

TRANSPORTATION ALTERNATIVES (TA SET-ASIDE) BEST PRACTICE ANALYSIS



September 2019

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Executive Summary

Gannett Fleming, Inc., and Delta Development Group, Inc., (project team) were engaged by the Pennsylvania Department of Transportation (PennDOT) to study operational best practices for the Commonwealth's Transportation Alternatives (TA) Set-Aside Program. In coordination with Pennsylvania's Transportation Alternatives Set-Aside Coordinator, the project team analyzed keys to preparing applicants for successful, cost-effective, and efficiently implemented TA Set-Aside projects. Cost estimating and blended funding were the two main areas examined. The project team interviewed representatives from PennDOT District Offices; Metropolitan Planning Organizations/Rural Planning Organizations (MPOs/RPOs), also known as "Planning Partners;" and Transportation Alternatives Coordinators from other states to identify what best practices could be employed to prepare TA Set-Aside project sponsors for more cost-effective and efficiently executed projects. The project team developed 10 recommendations in three categories: Cost Estimating, Blended Funding, and TA Program Process.

Recommendations to improve cost-estimating practices:

- C1: Utilize the ECMS Item Price History Database to assist with cost estimating, specifically:
- Incorporate the existing ECMS Master Items and Item Price History database instructions into program guidelines.
 - Develop a common bid item and prevailing wage sheet to provide additional guidance to third-party estimators.
 - Provide sample cost estimates in the TA Set-Aside Program Guidance Manual.
- C2: Expand the PennDOT Connects initial planning meeting to include detailed cost estimate review and education.
- C3: Pilot the use of PennDOT open-end design contracts by project sponsors for preliminary design and engineering; expand use of the method if successful.
- C4: Implement a conditional award commitment with low-bid selection prior to the final reimbursement agreement.

Recommendations to improve the efficiency of blended funding:

- BF1: Develop a standard reimbursement agreement that would enable municipal sponsors to designate PennDOT as the lead partner on appropriate projects.
- BF2: Streamline reimbursement agreement(s) to blend TA Set-Aside funds with PennDOT Multimodal Transportation Funds (PennDOT MTF), Commonwealth Financing Authority Multimodal Transportation Funds (CFA MTF), and Transportation Improvement Program (TIP) funds.
- BF3: Grant a higher level of ECMS access to state project funding partners.
- BF4: Implement a grant coordinator program to assist project sponsors with funding strategies, application preparation, and blended funding approaches.

Recommendations to improve the TA program process:

- P1: Expand the pre-application TA Set-Aside webinar to better prepare prospective applicants for the process ahead.
- P2: Standardize the application and award announcements cycle to assist project sponsors in planning for the funding and advancement of their selected projects.

Methodology

In order to develop a comprehensive overview of TA Set-Aside Program structure, challenges, and best practices, the project team undertook extensive outreach, including an initial kick-off meeting with PennDOT, interviews with MPO/RPO stakeholders, review of U.S. Department of Transportation (USDOT) guidance, and interviews with other states' departments of transportation (DOTs), which the team synthesized into findings and recommendations. The evaluation of TA Set-Aside practices related to cost estimating and projects with blended funding have several points of overlap in process. To the extent possible, the project team raised both topics in interviews to better understand the interconnectedness of cost estimating and blended funding. The project team's methodology for evaluating the cost estimating and blended funding objectives are discussed separately in the following sections for clarity.

Approach for Evaluating Cost Estimating

The project team's first step in analyzing cost estimation methods was to study PennDOT's current TA Set-Aside practices and understand how cost estimating affects that process. The project team interviewed PennDOT's Transportation Alternatives Program Coordinator and conducted follow-up communications as required to ensure the project aligned with PennDOT's TA Set-Aside policy objectives. These include: limiting exposure of TA Set-Aside awards to underfunded and overfunded projects to maximize funds available for and accuracy of programmed Transportation Improvement Program (TIP) projects; giving preference to projects that avoid schedule delays; and educating sponsors and their consultants on how to produce good cost estimates. Additionally, the project team reviewed current cost estimate guidance and tools provided by PennDOT.

The initial interview and subsequent communications with PennDOT's program coordinator also provided an opportunity to gather background data on TA Set-Aside projects. The project team analyzed estimates submitted with projects, PennDOT estimates, and final bidding to identify correlating factors that determine or suggest a relationship between what makes an estimate more accurate or less accurate. A part of this analysis consisted of a case analysis of various projects to identify projects where variation in the cost estimate played a significant role in the program outcomes.

The second step was to identify Planning Partner practices for assisting project sponsors with cost estimating. The project team built upon case study research previously conducted for PennDOT and also interviewed representatives from the following Planning Partners to evaluate cost variances:

- Delaware Valley Regional Planning Commission (DVRPC)
- Centre County Metropolitan Planning Organization (CCMPO)
- Northwest Rural Planning Organization (RPO) & Venango County Regional Planning Commission
- SEDA-Council of Governments Metropolitan Planning Organization (SEDA-COG MPO)

The team's third step was to interview other states' DOTs. After identifying five comparable states for interviews using the method described at the end of this chapter, the project team developed an interview agenda and coordinated interviews to discuss cost estimating and project delivery practices.

The project team's primary focus was: (1) What are the challenges to cost estimating they experience when implementing projects, and (2) What have they built into the project solicitation, evaluation, approval, and implementation process to ensure successful cost estimates and implementation of TA Set-Aside projects.

The final step in the project team's cost estimating research approach was to prepare this final report synthesizing findings and recommendations.

Approach for Evaluating Blended Funding Methods

The first step in addressing blended funding in projects granted TA Set-Aside funding was to interview PennDOT and obtain data. The project team researched and analyzed projects and examined case studies such as Allegheny Boulevard in Venango County (PennDOT District 1-0) and State Routes 11 and 487 (S.R. 11/487) Pedestrian Improvements in Columbia County (PennDOT District 3-0).

The second step was to interview MPOs, RPOs, PennDOT District project managers, and others with direct experience in blended funding projects. In these interviews, the project team discussed experiences with projects with multiple funding sources, with an emphasis on combining federal TA Set-Aside funds with other sources, particularly state sources such as PennDOT Multimodal Transportation Fund (MTF) grants. These interviews were also used to determine what strategies worked to advance the projects, and what did not. The interviews and case studies also explored the question of when and how the PennDOT Connects planning process was integrated with the TA Set-Aside project evaluation and funding process.

The third step was to interview other state funding agencies to examine any potential funding compatibility with TA Set-Aside funds. The project team identified contacts with agencies to interview regarding a variety of funding programs, including the PennDOT MTF and Department of Natural Resources Community Conservation and Partnership Program grants (C2P2). In these interviews, the project team discussed each program's requirements and restrictions for blending with TA Set-Aside funding, any existing funding coordination with PennDOT, and departmental processes and design standards.

The fourth step of the blended funding research approach was to identify best practices utilized by other state DOTs. Comparable states were identified using the methodology described below. The project team conducted interviews with these states' Transportation Alternatives Program administrators to summarize each state's current TA program. Of particular interest was how selected states integrate a holistic transportation planning process with TA Set-Aside or similar funding initiatives.

The sixth and final step was to synthesize project deliverables into this final report. The report includes brief profile case studies in Pennsylvania (for both PennDOT and MPOs/RPOs), the national best practice summaries, and overall recommendations.

Method of Selecting Other State DOTs for Study

To gather best practices for cost estimating and blended funding approaches, the project team sought to reach out to various state DOTs to collect their insight. During the state selection process, the project team gathered and analyzed both quantitative data (e.g., rural-to-urban lane miles, TA Set-Aside

obligation rates, state populations) and qualitative data (e.g., climate, region, economic circumstance) to compile a list of candidate states. Attributes, both alike and different, were weighed in order to get a comprehensive comparison and contrast to Pennsylvania's TA Set-Aside Program. The following matrix presents factors that led to the selection of the identified states.

SELECTED STATES FOR TA PROGRAM MANAGER INTERVIEWS

State	Qualitative Factors			Quantitative Factors			
	Region	Climate	Economic Circumstance	Population (2018)	Land Area in Square Miles	Ratio of Rural to Urban Lane Miles	TA Set-Aside Obligation Rate (March 2019)
Pennsylvania	Northeast	Humid Continental	Deindustrialized/ Rust Belt	12,807,060	44,743	1.5:1	48%
Michigan	Midwest	Humid Continental	Deindustrialized/ Rust Belt	9,995,915	56,539	2.0:1	77%
Ohio	Midwest	Humid Continental	Deindustrialized/ Agricultural/ Rust Belt	11,689,442	40,861	1.4:1	81%
Illinois	Midwest	Humid Continental	Deindustrialized/ Rust Belt	12,741,080	55,519	1.8:1	54%
Georgia	South	Humid Subtropical	Growing/ Sun Belt	10,519,475	57,513	1.4:1	51%
North Carolina	South	Humid Subtropical	Growing/ Mid-Atlantic	10,383,620	48,618	1.5:1	51%
Virginia	South	Humid Subtropical	Growing/ Mid-Atlantic	8,411,808	39,594	1.7:1	49%

Sources: World Atlas; Federal Highway Administration; Delta Development Group Analysis

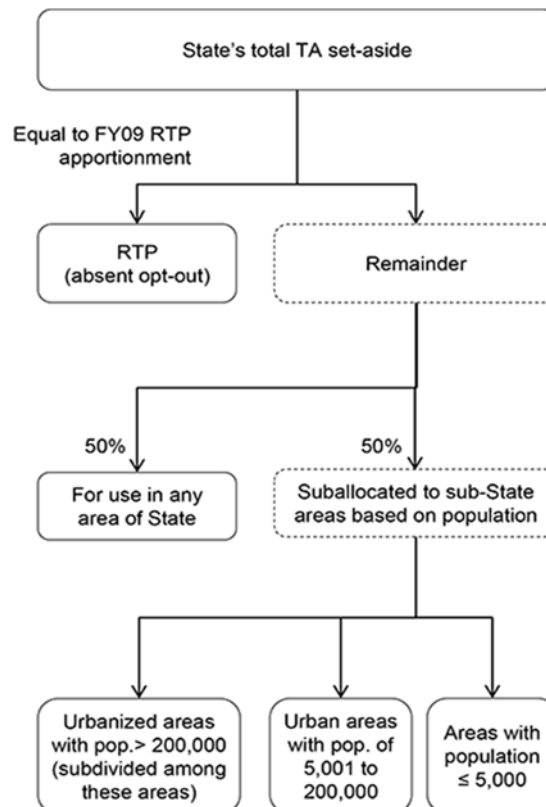
Pennsylvania's TA Set-Aside Program

Current Process

Funding Allocation

All state TA Set-Aside funds originate from the federal government. In 2015, Congress passed the Fixing America's Surface Transportation (FAST) Act. For federal fiscal years 2016–2020, the FAST Act authorizes a total of \$305 billion for surface transportation programs in all 50 states plus the District of Columbia. Surface Transportation Block Grant (STBG) Program funding apportionments, of which TA Set-Aside is a part, are calculated by multiplying the total amount available for each state by the ratio of that state's FY 2015 combined amount of apportionments to the total FY 2015 combined amount of apportionments for all states. Pursuant to 23 U.S.C. § 104(c)(1)(B), the initial amounts are then adjusted to ensure that each state's aggregate amount of apportionments for the base apportionment and supplemental funds is not less than 95 percent of the estimated tax payments attributable to highway users in that state that were paid into the Highway Trust Fund (other than the Mass Transit Account) in the most recent fiscal year for which data is available.

As part of the TA Set-Aside program, statewide funds are sub-allocated to areas based on their relative share of the total state population according to the 2010 U.S. Census. Below is a diagram showing the flow of FAST Act Transportation Alternative sub-allocated funds to recipients:

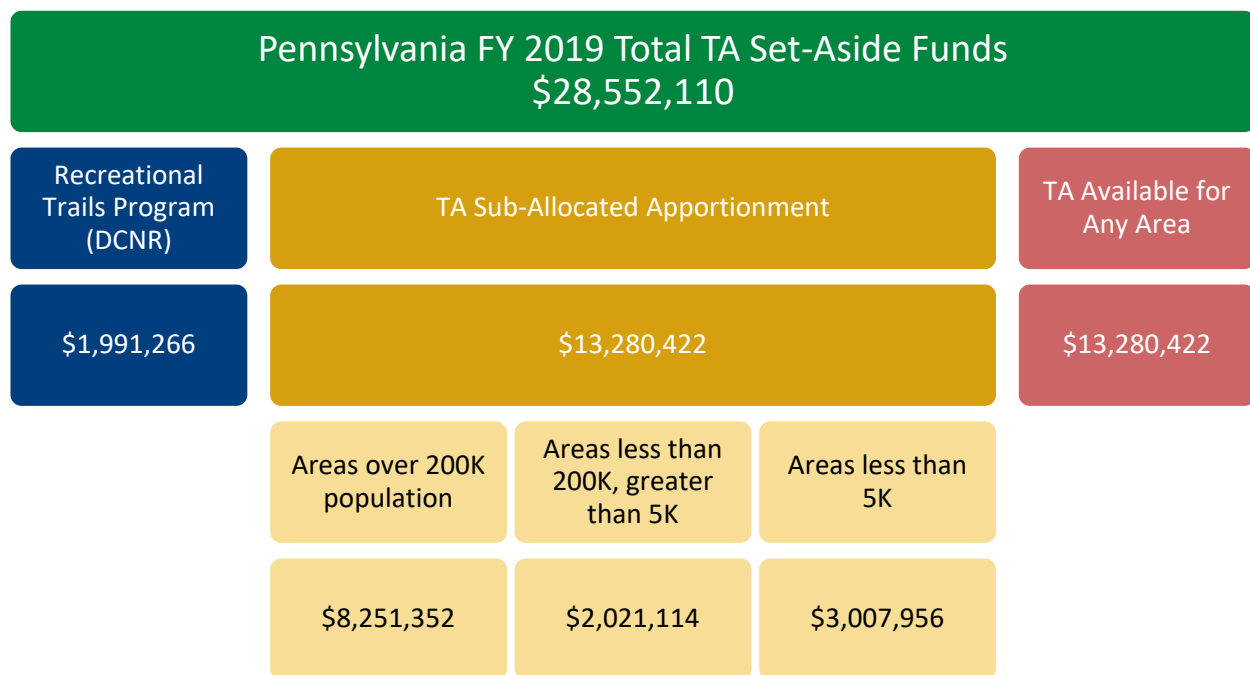


Source: FHWA

For FY 2019, the Commonwealth of Pennsylvania received \$28,552,110 in total TA Set-Aside funds. Of this total, \$1,991,266 was reserved for the Recreational Trails Programs (RTP; grant program administered by the Pennsylvania Department of Conservation and Natural Resources). The remaining \$26,560,844 was allocated as follows:

- \$13,280,422 was made available for PennDOT's competitive TA Set-Aside program.
- \$8,251,352 was sub-allocated for urbanized areas with a population greater than 200,000.
- \$2,021,114 was made available for urban areas with a population of 5,001 to 200,000 to be awarded competitively throughout the state.
- \$3,007,956 was made available for areas with a population of 5,000 or fewer residents to be competitively awarded throughout the state.

The following graphic details the breakdown of TA Set-Aside sub-allocated funds for FY 2019 in the Commonwealth of Pennsylvania:



Source: FHWA

Statewide Process

PennDOT's TA Set-Aside program is currently on a two-year application cycle. However, grant announcements, application submission, and award announcement dates vary each cycle. The Transportation Alternatives Program (TAP) Task Force, a group responsible for reviewing the TA Set-Aside application and program guidance for each funding round, reviews assembled guidance documents and program dates. The program timeline allows for approximately three months of application preparation, more than three months of review, and an award announcement within the Transportation Improvement Program (TIP) development process. Syncing with the TIP development process gives potential project

sponsors an opportunity to develop funding strategies with or without a TA Set-Aside award. The entire process is outlined in the following chart.

PENNSYLVANIA'S TA SET-ASIDE APPLICATION CYCLE

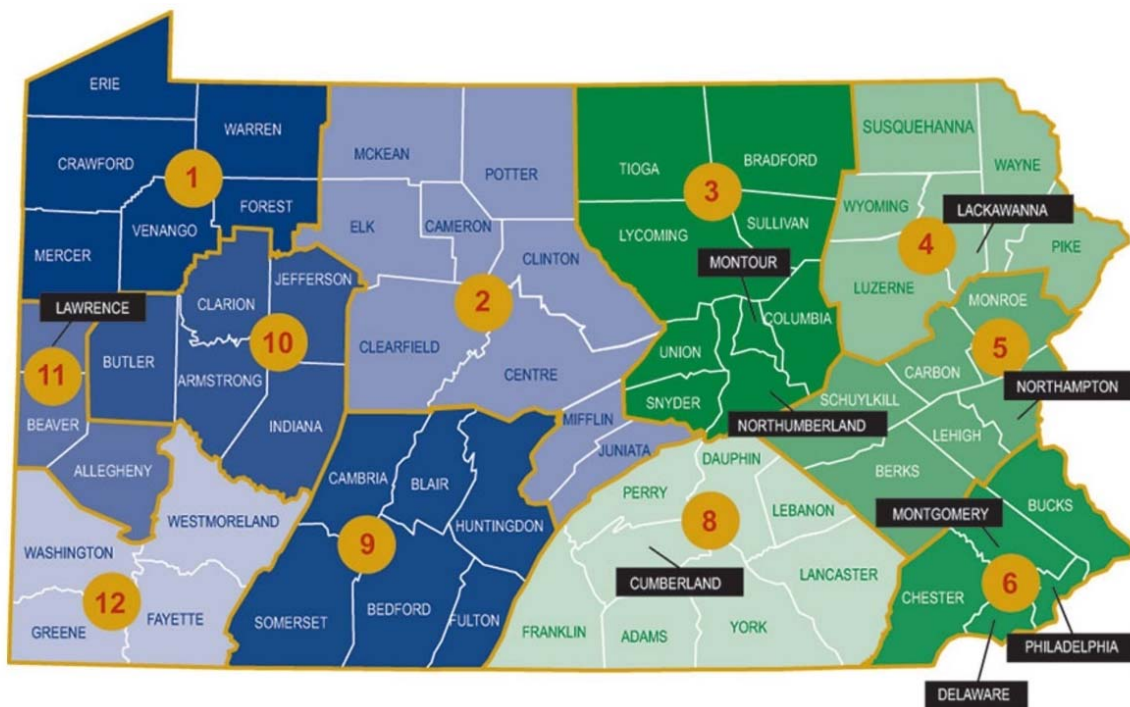
TAP Task Force	Application Period (3 Months)	Application Review (3-5 Months)	Award Announcement	Reimbursement Agreement	Project Monitoring
<ul style="list-style-type: none"> TAP Task Force begins by reviewing guidance documents, commenting on the application, and confirming proposed program dates. 	<ul style="list-style-type: none"> Central Office alerts District Offices and Planning Partners of the opened application portal. District Offices and Planning Partners alert potential project sponsors using their own notification practices. PennDOT Connects initial meeting takes place. 	<ul style="list-style-type: none"> Central Office first conducts a preliminary eligibility review. District Offices and Planning Partners provide comments and rankings. Review by Statewide Selection Committee. 	<ul style="list-style-type: none"> Review and approval by Governor's Office After approval by the Governor's Office, award or rejection letters are sent. Sponsors not awarded are encouraged to apply in the next funding round. 	<ul style="list-style-type: none"> Project sponsors must sign a reimbursement agreement with PennDOT. PennDOT uses a form-approved agreement specifically for TA Set-Aside. If there is a blend of funding sources, the Office of General Counsel must draft a custom agreement. 	<ul style="list-style-type: none"> Central Office monitors project progress.

