What is a Travel Demand Forecast Model (TDFM)?

The TDFM is a computer program that simulates traffic levels and travel patterns for a specific geographical area. The program consists of input files that summarize the area’s land uses, street network, travel characteristics, and other key factors. Using this data, the model performs a series of calculations to determine the amount of trips generated, the beginning and ending location of each trip, and the route taken by the trip. Output includes - but is not limited to: vehicle miles traveled, congested speeds, daily and peak period volumes, origin-destination information, pass through trips, internal trips, and external-internal trips.

How is a TDFM useful?

The TDFM will be a valuable tool for preparing long-range transportation planning studies, such as for the City of Culver City’s General Plan Update. The TDFM will be used to form a consistent basis for analyzing projected changes in mobility patterns in response to future land use, transportation infrastructure, and policy assumptions. Additionally, using these projections, mobility improvements will be identified to accommodate the changing mobility patterns associated with the General Plan Update’s preferred land use alternatives.

How do we know if the TDFM is accurate?

To be deemed accurate, a model must be calibrated to a year in which actual land use data and traffic volumes are available and well documented. A model is accurately calibrated when it replicates the actual traffic counts on the major roads within certain ranges of error established in Travel Forecasting Guidelines (Caltrans, 1992) and it demonstrates stable responses to varying levels of inputs. The City of Culver City model will be calibrated to base year conditions to be determined using actual traffic counts, census data, and land use data compiled by City staff.

Will the City of Culver City TDFM be consistent with standard practices?

The City of Culver City model will be consistent in form and function with standard models typically used in transportation planning. The travel model will utilize TransCAD Transportation GIS software, which is consistent with many of the models used by local jurisdictions in California and throughout the nation. The Southern California Association of Governments (SCAG), the metropolitan planning organization for Southern California, maintains their regional model in TransCAD.

Find helpful links and resources at: culvercity.org/travelmodel