Introduction

The Mother of Sorrows Grotto complex was built on the campus of Mount Mercy College by contractor William Lightner over a period of twelve years, from 1929 to 1941. Lightner built the structures of reinforced concrete, masterfully embellished with a range of stones, tile, and other materials. A focal point of the original complex was a Grotto Shrine to the Virgin Mary (no longer extant); radiating out from this monument, Lightner created two commanding Roman entry arches, an elaborate bridge, and a temple-like monument to the Ten Commandments, erected on an island in the lagoon. The monuments are ornamented with phrases expressing Catholic devotion and mottos regarding the Virgin Mary as the Mother of Sorrows.

Built during the Depression and the years preceding World War Two, the Mother of Sorrows Grotto complex was created within a phenomena of Grotto building begun in Iowa by Father Paul Dobberstein, famed builder of the Grotto of the Redemption in West Bend, and continued by Father Mathias Wernerus with his Holy Ghost Shrine in Dickeyville, WI, and at the Rudolph Grotto of Father Philip Wagner in Rudolph, WI. Dobberstein's work in Iowa was extensive, and presented a model for building devotional shrines of richly embellished concrete. As an indication of the popularity of grottos in the first half of the Twentieth Century, Dobberstein was commissioned to build several "satellite" works, civic structures and smaller Catholic devotional grottos, in Iowa (Wesley, Humboldt, Carroll, Dubuque, Old Rolfe, Pocahontas, and Sioux City), North Dakota (Parkston), and Wisconsin (St. Joseph's Ridge and La Crosse).

The presence of three extensive Catholic devotional grotto environments, all engaging embellished concrete, inspired a number of builders in the region to create sculptural environments with similar materials. These grottos anchored a geographic region in which the tradition of building extensive environments flourished. Works inspired by these grottos include the Jacob Baker house sculptures (northwestern IL), Frederick Schultz embellished houses (Freeport, IL), Fred G. Zimmerman's garage and flagpole, (New Glarus, WI), Nick Engelbert's Grandview (Hollandale, WI), Bill Notzke's Jubilee Rock Garden (Brimfield, IL), the Paul and Matilda Wegner Grotto (Cataract, WI), James Tellen Sculpture Garden (Black River, WI), Molly Jensen's Art Exhibit (River Falls, WI), Herman Rusch's Prairie Moon Museum and sculpture garden (Cochrane, WI), and Fred Smith's Wisconsin Concrete Park (Phillips, WI). These sites can all be linked to the presence of the three religious grottos, and reflect a strong tradition of creative expression within the contexts of home and landscape that is firmly rooted in the region, and contributes significantly to its cultural identity.

William Lightner's work is both original in its design—especially with his inclusion of the unifying element of the lagoon—and firmly related to the work of Dobberstein and Wernerus. When Dobberstein began his work in 1912, concrete had recently become available to contractors and consumers. Dobberstein traveled far and wide to collect a huge amounts of unusual rock specimens for his constructions, wanting to use the finest materials to create a splendid effect, and to build to the glory of God. Lightner followed his lead and apparently traveled over 40,000 miles to collect stone in the U.S. and Mexico. It's noteworthy that Lightner constructed the entire Grotto complex at his own expense. The Mother of Sorrows Grotto complex was a labor of love and an expression of his devotion to the Virgin Mary (he was a recent convert to Catholicism when he began building), as well as a major and enduring contribution to the identity and life of Mount Mercy College.

The Mother of Sorrows Grotto complex has anchored Mount Mercy College as a treasured and unique feature of the campus. It has undergone major changes over the years, especially the demolition of the primary Grotto structure in 1974 and the elimination of the lagoon in 1970. The structures are maintained and the landscape setting is beautifully designed and maintained. A restoration project in 2002 with a preservation grant from the Smithsonian Institution's Save Outdoor Sculpture (SOS!) program resulted in some structural and cosmetic restoration of the Grotto elements and re-establishing the lagoon, with a smaller footprint than the original. The lagoon serves to unify the elements and the reintroduction of the element of water did much to restore the original character of the site. An anodized aluminum interpretive plaque was installed on the stairway leading to the lagoon, providing viewers with information and vintage photographs of the site. Other changes since the time it was built include construction of parking areas and student apartments adjacent to the Grotto in 1976.

At the invitation of Mount Mercy College, Don Howlett and Lisa Stone of Preservation Services, Inc. conducted an examination of the elements on June 23, and met with Mount Mercy College faculty and staff the following day to present an overview of the Grotto's significance and introduce preservation activities at other sites. This report is based on our reviewing all available archival documentation and images, and our findings from the examination.

Preservation Philosophy

Preservation Services believes the Mother of Sorrows is of outstanding local, regional, and national significance, and should be restored and maintained. We recommend that the Grotto of the Redemption be addressed as a landmark and that all work be guided by original photographic and archival documentation of site elements, as created by William Lightner. Preservation activities should strive to conserve elements as closely as possible to their original condition and context as built by Lightner:

- Preservation activities should follow highest preservation and conservation standards achievable.
- Preservation activities should comply with the Secretary of the Interior's Standards for the Preservation of Historic Properties. Please see the Appendix for an outline of the Standards, with Standards and Guidelines for the *Preservation* level, the level it is recommended most activities at the Grotto are guided by; definitions for *Rehabilitation*, *Restoration*, and *Reconstruction* are also outlined.
- The site has undergone significant changes since it was built. We do not recommend replication of the non-extant primary Grotto, demolished in the 1970s, nor do we recommend recreating the original footprint of the lagoon. We recommend that these original features are referenced in all site interpretation, publications, and other communications to provide historical context.
- We recommend that all future work strives to harmonize changes to the site with it's original character and condition as built by Lighner.

This report includes descriptions of the five structures plus the landscape and circulation features, followed by a description of the existing conditions followed by recommendations for site preservation and restoration.

Description of Grotto structures

<u>Warde Arch</u>: Upright flanking sidewalls support a Roman Arch; an embellished cross is mounted on the top center of the arch. Two embellished urns with tile covered lids are placed atop the north and south corners of each upright sidewall. The words BLESSED ART THOU AMONG WOMEN are spelled out in white stone on the south arch face. The words BLESS....ERE STOOD BY THE CROSS OF JESUS HIS MOTHER are spelled out in white stone on the north arch face (letters in the first word are missing but apparently the wording of the original phrase is known). A concrete sidewalk and steps lead to the Arch from the drive between the Arch and Warde Hall, continuing down to the Apartments parking lot.

McAuley Arch: This arch is nearly identical to the Warde Arch in design, proportions, and surface embellishment. The words AND THE VIRGIN'S NAME IS MARY are spelled out in white stone on the east arch face. The words HAIL FULL OF GRACE THE LORD IS WITH THEE are spelled out in white stone on the west arch face. A concrete sidewalk and steps lead to and the Arch from Cherry Heritage Hall, and ends just east of the arch, with three curved stone benches (not Lighner's work). The arches function as symbolic architectural monuments and circulation features, marking the approach to the lagoon landscape from two primary axes of the campus.

<u>Ten Commandments monument</u>: The Ten Commandments monument consists of a rectangular plinth or base resting on a small rock island in the lagoon. The four sides of the base are covered with Italian glass mosaic tile spelling out the Commandments. Ten embellished concrete columns rise from the base (four on each long side with one in the center of each short side). Each column has the Roman numerals corresponding to one of the commandments as a capital decoration. The columns support Roman arches that support a cornice, and above is a three-tiered roof with a globe and cross at the top center. The Ten Commandments monument is a symbolic architectural temple to Moses' Decalogue, an anchor of Catholic faith and a focal point of the Grotto.