Once scheduled, an opening announcement is made, and the TA Set-Aside informational online portal becomes active. PennDOT District Offices and Planning Partners are made aware of the forthcoming application round through internal correspondence. Dissemination of TA Set-Aside program information to potential project sponsors primarily comes through Planning Partners and PennDOT District Offices, although Central Office also sends an e-mail to all former TAP and TA Set-Aside sponsors and others that have expressed interest in the program. Some Planning Partners and PennDOT District Offices focus their TA Set-Aside notification efforts on identifying project sponsors with a record of success in administering federally funded projects. Others focus their efforts on identifying construction-ready projects that fulfill a regional transportation need. The degree of outreach to potential project sponsors varies greatly by

MPO, RPO, and District Office. PennDOT's Program Center conducts a webinar early in the application process to inform project sponsors of application requirements. The informational campaign through Planning Partners, PennDOT District Offices, and PennDOT's Program Center is designed to inform potential project sponsors of the upcoming funding cycle and project eligibility criteria.

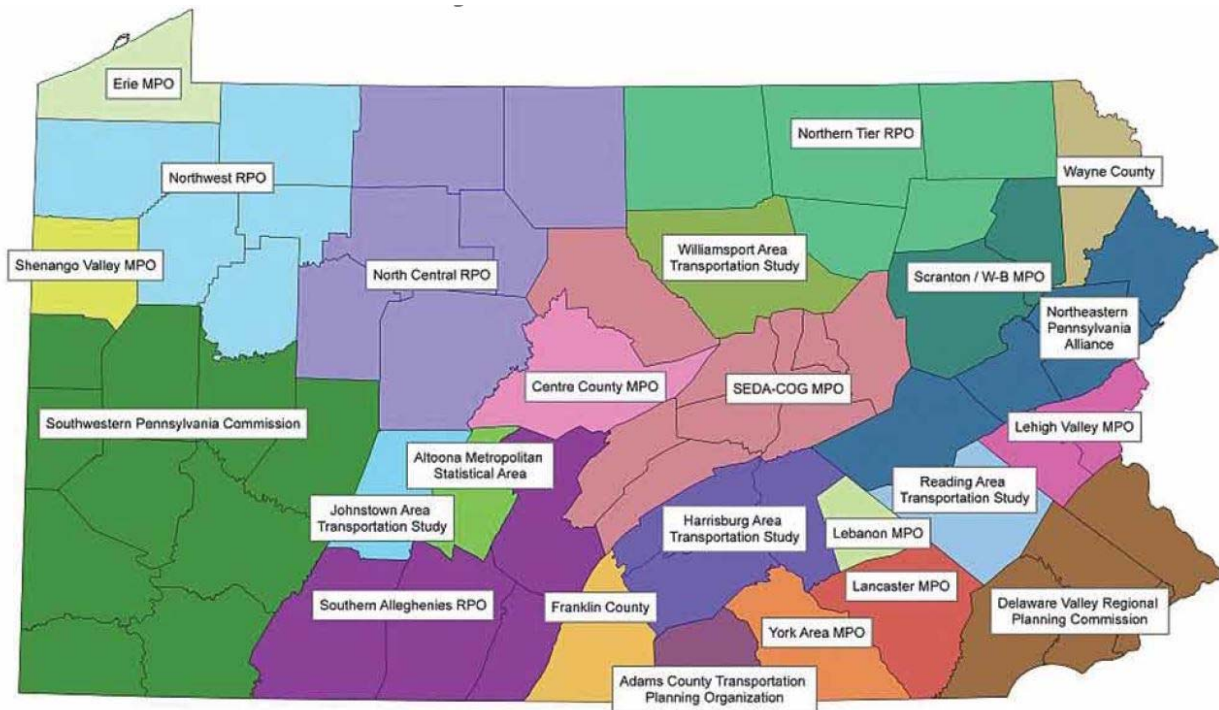
Beginning in 2018, project sponsors interested in pursuing statewide TA Set-Aside funding are required to meet with staff from their Planning Partner and PennDOT District Office before applying to discuss the merits of the project. Following are maps of state Planning Partners and PennDOT District Offices:

PENNDOT DISTRICT OFFICE REGIONS



Source: PennDOT.gov

PENNSYLVANIA MPO AND RPO REGIONS



Source: Ruraltransportation.org

The compulsory coordination with Planning Partners and PennDOT District Offices was implemented to foster stronger TA Set-Aside applications and projects. The coordination is conducted as part of PennDOT Connects, a larger initiative that helps integrate local planning studies, comprehensive plans, and other local government input at the beginning of transportation project planning. The project sponsor's meeting with the Planning Partner and PennDOT District Office in the pre-application phase results in the completion of the PennDOT Connects Project Initiation Form, confirmation that the project meets TA Set-Aside eligibility requirements, and confirmation that the project can be ready for construction within two years of project award.

Certain Planning Partners and PennDOT District Offices also use this meeting to review project cost estimates received from the project sponsor. If ineligible items are included in the scope and cost estimate, PennDOT may assist in changing the project's scope to ensure all activities are eligible. Project sponsors that adequately coordinate with the Planning Partners and PennDOT District Office before applying will earn points for the statewide TA Set-Aside ranking process.

After the three-month application period closes, all statewide TA Set-Aside applications are reviewed by PennDOT Central Office for eligibility and a preliminary line-item budget check. Simultaneously, all statewide TA Set-Aside applications and associated attachments are provided to the relevant Planning Partners and PennDOT District Offices for comment through PennDOT's SharePoint file-sharing site. PennDOT Districts are given three months to provide guidance, review, and comments. PennDOT Districts are also encouraged to assist Planning Partners with project review and rankings.

Final rankings from District Offices and Planning Partners are then provided to PennDOT Central Office for review by the Statewide Selection Committee. The Statewide Selection Committee reviews, scores, and comments on all applications in advance of the final project selection meeting. The Statewide Selection Committee is comprised of at least one representative from each of the following organizations:

- PennDOT
 - Program Center
 - Policy Office
 - Bureau of Maintenance and Operations
 - Municipal Services
 - Project Delivery
 - Multimodal Deputate
- Department of Conservation and Natural Resources (DCNR)
- Pennsylvania State Trails Advisory Committee
- Pennsylvania Department of Education
- One Pennsylvania MPO
- One Pennsylvania RPO

After Planning Partner and Statewide Selection Committee rankings are received, the Transportation Alternatives Program Coordinator compares application scores and ranks the projects. During this process, the Program Coordinator confirms project eligibility. Next the Program Coordinator lists applications with the three “green lights” that position a project for award: approval by the PennDOT District, approval by the MPO or RPO, and approval by the Statewide Selection Committee. Final rankings are submitted to the Governor’s Office for review and approval. All awards are then announced through a statewide press release, and all project sponsors receive e-mail correspondence and a hard-copy letter noting their application’s selection status.

Awarded project sponsors must execute a reimbursement agreement with PennDOT prior to proceeding with any work on the project. For projects that require a contractor to perform physical construction or rehabilitation, the sponsor’s selected professional assembles the contract proposal package. The project sponsor or PennDOT manages the bidding as agreed upon at the project kick-off meeting. Project sponsors are responsible for all costs associated with the maintenance and operation of the project after TA Set-Aside-funded construction.

If a project is continually missing key milestones, a project review is undertaken by joint staff (PennDOT Central Office, PennDOT District, and representatives from the local MPO/RPO) to determine if significant progress has been reached. If it is determined that insufficient progress has been made, the project sponsor is warned in writing and provided a set amount of time (determined by joint staff) for the sponsor to meet specific milestones. A project sponsor may decide to cancel the project or drop out of the program at any time in the process.

Large MPO Process

Large MPOs (areas with an urbanized population greater than 200,000 residents) receive their own sub-allocation of TA Set-Aside funds. These funds, as authorized by the FAST Act, are to be distributed through a Large MPO's self-adopted competitive selection procedure. A Large MPO is responsible for developing program guidance, eligibility criteria, a project scoring matrix, and project selection procedures that reflect regional priorities. If desired, Large MPOs may choose to replicate the competitive selection process and materials developed by PennDOT's Central Office. If a Large MPO chooses to develop its own competitive process, PennDOT and the Federal Highway Administration PA Division Office (FHWA PA) must jointly review the following information about the proposed competitive process:

- Persons involved in project review, scoring, and selection
- Summary of the competitive selection process
- Scoring matrix or weighting criteria
- Regional program guidance
- List of eligible project activities

Large MPOs have three months to competitively award TA Set-Aside sub-allocated funds. Any additional funds that are not allocated do not lapse. Instead, a Large MPO may choose to reserve funds to cover unanticipated costs (e.g., cost increases, bid overages, etc.). Once an MPO has selected its TA-awarded projects, a list must be provided to PennDOT's Central Office. Large MPOs are also tasked with providing comments and rankings on applications within the MPO's region that were submitted as part of the statewide selection process. As of 2019, the following MPOs are categorized as Large MPOs:

1. Delaware Valley Regional Planning Commission (DVRPC)
2. Harrisburg Area Transportation Study (HATS)
3. Lackawanna-Luzerne Transportation Study (LLTS)
4. Lancaster County Transportation Coordinating Committee (LCTCC)
5. Lehigh Valley Transportation Study (LVTS)
6. Reading Area Transportation Study (RATS)
7. Shenango Valley Transportation Study (SVTS)*
8. Southwestern Pennsylvania Commission (SPC)
9. Susquehanna Economic Development Association Council of Governments (SEDA-COG)
10. York Area MPO

*The Shenango Valley Transportation Study itself is small, but it received Large MPO funds from the cross-border Youngstown MPO, which conducts its own TA Set-Aside application round.

Potential project sponsors located within the territory of a large MPO are eligible to submit a TA Set-Aside application that will be considered for both statewide and Large MPO funding. This gives potential project sponsors two avenues of applying for TA Set-Aside funds.

Small MPOs and RPOs

In areas with populations of less than 200,000 people, PennDOT is mandated by the FAST Act to administer a statewide competitive process for applicants. PennDOT has elected to combine these sub-allocated funds with the 50 percent statewide funds to more effectively and efficiently administer this competitive application round. As with the Large MPOs, Small MPOs and RPOs are given three months to provide rankings and comments on applications submitted within their coverage area. Planning Partners may elect to rank applications based on regional priorities or may use the Statewide Project Selection Criteria to rank projects. After projects are ranked, they are sent to PennDOT Central Office for Statewide Selection Committee ranking. As of 2019, the following Planning Partners are designated as a small MPOs/RPOs:

- | | |
|--|--|
| 1. Adams County Transportation Planning Organization (ACTPO) | 7. North Central RPO |
| 2. Blair County Planning Commission | 8. Northern Tier RPO |
| 3. Cambria County MPO | 9. Northwest RPO |
| 4. Centre County MPO (CCMPO) | 10. Shenango Valley Area Transportation Study (SVATS) [†] |
| 5. Franklin County MPO (FCMPO) | 11. Southern Alleghenies RPO |
| 6. Lebanon County MPO (LEBCO MPO) | 12. Williamsport Area Transportation Study (WATS) |

Planning Partner and Agency Interviews

As part of the project team's outreach efforts within the Commonwealth, the project team conducted in-person interviews with representatives of various PennDOT District Offices, Planning Partners, and state funding partners. These interviews were conducted in person at the respective PennDOT District, MPO/RPO, or administrative agency office. By interviewing this diverse range of individuals, the project team was able to solicit their perspectives on the current TA Set-Aside process at the PennDOT District Office and MPO/RPO level, the challenges that these organizations face with TA Set-Aside projects, and how state funding partners work together to advance TA Set-Aside projects. Following are key take-aways from each interview.

[†]The Shenango Valley Transportation Study itself is small, but it received Large MPO funds from the cross-border Youngstown MPO, which conducts its own TA Set-Aside application round.

Interview 1: Delaware Valley Regional Planning Commission (DVRPC)

- DVRPC conducts a one-hour pre-application cost estimate review with each prospective applicant in its region.
- Maintaining regular contact with project sponsors has been effective in refining cost estimates.
- The wait for customized reimbursement agreements adversely affects project delivery.
- DVRPC limits its minimum award to \$250,000.
- Advertising the TA Set-Aside program results in better quality projects. Municipal leaders tend not to develop and advance projects before they find a funding source, which can result in tight timeframes for TA Set-Aside projects.

Interview 2: Centre County Metropolitan Planning Organization (CCMPO)

- The CCMPO is unique because State College is a relatively urban enclave within PennDOT District 2-0's rural territory.
- Cost estimates tend to become inaccurate when the project is delayed. In many instances, the delay stems from environmental review and right-of-way acquisition.
- Quick and inaccurate cost estimating during the TIP process tends to lead to incorrect cost estimates for TA Set-Aside projects.
- The easiest way to manage TA Set-Aside funds is to add the TA project onto a larger project administered by PennDOT.
- Regular application and award cycles give municipalities time to formulate their funding strategies and project timelines.

Interview 3: PennDOT District 1-0 and the Venango County Regional Planning Commission

- PennDOT District 1-0 is proactive in providing cost estimating assistance and technical guidance during the pre-application phase. Throughout the process, PennDOT District 1-0 serves as a resource to answer questions during the grant writing phase.
- The Venango County Regional Planning Commission works closely with the District Planner to scope projects.
- PennDOT consultants tend to have more experience in the area of cost estimating. Design consultants chosen by the municipality can derail a project.
- If blended funding approaches do not work, bid packages must be separated.
- Reimbursement agreement exhibits are sometimes changed without notifying PennDOT District Offices and Planning Partners.
- PennDOT District 1-0 is conducting a pilot project where design activities for a project are paid through an existing PennDOT open-end design contract.

Interview 4: SEDACOG Metropolitan Planning Organization (SEDACOG MPO)

- SEDACOG promotes PennDOT TA Set-Aside webinars and sends notices to prospective applicants within its region to promote the program.
- SEDACOG partners with local county planning agencies to conduct TA Set-Aside workshops to inform municipal officials of TA program eligibility and requirements.
- SEDACOG offers technical assistance throughout the pre-application process.
- Cost estimates vary by the designer/engineer's familiarity with the PennDOT process.
- In some instances, phasing projects results in more accurate cost estimates.
- SEDACOG has seen many instances of Community Development Block Grant (CDBG), Elm Street funding, and C2P2 funds utilized for design. SEDACOG encourages applicants to use any local match for design, and TA Set-Aside for construction.
- Some sponsors have been able to streamline project delivery by asking PennDOT to include TA Set-Aside funded elements with larger roadway projects already on the TIP.

Interview 5: PennDOT District 3-0

- PennDOT District 3-0 encourages prospective applicants to apply for any eligible funding sources. The District shows them their funding options, which include the TA Set-Aside program.
- During the pre-application PennDOT Connects meeting, the District previews the cost estimate. It is not a line-by-line review of the estimate, but instead a high-level overview based upon the reviewer's familiarity with other projects.
- Reimbursement agreements (municipal) cannot go into standard PennDOT-led projects. ECMS is not designed to sync reimbursement agreements with standard projects. Instead of using the standard template for the project, PennDOT District 3-0 assigned the municipality as the lead instead of PennDOT.
- As a workaround, the District drafted a custom contribution/cooperative agreement where the municipality sends money to PennDOT to pay the contractors.
- ECMS Business Partner (BP) registration and requests to change ECMS administrators, which are initiated by project sponsors, have been challenging and can hold up reimbursement agreements. Sometimes the process works well, but other times there is a communication breakdown between the project sponsor and the BP registration team in PennDOT Central Office.
- ECMS exhibits are tailored to one funding source. A revised Exhibit A could be beneficial for blended funding projects—possibly a separate exhibit for each funding source (e.g. A-1, A-2, etc.).

Interview 6: PennDOT Central Office Planning Division

- One of the best resources for cost estimating is the historical records/data.
- PennDOT Districts that closely track data (i.e., size, costs, dimensions, urban/rural, etc.) tend to have the most accurate cost estimates.
- The “hunger” of contractors and engineers for project work also affects bids.
- Bids may also vary by the judgement of the cost estimator.
- PennDOT pays more attention to revising costs of bigger items.

Interview 7: Pennsylvania Department of Conservation and Natural Resources (DCNR)

- DCNR assists with funding and advancing many TA Set-Aside projects. DCNR representatives even sit on the TA Selection Committee.
- DCNR assists in funding pre-construction activity (i.e., feasibility/master plans, preliminary design, engineering, etc.) for TA Set-Aside projects.
- DCNR will fund 50 percent of costs associated with eligible components.
- Projects that rank highly with DCNR tend to also rank well with PennDOT.
- DCNR does not have complete access to the portal containing individual ECMS access.
- Because PennDOT sometimes fills funding gaps [provides additional funding when low bids come in higher than cost estimates], DCNR is concerned about accidentally “double obligating” because it was not aware of PennDOT’s intent to fill the gap.
- It would be helpful if PennDOT reviewed DCNR’s trail gap and planned trail data prior to planning roadway improvements.

