



Smithsonian  
*Museum Conservation Institute*

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Mr. Shane L. Dettman, AICP  
Senior Urban Planner, Urban Design and Plan Review  
National Capital Planning Commission  
401 9<sup>th</sup> Street, NW – Suite 500  
Washington, DC 20004

Dear Shane:

I am writing in response to your request that I provide my opinion as to whether the base materials and tapestry structure of the Eisenhower Memorial tapestry meet the durability criteria of the Commemorative Works Act (CWA). I have read the "Eisenhower Memorial Tapestry Engineering and Technical Data Summary" and "Eisenhower Memorial Submission for Preliminary Design Approval," both submitted August 31, 2012, as well as a shadow study submitted in 2007. I also participated in a visit to see sample tapestry panels at the Soldiers' Home on July 31, 2012. I write from the point of view of a conservator with experience in the care and treatment of outdoor sculpture.

Both 316L and 317L stainless steel are known to have excellent corrosion resistance in outdoor environments and meet the durability criteria of the CWA. I cede authority to corrosion experts at the National Institute of Standards and Technology and Army Research Laboratory to choose between them. I concur with them that the greatest concern is not with the stainless-steel alloy but with the welds, since welding creates slightly different metallic compositions leading to corrosion. I also expect that it may be difficult to achieve good welds for the braided cables that create the tapestry images. Pickling and passivation of the tapestry panels after fabrication seem like a wise course of action, given the discolorations that we saw on tapestry samples at the Soldiers' Home. Further testing should definitely be done on small samples of robotically welded tapestry once they become available. I understand that for the moment my colleagues have rejected the idea of installing sacrificial anodes or applying current to prevent corrosion of the tapestry. If provision for applied current can be easily incorporated into the design, however, it might make implementation much easier to achieve in future, should it be found to be desirable.

From my standpoint the tapestry structure also meets durability criteria of the CWA. I especially like the fact that tapestry panels will be removable. This will facilitate treatment when a panel becomes damaged. Fabrication of a complete second set of panels that could be used for replacement is also desirable, although obviously storage and cost would be an issue.

As a conservator, I expect soiling is likely to be a significant maintenance problem for the tapestry given the many layers of cable and wire that we saw on the handmade samples at the Soldiers' Home: as many as seven on each face for a total of 14! Not only will dirt contribute to poor

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appearance, but it will increase corrosion of the stainless steel. Guano may also disfigure the tapestry, since I expect that the box beam at the top will be an appealing perch for birds, and nesting may also occur. While it is not possible at this stage to determine how often the tapestry will require cleaning, I submit that the recommendation of a simple "wash-down on a yearly basis" with water and soap or a mild detergent, as proposed in 6.1 of the Engineering and Technical Data Summary, is likely to be too infrequent. For outdoor bronze sculpture, quarterly washing is considered the ideal, if not often achieved. Given the size and height of the tapestry (80 feet), a large lift may have to be used that will require placement on a firm support such as concrete. The tapestry maintenance access diagram (Eisenhower Memorial Submission for Preliminary Design Approval, p. 240) instead shows grassy areas for most of the tapestry "lift paths." It is hard to imagine that a safety officer would approve placing the lift in a swale, as illustrated in the same report on page 241.

Results of the shadow study prepared in 2007, which showed that the large tapestry will be in the shade for at least half the year (when the sun is low in the sky), suggest that the large tapestry will be slow to dry out, which should increase corrosion. Shade is also likely to increase algal growth on the limestone structures of the memorial, forming unsightly black deposits in the manner of those on the adjacent Wilbur J. Cohen Building made of Indiana limestone.

As might be expected, Frank Gehry is endeavoring to produce a unique artwork for the Eisenhower Memorial, and personally I found the tapestry samples at the Soldiers Home quite lovely. I look forward to providing continued assistance to the National Capitol Planning Commission in carrying this project forward.

Sincerely,

A handwritten signature in dark ink, appearing to read "Carol A. Grinn". The signature is fluid and cursive, with a large, stylized initial "C".