

Planning, Policy  
and  
Programming

JULY 2021

Project Title:  
Parking Utilization And Site Level  
VMT Database

Task Number: 3291

Start Date: August 21, 2019

Completion Date: June 29, 2022

Task Manager:  
Angela Fredericks  
Associate Transportation Planner  
[angela.fredericks@dot.ca.gov](mailto:angela.fredericks@dot.ca.gov)

## Parking Utilization And Site Level Vehicle Miles Traveled (VMT) Database

Collect data to quantify how changing parking supply at different types of developments impacts the use of motorized vehicles.

### WHAT IS THE NEED?

Caltrans' Local Development – Intergovernmental Review (LD-IGR) program often references parking reduction in the formal comment letters as an appropriate Transportation Demand Management (TDM) measure to support infill development. The program relies on prior statewide and nationwide research that documents how the lack of parking can be a primary decision point to make a trip via transit, rail, bicycle, or pedestrian modes, rather than an automobile.

Local jurisdictions such as cities use parking research to make policy decisions about minimum and/or maximum parking requirements for developments, and provision of on-street and off-street parking in neighborhoods and around destination centers (central business district, arena, tourist attraction, etc.).

### WHAT ARE WE DOING?

The two major outcomes of this project include a vehicle miles traveled (VMT) and parking database and a corresponding tool that will include one or more model(s) that allow practitioners and agencies to estimate how changing parking supply at a development level impacts VMT with different parking assumptions, controlling for other relevant contextual characteristics. The tool will be derived by data collected during this project and provided in the VMT/Parking database, in addition to any additional existing information found, in at least four California cities. The database will be structured so that agencies and practitioners can supplement the database and tool in the future with new information as it becomes available.



DRISI provides solutions and  
knowledge that improves  
California's transportation system

## WHAT IS OUR GOAL?

The goal of this study is to establish a data-driven link between parking supply at a development-level and VMT.

## WHAT IS THE BENEFIT?

The parking database and tool used to estimate parking's effect on VMT (the two major outcomes of this project) can help inform policy decisions such as how much parking to require of local development projects.

## WHAT IS THE PROGRESS TO DATE?

Kick-off meeting held September 3, 2019.  
TAC meetings were held in 2020 (3/4, 5/26, 9/8, 10/27) to discuss the analysis goals; implications of COVID-19 travel restrictions on data collection and travel behavior; and the evaluation of alternative methods and our recommendations.  
In August 2020, a white paper of the initial proof-of-concept analysis was developed and submitted for external review and comment. The paper was discussed at the 10/27 TAC meeting and was presented at the 2019 Annual Meeting of the transportation Research Board.

The research team reviewed existing and on-going research related to this project and defined the analysis and project goals based on available methodologies and practices. The existing research and knowledge has been summarized and several performance indicators have been proposed to the technical advisory committee to help us evaluate alternative data collection methods (e.g., cost, time, quality). These indicators were discussed at the second technical advisory committee meeting.

The research team evaluated alternative data collection options and developing a rubric that will compare the alternative methods across the proposed performance indicators. In the October 2020 TAC meeting, the research team

presented their recommended approach. First, the researchers will analyze existing travel survey data by appending estimates of parking supply for residential locations. Second, they will develop and administer their own travel survey, which will expand and improve the sensitivity between parking characteristics and travel behavior outcomes. The research team is currently analyzing an existing travel survey for the four study cities, and they are developing a draft of the original travel survey to be administered in Fall 2021. In the April 2021 TAC meeting, they presented their draft survey sampling strategy and instrument for feedback.

## IMAGES

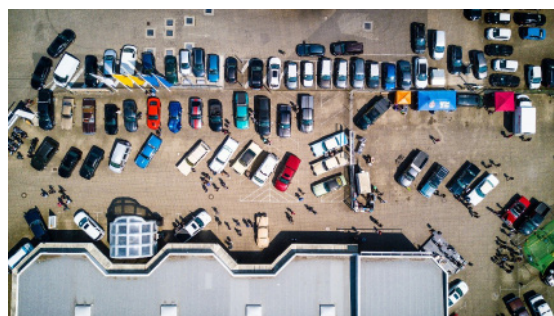


Image 1: An aerial view of a parking lot adjacent to a shopping center shows vehicles parked and people walking around. This is a stock photo.



Image 2: In a view down a long street, this photo shows a city from a residential district facing several high-rise buildings. Vehicles are parked along the street; few cars are using the roadway. This is a stock photo.