Interview 8: Pennsylvania Department of Community and Economic Development (DCED) and PennDOT Multimodal Transportation Fund

- Both Program Administrators were unaware of any projects that use MTF funds and TA funds in one contract.
- The Commonwealth Financing Authority (CFA), part of DCED, rarely deals with TA Set-Aside projects.
- Funds expended by sponsors count as match after the award announcement for CFA MTFs, while for PennDOT MTFs, this happens upon grant agreement.
- Both MTF types are not advertised as being compatible with TA Set-Aside funds because of differing funding cycles and activation periods.
- The CFA MTF program is not involved with PennDOT Connects.

Other States – Program Profiles and Interview Notes

Michigan

PROGRAM FRAMEWORK:

PROGRAM STRUCTURE: The program is administered by the Michigan Department of Transportation (MDOT) Office of Economic Development. The state uses a competitive selection process, and TAP funds are distributed directly by MDOT. A portion of TAP funding is available through a competitive grant process administered by MPOs in urban areas with populations greater than 200,000.

ELIGIBLE APPLICANTS: County road commissions, cities, villages, regional transportation authorities, transit agencies, state and federal natural resource or public land agencies, and tribal governments.

ITEMS ELIGIBLE FOR FUNDING: Construction only. MDOT will not fund pre-construction activities.

OUTREACH EFFORTS: MDOT has four Grant Coordinators on staff to assist prospective project sponsors with formulating a funding strategy and application.

INSIGHTS FROM INTERVIEW:

Of all the states the project team contacted, Michigan has the most uniquely organized program. Michigan has four Grant Coordinators. These individuals are responsible for working with municipalities and other entities to review their transportation needs and formulate long-term project funding strategies. They help to identify appropriate funding sources and application schedules. Additionally, they provide technical assistance in preparing applications (including TA applications). In addition, unlike most states, which award funds and then proceed to have grant/reimbursement agreements signed, MDOT takes a more long-term approach. When projects are selected, MDOT issues a “Conditional Commitment.” This document states that MDOT conditionally awards the funds to the applicant. After the Conditional Commitment is signed, project sponsors issue and collect bids, where the low bid is selected. Once the low bid is selected, MDOT issues the final grant/reimbursement agreement. If the low bid is higher than

APPLICATION TIMELINE: Applications are accepted year-round; grant decisions are made three times a year for future fiscal years.

PROJECT AWARD MINIMUM: \$200,000

PROJECT AWARD MAXIMUM: No Limit.

MATCH REQUIREMENT: Averages 40 percent on cash construction.

MATCHING POLICIES: Cash match on construction only; grants do not cover acquisition, permitting, design engineering, or construction engineering.

CONTINGENCY POLICIES: MDOT recommends that applicants add 3 percent inflation per year, and 10 percent contingency costs. MDOT will allow a 20 percent contingency cost where appropriate.

SELECTION CRITERIA: Financial factors, public input, project coordination, constructability, maintenance factors, and previous transportation enhancement experience.

the cost estimate submitted as the basis for the Conditional Commitment, MDOT does not provide additional funding to make up the difference.

Virginia

PROGRAM FRAMEWORK:

PROGRAM STRUCTURE: In Virginia, the Transportation Alternatives Program, as administered by the Virginia Department of Transportation (VDOT), focuses on the Transportation Alternatives and Safe Routes to School eligibilities. If a project were to be submitted under the “Boulevards” category, that too would fall under VDOT administration. As stated earlier, the Recreational Trails Program is administered by Virginia’s Department of Conservation and Recreation (DCR) and has a separate application process. There is a sub-apportionment for the Recreational Trails Program which is taken off the top of the state’s total TAP funding allocation. Fifty percent of the remaining funds may be allocated anywhere in the state, but the other 50 percent must be allocated based upon population. Projects must go through a competitive selection process.

ELIGIBLE APPLICANTS: City and county governments, transit agencies, natural resource or public land agencies, schools, tribal governments, and any other local or regional governmental agency with responsibility for or oversight of transportation or recreational trails.

ITEMS ELIGIBLE FOR FUNDING: Preliminary engineering and final design/engineering activities, utility relocations, right-of-way acquisition, and construction.

INSIGHTS FROM INTERVIEW:

VDOT makes it a top priority to inform and educate prospective applicants about all phases of the TA application and administration processes. VDOT conducts one TA Set-Aside Applicant Workshop per year to inform prospective applicants across the Commonwealth about Virginia’s application process, eligible projects, the complexity of administering TA projects, etc. To further assist prospective applicants, VDOT conducts four regional workshops that focus on application preparation and cost estimating. VDOT is also

OUTREACH EFFORTS: VDOT promotes the program on its website, conducts an annual applicant workshop to inform prospective applicants about the TA program, and conducts four regional workshops to assist prospective applicants.

APPLICATION TIMELINE: Pre-applications are to be submitted by July 1st; final applications are to be submitted by October 1st of each year.

PROJECT AWARD MINIMUM: No award minimum, but historically projects average \$250,000.

PROJECT AWARD MAXIMUM: \$1,000,000

MATCH REQUIREMENT: 20 percent of project costs.

MATCHING POLICIES: The state accepts in-kind match for donation of property, materials, and services.

CONTINGENCY POLICIES: VDOT advises that contingency costs should be approximately 10 percent of construction costs.

SELECTION CRITERIA: VDOT is more likely to select projects with a clear project concept, adequate funding/resources, positive effects on the transportation network, sponsors that have demonstrated experience administering Federal-Aid projects, and projects that are ready to proceed to construction.

currently designing a project delivery qualifications program intended for employees of any entity using VDOT as a federal funding passthrough. It will be mandatory for at least one full-time employee belonging to the project team. The program will consist of seven online courses and classes at an annual conference. VDOT expects the qualifications program to improve project delivery efficiency and cost-effectiveness.

Ohio

PROGRAM FRAMEWORK:

PROGRAM STRUCTURE: Funds for the Ohio Department of Transportation (ODOT) TA Set-Aside program are divided between areas within an MPO and areas outside of an MPO. MPOs use their own selection process to distribute funds. For funds distributed to areas outside of an MPO, the state uses a competitive statewide selection process.

ELIGIBLE APPLICANTS: Local government entities (cities, villages, townships, etc.) or natural resource or public land agencies. ODOT does not allow school districts or transit agencies to apply for Transportation Alternatives funding. School districts may, however, apply for Safe Routes to School funds.

ITEMS ELIGIBLE FOR FUNDING: Construction costs.

OUTREACH EFFORTS: Each year, ODOT sponsors Show Me the Money, a half-day public workshop for interested parties (municipalities, counties, etc.) that reviews available funding sources (including TA Set-Aside). Each program manager, including the TA Program Manager, explains the attributes of his or her respective program. A recording of the program is made available on ODOT's website for anyone unable to attend. ODOT also sends out a mass e-mail to local governments notifying them of upcoming application rounds.

APPLICATION TIMELINE: Ohio's application process consists of two parts. First, applicants must submit a Letter of Interest (LOI) to the TAP Program

Manager. The Program Manager submits LOIs to ODOT District TAP Coordinators for review to determine project eligibility. After all project components are deemed eligible, project sponsors are provided the full application.

PROJECT AWARD MINIMUM: No minimum.

PROJECT AWARD MAXIMUM: No maximum.

MATCH REQUIREMENT: There is typically a 20 percent required match, but due to abundant Toll Credit Funds, ODOT has temporarily reduced the match requirement to 5 percent.

MATCHING POLICIES: No in-kind match is permitted.

CONTINGENCY POLICIES: ODOT does not allow for contingency costs to be included in the award. Almost all submitted cost estimates include contingency costs, but contingency costs are removed, and awards are based only on construction, inspection, and inflation (3-4 percent per year) costs.

SELECTION CRITERIA: The project must show a direct relationship to surface transportation, demonstrate a clear public benefit, have abundant local support, show a safety benefit, have at least one of the eligible activities, and have the local match secured. The applicant must demonstrate its commitment to maintaining the project. The applicant must also have no record of maintenance issues with past projects.

INSIGHTS FROM INTERVIEW:

ODOT conducts a two-step application process. First, prospective applicants must submit a LOI outlining components of the proposed project, including a preliminary cost estimate. There is no set format for preliminary cost estimates in the LOI. The Transportation Alternatives Project Manager at the Central Office checks the LOI to confirm that all components are eligible for funding. If the cost estimate is not adequately detailed, ODOT sends it back to the applicant to redo. The Central Office may also send it to the respective district office to provide the prospective applicant with cost-estimating assistance.

Georgia

PROGRAM FRAMEWORK:

PROGRAM STRUCTURE: Georgia Department of Transportation (GDOT) runs a state competitive selection process for areas with a population of 5,001 to 200,000, and areas with populations below 5,000. MPOs with urbanized areas (UZAs) exceeding 200,000 are designated as Transportation Management Areas (TMAs). Potential project sponsors within the TMAs must seek TA funding through their local MPO's designated process.

ELIGIBLE APPLICANTS: Local governments, regional transportation authorities, transit agencies, natural resources or public lands agencies, school districts, educational agencies, schools, tribal governments, and any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails.

ITEMS ELIGIBLE FOR FUNDING: Funds may be used for any project phase, including preliminary engineering, right-of-way acquisition, or construction. Funding is approved for preliminary engineering, utility relocation, or right-of-way acquisition only when the applicant can demonstrate that the TA funds, combined with other existing resources, will result in a completed and fully funded project.

OUTREACH EFFORTS: The competitive state program is promoted on GDOT's website, and GDOT notifies MPOs of the upcoming funding

round. Large MPOs conduct their own promotion processes.

APPLICATION TIMELINE: The application round opens once a year, typically in summer. GDOT aims to keep a consistent application cycle.

PROJECT AWARD MINIMUM: \$1,000,000

PROJECT AWARD MAXIMUM: Pool limit for that cycle.

MATCH REQUIREMENT: 20 percent

MATCHING POLICIES: At least 20 percent local cash match ("hard match") is required, but providing an additional match is encouraged. "Soft match," such as provision of pre-construction activities, is not accepted as the required match.

CONTINGENCY POLICIES: Applications must show a 10 percent contingency fee for the project. Applicants may not deviate from the 10 percent figure.

SELECTION CRITERIA: The project must demonstrate financial feasibility. The applicant must demonstrate that it can provide the required matching funds in cash, complete the project, and plan for its ongoing maintenance of required items. Applicants must also indemnify GDOT of liability for the project or its maintenance and certify that there are no known or foreseeable legal impediments to the project.

INSIGHTS FROM INTERVIEW:

GDOT, like VDOT, emphasizes educating the individuals involved with local project delivery. GDOT requires at least one full-time employee of each project team to be Local Administered Project (LAP)-certified. This certification, which requires recertification every three years, is designed to educate local officials and project team staff about project letting, project budgeting, project delivery, right-of-way acquisition, etc. If a member of the project team is not LAP-certified, GDOT will administer the project and charge the project sponsor for administration services. GDOT has found that this mandatory certification, which can be earned for the specific project or as a stand-alone certification, tends to assist in efficient and cost-effective project delivery. LAP certification materials can be found at the following link:

<http://www.dot.ga.gov/PS/Local/LAP#tab-1>

For bidding, GDOT utilizes AASHTOWare Project Bids software. This software offers a secure electronic environment for submitting bids. To assist prospective applicants with cost-estimating, GDOT operates a public Item Mean Summary portal that gives cost estimators the mean and weighted average cost of common bid items at specified time intervals. This public portal enables cost estimators to view the mean item costs prior to submitting cost estimates for TA applications. The portal can be accessed at the link below:

https://gdotbiext.dot.ga.gov/analytics/saw.dll?Dashboard&PortalPath=/shared/External/_portal/Item%20Mean%20Summary&Page=page%201&Syndicate=true&anon=1

Illinois

PROGRAM FRAMEWORK:

PROGRAM STRUCTURE: The TA program is run through the Illinois Bureau of Programming and regional MPOs where appropriate. The state uses a competitive selection process and funds are distributed directly by the Illinois Transportation Enhancement Program (ITEP) office.

ELIGIBLE APPLICANTS: Local governments, regional transportation authorities, transit agencies, natural resource or public land agencies, school districts, local education agencies, schools, tribal governments, and any other local or regional governmental entity with responsibility for oversight of transportation of recreational trails.

ITEMS ELIGIBLE FOR FUNDING: Funds can be utilized for preliminary engineering phase II, utility relocation, right-of-way acquisition, or construction. Beginning in 2019, ITEP will not fund

preliminary engineering phase I, in an effort to receive projects applications that are further along in the planning process.

OUTREACH EFFORTS: Illinois Department of Transportation (IDOT) advertises for applications in areas of the state with populations of less than 200,000 residents. IDOT Central Office also conducts workshops with District Office personnel to make them aware of available funding sources, including TA. District Offices then disseminate the information to MPOs. Large MPOs (with populations of 200,000 or more) advertise for their specific application cycle.

APPLICATION TIMELINE: IDOT conducts a two-year application cycle. Applications are accepted through the fall, application review and selection take place in the winter and spring, and award

announcements are made in the spring of even numbered years.

PROJECT AWARD MINIMUM: None

PROJECT AWARD MAXIMUM: \$2,000,000

MATCH REQUIREMENT: 20 percent local match is required for most eligible activities.

MATCHING POLICIES: For some items, such as street lighting co-located with a transportation alternative facility or right-of-way acquisition, a higher 50/50 match requirement exists. Match credit can also be obtained through the Local Agency Federal Flexible Match (FFM) Program, which allows local agencies to apply for credits to be used as part of their local match against the construction or construction engineering portion of the project. IDOT considers the municipality's

financial state when reviewing FFM Program requests.

CONTINGENCY POLICIES: Contingency costs are not funded by the ITEP program, but these costs must be defined and estimated within the application. IDOT does not have a written policy concerning contingency amounts.

SELECTION CRITERIA: Project review criteria include: eligibility, strength of transportation relationship, category intent, benefits and accessibility to the public, project support and local commitment, connectivity to existing facilities, project sponsor investment, project sponsor capacity, project readiness, application completeness, planning consistency, cost effectiveness, and planning and coordination.

INSIGHTS FROM INTERVIEW:

Illinois has opted to name its TA program ITEP (Illinois Transportation Enhancement Program). Like Pennsylvania, IDOT currently runs a two-year cycle for the ITEP. IDOT has elected to fund preliminary engineering phase II activities, utility relocations, construction engineering, and construction at a match level of 20 percent. Other items, such as right-of-way acquisition, have a higher match threshold of 50 percent. IDOT provides sample cost estimates by project type in Appendix 7 of its ITEP Program Guidelines Manual (see Appendix 1 of this report). By placing these sample cost estimates directly within the ITEP Program Guidelines Manual, cost estimators have a better sense of cost estimate format prior to application development. The ITEP Coordinator has found that providing the sample cost estimates reduces the need for Central and District Office technical assistance in preparing cost estimates.

North Carolina

PROGRAM FRAMEWORK:

PROGRAM STRUCTURE: The program is run through a state-level local programs management office. The state uses a mix of competitive and non-competitive selection processes, and funds are distributed directly by the North Carolina Board of Transportation in accordance with departmental funding allocation procedures.

ELIGIBLE APPLICANTS: Municipalities, counties, state transportation authorities, school districts, local education agencies, and schools, tribal governments, non-profit organizations that oversee the administration of local transportation safety programs, and other local and regional governmental entities with responsibility for

oversight of transportation and recreational trails (except MPOs and state agencies).

ITEMS ELIGIBLE FOR FUNDING: Any items allowed by the federal regulations (e.g., design, engineering, right-of-way, utilities, construction). When pre-construction activities are funded, the project implementation timeline may stretch out, but the North Carolina Department of Transportation's (NCDOT's) Highway Divisions assist smaller communities that do not have the technical capacity to prepare the federal selection materials.

OUTREACH EFFORTS: Calls for all transportation projects are submitted every two years through NCDOT's local planning partners.

APPLICATION TIMELINE: Two-year cycles.

INSIGHTS FROM INTERVIEW:

The North Carolina Department of Transportation (NCDOT) has a two-year grant cycle for TA Set-Aside projects. It begins when NCDOT issues a call for all transportation projects. The projects are coordinated and submitted through the local MPOs and RPOs. NCDOT sorts projects based on eligibility for potential federal and state funding programs. Projects deemed eligible for the TA Set-Aside program are evaluated. NCDOT Division Engineers and MPOs/RPOs review and assign points to potential TA Set-Aside projects. NCDOT prioritizes the projects and provides its list to the Board of Transportation for review and final decision.

Cost estimation has been a struggle for all NCDOT local projects. NCDOT is in the final stages of completing a custom cost automation tool. It is an Excel-based tool that draws real-time bid data from NCDOT's main project engineering system. The system allows users to input information/variables on the project including region, community type (urban, suburban, rural), type of project, etc., and then provides the user with a cost estimate based on average pricing from real-time bid analysis. NCDOT will accept cost estimates from the new system or third-party estimates.

Additionally, to account for potential cost overruns, NCDOT does not obligate 100 percent of TA Set-Aside funds each round. If the bid comes in less than 25 percent over the cost estimate, NCDOT can amend the local agreement and the cost overrun is split 80/20. However, if the bid is 25 percent or more above the

PROJECT AWARD MINIMUM: \$100,000

PROJECT AWARD MAXIMUM: No maximum

MATCH REQUIREMENT: 20 percent

MATCHING POLICIES: Other state and federal funds cannot be used as match.

CONTINGENCY POLICIES: NCDOT follows FHWA guidance, which recommends a contingency estimate of between 5 percent and 10 percent.[‡]

SELECTION CRITERIA: Likelihood of success, collaboration with regional or municipal partners, project need, reasonableness of cost, comprehensive strategy, experience, equity, fit/consistency with other local or regional plans and initiatives.

‡

https://www.fhwa.dot.gov/majorprojects/cost_estimating/guidance.cfm

cost estimate, NCDOT works with the project sponsor to reduce the scope or seek approval from the Board of Transportation to move forward with the project.

NCDOT does not currently blend TA Set-Aside funding with other federal or state funding sources.

