



SAN RAMON

CROW CANYON ROAD CORRIDOR

CALIFORNIA

PROJECT DESCRIPTION

Crow Canyon Road in San Ramon, CA is a 0.59 mile long arterial corridor with 5 traffic signals between Crow Canyon Place and Tahiti Drive/El Capitan Drive. This study compares the operation of the Crow Canyon Road corridor under its existing timing schemes with its operation using the InSync® adaptive traffic control system.

OBJECTIVE

Reduce stops, travel time, delay and fuel consumption along the artery by optimizing traffic signal operations using InSync®.

CHALLENGE

The major challenges of coordinating the signals on Crow Canyon Road are the high pedestrian volume as well as random fluctuations in traffic volume.

SOLUTION

Rhythm Engineering deployed the InSync® adaptive traffic signal system at 5 intersections along the 0.59 mile corridor in August 2010. Immediately thereafter, Rhythm Engineering configured the system, monitored its performance and made the appropriate adjustments to the system to optimize traffic flow.

DATA COLLECTION

Field data was collected along the study corridor in July 2010 prior to the installation of the InSync® system. The data collected during this period was used as the baseline for comparing measures of effectiveness. Data was collected again in September 2010 after the InSync® system was installed and had been in operation for several weeks. The July 2010 survey was conducted while school was not in session, which differs from the September 2010 survey which was conducted during the school year. The implications of this condition were addressed in the report.

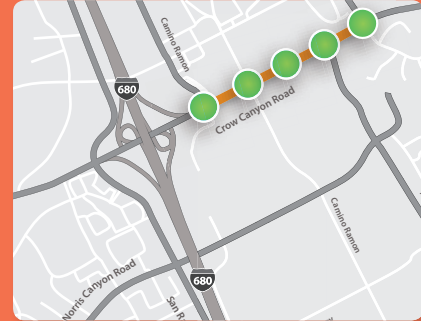
The travel time runs were conducted through the corridor in both directions during four time-of-day periods (AM Peak, AM Off-Peak, Midday Peak, PM Peak). The drivers conducting the travel time study used the "floating car method," in which the drivers attempt to travel with the flow of traffic, changing lanes so as to pass as many cars as they are passed by. This method is used so that the travel times collected are representative of the travel time of the average vehicle traveling through the corridor.

Data was gathered by driving the corridor utilizing GPS equipment and software, collecting data, then processing the data using PC-Travel software.

BENEFITS

Calculations are based on an ADT of 37,466 vehicles and an assumption that the change impacts 70% of the ADT. All calculations are based on normal weekday travel and the results indicate approximate benefits to drivers.

	DAILY BENEFIT	ANNUAL BENEFIT
Vehicle Hours of Travel (reduction)	185 hours	48,205 hours
Fuel Consumption (decrease)	173 gallons	45,128 gallons
Stops (eliminated)	17,506 stops	4,564,061 stops
Total Economic Benefit (fuel • \$2.50 + stops • \$0.10 + time • \$15.00)	\$4,956	\$1,292,296



The green markers indicate the intersections where InSync® is deployed. The Crow Canyon Road corridor is highlighted in orange.



VALIDATION STUDY BRIEF



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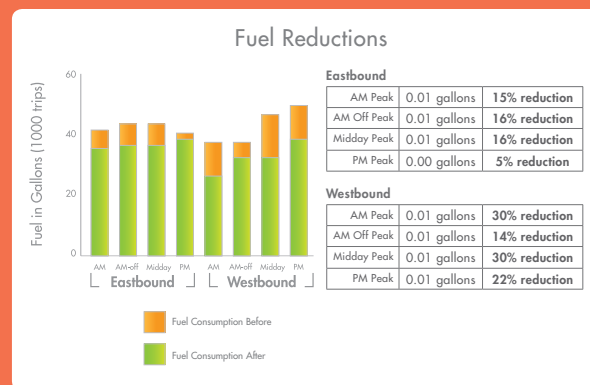
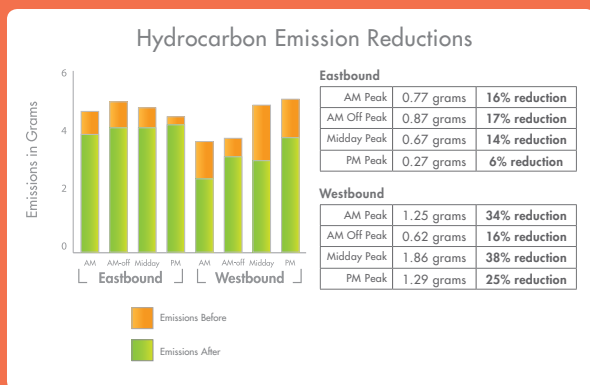
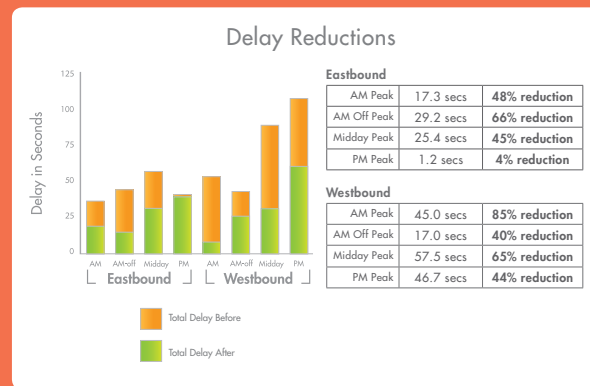
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RESULTS

The study evaluates and compares the travel time, number of stops, speed, delay, emissions and fuel consumption before and after the implementation of the InSync® system.



MOST NOTEWORTHY IMPROVEMENTS:

- 80% reduction in stops
- 85% reduction in delay
- 68% increase in average speed
- 30% reduction in fuel consumption
- 44% reduction in travel time
- 38% reduction in emissions