

SVATS MPO Project Selection Process for 2019-2022 TIP

Introduction:

Federal law and regulations require that any urbanized areas with a population over 50,000 people form a Metropolitan Planning Organization (MPO). This group provides a forum for local and state officials to work cooperatively to maintain a cooperative, comprehensive, and continuing transportation process. The Shenango Valley Area Transportation Study (SVATS) MPO, formed in 1981, is the MPO responsible for planning and programming transportation projects receiving federal funding within the 48 municipalities comprising Mercer County.

On a biennial basis, the MPO produces a local Transportation Improvement Program (TIP), which contains the programmed transportation projects throughout Mercer County. This short-range document is also developed with significant collaboration with the Pennsylvania Department of Transportation. MPO and PennDOT staffs work increasingly closely to develop a TIP that takes into account the Long Range Transportation Plan's (LRTP's) priorities. Significant strides have been made in recent years to ensure that the TIP is developed collaboratively, taking into account the LRTP, and that it represents logical and beneficial projects for the region.

Process Overview:

Development of the TIP is a process that begins in earnest about a year before final adoption. Significant information is gathered, information that is increasingly data-driven and performance-based. Several meetings are held between SVATS MPO and PennDOT District 1-0 staff members to collaboratively develop the TIP to the point that we have consensus. The 2019 TIP involved a far-greater number of meetings and discussions than in past TIP-updates, which demonstrates the MPO staff's determination to improve the 3C-compliant (cooperative, comprehensive, and continuing) transportation process.

These meetings involve discussion about validity and details of specific projects, availability of total funding (what we the needs are vs. the amount of funding expected to be available in the new TIP cycle), the availability of different types of funding (which is also provided to us from the Program Center), and overall goals of our program.

When the groups convene to discuss the TIP, information is considered from numerous different sources. The sections below attempt to inventory and categorize most of this information and how it is utilized in the SVATS MPO's project selection process.

Consideration of Departmental (PennDOT) Priorities:

Before the meetings between District 1-0 and the MPO even begin, PennDOT's Planning and Programming staff has already worked with several other departments within PennDOT District 1-0 to get an idea of what their priorities are. These include, but are not limited to, the departments within District 1-0 listed on the following page:

Department	How Projects are Conceptualized and Prioritized
Safety Unit	Consideration of safety hot-spots, based on crash data. This includes Mercer County's "Top 25" crash locations, top Intersection safety (ISIP) and roadway-departure (RDIP) concerns. <i>(See also Consideration of Performance-Based Planning: SVATS MPO Safety Performance Targets section on pages 4-5).</i>
Maintenance Unit	Local (Mercer) maintenance contemplates their highest priorities, and which projects would be better-utilized with TIP dollars (as opposed to maintenance funds) due to scope and size of project. Quantitative measures such as International Roughness Index (IRI), or "rideability" of the roadway, and Overall Pavement Index (OPI), which is the pavement's performance, are used to determine which roads need attention. Historical data (i.e. when the road was last resurfaced, and how it has held up historically) is considered as well as observational data, like how pavement is deteriorating. All of this is factored in with the use and traffic volume of the roadway to determine a prioritized list.
Highway Design Unit	Some roadway projects cannot be completed with county maintenance dollars due to their scope and size. These larger projects that involve more extensive restoration and reconstruction work (sometimes including stormwater improvements, pedestrian facilities, and other less-simple project elements) are called <i>betterments</i> . The process for determining how projects become betterments is the same as noted above in the "Maintenance Unit" section. Engineers from District 1-0's design unit make these determinations, often in close collaboration with the county maintenance engineers.
Bridge Design Unit	The bridge design staff keeps a detailed list of bridge condition based on inspections, which occur at least every two years. The physical condition of the superstructure compared to its original as-built condition is looked at. Certain bridges fall into the structurally-deficient (SD) category. These overall ratings are applied to determine which bridges not only need imminent attention, but as to what level of attention they need. Quantitative methods are used to determine which bridges can be rehabilitated or preserved, vs. full replacement.

District 1-0's Planning and Programming staff takes this information into consideration, and also looks at carryover projects from the current TIP (e.g. projects partially funded but not yet fully complete during the current/2017 TIP cycle). These carryover projects typically constitute a very large portion of our total dollars available.

These departments' priorities are incorporated into an initial, "rough draft" TIP and this is presented to the MPO staff. This occurred in the Fall of 2017. Staff begins discussions about these projects. As-needed, staff members from these departments are brought into discussions regarding either specific projects, overall priorities, or to provide details on how their list might fit into our overall TIP.

