

2021-2024 Transportation Improvement Program (TIP) Project Selection Process

SEDA-COG Metropolitan Planning Organization (SEDA-COG MPO)

The federal Fixing America's Surface Transportation (FAST) Act legislation and the federal *Statewide and Metropolitan Transportation Planning Final Rule* (Title 23 U.S.C. Section 34 and Title 49 U.S.C. Section 1607) require that local and state officials work cooperatively to maintain a continuous and comprehensive long-range transportation planning program in all urbanized areas with a population of over 50,000 persons in the United States. This Federal mandate is carried out by a formal group called a "Metropolitan Planning Organization (MPO)." The FAST Act and the federal planning rule specify the primary roles and responsibilities of MPOs. The SEDA-COG MPO is responsible for fulfilling these federal requirements in its 8-county MPO area.

Every two years, Pennsylvania's Planning Partners, including the SEDA-COG MPO, work in partnership with PennDOT, local transit providers and area local officials to identify priority transportation needs and develop a new Transportation Improvement Program (TIP) to address these needs over the next four-year period.

The TIP details the planned expenditure of federal funds and state capital funds for specific programs and projects, within specified limits of fiscal constraint. To be included on the TIP, programs and projects must be included on the Planning Partner's adopted Long Range Transportation Plan (LRTP) or addressed through reserve line items included on the LRTP. The TIP years are based on the federal fiscal year, which extends from October 1 to September 30.

The list of projects on the TIP coincides with the First Four Year segment of the Commonwealth of Pennsylvania's Twelve Year Program (TYP), which is developed by PennDOT and adopted by the State Transportation Commission (STC) every two years, at the same time as the TIP.

The SEDA-COG MPO works to educate the general public on transportation programs and encourages interested citizens to participate in the STC public involvement process. The public is notified of the opportunity to provide input via the STC Twelve Year Program update outreach processes, and SEDA-COG MPO reviews public feedback compiled by the STC. SEDA-COG MPO also regularly solicits public input on transportation priorities through public meetings, press releases, surveys, comment forms on websites, etc.

Meetings are also held with PennDOT staff to review candidate lists of projects for possible inclusion in the TIP, considering previous public involvement and undertaking a consistency check with the LRTP and with local/county priorities. The project priorities and essential project information are compiled in the Draft TIP documentation made available to the public as part of a 30-day public comment period before adoption by each Planning Partner.

Projects in the TIP address a variety of transportation modes, including improvements to roadways, bridges, transit, bicycle and pedestrian facilities, rail freight facilities and airports. In recent years, system maintenance has required a growing share of the Commonwealth of Pennsylvania's limited resources. Consequently, the TIP places high priority on projects that rehabilitate, reconstruct, and renew the existing and aging transportation infrastructure. Fiscal constraints also mean that very few new projects are typically added to the TIP during updates.

The projects selected for inclusion on the 2021-2024 TIP, which were not carryovers from the prior TIP, are consistent with PennDOT's Transportation Asset Management Plan (TAMP).

The purpose of PennDOT's TAMP is to use a data-driven approach coupled with a risk-based methodology to outline the investment strategies for infrastructure condition targets and document asset management objectives. While the TAMP currently focuses on the National Highway System (NHS), SEDA-COG MPO evaluates the entire state-owned and locally owned Federal-aid network for needed project investments. The SEDA-COG MPO considers the following in the program development process:

- Regional highway and bridge system assets
- Existing conditions on the NHS
- Projected future conditions on the NHS
- Development of strategies/priorities to continue to improve the system at the lowest life cycle costs
- Planning and programming of projects as part of fiscal constraint

In addition, projects are also programmed from the following sources:

- Project priorities and line items specified in the MPO's LRTP
- Recommendations in the MPO's Coordinated Public Transit – Human Services Transportation Plan
- Priorities of key project sponsors such as PennDOT Engineering District staff, county/ municipal governments, and local fixed route and shared ride transit providers
- Project priorities committed to as part of the Decade of Investment (DOI) list generated during consideration of Pennsylvania Act 89
- Safety needs identified through statewide Intersection Safety Implementation and Roadway Departure Implementation Plans and regional safety plans
- Safety needs identified through review of key locations identified by PennDOT and other project sponsors

An effort was made to select the suite of projects that would provide the greatest possible improvement in asset conditions and improve the overall “performance” of the system. The SEDA-COG MPO dedicates particular attention to gathering local bridge needs and system benefits. SEDA-COG uses Decision Lens to evaluate and prioritize the local bridge candidates based on criteria such as bridge condition; county priority; impacts to residents; potential development; etc. The following methodology identifies more details on the process used for selecting roadway and bridge projects for inclusion on the TIP:

