

FFY 2025-2028 HATS TIP Development & Project Selection Process Documentation

Introduction

The goal of the TIP update process is to select transportation improvements with the greatest benefit to the region, counties, and individual municipalities. Above all else, preservation and management of the existing transportation system is the highest priority for both HATS and PennDOT. Nearly all projects proposed for the 2025-2028 TIP are dedicated to preserving the system or improving its safety, reliability, traffic flow, or security. The only exceptions to this are those projects proposing to construct non-motorized alternatives to the current system.

The transportation program must fulfill requirements defined in federal transportation laws and regulations and achieve the goals and objectives expressed in the Commonwealth's Long Range Transportation Plan and the goals of the HATS 2045 Regional Transportation Plan along with other key documents. Major capital candidate projects are selected from existing long range transportation plans for inclusion in the transportation program.

HATS TIP Project Selection Process

New projects are selected for the TIP after all funds needed for phases of current projects are accounted for. Maintenance projects for highways and bridges are proposed by PennDOT. Other projects are selected from the HATS RTP, which prioritizes regional transportation projects and problems on a rolling basis in accordance with the planning factors defined in federal transportation regulation. All projects are given a regional priority ranking (high/medium/low) that reflects the project's ability to address a variety of regional needs. The regional needs include the following:

- Safety (corridors and intersections identified using PennDOT's Highway Screening Tool)
- Congestion (corridors and intersections identified in HATS Congestion Management Plan)
- Asset condition (bridge and pavement condition provided by PennDOT)
- Non-motorized needs (bike/pedestrian demand analysis and Regional Backbone from RTP)
- Mobility needs (demographic data on population 65+ years of age and/or disability)
- Environmental Justice (concentration of minority and/or low-income populations)
- Freight movement (corridors identified in the HATS Regional Freight Study)

The HATS RTP Implementation Work Group, Technical and Coordinating Committees also provide input into project selection.

PennDOT and HATS staff utilized the following methodology in the development of the 2025-2028 TIP:

1. Financial guidance provided by PennDOT estimated approximately \$284 million of federal funding and \$115 million of state funding, for a total of \$399 million, would be available for FFY 2025-2028. (Please Note: Other sources of funding that are distributed statewide to counties, municipalities and through PennDOT maintenance, but are not included in the TIP/STIP or PennDOT Financial Guidance are discussed later in this document.)
2. Once funding was identified and established, projects carried over from the FFY 2023-2026 TIP were included in the FFY 2025-2028 TIP. Carryover projects include projects or phases of projects in which:
 - Federal funds were not or are not anticipated to be obligated in FFY 2023 or 2024

- State funds were not or are not anticipated to be encumbered in FFY 2023 or 2024, and
- Construction projects have estimated let dates after 10/1/2024.

In the HATS region, there were 114 carry-over projects proposed for the FFY 2025-2028 TIP, examples of which include:

- *Old Forge Road over Yellow Breeches Creek (MPMS 99813)*
- *Sporting Hill Road Turn Lanes (MPMS 114315)*
- *Riverlands Safety Implementation (MPMS 106554)*
- *Market Street Bridge East & West (MPMS 93176 & 93177)*
- *Maclay Street Bridge (MPMS 74521)*
- *Schaeffers Valley Road Resurfacing (MPMS 108605)*

In addition to the above noted projects, the following bridges were carried-over using the funds under the “local bridge line item” programmed on the previous FFY 2023-2026 TIP. A bridge bundle was added for each county, with two bridges programmed separately because of considerations of construction timelines.