Grotto Bridge: The Grotto Bridge consists of a concrete walkway (new, with nonoriginal shell-embellished circle decorations in the center of each section and a time capsule installed in 2002), leading to the structure, which has three original embellished fence posts support two gently swagging embellished fence rails, flanking both sides of the paths leading from the north to the Bridge. Two embellished fence posts supporting single gently swagging fence rails flank the path leading from the Apartments parking area to the south of the Bridge. Non-original concrete posts (six total) were added under the center of each fence rail, to provide support that was presumed to be necessary in the 2002 restoration project. The Bridge rests on an embellished stone arch over a narrow in the lagoon. The closed spandrel surfaces above the stone arch span are yellow and black checkerboard glass tile, with green glass tile in the center. The bridge deck is built of freeform interlocking stone and supports two flanking columns at each end; the north and south columns on each side are connected by embellished fence rails. The columns on each side of the bridge support two flanking open air "canopy" arches, connected by a span at the center. The span is topped by a flower basket finial, with 5 embellished flowers. The words BUT WITHOUT FAITH IT IS IMPOSSIBLE TO **PLEASE GOD** are spelled out in gold tile against a red background on the north facing

span and the words **MY GRACE IS SUFFICIENT FOR THEE** are spelled out in gold tile against a red background on the south facing span. The bridge is a symbolic architectural feature, representing Lighner's crossing over into the Catholic faith, and is a central focal point and circulation feature, leading over the lagoon, framing a view to the Ten Commandments monument and the surrounding landscape.

Mother of Sorrows shrine: The Mother of Sorrows shrine is not the work of William Lighner, but was created in 2003-2004 to reinstate the original statue of the Virgin, carved by Marcella Rebechini at the Daprata Studios in Pietrasanta, Italy, and saved from Lighner's original Grotto, when it was demolished. Built by Rick Edelman, the Mother of Sorrows shrine is a square open-air structure with a stone floor, four embellished concrete columns at the corners which support a cross gabled roof over a groin vault ceiling. The Virgin statue is installed within. The craftsmanship is outstanding and emulates Lightner's signature design and embellishment style very closely. The shrine is situated about halfway up the hill to the north of the lagoon, on a stone path leading to and from the MacAuley Arch.

Walkways and gardens: The Grotto elements are connected by curving paths and are set among many commanding mature trees and gardens with classic Midwestern plantings. A nicely-designed anodized aluminum interpretive plaque is tucked in the trees at a path leading down to the Grotto complex, providing viewers with an overview of the site's features. The plaque includes several vintage photos providing important historical context. Three benches were created to replicate originals, using the last remaining original as a prototype in 2001. These are situated, respectively, on the west side of the Ten Commandments monument, above the north lagoon garden, and east of the Bridge. A stone path leads from the north side of the bridge sidewalk, and winds west to the road facing the McAuley Arch. A bronze plaque in memory of Jacqueline Joan "J.J." Feld, daughter of former Mount Mercy College president Thomas R. Feld, is installed on a rock next to the bench facing the Ten Commandments Arch.

Existing Conditions

Like the grotto-builder Catholic priests, who understood concrete construction and built their works to last, Lightner was a talented and competent contractor, and the elements in the Mother of Sorrows Grotto complex were well built and are primarily sound and in good condition. Exceptions include areas of organic growth, efflorescence, deteriorating mortar, and the introduction of some inappropriate non-original elements. Steven Lawrence's report of November 2009 was an accurate assessment of existing conditions which this report expands upon. Below are definitions for conditions noted, and condition descriptions for each element.

It's important to note that other than minor drilling into the Ten Commandments ceiling and the Warde Arch, only visible surfaces were examined; this report does not address the conditions of structural systems. It appears that all monuments are structurally sound. Some conditions are illustrated in this report. Additional images of each element can be found in the folders, labeled according to the element, with numbered images for each element, on the enclosed CD Rom.

General conditions:

Efflorescence

Efflorescence refers to the leaching of lime and other soluble substances from mortar and rocks, causing build up of white "plaque-like" calcified surfaces, generally on ceilings and vertical surfaces, some dripping on floor surfaces, and some formation of stalactites.

Organic growth and environmental pollution

Build-up of moss, lichens, tree seedlings and other organic growth occurs naturally on outdoor sculpture made of stones. The tops of Grotto elements allow pockets of organic materials to collect, creating excellent conditions for plant life to take hold. While this can be visually attractive, plants take hold in cracks in the concrete, cause the cracks to widen, allowing moisture to enter, freeze, and cause deterioration. Environmental pollution can erode surfaces and dull the visual effect of embellished surfaces.

Deteriorated mortar

Areas of "dead" or deteriorated mortar—in which separation of Portland cement from sand matrix occurs (often a result of leaching and efflorescence), resulting in failed mortar of no structural strength. This condition threatens structural integrity and can cause damage to surface embellishment.

Cold joint delamination

This condition is common to several structures, and consists of damage to the interior structural core construction and the veneer finish coats of concrete. Water becomes trapped between the cores and veneer and causes expansion and contraction through the seasons. Expansion loosens stone and surface ornament. A slow release of the moisture through cracks, and voids leaches lime out of the Portland cement over time, resulting in calcium deposits (see Efflorescence).

Footings, foundations

There is no evidence of settling or any issues with the foundations of any of the structures. The foundations appear solid and intact.

Warde Arch conditions

The Warde Arch has minor areas of deteriorating mortar and efflorescence on the side walls. The wall cornice capitals, urns, and exterior/top of the arch have efflorescence, organic growth, and deteriorating mortar. The Cross has loss of stone embellishment that appears to be original, not a restored surface. All four urns have extensive loss of blue tile and mirror, due to failure of the product Rockite, an anchoring material used to adhere tile and stone in 2002/03, which is inappropriate for this purpose.

Efflorescence:



1. Northeast inner corner of the wall where base meets pavement



2. Northeast inner rim where wall meets arch



3. North side of west wall at wall rim; this area has deteriorating mortar as well.



4. Top of east wall southeast inner corner

Efflorescence around letters on both sides of the arch will be addressed in the deteriorated mortar section below.

Organic growth and environmental pollution

Since the Arch has not been cleaned since the 2002/03 project it can be assumed that the entire surface is affected by pollution. The inner areas are somewhat protected and pink and white quartz stone is fairly clean. The more exposed urns show darkening of environmental pollution. The top of the arch has pockets of organic growth.



Inner arch embellishment is fairly clean.



Urn shows darkening of pollution.



Left and right images show organic growth on top of the arch.



Deteriorated mortar

Deteriorated mortar occurs primarily on the top of the arch, due to moisture entry from cracks accelerated by organic growth. Moisture has been gravity fed down to the cold joints between north and south arch faces (the areas with the phrases), causing deterioration to areas of the words and the cold joints above. There is a serious area of dead mortar on the south face of the arch, west side. Howlett used a small amount of urethane foam on the southwest side of the top of the arch to temporarily fill a void where water was entering and to lock in loose rock embellishment.



1. Letters on north arch face; left and right areas show deteriorated mortar.



2. Area of dead mortar



3. Deteriorated mortar joint above "BLESSED"



4. Extensive dead mortar on southwest arch face.



5. Deteriorating mortar at cold joint.

Detached embellishment materials.



