

OFFICE MEMORANDUM

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MICHIGAN

DEPARTMENT OF STATE HIGHWAYS

April 15, 1966

To: W. W. McLaughlin
Testing and Research Engineer

From: E. A. Finney

Subject: ASTM A 242 Corrosion Resistant Steel (Mayari-R) Panels in Field Exposure Tests on Eight Mile Road Structure in Detroit. Research Project 62 G-122. Research Report No. R-574

In accordance with J. E. Meyer's letter of October 29, 1965 to T. E. Gunn of the Bethlehem Steel Corp., and with your subsequent approval, the Research Laboratory Division cooperated with the Office of Construction and Bethlehem Steel in installing five assemblies of subject test panels on a steel beam of the lower level of the Eight Mile Road (M 102) structure over I 696 in Detroit. The assemblies were installed on March 15, 1966, as shown in Figures 1 and 2, on a structure utilizing the A 242 corrosion resistant steel.

The purpose of the tests is to determine the loss of this steel due to corrosion, as measured in actual environment of the structure. The five panel assemblies are to be removed, one at a time, at tentatively scheduled intervals of 1/2, 1, 2, 4, and 8 years from date of installation, and transferred to Bethlehem Steel for the determinations. The separate panels, with twelve to each assembly, have been weighed, numbered, and positioned in the assemblies to represent the various surfaces of a bridge beam. The numbering and positioning sequence of the panels in the different assemblies is given in Figure 3.

Bethlehem Steel has arranged to expose a duplicate set of five assemblies on the roof of a nearby building for comparative purposes, and to determine the accelerated corrosion resulting from roadway exposure.

A. J. Sinelli arranged for the installation of the assemblies by the Wayne County Road Commission, under supervision of S. W. Curtiss.

OFFICE OF TESTING AND RESEARCH

E. A. Finney, Director
Research Laboratory Division

EAF:AJP:jcb

cc: J. E. Meyer

C. B. Laird

P. A. Nordgren

A. J. Sinelli

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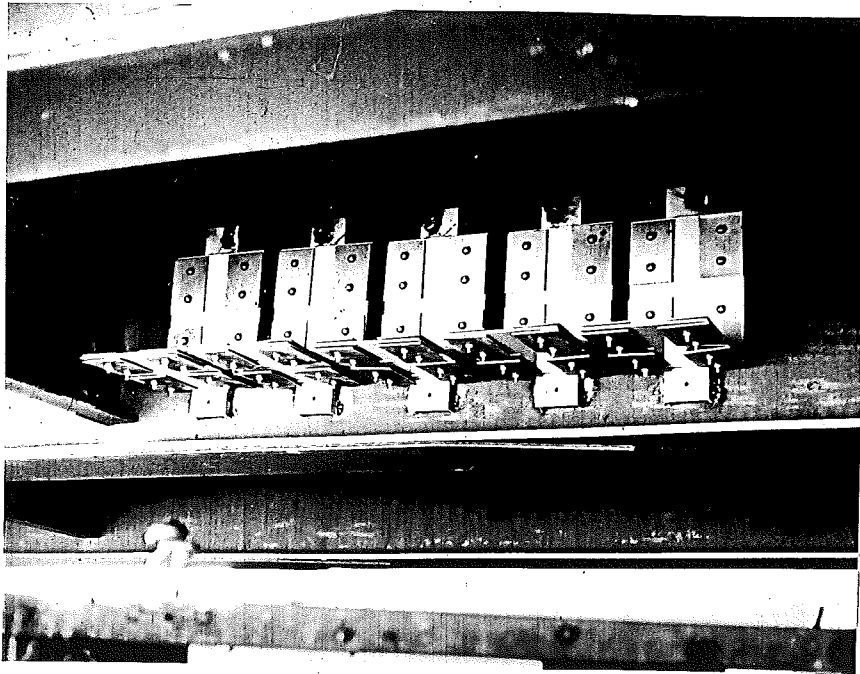
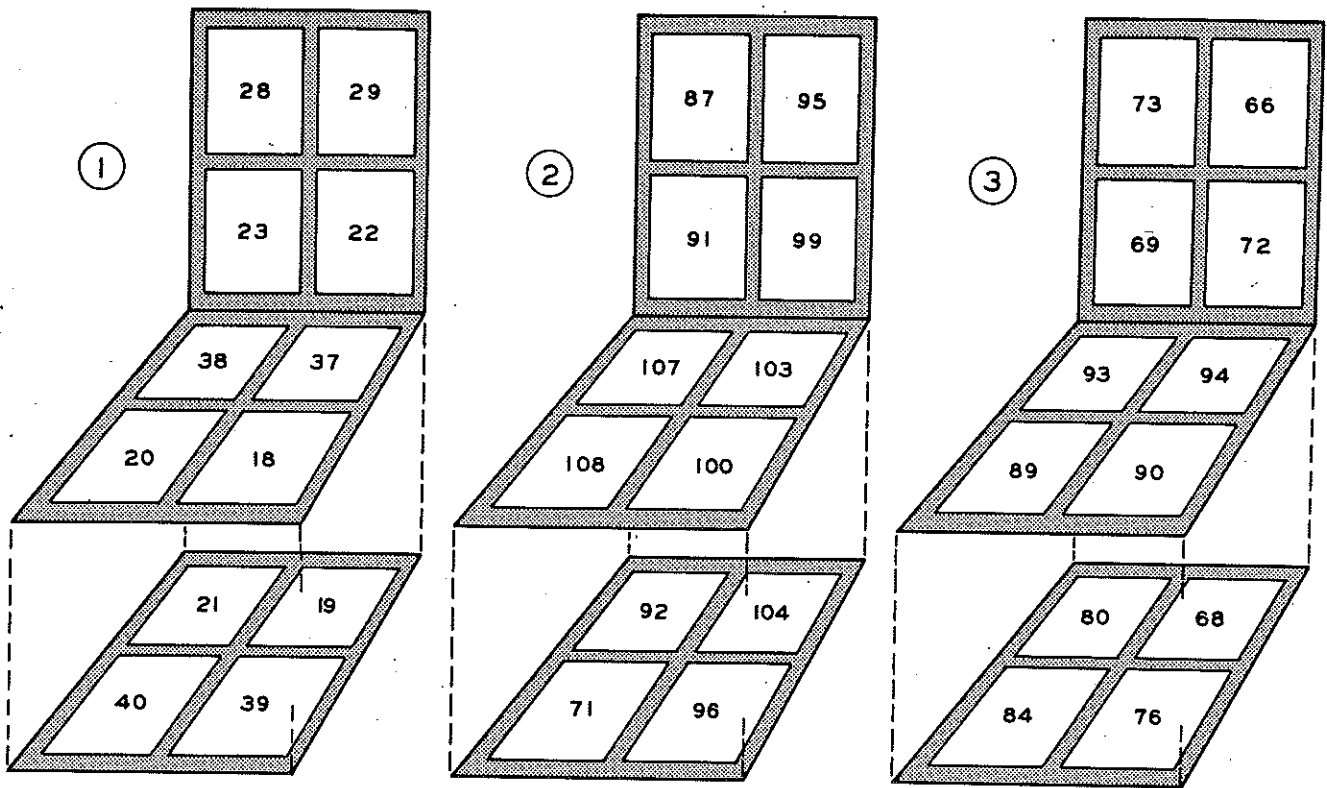


