

**Request for Research Funding for FY 2020-2021**

<b>Requesting Office</b>	State Materials Office (SMO)	<b>Priority</b>	SMO 8 / 10
<b>Proposed Title</b>	Review of Open-Graded Friction Courses Suitable for Suburban Environments		
<b>Justification</b>	Open-graded friction courses provide a skid resistant surface and allow the rapid removal of water from the roadway surface. This type of friction course is used on multi-lane roadways with a design speed of 50 mph or greater. While open-graded friction courses are critical for driver safety, they tend to ravel and rut prematurely; particularly at signalized intersections and other locations where acceleration, deceleration or turning movements are common. As rural parts of Florida become more urbanized, roadway sections with open-graded friction courses are exposed to more challenging traffic movements, which potentially accelerate failure. The objective of this research is to determine alternative friction courses that are more durable in suburban environments that will provide adequate friction and texture properties.		
<b>Impact</b>	As Florida urbanizes more rapidly, open-graded friction courses will be subjected to traffic movements associated with signalized intersections and turn lanes. These types of movements accelerate the failure of open-graded surfaces. This research will provide a more durable alternative which will prolong pavement life while still addressing safety aspects.		
<b>Affected Offices</b>	Materials, Maintenance, Construction, Design		
<b>Existing Work</b>	The Transportation Research International Documentation (TRID) and the Research in Progress (RIP) online databases were reviewed. Mixture performance data for some of the potential alternative mix types doesn't exist for some of the commonly used paving materials in Florida.		
<b>Keywords Used In Existing Work Search</b> <b>(Cannot leave blank)</b>	Open-graded friction course, high speed friction course		
<b>Related Contracts</b> <b>(Give contract numbers)</b>	N/A		
<b>Funding Request</b>	\$210,000	<b>Anticipated Duration</b>	24 months
<b>Project Manager</b>	Wayne Rilko	<b>Contracting Method</b>	RFP
<b>Urgency</b>	Score 1-5 1= highest, most immediate need	2: Open-graded friction courses continue to experience premature failures in more urbanized areas that experience significant amounts of acceleration, deceleration, and turning movements.	
<b>Implementability</b>	Score 1-5 1=greatest likelihood of and proximity to implementing results	1: This project will identify alternative friction courses that will provide increased durability and address the safety aspects needed for multi-lane, high-speed corridors.	

**Project Benefits (Succinct, complete explanation)**

This project will identify potential alternative friction courses that may be suitable for suburban, multi-lane, high speed corridors. The most promising alternative will be tested in the laboratory to determine the following properties: rutting resistance, cracking resistance, durability, permeability, friction, and texture. The project will include multiple aggregate types that represent those commonly used in Florida. The results from the project will be used to determine the best alternative friction course for these corridors that are currently experiencing premature pavement deficiencies.

<b>Project Benefits</b> <b>(Select all that apply and explain)</b>	<b>Quantifiable Benefits</b> <b>(units, dollars, etc...if applicable)</b>	<b>Methodology or Data Sources Used to Determine Quantifiable Benefits. If not applicable, please give justification of project benefits</b>
○ Materials Enhancement	Longer lifespan. Reduced resurfacing cycles.	The research will recommend alternative friction courses that have increased durability for suburban, multi-lane, high speed corridors. The use of these mixtures should increase the pavement life and reduce the frequency of resurfacing.
○ Materials Savings	N/A	
○ Time Savings	Reduced resurfacing cycles	Reduced resurfacing projects and less disruption to the public.
○ Lives Saved/Injuries Prevented	N/A	
○ Other (Explain)		

\*Comments should explain and support urgency, financial benefit, and implementability scores