

PERFORMANCE MEASURES IN THE SHEBOYGAN METROPOLITAN PLANNING AREA TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

Introduction

As part of recent federal transportation legislation (MAP-21 and the FAST Act), it is a requirement to incorporate performance-based planning and programming into the development of Metropolitan Planning Organization (MPO) Long-Range Transportation Plans (LRTPs) and Transportation Improvement Programs (TIPs). The Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning; Final Rule further defined that the TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the 23 CFR 490 performance measure targets identified in the metropolitan transportation plan, linking investment priorities to those performance targets (23 CFR 450.326(d)).

Federal funding is provided for a wide range of transportation-related activities, including projects on higher function local streets and highways not on the State Trunk Highway system, and local safety improvements. These programs are funded through the federal “Fixing America’s Surface Transportation” (FAST) Act.

23 USC 150: National performance measure goals are:

- **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;
- **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; and
- **Reduced Project Delivery Delays** – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies’ work practices.

More information on the national performance measure goals can be found at the Federal Highway Administration (FHWA) website link listed below:

<https://www.fhwa.dot.gov/tpm/about/goals.cfm>

MAP-21/FAST Act Performance Measures (as established in 49 USC 625 and 23 CFR 490) are:

- Transit
 - Rolling Stock: The percentage of revenue vehicles (by type) that exceed the useful life benchmark (ULB)
 - Equipment: The percentage of equipment that exceeds the ULB
 - Facilities: The percentage of facilities (by group) that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) Scale
 - Infrastructure: The percentage of track segments (by mode) that have performance restrictions. Track segments are measured to the nearest 0.01 of a mile. (This performance measure does not apply to the Sheboygan Metropolitan Planning Area).

- Safety
 - Number of fatalities
 - Fatalities per 100 million vehicle miles traveled
 - Number of serious injuries
 - Serious injuries per 100 million vehicle miles traveled
 - Number of non-motorized fatalities and non-motorized serious injuries

- Infrastructure
 - Percentage of pavements on the Interstate System in Good Condition
 - Percentage of pavements on the Interstate System in Poor Condition
 - Percentage of pavements on the non-Interstate National Highway System (NHS) in Good condition
 - Percentage of pavements on the non-Interstate NHS in Poor condition.
 - Percentage of NHS bridges classified as in Good condition
 - Percentage of NHS bridges classified as in Poor condition

- System Performance on the NHS
 - Interstate Travel Time Reliability Measure: Percent of person-miles traveled on the Interstate that are reliable
 - Non-Interstate NHS Travel Time Reliability Measure: Percent of person-miles on the non-Interstate NHS that are reliable

- Freight Movement
 - Freight Reliability Measure: Truck Travel Time Reliability (TTTR) Index

- CMAQ – Congestion Reduction
 - Peak Hour Excessive Delay (PHED) Measure: Annual Hours of PHED Per Capita (This performance measure does not apply to the Sheboygan Metropolitan Planning Area).
 - Non-Single Occupancy Vehicle (SOV) Travel Measure: Percentage of Non-SOV Travel (This performance measure does not apply to the Sheboygan Metropolitan Planning Area).
 - Emissions Measure: Total Emission Reductions

Sheboygan MPO Performance-Based Planning and Programming Processes

Long-Range Transportation Plan

The Bay-Lake Regional Planning Commission, as the designated MPO for the Sheboygan Metropolitan Planning Area, has been using performance measures in its planning process for several years. The *Year 2045 Sheboygan Area Transportation Plan (SATP)* addressed performance measures as a new requirement as a part of the federal MAP-21 transportation legislation. MPO staff has been tracking and updating data on an annual basis or as it becomes available. The goals identified above have been incorporated into the policies and performance measures monitored in the *Year 2045 SATP*. The *Year 2045 SATP* was adopted on May 29, 2015, and can be viewed at the following page on the Sheboygan MPO website:

<http://baylakerpc.org/sheboygan-mpo/year-2045-sheboygan-area-transportation-plan-satp>

Transportation Improvement Program (TIP)

