FEDERAL TRANSIT ADMINISTRATION

FTA Safety Bulletins 20-1 and 20-2 End-of-Railcar Door Signage and Messaging; Inward- and Outward-Facing Image and Audio Recorders

January 26, 2021





FTA published two Safety Bulletins on December 30, 2020 to improve the safety of rail transit systems:



<u>SB 20-1</u>: End of Railcar Door Signage and Messaging

SB 20-2: Inward- and Outward-Facing Image and Audio Recorders



This Safety Bulletin (SB 20-2) provides information to State Safety Oversight Agencies (SSOAs) and Rail Transit Agencies (RTAs) on the implementation of inward- and outward-facing image and audio recorders in rail transit compartments.

Background

On February 21, 2017, a Southasstern Pennsylvania Transportation Authority (ISETA) light-rail passenger trais noter the number two low plass, and antivas a support BFFA light-rail passenger trais. Four people were injured and equipment duranges totaled \$1.6 million. The orable of the state providing recordings to verify this crew actions and train operating conditions may all in the providing recordings to verify this crew actions and train operating conditions may all in the verifyint of meta-conditional duration and antifold to the impreventional staticity.

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Rail transit vehicles that are not equipped with inward- and outward-facing image and audio recorders may pose an increased risk to RTAs in the following areas:

Federal Transit Administration, December 30, 2020

The guidance in this document is not legally binding in its own right and will not be relad upon by the Federal Transit Administration as a separate have for afformative enforcement action or other administrative penalty. Compliance with the guidance in this document is a distinct from existing statutes and regulations) is voluntary only, and noncompliance will not affect rights and obligations under existing statutes and regulations.

A Safety Bulletin:

- Does not impose mandatory requirements
- Alerts agencies to hazards and includes considerations



Agenda

- Safety Bulletin 20-1: End-of-Railcar Door Signage and Messaging
 - Timeline
 - Safety Risks
 - Considerations for Transit Agencies
 - Resources Available
- Safety Bulletin 20-2: Inward- and Outward-Facing Image and Audio Recorders
 - Timeline
 - Safety Risks
 - Considerations for Transit Agencies
 - Resources Available



SB 20-1: End-of-Railcar Door Signage and Messaging



SB 20-I Timeline

September 2018

August 2019

December 2019

> June 2020

December 2020 A SEPTA subway train struck and killed a child who had fallen between railcars as he passed through the end-of-railcar doors shortly after the train had departed the station

NTSB recommended FTA require the development and implementation of safety messaging standards for end-of-railcar doors

FTA responded that the newly established Safety Risk Management (SRM) process would be implemented to assess the safety concerns and inform FTA's next steps

FTA began the SRM process for end-of-railcar door signage and messaging

FTA released Safety Bulletin 20-1 on End-of-Railcar Door Signage and Messaging

Safety Risks

Risks associated with end-of-railcar door signage:



Inadequate signage and messaging on dangers of passing between railcars poses safety risk to employees and passengers

 Likelihood of passengers traveling between railcars may increase if signage is inadequate



Non-standardized end-of-railcar door messaging across rail transit industry and within rail transit agencies (RTAs) may decrease likelihood of passengers being informed of dangers



Considerations for Transit Agencies

Evaluate design and placement of warning signs and messages within railcars

- For example, RTAs may consider whether end-of-railcar signage and messaging clearly communicates basic information such as:
 - Safety risk associated with moving between railcars
 - Who to contact in case of emergency

Consider the extent signage and messaging:

- Attracts reader's attention
- Clearly communicates policies and guidance
- Reflects best practices for communicating safety messages



Resources Available (1/2)

Existing American Public Transportation Association (APTA) voluntary standards for emergency signage:

- <u>APTA PR-PS-S-002-98, Rev.3</u> Emergency Signage for Egress/Access of Passenger Rail Equipment
 - Specifies requirements for letter-size, luminance/illuminance criteria, sign size, and color and contrast of emergency signage
- <u>APTA RT-VIM-S-021-10, Rev.1</u> Emergency Signage for Rail Transit Vehicles
 - Offers minimum performance criteria for emergency sidedoor signage. The design principles of the APTA standards may be applied to safety-critical end-of-railcar door signage

Resources Available (2/2)

Additional resources containing information on developing endof-railcar door signage and messaging:

- Occupational Safety and Health Administration (OSHA), Specifications for Accident Prevention Signs and Tags, <u>Regulation</u> <u>29 CFR 1910.145</u>
- 2. International Organization for Standardization (ISO) <u>3864-1:2011</u> and <u>ISO 7010:2019</u>
- 3. American National Standards Institute (ANSI) Z535 series



SB 20-2: Inward- and Outward-Facing Image and Audio Recorders



SB 20-2 Timeline

SEPTA light-rail passenger train caused a three-train accident after February striking a light-rail passenger train which then derailed into another train 2017 NTSB formally recommended FTA require the installation of inward- and August outward-facing image and audio recorders 2017 APTA published their final Recommended Practice (RT-OP-RP-024-019) for Crash and Fire Protected Inward and Outward Facing Image and April 2019 Audio Recorders in Rail Transit Operating Compartments FTA began the SRM process for inward- and outward-facing image and lune audio recorders and found that additional mitigations were warranted 2019 FTA released Safety Bulletin 20-2 on Inward- and December **Outward-Facing Image and Audio Recorders** 2020



