

FTA TRANSIT BUS AUTOMATION STRATEGIC PARTNER



LINCOLN TUNNEL EXCLUSIVE BUS LANE CONNECTED & AUTOMATED BUS PROOF-OF-CONCEPT

PORT AUTHORITY OF NEW YORK AND NEW JERSEY

IN PARTNERSHIP WITH THE NEW JERSEY DEPARTMENT OF TRANSPORTATION, NEW JERSEY TURNPIKE, NEW JERSEY TRANSIT, COACH USA, GREYHOUND, ROBOTIC RESEARCH, AND SOUTHWEST RESEARCH INSTITUTE



U.S. Department of Transportation
Federal Transit Administration

PROJECT SUMMARY

Automation Level(s): 1-2

This proof-of-concept project focuses on the Lincoln Tunnel Exclusive Bus Lane (XBL). The project involves a rush-hour contraflow exclusive bus lane between the New Jersey Turnpike and I-95 in New Jersey that connects to the Lincoln Tunnel and into the Port Authority midtown bus terminal in Manhattan. Technologies would be initially tested off-site while the PANYNJ develops a traffic simulation model, and the technologies would then be tested on buses in the XBL during off-peak hours. Technologies being tested as a part of this project include lateral lane-keeping and bus platooning to enhance safety, improve capacity, and improve reliability of the exclusive bus lane.

PROJECT GOALS

- Demonstrate the benefits of connected and automated vehicle technologies to help prevent or mitigate the effect of incidents and deviations in traffic flow on the corridor
- Plan for the scaled adoption and deployment of effective technology solutions to enhance the safety, reliability, and effective capacity of the XBL
- Long-term objectives include improving travel time reliability, decreasing headway, reducing emissions, improving fuel efficiency, and improving traffic safety

VEHICLE INFORMATION

As of August 2020, details about the vehicles have not been publicly announced; however, the project will use motor coaches and will involve two different technology systems: one provided by the Southwest Research Institute and one provided by Robotic Research.

DATA COLLECTION, MANAGEMENT, & SHARING

Data will be collected on average speed and headway, variability of speeds and headway, and the amount of steering, throttle, and braking power applied autonomously. The project will use sensors and cameras mounted on the vehicles for measurement, and the bus drivers will also be interviewed to understand their experiences. The PANYNJ's Technology Department will provide database space and connect the field devices.

PROJECT STATUS & SCHEDULE

The project is expected to kick off in early 2021.

BUDGET

FTA Strategic Partnership Funding	Non-Federal Cost Share	Total Amount
\$250,000	\$550,000	\$800,000