

Glades Road in Boca Raton getting better synced traffic signals

New system adjusts traffic signal cycles in real time

By: Angel Streeter, SunSentinel
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Getting through the most congested road in Palm Beach County takes time.

But soon, motorists could claw back some of those precious minutes as Boca Raton installs a new traffic control system [provided by Trafficware] — the first in Palm Beach County— along the busiest sections of Glades Road.

The new system [called SynchroGreen] will synchronize traffic signals in real time, adjusting the timing of traffic signals based on how traffic is flowing. It's a change officials hope will reduce delays and the amount of time motorists spend at traffic lights.

"When traffic is dying down a little bit, you don't need the longer [traffic signal] cycles," said Emanuel Posadas, Boca Raton's traffic operations engineer.

The Palm Beach Metropolitan Planning Organization, which provides short- and long-term transportation planning in the county, made the deployment of the so-called adaptive traffic control system on certain major roads one its top funding priorities for the coming years.

"The public interest is moving away from widening roads further," said Doug Hess, Boca Raton's traffic engineer. "We've got to do something else."

The system will detect that, make adjustments and send new timing cycles to the traffic signals.

Currently, traffic signal timing is preprogrammed with the length of cycles based on the time of day. During rush hour, traffic signals stay green longer on major roads, whereas in the middle of the night they change sooner.

The installation along Glades Road at nine intersections between St. Andrews Boulevard and Northeast 13th Street will begin in October and take about six months to complete. The cost of the project is \$306,781.

But more roads in the county could soon have the smarter traffic control.

If the Glades project is successful in improving travel times and reducing delays, Boca Raton may install it on other roads that are part of its traffic control system.

Palm Beach County is looking at using the system as well on specific roads and is hoping to get state or federal transportation money to do a demonstration project on Northlake Boulevard.

"We want to gain experience with these," said Dan Weisberg, the county's traffic engineer. "There are studies that show less stops and delays and reduced travel times [under this system]."

The real-time traffic control system won't be deployed on all roads. And it's not expected to improve congestion at peak times. But it is supposed to move traffic more quickly and smoothly.

The system is ideal on roads such as Glades where there are fluctuations and surges in traffic throughout the day, particularly on the section of Glades that's getting the new system. The road has major traffic generators such as the Town Center Mall, Interstate 95, Florida Atlantic University and Boca Raton High School.

"That's ground zero for traffic in the city," Hess said. "That is probably our No. 1 traffic concern as far as congestion and traffic surges."

The road has the typical morning and afternoon rush hours. But there are also times when there are unexpected upticks and declines in traffic that can't be predicted or wouldn't be considered when setting signal cycles.

A crash that closes lanes on I-95 sends traffic flooding to Glades. The differing schedules at FAU from one semester to the next causes fluctuations in traffic. Holiday traffic at the mall or the changes in traffic at the high school throughout the school year such as days off and half-days, and from the summer to the fall have an impact as well.

"We can't keep track of every event and excess traffic surge that happens," Hess said.

Traffic engineers tend to retime traffic signals every three years. But the new system will retime the traffic signals exactly when they're needed.

The impact likely won't be felt during rush hour, traffic engineers caution, because traffic lights are given the maximum amount of green time possible during those times.

The most impact should be felt during non-peak hours and by motorists using side streets who will no longer have to wait for extended green lights on the major roads.

Boca Raton traffic engineers are careful not to promise too much as far as how much better travel times will get on Glades.

But if the results of a similar system installed in Seminole County are any indication, motorists could look forward to smoother rides. Seminole County installed an adaptive traffic control system on State Road 436 in May 2011. A study of the new system showed travel times were reduced by as much as 27 percent in the mid-day.

So Seminole County installed the system on Lake Mary Boulevard in March. And with some federal money coming its way, the county will put the system in on five other corridors.

"Traffic is still bad," said Charles Wetzel, Seminole County's traffic engineer. "But coordination is better. It worked well."