

Request for Research Funding for FY 2024-2025			
Project Number (Research Center Use Only): SMO-25-11			
Requesting Office	State Materials Office	Priority	11 of 15
Proposed Title	Synthesis of the Current Design and Performance of Flooded State Roads in Florida		
Justification	This research will advance the Department's understanding of our current state of resilient roads. We have limited data that has been collected on roads that have been inundated by floodwaters and the condition of the pavement structure immediately following those events. This synthesis is meant to provide more data on the existing structure and performance of our pavements that have been subjected to inundation due to flood events.		
Impact	The results of this synthesis will provide a road map for further research on the topic of pavement resilience. Based on the outcome of the data collected during this synthesis, we should be able to identify specific areas of focus for follow-up research.		
Affected Offices/ Districts	Materials and Design Offices		
Existing Work	<ol style="list-style-type: none"> 1. "Case Study on the Impact of Flooding and Inundation on Pavement Performance," Article, Transportation Research Record: Journal of the Transportation Research Board, Volume 2677, Issue 7, pp 157-168 2. "Impact of the Great Flood of 2016 on the Asphaltic Concrete Road Infrastructure in Louisiana," Article, Transportation Research Record: Journal of the Transportation Research Board, Volume 2676, Issue 8, pp 463-474 3. "Full-Scale Experimental Evaluation of the Flood Resiliency of Thin Concrete Overlay on Asphalt Pavements," Article, Transportation Research Record: Journal of the Transportation Research Board, Volume 2676, Issue 4, pp 461-472 		
Keywords Used In Existing Work Search (Cannot leave blank)	Pavement inundation, flooded pavement		
Related Contracts (Give contract numbers)			
Funding Request	\$50,000	Anticipated Duration	12 months
Project Manager	Mary Jane Hayden	Contracting Method	RFP
Equipment	N/A	N/A	
Urgency	3	While there is not a high level of urgency or a specific timeframe associated with this synthesis, Resiliency is one of the top priorities for the Department. Continuing to move forward and make quantifiable progress is important.	
Implementability	3	This synthesis will be the first step in having a better understanding of our current level of pavement Resilience on State Roads. This effort will create a road map to guide future specifically-targeted research.	
Project Benefits (Succinct, complete explanation) The benefit of this synthesis is that the Department would have a collection of data regarding existing pavement structure and performance for the locations that have experienced inundation. Based on this data, we can then begin to determine designs and materials that work better than others (in terms of flooding). It is expected that this will lead to additional research that can provide focused recommendations for pavement designs and material selections for areas that are flood-prone, coastal, or have high groundwater conditions.			

Project Benefits (Select all that apply and explain)	Quantifiable Benefits (units, dollars, etc...if applicable)	Methodology or Data Sources Used to Determine Quantifiable Benefits. If not applicable, please give justification of project benefits
○ Materials Enhancement	N/A	Since this is a synthesis, it is too early to quantify benefits. It is expected that materials recommendations or additional research recommendations will be the outcomes.
○ Financial Impact	N/A	See above response.
○ Time Savings	N/A	See above response.
○ Lives Saved/Injuries Prevented	N/A	See above response.
○ Other (Explain)	N/A	See above response.

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