Roadway Projects

The PennDOT District updates its roadway inventories annually, which is used to update the Roadway Management System (RMS). This information is then used to update the District's Roadway “5-Year Plan” process, where roadway needs are assessed and planned, utilizing cycles that follow PennDOT's Pavement Policy Manual. Utilizing this Plan, projects are then funded on the TIP/TYP. Factors for which projects are picked from the 5-Year Plan are: projects on the Decade of Investment (DOI) plan that still need to be constructed; fulfillment of and maintaining acceptable levels on the scorecard of influence; hierarchy (Business Plan Network) of the roadway (i.e., Interstate gets more preference than a 4-digit state route); current roadway conditions; and the next needed pavement treatment cycle.

Bridge Projects

Replacements:

1. The current SD population and the condition 5 population are evaluated

2. Prioritization by Business Plan Network: Interstate top priority and Non-NHS with less than 2,000 ADT lowest priority
3. Consider roadway projects to determine if we can combine the bridge replacements with the roadway projects
4. Evaluate if Department Forces can possibly complete the work

Rehabilitations:

Same logic as replacements, but mostly look for bridges that we can raise the condition ratings to a 6 or greater for all three major bridge components (substructures, superstructures and deck).

Preservation:

1. Rely on cycles for each preservation treatment:
 - a. 10 to 20-year cycle for deck overlays (depends on type of overlay and traffic volumes)
 - b. 10-year replacement cycle for expansion dam strip seal glands
 - c. 15-year replacement cycle for tooth dam expansion troughs
 - d. 50 to 75-year cycle to replace entire expansion dams
 - e. 30 to 40-year cycle for painting steel girder bridges
 - f. 15 to 20-year cycle for painting steel trusses and steel through plate girders
2. Most of the deck and joint preservations are included with roadway projects on Business Plan Networks 1 to 3
3. Standalone group bridge preservation projects are established for:
 - a. Painting projects
 - b. To get bridges on cycle when no roadway projects are planned
 - c. To address Business Plan Network 4 when Department Forces cannot complete the work
 - d. Scour or substructure repairs
4. Prioritize by Business Plan Network and by the highest cost assets (major river crossings)

Safety Projects

Federal safety performance measures were implemented in 2016. PennDOT established Statewide Targets in August 2017. Beginning in November 2017, the SEDA-COG MPO started adopting Pennsylvania's Statewide Safety Performance Measure Targets. The following shows the 2020 Statewide Targets established based on 1% reduction of five-year average baseline data and aggregated supporting regional SEDA-COG MPO Targets:

Safety Performance Measure	Statewide Baseline (2014-2018)	Statewide Target (2016-2020)	SEDA-COG MPO Target (2016-2020)
Number of fatalities	1,182.0	1,171.9	45.7
Rate of fatalities per 100 million VMT	1.169	1.148	1.215
Number of serious injuries	3,839.6	4,400.3	182.5
Rate of serious injuries per 100 million VMT	3.797	4.309	4.854
Number of non-motorized fatalities and non-motorized serious injuries	679	781.7	21.3

The SEDA-COG MPO FFY 2021-2024 TIP includes road safety improvement projects that are intended to improve the performance of the roadway system relative to the five federal safety performance measures.

To ensure planned safety projects achieve a significant reduction of traffic fatalities and serious injuries on all public roads, the SEDA-COG MPO did the following for the development of the FFY 2021-2024 TIP:

- Coordinated with PennDOT District traffic safety managers
- Consulted with county and municipal officials
- Reviewed crash statistics, mapping, data driven safety analysis, and prior road safety audits
- Participated in PennDOT Connects outreach meetings
- Participated in advisory committees for safety projects

Public Transportation Projects

The TIP includes carry-over and new public transportation projects. The transit projects reflect the priorities established by:

1. The project prioritization process for the LRTP
2. The recommendations in the MPO's adopted Coordinated Public Transit – Human Services Transportation Plan
3. The priorities expressed by fixed route and shared ride transit providers

Other Projects

The SEDA-COG MPO TIP may include funds for projects approved for funding from programs allocated on a statewide basis, including the following:

- Transportation Alternatives Set-Aside
- Appalachian Regional Commission Local Access Road Program
- Automated Red Light Enforcement and Green Light-Go Programs
- Multimodal Transportation Fund
- Congested Corridor Improvement Program
- Rapid Bridge Replacement Program (P3)
- Highway-Rail Grade Crossing Safety Program (RRX)
- Highway Safety Improvement Program (HSIP) Statewide Set-aside

As new projects are successful in obtaining funding through these programs, the MPO will consider adding the projects to the approved TIP.