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ANNIE C. STEWART MEMORIAL FOUNTAIN
ASSESSMENT REPORT AND RECOMMENDATIONS

Date of Work:	May 2022	**Project Name and Location:**	Annie C. Stewart Memorial Fountain Madison, WI
Date of Report:	June 22, 2023 (draft)		
Reported by:	Jamie Morris Andrzej Dajnowski	**Owner/Client:**	City of Madison

Artist/Date: Frederick J. Clasgens, installed 1925
Dimensions: 21' in diameter at perimeter wall
Project Goal: To perform conservation assessment and develop treatment options with estimated pricing.

Work Performed by:
CSOS
Neomek Incorporated
Wiss, Janney, Elstner Associates

Contact:
Karin Wolf, City of Madison
William Fruhling, City of Madison

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BACKGROUND

The Annie C Stewart fountain is reportedly the City of Madison's oldest piece of public art. It was completed in 1925 and was intended as a drinking fountain. The fountain was a gift from the Stewart family to the Madison Park and Pleasure Drive Association in memory of Annie who succumbed to suicide in 1905. Annie was also known as one of the original members of the Attic Angels organization.

The fountain, designed by Frederick J. Clasgens, was located at the historic entrance to the zoo. It consisted of a central marble figure of a mermaid holding vessel that flowed onto a shell held by a young Triton. The figures are set on a base decorated with shell and flower motifs. The lower bowl or perimeter wall of the fountain is approximately twenty-one feet wide. Originally two tritons were located on the edge of the fountain's lower bowl, these tritons served as the drinking fountain portion.

The fountain experienced early episodes of vandalism directed to the Tritons. The fountain has not operated as a water feature or drinking fountain for decades.

In August 2017 InSite Consulting Architects reviewed the fountain and prepared a report for the Madison Parks Division. The general conclusion of this report was that the fountain was significantly distressed and required preservation or removal.

In early 2022 the City of Madison issued a request for proposals for an art conservator to provide an expert condition assessment of the fountain and develop and estimate costs for nine treatment options based on a matrix developed by the City (see below). The purpose of this report is to present those treatment options and costs.

Minimal repairs/in place	Minimal repair/relocate outdoors	Minimal repairs/relocate key sculptural components indoors
Moderate repairs/in place	Moderate repair/relocate outdoors	Moderate repairs/relocate key sculptural components indoors
Thorough repairs/in place	Thorough repair/relocate outdoors	Thorough repairs/relocate key sculptural components indoors

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MEETING ONE - JUNE 6, 2022

As an initial step in the project process CSOS reviewed previously created documents that were provided to us. This included:

- 2017 InSite Consulting Architects Report (Attachment A)
- 2020 Neighborhood Survey results (Attachment B)
- 2020 Written notes on feedback from Bill Quakenbush's discussion with Mark Wagler (Attachment C)
- 2021 Survey results (Attachment D)

CSOS and the City of Madison hosted an evening Zoom meeting to introduce the CSOS project team and discuss our review of the documents provided.

The 2017 InSite Consulting Architects report related most directly to the physical condition of the fountain. This report considered the fountain highly deteriorated with multiple undocumented previous interventions and some elements beyond repair. Their recommendations included (but are not limited to) creating a new base, conserving and cleaning the marble sculpture, providing winter protection, developing a long-range treatment plan, and developing interpretation.

EXAMINATION

Laser Scan (Attachment E)

During the week of June 13, 2022, Neomek Incorporated performed a 3D laser scan of the fountain. The purpose of this scan was to develop very highly detailed images of the existing fountain as a record and also as a basis for CSOS to develop survey sheets for the condition assessment.

Ground Penetrating Radar Report (Attachment F)

During the week of June 20, 2022, Wiss, Janney, Elstner Associates performed a GPR survey of the concrete sidewalk at the perimeter of the fountain. The purpose of the survey was to determine if significant voids were present under the walkway. No significant voids were observed.

