TECHNICAL MEMORANDUM

DATE: **March 5, 2026**
TO: **Boston Region Metropolitan Planning Organization**
FROM: **Adriana Jacobsen, MPO Staff**
RE: **Transit Safety Performance Targets**

Metropolitan planning organizations (MPO) are federally required to set transit safety performance measure targets for their regions. MPOs set targets in coordination with transit authorities and state agencies to manage safety risks on transit systems. This memorandum summarizes the most recent set of transit safety targets set by the Massachusetts Bay Transportation Authority (MBTA), the Cape Ann Transportation Authority (CATA), and the MetroWest Regional Transit Authority (MWRTA). The Boston Region MPO staff proposes that the MPO board adopt these targets as presented for the Boston region at the March 5, 2026, MPO meeting.

1 TRANSIT SAFETY PERFORMANCE OVERVIEW

The Federal Transit Administration's Public Transportation Agency Safety Plan final rule identifies safety performance measurement as a key component of safety management processes. It defines measures in five areas—fatalities, injuries, transit worker safety, safety events, and system reliability.

Table 1 describes the performance measures for which targets and performance are reported in this memo. For all measures except for the system reliability measure, the goal is to minimize the value.

Table 1
Federally Required Transit Safety Performance Measures

Category	Measure	Desired Direction
Safety Events	Total number of reportable safety events by mode	Decrease
Safety Events	Rate of safety events per total VRM by mode	Decrease
Safety Events	Collision rate by mode	Decrease
Safety Events	Pedestrian collision rate by mode	Decrease
Safety Events	Vehicular collision rate by mode	Decrease
Fatalities	Total number of reportable fatalities by mode	Decrease
Fatalities	Total number of reportable fatalities by mode	Decrease
Injuries	Injury rate per total VRM by mode	Decrease
Injuries	Injury rate per total VRM by mode	Decrease
Transit Worker Safety	Transit worker fatality rate by mode	Decrease
Transit Worker Safety	Transit worker injury rate by mode	Decrease
Transit Worker Safety	Assaults on transit workers by mode	Decrease
Transit Worker Safety	Rate of assaults on transit workers by mode	Decrease
System Reliability	Mean distance between major mechanical failures by mode	Increase

VRM = vehicle revenue-miles.
Source: Federal Transit Administration, “Safety Performance Targets Guide,” accessed February 3, 2026, https://www.transit.dot.gov/sites/fta.dot.gov/files/2024-11/SPTs-Guide-v3-11-06-2024.pdf.

2 BOSTON REGION TRANSIT AUTHORITIES' SAFETY TARGETS

To meet federal transit safety requirements, the Boston Region MPO coordinates with the MBTA, CATA, and MWRTA. As previously mentioned, the Federal Transit Administration gives transit agencies flexibility when developing targets for their specific service areas. The MBTA, CATA, and MWRTA systems have distinct operating contexts, and each transit authority has taken a somewhat different approach to setting targets, so their targets are presented separately. MPO staff recommend adopting these transit authorities' safety targets as presented, as they reflect each authority's understanding of the factors that will affect safety outcomes in their service areas.

2.1 MBTA Safety Targets

The MBTA monitors performance and sets federally required targets for four modes: heavy rail (Red, Orange, and Blue Lines), light rail (Green Line and the Mattapan High Speed Line), bus, and The RIDE paratransit system. Its commuter rail network and ferry service are not subject to the Federal Transit Administration's requirements and are addressed outside of the Public Transportation Agency Safety Plans process.

MBTA Fatalities and Injuries

Table 2 shows past averages for the federally required transit safety measures of fatalities, fatality rate, injuries, and injury rate for MBTA's heavy rail, light rail, and bus service, and The RIDE, based on data provided by the MBTA. These averages reflect safety data from Calendar Years (CY) 2022 to 2024, which were the most recent data available at the time of performance target development.

Table 2
MBTA—Performance on Fatalities and Injuries (CYs 2022–24 Averages)

Mode	Average Fatalities	Average Fatality Rate	Average Injuries	Average Injury Rate
Heavy Rail	3	0.16	270.33	14.66
Light Rail	0.33	0.06	102	17.64
Bus	0.33	0.02	353.67	16.85
The RIDE	0	0	33	3.03

Note: All rates per 1,000,000 vehicle revenue-miles.
CY = Calendar Year. MBTA = Massachusetts Bay Transportation Authority.
Source: 2026 Transit Safety Plan, MBTA.

