

Stop Bar Solutions — Baltimore, Maryland



“We installed the Sensys Networks VDS240 system without expensive infrastructure or cabling upgrades.

The savings in time and materials were tremendous. Our average installation time was less than three hours per intersection.”

— Paul Manik

*Superintendent, Signal Electronics
Baltimore City Department of Transportation*



Stop Bar Detection for Optimized Traffic

The quaint, narrow streets that lend Baltimore much of its charm, were also the culprit of an increasing traffic quagmire. Like many aging cities along the Eastern Seaboard, population had outgrown the industrial hub's 19th century infrastructure. Existing conduit could not support additional cables, and, the city was operating under severe fiscal restraints. Baltimore City Department of Transportation needed a cost-effective solution to improving citywide traffic flow with minimal disruptions to roadways.

In their efforts to improve mobility, Baltimore DOT completed development of a state-of-the-art Traffic Management Center with fiber optic uplinks, replaced 1,300 traffic signal controllers, and re-timed signals throughout the business district and selected gateways. The upgrade to NEMA TS2 controllers provided enhanced functionality and communications capabilities enabling engineers to remotely manage traffic controllers, however, their system still relied upon controller-based time-of-day schedules.

Installation of stop bar detection at the side street to minimize unnecessary green light time was an obvious solution, however, since a majority of Baltimore's side streets are small, video detection proved too expensive, and inductive loops deemed impractical due to poor pavement conditions and protracted road closures.

Baltimore City DOT chose Sensys Networks wireless vehicle detection system for trial along a one-mile segment of Edmondson Avenue, west of Gwynns Falls Park – a major east-west route to the city center.

Evaluation during the trial showed immediate improvement in travel times and eased congestion along this major arterial, while the system's cost, flexibility, and ease of installation and deployment, convinced Baltimore City DOT to implement an additional 75 intersections.

Dependable Technology

Our rugged in-pavement, wireless magnetic sensor —with a remarkable 10-year battery life—is the core of VDS240's technology.

Flexible Installation

From one intersection—to an entire region, install detection precisely where needed in less than 15 minutes per unit. No trenching—and easily removed—sensors are reusable should a roadway undergo resurfacing.

Lowest Operating Cost

Virtually maintenance free, wireless sensors install in minutes—and begin transmitting accurate data almost immediately. Remotely managed diagnostics, software upgrades, and configuration streamlines operations, while significantly reducing long-term maintenance costs associated with less advanced technologies—a potential savings of millions of dollars a year.

Universal Platform

Simplifying operations with comprehensive data communications, archiving, and management requirements for performance measurement and analysis, Sensys Networks Universal Platform easily integrates with legacy systems, and supports all traffic detection applications—with one set of tools.



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