UTC Project Information	
Project Title	Multi Incident Response Vehicle (MIRV)
University	Virginia Tech
Principal Investigator	Elijah (Will) Vaughan (0000-0002-1608-0071)
PI Contact Information	wvaughan@vtti.vt.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	$50,000: SAFE-D $120,000: SOADS (451638)
Total Project Cost	$170,000
Agency ID or Contract Number	Grant No: 69A3551747115 Project: 06-013
Start and End Dates	1 July – 31 December 2022
Brief Description of Research Project	This project will explore whether a MIRV can extend the perception of ADS to beyond the vehicle by providing eyes on the ground for better situational awareness, deploy flares to secure a scene surrounding a vehicle, and communicating with emergency, safety, and police personnel.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	<u>Deliverables</u> - Delivery of rosbags from demonstration - Final Project Report - Final Dataset and Metadata Uploaded to VTTI Dataverse - Project Closure Report <u>EWD</u> - Professionally supervised student mechanical design and software development - Short Statement delivered to SAFE-D about the skill and aptitude development of the students as was cultivated by this project <u>T2</u> - Fully Functional MIRV - Complete Software Package - Smart Road Demonstration The MIRV delivered at the end of this project and lessons learned will be used as a stepping stone for a follow-on research project to improve and add to the capabilities of an ADS integrated MIRV. Further research may involve adapting the MIRV to VDOT Safety Service Patrol (SSP) vehicles for use on Virginia highways

Impacts/Benefits of Implementation (actual, not anticipated)	The benefit of a semi-autonomous MIRV are numerous. Implementation could greatly reduce the risk to drivers/passengers by allowing them to remain inside the vehicle while their vehicle is disposed on the roadway.
Web Links • Reports • Project website	https://safed.vtti.vt.edu/projects/multi-incident-response-vehicle-mirv/