



U.S. Department
of Transportation

**Federal Transit
Administration**

Headquarters

1200 New Jersey Avenue, SE
Washington, DC 20590

SENT VIA EMAIL

October 28, 2022

Mr. Steve Poftak
General Manager
Massachusetts Bay Transportation Authority
10 Park Plaza
Boston, MA 02116

Subject: Resubmittals Required for Corrective Action Plans in Response to Special Directive 22-10,
Prioritization of Safety Management Information

Dear Mr. Poftak,

Thank you and your team for submitting the Massachusetts Bay Transportation Authority's (MBTA) Corrective Action Plans (CAPs) for the Federal Transit Administration's (FTA) Special Directive (SD) 22-10, Prioritization of Safety Management Information. The MBTA submitted these CAPs on time as required in SD 22-10, addressing [FTA's six \(6\) findings and 17 required actions](#).

Resubmission Required for CAPs for Findings 1 through 6

As documented in the attached evaluation matrix, FTA requires resubmittal of MBTA's CAPs for Findings 1 through 6. Collectively, these findings required MBTA to revise both its strategic and tactical approaches to Safety Management System (SMS) implementation. At the strategic level, FTA required MBTA Executive Leadership to provide direct and explicit guidance to operations and maintenance management, as well as the Safety Department, for the identification and elevation of safety information necessary to prioritize resources to address safety risks in MBTA operations. At the tactical level, FTA required MBTA Executive Leadership to work with operations and maintenance management and the Safety Department to establish and integrate the necessary structures, processes, and tools to support leadership safety priorities and implementation of MBTA's SMS.

As previously discussed with representatives of MBTA's Safety Department and Quality, Compliance and Oversight Office (QCOO), FTA's evaluation of MBTA's proposed CAPs finds that they are logically structured and sequenced. FTA is requiring resubmittal of the CAPs because FTA finds that MBTA has not provided sufficient details on how the organization will:

- direct and manage safety risk in the interim while work on these CAPs is being completed,
- ensure safety risk information is presented to Executive Leadership for resource prioritization,
- coordinate updates to SMS processes, tools, and activities with updates to MBTA's Agency Safety Plan, and
- identify and monitor safety risk through safety assurance activities and event investigations.

As noted in the attached evaluation table, additional milestones should be included to clarify the accountabilities of Executive Leadership and their role in the development, implementation, and oversight of action items and CAPs for SD 22-10. Ultimately, Executive Leadership is accountable for MBTA's SMS and for defining the information and data used to support decision making, including the prioritization of safety risk.

The CAPs should also be revised to explain how MBTA's personnel, including the Safety Department, QCOO, Steering Committees, Working Groups, Departmental and Executive Leadership and contractors will engage with FTA and the SMI team in Bi-Weekly Meetings and during verification activities. The CAPs do not clearly indicate how this engagement will occur.

Given the scope of MBTA's proposed reliance on consultant support, FTA finds that additional milestones and action items are needed to ensure integration of consultant work into MBTA's safety management processes, activities, and outputs. Without this additional clarification, in the event of poor contractor performance or lack of dedicated MBTA oversight, these CAPs may be at risk for non-compliance or unsuccessful project delivery. FTA has requested additional milestones and actions in the attached evaluation matrix. **Please note that FTA will require that MBTA provide a presentation explaining the approach and the RFP or Task Order for consulting services to FTA two weeks prior to its release so that FTA may ensure the Findings are sufficiently addressed.**

As discussed previously with you, FTA remains concerned regarding the sufficiency of resources to oversee and manage both contractor and MBTA agency-wide work for these CAPs. Finally, MBTA has not provided sufficient information on how corrective actions will be integrated across the six findings (as well as related findings from other Special Directives).

To address these concerns FTA requires MBTA to resubmit its proposed CAPs for Findings 1 through 6 by Friday November 18, 2022. The revised CAPs must include additional action items that address how the agency will mitigate key safety concerns identified in FTA's SMI report in the interim while contractor or agency work proceeds. FTA has provided specific comments in the attached evaluation table to support development of these additional action items.

As part of the resubmittal of CAPs, MBTA must also include action items that demonstrate how contractor work, once completed, will be integrated into MBTA's organization and operations to ensure long-term change. MBTA also must submit a Resource Memorandum to demonstrate how the relevant MBTA departments, including the Safety Department and QCOO, will resource, manage, and oversee work and contractor activities to complete CAPs for Findings 1 through 6 – within the context of current accountabilities and responsibilities.

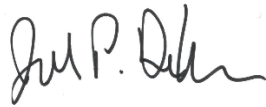
Also, please be advised that FTA will ask MBTA to provide a presentation regarding the

requirements to be included in the RFPs identified in the CAPs for Findings 1 through 6 during FTA's December on-site meetings (week of December 5, 2022),

Conclusion

We appreciate your efforts to enhance MBTA's safety performance, and we look forward to working with you and your team as the MBTA addresses these findings and required actions. Please contact our SMI Coordinator, Erin Powell, by phone at (771) 200-8016 or by email at Erin.Powell@dot.gov with any questions.