Cost Estimating

Challenge

In recent years, PennDOT has struggled to obtain precise cost estimates from applicants seeking public funding. For public funding programs that require money to be obligated for future fiscal years, inaccurate cost estimates result in inefficient obligation of funds. According to interviewed PennDOT District Offices and MPOs/RPOs, the source of cost estimates varies greatly by applicant. Using ECMS cost data collected for TA Set-Aside projects, quantitative analysis by the project team shows that some construction materials are prone to variances in cost estimates. Like Pennsylvania, other state departments of transportation are experiencing similar difficulties with cost estimating. In response, these states have implemented solutions that enable them to collect more precise cost estimates.

Analysis

To determine any areas of common inaccuracy within TA Set-Aside cost estimates, the project team undertook quantitative analysis of all bid items from bid TAP/TA projects from 2013–2018. The data the project team was provided includes item count, minimum estimated price, and maximum estimated price. As a first measure of cost estimate variance, the project team analyzed items with extreme outlier variation unit price. The five items selected have both high standard deviations and high item counts, as shown in the following table. With these items, the minimum–maximum range in unit price is also notably wide. This analysis did not reveal a definitive statistical trend to explain cost estimate variances. However, for items with noticeably high unit counts and discrepancies in minimum and maximum estimated pricing, PennDOT could conduct a yearly analysis to inform applicants of appropriate unit costs for items with notable variability. Selected items with high cost variability could also be included on the standardized cost item guidance.

BID ITEM OUTLIER ANALYSIS

Item Number	Item Description	Count	Average	Minimum	Maximum	Standard Deviation
2010001	Clearing and Grubbing	75	\$22,432	\$500	\$200,000	\$34,505
6080001	Mobilization	150	\$44,891	\$2,000	\$363,000	\$57,427
90000003	24" Green Hot Thermoplastic Pavement Markings	74	\$6,122	\$1	\$330,000	\$38,452
90000005	Bridge Paint Inspection Kit	53	\$15,409	\$4	\$742,000	\$101,753
90000006	Pocket Repair	48	\$20,421	\$4	\$748,000	\$107,554

Source: PennDOT ECMS; Delta analysis

Additionally, the project team evaluated cost variances of entire projects bid during the same 2013–2018 timeframe. The 10 projects listed in the following table had the greatest percentage of discrepancy

between programmed and low bid amounts. These factors were chosen because the low bid represents the actual project cost, and the programmed amount at project let represents a refined version of the original cost estimate. Again, there was not a definitive statistical trend in the variation of cost estimates.

PROJECT COST VARIANCE ANALYSIS: PERCENTAGE

County	Let Date	Project Title	Award Year	TAP/TE/SRTS Award Amount	PS&E Estimate	Programmed @ Project Let	Low Bid	Low Bid - Programmed Amount	Percent Difference
Lancaster	3/27/2013	NWRT Trail Services Bldg				\$568,000.00	\$1,932,210.00	\$1,364,210.00	-71%
Blair	4/24/2014	Martinsburg Streetscape	2013	\$150,481.00	\$341,673.00	\$150,481.00	\$448,000.00	-\$297,519.00	-66%
Cambria	5/7/2015	Ebensburg Sidewalk Proj	2014	\$500,000.00	\$993,907.00	\$500,000.00	\$1,282,726.79	-\$782,726.79	-61%
Mercer	10/24/2014	Grove City Stscape Phs 2	2013	\$102,413.00	\$247,963.00	\$102,413.00	\$224,469.65	-\$122,056.65	-54%
Lebanon	7/2/2015	LVRT Cornwall Trailhead			\$295,021.48	\$160,000.00	\$327,486.50	-\$167,486.50	-51%
Montgomery	1/11/2018	ElkinsPkw Comm Dist Stscp	2014	\$1,000,000.00	\$1,033,504.07	\$1,000,000.00	\$1,854,321.00	-\$854,321.00	-46%
Susquehanna	7/27/2017	D and H Rail Trail PH II	2014	\$1,000,000.00	\$1,988,982.35	\$871,260.00	\$1,612,936.05	-\$741,676.05	-46%
Westmoreland	8/25/2016	Irwin Phase 2- PA Avenue	2014	\$221,900.00	\$419,699.00	\$221,900.00	\$397,651.95	-\$175,751.95	-44%
Blair	4/26/2018	12th Street Pedestrian Bridge	2016	\$310,100.00	\$599,556.00	\$460,000.00	\$818,000.00	-\$358,000.00	-44%
Susquehanna	7/26/2018	Montrose Borough So Main	2014	\$189,000.00	\$211,471.00	\$189,000.00	\$335,466.80	-\$146,466.80	-44%

Source: PennDOT ECMS; Delta analysis

After reviewing the data, there do not appear to be identifiable quantitative or geographic factors that determine variances in cost estimates. Two qualitative factors not present in the data are the readiness of the project and the familiarity of the original estimator with state and federal policies. Based upon interviews with PennDOT District Office and Planning Partner representatives across Pennsylvania, a wide variety of firms are selected to prepare cost estimates. Therefore, the issue with cost estimating may be due to the selection of firms unfamiliar with PennDOT processes and procedures.

Findings from PA Projects

According to interviews with PennDOT District Offices and Planning Partners, cost estimating is also a persistent issue at the District Office and Planning Partner level. As one interviewee phrased it, project cost estimates can be derived from “experienced consultants or borough employees drafting estimates on the back of a napkin.” To further complicate matters, District Offices and Planning Partners offer differing amounts of technical assistance and review for cost estimates based upon internal practices and workload.

The project team used experiences from the City Avenue, Atherton Street, Allegheny Boulevard, and SR 0011/0487 projects to analyze issues related to cost estimating. During the interviews with representatives from PennDOT District Offices and Planning Partners, common themes emerged related to sources of cost overrun. The issue, according to interviewees, is often consultant selection. Engineering consultants with an extensive knowledge of PennDOT design standards tend to provide more precise cost estimates. Engineering consultants or municipal officials lacking this background tend to price projects using baselines established for municipalities or counties that undertake the work in-house. Because the TA Set-Aside program is subject to federal reporting and compliance, actual costs are typically higher than projects that use municipal or county cost baselines.

To either improve or dispel cost estimates that are inaccurate from conception, PennDOT District Offices and Planning Partners offer various degrees of technical assistance prior to the TA Set-Aside application submission deadline. Below is a brief overview of the pre-application assistance offered by interviewed PennDOT District Offices:

- **PENNDOT DISTRICT 1-0:** Conducts pre-application PennDOT Connects meetings where ineligible costs are removed from cost estimates and project scopes; offers technical assistance throughout the application process.
- **PENNDOT DISTRICT 3-0:** Typically conducts one cost estimate review before application submission; technical assistance is offered when available.
- **DVRPC/PENNDOT DISTRICT 6-0:** Provides high-level cost-per-mile cost estimating formulas to potential applicants based on type of improvement (e.g., trails); cost estimates are reviewed in a one-hour pre-application meeting per application.

After cost estimates are reviewed by the respective PennDOT District Office, potential applicants typically defer to their respective Planning Partner for additional guidance. It is at this point that many projects are rescoped to include either multiple project phases or fewer project components. After projects have been rescoped and cost estimates refined, they are included in the TA Set-Aside and submitted for the MPO or Statewide Selection Process.

In summary, interviewed representatives of PennDOT District Offices and Planning Partners point to the following issues and observations concerning cost estimating:

1. Not all applicants use the services of qualified engineers familiar with PennDOT design standards to prepare cost estimates.
2. Some cost estimates are hastily prepared to meet application deadlines.
3. Inexperienced cost estimators often forget to price projects to federal baselines, not municipal and county baselines.
4. PennDOT does not currently publish a comprehensive cost-estimating document.
5. Cost overruns are common when a project is delayed.
6. Seasonality affects cost estimates due to supply and demand. Cost estimates received in the winter months typically are lower because there is not as much work available for contractors, so their pricing becomes more competitive.
7. The extent of technical assistance that PennDOT District Offices and Planning Partners can provide during the pre-application phase varies according to the workload of the specific office or organization.
8. By simply covering funding gaps caused by cost overruns, PennDOT is perpetuating the cost estimating issue.

The individuals interviewed offered various solutions to the persistent issue of inaccurate cost estimates. A common suggestion was mandating that applicants for TA Set-Aside funds use the preliminary design, engineering, and cost estimating services of a PennDOT-approved engineer. Expanding upon this idea, another suggestion included allowing sponsors to utilize PennDOT open-end design contracts for preliminary design and engineering of TA Set-Aside projects. The rationale behind steering applicants toward PennDOT design and engineering consultants is that cost estimates would be more precise from the beginning. Another common suggestion for more precise cost estimating is PennDOT Central Office or District Offices providing applicants with additional guidance, via guidance manuals or seminars/workshops, to educate cost estimators on TA Set-Aside program cost estimating best practices. By utilizing either strategy, interviewees feel that cost estimates would improve in coming funding cycles.

Other States Cost Estimate Findings

Much like Pennsylvania, other state departments of transportation are grappling with the effects of inaccurate cost estimates. The sections below outline the processes other states have implemented to improve cost estimates.

Application Process

The Commonwealth of Virginia has taken steps to ensure that cost estimates received meet the state's quality standards. VDOT uses a two-tier application process that includes a Pre-Application and Final Application. This affords VDOT additional control over which projects are submitted for the Final Application. The Pre-Application phase is also used to screen scopes and cost estimates. VDOT District Offices provide technical and cost estimating assistance to applicants prior to the submission of the Pre-Application to the VDOT Central Office. If VDOT Central Office is satisfied with the Pre-Application

submitted by the applicant, the project scope is then permanently locked. By locking the scope during the Pre-Application process, there is a reduced likelihood of cost overruns due to “scope creep.” The cost estimates, however, are free to be altered to reflect current pricing trends. To further control costs, VDOT requires applicants to submit any RFPs/RFQs/invitations to bid for TA Set-Aside-funded projects to VDOT for review before they are released. Throughout its entire TA program process, VDOT takes an active supervisory role in controlling costs and cost estimates.

Estimating Tools and Assistance

In the State of Michigan, MDOT aims to oversee cost estimates at every step of the TA Set-Aside process. Michigan has been proactive in providing cost estimators with resources that ensure cost estimates are developed to MDOT standards. MDOT currently provides project sponsors access to the Michigan Engineers’ Resource Library (MERL), a software program that gives the average current price of construction components by county. MERL, which can be assessed by cost estimators and municipalities by requesting credentials, is a system that is available for cost estimators to reference. The program, which is updated frequently, allows local agencies to review average component prices specific to their county prior to submitting their TA Set-Aside application. GDOT uses similar software that retrieves item price history by time period. Unlike Michigan’s system, GDOT’s system is open to the general public. IDOT has taken a different approach for its ITEP wherein the ITEP Coordinator has inserted sample cost estimates for different types of TA projects directly in the ITEP Guidance Manual. Placing the sample cost estimates directly within the Guidance Manual gives cost estimators a cost estimate format early in the process.

Obligation and Bidding

Michigan provides awardees of TA Set-Aside funds a Conditional Commitment before developing a reimbursement/grant agreement. The Conditional Commitment, which includes items such as project scope, conditional amount of funding, special conditions, etc., is a legal document that demonstrates Michigan’s commitment to funding a project. This system of Conditional Commitments gives project sponsors adequate time to secure any other funding needed to advance a project. Due to this unique practice, Michigan’s allocation process looks like the following:



If a low bid comes in higher than the original cost estimate, the sponsor is responsible for covering the cost overage. If the low bid comes in lower than the cost estimate, MDOT will reduce the match requirement by the same amount. This incentivizes applicants to prepare thorough and accurate cost estimates early in the process.

To make the system of Conditional Commitments work, MDOT over-commits TA Set-Aside funds each year. This over-commitment can total as much as 250 percent per fiscal year. The Conditional Commitment process ensures full obligation and the timely completion of projects. Appendix 2 provides examples of MDOT Grant Summaries from fully awarded, fully awarded but partially delayed, and Conditional Commitment phase TA Set-Aside projects. It should be noted that Grant Summary #2015056 shows a project in which a Conditional Commitment was signed in 2015 and the full grant agreement was

signed in 2019. The timeframe of this project, which is not uncommon in Michigan, speaks to MDOT's long-term approach with TA obligations.

Cost Estimating Recommendations

Recommendation C1: Utilize the ECMS Item Price History Database to Assist with Cost Estimating.

All states interviewed cited cost estimating as a challenge to their program. Several provide cost estimate tools, guidance, and assistance for potential sponsors. Additionally, PennDOT District Office and MPO/RPO representatives expressed the need for more technical guidance and cost estimating assistance from PennDOT Central Office. The following steps would provide cost estimate assistance to potential applicants in a pragmatic and cost-effective manner:

1. Incorporate instructions on how to use the existing ECMS Master Items and Item Price History database into program guidelines.
2. Develop common bid item and prevailing wage rate sheet to provide additional guidance to third-party estimators.
3. Provide sample cost estimates in the TA Set-Aside Program Guidance Manual.

ECMS has the function to view average unit cost by region for a specified time period. Instructions on where to find the information and how to use the Item Price History function should be included in the TA Set-Aside Program Guidance Manual. The screen shot below demonstrates the ECMS ability to provide a summary of the cost for low bids for grubbing and clearing in District 01 from 2017 through 2019.

The screenshot displays the ECMS Item Price History Results page. The browser address bar shows the URL: <https://www.ecms.penndot.gov/ECMS/SVITMPriceHistory?action=showResults>. The page header includes the Pennsylvania Department of Transportation logo, the ECMS logo, and navigation links for home, site map, and help. The main navigation bar lists: Business Partner, Solicitation, Engineering Agreements, Construction Projects, References, and Bidding Help. The page title is "ITEM PRICE HISTORY RESULTS". Below the title, there is a table with the following data:

District	# of Occurrences	Aver. Unit Price/ Quantity	Min. Unit Price/ Quantity	Max. Unit Price/ Quantity	Min. Quantity/ Unit Price	Max. Quantity/ Unit Price
0201-0001 - CLEARING AND GRUBBING						
01	37	\$12,020.2543 1.000 LS	\$500.0000 1.000 LS	\$75,000.0000 1.000 LS	1.000 LS \$3,000.0000	1.000 LS \$3,000.0000

At the bottom of the page, there is a message: "You are currently logged in as Anonymous. If this is incorrect, please [login](#). Your session will timeout in 28 minutes." The footer includes release and session size information, copyright notice for PennDOT, and the date and time of the screenshot: "Wed Jul 24 15:10:54 EDT 2019".

The Michigan Department of Transportation, Georgia Department of Transportation, Virginia Department of Transportation, and Illinois Department of Transportation have all experienced success in providing a similar online public portal or data sheet repository.

1. Michigan Engineers' Resource Library (Michigan): <https://merl.michiganltap.org/>
2. GDOT Item Mean Summary (Georgia): <https://gdotbiext.dot.ga.gov/analytics/saw.dll?Dashboard>
3. VDOT Construction Management Tools (Virginia): <http://www.virginiadot.org/business/const/cmp.asp>
4. IDOT Consultant Resources (Illinois): <http://www.idot.illinois.gov/doing-business/procurements/engineering-architectural-professional-services/consultants-resources/>

Additionally, the North Carolina DOT recently develop a software tool that uses real-time bid data to develop a project cost estimate based on predetermined variables.

To complement the ECMS data, PennDOT should prepare and distribute a common bid item and prevailing wage rate sheet to provide a quick reference and baseline for third-party estimators. The document could be used for cost estimating beyond the TA Set-Aside program. The Illinois Department of Transportation goes a step further and provides sample cost estimates by TA project type directly in its Program Guidance Manual (See Appendix 1). The approach gives Illinois cost estimators a sense of how to format cost estimates early in the process.

Recommendation C2: Expand the PennDOT Connects Initial Planning Meeting to Include Detailed Cost Estimate Review and Education.

Correcting inaccurate cost estimates early in the TA process tends to result in more precise funding obligations. Inaccurate cost estimates submitted with applications slow down the award process by requiring additional verification, or by taking otherwise suitable TA Set-Aside projects out of funding consideration due to lower rankings. The project team recommends implementing a robust cost estimate review requirement to the existing PennDOT Connects Project Initiation process.

During this initial cost estimate review, applicants would be responsible for providing a preliminary cost estimate. District Offices and Planning Partners would review the initial estimate against average unit prices and prevailing wage rates from the PennDOT Item Price History database and Bid Item Guidance Sheet. Discrepancies would be noted, and the local sponsor would be advised to revise the cost estimate.

Recommendation C3: Pilot the Use of PennDOT Open-End Design Contracts by Project Sponsors for Preliminary Design and Engineering; Expand Use of the Method if Successful.

Other states, PennDOT District Offices, and Planning Partners cite consultants with limited federal and state experience as a source of inaccurate cost estimates. Allowing local sponsors to piggyback on PennDOT open-ended design contracts would guarantee access to firms familiar with state and federal policies.

PennDOT District 1-0 is currently proposing a pilot project in which project design would be performed through an existing PennDOT open-end design contract. This would ensure that preliminary design and

engineering is conducted by a qualified firm that is familiar with PennDOT standards and specifications. If PennDOT District 1-0 elects to proceed with such a pilot project, and the results prove this method to be successful, PennDOT should consider statewide implementation.

Recommendation C4: Implement a Conditional Award Commitment with Low-Bid Selection Prior to the Final Reimbursement Agreement.

In its current process, bidding in the Pennsylvania TA Set-Aside process cannot occur until the reimbursement agreement has been executed. If the bids are higher than the cost estimate submitted during the application process, PennDOT is left with a dilemma: provide additional funding, have the sponsor find additional funds, shrink the scope of the project, or cancel/delay the project. This process can affect PennDOT's ability to fully obligate funds.

A system of "Conditional Commitments" would allow bidding before the final reimbursement agreement is executed. The low bid cost would be known and the scope and/or budget could be adjusted before final commitment of funds. MDOT uses Conditional Commitments (See Appendix 2) and has found the strategy useful in preventing any procedural mistakes during the bidding process. If the low bid comes in higher than the cost estimate used for the Conditional Commitment, MDOT does not make up the difference, which incentivizes more precise cost estimates. If the low bid comes in lower than the cost estimate used for the Conditional Commitment, MDOT makes a proportionate reduction in the amount of required local match.

