

APPENDIX F

Performance Measures

Performance-Based Planning and Programming

The most recent three federal transportation bills, MAP-21, FAST ACT, and now Infrastructure Investment & Jobs Act (IIJA), require incorporation of performance-based planning and programming into the development of Metropolitan Planning Organization (MPO) Long-Range Regional Transportation Plans (LRTP) and Transportation Improvement Programs (TIP). The goals of the new performance management process are to make the most efficient use of federal transportation funds, refocus on national goals, increase accountability and transparency, and improve decision-making.

Federal performance measures have been established to track progress in achieving national goals, which include the following:

- **Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure Condition** – To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion Reduction** – To achieve a significant reduction in congestion on the National Highway System (NHS).
- **System Reliability** – To improve the efficiency of the surface transportation system.
- **Freight Movement and Economic Vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental Sustainability** – To enhance the performance of the transportation system while protecting and enhancing the natural environment.

The Greater Madison MPO (Metropolitan Planning Organization), the MPO for the Madison Metropolitan Area, has made significant progress in the transition to performance-based planning and programming. The MPO has tracked transportation system performance measures for many years and included its first official list of measures in its 2035 Regional Transportation Plan

(RTP) Update adopted in 2012. The MPO also developed a list of congestion and reliability measures in its Congestion Management Process (CMP) adopted in 2011, and tracked those for which data was readily available. That CMP has now been replaced by an updated one with a scaled back list of measures that was included as part of the [Connect Greater Madison: 2050 Regional Transportation Plan](#), adopted in May 2022. The Connect Greater Madison Plan maintains the same core six goals from the previous RTP, which are consistent with the national goals above, and a revised set of performance measures tied to these goals. Based on both quantitative and qualitative analyses, the multi-modal set of recommended transportation facility and service investments in the Connect Greater Madison Plan were selected based on these goals and measures. These performance measures will also be used to track progress in achieving the goals over time. See Appendix B: System Performance Report of the RTP.

The MPO began publishing an annual Performance Measures report in 2016 for 2015 baseline data to gauge progress in achieving the RTP goals and fulfill federal performance management requirements. The report for 2019 incorporates the federal measures along with numerous other regional measures tied to RTP 2050 goals. Due to the impacts of the COVID-19 pandemic in 2020, the MPO collected and reported required data for the federal performance measures but did not produce a Performance Measures Report for 2020. The MPO transitioned to publishing an [online interactive performance measures dashboard](#) in 2023.

The MPO revised its set of project scoring criteria for the Surface Transportation Block Grant (STBG) – Urban program in 2023 (see Appendix A of the [TIP](#)) and for the Transportation Alternatives Program (TAP) in 2021 for use in evaluating and prioritizing projects for funding the MPO receives from those federal programs. Both sets of criteria rely heavily on quantitative scoring guidelines that are tied to RTP goals.

The performance measures established by FTA were developed to measure the effectiveness of the following federal funding programs:

FTA Section 53 Funding (5307, 5310, 5311, 5337, 5339)	
Transit Asset Management (TAM)	Percentage of Revenue Vehicles Exceeding Useful Life
	Percentage of Non-Revenue Service Vehicles Exceeding Useful Life
	Percentage of Facilities Exceeding the Transit Economic Requirements Model (TERM) Scale
	Percentage of Track Segments Having Performance Restrictions
Public Transportation Agency Safety Program (PTASP)	Number of Reportable Fatalities
	Rate of Reportable Fatalities Per Vehicle Revenue Miles
	Number of Reportable Injuries
	Rate of Reportable Injuries per Vehicle Revenue Miles
	Number of Reportable Safety Events
	Rate of Reportable Safety Events Per Vehicle Revenue Miles
	Mean Distance Between Major Mechanical Failures

Setting Targets for Performance Measures

Under the federally required performance management process, targets must be set for each of the federal performance measures. States must then report to the U.S. Department of Transportation (USDOT) on progress in achieving the targets on a schedule specific to each measure. At the state level, there are funding implications in cases where progress is not being made on a particular measure. State departments of transportation (DOTs) and transit agencies are to first set their performance measure targets in coordination with MPOs. In the case of DOT targets, MPOs may either choose to support the state targets or establish their own targets. In the case of the transit agency targets, MPOs may adopt the same targets or establish their own.

Given the limited amount of historical data for most of the measures, impact of COVID-19 on travel and uncertainty in what trends the data may show moving forward, and the limited amount of funding the MPO controls, the Greater Madison MPO has elected to support the state/transit agency targets for these measures, and to plan and program projects to contribute towards meeting these targets.

The MPO intends to continue to support the Metro Transit targets for transit asset management (TAM) and for the Public Transportation Agency Safety Plan (PTASP) since Metro is the agency with expertise to best manage its assets in light of funding challenges and addressing safety.

Linkage of Investments to Performance Measures

The federal rules for metropolitan transportation planning require that the RTP and TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the RTP and TIP toward achieving the federal transportation system performance measure (see 23 CFR 490) targets established, thereby linking investment priorities to those performance targets (23 CFR 450.326(d)). See the most current TIP¹ for descriptions of how programmed projects are anticipated to affect transit performance measures.

Existing Performance Measures

Public Transit Agency Safety Plan (PTASP)

The performance measures in the PTASP are updated annually by Metro and adopted by resolution by the MPO. The 2022 PTASP performance measure targets were adopted by the MPO Policy Board in MPO 2022 Resolution No. 13 on November 2, 2022. 2023 PTASP targets were unchanged from 2022 targets and were adopted with the 2024-2028 Transportation Improvement Program in MPO 2023 Resolution No. 10 on October 4, 2023. Metro met all of their 2023 safety targets other than those for Safety Events, but has decided to collect data on this metric for a few more years before adjusting that target.