Given past trends and current efforts to reduce fatalities and injuries, the MBTA established the following performance targets for CY 2026:

- Fatalities and Fatality Rates: The MBTA notes that fatality rates vary across modes due to the distinct operating environments and the inherent

safety risk exposure associated with each mode. The MBTA is committed to reducing the number of fatalities across its system to zero and continues to invest in proactive solutions to achieve this goal.

- Injuries and Injury Rates: The MBTA developed its targets for CY 2026 for these two injury measures by assuming a two percent decrease in the injury rate per vehicle-miles traveled from the CYs 2022–24 average.

MBTA fatality and injury performance targets are shown in Table 3.

Table 3
MBTA CY 2026 Performance Targets on Fatalities and Injuries

Mode	Average Fatalities	Average Fatality Rate	Average Injuries	Average Injury Rate
Heavy Rail	0	0	265	14.37
Light Rail	0	0	100	17.29
Bus	0	0	347	16.51
The RIDE	0	0	32	2.97

Note: All rates per 1,000,000 vehicle revenue-miles.
CY = Calendar Year. MBTA = Massachusetts Bay Transportation Authority.
Source: 2026 Transit Safety Plan, MBTA.

MBTA Transit Worker Safety

Beginning in 2025, the MBTA was required to track and set targets on aspects of transit worker safety, including transit worker fatality rate, transit worker injury rate, number of assaults on transit workers, and rates of assaults on transit workers. Transit worker fatalities are a subset of overall fatalities, and transit worker injuries are a subset of overall injuries, narrowed to include all transit workers as defined by the National Transit Database (NTD).[1] In addition, assaults on transit workers are counted as defined by NTD.[2] All performance measures involving rates are calculated per one million vehicle revenue-miles (VRM).

Table 4 shows average annual performance for transit worker safety categories by mode for CYs 2022–24.

[1] Federal Transit Administration, “National Transit Database (NTD) Glossary.” Accessed February 3, 2026, https://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary#T.
[2] Federal Transit Administration, “Assault on a Transit Worker Overview,” Accessed February 3, 2026, https://www.transit.dot.gov/sites/fta.dot.gov/files/2024-05/Assault-on-a-Transit-Worker-Overview_0.pdf.

Table 4
MBTA—Performance on Transit Worker Safety (CYs 2022–24 Averages)

Mode	Average Fatality Rate	Average Injury Rate	Average Assaults on Transit Workers	Assaults on Transit Worker Rate
Heavy Rail	0	0.78	40	2.17
Light Rail	0	2.54	24.3	4.21
Bus	0	2.73	275.67	13.14
The RIDE	0	1.00	2.67	0.31

Note: All rates per 1,000,000 vehicle revenue-miles.
CY = Calendar Year. MBTA = Massachusetts Bay Transportation Authority. N/A = Not Available.
Source: 2026 Transit Safety Plan, MBTA.

Table 5 shows the MBTA's targets for the transit worker safety categories. The MBTA developed its targets for CY 2026 for these measures by assuming a two percent decrease in the fatality, injury, and assault rates per one million VRM from the CYs 2022–24 average. The fatality rate target is zero, which is equal to the three-year average performance.

Table 5
MBTA CY 2026 Transit Worker Safety Performance Targets

Mode	Average Fatality Rate	Average Injury Rate	Average Assaults on Transit Workers	Assaults on Transit Worker Rate
Heavy Rail	0	0.76	39	2.13
Light Rail	0	2.49	24	4.13
Bus	0	2.68	270	12.88
The RIDE	0	0.98	3	0.30

Note: All rates per 1,000,000 vehicle revenue-miles.
CY = Calendar Year. MBTA = Massachusetts Bay Transportation Authority.
Source: 2026 Transit Safety Plan, MBTA.

MBTA—Events and Reliability

Along with setting targets, the MBTA has reported past performance on the following measures: average collision rate, average collision rates involving pedestrians and vehicles, average annual safety events, average safety event rate, and average system reliability. System reliability is a measure of the average number of mechanical failures per VRM. All rates are calculated per one million VRM.

The MBTA has set targets on annual numbers of safety events and a safety event rate per one million VRM. The safety event rate target aims for a two percent reduction from the three-year average rate shown in Table 6.

The targets for System Reliability are a measure of the mean number of miles between major mechanical failures by mode. The System Reliability targets for

CY 2026 are higher for all modes. Notably, this is the only target where the goal is to maximize the value.