Blended Funding

Challenge

To fill funding gaps for projects, project sponsors often seek funding from multiple sources to execute a project. There are, however, issues when combining funds from differing local, state, and federal sources. In many instances, differing match requirements make a blend of funding sources incompatible for a particular project or project phase (e.g., DCNR C2P2 funds and CFA MTF funds). In other instances, differences in respective reimbursement agreements make the reimbursement process too complex to administer. This problem is magnified when sponsors attempt to blend federal and state funding sources.

Findings from Case Studies

The project team reviewed four projects with multiple funding sources: City Avenue, Atherton Street, Allegheny Boulevard, and SR 0011/048. These projects present a great diversity of geography, scope, cost, and funding sources. Following are brief profiles of each project.

City Avenue (Philadelphia/Montgomery Counties)

PENNDOT DISTRICT: 6-0

PLANNING PARTNER: DVRPC MPO

SPONSOR: City Avenue Special Services District

YEAR: 2018

TOTAL TA SET-ASIDE FUNDING: \$986,715

FUNDING SOURCES: TA Set-Aside Funds, PennDOT MTF, CFA MTF, and local funds.

PROJECT DESCRIPTION: Installation of new pedestrian lighting from 52nd Street to Lapsley Lane, in the City of Philadelphia and Lower Merion Township, Montgomery County.

PROJECT LOCATION: The project site is located from 52nd Street to Lapsley Lane in the City of Philadelphia and Lower Merion Township, Montgomery County.

PROJECT CONTRACTING: Broken into multiple phases for each funding source.

Atherton St. Pedestrian & Streetscape Improvements (Centre County)

PENNDOT DISTRICT: 2-0

PLANNING PARTNER: Centre County MPO

SPONSOR: Borough of State College

YEAR: 2018

TOTAL TA SET-ASIDE FUNDING: \$935,000

FUNDING SOURCES: TA Set-Aside funds, TIP funds, and private funds.

PROJECT DESCRIPTION: The project will improve pedestrian safety based on recommendations of the 2013 State College Downtown Master Plan. It includes sidewalk improvements, pedestrian fencing, streetlights, street furniture, and landscape features for traffic calming.

PROJECT LOCATION: Along Atherton Street (SR3014) from the Beaver Avenue (SR26) intersection to Railroad Avenue. All work will occur behind the existing curb line.

PROJECT CONTRACTING: Broken into phases by project partner; three partners, three separate project phases.

Allegheny Boulevard Multi-Use Trail Project (Venango County)

PENNDOT DISTRICT: 1-0

PLANNING PARTNER: Northwest RPO

SPONSOR: Venango County

YEAR: 2018

TOTAL TA SET-ASIDE FUNDING: \$1,000,000

FUNDING SOURCES: TA Set-Aside and TIP funds.

PROJECT DESCRIPTION: Construction of a multi-use trail along the Route 8/US 62 corridor in coordination with a PennDOT roadway safety project.

PROJECT LOCATION: Route 8/US 62 corridor.

PROJECT CONTRACTING: Multiple contracts.

SR 0011/0487 Pedestrian Improvements (Columbia County)

PENNDOT DISTRICT: 3-0

PLANNING PARTNER: SEDA-COG MPO

SPONSOR: Town of Bloomsburg

YEAR: 2018

TOTAL TA SET-ASIDE FUNDING: \$1,113,350

FUNDING SOURCES: TA Set-Aside funds, TIP funds, and local funds.

PROJECT DESCRIPTION: The improvements will repair deteriorated sidewalk, install new sidewalk in areas where sidewalk gaps exist, and install new street lighting on the northern end of the project from 7th Street to 3rd Street.

PROJECT CONTRACTING: Three projects; three different design teams; one let.

Case Study Overview

During interviews with representatives from PennDOT District Offices and MPOs/RPOs, most individuals expressed frustration with the complexity of blending funding sources. Most issues stem from the following six perceptions:

1. Incompatibility of reimbursement agreements between state and local, state and state, or state and federal funding sources.
2. Delay caused by developing customized reimbursement agreements.
3. Lack of funding sources for preliminary design, engineering, and right-of-way acquisition expenses.
4. Difficulty combining TA Set-Aside funds with other state funding sources.
5. Lack of project sponsor experience to coordinate funding strategies and administer complex projects.
6. Complexity of utilizing ECMS for one contract with multiple funding sources and reimbursement agreements.

The single biggest source of issues, according to interviewees, is the incompatibility of reimbursement agreements for local, state, and federal funds. Reimbursement agreements are drafted as separate legal documents for each funding source. Separate agreements increase project management complexity and can delay the start of a project if one agreement is not executed. ECMS, according to interviewed individuals, cannot easily accept reimbursement agreements in this segmented fashion. Additionally, custom reimbursement agreements that incorporate more than one funding source can take an excessive amount of time to complete (one year according to interviewees). As a workaround, some PennDOT District Offices have made it a best practice to simply phase projects, with each phase centered around a separate funding source.

Pennsylvania's Transportation Alternatives program requires pre-construction activities (i.e., preliminary design, engineering, right-of-way acquisition) to be funded by the project sponsor. Therefore, many sponsors seek alternative funding sources to cover those costs. For trail projects, DCNR funds 50 percent of preliminary design, engineering, and right-of-way acquisition costs through its C2P2 grants.

Many state and federal funding sources that could, in theory, assist in project advancement, are deemed too difficult to blend as shown in the matrix below.

TA Set-Aside Funding Compatibility Matrix

State Sources	
DCNR C2P2	Compatible: May be used for preliminary design, engineering, and right-of-way acquisition for qualifying TA projects.
DCNR RTP	Not Compatible.
CFA MTF	Compatible: Eligible for match waiver in some instances, but requires increased recordkeeping and has additional compliance requirements.
PennDOT MTF	Compatible: However, TA Set-Aside cannot be used as match for the PennDOT MTF program.
Redevelopment Assistance Capital Program (RACP)	Compatible: But not easy to use under one contract.
TIP	Compatible: But not easy to use under one contract.
Federal Source	
Congestion Mitigation and Air Quality Program (CMAQ)	Compatible: May be used for preliminary design, engineering, and right-of-way acquisition for qualifying TA projects.

Findings from Other States

TA Program Managers from other states acknowledged issues with blended funding similar to Pennsylvania's experience. Due to blended funding issues arising, other state departments of transportation have created processes and procedures to assist with blended funding approaches, summarized below. North Carolina has not done a blended funding project and currently does not support the process but may do so in the future.

Grant Coordinators

The State of Michigan has been proactive in transforming its TA Set-Aside program to more effectively handle issues of blended funding. To adequately prepare potential project sponsors, beginning around 2006-2008, MDOT deployed four Grant Coordinators to assist potential project sponsors (i.e., county road commissions, cities, villages, etc.) in implementing funding strategies and developing master plans for short- and long-term funding goals. The Grant Coordinators are available to assist prospective applicants with a multitude of state and federal funding sources, not only TA Set-Aside funds. The Grant Coordinators recommend which funding sources to apply for and during which cycle period. MDOT deploys Grant Coordinators early in the process to identify solid project candidates for certain grant programs and discourage prospective applicants from applying for programs that may not suit their project. MDOT notes the following benefits of taking this approach:

1. By deploying Grant Coordinators early in the process, applicants can better coordinate future grant requests to advance their project(s).
2. Grant Coordinators assist with cost estimating.
3. Guidance by Grant Coordinators helps to reduce the number of grant requests across the state.
4. Grant Coordinators can help steer potential applicants to advancing projects of regional importance, and help an applicant coordinate with other necessary entities and municipalities.
5. Grant Coordinators ensure that MDOT coordinates with other agencies, such as Michigan's Department of Natural Resources, on projects where improvements can happen at the same time (such as syncing roadway and trail improvements).
6. MDOT can use information received by the Grant Coordinators to more easily and accurately forecast program amounts.

Education and Outreach

To encourage project readiness by potential project sponsors, VDOT and GDOT emphasize educating applicants. This adequately prepares potential project sponsors (e.g., cities, counties, transit agencies, etc.) for the complex tasks that lie ahead. GDOT currently requires that one full-time staff member of each TA project team undergo local project delivery certification (Local Administered Project (LAP)). If at least one full-time employee working on the project team is not LAP-certified, GDOT administers the project and charges the applicant administration fees.

VDOT offers a Transportation Alternatives Set-Aside Applicant Workshop (see Appendix 3) that reviews program requirements, VDOT's application process, project eligibility, award priorities, etc. A thorough understanding of the program tends to narrow the applicant pool to those projects and sponsors that are well-suited for a complex funding strategy. Going forward, VDOT will implement more stringent

educational requirements to improve an applicant's ability to advance a project. Beginning in 2020, VDOT will implement a qualifications program that requires one full-time staff member from each TA Set-Aside applicant (i.e., municipality, county, transit agency, etc.) to be certified. The qualifications program will also be mandatory for all entities seeking to use VDOT as a pass-through for federal dollars. This qualifications program will consist of seven online courses with tests, and classes at an annual conference. By implementing qualification requirements, VDOT aims to improve project delivery through education.

Overview

In conclusion, based upon discussions with other states, there does not seem to be a single solution for making blended funding approaches work. Reimbursement agreements are just as complex and difficult to obtain in states like Michigan and Virginia as they are in Pennsylvania. Both states also require a project match for TA Set-Aside projects, which they see as a source of local buy-in for projects. In Michigan, deploying Grant Coordinators has eased the strain of attempting to blend funding sources. The deployment of Grant Coordinators has also enabled the TA Program Manager to more accurately obligate funds.

Blended Funding Best Practices from Other States

1. Use knowledgeable individuals to guide potential project sponsors to/from funding sources and work through complex funding blends.
2. Conduct rolling TA Set-Aside application cycles to allow adequate preparation time for project readiness and funding strategies.
3. A lack of complete funding for project delivery can be a good thing—it encourages local buy-in to a project.
4. Conditional Commitments give project sponsors adequate time to secure complete funding. There is no “rush” to deliver.
5. Education of potential applicants prior to the application period reduces the number of unprepared applicants.

Blended Funding Recommendations

Recommendation BF1: Develop a Standard Reimbursement Agreement that would Enable Municipal Sponsors to Designate PennDOT as the Lead Partner on Appropriate Projects.

As grant agreements are currently written for TA Set-Aside projects, the lead applicant is responsible for administering the project. For municipal applicants without the staff or expertise to manage a complex construction project, this can be a challenge. In instances where the TA Set-Aside scope of work is a phase of a larger construction project with multiple funding sources, the TA Set-Aside project sponsor would be responsible for managing the entire project. For example, if a municipal project sponsor received TA Set-Aside funds for a sidewalk project leading to a bridge, and the sidewalk and bridge project were combined out of need for project delivery, the municipal project sponsor would be required to manage the entire sidewalk and bridge project.

PennDOT District Offices and Planning Partners cite this issue as a reason many potential project sponsors do not look to combined funding sources. PennDOT District 3-0 has used contribution and cooperation agreements to blend funding sources. The agreement has the municipality (which is listed as the applicant) send funds to PennDOT to administer the project and pay contractors.

The project team recommends working with the Office of General Counsel to develop a form agreement that would enable municipal sponsors to designate PennDOT as the lead partner on appropriate projects.

Recommendation BF2: Streamline Reimbursement Agreements to Blend TA Set-Aside Funds with PennDOT MTF, CFA MTF, and TIP funds.

Interviews with PennDOT District Office and Planning Partners revealed that biggest hurdle to blending funding sources is aligning the different grant agreements before going to bid. Additionally, they state that the length of time to accomplish a blended grant agreement is prohibitive to keeping a project on schedule.

According to PennDOT's Bureau of Project Delivery, the TA Set-Aside reimbursement agreement has recently been reviewed and is currently form-approved (as of January 14, 2019). The form-approved status of this reimbursement agreement means that it will no longer have to go through additional review by the Office of General Counsel. This is estimated to save four to eight weeks between project award and executed reimbursement agreement in the next TA Set-Aside funding round. Building on the recent success of the form-approved TA Set-Aside reimbursement agreement, the project team recommends developing blended funding agreement(s) to address TA Set-Aside funds with:

- PennDOT MTF and CFA MTF
- TIP funds

Recommendation BF3: Grant a Higher Level of ECMS Access to State Project Funding Partners.

To enable the successful implementation of blended funding projects, coordination is essential. Currently, partners that assist in funding PennDOT projects, including TA Set-Aside projects (e.g., DCNR), only have low-level access to ECMS files and data. Some state funding partners are concerned that PennDOT may provide additional funds to a project without their knowledge, which causes an overlap in funding from two state sources. To foster a spirit of cooperation and enable efficient information sharing, the project team recommends that PennDOT give state funding partners additional ECMS access to project information. This would allow funding partners to share additional files relating to the project, assist in checking cost estimates, and view how much PennDOT has actually paid into the project. This additional coordination and collaboration will streamline project delivery.

Recommendation BF4: Implement a Grant Coordinator Program.

The project team recommends implementing a grant coordinator program to assist project sponsors with funding strategy and application assistance. MDOT has found that the regional grant coordinator approach not only helps control the frequency and timing of grant applications, it also improves the quality of applications and results in more successful project delivery. PennDOT's grant coordinators would be responsible for the following items:

1. Assisting municipalities, counties, transit agencies, local education agencies, and other potential applicants, as selected by the PennDOT District Office, in preparing comprehensive funding strategies.
2. Assisting applicants in preparing funding applications, including TA Set-Aside applications.
3. Assisting selected entities in managing funding awards.
4. Assisting selected entities in coordinating blended funding approaches.
5. Reporting back to PennDOT District Offices and Central Office on which funding sources selected entities are using or plan to use in the future.

The grant coordinators should have a comprehensive understanding of funding applications, blended funding approaches, and funding award management. As it has in Michigan, the Grant Coordinator Program would assist PennDOT in determining which funding sources project sponsors will apply for in the future. This approach would allow PennDOT to obligate funds in a more efficient manner.

TA Set-Aside Program Process Recommendations

The following recommendations can assist with cost estimation, blended funding, and the TA Set-Aside Program in general.

Recommendation P1: Expand Pre-Application TA Set-Aside Webinar.

Expand pre-application webinars to include additional guidance on cost estimating and an overview of other potential funding programs. The goal is twofold:

1. Ensure potential sponsors are aware of cost-estimating expectations and available tools/guidance, so they can be prepared for their initial planning meeting with their District Office and Planning Partners.
2. Educate potential sponsors on other funding programs that could help fund portions of their project and ensure TA Set-Aside is the appropriate funding source.

VDOT has also found success in educating potential project sponsors through mandatory public workshops. The use of public workshops for pre-application education would improve the quality of TA Set-Aside project applications.

Potential topics to be expanded on include:

1. Eligible projects
2. Cost-estimating guidance
3. Contract and reporting requirements
4. Other potential funding sources
5. Available resources for technical assistance

Recommendation P2: Standardize Application and Award Announcements.

Develop a standardized application development cycle with recurring application due dates and award announcements. The standardization would help sponsors plan and allow them to program the TA Set-Aside project into their larger transportation planning process. Michigan, Virginia, Ohio, Georgia, and Illinois have all standardized their application cycle. These states note that predictability has helped to improve applications and increase the potential for using multiple funding sources. Additionally, PennDOT Planning Partners and project sponsors interviewed have recommended a standard cycle to remove uncertainty.

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Appendices

Appendix 1: Cost Estimating Guidance

CONTENTS:

- I. Illinois Department of Transportation (IDOT) Illinois Transportation Enhancement Program (ITEP) Guidance Manual Sample Cost Estimates

APPENDIX 7

SAMPLE COST ESTIMATES

The following sample cost estimates are provided as a guideline to exhibit the type of details that should be reflected in your cost estimate. Not all projects will require the same pay items, unit costs vary greatly depending on what part of the state you are in, and not all projects will have an exceptional amount of detail available to them, but every effort should be made to capture the type of project details displayed in these sample cost estimates. Estimates should be detailed enough to show improvement or material categories and cost estimates reported separately for each phase or construction location. At a minimum it should provide the following data fields: cost category, material description, unit, quantity, unit price, total cost. There should be separate columns for cost breakdown by funding source which includes Federal Share, Sponsor Share, Ineligible items, and % federal funds on eligible items (50% or 80%).

Please note that although most of the work included under roadway related work are not eligible for ITEP funding, it should be included as part of the overall project scope of work and annotated in the cost estimates.

Projects will be at risk if there are errors in the project cost estimate.

- ✓ Errors in the application may affect how well the application is scored.
- ✓ If after the project receives an award and it is found there are ineligible items that bare substantial cost, the local agency must have a plan to cover all ineligible costs. If additional local funds are not available, the project risks losing federal funds.

NOTE: The following sample cost estimates may not accurately reflect what items were approved as eligible nor does it reflect the amount of funds approved for that project. Unit costs are in no way meant to be reflective of today's current costs.

BICYCLE AND PEDESTRIAN FACILITY PROJECT COST ESTIMATE (Urban Area)

This is a fair example of the type of details IDOT is looking for when you submit a cost estimate. Notice that the federal and local portions for right-of-way are shown at 50% as they should be. If there were any ineligible items in this project, a separate column should be added to designate those items. Ineligible items are the responsibility of the project sponsor. Lighting of a bicycle facility is very difficult to justify. If justification for the lighting is not provided with your application, this item would typically be marked ineligible (or approved funds will be adjusted later if justification cannot be established).

Note: Contingencies are not an allowable line item and cannot be included as such. In this example the amount for Contingencies would have to be deducted from the eligible project costs. There are other ways to account for contingencies and inflation in your cost estimate.

