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TDOT
Department of
Transportation



Tennessee Rail Transit State Safety Oversight Program

Annual Report May 2022-2023



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State Safety Oversight Program

The Federal Transit Administration (FTA) delegates oversight of rail fixed guideway public transportation systems that operate with federal financial assistance authorized under 49 United States Code Chapter 53 to the states. This structure requires states to designate a state safety oversight agency (SSOA) to fulfill the requirements for state safety oversight (SSO), codified in 49 Code of Federal Regulation (CFR) Part 674.

In 2016, the FTA issued Part 674, standardizing SSOAs across the states and requiring financial, legal, operational, and administrative independence from the transit agencies they oversee. Part 674 also enhanced investigative and enforcement authorities and required annual reporting to the Governor and the Board of Directors or equivalent entity of the rail fixed guideway public transportation systems. The FTA required certification for this final rule by April 15, 2019; TDOT's SSO Program became certified in August of 2018, fulfilling the requirements of Part 674.

The TDOT SSOA oversees the rail fixed guideway public transportation systems that are not under the Federal Railroad Administration's (FRA's) jurisdiction, which include Memphis Area Transit Authority (MATA) Vintage Trolley system and the Chattanooga Area Regional Transportation Authority (CARTA) Incline Railway (IR). Both systems are designated as Rail Transit Agencies (RTAs). The SSOA program is governed through its Standard issued by TDOT, which is revised annually with input from each of the RTAs. The TDOT SSOA partners with RTAs to conduct proactive safety oversight.

The Infrastructure Investment and Jobs Act (IIJA) signed into law on November 15, 2021, continues the public transportation safety program. TDOT SSOA continues to fulfill FTA-required program elements and advance supplemental safety practices and standards in response to the unique aspects of Tennessee's RTAs. TDOT assumes oversight responsibility for a range of procedural developments, evaluation activities, and safety programs.

Program Summary

Over the past year, the SSOA worked collaboratively with the RTAs to continuously improve safety. The SSO Officer met with agency representatives through formal monthly and quarterly meetings and regularly communicated with the RTAs to address and monitor safety concerns. Oversight efforts included reviewing and approving agency safety plans, fulfilling Part 672 recertification requirements, investigating events, working with agency personnel to implement corrective actions, on-site inspections, and engaging in discussions about emergency preparedness. Although COVID-

19 continued to create challenges to the oversight program, TDOT SSOA maintained a strong partnership with the RTAs and continued monitoring compliance with safety requirements under Parts 672, 673, and 674. The SSOA also completed virtual three-year audits of both RTAs to evaluate agency compliance with safety and security plans without introducing undue risk and exposure to the COVID-19 virus.

SSOA Level of Effort

Calendar Year	2020	2021	2022
Hours	2,258	3,455	4000

FTA Coordination

The SSOA met with the FTA through scheduled quarterly virtual meetings. The SSO Officer and RTA representatives attended the virtual and in-person FTA Joint SSO and Rail Transit Agency Workshop in October of 2022 to gain information on SSO best practices and program updates.

In January of 2022, the FTA issued a request for information to assist FTA in understanding how rail transit agencies use end-of-railcar door signate and messaging to help develop informed development and analysis of response to NTSB safety recommendations R-19-39 and R-19-40.

In October of 2022, the FTA issued two Safety Advisories. SA-22-1 Rail Car Passenger Door Inspection and Function and SA-22-2 Signal System Safety and Train Control, both of which directed SSOAs to coordinate with their RTAs to ensure that hazards related to the passenger door wiring and signal safety were included in safety risk management to identify and adequately develop mitigations as necessary to ensure passenger safety.

In October of 2022, the FTA issued Special Directive 22-46 directing TDOT to develop and implement a risk-based inspection program as part of 49 CFR Part 670 and updated provisions under the IIJA. Monthly update meetings were scheduled to assist with the process and answer any questions.

In March 2023, the FTA and RTAs were notified of a change in the primary SSO officer's contact information pursuant to the established policies of the State Safety Program Standard and 5329 program guidance.

