

Case Study Santa Clara County

MetroTech's patented traffic analysis software leverages video feeds from existing roadside cameras to deliver accurate, real-time traffic flow data to transportation management systems, mobile applications and connected vehicles.



With public budgets at record lows, MetroTech allows consumers to maximize previous investments in transportation infrastructure by providing a low cost alternative to additional road building.

Value Proposition

- Mitigates congestion by utilizing actionable traffic data for signal synchronization across intersections, arterials, ramps and freeways
- Produces accurate, real-time, lane-level vehicle counts, speeds and headway to Traffic Control Centers (TCC)
- Powers connected vehicles with real-time, actionable traffic intelligence
- Incorporates existing video infrastructure, dramatically increasing Benefit-to-Cost ratio
- Reduces secondary accidents via improved emergency response times
- Feeds dynamic message signs, mobile apps and connected vehicles
- Generates automated "push-to-screen" incident detection for TCCs, reducing eyes-on-screen requirement while increasing awareness to new events
- Lowers environmental impact of greenhouse gasses by reducing congestion
- Increases commuter productivity by reducing travel times

Return On Investment (ROI)

Digitizing intersections through "video-as-a-sensor" technology is dramatically less expensive and less intrusive than adding traditional embedded traffic sensors. IntelliSections™ do not require road re-surfacing, additional power or cabling. In most cases, communities experience improved vehicular throughput on their existing roadways in less than 90 days. The price of a typical IntelliSection™ serving four lanes in each direction is approximately \$20K. In 2012 alone, Santa Clara County's return-on-investment for 107 intersections was \$17,328,800. That's an 8.01x ROI.

Commuter Benefits

- Reduced travel time estimates along the entire corridor
- Real-time images of traffic congestion
- Live incident detection
- Lane-level detection
- Congestion bypass routes
- Improved daily route planning
- Viewable from computer, tablet, smartphone and connected vehicle

Case Study - Santa Clara County

In 2012, Santa Clara County, California deployed MetroTech's IntelliSection™ technology on 107 intersections, including five of its busiest expressways. A post-deployment study conducted by the county on the seventeen intersections encompassing the Lawrence Expressway (~600K daily commuters) resulted in a 3% decrease in stops. That's 18,000 fewer vehicle stops each day.

Lawrence Expressway Savings

	First Year		Five Years (Projected)	
Travel Time	82,470 Hours	\$1,474,560	191,780 Hours	\$3,560,030
Fuel Consumption	86,280 Gallons	\$257,990	200,640	\$622,860
Nox Emission Reduction	1.28 Tons	\$22,120	2.97 Tons	\$53,410
Co-Emission Reduction	6.54 Tons	\$480	15.20 Tons	\$1,170
VOC Emission	1.51 Tons	\$1,830	3.52 Tons	\$4,430
Total Benefits		\$1,756,980		\$4,241,900

Benefits

Santa Clara County projected data collected from the seventeen intersections along the Lawrence Expressway across the county's 107 IntelliSections™ deployed with the following results in the first year:

Santa Clara - 107 IntelliSections™

	First Year		Five Years (Projected)	
Travel Time Savings	805,450 Hours	\$14,032,710	1,873,035 Hours	\$33,879,190
Fuel Consumption	984,330 Gallons	\$3,014,970	2,289,012 Gallons	\$7,279,040
Nox Emission Reduction	14.71 Tons	\$254,370	34.19 Tons	\$614,100
Co-Emission Reduction	75.52 Tons	\$5,590	175.60 Tons	\$13,500
VOC Emission	17.5 Tons	\$21,160	40.70 Tons	\$51,140
Total Benefits		\$17,328,800		\$41,836,970

*All projections are based on client and management provided assumptions and forecasts. Actual results may vary.

Conclusion

Today, MetroTech's software tracks over 3.7MM vehicle movements daily through 450 cameras in twelve different cities/towns. Communities with existing traffic video infrastructure have the distinct opportunity to further leverage their investment. MetroTech's IntelliSections™ yield accurate traffic count, speed and flow data, providing real insight into the health and performance of intersections and corridors.

As commuter travel times decrease, productivity and profitability for both individuals and their respective companies increases, improving quality of life and long-term economic development.

Commuters, businesses, governments and the environment all benefit from reduced congestion. The health of our community as a whole improves as travel times are reduced along with stress, accidents and greenhouse gasses.

MetroTech IntelliSection™ - *driving information*