

Request for Research Funding for FY 2022-2023

SPR Subpart B Project: TEO-23-06

Requesting Office	District 3 Traffic Operations	Priority	6 of 23
Proposed Title	Before and After Evaluation of the Smart Bay Connected and Automated Vehicle for Advanced Safety and Mobility along US 98		
Justification	FDOT District Three in the process of implementing connected vehicle (CV) and automated traffic signal performance measure (ATSPM) technologies and systems along US 98 in Bay County. This research will compare safety and mobility performance along US 98 after Smart Bay implementation to performance before implementation. US 98 was selected as a priority corridor to improve safety and mobility in response to the FDOT TSM&O Strategic Plan, the STAMP Action Plan, and the CAV Business Plan.		
Impact	The results of this research will assist District Three to understand the overall benefits of CV and ATSPM on US 98 and potential benefits on similar priority corridors in the District. Not doing the research would limit District Three's ability to prioritize CV and ATSPM on other priority corridors. The results will also add to the "body of knowledge" statewide as support other Districts as they consider CV and ATSPM implementation.		
Affected Offices	District Three Traffic Operations, State Traffic Engineering and Operations, District Traffic Operations		
Existing Work	TRID (https://trid.trb.org/Results) and RIP (https://rip.trb.org/) revealed a number of studies related to the technologies implemented in Smart Bay. Nearly all the evaluation studies were based on simulated data rather than actual field data. See Attachment A – Existing Work for summaries of previous and on-going studies.		
Keywords Used In Existing Work Search	Automated Traffic Signal Performance Measures (ATSPM); Connected Vehicles (CV); Connected and Automated Vehicle (CAV); Freight Signal Priority (CVP); Emergency Vehicle Preemption (EVP); Transit Signal Priority (TSP); Pedestrian; Cyclist; Railroad Grade Crossing; Road Weather Motorist Alert; Work Zone Management; Reduced Speed Warning		
Related Contracts	Smart Bay Financial Project Identification Number: 447596-1-52-01		
Funding Request	\$295,000	Anticipated Duration	30 months
Project Manager	Amy DiRusso (PM) Raj Ponnaluri (co-PM)	Contracting Method	Direct contract with FSU (Dr. Ren) and UF (Dr. Ranka)
Equipment	Estimated equipment cost (or N/A)	Comments* (understanding leases are preferred, include the proposed use of the equipment, whether lease options are feasible, whether work to be done with equipment could instead be procured through service expenditure, etc.)	
Urgency	1	FDOT's Central Office and Districts per TSM&O, STAMP, and CAV plans have prioritized evaluation of CAV projects as a high priority.	
Implementability	1	FDOT and local agencies intend to implement additional CAV projects. The results of this study will assist in project prioritization and programming.	
Project Benefits (Succinct, complete explanation) FDOT and local agencies intend to implement additional CAV projects. The results of this study will assist in project prioritization and programming. It will also assist FDOT to understand what technologies should be addressed in FDOT's Standard Specifications and Approved Project List.			
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		
○ Materials Savings		
○ Time Savings	TBD	The goal of the evaluation is to understand possible travel time savings and mobility enhancements associated with the CAV applications implemented with Smart Bay.
○ Lives Saved/Injuries Prevented	TBD	The goal of the evaluation is to understand possible crash, injury, and lives savings associated with the CAV applications implemented with Smart Bay.
○ Other (Explain)		

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