



Caltrans Division of Research,
Innovation and System Information

Research



Results



Transportation
Safety and
Mobility

APRIL 2014

Project Title:

Trip-Generation Rates for
Smart-Growth Land-Use
Projects

Task Number: 1940

Completion Date: March
31,2014

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Trip-Generation Rates for Smart-Growth Land-Use Projects

Create and describe an acceptable methodology to estimate trip-generation rates of vehicle, transit, and non-motorized trips associated with "smart-growth" land use projects proposed in California.

WHAT IS THE NEED?

Currently, practitioners typically obtain trip-generation rates published by the Institute of Transportation Engineers (ITE), a national professional organization. This data is collected primarily at suburban sites without significant transit, bicycle, or pedestrian facilities and is available only for vehicles, not for "active" modes such as walking, bicycling, or transit. However, recent studies indicate that such data often significantly over-estimates the number of trips from cars and trucks for land use projects located in urban areas near transit and within easy walking distance of other land uses.

A tool is needed for estimating travel associated with "smart growth" in-fill land use projects is needed by cities and counties and Caltrans' Local Development/IGR program for use in traffic impact analyses and environmental review of such projects.

WHAT WAS OUR GOAL?

To Create and describe an acceptable methodology tool to estimate trip-generation rates of vehicle, transit, and non-motorized trips associated with "smart-growth" land use projects proposed in California, such as those located in downtowns, other activity centers, and other higher-density mixed-use areas.



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system to enhance California's
economy and livability.

WHAT DID WE DO?

Building on data from the Caltrans Infill Trip Generation Rates effort and other available site data, the University of California, Davis (UCD), team will create a tool for estimating travel associated with proposed urban infill and other "smart growth" land use projects in California.

The UCD team collects data at representative smart growth sites in California in a manner acceptable to transportation engineers, and the results initially calibrate the new smart growth trip estimation Method.

These products are provided free of charge via a public website at: <http://downloads.ice.ucdavis.edu/ultrans/smartgrowthtripgen/>

WHAT WAS THE OUTCOME?

An acceptable methodology for estimating trip-generation rates of "smart growth" land use projects resulting in:

- Accurate estimation of vehicle trips associated with urban in-fill projects
- The accurate provision of road-related "mitigations" such as wider roads, etc. for urban in-fill projects
- Significantly improved estimation and "mitigation" of facilities and services for walking, bicycling and transit use.

Caltrans' Local Development/IGR program can use the methodology tool in traffic impact analyses and environmental review of California's urban in-fill projects but the traffic engineers prefer to use the methodologies defined in the Institute of Transportation Engineers' (ITE), Trip Generation Manual.

Future research will address measures to bring the defined methodology into the ITE Trip Generation Manual.

WHAT IS THE BENEFIT?

This tool provides an acceptable methodology for estimating trip-generation rates of "smart growth" land use projects that will accurately estimate the needed transportation infrastructure of specific urban in-fill projects for all modes of transportation, i.e. walking, bicycling, transit, and auto.

U.S. and California cities, counties and State Local Development/IGR program can benefit from the use in their traffic impact analyses and environmental review for their in-fill "smart growth" projects.