

EXHIBIT F

UTC Project Information	
Project Title	Connected Electric Vehicles: Vehicle-Pedestrian Communications to Enhance Vision Impaired Pedestrian Safety
University	Virginia Tech
Principal Investigator	Michael Roan
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Funding Source(s) and Amounts Provided (by each agency or organization)	United States Department of Transportation Subgrant (270128Z) for the project entitled "Center for Advanced Transportation Mobility: UTC Tier 1 Competition Application. \$149,998 from the UTC and \$75,000 Cost Share from Virginia Tech for a total amount of : \$224,998
Total Project Cost	\$149,998 from UTC and \$75,000 cost share form Virginia Tech for a total of \$224,998.
Agency ID or Contract Number	69A3551747125
Start and End Dates	3/01/2021-04/30/2022
Brief Description of Research Project	<p>The steady increase of electric vehicles (EVs) on roadways has led to safety concerns for vulnerable populations. The electric motor utilized in EVs produces considerably less noise compared to the internal combustion engine (ICE) in gasoline-powered vehicles, especially when traveling at slow speeds. Although pedestrians across all demographics are at risk, visually impaired pedestrians face significantly greater disadvantages in environments where ambient noise levels are high in relation to EV noise output. A major reason for this is because they depend on auditory cues to discern traffic flow when making life-threatening decisions such as crossing complex intersections or walking through city streets. Considering traffic data provided by the National Highway Traffic Safety Administration (NHTSA), the aim of the proposed research is to improve the lives of vulnerable pedestrians by determining the effects of different vehicle-to-pedestrian (V2P) alert systems on signal-response times. This study seeks to: (1) identify</p>

	and evaluate modes by which V2P systems can be effectively implemented for use in urban street crossing environments; (2) determine the efficacy of V2P systems in relation to pedestrian reaction time; and (3) obtain evidence to support the need for non-intrusive V2P alert systems as a safety precaution for vulnerable road users.
Describe Implementation of Research Outcomes (or why Not implemented) Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none"> • Reports • Project Website 	



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