ITEM	DESCRIPTION	UNITS	TOTAL QUANTITY	UNIT COST	LOCAL MATCH	FEDERAL SHARE	TOTAL COST
1	EROSION CONTROL	FOOT	2750	8.40	4620.00	18480.00	23100.00
2	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	674	60.29	8127.48	32509.90	40637.38
3	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	54450	5.36	58370.40	233481.60	291852.00
4	PAVEMENT AND DRIVEWAY REMOVAL	SQ YD	1530	12.06	3690.36	14761.44	18451.80
5	COMBINATION CURB AND GUTTER REMOVAL	FOOT	1848	6.70	2476.32	9905.28	12381.60
6	SIDEWALK REMOVAL	SQ FT	25988	1.68	8731.97	34927.87	43659.84
7	COMBINATION CONCRETE CURB AND GUTTER	FOOT	1840	33.50	12328.00	49312.00	61640.00
8	INLET REPLACEMENT / RELOCATE / LEVEL	EACH	11	1700.00	3740.00	14960.00	18700.00
9	TRAFFIC CONTROL AND PROTECTION	EACH	2	26800.00	10720.00	42880.00	53600.00
10	SIGNING	EACH	1	26800.00	5360.00	21440.00	26800.00
11	PEDESTRIAN LIGHTING (NOT CO-LOCATED WITH STREET LIGHTING)	EACH	79	2010.00	31758.00	127032.00	158790.00
12	GRADING AND SHAPING	STA	55	469.00	5159.00	20636.00	25795.00
13	CONSTRUCTION LAYOUT	EACH	1	40200.00	8040.00	32160.00	40200.00
ESTIMATED CONSTRUCTION COST				SUM	163121.52	652486.10	815607.62
CONTINGENCY 25%					40780.38	163121.52	203901.91
TOTAL CONSTRUCTION COST					203901.91	815607.62	1019509.53
COMMERCIAL ROW		SQ FT	1750	5.00	4375.00	4375.00	8750.00
RESIDENTIAL ROW		SQ FT	14737.5	1.00	7368.75	7368.75	14737.50
TEMPORARY EASEMENTS		SQ FT	22000	0.50	5500.00	5500.00	11000.00
TOTAL ROW COST					17243.75	17243.75	34487.50

BICYCLE AND PEDESTRIAN FACILITY PROJECT COST ESTIMATE (Rural Area)

This is a fair example of the type of details IDOT is looking for when you submit a cost estimate. It describes some of the assumptions and methods used in their calculations. If there were any ineligible items in this project a separate column should be added to designate those items. Ineligible items are the responsibility of the project sponsor.

Note: Contingencies are not an allowable line item and cannot be included as such. In this example the amount for Contingencies would have to be deducted from the eligible project costs. There are other ways to account for contingencies and inflation in your cost estimate.

Item No	Description	Unit	Quantity	Unit Price	Total Price
1	Tree Removal	Acre	6	\$ 3,000.00	\$ 18,000.00
2	Earth Excavation	Cu. Yd	22,500	\$ 8.00	\$ 180,000.00
3	Aggregate Base Course	Ton	5,300	\$ 30.00	\$ 159,000.00
4	Hot Mix Asphalt Surface Course	Ton	2,200	\$ 75.00	\$ 165,000.00
5	HDPE Culvert Pipe, 12" Diameter	Foot	500	\$ 25.00	\$ 12,500.00
6	HDPE Culvert Pipe, 24" Diameter	Foot	250	\$ 40.00	\$ 10,000.00
7	24" RCCP Storm Sewer Pipe	Foot	300	\$ 65.00	\$ 19,500.00
8	Inlets for Storm Sewer Pipe	Each	2	\$ 1,000.00	\$ 2,000.00
9	24" Flared End Sections	Each	2	\$ 500.00	\$ 1,000.00
10	PCC Sidewalk, 5'	Sq. Ft	1,920	\$ 12.00	\$ 23,000.00
11	Detectable Warnings	Sq. Ft	768	\$ 65.00	\$ 49,920.00
12	Segmental Concrete Block Retaining Wall	Sq. Ft	900	\$ 50.00	\$ 45,000.00
13	Pavement Striping	Lump Sum	1	\$ 8,000.00	\$ 8,000.00
14	Seed, Fertilize and Mow	Acre	10	\$ 2,000.00	\$ 20,000.00
15	Temporary Erosion Control Seeding	Acre	10	\$ 300.00	\$ 3,000.00
16	Install, Maintain and Remove Silt Fence	Foot	10,000	\$ 4.00	\$ 40,000.00
Estimated Construction					\$ 755,920.00
20% Construction Contingency					\$ 151,000.00
Total Construction					\$ 906,920.00

Phase II Design Engineering	\$ 63,000.00
Construction Engineering & Staking	\$ 91,000.00
Total Engineering	\$ 154,000.00

* Total Estimated Engineering & Construction Costs	\$ 1,060,920.00
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Estimate Reference Information

1) Estimated Trail Length: 11,800 Feet
2) Estimated Trail Width: 10 Foot Hot Mix Asphalt, 12 Foot Aggregate Base Course
3) Estimated Thickness: 3" Hot Mix Asphalt, 6" Aggregate Base Course
4) Pipe size, location & length roughly estimated from USGS quadrangle maps
5) Assume ADA ramps will be required at all street, alley, and commercial entrance crossings (48 total ramps)
6) Earthwork was roughly estimated using the 10' contour lines on the USGS quadrangle maps
7) Unit prices based on current (2008) construction costs

* THE ABOVE COSTS DO NOT INCLUDE ANY COST ESTIMATES FOR LAND ACQUISITION, PROPERTY SURVEYS FOR LAND ACQUISITION, LEGAL FEES, UTILITY RELOCATION COSTS, GRANT APPLICATION FEES, OR ANY OTHER MISCELLANEOUS COSTS THAT MIGHT BE INCURRED DURING COMPLETION OF THIS PROJECT

LANDSCAPE AND SCENIC BEAUTIFICATION PROJECT COST ESTIMATE (Streetscape Project)

The following sample cost estimate is a fair example of a summary cost sheet since it provides separate columns for Federal Share, Local Share and Ineligible items. It also includes the federal / local percent share ratio for the eligible funding. What it doesn't provide are the calculations used to determine these costs. A more detailed estimate should be provided to show how many of each item is proposed and the unit cost associated with that item.

NOTE: Ineligible items in this estimate which should have been shown in the ITEP Ineligible column are Benches, Decorative Fencing, and Trash Receptacles. Also, Contingencies are not an allowable line item and cannot be included as such. In this example the amount for Benches, Decorative Fencing, Trash Receptacles and Contingencies would have to be deducted from the eligible project costs. There are other ways to account for contingencies and inflation in your cost estimate.

Item	Federal Share	Local Share	ITEP Ineligible	Total Cost	Eligibility
Streetscape PCC Sidewalk	\$152,516.00	\$28,154.00	\$0.00	\$180,670.00	80/20
Type A Sidewalk Border Pavers	\$74,100.00	\$18,525.00	\$0.00	\$92,625.00	80/20
Type B Island Pavement Pavers	\$59,760.00	\$14,940.00	\$0.00	\$74,700.00	80/20
Tactile Brick Warning Border for Cross Walks	\$12,086.00	\$3,024.00	\$0.00	\$15,120.00	80/20
Ornamental Trees	\$43,600.00	\$10,900.00	\$0.00	\$54,500.00	80/20
Perennials, Shrubs, Groundcover	\$80,240.00	\$15,060.00	\$0.00	\$95,300.00	80/20
Pedestrian Light Fixtures	\$499,200.00	\$124,800.00	\$0.00	\$624,000.00	80/20
Street Light Fixtures (No Co-located Art-Trans. Facility)	\$0.00	\$224,000.00	\$224,000.00	\$224,000.00	
Pedestrian Ballards for Decorative Fence	\$44,400.00	\$11,100.00	\$0.00	\$55,500.00	80/20
Decorative Fencing	\$32,400.00	\$8,100.00	\$0.00	\$40,500.00	80/20
Benches	\$22,400.00	\$5,600.00	\$0.00	\$28,000.00	80/20
Trash Receptacles	\$13,600.00	\$3,400.00	\$0.00	\$17,000.00	80/20
Downtown Streetscape Gateway/Arch Feature	\$20,000.00	\$5,000.00	\$0.00	\$25,000.00	80/20
Construction Sub-Total	\$1,148,412.00	\$282,500.00	\$0.00	\$1,517,015.00	
Construction Contingency	\$135,782.00	\$44,703.00	\$0.00	\$182,985.00	
Construction Total	\$1,172,694.00	\$527,306.00	\$0.00	\$1,700,000.00	

STREETSCAPE PROJECT COST ESTIMATE

The following sample cost estimate is an excellent example since it provides quantities, unit costs and separate columns for Federal Share, Sponsor Share and Ineligible items. It also breaks the project out by specific types of improvements, and improvements at different locations. Please note that although most of the work included under the intersection improvement is roadway related work and not eligible for ITEP funding, it should be included as part of the overall project scope of work. The street lighting is co-located with an alternate transportation facility, so all elements are eligible for 50% federal match. This cost estimate could be improved by adding the percentage of the cost share. If this project intends on constructing this project in construction phases, then each phase should have costs reported separately.

[illegible]

HISTORIC PRESERVATION PROJECT COST ESTIMATE

One of the good features about this sample cost estimate is that the project sponsor listed three separate funding scenarios based on the urgency and scope of work for each phase. If the ITEP program could not fund the full renovation, the estimate allows IDOT to provide enough funding to complete Level 1, Level 2 or any combination of items to make this a viable project.

Note: Contingencies are not an allowable line item and cannot be included as such. In this example the amount for Contingencies would have to be deducted from the eligible project costs. There are other ways to account for contingencies and inflation in your cost estimate.

Train Station Phased Renovation

Phased Budget Estimates: Level 3		Level 1	Level 2	Level 3
		Emergency Stabilization	Enhanced Stabilization	Full Renovation
Item	Description			
A.	Slate Roof (*Level 1= Asphalt Shingle)	\$ 150,592	\$ 473,200	\$ 473,200
B.	Roof Dormers		\$ 36,837	\$ 36,837
C.	Remove Warming House Gables		\$ 14,830	\$ 14,830
D.	Stucco	\$ 5,200	\$ 15,101	\$ 15,101
E.	Masonry Knee Wall/ Ticket Bay Window			\$ 74,152
F.	Exterior Woodwork	\$ 41,600	\$ 145,600	\$ 444,912
G.	Masonry	\$ 5,200	\$ 36,816	\$ 184,080
H.	Windows		\$ 20,800	\$ 93,288
I.	Doors		\$ 14,560	\$ 61,568
J.	Toilet Room - Option 1			\$ 61,707
K.	Reopen Tunnel Stairs			\$ 50,253
L.	Interior Flooring			\$ 51,755
M.	Plaster Walls			\$ 116,542
N.	Exit Signs/EM Lighting			\$ 97,344
O.	Fire Protection			\$ 64,478
P.	Mechanical			\$ 223,704
Q.	Other			\$ 20,904
	Subtotal	\$ 202,592	\$ 757,744	\$2,084,655
	General Conditions (6 months)		\$ 72,800	\$ 218,400
	Bid Documents		\$ 2,080	\$ 5,200
	Subtotal	\$ 202,592	\$ 832,624	\$2,308,255
	Fee (4%)	\$ -	\$ 33,305	\$ 92,330
	Insurance (1%)	\$ -	\$ 8,326	\$ 23,083
	Contingency (15%)	\$ 10,130	\$ 124,894	\$ 346,238
	Subtotal Construction Services	\$ 212,722	\$ 999,149	\$2,769,906
	Design / Engineering Fees (15%)	\$ -	\$ 113,662	\$ 312,698
	Total Estimated Restoration Cost	\$ 212,722	\$ 1,112,810	\$3,082,604

*Estimate for a cedar shake roof is \$246,560.

STREETSCAPE PROJECT COST ESTIMATE

This sample cost estimate was provided as an example of a "lump sum" estimate. This does not provide IDOT with any details as to what is included in this project, nor does it specify eligible and ineligible items. The project costs are far more than can be funded at one time from the ITEP program. If the project sponsor would have divided the project into constructible segments of \$2M or less, funding may have been able to be provided for at least one segment of the project.

Lump Sum estimates such as this one is not acceptable. Your project application will be marked as INELIGIBLE and will not be considered for funding.

DETAILED ESTIMATE OF CONSTRUCTION COSTS

[illegible]

Appendix 2: Michigan Department of Transportation (MDOT) Conditional Commitment Grant Summaries**CONTENTS:**

- I. Grant Summary TAP 2015029 (Fully Awarded Example)
- II. Grant Summary TAP 2015056 (Fully Awarded Example w/Delays)
- III. Grant Summary TAP 2016015 (In Conditional Commitment Phase)



Grant Summary

Date: 07/24/2019

Page: 1 of 5

Grant Type: Transportation Alternatives Program

Grant Number: 2015029

Section	Applicant	Description (rpt)	Current Grant Amount	Total Match	Total Amount	Grant %	Status	Grant Year
01	MDNR and MDOT Jackson TSC	IBT: Lakelands Trail Phase 1 - Bridges Replacement	\$1,941,660.00	\$832,140.00	\$2,773,800.00	70.00%	Approved	2018
02	MDNR and MDOT Jackson TSC	IBT: Lakelands Trail Phase 2 - Surfacing and Trailhead	\$2,954,840.00	\$1,266,360.00	\$4,221,200.00	70.00%	Approved	2018
03	MDNR and MDOT Jackson TSC	IBT: Lakelands Trail - Design Phase	\$579,840.00	\$248,503.00	\$828,343.00	70.00%	Approved	2017
Total:			\$5,476,340.00	\$2,347,003.00	\$7,823,343.00	70.00%		

Section Grant Section Description

01 TAP GRANT AWARDED 7/25/18

FY 2018 TAP CONDITIONAL COMMITMENT

The Michigan Department of Transportation will construct the Lakelands Trail State Park from M-52 in Stockbridge to 400-feet south of the Portage River Bridge in Leoni Township. The MDOT Jackson Transportation Service Center is implementing this project on behalf of the Michigan Department of Natural Resources.

At its northern end, the 10-foot wide crushed limestone multi-use path will begin at M-52 (S. Clinton Street) in the village of Stockbridge, where it will connect to an existing segment of the Lakelands Trail State Park. The path will continue from Stockbridge southwest along an abandoned rail line through the community of Munith and end at a new trailhead located approximately 400 feet south of the Portage River. The trail will also feature an adjacent turf trail for equestrians. A future phase will extend the Lakelands Trail State Park into the City of Jackson.

This project is listed as a priority on the MDOT University Region Nonmotorized Plan, the Jackson County Regional Trailway Study, the City of Jackson & Jackson County Joint Recreation Plan, and the Leoni Township Recreation Plan. The trail is part of the Great Lake-to-Lake Trail that will connect Lake Michigan and Lake Huron, as well as part of the Iron Belle Trail that will eventually extend from Belle Isle to Ironwood.

This grant section (.01) is specifically for the replacement of three bridges along the route: the Orchard Creek Bridge near Kennedy Road, the Batteese Creek Bridge near Coon Hill Road, and the Portage River Bridge near Hawkins Road.

The project budget for this section is \$2,773,800, including \$1,941,660 in federal Transportation Alternatives Program funds, \$200,000 in matching funds from the Michigan Natural Resources Trust Fund, \$300,000 in matching funds from the Recreational Trails Program, \$190,000 in matching funds from the Friends of the Lakelands Trail, and \$142,140 in matching funds from the Michigan Department of Natural Resources. A portion of the grant will be used for construction engineering and inspection.



Grant Summary

Date: 07/24/2019

Page: 2 of 5

02 TAP GRANT AWARDED 7/25/18

 REVISED 7/16/18 - Grant reduced by \$201,637

 REVISED 7/6/18 - Grant increase of \$1.183 million approved

FY 2018 TAP CONDITIONAL COMMITMENT

The Michigan Department of Transportation will construct the Lakelands Trail State Park from M-52 in Stockbridge to 400-feet south of the Portage River Bridge in Leoni Township. The MDOT Jackson Transportation Service Center is implementing this project on behalf of the Michigan Department of Natural Resources.

At its northern end, the 10-foot wide crushed limestone multi-use path will begin at M-52 (S. Clinton Street) in the village of Stockbridge, where it will connect to an existing segment of the Lakelands Trail State Park. The path will continue from Stockbridge southwest along an abandoned rail line through the community of Munith and end at a new trailhead located approximately 400 feet south of the Portage River. The trail will also feature an adjacent turf trail for equestrians. A future phase will extend the Lakelands Trail State Park into the City of Jackson.

This project is listed as a priority on the MDOT University Region Nonmotorized Plan, the Jackson County Regional Trailway Study, the City of Jackson & Jackson County Joint Recreation Plan, and the Leoni Township Recreation Plan. The trail is part of the Great Lake-to-Lake Trail that will connect Lake Michigan and Lake Huron, as well as part of the Iron Belle Trail that will eventually extend from Belle Isle to Ironwood.

Section .02 is specifically for trail surfacing and trailhead construction. The project budget for this section is \$4,221,200, including \$2,954,840 in federal Transportation Alternative Program funds, \$340,000 in matching funds from the Recreational Trails Program, \$100,000 in matching funds from the Michigan Natural Resources Trust Fund, \$221,059 in matching funds from the Friends of the Lakelands Trail, and \$605,301 in matching funds from the Michigan Department of Natural Resources. A portion of the grant will be used for construction engineering and inspection.

03 REVISED 4/3/18 - Grant increase approved

FY 2017 TAP AWARD

The Michigan Department of Transportation will construct the Lakelands Trail State Park from M-52 in Stockbridge to 400-feet south of the Portage River Bridge in Leoni Township. The MDOT Jackson Transportation Service Center is implementing this project on behalf of the Michigan Department of Natural Resources.

At its northern end, the 10-foot wide crushed limestone multi-use path will begin at M-52 (S. Clinton Street) in the village of Stockbridge, where it will connect to an existing segment of the Lakelands Trail State Park. The path will continue from Stockbridge southwest along an abandoned rail line through the community of Munith and end at a new trailhead located approximately 400 feet south of the Portage River. The trail will also feature an adjacent turf trail for equestrians. A future phase will extend the Lakelands Trail State Park into the City of Jackson.

This project is listed as a priority on the MDOT University Region Nonmotorized Plan, the Jackson County Regional Trailway Study, the City of Jackson & Jackson County Joint Recreation Plan, and the Leoni Township Recreation Plan. The trail is part of the Great Lake-to-Lake Trail that will connect Lake Michigan and Lake Huron, as well as part of the Iron Belle Trail that will eventually extend from Belle Isle to Ironwood.

Section .03 is specifically for preliminary engineering (design) costs. The project budget for this section is \$828,343, including \$579,840 in Federal Transportation Alternative Program funds and \$248,503 in matching funds from the Michigan Department of Natural Resources.



