

FATHER MARQUETTE

Report of Treatment

09/27/04 – 10/02/04



ARTIST: G. Trentanove

OWNER City of Marquette

MEDIA Sculpture: Cast Bronze
Pedestal: Concrete and Sandstone

LOCATION North of 501 E. Front Street,
Marquette, MI

FOUNDRY/FABRICATOR: F.^{LLI} GALLI

DATES Creation: 1897
Installation: 1897
Dedication: July 15, 1897

SIGNATURE/MARKINGS:
Proper Left Side: G. TRENTANOVE FECIT
Proper Right Side: F.^{LLI} GALLI FUSERO FIRENZE
1897

DIMENSIONS
Sculpture: 90" H x 36"W x 31"D
Pedestal: 134" H x 114" W x 114"D
Overall: 224" H x 114"W x 114"D

INSCRIPTIONS
Front: *JAMES MARQUETTE/INTREPID EXPLOREI*
Back: *PRESENTED TO THE CITY OF
MARQUETTE/JULY 15TH, 1897*

PLAQUE: 17 7/8"W x 15 7/8"H x 3/8"D, bronze; *CCAM/ CONCERNED CITIZENS FOR THE ARTS IN MICHIGAN/ ARTS AWARD/ PRESENTED TO ART ON THE ROCKS FOR OUTSTANDING ACHEIVEMENT IN THE ARTS BY GOVERNOR JAMES J. BLANCHARD/ MAY 23, 1985.*

DESCRIPTION: Father Marquette is standing in contrapasto, fully dressed in robe and cloak with rosary beads and cross tucked into waistband. He is holding a map in right hand, has a full beard, deep-set eyes and is facing north.

RELIEFS: There are two bronze relief sculptures installed in the pedestal, one on the right side and one on the left. They each measure 27"W x 21 1/2"H. The proper left side relief depicts the explorers in a canoe. The proper right side relief depicts Father Marquette speaking to a group of Native Americans.

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Notes on Condition

The object structurally is in stable condition. The casting/fabrication is of fair quality. The monument is composed of approximately 10 cast pieces which were visually counted. It appears that some sections were sand cast (base) and the balance cast with classical investment.

The entire sculpture was previously painted with a bronze color paint. When paint was removed the exposed surfaces were somewhat rough and clean, indicating that possibly the monument was sand-blasted before it was painted. Tar and egg/shell remnants were evident.

Foundry patches/plugs both round and rectangular were visible, ranging from 3/4" up to 1 3/4" throughout. No missing elements were noted on the figure of Father Marquette. Although some of the cast sections were visible, no significant cracks, gaps, or joint separations. However, some large holes and porosity was observed throughout. There were no iron stains from iron core pins.

The two reliefs mounted on the pedestal were found to be in the same condition as stated above for the statue, although small parts were missing from each. On the proper left side relief, both hands from first figure on left, the arm of third figure from left, and the head of far right figure were found to be missing or broken off. On the proper right side relief the middle section of the ore was found to be missing.

The pedestal had a moderate amount of chipping and some cracking. There were also a few man-made markings/carvings/initialing.

Report of Treatment

The treatment started on 9/27/04 and ended 10/2/04 (one week). The work was performed from scaffolding erected around the monument.

A total of 2 weep holes were opened at his arms, at the low points of internal cavities, all size # 7 drill so that they can be plugged if needed, with 1/4"20 bronze rod.

The paint was removed using solvents (MEK, Acetone) with small stiff nylon brushes and rags. The tar was removed with mineral spirits and the egg/shell remnants with detergent and the pressure washing.

The cleaning of the bronze monument consisted of washing with a non-ionic detergent (Igepal), soft bristle brushes, bronze wool, and medium-intensity water-wash (1500 psi). After thorough cleaning, minimum localized hot patination was performed as needed on bare exposed surfaces. Solutions of Potassium polysulfide, Ferric nitrate and some Cupric nitrate were used, as traditionally foundry-applied patinas. All surfaces were thoroughly flushed after each application to remove all chemical residues.

The patination process on a weathered bronze can be considered primarily a modulation procedure (retaining a translucent quality, in which the underlying layers of color differentiation are blended but not obscured). The objective was to incorporate whatever is known about the original appearance with the fact that the art object has aged. The appearance was of a well maintained, aged outdoor bronze sculpture.

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After the patination process was completed, the object was treated by applying benzotriazole (BTA), a copper-alloy corrosion inhibitor (a 3% solution in water, isopropyl and ethyl alcohols) to warm metal, and thoroughly rinsed.

The next step was the application of the protective coating. When completely dry, three coats of wax were then applied. The initial coat was applied to heated metal, which causes the wax to flow and permeate the porous cast metal providing superior protection against corrosion. This method of application is considered to be superior as it provides an integral coating across the surface. It has a darkening effect as it saturates the patina and weathering products, causing them to become translucent and permitting the metal to become more visible. The next two coats were applied cold. The first two coats of wax contain 85% Victory White microcrystalline wax, 12% Polywax 2000 polyethylene wax, and 3% Cosmoloid 80H hard microcrystalline wax. The final coat of wax contains an additional 20% carnauba wax. All waxes were prepared as a paste in a solvent base of mineral spirits. When dry, each coat was buffed with soft brushes and no-lint cloths.

Between coats, pigmented hard microcrystalline wax was used to plug and seal small holes, cracks, porosity/gas, and separations to prevent the ingress of water. The final coat was carefully buffed to highlight and enhance the form and texture of the objects. The final appearance is of a somewhat mottled but uniform patina, varying from bronzy brown to dark brown, approximate and present an appropriate well-maintained, aged appearance.

The missing pieces will be recreated and installed by a local artist and professor at NMU.

Maintenance Considerations

The recommended and applied coatings are best maintained on an annual basis. This consists of the sculpture being first wet-down, and then washed with a non-ionic detergent, and soft bristle brushes. The surfaces are rinsed, with low to medium pressure water (not more than 500 psi), paying particular attention to spray water on those surfaces, which are not accessible with brushes, in order to loosen and wash away accumulated deposits. Sufficient time needs to be allowed for the metal to completely dry before wax is applied.

Clear paste wax is applied sparingly (stipple) with brushes to the metal surface, taking care to remove as little of the existing wax as possible. Pigment should not be required. The wax requires at least eight hours to dry. Overnight drying is recommended so the following morning, the wax can be buffed-out while the metal is still cold. Buffing should be done with soft brushes and cloths that do not leave lint. Weep holes should be inspected at this time and cleared of any debris.