In April 2023, the FTA issued a request for information to assist FTA in understanding how rail transit agencies integrate crashworthiness or crash energy management standards into the design of their current rail transit fleets and planned rail transit vehicle procurements to help inform development and analysis of response to NTSB safety recommendation R-06-006.

The partnership between the TDOT SSOA and RTAs, and the FTA coordination, continues to focus on achieving the highest levels of safety practicable, benefitting RTA patrons, employees, and the public. The following sections of this report highlight oversight activities and RTA reporting.

Oversight Activities

TDOT State Safety Oversight Program Standard

TDOT SSOA adopted the revised State Safety Program Standard (SSPS) in October 2022. The RTAs were provided an opportunity to review and comment on the SSPS draft in October 2022. TDOT's Program Standard is posted on the TDOT website at:

<https://www.tn.gov/content/dam/tn/tdot/freight-and-logistics/TDOT%20Rail%20State%20Safety%20Program%20Standard%20v4.0%20TDOT.pdf>

Public Transportation Agency Safety Plan (PTASP)

Prior to FTA's adoption of Part 673 (FTA's PTASP rule), RTAs were guided by their System Safety Program Plan (SSPP), as required by 49 CFR Part 659, for the first part of 2020. On July 29, 2018, FTA issued 49 CFR Part 673, which required RTAs under FTA jurisdiction to develop PTASPs based on Safety Management Systems (SMS) principles. Part 673 required RTAs under FTA jurisdiction to have their PTASP submitted and approved by their SSOA no later than July 20, 2020 and reviewed annually. However, due to the COVID-19 pandemic, FTA announced it would defer until July 20, 2021, enforcement action on RTAs that did not comply with the initial requirement. Both MATA and CARTA PTASPs were initially approved well before the deadline in August of 2020. According to the SSPS, RTAs must submit their revised PTASP annually by February 1st. CARTA's PTASP was reviewed and minimally revised in December 2022. The SSO Officer approved the PTASP on February 14, 2023. MATA's draft PTASP was submitted for review in November 2022. The SSO Officer approved the PTASP on March 6, 2023.

Safety Training

The designated SSO Officer must complete the FTA-required Public Transportation Safety Certification Training Program (PTSCTP) through the Transportation Safety Institute (TSI) within three years of their designation and recertify every two years. The SSO Officer completed their certification in January 2023. State-specific requirements for training related to the program, safety, and security oversight, supplemental to the FTA-required training and familiarizing SSOA personnel with program-wide principles, are in the process of completion. This includes specialty rail safety classes through the University of Tennessee Center for Transportation Research. The SSO Officer's goal is to work with the RTAs to integrate the requirements for initial and refresher safety training for designated safety-critical personnel into continually improving training programs at the RTAs.

Reportable Events

Investigation Process

Per the SSPS and Part 674, the SSOA is responsible for investigating safety events and the review of hazard analysis and mitigation activities. TDOT SSOA delegates investigation authority of events to each RTA, which the SSO requires agencies to identify, report, and analyze hazards during transit operations. Based on RTA event notifications, investigations, and hazard analyses, the SSO Officer monitors a wide range of investigative activities, beginning with the event itself and culminating with determining a probable cause and the development of corrective action plans (CAPs) to mitigate the possibility of recurrence. The SSO Officer and RTAs communicate throughout all stages of the investigation process. Typically, the SSO Officer receives an initial event notification from an RTA safety representative, and the SSO Officer will determine if the event is FTA (or other governing body) reportable. Following contacting the appropriate governing authorities, the Lead Investigator will begin working to conduct the investigation. The SSO Officer's process for adopting and closing an investigation includes reviewing the investigation report and ensuring thorough information. Investigations must include a probable cause and identify CAPs as appropriate.

Accidents

Per the State Standard and FTA requirements, RTAs must report accidents to the SSO and FTA within two hours of their occurrence. From May 2022 to May 2023, MATA reported four (4) accidents, and no events at the CARTA Incline Railway met the criteria for accident reporting.

