement of missing glass.

The fireplace has a gas line, but it is undetermined whether or not it is still functioning. If such is the case the only change needed is the re-installation of fixtures. The mechanical systems of the windows have slight rust and corrosion, and therefore may require gentle cleaning or replacement. It is unknown if the flue works, but in all likelihood it requires cleaning.

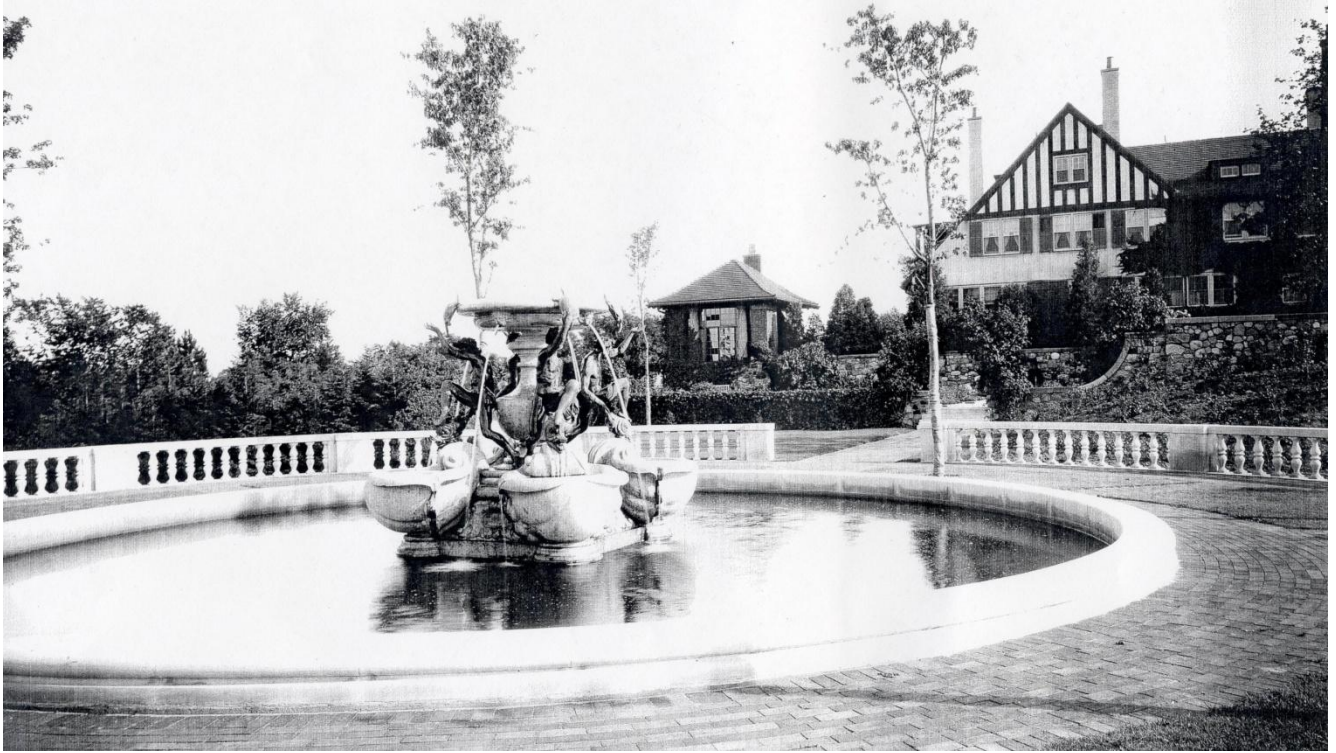
[Historic Photos]



