



Trip-Generation Rates for “Smart Growth” Land Use Projects in California

Objective: The goal of this project is to develop and disseminate data and a method that practitioners can use to estimate multimodal trip-generation rates for “smart growth” land use development projects proposed in California, such as projects located in downtowns and other urban areas served by transit and in which a variety of land uses are close enough to allow walking or bicycle travel.

Why? Local agencies typically require the preparation of a “transportation impact analysis” (TIA) to estimate the effects of major proposed land use projects, and to identify improvements needed to help “mitigate” impacts. The California Environmental Quality Act (CEQA) and other State, Federal, and local laws also require the identification, analysis, and mitigation of transportation-related impacts of proposed land use projects. The first step in preparing a TIA is to estimate the number of trips by cars, trucks, and other modes of travel that may result from a proposed land use project – which is commonly referred to as “trip-generation.” Currently, practitioners typically use trip-generation data 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.

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 within walking distance of transit and other land uses. Although ITE guidelines state that trip-generation data should not be used for land use projects in such locations, there is currently no acceptable method available in the U.S. for such projects. This lack makes it extremely difficult to accurately forecast transportation-related effects of such projects and to implement appropriate mitigation for people who walk, bike, drive, or use public transit to/from such sites.

How? With ongoing input from a technical advisory Panel, UC Davis researchers collected trip-generation data at 30 smart growth land uses in California. They then used this information, along with data available from other studies, to develop a method and spreadsheet tool that can be used to adjust available trip-generation rates for “smart growth” land use projects proposed in California.

Products: This project will produce: An analysis of the adequacy of existing methods and tools; data for 30 smart growth sites in California; a method for adjusting suburban trip-generation rates for proposed smart growth land use projects; a spreadsheet tool to facilitate use of this new method; a final study report; and a workshop to describe the results. All products are available (for free) at this UCD website: <http://ultrans.its.ucdavis.edu/projects/smart-growth-trip-generation>

Outcomes: The results of this project are a significant contribution to the traffic engineering and planning fields, and will help overcome barriers to implementing smarter, safer land uses that meet multiple social, economic and environmental goals. Transportation and land use stakeholders, traffic engineers, local governments, regional organizations, Caltrans staff, transit agencies, air quality districts, environmental and community groups, developers, consultants, elected officials, and the public will all benefit.

Who is implementing this project? UC Davis’ Institute of Transportation Studies: Drs. Susan Handy, Kevan Shafizadeh, and Robert Schneider, with input from practitioners and graduate students.

Cost/timeframe: Total: \$485,000 (Caltrans Div. of Research & Innovation). Sept. 2009 – 2013.

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(updated Dec. 2012 T.Parker)