CSOS Condition Assessment General Observation (Photos – Attachment G)

On July 2, 2022, Andrzej Dajnowski and Jamie Morris of CSOS performed a condition assessment of the fountain. The assessment was performed visually from grade as well as from the top of the fountain pedestal. Microscopic observations were made with a magnifying hand lens.

The general condition of the marble sculpture was observed to be good for a marble sculpture of its age exposed to the elements. The marble sculpture exhibited surface soiling from both atmospheric and biological sources and some minor areas of loss such as the apparent loss of some relief on the nose of the mermaid.

The overall condition of the fountain was observed to be very poor, in fact hazardous. The condition was so poor that it was determined that documenting individual distress conditions on survey sheets was impractical. The following distress conditions were observed at the fountain pedestal and base (many of them interrelated).

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Extensive cracking was observed throughout the pedestal and the base. Many cracks appear to have secondary deposits (material filling the crack) either from minerals in the water the fountain previously held or from dissolved and redeposited mineral components of materials from various previous repair campaigns. The observed cracking ranged from hairline to greater than ¼ inch in width. The following photographs show typical cracks on the pedestal and outer ring.

Spalls and areas of loss were observed on the pedestal especially at the lower ring. Some large pieces of material that had apparently previously fallen were sitting on the top of the pedestal. Other areas of incipient spalls (spalls that are about to become loose but are still weakly attached) were observed. The majority of the losses were observed to the left of the figures as viewed facing them. The photographs below show areas of spalls and loss on the pedestal.

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Patches, coatings, added materials. CSOS is unaware of any documented previous repair campaigns, however, many types of repair materials were observed in situ. Based on the number of previous repairs and the lack of documentation it is possible that repairs maybe have been implemented by well meaning activists without knowledge of how the two materials would interact. Mortar patches that are stronger than the masonry they are used to patch can contribute to degeneration of surrounding original materials. Many apparent mortar patches are present on the lower bowl. As shown in the photographs below, the pedestal includes apparent patch material as well as remnants of a coating applied to the top two tiers.

Vegetation and bio growth were observed in micro scale and macro scale with micro scale biological growth such as lichen primarily on the marble figures and large-scale vegetation (large weeds) growing out of crevices in the pedestal. The growth of large-scale vegetation exerts outward pressure that can exacerbate the formation of cracks while also holding on to moisture which contributes to freeze/thaw distress. Micro scale biological growth obstructs the ability to visually distinguish the features of the sculpture and some types of biological growth can secrete acids which can slowly chemically dissolve calcite-based stone. Additionally, biological growth absorbs and holds moisture to the stone surface potentially contributing to freeze/thaw distress. Examples of macro and micro scale biological growth are shown below.

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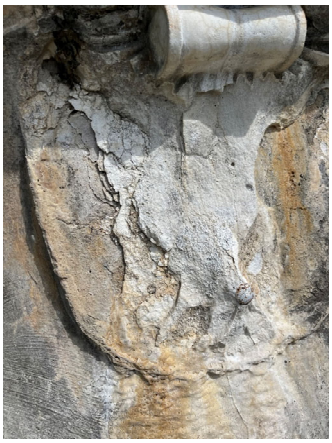
Discoloration and deposits. In addition to the discoloration imparted by the biological growth on the marble sculpture, streaks of white and yellow deposits were observed on the surface of the pedestal and a network of fine cracks with white deposits was observed on the surface of the lower bowl. Due to the general condition of the pedestal and concrete perimeter, samples were not taken for testing. It is likely that the deposits are due to both the water chemistry when the fountain was in use and migration of soluble minerals in construction and repair products. Various examples of discoloration and deposits are shown below.



Corrosion of internal steel. A piece of corroded steel was observed at the location of lost material and extensive cracking at the second tier of the pedestal. Embedded steel elements that become exposed to moisture and corrode can expand to ten times their original surface area. This expansion exerts force on the surrounding materials that can lead to cracking. Distress can accelerate if cracking leads to increased moisture exposure. The photographs below show corroded steel remaining in the pedestal and an adjacent area of loss.