6. Loose black stones on left have become detached from top of cross.



5. Failed Rockite used to attach tiles.



7. Detached tile and mirror, condition evident on all four urns.



8. Pipe on north west side.

Sections of iron pipe project from the center of the north faces of the arch walls about 18" down from the top wall edge (pipes protrude from the McAuley arch as well. It's not clear if these were installed for drainage or if they held electric or gas lamps at one time.

McAuley Arch conditions

The McAuley Arch is in better condition than the Warde Arch. There are fewer instances of efflorescence and dead mortar than those affecting the Warde Arch. It was not possible to examine the top of the arch as the lift would not reach that area. Areas of deterioration and organic growth were not visible from the ground or ladders but the top was not thoroughly examined. From the ground it's evident that the condition of the urns on the McAuley Arch is the same as the conditions of the urns on the Warde Arch (tile de-lamination due to failure of Rockite used in 2002/03).

The images below show areas of efflorescence, cold joint separation, and deterioration around the letters in the arch faces.



1. Efflorescence on inner south wall at cold joint.



2. Detail of inner south wall efflorescence.



- 3. Efflorescence on north inner wall.
- 4. Right, efflorescence at top of south east arch.





6 & 7: Efflorescence on the east arch letters; mortar deterioration occurs at the cold joints where letter arch areas meet rock arch above.



8. Efflorescence on west arch letters; mortar deterioration occurs at the cold joints where letter areas meet rock arch above.



9. Tile de-lamination on tops of urns

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Benches: although these are non-original additions they harmonize with the site. Recommendations will address possible landscaping from benches to the road, to suggest the connection from this axis to the stone path leading to the Grotto complex and lagoon below.

Grotto Bridge conditions

The Grotto Bridge is in very good condition overall. The entire structure appears to be structurally sound. The adverse conditions include areas of detached embellishment materials on the fence rails, posts, and half-globe post tops, most of which has become detached due to failure of Rockite anchoring mortar used in the 2002/03 restoration. Heavy concrete fence posts were added under the center of each fence rail (6 total) in 2002/03, apparently to provide additional support. Photos show that these are not actually providing support. They are visually obtrusive, undermining Lighner's design, and imply that his engineering was insufficient. The tile spandrels on the east side of the bridge deck arch are becoming detached, most likely due to moisture entry from behind. Some repair work was done in these areas in 2002/03, which is failing. Howlett applied polyurethane caulk behind a section of tile that was becoming detached from the southeast spandrel, to hold tile in temporarily, so it would not be lost. The spandrels on the west side have minor discoloration but appear to be intact and stable. There are a few areas where corrosion of interior rebar is leaching out causing discoloration to surface embellishment. There are minor areas of rock deterioration at the two ends of the bridge deck, where the stone meets the pavement. Exposed sections of rebar are visible on the bottom of the northwest fence rail, running down the center of the rail. Howlett sawed a 1/8" line on the bottom of one of the fence rails to determine if Lightner used more than one reinforcing rod. No additional rebar was exposed but shadow lines indicate sections of additional rod. There are a few areas where voids in surface embellishment were repaired unprofessionally and do not harmonize with Lighner's embellishment. The Bridge shows evidence of organic growth and environmental pollution, especially in the canopy posts and undersides of the canopy arches: discoloration is visible on the white quartz embellishment. Tile on the north and south canopy arch appears to be in excellent condition.



1. Northeast post with detached tile.



2. Northwest post with detached tile.



3. South west post with detached embellishment and traces of Rocktite.



4. Corrosion discoloration on surface from interior rebar.

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5. North west fence section showing non-original posts.



6. Area of detached embellishment traces of Rocktite.



7. Gap between fence rail and non-original and fence post, providing no structural support.



8. Deteriorated lip where stone bridge deck meets pavement.

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9. West spandrels showing minor discoloration of tile.



10. Southeast spandrel showing efflorescence and detached tile.



11. Center tile and northeast spandrel showing efflorescence and detached tile.



12. Southeast spandrel with temporary caulk infill, seen from above (bridge deck)





14. Poor quality embellishment restoration.

13. Masonry cut on fence rail bottom side showing exposed rebar only, no additional rebar.



15. Lost embellishment on canopy post.



16. Underside of canopy arch showing buildup of organic growth and environmental pollution.

Ten Commandments monument conditions

The Ten Commandments monument has the most extensive areas of efflorescence in surface embellishment and tile, and deteriorating mortar due to moisture entry from the roof, and possibly from the floor into the base. The foundation appears to be in excellent condition. The tile on the west and north sides of the base appear to be in good, stable condition. The tile on the east and south sides of the base show large areas of efflorescence and rust-colored discoloration possibly due to leaching of corrosion of iron reinforcement rod on the interior. The column shafts appear to be in good condition. The tile bands beneath the capitals (with tile Roman numerals, I through X) have extensive efflorescence and discoloration. Several column capitals show heavy efflorescence. The ceiling has heavy areas of efflorescence indicating moisture collection and build up above. Howlett drilled two $\frac{1}{2}$ holes in the center near the south end and streams of water rushed out. The south corner of the cornice appears to be a restored section, with gray mortar and smaller white glass chips. There is medium to heavy efflorescence along the cornice and in the roof tiers, especially on the south and east elevations. There are areas of mortar deterioration in places where the cornice meets the underside of the roof at the cold joint. A section of embellishment is missing from the northeast corner of the first roof tier. Cold joints on the roof tiers may be allowing moisture entry. The original surface embellishment on the globe was apparently missing or mostly gone in 2002/03, and large tiles with a bronze luster glaze were created by a faculty member to cover the globe. The glazed surface and parts of many tiles have chipped off and fragments are found on the tiers below.

Mother of Sorrows shrine

The Mother of Sorrows shrine is in good condition.

Walkways, gardens and lagoon

The walkways and gardens are in good condition and are well maintained. The lagoon has circulation problems; maintenance staff have been trying to eliminate build up of algae.

RECOMMENDATIONS

Below are recommendations for documentation, conservation, maintenance, and development, and networking with historical, cultural, and preservation communities.

It is recommended that conservation activities be planned and implemented in phases: cleaning, followed by stabilization and surface restoration. Progress will depend on the level of staffing (in and beyond Mount Mercy College), the support of the College and preservation agencies (local, state, and national), the success of fund raising efforts, and retaining preservation professionals, contractors, and laborers.

Grotto Preservation Policy

It is recommended that Mount Mercy College adopt a preservation policy outlining the overall intent of preserving the superior design, craftsmanship, and overall intent of William Lightner in the creation of the Mother of Sorrows Grotto, and maintaining the entire site in the spirit it was created, for the College, community, and the public.

The policy should state that the introduction of non-original features within the grotto should be avoided to preserve the integrity of the original design. Adopt guidelines and a review process for all additions to the Grotto landscape, including signage, garden elements, street furniture, memorials, donor recognition, or other elements. Identify areas where such additions can be placed, if they are approved. These should be located in neutral areas, away from the Grotto structures.