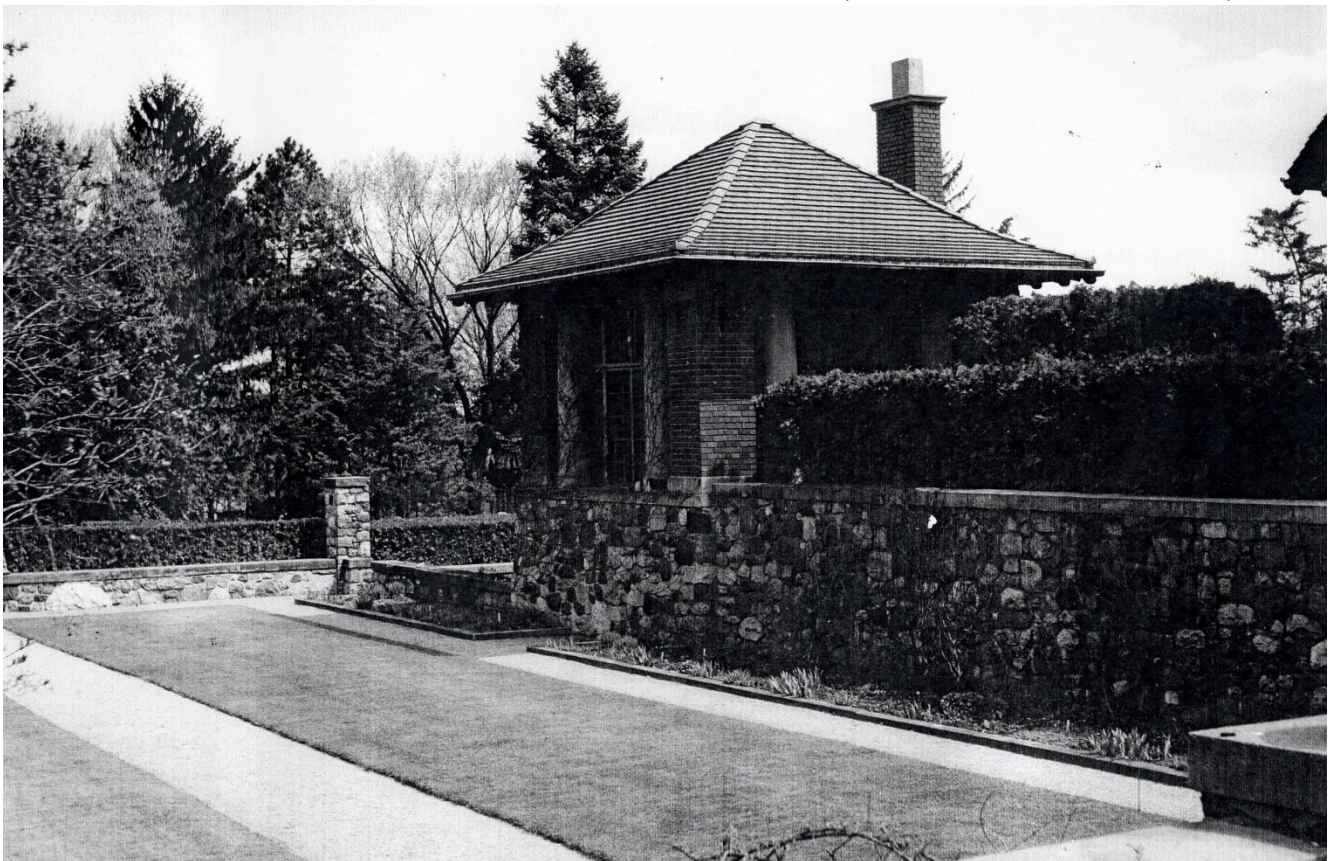
Ca. 1912; CH East - wide view; 8x10 glass negative; E-219



Ca. 1912; CH East – Pavilion and Laundry yard fence; 8x10 glass negative; E-218



Ca. 1925; CH North – Turtle Fountain; E-405



5-9-1951; CH East - Studio, previously the pavilion; CC-196-27

[Existing Photos]



View of the pavilion looking north (some brick repair may be needed on the upper chimney)



Condition of electrical (some updates needed)



Existing fireplace with brickwork



Entrance to pavilion



View of grounds looking north from inside the pavilion



Corroded southwest wall



Oil stains on the concrete tiled floor



Damage in the entrance threshold



Crack above the door



Rust damage in the north window hardware



Damaged paint and plaster northwest corner



Detail around fireplace



Fireplace with gas hookup

(Photos were taken by authors October and November of 2010)

[TREATMENT AND USE]

Statement of Historic and Architectural Significance:

The Cranbrook House and Gardens has been on the list of National Historic Landmark since June 29th, 1989. It is one of the oldest Metropolitan Detroit Manors still in great condition. It is an architectural masterpiece designed by Albert Kahn. It was and still is one of the best examples of the English Arts and Crafts movement within the Detroit area. The Booth's Cranbrook house has been a well preserved example of the Country Estate era.

The historical significance of the Cranbrook House was not only a family residence but also a place that dedicated continuous educational influence to the community, and was a great asset for the people. When the family first moved from their home in Detroit to the Cranbrook Farm, they brought along their love for the arts. At that time it was a very sleepy farm village, considered far outside of Detroit limits. The Booth family was willing and dedicated to teach the nearby residents about the skills and value of art. They used their personal collection of works, which they had acquired over the years through their high society status, as an example.

The architectural significance of the structure was just as important and the various types of art that were often displayed throughout the house and grounds. It depicted importance of detail in works of art, as well as within the built environment. Everything was designed and meticulously documented, even down to the outdoor spaces and gardens. The main house and its outbuildings are, and always will be, a testament to the country place era. It is a very significant piece of architectural history and it must be preserved.