Safety Risks (1/2)

Rail transit vehicles not equipped with image and audio recorders may pose an increased risk to RTAs in the following areas:



Accidents

- Agency may fail to correctly identify and address issues when accident investigation cannot make accurate causal determination
- Agency may be unable to apply targeted mitigations to reduce likelihood or severity of repeat accidents



Unidentified Hazards

- Data from near-miss events could help RTAs develop mitigations before accident occurs
- Image and audio recorders could support proactive training and hazard mitigation programs



Safety Risks (2/2)



Operator Rule Violations

- Image and audio recorders may deter rule violations by rail transit operators
- Operator accountability could increase through additional performance monitoring
- RTAs could use data to develop and administer performance monitoring programs to proactively address non-compliances with operator rules and regulations



Considerations for Transit Agencies

Install inward- and outward-facing image and audio recorders in controlling locomotive cabs and cab car operating compartments to support safety risk management and safety assurance activities required under Public Transportation Agency Safety Plan regulation (49 CFR Part 673)

Adopt APTA RT-OP-RP-024-019 as a method for determining:

- Minimum requirements for selection, installation, and operation of equipment
- Maintenance requirements for crash and fire protected inward- and outward-facing image and audio recorders



Resources Available (1/2)

Existing APTA recommended practice for crash and fire protected inward- and outward-facing image and audio recorders:

Crash and Fire Protected Inward and Outward Facing Audio and Image Recorders in Rail Transit Operating Compartments

APTA STANDARDS DEVELOPMENT PROGRAM APTA RT-OP-RP-024-19

First Published: April 12, 2019

RECOMMENDED PRACTICE

Abstract: This Recommended Practice (RP) provides minimum requirements for selection, installation, and operating and maintenance requirements for crash and fire protected inward and outward facing audio and image recorders in all rail transit vehicle operating compartments. This RP includes guidance for design criteria, administrative program activities, maintenance and usage, and data management.

Keywords: cameras, crash, crash and fire recording systems, fire, audio recorder, image recorder, NTSB Recommendation R-17-13, operating compartment, microphone

Summary: This RP addresses and strengthens requirements for crash and fire protected audio and image recording systems for rall transit vehicles. In particular, it calls for the design and operation of inward and outward facing audio and image recording systems in rail transit vehicle operating compartments so that the all constant of RTA) can capture data that will be essential in investigning accidents and in managing the safe operations of trains. This RP has been developed in response to key concerns and findings raised by the National Transportion Safety Board (OTSB) in their response to *Innoval and Onsured Facing* Audio and Image Recorders as Investigation and Safety Tools – stated February 21, 2017 and adopted on August 24, 2017 and in response to NTSB Safety Recommendations R-17-13.

Every RTA experiences events which require investigation as to the causes and contributing factors, and the capture of accurate data can be enhanced with adusd and image recordings. While some states have issued rules concerning the installation of audio and image recording. While some states have beguns to install such systems on their existing and new rail transit vehicle flexts, the arill transit instally related to a consistent guideline that outlines considerations for the design of systems; the formal operation and maintenance of the systems in their examplement of data.

Scope and purpose: Incidents and accidents are investigated by various entities including the RTA, state safety oversight agencies, and the NTSB. Investigations often lead to an understanding of what occurred, and subsequently assist management to identify safety issues and develop methods to prevent accidents. Installation of audio and image recorders on mil transit vehicles greatly enhances the preservation of evidence. This is

This document represents a common viewplorit of those parties concerned with its provisions, namely operating/ planning quercisis, manufactumes, constants, engineers and general interest group. The application of any requiration govern provides of tarsets systems operations. In the operation takes providence over this standard. The North American Tarset Service Association (NATSA) and its parent organization better more over the standard. The North American Tarset Service Association (NATSA) and the generative operations. The service service over the standard. The North American Tarset Service Association (NATSA) and its parent organization better more or leaves treat/drive han those given in this document. © 2019 IAVIXA and ta parent organization. No part of the publication may be reproduced in any form, in an election: interest given or otherwise. APTA RT-OP-RP-024-19 – Crash and Fire Protected Inward and Outward Facing Audio and Image Recorders in Rail Transit Operating Compartments

Specifies requirements for selection, installation, operating requirements, and maintenance requirements for inward- and outward-facing audio and image recorders and lists related standards for design and performance



Resources Available (2/2)

RTA Funding Resources:

- Installation or retrofit of inward- and outward-facing image and audio recorders may be eligible expenses under FTA's grant programs, including:
 - Section 5307: Urbanized Area Formula Grants
 - Section 5309: Capital Investment Grants
 - Section 5337: State of Good Repair Grants

FTA Resources:

- FTA Grant Program
- <u>https://www.transit.dot.gov/fun</u> <u>ding/grants/grant-programs</u>

FTA Contact:

- FTA Regional Offices
- <u>https://www.transit.dot.gov/ab</u> <u>out/regional-offices/regional-</u> <u>offices</u>



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