Sincerely,



Joe DeLorenzo
Associate Administrator and
Chief Safety Officer
Office of Transit Safety and Oversight

cc: Peter Butler, Regional Administrator, FTA Region 1
Jeffrey Gonneville, Deputy General Manager, MBTA
Erik Stoothoff, Acting Chief Operating Officer, MBTA
Ron Ester, Chief Safety Officer, MBTA
Katie Choe, Chief of Quality, Compliance and Oversight, MBTA
Elizabeth Cellucci, Director, Transportation Oversight Division, Massachusetts Department of Public Utilities

Corrective Action Plan (CAP) Evaluation Matrix
Special Directive 22-10: Prioritization of Safety Management Information

Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
FTA-22-10-MBTA-CAT2-1	<u>Finding:</u> MBTA has not ensured that the necessary structures are in place to support effective implementation and operation of its SMS. <u>Required Action:</u> 1.A: MBTA must conduct a critical and comprehensive review of its entire SMS planning, implementation, and operational processes and activities to address the gaps discussed in this finding. 1.B: MBTA must update its SMS Implementation Plan to reflect the results of this review, including defined actions, timeframes, responsibilities, and expected outcomes.	1. Establish CAP Advisory Committee: Establish an advisory committee of internal stakeholders to review and guide implementation of the corrective action plan.	10/31/22	Action Required Provide FTA with a list of the identified internal stakeholders. Provide additional detail to explain how MBTA’s CAP management personnel and, especially, Executive Leadership, will engage with FTA and the SMI team in meetings and during verification activities.	
		2. Strategic Planning Session: Conduct a strategic planning session for SD 22-10 Finding 1 CAP implementation with the advisory committee identified in Actionable Item #1.	12/31/22	Action Item Approved <u>Note:</u> FTA will review agendas and meeting notes to assess implementation of this session.	
		3. Procure Consulting Services: Issue RFP or Task Order for consulting services to evaluate the Transit Safety Plan, SMS Implementation Plan, and SMS Implementation Project Plan in relation to safety management governance structure and incorporate changes into the relevant plan(s).	12/22/22	Action Required MBTA must provide a presentation explaining the approach and the RFP or Task Order for consulting services to FTA two weeks prior to its release.	
		4. Onboard Consultant: Onboard selected consultant.	2/20/23	Action Item Approved	

Corrective Action Plan (CAP) Evaluation Matrix
Special Directive 22-10: Prioritization of Safety Management Information

Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
				<p><u>Note:</u> FTA will review the executed contract for the selected consultant to verify the scope of work and qualifications of the selected contractor to assure their ability to provide these activities.</p>	
		<p>5. Review SMS Documents: Perform a comprehensive review and gap analysis of existing documents, processes, procedures, and tools to identify actionable steps requisite to the successful implementation of the SMS.</p>	<p>3/27/23</p>	<p>Action Required</p> <p>Please revise the CAP to provide additional detail to address the specific deliverables for this item: developing a tool to guide the gap analysis, completing the gap analysis, and identifying actionable steps for SMS implementation. Also, please clarify how this last activity relates to item 6.</p> <p><u>Note:</u> FTA will ask MBTA to provide a copy of its gap analysis tool/activities.</p>	
		<p>6. Identify Actions to Implement SMS: Identify clearly defined actionable steps required to fully implement the SMS.</p>	<p>5/19/23</p>	<p>Action Item Approved</p> <p><u>Note:</u> FTA will ask MBTA to provide a copy of its action items.</p>	
		<p>7. Revise SMS Project Planning: Specify responsible individuals, timelines, and outcomes in the SMS</p>	<p>6/8/23</p>	<p>Action Required</p>	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		Implementation Project Plan for each SMS actionable step.		Please provide additional detail in this action item (or add action items) to include: <ul style="list-style-type: none"> • Submission of the SMS the Implementation Project Plan to the General Manager and Deputy General Manager for review, approval, and resourcing • Authorities, accountabilities, and responsibilities of MBTA personnel involved in managing and executing the project plan • MBTA’s considerations and criteria for implementation sustainability. <u>Note:</u> FTA will ask MBTA to provide the plan for each actionable step.	
		8. Develop Status Monitoring and Reporting: Develop ongoing status monitoring and reposting within the SMS safety management processes that provide project management controls to support resource allocation decision making.	6/28/23	Action Item Approved <u>Note:</u> FTA will ask MBTA to provide details on its status monitoring and reporting outputs.	
		9. N/A – missing from CAP	N/A	N/A	
		10. Identify Tools and Processes for Data Collection, Analysis, and Monitoring: Identify	7/27/23	Action Required	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		tools and associated processes for the centralization of trends, assessments, and monitoring of hazards and safety risks.		Please provide additional detail related to identification activities and the source of reference. Please specify the deliverables and milestones, i.e., inventory and assessment.	
		11. Implement Tools and Processes for Data Collection, Analysis, and Monitoring: Implement tools and associated processes to ensure the centralization of trends, assessments, and monitoring of hazards and safety risks.	8/29/23	<p>Action Required</p> <p>Please provide additional detail related to the implementation of tools including sign-off from Executive Management – with the intent to ensure cross-organization success.</p> <p><u>Note:</u> FTA will ask MBTA to provide outputs from its data collection, analysis, and monitoring activities.</p>	
		12. Assess Existing SMS Implementation: Perform, with the guidance of a stakeholder group, a comprehensive review of operational SMS activities, identify gaps in SMS understanding within business units, and socialize best practices related to SMS implementation.	9/29/23	<p>Action Required</p> <p>Please revise the CAP to explain relationship between items 12 and 13 and the SMS gap analysis to be conducted under item 5 above. Please explain why this assessment is not occurring earlier in the process, to leverage operational input, taking into consideration business unit activities related to SMS.</p>	
		13. Map Operational Process: Develop an operational process map for SMS implementation identifying roles and responsibilities,	10/26/23	<p>Action Item Approved</p> <p><u>Note:</u> FTA will ask MBTA to provide outputs from process mapping.</p>	