The English Arts and Crafts style of home depicted the immense wealth and detail for beauty. Many country estates during that time period studied various manors from Europe and incorporated many details into early 20th century American architecture. Cranbrook's House and Gardens are important to understanding that specific time period and insight to what life was like during the early 1900's. Visiting the House and grounds takes you back to a lost era.

The old east pavilion, which is located just east of the main house, was originally used as a way to get from the upper laundry yard to the lower laundry yard. It was not a room but an area to pass through between the different levels of the gardens. The east pavilion has the same details as the main house. It has the same brick and tiled roofing as the main house.

There was an addition added onto the main house during 1920, during that time the east pavilion was enclosed with walls, windows and a chimney. This new pavilion was used by one of Booth's sons Henry. He used it as his personal studio which explains the Historical and Architectural significance of establishing and preserving this very historic structure, as a component to the main house and grounds. It is crucial to retain this history and make the space useful once again.

Statement of Architectural Integrity:

The only major changes to the east pavilion were in 1920, the walls were enclosed with brick between the existing stone pillars, windows were added facing outward into the gardens and a

chimney and working fireplace was added probably to provide decoration as well as heat. The structural integrity of the foundation has not changed since it was originally built in 1908 (even after the new enclosure).

Future use of the Building:

The proposed new use of the east pavilion is a seasonal gift shop which will be named the “thistle shop” in memory of Henry Booth who used it as his studio (thistle was his well known nickname). The pavilion is an important part of the house and grounds. It holds a lot historical, architectural and educational importance. It should be well preserved, as an important component to the grounds. It is in good condition.

The pavilion is not used mainly because of poor programming. The pavilion would need some minor updates and repairs, but for the most part would function well as a souvenir or information outpost for visitors. The Cranbrook House and Garden Auxiliary could easily program events within the pavilion and its surrounding gardens.

The proposed thistle gift shop could potentially hold tea gatherings, storytelling or educational programs, or an exhibition space to display works of art done by Cranbrook students or faculty. This would be keeping in line of what the enclosure was originally intended for in 1920 (as a studio). The exterior will remain the same and its characteristics will identify with the period that was most important, but be rehabilitated to support the new proposed use. It will keep in line with the history of the main house, since in fact it was an integral part of its design by Albert Kahn.

The interior will be updated and prepared for visitors entering and exiting frequently. The interior will not be extensively heated. However, there is an existing gas line that runs into the fireplace. By rehabilitating the fireplace with functioning gas logs; it would allow for supplemental heat during the seasons of use which would most likely be the months when the gardens are open. During the dead of winter, there are no tours, and therefore no guests for the gift shop. It will be closed during the winter months while the garden tours are closed during the months of November through April (following the schedule when the gardens are closed). If needed, holiday gatherings such as “cookies and cocoa with Santa” which are held in the main house; the thistle shop could open periodically by utilizing the fireplace, and additional electric heaters allowing the public to walk from the house to the cozy pavilion for holiday gifts.

This project will add an additional asset to the house and gardens. Revenue will be produced and will help maintain this building through the years. This is an architectural gem for the Cranbrook House, and it is an important building to protect along with the house and grounds. Considering it is in such good condition already, it would be in the best interest of the Auxiliary to acknowledge the benefits from utilizing this space.

There will have to be certain measures taken to repair the east pavilion. But the repairs, even though it is an out building of the main house, must follow the procedures, guidelines, and standards of proper historic preservation. It must follow these to qualify and remain a national historic structure.

Proposed New Use:

Gift Shop/Cranbrook House and Gardens Information Kiosk

- It will be advantageous to use the space since it is perfect size for a small, charming gift shop.
- It will also offer information, such as history and tour schedules of the house and gardens.
- Large windows from wall to wall on the north and east facades offer stunning views into the gardens and distant grounds.
- It is located centrally, just outside the Cranbrook House, within the gardens.
- The enclosed, cozy feeling of interior space will provide a charming hot spot for the public.
- Parking nearby, for visitors.
- Will become an important hub to allow visitors to purchase gifts and tickets for tours.
- There will be no change in the layout and structure of the building; however, minimal repairs will be done to allow the space to be functional.
- The exterior and interior character will remain as it was during the Country Place Era.
- Using the interior space for a gift shop, but keeping the exterior detail and appearance as it was when it was originally built supports the restoration standard (#5) *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.*

Standards, Preservation Guidelines and Treatment Recommendations:

[Interior Treatment Approach and Recommendations]

Preservation: The goal is to preserve the interior finishes as they were during the most significant time period, such lighting, paint, and spatial conditions. It will be keeping in line with the history of the main house. The walls and ceiling will be cleaned and repaired in certain areas. The floor will be cleaned and protected from future wearing due to visitors walking on the concrete tiles. The paint will be retained and preserved. The lighting fixture will be cleaned and kept how it is.

