

ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS) FOR TRANSIT BUSES DEMONSTRATION PROJECT



ADAS SAFETY AND ACCESSIBILITY DEPLOYMENT PROJECT

CONNECTICUT DEPARTMENT OF TRANSPORTATION (CTDOT)

IN PARTNERSHIP WITH FEDERAL TRANSIT ADMINISTRATION, THE CENTER FOR TRANSPORTATION AND THE ENVIRONMENT,
NEW FLYER, THE UNIVERSITY OF CONNECTICUT, AND EDGE CASE RESEARCH



U.S. Department of Transportation
Federal Transit Administration

PROJECT SUMMARY

Automation Level(s): 1

This project will expand an existing FTA sponsored transit automation program along the CTfastrak fixed guideway, incorporating ADAS features to enhance safety and accessibility throughout the CTfastrak local bus network. Specifically, CTDOT will utilize FTA funds to develop, integrate, and demonstrate multiple ADAS safety and accessibility features on 40-foot battery electric transit buses, including Forward Collision Mitigation, Side Collision Avoidance, Rear Collision Avoidance, Rear Blind Spot Warning, and Precision Docking Assist. ADAS-equipped buses will operate throughout CTDOT's CTfastrak local transit network on multiple routes across the Hartford region, including along the CTfastrak dedicated busway and in downtown Hartford. CTDOT will leverage prior federal and state investments in vehicle automation and supporting infrastructure to accelerate project development, reduce risks, and deliver greater return on investment for FTA and the industry. Project partners include New Flyer, Center for Transportation and the Environment, the University of Connecticut, and Edge Case Research. Data collection and analysis will be performed by the University of Connecticut (UConn) in coordination with FTA's independent evaluator.

PROJECT GOALS

The fundamental goals of CTDOT's ADAS Safety and Accessibility Deployment Project include:

- Increase on-road safety.
- Enhance transit service reliability.
- Improve transit rider accessibility throughout the CTfastrak local bus network.

VEHICLE INFORMATION

This project will deploy three 40-foot ADAS-equipped, battery electric New Flyer Xcelsior CHARGE™ heavy-duty transit buses.

DATA COLLECTION, MANAGEMENT, & SHARING

UConn will be the local project lead assisting CTDOT in conducting and coordinating all data planning, collection, storage, and analysis activities for the project. UConn and all project partners will work with FTA's independent evaluator to scope the appropriate delineation of data planning, collection, analysis, and reporting tasks to meet program objectives and ensure efficient use of project resources. Examples of UConn tasks will include assistance with reviewing ADAS requirements and documents for vehicle deployment; documenting data sources and systems; developing system and database architecture and data flows; collecting ADAS and other data to populate databases and application development; developing a data portal and visualization tool to assist with data analysis; conducting data analyses; and assisting CTDOT with creating the final project report and the independent evaluator with producing an evaluation report. UConn and the project team will use several software tools to collect, aggregate, and analyze ADAS system safety, operational, performance and other data throughout the project.

BUDGET

ADAS FTA FY 22 Discretionary Funding	Section 5307 Formula Funding	Non-Federal Cost Share	Total Amount
\$2,000,000	\$1,683,318	\$2,433,343	\$6,116,661