The Sheboygan MPO has always used appropriate scoring criteria for ranking and selecting projects for the Surface Transportation Block Grant (STBG) – Urban program in the TIP. The ranking criteria for this federal program use scoring systems that are tied to goals and policies in the *Year 2045 SATP*. The TIP evaluates short-range projects based on criteria that include: plan consistency, current or potential demand (capacity needs), functional classification (including traffic volume within two of the classifications), pavement condition, multimodalism, and safety. Transit improvements and bicycle and pedestrian transportation improvements also have parallel criteria which allow projects in these categories to compete for funding. While not officially included as a criterion, preservation of existing systems has been emphasized in the project selection process over past funding cycles. Projects are scored based on a set number of points for each criterion, resulting in a project ranking and recommendation list for STBG – Urban projects in the TIP. The *Sheboygan Metropolitan Planning Area TIP: Calendar Years 2018 – 2021* was adopted on October 27, 2017, and it, along with recent amendments to that document, can be viewed at the following page on the Sheboygan MPO website:

[http://baylakerpc.org/sheboygan-mpo/sheboygan-metropolitan-planning-area-transportation-improvement-program-\(tip\)](http://baylakerpc.org/sheboygan-mpo/sheboygan-metropolitan-planning-area-transportation-improvement-program-(tip))

Sheboygan MPO Performance Measures

According to the requirement for the federal performance measure management process, targets are set for national performance measures on a schedule based on when the measures were finalized. In this case, the Wisconsin Department of Transportation (WisDOT) must report to the U.S. Department of Transportation (USDOT) on the progress in achieving the targets for each measure. WisDOT sets its performance measure targets first (in coordination with the MPOs), and then, the MPOs can choose to either set their own targets or support the targets that WisDOT has adopted (or a combination thereof) within 180 days of WisDOT setting its targets. In Wisconsin, for most performance measure targets, most MPOs have chosen to follow and support WisDOT and its targets.

Transit Asset Management Targets

The U.S. Department of Transportation established four performance measures for transit asset management (TAM). The Sheboygan MPO worked with the one transit operator in the Sheboygan Metropolitan Planning Area (Shoreline Metro) to establish targets for three of the four measures (rolling stock, equipment and facilities; infrastructure only relates to rail transit, which does not exist locally). The Sheboygan Transit Commission approved the targets for Shoreline Metro on May 16, 2017. The Sheboygan MPO Technical and Policy Advisory Committees recommended approval of the targets for the MPO at their May 25, 2017, joint meeting. The Bay-Lake Regional Planning Commission approved the targets for the Sheboygan MPO on June 9, 2017. The TAM targets are:

- **Rolling Stock:** The percentage of revenue vehicles (by type) that exceed the useful life benchmark (ULB) – This target allows for 61 percent of vehicles to pass beyond useful life.
- **Equipment:** The percentage of equipment that exceeds the ULB – In the case of Shoreline Metro, “equipment” was characterized as the most significant equipment, or non-vehicle items with a replacement value of \$50,000 or more. These items include a scrubber, a hoist and a bus wash, all located at the Shoreline Metro bus garage. This target allows for 100 percent of Shoreline Metro’s most significant equipment to pass beyond its useful life.
- **Facilities:** The percentage of facilities that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) Scale. Shoreline Metro’s facilities include: its administration, maintenance and storage facility (bus garage), and its transfer facility/station. This target allows for 50 percent of facilities to pass beyond useful life.
- **Infrastructure:** The percentage of track segments (by mode) that have performance restrictions. This performance measure does not apply to the Sheboygan Metropolitan Planning Area, as there is no rail transit in the area.

The Sheboygan MPO and Shoreline Metro will continue to work closely in 2018 (in cooperation with WisDOT Transit Section staff and with the FTA) to prepare a formal TAM plan and to adjust the above targets, as needed.

Safety Targets

The USDOT established five performance measures for the Highway Safety Improvement Program (HSIP) within the National Performance Management Measures. WisDOT established statewide calendar year 2018 targets for each of the five HSIP performance measures in accordance with 23 CFR 490.209, which were approved at the state level on August 31, 2017. The WisDOT statewide targets are:

- Number of fatalities < 556.1 (a 2 percent reduction from the 2012 – 2016 annual average);
- Rate of fatalities < 0.917 per 100 million vehicle miles traveled (VMT, a 2 percent reduction from the 2012 – 2016 annual average);
- Number of serious injuries < 3,023 (a 5 percent reduction from the 2012 – 2016 annual average);
- Rate of serious injuries < 4.997 per 100 million VMT (a 5 percent reduction from the 2012 – 2016 annual average); and
- Number of non-motorized fatalities and non-motorized serious injuries < 343.3 (a 5 percent reduction from the 2012 – 2016 annual average).

