

Metropolitan Transportation Commission
Planning Committee

March 8, 2024

Agenda Item 3b

Federal Performance Target-Setting Update – March 2024

Subject:

Update on performance measures related to Road Safety, including past performance and near-term targets.

Background:

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) established a Transportation Performance Management program to orient transportation investment decision-making around national transportation goals, while also moving toward a performance-based planning and programming paradigm. Through this program, State Departments of Transportation (DOTs), Metropolitan Planning Organizations (MPOs), and transit agencies are responsible for setting targets for 29 performance measures covering the following federal goal areas: Safety; Infrastructure Condition; System Reliability; Freight Movement and Economic Vitality; Congestion Reduction; and Environmental Sustainability (status shown in Attachment A). Under MTC Resolution No. 4295, adopted in June 2017, the Planning Committee delegated authority for target-setting to staff, requiring regular consultation with stakeholders through MTC's working groups and semiannual updates to the committee going forward.

This memorandum summarizes MTC's target-setting actions for Road Safety, and presents the methodology and rationale used to arrive at the targets. This will be the seventh 1-year performance period for performance measures related to Road Safety.

MTC's approach to setting targets for federally mandated performance measures is to support targets set by the state if state targets align with regional priorities and there is no regulatory requirement for MPOs to establish regional targets. In this cycle, MTC established regional targets for Road Safety to align with Vision Zero principles rather than supporting the state's less ambitious targets.

Issues:

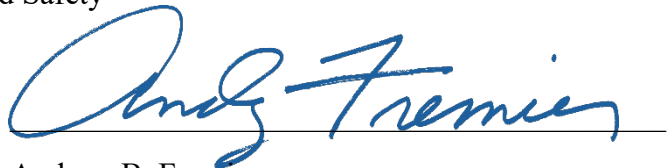
In recent years, fatalities from crashes, both in terms of absolute numbers and rate per vehicle miles traveled (VMT), have been increasing at the regional, state, and national levels. These trends make it challenging to set realistic Road Safety target goals in the context of Vision Zero, which aims to eliminate traffic deaths and serious vehicular injuries in the Bay Area by 2030. While these targets are aspirational, federal regulations mandate that these targets must be regularly updated, and MPOs are not penalized for failing to meet them.

Next Steps:

In spring 2024, MTC will undertake the next round of target-setting for Transit Safety and State of Good Repair for Transit Assets. On December 7, 2023, the FHWA published a final rule establishing a performance measure for assessing the performance of the National Highway System related to greenhouse gas (GHG) emissions. MTC will undertake the first round of target-setting for the new GHG performance measure in the summer of 2024. MTC will also continue to monitor regional performance for all federal performance measures.

Attachments:

- Attachment A: List of Federally Required Performance Measures
- Attachment B: 2024 Target-Setting Summary: Road Safety
- Attachment C: 2024 Targets for Road Safety



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List of Federally Required Performance Measures

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
Safety	Number of Fatalities on Roads	1. Total number of road fatalities	Annual	State: in August MPO: in February	MTC set the 2024 targets in February 2024. Seven rounds of target-setting complete.
	Rate of Fatalities on Roads	2. Road fatalities per 100 million vehicle miles traveled	Annual	State: in August MPO: in February	
	Number of Serious Injuries on Roads	3. Total number of serious injuries on roads	Annual	State: in August MPO: in February	
	Rate of Serious Injuries on Roads	4. Serious injuries on roads per 100 million vehicle miles traveled	Annual	State: in August MPO: in February	
	Non-Motorized Safety on Roads	5. Combined total number of non-motorized fatalities and serious injuries	Annual	State: in August MPO: in February	

