<table>
<tr><th colspan="4">Request for Research Funding for FY 2021-2022</th></tr>
<tr><td>Requesting Office</td><td>State Traffic Engineering and Operations Office</td><td>Priority</td><td>7 of 15</td></tr>
<tr><td>Proposed Title</td><td colspan="3">Support for the I-STREET (Implementing Solutions from Transportation Research and Evaluation of Emerging Technologies) Testbed</td></tr>
<tr><td>Justification</td><td colspan="3">The University of Florida (UF) and its Transportation Institute (UFTI), the Florida Department of Transportation (FDOT) and the City of Gainesville (CoG) have partnered to create I-STREET (Implementing Solutions from Transportation Research and Evaluation of Emerging Technologies). The principal objective of the three partners in developing I-STREET is to make significant improvements to transportation safety and mobility. I-STREET is a real-world transportation testbed with diverse technology installed and embedded in the transportation infrastructure on and surrounding the UF campus in Gainesville, Florida. It also includes an expanding set of technology installed on segments of the Interstate system in Florida.

The mission of I-STREET is to provide a real-world environment to enable the development, testing, evaluation and implementation of emerging technology solutions that will provide real and measurable transportation safety and mobility solutions for all roadway modes and users. The main goals of I-STREET are to improve safety and mobility locally, and across Florida; to facilitate the development and implementation of advanced and emerging technologies that can improve safety and mobility; to foster collaboration with industry wishing to develop, test and implement their own technologies to improve safety and mobility; and to become a recognized national and global leader in the development and implementation of advanced technologies to improve transportation safety and mobility.

The objectives of this proposed project are to:
• Develop a research and infrastructure plan for expanding the functionality and usability of the I-STREET testbed, capitalizing on industry engagement
• Develop a business plan for engaging with industry and other agencies for data sharing and for jointly developing and implementing advanced transportation technology products
• Develop a marketing plan for I-STREET
• Develop an education and outreach plan for I-STREET

The project will rely heavily on stakeholder engagement (FDOT, City of Gainesville, industry partners, and academia partners) through quarterly meetings to maximize the impacts and benefits of I-STREET.</td></tr>
<tr><td>Impact</td><td colspan="3">Enhance safety and mobility, improve education and outreach, and facilitate deployment of advanced transportation technologies across Florida and nationally.</td></tr>
<tr><td>Affected Offices</td><td colspan="3">State Traffic Engineering and Operations Office</td></tr>
<tr><td>Existing Work</td><td colspan="3">Several research projects are related to I-STREET including I-75 Florida’s Regional Advanced Mobility Elements (FRAME), Gainesville Signal Phase and Timing (SPaT) Trapezium, and Gainesville Bicycle and Pedestrian Safety Project.</td></tr>
<tr><td>Keywords Used In Existing Work Search

(Cannot leave blank)</td><td colspan="3">Autonomous vehicles, connected vehicles, sensors, deployment, industry engagement</td></tr>
<tr><td>Related Contracts (Give contract numbers)</td><td colspan="3"></td></tr>
<tr><td>Funding Request</td><td>$190,000</td><td>Anticipated Duration</td><td>18 months</td></tr>
<tr><td>Project Manager</td><td>Raj Ponnaluri, PhD, PE, PTOE, PMP</td><td>Contracting Method</td><td>Direct contract with University of Florida (Dr. Lily Elefteriadou).</td></tr>
<tr><td>Urgency</td><td>1</td><td colspan="2">As I-STREET initiatives have become the face of research and development for connected and automated vehicles deployment in Florida, the program needs to make it self-sustaining. Hence, the need for developing a research and infrastructure plan for expanding</td></tr>
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		the functionality and usability of the I-STREET testbed, capitalizing on industry engagement, business plan for engaging with industry and other agencies for data sharing, marketing plan and education and outreach plan.
Implementability	1	The results from this research project will be implemented to advance the I-STREET initiative and make the program self-sustaining.

Project Benefits (Succinct, complete explanation)

Develop, evaluate, and deploy advanced transportation technologies (autonomous and connected vehicles, sensors, artificial intelligence tools) to improve mobility and safety; engage industry; enhance workforce development on advanced transportation technologies across Florida and nationally.

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		
o Time Savings	Reduced travel times	Autonomous and connected vehicle technologies, improved traffic management tools based on artificial intelligent, machine learning, and data analytics; will improve mobility as soon as they are available
o Lives Saved/Injuries Prevented	Reduced crashes and conflicts	Autonomous and connected vehicle technologies are anticipated to improve safety and reduce crashes.
o Other (Explain)	Workforce development	Education and outreach across Florida and nationally to share research and deployment results

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