Based on the amount of distress observed and the interrelationship of the distress conditions CSOS has concluded that the pedestal and the concrete lower bowl are beyond reasonable repair.

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MEETING TWO - AUGUST 29, 2022

The purpose of the second meeting was to present and review the existing conditions and mitigation options. At this meeting CSOS presented our observations and the repair matrix with costs developed after the examination.

Annie Stewart Memorial Fountain - Repair Matrix

	Repair In Place	Relocate Indoors	Relocate Outdoors
Minimal Repairs	Not, feasible, safety hazard	Remove marble, clean, simple base, install indoors $90k dismantle, transport marble $10-15k cleaning $25-35k new simple base No foundation if floor supports load $50-70k reinstallation	Remove marble, clean, simple base, install outdoors $90k dismantle, transport marble $10-15k cleaning $25-35k new simple base $15k new foundation $50-70k reinstallation
		Total: $175-210k	**Total: $190-225k**
Moderate Repairs	Not, feasible, safety hazard	Remove marble, clean, minimal recreations, simple base, install indoors $90k dismantle, transport marble $10-15k cleaning $25-35k recreate marble loss $25-35k new simple base No foundation if floor supports load $50-70k reinstallation	Remove marble, clean, minimal recreations, replicate stone base, install outdoors $90k dismantle, transport marble $10-15k cleaning $25-35k recreate marble loss up to $100k limestone base $15-20k new foundation $50-70k reinstallation
		Total: $200-245k	**Total: $290-330k**
Thorough Repairs*	"Repair" not feasible, would require rebuilding - see two cells to the right for cost.	Remove marble, clean, all recreations, replicate stone base, install indoors $90k dismantle, transport marble $10-15k cleaning $25-30k recreate marble loss up to $100k limestone base no perimeter No foundation if floor supports load $50-70k reinstallation	Remove marble, clean, all recreations, replicate stone base & perimeter wall, install outdoors $90k dismantle, transport marble $10-15k cleaning $25-30k recreate marble loss up to $100k limestone base $50-70k concrete perimeter $25-30k new foundation $50-70k reinstallation
		Total: $275-305k	**Total: $350-405k**

*Recreate missing tritons if desired for thorough repair: $60-80k each if concrete, $90-130k each if limestone.
If inside with no outer ring, tritons could be placed approximate to center on simple bases.

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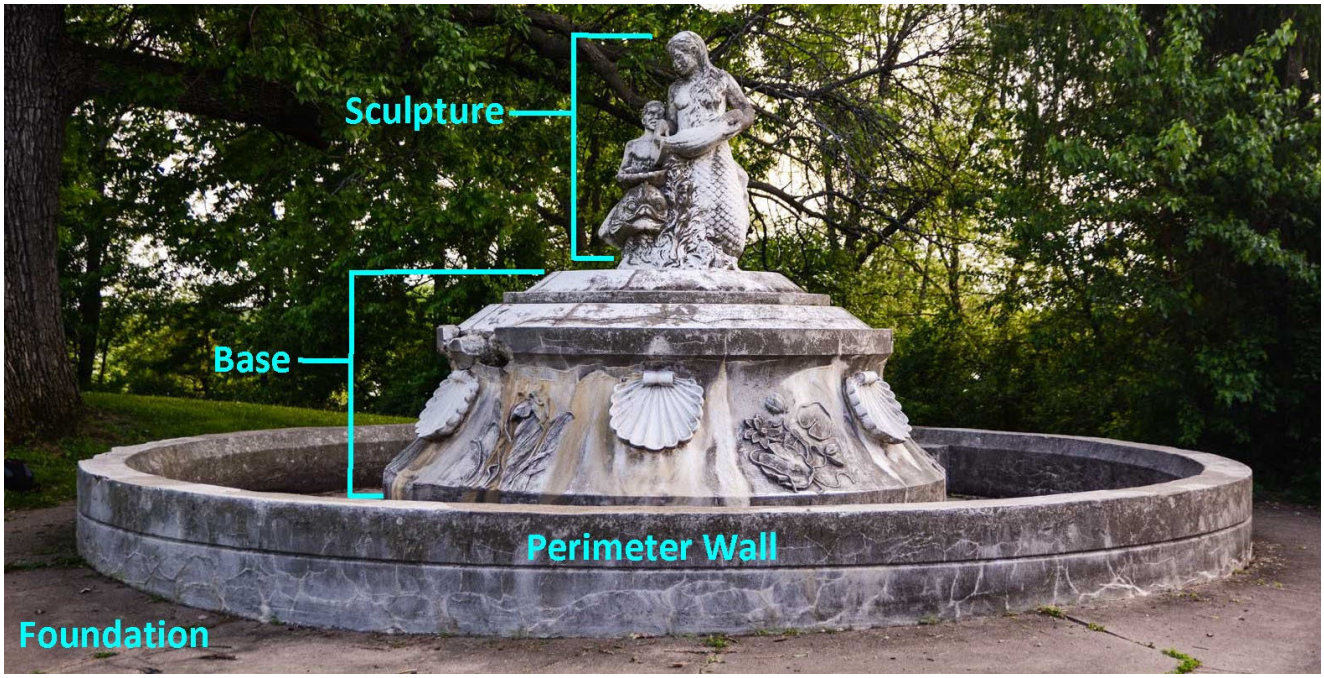