Consideration of the Long Range Transportation Plan (LRTP) in TIP Development:

The MPO's most recent LRTP was completed in November 2016, and is used as a primary tool in TIP development. Because past LRTPs were arguably vague not exceptionally well-utilized, the

MPO decided to put significant effort toward developing a meaningful plan. This most recent LRTP was highly-successful for various reasons. First, it was developed collaboratively with direct input from municipal officials, the general public, various agency stakeholders, and PennDOT officials. Second, it provided a clear roadmap that could directly feed our TIP's development by laying out a detailed listing of prioritized projects. Because it was developed with regular input with PennDOT's District 1-0 staff, it allowed their planning and programming unit to have a thorough understanding of our region's priorities and needs, and enabled them to easily communicate this information to project managers and other staff within the agency.

The LRTP focuses much attention on capital improvements, which might include intersection redesigns, major bridges, streetscape projects, safety improvements, and other projects that alter the existing conditions of an asset.

Many of these improvements can be found under the "Highway Projects" section of the LRTP (see pages 66-69 of the 2016 LRTP). All of these were prioritized using DecisionLens software, where our MPO voting members decided on various criteria to rank projects (see Appendix A of LRTP on Page 89), and voted on how important each of these criteria were in comparison to others. Pre-determining how projects should be ranked and scored allowed for an objective ranking/prioritization of our projects. Projects were run through the DecisionLens model only after the ranking criteria were decided upon.

The list generated through Decision Lens gives us a clear idea of project ranking, but of course feasibility of constructing improvements and cost play a role as well. For example, if a top-ranked project is \$20m, this is not going to happen as quickly and easily as a \$1m project. Moreover, decisions about when to program certain improvements are affected by other projects within the vicinity. An example of this is if PennDOT's district office has determined that a road needs to be resurfaced in the next two years, incorporating an intersection improvement within this maintenance project is often a more efficient/less costly way to make the more major improvement than if it were a standalone project.

Consideration of Planning Studies:

Numerous planning studies fully or partially relating to transportation have been undertaken within Mercer County in recent years. These include corridor studies, comprehensive and strategic community plans, traffic impact studies, feasibility studies, access management studies, bicycle/pedestrian master plans, and various other studies. Typically, but not always, the MPO funds these studies, and has a primary role in their development. All of these studies provide project recommendations resulting from a comprehensive planning process, almost always including cost estimates and an implementation and funding plan. The vast majority of the many recommendations from these plans were cataloged and captured in the 2016 LRTP, the exception being more-recent studies begun subsequent to the recent update.

Consideration of Other TIP Components:

Transit and local bridge projects are also a major component of the TIP. Because the decisions about these aspects of the overall program are made largely outside of the PennDOT District office and the MPO, these are noted separately. The processes for developing these projects are detailed in the table below:

Agency	How Projects are Conceptualized and Prioritized
Mercer County Bridge Department	Some bridge funding can be used on off-system, or “local” bridges. In Mercer County, the county itself owns the vast majority of non-state owned bridges. The County bridge engineer uses a similar process to what the PennDOT bridge unit uses (see table on preceding page) to prioritize needs. These needs are communicated with the District 1-0 bridge unit, planning and programming staff, and the MPO staff so that everyone can reach consensus on which bridges are able to be programmed on the TIP.
Shenango Valley Shuttle Service/Mercer County Community Transit	Mercer County has two transit providers—the Shenango Valley Shuttle Service and Mercer County Community Transit—which are staffed through the Mercer County Regional Council of Governments (MCRCOG). The transit portion of the TIP is developed separately the MCRCOG staff and their board, based on guidance from the PennDOT Bureau of Multimodal Transportation and in accordance with the Federal Transit Administration’s (FTA’s) guidelines. The transit portion of the TIP is also developed with consideration to the adopted Coordinated Public Transit/Human Services Transportation Plan, MCRCOG’s Citizens Advisory Board, and PennDOT’s Capital Planning Tool. Once the transit portion of the TIP is developed, it is shared with MPO staff and PennDOT’s Program Center staff.

Consideration of Performance-Based Planning: SVATS MPO Safety Performance Targets

The Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act include performance management requirements. Performance-based planning will ensure that PennDOT and the MPOs collectively invest Federal transportation funds efficiently towards achieving national goals.

Transportation Performance Management (TPM) is strategic approach that uses data to make investment and policy decisions to achieve national performance goals. [23 CFR 490](#) outlines the national performance goals for the federal-aid program. It establishes the seven goal areas: safety, infrastructure condition, congestion reduction, system reliability, freight, environmental sustainability and reduced project delivery delay.

At this time, only the safety performance measures are required to be a documented consideration in our project development. Based on FHWA guidance, it is anticipated that the 2021 TIP update will delve deeper into meeting goals in the remaining six goal areas.

