

Atlanta Smart Corridor – Project Fact Sheet



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Georgia Regional Transportation Authority partnered with the City of Atlanta, Cobb County, City of Marietta, Georgia Department of Transportation and the Federal Highway Administration on the Atlanta Smart Corridor (ASC) Project completed in June 2010.

Key components of this innovative project are intelligent transportation system (ITS) traffic signal system upgrades and cross-jurisdictional traffic signal coordination. The project area extends from Howell Mill Road in the City of Atlanta to South Marietta Parkway in the City of Marietta along the US 41/Cobb Parkway/Northside Parkway corridor.

A total of 29 intersections are included in the project limits; they are equipped with SCATS (Sydney Coordinated Adaptive Traffic System) adaptive traffic signal control system. This is “smart” signal control that uses real time vehicle counts obtained from sensors (e.g., loop detectors or video detection cameras) at the system intersections to determine the most appropriate cycle time and optimized splits for every approach at all of the intersections within the system.

Transit signal priority (TSP) technology was installed on seven City of Marietta intersections, 11 intersections in Cobb County, and four City of Atlanta intersections. TSP provides an effective means of achieving a low-cost improvement in Cobb Community Transit bus operations within the corridor. Transit signal priority is achieved via either green signal extension or early green signal. Additionally, pedestrian safety and ADA upgrades, and recalibration of video detection cameras were implemented.

A first in the region, this project uses Cobb County’s Traffic Control Center as the main server to centralize traffic signal coordination for the entire corridor.

PROJECT BENEFITS

- Cross-jurisdictional traffic signal coordination
- Adaptability of signals to changing traffic patterns
- Vehicle travel time, vehicle delay, and vehicle stops declined on average by 22%, 40%, and 34%, respectively. This also contributed to reducing vehicle fuel consumption by 34%
- NOx and VOC vehicle emissions were reduced by 1%, and 8.5%, respectively
- The average southbound transit travel times decreased, while the average northbound transit travel times increased
- The average transit stop rate decreased from 53% to 50% in the northbound direction, and dropped from 43% to 28% in the southbound direction
- Annual savings of about six million dollars in the form of reduced travel time and fuel consumption
- This ITS investment in the corridor has a benefit/cost ratio between 23 and 28

A before and after studies were conducted to evaluate the effectiveness of both SCATS and TSP technologies. The studies, results, and lessons learnt are summarized and available online:

- *Primer for Regional ITS Corridors* at www.grta.org/ASC_Primer.pdf; and
- *Atlanta Smart Corridor Evaluation Report* at www.grta.org/ASC_Evaluation.pdf.

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Atlanta Smart Corridor Project – Location Map