Figure 1. Original appearance of test assemblies installed on north face of interior beam of Eight Mile Road (M 102) structure. Assemblies numbered 1 to 5 from left.



Figure 2. Location of test assemblies (indicated by arrow) over traffic lane on southbound I 696 in Detroit under Eight Mile Road.



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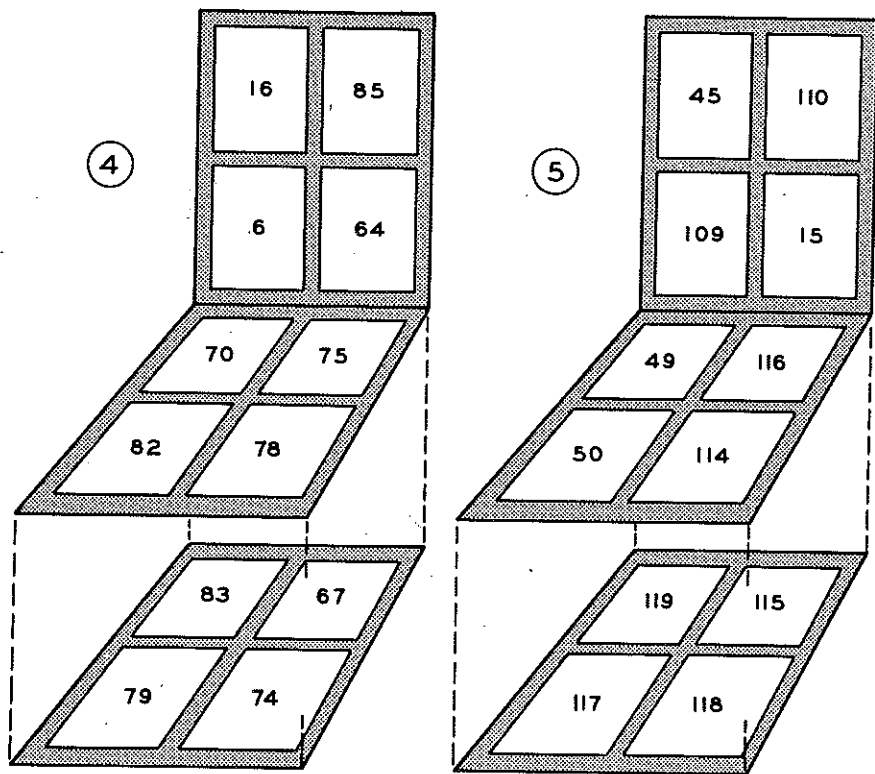


Figure 3. Schematic drawing of five exposure test panel assemblies on lower level of Eight Mile Road (M 102) structure over I 696 in Detroit.