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
	Safety of Public Transit Systems	<p>6. Total number of reportable transit fatalities</p> <p>7. Reportable transit fatalities per revenue vehicle miles by mode (<i>example below</i>)</p> <p style="margin-left: 40px;"><i>a. Motor bus</i></p> <p style="margin-left: 40px;"><i>b. Light rail</i></p> <p style="margin-left: 40px;"><i>c. etc.</i></p> <p>8. Total number of reportable transit injuries</p> <p>9. Reportable transit injuries per revenue vehicle miles by mode</p> <p>10. Total number of reportable transit safety events</p> <p>11. Reportable transit safety events per revenue vehicle miles by mode</p> <p>12. Mean distance between major mechanical failures by mode</p>	Annual	Operators: in July MPO: in January	MTC set the 2023 targets in April 2023. Two rounds of target-setting complete.
Infrastructure Condition	Pavement Condition on	13. Percentage of pavements on the Interstate Highway System in good condition	Every 4 years	State: May 2022 MPO: November 2022	MTC set the 2025 targets

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
	the Interstate Highway System	14. Percentage of pavements on the Interstate Highway System in poor condition			in February 2023. Two rounds of target-setting complete.
	Pavement Condition on the National Highway System	15. Percentage of pavements on the non-Interstate National Highway System in good condition 16. Percentage of pavements on the non-Interstate National Highway System in poor condition	Every 4 years	State: May 2022 MPO: November 2022	
	Bridge Condition on the National Highway System	17. Percentage of National Highway System bridges by deck area classified in good condition 18. Percentage of National Highway System bridges by deck area classified in poor condition	Every 4 years	State: May 2022 MPO: November 2022	
	State of Good Repair for	19. Percentage of revenue vehicles that have met or exceeded their useful life benchmark by asset class (example below)	Annual	Operators: in October MPO: in April	MTC set the 2023 targets in April 2023.

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
	Public Transit Assets	<p><i>a. Motor bus</i></p> <p><i>b. Light rail vehicle</i></p> <p><i>c. etc.</i></p> <p>20. Percentage of facilities within a condition rating below fair by asset class (example below)</p> <p><i>a. Administrative and maintenance facilities</i></p> <p><i>b. Passenger facilities</i></p> <p>21. Percentage of guideway directional route-miles with performance restrictions</p> <p>22. Percentage of non-revenue vehicles that have met or exceeded their useful life benchmark</p>			Five rounds of target-setting complete.
System Performance	Performance of the Interstate System	23. Percentage of person-miles traveled on the Interstate Highway System that are reliable	Every 4 years	State: December 2022 MPO: June 2023	MTC set the 2025 targets in February

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
	Performance of the National Highway System	<p>24. Percentage of person-miles traveled on the non-Interstate National Highway System that are reliable</p> <p>25. Percent change in tailpipe carbon dioxide (CO2) emissions on the NHS compared to the reference year (calendar year 2022).</p> <p><i>(eliminated by FHWA in spring 2018 but re-introduced by FHWA in winter 2023)</i></p>	Every 4 years	State: December 2022 MPO: June 2023	<p>2023. Two rounds of target-setting complete.</p> <p>Targets not set for #25 yet as this new measure is being phased-in mid-cycle.</p>
Freight Movement and Economic Vitality	Freight Movement on the Interstate System	26. Interstate Highway System truck travel reliability index	Every 4 years	State: December 2022 MPO: June 2023	MTC set the 2025 targets in February 2023. Two rounds of

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
					target-setting complete.
Congestion Reduction	Traffic Congestion	<p>27. Annual hours of peak-hour excessive delay per capita by urbanized area</p> <ul style="list-style-type: none"> <i>a. San Francisco-Oakland UA</i> <i>b. San Jose UA</i> <i>c. Concord UA**</i> <i>d. Santa Rosa UA**</i> <i>e. Antioch UA**</i> <p>28. Percent of non-single occupant vehicle travel by urbanized area</p> <ul style="list-style-type: none"> <i>a. San Francisco-Oakland UA</i> <i>b. San Jose UA</i> <i>c. Concord UA**</i> <i>d. Santa Rosa UA**</i> 	Every 4 years	State: December 2022 MPO: June 2023	MTC set the 2025 targets in February 2023. Two rounds of target-setting complete.