- *Cumberland County Bridge Bundle (MPMS 120270)*
 - *Ladnor Lane over Montour Creek (BR 14101)*
 - *Village Road over Hogestown Run (BR 14091)*
 - *Wildwood Road over Locust Creek (BR 40691)*
- *Dauphin County Bridge Bundle (MPMS 120271)*
 - *Crums Mill Road over Paxton Creek (BR 14683)*
 - *Meadow Lane over Manada Creek (BR 14655)*
 - *Walnut Street over Jonestown Road (BR 14741)*
- *Perry County Bridge Bundle (MPMS 120274)*
 - *Ernest Road over Montour Creek (BR 29753)*
 - *Kennedy Valley Road over McCabe Run (BR 29752)*
 - *Book Road over Bull Run (BR 29714)*
 - *Bloomfield Avenue over Little Buffalo Creek (BR 29724)*
 - *Montbello Road over Little Juniata Creek (BR 29761)*
- *Quarry Road over Mountain Creek (MPMS 120308)*
- *Kohn Road over Paxton Creek (MPMS 120307)*

3. Next, asset management needs identified, in part, through the PennDOT District 8-0 Roadway Selection Process (further explained later) and regional priorities identified in the 2045 RTP were considered, from which new projects were considered and added to the TIP. A total of 4 new projects are proposed for the FFY 2025-2028 TIP:

- *UPS for Existing Sites – HATS TSMO (MPMS 121186)*
- *SR 34 Bridge over Juniata River Repairs (MPMS 121179)*
- *22 Concrete Patching & Diamond Grinding (MPMS 119783)*
- *Susquehanna Trail Restoration (MPMS 119784)*

4. Next, the RTP Implementation Program was added as a line item. Established as part of the development of the FFY 2021-2024 TIP, this program will evaluate and fund planning studies and construction projects that are consistent with the HATS Regional Transportation Plan and TCRPC

Regional Growth Management Plan goals while “providing for safer, more walkable, bikeable and transit-friendly transportation systems.”

These steps took place with internal review among HATS staff after the initial carry-over projects, remaining allocation tables, and candidate projects were received in July 2023, and formal cooperative meetings were held on July 13, 2024 and November 8, 2024 between PennDOT District 8-0 and HATS staff. Between those two meeting dates, informal discussions with regional stakeholders occurred throughout the fall. Before formal presentation to the HATS Technical and Coordinating Committees in February 2024, the draft FFY 2025-2028 TIP was reviewed by the HATS RTP Implementation Work Group on November 14, 2023, and PennDOT Central Office personnel on January 30, 2024.

Determination of Funding Type

As prioritized needs progress through the process to become projects, available funding types are considered. For funding types with specific requirements, like CMAQ and HSIP, projects are preliminarily reviewed with PennDOT and/or FHWA staff, as appropriate. Because of the importance of congestion reduction, multi-modal mobility, and safety improvements in our RTP Project Pipeline evaluation criteria, projects that rank as a high priority are often eligible under CMAQ and HSIP requirements. Any additional evaluation (such as a cost/benefit analysis for potential HSIP projects) before funding is applied to a project.

Incorporation of Performance Based Planning and Programming

HATS has adopted statewide targets for PM-1, PM-2, and PM-3 and worked closely with District 8-0 staff to identify and support inclusion of projects to make progress toward them. For specific activities and impacts on project selection, refer to the Performance Measure Documentation.

Public Participation and HATS Committee Review

In the initial stages of development for the FFY 2025-2028 TIP, HATS Committees were presented information regarding the carry-over projects and remaining allocation balances in each funding category at the December 1 and 15, 2023 meetings. The full draft 2025-2028 TIP was first brought before the HATS Committees at the meetings on February 9 and 23, 2024. At these meetings, PennDOT representatives discussed new project starts that were on the draft program at that time. The HATS Committees had a second opportunity to review and comment on the draft program at the Technical Committee meeting held April 12, 2024 and the Coordinating Committee meeting held April 26, 2024.

The formal comment period was advertised in the Patriot News on April 28, 2024, began on May 1, 2024 and closed on June 1, 2024. In addition to extensive outreach conducted online via social media, a public meeting took place on May 15, 2024 at 11:30 am in the Strawberry Square Atrium in Harrisburg and virtual public information sessions were held on May 7, 2024 at 6:00 pm and May 23, 2024 at 12:00 pm. Recordings of the public information sessions were available on the TCRPC website and distributed via social media outreach.

