



UTC Project Information – <b>Center for Transportation, Environment, and Community Health</b>	
<i>Project Title</i>	Development of a framework to estimate crashes involving pedestrians in urban areas using parking, transit, and infrastructure factors
<i>University</i>	The University of Texas at El Paso
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<i>Funding Sources and Amount Provided (by each agency or organization)</i>	USDOT: \$95,358 UTEP: \$38,671 Texas A&M Transportation Institute: \$9,000
<i>Total Project Cost</i>	\$143,029
<i>Agency ID or Contract Number</i>	Sponsor Source: Federal Government CFDA #: 20.701 Agreement ID: 69A3551747119
<i>Start and End Dates</i>	04/01/2022 – 03/31/2023
<i>Brief Description of Research Project</i>	<p>Urban areas tend to have higher concentrations of pedestrians. Accordingly, there are more pedestrian related traffic crashes. During the morning and evening commute hours, pedestrian trips are generated largely by travelers walking from their parked vehicles, transit stops to the final destinations, and vice versa. The risk of a pedestrian being involved in a traffic crash is related to the exposure and conflicts. Both exposure and conflicts are related to pedestrian routes. A pedestrian route may be characterized by the origin, destination, distance, elevation gains, number of street crossings, type of crossing (e.g., signalized versus unsignalized crossings), paved versus unpaved sidewalk, etc. The objective of this project is to develop a framework to predict the rate of crashes involving pedestrians in urban areas. The research team will relate the pedestrian related crash rate in a defined pedestrian analysis zone as a function of the parking demand, transit ridership, and pedestrian infrastructure. The developed model may be used by engineers and planners, as well as potentially by the City of El Paso, to predict the rate of pedestrian related crashes. By analyzing the contributing factors in the model, engineers and planners may identify ways to reduce pedestrian involved crashes, and/or improve walkability.</p> <p>The objective of this project will be achieved by performing the following tasks:</p> <p>Task 1: Review literature.</p> <p>Task 2: Survey pedestrians.</p> <p>Task 3: Collect crash, parking demand, transit ridership and pedestrian</p>

	<p>infrastructure data.</p> <p>Task 4: Develop a pedestrian crash rate prediction model using parking demand, transit ridership and pedestrian infrastructure data as inputs.</p> <p>Task 5: Develop models to estimate parking demand and transit ridership using land use data.</p> <p>Task 6: Document findings.</p> <p>We anticipate improved pedestrian infrastructure will come from the application of the developed model.</p>
<p><i>Describe Implementation of Research Outcomes (or why not implemented)</i></p> <p><i>Place Any Photos Here</i></p>	
<p><i>Impacts/Benefits of Implementation (actual, not anticipated)</i></p>	
<p><i>Web Links</i></p> <ul style="list-style-type: none"> <li>• <i>Reports</i></li> <li>• <i>Project website</i></li> </ul>	<p><a href="http://ctech.cee.cornell.edu/final-project-reports">http://ctech.cee.cornell.edu/final-project-reports</a></p>