UNIVERSITY TRANSPORTATION CENTER

RESEARCH BRIEF

Parking Planning Tools to Improve Efficiencies, Aid Recovery, and Prepare for the Post-COVID Environment

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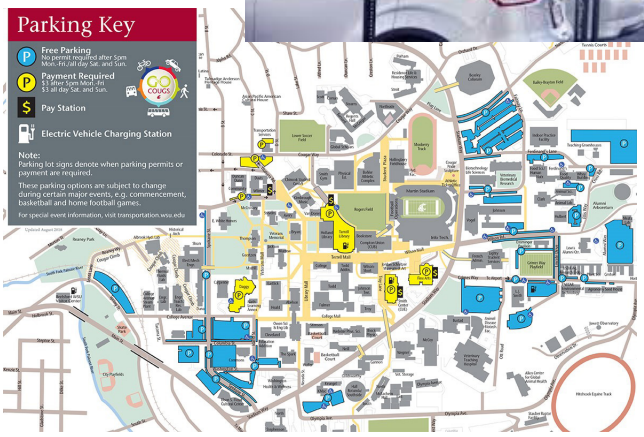
Background

Shoup (2005) describes that within the U.S., parking is 'free' for over 99% of all trips (p. 1); you likely do not pay for parking at work, at the grocery store, at your gym, or your local shopping center. The fact that parking is free in most places explains (at least in part) why 83 percent of all trips in the U.S. are made by personal motor vehicles, and only 2.5 percent are made by public transit (McGuckin and Fucci, 2018). Where parking fees do exist (at sporting events, on college campuses, etc.) they typically make up a substantial share of total driving costs, yielding the potential to divert mode and parking lot location decisions away from single occupancy vehicles and outside highly congested zones. Managing how parking is priced is critical to both individuals' mode choices, and parking providers operating decisions; parking fee structures are critical to parking providers revenues, capacity constraints, and capital decisions.



Research Project

Washington State University Transportation Services is a self-sustaining unit responsible for managing the parking and transportation facilities and operations at WSU. They manage over 8,300 parking spaces including covered garages, paved lots and unpaved gravel lots. As a self-sustaining unit, Transportation Services is required to balance their budget through the collection of short-term parking fees, annual permit sales, and parking fines. The aim of this project is to provide parking and transportation planners at WSU with the information they need to improve operating efficiencies so that they can better meet parking demands, community transportation needs, and recover from the budget deficit left by COVID-19.

Where should lots be located? How should annual permit prices be set? Which lots should be available for hourly parking? What is the optimal hourly rate? By developing a rigorous model of parking supply and demand at WSU, this project seeks to identify the critical tradeoffs parking planners face in making operating decisions (setting rates, selecting lot locations, etc.), and provide guidance for efficient parking management strategies.

ABOUT THE AUTHORS

The research team consisted of Danna Moore of Washington State University.

ABOUT THE FUNDERS

This research was funded by the Pacific Northwest Transportation Consortium, with additional support from Washington State University.

EXPECTED DATE OF COMPLETION

March 2022

FOR MORE INFORMATION

https://depts.washington.edu/pactrans/research/projects/parking-planning-tools-to-improve-efficiencies-aid-recovery-and-prepare-for-the-post-covid-environment/