Federal Goals & Programs	General Measures in Law	Final Performance Measures	Target-Setting Frequency	Target-Setting Due Dates	Current Status
		<p><i>e. Antioch UA**</i></p> <p>** = not required during 1st target-setting cycle</p>			
Environmental Sustainability	On-Road Mobile Source Emissions	<p>29. Total emissions reductions from Congestion Mitigation and Air Quality (CMAQ) Improvement Program funded projects by pollutant</p> <p><i>a. PM_{2.5}</i></p> <p><i>b. PM₁₀</i></p> <p><i>c. CO</i></p> <p><i>d. VOC</i></p> <p><i>e. NO_x</i></p>	Every 4 years	<p>State: December 2022</p> <p>MPO: June 2023</p>	<p>MTC set the 2025 targets in May 2023. Two rounds of target-setting complete.</p>
Reduced Project Delivery Delays	<i>none</i>	<p><i>none</i></p> <p>(neither MAP-21 nor FAST included performance measures for this goal)</p>	N/A	N/A	N/A

2024 Target-Setting Summary: Safety

Overview

The final rule from the Federal Highway Administration (FHWA) established five performance measures to assess performance for Safety. The rule contained new requirements for State Departments of Transportation (DOTs) and metropolitan planning organizations (MPOs). The major requirements of the rule related to Safety are:

- 1) **Safety Targets** – The final rule established five performance measures to assess progress towards the Safety goal, defined as such:

Measure	Definition
Number of fatalities	The number of people involved in a crash with the outcome fatal injury.
Rate of fatalities per 100 million vehicle miles traveled	The number of people involved in a crash with the outcome fatal injury, divided by the number of vehicle miles traveled on roads within the jurisdiction in hundreds of millions of miles.
Number of serious injuries	The number of people involved in a crash with the outcome suspected or confirmed serious injury.
Rate of serious injuries per 100 million vehicle miles traveled	The number of people involved in a crash with the outcome suspected or confirmed serious injury, divided by the number of vehicle miles traveled on roads within the jurisdiction in hundreds of millions of miles.
Number of non-motorized fatalities and non-motorized serious injuries	The number of pedestrians or cyclists involved in a crash with the outcome fatal injury or suspected serious injury.

State DOTs must set numerical targets and MPOs must support State targets or set numerical regional targets annually for each of the five safety targets to comply with the regulation.

- 2) **Reporting** – State DOTs must submit a report at the start of each performance period summarizing baseline conditions and targets. Additionally, State DOTs must submit progress reports at the midpoint and end of the performance period. MPOs and State DOTs must agree on reporting process as part of their Metropolitan Planning Agreements, though federal regulation does not require separate reports to be submitted to FHWA.
- 3) **Evaluation** – A State DOT is said to have made “significant progress” if it meets four out of five safety performance targets or if performance is better than baseline data for four out of five safety performance measures. FHWA will assess an MPO’s progress as part of ongoing transportation planning process reviews. If an MPO does not meet or achieved its targets, the MPO is encouraged to develop a statement that describes how the MPO will work with the State and other partners to meet targets during the next performance period.

MPOs are required to establish their 2024 targets for safety by February 27, 2024, 180 days after the state DOT sets its targets.

Per federal guidelines, baseline and target performance are both reported as 5-year rolling averages, meaning baseline performance represents the average of the years 2017-2021 and the targets represent the years 2020-2024.

