

# A Study of the Impact of Roundabouts on Traffic Flows and Business

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## **Introduction**

For a number of years there has been a controversy regarding whether installing roundabouts in a business area are good for business in the area, or whether they have negative impacts on business in the area. This study attempts to answer this question with emphasis on Kansas cities, particularly Topeka, Kansas; however, it does use examples and data from other cities and studies that are relevant to this study.

## **Project Description**

This study reviewed the literature and all sources where national data or reliable case studies addressed the issue of the impact of roundabouts on business to serve as a basis for Kansas studies. Some data that was initially thought to be available; namely, business profits, before and after economic data like sales taxes, property values, building permits and so forth, were not generally available and/or beyond the scope of the project. The study concentrated on the literature, surveys to businesses, and case studies that showed roundabouts' ability to move traffic more efficiently. Conclusions were based on the widely accepted assumption that businesses and business areas that have good vehicle and pedestrian access and traffic flow should prosper and grow and, conversely, businesses that do not have good access and good traffic flow will not. Case studies that were found in the literature, and from personal contacts, are reported in the study report. Surveys were conducted and sent to several Kansas cities as well as Carmel, Indiana, which is known to have a great number of roundabouts in the city. Personal contact was also made with a number of business managers and/or owners in Topeka. Since no reliable before and



**Roundabouts on South Golden Road in Golden, Colorado**

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after corridor data could be found that would lead to definite conclusions, a task was added to do a simulation study of a business corridor in Topeka, Kansas. The study used VISSIM software to simulate a hypothetical before and after study of converting several traditional intersections in the corridor to roundabouts.

## Project Results

The most relevant study found in the literature was a study of South Goldman Road in Golden, Colorado, where four roundabouts were built in a business corridor with many positive results which led to the conclusions that “yes, roundabouts are good for business.” Survey results, reported in detail in the full report, were generally positive albeit mixed. For example, the survey results from businesses in Topeka indicated that 76.9% of businesses answered that the impact of the addition of roundabouts was fair, good or very good, and only a combined 15.2% indicated they were bad or very bad. Personal contact with business managers and owners in Topeka found that they were of the opinion that roundabouts in their area were good for business. The simulation study of the Topeka business area, assuming several intersections were replaced with roundabouts, showed significant reductions in delay and queuing for most all significant traffic movements. Based on the authors’ assumption that better traffic flow and access are good for business, it was concluded that the addition of roundabouts in this corridor would have been good for business. The overall conclusion of the study was that roundabouts have a positive impact on traffic flows and business.

## Project Information

For information on this report, please contact Dr. Eugene Russell at the Kansas State University Department of Civil Engineering; 2133 Fielder Hall; Manhattan, Kansas 66506; 785.532.1588; geno@ksu.edu.

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