Metro Transit has developed its required safety plan and established the following 2024 PTASP performance measure targets, which are the same as those estab-

¹ <https://www.greatermadisonmpo.org/planning/improvementprogram.cfm>.

lished for 2020 and 2021, with the exceptions of: System Reliability/State of Good Repair, which was adjusted to be more realistic and attainable; Bus Transit Injuries, which were adjusted to be higher than in 2021 but still attainable; and, adjusting the way the System Reliability target is reported to improve consistency with other measures:

- Number of reportable fatalities – Bus transit and ADA/Paratransit targets: 0 [0 in 2023]
- Rate of reportable fatalities per 100,000 vehicle revenue miles – Bus transit and ADA/Paratransit targets: 0 [0 in 2023]
- Number of reportable injuries – Bus transit target: 10 [7 in 2023]; ADA/Paratransit target: 1 [0 in 2023]
- Rate of reportable injuries per 100,000 vehicle revenue miles – Bus transit target: 0.15 [0.12 in 2023]; ADA/Paratransit target: 0.15 [0 in 2023]
- Number of reportable safety events – Bus transit target: 300 [458 in 2023]; ADA/Paratransit target: 20 [0 in 2023]
- Rate of reportable safety events per 100,000 vehicle revenue miles – Bus transit target: 5.91 [8.04 in 2023]; ADA/Paratransit target: 3.07 [0.00 in 2023]
- System Reliability/State of Good Repair (Mean distance between major mechanical failures) – Bus transit target: 4 failures/100,000 vehicle revenue miles [3.38 in 2023]; ADA/Paratransit target: 1.82 failures/100,000 vehicle revenue miles [0 in 2023]

Transit Asset Management Plan (TAM)

The performance measures in the TAM are updated annually by Metro and adopted by resolution by the MPO. The 2024 TAM performance measure targets were adopted by the MPO Policy Board in MPO 2024 Resolution No. 3 on April 3, 2024.

Metro Transit has established the following 2024 TAM performance measure targets:

- Percentage of rolling stock (buses) that have met or exceeded their Useful Life Benchmark (USB) – 11% [2023 performance at 15%, with 62 new buses entering service in 2024 this target will be met by the end of the year.]

- Percentage of non-revenue service vehicles that have met or exceeded their USB – 38% [2023 performance at 58%.]
- Percentage of facilities with a condition rating below 3.0 (“adequate”) on the FTA Transit Economic Requirement Model (TERM) scale – 0% [2023 performance at 0% as the main admin/ maintenance facility and new satellite facility are rated 3.7 and 3.8 respectively. The facilities will exceed a target goal of 4.0 after the 6-phase main facility renovation and satellite facility remodel are completed.]

On-Time Performance (OTP)

On-Time Performance is both one of Metro’s Performance Standards (see Appendix A, Section 2) and an MPO Performance Measure. Although Metro has set Performance Standards for this metric, the MPO has simply reported² the annual average OTP with the target of holding OTP steady year-to-year. OTP improved slightly during the COVID-19 pandemic, although the percentage of early buses increased and of late buses decreased. Early buses increased as reduced ridership resulted in fewer stops and less time spent with passengers boarding, alighting, and paying fares coupled with reduced congestion to enable buses to “run hot”, or depart ahead of schedule, at increased rates. Late buses declined for the same reasons, as routes that are typically slowed by large numbers of boardings and alightings and/or congested roadways did not experience the level of delay they typically experience.

Although overall OTP improved in 2020 and 2021 (89 and 88% on-time, respectively) over prior years, it is important to note that early buses are potentially much worse, from a rider’s perspective, than are late buses. Early buses can pass stops before riders expect them, causing them to miss the bus and any subsequent planned transfers. Additionally, riders may perceive these early buses to be “ghost buses”, buses that simply never arrive. This negatively impacts the rider’s perception of system and travel time reliability and may cause them to choose alternative modes of travel.

On-Time Performance decreased slightly in 2022 to 86% and to 78% in 2023 due to issues with adherence to new schedules for new routes with the Transit Network Redesign and construction-related delays, especially along the East-West Bus Rapid Transit corridor. Ser-

² MPO Performance Measures Dashboard: <https://experience.arcgis.com/experience/d96eb20cbec94df292009ccb2152085f>.

vice adjustments made in August and December 2023 improved OTP as schedules were brought in line with actual performance.

Ridership

The MPO reports on the total number of annual un-linked passenger trips (individual boardings),³ with a target of increasing ridership. As is discussed in Chapter 4, this target was not being met prior to the COVID-19 pandemic, and ridership has not yet recovered to pre-pandemic levels. Due to the unique situation posed by a global pandemic, and the historic-low ridership in 2020 with subsequent increases in ridership, a target of increasing ridership continues to be appropriate.

New Performance Measures

Although the MPO tracked Metro ridership as its sole performance measure for “Improving equity for users of the transportation system” from 2015 to 2019,⁴ this measure does not actually reflect any impact on equity, as it counts affluent and white choice riders in addition to low-income and minority riders. Transit performance measures that track impacts on these populations of concern should be adopted and tracked in future years. Due to Metro staff workloads and capacity in 2024 in preparation for the initiation of Bus Rapid Transit and related projects, no new performance measures are included in this TDP; however, MPO and Metro staff intend to develop new performance measures in late 2024 and early 2025.

³ Ibid.

⁴ <https://www.greatermadisonmpo.org/trends/>.