This image identifies the sections of the fountain as discussed in the matrix above

Additional topics for conversation at the second meeting included that the Annie C. Stewart Fountain is not currently listed as a local landmark nor is it included within a local or national landmark district. (It is indicated in the 1998 Vilas Park Mound Group, but as a modern feature not contributing to the historic district.)

The fountain has lost its integrity of setting, as the entrance to the zoo has shifted and the fountain is no longer viewed by the typical zoo visitor. There is also loss to the integrity of material as many different repair materials appear present. Integrity of feeling is weakened due to the loss of the tritons and general function of the fountain.

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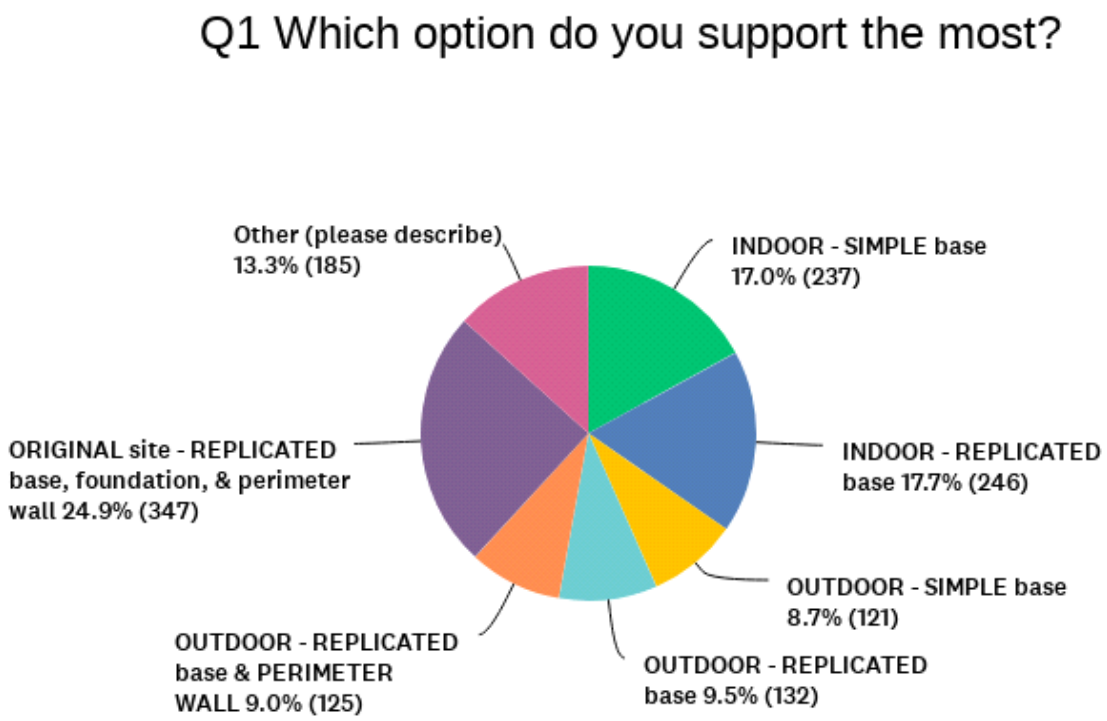
2023 RESIDENT SURVEY RESULTS (Attachment H)

