



Photo Source: USDOT

Connected Vehicle Pilot Deployment Program: **TAMPA, FLORIDA**



SAFETY



MOBILITY



ENVIRONMENT

Connected Vehicle Pilot Deployment Program

Sponsored by the U.S. Department of Transportation (USDOT) Intelligent Transportation Systems Joint Program Office, the Connected Vehicle Pilot Deployment Program is a national effort to deploy, test, and operationalize cutting-edge mobile and roadside technologies and enable multiple connected vehicle applications.

In early September 2015, the USDOT awarded three cooperative agreements collectively worth more than \$45 million to three sites for the regional connected vehicle pilots:

- New York City, New York
- Wyoming
- Tampa, Florida.

The locations were selected in a competitive process to go beyond traditional vehicle technologies to help drivers better use the roadways to get to work and appointments, relieve the stress caused by bottlenecks, and communicate with pedestrians on cell phones of approaching vehicles.

Pedestrians, transit riders, and automobile drivers in downtown Tampa, Florida, experience transportation challenges on a daily basis. During morning peak periods, inbound commuters on the Lee Roy Selmon Expressway's Reversible Express Lanes encounter significant delays and, too often, rear-end crashes. Vehicle and pedestrian conflicts are commonplace, especially at a busy mid-block crosswalk near the Hillsborough County Courthouse. Drivers and pedestrians also experience conflicts with buses and streetcars that traverse the central business district. This combination of pedestrians, automobiles, streetcars, buses, and even a cruise ship terminal make downtown Tampa a promising environment for new transportation solutions.

Tampa Connected Vehicle Pilot

The Tampa Connected Vehicle Pilot aims to transform the experience of automobile drivers, transit riders, and pedestrians in downtown Tampa by preventing crashes, enhancing traffic flow, improving transit trip times, and reducing greenhouse gas emissions.

Approach

The Tampa Connected Vehicle Pilot will equip buses, streetcars, and privately owned vehicles with connected vehicle technology, which will enable them to communicate vital information with each other and transportation infrastructure elements. Pedestrians will also participate by downloading and using a smartphone app. Drivers, transit riders, and pedestrians in the connected vehicle environment will enjoy a range of safety and mobility benefits, including crash prevention, enhanced traffic flow, and greenhouse gas reductions.



Vehicle Turning Right in Front of Transit Vehicle



U.S. Department of Transportation



Partners

The Tampa Hillsborough Expressway Authority (THEA) leads this pilot. THEA's partners include:

- USDOT
- Florida Department of Transportation
- City of Tampa
- Hillsborough Area Regional Transit
- University of South Florida Center for Urban Transportation Research
- HNTB
- Siemens
- BrandMotion
- Global-5 Communications.

Applications

The Tampa Connected Vehicle Pilot will deploy a variety of safety and mobility applications:

- **End of Ramp Deceleration Warning** – Warns the driver to slow down to a recommended speed as the driver approaches the end of a queue, which may be around a curve at the end of the ramp.
- **Wrong-Way Entry** – Warns the driver of a vehicle that is entering the reversible express lanes from the wrong direction. This application also broadcasts a warning to other equipped vehicles on the reversible lanes that a wrong-way driver is approaching.
- **Mobile Accessible Pedestrian Signal System** – Requests a pedestrian crossing signal when an equipped pedestrian approaches the crosswalk at a signalized intersection.
- **Pedestrian in a Signalized Crosswalk Vehicle Warning** – Warns the driver when a pedestrian is using a crosswalk in the vehicle's projected path. The pedestrian also receives a warning that a vehicle is approaching the crosswalk. The application also provides warnings when a pedestrian jaywalks outside the crosswalk.

Deployment by the Numbers

The Tampa Connected Vehicle Pilot is deploying:

- 1,500 privately owned vehicles equipped with onboard units
 - 10 buses equipped with onboard units
 - 10 streetcars equipped with onboard units
 - 500 or more pedestrian participants
 - 40 roadside units at the busiest intersections.
- **Vehicle Turning Right in Front of Transit Vehicle** – Warns the streetcar operator when a vehicle is turning right at an intersection the streetcar is approaching.
 - **Intelligent Signal System** – Optimizes traffic signal timing based on real-time connected vehicle data.
 - **Transit Signal Priority** – Gives buses priority at traffic signals to keep them running on schedule.
 - **Forward Collision Warning** – Warns the driver when a forward collision is imminent.
 - **Emergency Electronic Brake Light Warning** – Alerts the driver that a vehicle ahead is hard braking.
 - **Intersection Movement Assist** – Warns the driver when it is not safe to enter an intersection because of other vehicles in or approaching it.
 - **Probe Data Enabled Traffic Monitoring** – Gathers real-time traffic data from connected vehicles to optimize transportation management.

Tampa is one of the first cities in the nation to deploy connected vehicle technology on real city streets. Tampa's deployment is uniquely multimodal—encompassing pedestrians, buses, streetcars, and privately owned automobiles.

Stay updated on the Tampa Connected Vehicle Pilot:

Website: www.TampaCVPilot.com

Facebook: www.facebook.com/TampaCVPilot

Twitter: [@Tampa_CV](https://twitter.com/Tampa_CV)

For more information, please visit http://www.its.dot.gov/pilots/pilots_thea.htm or contact:

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