The policy should include a to-scale site plan locating:

- Structures built by William Lightner
- Location and footprint of original Mother of Sorrows Grotto
- Structure created by others (Mother of Sorrows shrine)
- Non-original elements within the site:
 - Time capsule
 - Walkways with pavement ornament
 - Memorial rock
 - Support posts under bridge fence rails (noting their removal, if this is done)
 - Arched cement and rock canopy structure housing marble statue of the Virgin Mary (statue is original to site and was housed in the extant larger shrine structure removed in 1974)

The site plan will be useful in determining how to deal with later additions and will assist in the creation of guidelines for all future additions. It will also support site interpretation, providing the public with a tool for understanding the evolution of the Grotto as an ongoing project, from its origins to the present time.

Research and documentation

The history of the site is very well documented and information, photo-documentation and records are well organized. Additional documentation activities are recommended:

- Create a key for all photographs and digital images. The key should include the structure, date or circa, photographer (if known), direction of the image, and notes on historical or anecdotal information the image contains. Organize the key according to vintage (images that show the Grotto as built by Lightner with few changes), intermediate (1970s/90s, images during the time when major changes were made) and contemporary (2000 forward). All conservation and maintenance should be guided by images of the original conditions. This digital archive will support site interpretation, continued scholarship, and promotional activities.
- Using photos of each structure taken from all sides, create a diagram for each structure and identify each side and/or distinct element (i.e. A. southeast urn, B. southwest urn, J north west fence rail, etc.). This will facilitate accurate labeling of fragments, and keeping records of all past and future work.
- Organize all information and documentation of previous conservation and maintenance treatments and all present and future treatments. Create site plans labeled with areas that were treated, when they were treated, and what materials were used, when known.
- Create a storage area where all fragments can be stored. Label all fragments with the location they came from (with a photo or drawing, or notation on site plan, if possible), and the date. Have a supply of containers (ice cream buckets, popcorn containers, paper cups, zip lock bags, etc.) and magic markers handy, so it's easy to label fragments as soon as they are collected. Move fragments from Gilmor's garage to the campus. Note: the following fragments were collected during the site visit and are stored in Gilmor's garage:
 - Fragments from the Ten Commandments ceiling
 - o Green tile from the west side of the Bridge spandrel, found in the water
 - Tile and fragments from the east urns of Warde Arch (in an iced tea jar and 2 plastic bags)

Landmark designation

It is recommended that Mother of Sorrows Grotto be nominated for listing in the National Register of Historic Places. The Grotto of the Redemption was listed in the NRHP in 2003. Consult first with the Iowa Historic Preservation Alliance and the field representative for the National Trust for Historic Preservation, to see if they recommend that the Mother of Sorrows Grotto be nominated individually or if it should be included in a district nomination, which would include the Mother of Sorrows Grotto and all extant Dobberstein works in Iowa. Contact information and a PDF of the nomination for the Grotto of the Redemption are in the appendix.

Networking

It is recommended that Mount Mercy College staff seek wider recognition for the Grotto and network with custodians of the other grottos in Iowa and in the region, and with the state and local historical societies and preservation agencies—-all of whom should be aware of this regional treasure and the College's efforts to preserve it. (Contact information can be found in the Appendix). It could be useful to communicate with Rhonda Miller at the Grotto of the Redemption and Todd Lee with the Humboldt Parks department, as both are involved in conservation efforts and may have valuable information to share.

It is recommended that the College involve faculty and students in all aspects of the preservation project, when possible and appropriate. It might also be advantageous to open the project up to interns from other area colleges and the University of Iowa. Preservation projects have strong educational value, and by involving Mount Mercy students, you build in appreciative future alumni. The cleaning process can be taught to volunteers and would be a good activity for student participants.

Development

It is recommended that Mount Mercy College staff contact the Iowa Historic Preservation Alliance and the field representative for the National Trust for Historic Preservation to identify possible sources of funding for preservation. The NTHP manages a special fund from the Jeffris Family Foundation that specifically funds preservation in Wisconsin. There may be something similar for Iowa.

Steve Ohrn, formerly the coordinator of Historic Sites for the State Historical Society of lowa authored the book *Passing Time and Tradition*, about the folk and vernacular arts of lowa. He was a serious proponent of the grottos in the state. He's not listed in the SHSI staff list on their website but it would be good to contact the SHSI staff and see if there's a current advocate for the state's grottos.

Kohler Foundation, Inc. funds the preservation of art environments in Wisconsin and elsewhere but they generally purchase sites, fund the preservation, and gift the sites to local non-profits. Kohler Foundation Inc. should be contacted to see if they award grants for preservation projects at sites they don't purchase.

Friends of Fred Smith, Inc. retained Kathryn McKee of Business Development for the Arts (BD4A) to do a report on foundations and grants opportunities that would be appropriate for a small non-profit that cares for a very extensive art environment. She subscribes to many foundation databases but there are some generally accessible I foundation databases that can be searched.

Mount Mercy College alumni may be an important source of support. If/when aspects of the preservation plan are to be implemented it would be good to announce the project in alumni communications and request support, mentioning the existing, specific endowments for the Grotto.

Mount Mercy College most likely has strong partnerships with the greater Cedar Rapids corporate community. It's recommended that the roster of local supporters be considered with regard to corporations that might support the preservation, especially construction businesses and businesses that support the arts and culture.

Research should be done to identify foundations that support Catholic education or Catholic initiatives. Contact information for Partners for Sacred Places, a national organization that supports the preservation of sacred architecture, can be found in the Appendix.

STAFF, WORKERS

PSI defines staff expertise as follows:

- **Curator/preservation professional:** Has comprehensive knowledge of the site history and documentation, is familiar with preservation and conservation theory and practice, and can plan and make decisions regarding overall approaches, methodologies, and treatment. The preservation professional need not be on site but all conservation work should be done with the direction of a preservation professional or report created by a preservation professional.
- **Technician**: Has appropriate skills to implement directions outlined by a preservation professional. This includes conservators, contractors, Mount Mercy college maintenance staff, and some faculty.
- **Trained assistant**: Can be trained to carry out activities under the direction of preservation professional and/or technicians; assistants can include students, interns, and volunteers.

Technicians should understand that they take direction from the preservation professional and trained assistants should understand that they take direction from the technicians.

It is recommended that treatments be made only by staff who are trained in techniques and the proper use of materials. If staff does not have expertise or has not received training in any materials and methods, the work should be conducted by a professional technician.

While some of the recommended work could be done by Mount Mercy College buildings and grounds/maintenance staff, the scope of the work will likely exceed the scope of their current job descriptions (in terms of time, not skill).

The conservation/restoration of the Grotto will be best served by using journeymen construction workers. A general contractor familiar with the building requirements at Mount Mercy College should be considered. The contractor will have scaffolding, equipment, and laborers skilled in construction materials and techniques. The recommendations are based on two construction professionals, one with expertise in masonry and cement finishing and a laborer.

RESTORATION: GENERAL RECOMMENDATIONS

Cleaning

The exterior surfaces of each structure need to be thoroughly cleaned, beginning with exterior surfaces, top to bottom, as per training. Document areas cleaned with dates, products used, and results, and note areas cleaned on site plans. Cleaning the surfaces will protect them from build up and penetration of organic growth which can damage individual rocks and create entry points for water, which will lead to freeze/thaw damage of embellished concrete. Cleaning surfaces of environmental pollution, which can cause deterioration, will extend the life of the materials. Cleaned surfaces will be closer to the

original appearance of the Grotto. Initial cleaning may take more than one application. When most of the surface dirt has been removed, a periodical cleaning schedule can be established and may be necessary once every 6 to 8 years. We recommend that cleaning be done before structural stabilization. A preservation professional should be retained to train technicians and assistants in materials and methods for cleaning. Cleaning is time consuming, requires copious amounts of water and a substantial purchase of products. PSI recommends ProSoCo products (information in the Appendix).