Grant Summary

Date: 07/24/2019

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Job Phase Summary

Section	Job/Phase	Est Grant Amount	Auth Grant Amount	CTD Grant Amount	Route	Work Description	Location Description	Financial Stage/Status	FinSys
01	200803(A)	\$1,941,660.00	\$1,941,660.00	\$1,941,660.00	M-106	Non-Motorized Trail improvement with bridge replac	Lakelands Trail Expansion Phase 1 and 2	Change / Approved	TA, NRT
02	200803(A)	\$2,954,840.00	\$2,387,821.40	\$680,675.41	M-106	Non-Motorized Trail improvement with bridge replac	Lakelands Trail Expansion Phase 1 and 2	Change / Approved	TA, NRT
03	200803(C)	\$509,840.01	\$579,840.10	\$575,430.63	M-106	Non-Motorized Trail improvement with bridge replac	Lakelands Trail Expansion Phase 1 and 2	Change / Approved	TA
Total:		\$5,406,340.01	\$4,909,321.50	\$3,197,766.04					



Grant Summary

Date: 07/24/2019

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Nonmotorized Funding Condition

This project must be designed and constructed in accordance with the standards in the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, 2012 edition. The standards for off-road trails include a minimum 10' width with a minimum of 2' clear zone on each side. The standards for bridges or boardwalks include a minimum 14' width between rub rails. In addition, bridges and boardwalks should meet a minimum H-10 design load rating. For roadways with no curb and gutter, the standards for on-road paved shoulders include a minimum 4' width facility on each side of the road. If parking is permitted, the standards for bike lanes include a minimum width of 5'. The project must also be designed and constructed in accordance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD).

Archeological Survey

The current project alignment may require an archaeological survey per the State Historic Preservation Office (SHPO). MDOT is in the process of making a determination with the SHPO regarding this requirement and will inform the applicant when it is made. The survey must be performed by a qualified archaeologist (found to meet or exceed the professional requirements for archaeologists as stated in "Archaeology & Historic Preservation: Secretary of the Interior's Standards and Guidelines," Federal Register 48(190), September 29, 1983) as part of the Section 106 review for the project.

Funding Condition

Transportation Alternatives Program (TAP) funding is conditional upon the items mentioned in the correspondence from the MDOT Office of Economic Development conveying the conditional commitment, supporting documentation, as well as fund availability. Federal transportation funding could be subject to congressional approval of a rescission, reducing or eliminating the remaining unobligated funds. The amount of TAP funding that Congress has authorized for expenditure is provided on a first come, first served basis to the projects that have completed the steps necessary to request federal fund authorization from the Federal Highway Administration. These steps typically include submitting completed plans, a cost estimate, specifications, and obtaining all necessary permits, clearances, an executed agreement, and matching funds.

Important Note on TAP Funding for Local Agencies

Federal TAP funds shall be applied to the eligible items of the total participating project cost up to the lesser of: (1) the TAP grant amount, or (2) an amount such that 80 - 81.85 percent, the maximum federal participation ratio for such funds, is not exceeded at the time of the award of the construction contract. The balance of the participating project cost, after deduction of TAP Funds, shall be the responsibility of the grant applicant. All of the non-participating cost shall be the responsibility of the grant applicant. In addition to the limits mentioned above, TAP funds are capped at the applicable low bid amount and shall not be applied to any extra construction costs or construction over-runs; these costs shall be the responsibility of the grant applicant.

Nonmotorized Funding Condition

This project must be designed and constructed in accordance with the standards in the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, 2012 edition. The standards for off-road trails include a minimum 10' width with a minimum of 2' clear zone on each side. The standards for bridges or boardwalks include a minimum 14' width between rub rails. In addition, bridges and boardwalks should meet a minimum H-10 design load rating. For roadways with no curb and gutter, the standards for on-road paved shoulders include a minimum 4' width facility on each side of the road. If parking is permitted, the standards for bike lanes include a minimum width of 5'. The project must also be designed and constructed in accordance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD).

Archeological Survey

The current project alignment may require an archaeological survey per the State Historic Preservation Office (SHPO). MDOT is in the process of making a determination with the SHPO regarding this requirement and will inform the applicant when it is made. The survey must be performed by a qualified archaeologist (found to meet or exceed the professional requirements for archaeologists as stated in "Archaeology & Historic Preservation: Secretary of the Interior's Standards and Guidelines," Federal Register 48(190), September 29, 1983) as part of the Section 106 review for the project.

Funding Condition



Grant Summary

Date: 07/24/2019

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Transportation Alternatives Program (TAP) funding is conditional upon the items mentioned in the correspondence from the MDOT Office of Economic Development conveying the conditional commitment, supporting documentation, as well as fund availability. Federal transportation funding could be subject to congressional approval of a rescission, reducing or eliminating the remaining unobligated funds. The amount of TAP funding that Congress has authorized for expenditure is provided on a first come, first served basis to the projects that have completed the steps necessary to request federal fund authorization from the Federal Highway Administration. These steps typically include submitting completed plans, a cost estimate, specifications, and obtaining all necessary permits, clearances, an executed agreement, and matching funds.

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Nonmotorized Funding Condition

This project must be designed and constructed in accordance with the standards in the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, 2012 edition. The standards for off-road trails include a minimum 10' width with a minimum of 2' clear zone on each side. The standards for bridges or boardwalks include a minimum 14' width between rub rails. In addition, bridges and boardwalks should meet a minimum H-10 design load rating. For roadways with no curb and gutter, the standards for on-road paved shoulders include a minimum 4' width facility on each side of the road. If parking is permitted, the standards for bike lanes include a minimum width of 5'. The project must also be designed and constructed in accordance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD).

Funding Condition

Transportation Alternatives Program (TAP) funding is conditional upon the items mentioned in the correspondence from the MDOT Office of Economic Development conveying the conditional commitment, supporting documentation, as well as fund availability. Federal transportation funding could be subject to congressional approval of a rescission, reducing or eliminating the remaining unobligated funds. The amount of TAP funding that Congress has authorized for expenditure is provided on a first come, first served basis to the projects that have completed the steps necessary to request federal fund authorization from the Federal Highway Administration. These steps typically include submitting completed plans, a cost estimate, specifications, and obtaining all necessary permits, clearances, an executed agreement, and matching funds.

Important Note on TAP Funding for Local Agencies

Federal TAP funds shall be applied to the eligible items of the total participating project cost up to the lesser of: (1) the TAP grant amount, or (2) an amount such that 80 - 81.85 percent, the maximum federal participation ratio for such funds, is not exceeded at the time of the award of the construction contract. The balance of the participating project cost, after deduction of TAP Funds, shall be the responsibility of the grant applicant. All of the non-participating cost shall be the responsibility of the grant applicant. In addition to the limits mentioned above, TAP funds are capped at the applicable low bid amount and shall not be applied to any extra construction costs or construction over-runs; these costs shall be the responsibility of the grant applicant.



Grant Summary

Date: 07/24/2019

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Grant Type: Transportation Alternatives Program

Grant Number: 2015056

Section	Applicant	Description (rpt)	Current Grant Amount	Total Match	Total Amount	Grant %	Status	Grant Year
01	Kent CRC	Fred Meijer Flat River Valley Rail Trail - North Phase (north & south of Belding)	\$750,000.00	\$363,468.00	\$1,113,468.00	67.36%	Approved	2019
02	Kent CRC	Fred Meijer Flat River Valley Rail Trail - South Phase (north of Lowell and east to Saranac)	\$750,000.00	\$449,372.00	\$1,199,372.00	62.53%	Approved	2019
Total:			\$1,500,000.00	\$812,840.00	\$2,312,840.00	64.86%		

Section Grant Section Description

01 MDOT TAP GRANT AWARD (01/22/19 am)
All conditions met, grant awarded

MDOT TAP CONDITIONAL COMMITMENT - REVISED to FY2019 (06.29.18 - am)

The project construction documentation must be submitted to MDOT Local Agency Programs to be listed on or before the March 1, 2019 bid letting as a condition of the grant.

Project scope remains the same.

MDOT TAP CC REVISION (6/7/16):

The fiscal year of the grant is revised from 2016 to 2018 to provide additional time for match procurement. The matching funds must be certified by Dec. 31, 2017, to the MDOT Office of Economic Development as a condition of the grant. ms

MDOT TAP CONDITIONAL COMMITMENT (10/30/15):

The Kent County Road Commission will construct the Fred Meijer Flat River Valley Rail Trail - North Phase for 11 miles from Jackson's Landing Park (M-57) in Greenville south to Montcalm Avenue (Kent/Ionia county line), generally following the Mid-Michigan Rail Road corridor in Montcalm and Ionia Counties. In Greenville the trail will connect with the Fred Meijer Flat River Trail and the Fred Meijer Heartland Trail in the area of Jackson's Landing Park. This project gaps out the trail recently constructed in Belding. It will connect from Greenville to the existing Belding trail at Long Lake Road on the north side of Belding in the Flat River State Game Area, and it will connect on the south side where the existing Belding trail currently ends at M-44. From M-44 the trail will continue to Montcalm Avenue (Kent/Ionia county line). The South Phase will continue in Kent County as a separate project to Lowell, and from Lowell to Saranac in Ionia County. The Fred Meijer Flat River Valley Rail Trail is part of the 125 mile Fred Meijer



Grant Summary

Date: 07/24/2019

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Mid-West Michigan Trail Network, spanning six counties. This network already attracts out-of-state tourists and has spurred local economic revitalization and growth along the trail corridor. As the final gaps are filled in, the tourism and placemaking aspects will continue to grow.

The total cost of construction is \$1,113,468, with \$750,000 in federal funds and \$363,468 in match from the Kent County Road Commission. ms

- 02 MDOT TAP GRANT AWARD (01/22/19 am)
All conditions met, grant awarded

MDOT TAP CONDITIONAL COMMITMENT - REVISED to FY2019 (06.29.18 - am)

The project construction documentation must be submitted to MDOT Local Agency Programs to be listed on or before the March 1, 2019 bid letting as a condition of the grant.

Project scope remains the same.

MDOT TAP CC REVISION (6/7/16):

The fiscal year of the grant is revised from 2016 to 2018 to provide additional time for match procurement. The matching funds must be certified by Dec. 31, 2017, to the MDOT Office of Economic Development as a condition of the grant. ms

MDOT TAP CONDITIONAL COMMITMENT (10/30/15):

The Kent County Road Commission will construct the Fred Meijer Flat River Valley Rail Trail - South Phase for 14.5 miles from Montcalm Avenue (Kent/Ionia county line) through Kent County and then through Ionia County to Grand River Avenue in Saranac. The trail will be constructed from Montcalm Avenue (Kent County) southwest to Foreman Street in Lowell. The City of Lowell will be gapped out of this project. The trail will be constructed east of Lowell from Montcalm Avenue (Kent/Ionia county line) east to Parsonage Road in Saranac (Ionia County). The North Phase will continue in Ionia and Montcalm Counties as a separate project to Greenville. The Fred Meijer Flat River Valley Rail Trail is part of the 125 mile Fred Meijer Mid-West Michigan Trail Network, spanning six counties. This network already attracts out-of-state tourists and has spurred local economic revitalization and growth along the trail corridor. As the final gaps are filled in, the tourism and placemaking aspects will continue to grow.

The total cost of construction is \$1,199,372, with \$750,000 in federal funds and \$449,372 in match from the Kent County Road Commission. ms

Job Phase Summary

Section	Job/Phase	Est Grant Amount	Auth Grant Amount	CTD Grant Amount	Route	Work Description	Location Description	Financial Stage/Status	FinSys
01	131354(A)	\$750,000.00	\$750,000.00	\$0.00	Flat River Dr NE	Construct Fred Meijer Flat River Valley Rail Trail	Greenville to Saranac	Change / Approved	TAL

**Grant Summary**

Date: 07/24/2019

Page: 3 of 5

02	131354(A)	\$750,000.00	\$750,000.00	\$0.00	Flat River Dr NE	Construct Fred Meijer Flat River Valley Rail Trail	Greenville to Saranac	Change / Approved	TAL
Total:		\$1,500,000.00	\$1,500,000.00	\$0.00					



Grant Summary

Date: 07/24/2019

Page: 4 of 5

Special Condition

Pathways need to be designed according to appropriate and applicable AASHTO and PROWAG/ADA requirements and guidelines with no expectation of design exceptions, including 10 feet wide pathway with two 150; 2 feet adjacent shoulder widths then the graded area, a minimum radius for the 18-mph design speed, maximum 5 percent grade, maximum 2 percent cross slope, and at least 5 feet horizontal separation from the back of curb and trailing edge of shoulder.

Special Condition

FHWA and MDOT consider boardwalks to be bridges. Therefore, boardwalks and bridges need to be designed according to all appropriate and applicable AASHTO and PROWAG/ADA requirements and guidelines, with no expectation of design exceptions, including:

- o no bollards or any other obstructions or features that limit use of the structure
- o minimum H10 and 90 psf loading, considered "separately" and not "concurrently"
- o minimum 14 feet inside clearance width between rub rails, guardrails, or side rails.

Special Condition

This project must have all of the match certified by December 31, 2017.

Funding Condition

Transportation Alternatives Program (TAP) funding is conditional upon the items mentioned in the correspondence from the MDOT Office of Economic Development conveying the conditional commitment, supporting documentation, as well as fund availability. Federal transportation funding could be subject to congressional approval of a rescission, reducing or eliminating the remaining unobligated funds. The amount of TAP funding that Congress has authorized for expenditure is provided on a first come, first served basis to the projects that have completed the steps necessary to request federal fund authorization from the Federal Highway Administration. These steps typically include submitting completed plans, a cost estimate, specifications, and obtaining all necessary permits, clearances, an executed agreement, and matching funds. In addition, funding is conditional upon CONGRESS' REAUTHORIZATION OR EXTENSION OF MOVING AHEAD FOR PROGRESS IN THE 21st CENTURY ACT (MAP-21) CONTINUING TAP FUNDING.

Quarterly Report Funding Condition

As the grantee responsible for implementing this project, it is your responsibility to show that your project is making adequate progress towards fund obligation in the approved fiscal year. To show continued progress, you must submit a Quarterly Report in the MDOT Grant System (MGS) on or before the first business day of the months of January, April, July, and October. Expect cancellation of this CC/Award for failure to submit a Quarterly Report every quarter. Expect cancellation of this Award/CC for lack of adequate progress every quarter.

Important Note on TAP Funding for Local Agencies

Federal TAP funds shall be applied to the eligible items of the total participating project cost up to the lesser of: (1) the TAP grant amount, or (2) an amount such that 80 - 81.85 percent, the maximum federal participation ratio for such funds, is not exceeded at the time of the award of the construction contract. The balance of the participating project cost, after deduction of TAP Funds, shall be the responsibility of the grant applicant. All of the non-participating cost shall be the responsibility of the grant applicant. In addition to the limits mentioned above, TAP funds are capped at the applicable low bid amount and shall not be applied to any extra construction costs or construction over-runs; these costs shall be the responsibility of the grant applicant.

Implementation Requirement

This project must be let through the Michigan Department of Transportation (MDOT) Letting Process.

Nonmotorized Funding Condition



Grant Summary

Date: 07/24/2019

Page: 5 of 5

This project must be designed and constructed in accordance with the standards in the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, 2012 edition. The standards for off-road trails include a minimum 10' width with a minimum of 2' clear zone on each side. The standards for bridges or boardwalks include a minimum 14' width between rub rails. In addition, bridges and boardwalks should meet a minimum H-10 design load rating. For roadways with no curb and gutter, the standards for on-road paved shoulders include a minimum 4' width facility on each side of the road. If parking is permitted, the standards for bike lanes include a minimum width of 5'. The project must also be designed and constructed in accordance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD).



Grant Summary

Date: 07/24/2019

Page: 1 of 3

Grant Type: Transportation Alternatives Program

Grant Number: 2016015

Section	Applicant	Description (rpt)	Current Grant Amount	Total Match	Total Amount	Grant %	Status	Grant Year
01	Genesee County Road Commission	IBT - Flint River Trail, Irish Rd to Richfield Park Rd	\$317,168.00	\$105,722.00	\$422,890.00	75.00%	Proposed	2020
Total:			\$317,168.00	\$105,722.00	\$422,890.00	75.00%		

Section Grant Section Description

01 FY 2020 TAP CONDITIONAL COMMITMENT

The Genesee County Road Commission will extend the Flint River Trail from Irish Road to Richfield Park Road (approximately 675 feet east of Gale Road). This project is part of the county's long-term effort to connect the Flint River Trail with the Southern Links Trail in Lapeer County. The route is part of the Iron Belle Trail and is listed as a priority in the Genesee County Nonmotorized Trail Plan.

At its western end, the 10' wide asphalt multi-use path will begin at an existing trailhead near the Richfield County Park entrance off Irish Road. The path will parallel the park's gravel road for approximately 1,400 feet before veering off onto an existing unimproved (turf) walking path. The path will follow the turf path alignment for approximately 3,400 feet before returning to the gravel road. It will then continue alongside the gravel road for another 1,300 feet before ending at a paved trailhead at Richfield Park Road.

The Flint River Trail system, including the Chevy Commons Trail and the Genesee Valley Trail, provides nonmotorized access from the commercial areas in Flint Township to destinations such as downtown Flint, Kettering University, UM-Flint, Mott Community College, the Flint Cultural Center, the Genesee Recreation Area, Mott Lake, Crossroads Village, Stepping Stone Falls, and Bluebell Beach.

The project budget is \$422,890 including \$317,168 in federal Transportation Alternative Program funds and \$105,722 in matching funds from the Genesee County Road Commission.

Job Phase Summary

Section	Job/Phase	Est Grant Amount	Auth Grant Amount	CTD Grant Amount	Route	Work Description	Location Description	Financial Stage/Status	FinSys
01	132642(A)	\$317,168.00			N Irish Rd	Non-Motorized Path	Irish Rd to N. Gale Rd	New / Requesting	TA
Total:		\$317,168.00							



Grant Summary

Date: 07/24/2019

Page: 2 of 3

Nonmotorized Funding Condition

This project must be designed and constructed in accordance with the standards in the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, 2012 edition. The standards for off-road trails include a minimum 10' width with a minimum of 2' clear zone on each side. The standards for bridges or boardwalks include a minimum 14' width between rub rails. In addition, bridges and boardwalks should meet a minimum H-10 design load rating. For roadways with no curb and gutter, the standards for on-road paved shoulders include a minimum 4' width facility on each side of the road. If parking is permitted, the standards for bike lanes include a minimum width of 5'. The project must also be designed and constructed in accordance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD).

