

# Metropolitan Transportation Commission Planning Committee

May 8, 2020

Agenda Item 3b

## Federal Performance Target-Setting Update 2020 State of Good Repair for Transit Assets Targets

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**Subject:** Update on State of Good Repair for Transit Assets performance measures, including 2019 performance and 2020 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 28 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 State of Good Repair for Transit Assets and presents the methodology and rationale used to arrive at the targets. MTC set targets for the four federally-mandated performance measures for State of Good Repair (SGR) for Transit Assets for the fourth time in April 2020. The performance measures are:

- Percentage of revenue vehicles that have met or exceeded their useful life benchmark by asset class (18 asset classes)
- Percentage of facilities within a condition rating below fair by asset class (2 asset classes)
- Percentage of guideway directional route-miles with performance restrictions
- Percentage of non-revenue vehicles that have met or exceeded their useful life benchmark

The remaining performance measures under the federal goal area of Infrastructure, which quantify the condition of bridges and pavement on the National Highway System (on Interstate and Non-Interstate facilities), will be updated by Caltrans and MTC in the year 2022.

In setting these targets, MTC staff worked in close collaboration with the region's transit operators. Based on an analysis of available funding for the coming year, we expect three of four asset categories - Revenue Vehicles, Non-Revenue Vehicles, and Facilities - to see modest improvements in the percentage of assets in a state of good repair, which would represent a continuation of progress made over the past year. Guideway is expected to see

a slight decline in state of good repair in 2020, though Guideway condition improved significantly from 2018 to 2019.

**State of Good Repair for Transit Asset Targets - Methodology**

As discussed in **Attachment B** and **Attachment C**, MTC is required to establish quantifiable regional targets for the State of Good Repair for Transit Assets annually. MTC's State of Good Repair targets reflect an aggregation of individual targets set at the operator level. On an annual basis, MTC coordinates an update to the Regional Transit Capital Inventory, a database maintained by MTC which contains information on operators' transit asset inventories. This database is used to calculate the percentage of assets not in a state of good repair for each operator each year. These percentages represent the performance measure for each asset class. In order to set targets for the following year, transit operator staff estimate their expected state of good repair funding for the coming year and calculate the percentage of assets in each asset class they expect to be able to rehabilitate or replace with that funding. MTC works with operators to help them set realistic targets before aggregating them to a region-wide level for each asset class.

**Issues:**

**Impact of COVID-19 on Transit Asset Condition Performance**

Per federal regulations, Bay Area transit operators set the 2020 State of Good Repair for Transit Assets performance targets in October 2019, months before the onset of COVID-19 and the associated impacts on the global economy. While transportation operations and funding have been significantly disrupted, progress toward the 2020 targets is not expected to be significantly altered, given that a major share of transit capital funding comes from federal government grants as opposed to sources that are more dependent on economic conditions (such as transit fares or sales taxes) and that some of the procurements of transit assets are either underway or fully funded. Staff will be closely monitoring next years' (2021) transit asset condition targets and how they may be impacted if transit operators are in a situation where they need to use their capital funds to continue operations.

**Next Steps:**

Updated transit asset condition targets have been posted on Vital Signs, where progress toward targets is updated on an annual basis. The next round of target-setting for federal performance measures will occur in January 2021, where MTC will set its first round of targets for Safety of Public Transit Systems in partnership with Bay Area transit operators.

**Attachments:**

Attachment A: List of Federally-Required Performance Measures  
Attachment B: April 2020 Target-Setting Summary: State of Good Repair for Transit Assets  
Attachment C: 2020 Targets for State of Good Repair for Transit Assets



