



Walk. Ride. Drive. Smarter.

THEA CONNECTED VEHICLE PILOT

Tampa, Florida, is one of the first cities in the nation to deploy connected vehicle technology on real city streets. The THEA Connected Vehicle Pilot is the only site that generates real-time data, enhancing the progress of the deployment of the connected technology in the Automated, Connected, Electric, and Shared (ACES) world. Tampa's deployment is uniquely multimodal, encompassing pedestrians and privately owned automobiles aiming to help Tampa realize its Vision Zero goals.

GOALS

The Tampa Hillsborough Expressway Authority (THEA) Connected Vehicle Pilot aims to:

- Increase safety by eliminating crashes and reducing traffic conflicts
- Enhance mobility by improving travel time and travel time reliability
- Help sustain the environment by reducing emissions of greenhouse gases
- Contribute to the development of rules and regulations in the connected vehicle space
- Transform the experience of the drivers and pedestrians

BACKGROUND

The THEA Connected Vehicle Pilot began in 2015, when the U.S. Department of Transportation (USDOT) awarded THEA a \$22 million contract as part of its Connected Vehicle Pilot Deployment Program. In 2021, USDOT authorized THEA and its partners to proceed with the next phase – collaboration with auto manufacturers and road operators to provide the next evolution of delivering safer transportation. THEA will work together with Honda Development & Manufacturing of America, LLC (HDMA), Hyundai America Technical Center, Inc. (HATCI) and Toyota Motor North America to deploy vehicles with connected vehicle technology to provide safer and smarter mobility solutions in Tampa Bay to meet the region's unique transportation needs.



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PARTNERS

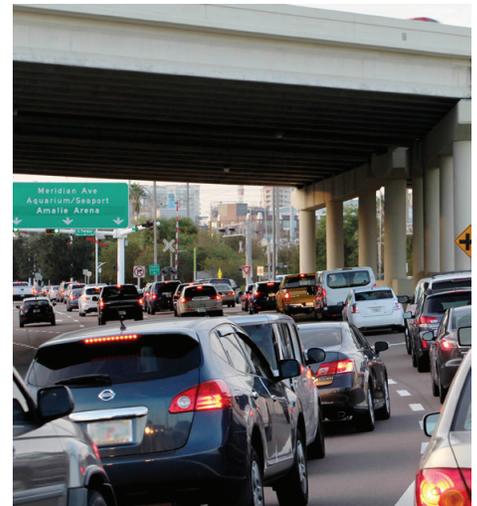
THEA has assembled an implementation team that includes Honda Development & Manufacturing of America, LLC (HDMA), LLC, Hyundai America Technical Center, Inc. (HATCI), Toyota Motor North America, DENSO, HNTB, Siemens, the University of South Florida Center for Urban Transportation Research (CUTR), Brandmotion and Playbook Public Relations. Other key partners include the Florida Department of Transportation, the City of Tampa, the Hillsborough Area Regional Transit Authority (HART) and HNTB.

COMMUNITY

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

APPROACH

The THEA Connected Vehicle Pilot has equipped hundreds of privately owned vehicles with technology that enables them to communicate with each other and with elements of the transportation infrastructure. Individual drivers get safety alerts in their vehicle's rearview mirror.





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APPLICATIONS

Emergency Electronic Brake Light Warning – Alerts the driver to hard braking ahead.

End of Ramp Deceleration Warning – Warns the driver to slow down to a recommended speed as the vehicle approaches the end of a queue.

Forward Collision Warning – Warns the driver when a forward collision is imminent.

Intelligent Signal System – Optimizes traffic signal timing based on connected vehicle data.

Intersection Movement Assist – Warns the driver when it is not safe to enter an intersection.

Pedestrian Collision Warning – Warns the driver when a pedestrian is using a crosswalk in the vehicle's projected path.

Red Light Violation Warning – Warns the driver whether it appears likely that the vehicle will enter the intersection in violation of a traffic signal.

Wrong Way Entry – Warns the driver of a vehicle that is entering the reversible express lanes in the wrong direction and warns other equipped vehicles that a wrong-way driver is approaching.





Up to 600
privately owned vehicles
equipped with onboard units



48
roadside units