Cleaning Efflorescence

It will be essential to try to determine the source of water entry, which causes efflorescence. This is a challenge and will entail careful examination of surfaces above areas with efflorescence. If cracks are visible they should be sealed with caulk. (See

<u>Caulking cracks and other areas</u> below). After all structures have been cleaned, a sealant (such as ProSoCo Siloxane) should be applied. The project to seal all surfaces should be undertaken to deter areas of water entry. A preservation professional should be retained to train technicians and assistants in materials and methods for cleaning efflorescence and sealing. Much of the efflorescence will be removed by hand.

- After built-up areas of efflorescence have been removed by hand, a professional technician should clean the area with a non-acid based cleaner.
- When holes or cracks are found where water is coming through from above, these should be treated with the caulking method described below.
- In some instances it may not be possible to determine the source of water entry. To direct water through and out of cracks, weep pipes can be installed, using sections of clear polypropylene tubing.

Caulking cracks and other areas

An appropriate weatherproof polyurethane caulk, color matched to the existing colors around each crack, is a recommended product for these applications. A preservation professional can demonstrate how to work with colored mortars, sand, and caulk, to colorize caulk for this purpose. Colorized caulk is then loaded into empty caulk tubes and applied on surfaces that have been prepared with a thin coat of low modulus epoxy; the epoxy give a solid surface for the caulk to adhere to. Weatherproof caulk will remain flexible, so it can expand and contract with variable temperatures.

Treatment of deteriorated or dead mortar

ProSoCo H100 Consolidation Treatment is a recommended product for these applications. A preservation professional should demonstrate how to apply this product in repeated applications. In general, areas of dead mortar should be cleaned and wirebrushed to remove all loose material. The entire area should be masked to protect from consolidant application. The consolidant should be brushed repeatedly, in cycles, until the area is saturated. In certain areas a migratory rust inhibitor should be used to arrest corrosion of interior steel.

Tile conservation

The Grotto includes many sections of glass tile that are both narrative and decorative. Lightner's use of tile reflects his desire to use the finest materials (also expressed in his work with stone) that represent historical associations with opulence and high craftsmanship. Some areas of tile need cleaning and there are areas of lost tile for which replacements need to be found. It is recommended that specialist in glass tile be

consulted, to recommend conservation treatments of these very important decorative and narrative elements.

RECOMMENDATIONS FOR EACH STRUCTURE

NOTE: The recommendations below include approximate estimates for labor, materials, and equipment. There are many variables, including the costs of all activities engaging a local contractor, and the costs of other workers, purchase or rental of equipment, and other factors. Estimates reflect the use of the same products on all structures so some product estimates are lower, based on leftover materials factored into estimates for other structures. The figures do not include travel, lodging, or per diem for preservation professionals. In some instances a lift may be used instead of scaffolding. These estimates are included to facilitate project quantification and fund raising, they are not firm figures and they are calculated on the high side. Some estimates will go down if Mount Mercy College staff are available to work. It is understood that conditions that were not visible during the site exam may be found that could require treatment not described in this report.

PROJECT I: WARDE ARCH 2011-12

Warde Arch (need to update 6-2012)

Cleaning, 2 days	
Preservation professional: \$400 a day/\$50.00 per HR, 2 Days	\$800
2 laborers, 2 days	\$800
1 pressure washer rental, \$75/day	\$150
Scaffold rental, 2 days @ \$300	\$600
Cleaning supplies	\$400
Water supply, hoses, misc.	\$200

SubTotal

\$2950

Stabilization and surface restoration of the top surface, urns, and cross

- Loose and deteriorated mortar repair and repair of surrounding embellishment; some stainless steel pinning
- Repair of cold joint delamination
- Drill relief holes at the points of calcification staining to allow water to exit. Weep pipes may be installed.
- Clean Rockite from urns; research urns to determine original tile; acquire tile and restore surfaces
- Sealant and migratory rust inhibitor application

Project 10 days (+/-)	
Preservation professional: \$400 per day \$50/	\$5000
Laborers	\$5000
Stainless Steel	\$500
Restoration mortar	\$1000
Consolidation materials, sealant, corrosion inhibitor	\$1200
Scaffold rental, 10 days @ \$300/	\$3000
Equipment rental	\$150
Sub Total	<u>\$ 15,850</u>

Total for Warde Arch

\$ 18,800

Project II, 2012-2014 (Restoration of Ten Commandments, Bridge, McAuley Arch)

McAuley Arch

The McAuley Arch is in much better condition than the Wade Arch. It will need to be cleaned the same way as the Wade Arch. It was not possible to examine the top so closer inspection on scaffolding may reveal unseen conditions.

Total McAuley Arch cleaning only	\$2950
Water supply, hoses, misc.	\$200
Materials	\$400
Scaffold rental, 2 days @ \$300/	\$600
1 pressure washer rental, \$75/day	\$150
2 laborers: 16 hrs. Local contractor wage best guess 25.0 per HR	\$800
Preservation professional: \$400 a day/\$50.00 per HR, 2 Days	\$800
<u>Cleaning, 2 days</u>	

McAuley Arch

Stabilization and surface restoration of the top surface, urns, and cross

- Loose and deteriorated mortar repair and repair of surrounding embellishment; some stainless steel pinning
- Repair of cold joint delamination
- Drill relief holes at the points of calcification staining to allow water to exit. Weep pipes may be installed.
- Clean Rockite from urns; research urns to determine original tile; acquire tile and restore surfaces
- Sealant and migratory rust inhibitor application

Project 5 days (+/-)	
Preservation professional: \$400 per day \$50/	\$2000
Laborers	\$2000
Equipment Rental	\$2500
Scaffold rental, 2 days @ \$300/	\$600
Consolidation materials, sealant	\$500

Total

\$7600

Grotto Bridge

The Grotto Bridge has a higher build-up of environmental staining and organic growth due to its proximity to water. The lagoon will have to be drained.

<u>Cleaning, 2 days</u>	
Preservation professional: \$400 a day/\$50.00 per HR, 2 Days	\$800
2 laborers, 2 days	\$800
1 pressure washer rental, \$75/day	\$150
Scaffold rental, 2 days (1 ring only) @ \$250/	\$500
Materials	\$400
Water supply, hoses, misc.	\$200

Total

Stabilization and surface restoration

- Loose and deteriorated mortar repair and repair of surrounding embellishment
- Removal of Rockite, clean, repair, and restore embellishment in these areas
- Repair flower on top of canopy
- Remove deteriorated stone from Bridge deck and repair
- Removal of 6 non-original fence posts
- Treat cementacious elements with migratory rust inhibitor
- Repair spandrel arch tile and substrate, further investigation might reveal that more extensive interior stabilization is necessary.
- Application of migrating corrosion inhibitor
- Sealant and migratory rust inhibitor application

Project 10 days (+/-)

Preservation professional: \$400 per day \$50/	\$5000
Laborers	\$5000
Scaffold rental 3 days (1 ring only) @ \$150	\$450
Cathedral Stone and/or ProSoCo products and sealant	\$1200
Ероху	\$350
Migrating corrosion inhibitor	\$350
Misc. materials	\$200

