



**Massachusetts Bay  
Transportation Authority**

# Safety Event Investigation and Training

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Fiscal and Management Control Board

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# Safety Initiative: Strengthen Safety Event Investigations

Safety Risk Management



Conduct thorough investigations

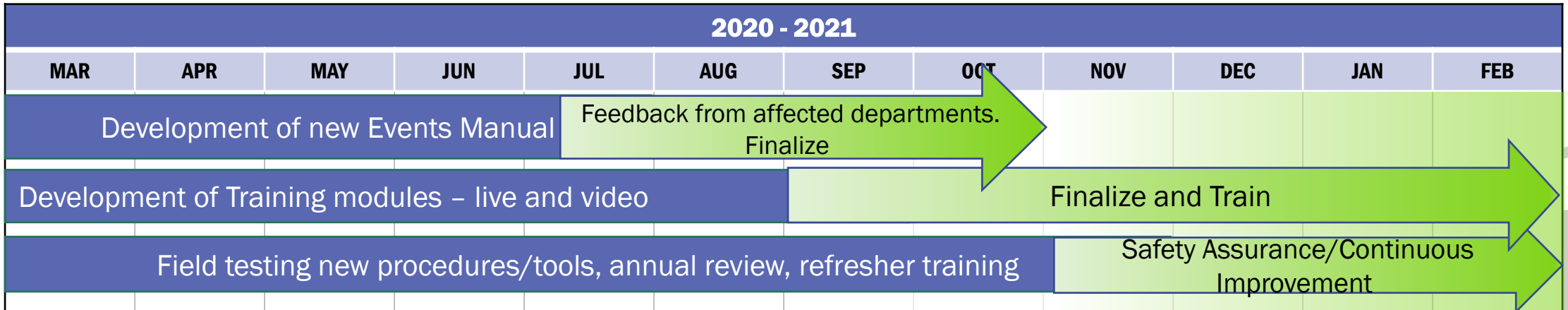
- Review and enhance safety event investigations:
  - Review/assess existing procedures, recently closed CAPs
  - Enhance procedures – create Manual to compile procedures and tools

Safety Assurance



Train and track progress

- Develop training for new procedures
- Develop safety performance metrics and targets
- Field test, track progress, refresher training



# Enhance Safety Event Investigations – Manual

- 3<sup>rd</sup> party review/evaluation of recently closed CAPs
- Best Practices Review
  - Transportation Agencies
    - Amtrak Transportation, Keolis
    - CATS (Charlotte), CTA (Chicago)
    - Metro Link (SCRRA)
    - Minneapolis Metro Transit
    - NJ Transit, NY MTA, WMATA (D.C.)
  - Industry Standards
    - APTA Standards, FRA Standards
    - NTSB and U.S. DOE Safety Investigations
    - European Railway Agency Guidance
    - Pat Lavin, Former NY MTA Investigator, WMATA CSO
- Prepared new Events Manual w/3<sup>rd</sup> party support
- Manual includes detailed processes for:
  - On-scene response and investigation
  - Post on-scene investigation and analyses
  - Causal factor identification, root cause analyses
  - Corrective and preventative action and monitoring
  - Tools – checklists, instructions, templates
- Training – in-person and video
- Field testing
- Tracking



# Enhance Safety Event Investigations – Training Modules

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- Developed in coordination with departmental Subject Matter Experts (SMEs)
- Provide MBTA and MBTA Safety personnel with a baseline understanding of investigation techniques
- Sustainable training program through MassDOT/MBTA Learning Hub
- Opportunities to provide hands-on training with departmental SMEs
- 22 training modules presented by SMEs, MBTA Safety, or MBTA Management



# Investigation Training Modules

## Training Modules – Multiple Departments

1. Executive Management
2. Employee Injury Response
3. Safety Event Response Team (SERT)
4. On-Scene Signals
5. On-Scene MOW
6. On-Scene Power
7. On-Scene Bus Transportation
8. On-Scene Rail Transportation
9. On-Scene Rail Vehicle Maintenance
10. Effective Interviewing

## Training Modules – Safety-Specific

11. Signals Familiarization
12. MOW Familiarization (Presented 09/14/20)
13. Power Familiarization
14. Bus Transportation Familiarization (Presenting on 09/21/20)
15. Rail Transportation Familiarization
16. Rail Vehicle Maintenance Familiarization
17. On-Scene Safety Responder
18. Photographing and Video Recording the Scene
19. Sketching the Scene
20. Post-On-Scene Investigation Activities
21. Causal Factors and Root Cause Analysis
22. Report Writing and Mitigating Actions



# Example Investigation Training Module

**Safety Management System**  
MANAGEMENT POLICY  
RISK MANAGEMENT  
ASSURANCE  
PROMOTION

**Menu**

- ▼ Untitled Scene
  - Intro
  - Before We Get Started
  - Learning Objectives
  - Safety Event Investigations
  - Message from NTSB
  - Plan-Do-Study-Act (PDSA)
  - Purpose of Investigation
  - Safety Event
  - Responsibility Table
  - Scenario
  - Knowledge Check: Multiple Ch...
  - Knowledge Check
  - Responsibilities Graphic
  - Key Players in Safety Investigat...
  - Safety Event Tier 1 and 2 Flow ...
  - Safety Events Tier 3 and 4 Flow...
  - Safety Event Scene
  - Knowledge Check
  - Knowledge Check

MBTA - Executive Management Course

Resources

WELCOME TO  
MBTA Agency  
Leadership  
Safety Event  
Investigation  
Training

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