Safety Reviews

Inspection Program

TDOT proactively identifies risks and potential hazards and makes recommendations during on-site inspections of the RTAs' facilities, rolling stock, passenger stations, right-of-way (ROW), overhead contact system (OCS), track, and funicular system recommendations for safety improvements. During this time, other inspection items may include CAP verification for closure, document review, and monitoring of active safety mitigations. From May 1, 2022, to May 1, 2023 TDOT completed four inspections at MATA. Two inspections were completed at CARTA. Each inspection resulted in safety recommendations to the RTAs, and CAPs were developed when necessary.

Triennial Audits

The TDOT SSOA performs triennial audits at each of its RTAs every three years. 2021 marked the end of the triennial cycle for both MATA and CARTA. Triennial audits monitor the RTA's compliance with its PTASP, including the processes and procedures necessary for implementing Safety Management Systems (SMS). These audits included a comprehensive document and record review, and employee interviews. This year's audits presented some unique challenges, such as the transition from auditing under the SSO rules under Part 659 to Part 674 and occurring during a pandemic. Despite these challenges, the TDOT SSOA was able to perform effective virtual audits thanks to the cooperation of the RTAs. TDOT SSOA found that both MATA and CARTA's safety and security conditions are in good standing.

RTA Internal Safety Reviews (ISRs)

Each RTA completed Internal Safety Reviews (ISRs), as required by FTA and the SSPS. This year marked CARTA's first year conducting an ISR utilizing the SMS model. MATA is revising its ISR Program; they are working to continuously improve and incorporate regulatory guidance, APTA Standards, industry best practices, and SMS modeling.

Corrective Action Plans (CAPs)

RTAs must develop CAPs for various deficiencies and hazards identified through triennial audits, event investigations, hazard reports, SMS monitoring, and inspections. All Corrective Action Caps (CAPs) must be submitted the SSO for review and approval. Subsequently, the SSO is responsible for reviewing, approving, and verifying implementation. At a minimum, the SSO Officer reviews the status of CAPs with safety personnel monthly. During these meetings, RTA and TDOT personnel review progress towards the closure of open CAPs and identify documentation to review to verify completion. The SSO verifies implementation through inspections, record reviews, photographs, and/or plan, policy, or procedure revisions. The tables below display the number of opened and closed CAPs per year for MATA and CARTA.

MATA CAPs by Year							
FTA Category	Prior to 2022	CY 2022			CY 2023		
	Open CAPs	Number	CAP Status		Number	CAP Status	
			Open	Closed		Open	Closed
Event	7	0	0	0	9	9	0
SMS Assessment	1	0	0	0	0	0	0
Inspection	4	2	2	0	0	0	0
Internal Safety Review	2	0	0	0	0	0	0
Triennial Audit	0	4	4	0	0	0	0
Other	1	0	0	0	0	0	0
Total	15	6	6	0	9	9	0

CARTA CAPs by Year							
FTA Category	Prior to 2022	CY 2022			CY 2023		
	Open CAPs	Number	CAP Status		Number	CAP Status	
			Open	Closed		Open	Closed
Event	0	1	0	1	0	0	0
SMS Assessment	0	0	0	0	0	0	0
Inspection	1	0	0	0	0	0	0
Internal Safety Review	0	0	0	0	0	0	0
Triennial Audit	4	0	0	0	0	0	0
Other	0	1	1	0	0	0	0
Total	5	2	1	1	0	0	0

Looking Forward

TDOT will continue to work closely with its RTAs regarding safety initiatives. Focus areas will include:

- Continued SMS implementation and improvement
- Development, implementation, and FTA approval of a Risk Based Inspection Program in response to Special Directive SD-22-46 issued as part of the Bipartisan Infrastructure Law
- Working with the agencies to improve their current procedures and plans
- Beginning the safety certification process of MATA's Madison and Riverfront Lines, and replacement trolley cars.

Furthermore, the TDOT SSOA will continue to update its Standard in line with any issued guidance and rule changes from FTA. TDOT SSOA will also review and assist the RTAs in any necessary modifications to align with issued guidance and rule changes.

Contact Information

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