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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  HSIP TSOP	Number of Fatalities on Roads	<b>1. Total number of road fatalities</b>	Annual	State: <b>annually in August</b> MPO: <b>annually in February</b>	MTC set regional targets for road safety in 2020. Three rounds of target-setting complete.
	Rate of Fatalities on Roads	<b>2. Road fatalities per 100M VMT</b>	Annual	State: <b>annually in August</b> MPO: <b>annually in February</b>	
	Number of Serious Injuries on Roads	<b>3. Total number of serious injuries on roads</b>	Annual	State: <b>annually in August</b> MPO: <b>annually in February</b>	
	Rate of Serious Injuries on Roads	<b>4. Serious injuries on roads per 100M VMT</b>	Annual	State: <b>annually in August</b> MPO: <b>annually in February</b>	
	Non-Motorized Safety on Roads	<b>5. Combined total number of non-motorized fatalities and serious injuries</b>	Annual	State: <b>annually in August</b> MPO: <b>annually in February</b>	
	Safety of Public Transit Systems	<b>6. Total number of reportable transit fatalities</b> <b>7. Reportable transit fatalities per RVM by mode</b> <i>(example below)</i> a. Motor bus b. Light rail c. etc.  <b>8. Total number of reportable transit injuries</b> <b>9. Reportable transit injuries per RVM by mode</b> <i>(example below)</i> a. Motor bus b. Light rail c. etc.  <b>10. Total number of reportable transit safety events</b> <b>11. Reportable transit safety events per RVM by mode</b> <i>(example below)</i> a. Motor bus b. Light rail c. etc.  <b>12. Mean distance between major mechanical failures by mode</b> <i>(example below)</i> a. Motor bus b. Light rail c. etc.	Annual	Operators: <b>annually in July</b> (starting 2020) MPO: <b>annually in January</b> (starting 2021)	The final rule for these performance measures was issued in July 2018 and goes into effect in July 2019. Transit operators must establish a Public Transportation Agency Plan, including safety performance targets, by July 20, 2020. MPOs will have 180 days after the establishment of the Safety Plan to establish regional targets for Safety of Public Transit Systems.

FEDERAL GOALS & PROGRAMS	GENERAL MEASURES IN LAW	FINAL PERFORMANCE MEASURES	TARGET-SETTING FREQUENCY	TARGET-SETTING DUE DATES	CURRENT STATUS
Infrastructure Condition	Pavement Condition on the IHS	<b>13. Percentage of pavements on the IHS in good condition</b> <b>14. Percentage of pavements on the IHS in poor condition</b>	Every 4 years	State: <b>May 2022</b> MPO: <b>November 2022</b>	MTC supported State targets in 2018. One round of target-setting complete.
	Pavement Condition on the NHS	<b>15. Percentage of pavements on the non-IHS NHS in good condition</b> <b>16. Percentage of pavements on the non-IHS NHS in poor condition</b>	Every 4 years	State: <b>May 2022</b> MPO: <b>November 2022</b>	
	Bridge Condition on the NHS	<b>17. Percentage of NHS bridges by deck area classified in good condition</b> <b>18. Percentage of NHS bridges by deck area classified in poor condition</b>	Every 4 years	State: <b>May 2022</b> MPO: <b>November 2022</b>	
NHPP NTAMS	State of Good Repair for Public Transit Assets	<b>19. Percentage of revenue vehicles that have met or exceeded their ULB by asset class (example below)</b> <i>a. Motor bus</i> <i>b. Light rail vehicle</i> <i>c. etc.</i> <b>20. Percentage of facilities within a condition rating below fair by asset class (example below)</b> <i>a. Administrative and maintenance facilities</i> <i>b. Passenger facilities</i> <b>21. Percentage of guideway directional route-miles with performance restrictions</b> <b>22. Percentage of non-revenue vehicles that have met or exceeded their ULB</b>	Annual	Operators: <b>annually in October</b> MPO: <b>annually in April</b>	Operators set their 2020 targets in October 2019. MTC must set regional targets by April 2020. Three rounds of target-setting complete.
System Performance	Performance of the Interstate System	<b>23. Percentage of person-miles traveled on the IHS that are reliable</b>	Every 4 years	State: <b>May 2022</b> MPO: <b>November 2022</b>	MTC supported State targets in 2018. One round of target-setting complete.
NHPP	Performance of the NHS	<b>24. Percentage of person-miles traveled on the non-IHS NHS that are reliable</b> <del><b>25. Percent change in NHS tailpipe CO<sub>2</sub> emissions compared to 2017 baseline (eliminated by FHWA in spring 2018)</b></del>	Every 4 years	State: <b>May 2022</b> MPO: <b>November 2022</b>	

FEDERAL GOALS & PROGRAMS	GENERAL MEASURES IN LAW	FINAL PERFORMANCE MEASURES	TARGET-SETTING FREQUENCY	TARGET-SETTING DUE DATES	CURRENT STATUS
Freight Movement and Economic Vitality  NHFP	Freight Movement on the Interstate System	26. IHS truck travel reliability index	Every 4 years	State: May 2022 MPO: November 2022	MTC supported State targets in 2018. One round of target-setting complete.
Congestion Reduction  CMAQ	Traffic Congestion	27. Annual hours of peak-hour excessive delay per capita by urbanized area a. San Francisco-Oakland UA b. San Jose UA c. Concord UA** d. Santa Rosa UA** e. Antioch UA** 28. Percent of non-SOV travel by urbanized area a. San Francisco-Oakland UA b. San Jose UA c. Concord UA** d. Santa Rosa UA** e. Antioch UA** ** = not required during 1 <sup>st</sup> target-setting cycle	Every 4 years	State: May 2021 MPO: November 2021  <i>Note that targets must be fully consistent with state targets; therefore the de facto target-setting deadline for both State and MPO is May 2021.</i>	State & MTC agreed upon targets in May 2018 for PHED and non-SOV travel. One round of target-setting complete.
Environmental Sustainability  CMAQ	On-Road Mobile Source Emissions	29. Total emissions reductions from CMAQ-funded projects by pollutant a. PM <sub>2.5</sub> b. PM <sub>10</sub> c. CO d. VOC e. NO <sub>x</sub>	Every 4 years	State: May 2022 MPO: November 2022	MTC set regional targets for on-road mobile emissions based on EMFAC regional emissions forecasts in 2018. One round of target-setting complete.
Reduced Project Delivery Delays	<i>none</i>	<i>none</i> <i>(neither MAP-21 nor FAST included performance measures for this goal)</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