Total

\$12,550

\$2850

Ten Commandments monument

<u>Cleaning, 2 days</u>	
Preservation professional: \$400 a day/\$50.00 per HR, 2 Days	\$800
2 laborers, 2 days	\$800
1 pressure washer rental, \$75/day	\$150
Scaffold rental, 2 days @ \$600/	\$1200
Materials	\$400
Water supply, hoses, misc.	\$200

<mark>\$3550</mark>

Stabilization and surface restoration

- ٠ Remove globe; research original surface, find materials and restore accordingly
- Remove sections of the roof to further determine interior conditions •
- Channel run off water inside the structure to open air exits.
- Install drain ports in columns •
- Clean tile, repair damaged tile
- Repair cracking in floor and around column bases •
- Sealant and migratory rust inhibitor application ٠

Total	\$18,000	
Misc. materials	\$400	
Replacement Italian glass mosaic tiles	\$3000	
Cathedral Stone and/or ProSoCo products	\$500	
Scaffolding	\$2500	
Laborers	\$5800	
Preservation professional	\$5800	
Project 12 days (+/-)		

Total

Mother of Sorrows shrine

The shrine could be cleaned during the cleaning of another structure at minimal cost.

Project II TOTAL:

\$ 44,550

(Restoration of Ten Commandments, Bridget, McAuley Arch and Mother of Sorrows Shrine. This does not include the hours of in-kind work by the Project Director, volunteers, or additional facilities workers.

Walkways and gardens

The walkways and gardens are beautifully planted and maintained. Technical issues of the lagoon are not addressed in this report. Howlett has extensive experience in ponds and man-made water features and can consult on the lagoon by request.



Consider planting shrubs or tall grasses on the south borders of the lagoon to soften the transition to the parking lot.



Consider planting grasses or a border (such as the grassy border on the walkway to the north of the Arch, or the other planted borders on campus) to visually connect the Arch with the stone path leading to the Grotto grounds below, and underscore it's function as a circulation feature.

RECOMMENDED PRIORITY OF TREATMENT

The treatment priority is based on structures in most need of treatment. Depending on the budget, availability of workers and time frame, cleaning could occur simultaneously with stabilization and surface restoration. Works should ideally be cleaned before stabilization and surface restoration.

- 1. Warde Arch surface cleaning
- 2. Warde Arch stabilization and surface restoration
- 3. Ten Commandments surface cleaning*
- 4. Ten Commandments stabilization and surface restoration**
- 5. Grotto Bridge cleaning
- 6. Grotto Bridge stabilization and surface restoration
- 7. McAuley Arch cleaning
- 8. McAuley Arch stabilization and surface restoration

* The pond will need to be drained when the Ten Commandments monument is cleaned and treated.

** The Ten Commandments globe can be removed and restored at Preservation Service's studio and could be done during the winter.

PRESERVATION SERVICES FEES

- \$400.00/day or \$45/hour for less than a day, on site work
- \$75.00/trip driving time
- .50/ mile (250 miles, average \$250 round trip)
- \$40/day per diem
- lodging (tbd)

APPENDIX

Contacts

Historic Preservation

National Trust for Historic Preservation, Midwest Regional office: <u>http://www.preservationnation.org/about-us/regional-offices/midwest/</u> lowa field representative: Jennifer Sandy <u>Jennifer_Sandy@nthp.org</u> 312-939-5547 x 37225

Iowa State Historical Society: http://www.iowahistory.org/

Iowa Historic Preservation Alliance: http://www.preservationiowa.org/

Iowa Arts Council: http://www.state.ia.us/government/dca/iac/

Iowa Department of Cultural Affairs: www.culturalaffairs.org/index.htm

Partners for Sacred Places: http://www.sacredplaces.org/

A copy of the National Register for Historic Places nomination form for the Grotto of the Redemption, West Bend, IA is included at the end of this report and on the enclosed CD Rom.

Development

Terri Yoho, Executive Director, Kohler Foundation, Inc. 725 X Woodlake, Kohler, WI 53044 * 920. 458-1972 * terri.yoho@kohler.com

Kathryn McKee, BD4A, Business Development for the Arts 248 South Clinton Ave., Oak Park, IL 60302 * 708. 575-3766 * k.mckee@comcast.net

Grotto community

Rhonda Miller, Director, Grotto of the Redemption, 300 N Broadway, PO Box 376, West Bend, IA 50597 * (515) 887-2371 rhondamiller@westbendgrotto.com

Todd Lee, City of Humboldt Parks Department (Liberty Fountain) P.O. Box 529, Humboldt, Iowa 50548, parksdept@ci.humboldt.ia.us

Dickeyville Grotto Arlene Schultz, Dickeyville Grotto, 305 West Main St., Dickeyville, WI 53808 (608) 568-3119, tschultz@chorus.net

Rudolph Grotto

Kris Wilfahrt, Rudolph Grotto, 675 Grotto Avenue, Rudolph, WI 54475, 715. 435-3120

Products **Products**

ProSoCo products, for cleaning, consolidation, and sealing. http://www.prosoco.com/

Sure Klean[®] Weather Seal Siloxane WB, Weather Seal Siloxane WB BioKlean and BioWash ProSoCo Siloxane PD ProSoCo H100 Consolidation Treatment

Sika Chemical Company <u>http://www.sikaconstruction.com/sika-about-cons.htm</u> Sika Lo-Mod LV products for brushable applications and Sika Gel for injection.

Cathedral Stone, Jahn mortars

http://www.cathedralstone.com

References

Ohrn, Steven, ed. *Passing Time and Traditions Contemporary Iowa Folk Artists*. Ames: The Iowa State University Press, 1984.

Stone, Lisa, and Zanzi, Jim. Sacred Spaces and Other Places A Guide to the Grottos and Sculptural Environments of the Upper Midwest. Chicago: The School of the Art Institute of Chicago Press, 1993.

Niles, Susan A. *Dickeyville Grotto: The Vision of Father Mathias Wernerus*, University Press of Mississippi, 1997.

National Trust for Historic Preservation

http://www.preservationnation.org/

Grottos and Art Environments The Grotto of the Redemption Dickeyville Grotto Kohler Foundation John Michael Kohler Arts Center Wandering Wisconsin Friends of Fred Smith's Nick Engelbert's Grandview Orange Show Center for Visionary Art

http://www.westbendgrotto.com/ http://www.dickeyvillegrotto.com/ http://www.kohlerfoundation.org/ http://www.jmkac.org/ http://www.jmkac.org/WanderingWisconsin http://www.jmkac.org/WanderingWisconsin http://www.friendsoffredsmith.org/ http://www.nicksgrandview.com/Welcome.html http://www.orangeshow.org/

Data on the enclosed CD Rom

- Mother of SorrowsGrotto Preservation Plan, PDF file
- Mother of SorrowsGrotto site examination images: a folder of labeled digital images.
- National Register for Historic Places nomination form, Grotto of the Redemption, West Bend, IA

The Secretary of the Interior's Standards for the Treatment of Historic Properties

The information below was taken from the National Park Service's website, The Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, http://www.nps.gov/history/hps/tps/standguide/

The information below was taken from the introduction and the Standards and Guidelines from the section on Preserving. We recommend that you read the entire website, and the sections on Rehabilitating, Restoring, and Reconstructing as well.