Discussion: It is important to understand the appropriate methods for cleaning. Certain inconspicuous areas must be tested with the cleaning method prior to using that same method on the entire visible area. The floor contains oils spots which will have to be removed with special techniques. (refer to the guidelines in Appendix 1)

Rehabilitation: Cracks in the wall and in the door threshold will be repaired similar to their original form. The electrical systems will be updated and replaced with up to date outlets. A cable will be fed through the underground electrical conduit tube, for internet accessibility. The fireplace will be rehabilitated and tap into its existing gas supply to allow for beauty and supplemental heat during colder months.

Discussion: The cracks in the walls will be patched and repainted with paint that keeps the same character and integrity of the original existing paint. The cracks in the threshold will be patched or replaced if needed. The electrical will be outfitted and updated to withstand electrical surges and avoid fuse blowouts. The existing gas line will be connected and gas logs will be put in. The painted detail surrounding the fireplace will need to be protected and repaired in places. The bricks on the threshold of the fireplace need to be secured and re-mortared.

[Exterior Treatment Approach and Recommendations]

Rehabilitation: The window hardware will need to be repaired and cleaned. New panes of glass will need to be added in a few places. The door will need to be cleaned and protected from the elements. Any damage to the wood will be properly replaced and not take away from the original character. The existing screen door will need to be extensively repaired because of its bad condition. The roof is in great condition. However, some of the mortar in the joints between the tiled roof will need to be replaced. The brickwork has survived the years in most places however; the upper part of the chimney has suffered damage through the years. It is recommended that the brick work is replaced in some areas. The drainage system needs to be fixed in some areas.

Discussion: It is very important that character and identity of the exterior is not changed when replacing and repairing existing elements. This is by far the most important of the project. By maintaining, repairing, and replacing the exterior it is protecting the interior from and future damage such as moisture. Although the exterior seems to be in good condition, repairs must be considered to keep the building protected from any further damage. It is important that the mortar and brick are the same color, the windows will maintain their visual integrity, and the paint color of the door is the same as it was historically when rehabilitating the materials. The drainage system should be repaired and directed away from the pavilion to avoid any more settling in the soils, which most likely produced the cracked walls and threshold on the interior.

(for detailed historic preservation standards and guidelines; refer to Appendix 1)

Timeline:

1890's

Original 174 acre farm is purchased in Bloomfield Hills

1906

James Scripps dies, George and Ellen decide to make summer home their permanent residence

1907

Ground is broken, construction begins

1908

Construction is complete, and the Booths move in

1908 through 1922

Cranbrook is constantly evolving and being revised, with all major design work done by Albert Kahn

1919

The Eastern Pavilion is enclosed and converted into Henry Booth's studio

1922

Brookside School for Children, Christ Church Cranbrook, Cranbrook School

for Boys, Cranbrook Academy of Art, Cranbrook Institute of Science and College, as well as art and science museums are constructed. The Cranbrook foundation is also started

1971

The Garden Auxiliary is formed

1974

The House Auxiliary is formed

1977

The two organizations merge and become the Cranbrook House and Gardens Auxiliary, responsible for the upkeep of the Eastern Pavilion