The Bay-Lake Regional Planning Commission, as MPO for the Sheboygan Metropolitan Planning Area, agreed to support the statewide targets, which were approved by formal resolution on December 8, 2017. This followed several months of measuring these numbers and rates for the Sheboygan Metropolitan Planning Area, and coming to the conclusion that the area had lower incidences and rates for the above measures than statewide averages. Commission MPO staff will work closely with WisDOT and will plan and program projects so that they contribute toward the accomplishment of WisDOT's calendar year 2018 HSIP targets.

Future Performance Measure/Target Activities and Coordination

Performance measures such as pavement and bridge condition, travel time reliability on the NHS, truck travel time reliability, and total emission reductions, as well as updated TAM performance measures, will be set in the next update cycle, and will continue to be monitored in future TIPs.

The tentative calendar for setting targets for the above measures (or supporting WisDOT's statewide targets) is as follows:

- TAM performance measures – TAM plan due on October 1, 2018, with annual targets due on October 31, 2018.

- Percentage of pavements on the Interstate system and the non-Interstate NHS in “good” and “poor” condition – November 16, 2018 (4-year targets).
- Percentage of NHS bridges classified as in “good” and in “poor” condition – November 16, 2018 (4-year targets).
- Percentage of the person-miles traveled on the Interstate system and the non-Interstate NHS that are reliable – November 16, 2018 (2-year and 4-year targets on the Interstate system, and 4-year on the non-Interstate NHS).
- Truck travel time reliability index on the Interstate system – November 16, 2018 (2-year and 4-year targets).
- Total emission reductions – November 16, 2018 (4-year targets).

Linkage of Investments to Established Performance Measures

Federal planning requirements for MPOs for the LRTP and for TIPs mandate inclusion of a description of the effects of these planning documents toward meeting the transportation system performance targets that were established. The next section links projects with investment priorities to those with transit asset management and safety benefits to the transportation system. Projects programmed in the four years covered by the TIP will assist WisDOT in achieving the transit asset management and safety performance measure targets. As additional performance measure targets are adopted, a more thorough analysis will be provided.

Analysis of Transit Capital Projects in the TIP

There are two transit capital projects programmed in the *Sheboygan Metropolitan Planning Area TIP: Calendar Years 2018 – 2021*:

- Replacement of one (1) 35-Foot Fixed-Route Bus in 2018 (funded through the FTA Section 5339 program); and
- Replacement of two (2) 35-Foot Fixed-Route Buses in 2018 (funded through the CMAQ program).

It is hoped that two paratransit vehicles can also be added to the *2018 – 2021 TIP* in the near future, but this will be dependent upon the status of the STBG Urban program over the next few weeks. All of these projects will improve the overall condition of the rolling stock component of Shoreline Metro’s transit assets within the timeframe of the *2018 – 2021 TIP*.

Analysis of Safety Projects in the TIP

Infrastructure Projects

The *2018 – 2021 TIP* contains one infrastructure project that will improve safety on the transportation system. Construction of a roundabout at the intersection of State Highway 28 and County Highway EE is scheduled for 2020. This project will be funded with STBG funding as well as with state matching funds. Roundabouts typically reduce the rate of angle and injury crashes, and the lower speeds will likely result in less severe crashes.

In addition, two reconstruction projects (with no increases in capacity), three bridge replacement projects, and one bridge rehabilitation project have been programmed in the *2018 – 2021 TIP*, all of which should improve safety on the transportation system. Five of the eight categories of “grouped” street and highway projects in the *2018 – 2021 TIP* involve various forms of highway safety.

Surface Transportation Block Grant (STBG) – Urban Projects

The *2018 – 2021 TIP* currently contains two STBG Urban projects that are programmed for construction. The STBG Urban program uses ranking criteria to set priorities for funding. The criteria include: plan consistency, current or potential demand (capacity needs), functional classification (including traffic volume within two of the classifications), pavement condition, multimodalism, and safety. Transit improvements and bicycle and pedestrian transportation improvements also have parallel criteria which allow projects in these categories to compete for funding. While not officially included as a criterion, preservation of existing systems has been emphasized in the project selection process over past funding cycles. Projects are scored based on a set number of points for each criterion, resulting in a project ranking and recommendation list for STBG – Urban projects in the TIP.

Bicycle and Pedestrian Safety Projects

The *2018 – 2021 TIP* contains projects that promote bicycle and/or pedestrian safety. Safety education takes place under the Sheboygan County Non-Motorized Transportation Pilot Program (NMTTP) level of effort for program oversight project, which includes some funding for education and outreach. Safety education can also take place under the Sheboygan County NMTTP marketing and branding project. Finally, two construction projects and one enhancements “grouped” project are also expected to improve bicycle and pedestrian safety.