The HATS Technical Committee reviewed of all TIP submission materials at the June 14, 2022 meeting and recommended approval of the FFY 2025-2028 TIP. The HATS Coordinating Committee considered the final draft at the June 28, 2024 meeting and voted to formally approve.

Linkage to HATS RTP Vision, Goals, and Objectives

The FFY 2025-2028 TIP aligns with the vision, goals and objectives of the HATS 2045 Regional Transportation Plan (RTP), adopted September 2021.

The FFY 2025-2028 TIP for HATS consists of the following:

- 67 bridge projects
- 26 roadway projects
- 2 intermodal projects
- 19 bicycle and pedestrian projects

The above projects do not include interstate projects or line items.

The vision of the HATS 2045 RTP is a safe, efficient, environmentally responsible, and seamless multi-modal transportation system integrated with sustainable land use patterns to serve the mobility and accessibility needs of our residents, businesses and through-travelers. The 2025-2028 TIP incorporates projects to improve the efficiency of our region's transportation system for all modes, including automobiles, trucks, bicycles, pedestrians, buses, and more.

The 2025-2028 TIP project listing aligns with the goals and objectives of the HATS 2045 RTP:

1. Provide an efficient, seamless and reliable transportation system

The improvements on the 2025-2028 TIP provide an overall improvement to not just the local community it is taking place, but the regional system as a whole. Each improvement provides for better movement and a more reliable system.

2. Improve the performance and operation of our transportation system for all modes

The improvements programmed on the 2025-2028 TIP provide for all modes of transportation including cars, trucks, bicycles, pedestrians and transit (on the Public Transit TIP).

Some of the programmed projects that improve the performance and operations of cars and trucks include:

- Middletown Road Safety and Congestion Improvements (MPMS 116786)
- Center Street and 21st Street Intersection (MPMS 114319)
- PA 34 Turn Lanes (MPMS 114321)

Programmed projects that improve the performance and operations for bicycles and pedestrians include:

- Lemoyne Bottleneck Improvements (MPMS 114202)
- Eisenhower Boulevard Safety Improvements (MPMS 118276)
- Sidewalks and Curbs Reconstruction Phase 2 (MPMS 119313)

Programmed projects improving transit in the region include:

- SRTA Employment Access (MPMS 112974)
- HATS Bikeshare (MPMS 111064)

3. Expand transportation choices

The HATS Region continues to strive for diverse transportation options to serve all of the region's residents and visitors. The 2025-2028 TIP supports this goal through several programmed projects. The HATS Bikeshare project (MPMS 111064) provides funding for a micro-mobility service across the City of Harrisburg, while also allowing for future expansion throughout the region. The Lemoyne Bottleneck Improvements (MPMS 114202) will provide a safer, more convenient connection across the Susquehanna River for non-motorized users. The Boiling Springs Pedestrian Improvements (MPMS 115792) and Sidewalks and Curbs Reconstruction Phase 2 (MPMS 119313) serve as examples of projects expanding transportation choices in our region's rural communities.

In addition to these projects, the HATS RTP Implementation Program will continue to facilitate the study and implementation of improvements that provide for safer, more walkable, bikeable and transit-friendly transportation systems.

4. Improve quality of life, promote human health and provide a safe experience for all users

While efficient movement and improved operations are important components of a regional transportation system, it is also very important that residents enjoy where they live and for visitors to enjoy their stay in the Harrisburg area. Some improvements programmed on the TIP will provide healthy living opportunities including the HATS Bikeshare as well as the Lemoyne Bottleneck Improvements.