Table 6
MBTA—Performance on Safety Events and Reliability
(CYs 2022–24 Averages)

Mode	Average Collision Rate	Average Pedestrian Collision Rate	Average Vehicular Collision Rate	Average Safety Events	Average Safety Event Rate	Average System Reliability (miles)
Heavy Rail	0.25	0.14	0	82.33	4.47	52371
Light Rail	1.79	0.63	0.75	45.67	7.90	8530
Bus	5.07	0.59	4.32	156	7.43	30574
The RIDE	2.50	0.04	2.11	21.67	2.50	27782

Note: All rates per 1,000,000 vehicle revenue-miles.
CY = Calendar Year. MBTA = Massachusetts Bay Transportation Authority.
Source: 2026 Transit Safety Plan, MBTA.

Beginning in 2025, the MBTA was required to set targets on rates of collisions, collision rates involving pedestrians, and collision rates involving vehicles. All targets for events and reliability, including the targets for average collision rate, average pedestrian collision rate, and average vehicular collision rate, are shown in Table 7. All rates are set per one million VRM.

The targets for rates of collision-related measures shown in Table 7 aim for a two-percent reduction from the three-year average rates per VRM for light rail and bus. Heavy rail targets remain equal to the three-year average per VRM.

Table 7
MBTA CY 2026 Events and Reliability Performance Targets

Mode	Average Collision Rate	Average Pedestrian Collision Rate	Average Vehicular Collision Rate	Average Safety Events	Average Safety Event Rate	Average System Reliability (miles)
Heavy Rail	0.25	0.14	0	81	4.38	53418
Light Rail	1.75	0.62	0.75	45	7.74	8701
Bus	4.97	0.58	4.32	153	7.28	31185
The RIDE	2.45	0.04	2.11	21	2.45	28338

Note: All rates per 1,000,000 vehicle revenue-miles.
CY = Calendar Year. MBTA = Massachusetts Bay Transportation Authority.
Source: 2026 Transit Safety Plan, MBTA.

2.2 CATA Safety Targets

CATA monitors performance and sets federally required targets for its fixed-route bus service and its demand response service. CATA has established targets for CY 2026; all rate targets are calculated per 100,000 VRM.

CATA Fatalities and Injuries

Table 8 shows past averages for the measures of fatalities, fatality rate, injuries, and injury rate for CATA's fixed-route and demand response services. The table provides CYs 2021–25 averages for fatalities, injury and safety event measures, and system reliability measures.

Table 8
CATA—Performance on Fatalities and Injuries (CYs 2021–25 Averages)

Mode	Average Fatalities	Average Fatality Rate	Average Injuries	Average Injury Rate
Fixed-Route Bus	0	0	0	0
Demand Response	0	0	0.2	0.2

Note: All rates per 100,000 vehicle revenue-miles.
CATA = Cape Ann Transportation Authority. CY = Calendar Year.
Source: Cape Ann Transportation Authority.

With no reportable fatalities and few reportable injuries over the past five years, CATA has set targets of zero for all related measures for CY 2026. Table 9 provides a summary of the performance targets for fatalities and injuries.

Table 9
CATA CY 2026 Performance Targets on Fatalities and Injuries

Mode	Average Fatalities	Average Fatality Rate	Average Injuries	Average Injury Rate
Fixed-Route Bus	0	0	0	0
Demand Response	0	0	0	0

Note: All rates per 100,000 vehicle revenue-miles.
CATA = Cape Ann Transportation Authority. CY = Calendar Year.
Source: Cape Ann Transportation Authority.

CATA Transit Worker Safety

Beginning in 2025, CATA was required to track and set targets on aspects of transit worker safety, including transit worker fatality rate, transit worker injury rate, number of assaults on transit workers, and rates of assaults on transit workers. Transit worker fatalities are a subset of overall fatalities, and transit worker injuries are a subset of overall injuries, narrowed to include all transit workers as defined by NTD. In addition, assaults on transit workers are counted as defined by NTD. Past performance is shown in Table 10.

Table 10
CATA—Performance on Transit Worker Safety (CYs 2021–25 Averages)

Mode	Average Fatality Rate	Average Transit Worker Injury Rate	Average Assaults on Transit Workers	Assault on Transit Worker Rate
Fixed-Route Bus	0	0	0	0
Demand Response	0	0	0	0

Note: All rates per 100,000 vehicle revenue-miles.
CATA = Cape Ann Transportation Authority. CY = Calendar Year.
Source: Cape Ann Transportation Authority.

