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# Walk. Ride. Drive. *Smarter.*

## EQUIPMENT

The Tampa Connected Vehicle Pilot aims to improve safety, mobility and the environment by enabling cars, buses, streetcars, handheld devices and elements of the downtown roadway infrastructure to “talk” to each other. To make this vision a reality, THEA has assembled a team that includes HNTB, Siemens, the University of South Florida Center for Urban Transportation Research and Global-5 Communications. Siemens is developing roadside units that will communicate with connected vehicles and with the city's Transportation Management Center via dedicated short range communications, or DSRC. The project's vehicle systems integration partner, Brandmotion, is working with Savari, Commsignia and SiriusXM to supply the onboard units that will be installed in participants' vehicles. The onboard units, which display safety messages on an enhanced rearview mirror, will be the primary interface between drivers and the connected vehicle environment.



## OUR PARTNERS



**D** rivers, bus and streetcar passengers, and pedestrians in downtown Tampa will soon experience a safer, smoother trip as the Tampa Hillsborough Expressway Authority brings innovative connected vehicle technology to the city's central business district. This technology has the potential to transform the experience of the drivers, transit riders and pedestrians who traverse the city every day—preventing collisions, enhancing traffic flow, improving transit trip times and even shrinking the Tampa Bay area's carbon footprint by reducing emissions of greenhouse gases.

Tampa is one of the first cities in the nation to deploy connected vehicle technology on real city streets. In fact, Tampa was one of just three sites in the nation to be selected for the U.S. Department of Transportation (USDOT) Connected Vehicle Pilot Deployment Program, which seeks to spur innovation among early adopters of connected vehicle applications. The other two sites are New York City and the Interstate 80 corridor in Wyoming.

The four-year effort began in September 2015, when the USDOT awarded THEA a \$17 million contract to implement its winning proposal. In 2016, the project entered its second phase, which includes design, testing and deployment. The third and final phase, expected to begin in mid-2018, will involve the full-scale operation of connected vehicle technology throughout downtown Tampa.





# WHAT WE'RE DOING

The Tampa Connected Vehicle Pilot will employ innovative vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communication technology to improve safety and traffic conditions in downtown Tampa.

## MORNING BACKUPS



**Roadways:** *Lee Roy Selmon Expressway*

Commuters approaching downtown on the Lee Roy Selmon Expressway's Reversible Express Lanes enter a curve ending at a traffic light at the intersection of East Twiggs Street and Meridian Avenue. Morning traffic backs up here, increasing the risk of rear-end crashes. Drivers on the express lanes who participate in the Tampa Connected Vehicle Pilot will receive warnings when cars on the road ahead have suddenly slowed or come to a stop. Their vehicles will also alert them when they are approaching the curve at an unsafe speed.

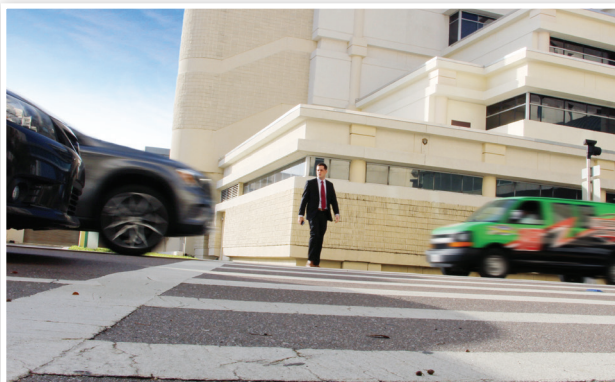
## WRONG-WAY ENTRY



**Roadways:** *Lee Roy Selmon Expressway, East Twiggs Street, North Meridian Avenue*

The downtown end of the Lee Roy Selmon Expressway's Reversible Express Lanes is a potential entry point for wrong-way drivers. The Tampa Connected Vehicle Pilot aims to reduce the risk of collisions by detecting and warning wrong-way drivers before they get on the expressway. Other connected vehicles on the express lanes will also receive warnings when a wrong-way driver is approaching.

## PEDESTRIAN SAFETY



**Roadways:** *East Twiggs Street*

The Tampa Connected Vehicle Pilot will install connected vehicle technology at the midblock crosswalk on East Twiggs Street at the Hillsborough County Courthouse to improve pedestrian safety. When sensors detect a pedestrian in the crosswalk, roadside equipment will broadcast that information to connected vehicles in the vicinity, and their drivers will receive an alert.

## TRANSIT SIGNAL PRIORITY



**Roadways:** *North Marion Street, East Kennedy Boulevard, East Jackson Street*

The Tampa Connected Vehicle Pilot will outfit 10 Hillsborough Area Regional Transit (HART) buses with equipment that will enable them to communicate with traffic signals on their routes. Downtown traffic congestion can prevent HART buses from reaching their stops on time, causing them to fall behind schedule. The signals will prioritize bus movements when necessary to keep buses on schedule.

## STREETCAR CONFLICTS



**Roadways:** *Channelside Drive*

The TECO Line Streetcar System is an electric trolley line that roughly follows Channelside Drive between downtown Tampa and Ybor City. The Tampa Connected Vehicle Pilot will equip TECO Line streetcars with devices that enable them to detect other connected vehicles. Streetcar operators will receive a warning when a connected vehicle is about to cross the track, reducing the risk of a collision.

## TRAFFIC FLOW OPTIMIZATION



**Roadways:** *Meridian Avenue, North Nebraska Avenue, Florida Avenue*

Connected vehicles will communicate with some traffic signals on Meridian, North Nebraska and Florida avenues to improve traffic flow in real time. Drivers of connected vehicles will also receive a warning when it is not safe to enter an intersection. For example, a car may alert its driver to oncoming traffic on a cross street that may be out of view. The City of Tampa's Transportation Management Center will also capture traffic data to improve system-wide performance.