Most importantly, the safety of the region's travelers is a high priority for HATS and the TIP includes projects that reflect this:

- D-8 Pedestrian Countdown Signals VRU Safety Project (MPMS 119233)
- SR 641 and Locust Point Road Intersection HSM (MPMS 117594)
- SR 641 and Middlesex Road Intersection HSM (MPMS 117596)
- Riverlands Safety Implementation (MPMS 106554)
- Sycamore and Paxton Street Intersection Improvements (MPMS 113384)
- Eisenhower Boulevard Safety Improvements (MPMS 118276)
- PA 743 and PA 341 Intersection HSM (MPMS 117612)

5. Reduce environmental impacts

The HATS RTP continues to promote coordination between agencies to ensure limited to no impact on the region's environmental resources. While the details of many of these projects have yet to be revealed due to being programmed in various years, environmental screening is completed regularly to identify any environmental concerns.

Congestion management and reduction also continues to be a method of improving our environmental impact. Some of the TIP projects programmed that will help with congestion include:

- Center Street and 21st Street Intersection (MPMS 114319)
- Sporting Hill Road Turn Lanes (MPMS 114315)
- Cameron Street and Maclay Street Intersection (MPMS 114316)

6. Encourage livable communities and efficient land use

HATS continues to promote the importance of livable communities and efficient land use. The PennDOT Connects Policy, the local government collaboration initiative that began in 2016, allows for these connections to have higher clarity. PennDOT, HATS, and local officials meet to discuss the programmed projects on the TIP and how these projects will ultimately impact the community, with specific focus on bicycle/pedestrian/transit needs, local congestion and operations concerns, and long-term compatibility with local land use plans.

In addition to meetings held previously to discuss transportation needs as part of the development of the 2045 HATS RTP and subsequent follow up meetings thereafter, HATS and PennDOT District 8-0 staff held PennDOT Connects meetings with municipal representatives for each new project being proposed for the 2025-2028 TIP.

7. Efficiently utilize existing transportation funds and pursue other funding opportunities for transportation system improvements.

HATS staff and PennDOT met informally to discuss the available funding once carry-over project needs were established and the MPO's regional priorities for consideration throughout the development of the TIP, with a formal meeting on November 8, 2023. Through other means of collaboration (conference calls, etc), HATS was able to provide input on the use of federal funds on the TIP.

HATS continues to search for other opportunities for transportation improvements and assist local governments with finding funding opportunities for localized projects.

PennDOT District 8-0 Bridge and Roadway Project Prioritization Process

Bridge

State and Federal policy has shifted in recent years from an emphasis on “reducing the number of structurally deficient bridges” (i.e. worst-first replacements) to an emphasis on obtaining “Lowest Lifecycle Cost” (LLC). In response to this policy shift, District 8-0 direction for the 2025 TIP update and beyond will be also be switching from programming bridge candidates in a “worst-first” ranking over to a Lowest Lifecycle Cost (LLC) ranking. Through a comprehensive exercise the District 8-0 Bridge Unit analyzed the entire state-owned bridge network in District 8-0. During the review of state-owned bridges, the Bridge Unit determined that a number of current bridge projects on the Twelve-Year Program (TYP) could be re-scoped as preservations to follow the LLC approach and provide additional capacity for future funding.

PennDOT's Bridge Asset Management (BAMS) Tool is named Bridge Care and seeks to develop a LLC program weight according to Bridge Risk Score. The Bridge Risk Score Calculation is shown below and can best be thought of as a bridge “importance score” primarily based on the size of the bridge and the amount of traffic using it. This software, along with extensive manual review of potential candidates,

was used to determine the bridge candidates to submit to the MPO’s for consideration in the 2025 Transportation Improvement Program (TIP) update. After the MPO’s received the candidates from District 8-0, they compared them to their scoring process to see how they ranked against their bridge priorities for programming.

