

UTC Project Information	
Project Title	Developing Design Guidelines for Commercial Vehicle Envelopes on Urban Streets
University	University of Washington
Principal Investigator(s)	Ed McCormack, Anne Goodchild, David Hurwitz
PI Contact Information	edm@uw.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans \$180,000 Seattle Department of Transportation \$55,000 Supply Chain Transportation and Logistics Center (UW) \$35,000 Oregon State University \$90,000
Total Project Cost	\$360,000
Agency ID or Contract Number	69A3551747110
Start and End Dates	August 16, 2017 – August 15, 2019
Brief Description of Research Project	This research addresses the PacTrans topics of System-wide Efficiency and Improved Reliability across Modes. The research findings will improve our understanding of the interactions between heavy vehicles and other users in an urban environment. In particular, cases where commercial vehicle activity disrupts the activity of pedestrians, bicyclists, and motorists. This information will support better roadway and load zone design guidelines; which will allow our urban street system to operate more efficiently, safely, and reliably for all users.

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>In support of implementation, the research findings have been published: McCormack, E., A. Goodchild, M. Sheth and D. Hurwitz, (2019). Developing design guidelines for commercial vehicle envelopes on urban streets. International Journal of Transport Development and Integration, 3(2), 132-143.</p> <p>Addition publication are being developed by the project team.</p> <p>The project findings have been presented: Edward McCormack, Developing Design Guidelines for Commercial Vehicle Envelopes on Urban Street, Urban Transport Conference, Aveiro, Portugal June 26th, 2019.</p> <p>The City of Seattle Department of Transportation requested our preliminary research findings to support the design of commercial vehicle load zones.</p>
<p>Impacts/Benefits of Implementation (actual, or anticipated)</p>	<p>This project improves our understanding of curb space requirements and delivery needs in urban areas. The research approach involved the observation of delivery activities operations to measure the envelope required for different vehicle types, loading actions, door locations, and accessories. These measurements ultimately provide a recommendation for traffic engineers and planners who are interested in the optimal envelope dimensions of a commercial vehicle load zone (CVLZ).</p> <p>The measurement and findings from the field observations and simulated deliveries guided experimental design, such as the truck type and the behaviors of the truck operator modeled, for a bicycling simulator experiment. The experiment examined bicycle and truck interactions in a variety of CVLZ designs. Depending on the desired bicyclist response when approaching truck loading/unloading activities, different recommended treatments could be effective based on the output of the bicycling simulator experiment. These recommendations will support better roadway and CVLZ design guidelines, which will allow our urban street system to operate more efficiently, safely, and reliably for all users.</p>

<p>Web Links</p> <ul style="list-style-type: none">• Reports• Project Website	<p>Report cites are above.</p> <p>There is not a project website.</p>
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