



UNIVERSITY TRANSPORTATION CENTER RESEARCH BRIEF

Managing Increased Demand for Curb Space in the City of the Future

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Background

This research directly addresses system-wide efficiency by supporting systems integration and optimization and improved reliability across modes by developing innovative methods for managing curb lane function and curb access. The rapid rise of autonomous

vehicles (AV), on-demand transportation, and e-commerce goods deliveries as well as increased cycling rates and transit use is increasing demand for curb space resulting in competition between modes, failed good deliveries, roadway and curbside congestion, and illegal parking. This research will improve mobility by increasing our understanding of existing curb usage and provide new solutions to officials, planners, and engineers responsible for managing this scarce resource in the future. The research team will work closely with cities in the region to ensure the study's relevance to their needs, and that the results will be broadly applicable for other cities. This research will allow for the development of innovative curb space designs and ensure that our urban streets may operate more efficiently, safely, and reliably for both goods and people.

Research Project

The strategies employed by city officials and transportation professionals for managing curb space have not always kept pace with change. They lack the conceptual approaches and analytic methods needed to manage scarce curb space in the new world of on-demand transportation, one to



two hour e-commerce goods deliveries, rising cycling and transit usage, and autonomous and cooperative vehicle technologies. These trends are happening in cities where the lack of curb space capacity is already a significant problem. For this particular project, the research team will: conduct a thorough scan and document previous studies that have examined curb space management, identify emerging urban policies developed in response to growth, review existing curb management policies and regulations, develop a conceptual curb use policy framework, review existing and emerging technologies that will support flexible curb space management, and evaluate curb use policy frameworks by collecting curb utilization data and establishing performance metrics and simulating curb performance under different policy frameworks. Lastly, researchers will develop outreach materials to support curb utilization practices.



ABOUT THE AUTHORS

The research team consisted of Kevin Chang of the University of Idaho and Anne Goodchild and Ed McCormack of the University of Washington.

ABOUT THE FUNDERS

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EXPECTED DATE OF COMPLETION

August 2021

FOR MORE INFORMATION

<http://depts.washington.edu/pactrans/research/projects/managing-increased-demand-for-curb-space-in-the-city-of-the-future/>