Target-Setting Approach

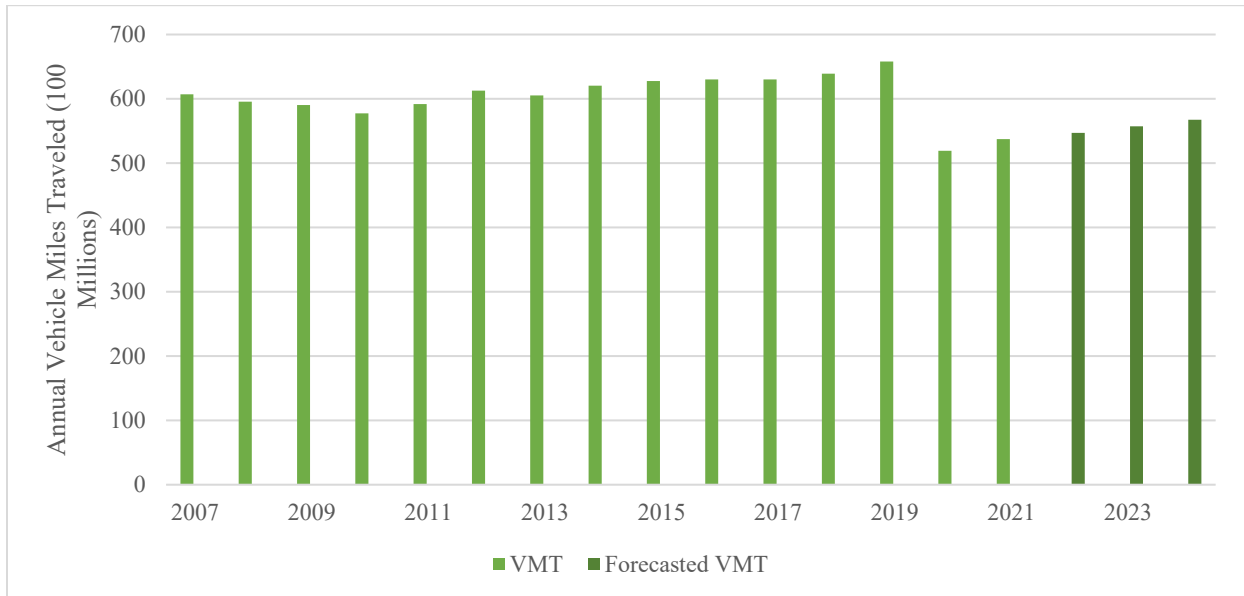
Given the Bay Area’s commitment to advancing road safety and the ongoing initiatives that seek to bend the curve of fatalities and serious injuries toward zero, MTC opted to set aspirational targets in line with Vision Zero, an approach the agency has taken over in previous target-setting cycles. Such initiatives include the adoption of MTC Resolution No. 4400, establishing a Regional Safety/Vision Zero Policy, the initiation of the development of a regional safety data system, and ongoing work to support local jurisdictions through technical assistance and information-sharing networks. Under MTC’s Vision Zero-based target-setting methodology, road safety targets were set based on a linear decline toward zero fatalities and serious injuries in the year 2030 starting in 2022.

This methodology differs from the methodology used by Caltrans to set targets at the state level, which sets targets based on the observed trends in fatalities and serious injuries. Under the

Caltrans framework, the percentage change in statewide reported fatalities or serious injuries over the past several years is used to forecast the expected number or rate of fatalities or serious injuries in 2024. For 2024 targets, Caltrans and California Office of Traffic Safety agreed on a target-setting methodology that considers the impacts of COVID-19 and other factors that are causing fatalities and serious injuries to increase, and set the expected 2026 five-year rolling average target equal to the 2021 five-year rolling average target. The average annual change is then used to calculate the annual 2022, 2023, 2024, and 2025 values, resulting in a 2.84% reduction in fatalities and a 3.69% reduction in serious injuries each year between 2022 and 2025. In comparison, targets for the Bay Area were set based on an annual decline of 11% of the 2021 value for fatalities, serious injuries, and non-motorized fatalities and serious injuries. A substantial time lag exists in the publishing of crash data due to the time-intensive process of collecting data from various reporting agencies and preparing data for public consumption. Final data for fatalities and serious injuries are available through 2021 from the Fatality Analysis Reporting System (FARS) and the Statewide Integrated Traffic Records System (SWITRS), respectively. While some data on the number of serious injuries for 2022 are available from SWITRS, they are considered provisional, and fatality data for 2022 are not yet available from FARS. As such, the regional targets are set using 2021 as a baseline, in line with the methodology used by Caltrans.

