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Problem:

Block and reflective cracking

Solution:

Modified triple chip seal

Success Story: Chip Seal/Modified Chip Seal

In 2005, the Georgia Department of Transportation (GDOT) moved away from chip seal treatments due to vehicle damage caused by loose stone and friction loss due to bleeding. Recently, however, GDOT sought to bring the process back by changing both the construction methods and the materials used. The GDOT Maintenance Department determined that a pilot project, called a triple chip seal, would be the most appropriate way to test the new approach.

A 9.5-mile section of SR 233 in Wilcox County, south of Hawkinsville, GA, was selected to be the location for the pilot project. The roadway was affected by both block and reflective cracking and required resurfacing. It was an important goal for the county to conserve funds while preserving the roadway and protecting their investment.

While typical chip seal methods were not recommended to address these types of distresses, the triple seal method would provide the layer thickness and extra binder to repair the pavement failure. The construction practice consisted of sequential application of progressively smaller aggregates; ASTM#7s followed by #89s and then washed #10s. This approach resulted in a much smoother surface, significantly reducing the potential for windshield damage. The use of CRS 2P was required as the emulsion ensured a polymer-modified binder, which assisted in aggregate retention and reduced the potential for bleeding.

GDOT Maintenance Forces performed the project with no construction issues. To date, the road's life has been extended by eight years, and the road is not expected to require any additional treatments for the foreseeable future.

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