Corrective Action Plan (CAP) Evaluation Matrix
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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		process flows, and processes/linkages in need of further development.			
		14. Update Operational Process: Update operational processes and linkages to address gaps and weaknesses identified during the operational process mapping phase.	11/17/23	<p>Action Required</p> <p>Please provide additional details on how MBTA will integrate and manage the proposed updates to operational processes under this activity in conjunction with proposed procedural updates under SD-22-11 and 12.</p> <p>Also, please provide additional details on how the updated operational processes will be reflected in the MBTA's Transit Agency Safety Plan.</p>	
		15. Review Meeting Structure: Review existing meeting structure to support SMS implementation, including the SMS Working Group and key interdepartmental / executive safety meetings, and ensure that meeting membership, schedules, agenda items, and activities are adequate to support the standup and continued monitoring of the Authority's SMS.	12/15/23	<p>Action Required</p> <p>Please provide additional details on how MBTA will integrate this activity with the proposed assessment and changes to its safety committee structure under SD-22-11.</p>	

Corrective Action Plan (CAP) Evaluation Matrix
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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		16. Update Meeting Structure: Revise existing meetings in accordance with the findings from the meeting structure review.	1/15/24	Action Required Please provide additional details on how MBTA will integrate this activity with the proposed changes to its safety committee structure under SD-22-11.	
		17. Update SMS Implementation and Project Plans: Revise the SMS Implementation Plan and SMS Implementation Project Plan.	2/2/24	Action Item Approved <u>Note:</u> FTA will ask MBTA to provide its SMS Implementation and Project Plans.	
		18. Update SMS Trainings: Perform a review of existing SMS training materials to ensure SMS principles and their accountabilities are defined.	3/1/24	Action Required Please provide additional detail regarding the specific deliverables and timeframes associated with this item. FTA would like to understand which trainings will be updated and/or developed and the milestone schedule.	
		19. Reissue SMS Trainings: Reassign all updated trainings to staff tasked with SMS responsibilities.	3/22/24	Action Required Please provide additional details related to how MBTA will carry out the training and ensure its effectiveness and sustainability.	
		20. CAP verification: Evaluate actionable items/deliverables before submission to FTA to confirm there is reasonable	Ongoing	Action Item Approved <u>Note:</u> In coordination with item 14, please provide additional detail	

Corrective Action Plan (CAP) Evaluation Matrix
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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		evidence that the findings and the required action have been resolved, considering the scope and performance measures.		regarding how the updated SMS elements and training will be incorporated into the MBTA's Transit Agency Safety Plan.	
FTA-22-10-MBTA-CAT2-2	<u>Finding:</u> MBTA executive leadership does not receive prioritized and actionable information related to safety risks or shortcomings in safety risk mitigations. <u>Required Action:</u> MBTA leadership must: 2.1: Work with safety and operating department leads (including maintenance and engineering departments) to define explicit criteria for prioritizing safety risks. 2.2: Include explicit safety risk acceptance criteria into its Agency Safety Plan and/or reference documents. 2.3: Work with MBTA's Safety Department and operating department leads (including maintenance and engineering departments) to define how safety information must be presented to MBTA leadership	1. Establish CAP Advisory Committee: Establish an advisory committee of internal stakeholders to review and guide implementation of the corrective action plan.	10/31/22	Action Required Provide FTA with a list of the identified internal stakeholders. Provide additional detail to help FTA understand how MBTA's CAP management personnel and, especially, Executive Leadership, will engage with FTA and the SMI team in meetings and during verification activities.	
		2. Strategic Planning Session: Conduct a strategic planning session for SD 22-10 Finding 2 CAP implementation with the advisory committee identified in Actionable Item #1.	12/31/22	Action Item Approved <u>Note:</u> FTA will review agendas and meeting notes to assess implementation of this session.	
		3. Procure Consulting Services: Issue RFP or Task Order for consulting services to evaluate the safety risk management process and incorporate changes into the Transit Safety Plan.	12/22/22	Action Required MBTA must provide a presentation explaining the approach and the RFP or Task Order for consulting services to FTA two weeks prior to its release.	

Corrective Action Plan (CAP) Evaluation Matrix
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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
	<p>in a prioritized and actionable manner.</p> <p>2.4: Require, and provide means for, operating department leads (including maintenance and engineering departments) to elevate proposed safety risk mitigations, including their status, that require MBTA leadership approval for resourcing. This must include safety risk mitigations deemed ineffective or inappropriate and that require executive level decision regarding the redirection of, or additional, resourcing.</p>	<p>4. Onboard Consultant: Onboard selected consultant.</p>	<p>2/20/23</p>	<p>Action Item Approved</p> <p><u>Note:</u> FTA will review the executed contract for the selected consultant to verify the scope of work and qualifications of the selected contractor to assure their ability to provide these activities.</p>	
		<p>5. Develop Data Analysis Guidance: Develop formal methods and guidance for safety data analysis to ensure the proper interpretation of facts into usable safety information.</p>	<p>4/24/23</p>	<p>Action Required</p> <p>Please provide additional detail regarding the specific deliverables and timeframes associated with this item. FTA would like to understand the steps MBTA will follow to develop formal methods and guidance for safety data analysis and the milestone schedule.</p> <p>FTA also would like to better understand how items 5 through 9 are related to items 5 through 9 in FTA-22-10-MBTA-CAT2-1.</p>	
		<p>6. Define Safety Information for Escalation: Identify the types of safety information to escalate from the field to the next levels through the development of a safety</p>	<p>5/19/23</p>	<p>Action Item Approved</p>	

