

C7
Travel Demand Modeling

MODELS OF UNIVERSITY STUDENT TRAVEL FOR SMALL AND MEDIUM CITIES

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This presentation will report results of research conducted for the North Carolina Department of Transportation to prepare models of university student travel behavior based on surveys of university students conducted on six university campuses in North Carolina during 2013 and 2014. The campuses were selected based on a few criteria that were intended to reflect the characteristics of the university as well as of the community settings in which the universities are located such as: population within 50 minute driving distance, and percent part time undergraduate students. Each criterion covered a broad range of criterion values and selection of the campuses was intended to allow the data collected to be transferred for use in communities that were not surveyed. The campuses included two in small or medium size cities and four in large cities allowing comparisons to be made among the campuses with different characteristics and under various settings. Models that quantified the relationship between university student travel patterns and the characteristics of the campus and community were developed from the data for trip generation, distribution and mode choice. Findings from the surveys will be shared with an emphasis placed on how the data and models could be applied in small and medium cities to understand the impact of university campuses on the surrounding transportation system. The analysis focused on trips crossing the campus boundary (and outside the campus boundary, though these are a small portion of trips in the data), because these are the trips that most affect roads and transit systems surrounding the campus. The models developed based on the data could be added to local travel models in other communities by considering the context for the university provided by the campus selection criteria variables. The models will be generally described emphasizing ways they might be applied in small and medium cities.