Request for Research Funding for FY 2021-2022			
Requesting Office	State Traffic Engineering and Operations	**Priority**	12 of 15
Proposed Title	Evaluating and Recommending Arterial Road Ranger Implementation in Central Florida		
Justification	It has been well established that large-scale incidents along arterials can block lanes and have significant impacts on the overall travel-time reliability of the region. The availability of a service patrol program can help law enforcement at the scene of the incident with many critical tasks such as moving the disabled vehicles off the road, clearing out the debris, and management of traffic. Expedited incident clearance can reduce delays, minimize the likelihood of secondary crashes and improve travel time reliability. The Central Florida region has a robust service patrol program for incident management on freeways but not for the major arterials. The intent of this project to examine the spatio-temporal profile of incidents1 and suggest an initial plan for service patrol deployment for arterials in Orlando. It is anticipated that the initial plan will be deployed with an associated data collection plan. The data collected from the deployment will be used to re-evaluate the program (say about 18 months after deployment) to make suitable modifications and to make recommendations for best approaches for deploying service patrols in other arterials in the state of Florida. The objective of this project is to develop initial recommendations about a road ranger service for Arterials in the Orlando area. Specifically the study will determine whether service from staged locations or patrolling in beats (in a loop around the major arterials) would be appropriate. The study will also determine whether staged locations, if preferable, should be static or dynamic (i.e., staging locations vary over the time of the day and days of the week). The analysis will be based on data available (traffic crashes from police report, data from traffic incident management program, other data on traffic patterns such as from queues/congestion at intersections from ATSPM), contextual knowledge, and opportunities and constraints imposed by network and lane use conditions.		
Impact	The project will align with the vital few recommendation 1.5 of the mobility implementation plan. The recommendation recognizes that TIM is not limited to limited access roadways, but frequently arterials impact the limited access facilities and vice versa. The challenge in in implementing using existing resources or with very limited additional resources and still moving the needle. The research will make use of an opportunity in District 5 to utilize road rangers that are uniquely contracted and tasked to be able to show the benefits of arterial TIM. District 5 has a contract with LYNX, a local transit provider, for Service Patrol Activities. LYNX, as a public agency, has a unique potential to move vehicle due to their public status. District 5 also has already identified resources around downtown Orlando to be able to assist with arterial implementation. This research would guide that implementation, providing the best potential for moving the needle on performance.		
Affected Offices	Traffic Engineering and Operations, Safety, Transportation Technology, and all Districts		
Existing Work	1. Warrants, Design, and Safety of Road Ranger Service Patrols, https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/research/reports/fdot-bdv31-977-52-rpt.pdf 2. Evaluation of Arterial Service Patrol Programs https://spexternal.modot.mo.gov/sites/cm/CORDT/or10013.pdf		
Keywords Used In Existing Work Search **(Cannot leave blank)**	Arterial Service Patrol (TRID database)		

Related Contracts (Give contract numbers)	-		
Funding Request	$70K	**Anticipated Duration**	12 months
Project Manager	Mr. Jeremy Dilmore Co-PM: Shawn Kinney	**Contracting Method**	Direct contract with the University of Florida (Dr. Siva Srinivasan)
Urgency	1	The project is needed to direct District 5's implementation of arterial Road Rangers this summer	
Implementability	1	District 5 has identified staffing for this purpose	

The project will guide the deployment of road rangers for maximum benefit of the public. While the cost is constant, reducing the response time by using this resource most efficiently will allow for reduced congestion and fewer secondary crashes as will out traffic incident management activities.

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**
o Materials Enhancement		
o Materials Savings	Better Benefit/Cost Ratio	Better utilization of contracted assets
o Time Savings	Open Roads Time for arterials	Reduced delay to quicker clearance on surface streets
o Lives Saved/Injuries Prevented	Secondary crash rate	Reduced secondary crashes due to quicker clearance on surface streets
o Productivity		

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