1980s

Used as the library and meeting space for the Auxiliary

1998, 1999

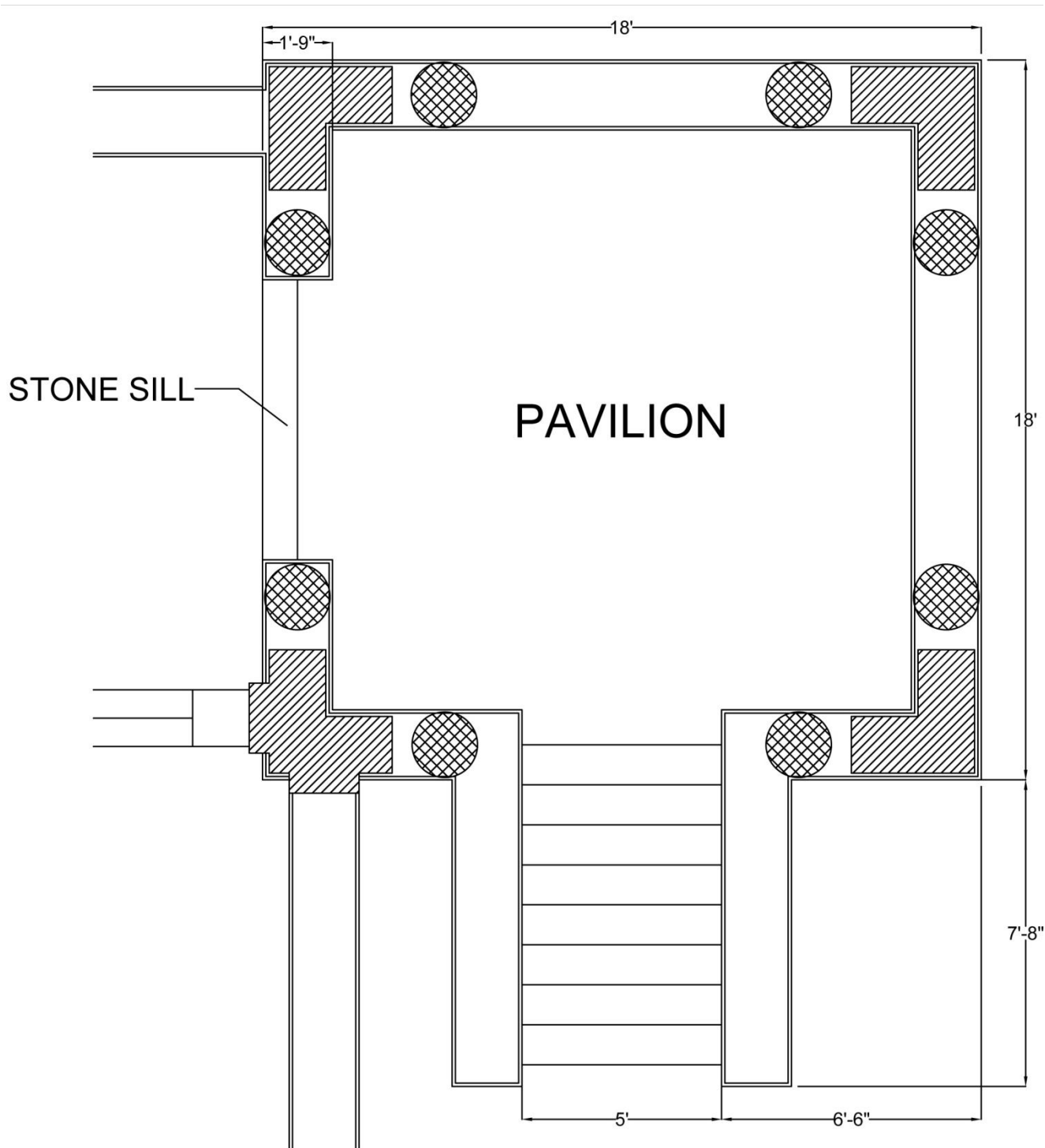
Music in the Gardens

2008

Plan for renovation and new use is proposed, abandoned due to

[Drawings]