Bridge Risk Score Calculation

The risk score for each bridge is calculated using the formula below. Appendix Table J.2 defines the factors and the parameters that determine factor values.

$$\text{Bridge Risk} = (\sqrt{\text{Deck Area} * \text{Annual Average Daily Traffic}}) * F_s * F_{fc} * F_{det} * F_{aadtt} * F_{flood}$$

Appendix Table J.2: Bridge Risk Score Factors

Factor	Definition	Parameter	Factor Value
F_s	Scour Factor	Scour Rating = A	1.2
		Scour Rating ≠ A	1.0
F_{fc}	Fracture Critical Factor	Fracture Critical Rating < 5	1.4
		Fracture Critical Rating ≥ 5	1.0
F_{det}	Detour Length Factor	Detour Length > 30 miles	2.0
		Detour Length ≥ 10 miles	1.5
		Detour Length < 10 miles	1.0
F_{aadtt}	Annual Average Daily Truck Traffic Factor	Truck traffic > 20% total traffic	2.0
		Truck traffic ≥ 10% total traffic	1.5
		Truck traffic < 10% total traffic	1.0
F_{flood}	Bridge Closed for Flooding Event Factor	Bridge has been closed for flooding	3.0
		Bridge has been overtopped due to flooding	1.5
		Bridge has not been closed or overtopped due to flooding	1.0

Pavement

District 8-0 utilized data from the Roadway Management System (RMS) along with input from our County Maintenance Managers to identify our TIP and A-409 pavement candidates for the 2025 TIP update. Both our District Maintenance Services Manager and District Maintenance Program Manager analyzed segments of roadway on our four business plan networks based on International Roughness Index (IRI), Overall Pavement Index (OPI), Average Daily Traffic (ADT), Average Daily Truck Traffic (ADTT) and last year of resurfacing. The County Maintenance Manager identified pavement priorities for their county and shared the list with our District Maintenance Services Manager and District Maintenance Program Manager, which were compared with the RMS data to identify the candidates for the A- team rides.

County A-Team rides were conducted including the following staff: District Executive, Assistant District Executive-Design and Maintenance, District Maintenance Services Manager, District Maintenance Program Manager District Highway Design Engineer, District Traffic Engineer, and County Maintenance Manager. The A-Team ride provides the District staff within person knowledge of the priorities to help determine the needs. Maintenance Staff then conducted a meeting to discuss the priorities and funding availability from both maintenance and Transportation Improvement Programs (TIP) with the Planning and Programming Manager. Projects deemed to be more appropriate for TIP Funding were shared with the MPO for funding consideration. A-409 considered projects were also shared with the MPO for any specific feedback.

PA Transportation Funding Not in the STIP

In addition to the baseline STIP/TIP funding identified in PennDOT's Financial Guidance, there are multiple funding sources that are distributed statewide to counties, municipalities and through PennDOT maintenance. This funding includes:

- County/Municipal Liquid Fuels Tax Fund Allocations
- PennDOT County Maintenance A-582/A-409
- Statewide Distribution of Funds:
 - Green Light Go
 - Highway Transfer/Turnback Program
 - Highway Systems Technology
 - Debt Service
 - Pennsylvania Infrastructure Bank (PIB)
 - Act 44 Bridge
 - \$5 County Fee for Local Use Fund
 - Marcellus Shale
 - A-409 Discretionary

As defined by [23 USC 450.218\(m\)](#), the STIP and regional TIPs are required to contain system-level estimates of costs and state and local revenue sources beyond Financial Guidance that are reasonably expected to be available to adequately operate and maintain Federal-aid highways and public transportation.

Beyond the baseline federal and state funding, Pennsylvania invests more than \$2.4 Billion annually to operate and maintain the Commonwealth's transportation network. This funding plays an important role in maintaining transportation infrastructure across the Commonwealth and contributes significantly to providing a state of good repair. It should be noted that existing and future transportation needs are much greater than what current financial resources can provide in Pennsylvania. These needs go beyond traditional highway and bridge infrastructure and include multi-modal facilities such as public transit, aviation, rail, marine, ports, bicycle, pedestrian, and other assets.

Pennsylvania Transportation Funding Not Included in the STIP					
PLANNING PARTNER	SFY 22-23	SFY 23-24	SFY 24-25	SFY 25-26	SFY 26-27
Harrisburg	79,347,584	79,942,312	80,437,719	80,937,937	81,431,577