With no transit worker safety fatalities, injuries, or assaults, targets for CY 2026 are set to zero. Table 11 shows the CATA's targets for transit worker safety categories by mode.

Table 11
CATA CY 2026 Transit Worker Safety Performance Targets

Mode	Average Fatality Rate	Average Transit Worker Injury Rate	Average Assaults on Transit Workers	Assault on Transit Worker Rate
Fixed-Route Bus	0	0	0	0
Demand Response	0	0	0	0

Note: All rates per 100,000 vehicle revenue-miles.
CATA = Cape Ann Transportation Authority. CY = Calendar Year.
Source: Cape Ann Transportation Authority.

CATA Events and Reliability

Along with setting targets, CATA has reported past performance on the following measures: average collision rate, collision rates involving pedestrians, collision rates involving vehicles, average annual safety events, average safety event rate, and average system reliability. System reliability is a measure of the average number of mechanical failures per VRM. All rates are calculated per 100,000 VRM. Events and reliability targets are shown in Table 12.

Table 12
CATA—Performance on Events and Reliability (CYs 2021–25 Averages)

Mode	Average Collision Rate	Average Pedestrian Collision Rate	Average Vehicular Collision Rate	Average Safety Events	Average Safety Event Rate	Average System Reliability (miles)
Fixed-Route Bus	2.14	0	2.14	2.2	0.80	112,694
Demand Response	1	0	1	1	1.92	137,995

Note: All rates per 100,000 vehicle revenue-miles.
CATA = Cape Ann Transportation Authority. CY = Calendar Year.
Source: Cape Ann Transportation Authority.

Beginning in 2025, CATA was required to set targets on rates of collisions, collision rates involving pedestrians, and collision rates involving vehicles. All target rates are set per 100,000 VRM. In addition, CATA has set targets on annual numbers of safety events and a safety event rate per 100,000 VRM. CATA aims for a reduction of safety events for fixed-route bus service and relative stasis of safety events for demand response service. All targets for events and reliability, including the targets for average collision rate, average pedestrian collision rate, and average vehicular collision rate, are shown in Table 13.

Table 13
CATA CY 2026 Events and Reliability Performance Targets

Mode	Average Collision Rate	Average Pedestrian Collision Rate	Average Vehicular Collision Rate	Average Safety Events	Average Safety Event Rate	Average System Reliability (miles)
Fixed-Route Bus	2	0	2	1	1	87,180
Demand Response	2	0	2	1	2	118,351

Note: All rates per 100,000 vehicle revenue-miles.
CATA = Cape Ann Transportation Authority. CY = Calendar Year.
Source: Cape Ann Transportation Authority.

2.2 MWRTA Safety Targets

MWRTA monitors performance and sets federally required targets for its fixed-route bus service and demand response service. MWRTA has established targets for CY 2026; all rate targets are calculated per one hundred thousand VRM.

MWRTA Fatalities and Injuries

Table 14 shows past data for the measures of fatalities, fatality rate, injuries, and injury rate for MWRTA's fixed-route and demand response services. The table provides CY 2025 performance data for these metrics.

Table 14
MWRTA Performance on Fatalities and Injuries (CYs 2021–25 Averages)

Mode	Average Fatalities	Average Fatality Rate	Average Injuries	Average Injury Rate
Fixed-Route Bus	0	0	1.2	0.11
Demand Response	0	0	0	0

Note: All rates per 100,000 vehicle revenue-miles.
CY = Calendar Year. MWRTA = MetroWest Regional Transit Authority.
Source: MetroWest Regional Transit Authority.

MWRTA set targets of zero fatalities and less than one injury per 100,000 VRM. MWRTA set more conservative injury targets than past performance to account for increased encouragement to report injuries. Table 15 provides a summary of the performance targets on fatalities and injuries.

Table 15
MWRTA CY 2026 Performance Targets on Fatalities and Injuries

Mode	Average Fatalities	Average Fatality Rate	Average Injuries	Average Injury Rate
Fixed-Route Bus	0	0	9	0.8
Demand Response	0	0	7	0.7

Note: All rates per 100,000 vehicle revenue-miles.
CY = Calendar Year. MWRTA = MetroWest Regional Transit Authority.
Source: MetroWest Regional Transit Authority.