Corrective Action Plan (CAP) Evaluation Matrix
Special Directive 22-10: Prioritization of Safety Management Information

Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		information evaluation and review process (see CAP 3).			
		7. Define Organizational Structure for Movement of Safety Information: Identify the process for the movement of safety information from the field to the next levels through the development of a safety evaluation and review process (see CAP 3).	6/22/23	Action Item Approved	
		8. Assess Safety Risk Prioritization/Process: Compile and review all existing tools and processes related to safety risk prioritization and the safety risk assessment process, including the safety risk assessment criteria.	7/7/23	Action Item Approved	
		9. Identify Gaps in the Safety Risk Prioritization/Process: Identify gaps in the existing tools and processes used to prioritize safety risks and perform safety risk assessments. Analyze variations in use of existing tools and processes and reasons for variation.	8/9/23	Action Item Approved <u>Note:</u> FTA will review the identified gaps to ensure consistency with FTA's findings and compliance with Part 673.	

Corrective Action Plan (CAP) Evaluation Matrix
Special Directive 22-10: Prioritization of Safety Management Information

Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		<p>10. Conduct Risk Prioritization Workshops: Plan and facilitate workshops with operations, maintenance, and engineering stakeholders to discuss criteria for prioritization of safety risks, process flows, and potential obstacles to and resolution of the implementation of new/expanded criteria.</p>	<p>9/14/23</p>	<p>Action Required</p> <p>Please provide additional information regarding the number of workshops that will be conducted and how the MBTA will include frontline and leadership personnel.</p> <p><u>Note:</u> FTA may attend these workshops and will review agendas and meeting notes as well as developed process flows.</p>	
		<p>11. Revise Risk Acceptance Procedure: Revise the risk assessment criteria and procedure, including the escalation process, to ensure its completeness, ease of use, and understanding among users.</p>	<p>10/13/23</p>	<p>Action Item Approved</p> <p><u>Note:</u> FTA will review the revised criteria and procedure.</p>	
		<p>12. Create SMS Database SRM Module: Develop and launch the Civix Safety Risk Management module from its SMS database and familiarize management from key business units with the purpose and function of the centralized database for tracking of safety risk information as well as the status of mitigations.</p>	<p>2/2/24</p>	<p>Action Required</p> <p>Please provide additional detail related to the development and incorporation of business requirements and MBTA's plan for testing the Civix SRM module.</p>	

Corrective Action Plan (CAP) Evaluation Matrix
Special Directive 22-10: Prioritization of Safety Management Information

Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		13. Expand SMS Database Safety Assurance Module: Expand existing capabilities for risk mitigation monitoring by developing and deploying the Civix Safety Assurance module from its SMS database to support ongoing monitoring of the effectiveness of safety risk mitigations.	2/2/24	Action Item Approved <u>Note:</u> FTA will request a demonstration of the SMS database at incremental times as this work progresses.	
		14. Review Meeting Structure: Assess existing safety meeting structure to ensure that all management meetings incorporate risk-driven discussions of safety issues, that the safety risk assessment procedure and tools are used to prioritize and direct action on safety concerns, and that managers have opportunities to address ineffective safety risk mitigations.	11/13/23	Action Required Please provide additional details on how MBTA will integrate this activity with the proposed changes to its safety committee structure under SD-22-11.	
		15. Review SRM Training Materials: Review existing training related to the SRM process and assign updated training.	2/9/24	Action Item Approved	
		16. Update SRM Training Materials: Update existing training related to the SRM	3/8/24	Action Required	

Corrective Action Plan (CAP) Evaluation Matrix
Special Directive 22-10: Prioritization of Safety Management Information

Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		process and assign updated training.		Please provide additional details related to how MBTA will carry out the training and ensure its effectiveness. <u>Note:</u> FTA will review updated training.	
		17. Review Safety Assurance Training Materials: Review existing training related to the safety assurance process and assign updated training.	4/1/24	Action Item Approved	
		18. Update Safety Assurance Training Materials: Update existing training related to the safety assurance process and assign updated training.	4/28/24	Action Required Please provide additional details related to how MBTA will carry out the training and ensure its effectiveness. <u>Note:</u> FTA will review updated training.	
		19. Revise and Distribute Transit Safety Plan: Update and distribute the Transit Safety Plan.	7/1/24	Action Required Provide additional milestones and clarifications for how this review and update process will occur throughout the period of performance for the CAP.	
		20. CAP Verification: Evaluate actionable items/deliverables before submission to FTA to confirm there is reasonable evidence that the findings	7/18/24	Action Item Approved	

Corrective Action Plan (CAP) Evaluation Matrix
Special Directive 22-10: Prioritization of Safety Management Information

Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		and this required action have been resolved, considering the scope and performance measures.			
FTA-22-10-MBTA-CAT2-3	<u>Finding:</u> MBTA Executive Management does not consistently ensure its decisions related to safety risks are based on safety data analysis or documented facts. <u>Required Action:</u> 3.A: MBTA must map its safety data flows and supporting processes. 3.B: MBTA must establish explicit accountabilities and responsibilities for safety data flows as a component of safety information management (collection, analysis, communication, storage, and retrieval of safety data). 3.C: MBTA must provide formal training in safety information management to relevant personnel. 3.D: MBTA must demonstrate that its executive management uses and promotes the usage of safety data analysis and/or	1. Establish CAP Advisory Committee: Establish an advisory committee of internal stakeholders to review and guide implementation of the corrective action plan.	10/31/22	Action Required Provide FTA with a list of the identified internal stakeholders. Provide additional detail to explain how MBTA’s CAP management personnel and, especially, Executive Leadership, will engage with FTA and the SMI team in meetings and during verification activities.	
		2. Strategic Planning Session: Conduct a strategic planning session for SD 22-10 Finding 3 CAP implementation with the advisory committee identified in Actionable Item #1.	12/31/22	Action Item Approved <u>Note:</u> FTA may attend this session and will review agendas and meeting notes to assess implementation planning.	
		3. Procure Consulting Services: Issue RFP or Task Order for consulting services to evaluate existing data sources to facilitate development an explicit and formal safety data map.	12/22/22	Action Required MBTA must provide a presentation explaining the approach and the RFP or Task Order for consulting services to FTA two weeks prior to its release.	
		4. Onboard Consultant: Onboard selected consultant.	2/20/23	Action Item Approved	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
	documented facts in decision-making related to safety risk.			<u>Note:</u> FTA will review the executed contract for the selected consultant to verify the scope of work and qualifications of the selected contractor to assure their ability to provide these activities.	
		5. Perform Data Inventory: Perform a comprehensive review of existing sources of safety data across the MBTA, including the basis for integration into Safety's SMS database.	1/3/23	Action Required Please provide additional detail regarding the specific deliverables and timeframes associated with this item. Please explain the steps MBTA will take to perform the data inventory and the milestone schedule. Please review the CAPs to explain how items 5 through 9 are related to items 5 through 9 in FTA-22-10-MBTA-CAT2-1.	
		6. Map Data Flow and Process: Develop an overall map of safety data sources, flows, and supporting processes, including all data types and processes necessary to support the SMS.	2/9/23	Action Item Approved <u>Note:</u> FTA will review safety data mapping.	
		7. Assess SMS Database Gap: In consultation with Civix, review the data flow and process map to identify gaps where the SMS database	3/16/23	Action Item Approved	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		currently may not be configured to support effective safety data management.			
		8. Improve SMS Database Capabilities: In consultation with Civix, ensure that all gaps identified during the comparison of the data flow map and SMS database capabilities are addressed via updates to the database software.	7/28/23	Action Required Please provide additional detail related to MBTA's testing criteria.	
		9. Identify Data Responsibilities: With the data flow and process maps as a guide, identify explicit accountabilities and responsibilities for all safety data flows, extending to data collection, analysis, communication, storage, and retrieval of data.	4/13/23	Action Item Approved	
		10. Document Responsibilities: Document accountabilities and responsibilities for safety data flows in the Transit Safety Plan, SMS database guidance, and related programs and procedures.	5/11/23	Action Item Approved <u>Note:</u> FTA will review updated accountabilities and responsibilities.	
		11. Inventory Training Materials: Perform a comprehensive	6/8/23	Action Item Approved	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		<p>review of training materials to identify existing virtual trainings with relevancy to safety data flows and processes and SMS database use.</p>		<p><u>Note:</u> FTA will review the safety data inventory.</p>	
		<p>12. Update Training Materials: Update and/or develop new virtual training materials to address gaps in existing trainings relative to the safety data flow map, ensuring that all management and staff receive explicit guidance regarding formal information management in the SMS database as well as their accountabilities and responsibilities related to safety data.</p>	<p>7/17/23</p>	<p>Action Required</p> <p>Please provide additional details related to how MBTA will carry out the training and ensure its effectiveness.</p> <p><u>Note:</u> FTA will review updated training.</p>	
		<p>13. Implement Executive Management Workshop: Facilitate a workshop with executive leadership regarding existing safety data analysis capabilities, gaps between existing activities and effective data/driven decision making, and opportunities for enhancements to safety data reports and products made available to senior leaders.</p>	<p>8/14/23</p>	<p>Action Required</p> <p>Please clarify how and when Executive Management will provide direction on safety data needs to guide the safety data reporting process. The revised CAP should include a more explicit indication that Executive Leadership will provide criteria for safety information escalation and consistent reporting earlier in the process.</p>	

