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### South Bay Cities Council of Governments Research and Demonstration Program 2003 to 2017

#### South Bay Transportation Performance Study

2003 - 2008

Funded by SCAG

Established baseline knowledge about how previous infill development performs from a transportation perspective. Based on survey research of households in 8 neighborhoods to determine capture rate by the nearest commercial center and mode to center. Found that the characteristics of commercial centers result in different capture rates of trips originating in the adjacent neighborhood. Produced a data base of transportation behavior used in the 2017 CAP.

### Sustainable South Bay: An Integrated Land Use and Transportation Strategy 2009

Funded by LA Metro

Applied regression and case study analyses to determine the factors that cause a higher capture rate of commercial centers and walking mode choice by adjacent residents. Business density measure as businesses per acre was found to be the most influential factor. Mix and variety of destinations also play a role but impact was not quantified. The findings were synthesized into the Sustainable South Bay Strategy which was adopted by the SBCCOG's Board of Directors in 2010.

#### Sustainable Land Use: Proof of Concept

2010 - 2011

Funded by SCAG

Developed a detailed case study of a segment of Marine Ave. between the City of Hawthorne and the City of Redondo Beach. The feasibility of converting a commercial strip to housing and relocating the commercial uses to developments at the ends of the corridor was studied. The strategy proved to be feasible subject to reduced parking requirements.

#### Neighborhood Electric Vehicle Demonstration Project

2009 - 2012

Previous studies discovered that the trips taken by South Bay households were relatively short on average. The question was the extent to which short range electric vehicles could satisfy those short trips. A fleet of NEVs were acquired and loaned to 50 households for a two month period each. Usage of all household vehicles including the NEVs were monitored with GPS technology. The demonstration found that households with an NEV used it for 19% of their trips and reduced their GHG emissions by 20%. The study created a rich database of household travel based on 20,000 observed trips.

Funded by the SCAQMD

#### **Battery Electric Vehicle Demonstration Project**

2013 - 2015

A fleet of full speed BEVs was acquired and loaned to South Bay households for a 2 month period. As in the NEV project, GPS was used to monitor all household vehicular travel. The demonstration found the average household reduced their GHG emissions by 40%. BEV usage replicated the driving patterns of the ICE vehicles. Like the NEV study, this study also created a rich database of household travel based on 20,000 trips.

Funded by the SCAQMD

# Assessing the Multi-Unit Dwelling (MUD) Barrier to Plug-in Electric Vehicle in the South Bay

2016-2017

The purpose of the report was to explore the MUD electric infrastructure barrier to PEV adoption within the South Bay sub-region. The results confirm that the cost of EVSE installation in MUDs is variable from site to site and often high largely because of the 50-60 year age of the housing stock. Additionally, parking arrangements, distance to the electrical panel and the level of electric service to the building were important factors. Level 1 charging and group investments for EVSE installations may provide MUD residents access to home charging at lower costs. Upgrade to Level 2 charging infrastructure was determined to add a significant financial burden to building owners.

Funded by the California Energy Commission

## Slow Speed Network Plan for the South Bay 2016 – 2017

Within the framework of Metro's "Complete Streets" strategies, this project developed a "Master Plan" for a "Slow-Speed" network across the South Bay – a network that would include all modes of vehicles whose maximum speed would be 25 mph or less (including NEVs). The slow speed infrastructure is a significant component of municipal support for large scale deployment of LUVs.

Funded by LA Metro