

TRANSPORTATION SYSTEM MANAGEMENT & OPERATIONS (TSMO) INITIATIVE



ANDRESEN ROAD DEMONSTRATION PROJECT

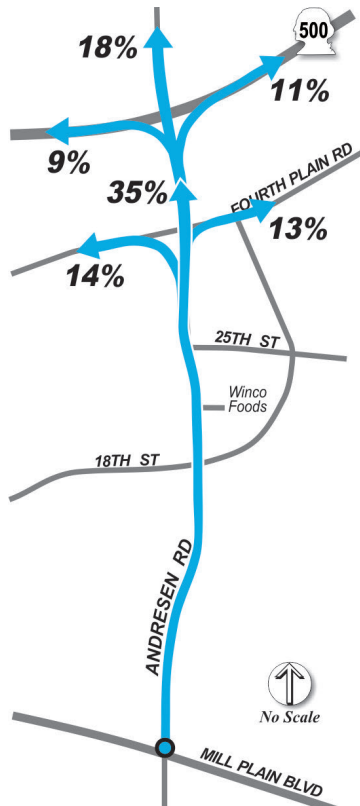
Regional Transportation Council

The TSMO initiative was undertaken to determine the usefulness of using technology from field devices to measure corridor performance. Using Bluetooth device and radar unit technology, real-time data was collected and utilized to measure corridor performance, including:

- Vehicle travel times
- Travel time reliability
- Vehicle speeds, volumes, and classifications
- Vehicle origin-destination patterns

The Andresen Road demonstration project installed technology that continuously collects arterial performance information and can ultimately be utilized to enhance traffic signal and overall corridor operations, improve incident detection along corridors, and provide information to help travelers make informed choices. The demonstration project furnished and installed the following equipment:

- Nineteen permanent and three portable travel time sensors for traveler information and automated data collection
- Two radar detectors that collect vehicle speed, volume, and classification data
- A shared central travel time server to archive the data



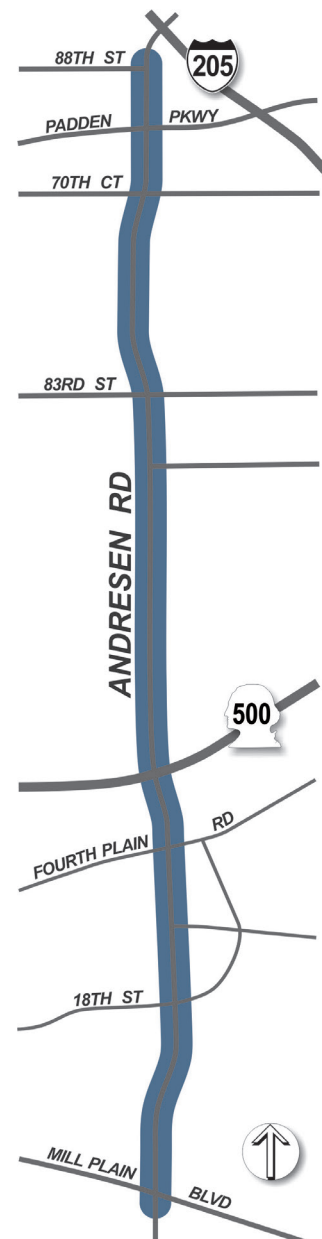
Example of data collected along Andresen Road

Example Data: Driver Origin-Destination Patterns

The data collection units installed with this project produce origin-destination patterns for vehicles traveling in the corridor. This graphic illustrates the destination of vehicles traveling northbound from Mill Plain Boulevard. For example, 35% of northbound vehicles at Mill Plain continue north of Fourth Plain Boulevard. This information is used to prioritize groups of traffic signals for coordination.

Project Goals

- Improve arterial corridor operations
- Improve traffic signal performance
- Automate travel time and count data for long-range planning
- Provide continuous arterial performance information
- Provide origin-destination patterns



Andresen Road Demonstration Corridor

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Project Outcomes

12%

reduction in vehicle travel time along the corridor.

\$14

in benefits for every \$1 that was invested, resulting in over \$1 million in total project benefits.

18%

decrease in vehicle delay at traffic signals.

60,000 gallons

of reduced fuel consumption per year.

1.2 million

pounds of reduced greenhouse gas emissions per year.

Next Steps

In spring of 2015, the project will implement a new performance report that monitors the percent of vehicles arriving during the green indication. This report will be used to fine-tune the signal timings. The data collection units will be used to evaluate the corridor operating conditions before and after the signal timing adjustments, before a final report is produced in summer 2015.

Summary of the demonstration project along Andresen Road

