

Request for Research Funding for FY 2019-2020

Requesting Office	Traffic Engineering and Operations Office	Priority High	2 of 8
Proposed Title	Identifying and Prioritizing Target Regions to Conduct Outreach Activities to Improve Safety and Mobility of Aging Population		
Justification	<p>Florida leads the nation with over 20% of the population 65 years and older, and this percentage is expected to continue to grow. As such, the Department has been proactively addressing the specific needs of Florida’s aging road users. One of the remarkable accomplishments was the establishment of the <i>Safe Mobility for Life Coalition</i>, and the development of the <i>2017 Aging Road User Strategic Plan</i>. The Strategic Plan focuses on improving the safety, access, and mobility of Florida’s aging population by addressing areas critical to the needs and concerns of the target population. The <i>Coalition’s</i> mission is to implement the Strategic Plan to increase the safety, access, and mobility for aging road users and eliminate fatalities and reduce serious injuries. One of the <i>Coalition’s</i> objectives is to develop educational materials, resources, and information that is beneficial to the aging population. Some of the outreach activities include organizing safety and mobility events such as <i>Safe Transit for Life</i>, <i>Safe Walking for Life</i>, <i>Safe Bicycling for Life and CarFit</i>, etc.; distributing educational material such as tip cards on <i>Flashing Yellow Arrow</i>, <i>Right Turn on Red</i>, <i>Roundabouts</i>, etc. These outreach activities have proven to be crucial in educating the Florida’s aging population about safe transportation practices.</p> <p>Since it is not possible to reach out to the target population in the entire state, the <i>Coalition</i>, on an annual basis, identifies and focuses its resources on the top ten urban and top ten rural priority counties that have above-average crash rates involving individuals aged 65 years and older. These priority counties receive special attention for program and project delivery which includes engineering improvements, material distribution, media, and outreach events. However, it may be more beneficial to identify specific regions within these (and other) counties to conduct specific outreach activities. In other words, a more focused and targeted outreach activities may be more efficient in delivering the safety messages to the aging population.</p> <p>In addition to targeting regions that experience disproportionately high crashes involving aging road users, it is better to proactively identify regions based on the built environment. Regions with certain land use, demographic, and socioeconomic characteristics may be perceived to be “less safe” and more prone to crashes involving aging road users, and hence, may need additional resources. For example, outreach activities in the vicinity of hospitals and senior housing establishments may have greater impact compared to the outreach activities in the vicinity of sport arenas and educational institutions. Furthermore, the focus has to be not only on the target regions where the outreach activities need to be conducted, but also on the type of outreach activities. For example, it may be more effective to distribute the tip cards on <i>Right Turn on Red</i> at signalized intersections where pedestrian crashes are more prevalent and where the built environment demands more attention from the aging road users.</p> <p>The goal of this research is to develop a GIS-based approach to strategically identify and prioritize specific regions that benefit the most from outreach activities utilizing the <i>Coalition’s</i> aging road user data. The research goal will be achieved through extensive <i>data visualization</i> and <i>spatial analyses</i> in ArcGIS. The macroscopic analysis involves aggregating crashes involving aging road users over some geographic areas (e.g., census block groups or Traffic Analysis Zones) and spatially analyzing these crashes with an intent to identify socio-economic, demographic, land use, and infrastructure-related factors that may contribute to these crashes. The relation between crashes and the built environment will be determined, and this information will be used to identify and prioritize the regions for conducting the outreach activities and the type of education material that need to be distributed at these target regions. This approach can shape long-term planning and policy implications in improving the safety and mobility of aging population.</p> <p>The research team will work closely with Ms. Gail Holley and the <i>Coalition</i> members to identify and prioritize the regions for conducting the outreach activities targeting the aging population. The team will also have regular meetings with all the stakeholders, and will disseminate the study results for immediate review and implementation.</p>		

Impact	This project will assist FDOT in streamlining the outreach efforts to reach out to the most vulnerable population groups such that the benefits are maximum. The research results will help the Department and the <i>Coalition</i> in identifying specific regions that will potentially benefit the most from the outreach activities. It will also help identify the type of education material that need to be distributed at these regions. This approach will ensure that the most critical regions in need of special attention for program and project delivery are identified.		
Affected Offices	Traffic Engineering and Operations Office, District Traffic Engineering and Operations, <i>Safe Mobility for Life</i> Coalition members, Safety Office,		
Existing Work	A literature search suggested that the proposed study is the first of its kind. This project, for the first time, attempts to identify and prioritize specific regions to conduct specific outreach activities.		
Keywords Used In Existing Work Search	<ul style="list-style-type: none"> • Target Regions + Outreach Activities (65 results; none are relevant) • Safety + Mobility + Aging Population (17 results; none are relevant) • GIS + Transportation Outreach Activities (1 result; not relevant) 		
Related Contracts (Give contract numbers)	None		
Funding Request	\$140,000	Anticipated Duration	18 months but interim results will be disseminated for immediate use by FDOT
Project Manager	Gail M. Holley	Contracting Method	Direct to Dr. Priyanka Alluri at FIU
Urgency	1	The <i>Safe Mobility for Life Coalition</i> has been developing educational material and conducting outreach activities to increase the safety, access, and mobility of aging road users. This project will help identify and prioritize target regions to focus the outreach efforts such that maximum benefits are achieved.	
Implementability	1	The research results will be readily implementable. The results will be disseminated to <i>Coalition</i> members and other stakeholders for immediate adoption. The Department could use the prioritized list of regions to conduct outreach activities.	
Project Benefits (Succinct, complete explanation)			
<ul style="list-style-type: none"> • The Department will specifically know where to focus the outreach efforts, and what specific type of education materials need to be developed and distributed. • This project will ensure that the outreach activities are more efficient in delivering the safety messages to the aging population. 			
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	
<input type="radio"/> Materials Enhancement			
<input type="radio"/> Materials Savings			
<input type="radio"/> Time Savings			
<input checked="" type="checkbox"/> Lives Saved/Injuries Prevented		Targeted outreach activities help to achieve the maximum benefits and reduce the number of fatal and severe injury crashes involving aging road users.	
<input type="radio"/> Other (Explain)			

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