Special Condition

To ensure immediate connectivity, funding for this project is conditional on the completion of the Vassar Rd-Irish Rd segment directly to the west.

Special Condition

Part of the proposed trail alignment and trailhead parking will require an archaeological survey, specifically from Station 49+50 to 62+68, and the trail head/parking area. The applicant should hire a consultant that will conduct a professional survey of these areas for prehistoric and/or historic period archaeological sites and prepare a professional report documenting the results of the survey that can be submitted to the State Historic Preservation Office (SHPO) for their review and comment.

The survey must include both visual survey and shovel tests (small excavation units placed every 25 to 50 feet and excavated up to 2.5 feet deep with the soils screened to look for artifacts). The archaeological survey must be performed by a qualified archaeologist (found to meet or exceed the professional requirements for archaeologists as stated in "Archaeology & Historic Preservation: Secretary of the Interior's Standards and Guidelines," Federal Register 48(190), September 29, 1983). A list of archaeological consultants can be found on the SHPO website at http://www.michigan.gov/mshda/0,4641,7-141-54317_19320_54320-285986--,00.html. Archaeological surveys can take months to complete, so a timely initiation of the survey and submittal of the survey results to the SHPO can avoid project delays. Please be aware that coordination with the SHPO archaeologist may require alterations to the design, and the applicant is required to make any necessary alterations to avoid and/or minimize impacts to any archaeological resources. The final design plans, sent as part of the required formal Section 106 submittal, must receive a "no adverse effect" or "no properties affected" determination from the SHPO in order to be awarded Alternatives funding.

Section 106 of the National Historic Preservation Act also requires consultation with Michigan's Federally recognized Tribal Governments (mailing list is attached). Both the archaeological survey and the Tribal Consultation must be completed and documented to satisfy Section 106 of the National Historic Preservation Act and receive environmental clearance.

Funding Condition

Transportation Alternatives Program (TAP) funding is conditional upon the items mentioned in the correspondence from the MDOT Office of Economic Development conveying the conditional commitment, supporting documentation, as well as fund availability. Federal transportation funding could be subject to congressional approval of a rescission, reducing or eliminating the remaining unobligated funds. The amount of TAP funding that Congress has authorized for expenditure is provided on a first come, first served basis to the projects that have completed the steps necessary to request federal fund authorization from the Federal Highway Administration. These steps typically include submitting completed plans, a cost estimate, specifications, and obtaining all necessary permits, clearances, an executed agreement, and matching funds.

Quarterly Report Funding Condition

As the grantee responsible for implementing this project, it is your responsibility to show that your project is making adequate progress towards fund obligation in the approved fiscal year. To show continued progress, you must submit a Quarterly Report in the MDOT Grant System (MGS) on or before the first business day of the months of January, April, July, and October. Expect cancellation of this CC/Award for failure to submit a Quarterly Report every quarter. Expect cancellation of this Award/CC for lack of adequate progress every quarter.



Grant Summary

Date: 07/24/2019

Page: 3 of 3

Important Note on TAP Funding for Local Agencies

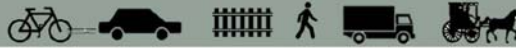
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Appendix 3: Education / Informational Materials

**Materials have been abbreviated from their original form. Full-length versions of the documents can be obtained upon request.*

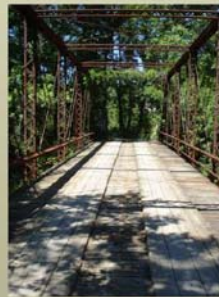
CONTENTS:

- I. Snyder & Union Counties Transportation Funding Presentation
- II. Virginia Department of Transportation (VDOT) Transportation Alternatives Set-Aside Applicant Workshop Presentation



TRANSPORTATION FUNDING

Snyder & Union Counties
March 29th, 2018





AGENDA

- ☐ Welcome & Introductions
- ☐ Housekeeping Items
- ☐ Transportation Funding Programs
- ☐ Keys to a Successful Application & Project
- ☐ Final Q&A



Transportation Alternatives Set Aside

Funding for transportation alternatives: on- and off-road bicycle and pedestrian facilities, infrastructure for non-driver access to public transportation and enhanced mobility, community improvement, environmental mitigation, recreational trails and safe routes to school.



Photo by Richard Dirdul
<https://creativecommons.org/licenses/by-sa/2.0/>



pennsylvania
DEPARTMENT OF TRANSPORTATION



TA Set-Aside Eligible Applicants



- **Municipalities** (Borough, City, County, Township)
- Schools
- Transit Agencies
- Natural Resource/Public Land Agencies
- Local/Regional governments responsible for transportation or trails
- Nonprofit entities responsible for transportation safety

*Most nonprofits
remain ineligible!*



TA Set-Aside Overview



- *Cost Reimbursement Program*
- **100%** *Construction Funding*
- *No Local Match*
- *Project Sponsor Pays for Design, Permitting, etc.*
- *\$50,000 to \$1,000,000 per project*
- *2019 Next Anticipated Application Round*



TA-Set Aside Eligible Projects

Bike/Ped Facilities



Historic Preservation



Rail Trails



Safe Routes to School



Advertising Management



Archaeological Activities



Vegetation Management



Managing Stormwater



Wildlife Mortality





TA/TAP Funded Projects



PROJECT	LOCATION	FUNDING
Phase VI East 2 nd Streetscape	Town of Bloomsburg	\$459,600
Chestnut Street Improvements Phase II	City of Sunbury	\$640,000
Monument Square Phase V	Lewistown Borough	\$608,800
Buffalo Valley Rail Trail Extension	Lewisburg Borough	\$485,300
Streetlight & Safety Improvements	Selinsgrove Borough	\$402,500
Broadway Streetscape Phase I	Milton Borough	\$495,250
Miller Run Greenway Phase I	Loyalsock Township	\$765,000



KEYS TO SUCCESS

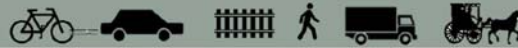
Tips for a Better Application



Pre-Application



Start Early	Communicate	Consistent	Funding
<ul style="list-style-type: none">• Purpose/Goal• Planning• Project Scope• Get Help	<ul style="list-style-type: none">• Stakeholders• PennDOT• MPO• County	<ul style="list-style-type: none">• Comp Plan• LRTP• Corridor Plan• Priority	<ul style="list-style-type: none">• Options• Best Source• Align• Communicate



Pre-Application



BE READY BEFORE FUNDING WINDOW IS ANNOUNCED!



Application – General Tips

- Review application and guidance
- Know evaluation criteria
- Get organized, come up with a plan
- Use ingredients from pre-application
- Develop hook
- Think like reviewer





Application Checklist

- | | |
|--|--|
| <input checked="" type="checkbox"/> <u>Follow Directions/Guidance</u> | <input checked="" type="checkbox"/> <u>Explain Regional Significance</u> |
| <input checked="" type="checkbox"/> <u>Get assistance</u> | <input checked="" type="checkbox"/> <u>Planning Consistency</u> |
| <input checked="" type="checkbox"/> <u>100% complete</u> | <input checked="" type="checkbox"/> <u>Demonstrate Readiness</u> |
| <input checked="" type="checkbox"/> <u>Concise & Straightforward</u> | <input checked="" type="checkbox"/> <u>Justify Costs</u> |
| <input checked="" type="checkbox"/> <u>Demonstrate Project Need</u> | <input checked="" type="checkbox"/> <u>Relevant Support Documents</u> |
| <input checked="" type="checkbox"/> <u>Articulate Project Benefits</u> | <input checked="" type="checkbox"/> <u>Communicate with Partners</u> |



Evaluation Criteria

- ✓ Readiness for Implementation
- ✓ Public benefit
- ✓ Safety, mobility, & economic benefits
- ✓ Planning consistency
- ✓ Regional and statewide significance

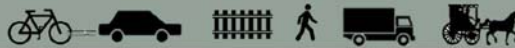




Evaluation Criteria

- ✓ Reasonable cost– is it cost effective
- ✓ Technically feasible
- ✓ Local support, stakeholder involvement
- ✓ Level of matching funds – leveraged funds
- ✓ Do resources exist to maintain?





10 Common Problems

- 1** Not a fundable project- doesn't meet criteria
- 2** Just Not Ready- deliverability concerns
- 3** Match not secured
- 4** Incomplete information
- 5** Budget issues – inaccurate, cost effectiveness



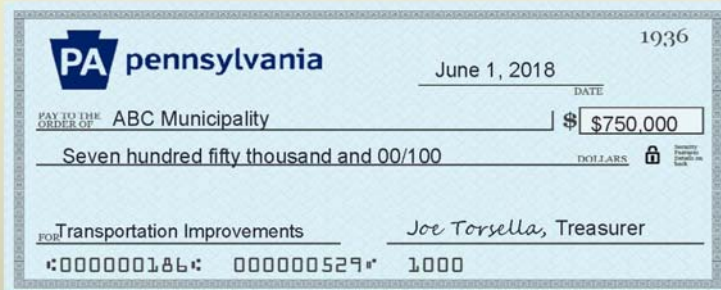
10 Common Problems

- 6** Not linked to or consistent with planning
- 7** Public not involved
- 8** Poor design
- 9** No consultant or qualified engineer
- 10** Too many constraints, constructability



Post Application

CONGRATULATIONS!!!!



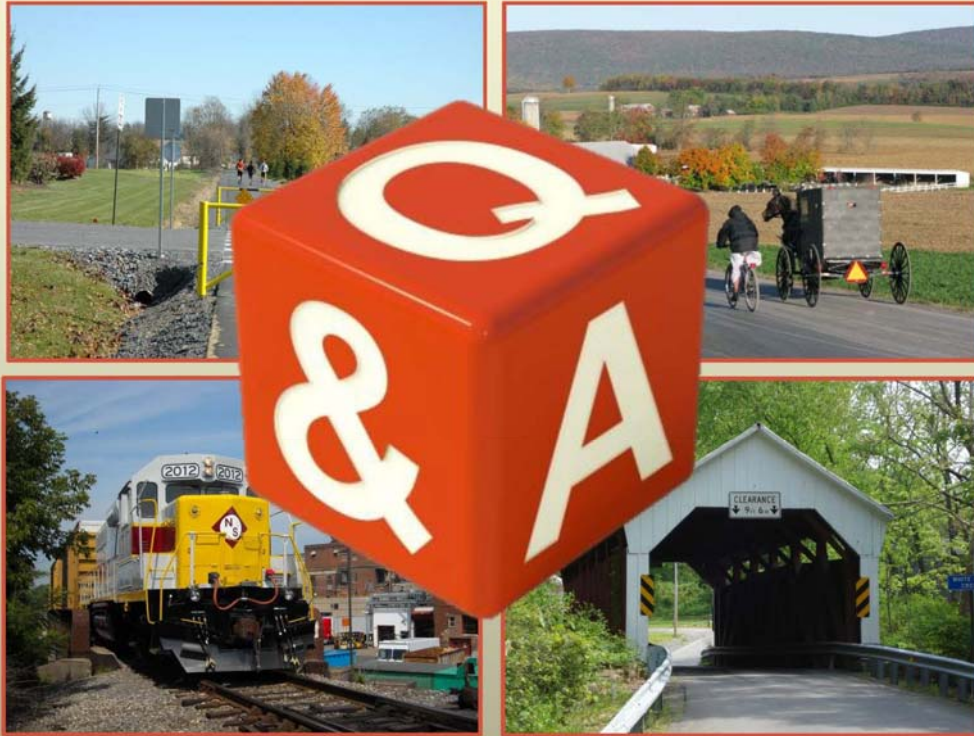
Not funded – why?



Try and try again!



Questions?





Contact Information

Steve Herman, AICP
Transportation Program Analyst
SEDA-Council of Governments
sherman@seda-cog.org

Lincoln Kauffman
Planning Director
Snyder County, PA
lkauffman@snydercounty.org

Shawn McLaughlin, AICP, CPRP
Director of Planning & Economic Development
Union County, PA
smclaughlin@unionco.org

James Saylor, PE
Transportation Program Director
SEDA-Council of Governments
jsaylor@seda-cog.org

Wes Fahringer
Regional Advisor
PA DCNR
mfahringer@pa.gov

Aaron Crist
Local Projects Coordinator
PennDOT District 3-0
acrist@pa.gov





TRANSPORTATION ALTERNATIVES SET-ASIDE

| Applicant Workshop

Transportation Alternatives Set-aside Program Overview

- **Federal funding available to localities**
- **Non-traditional transportation projects**
- **Reimbursement program (80 / 20)**
- **Projects locally administered; oversight provided by VDOT**
- **Four years to reach construction**
- **Small localities can request that VDOT administer the project on their behalf**



Virginia Department of Transportation

Pre-Application Process Smart Portal



Portal Access

- Organizational Administrator
- Need “permission” for TA Program

Pre-application submission ****MANDATORY****

- Portal opens May 15, 2019 at 8am
- From May 15 – July 1 will be a “rolling submission” period
- Locality is “owner” of the pre-application and can make changes until it is SUBMITTED
- Portal closes to pre-applications July 1, 2019 at 5pm



Pre-Application Process Validation Period

Submission of Pre-Application – by July 1, 2019

- After submission by locality, pre-application fields are “locked”
- To make changes after this point, the locality will need to notify District PC and request changes be made

VDOT Validation – completed no later than August 15, 2019

- LAD and VDOT District will begin reviewing pre-applications as they are submitted; validations will occur on a “rolling” basis
- Two levels of validation: District and CO LAD (can be done concurrently)
- All pre-applications will be validated by August 15
- Locality will be notified via email of validation and authorized to proceed with the full application



Virginia Department of Transportation

Pre-Application

What does it look like?

Viewing TA Set-Aside Pre-Application

UAT Test 5

Project Status: **Pre-Submitted**
Organization: Richmond City
Project ID: 5449-Pre

☒ Edit Pre-Application ☐ Print Version ☐ Save as PDF

Created: 03/07/2018 @ 1:14PM by Sunela Nair
Last Updated: 03/07/2018 @ 1:14PM by Sunela Nair

Navigation: **General** | Location | Funding | Project's Readiness To Proceed | Supporting Documents

☒ General

Project Sponsor
Organization: Richmond City Organization
Point of Contact: Sunela Nekkanti
Email: Nekkanti@gmail.com
Phone: (202) 225-2222

Project Information
Project Title: UAT Test 5

Provide a description of the project and a clearly defined scope of the improvements to be made utilizing Transportation Alternatives funds. Should additional space be needed, please use the Upload Supporting Documents feature. Label the document "Project Description".
This is a project description

Select primary category of eligibility even if other categories may apply.
Environmental mitigation activity focused on wildlife mortality or habitat connectivity

Does this project qualify as a "Safe Routes to School" project based on this criteria?
• Eligible infrastructure activity
• Project is located within 2 miles of an elementary / middle school (K-8th)
Yes

Do you wish to pursue this as a SRTS project?
Yes

Pre-Application What do I need to provide?

Basic project information:

- Project applicant and contact information
- Project title and accurate description
- Eligibility category – what activity does it qualify under
- Project termini
- Will you use third-party donations as part / all of your match?
- Has design started and status of right of way?
- Attachment Required: detailed project cost estimate
- Attachment Required: map / sketch of proposed project

Final Application Process Smart Portal



Final Application ****MANDATORY**** - no later than October 1, 2019

- Cannot submit final application if no pre-application was submitted
- Locality has from date of validation to October 1 to work on and complete full application
- Pre-application fields are “locked” after validation; most importantly, the project scope / description
- Attachments (estimate and sketch) can be updated after validation
- Important to incorporate District and LAD comments / suggestions
- Clarifications / details should be conveyed via Smart Portal “Alerts”
- **DEADLINE:** Portal closes October 1, 2019 at 5pm

Final Application Documented Pre-requisites

The final application submission must include:

- Current local resolution
- Current MPO endorsement (if applicable) except NOVA / COG
- Evidence of public meeting

With the pre-application requirement, any exception to including these documents in the final application will be addressed on a case-by-case basis; there will be no “blanket” grace period.



What Makes a Good Application? Scoring Criteria

All applications scored on five (5) criteria:

- Project Resources
- Project Concept
- Improvement to Transportation Network
- Sponsor's Experience Administering Federal-aid Projects
- Project's Readiness to Proceed



Existing projects are also evaluated on progress:

- What has been achieved in project development?



Important Points to Remember

When preparing a project application:

- Develop finite scope capable of starting construction within 4 years
- Project cost estimate must address ALL developmental phases – PE, RW and CN even if other funding is anticipated
- No carry-over or “banking” of funds for future project segments; the application and costs must address specified termini
- Separate applications are required for multiple project segments; each must have independent utility
- The more details / engineering provided early; the better the project

**** AN ACCURATE COST ESTIMATE IS KEY ****

Transportation Alternatives Set-aside Program Resources



Local Assistance Division website:

<http://www.virginiadot.org/business/local-assistance.asp>



Virginia's Transportation Alternatives Set-aside website:

<http://www.virginiadot.org/business/prehancegrants.asp>



VDOT Smart Portal website:

<http://smartscale.org>



Transportation Alternatives Data Exchange website:

<http://trade.railstotrails.org/index>



Safe Routes to Schools website:

<http://www.virginiadot.org/saferoutes>



Virginia Department of Transportation

Transportation Alternatives Set-aside Central Office Contacts

Pam Liston, Transportation Alternatives Program Manager
Pamela.Liston@VDOT.Virginia.gov or (804) 786-2734

Kelly Waldrop, Federal Programs Manager
Kelly.Waldrop@VDOT.Virginia.gov (804) 371-6180

Virginia's TAP contact address
EnhancementProgram@VDOT.Virginia.gov

Rob Williams, Safe Routes to School Coordinator
RobertJ.Williams@VDOT.Virginia.gov or (804) 371-4868

Local Programs Workshop 2019

Colonial Williamsburg

September 9 – 11

Williamsburg Lodge

