

# OFFICE MEMORANDUM

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MICHIGAN  
DEPARTMENT OF STATE HIGHWAYS

April 15, 1966

To: Traffic Control Devices Committee:

H. H. Cooper, Chairman

J. J. Becker

J. L. Byers

W. W. McLaughlin

H. J. Rathfoot

F. W. Gillespie

From: A. J. Permoda

Subject: First Progress Report on 1965 Traffic Paint Performance Tests.  
Research Project 47 G-36(18). Research Report No. R-577.

This progress report is presented for review by the Committee at its annual Spring meeting. The following producers submitted paints for the 1965 tests, currently in progress:

1. Argo Paint and Chemical Co. of Detroit.
2. Baltimore Paint and Chemical Corp. of Baltimore.
3. Forman Ford, Inc. of Minneapolis.
4. Glidden Co. of Cleveland.
5. Jaegle Paint and Varnish Co. of Camden, N. J.
6. Prismo Safety Corp. of Huntingdon, Pa.
7. Sherwin-Williams Co. of Detroit.
8. Standard Detroit Paint Co. of Detroit.
9. Truscon Laboratories of Detroit.

Compared to 1964, this list has two deletions (Stiles Co. and Tropical Paint) and one addition (Forman Ford).

The current tests differ from past tests in that the Committee authorized each producer to submit two samples of white paint for evaluation, one being his regular product and the other a premium or quality paint of potential value in improving quality of Michigan striping. The Committee resorted to this procedure in its program to upgrade the quality of the submitted paints. Table 1 lists six-month service factors or road performance ratings of 1965 test paints, showing that each producer's two whites were nearly identical in ratings, except for one producer whose paints (Nos. 90 and 102) differed significantly with ratings of 73.5 and 67.8. Even though a larger spread in the ratings may be anticipated in the additional six months of exposure through test completion, these comparative ratings indicate no significant improvement of quality in the second paint submitted by each producer for the current tests.

Table 2 lists Six-Month Service Factor ranges for the period 1961-65, indicating no significant change in performance of the best white and yellow paints tested each year over the five-year period, considering the progressively increased traffic volumes to which road performance stripes have been subjected. However, the range has shown a narrowing trend, due to the Committee's policy of excluding producers of poor performing paints.

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Paints submitted for the 1965 tests were put down August 5 to 12, 1965 in four areas, as usual, with two areas on US 27 south of St. Johns substituted for those used on US 27-M 78 and M 43 in 1964 and earlier tests. Specific locations are shown in Figure 1. Two whites and one yellow paint were deleted from the field tests because of failure to meet specification requirements; others were borderline in meeting the requirements, with the following deficiencies:

1. Argo: Yellow--excessive bleeding index on asphalt base and borderline in meeting color standard, causing deletion from field tests. Whites--excessive bleeding index on asphalt base and borderline on tar, and low settling index, causing one's deletion from field tests; other white had borderline bleeding indexes on both asphalt and tar bases.
2. Baltimore: One white had a borderline low settling index.
3. Forman Ford: Yellow--borderline in meeting color requirements because of fluorescence. One white--borderline bleeding index on asphalt base.
4. Glidden: Yellow--borderline in matching color standards. One white--borderline bleeding index on tar base.
5. Jaegle: Yellow--borderline in matching color standard.
6. Prismo: Yellow--borderline in meeting color requirements because of fluorescence.
7. Sherwin-Williams: Yellow--borderline low settling index and failed vehicle stability test. Whites--both had low viscosity and failed vehicle stability test; one also had excessive bleeding index on a tar base and was deleted from field tests.
8. Standard Detroit: One white--borderline low color reflectivity.
9. Truscon: Yellow--borderline in matching color standard.

Of the 27 paints received for current tests, 12 met all specification requirements, 9 were borderline, and 6 failed. In this respect, compliance to requirements is poorer than the average.

The nine producers listed should be notified of the deficiencies of their respective products when Requests for Bids are next placed for performance paint testing. These notifications should emphasize that a paint's failure to meet any of the specification requirements is cause for disqualification from field performance tests, and therefore from subsequent bidding on roadway striping requirements.

Specifications to accompany the Requests for Bids are those dated April 1, 1966.

#### Experimental Paints and Beads

No experimental paints are being evaluated in the 1965 performance tests, other than the second white paint from each of the producers.

High-intensity non-colored glass beads from two producers, Cataphote and Flex-O-Lite, are under exploratory field evaluation, each in one yellow paint in two test sections. Results of laboratory tests were submitted last Fall before the November 19, 1965 Committee meeting, where they were discussed.

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Cooperative Tests

As in the past few years, the Department cooperated with Wayne County and the City of Detroit in depositing their performance stripes. The Wayne County stripes were laid on concrete of Beech-Daly Road on August 24, 1965, and on bituminous of Middle Belt Road on September 2, 1965. The Detroit stripes were laid on black-top of Oakland Avenue on July 15, 1965. These will be rated in early April, as in the past.