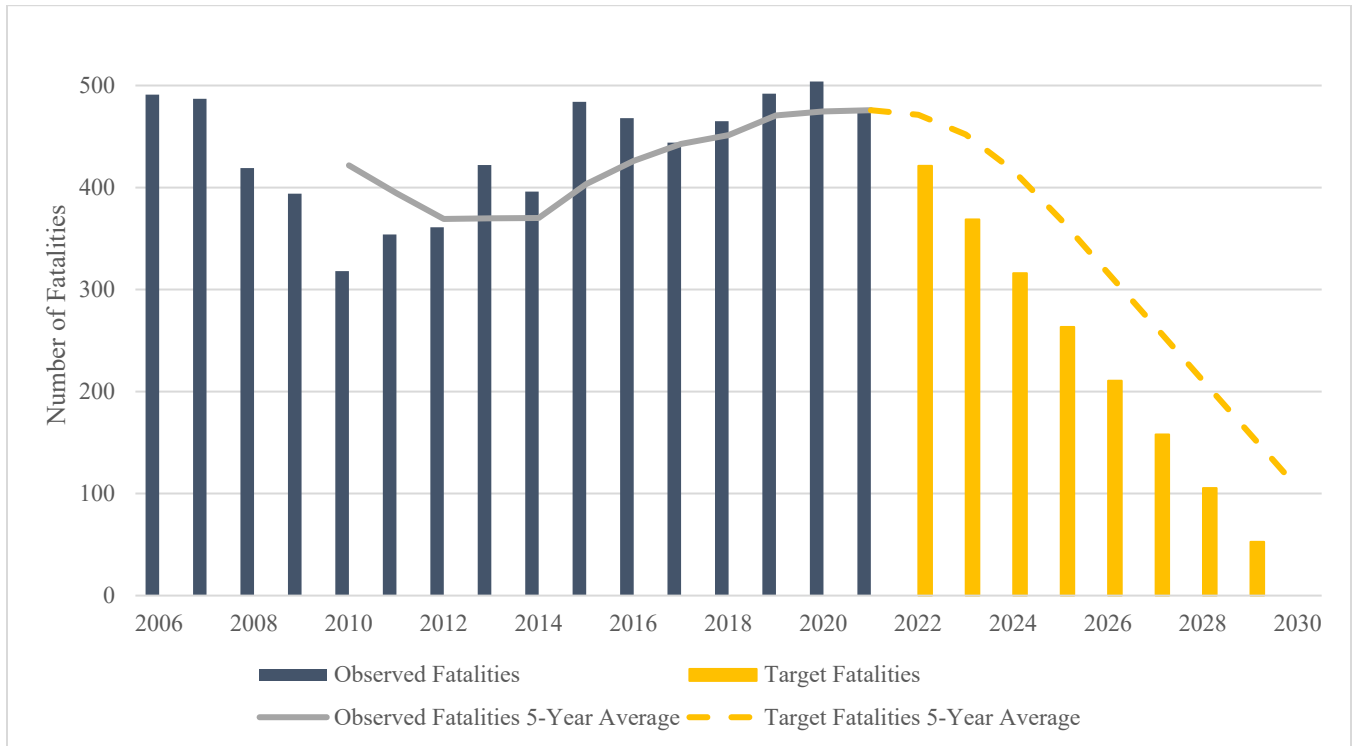
Annual vehicle miles traveled (VMT) data are used to set targets for the rate of fatalities and serious injuries per 100 million VMT. As finalized regional VMT data for years 2023 to 2024 are not yet available, MTC must make assumptions about what future VMT would look like. For the years 2022 through 2024, VMT in the Bay Area was assumed to increase at a rate on par with that observed in recent years prior to and after the COVID-19 pandemic. The average annual increase (starting with 2016 to 2017) was calculated for 2017 to 2019 as well as for 2021-2022, all ranging around slightly above 1%. The average of the five time periods was an increase of 1.2%. VMT was anticipated to increase by this factor each year beginning in 2022.