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				<u>Note:</u> FTA will review agendas and meeting notes to assess implementation of these sessions.	
		14. Review Safety Data Products: Informed by the results of the workshop and the safety data process mapping exercise, review existing safety data products including the monthly and annual Safety Data Analysis Report and daily/weekly data digests to identify opportunities for presentation of additional safety data analysis and data-supported facts.	9/12/23	Action Item Approved	
		15. Update Safety Data Products: Update and refine safety data products including the monthly and annual Safety Data Analysis Report and daily/weekly data digests to include expanded and clarified factual safety information with the goal of informing and supporting leadership risk management decisions.	11/8/23	Action Required Please clarify how and when Executive Management will review and provide comment on the safety data products. <u>Note:</u> FTA will review agendas and meeting notes to assess implementation of these sessions.	
		16. CAP Verification: Evaluate actionable items/deliverables before submission to FTA to confirm there is reasonable	11/24/23	Action Item Approved	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		evidence that the findings and this required action have been resolved, considering the scope and performance measures.			
FTA-22-10-MBTA-CAT2-4	<u>Finding:</u> MBTA’s safety investigations and safety assurance activities do not consistently collect and analyze information on precursor factors. <u>Required Action:</u> 4.A: MBTA must update its Safety Assurance process to include monitoring of safety risk mitigations with a) compliance-based activities to provide the baseline for monitoring implementation status and b) performance-based activities to monitor the actual effectiveness of safety risk mitigations. 4.B: MBTA must prepare a monthly look-ahead schedule for prioritized safety risk monitoring activities that include safety risk mitigations and corrective actions in place to address MBTA’s highest safety priorities.	1. Establish CAP Advisory Committee: establish an advisory committee of internal stakeholders to review and guide implementation of the corrective action plan.	10/31/22	Action Required Provide FTA with a list of the identified internal stakeholders. Provide additional detail to explain how MBTA’s CAP management personnel and, especially, Executive Leadership, will engage with FTA and the SMI team in meetings and during verification activities.	
		2. Strategic Planning Session: Conduct a strategic planning session for SD 22-10 Finding 4 CAP implementation with the advisory committee identified in Actionable Item #1.	12/31/22	Action Item Approved <u>Note:</u> FTA will review agendas and meeting notes to assess implementation of this session.	
		3. Procure Consulting Services: Issue RFP or Task Order for consulting services to evaluate the Transit Safety Plan, Risk Mitigation and Monitoring SOP, and Safety Event Investigation Manual in relation to mitigation monitoring and validation and safety investigation	12/22/22	Action Required MBTA must provide a presentation explaining the approach and the RFP or Task Order for consulting services to FTA two weeks prior to its release.	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
	<p>4.C: MBTA must develop and document guidance, and deliver training for safety investigators that ensure the consideration of precursor factors in the analysis of the chain of events leading to a safety event (accident, incident, or occurrence), including but not limited to for example:</p> <ul style="list-style-type: none"> • Suitability of resources available to frontline personnel for operational and maintenance activities • Deficiencies in policies, procedures, rulebooks • Outdated policies, procedures, and rulebooks • Deficiencies/inadequacies in training shortcomings in supervision • Deviations from procedures and rules reasons for lack of adherence to procedures and rules • The limited success of discipline to address safety issues 	precursor factors and incorporate changes into the relevant plans.			
		4. Onboard Consultant: Onboard selected consultant.	2/20/23	<p>Action Item Approved</p> <p><u>Note:</u> FTA will review the executed contract for the selected consultant to verify the scope of work and qualifications of the selected contractor to assure their ability to provide these activities.</p>	
		5. Review Tools and Processes for Risk Mitigation: Perform a comprehensive review of existing programs and standard operating procedures related to risk mitigation and monitoring, including Safety Department SOPs and external program documents such as the Safety Rules Compliance Program Manual.	3/30/23	<p>Action Required</p> <p>Please provide additional detail to address the specific deliverables for this item: developing a tool to guide the comprehensive review and completing the review. Also, please clarify how this last activity relates to item 6.</p> <p><u>Note:</u> FTA will ask MBTA to provide a copy of its review.</p>	
		6. Update Tools and Processes for Risk Mitigation: Update Safety Department SOPs and external program documents in accordance with identified gaps.	5/4/23	<p>Action Item Approved</p> <p><u>Note:</u> FTA will review the updated Safety Department SOPs.</p>	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		7. Identify Safety Assurance Activities: Identify safety assurance activities that ensure effective mitigations and completion of corrective actions.	6/8/23	Action Required Please provide additional detail to address the specific deliverables for this item. Also please explain how the MBTA will ensure the comprehensive identification of these activities.	
		8. Evaluate Capacity for Monitoring Risk Mitigations: Perform a review of existing Safety Department staff capacity for monitoring of safety risk mitigations and corrective actions to identify resources required to implement effective safety assurance activities.	7/17/23	Action Item Approved <u>Note:</u> FTA will review the capacity evaluation.	
		9. Define High Risk Mitigation and Corrective Action Criteria: Establish criteria that defines high risk mitigations and corrective actions that should be included in the safety assurance monitoring program.	8/21/23	Action Required Please provide additional detail to address the specific deliverables for this item. Also please explain how the MBTA will ensure the comprehensive identification of these activities.	
		10. Identify Safety Risk Monitoring Activities: Utilize Civix's Safety Assurance	9/26/23	Action Item Approved	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		modules within the SMS database to generate a one month look ahead report using defined criteria that identify high risk mitigations and corrective actions.			
		11. Schedule Safety Risk Monitoring Oversight: Schedule a monthly safety risk monitoring meeting, which utilizes the monthly look ahead report, to ensure timely oversight of safety risk mitigations and corrective actions.	11/1/23	Action Item Approved <u>Note:</u> FTA will review agendas and meeting notes to assess implementation of these meetings.	
		12. Develop Criteria for Risk Mitigation Activities: Establish, document, and implement explicit criteria to guide the application of safety assurance activities to risk mitigations, including the frequency and intensity of activities as well as the compliance- or performance-based nature of activities.	5/4/23	Action Required Please provide additional detail to address the specific deliverables for this item. Also please explain how the MBTA will ensure that criteria are comprehensive across the range of safety risk mitigations available to the MBTA.	