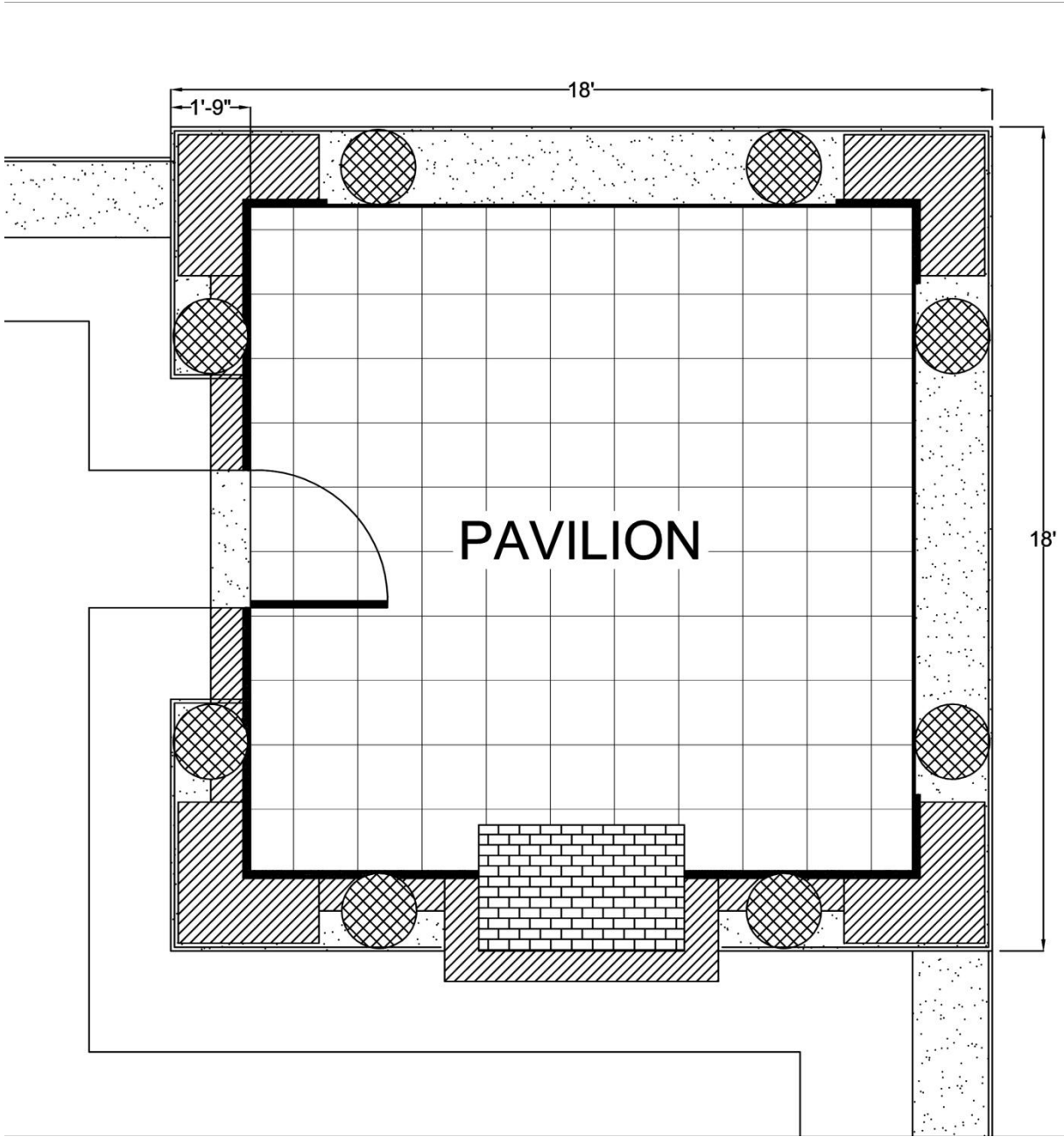
Original Pavilion:



Original construction in 1908 (referenced from Albert Kahn’s original drawings)

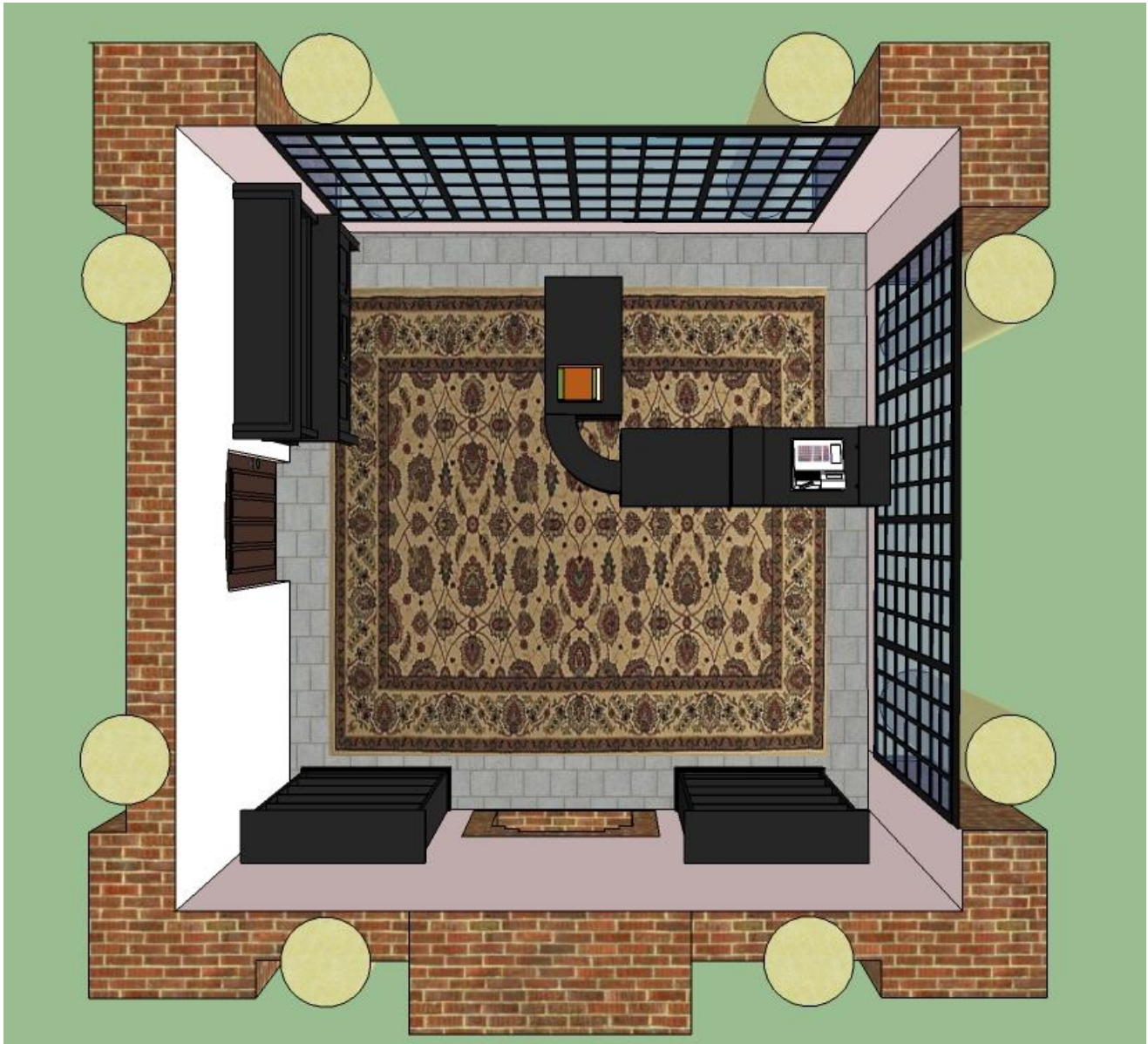
(refer to appendix 2)