Figure 1: MTC Observed and Forecasted Vehicle Miles Traveled for Target-Setting



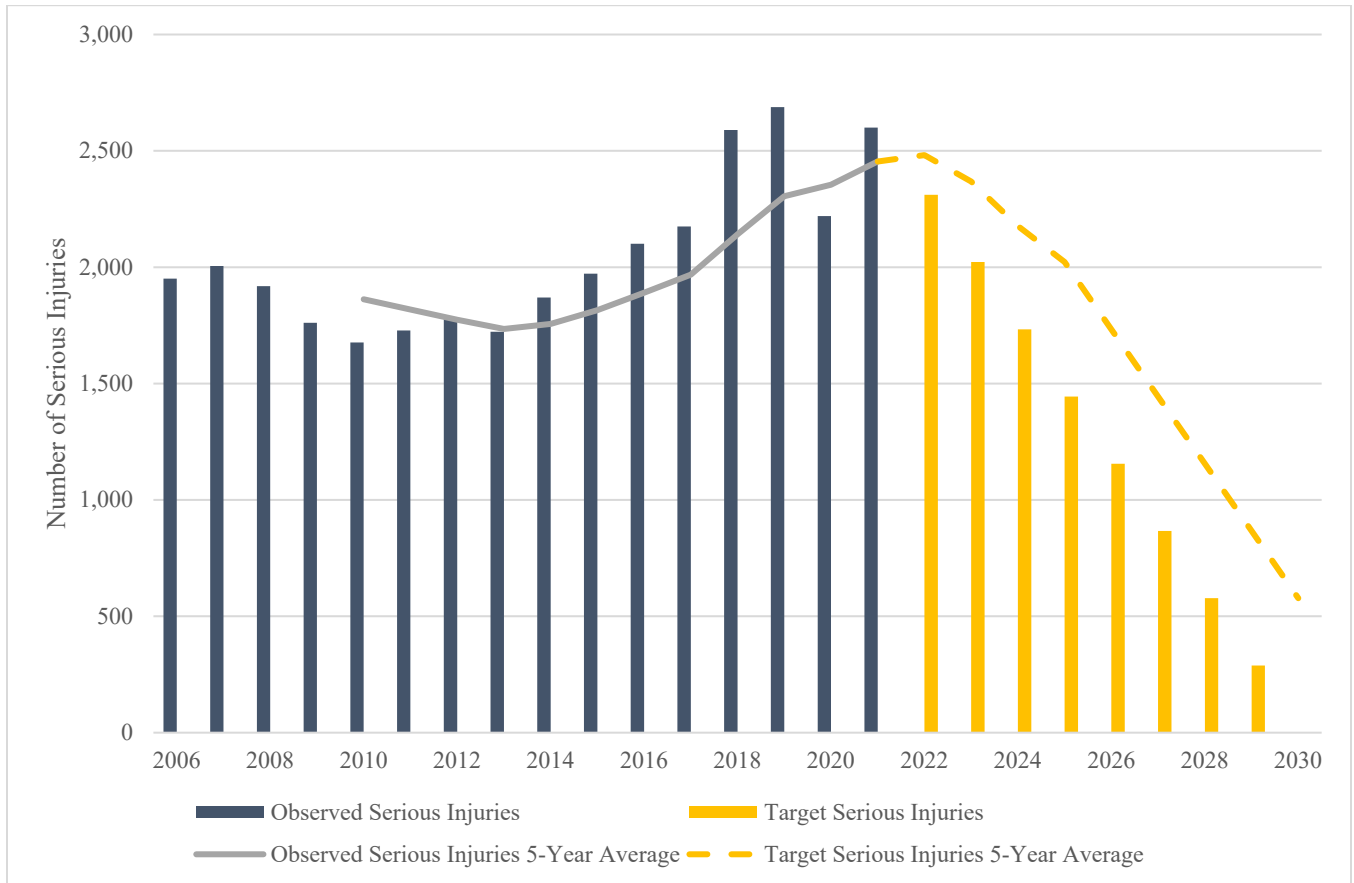
Figures 2 through 4 summarize the Bay Area’s past performance and estimated future performance, upon which the targets are based, for number of fatalities, number of serious injuries, and number of non-motorized fatalities and serious injuries. The target number of fatalities or serious injuries is then divided by VMT (Figure 1) to calculate performance and targets for rate of fatalities and serious injuries per 100 million annual VMT.

