and how likely people are to use walking, biking or transit for trips. These factors include: mix of uses, density or "compactness" of development, availability/quality of pedestrian and bike features (sidewalks, bike lanes, etc.), availability/quality of transit service, street connectivity, site design/layout features, and proximity to destinations. By choosing the Northern Carrboro neighborhoods, we get to see two ends of the spectrum on these related factors for what are expected to be similar demographic groups, thus any differences in travel behavior should represent two endpoints.

By comparing Southern Village with Lake Hogan Farms (a conventional development within the Northern Carrboro neighborhoods), we can compare differences in trip generation and actual traffic volumes for one example of each development form. In this study, only these two neighborhoods were assessed and all results are only proven to be applicable for these two examples. Generalizations for other TNDs in North Carolina or nationwide, therefore have to be treated with care.

TNDs are expected to encourage the use of alternative modes, and increase internal trip capture rates ultimately reducing congestion, vehicle miles traveled and to improve air quality. The behavioral trip generation portion of this study assesses if indeed trip generation rates and alternative mode use are any different in Southern Village compared with more conventional developments in Northern Carrboro. The study conducted a resident survey of Southern Village TND and Northern Carrboro conventional neighborhoods (N=453 households) and also collected spatial data on the developments. In addition, data regarding trips to on-site commercial and retail offices in the Southern Village TND was collected to understand the travel characteristics of office and retail users. The study survey attempts to distinguish between trip types, such as home-based-work or home-based-other, and to estimate the effects of TND design such as trip chaining, mode choice, internal capture, and pass-by trips.

For the two neighborhoods, typical traffic impact analysis (TIA) methods were also utilized to explore TND trip generation. Traffic generation was performed using the methods developed by ITE, as well as, spreadsheet implementations of these methods developed by a consultant. As an additional method to explore trip generation the study used the Triangle Regional Travel Demand Model to obtain further trip estimates. It was not the objective of this study to develop new methods for traffic forecasting, but rather to apply, verify and validate existing ones. In that regard all traffic generation estimates were compared to traffic counts taken on streets entering/exiting the neighborhood.

The focus of the traffic generation portion of this study is on the total site traffic generated and overall volumes counted at the entrances and exits to the developments. The study did not look at internal distribution and did not distinguish between trip types, such as home-based-work or home-based-other. Other proclaimed features and effects of TND design such as trip chaining, mode choice, internal capture, and pass-by trips are discussed in the literature review, and are analyzed in the traffic generation portion of the document to the extent that they affect the total traffic volumes entering and exiting the neighborhood. The traffic generation estimates and methods reflect and validate current practice of consultants and public agencies.