The Secretary of the Interior's Standards for the Treatment of Historic Properties

The Standards are neither technical nor prescriptive, but are intended to promote responsible preservation practices that help protect our Nation's irreplaceable cultural resources. For example, they cannot, in and of themselves, be used to make essential decisions about which features of the historic building should be saved and which can be changed. But once a treatment is selected, the Standards provide philosophical consistency to the work.

The four treatment approaches are Preservation, Rehabilitation, Restoration, and Reconstruction, outlined below in hierarchical order and explained:

The first treatment, **Preservation**, places a high premium on the retention of all historic fabric through conservation, maintenance and repair. It reflects a building's continuum over time, through successive occupancies, and the respectful changes and alterations that are made.

Rehabilitation, the second treatment, emphasizes the retention and repair of historic materials, but more latitude is provided for replacement because it is assumed the property is more deteriorated prior to work. (Both Preservation and Rehabilitation standards focus attention on the preservation of those materials, features, finishes, spaces, and spatial relationships that, together, give a property its historic character.)

Restoration, the third treatment, focuses on the retention of materials from the most significant time in a property's history, while permitting the removal of materials from other periods.

Reconstruction, the fourth treatment, establishes limited opportunities to re-create a non-surviving site, landscape, building, structure, or object in all new materials.

Choosing the most appropriate treatment for a building requires careful decisionmaking about a building's historical significance, as well taking into account a number of other considerations:

Relative importance in history. Is the building a nationally significant resource--a rare survivor or the work of a master architect or craftsman? Did an important event take place in it? National Historic Landmarks, designated for their "exceptional significance in American history," or many buildings individually listed in the National Register often warrant Preservation or Restoration. Buildings that contribute to the significance of a historic district but are not individually listed in the National Register more frequently undergo Rehabilitation for a compatible new use.

Physical condition. What is the existing condition--or degree of material integrity--of the building prior to work? Has the original form survived largely intact or has it been altered over time? Are the alterations an important part of the building's history? Preservation may be appropriate if distinctive materials, features, and spaces are essentially intact and convey the building's historical significance. If the building requires more extensive repair and replacement, or if alterations or additions are necessary for a new use, then Rehabilitation is probably the most appropriate treatment. These key questions play major roles in determining what treatment is selected.

Proposed use. An essential, practical question to ask is: Will the building be used as it was historically or will it be given a new use? Many historic buildings can be adapted for new uses without seriously damaging their historic character; special-use properties such as grain silos, forts, ice houses, or windmills may be extremely difficult to adapt to new uses without major intervention and a resulting loss of historic character and even integrity.

Mandated code requirements. Regardless of the treatment, code requirements will need to be taken into consideration. But if hastily or poorly designed, a series of code-required actions may jeopardize a building's materials as well as its historic character. Thus, if a building needs to be seismically upgraded, modifications to the historic appearance should be minimal. Abatement of lead paint and asbestos within historic buildings requires particular care if important historic finishes are not to be adversely affected. Finally, alterations and new construction needed to meet accessibility requirements under the Americans with Disabilities Act of 1990 should be designed to minimize material loss and visual change to a historic building.

PRESERVING

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

STANDARDS FOR PRESERVING

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

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.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

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.

 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.
Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

GUIDELINES FOR PRESERVING

Choosing Preservation as a Treatment

In Preservation, the options for replacement are less extensive than in the treatment, Rehabilitation. This is because it is assumed at the outset that building materials and character-defining features are essentially intact, i.e, that more historic fabric has survived, unchanged over time. The expressed goal of the **Standards for Preservation and Guidelines for Preserving Historic Buildings** is retention of the building's existing form, features and detailing. This may be as simple as basic maintenance of existing materials and features or may involve preparing a historic structure report, undertaking laboratory testing such as paint and mortar analysis, and hiring conservators to perform sensitive work such as reconstituting interior finishes. Protection, maintenance, and repair are emphasized while replacement is minimized.

Identify, Retain, and Preserve Historic Materials and Features

The guidance for the treatment **Preservation** begins with recommendations to identify the form and detailing of those architectural materials and features that are important in defining the building's historic character and which must be retained in order to preserve that character. Therefore, guidance on *identifying, retaining, and preserving* character-defining features is always given first. The character of a historic building may be defined by the form and detailing of exterior materials, such as masonry, wood, and metal; exterior features, such as roofs, porches, and windows; interior materials, such as plaster and paint; and interior features, such as moldings and stairways, room configuration and spatial relationships, as well as structural and mechanical systems; and the building's site and setting.

Stabilize Deteriorated Historic Materials and Features as a Preliminary Measure

Deteriorated portions of a historic building may need to be protected thorough preliminary stabilization measures until additional work can be undertaken. *Stabilizing* may include structural reinforcement, weatherization, or correcting unsafe conditions. Temporary stabilization should always be carried out in such a manner that it detracts as little as possible from the historic building's appearance. Although it may not be necessary in every preservation project, stabilization is nonetheless an integral part of the treatment Preservation; it is equally applicable, if circumstances warrant, for the other treatments.

Protect and Maintain Historic Materials and Features

After identifying those materials and features that are important and must be retained in the process of **Preservation** work, then *protecting and maintaining* them are

addressed. Protection generally involves the least degree of intervention and is preparatory to other work. For example, protection includes the maintenance of historic materials through treatments such as rust removal, caulking, limited paint removal, and re-application of protective coatings; the cyclical cleaning of roof gutter systems; or installation of fencing, alarm systems and other temporary protective measures. Although a historic building will usually require more extensive work, an overall evaluation of its physical condition should always begin at this level.

Repair (Stabilize, Consolidate, and Conserve) Historic Materials and Features

Next, when the physical condition of character-defining materials and features requires additional work, *repairing* by *stabilizing, consolidating, and conserving* is recommended. **Preservation** strives to retain existing materials and features while employing as little new material as possible. Consequently, guidance for repairing a historic material, such as masonry, again begins with the least degree of intervention possible such as strengthening fragile materials through consolidation, when appropriate, and repointing with mortar of an appropriate strength. Repairing masonry as well as wood and architectural metal features may also include patching, splicing, or otherwise reinforcing them using recognized preservation methods. Similarly, within the treatment **Preservation**, portions of a historic structural system could be reinforced using contemporary materials such as steel rods. All work should be physically and visually compatible, identifiable upon close inspection and documented for future research.

Limited Replacement In Kind of Extensively Deteriorated Portions of Historic Features

If repair by stabilization, consolidation, and conservation proves inadequate, the next level of intervention involves the *limited replacement in kind* of extensively deteriorated or missing parts of features when there are surviving prototypes (for example, brackets, dentils, steps, plaster, or portions of slate or tile roofing). The replacement material needs to match the old both physically and visually, i.e., wood with wood, etc. Thus, with the exception of hidden structural reinforcement and new mechanical system components, substitute materials are not appropriate in the treatment **Preservation**. Again, it is important that all new material be identified and properly documented for future research. If prominent features are missing, such as an interior staircase, exterior cornice, or a roof dormer, then a Rehabilitation or Restoration treatment may be more appropriate.

Energy Efficiency/Accessibility Considerations/Health and Safety Code Considerations

These sections of the **Preservation** guidance address work done to meet accessibility requirements and health and safety code requirements; or limited retrofitting measures to improve energy efficiency. Although this work is quite often an important aspect of preservation projects, it is usually not part of the overall process of protecting, stabilizing, conserving, or repairing character-defining features; rather, such work is assessed for its potential negative impact on the building's historic character. For this reason, particular care must be taken not to obscure, damage, or destroy character-defining materials or features in the process of undertaking work to meet code and energy requirements.