Figure 2: MTC Regional Performance and Targets for Number of Fatalities



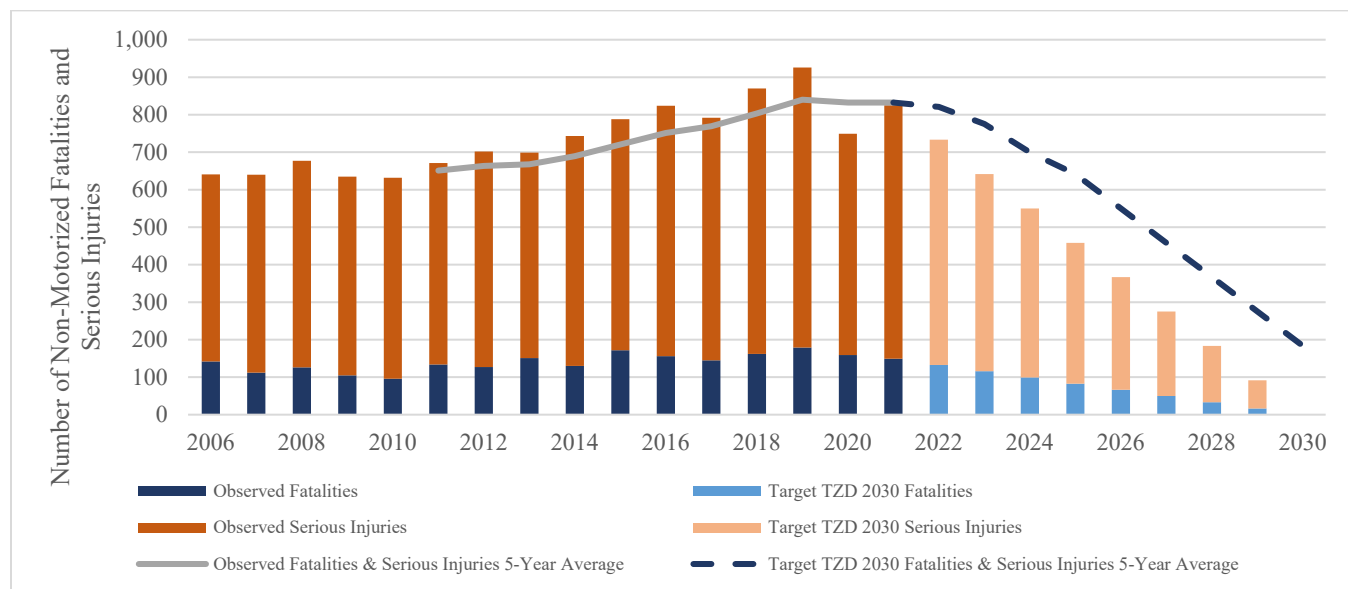
Road fatalities in the Bay Area have historically been linked with VMT – which historically has peaked during periods of high economic activity. In turn, this pattern has the potential to translate to more fatalities if safety measures are not implemented. While VMT was reduced in 2020 as people opted to take fewer discretionary trips and telecommute, when possible, this did not translate to a dip in fatalities; the number of fatalities on Bay Area roads slightly increased to 504 in 2020, compared with 492 in 2019. However, in 2021, while VMT increased, the number of fatalities on Bay Area roads fell from 504 in 2020 to 474 in 2021. In order to arrive at zero fatalities on Bay Area roads by the year 2030, the region would need to eliminate 53 fatalities each year.