		13. Expand SMS Database Safety Assurance Module: Expand existing capabilities for risk mitigation monitoring by developing and deploying the Safety Assurance module of the Civix SMS database to	2/2/24	Action Item Approved	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		support ongoing monitoring of the effectiveness and completion of safety risk mitigations.			
		14. Review Investigation Tools: Perform a comprehensive review of existing program documentation to ensure precursors are adequately described to promote comprehensive safety investigation findings.	7/17/23	Action Required Please provide additional detail to address the specific deliverables for this item. Also please explain how the MBTA will ensure the comprehensive identification of precursors.	
		15. Update Investigation Tools: Update program documentation in accordance with identified gaps to ensure a complete list of precursors is specified for safety investigations.	8/21/23	Action Item Approved <u>Note:</u> FTA will review updated program documentation.	
		16. Update Investigation Trainings: Perform a review of existing investigation training materials to ensure precursors are adequately described such that they are appropriately selected during investigations.	10/3/23	Action Item Approved Please provide a list of the MBTA roles (and if they're staffed) that will participate in the review of the training materials. <u>Note:</u> FTA will review updated training.	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		17. Reissue Investigation Trainings: Reassign all updated trainings to staff tasked with performing safety investigations and safety assurance activities to ensure proper selection of precursors.	11/16/23	Action Required Please provide additional details related to how MBTA will carry out the training and ensure its effectiveness. <u>Note:</u> FTA will review updated training.	
		18. CAP Verification: Evaluate actionable items/deliverables before submission to FTA to confirm there is reasonable evidence that the findings and this required action have been resolved, considering the scope and performance measures.	11/24/23	Action Item Approved	
FTA-22-10-MBTA-CAT2-5	<u>Finding:</u> MBTA's safety risk assessment guidance as part of its Safety Risk Management is ambiguous and has led to confusion among stakeholders regarding their responsibilities and authorities, which has created delays in carrying out safety risk assessments activities. <u>Required Action:</u>	1. Establish CAP Advisory Committee: Establish an advisory committee of internal stakeholders to review and guide implementation of the corrective action plan.	10/31/22	Action Required Provide FTA with a list of the identified internal stakeholders. Provide additional detail to explain how MBTA's CAP management personnel and, especially, Executive Leadership, will engage with FTA and the SMI team in meetings and during verification activities.	
		2. Strategic Planning Session: Conduct a strategic planning session for SD 22-10 Finding	12/31/22	Action Item Approved	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
	<p>5.A: MBTA must develop and document criteria for conducting safety risk assessments consistent with the basic principles of safety management and the tenants of SMS as conveyed in FTA's SMS guidance materials.</p> <p>5.B: MBTA must develop explicit direction for the ownership of safety risk assessments among the safety department and the operating departments. Documentation must include providing explicit roles, responsibilities, and thresholds of authority of each department involved.</p> <p>5.C: MBTA must include in the above criteria directives to ensure that operating departments including subject matter expertise, own safety risk assessments, while safety officials provide support for safety risk assessments and reports on results to Executive Leadership for safety resource allocation priorities.</p> <p>5.D: MBTA must expand its policy of establishing a predefined schedule of safety risk assessment workshops and</p>	5 CAP implementation with the advisory committee identified an actionable item #1.		<u>Note:</u> FTA will review agendas and meeting notes to assess implementation of this session.	
		3. Procure Consulting Services: Issue RFP or Task Order for consulting services to evaluate the safety risk assessment process and incorporate changes into the Transit Safety Plan.	12/22/22	Action Item Approved <u>Note:</u> FTA will ask MBTA to provide a presentation regarding the requirements to be included in the RFP prior to its release.	
		4. Onboard consultant: Onboard selected consultant.	2/20/23	Action Item Approved <u>Note:</u> FTA will review the executed contract for the selected consultant to verify the scope of work and qualifications of the selected contractor to assure their ability to provide these activities.	
		5. Define Criteria for Safety Risk Assessments: Develop criteria for conducting safety risk assessments utilizing FTA's SMS guidance materials, to ensure the safety risk assessment process is applied to all hazards where mitigations or corrective actions are required.	3/29/23	Action Required Please provide additional detail to address the specific deliverables for this item. How will the MBTA document these criteria?	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
	develop criteria attuned with the nature of hazard identification (i.e., as they are identified), to expedite safety risk assessments to support prioritization for resource allocation.	6. Assess Roles and Responsibilities: Specify safety risk assessment roles, responsibilities, and thresholds of authority by department. Document these roles, responsibilities, and thresholds as appropriate, including in Safety, operations departments, and MBTA-wide policies and job responsibilities.	4/26/23	Action Item Approved	
		7. Assess SRM Personnel Support: Define appropriate staffing requirements to support safety risk assessments and incorporate into the safety risk assessment process.	5/24/23	Action Item Approved	
		8. Allocate Resources for SRM Workshops: Develop directives that apply to all departments that ensure the prioritization and allocation of required safety management resources for safety risk assessments.	6/22/23	Action Item Approved	
		9. Develop Risk Assessment Schedule: Develop and implement a defined schedule for risk assessment activities allowing for both expedited need-based	7/21/23	Action Item Approved <u>Note:</u> FTA will review the defined schedule.	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		assessments and planned assessments to create a comprehensive body of risk information incorporating critical functions and processes.			
		10. Engage Stakeholders to Identify Gaps in Training: Convene a stakeholder engagement group from all affected areas to understand gaps in training materials and training methods.	8/18/23	Action Item Approved <u>Note:</u> FTA will review agendas and meeting notes to assess implementation of this session.	
		11. Update SRM Trainings: Update the training modules related to safety risk assessments based on results of the stakeholder engagements.	9/25/23	Action Item Approved <u>Note:</u> FTA will review updated training modules. Please provide a list of the MBTA roles (and if they're staffed) that will participate in the review of the training materials.	
		12. Assign SRM Trainings: Assign updated training modules to safety staff and external department stakeholders.	10/21/23	Action Required Please provide additional details related to how MBTA will carry out the training and ensure its effectiveness.	
		13. Revise Transit Safety Plan: Incorporate into the Transit Safety Plan modifications to the safety risk prioritization	12/31/23	Action Required Provide additional milestones and clarifications for how this review and	

