PROJECT OVERVIEW

DEERFIELD BEACH COLLEGE PARK AREA - FLORIDA

Florida Department of Transportation
Automated High Friction Surfacing Treatment

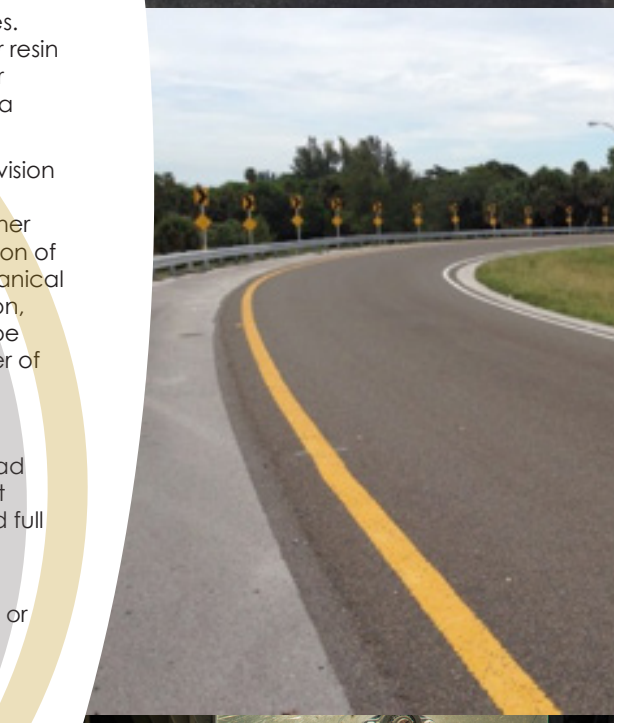
Statewide high speed ramps and intersections had been the subject of safety upgrades over the years, which initially slowed the volume of off-road incidents, especially in wet weather conditions. However, the incidents of vehicles destroying protective guardrails, leaving the highway completely, and rear-end collisions became the norm at heavily trafficked ramps and intersections.

In order to combat this, FDOT began using a special asphalt mixture on all of its high speed ramps - an open graded friction course (OGFC). This pavement is designed to increase friction as well as drain water from the pavement. Though the new pavement type provides a smoother driving surface, it lacks friction; something had to be done to reduce the number of serious injury crashes.

Project Highlights

The use of OGFC presented an engineering challenge to DBi Services. HFST applications are typically installed with a single layer of polymer resin binder and high friction bauxite aggregate. However this single layer application would not perform long-term on the OGFC pavements; a different approached was required.

An engineered specification was designed by the FDOT materials division in combination with DBi Services and input from other state highway agencies with OGFC experience. A standard installation involves either retrofitting an existing pavement or installing on a newly paved section of OGFC. To meet the requirements of the FDOT specification, a mechanical continuous application with precise controls must be used. In addition, the application technique involves an initial thinner layer of HFST to be installed at full-lane width followed by a second wearing course layer of polymer resin binder and high friction bauxite aggregate.



Relevant Experience Gained

- HFST does not bond to the existing thermoplastic striping and road symbols; these must be removed prior to the application. Do not apply permanent road markings onto HFST until after the second full location sweep.
- When specifying HFST on intersections, apply the process at a minimum of 300 linear feet back from each stop bar, traffic light or stop sign for the maximum friction generating stopping power.

Value to Customer

- Because FDOT discourages all daytime traffic closures, by DBi utilizing its fully-automated, specification-compliant, high volume capacity application equipment, installations were completed within the allotted time frames with no additional traffic closures.
- For nighttime operations, DBi Services' application trucks are self-lit with their own power plants to generate bright light for visibility and worker safety, removing the need for additional pieces of equipment such as light towers.
- HFST is classified by the Federal Highway Administration as a low-cost safety countermeasure.
- Safe, predictable, fast and continuous application.

High Friction Surfacing Treatments are eligible for federal and state funding through HSIP (Highway Safety Improvement Programs)

DBi SERVICES
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