

TECH NEWS

TECHNOLOGY NEWS

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Dollars and sense of urban pavement markings

Drivers in Lawton, Iowa, were having trouble following new lane lines after a 1.2-mile section was converted from a four-lane undivided road to a three-lane road. Scars from old pavement markings and joint lines confused drivers, making it difficult for them to stay in the correct lane.

Learning about the problem, engineers with the Iowa DOT used Traffic Safety Improvement Program (TSIP) funds to help the community and, at the same time, to compare two pavement marking products.

They installed 3M's 820 wet reflective tape for the turn bay lane lines. They also installed raised pavement markers to supplement the painted median and turn bay lane lines.

At nearly \$70 apiece, the raised markers were far more expensive than the reflective tape at \$2.50 per foot. (Standard waterborne paint markings cost between \$0.05 to \$0.10 per foot.)

The engineers wanted to compare the performance of these two products. Recognizing that cost doesn't always directly relate to quality, they evaluated whether the higher cost of raised pavement markers was worth the investment.

Two years later

The raised pavement markers were fantastic when new but, after two years of service, had lost 80–90 percent of their retroreflectivity.

The reflective tape, on the other hand, was still effective at the end of two years. Because it was installed in grooves, it suffered only minimal damage from snow plows.

In fact, the tape performed so well that it's being used for the dashed lane lines on I-35 between Des Moines and Ankeny.

For more information

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Editor's note

This article is part of a series highlighting projects funded by the Traffic Safety Improvement Program (TSIP). For more information about TSIP, contact Tim Simodynes, traffic and safety engineer, Office of Traffic and Safety, Iowa DOT, 515-239-1349, tim.simodynes@dot.state.ia.us.
