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# Transit Track Worker Safety Protection Demonstration Project

## Background

Rail transit track worker safety is one of the top priorities for the Federal Transit Agency (FTA). Tragically, over recent years, there has been an increasing trend of fatal and serious accidents among those who work close to or within the train envelope to maintain and repair transit infrastructure. Bombardier was selected by FTA to demonstrate new and innovative technologies to reduce the risks of working in the track environment.

## Objectives

Bombardier, in partnership with the Metropolitan Atlanta Rapid Transit Authority (MARTA), conducted a demonstration of Bombardier's TrackSafe technology on a section of MARTA's operational rail transit system. This project was to manufacture, install, and test TrackSafe equipment on MARTA's Green Line between Bankhead station and Ashby station.

## Findings and Conclusions

*TrackSafe technology can improve operational effectiveness through improved communication with Transit Control and can provide warnings to track workers of approaching trains and vice versa.*

TrackSafe equipment on MARTA's Green Line between Bankhead station and Ashby station was manufactured, installed, and tested. Although during initial commissioning, some logic issues were discovered within the system, following minor software updates, the system was able to function as intended.

A number of opportunities for further enhancement of the TrackSafe technology were jointly identified and implemented during the course of the project. These included:

- A sophisticated display of track worker locations for the Rail Service Control Center
- Improved data management through record automation
- Radio-Frequency Identification (RFID) tag incorporated in existing Wayside Access Pass
- Vandal-resistant design

Bombardier's project team received ad-hoc feedback from MARTA's operational staff, including train operators and track workers, during various stages of deployment. These were taken into account by Bombardier's Project Team in determining final configurations of the system.

A number of areas for further development were identified:

- Further self diagnostic/self health monitoring features
- Improvements to the design to facilitate easier installation
- Increased multi track/multi direction options

## Benefits

This project demonstrated how Bombardier's TrackSafe technology could be used to improve operational effectiveness through improve communication with Transit Control as well as the core objective of providing warnings to track workers of approaching trains and vice versa.

## Project Information

### FTA Report No. 0046

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