Figure 3: MTC Regional Performance and Targets for Number of Serious Injuries



As with fatalities, the number of serious injuries increased as the region recovered from the Great Recession in the early 2010s, reaching consecutive new highs every year between 2016 and 2019 with over 2,600 serious injuries occurring on the region’s roads in 2019. The spike in serious injuries in 2018 and 2019 can be attributed in part to a change in the way serious injuries are quantified. In mid-2017, the definition of serious injuries was revised to include suspected serious injuries, making 2018 the first full year of this expanded definition. Between 2019 and 2020, the number of serious injuries in the Bay Area decreased from 2,688 to 2,220. By contrast, fatalities increased during this time period. In 2021, the number of serious injuries in the Bay Area returned to near pre-pandemic levels. In order to arrive at zero serious injuries on Bay Area roads by the year 2030, the region would need to eliminate 289 serious injuries each year.

Figure 4: MTC Regional Performance and Targets for Number of Non-Motorized Fatalities and Serious Injuries



Pedestrians, cyclists, and those using other non-auto personal mobility options such as scooters or skateboards, referred to as “non-motorized” travelers in the context of target-setting, face a higher risk of fatality or serious injury in the event of a collision. The number of non-motorized fatalities has generally increased at a slow but steady pace, peaking in 2019 at just over 900 fatalities and serious injuries. In 2020, there was a sizeable decrease in the number of non-motorized serious injuries and a smaller reduction in the number of non-motorized fatalities, with the number of these adverse outcomes falling to the lowest number since 2014. The reduction in VMT is likely a factor, as most collisions resulting in a fatality or serious injury involve a vehicle. Additionally, local street closures such as the Slow Streets program in various Bay Area jurisdictions, which provided spaces for people to walk, bike, and roll with minimal auto traffic, could have also improved safety conditions. VMT began to increase in 2021 and so did the total non-motorized serious injuries and fatalities. In order to arrive at zero non-motorized fatalities and serious injuries by the year 2030, the region would need to eliminate 17 non-motorized fatalities and 76 non-motorized serious injuries each year.

Summary of Regional Targets

Staff propose the following targets for Safety for the 5-year performance period ending in 2024. The regional targets for this performance period are set based on a linear decrease in fatalities, serious injuries, and non-motorized fatalities and serious injuries to zero in the year 2030, in line with the Vision Zero framework.

Measure	Baseline*	2024 Target
Number of fatalities	475.8	416.8
Rate of fatalities per 100 million vehicle miles traveled	0.807	0.768
Number of serious injuries	2,454.6	2,177.3
Rate of serious injuries per 100 million vehicle miles traveled	4.141	4.005
Number of non-motorized fatalities and non-motorized serious injuries	832.4	699.8

** = based upon most recently available data (2021); uses five-year rolling average (2017-2021).*

2024 Targets for Safety

General Information

Goal	Safety
Performance Measure(s)	<ul style="list-style-type: none"> • Number of fatalities • Rate of fatalities per 100 million vehicle miles traveled • Number of serious injuries • Rate of serious injuries per 100 million vehicle miles traveled • Number of non-motorized fatalities and non-motorized serious injuries
Target(s) for Year	2024
Target(s) Deadline for MTC Approval	February 27, 2024

Past Targets & Past Performance

Measure	Target (2017- 2021)	Actual (2017- 2021)*	Target Achieved?	Measure ID
Number of fatalities	392.6	475.8	No	1
Rate of fatalities per 100 million vehicle miles traveled	0.612	0.807	No	2
Number of serious injuries	2,248.0	2,454.6	No	3
Rate of serious injuries per 100 million vehicle miles traveled	3.499	4.141	No	4
Number of non-motorized fatalities and non-motorized serious injuries	755.5	832.4	No	5

* = based upon most recently available data (2021); uses five-year rolling average (2017-2021).

Current Conditions and Regional Targets

Measure	Baseline (2017-2021)*	Target (2020-2024)	Measure ID
Number of fatalities	475.8	416.8	1
Rate of fatalities per 100 million vehicle miles traveled	0.807	0.768	2
Number of serious injuries	2,454.6	2,177.3	3
Rate of serious injuries per 100 million vehicle miles traveled	4.141	4.005	4
Number of non-motorized fatalities and non-motorized serious injuries	832.4	699.8	5

** = based upon most recently available data (2021); uses five-year rolling average (2017-2021).*