<u>Please see the website for standards and guidelines for the three additional treatments below.</u>

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

Preservation Services Inc.

Preservation Services, Inc. (**PSI**) specializes in the preservation of art environments, works that engage sculpture and/or architectural elements, built within a landscape setting, often the creation of self-taught artists. **PSI** also addresses sculpture and structures that fall outside of the genre of art environments.

With extensive experience in the documentation, interpretation, and preservation of art environments, PSI offers preservation planning, curatorial consultation, and physical repair of sculptural, architectural, and landscape elements, on site, as well as elements that have been moved from their original settings.

We are passionate about the rich genre of art environments --

combinations of art, architecture and/or landscape architecture -- including religious grottos, sculptural and garden environments, transformed interior spaces, and other built works that are *site* and *life* specific. Such works are generally made by vernacular artist/builders who are or were not formally trained in art or architecture, and are often created with combinations of traditional and non-traditional techniques.

PSI approaches art environments as integrated artistic entities.

Work is guided by original documentation of site elements, as created by the artist(s). Preservation is planned to conserve elements as close as possible to their original state and context, during the time period of creation and/or the artist's lifetime.

- Preservation activities are planned according to the highest preservation and conservation standards achievable.
- Preservation activities are planned to comply with the <u>Secretary of the Interior's</u> <u>Standards for the Preservation of Historic Properties</u> (embed <u>http://www.nps.gov/hps/tps/standguide/</u>), for properties that are landmarks or eligible for landmark status.
- Preservation activities address elements in order of prioritized need.

CONSULTATION AND PRESERVATION PLANNING

PSI consultation includes a site visit, examination of archival documentation and existing conditions, discussion with caretakers about site use and management (including sources of funding), prior conservation, and community involvement. PSI will provide a report with recommendations for treatment, maintenance, and training.

PSI conservation projects generally entail site research and examination, condition assessment, treatment, documentation, and training. Project documentation is provided at the project's completion and includes a written report of prior conditions, a thorough description of treatment, and photo-documentation, in digital format, of all processes.

EDUCATION & AWARENESS

PSI will work with clients and their communities to increase awareness of the history, significance, and appropriate treatment of their sites. Post-project maintenance is encouraged and is outlined upon request.

ADVOCATING FOR THE PRESERVATION OF ART ENVIRONMENTS

We believe in the preservation of art environments as significant, and in some instances, exceptional artistic and cultural expressions. We are in contact with other advocates for the preservation of art environments and other vernacular expressions.

DON HOWLETT has a Master of Fine Arts from the University of Oklahoma (1975). He was a project supervisor in the construction industry, specializing in aquarium, museum, and zoological exhibit construction throughout the United States, from 1979 to 2004. He has consulted, planned, managed, and undertaken treatments on art environments since 1977. Howlett serves on the board of directors of <u>Friends of Fred</u> <u>Smith.</u>

Selected projects

- Comprehensive repair of major storm damage at Fred Smith's Wisconsin Concrete Park, Phillips, WI, 1977-78; Conservation work at the site annually from 1988 to the present. Founder, Friends of Fred Smith, Inc. 1995.
- Preservation Plan and training, Father Paul Dobberstein's Grotto of the Redemption, West Bend, IA, 2009.
- Preservation Plan and training, Father Paul Dobberstein's Liberty Fountain, John Brown Park, Humboldt, IA, City of Humboldt Parks Department, 2009 (continuing).
- Restoration of the Carl Peterson family memorial setting, St. James, MN, 2008.
- Preservation Plan and training, the Dickeyville Grotto, Dickeyville, WI, 2007 and 2009.
- Conservation of sculpture by Jacob Baker, Fred Smith, James Tellen, Herman Rusch, and Mary Nohl for Kohler Foundation, Inc. and the John Michael Kohler Arts Center, 2006-08.
- Planning and implementation of the restoration of The Painted Forest, Valton, WI, 1981-82, a project of Kohler Foundation, Inc.
- Planning and implementation of the preservation of the Paul and Matilda Wegner Grotto, Cataract, WI, a project of Kohler Foundation, Inc.
- Preservation of storm damage at Fred Smith's Wisconsin Concrete Park, 1977-78, and preservation at Fred Smith's Wisconsin Concrete Park, annually, 1988 to the present.
- Preservation of rock sculpture at the Ellsworth Rock Garden, as a volunteer for the National Park Service at Voyageur's National Park, MN, 2001 & 2002.
- Conservation of sculpture at Nick Engelbert's Grandview, Hollandale, WI, including replication of lost sculpture.
- Consultation on preservation of The Orange Show and The Beer Can House for The Orange Show Center for Visionary Art, Houston, TX, 2004, 2005.
- Consultation on conservation and installation of sculptures and architectural features by Fred Schlosstein, for the Herman Rusch Prairie Moon Museum and Sculpture Garden, Cochrane, WI, 2006 to Summer 2008

LISA STONE has a Master of Science in Historic Preservation from the School of the Art Institute of Chicago (SAIC, 1997) and is curator of SAIC's <u>Roger Brown Study</u> Collection (RBSC) of SAIC. She has worked on preservation planning and site preservation with Howlett from 1981 to the present. She has written widely on art environments and has co-taught art history courses exploring the genre, with Jim Zanzi, from 1985 to the present.

Stone serves on the board of directors of <u>Friends of Fred Smith</u> (chair, Conservation Committee), <u>Intuit: The Center for Intuitive and Outsider Art</u> (chair, Collections and Acquisitions Committee), and <u>SPACES</u> (Saving and Preserving Arts and Cultural Environments).

Selected projects

- Preservation Plan, Father Paul Dobberstein's Grotto of the Redemption, West Bend, IA, 2009.
- Preservation Plan, Father Paul Dobberstein's Liberty Fountain, John Brown Park, Humboldt, IA, 2009 (continuing).
- Preservation Report, the Dickeyville Grotto, Dickeyville, WI, 2007 and 2009.
- Co-curator of the Henry Darger Room Collection, for Intuit: The Center for Intuitive and Outsider Art, Chicago, IL (2001-2008).
- Consultation on preservation of The Orange Show and The Beer Can House for The Orange Show Center for Visionary Art, Houston, TX, 2004, 2005.
- Volunteer (for the National Park Service) and preservation consultation, Ellsworth Rock Garden, Voyageur's National Park, MN, 2001.
- Report and preservation plan for Dr. Charles Smith's African American Heritage Museum and Black Veterans Archive, Aurora, IL, for Kane County Department of Development, 1999-2000.
- Curator of Interpretation, Nick Engelbert's Grandview: design of historic house museum exhibits and on-site interpretation at Nick Engelbert's Grandview, Hollandale, WI, a preservation project of Kohler, Foundation, Inc., 1997.
- Site analysis and inventory of fragments at Nick Engelbert's Grandview for Kohler Foundation Inc., 1995.
- Research, writing, preservation planning, and conservation at Fred Smith's Wisconsin Concrete Park, Phillips, WI, 1988 to the present.
- Research, writing, and restoration at the Paul and Matilda Wegner Grotto, Cataract, WI, 1986 1987. (A project of Kohler Foundation, Inc.)
- Research, writing, and restoration at The Painted Forest, Valton, WI, 1981-82. (A project of Kohler Foundation, Inc.)