Federal safety performance measures were implemented in 2016. PennDOT established Statewide Targets in August 2017. On November 14, 2017 the SVATS MPO adopted supporting Pennsylvania’s Statewide Safety Performance Measure Targets. The following shows the 2018

Statewide Targets established based on 2% reduction of five-year average (2014-2018) and aggregated supporting regional SVATS MPO targets:

Safety Performance Measure	Baseline (2012-2016)	Statewide Target (2014-2018)	SVATS MPO Target (2014-2018)
Number of fatalities	1,220.2	1,177.6	14.2
Rate of fatalities per 100 million VMT	1.220	1.161	1.176
Number of serious injuries	3,434.0	3,799.8	50.2
Rate of serious injuries per 100 million VMT	3.433	3.746	4.159
Number of non-motorized fatalities and non-motorized serious injuries	602.4	654.4	5.7

The SVATS MPO FFY 2019-2022 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 HSIP projects achieve a significant reduction of traffic fatalities and serious injuries on all public roads, the SVATS MPO did the following for the development of the FFY 2019-2022 TIP:

1. The MPO staff met multiple times with District 1-0's Safety Unit staff (often along with design and programming staff members) to talk specifically about Highway Safety Improvement Program (HSIP)-eligible projects (i.e. the funding that specifically goes toward rectifying safety issues) and how we can better-utilize our HSIP funds. During these conversations, we looked at projects listed on our LRTP that could be HSIP-eligible. PennDOT staff took a deeper-dive into each area (intersection or corridor), outlining (a.) the specifics of the crash history (accident type, severity, patterns, etc.) and (b.) the level of eligibility for HSIP (whether a project could be fully funded, partially funded, or not funded with HSIP dollars). These meetings also allowed us to use a data-driven approach to either prove or disprove certain areas where we would suspect crashes would be a major concern. In a few cases, intersections that are commonly thought of as dangerous were shown, based on past crash data, to be relatively safe.
2. The aforementioned group has also met to discuss low-cost countermeasures aimed at improving high accident clusters along intersections and roadways (ISIP/RDIP). MPO staff has used their local knowledge and observational field views to suggest improvements at many of these locations, and we subsequently met with the Safety Unit to discuss these.
3. On our recently-developed Unified Planning Work Program (UPWP), we budgeted some funding to perform a few roadway safety audits (RSAs), which are an effective, low-cost way of identifying issues and solutions for fixing these issues, without having to do a full and lengthy study. While the exact locations of these RSAs have yet to be determined, we have discussed several possible locations, based on data that District 1-0 provided to the MPO.
4. The MPO proposes to use HSIP dollars to perform two corridor safety studies that were recommended in the 2016 LRTP.

Based on this process, the following regional SVATS MPO projects were included in the FFY 2019-2022 TIP to help achieve a significant reduction of traffic fatalities and serious injuries on all public roads:

Project	Municipality(ies)	Improvement Focus
US 62/3008 (State Street) Intersection Improvement—New Roundabout	Hermitage	Serious Injury Crashes
SR 18/SR 4006 (Williamson Road) Intersection Re-alignment	Hempfield, West Salem	Serious Injury Crashes
US 58 Safety Study	Mercer, Jefferson, Delaware, Hempfield, Greenville	Serious Injury Crashes Fatal Crashes
US 62 Safety Study	Hermitage, Jefferson, Mercer, Lackawannock, E. Lackawannock,	Serious Injury Crashes Fatal Crashes

In addition, some remaining HSIP funding is in a line item and the MPO and PennDOT have begun conversations about possible uses for this funding. At this point, SR 58/SR 4006 (Williamson Road)—which is about a mile from the second project above—is a likely candidate for this funding.

Consideration of Public and Stakeholder Input:

There are several opportunities for our MPO voting members, transportation stakeholders, and the general public to provide public input before, during, and even toward the end of the TIP development process.

The MPO members and staff began discussing some of the issues/challenges being faced at the November, 2017 MPO Coordinating Committee meeting. As always, these meetings are open to the public and very well-attended. As MPO staff and PennDOT staff continued working through the TIP development, a few drafts were developed, and the latest draft at that time was shared and discussed with the Coordinating Committee at the February 2018 meeting. The final draft TIP was approved by this committee at our May 2018 meeting.

In June of 2018, the TIP entered into a 30-day public comment period. A legal ad was placed in two Mercer County-based newspapers, the TIP documents were posted on our website, and various notifications were sent out to the transportation community stating that the TIP was available for public comment. A Public Hearing was also scheduled during this 30-day public comment period (any official comments are included with the TIP documentation).

The final TIP is to be approved at the July 2018 Coordinating Committee meeting, and will then be processed by PennDOT. After their review, PennDOT will submit the Statewide TIP (STIP) to the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) for final approval. After final approval of the STIP by FHWA and FTA, the TIP takes effect at the beginning of the federal fiscal year on October 1, 2018.