

2020 FTA Joint State Safety Oversight and Rail Transit Agency Virtual Workshop

October 6-8, 2020



**U.S. Department
of Transportation**

**Federal Transit
Administration**



U.S. Department of Transportation
Federal Transit Administration

Safety Risk Management Process

Joseph Powell

Program Manger, Office of Safety Review
Office of Transit Safety and Oversight
Federal Transit Administration

Annabelle Boyd

Senior Consultant
Boyd Caton Group

Overview

- Review 49 CFR Part 673 requirements and lessons learned for Safety Risk Management (SRM)
- Highlight considerations for State Safety Oversight Agencies (SSOAs) in overseeing SRM
- Answer common SRM questions

Current State and Transition

COVID-19, 659, 673, 674

COVID-19 and PTASP Rule

- Unprecedented Disruptions
 - Ridership
 - Public Safety
 - Employee Safety
 - Daily Life
- Notice of Enforcement Discretion effectively extends compliance

July 20, 2020 → December 31, 2020

Where Are We Now?

- The Past - 659
 - System Safety
 - SSPP
 - Hazard Management
- The Future – 673 & 674
 - Safety Management Systems
 - PTASP
 - Safety Risk Management



Hazard Management Part 659

- Identify System Failures Through Events, Audits, and Inspections
- React to System Failures
- Assume Systems are Static
- Performance Supports Allocation of Resources

Safety Risk Management Part 673

- Continuously Develop New Data Collection Tools
- Predict Potential System Failures
- Assume Systems are Dynamic
- Data Supports Allocation of Resources

SSOA Oversight Requirements

674.29(b) and 674.25(b)

General SSOA Requirements for SRM Oversight

- **Initial Evaluation of Safety Risk Management Plan**

“An SSOA must determine whether the PTASP sets forth a sufficiently explicit process for safety risk management” 674.29(b)

- **Ongoing oversight of Plan**

“An SSOA must oversee and enforce the execution of an RTA’s PTASP [including SRM]” 674.25(b)

Some Requirements for Ongoing Oversight

- Triennial Audits 674.31
- Investigations of Allegations of Noncompliance 674.25(c)
- State Safety Standards 674.11(b)

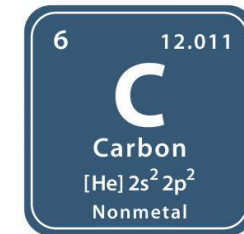
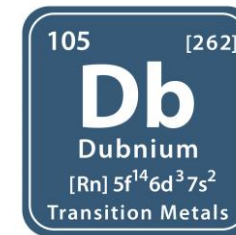
RTA Requirements for Developing an SRM Process

673.25(a)

Elements of the SRM Process 673.25(a)

- **The Transit Agency's SRM Process must apply to all elements of its public transportation system, and must include the following three elements:**

- Safety Hazard Identification – 673.25(b)
- Safety Risk Assessment – 673.25(c)
- Safety Risk Mitigation – 673.25(d)



Key Regulatory Concepts Applied to SRM

- **Direction** (673.23(a)&(c)): Define roles and responsibilities
- **Documentation** (673.31): Define and record key processes and decision-making criteria
- **Communication** (673.29(b)): Identify what information needs to go where, and how it is going to get there
- **Training** (673.29(a)): All personnel understand their roles and have the tools to accomplish them

Key Takeaways – SRM Process

RTA Lessons Learned

- SRM must apply to ALL system elements
- Define and Document:
 - Roles and responsibilities
 - Procedures
 - Thresholds
 - Timeframes
 - Personnel and training needs
 - Paths of communication

SSOA Considerations

- SRM Procedures in PTASP meet Program Standard requirements
 - ‘Sufficiently explicit process’
- Evaluate:
 - All relevant documents
 - Roles and authorities
 - Viability of procedures
- Observe the plan in action

The Three Elements of SRM

674.25(b), (c), & (d)

Safety Hazard Identification 673.25(b)



(1) A transit agency must establish methods or processes to identify hazards and consequences of the hazards

(2) A transit agency must consider, as a source for hazard identification, data and information provided by an oversight authority and the FTA

Key Takeaways – Safety Hazard Identification

RTA Lessons Learned

- Define:
 - Hazard & Potential Consequence
- Explain how:
 - RTA will manage hazard information from FTA and SSOA
 - Hazards and Consequences are communicated

SSOA Considerations

- Consistent with 673 definitions
- Procedures are followed as defined
- More than a list of sources of hazards
- Evaluate and observe training

Safety Risk Assessment 673.25(c)

(1) A transit agency must establish methods or processes to assess the safety risks associated with identified safety hazards

(2) A safety risk assessment includes an assessment of the likelihood and severity of the consequences of the hazards, including existing mitigations, and prioritization of the hazards based on the safety risk

RISK ASSESSMENT MATRIX			
Severity \ Likelihood	(1) Catastrophic	(2) Serious	(3) Marginal
(A) Frequent	High (1A)	High (2A)	Medium (3A)
(B) Occasional	High (1B)	Medium (2B)	Low (3B)
(C) Remote	High (1C)	Medium (2C)	Low (3C)

SAFETY RISK LEVEL CATEGORIES	
Safety Risk Index	Criteria by Index
High	<i>Unacceptable – Action Required:</i> Safety risk must be mitigated or eliminated.
Medium	<i>Undesirable – Management Decision:</i> Executive management must decide whether to accept safety risk with monitoring or require additional action.
Low	<i>Acceptable with Review:</i> Safety risk is acceptable pending management review.