## April 2020 Target-Setting Summary: State of Good Repair for Public Transit Assets

### Overview

The transit asset management (TAM) final rule published by FTA in July 2016 established a National TAM System in accordance with MAP-21. The rule contained new requirements for public transit providers, and designated recipients such as MTC. The major requirements of the rule include:

- 1) **State of Good Repair (SGR) Performance Targets** – Targets must be set for each applicable asset including Rolling Stock, Equipment, Infrastructure, and Facilities. The final rule establishes SGR standards and SGR performance measures as shown below:

Asset Category	Performance Measure
Rolling Stock: All revenue vehicles	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their Useful Life Benchmark (ULB)
Facilities: All buildings or structures and parking facilities	Percentage of facilities within an asset class, rated below condition 3 (fair) on the TERM scale
Infrastructure: Only rail fixed guideway, tracks, signals and systems	Percentage of guideway directional route-miles with performance restrictions
Equipment: Only non-revenue (service) vehicles	Percentage of non-revenue vehicles that have either met or exceeded their ULB

In the case of rolling stock and facilities, the major asset categories are further broken down into distinct asset classes, with targets required for each asset class. Facilities are separated into administrative and maintenance facilities and passenger facilities, while revenue vehicles are separated into 18 sub-categories (e.g., light rail vehicle, bus, ferry, etc.)

Note that over time some targets improve relative to existing performance measures if there is funding available to replace or repair assets that are in poor condition. On the other hand, if there is no funding available to replace or repair assets, targets can worsen due to these assets aging another year and exceeding their useful lives.

- 2) **Development of TAM Plans** – Tier I operators (rail operators and any operators with 101 or more vehicles) must do their own TAM plan consisting of nine required elements. Tier II operators (operators with 100 vehicles or less) may do their own plan or participate in a group plan. There are only four required elements to the TAM plan for Tier II operators.
- 3) **Reporting** – Operators must report annually to FTA on SGR targets, asset conditions, and progress made towards meeting set targets.

The TAM Rule required transit providers to set SGR performance targets by October 1<sup>st</sup> of each year. The Planning Rule requires that each MPO establish targets no later than 180 days after the date on which the transit providers establish their performance targets. Therefore, staff developed targets to meet the year 2020 target-setting deadline of April 1<sup>st</sup> for State of Good Repair for Transit Assets.

Target-Setting Approach and Rationale

To set SGR targets, MTC staff assessed the current condition of operators' assets using data from the Regional Transit Capital Inventory (RTCI). The RTCI is a comprehensive regional database of the transit assets that are owned by transit agencies across the region. MTC developed the RTCI in order to collect consistent and comparable data on the region's transit capital assets and associated replacement and rehabilitation costs from each operator.

To set the target for each asset category, MTC staff provided each operator with existing performance measures (by asset class) for their asset inventory included in the RTCI and requested that each operator conduct an analysis of expected funding from all sources for the coming fiscal year that will be used to repair or replace transit assets. Operators used this assessment to predict which vehicle assets would be replaced or repaired, and presented MTC with a target percentage of assets expected not to be in a state of good repair by the end of the fiscal year.

Staff worked with the operators to keep the targets realistic and base them on reasonable financial projections. For vehicles and infrastructure, MTC staff consolidated the targets for all operators to identify a regional target for each asset class. With respect to facilities, prior targets had been set using the age of the facility as a proxy for its condition to determine the percentage of all regional transit facilities assets estimated to be out of a state of good repair. Operators' methodology has improved in the last couple of years due to new TAM Plan requirements. Operators are required to conduct physical inspections of their facilities to determine their condition rather than relying on the age of the facilities alone. As a result, most of the facilities' targets reflect the actual condition of the assets.

