

AN ABSTRACT OF A THESIS

**TRIP GENERATION MODELS FOR SHOPPING CENTERS
IN A SMALL URBAN AREA**

Jason A. Carder

Master of Science in Civil Engineering

The purpose of this study was to investigate the trip generation characteristics of several major shopping centers in a small urban area. The study examined the influence of several different factors on the trip generation rates of these shopping centers, and compared these rates to those forecasted by currently accepted methods.

Traffic counts were taken at five different shopping centers in the City of Cookeville, Tennessee, between September 2002 and March 2003 to determine the total number of trips generated by each center. In addition, information on several different explanatory characteristics of each shopping center, such as the occupied gross leasable area, the number of parking spaces, and others were also collected. Single and multiple regression analysis were then used to estimate models for predicting trip generation rates for these shopping centers. The models were then compared to those provided by the Institute of Transportation Engineers (ITE) in the *Trip Generation* manual (6th Edition). This manual is the currently accepted method for estimating trip generation rates.

The results of the study showed that the rates given by ITE tended to overestimate the number of trips for the shopping centers in this study. The models developed by this study provided a closer approximation of the number of trips generated by each site than the models given by ITE.