OFFICE OF TESTING AND RESEARCH



A. J. Permoda, Supervisor  
Materials Research Section  
Research Laboratory Division

AJP:jcb

cc: E. A. Finney  
Traffic Paint Subcommittee

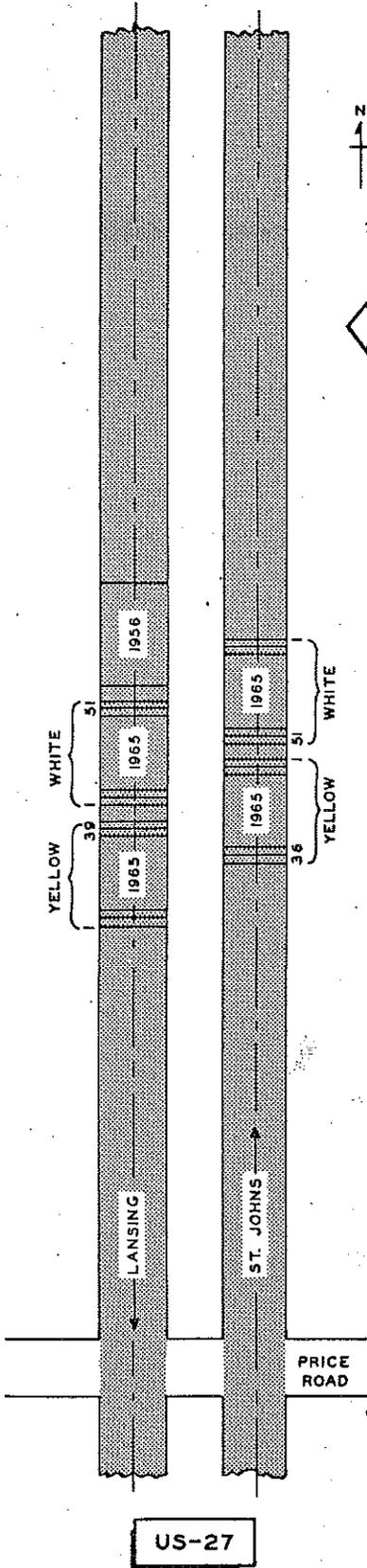
TABLE 1  
1965 SIX-MONTH SERVICE FACTORS

Paint Number	White	Paint Number	Yellow
80	--	79	70.2
97	66.5		
82	71.3	81	74.9
98	71.4		
84	74.5	83	79.9
99	74.6		
86	74.7	85	78.1
100	75.0		
88	74.3	87	76.5
101	75.9		
90	73.5	89	74.7
102	67.8		
92	75.4	91	74.1
103	74.6		
94	--	93	--
104	63.6		
96	76.3	95	70.5
105	77.4		

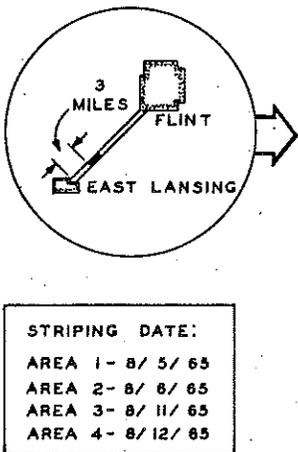
TABLE 2  
SIX-MONTH SERVICE FACTOR RANGE: 1961-65

Color	1965	1964	1963	1962	1961
Whites	77-64	74-52	79-46	80-56	81-57
Yellows	80-70	77-66	81-49	84-57	85-54

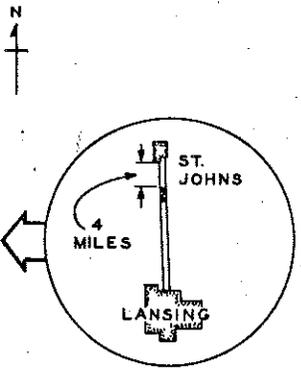
TEST AREA 3, 22' CONCRETE, CONSTRUCTED 1952



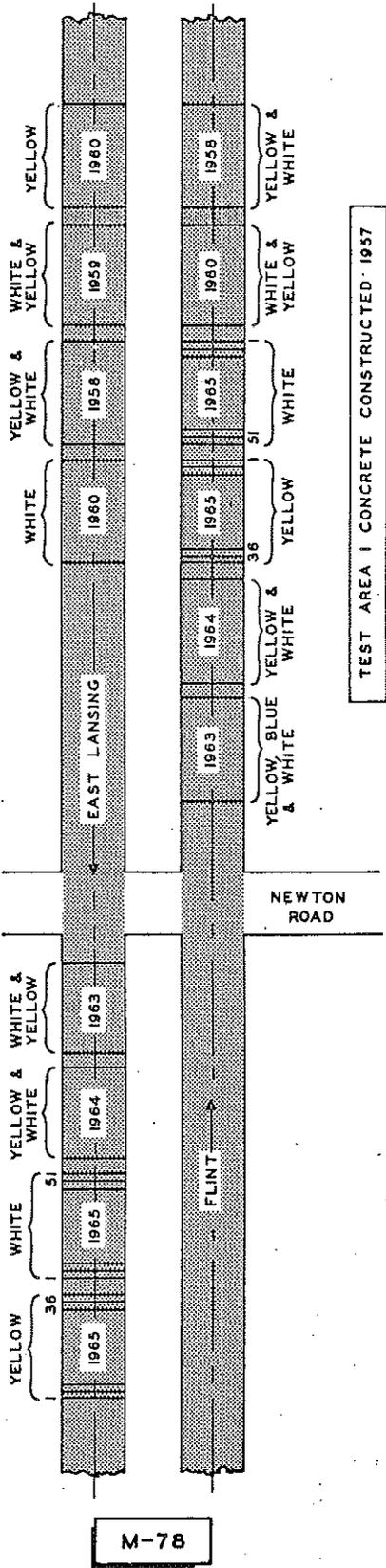
TEST AREA 4, 24' BITUMINOUS, RESURFACED 1964



STRIPING DATE:  
 AREA 1 - 8/ 5/ 65  
 AREA 2 - 8/ 8/ 65  
 AREA 3 - 8/ 11/ 65  
 AREA 4 - 8/ 12/ 65



TEST AREA 2 BITUMINOUS RESURFACED 1957



TEST AREA 1 CONCRETE CONSTRUCTED 1957

Figure 1. Location of 1965 Traffic Paint Performance Test Areas.