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**RESEARCH UPDATE**

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Update U96-16

**EPOPLEX EPOXY PAVEMENT MARKINGS**  
(INTERIM REPORT)**REFERENCE:**

WP 94-R-23, U94-16, U95-2.

**HISTORY:**

In November 1994, EPOPLEX epoxy paint was applied as edge and centerline pavement markings on 1.73 miles of US 302 as part of the Barre F 026-11(36)S project. The project was surveyed for durability and reflectivity on April 18, 1995 and received an excellent rating. Reflectivity readings indicate that the product is adequately visible during night and adverse conditions. Ten readings were taken, with the averages being 140, 309, and 160 millicandelas.

**PRODUCT:**

EPOPLEX LS5, a two component, 100% solids, epoxy coating material was selected for this project. LS5 is designed to be a rapid setting highway marking offering durability and abrasion resistance. Drying time is estimated to be 10 minutes at 77°F.

**INSTALLATION:**

The markings were applied on November 16, 1994, with the ambient and surface temperatures being 40°F and 43°F, respectively. Tests indicated that the average thickness of the epoxy was 23 mils. The material developed a dry, durable skin, so that no vehicle tracking problems were noted. It took approximately 20 minutes to totally dry through, due to the cold conditions.

**STATUS:**

The epoxy markings, which are estimated to have a life of four years, appear to be performing well. In 1995 the centerline had some slight scalloping which occurred at random locations on one quarter to one third of the project length. Edgeline damage was limited to only a few occasional 2" by 2" chips. These losses were most likely due to snowplow scraping. Upon inspection in 1996, this damage had increased with some parts of the center line missing. Even with this loss, the line has remained visible to drivers and is performing as would be expected after 2 winters of exposure.

Because of safety concerns, the yellow center line was measured for reflectivity at one location, while the white edge line was tested at three separate sites: MM 2.65, MM 2.10, and MM

1.40. Five different readings were taken on the white edge line at each site while only one reading was observed on the center line.

<b>MM</b>	<b>EdgeLine</b>			<b>CenterLine</b>	
	<b>4/95</b>	<b>5/96</b>	<b>8/96</b>	<b>5/96</b>	<b>8/96</b>
1.40	160	149	129	131	--
2.10	309	174	127	87	--
2.65	140	169	61	--	45
Average	203	164	106	109	45

The August 1996 readings were measured by a LTL 2000 reflectometer while all other readings used the MiroLux 12. As of August 1996, the average readings on the white edge line were just above the Agency's unofficial low limit of 100 mcd. It may be expected that by the summer of 1997 the reflectivity will be at a point where restriping will be required.

**FOLLOW UP:** The material will continue to be evaluated with emphasis on durability and reflectivity. Additional data and surveys will be conducted, culminating in a final report, to be issued at the end of service life.