MWRTA Transit Worker Safety

Beginning in 2025, MWRTA was required to track and set targets on aspects of transit worker safety, including transit worker fatality rate, transit worker injury rate, number of assaults on transit workers, and rates of assaults on transit workers. Transit worker fatalities are a subset of overall fatalities, and transit worker injuries are a subset of overall injuries, narrowed to include all transit workers as defined by NTD. In addition, assaults on transit workers are counted as defined by NTD. Past performance is shown in Table 16.

Table 16
MWRTA Performance on Transit Worker Safety (CYs 2021–25 Averages)

Mode	Average Fatality Rate	Average Transit Worker Injury Rate	Average Assaults on Transit Workers	Assault on Transit Worker Rate
Fixed-Route Bus	0	0.02	0	0
Demand Response	0	0	0	0

Note: All rates per 100,000 vehicle revenue-miles.
CY = Calendar Year. MWRTA = MetroWest Regional Transit Authority.
Source: MetroWest Regional Transit Authority.

With zero transit worker fatalities in the past five years, MWRTA has set its fatality rate target to zero. In addition, MWRTA has set transit worker injury and transit worker assault rates at less than one injury and less than one assault per 100,000 VRM for both its fixed-route and demand response services. MWRTA set more conservative transit worker injury and transit worker assault targets than past performance to account for increased encouragement to report incidents. Table 17 shows the MWRTA's targets for transit worker safety categories by mode.

Table 17
MWRTA CY 2026 Transit Worker Safety Performance Targets

Mode	Average Fatality Rate	Average Transit Worker Injury Rate	Average Assaults on Transit Workers	Assault on Transit Worker Rate
Fixed-Route Bus	0	0.44	6	0.53
Demand Response	0	0.44	5	0.5

Note: All rates per 100,000 vehicle revenue-miles.
CY = Calendar Year. MWRTA = MetroWest Regional Transit Authority.
Source: MetroWest Regional Transit Authority.

MWRTA Events and Reliability

Along with setting targets, MWRTA has reported past performance on the following measures: average collision rate, collision rates involving pedestrians, collision rates involving vehicles, average annual safety events, average safety event rate, and average system reliability. System reliability is a measure of the average number of mechanical failures per VRM. All rates are calculated per 100,000 VRM. Data on safety events and reliability performance are shown in Table 18.

Table 18
MWRTA Performance on Events and Reliability (CYs 2021–25 Averages)

Mode	Average Collision Rate	Average Pedestrian Collision Rate	Average Vehicular Collision Rate	Average Safety Events	Average Safety Event Rate	Average System Reliability (miles)[a]
Fixed-Route Bus	0.07	0	0.07	1.4	0.14	171,428
Demand Response	0.02	0	0.02	0.2	0.02	112,346

Note: All rates per 100,000 vehicle revenue-miles.
[a] Average System Reliability includes data from CYs 2020–23 only.
CY = Calendar Year. MWRTA = MetroWest Regional Transit Authority.
Source: MetroWest Regional Transit Authority.

Beginning in 2025, MWRTA was required to set targets on rates of collisions, collision rates involving pedestrians, and collision rates involving vehicles. All target rates are set per 100,000 VRM. In addition, MWRTA has set targets on annual numbers of safety events and a safety event rate per 100,000 VRM. All targets for events and reliability, including the targets for average collision rate, average pedestrian collision rate, and average vehicular collision rate, are shown in Table 19.

Table 19
MWRTA CY 2026 Events and Reliability Performance Targets

Mode	Average Collision Rate	Average Pedestrian Collision Rate	Average Vehicular Collision Rate	Average Safety Events	Average Safety Event Rate	Average System Reliability (miles)
Fixed-Route Bus	0.53	0.08	0.44	9	0.8	75,000
Demand Response	0.6	0.1	0.5	7	0.7	75,000

Note: All rates per 100,000 vehicle revenue-miles.
CY = Calendar Year. MWRTA = MetroWest Regional Transit Authority.
Source: MetroWest Regional Transit Authority.

3 REQUESTED ACTIONS AND NEXT STEPS

Each transit authority's set of targets reflects its operating context and anticipated safety-related investments, policies, and safety management activities. Should the MPO adopt these targets as its regional targets, staff will present and describe these targets in the performance chapters of the FFYs 2027–31 Transportation Improvement Program (TIP) document. Going forward, the MPO will work with transit authorities and MassDOT to use transit performance measures and targets to monitor transit safety outcomes in the region, and to consider what effect the transit programs and projects proposed for the MPO's TIP will have on safety outcomes on the region's transit systems.

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