

# OFFICE MEMORANDUM



MICHIGAN

STATE HIGHWAY DEPARTMENT

September 12, 1966

To: R. L. Greenman, Secretary  
Committee for Investigation of New Materials

From: E. A. Finney

Subject: "Surface Modified 1M" Metal Coatings (Dow Chemical Company,  
Research Project 66 NM-157. Research Report No. R-605.

In accordance with your letter of August 26, 1966, descriptive literature and panels submitted by the manufacturer have been reviewed. Comments concerning this aggregate-portland cement-binder-water mixture may be summarized as follows:

1. For: The material has the potential of being applied as a heavy coating (about 1/16-in. thick) in a single spray application presumably for protection of structural steel. Coatings on the panels submitted are tough and not brittle. Possibly the material could be used as a coating over galvanized beam guard rails, since it is similar in appearance to Witco-Guard.

2. Against: The coating's rough surface texture would foster dirt collection and retention. Being a latex mixture, it has application temperature limitations of 50 to 90 F, as indicated in the company literature. Care must be exercised in storing latex materials to keep the emulsion from breaking.

The coating appears to be a modification of Dow's portland cement latex grout, which the Department has under test for repair of shallow spalling on several concrete bridge decks. In these experimental applications, it has given fair to good performance. If the producer has case histories concerning performance of this material in field exposure as a steel coating, they would be of interest. Its potential as a bridge steel coating would be enhanced if the mixture were formulated to a finer texture.

OFFICE OF TESTING AND RESEARCH

A handwritten signature in cursive script that reads "E. A. Finney".

E. A. Finney, Director  
Research Laboratory Division

EAF:AJP:jcb

cc: A. J. Permoda