Existing Pavilion:



Existing structure from 1921 (referenced from Albert Kahn’s original drawings)
(refer to Appendix 2)

Proposed Spatial Layout:



Spatial Plan of "Thistle Shop"
Renders completed by Authors

Proposed Interior Views:



Interior View looking southwest
Renders completed by Authors

Proposed Interior Views (continued):



Interior View looking southeast
Renders completed by Authors

Inventory of Materials:

18'1"x18'2", 1 story

trench excavation

trench filling in

field stone grout masonry below grade

cu. ft. granite 1 face field stone, above grade

cu. feet granite above ground

Saginaw wire cut brick in floor and columns

common brick column with molded cap

Cu. ft. concrete in copings

6"x12"x8' cut stone sill

7"x14"x8" cut stone steps

21" diameter x8" cut stone column bases

18"x35"x8" cut stone brick column bases

18"x18"x18" cut stone column bases

Linear ft. 6"x24" cut stone wall coping

Linear ft. 8"x17" cut stone wall coping

338' linear ft 2"x14" cut clear pine beam soffit

288' linear ft. 2"x12" clear pine beam fascia

255' linear ft. 3"x6" clear pine beam rafters

120' 3"x10" clear pine beam framing

3"x6"x4' Clear pine band saw lookouts

3"x6"x2" clear pine band saw lookouts

3"x10"x6' clear pine band saw corner lookouts

13/16"x7" V chamfered pine roof sheathing

2100' B.M. Pine lumber in framing and sheathing including labor, nails, and spiked

Linear ft. 2"x5" clear pine frieze

" 1 1/8"x10" " " cornice fascia

" 7/8"x4.5" " " eave frieze

" 13/16"x5" " " eave fascia

" 13/16"x10" " " inside fascia

" 13/16"x12" " " cornice fascia

" 7/8"x3 1/4" " " frieze mold

" 1"x1 3/4" " " beam frieze mold

" 7/8" quarter round eave mold

sq. ft. tarred felt roof lining

Squares celadon tile roofing

linear ft. #1748 Celadon ridge tile

linear ft. 4" double 19 gauge copper gutter

linear ft. 4" corr. 19 gauge copper conduit

32" round top cement table

16"x13 1/4" terra cotta urn

4"-19" gauge copper elbows

copper conductor brackets

W.I. gutter straps

Wire conductor strainer

sq. yards, staining, 2 coats

16 cp. drop light wired in conduit

Building material and electric lighting systems cost 3301.84

[NOTES, BIBLIOGRAPHY & APPENDICES]

[Appendix 1]

Interior Preservation:

Applicable Standards:

(#3) Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

(#5) Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

(#6) The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

(#7) Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

Applicable Guidelines:

Identify, Retain, and Preserve - *Identifying, retaining, and preserving a floor plan or interior spaces that are important in defining the overall historic character of the building. This includes the size, configuration, proportion, and relationship of rooms and corridors; the relationship of features to spaces; and the spaces themselves such as lobbies, reception halls, entrance halls, double parlors, theaters, auditoriums, and important industrial or commercial spaces*

