

Smart Right-of-Way Permitting System for the City of Pittsburgh: Coordination, Pricing and Enforcement

Purpose: To develop a prototype of a smart permitting system to effectively evaluate the multi-modal impact of right-of-way permits for the City of Pittsburgh.

Approach: The team focused on two large neighborhoods in Pittsburgh: Shadyside and Oakland. They set out to analyze the current right-of-way permitting fee structure for the City of Pittsburgh and introduce a dynamic pricing strategy that more accurately captures the marginal impact of true social costs incurred and to develop a prototype web application for visualizing and analyzing right-of-way permits.

Key Findings:

The project team developed a prototype web application to visualize the Right Of Way permit information and their respective 'true social cost.' The team also develops a conceptual algorithm to detect locations that are likely to violate permits, and recommends routes and locations for visual inspection and enforcement.

Conclusion: The City of Pittsburgh is responsible for granting right-of-way permits. Numerous competing users are trying to gain access to precious amounts of roadway, sidewalk, and curb.

While the City has not updated its fees for permits in at least a decade, a new permitting models, algorithm and software may provide an opportunity to evaluate the "cost of the right-of-way" and set a consistent pricing strategy across the City that could underpin a dynamic pricing system.

This right-of-way permitting system could also allow the city to efficiently manage and enforce permits, reduce labor costs, and improve revenue management, and could improve the city's mobility and safety.



Research Team:

- Sean Qian (Principal Investigator)
<https://orcid.org/0000-0001-8716-8989>

Project Record:

- <https://ppms.cit.cmu.edu/projects/detail/311>

Follow Us:

 www.facebook.com/traffic21.tset

 @Traffic21CMU

The contents of this Research Recap reflect the views of the final research report authors, who are responsible for the facts and the accuracy of the information presented herein. This document is disseminated under the sponsorship of the U.S. Department of Transportation's University Transportation Centers Program, in the interest of information exchange.

The U.S. Government assumes no liability for the contents or use thereof.