



MarTREC

Maritime Transportation Research & Education Center

Lizbeth Juarez-Bartolo **MarTREC's Outstanding Student of the Year 2022**

After graduation from the University of Arkansas, where Lizbeth Juarez-Bartolo received a bachelor's degree in Civil Engineering, she accepted a position as a graduate research assistant at the same university. Lizbeth's projects range from serving as CEO of a startup selling LIDAR technology for a National Science Foundation program to creating and deploying a statewide traffic safety survey. While working on various research projects, she has also been able to participate in the Institute of Transportation Engineers.

During the Missouri Valley District Institute of Transportation Engineers' Spring Conference, Lizbeth's team won the Regional Traffic Bowl Competition; with this win, we qualified for the International Traffic Bowl Competition. Traffic Bowl is a jeopardy-style competition with questions regarding transportation engineering topics.

Lizbeth's thesis title is "Food Deserts Effect on Arkansas's Rural Residents' Exposure to Vehicle Crashes." Food deserts are areas where a population of people does not have convenient options for obtaining affordable healthy groceries and fresh produce, due to the distance from which they live from the grocery store, lack of accessible transportation, and low socioeconomic status. In Arkansas, based on available census tract data, 50% of the population lives approximately 10 miles or farther from a grocery store causing low access to healthy groceries and fresh produces. While research into the adverse health effects of living within a food desert has been researched abundantly, there has been little research done observing the effects on drivers' safety due to the presence of food deserts. Given a rural resident's increased distance to and from a grocery store due to the presence of a food desert, the driver has increased exposure on the roadway which leads to an increased likelihood of the driver experiencing a vehicular crash. Utilizing the "2022 Arkansas Safety Awareness Survey", information will be gathered on safety attitudes, driving and riding behaviors, awareness of traffic safety enforcement and campaign activities, knowledge and opinions regarding cellphone usage laws, and trip information regarding grocery trips. The information gathered from this survey will be utilized to see the effects of food deserts on rural drivers' likeliness of being in a vehicular crash due to exposure on the roadways.

Lizbeth was nominated by her advisor Dr. Sarah Hernandez, Assistant Professor, Civil Engineering at the University of Arkansas and Dr. Heather Nachtmann, Director of the Maritime Transportation Research and Education Center also at the University of Arkansas.