Corrective Action Plan (CAP) Evaluation Matrix
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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		and safety risk assessment process.		update process will occur throughout the period of performance for the CAP.	
		14. CAP Verification: Evaluate actionable items/deliverables before submission to FTA to confirm there is reasonable evidence that the findings and this required action have been resolved, considering the scope and performance measures.	Ongoing	Action Item Approved	
FTA-22-10-MBTA-CAT2-6	<u>Finding:</u> MBTA safety information management tools (hazard log, safety risk mitigation log, etc.) do not fully support prioritization of resources to address safety risk and safety performance monitoring. <u>Required Action:</u> 6.A: MBTA must evaluate (and correct) the data contained in its hazard log and safety risk mitigation log for accuracy and relevancy to SMS. 6.B: MBTA must expedite the build out of its safety risk and safety risk mitigation monitoring information tools.	1. Establish CAP Advisory Committee: Establish an advisory committee of internal stakeholders to review and guide implementation of the corrective action plan.	10/31/22	Action Required Provide FTA with a list of the identified internal stakeholders. Provide additional detail to explain how MBTA's CAP management personnel and, especially, Executive Leadership, will engage with FTA and the SMI team in meetings and during verification activities.	
		2. Strategic Planning Session: Conduct a strategic planning session for SD 22-10 Finding 6 CAP implementation with the advisory committee identified in Actionable Item #1.	12/31/22	Action Item Approved <u>Note:</u> FTA will review agendas and meeting notes to assess implementation of this session.	
		3. Procure Consulting Services: Issue RFP or Task Order for	12/22/22	Action Required	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
	6.C: MBTA must demonstrate use of its safety information management tools to effectively prioritize its resources to address the results of: <ul style="list-style-type: none"> • Safety Risk Monitoring • Safety Performance Monitoring 	consulting services to evaluate the safety risk management process and incorporate changes into the Transit Safety Plan.		MBTA must provide a presentation explaining the approach and the RFP or Task Order for consulting services to FTA two weeks prior to its release.	
		4. Onboard Consultant: Onboard selected consultant.	2/20/23	Action Item Approved <u>Note:</u> FTA will review the executed contract for the selected consultant to verify the scope of work and qualifications of the selected contractor to assure their ability to provide these activities.	
		5. Assess Existing Safety Data Tools and Processes: Compile and review all existing tools and processes used to document, track, and analyze safety data and monitor mitigations.	4/10/23	Action Required Please provide additional detail to address the specific deliverables for this item. Please explain how this review and compilation will be conducted and how MBTA will ensure its comprehensiveness. <u>Note:</u> FTA will ask MBTA to provide a copy of its gap analysis tool/activities.	
		6. Define SMS Requirements for Data Collection: Analyze safety risk monitoring tools	5/16/23	Action Item Approved	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		and records to ensure SMS requirements for tracking hazards are met; include requirements in Transit Safety Plan.			
		7. Review and Update Data Logs: Evaluate and revise the data contained in the hazard and safety risk mitigation logs for accuracy and relevancy to SMS requirements.	5/16/23	Action Item Approved	
		8. Build Out Data Tools: Expedite the build out of the safety risk and safety risk mitigation monitoring information tools using the defined SMS requirements.	11/15/23	Action Required Please modify Action Item to include interim Action Items and submit to FTA prior to initiation of Action Item.	
		9. Verify Effectiveness of Tools: Ensure safety information management tools provide the required information to effectively prioritize resources to address the results of Safety Risk Monitoring and Safety Performance Monitoring.	2/2/24	Action Item Approved	
		10. Review SMS Training Materials: Review and update existing training related to safety tracking and mitigation and monitoring	3/7/24	Action Required Please clarify if training material review will occur in this Action Item and the training update will occur in Action Item 11.	

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Identification Number	Finding and Required Action	Proposed CAP Items	Proposed Due Dates	FTA Comments	MBTA Response (if needed)
		effectiveness; assign updated training.		Please provide a list of the MBTA roles (and if they're staffed) that will participate in the review of the training materials.	
		11. Update SMS Training Materials: Review and update existing training related to safety risk tracking and mitigation and monitoring effectiveness; assign updated training.	4/5/24	Action Required Please provide additional details related to how MBTA will carry out the training and ensure its effectiveness. Note: FTA will review updated training.	
		12. Revise and Distribute Transit Safety Plan: Revise the Transit Safety Plan to reflect modifications to the safety risk management process.	12/31/22	Action Required Provide additional milestones and clarifications for how this review and update process will occur throughout the period of performance for the CAP.	
		13. CAP Verification: Evaluate actionable items/deliverables before submission to FTA to confirm there is reasonable evidence that the findings and this required action have been resolved, considering the scope and performance measures.	Ongoing	Action Item Approved	