



Project Number
BE965

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Green Bike Lane Evaluation for Florida Pavements

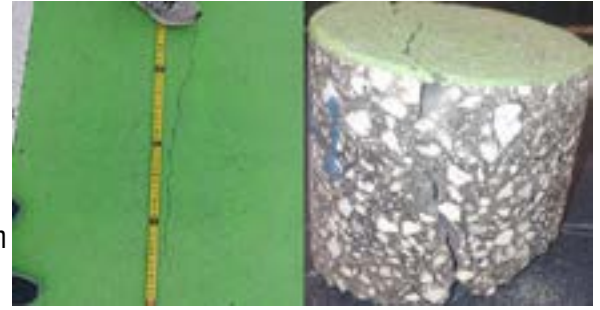
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Current Situation

Pedestrians and bicyclists often interact with motor vehicles in a shared roadway environment, which can be deadly. To promote safety and reduce the risk of serious injuries and fatal crashes, the Florida Department of Transportation (FDOT) began experimenting with using green-colored pavement markings (GCPM).

Over the years, FDOT has found that some GCPM installations were prematurely failing due to cracking, pavement deterioration, and delamination—something which the guidance provided by the Manual of Uniform Traffic Control Devices (MUTCD) did not provide best practices for preventing.

FDOT contracted the Texas A&M Transportation Institute to investigate the subject.



The Texas A&M Transportation Institute research team performed a lab investigation of cores collected from different GCPM installations in Florida to determine the extent and possible cause of distress in the pavements.

Research Objectives

The objectives of this research were to identify the causes of the premature failures in GCPM and to produce guidelines and improved specifications for future installations and material testing.

Project Activities

Following a literature review, the Texas A&M Transportation Institute research team interviewed suppliers, community partners, and a material testing laboratory to understand the state of the practice.

Then, the team visited existing GCPM sites in Florida and evaluated five types of GCPM materials (preformed thermoplastic installations, epoxy-modified acrylic, epoxy, paint, and methyl methacrylate) across 30 installations and developed a summary of the distresses observed at each site.

Next, the team identified four research needs that could improve the state of practice of GCPMs in Florida and conducted a series of experiments to address each need, including testing chromaticity and luminance, water exposure and other types of weathering, direct tension, and thermal compatibility.

The team then used the evaluated data to revise the FDOT specifications and test methods as well as develop guidelines for GCPM materials and installation.

Project Conclusions and Benefits

FDOT is now better equipped to improve the service life of new GCPM installations. View the FDOT Green Colored Pavement Markings Guidelines [here](#).

For more information, please see fdot.gov/research.