Review of 2019 Performance

The Bay Area did not meet its performance targets for state of good repair for revenue vehicles, non-revenue vehicles, and facilities in 2019, though the condition of the region's revenue vehicles, non-revenue vehicles, and guideway did improve. Additionally, facility condition held approximately steady from 2018 to 2019. As current federal regulations stand, there is no penalty for not meeting the 2019 targets.

In 2019, 26 percent of revenue vehicles were past their useful life, just shy of the regional target of 23 percent. This represented a three percentage point decrease, powered in large part by improvements to articulated buses, buses, heavy rail, light rail, and trolleybuses. The share of non-revenue vehicles past their useful life declined in 2019 as well, improving from 61 percent to 56 percent, though falling short of the target of 32 percent of vehicles past their useful life - some operators had plans for replacing their aging non-revenue vehicles in 2019, but did not end up actually replacing them; the 2020 non-revenue vehicle target has been adjusted to be more realistic.

The region met its guideway target in 2019. The percentage of route directional miles with speed or operational restrictions decreased from 2.5 percent in 2018 to 1 percent in 2019, below the target share of 1.4 percent.

Summary of Proposed Targets

As presented in detail in **Attachment C**, MTC set the following targets for transit asset management for 2020. The regional targets for this performance period generally expect to see a reduction in the share of assets that are not in a state of good repair. As a whole, revenue vehicles are expected to see an improvement in state of repair as some vehicle and rolling stock replacements occur at the operator level over the coming year. Non-revenue vehicles are also expected to see an improvement, though the majority of assets would still remain outside of a state of good repair. The region's

facilities and guideway were mostly in a state of good repair as of 2019; the condition of these facilities held approximately level between 2018 and 2019 and is expected to continue to hold steady over the coming year.

**Percent of Assets Not in a State of Good Repair**

<b>Asset Category</b>	<b>2019 Target</b>	<b>2019 Performance</b>	<b>2020 Target</b>
<b>Revenue Vehicles</b>	23%	26% (target not met)	24%
<b>Facilities</b>	3%	6% (target not met)	6%
<b>Infrastructure</b>	1.4%	1% (target met)	1.3%
<b>Non-Revenue Vehicles</b>	32%	56% (target not met)	53%

Data source: Regional Transit Capital Inventory (RTCI) & operators' targets



## 2020 Targets for State of Good Repair for Transit Assets

### General Information

<b>Goal</b>	Infrastructure Condition
<b>Performance Measure(s)</b>	<ul style="list-style-type: none"><li>• Percentage of revenue vehicles that have met or exceeded their useful life benchmark (ULB) by asset class</li><li>• Percentage of facilities with a condition rating below fair by asset class</li><li>• Percentage of guideway directional route-miles with performance restrictions</li><li>• Percentage of non-revenue vehicles that have met or exceeded their ULB</li></ul>
<b>Target(s) for Year</b>	2020
<b>Target(s) Deadline for MTC Approval</b>	April 1, 2020

*Current Conditions and Targets*

Measure	Subcategory	Current (2019)	Target (2020)	Total # (2019)	Measure ID
<b>Percentage of revenue vehicles that have met or exceeded their useful life benchmark (ULB)</b>	Articulated bus	12%	1%	489	US-19a
	Automated guideway vehicle	0%	0%	4	US-19b
	Automobile	18%	1%	151	US-19c
	Bus	17%	17%	2,787	US-19d
	Cable car	70%	70%	42	US-19e
	Commuter rail – locomotive	56%	56%	42	US-19f
	Commuter rail – passenger coach	41%	41%	177	US-19g
	Commuter rail – self-propelled passenger car	0%	0%	18	US-19h
	Cutaway bus	26%	1%	409	US-19i
	Double decker bus	0%	0%	13	US-19j
	Ferryboat	21%	15%	23	US-19k
	Heavy rail	78%	73%	669	US-19l
	Light rail	0%	0%	250	US-19m
	Minivan	29%	0%	218	US-19n
	Over-the-road bus	35%	35%	156	US-19o
	Trolley bus	21%	24%	309	US-19p
	Van	10%	10%	351	US-19q
Vintage trolley	100%	100%	43	US-19r	
<b>Percentage of facilities with a condition rating below fair</b>	Administrative and maintenance facilities	5%	6%	N/A	US-20a
	Passenger facilities	7%	6%	N/A	US-20b
<b>Percentage of guideway directional route-miles with performance restrictions</b>	n/a	1.0%	1.3%	N/A	US-21
<b>Percentage of non-revenue vehicles that have met or exceeded their ULB</b>	n/a	56%	53%	1,941	US-22

Data source: Regional Transit Capital Inventory (RTCI) & operators' targets