

Michigan Tests New Asphalt Mix

Crumb rubber added to pavement to prolong road life

Michigan Department of Transportation (MDOT) officials will use a rubberized asphalt mix on three test sections of a road repaving job in Lunsing, MI. The project which is one of the last for the 2011 paving session, will include drainage improvements, sidewalk ramp upgrades and other repairs.

The crumb rubber is expected to give a longer life to the road, making it less likely to crack and also is quieter - up to three decibels - than typical asphalt, MDOT officials said.

"The most important thing is performance. If it performs as good or better than the asphalt used now, hopefully this technology will be utilized more in Michigan," said Michigan State University (MSU) assistant professor M. Emin Kutay, who is leading the research in MSU's Department of Civil & Environmental Engineering.

Kutay and several graduate and undergraduate researchers spent last year investigating several ways of adding crumb rubber to asphalt and the resulting combination's effects.

Researchers found that an effective mixture is made by blending the ground tire at high temperatures with the asphalt binder so the tire melts into the binder, and the binder changes its chemical composition, Kutay said.

Lab results showed the crumb rubber-modified asphalt performed better than conventional asphalt alone. The next step is to test the mixture in the field.

The three segments that will be tested have the same crumb rubber-modified mixture, but different thicknesses. A thinner layer of the rubber modified asphalt could work just as well as a thicker layer of asphalt, Kutay said, which would save officials money on materials in the future.

Although the mixture has been tested and used in other states, such as California and Arizona, this will be the first test in Michigan, Kutay said.

A portion of a Michigan Department of Environmental Quality grant for \$450,000, along with funding from the Federal Highway Administration's Surface Transportation Program and a 20 percent match from the Ingham County Road Commission is making the \$1.06 million project possible.

Ingham County Road Commission's managing director, Bill Conklin, said he was approached by MSU officials regarding the research project and if successful, the new asphalt mixture will have economic and environmental benefits. Kutay said he'll monitor the roadway with help from the county for the next several years. ♦



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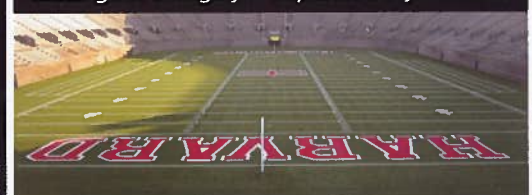
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