In the spring of 2023, the City of Madison issued a city-wide survey in an attempt to better understand public preferences for the future treatment of the fountain (Attachment E). The survey presented the CSOS matrix with costs and asked the respondents to select their preferred option. One thousand three hundred and ninety-three responses were received. The total percentage of responses supporting one of the two indoor options was 34.7 percent. The total percentage of responses supporting one of the alternate outdoor site locations was 27.2 percent. The total percentage of responses supporting retaining the sculpture at the original site with a replicated base, foundation and perimeter wall was 24.9 percent. "Other" responses comprised 13.3 percent.



Question 2 asked "Why did you select this (question #1) option?" While it is not possible to capture all 1,393 written responses, broad trends include respecting the adjacent burial grounds, associating the fountain with the zoo, and continuing to honor the memory of suicide victims. Many written responses indicate that the respondent voted to keep the fountain in its original location but would consider a new location at the zoo appropriate for both the association of the fountain and honoring the Ho-Chunk culture. Those opposed to moving the fountain inside indicated that it should be accessible outside of 'business hours.'

Question 3 inquired about potential sources of funding. The majority of the responses suggested that the City "fundraise" or "find a donor" to cover the costs. While some suggestions of fundraising opportunities were provided (i.e. an event at the zoo), no one offered a funding source.

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CONCLUSION

BASED ON THE FEEDBACK FROM MEETINGS, SURVEYS AND CONSERVATION ANALYSIS CSOS RECOMMENDS:

1. Retain the original marble sculpture, conserve it, and move it to an interior location where it can be available to the public for viewing.
2. Create a replica using the provided laser scan information. Locate this replica at the entrance of the Henry Vilas Zoo at Vilas Park to reestablish this historical connection.

It is CSOS' understanding that the original intention of the fountain was to welcome visitors to the park/zoo. The integrity of the site seems diminished with this loss of connection. The fountain's proximity to a Native American sacred site is also a very serious consideration as indicated by several residents in their written responses. Due to the extensive deterioration, 'repair' is not feasible and re-construction is more appropriate. Thus, moving the fountain to restore its connection to the zoo and respect the Native American cultural site, is our recommendation.

From a conservation perspective we do feel that an interior location would provide the most protection from future deterioration; thus, we recommend that the original marble sculpture be relocated to an interior location. If a replica is created, we feel it would be best to proceed with a minimal repair ($175-$210k) of the existing marble statue to retain the authenticity.

COST FOR REPLICA (Attachment I)
At the City's request, CSOS discussed the option of creating a replica fountain with stone fabricators from Quarra Stone. Their proposal is attached and includes delivery but does not include the cost of installation. Their cost to recreate the sculpture and decorative base from new white granite is $697,000.00. If the City decides to go forward with this approach, we recommend the option to move the key sculptural elements indoors with minimal intervention for an estimated cost of $215,000.00 to $260,000.00 (including demolition of the existing site)

The laser scan of the fountain thoroughly documented the existing condition of the fountain. This scan can be used to accurately reconstruct the perimeter wall, decorative pedestal and also the marble sculpture so a new replica fountain can be constructed.

Due to the information collected with the laser scan, a digital "reconstruction" of the fountain is possible (this entails editing the digital file to restore areas of loss). It is possible to maintain a connection between the fountain and its original site by installing an interpretive sign with historic and modern images of the fountain, text memorializing Annie C Stewart, and a QR code to view the digital reconstruction on or near the original site.