Key Takeaways – Safety Risk Assessment

RTA Lessons Learned

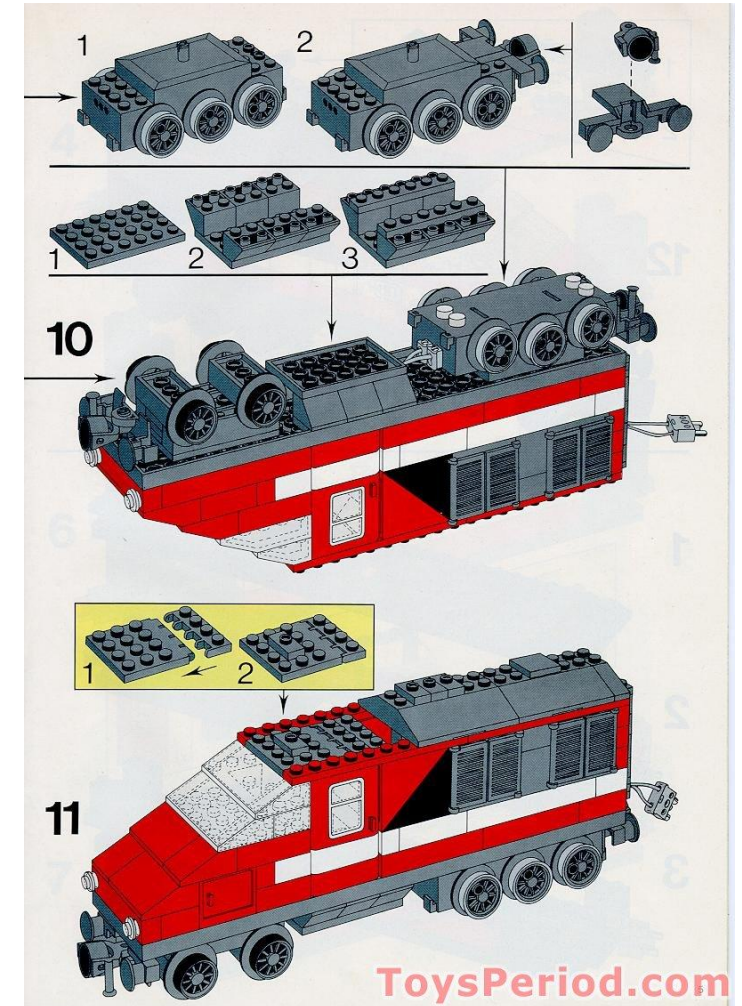
- Responsibilities of key positions
- Authority for final risk determination
- Key steps and timelines
- Risk Matrix terminology consistent with 673
- Include existing mitigations
- Safety Risk Register

SSOA Considerations

- Hazards and potential consequences
- Evaluate Severity and Likelihood Criteria
- Evaluate data collection procedures
- Authorities for determining and accepting risk
- Expertise of assessing personnel

Safety Risk Mitigation 673.25(d)

- A transit agency must establish methods or processes to identify mitigations or strategies necessary as a result of the agency's safety risk assessment to reduce the likelihood and severity of the consequences



Key Takeaways – Safety Risk Mitigation

RTA Lessons Learned

- Procedures and ‘ownership’ for:
 - Development
 - Tracking and
 - Implementation of all mitigations
- Mitigations developed outside the safety department
- Clarify documentation requirements for all mitigation activities

SSOA Considerations

- Compliance with the Program Standard
- RTA is following its procedures
- How risk is accepted
- Effectiveness of the RTA’s mitigations
- Does not introduce new hazards

Common Questions

- When is a hazard identified?
- Do SSOAs need to be notified every time a hazard is identified?
- What is the difference between a consequence and event?
- What is a safety risk register?
- What is the difference between a mitigation and a corrective action plan?
- When should an SSOA issue a CAP for the SRM process?



U.S. Department of Transportation
Federal Transit Administration

Contact Information

Joseph Powell

Program Manger, Office of Safety Review
Office of Transit Safety and Oversight
Federal Transit Administration

Joseph.Powell@dot.gov

(202) 366-1631