Interior Features and Finishes - *Identifying, retaining, and preserving interior features and finishes that are important in defining the overall historic character of the building, including columns, cornices, baseboards, fireplaces and mantels, panelling, light fixtures, hardware, and flooring; and wallpaper, plaster, paint, and finishes such as stencilling, marbling, and graining; and other decorative materials that accent interior features and provide color, texture, and patterning to walls, floors, and ceilings.*

Protect and Maintain - *Protecting and maintaining masonry, wood, and architectural metals that comprise interior features through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and reapplication of protective coatings systems.*

Protecting interior features and finishes against arson and vandalism before project work begins, boarding-up windows, and installing fire alarm systems that are keyed to local protection agencies.

Protecting interior features such as a staircase, mantel, or decorative finishes and wall coverings against damage during project work by covering them with heavy canvas or plastic sheets.

http://www.nps.gov/history/hps/tps/standguide/preserve/preserve_spacefeatfinish.htm

[Appendix 1, continued]

Interior Rehabilitation:

Applicable Standards:

(#3) Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

(#5) Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

(#6) Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

(#9) New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

Applicable Guidelines:

Repair - Repairing interior features and finishes by reinforcing the historic materials. Repair will also generally include the limited replacement in kind--or with compatible substitute material--of those extensively deteriorated or missing parts of repeated features when there are surviving prototypes such as stairs, balustrades, wood panelling, columns; or decorative wall coverings or ornamental tin or plaster ceilings.

Replace - Replacing in kind an entire interior feature or finish that is too deteriorated to repair--if the overall form and detailing are still evident--using the physical evidence as a model for reproduction. Examples could include wainscoting, a tin ceiling, or interior stairs. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

http://www.nps.gov/history/hps/tps/standguide/rehab/rehab_spacefeatfinish.htm

[Appendix 1, continued]

Exterior Rehabilitation:

Applicable Standards:

(#1) A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

(#5) Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

(#6) Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

(#9) New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

Applicable Guidelines:

Repair - *Repairing a roof by reinforcing the historic materials which comprise roof features. Repairs will also generally include the limited replacement in kind--or with compatible substitute material--of those extensively deteriorated or missing parts of features when there are surviving prototypes such as cupola louvers, dentils, dormer roofing; or slates, tiles, or wood shingles on a main roof.*

Repairing window frames and sash by patching, splicing, consolidating or otherwise reinforcing. Such repair may also include replacement in kind--or with compatible substitute material--of those parts that are either extensively deteriorated or are missing when there are surviving prototypes such as architraves, hoodmolds, sash, sills, and interior or exterior shutters and blinds.

Repairing masonry walls and other masonry features by repointing the mortar joints where there is evidence of deterioration such as disintegrating mortar, cracks in mortar joints, loose bricks, damp walls, or damaged plasterwork.

Identify, Retain, and Preserve - *Identifying, retaining, and preserving masonry features that are important in defining the overall historic character of the building such as walls, brackets, railings, cornices, window architraves, door pediments, steps, and columns; and details such as tooling and bonding patterns, coatings, and color.*

http://www.nps.gov/history/hps/tps/standguide/rehab/rehab_masonry.htm

http://www.nps.gov/history/hps/tps/standguide/rehab/rehab_roofs.htm

http://www.nps.gov/history/hps/tps/standguide/rehab/rehab_windows.htm

27

W



W

[BIBLIOGRAPHY]

Sources for Drainage Repair

<http://www.nps.gov/history/hps/tps/briefs/brief01.htm>

Methods for Repairing the Historic Tiled Roof

<http://www.nps.gov/history/hps/tps/briefs/brief30.htm>

How to Repairing the Historic Plaster

<http://www.nps.gov/history/hps/tps/briefs/brief21.htm>

Making the Building Accessible

<http://www.nps.gov/history/hps/tps/briefs/brief32.htm>

Dangers of Abrasive Cleaning to Historic Buildings

<http://www.nps.gov/history/hps/tps/briefs/brief06.htm>

Source for Developmental History

<http://www.cranbrook.edu/housegardens/history/>

Materials below were acquired from the Cranbrook Archival Collection under the supervision of:

Leslie S. Edwards; Interim Director & Robbie Terman; Reference Archivist:

Photographs:

Ca. 1912; CH East – Pavilion and Laundry yard fence; 8x10 glass negative; E-218

5-9-1951; CH East - Studio, previously the pavilion; CC-196-27

Ca. 1925; CH North – Turtle Fountain; E-405

Ca. 1912; CH East - wide view; 8x10 glass negative; E-219

Drawings:

Original Drawings by Albert Kahn of Main house and Pavilion; 1908 and 1921